Quarterly Environmental and Social Report
First Quarter 2010

PNG LNG

Energy for the World. Opportunity for Papua New Guinea.

Foreword

Welcome to the first Papua New Guinea Liquefied Natural Gas Project, Environmental and Social Quarterly Report.

In March 2010, we announced that with sales and purchase agreements in place, and financing arrangements completed, this Project was proceeding into full execution.

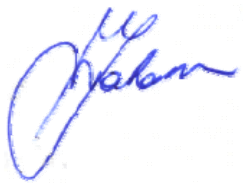
Reaching this milestone represents a vote of confidence in the Project and in ExxonMobil's ability to deliver as the operator working with our co-venturers. It is also a vote of confidence in the Government and people of Papua New Guinea to capitalize on the Project's benefits as a catalyst to position the nation as a major Liquefied Natural Gas producer.

Commencement of the Project's execution, while an historic milestone, is also only the beginning.

A project of the scale we are undertaking in Papua New Guinea requires the application of world class technology and management skills combined with a commitment to safety, environmental and socioeconomic excellence. In Papua New Guinea, the Project gas resources are located in a very challenging environment of rugged terrain, intense rainfall, and sensitive ecosystems. It demands ingenuity and rigorous planning to bring the country's natural gas to the global market in an efficient, timely, and responsible way.

We take on this Project with our co-venturers recognizing that Papua New Guinea is one of the most beautiful and unique places on earth. It is a nation of distinctive cultures and people, closely linked to the incredible natural environment, endowed with many natural resources. Our goal is to develop and operate this Project in a way that protects these national blessings while helping to bring economic success to the country and contributing to the global community by supplying energy to help meet the worlds growing demand.

This is the first in an ongoing series of reports providing details on how we are achieving our goal.



Peter Graham

Managing Director

Esso Highlands Limited

Ken Larson

Project Executive

Papua New Guinea Liquefied Natural Gas

QUARTERLY ENVIRONMENTAL AND SOCIAL REPORT FIRST QUARTER 2010

Contents

EXECUTIVE SUMMARY		**I**
1.0	**INTRODUCTION**	**1**
2.0	**THE PROJECT**	**2**
2.1	DESCRIPTION	2
3.0	**CONSTRUCTION OVERVIEW**	**7**
3.1	HIGHLAND AREA (DRILLING, HGCP, KOMO AIRFIELD, HEAVY HAUL ROAD, SUPPLY ROUTES)	7
3.2	ONSHORE PIPELINE	10
3.3	OFFSHORE PIPELINE	10
3.4	LNG TERMINAL AND ASSOCIATED ACTIVITIES	10
3.5	ASSOCIATED GAS DEVELPOMENT	11
3.6	POM TECH	11
3.7	DEVELOPMENT SUPPORT – LOGISTICS/AVIATION	12
3.8	PRE-CONSTRUCTION SURVEYS	12
4.0	**SAFETY, SECURITY, HEALTH, ENVIRONMENT AND SOCIAL MANAGEMENT**	**14**
4.1	APPROACH	14
4.2	CONTRACTOR MANAGEMENT	16
4.3	REVENUE MANAGEMENT	16
4.4	MANAGEMENT OF CHANGE	16
4.5	ENVIRONMENTAL AND SOCIAL MILESTONE SCHEDULE UPDATE	16
4.6	COMPLIANCE	17
5.0	**PROCUREMENT AND SUPPLY**	**18**
5.1	SUPPLIER DEVELOPMENT	18
5.2	SUPPLY ROUTE ACTIVITIES	20
5.3	ENTERPRISE CENTER	21
6.0	**COMMUNITIES**	**23**
6.1	STRUCTURE AND RELATIONS	23
6.2	INFRASTRUCTURE, SERVICES AND RESOURCES	26
6.3	VERIFICATION, ASSESSMENT AND AUDIT	27
6.4	HEALTH AND SAFETY	27
6.5	PARTNERSHIPS	31
7.0	**COMPENSATION AND RESETTLEMENT**	**35**
7.1	COMPENSATION	35
7.2	RESETTLEMENT	36
8.0	**WORKFORCE**	**42**
8.1	DEVELOPMENT	42
8.2	HEALTH MANAGEMENT	43
8.3	SAFETY MANAGEMENT	52
8.4	WORKER WELFARE AND CONDITIONS	57
8.5	WORKFORCE TRAINING	58

9.0 COMPLIANCE MANAGEMENT 61
9.1 VERIFICATION 61
9.2 MONITORING 61
9.3 ASSESSMENTS AND AUDITS 62
9.4 NON-CONFORMANCES, INCIDENTS AND CORRECTIVE ACTIONS 62

10.0 POLLUTION PREVENTION AND ABATEMENT 66
10.1 AIR EMISSIONS 66
10.2 NOISE AND VIBRATION 66
10.3 WASTE MANAGEMENT 67
10.4 RESTRICTED MATERIALS 69

11.0 BIODIVERSITY 70
11.1 MANAGEMENT 70
11.2 STRATEGY 72

12.0 RESOURCE MANAGEMENT 73
12.1 WATER MANAGEMENT 73
12.2 RAW MATERIALS 75
12.3 EROSION AND SEDIMENT CONTROL 76

13.0 CULTURAL HERITAGE 78
13.1 MANAGEMENT OF KNOWN SITES 79
13.2 MANAGEMENT OF CHANCE FINDS 80

14.0 STAKEHOLDER ENGAGEMENT 84
14.1 GOVERNMENT 84
14.2 COMMUNITIES 85

15.0 ACRONYMS 89

APPENDIX 1 - DEFINITION OF MONITORING, VERIFICATION, ASSESSMENT AND AUDIT 91
VERIFICATION, MONITORING, ASSESSMENT AND AUDIT 91

APPENDIX 2 - DEFINITION OF NON-CONFORMANCES 93

CASE STUDY 1: HEALTH AWARENESS 51

CASE STUDY 2: EMERGENCY RESPONSE DRILL 55

CASE STUDY 3: LNG PLANT CULTURAL HERITAGE SALVAGE PROGRAM 82

Executive Summary

The Papua New Guinea Liquefied Natural Gas Project ("the Project") is an integrated development that includes gas production from currently operating fields in the Southern Highlands and Western Provinces of Papua New Guinea and processing facilities (the Hides Gas Conditioning Plant (HGCP)), onshore and offshore pipelines for transport to liquefaction facilities near the capital, Port Moresby. From there the Liquefied Natural Gas (LNG) will be transported in specially built tankers to international customers with first deliveries scheduled to begin in 2014.

Esso Highlands Limited, a subsidiary of ExxonMobil Corporation, is constructing and will operate the Project on behalf of the co-venturers - Oil Search Limited (OSL), Independent Public Business Corporation (Papua New Guinea Government), Santos Limited, Nippon Oil Exploration, Mineral Resources Development Company (Papua New Guinea landowners) and Petromin PNG Holdings Limited.

Safety, security, health, environmental and social aspects of the Project are managed under a series of plans which enable construction to be undertaken in accordance with national legislation, the external financing group's environmental and social requirements, and ExxonMobil standards. This report, covering the period January–March 2010, is the first in a series of Environmental and Social Quarterly Reports that will provide an update on Project construction activities and report on safety, security, health, environment and social performance plus compliance with the above requirements.

Esso Highlands Limited, Managing Director, Peter Graham and Petroleum and Energy Minister William Duma

The Project moved into the full execution phase in March 2010 and is currently at the earliest stages of the four year construction period. As such, the environmental and social verification and monitoring systems, and reporting protocols are also at an early stage of implementation.

Much of the Project activity will occur under six Engineering, Procurement and Construction (EPC) contracts being executed by some of the industry's leading contractors. To date only one of the EPC contractors (for the Komo Airfield) has commenced field construction activity. The other EPC contractors remain in the execution planning phase.

Additional to the EPC contracts, construction contracts were awarded in 2009 for a program of infrastructure upgrades in advance of the main construction activities in the Gulf Province and Southern Highlands Province. The Upstream Infrastructure element of this program incorporates civil works in the areas of Hides and Kutubu, upgrade and construction of new roads and bridges, construction of training facilities and camp construction, extension and refurbishment. Another contract covers early works at the LNG plant site and nearby area. Contracting is in the advanced stages for two new-build drilling rigs to drill and complete the Project wells.

The table overleaf shows the contracts and main construction activities in this first quarter of 2010.

Table 1: Contractors and activities, first quarter 2010

Contract	Contractor	Major first quarter 2010 activities
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	Road and bridge improvements, camp construction and renovation of existing OSL camps. Bulk earthworks for Wellpads and HGCP.
	Red Sea Housing	Camp construction. Construction of Juni Camp and training facility.
	Telecommunications (EPC1) - TransTel Engineering	Execution planning.
LNG Plant Early Works (C2)	Curtain Brothers Papua New Guinea Limited	LNG plant site Bypass Road and upgrade of the Lea-Lea Road. Pioneer Camp construction. Installation of the LNG plant perimeter fence.
Offshore Pipeline (EPC2)	Saipem	Detailed design engineering and long lead procurement.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Corporation	Detailed design engineering and long lead procurement.
HGCP and Hides Wellpads (EPC4)	CBI Clough Joint Venture	Detailed design engineering and long lead procurement.
Onshore Pipelines and Infrastructure (EPC5a)	SpieCapag	Detailed design engineering and long lead procurement.
Komo Airfield (EPC5b)	McConnell Dowell and Consolidated Contractor Group Offshore	Preliminary earthworks and geotechnical trials for Komo Airfield and construction of Pioneer Camp. Clearing and grubbing for the Heavy Haul access road.
Oil Search Limited Associated Gas Development	Aker Solutions	Detailed engineering, procurement and execution planning
Drilling (new wells and re-completions)	Nabors Drilling International Limited	Contract negotiations with selected contractor.
Port Moresby Construction Training Facility	Eos	

The Project has the potential to transform the economy of Papua New Guinea and, if the benefits from the Project are applied throughout the economy as intended, it has the potential to dramatically improve the quality of life for the Papua New Guinean citizens. This will be achieved by boosting Gross Domestic Product (PNG LNG Economic Impact Study. ACIL Tasman, 2008) and export earnings, providing a major increase in government revenues, making royalty payments to landowners, creating employment, and providing a catalyst to further industry development. Project area landowners will benefit from direct royalty payments as well as improved social and developmental infrastructure.

The recruitment and development of qualified Papua New Guinean citizens is a key component of the Project's National Content Plan (NCP). The strategy is to maximize the number of local employment opportunities, to increase the percentage of national employees over the life span of the Project and to train them in the technical and professional skills necessary for working on existing, and future, projects and operations. To facilitate implementation of this strategy, the Project is building two construction training facilities. The Port Moresby Construction Training Facility (POM Tech) and Juni Construction Training Facility (Juni CTF) represent an investment of approximately 150 million Kina (US$60 million) to train about 850 students per year starting later in 2010 for the next four years.

The Project's Graduate Training Development Program recruits Papua New Guinea graduates in engineering, safety, accounting and administration to provide training through work experience. Upon successful completion these graduates will be employed by Project contractors. The program began in October 2009 with the recruitment of 22 graduates and continued through the first quarter with on the job training of graduates in the Brisbane Project office.

Contractors may employ Papua New Guinean citizens through the network of Land Owner Companies (Lancos) with a focus on employment for people from areas with the highest Project presence. The Project has assisted with the establishment of representative Lancos and is providing support to them to develop business skills. Project contractors will also be responsible for enhancing the capacity of representative Lancos and their ability to deliver the goods and services required to execute the Project.

Through the purchase of goods and services in Papua New Guinea and by developing long-term supplier relationships, the Project supports the development of the local business economy. Local capacity is promoted by helping suppliers meet Project supplier standards, providing training for entrepreneurs, and creating business opportunities for local small and medium sized enterprises. In March 2010, the Project opened an Enterprise Center, which is responsible for assisting Papua New Guinean suppliers, strengthening their business management skills and providing them with assistance in seeking financing from the Papua New Guinean banks.

Community consultation

An extensive stakeholder mapping process has identified over 120,000 Project stakeholders covering national and provincial governments, local communities, landowners, non-government organizations (NGO), and other interested stakeholders. Following consultation activities undertaken initially in connection with the environmental impact assessment (at 6,000 pages the largest ever undertaken in Papua New Guinea), the Project continues to implement an extensive communications program. A new phase of community engagement began in early December 2009 and continued through the first quarter. Meetings with community groups concentrated on the Mendi area of the Highlands Highway (Northern Logistics Route), the initial focus of the road maintenance and bridge building program. A total of 17 meetings were held this quarter with approximately 1,600 stakeholders.

In addition, a team of Land and Community Affairs staff continues daily interactions with individuals and groups on such topics as compensation payments, resettlement, pre-construction surveys and work site activities. The Project has developed a Third Party Grievance Procedure with the objective of receiving, responding to and addressing community concerns and grievances. The existence of such a procedure is considered to be a vital component of facilitating good relations in allowing timely resolution of grievances in a consistent and transparent manner. Training was undertaken for Land and Community Affairs staff during the first quarter to ensure familiarity with the procedure. The procedure will be fully rolled out in the next quarter.

A well-defined, transparent land access process is in place including a clear system of compensation payments. During this first quarter compensation payments were made for works such as land clearing for bridge maintenance activities, surveys to document the boundaries of land ownership and land clearing for road works. Resettlement activities are ongoing with the goal of giving persons physically and economically displaced as a result of Project activities the opportunity to restore their livelihoods and standards of living. Resettlement activities during the first quarter related primarily to: relocation of households in the Komo Airfield area; household identification and relocation planning along the Komo access road; relocation assistance package negotiations for the HGCP and compilation of the Resettlement Action Plan; socioeconomic surveys and data analysis for the Hides Waste Management Area, Heavy Haul Road, and quarries and production of draft Resettlement Action Plans for the latter two and baseline surveys for the Highlands Highway bridges.

During this quarter, the Project completed a preliminary Project Induced In-Migration (PIIM) Study. This study identified variables, drivers, and "hot spots" for population influx. It also identified areas for further study to facilitate the development of management and mitigation measures to address social risks and impacts associated with in-migration in the specific context of the Project and Papua New Guinea.

A 14 month survey is underway in relation to fish catch landings at each of the four villages surrounding the LNG plant site with the aim of establishing baseline catch data (such as number, size, weight and species caught) in order to understand the importance of fisheries for household consumption and for market. Information concerning fisheries resources will be shared with villagers. Village meetings have been held to describe the purpose and method of the survey and to secure approval and support for survey implementation from community leaders. Fisheries species identification workshops have also been completed.

Social assessments were undertaken in the first quarter to establish baseline data for the two primary land Project supply chains: the Highlands Highway and the Southern Logistics Route. Assessments focused on identifying potential social risks or social impacts on communities and identifying the additional management and mitigation measures that may be required. The process to document the baseline condition of existing infrastructure such as roads, bridges and wharfs that will be used during construction was commenced. This information will allow a future evaluation of Project impacts on infrastructure.

Mendi Road Works

Safety is the Project's first priority. Community road safety is a particular focus area and in the first quarter a number of procedures and activities were put in place to assist with traffic management. These included implementation of road signage ahead of work sites, positioning of traffic controllers near work sites, fencing of sensitive sites, grass cutting at road sides to enhance visibility, community education on traffic and pedestrian safety, random alcohol and drug testing of truck drivers and use of attendance vehicles to warn of approaching convoys.

Esso Highlands Limited, Managing Director, Peter Graham (left) and Ron Seddom, Chair of Rotarians Against Malaria at the initiation of the collaborative Bed Net Program

The Project's Community Health Program, to be undertaken in collaboration with a government agency and potentially NGOs, is organized around two fundamental public health concepts: health promotion/education and disease prevention. As part of the ExxonMobil Long Lasting Insecticide Treated Bed Net Education and Distribution Program to fight Malaria, this quarter the Project collaborated with the existing Rotarians Against Malaria Program on logistics planning and bed net distribution. Project sites have been added to the National Malaria Surveillance Program and plans are under development for enhanced Malaria diagnostics at relevant Project community clinics. Over 1,000 community members have been tested for Malaria under the resettlement program and treated if positive.

Tuberculosis is one of the health focus areas and a Tuberculosis prevention and control program is underway. Sexually transmitted infections and Human Immunodeficiency Virus (HIV) are covered under a national surveillance program.

As part of the environmental impact assessment for the Project, archaeologists undertook detailed studies, in consultation with communities, to identify areas and features of cultural and historic significance (archaeological and oral tradition sites). Where avoidance was not possible, a process has been established for the management, recovery and documentation of sites that are authorized by the Papua New Guinean Government Department of Environment and Conservation (DEC) for disturbance. Salvage excavations involving 47 team members were underway in the first quarter at the following sites: HGCP, Kikori River Bridge and the LNG plant site. Following analysis and documentation the material will be transferred to the Papua New Guinea Museum and Art Gallery. The Project efforts relevant to cultural heritage and archaeology will add substantial materials and information to the body of knowledge related to Papua New Guinean cultural heritage. These programs also provide a valuable opportunity for Papua New Guinea based scientists to gain valuable field experience that will enhance Papua New Guinea's capacity into the future. Further pre-construction surveys were undertaken by the Project during the quarter to ensure each worksite is characterized, and appropriate site-specific mitigation and management measures are identified.

In addition to the known cultural heritage sites, construction activities have the potential to disturb or alter as-yet unrecorded archaeological sites within the Project area. Additional archaeological features discovered during construction activities are referred to as "chance finds". A protocol has been developed by the Project and endorsed by the Papua New Guinea Museum and Art Gallery to manage the preservation and appropriate treatment of chance cultural heritage finds. Ground disturbance activities are monitored. During the first quarter no chance finds were made.

Lake Kutubu

Biodiversity pre-construction surveys were undertaken in the first quarter to identify sensitivities including large habitat trees, bird-of-paradise/bower bird trees/habitat and other ecological "no go" areas. Requirements to avoid or otherwise manage these sensitivities were shared with contractors. Sensitivities identified as "no go" areas have been physically marked out at work sites. Following on from surveys undertaken for the Environmental Impact Statement (EIS), additional studies have been undertaken. One of the these covered aquatic biology of the Vaihua river/estuary near the LNG plant site during the wet season. Another was of the marine ecology in Caution Bay in the area of the offshore pipeline, marine facilities, the temporary dredge material storage areas and in the vicinity of the shipping channel.

A draft Biodiversity Strategy was produced in late 2009 and includes a plan for developing post-construction biodiversity monitoring to test predictions made in the Project EIS and aid understanding of residual Project impacts following the implementation of mitigation measures. The Biodiversity Strategy also includes an approach to identifying and undertaking biodiversity management activities to offset residual project impacts. The Biodiversity Strategy was finalized in the first quarter with early implementation activities initiated. Specifically, activities instigated were associated with remote sensing to detect deforestation in the Project area and definition of benchmarks for the field monitoring program to track vegetation regeneration using an experienced forest ecologist with extensive Papua New Guinea experience.

Rainforest tree

To protect Papua New Guinea's biodiversity, a quarantine program is under development based on an integration of Papua New Guinea quarantine related laws and regulations. The outcomes of the assessment will include measures and plans in the form of a Project-wide Quarantine Program. Visual inspections have been undertaken at work sites to check for any establishment or spread of weeds, plant pathogens or pests. High risk areas for new weed and pest invasion and *Nothofagus* forest susceptible to fungal disease and dieback were identified as part of pre-construction surveys in the quarter.

In keeping with the Project commitment to make use of existing quarries, eight of the nine quarries utilized in the first quarter were pre-existing. At the one new quarry site that was utilized, comprehensive ecological and cultural heritage pre-construction surveys were undertaken and the Project was able to identify a suitable site with the least sensitivities.

Water abstraction environmental assessments were undertaken for three rivers to assess potential water sustainability and pollution impacts. All assessments concluded that water draw would be less than 10 percent of water flow and would not adversely impact downstream users or habitat. Pollution mitigation measures were identified and implemented such as no vehicle access into the water and ensuring pumps were mounted on platforms away from the rivers. Erosion and sedimentation control devices were installed during the quarter, particularly on stream crossings and at road works. Verification showed that most devices were working well. Contractors will continue monitoring and perform maintenance when required.

Systems of waste management were rolled out to the contractors at the start of construction and during this quarter contractors successfully recorded waste transfers, storage and disposal. The majority of waste generated by the Project was non-restricted domestic and packaging waste. As it is early in the construction phase, use was made of Project approved incinerators and existing municipal facilities for disposal of non-restricted waste. The small amounts of restricted waste generated by the Project were stored in controlled areas until completion of appropriate Project waste management facilities. Some areas for improvement were identified and corrective actions implemented.

Overall, the Project performed well in regards to the volume and number of spills in the first quarter. All spills are reportable to the Project and ExxonMobil Development Company. With over 1.5 million work hours for the quarter, there were only 25 minor spills (with an average of 7 liters per spill). These small events were predominantly localized spills to soils on construction sites, contained and cleaned up appropriately. Performance over the quarter indicated room for improvement in spill prevention and response, and enhanced efforts were made in the quarter to prevent even minor spills. Most of the recorded spills were equipment related. Project teams were reminded that diligent inspection and maintenance of equipment and vehicles is an important priority going forward. A spill awareness training package was presented to the contractors to proactively prevent these minor spills from occurring. Focus on these minor spills and their prevention emphasizes the Project's commitment to environmental protection and reliable construction operations.

Greenhouse gas emissions were documented for the first quarter to provide a baseline for future comparison.

During this first quarter, an environmental verification process was implemented by both the Project and contractors. Non-conformances indicate that a contractor protocol and/or procedure is not being correctly managed and implemented and needs to be corrected. Field observations indicate the potential for a situation to eventually become inconsistent with the correct protocols and/or procedures requiring intervention and resolution by the Project and contractor. Early field observation helps prevent potential future non-conformances. Positive field observations are noted when a mitigation, commitment or situation is being undertaken in compliance with the protocols/procedures. The verification process resulted in 19 minor environmental non-conformance issues, 102 field observations and 10 positive field observations. Corrective actions have been implemented and each non-conformance and field observation will be tracked and closed-out.

The Project recognizes its responsibility to help meet the world's growing energy demands while balancing the components of sustainability, economic growth, social development and environmental protection. While proud of the achievements this quarter, the Project is not complacent and will continue to take its obligations and commitments seriously.

The Project welcomes any feedback on this Quarterly Report (contact details can be found on the back cover).

QUARTERLY ENVIRONMENTAL AND SOCIAL REPORT FIRST QUARTER 2010

1.0 Introduction

This Quarterly Report is the first in a series that provide an update on construction activities and safety, security, health, environment and social performance of the Project.

The Project has secured debt financing from various Export Credit Agencies and commercial banks (collectively referred to as the Lender Group). The Lender Group requires the Project to conform to certain environmental and social principles and standards, namely the International Finance Corporation (IFC) Performance Standards and the Equator Principles. A condition of the financing is that the Project produces this Quarterly Report summarizing the Project's performance and compliance with applicable Lender Group Environmental and Social Standards, and applicable environmental and social laws.

This Quarterly Report also represents a commitment to transparency by the Project. By publishing this information, the Project wishes to make it possible for the citizens of the host country, interested NGO and other stakeholders to be well informed about the Project as it progresses.

The Quarterly Report is posted on the Project's website (www.pnglng.com) and printed reports are distributed to stakeholders to make information available to the citizens of Papua New Guinea where access to the internet may be limited. The Quarterly Report collates Project progress information in areas of safety, security, health, environment and social management.

2.0 The Project

2.1 DESCRIPTION

The Project is an integrated development that includes gas production and processing facilities in the Southern Highlands and Western Provinces of Papua New Guinea; liquefaction and storage facilities with capacity of 6.6 million tons per year, located northwest of Port Moresby on the Gulf of Papua; and over 700 kilometers (450 miles) of pipelines connecting the facilities. The investment for the initial phase of the Project, excluding shipping costs, is estimated at US$15 billion. Over the life of the Project, it is expected that over 9 trillion cubic feet of gas will be produced and sold. The Project will supply four major LNG customers in the Asia region through long-term sales agreements, including: Chinese Petroleum Corporation, Taiwan; Osaka Gas Company Limited; The Tokyo Electric Power Company Inc.; and Unipec Asia Company Limited, a subsidiary of China Petroleum and Chemical Corporation (Sinopec). The first LNG deliveries are scheduled to begin in 2014, following a construction period of about four years.

Participating interests in the Project are shown in the Figure 2.1 below.

Figure 2.1: Project participants

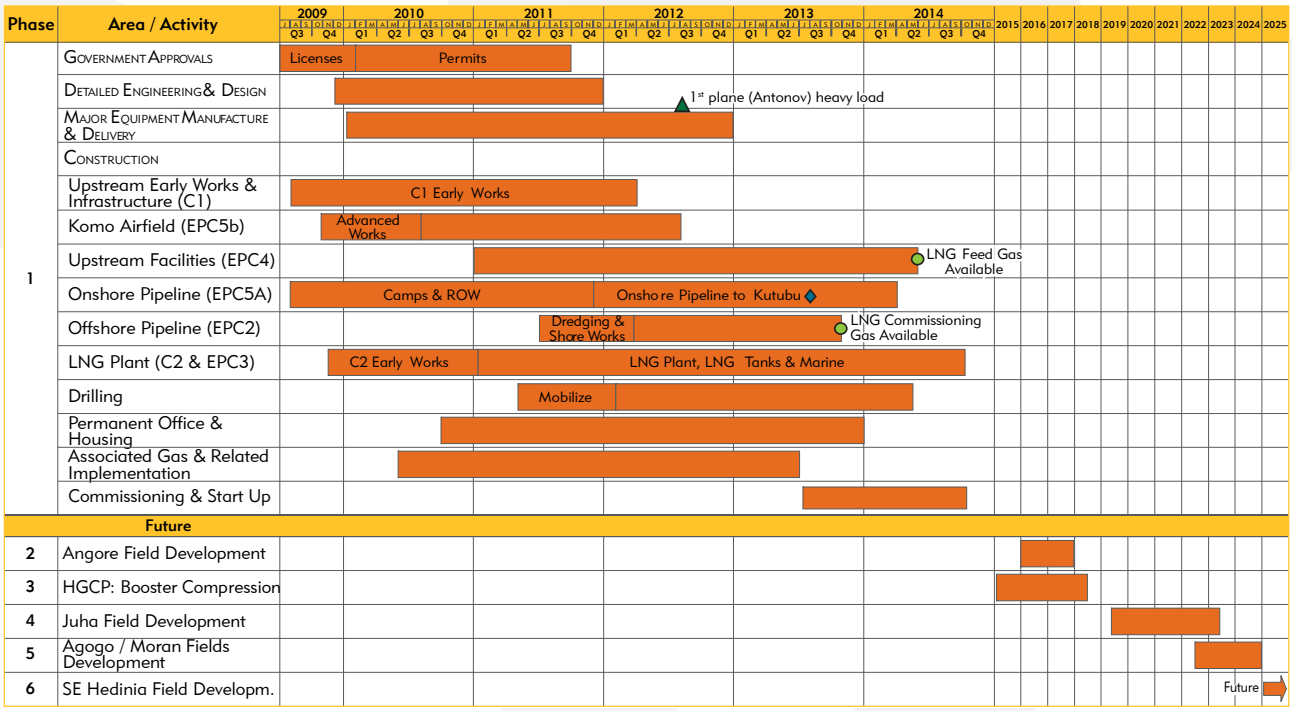
ExxonMobil	33.2%	Esso Highlands Ltd, a subsidiary of ExxonMobil Corporation, operator of the PNG LNG Project.
OIL SEARCH LIMITED	29.0%	Oil Search is Papua New Guinea's largest oil and gas producer and operator of Papua New Guinea's currently producing oil fields.
IPBC INDEPENDENT PUBLIC BUSINESS CORPORATION	16.6%	Owned by Papua New Guinean Government. It holds the majority of State-owned commercial assets.
Santos We have the energy.	13.5%	Santos Ltd is Australia's largest domestic gas producer.
ENEOS NIPPON OIL Your Choice of Energy	4.7%	Nippon Oil is Japan's largest integrated oil company.
MRDC	2.8%	Mineral Resources Development Company (MRDC), trustee and manager for landowner interests in Papua New Guinea oil and gas.
EDA OIL	0.2%	Eda Oil Limited is a wholly owned subsidiary of Petromin PNG Holdings Limited. Petromin is Papua New Guinea State owned.

The Project has the potential to transform the economy of Papua New Guinea, boosting Gross Domestic Product (PNG LNG Economic Impact Study. ACIL Tasman, 2008) and export earnings, providing a major increase in government revenue, providing royalty payments to landowners, creating employment opportunities during construction and operation, and providing a catalyst to further gas-based industry development.

In October and November 2009, the Independent State of Papua New Guinea, representatives of Project area landowners, four provincial and 10 local level governments executed the Project License-based Benefit Sharing Agreement as a first step in allocation and sharing of Project benefits. The overarching agreement outlines the sharing of revenue streams from royalties, development taxes and equity dividends totaling some 15–20 billion Kina (US$5.6 – $7.5 billion) over the Project life. Under this agreement, a portion of the State's project equity will go to landowners and provincial governments. In addition, 1.2 billion Kina (US$432 million) was committed over the next 10 years for infrastructure development such as roads, bridges, airports and townships.

The Project is to be undertaken in a series of development phases, with Phase I scheduled to commence operations in 2014 followed by additional developments in subsequent years.

Figure 2.2: Phases of development



Phase I – Initial Development and Drilling Campaign 1 comprises:

- Hides Gas Field: Wellpads A, B, C, D, E, F and G
- Angore Gas Field: Wellpads A and B
- Hides Gas Field Drilling: 8 new wells/2 Re-completions
- Angore Gas Field: Drilling 2 new wells
- Hides Gathering System including the Hides Spineline

- Hides HGCP Monoethylene Glycol Pipeline
- HGCP
- HGCP–Kutubu Condensate Pipeline
- Kopi Scraper Station
- LNG Project Gas Pipeline (Onshore/Offshore)
- LNG Plant and Marine Facilities
- Gobe Gas Pipeline 'lateral'
- Gobe Production Facility upgrade
- Kutubu Gas Pipeline 'lateral'
- Kutubu Central Processing Facility upgrade
- Komo Airfield
- Helicopter facilities
- Highlands Highway (Northern Logistics Route) – from the Port of Lae to the HGCP
- Southern Logistics Route – from the Kikori River shore base at Kopi to Poroma Junction
- Training facilities – Juni and Port Moresby
- Permanent Office and Housing – Port Moresby

The location and elements of the Project are illustrated in Figure 2.3 and Table 2.1 details how the contracts for Phase I of the Project have been divided.

Figure 2.3: Project elements

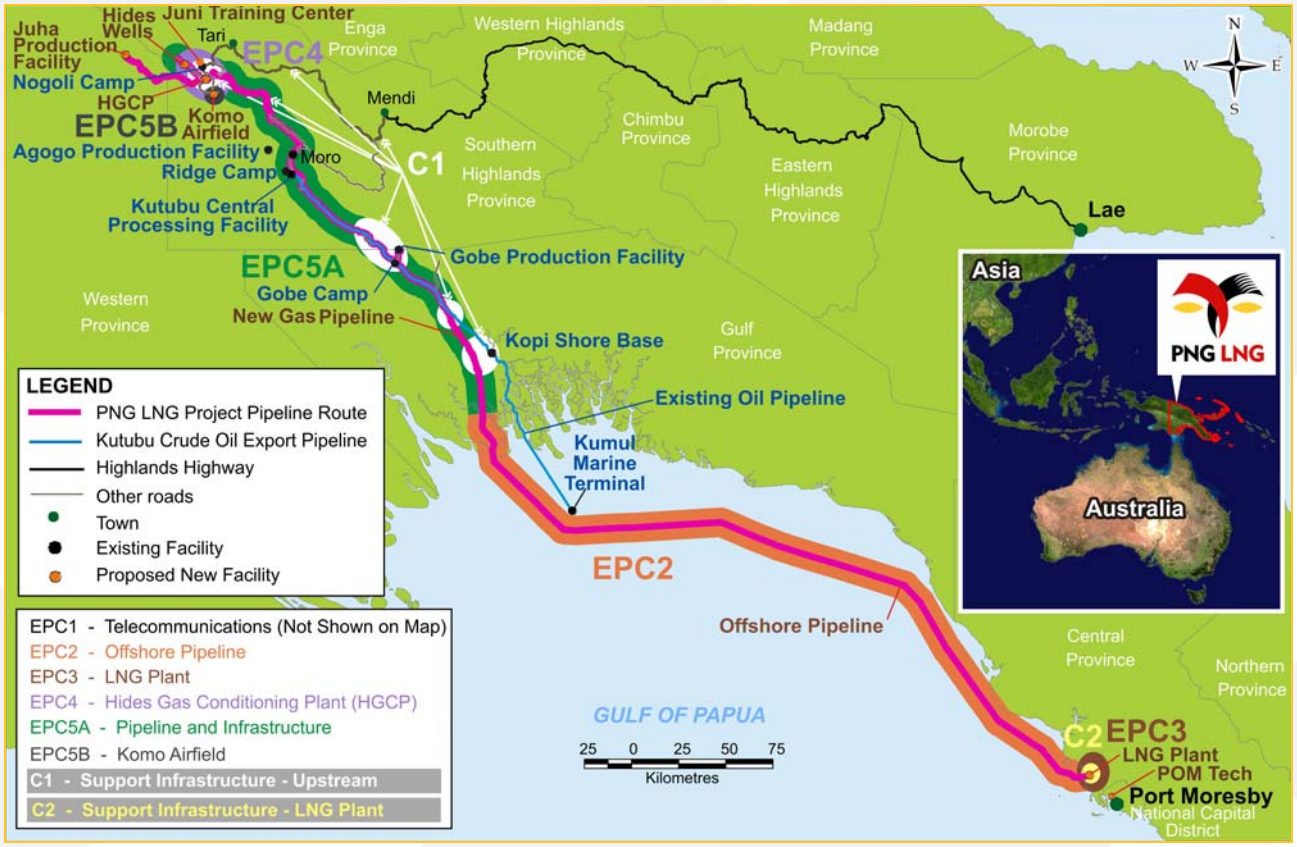


Table 2.1: Project contractors and work scopes

Contract	Description of work scope
Upstream Infrastructure (C1) Clough Curtain Brothers Joint Venture	▪ A program of infrastructure upgrades in advance of main construction activities in the Gulf Province and Southern Highlands Province. This program includes civil works in the areas of Hides and Kutubu Worksite (area of the existing OSL operations) and the upgrade or new construction of roads and bridges along two main logistics routes. These are the Southern Logistics Route Worksite (upgrade/new construction of roads and bridges along the Southern Logistics Route between Kantobo and Kopi) and Northern Logistics Route Worksites (upgrades to the Highlands Highway and 'Ring Road' from Lae to Poroma and Moro to the HGCP site). ▪ Camps – Gobe, Oiyarip (new camps), Nogoli (existing camp extension), IDT10 (Moro Camp refurbishment). ▪ Construction of landfill site at Hides.
Red Sea Housing	▪ Juni CTF. ▪ Camps - Kobalu, Gobe, Juni CTF, Moro Parker (all new camps).
LNG Plant Early Works (C2) Curtain Brothers Papua New Guinea Limited	A program of early works at the LNG plant site and environs: ▪ Upgrade of existing road from Motukea Island to LNG plant site. ▪ New bypass road (re-routing of existing public road, which transects LNG plant site). ▪ LNG plant site security fence. ▪ Tari Airport Upgrade.

Contract	Description of work scope
Telecommunications (EPC1) TransTel Engineering	▪ Installation of a telecommunications system to support construction and operations.
Offshore Pipeline (EPC2) 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 site landfall. ▪ System completion works including hydro testing, cleaning, and drying of the offshore pipeline.
LNG Plant and Marine Facilities (EPC3) Chiyoda and JGC Corporation	▪ Onshore aspects include LNG trains, condensate storage tanks, LNG storage tanks, boil off compressor, utilities, flare, waste disposal area, laydown area, permanent accommodations, construction camp, heliport and telecommunications. ▪ Marine aspects include LNG/condensate export berths, materials offloading facilities and tug berth.
HGCP and Hides Wellpads (EPC4) CBI Clough Joint Venture	▪ HGCP processing facilities. ▪ HGCP Industrial Park. ▪ HGCP Rotator Housing Community. ▪ Construction camp. ▪ Hides Wellpads.
Onshore Pipelines and Infrastructure (EPC5a) SpieCapag	▪ Onshore gas/condensate/MEG pipelines, flowlines, spinelines, above ground facilities (e.g. mainline valve stations, meter stations, pig launcher/receiver stations, cathodic protection equipment), power and optic telecommunications cables. ▪ Upgrades, repair, construction, and/or maintenance of existing and new access tracks, roads, and bridges for heavy load and construction logistics scenarios. ▪ Vehicle washdown stations at Kopi/Moro. ▪ Waste management facilities at Gobe/Kopi. ▪ Helipads for access to pipeline above ground facilities. ▪ Construction camps.
Komo Airfield (EPC5b) McConnell Dowell and Consolidated Contractor Group Offshore	Airfield comprising runway; navigation and landing aids; aircraft parking aprons; taxiway to runway; two helicopter pads; meteorological station; terminal building; hangar; freight and equipment storage area; fuel depot; fire station; boundary and security fencing; internal access road; external access road; powerhouse/airfield lighting equipment room; entrance guard house; pump house.
Aker Solutions	▪ Upgrades and modifications to Kutubu Central Processing Facility and Gobe Production Facility including gas dehydration, metering and condensate handling.
Nabors Drilling International Limited	▪ 10 new wells, two re-completions.
Permanent office and housing Company (to be determined)	▪ Construction of office accommodation with housing.
Port Moresby Construction Training Facility (POM Tech) Eos	▪ Construction of training premises.

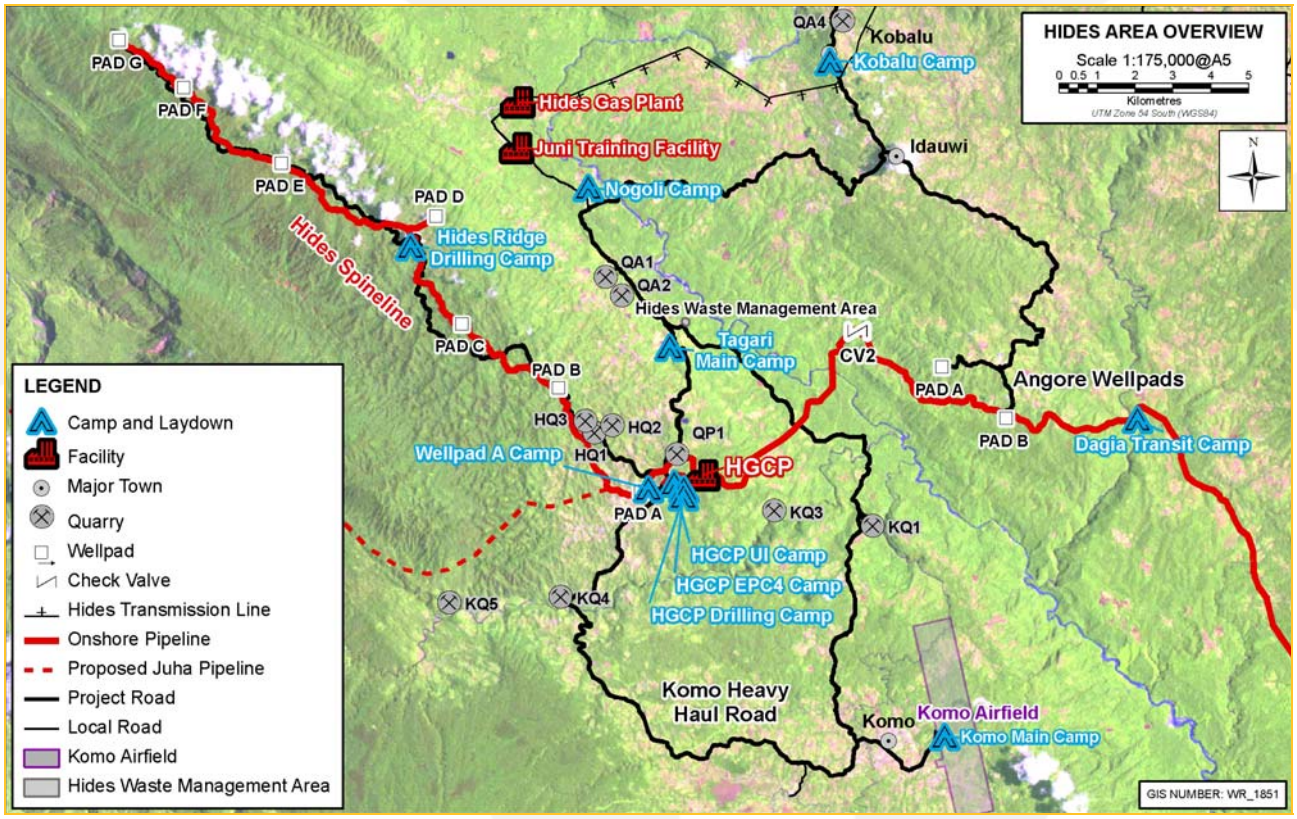
3.0 Construction Overview

With the completion of the Sales and Purchase Agreements for the long-term supply of LNG and financing arrangements with the Lender Group in March 2010, the Project moved into the full execution phase. As such, the Project is in detailed design and early stages of construction with a limited number of contractors working on the ground. Activities and progress are summarized in the sections below.

At this early stage of a project precise schedules are a challenge to define, but will be refined as construction plans develop. There were some delays in the schedule due to a variety of reasons (explained in more detail in the relevant sections below) and measures were put in place to remedy schedule slippage.

3.1 HIGHLAND AREA (DRILLING, HGCP, KOMO AIRFIELD, HEAVY HAUL ROAD, SUPPLY ROUTES)

Figure 3.1: Highland area Project activities (all phases)



3.1.1 C1 UPSTREAM INFRASTRUCTURE

The contractor commenced works on-site in early October 2009 with the start of construction of the Kopi Camp and geotechnical drilling investigations at one of the quarry sites.

Works progressed on a number of fronts:

Plate 3.1: Piling barge arrives at Kopi

- Highlands Highway:
  - Commencement of construction at ME-16 Lai River Bridge and re-grading of sections of the road along the Northern Logistics Route that will be used to mobilize equipment and materials to the Hides site.
  - Construction of Oiyarip Camp at Mendi was nearing completion.
- Hides/HGCP:
  - Ongoing construction of Wellpad A Camp and renovation of existing OSL IDT10 Camp.
- Southern Logistics Route:
  - Construction of two wharfs at Kopi: A piling barge was mobilized to Kopi and the first pile was achieved at the Kopi Wharf at the end of March 2010.
  - A floating hotel (Floatel) was mobilized to Kopi to house the workforce.
  - Preparation of laydown areas for plant and equipment at Kopi.
  - Ongoing construction of Gobe Camp (250 beds) and laydown area.
  - Upgrades to the Gobe – Mubi Road.
  - Works at Kwil Creek and Mubi bridges.

The schedule was challenged by logistics difficulties including a heavy seasonal rainfall induced wash-out on the Highlands Highway, which is used to access the Hides area, limited availability of early accommodation for workers and land access issues. Work is ongoing to address these issues.

3.1.2 HGCP AND HIDES WELLPADS

The EPC4 Project office was established in Brisbane during the first quarter. The Northern Logistics Route Bridge and Road Field Survey was completed as was the engineering verification and design review for the HGCP and the procurement of equipment with long delivery times.

3.1.3 TELECOMMUNICATIONS

The EPC 1 contractor undertook planning for execution in the first quarter.

Figure 3.2: Artists impression of HGCP and typical Wellpads

3.1.4 KOMO AIRFIELD

Plate 3.2: Earthworks trials area

The EPC5b Komo Airfield contractor commenced work in the field in February 2010. Preliminary earthworks were started as were geotechnical earthwork trials. Construction began on the pads to enable ground strength testing. Installation of the Pioneer Camp was started to provide housing for workers during the installation of the main construction camp. Clearing activities were started for the Heavy Haul access road.

In addition, the design for the road between the existing Komo Airstrip and proposed Komo Airfield received Government approval.

3.1.5 PROJECT MANAGED CONTRACTS

Construction of the Kobalu, Juni and Moro Parker camps and renovation of the existing OSL Camp were initiated. Construction of the Juni CTF was also progressed.

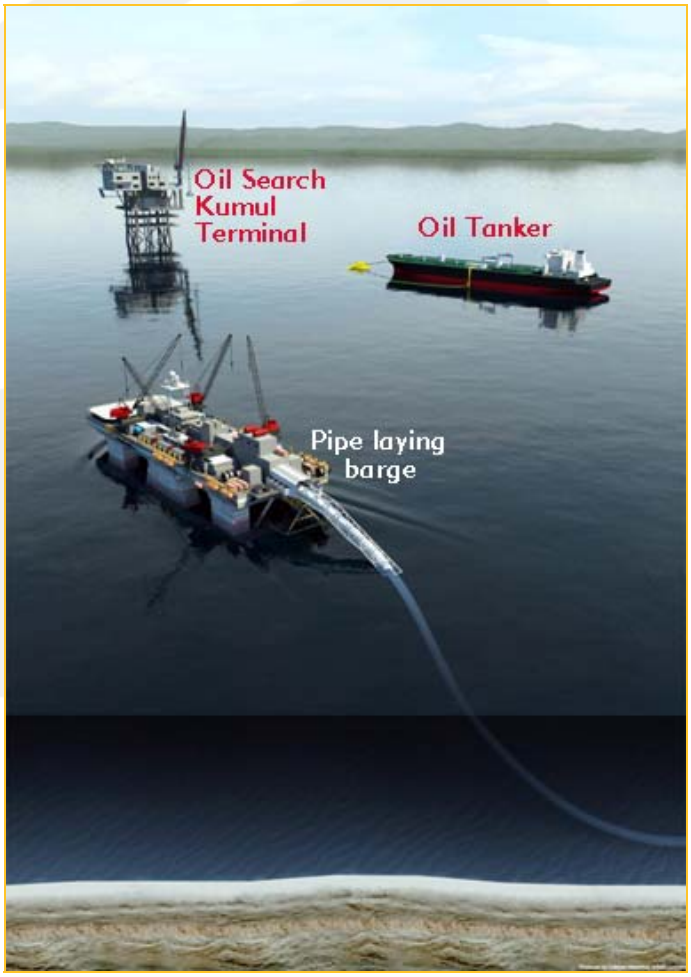
3.1.6 DRILLING

During the quarter, planning in preparation for the drilling program continued. In January 2010, the Nabors rig contractor was selected and detailed drilling design and well completions engineering were progressed.

3.2 ONSHORE PIPELINE

In February 2010, the EPC5a Onshore Pipeline established a project office in Brisbane. The contractor was undertaking detailed design and procurement work.

Figure 3.3: Offshore pipe lay off Kumul Platform (artist's impression)



3.3 OFFSHORE PIPELINE

In February 2010, the EPC2 Offshore Pipeline contractor completed mobilization to project offices in Singapore. Offshore pipeline work detailed design and procurement for long-lead time items was being progressed

3.4 LNG TERMINAL AND ASSOCIATED ACTIVITIES

3.4.1 C2 LNG PLANT EARLY WORKS

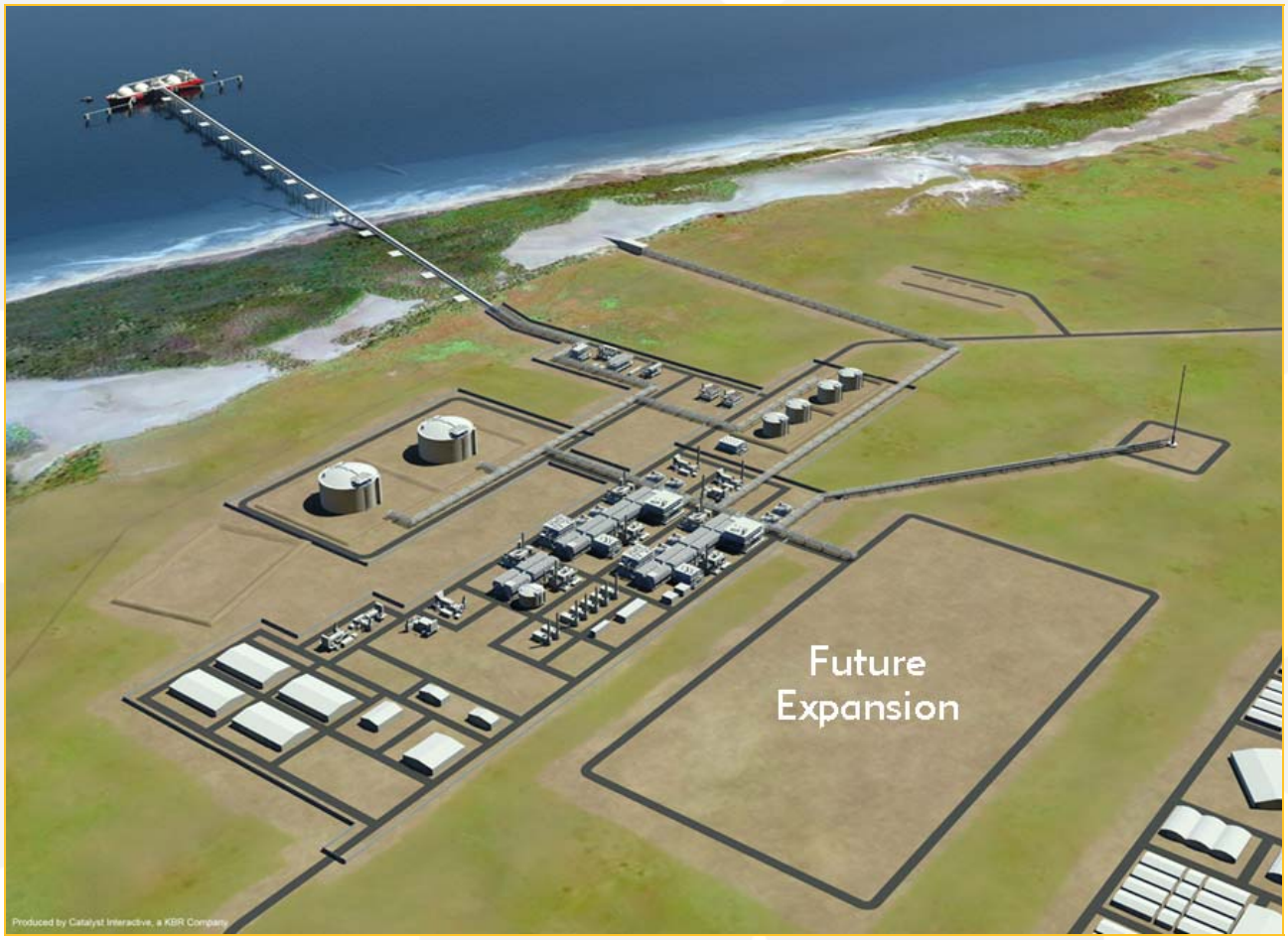
Construction works on the bypass road around the LNG plant site were started. Work on the upgrade of the Lea-Lea Road was progressed. Construction was initiated for the Pioneer Camp, which will accommodate workers during the construction of the main LNG plant operator camp. All accommodation modules were received and site grading completed. Installation of the LNG plant perimeter fence was also started.

3.4.2 EPC3 LNG PLANT AND MARINE FACILITIES

The LNG plant contractor progressed detailed engineering, procurement and planning at their main execution office in Japan. Site preparation is planned for later this year.

Plate 3.3: LNG plant site bypass road

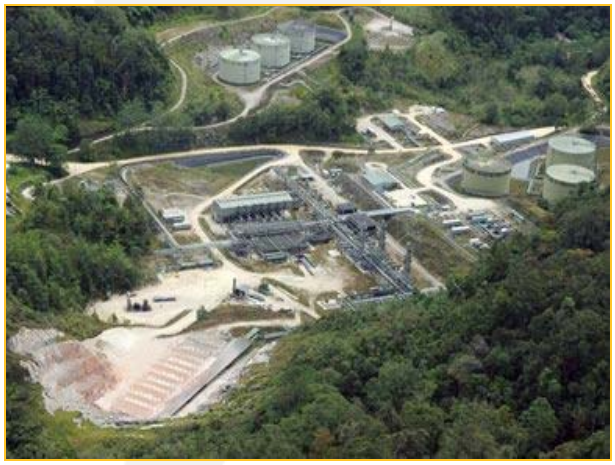
Figure 3.4: Proposed LNG plant layout



3.5 *ASSOCIATED GAS DEVELPOMENT*

Detailed engineering design work, equipment procurement and execution planning was ongoing in relation to the upgrades of the Kutubu Central Processing Facility and the Gobe Production Facility.

Plate 3.4: Kutubu Central Processing Facility



3.6 *POM TECH*

Site preparation for POM Tech started in late 2009. Works continued in this quarter on new staff housing/accommodation and building of the trainee dining facilities and classrooms. Work on the construction of POM Tech continues to progress.

Figure 3.5: Proposed POM Tech

Plate 3.5: POM Tech construction site

3.7 DEVELOPMENT SUPPORT – LOGISTICS/AVIATION

Development began on a supply base at Lae. This will act as a logistics base for the Project. Execution planning for Tari Airfield upgrades and the Moro aviation base were also initiated.

3.8 PRE-CONSTRUCTION SURVEYS

Table 3.1 provides an overview on the progress of environmental pre-construction surveys undertaken at infrastructure worksites during the quarter. These surveys address archaeology/cultural heritage, ecology, weeds and baseline water quality. The pre-construction surveys are a requirement of the Project's environmental permit. Sensitivities and any relevant mitigation measures identified as part of the surveys have been provided to the contractors.

The DEC reviews all pre-construction survey reports. Where a pre-construction survey report identifies sensitivities, that report must be approved by the DEC prior to commencement of construction at that worksite.

Pre-construction survey reports submitted during the first quarter are as follows:

- Bridge MR-04
- Bridge MR-01
- Bridge ME-15
- Quarry QA33
- Quarry QA32

Plate 3.6: Port of Lae

Plate 3.7: Biodiversity pre-construction surveys

- Kutubu – Central Processing Facility Bypass Road
- Ridge Camp Bypass Road
- Kikori River Bridge and Road Deviation, South
- Kikori River Bridge and Road Deviation, North

Table 3.1: Environmental pre-construction surveys

Location	First quarter 2010 activities
Southern Road Works	Cultural heritage survey completed at five sites.
Southern Road Quarries	Cultural heritage survey on Mubi River Quarry completed.
Highlands Highway	Ecology surveys completed at all eastern bridge locations and quarries. Cultural heritage surveys completed are: 15 bridges at Mendi, Tari and Magarima camps and seven quarries.
Highlands	Ecology surveys: Ridge Camp Bypass Road, Kutubu central processing facility bypass road, Kantobo. Quarries. Hides 1. Moran Peak. Iagifu.
Gulf Province	Ecology surveys: Gobe Tower. Kaiam. Mount Hee.
Pipeline	Pre-construction survey.
Hides	Cultural heritage surveys at: Roads: HGCP to Komo Airfield Heavy Haul Road, HGCP to Hides Quarry Road. Other facilities: Juni CTF, Kobalu Camp, Komo Airfield, Hides Wellpad A and Hides landfill and vehicle washdown. Telecommunications.
Lake Kutubu	Cultural heritage surveys at: Moro Parker Camp, Ridge Camp Bypass Road, Tamatigi Camp, LNG plant site bypass and Kantobu Camp. Telecommunications sites: Moran Peak and Iagifu.
Middle Kikori-Kopi-Gulf	Cultural heritage surveys at Gobe Camp. Other facilities: Kopi shore base, Kikori River bridge and road deviation, Kikori River laydown, Mubi River bridge, ferry, camp and laydown, Kwill Creek bridge. Quarries: Wah River, Kopi, Kikori River North and Kikori River South and Mubi River. Telecommunications site: Gobe tower, Kaiam and Mt Hee.
LNG Facilities Site	Cultural heritage surveys focusing on the area within the site security fence (i.e. the main disturbance area within the LNG plant site lease area) and along the LNG plant site Bypass Road corridor.

4.0 Safety, Security, Health, Environment and Social Management

4.1 APPROACH

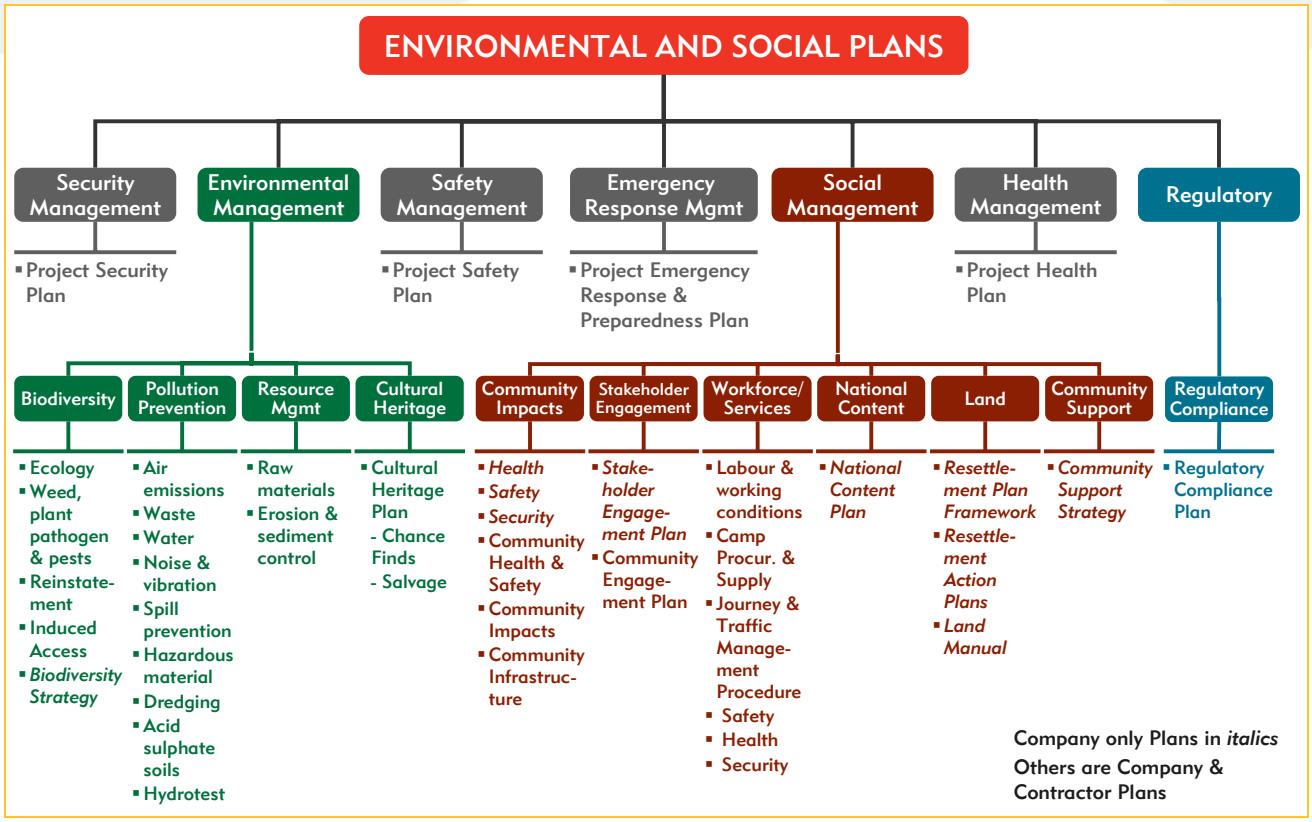
ExxonMobil's management systems regarding all safety, security, health, environment and social aspects underpin the Project, notably the proprietary Operations Integrity Management System and ExxonMobil Capital Project Management System requirements. ExxonMobil utilizes the Operations Integrity Management System on a worldwide basis to manage safety, security, health, and environmental aspects of its operations. ExxonMobil's Capital Projects Systems is a set of guidelines used to manage capital projects and continuously improve project management capability and performance through the systematic application of best practices.

ExxonMobil's Standards of Business Conduct form the framework by which the Company operates around the world. In this context, the relevant guiding principles and foundation policies in these Standards are the: Environment Policy, labor practices guidance, Health Policy, Statement of Principles on Security and Human Rights, Best Practices in External Affairs and transparency commitments.

Specifically, the safety, security, health, environmental and social aspects are managed through a series of Project Management Plans.

Environmental and social requirements are addressed in the Project's Environmental and Social Management Plan (ESMP). Safety, health, regulatory compliance, and security aspects pertaining to the Project are discussed in the Project Safety Management Plan, the Health Management Plan, the Regulatory Compliance Plan, and the Security Management Plan, respectively.

Figure 4.1: Environmental and Social Management Plans



The ESMP provides an overview of the potential environmental and social impacts associated with construction activities. It outlines environmental and social management, mitigation actions and monitoring requirements. The main document is supported by a series of discipline specific Environmental Management Plans and Social Management Plans as appendices. These Plans each describe the Project's position with respect to the mitigation measures which are designed to avoid or minimize impacts during construction, plus implementation of monitoring requirements. These also cover baseline and ongoing survey requirements. Roles and responsibilities are defined along with awareness and competency training needs. Performance Indicators are included with an assigned reporting frequency as well as other reporting and notification requirements.

Safety objectives, desired behaviors and performance targets, and the strategic approach for managing safety according to the established Project Execution Plans and Contracting Strategies are covered in the Safety Management Plan. This Plan describes key safety processes and safety improvement initiatives to be implemented by the Project teams (e.g. safety leadership, site safety categorization, leading indicators, safety governance model, and incident management).

Project requirements to ensure the health of the Project's workforce are identified in the Health Management Plan. This plan identifies the requirements to ensure the health of the Project workforce from public and occupational health hazards.

Security objectives and priorities throughout the Project's life cycle are covered in the Security Management Plan. This Plan aims to provide timely delivery of effective security measures and services to manage security risks to the Project. The overarching objective of security management is to protect people, facilities, information and other assets.

Compliance with applicable regulatory requirements is covered in the Regulatory Compliance Plan. This Plan defines the process for ensuring project teams are aware of, and address, regulatory requirements and obligations.

ExxonMobil implemented a variety of support and incentive programs for capacity building, collectively referred to as National Content development. The Project's NCP outlines the overall approach and objectives in conveying the social and economic benefits of the Project to local communities and the nation of Papua New Guinea. There are three components to the NCP – Workforce Development (*Section 8.1*), Supplier Development (*Section 5.1*) and Strategic Community Investment (*Section 6.5*).

Contractors and subcontractors are required to implement measures defined in the relevant management plans, as applicable to each contract scope of work. Contractors and subcontractors develop and implement their own management plans, supported by procedures, instructions and other documents as necessary to provide site specific implementation.

It is the Project's intention to avoid, when and where practical, those situations or incidents that could cause unacceptable, adverse biophysical, socioeconomic, or health impacts. For those situations or impacts that cannot be avoided, the Project has committed to undertaking appropriate mitigation measures.

Environmental and social management, and mitigation measures are compiled in a register and a tracking system is maintained by both the Project and contractors to include the details of environmental and social incidents, identify any remedial corrective actions required and track these actions. Incidents and follow-up actions are covered in subsequent sections of this Report.

The Project has established systems and processes dedicated to oversee the implementation of the management plans. The contractors are required to ensure sufficient resources are allocated to achieve effective implementation of management plans. In addition, contractors are required to ensure that their subcontractors allocate sufficient resources to achieve this aim.

4.2 CONTRACTOR MANAGEMENT

The majority of the contractors are in the design and pre-mobilization phase and are preparing plans and procedures (for example, safety, health, environmental, social and regulatory management plans) for execution of the work. The Project is supporting this effort through the review and approval of contractor documents with a view to ensuring these are prepared to a high standard and reflect the Projects requirements.

4.3 REVENUE MANAGEMENT

Developments such as this Project generate revenues that can foster economic growth. Transparency initiatives seek to strengthen accountability and good governance, reduce corruption, and promote greater economic stability.

ExxonMobil believes transparency initiatives should apply universally to all companies – publicly traded, private and State-owned – with an interest in a country's extractive industries; protect truly proprietary information and respect the laws of a host government or a company(s) contractual obligations. ExxonMobil supports initiatives such as the Extractive Industries Transparency Initiative, the Group of Eight (G-8) Transparency Initiative and the United Nations Convention against Corruption.

In Papua New Guinea, ExxonMobil is an active participant in transparency dialogue through membership of Transparency International and acknowledges the Government's bilateral Memorandum of Understanding with Australia to explore options for a sovereign wealth fund to benefit the people of Papua New Guinea.

4.4 MANAGEMENT OF CHANGE

The Project's Management of Change system is designed to ensure changes are appropriately reviewed and endorsed prior to implementation. Considerations include safety, security, health, environment and social management aspects, operability and maintenance, regulatory, cost, schedule and other identified requirements. Depending on a classification level, certain changes may require Lender Group notification in the Quarterly Environmental and Social Report (Class II changes of moderate significance), or for changes of more significance, Lender Group review is required prior to implementation (Class I).

For the first quarter, no Class I or Class II changes were required.

4.5 ENVIRONMENTAL AND SOCIAL MILESTONE SCHEDULE UPDATE

The financing agreements for the Project include undertakings and deliverables required during the development, construction and operations phases of the Project.

The outline below summarizes the status of the undertakings and deliverables in line with the Environmental and Social Milestones schedule.

- The Project is working with the DEC to finalize the Project Environmental Monitoring Plan, which entails modifications to monitoring provisions made in other appendices of the ESMP (e.g. Appendix 5 Water Management Plan). Once the DEC approval of this Plan is obtained, the Project will make the corresponding modifications to the ESMP appendices and formally submit a revised version to the DEC for approval. Following the DEC approval, the ESMP will be reissued and disclosed on the Project website (www.pnglng.com).
- The Biodiversity Strategy was produced in line with the target date of the end of the quarter (see *Section 11.0 Biodiversity*). Elements of the Biodiversity Monitoring Plan are due as an initial draft in the second quarter. Consultation on suitable projects and potential partners for consideration under the biodiversity offset element of the Biodiversity Strategy have been initiated in line with the milestone schedule.
- The Komo Airfield Resettlement Action Plan Study was completed in January 2010.
- The Independent Compensation Rates Survey was initiated in January 2010.
- The LNG facilities baseline survey, progressing prior to commencing construction activities (see *Section 3.7 Pre-construction Surveys*).
- A Project-wide access road register is maintained as required prior to the establishment of the first access road constructed as part of the Project.
- Development of a quarantine program, due at the end of the second quarter, is progressing.
- Work on the development of the Community Support Strategy and supporting plans is ongoing. This includes a Community Support Strategy Action Plan, due the second quarter of 2010 (see *Section 6.5 Partnerships*).
- Plans for follow-up to cultural heritage salvage excavations are progressing and will be reflected in changes to the Cultural Heritage Management Plan by the end of the second quarter (see *Section 13.0 Cultural Heritage*).

4.6 COMPLIANCE

The Project met its obligations under Section 7.2 of the financing agreement, which requires repeated representation and warranty, at each disbursement, that: "*the Project, including its development, construction and operations, is in compliance in all material respects with all applicable laws, rules, regulations and orders, applicable Environmental and Social Laws, the Environmental and Social Management Plan and Applicable Lender Environmental and Social Standards*" and that "*all material permits, authorizations, consents and approvals…for the development, construction and operation of the Project have been obtained and are in full force and effect or, are expected to be obtained…by the time they are necessary*".

5.0 Procurement and Supply

This section deals with supply of goods and services to the Project, in particular activities involved with development of national supply sources. It also touches on the logistics of supply routes.

5.1 SUPPLIER DEVELOPMENT

One of the cornerstones of the ExxonMobil National Content Strategy is creating economic opportunities for local businesses and investing in developing the capabilities of local contractors, suppliers, and vendors to help them meet global industry standards to qualify for contracts with ExxonMobil and other organizations. In the case of this Project, local capacity is promoted by helping suppliers meet Project supplier prequalification requirements, providing training for entrepreneurs, and creating business opportunities for local small and medium enterprises. Through the purchase of goods and services in Papua New Guinea and by developing long-term supplier relationships, the Project supports the development of the local business economy.

In addition, Papua New Guinea's Oil and Gas Act places a number of requirements on the Project with respect to supplier development. For example, it requires licensees: to use and purchase Papua New Guinean goods and services whenever they are comparable to foreign-sourced supplies. This is to encourage and assist Papua New Guineans to establish businesses to supply goods and services to the Project and to purchase vehicles, machinery and equipment through Papua New Guinea-based traders. This also encourages maximum use of Papua New Guinean contractors and subcontractors where services in Papua New Guinea are of a comparable standard to those from overseas. In addition, the Gas Agreement requires the Project to prepare a Supplier Development Program and report annually to the Papua New Guinean Government on implementation of that program.

The above requirements are addressed through the use of Lancos – companies registered with the intent of doing business, owned by the people of the same clan, or of clan origin, who use and/or have title to land in a specific area. The Project has pre-qualified a number of Lancos, as representative Lancos, to supply the Project.

Supplier development falls under both the Project's NCP and the Procurement and Supply Management Plan.

During the first quarter, the NCP was presented to the Papua New Guinean Chamber of Commerce.

The objectives of the NCP in regards to supplier development are:

- To optimize the participation of Papua New Guinean suppliers, especially representative Lancos, in the Project.
- To stimulate capacity building in selected Papua New Guinean business segments where sustainable activity is expected – such as support to the operations phase of the Project and/or non-Project related business.
- To develop local suppliers of goods and services to be economically attractive and competitive with imported goods and services for like quality.

During construction, the objectives will largely be met through the contractors. Contractors and their subcontractors will use representative Lancos to hire Papua New Guinean citizens for construction work, and will be responsible to assist in developing the capacity of these representative Lancos relating to their technical, operational and business management capabilities. The Project assisted in establishing two new representative Lancos for the Project – Hides Gas Development Corporation at Hides and Laba covering the four villages near the LNG plant site. As the work progresses, the Project will assist in establishing additional representative Lancos as needed.

Contractors will also be encouraged to use and develop the capacity of non-Lanco suppliers where practical, and where these businesses are potentially sustainable. In addition, contractors will use established Papua New Guinean suppliers of goods and services (that do not require capacity building), in accordance with the requirements of the Papua New Guinea Oil and Gas Act.

In order to facilitate the use of local companies, a supplier database has been developed and populated for use by contactors. This will be facilitated through the Enterprise Centre (see *Section 5.3 Enterprise Centre*).

Plate 5.1: Installation of fenceline at LNG site by Lanco workers

Plate 5.2: Lease line fence workers' safety briefing

The Project will work to promote the competitiveness of representative Lancos and other Papua New Guinean businesses selected on the basis of their sustainability over the life of the Project, and to encourage Lancos to adhere to sound standards in terms of business practices, quality, safety, security, health, environment and operations integrity. To this end, the Project has engaged a third party company to provide assistance to Lancos to develop their business skills.

The Project is working to progress hiring of a national workforce and is adding resources to facilitate Lanco–contractor negotiations for the hire of labor, security, catering, camp maintenance and transport services.

With the majority of the contractors still in an engineering phase, the reporting of supplier data is relatively limited and for this quarter is applicable to only one contractor.

Figure 5.1: Contractor monthly expenditure by major country (in millions, US Dollars)

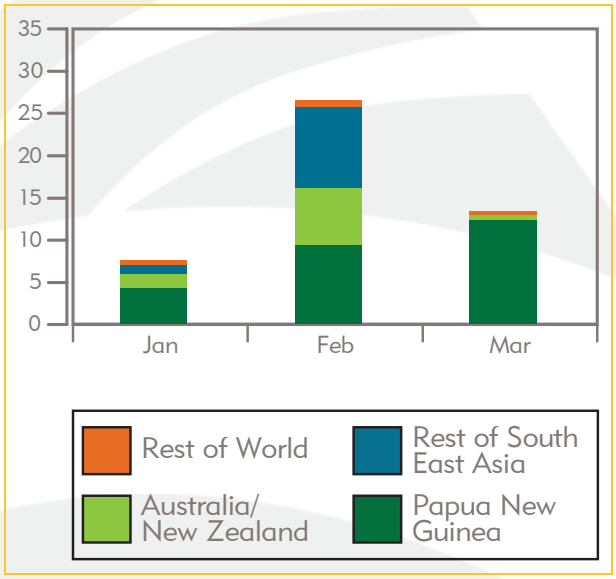
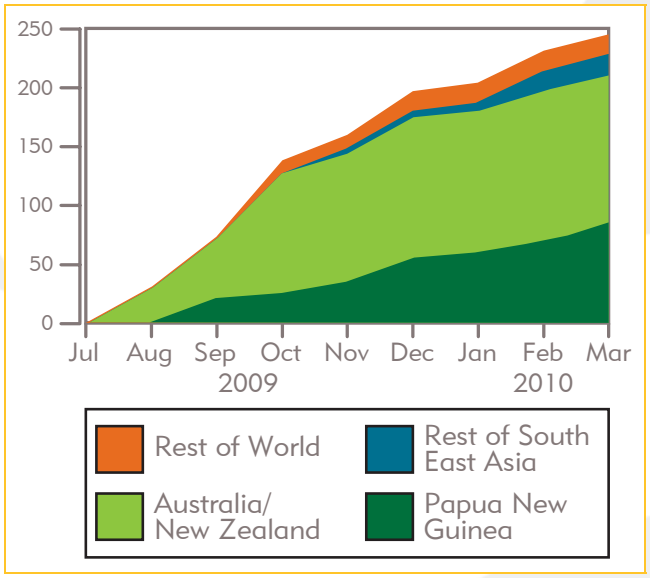


Figure 5.2: Contractor cumulative expenditure per major country (in millions, US Dollars)



5.2 *SUPPLY ROUTE ACTIVITIES*

There are two primary road supply routes for the Project: the Highlands Highway also known as the Northern Logistics Route, and the Southern Logistics Route. The Highlands Highway will serve as the primary supply chain for Project activities throughout 2010. Early Works around the Komo Airfield, C1 Upstream Infrastructure, EPC4 HGCP construction and drilling all require logistics support via the Highlands Highway in 2010. The high rainfall, and potential for landslides, presents challenges for transport along this route.

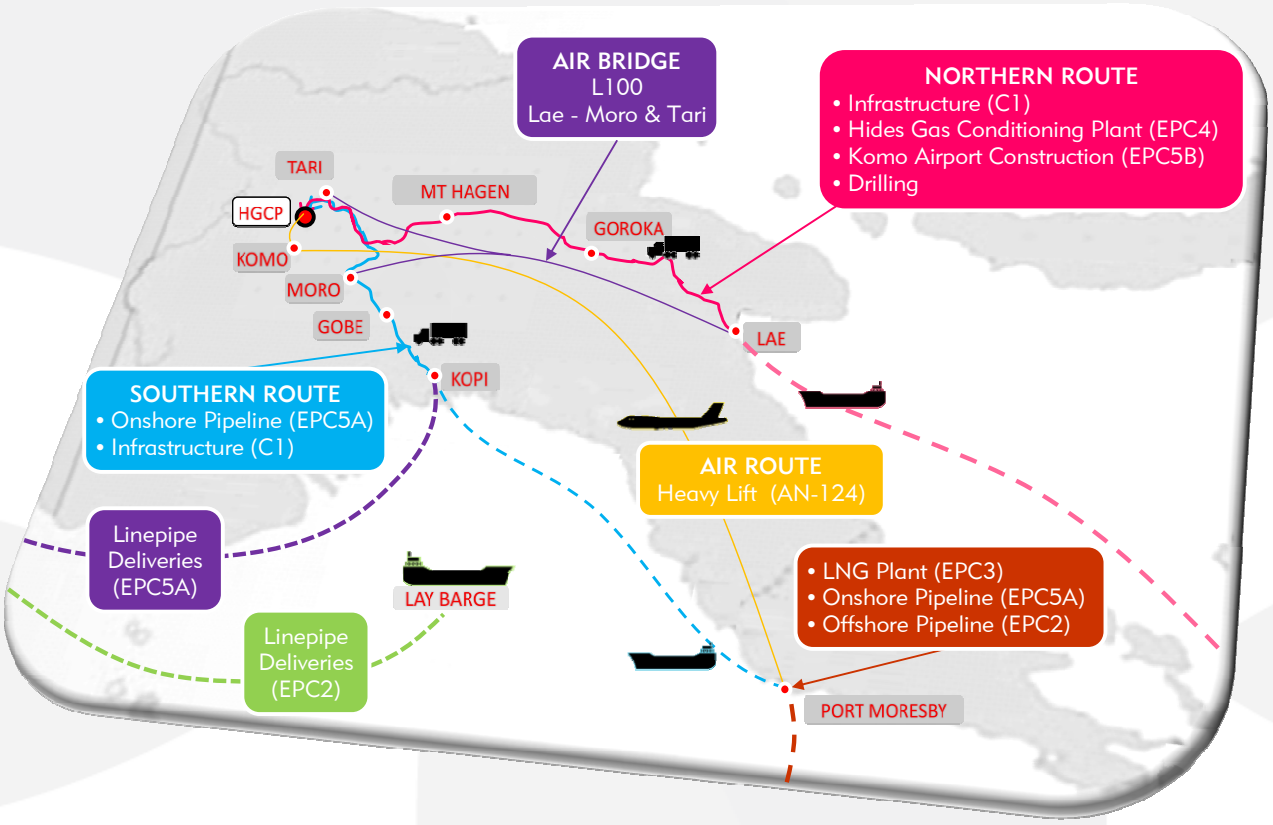
The Southern Logistics Route will support access to the Southern Highlands area for mobilization of the EPC5a Onshore Pipeline contractor and EPC5b Komo Airfield contractor. Materials and equipment will be transported by sea from Port Moresby to the wharf facilities at Kopi and then transported along the Project pipeline construction corridor to the Hides area.

The Project has logistics contractors, to manage logistics support from Lae to Hides along the Highlands Highway.

An air supply route from Lae to the existing airfields at Moro and Tari is being utilized and air transport from Port Moresby to Komo will also be used once the new Komo Airfield is operational.

There will also be water supply routes to Kopi.

Figure 5.3: Illustration of key locations along the Highlands Highway



5.3 *ENTERPRISE CENTER*

The Project has put an agreement in place with the Papua New Guinea Institute of Bankers and Business Management (IBBM) to set up an Enterprise Center, which will facilitate capacity-building of Papua New Guinean suppliers, strengthen their business management skills and provide them with reasonable assistance in seeking finance from Papua New Guinean banks. The IBBM is the longest established private sector training organization in Papua New Guinea and is recognized as the country's premier provider of pragmatic, cost-effective training in banking, business and finance management skills.

The Enterprise Center is an independent institution operated and managed by the IBBM and is located within their premises in Port Moresby. Its primary functions are to:

1. Facilitate communication between national suppliers, contractors and subcontractors by:
    - communicating business opportunities
    - maintaining a Papua New Guinean Supplier Database
    - facilitating access to Project information.

2. Build the capacity of national companies by:

- organizing seminars and assisting with business training
- providing business improvement services such as gap analysis, consulting and advisory services.

As part of the agreement the IBBM will construct a new building, which will be partly allocated to the Enterprise Center. Early access to the Enterprise Center was available from March 8 2010 in a temporary facility at IBBM. The new facilities are scheduled for completion later this year.

6.0 Communities

6.1 STRUCTURE AND RELATIONS

The impact of Project construction activities on local communities, including social interactions, relationships and the community structure itself, are addressed in this section. Several of the management plans are relevant in this regard:

- Communities Impact Management Plan – in part deals with issues that may affect the structure of, and relations within, communities.
- Community Engagement Management Plan – covers community relations, grievances and disruption.
- Camp Management Plan – deals with avoiding or reducing impacts on the community and maintaining constructive relationships between local communities and workers' camps.
- Engagement with communities is covered in *Section 14.0 Stakeholder Engagement*.

During the first quarter, the Project initiated the development of a cross-cultural training package to be used by contractors and subcontractors to raise awareness of health, safety and security issues as well as the standard of conduct expected when engaging with the community. When camps are operational, Camp Rules and a Code of Conduct will be developed and appropriate training provided.

The following sections highlight progress in relation to selected aspects of community structure and relations in the first quarter of 2010.

6.1.1 THIRD PARTY GRIEVANCE PROCEDURE

Plate 6.1: Canoe on Kikori River

The Project has developed a Third Party Grievance Procedure with the objective of receiving, responding to and addressing grievances made towards the Project or its contractors and subcontractors. The Procedure will be available to local populations residing in the Project impact area and other stakeholders directly affected by the Project. Grievances related to resettlement will also be managed though this Third Party Grievance Procedure. Workforce grievances will not be managed through this Procedure, but rather through the worker grievance mechanism of their respective employer (see *Section 8.4 Worker Welfare and Conditions*). The Project will disclose information about the Third Party Grievances Procedure to potentially affected persons and organizations. Stakeholders will be informed about the grievance process, including the transparency and fairness of the process, and will be provided with both verbal (via regular stakeholder meetings) and written (newsletters, website, posters, etc.) updates.

During the first quarter, the Project developed the Third Party Grievance Procedure and undertook internal training to ensure familiarity with this Procedure. Land and Community Affairs staff on the LNG plant site and three-quarters of the upstream Land and Community Affairs staff have undergone training. Roll-out of the process will continue in the second quarter. During this quarter, grievances were received verbally and in letter format through a number of mechanisms particularly the Land and Community Affairs and resettlement teams. Most were dealt with verbally, compensation paid as appropriate and the case documented.

6.1.2 PIIM STUDY

Starting in October 2009, the Project undertook a preliminary PIIM Study. The objective of the Study was to consolidate understanding of Project activities and the schedule across the impact area, identify variables, drivers, and locations or "hot spots" for population influx. It was also to identify areas for further attention. This facilitates the development of management and mitigation measures that address social risks and impacts associated with PIIM in the context of the Project area and Papua New Guinea. Lessons learned from other studies on in-migration were taken into account in the study.

Plate 6.2: Land cleared for supermarket at bridge north of Kopi

Distinct areas where Project activities may facilitate or attract in-migration have been identified. These are the:

- Highlands Highway from Lae to Hides
- pipeline construction corridor
- LNG plant site and five nearby villages of Papa, Lea Lea, Porebada, Boera and Buruni.

The nature of logistics arrangements for transporting materials and equipment from Lae to Hides via road and air-bridges has created awareness and interest in Project activities. Current improvement of the roads and bridges along the Highlands Highway, and the attraction of increased flights into the Tari and Mendi airstrips (and in future the Komo Airfield) may provide added incentives for population influx. The Study identifies the outcomes of improved infrastructure in expediting access to the Project area for in-migrants.

The planned Onshore Pipeline construction and improved access to facilities at Kopi provides incentives for population influx. As construction camp facilities, Project roads and supporting infrastructure develop in remote or lightly populated areas, communities are attracted to perceived benefits and the possibility of employment or access to services. This Study identifies these locations and describes the risks and impacts of population influx, and proposes future management and mitigation measures.

Plate 6.3: In-migration at Poroma

As the national capital, Port Moresby attracts in-migrants from throughout Papua New Guinea as people seek out employment opportunities in large growth areas. The increased presence of the Project in Port Moresby and the impending construction of the LNG plant have provided increased incentive for population influx into the city. The Study looks at population influx and the prevalence of squatter settlements in Port Moresby where previous in-migration has been concentrated. It considers the roles of Government, the Project and other developers in spatial land use planning to manage future population growth.

Additional analysis and engagement with the Government to address land use planning as well as assessments of logistics activities are planned in order to develop the Project's approach for managing and mitigating the impacts of PIIM.

6.1.3 FISHERIES SURVEYS

Plate 6.4: Fish Identification Workshop

The Project is engaging with the University of Papua New Guinea (Port Moresby) to undertake a survey of fish catch landings at each of the four villages surrounding the LNG plant site. The purpose of the survey is to understand and establish baseline catch data (such as number, size, weight and species caught) in order to understand the importance of fisheries for household consumption and for market. This will be of value in evaluating any potential future claims concerning commercial or artisanal fishing and determining an appropriate type and level of compensation if warranted.

Preparations for survey implementation have been underway for several months. Fish catch landing survey trials are planned from late April/early May 2010 involving each of the villages surrounding the LNG plant. Senior University of Papua New Guinea Biological Sciences staff responsible for the implementation of the survey and the Social Programs Fisheries Advisor are planning and supporting the survey implementation. The survey will be undertaken weekly in each of the four villages after the trials are completed.

Plate 6.5: Fish at the market

Meetings have been held at Porebada, Boera, Papa and Lea Lea by survey leaders to describe the purpose and method of the fish catch landing survey and to secure approval and support for survey implementation from community leaders. There has been widespread support for the fisheries survey from the weekly village meetings attended. Land and Community Affairs representatives have been key advocates and supporters of the fisheries survey reinforcing important information about survey implementation to community groups.

The Social Programs Fisheries Advisor at the University of Papua New Guinea has run fisheries species identification workshops. These have included staff and students who will be involved in survey implementation. The fisheries survey senior team will continue to attend weekly meetings at the four villages to monitor support for the fisheries survey and provide feedback and share information about fisheries resources to ensure communities benefit from the survey data.

6.1.4 HIGHLANDS HIGHWAY AND SOUTHERN LOGISTICS ROUTE SOCIAL ASSESSMENT

This quarter the Social Programs team conducted social assessments to establish baseline data for the Highlands Highway and Southern Logistics Route and identify social impacts on communities within the impact areas and social risks associated with these Project activities. Assessments focused on identifying potential social risks or social impacts on communities and identifying additional management and mitigation measures that may be required. These management and mitigation measures will be aligned with the procedures and processes employed by the contractors managing logistics for the Highlands Highway (see *Section 5.2 Supply Route Activities*).

6.2 INFRASTRUCTURE, SERVICES AND RESOURCES

This section and the Community Infrastructure Management Plan deals with issues such as: changing road conditions, road access, river access, disruption to electrical supplies, water supply and distribution, and telecommunications. In addition, specifically in relation to infrastructure and services, the Community Impact Plan covers issues relating to topics that include improved road conditions, marine and river vessel movements, fire, emergency services and response, water quality and quantity, raw materials and produce availability and price distortions.

The process of documenting the baseline condition of existing infrastructure such as roads, bridges and wharfs that will be used during construction has begun. This information will allow an evaluation of the Project impact on infrastructure. Further surveys are needed to identify infrastructure, services, drainage and irrigation systems that may be impacted.

The local community will be advised when the Project plans to undertake any construction activities which require the temporary blocking or closure of roads, the trafficable river course or access to a coastal waterway or traditional fishing ground. If the planned activities are to be carried out over an extended period, provision will be made to allow for public access for a set period of time during the day or the provision of an alternate route. There were no road closures in the first quarter. The bridge constructions on the Highlands Highway have been completed by re-aligning the new bridge, while keeping the existing bridge open throughout the site works.

Plate 6.6: Bridge works

Plate 6.7: Kaiam Ferry

Plate 6.8: Pigs are valuable livestock

Relocation of overhead power lines, with the consent of Papua New Guinea Power, has been undertaken as part of the road works along both the Highlands Highway and the Mendi Road relocation. During the relocation, power was briefly interrupted, which is not unusual in the area.

Claims concerning damage or loss alleged to have been caused by the Project or its contractors during the construction and operation of the Project e.g. injury or loss of livestock, will be fully investigated and compensation paid if the claim is substantiated via the Third Party Grievance Procedure. Substantiated claims for which compensation is due will be paid at the current local market rate in the case of crops and livestock and at an appropriate rate for other items.

6.3 *VERIFICATION, ASSESSMENT AND AUDIT*

No audits were undertaken this quarter. Internal audits of contractors are planned during the remainder of 2010.

6.4 *HEALTH AND SAFETY*

Plate 6.9: Health awareness education

Safety is the Project's first priority and it is committed to undertaking activities in a manner that protects the safety of the communities in which it operates. The Journey Traffic Management Procedure and the Community Health and Safety Management Plan address community safety. Community health is covered by the Project Health and Safety Plan, the Community Health and Safety Management Plan, Project Health, Safety and Security Plan, some aspects of the Community Impacts Management Plan and contractors' plans. The scope for these documents relating to community health is outlined in Table 6.1.

Table 6.1: Scope of Project Health and Safety Plan, Community Health and Safety Management Plan, Project Health, Safety and Security Plan, and Community Impacts Management Plan

Project Health and Safety Plan	**Project to implement**	Primarily intended for an internal Project audience and accordingly addresses internal health objectives. Describes the processes and procedures that will be applied to achieve the internal occupational (worker) health related objectives, including resources and responsible organizations.
Community Health and Management Safety Plan	**Contractors to implement**	Focuses on contractor/ community interface, potential health impacts that may arise from this interaction and corresponding mitigation measures. The intent is to specifically describe expectations and responsibilities of the contractors and it is to be used by contractors as a basis for preparing their own Contractor Implementation Plans.

Project Health, Safety and Security Plan	**Project to implement**	Specifically focuses on the mitigation of potential community health impacts that may be attributed to the Project and its workforce, and are considered to be the responsibility of the Project. Unlike the Contractor Community Health and Safety Management Plan, the scope is not confined to Project work sites (e.g. it includes health and safety issues associated with camps). The Plan includes issues relating to worker health management as there are clear associations with disease transmission from the workplace to the communities and from the communities back to the workplace.
Community Impacts Management Plan	**Contractors to implement**	Deals with potential impacts on individuals and communities caused as a result of contractor construction activities. Includes, but is not limited to, community health and safety issues (e.g. construction-related traffic).

The Community Health Program is focused around 12 Environmental Health Areas (EHA) identified in the IFC Performance Standards to provide a standard framework for considering community and household level impacts. The EHAs are detailed below with an activity status for the first quarter.

6.4.1 EHA 1 (HEALTH SERVICES INFRASTRUCTURE)

Work progressed well in the first quarter, with the establishment of a Community Emergency Response Plan via a partnership with OSL and the provision of the health requirements documentation to all contractors.

The Institute of Medical Research will conduct population based surveillance.

6.4.2 EHA 2 SEXUALLY TRANSMITTED INFECTIONS, HIV/AIDS

Curable sexually transmitted infections are under the Demographic Surveillance System health surveillance with HIV/AIDS as a separate but inter-linked program.

6.4.3 EHA 3 VECTOR RELATED ISSUES

EHA 3 focuses on Malaria, Lymphatic Filariasis and Dengue Fever. As part of the ExxonMobil's Long Lasting Insecticide Treated Bed Net Education and Distribution Program to fight Malaria, this quarter the Project collaborated with the Rotarians Against Malaria project on logistics planning. This includes public announcements, community education, training of village volunteers and bed net distribution as part of their ongoing program. Project sites have been added to the National Malaria Surveillance Program via Institute of Medical Research and plans are under development for enhanced Malaria diagnostics at relevant Project community clinics. Over 1,000 community members have been tested for Malaria under the Resettlement Program, and if positive, treated (see *Section 7.2 Resettlement*). Lymphatic Filariasis education and case finding is a component of the Bed Net Distribution Program implemented through the Rotarians Against Malaria Project, supported by the Project. For Dengue Fever, rapid diagnostic tests are to be introduced into Demographic Surveillance System clinics as part of health surveillance fever evaluation.

Plate 6.10: Bed net

6.4.4 EHA 4 VACCINE PREVENTABLE DISEASES

A pilot study proposal is under development for respiratory diseases and a proposal for expanded vaccination coverage in Project areas under evaluation. The immunization program for workers is covered under *Section 8.2 Health Management*.

6.4.5 EHA 5 WATER, SANITATION AND WASTE RELATED DISEASES

EHA 5 is partially covered by the ESMP and worker health management. Other aspects of this EHA are under evaluation or development e.g. worker education and assistance for adequate design of sanitation facilities.

6.4.6 EHA 6 FOOD AND NUTRITION RELATED ISSUES

The effects of inflation of food prices as a result of Project demands will be monitored through the Demographic Surveillance System census which measures such aspects as anaemia and anthropometric measurements (height, weight and age). Over 1,000 individuals in Komo and HGCP were surveyed for anaemia and anthropometric measurements. Plans for worker education are under development. Catering and waste management facilities and services are audited quarterly.

6.4.7 EHA 7 ACCIDENTS AND INJURIES, COMMUNITY SAFETY

EHA 7 is dealt with under the Community Health and Safety Plan (see *Section 6.4.13 Other Health Management*).

6.4.8 EHA 8 SOCIAL DETERMINANTS OF HEALTH

An annual 'social determinants of health survey' is planned through the Demographic Surveillance System. The Demographic Surveillance System also surveys core welfare indicators and alcohol use.

6.4.9 EHA 9 RESTRICTED MATERIALS EXPOSURE

EHA 9 is being managed through the ESMP, the Vector Control Program and the safety team.

6.4.10 EHA 10 RESPIRATORY/HOUSING CONDITIONS

A Tuberculosis prevention and control program is underway and is further discussed under EHA 1.

6.4.11 EHA 11 NON-COMMUNICABLE DISEASES

The community will receive blood pressure, glucose and Body Mass Index monitoring at Demographic Surveillance System sites. These are standard ways to track non-communicable diseases and change in nutritional related outcomes. These indicators are prominent as communities undergo the transition in growth rates and the burden of disease moves from infectious to non-communicable diseases. This is invariably associated with changes in income.

6.4.12 EHA 12 VETERINARY MEDICINE/ZOONOTIC DISEASES

Implementation mechanisms for the management of EHA 12 covering veterinary medicine and zoonotic disease that can be transmitted from animals to humans are under evaluation. One option under consideration is addressing soil-transmitted parasitic worms especially in the coastal/LNG villages where the burden of disease in school age children is extremely high.

6.4.13 OTHER HEALTH MANAGEMENT

As part of the resettlement activities (*Section 7.2 Resettlement*) over 1,000 individuals have been surveyed from a health perspective with a baseline status determined.

6.4.14 SAFETY

In considering workplace safety, the Project is taking steps to identify potential hazards to the community and to avoid or limit exposure to these hazards. As a primary measure, work sites (apart from road upgrades) are fenced off. Additionally, prior to beginning any work, a Job Hazard Analysis is undertaken by the contractor. This includes an evaluation and mitigation actions for community safety issues such as local community members entering work sites and associated safety issues. In the Hides area, the Job Hazard Analysis is read out in Huli (the local language) and the employees sign off on the English language copy. At meetings held prior to the start of work, spotters are reminded to look out for community members in the work area.

Community road safety is a focus area for the Project, particularly since roads used by the Project are frequently the only means of access to local communities. This means there are pedestrians on the road as well as local traffic. The Project's Journey and Traffic Management Procedure is an overarching document related to journey management and safety. In addition, for some areas there are site specific Traffic Management Procedures such as for the Highlands Highway. The Job Hazard Analysis takes into consideration traffic and pedestrian interaction with construction activities and vehicles. In this first quarter, a number of traffic management procedures were put in place. For example, road signage including "Prepare to Stop" signs were positioned ahead of work sites and traffic controllers were positioned near work sites. In the Mendi area, fencing was erected around a school located between two bridge sites where work was taking place. Other activities aimed at safety management included random alcohol and drug testing of drivers and the use of attendance vehicles to warn of convoys approaching.

The Project addressed poor visibility along roads as a result of high grasses at the road sides by grass clearing – local workers were carrying this out in the Mendi area and work is ongoing to make arrangements for cutting in the area between Nogoli and the junction of Komo and the Hides Gas Development Corporation site. Land and Community Affairs staff discussed road safety with local communities whenever possible, and the Project Stakeholder Engagement team talked about traffic safety with all communities that were engaged along the Highlands Highway. Further collaboration with local communities on education about traffic and pedestrian safety will be implemented in other areas.

Plate 6.11: Escorted convoy

As part of the management of community safety, monthly reporting on the number of driver training sessions and hours worked was undertaken by the Project and contractors. There was also quarterly reporting on the number of incidents per vehicle kilometer travelled.

Performance Indicators to measure implementation and effectiveness are yet to be defined for the Journey and Traffic Management Procedure. Indicators such as vehicle incidents that cause damage to assets or injury to personnel and vehicle related security incidents will be measured to determine incident trends and actions for improvement to be implemented. Audits will be performed to determine compliance with the Procedure and will include a review of driver training and compliance.

Plate 6.12: Mendi Road improvement

Plate 6.13: Roadside grass cutting on behalf of the Project by the community

6.5 *PARTNERSHIPS*

Community Partnerships are a critical aspect of the Project's citizenship. The Project engages with communities through programs and support that are part of the operating agreement, as well as through voluntary initiatives focused on health, education, environmental conservation and supporting economic opportunities for women. Through many of these initiatives, the Project strategically focuses investments to reduce known barriers to development and promote economic growth.

The Community Support Strategy provides strategic direction for initiatives designed to promote the development of conditions conducive to enhancing livelihoods of Papua New Guinean communities. This Strategy identifies the need for a suite of community support and development initiatives in addition to the activities already described in the existing Social Management Plans[1]. In order to develop these initiatives in compliance with the IFC Performance Standard 7 (Indigenous Peoples), a significant amount of analytical work is being completed, including an assessment of:

- community livelihood assets and vulnerabilities
- existing structures, activities, capacity and lessons of both Government and non-government bodies relevant to the Project benefit area
- business and livelihood opportunities for Project area communities
- risks of in-migration (see *Section 6.1.2*).

[1] The Benefit Sharing Agreement Process (Government-owned); Company Resettlement Policy Framework and Resettlement Action Plans; National Content Plan; Company Stakeholder Engagement Plan; Company Community Health, Safety and Security Management Plan; and the Project and contractor Social Management Plans (Construction).

This analytical work will underpin a Community Support Strategy Action Plan to be produced later this year.

A primary component of the Community Support Strategy Action Plan is the Community Development Support Program. This Program will describe activities the Project will undertake to invest in community development. To ensure Community Development Support activities are developed and implemented in a culturally appropriate and sustainable manner, the following principles will be adhered to:

- Maintain ongoing relationships with communities that are informed, empowered and ultimately fully accountable for their own development.
- Support communities and local government in defining their own development agenda through participatory planning and decision-making.
- Encourage self-reliance and reinforce local institutions and process, positioning the Project as a partner rather than the principal activist in local development – avoid creating a relationship of dependency.
- Where possible involve community, government and the Project.
- Ensure all social investments have a sound business case.
- Create a viable exit and handover strategy early.

Table 6.2 provides an update of Community Support Strategy activities and progress up to the end of the first quarter.

Table 6.2: Community Support Strategy status update

Commitment	Timeframe	Progress
Sustainable Livelihood Assessment	October 2009 – June 2010	On target. Field Work completed. Draft reports being developed.
Stakeholder Consultation and Visioning (to determine the operating principles of the Project)	November – December 2010	Ongoing stakeholder consultation through the development of analytical work, planning to present Vision (and draft Action Plan) to stakeholders in upcoming consultation workshops.
Industry/Sector Analysis (on the key sectors that contribute to livelihoods along the pipeline)	November 2009 – June 2010	On target. Third phase field work scheduled with draft analysis to follow.
Establishing Community Development Forums	November 2009 – June 2010	Forums development in progress with plans to rehabilitate Ward Development Committees (approximately 90) under Papua New Guinean law and link to sub-regional and regional development/leadership forums and local level government. Mapping of the Project impact area underway. Community awareness has started in Kikori, Kutubu and at the LNG plant site.

Commitment	Timeframe	Progress
Stakeholder Engagement of Vulnerable Communities	Ongoing	Identification of, and engagement with, vulnerable groups undertaken during livelihood assessment. Identification will ensure specific actions to include vulnerable groups when establishing the development committees and other Community Support Activities.
Community Cluster Local Development Plans	January – October 2010	On track. Anticipate community capacity to influence rate of planning with some communities moving more rapidly than others.
Consolidation of Information and Stakeholder Workshops	October 2010	Livelihood assessments, institutional and industry reviews to form a basis for Community Support Action Plan, which will be presented to primary stakeholders through planned workshops.
Programs and Budget Planning	November 2010	Developing draft plan.
Final Community Development Report for Public Disclosure	December 2010	Expected August 2010.
Implementation of Development Support Programs	May 2010 onwards	In practice, implementation of the Community Support Program has already started and benefits are accruing via engagement with communities and capacity building.

The Strategic Community Investment Program focuses on voluntary investments in education, health, sustainable livelihoods and environment that builds the capacity of local communities and improves their socioeconomic environment. This is primarily in the Project impact area, though other program areas may be included. The selected Program areas reflect the priorities identified in the Papua New Guinea Government's Medium-Term Development Strategy as well as the findings and recommendations of the Social Impact Assessment and two Health Impact Assessments.

To deliver this Program, the Project will work to strengthen the capacity of NGO currently operating in the Project impact area and encourage other NGO to enter the Project impact area to help deliver the community investments. Some Strategic Community Investment initiatives, such as water and sanitation projects, may be undertaken by service providers rather than a NGO. The Project will engage communities in the implementation of projects under the Strategic Community Investment Program to help ensure community ownership of, and involvement in, these projects to ensure the benefits are sustainable.

During the first quarter, strategy and execution plans were developed for early implementation of Strategic Community Investments based on input from Land and Community Affairs Officers. Screening of these proposals was undertaken and several were assessed to be valuable to the target communities and consistent with the Community Support Strategy.

At the close of this quarter, a number of projects across focus areas were being considered for implementation:

Education

Much of the Project impact area is difficult or even impossible to access without specialized transportation, including helicopter or other services. In partnership with AusAID and local District Women Facilitators, the Project will provide logistical support in distributing primary school textbooks to schools throughout the Project area. Support will also be provided to the commercial radio station FM100 to enable the installation of a transmitter at Mendi to expand radio coverage.

Health/Community Support

The Project has also committed to support a number of projects including Cheshire Homes and City Mission that serve disabled and orphaned/abandoned children, respectively.

Women's Economic Empowerment

Studies show that investing in the education and training of women and girls delivers high returns for social and economic development, including lower infant mortality and child mortality rates, disease prevention and higher income productivity rates.

Plate 6.14: Classroom

Plate 6.15: School children in class

In March 2010, ExxonMobil sponsored presentations by the banker, economist and Nobel Peace Prize winner Muhammad Yunus in Australia on the importance of the private sector partnerships in solving social and economic problems.

The Project sponsored networking and exhibition events for local women entrepreneurs and professionals. In February 2010, the first inaugural Papua New Guinea Women in Business Expo convened entrepreneurs from the informal sector to showcase their products, provide networking opportunities and to share best practices. Additionally, the Project sponsored the participation of 10 women at the March 2010 Papua New Guinea Women in Petroleum and Mining Conference, a similar networking and best practices sharing event that convenes female workers in the extractives industry.

7.0 Compensation and Resettlement

This section considers the compensation to land owners and users in order for the Project to obtain land access. It also covers resettlement activities including physical and economic displacement.

7.1 COMPENSATION

The Project has a well-defined land access process based upon Government requirements including specific compensation levels for the use of the land; damage to gardens, cultivated trees, man-made improvements or naturally occurring bush, vegetation, birds, animals or fish, or effects on the quality of water supplies.

Plate 7.1: Household fruit trees

Plate 7.2: Goods for sale at the market

As part of the resettlement process, the Project Land and Community Affairs team is responsible for negotiating an In-Principle Compensation Agreement with affected landowners/users. This Agreement contains details of the type of compensation to be paid (e.g. damages and/or occupation fee) dependent on the type of operation and the agreed compensation rates. In reaching such agreements, the Land and Community Affairs team follows Project processes and procedures established to facilitate land access for construction in a timely and transparent manner. This process ensures compensation amounts are correctly determined, compensation is paid to the proper landowners, and the process is transparent.

In the first quarter, compensation payments were made for such works as land clearing for bridge maintenance activities and for road works. Compensation has also been paid for the relocation activities at Komo Airfield and the HGCP site where earthworks are necessary.

To date, grievances associated with compensation are due to disputes between members of clans as to who should rightfully receive payments or relate to delays in payments being made due to landownership disputes. Payments will only be made when a land dispute is resolved through mediation or when disputing parties agree to share compensation.

7.2 RESETTLEMENT

7.2.1 IMPLEMENTATION

The Project's overall resettlement goal is to design and implement resettlement in a manner that gives physically and economically displaced persons the opportunity to restore their livelihoods and standards of living. Resettlement may be due to:

- Physical displacement involving the loss of shelter and assets resulting from acquisition of land associated with the Project that requires the affected persons to move to another location.
- Economic displacement involving the loss of income streams or means of livelihood resulting from land acquisition or obstructed access to economic resources (land, water, forest) resulting from the construction or operation of the Project or its associated facilities.

Plate 7.3: A Highlands home

A total of 13 Project areas have been identified where resettlement is necessary and the Resettlement Action Plan implementation activities are ongoing. Monitoring and evaluation is critical to the achievement of the goal of resettlement to restore livelihoods and improve standards of living of those affected. The purpose of the monitoring and evaluation system is to provide Project management, and directly affected persons, households and communities, with timely information on whether compensation, resettlement and development investments are on track. It also shows whether the Project goals related to restoration and improvement in the welfare of the affected people will be achieved, and to indicate the need for any course corrections. The monitoring and evaluation system has four components:

1. Internal progress monitoring – tracks whether the Resettlement Action Plan measures are implemented on schedule and as defined within the Plan. Input monitoring is done on an ongoing basis during the Resettlement Action Plan implementation in order to expedite delayed actions or resolve inconsistencies.
2. Internal output monitoring – measures the direct, usually quantitative, results of inputs to demonstrate whether components of the Resettlement Action Plan are achieving their desired outputs or need to be reoriented in a timely manner.
3. External outcome evaluation – to determine the extent to which inputs and outputs are achieving, or are likely to achieve, the overall goal and principles of the Resettlement Action Plan, with particular emphasis on livelihood restoration and standard of living. The evaluation process will judge the effectiveness of both measures and outcomes, and will make recommendations for any changes to measures and/or implementation processes necessary to implement displacement measures in a way that achieves the goal of the resettlement program.
4. External completion audit – an independent third party will conduct a completion audit for each Resettlement Action Plan to determine whether the Plan and its implementation comply with the requirements of the IFC Performance Standard 5.

7.2.2 PROCESS

A summary of the process involved in planning and implementation of the resettlement component required for land access is illustrated in Figure 7.1.

Plate 7.4: Fishing Kikori River

Plate 7.5: Women tending crops

The Environmental Law Centre Limited, a non-profit Papua New Guinea law practice, provides the resettlement compensation and assistance advocacy detailed in Figure 7.1. This facility is necessary due to the low literacy levels and the increased availability of funds from compensation and other Project related sources (e.g. annual rental for deprivation of use, royalty and equity incomes once the gas is produced). The Environmental Law Centre Limited acts as an independent advisor to Project affected households with respect to their rights, responsibilities, and options concerning resettlement in the context of both national Papua New Guinean legislation and the Project's plans and provisions. This assists households to better understand the resettlement process, particularly the valuation, compensation and assistance packages.

Plate 7.6: Selling fruit by the roadside

Plate 7.7: Rearing chickens

Plate 7.8: Advisor from Environmental Law Centre

Figure 7.1: Resettlement Process Summary

Ongoing information to and consultation with affected people

Steps	Purpose
Introduction to affected communities	An initial awareness raising process during which the communities are informed of the resettlement requirements and introduced to the Census and Survey teams who will be responsible for identifying and surveying potentially affected households and social infrastructure.
Census and surveys	To identify landowners (census), their assets, clan boundaries and livelihood strategies (asset register, socio-economic and land use surveys); identify cultural heritage assets, assess people's health, and identify potential impacts. Also to further create awareness and notify affected people.
Disclosure of census and survey summaries	Following analysis, summary of results provided to affected households for verification.
Negotiation and Agreements	Compensation package options proposed to affected household for discussion. Household selects a package and signs a final compensation agreement.
Compensation and assistance advocacy	To assist the resettlement affected constituencies participate in the process on an informed basis. Compensation Advisor, advises affected people on money management matters e.g. financial forward planning, investment options, expansion or 'start-up' business ventures & training & employment opportunities.
Identify resettlement sites	Affected households identify the sites to where they propose to relocate.
Develop livelihood restoration strategy	Company provides assistance with livelihoods restoration package aimed at benefit the broader community. Livelihood specialist consults with affected communities to determine the most appropriate support mechanisms to enhance livelihoods. Support and training given to improve production & development of replacement gardens is monitored. Support strategy includes land-based option i.e. agricultural extension support e.g. the introduction of improved crop varieties & non land based options e.g. training in skills that will reduce their dependence on subsistence agriculture.
Resettlement Action Plan	Resettlement process document in Resettlement Action Plan for each Project component.
Compensation Payments	Made prior to resettlement.
Resettlement assistance	Transit, rations & temporary housing: Provision to affected households of transit allowances agreed on for physical resettlement. Materials are provided for construction of temporary housing at the new sites, while new homes are built. The Company provides rations to compensate for the period during which households must re-establish gardens required for subsistence.
Land Access	Land access is finalized once households have temporary houses established into at their new site, have removed their belongings from their old homes, rations received & compensation payments made.

7.2.3 TRENDS, HIGHLIGHTS, CHALLENGES, ACHIEVEMENTS AND LESSONS LEARNED

Resettlement activities during the first quarter related primarily to:

- physical relocation of households in the Komo Airfield area
- the identification and relocation planning for households along the Komo access road
- negotiation with HGCP landowners concerning the relocation assistance package
- socioeconomic surveys, data capture and analysis for the Heavy Haul Road, landfill and quarries
- baseline surveys for Highlands Highway bridges
- compilation of the HGCP Resettlement Action Plan, and draft Resettlement Action Plans for the Heavy Haul Road and quarries.

This section provides a summary of key activities, highlights, challenges, achievements and lessons learned during the first quarter.

Komo Airfield Relocation: Relocation packages were finalized for 23 of 24 households. Discussions are ongoing with the remaining household. For the 21 households that have relocated to new sites, temporary housing materials and weekly rations were provided. Rations will continue to be provided for six months or until gardens are re-established. As these were some of the first resettlements to be implemented some challenges were encountered, for example, delays in the delivery of rations. A process has been put in place to resolve this for future resettlements.

The Absentee Landowner Committee formed in 2009 identified a total of 405 landowners with traditional land rights in the Komo Airfield area who left the area 10 years ago due to inter-clan disputes. Negotiations are planned to commence with these parties in April 2010.

Economic (crop) compensation has been identified to be paid to 14 households and two churches are to receive compensation for relocating.

Komo Access Road: Land access was obtained for 151 households (15 physical relocations, 136 economic displacements). An influx of new residents to the Komo Access Road site was discovered as construction was about to commence. Prompt and successful consultation and negotiations were undertaken with the additional households.

HGCP: Initial negotiations progressed slowly, however, an agreement was reached in mid-March 2010 under which households identified relocation sites and started work on re-establishing their gardens. This allowed for high priority work to begin at the HGCP site. Negotiations then continued toward reaching agreement on the housing package with the aim of signing a Memorandum of Understanding in April 2010. Based on this experience, the compensation package has been revised for future resettlement components.

Heavy Haul Road: Surveys and data capture were completed for all sections and data analysis has been completed for the Dimalia portion with Resettlement Action Plan development underway. Some speculative planting of gardens was noted which highlighted the need to undertake consultations soon after the completion of the surveys.

Hides Waste Management Area: The selection of a new site for the Hides Waste Management Area required a further 45 household surveys (30 physical, 15 economic).

Quarries: There were 25 household surveys completed for two quarry sites. A decision was later made to not use the Hides Quarry 2 (HQ2) site due to environmental factors and a new site is to be selected. This will require surveying once a new site is identified.

Highlands Highway Bridges: Surveys were completed for 7 bridges (47 households).

Plate 7.9: Garden, Highlands

Plate 7.10: Household

7.2.4 PLANNING: MILESTONES AND PROGRESS

Progress with regard to resettlement milestones to indicate whether the Resettlement Action Plan measures are implemented on schedule and as defined in the Resettlement Action Plan up to the point of obtaining land access is shown in Table 7.1. Results shown include households that will be affected by physical or economic displacement, as well as trade stores and social infrastructure impacted.

Table 7.1: Resettlement Progress

Resettlement Action Plan	Komo Airfield	HGCP	Heavy Haul Road				Komo Access Road	KQ5 quarry	HQ1 and HQ2, quarries Hides Landfill			Tamagidi	Bridges	Homa corridor and Camp		Dagia Corridor and Camp		Idauwi Tagari Corridor and Camps			HGCP to Gigira	Pipeline
Land/Activity	Airfield construction	HGCP Site - Earthworks and Camps	Komo to HGCP Heavy Haul Road: Portion immediately South of HGCP (C1 Scope)	Komo to HGCP Heavy Haul Road: North of Timalia River (EPC5b Scope)	Komo to HGCP Heavy Haul Road: South of Timalia River to Yarima	Bridge KM-03b Waguba River (New Bridge) Heavy Haul Road	Heavy Haul Road: Yarima to Komo Airfield (Komo Access Road)	KQ-5 Quarry Area	Quarries HQ1 and HQ2	Access Road HGCP to HQ1 and HQ2	Hides Waste Management Area	Camp and laydown Tamadigi	Highlands Highway Bridges	Pipeline Corridor	Homa Camp	Pipeline Corridor	Dagia 3 Camp	Pipeline Corridor	Camp Idauwi	Camp Tagari	ALL	ALL
Initial Awareness Activities																						
Census and Socioeconomic Survey																						
Land use Survey																						
Survey Data summary																						
Disclosure of household summary info. to households																						
Environmental Law Centre facilitation																						
Consultation, negotiation and sign-off																						
Finalize Resettlement Action Plan																						
Resettlement Action Plan approved by Lender Group																						
Provide initial shelter and rations																						
Circulate Resettlement Action Plan																						
Land access																						
Compensation advisor facilitation																						

Completed action

8.0 Workforce

8.1 DEVELOPMENT

In accordance with ExxonMobil's National Content commitments, the Workforce Development Strategy is to increase the number of local employment opportunities and to develop national employees over the life span of the development. This includes training personnel in the technical and professional skills necessary for working on existing and future projects and operations.

In addition, the Project and contractors will comply with the Papua New Guinean legal requirements relating to the employment of Papua New Guineans and will provide jobs for an estimated peak of approximately 3,500 Papua New Guinean citizens. Contractors will have access to Papua New Guineans through Lancos with a focus on employment for people from areas most impacted by the Project.

The national Workforce Development Plan covers recruitment and development of qualified Papua New Guinean employees. The objectives of the NCP with respect to workforce development are:

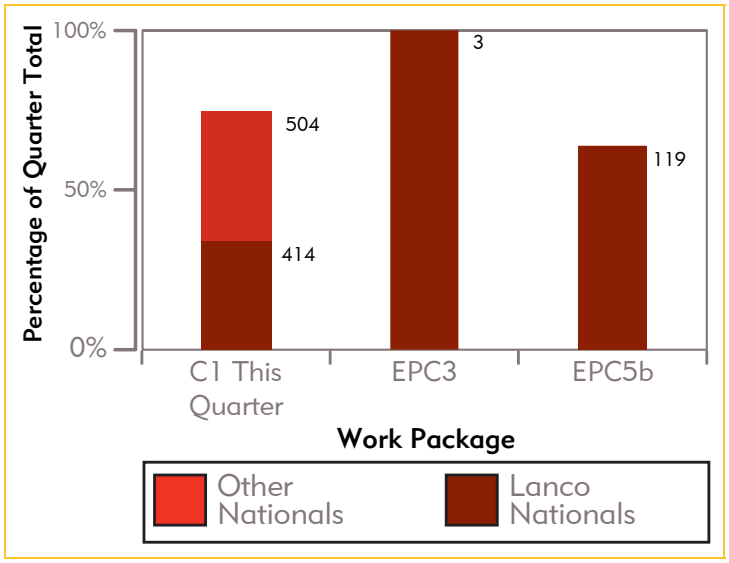
- To provide equitable distribution of training and employment opportunities while giving priority to communities in the Project impact area.
- To train enough Papua New Guineans to meet the requirements of the Project consistent with the Papua New Guinean Government's Work Permit Guideline. To provide training to Papua New Guineans engaged in construction to give them a transportable and recognized skill set.
- To provide Papua New Guineans with access to positions for which they are qualified.
- To recruit and train Papua New Guinean citizens for operations and other business functions, to enable qualified Papua New Guineans to participate fully in the operation and management of the Project, while reducing the number of expatriates.

At this early stage, workforce data has been collected with plans to streamline future reporting to reflect job categories, as specified in the Employment of Non-Citizens Act 2007 and associated Work Permit Guideline 2009 as follows:

- Red – reserved for Papua New Guinean citizens.
- Orange – advertised in Papua New Guinea first before filling with an expatriate.
- Green – open to Papua New Guineans or an expatriate.

For first quarter, there were 536 Lanco nationals and 504 other nationals working for contractors across the Project.

Figure 8.1: Workforce data (percentage and numbers)



8.2 *HEALTH MANAGEMENT*

The Project Health Plan identifies and provides the framework to manage public health issues associated with the Project including:

Plate 8.1: Camp Clinic

- single point of contact (Medical and Occupational Health Manager) for the Project
- Project's Medical and Occupational Health Manager supported by Medical and Health Advisor team
- review and approval of contractor health plans and related documents (procedures and site plans) against defined Project health specifications
- undertake inspections of the Project, contractor and third party facilities such as camps, lodges and the Floatel
- provide advice and assistance to contractors in relation to their ongoing health management related matters
- participate in outbreak management and incident investigation
- providing a single contractor for Medical and Vector Control services across all Project contractors
- supporting pre-travel/pre-employment/return to work medical assessments, medical evacuation and medical emergency response planning.

In addition, a range of performance reporting metrics has been established to monitor Project and contractor performance and key deliverables.

8.2.1 LEADING INDICATORS

The health team captures a range of leading indicators[2] including:

- results of Project camp health inspections (e.g. food, water, accommodation, general sanitation)
- Malarial Chemoprophylaxis Compliance Program
- Malaria Control Program field assessments
- Tuberculosis screening results.

8.2.1.1 Camp Health Inspections

Figures 8.2 and 8.3 summarize the results from the first quarter for camp inspections by the health team's in-country health advisors using standardized inspection scoresheets.

[2] Leading indicators provide advanced warning of conditions (e.g. poor water quality), which may lead to adverse health outcomes (e.g. water borne illness).

When establishing new work locations, workers may need to be accommodated in premises which are operated by third parties. In some instances the entire premises may be utilized by the Project or contractor (e.g. an entire lodge may be utilized for contractor staff), which means the accommodation becomes stewardable (responsibility for conditions at the site rests with the contractor/Project utilizing the facility). In cases where a third party facility is only partially utilized, the responsibility for these premises rests with the owner of the premises (non-stewardable sites).

Figure 8.2: First quarter 2010 monthly Category 1 & 2 camp cumulative compliance by Public Health Category

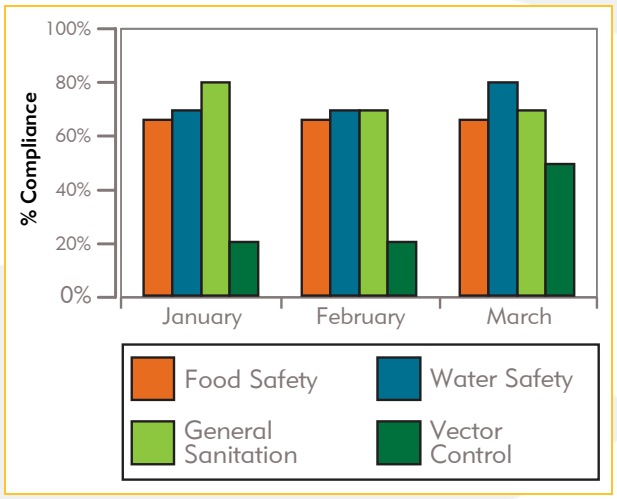
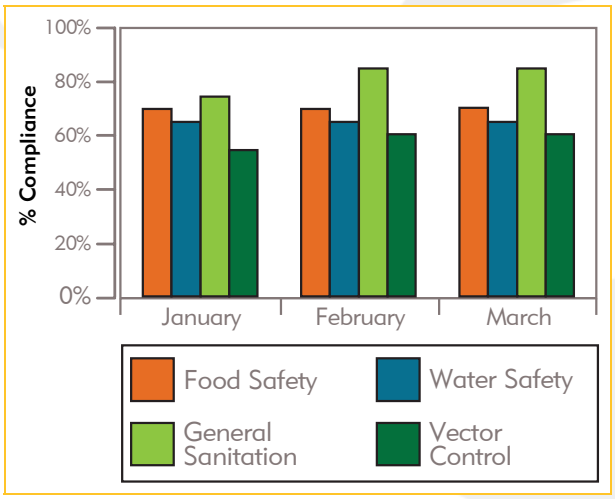


Figure 8.3: First quarter 2010 monthly non-stewardable camp cumulative compliance by Public Health Category



Category 1 – Camp established and managed by Project or contractor, Category 2 – third party facility utilized completely by Project or contractor.

Non-stewardable camps – third party facilities partially utilized by Project or contractor.

Highlights

During the quarter progress was made with organizational staffing, including appointing a Health Manager by one of the contractors. This is a key position required to ensure overall management of the health plan.

- Improvements have been made at Gobe Camp accommodations with a new water treatment plant installed and the health team is working with contractors to address water testing.
- Mosquito Zone Vector Control personnel have begun mobilization to Kopi, Gobe and IDT10 camps, which has contributed to an improvement in vector control.
- Improvement to camp standards at IDT10 Camp. Awaiting mobilization for camp management and catering contractor.

Plate 8.2: Nogoli Camp medical facility

- Significant effort is being made through the health team's in-country health advisors to monitor and assist with camp start-up and mobilization as this is a critical control point for health related outcomes.
- Response to significant non-compliance includes camp assessment action lists to site controllers, Safety, Security, Health and Environment Alerts, action item tracking through close-out and follow-up inspections.
- Category 1 and 2 camps are either temporary or newly established and compliance scores continue to improve. Scores for non-stewardable camps are in line with more permanent and well established facilities.

8.2.2 LAGGING INDICATORS

The health team tracks and reports a range of lagging indicators[3] including the number of, and actions resulting from, health related incidents – these are captured in the Project's Incident Register and are required to be reported by contractors in accordance with the Project coordination procedures and include:

- Reportable medical conditions such as Malaria, Active Tuberculosis, Meningitis, Varicella, toxic exposures, snake bites, food and water borne illness and anaphylaxis.
- Medical evacuations – a person, due to injury or illness, is evacuated to a point where the best medical care can be obtained. Transport is usually by air ambulance or road ambulance.
- Medical referral – a person, due to injury or illness, needs further medical investigation or assistance. Transport will not be by air ambulance or road ambulance.

Table 8.1: Health Dashboard – Lagging Indicators

Number of cases	2009	First quarter 2010
Serious Malaria	1	0
Vector borne disease, other [(1)]	0	0
Active Tuberculosis	0	2
Spread of Active Tuberculosis to close contacts	0	0
Foot or skin conditions (work related)	5 MTI's	37 FAC's; 2 MTI's
Number of events		
Vaccine preventable disease outbreaks [(2)]	0	0
Food/water borne disease outbreaks [(3)]	1	0
Infectious outbreaks, other indicators [(4)]	0	2
Medical evacuations		
Urgent medical evacuations (work and non-work related)	4	4
Community medical evacuations	2	1

[(1)] Other than Malaria, e.g. Dengue Fever, Lymphatic Filariasis, Scrub Typhus, Japanese Encephalitis B, Ross River Fever.

[(2)] Includes Measles, Mumps, Rubella, Influenza, Polio, Tetanus, Diphtheria, Pertussis (Whooping cough), Chicken Pox, Typhoid.

[3] Lagging indicators are direct measures of adverse health outcomes (e.g. reportable diseases).

(3) Food/Water borne disease outbreaks, e.g. Salmonella, Hepatitis A, Dysentery, Cholera, Escherichia coli (E. coli), Giardia.

(4) Other outbreaks not related to food/water transmission or respiratory transmitted diseases, e.g. Viral Enteritis (Norovirus), contagious Conjunctivitis, Scabies.

MTI = Medical Treatment Incident; FAC = First Aid Case.

Table 8.2: First quarter 2010 health incident summary

Incident type	Details	Outcome/Issue
Viral gastroenteritis	Gastroenteritis outbreaks in January and February 2010 resulted in a significant increase in Gastrointestinal illness for the quarter. 13 cases occurred at Mendi Lodges (January 2010 – viral). 26 cases occurred at Nogoli Camp (February 2010 – likely viral). Incidence of viral gastroenteritis cases at Nogoli has subsided.	Outbreaks contained.
Medical Evacuations	Four medical evacuations for the quarter	No significant issues identified with medical evacuation or case management processes.
Skin Medical Treatment Incident Cases	2 cases involving personnel from one of the Lancos.	Believed to be caused by wearing new boots.
Tuberculosis	2 active cases identified in Kopi.	1 case determined to be not highly infective. 1 case referred for further testing.

Highlights

- Care was required in interpreting data early in the year – particularly as mobilization numbers will increase over coming quarters.
- Foot/skin conditions remain an issue with an increasing number of first aid cases. Preventative measures and early detection/treatment are an important component in the management of foot/skin infections.
- Gastrointestinal illness outbreaks remain a potential risk as mobilization increases. Stringent food, water, sanitation and outbreak management procedures are being emphasized along with pre/post-commissioning inspections in order to reduce this risk.
- Tuberculosis screening is an essential element of the health program. Active Tuberculosis case management processes are in place to deal swiftly with diagnosed cases. Pre-placement screening and return to work from rotation screening is also an essential element of the Tuberculosis management strategy.
- Emphasis is being placed on contractor Medical Emergency Response Plans and pre-placement medical screening to minimize the need for medical evacuations (work and non-work related).

8.2.3 SIGNIFICANT ACTIVITIES HIGHLIGHT

8.2.3.1 Malaria Control Program (MCP) and Malaria Chemoprophylaxis Compliance Program (MCCP)

The combined MCP/MCCP is a critical component of the Project Health Management system due to the geographical area being a Malaria endemic region. The combined program consists of a range of initiatives to combat Malaria including medical screening, anti-malarial drugs, vector surveillance/control and bite prevention strategies.

Figure 8.4 shows the monthly enrolment in the MCCP and Figure 8.5 illustrates compliance assessments under the MCP. Notable aspects illustrated by these graphs are detailed below.

Figure 8.4: Monthly MCCP Enrolment Summary

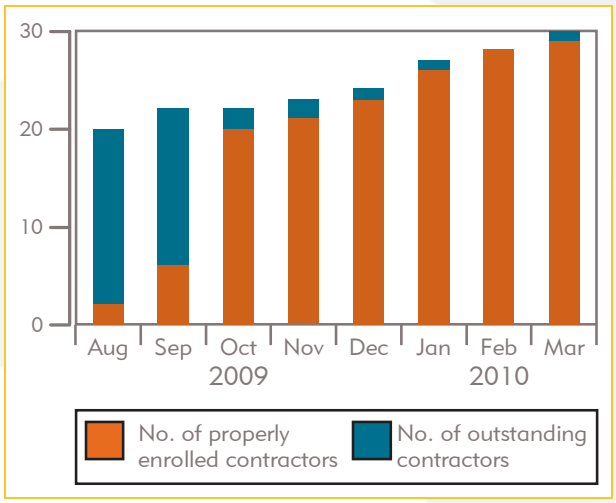


Figure 8.5: MCP Field Assessment Compliance

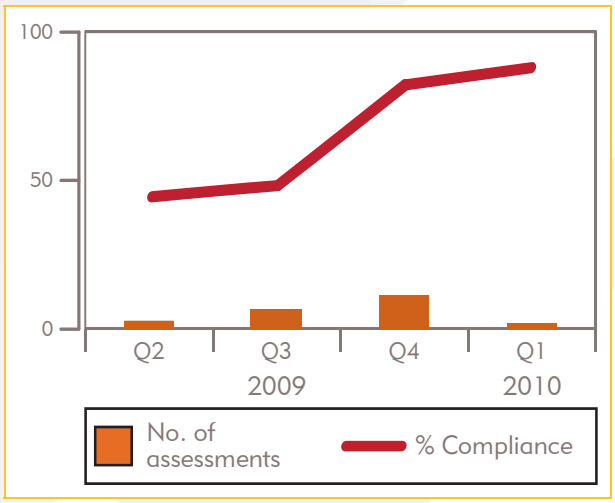
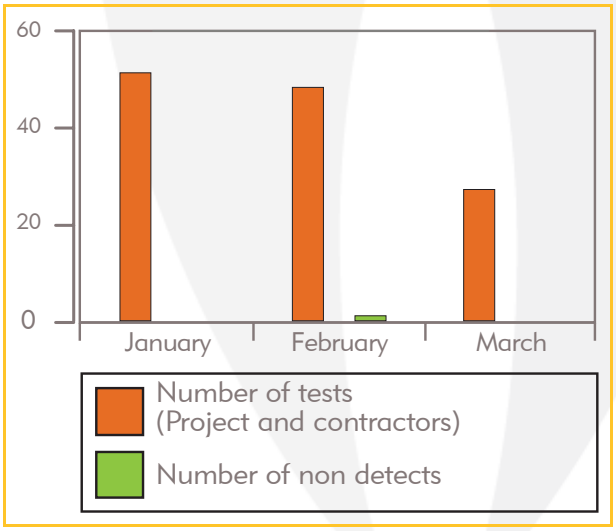


Figure 8.6: MCCP: total monthly tests and non-detect results, first quarter 2010



Highlights

- MCCP enrolment (Figure 8.4) remains excellent with only one contractor non-compliant at the end of the first quarter. Additional resources have been applied to ensure this is resolved.
- MCCP resident/rotator testing compliance (Figure 8.6) remains high with only one non-detect in a contractor employee. The issue has been discussed and resolved with the contractor concerned.
- Field assessments for contractor MCP compliance (Figure 8.5) are lower than planned due to unavoidable issues with the work permit for the additional upstream health advisor.
- The Project requires contractors to supply clothing factory treated with an insecticide (permethrin) to employees as part of its Malaria bite prevention strategy. Two new providers of factory treated clothing have been sourced which will help the Project to achieve 100 percent compliance with the clothing standard in the future.

Plate 8.3: Suitable boots and snake gaiters

Plate 8.4: Malaria nets at bush camp

Plate 8.5: Medical treatment of worker

8.2.3.2 Foot Hygiene Program

Climatic and hygiene issues in the region create increased risk for foot diseases which, if left untreated, can lead to serious conditions such as gangrene and "Jungle Rot".

Significant effort is directed towards prevention and treatment for immersion foot including the establishment of a Foot Care Hygiene Taskforce. There was a total of 36 First Aid Cases in the first quarter of 2010 involving foot/skin conditions. Of these, there were no foot/skin conditions involving medical treatments in January and March 2010 and two in February 2010. This compares to a cumulative total of five medical treatment incidents in 2009. The increase in cases is reflective of the greater numbers of workers on-site in the first quarter of 2010 compared to 2009 and also the increased surveillance.

Highlights:

- Prior to this quarter intervention using the Safety, Security, Health, Environment Alert system focused on key issues such as foot hygiene. These Alerts helped reduce the number of foot fungus related medical treatment incidents.
- A range of key deliverables have been identified for action and reviewed by a taskforce focusing on activities including:
    - sock and boot specifications
    - return to work from rotation Medical Check Procedures
    - list of approved boot manufactures and models
    - boot fitting guidelines
    - educational materials – DVDs, posters, Safety, Security, Health, Environment Alerts and tool box handouts
    - boot maintenance and care program examples
    - recommended prophylaxis powders
    - boot drying devices.

8.2.4 STRATEGIC ISSUES

Tuberculosis is a national priority in Papua New Guinea with about 33 percent of the population suffering latent Tuberculosis infection. Local Tuberculosis morbidity and mortality is also likely to rise due to HIV/AIDS.

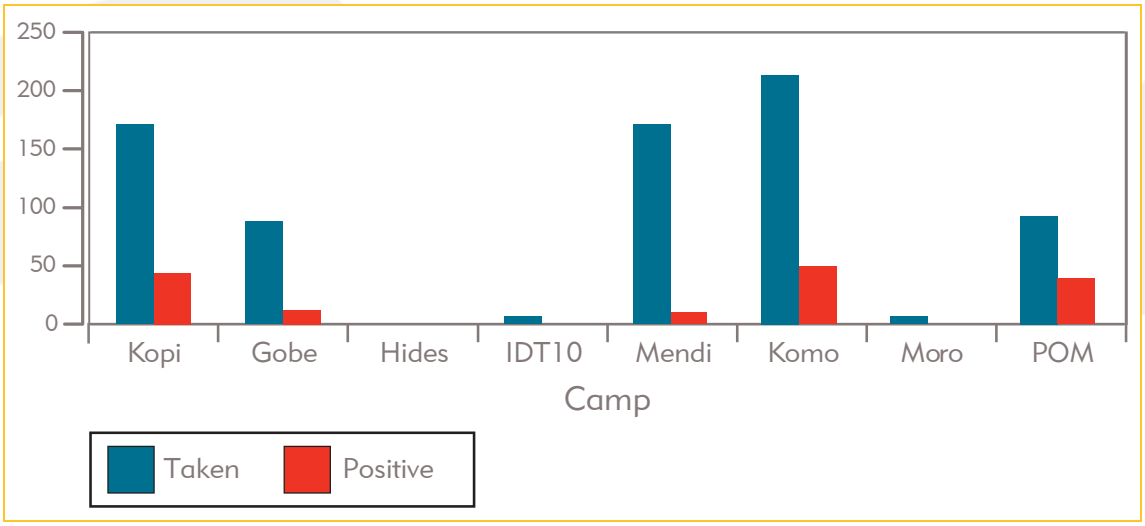
Tuberculosis control programs established and required by the Project are designed to ensure early diagnosis of Active Tuberculosis in the workforce and prevent its transmission. The Project's response focuses on:

- awareness and education
- screening for pre-employment/return to work and annually for all workers
- preventing transmission through clinical case management and epidemic management.

A key component of the program requires access to appropriate diagnostic screening including skin testing (Mantoux Testing), quantiferon testing and chest x-ray. In some upstream areas access to the necessary diagnostic tools has proven challenging and a working group of Project, contractor and medical subcontractor representatives was established in the first quarter to identify key strategies to ensure adequate Tuberculosis screening was available in all areas including:

- quantiferon testing equipment operational from February 2010 at the Port Moresby premises of a third party healthcare and medical assistance provider
- strategic introduction of quantiferon testing capability at field medical clinics
- one new self contained x-ray unit for Kopi/Gobe area was ordered
- negotiating access to third party medical screening capability at Moro.

Figure 8.7: Tuberculosis Screening Summary January–March 2010



Trends/Conclusions

- Port Moresby results are based on quantiferon testing, others on Mantoux.
- Mantoux screening results above indicate a range of 6–26 percent positive detection while Port Moresby quantiferon testing results show 42 percent positive detection.
- Hides testing to commence in May 2010 (currently utilizing screening questionnaire). IDT10 results not yet read.
- No patient with a positive screening result has been diagnosed with Active (contagious) Tuberculosis.

Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections

The Project has conducted an extensive health impact assessment and identified sexually transmitted infections, including HIV/AIDS as a key issue of concern. A range of measures have been established to deal with these risks and contractors are required to have specific sexually transmitted infections and blood borne pathogen management plans, which include:

- education and prevention activities
- supportive programs encouraging early diagnosis and counseling at camp clinics
- referral processes to local health services for viral Sexually Transmitted Infections
- on-site treatment for non-viral Sexually Transmitted Infections
- provision of barrier contraception on-site
- control of camp access to limit inappropriate interaction
- identification of at risk workers (e.g. first aid and clinical staff) and provision for appropriate personal protective equipment and response procedure (e.g. for needle stick injury).

Health Awareness

Raising employee and contractor awareness of potentially restricted agents in a workplace is critical to ensuring personnel's continued health and safety. One such method adopted by the Project in raising health awareness across the organization and improving the sharing of lessons learned is via Health Alerts. When a health incident or illness is identified and common learning points are evident a Safety, Security, Health and Environment (SSHE) Alert is compiled. These alerts provide a succinct summary of the events and the common learnings, which are distributed widely within the Project. These alerts, which are published in English and Pidgin, act as a good catalyst for discussion at health and safety meetings.

To date the Project has issued a number of health based SSHE alerts, as shown in Figure 1, covering topics such as:

- controlling mosquito populations and minimizing mosquito related illness
- prevention of viral gastroenteritis
- minimizing heat stress
- the correct use of Personal Protective Clothing.

Safety, Security, Health and Environment Alerts

8.3 SAFETY MANAGEMENT

The Safety Vision for the Project is "Nobody Gets Hurt". Project safety is led by line management and underpinned by the Project Safety Plan, the objectives of which are:

- Define safety objectives, desired behaviors, and desired performance targets.
- Define strategic approach for managing the safety discipline according to the established Project Execution Plans and Contracting Strategies.
- Describe key safety processes and safety improvement initiatives to be implemented by the Project teams (e.g. safety leadership, site safety categorization, leading indicators, safety governance model, incident management).
- Describe safety staffing strategy for the Project teams.
- Define safety roles and responsibilities for members of Project teams and describe interfaces between the Project teams and contractors.

Key safety issues that face the Project are:

- assimilation of contractors that do not have mature safety systems consistent with the Project's expectations
- overcoming cultural barriers to ensure effective safety systems
- risk of vehicle incidents due to proximity of villages, road systems and other road users.

To address these issues, some of the key activities that were conducted during the first quarter include:

- multiple Safety Leadership workshops were conducted to establish a foundation for world class safety leadership and project performance through open communication, collaboration, and partnership
- a small contractor and Lanco workshop was conducted to review the Project safety expectations and tools to ensure a safe working environment, such as Job Safety Analysis, and Observation and Intervention. Job Safety Analysis is a method for studying a job in order to identify the hazards associated with each step or task and develop solutions that will eliminate or prevent such hazards or accidents
- the Observation and Intervention process is a behavior based process performed by trained observers (managers, supervisors, safety advisors, and/or workers) who periodically observe workers as they perform their daily job activities. The goal of the Observation and Intervention process is to positively reinforce safe behaviors and to change at-risk behavior through constructive feedback
- a Project-wide Journey Management and Traffic Management Procedure has been drafted to address journey aspects such as driver training, vehicle standards, and methods for developing a specific journey management plan before undertaking a trip.

Plate 8.6: Signing the safety pledge

Plate 8.7: Safety awards given to three workers at Wellpad A

Initiatives to address injury trends include:

- prevent hand injuries – implementing a Project Glove Guideline to ensure workers understand the importance of wearing gloves and use the proper glove for each activity while in the bush or carrying out a physical activity
- improve hazard recognition and mitigation – safety Work Practice Team to ensure safety management systems are well understood and effectively implemented.

Safety management statistics for the first quarter are illustrated below.

Figure 8.8: Trend analysis (data only applies to Category 1 sites as there were no incidents on Category 2 sites)

Table 8.3: Project work hours

	Total Category 1 sites	Total Category 2 sites	Project Total (Category 1 & 2)
Hours first quarter 2010	1,508,250	8,840	1,517,090
Hours Project to date	3,678,083	8,840	3,686,923

Table 8.4: Leading indicators

	First quarter 2010	Project to date
Leading with safety workshops	58	89
Job safety analysis (actual)	10,893	13,749
Job safety analysis (per 200,000 work hours)	1,949	1,711
Job safety analysis quality	85%	80%
Observations and interventions (actual)	2,675	2,921
Observations and interventions (per 200,000 work hours)	503	364
Observations and interventions quality	73%	73%
Safe behaviors (per 200,000 work hours)	1,104	766
At risk behaviors (per 200,000 work hours)	229	455

Plate 8.8: LNG plant safety indicators signage

Plate 8.9: Safety signage

CASE STUDY 2

Emergency Response Drill

In February 2010, an Emergency Response Drill was carried out at Kopi. The purpose of the exercise was to test the Kopi Emergency Response Plan with particular regard to the ability of:

- on-site personnel to notify supervisors and managers of an emergency situation
- supervisors and managers to notify on-site medical personnel of such a situation
- on-site medical staff to respond to the incident;
- on-site managers to contact external resources when requested by medical staff
- external resources to support the site.

The scenario was arranged at a remote area of the site as an injury requiring medical evacuation. The situation acted out was that an employee had slipped and fallen into a cavity on top of an area called 'Pinnacle 17'. There was a bone protruding from his leg and, whilst he was bleeding heavily, he was conscious. A volunteer played the part of the injured person, and staff working in the area were provided with a description of his injuries and how they were sustained. They were then informed that an emergency exercise was about to commence, and were requested to initiate a response, based on the described scenario.

The exercise was carried out successfully and the following photo log follows the progress of the drill:

'Pinnacle 17' location

PHOTO LOG OF THE EMERGENCY DRILL EXERCISE















8.4 WORKER WELFARE AND CONDITIONS

Workforce (Project and contractor) welfare objectives are to:

- implement an equitable and transparent recruitment process
- ensure fair terms and conditions of employment in compliance with relevant laws
- enhance Papua New Guinean citizens' skills base through 'on the job' training.

In the first quarter, workers on the contractor work sites were either:

- citizens employed through Lancos
- citizens contracted through local labor agencies in areas where there are no Lancos i.e. on the Highlands Highway
- contract, non-national citizen hires.

Induction training was carried out for all employees.

One of the most important aspects of worker welfare is camp management. The objective of the Camp Management Plan, which will come into effect once camps are operational, is to establish standards on worker welfare and living conditions at the camps in order to provide a healthy, safe and comfortable environment. A Temporary Construction Camp Standard was developed as a guideline for the planning, layout, fit out and construction of temporary construction camp facilities. The objective of the standard is to ensure that adequate living conditions are provided for Project, contractor and subcontractor workers, and to provide the foundation for a productive, healthy, safe, and secure workforce during the execution of the Project.

In the first quarter, the existing Moro Parker Camp and several existing lodges in the Hides area were in use while a number of camps were under construction: Moro Camp B; Hides (Wellpad A, Juni), Komo, Kopi, Kobalu, Gobe, Oiyarip (Mendi) and the LNG plant site (Pioneer Camp). Concerns about potential inequality have been raised by Papua New Guinean nationals constructing the camps at Komo and the Pioneer Camp at the LNG plant site. A program is now in place to address their concerns.

Plate 8.10: Oiyarip Camp construction

Plate 8.11: Kitchen at Oiyarip Camp

8.4.1 VERIFICATION, ASSESSMENT AND AUDIT

As the construction activity increases, monitoring of labor and worker conditions will be undertaken to:

- assist contractors in the implementation of the Labor and Working Conditions Management Plan
- ensure employees are treated fairly and equitably and their employment conditions reflect the Papua New Guinean labor legislation or better.

A Labor and Worker Conditions checklist has been developed from the Project's Social Management Plans covering the following topics:

- Recruitment and selection practices – meeting skill and National Content requirements, openness and transparency of recruitment methods.
- Employment conditions – are documented by the contractors and any specific conditions of employment documented for each employee in their contract of employment.
- Remuneration and payroll – systems to track conditions of employment and payment enquiries.
- Training – appropriate employee training for positions as well as training on health and safety.
- Employee wellness – medical and first aid facilities, awareness programs around health and hygiene issues and plans to manage negative medical trends.
- Terminations – the process whereby employment contracts are terminated.

Plate 8.12: Entrance to Frog Pole Camp

The Project is developing a camp monitoring program that will apply to camps across all locations.

Checklists have been developed that will cover all aspects of camp management including social, environmental, safety, security and health. The health considerations of camps are covered in *Section 8.2.1.1 Camp Health Inspections*.

8.5 WORKFORCE TRAINING

8.5.1 PROJECT TRAINING

The Workforce Development component of the NCP aims to build capacity and access to employment for Papua New Guinean citizens on the Project. Various training takes place to build local capacity as well as develop skills for Papua New Guinean citizens to be able to safely and competently fill roles during Project construction and operation.

To address a shortage of existing qualified workers in Papua New Guinea, the Project is providing facilities to train Papua New Guinea citizens for construction roles. Two training facilities are being built: Juni CTF (close to the HGCP site) and the POM Tech. A temporary venue is being established in the Port Moresby area to meet early training needs while POM Tech and Juni CTF are completed.

At POM Tech and Juni CTF the first classes will be held in late 2010 and will train about 850 students per year for the next four years. Following the construction period, it is anticipated that the training facilities will be donated to local government or industry groups for operation. In addition to these two facilities, a Transport Truck Driver Training Center has been established at Port Moresby with training due to commence in the second quarter of 2010.

Figure 8.9: POM Tech

Figure 8.10: Juni CTF

Training will be provided by a registered organization under the Australian Quality Training Framework (AQTF). Curricula for the training programs are under development as information on positions and training needs is made available by the contractors. This quarter saw the graduation of 16 National Trainers from the Project under a "train the trainer" program.

Geographic priorities have been set for training and employment so that communities most impacted derive the greatest benefit. Trainees and employees will be chosen with priority given to:

1st Papua New Guinean citizens from the local representative Lanco area.

2nd Papua New Guinean citizens from the overall Project area.

3rd Papua New Guinean citizens from the four provinces of the Project area, and the national capital district.

4th Papua New Guinean citizens from elsewhere in Papua New Guinea.

5th Non-Papua New Guinean citizens from overseas, where applicable.

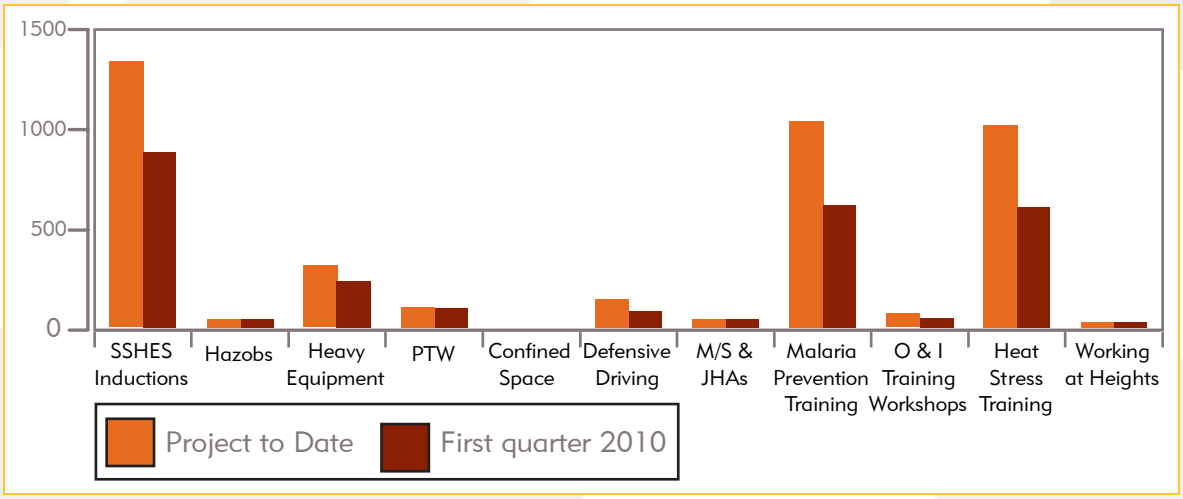
Preliminary community presentations to communicate training opportunities have been completed for a number of areas. Subsequent sessions will be completed as information on the various trade requirements becomes available from the contractors.

Training of Operations and Maintenance technicians will be completed at separate facilities in Papua New Guinea and overseas. It is anticipated that this training will occur over several years.

8.5.2 CONTRACTOR PROVIDED TRAINING

Contractors are to provide training to their workers and subcontractors. Training sessions and site inductions are being conducted by those contractors that have mobilized. Further training packages will be implemented as more contractors prepare for on the ground work activities. Statistics are illustrated in Figure 8.9.

Figure 8.11: Number of employees trained by topic, all contractors



SSHES inductions - Safety, Security, Health, Environment, Social inductions; Hazobs - hazard observations; PTW - Permit To Work; M/S - Management System; JHA - Job Hazard Analysis; O & I – Safety Observation and Intervention.

Plate 8.13: Worker briefing

9.0 Compliance Management

9.1 VERIFICATION

During the first quarter of 2010, a verification process of the Project's ESMP was implemented at the Project's worksites.

A team of Field Environmental Advisors supervised by a Field Environmental Lead implemented the Project's environmental verification activities. The environmental verification activities consisted of field visits, of approximately three days, to the various Project worksites. During these verification visits, the Field Environmental Advisors performed site tours with the contractor's environmental personnel (if present) and completed the field observation checklists, which were discussed with the Project's Site Representative. A review of appropriate contractor documentation (e.g. waste transfer forms, implementation of contractor checklists, appropriate environmental registers) was also performed.

A collated site Verification Report listing the major field observations, non-conformances, and other actions (see *Section 9.4*) was completed after each Project verification visit and was provided by the Field Environmental Advisor to the Field Environmental Lead, Project Site Representative and Project EPC Area Environmental Advisors for the necessary action. After each verification visit, registers were updated for stewardship and action tracking.

To date, the Project has conducted 72 site verifications across all the contractors. Verification visits took place at specified intervals at the following worksites:

- Kopi: every 7 to 10 days.
- Gobe: every 7 to 10 days.
- Highland Highway (Mendi, various bridge locations): every 7 to 10 days.
- Nogoli Worksites (Komo, Wellpad A, Kobalu, Juni): every 3 to 5 days.
- Moro Worksites (OSL Facility Bypass Roads, Project camps): every 7 to 10 days.
- LNG Plant Early Works: daily.
- POM Tech: every 7 to 10 days.

In addition to reviews by the Project, contractors were required to undertake daily and weekly inspections of their sites to determine and report compliance with their internal environmental plans and procedures.

For the quarter, contractors have reported a total of 139 verifications covering weekly and monthly environmental verifications, sediment and erosion control verifications and miscellaneous verification visits (for example of waste storage areas).

9.2 MONITORING

The Project's monitoring programs are being developed and will be finalized after the approval of the Environmental Monitoring and Reporting Plan, which was submitted to the DEC in the first quarter. The approval of this Plan will allow the Project to establish the monitoring locations, general sampling parameters set, and regulator frequency by which monitoring will be conducted and reported.

9.3 ASSESSMENTS AND AUDITS

Four internal assessments were undertaken by contractors to evaluate the implementation and effectiveness of their environmental program.

In the first quarter, water extraction environmental assessments were completed for:

- supply for Wellpad A Camp
- temporary supply for Oiyarip Camp (non-drinkable water)
- temporary supply for Oiyarip Camp (drinking water)
- supply for Gobe Main Camp
- supply for Kopi Floatel.

The assessments for Anga, Kata and Kikori rivers reviewed the potential water sustainability and pollution impacts. All assessments concluded that water draw was less than 10% of water flow and would not impact on downstream users or habitat. Pollution mitigation measures were identified and implemented, for example, no vehicle access into the water and ensuring pumps were mounted on platforms away from the rivers.

9.4 NON-CONFORMANCES, INCIDENTS AND CORRECTIVE ACTIONS

Project and contractor verifications and assessments undertaken during the quarter resulted in 21 environmental non-conformances being identified, 101 field observations and 13 positive field observations (see *Appendix 2* for definitions). Corrective actions were implemented to ensure the ESMP requirements were being met. The majority of corrective actions have been fully implemented and 72 field observations and 19 non-conformances have already been closed-out. Actions are still ongoing for the remainder.

Figure 9.1: Environmental non-conformances/ field observations summary

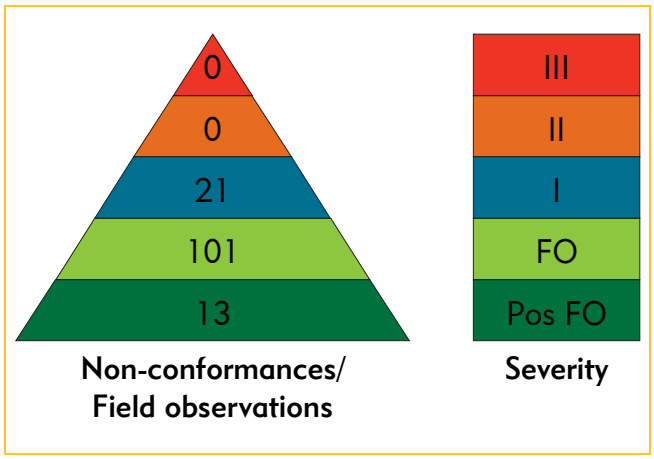


Figure 9.2: Non-conformance/field observation status

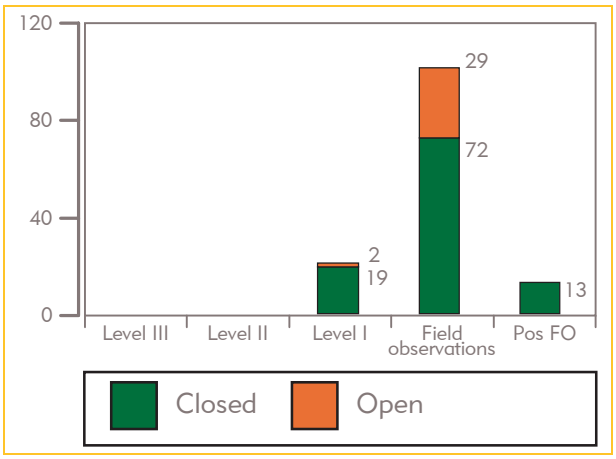
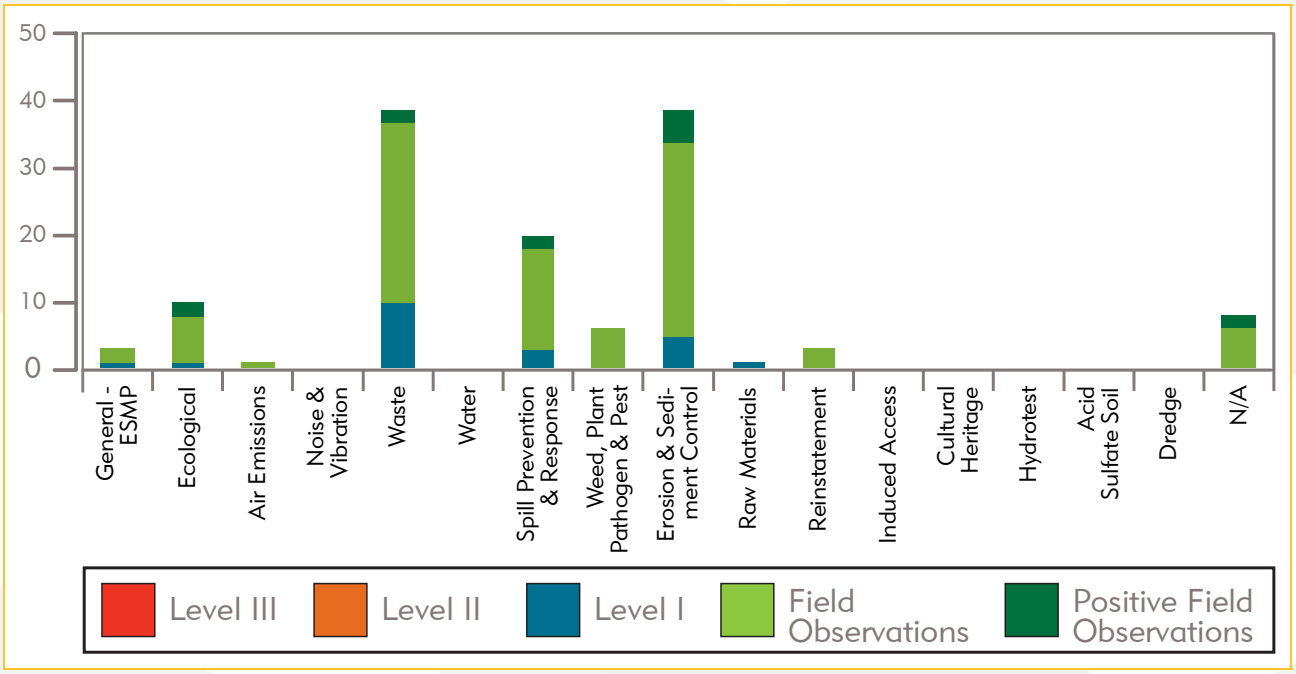


Figure 9.3: Non-conformances by type



Incidents are depicted in Figure 9.4. Of these 27 incidents, 11 have been closed-out.

Minor releases made up 95 percent of the environmental incidents. Figure 9.5 illustrates the causal factors for releases. The root cause of approximately 60 percent of the minor releases was equipment related (e.g. hydraulic hose line ruptures), this prompted contractors to place additional emphasis on proper vehicle and equipment inspection and maintenance.

Figure 9.4: Environmental incident summary

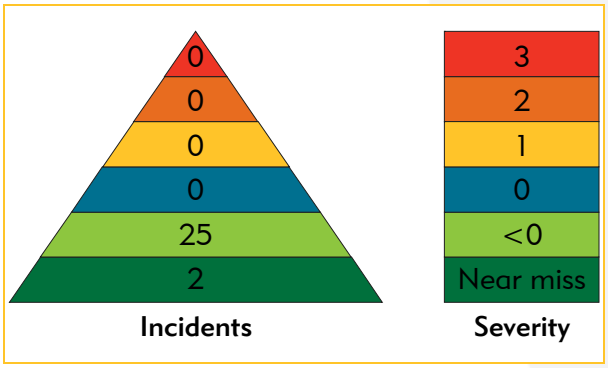
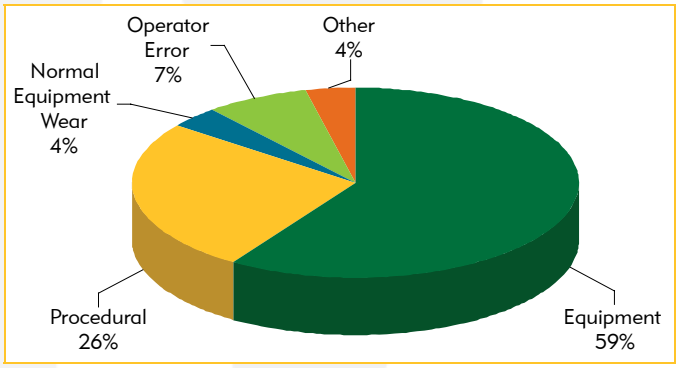


Figure 9.5: Environmental incident causal factors



The verification process indicates that performance is generally in line for a complex Project such as this. It requires waste management, erosion and sediment control (especially in a wet tropical climate), and spill prevention and response programs. It also highlights the need for ongoing attention. The corrective action implementation speed will also be targeted for improvement in the second quarter with establishing a 30 day recommended disclosure period.

One of the level I non-conformances related to a general ESMP requirement whereby one of the contractors did not have an Environmental Officer on site for four days.

During the first quarter, there were 10 level I non-conformances recorded relating to waste management, which highlighted areas for improvement in waste separation and storage. Corrective actions included improvement to storage facilities (e.g. number of bins), raising awareness of personnel, and improved use of waste tracking forms.

The Project tracks and addresses all spills/releases that reach a non-contained pervious ground surface as an incident (regardless of volume released). This helps to lower the risk of a more significant releases/spills occurring.

During the quarter, there were three level I non-conformances recorded related to spill prevention and response, and there were 25 level <0 incidents relating to predominately small hydraulic oil spills with some diesel spills all under 30 liters. Two incidents were related to wastewater spills - failure of a temporary wastewater storage tank and failure of a pump from sewage to septic tank.

The total volume of spills for the quarter was 178 liters, while for the Project to date is 627 liters (approximately 4 barrels).

Plate 9.1: Re-fuelling, LNG Plant Bypass Road Construction

The most common causes related to equipment and procedures. A responsible party was assigned to each incident to ensure corrective actions were implemented. Of these incidents 10 were closed-out. The most commonly implemented corrective actions were ensuring all spills (no matter how minor) were reported, ongoing visual inspections of all equipment and hydraulic components, ensuring proper maintenance of equipment and vehicles, keeping a maintenance log and not exceeding the service life of equipment and parts. A spill awareness training package was presented to contractors during March 2010 to increase awareness and to proactively prevent these minor types of spills. The training also emphasized the requirements for worksites to have spill kits available to enable an adequate response to spills if they should occur. A Safety, Security, Health, Environment Alert was produced that has been circulated within the Project and to all its contractors.

Figure 9.6: Environmental spill type

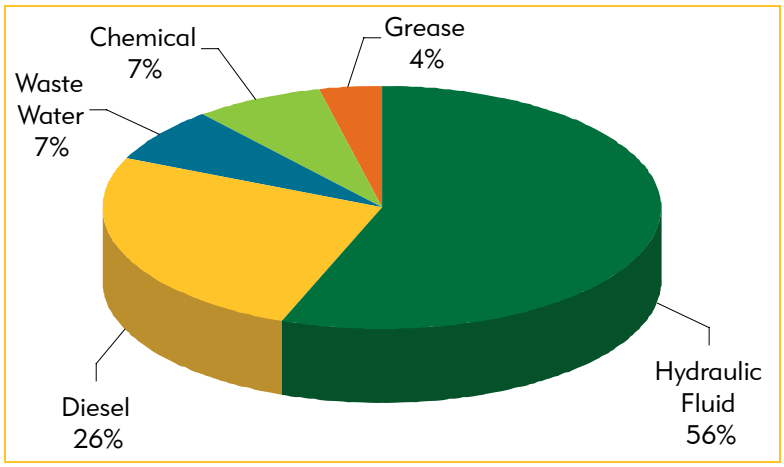


Figure 9.6 illustrates the spill types and shows that the majority were spills of hydraulic fluid.

Overall the Project performed well in regards to the volume of spills in this first quarter. With over 1.5 million man hours worked in the quarter, there were only 25 minor spills.

There was one level I ecological non-conformance concerning clearing of vegetation, a Bird of Paradise display, within 20 meters of an access buffer zone. The need for better identification of boundary limits of sensitive areas was identified as the cause. Driver inductions over the next quarter will require competency in identifying "no go" zones with awareness verified through future assessments and audits.

Plate 9.2: LNG plant – barricade installed to protect birds nest with eggs (insert)

Plate 9.3: Barricaded Bird of Paradise tree, Komo airport access road

One level I non-conformance relating to raw materials management covering the use of an existing quarry that had not been approved by the Project. Fill was needed on an emergency basis and extraction was limited to emergency needs only.

Five level I non-conformances occurred in the quarter relating to erosion and sediment control.

10.0 Pollution Prevention and Abatement

The ESMP commits the Project to achieving the objectives in the IFC Performance Standards with regard to Pollution Prevention and Abatement. These provisions include the objectives of Pollution Prevention (a: to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from Project activities and b: to promote the reduction of emissions that contribute to climate change).

10.1 AIR EMISSIONS

Air emission management objectives are provided in the Air Emissions Management Plan. The objectives of the plan are to:

1. Control emissions into the atmosphere to below harmful levels.
2. Optimize equipment to reduce greenhouse gas emissions.

In order to achieve these objectives, contractors reporting requirements include:

- number and results of verification inspections prescribed in the Air Emissions Management Plan, this includes mitigation and management of emissions such as dust
- estimation (calculation) of greenhouse gas emissions
- Performance Indicators in the reporting period, as applicable.

Since incinerator facilities were still in the process of being installed, sites used existing third party incinerators at Nogoli, Gobe, Kopi and Ridge for disposal of non-restricted waste.

Greenhouse gas emissions were documented for the first quarter, diesel being the only fuel recorded. The contractor's diesel usage was 1,040 kiloliteres, which gives a greenhouse gas emissions value of 2,755 tonnes of carbon dioxide equivalent emitted when calculated using the Australian Government's Department of Climate Change, National Greenhouse Accounts Factors, June 2009.

In general, most contractors have utilized preventative water spraying to minimize the amount of construction dust.

10.2 NOISE AND VIBRATION

Noise and vibration management objectives are provided in the Noise and Vibration Management Plan. The objective of the Noise and Vibration Management Plan is to reduce, to an acceptable level, noise and vibration impacts from Project activities to local residents and specific fauna habitat, including marine fauna and bats. To meet this objective, the Project will monitor and verify agreed mitigation and management procedures.

Plate 10.1: Blasting Pinnacle 17, Kopi

With regard to noise and vibration, a contractor's monthly report will include:

- results of surveys in accordance with the relevant components of the Ecological Management Plan, to be undertaken prior to blasting and the results integrated, including additional mitigation and management measures
- number and results of verification inspections
- results of monitoring, if any
- Performance Indicators in the reporting period, as applicable.

No noise or vibration complaints were received in this first quarter.

10.3 WASTE MANAGEMENT

The Project has two objectives for construction waste management:

1. Contain, transport, handle and dispose of solid and liquid waste arising from Project construction activities in such a manner as to minimize impacts to human health and the environment.
2. Dispose of waste at facilities approved by the Project, for which disposal is the only practical option.

The Waste Management Plan focuses on a waste management hierarchy that avoids and minimizes waste, then allows for reuse (i.e. drum washing), recycle, resource recovery (i.e. composting, incineration as replacement fuel) with disposal as a final option. The importance of waste tracking and reputable disposal are also embedded requirements. Contractor waste management plans were in place for the limited number of contractors operating on the ground during the quarter.

The Project has a two-phased approach covering interim and main construction waste management. For interim waste management, the approach is to:

- minimize the generation of waste
- safely dispose of on-site, where feasible e.g. burn pits for treated timber and packaging waste.
- maximize re-use – ash from burn pits is mixed with cement for use in the Pioneer Camp foundations at the LNG plant site or as foundations in road works. The ash is also used as a road base.
- segregate and stockpile waste either for recycling e.g. metals, batteries or for later disposal.
- use existing third party services and facilities for early construction.

Plate 10.2: Waste materials stored in containers at Oiyarip until incinerator installed

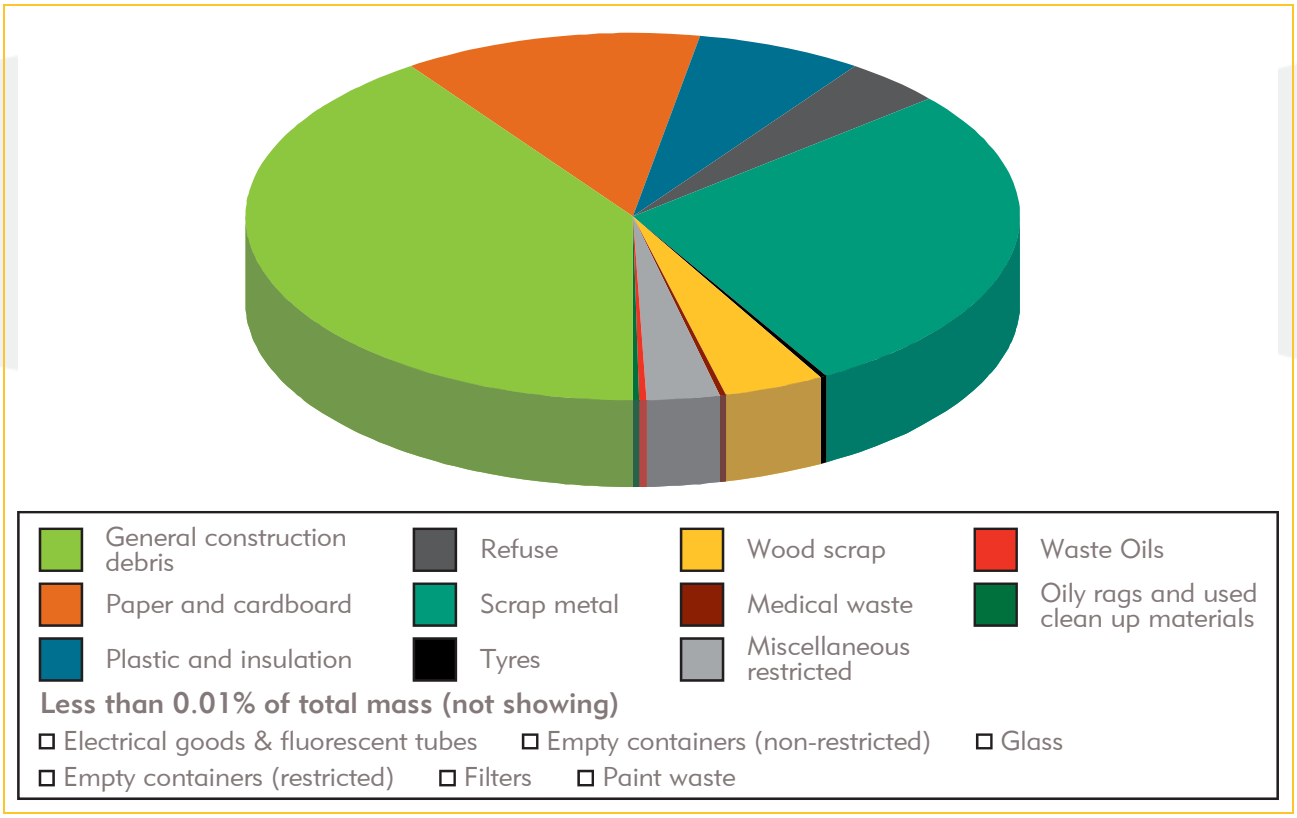
While incinerators are being installed at camps, non-restricted waste is being disposed of through a contractual agreement with a third party to use their existing approved incinerators. The small amount of restricted waste generated is being stored in controlled areas that meet the requirements of the ESMP until the arrival of contractor incinerators.

Such interim measures allow for waste management infrastructure to be developed enabling self-sufficient processes, procedures and facilities during main construction. Existing services and facilities will be used where there is an obvious benefit either to the environment, human health or economically.

The Project monitored waste during the quarter through contractor waste tracking forms (covering inventory, storage and transport) and field verification inspections. Contractors started waste tracking and refined metrics throughout the reporting period. Reported waste quantities must include all Project specified waste leaving the worksite as well as that sent to storage. Waste management is effectively reported using both quantitative and qualitative data - numerical data suitable for reporting waste volumes, types and treatment and a summary that allows initiatives such as avoidance or re-use options.

Solid waste by type for those contractors operating on the ground is illustrated in Figure 10.1.

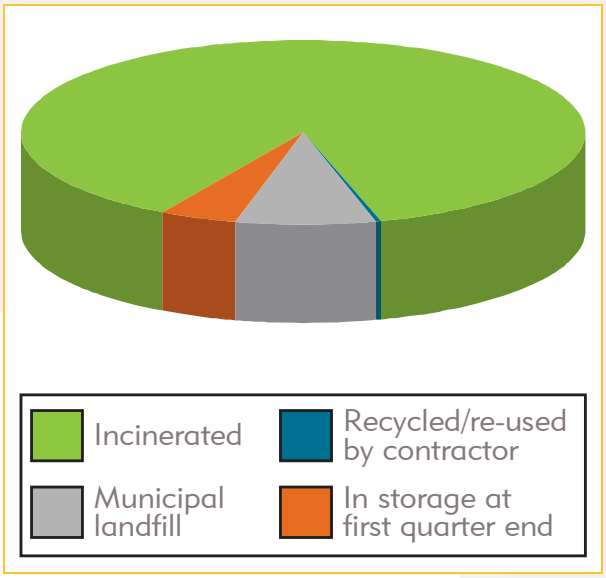
Figure 10.1: Solid waste by type, first quarter 2010 [4]



Predominant waste materials generated in the first quarter were general construction debris, paper and cardboard, plastics and insulation, scrap metal and wood. Restricted waste consisted of oils, paint, medical waste and empty containers. Spoil (500m^3) was being stored at the POM Tech site.

[4] Note – this is the first quarter of waste data collection and some parameters were not measured as waste management plans evolved and were tailored to the work sites. For example, volumes of waste oils were not available for February and March 2010 for one contractor. Another contractor did not classify into detailed breakdown until March, so relative quantities have been estimated.

Figure 10.2: Solid waste disposal



A wastewater treatment plant was installed at Oiyarip Camp in Mendi, which will be operational in the second quarter. The unit is a containerized membrane bioreactor chosen based upon the requirement to meet IFC discharge standards and Australian discharge standards. The wastewater treatment plant at IDT10 was refurbished and will also be operating in the second quarter. Monitoring of these facilities will commence upon commissioning.

10.4 RESTRICTED MATERIALS

The objectives of the Hazardous Materials Management Plan are to avoid the use of chemicals and restricted materials subject to international bans or phase-outs, and to prevent uncontrolled release of any restricted materials during transportation, handling, storage and use.

The Project requires contractors to provide immediate notification of all contained and uncontained restricted material spills detailing material released, volume, location, cause and proposed corrective measures. Details are recorded through the incident reporting system and subsequently collated for quarterly reporting.

Immediate Project notification is also required if the contractor identifies any radioactive materials to be utilized during construction and shall agree upon a procedure with the Project for the use, management and disposal of such materials.

The contractor's monthly report includes:

- number and results of verification inspections
- summary of all contained and uncontained spills/releases and follow-up action/outcome
- results of sampling undertaken to demonstrate successful remedial and decontamination in the event of an uncontrolled release
- results of other sampling
- Performance Indicators in the reporting period, as applicable.

11.0 Biodiversity

11.1 MANAGEMENT

ExxonMobil believes that biodiversity conservation can be balanced with economic development through careful management of environmental impacts. Biodiversity protection is addressed through efforts to limit impacts in sensitive areas.

Biodiversity management objectives for the Project are directly provided in the Ecological Management; Weed, Plant Pathogen and Pest Management; Induced Access and Reinstatement Management Plans.

The contractor's monthly reports include:

- results of the pre-construction ecological surveys
- number and results of verification inspections
- Performance Indicators in the reporting period, as applicable
- measures for control of weeds or pests as a result of the inspections
- results of dieback visual inspections (a serious disease caused by a range of root-rotting fungi that can kill a variety of plants)
- summary report of vehicle and equipment washdown and inspection certificates.

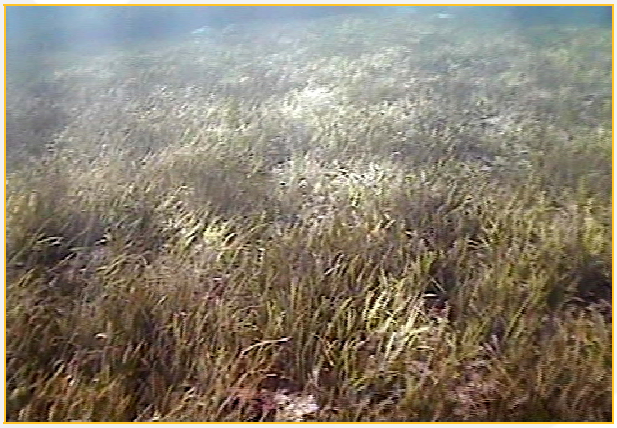
Plate 11.1: Fungus induced rainforest dieback

Activities this quarter centered primarily on the completion and approval of pre-construction surveys (see *Section 3.7 Pre-construction Surveys*). The pre-construction surveys identify ecological sensitivities including large habitat trees, bird-of-paradise/bower bird trees/habitat and other ecological "no go" areas. Reports include requirements by contractors to avoid or otherwise manage these sensitivities. In addition, a survey was completed in March 2010 to characterize the aquatic biology of the Vaihua river/ estuary near the LNG plant site during the wet season. This followed on from surveys undertaken for the EIS and covered 13 sampling sites. The survey reported additional species diversity and abundance for fish and invertebrates when compared to the dry season. All species are common and occur throughout southern Papua New Guinea.

Plate 11.2: Aquatic survey Vaihua River complex

Marine ecology surveys were undertaken in Caution Bay in the areas planned for the offshore pipeline, marine facilities, temporary dredge material storage areas and in the vicinity of the planned shipping channel. These surveys were undertaken to further characterize the near shore subtidal habitat. The surveys confirmed that most near shore reefs are in poor condition but developed a better structure offshore with more fish types and with few larger predators. No endemic species were identified. A narrow band (0-2m depth) supported sea grass beds comprising a number of species, which were generally dense but with bare areas. Algal beds (*Sargassum* species) occurred closer to the fringing reef, while un-vegetated sediments occurred beyond the fringing reef.

Plate 11.3: Caution Bay sea grass bed



As part of the integrated weeds management program, work sites are surveyed by a tropical weed specialist for weeds prior to commencement of works. All weeds are identified to species level and assigned a relative abundance rating with a geographical positioning system location taken for significant weeds. Each weed species is assigned a priority rating for control purposes based on levels of persistence, invasiveness and known behavior in other tropical locations. Observations have been made with regard to weeds in a camp site and a soil stockpile spoil that are considered potentially invasive and a priority for control. These observations have been formally logged and effective treatment will be tracked. To date contractors have not undertaken construction activities in areas requiring vehicle washes as construction has only occurred along public roads or within areas where weeds are widely established. However, when construction commences in more remote areas clearly demarcated clean/dirty lines will be established and vehicles crossing these line will be subject to vehicle washes.

Plate 11.4: Weed species *Tithonia diversifolia*

A quarantine program is under development based on an assessment of Papua New Guinean quarantine related laws and regulations. The outcomes of the assessment will include measures and plans in the form of a Quarantine Program. During the quarter, a review of the practices and capacity of the Papua New Guinea National Agriculture Quarantine and Inspection Authority was completed by a third party.

Plate 11.5: Red Bellied Pitta

Plate 11.6: Rainforest spider

11.2 STRATEGY

Plate 11.7: Starfish, Caution Bay

Preparation of a draft Biodiversity Strategy is scheduled for mid 2010. A detailed three year program of activities will be prepared as part of this. The Strategy focuses on alignment with the Papua New Guinea National Biodiversity Strategy and Action Plan. An early draft of the Biodiversity Strategy was reviewed by the Independent Environmental and Social Consultant (IESC) and received positive feedback.

During the quarter, the biodiversity monitoring program, set out in the draft strategy, has been expanded to include the indicators that will be used for monitoring the Projects impacts on biodiversity. Activities have also started on two of the five field monitoring programs. The first is monitoring indirect impacts by using remote sensing to detect deforestation in the Project area.

Plate11.8: Katydid

The second monitoring program is aimed at tracking vegetation regeneration following infrastructure and gas pipeline construction using benchmarking methods. An experienced forest ecologist with extensive Papua New Guinea experience has been engaged to develop the benchmarks required for the monitoring plan.

The Biodiversity Offset Plan section of the Biodiversity Strategy is early in its development and will be progressed throughout 2010. This Plan will involve external consultation with appropriate stakeholders such as government, NGO, industry and communities.

Plate 11.9: Long-Beaked Echidna

Plate 11.10: Upland forest interior

12.1 WATER MANAGEMENT

The objective of the Project's Water Management Plan is to reduce the impact on water quality (and associated beneficial values[5]) from construction activities. Water management covers water usage and water quality, which are dealt with in sub-sections below.

12.1.1 USAGE

Implementation of the Water Management Plan has been initiated. Monitoring of water taken from watercourses or groundwater for Project use demonstrates that environment (water extraction) permit conditions are met. Freshwater usage includes purchased raw or drinking water as well as water taken from surface or ground sources.

Plate 12.1: Preparation for drilling Moro Camp B water well

Plate 12.2: Forest stream

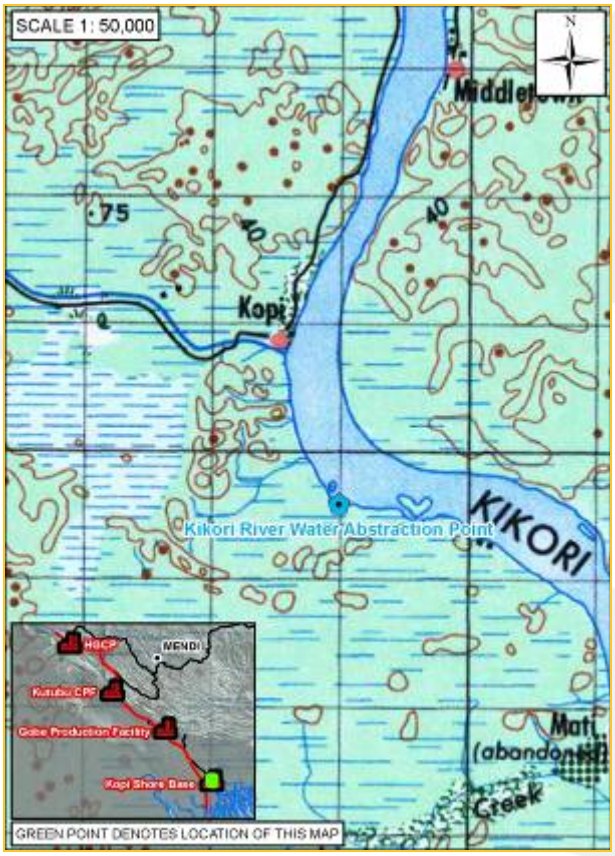
During the first quarter, water usage was recorded for self managed camps; water usage for the third party managed camps at Kopi and Gobe was not reported. Moro Parker Camp used both bottled water and trucked in water. Water for the IDT10 Camp was purchased from a third party and trucked in from their camp. Water for archaeology artifact washing and sieving at the LNG plant site was trucked in. Water usage amounted to 1,285 kiloliters for the quarter.

For construction activities in this quarter, water was extracted from:

- Anga River (at Mendi)
- Kata Spring (at Mendi)
- Kikori River (at Kopi)

[5] 'Beneficial values' includes use as drinking water and aquatic ecosystem protection.

Figures 12.1 and 12.2: Water abstraction locations



Water for archaeology artifact washing and sieving at the LNG plant site was trucked in. No other contractor sites were extracting fresh water in this quarter.

12.1.2 QUALITY

Sampling and analysis of water and wastewater discharges will be undertaken to comply with prescribed discharge limits, environmental consent conditions and the Environmental Monitoring and Reporting Plan (once approved by the DEC). Monitoring will vary according to site requirements. Sampling parameters, locations and frequency may be modified pending assessments of risk to sensitive receptors.

Plate 12.3: Water quality sampling

Contractors have developed detailed water quality sampling and analysis protocols prior to implementation of their monitoring programs. These protocols describe specific locations to be sampled (based on selection of sites in relation to project infrastructure and sampling logistics considerations), parameters to be analyzed, sampling and sample handling procedures, laboratory analysis requirements and quality control and assurance requirements.

In the first quarter, a groundwater monitoring bore network was installed at Hides Landfill. Installation of water bores at the HGCP is planned for the second quarter.

Plate 12.4: Hides landfill

The contractor's monthly report includes:

- results of all monitoring, highlighting any exceedances
- number and results of verification inspections
- Performance Indicators in the reporting period, as applicable.

The Performance Indicators that relate to water usage also relate to water quality.

At the IDT10 Camp the wastewater treatment plant is under contractor control and requires monitoring. At all other contractor sites workers stay in third party managed accommodation. On two occasions during the quarter, wastewater from the Oiyarip (Mendi) Camp has been sent to a third party facility - the Mount Hagen Wastewater Treatment Plant.

In terms of the marine environment, a water quality sampling program was undertaken from December 2009 to February 2010 in Caution Bay around Project activity areas. Turbidity and total suspended solids were found to be quite low with some increase after a storm event. All measurements of water quality were found to be within the range typical for seawater.

12.2 RAW MATERIALS

Implementation of the Raw Material Management Plan has been initiated including the objectives to extract aggregate from Project-approved locations, maximize the use of cleared timber and purchase any additional timber supplies from known and approved sources.

The contractor's monthly report includes:

- results of the surveys undertaken prior to use of new quarries
- number and results of verification inspections
- Performance Indicators in the reporting period, as applicable.

Eight pre-existing quarries were in use or operational during the first quarter with one new quarry being assessed and starting production. The Project will continue to maximize the utilization of existing quarries, where practicable.

Plate 12.5: Ebo Quarry

Plate 12.6: Gobe Quarry

12.3 EROSION AND SEDIMENT CONTROL

Monitoring will be undertaken in the form of water quality sampling and analysis downstream of major infrastructure sites and at sensitive locations to maintain stable landforms in order to reduce erosion and enhance reinstatement, maintain integrity of assets (through stable landforms) and reduce adverse impacts on stream water quality.

Plate 12.7: Sediment control, LNG plant site

Other monitoring is undertaken by verification of mitigation and management measures.

The contractor's monthly report will include:

- results of surveys
- number and results of verification inspections, including landform stability inspections, sediment control structure and stockpile inspections and control measures implemented to manage failing sediment control structures and stockpiles
- Performance Indicators in the reporting period, as applicable.

Key accomplishments this quarter included the practical implementation of erosion and sedimentation control devices, particularly on stream crossings and road works. Most devices were found to be working well and there were no mass failings; however, the need for inspection following rainfall events was noted.

Key issues included:

- the failure to identify some areas that required protection structures
- ineffective installations in the prevailing conditions requiring a reassessment of installation methodology.

The LNG plant worksite was a particular area that had continual challenges with erosion and sediment control. The Project worked diligently with the contractor to implement training programs for maintenance and installation crews of erosion and sediment control measures. The Project also considered and implemented improvements in this flat, high rainfall area. The site has seen erosion and sediment control performance increase.

Plates 12.8 and 12.9: Silt catchment Oiyarip Camp construction

13.0 Cultural Heritage

Characterization of cultural heritage within the Project area was reported as part of the Project's EIS. Following the approval of the EIS, the Project's Cultural Heritage Management Plan was developed, the objectives of which are to:

1. Avoid known cultural heritage sites (including both archaeological sites and oral tradition sites) where necessary and practicable
2. Where avoidance is not possible, manage cultural heritage sites in consultation with the Papua New Guinean Government and landowners.

The Cultural Heritage Management Plan prescribes the method for conducting the additional cultural heritage surveys required prior to the Project's execution disturbance works. These 'Project Cultural Heritage Surveys' ensure each worksite is characterized and appropriate site specific mitigation and management measures are identified, and endorsed by the Papua New Guinean Government DEC prior to construction commencing.

Plate 13.1: Waisted blade

Pre-construction surveys up to the end of the first quarter identified the following:

- Highlands Highway: burial sites, clan boundary ditches, spirit sites, sacred lakes, men's houses, ossuaries and settlement sites.
- Hides: burial sites, bachelor cult sites, men's houses, sacrificial sites, clan boundary ditches, sacred sites and ceremonial sites.
- Lake Kutubu area: former garden site, rock shelter, sago swamp, settlement site, ossuary and burial sites.
- Middle Kikori-Kopi-Gulf: spirit sites (often associated with underground waterways), rock shelters, ceremonial ground, chert (rock) flakes and a stone axe/waisted blade.
- LNG plant site: two major oral tradition sites within the Project lease area were delineated (Aemakara and Konekaru) and additional archaeological sites containing pottery, shell midden, stone and fauna bone were identified.
- Onshore pipeline route: burial sites, ossuaries, sacrificial sites, oral history sites, spirit sites, spirit lakes, ceremonial/ritual sites, former garden sites, boundary ditch.

Plate 13.2: Stone tool (adze)

The contractor's monthly report includes:

- incidents of disturbance to known cultural heritage sites
- all cultural heritage sites identified through chance finds
- management measures undertaken as a result of any significant chance finds
- number and results of verification inspections
- Performance Indicators in the reporting period, as applicable.

13.1 MANAGEMENT OF KNOWN SITES

Cultural Heritage Salvage Programs have been undertaken at sites where cultural heritage interest has been identified through EIS studies.

Plate 13.3: Archaeological excavation

HGCP Site

At the HGCP site, the three month-long salvage program commenced in February 2010. The salvage program involves recording both surface and sub-surface archaeological deposits by way of surface collection and archaeological excavations, as well as recording the oral tradition of sites through detailed interviews with local landowners.

In the first quarter, 19 excavations were completed; comprising 18 test pits and one open area excavation covering an area of 126 square meters. Further to this, the oral history component and surface collection had already been completed for 26 sites. In this quarter, the salvage program within the HGCP site was approximately 50 percent complete.

This salvage program involves up to eight expatriate archaeologists working with four Papua New Guinean archaeologists and up to 12 local labor assistants from the Hides area. During the quarter, there have been approximately 20 people working on the program on any given day. The program is planned to continue through to May 2010.

Plate 13.4: Sifting through recovered archaeological material

Kikori River Bridge Site

During the pre-construction survey of the Kikori River bridge site the survey team discovered an un-hafted stone axe (without a handle or hilt) on the northern bank. Due to the potential significance of this find the site was subject to surface salvage prior to construction to understand the historical context of the site and thereby determine its significance. During the surface salvage, 13 additional artifacts were identified and salvaged. The finds have been characterized to indicate a sago production site. After the surface salvage, archaeologists determined that no further mitigations were required and that the construction works could proceed subject to the application of the Project's Chance Finds Protocol.

LNG Plant Site

The LNG plant site cultural heritage salvage program commenced in September 2009 and salvage excavation activities concluded in March 2010. The salvage program involved both surface collection and excavation of two primary areas on the LNG plant site and the Bypass Road corridor where the main construction activities are expected to take place. During the program, 150 archaeological sites were salvaged comprising 204 excavated pits and 25 sites via surface collection.

The seven month-long cultural heritage salvage program involved 36 expatriate archaeologists who brought international expertise to the program and training to the 40 students from the University of Papua New Guinea who also participated. Local labor was sought from each of the four surrounding villages resulting in some 80 people working on the program on any given day during the seven month duration.

While excavations have been completed, sorting and sieving of material will continue until June 2010 at which time all excavated material will have been transferred to Australia for analysis and documentation. This process is expected to take up to 18 months to complete. After this time, the material will be returned to Papua New Guinea and custody will be transferred to the Papua New Guinea National Museum and Art Gallery.

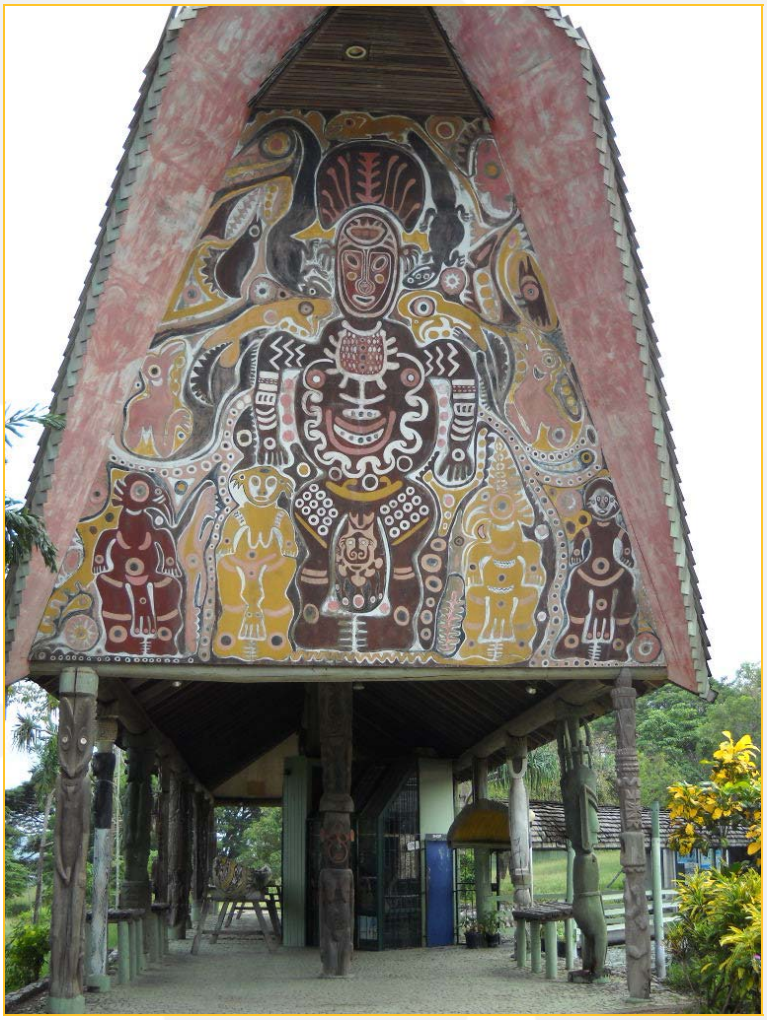
13.2 MANAGEMENT OF CHANCE FINDS

The Project's Chance Finds Protocol prescribes the procedures for management of as yet unknown or unrecorded archaeological sites, including human skeletal remains. The Chance Finds Protocol has been implemented twice for the discovery of human skeletal remains at the LNG plant site during the salvage program. In line with the protocol, an archaeologist deemed the remains to be non-suspicious (i.e. were ancient and not suspect of criminal activity) and consequently archaeologists professionally excavated the remains. The Project transferred the custody of the find to the Papua New Guinea National Museum and Art Gallery.

No chance finds occurred during the reporting period.

Plate 13.5: Stored archaeological material

Plates 13.6 and 13.7: Papua New Guinea National Museum and Art Gallery



CASE STUDY 3

LNG Plant Cultural Heritage Salvage Program

The Project is respectful of the culture and history of the communities located in the Project area. As part of the environmental assessment for the Project, archaeologists undertook detailed studies in consultation with local communities to identify areas and features of cultural significance (archaeological and oral tradition sites). One such area was the LNG plant site at Caution Bay outside of Port Moresby. The archaeological program was undertaken in two phases:

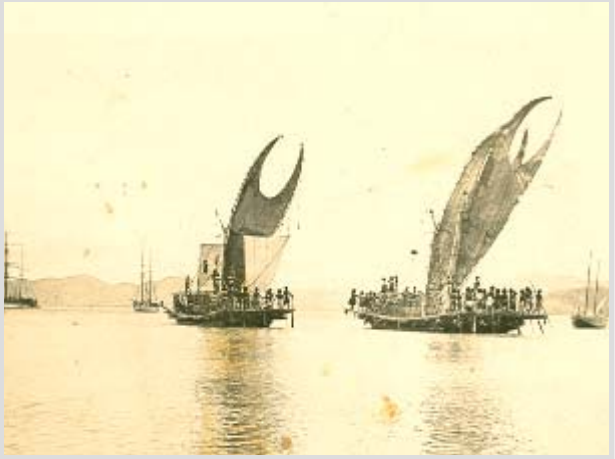
Phase 1: Characterization of the cultural heritage of the site completed between January 2008 and September 2009 involving meetings with elders from four villages (Porebada, Borea, Papa and Lea Lea) to gain local knowledge and field surveys. This investigation unearthed 647 cultural heritage sites with 453 of them being within the boundary of the LNG plant site.

Phase 2: Cultural Heritage Salvage Program to locate, remove and preserve artifacts that could not be avoided by the Project's activities. This work commenced in September 2009, with excavation ceasing in March 2010 and the field laboratory expected to close in June 2010. It is the largest archaeological salvage operation ever conducted in the Southern Hemisphere, covering an area of approximately 760 hectares.

As a result of these investigations, the location and layout of LNG plant site was revised to avoid important sites; including two major oral tradition sites.

The LNG plant site is the traditional land of the Motu and Koita people. Both groups were renowned makers of ceramic vessels and traded with each other for pottery, items of food, tools and shell jewelry as currency. The Motu also established an intrepid trade with distant communities across the Gulf of Papua. Their annual *hiri* expeditions exchanged ceramic vessels for sago palms and canoe hulls. Each fleet comprised up to 20 multi-hulled sailing ships known as *lagatoi*, with cargos running to hundreds of tons per year.

Lagatoi ships



The oral tradition sites avoided by the LNG plant layout are the ancestral villages of the Konekaru and Aemakara. The Motu village of Konekaru was occupied at the time of the initial European contact and in the oral tradition. Konekaru formed a gateway to the coast for the Koita, which enabled the Koita and Motu to coordinate fishing and sailing. Restricted access zones have been established over these sites by the Project.

Archaeological team digging

SALVAGE PROGRAM

The value of the archaeology lies in the knowledge yielded by the discovery, physical context, analysis and conservation of material remains recovered by surface collections and excavations. Sites within the investigation area are widely distributed, and so the salvage program focused on the areas of highest potential for disturbance and highest expected concentration of sites.

Four excavation pits

The salvage work was conducted in accordance with a Project developed protocol, endorsed by the Papua New Guinea National Museum and Art Gallery who have remained ongoing advisors to the Project.

The salvage program comprised 25 surface collection sites and 125 excavation sites involving 228 pits. This has unearthed decorated ceramic shards, obsidian artifacts, shell material, unexploded World War II ordinance and skeletal remains. One excavation pit has been shown, by radiocarbon dating, to be the oldest known archaeological site in the Port Moresby area.

A field laboratory was established with 18 sieving stations and 14 sorting stations. During operation of the salvage program it is estimated that approximately 240,000 kg of material will be excavated, sieved and sorted; by a team of 2 professional archaeologists, some 40 national university students and a number of local villagers. The sorted artifacts will be sent to Monash University, Melbourne for analysis and cataloguing over the next two years before being returned to the Papua New Guinea National Museum and Art Gallery.

DEVELOPING LOCAL ARCHAEOLOGY

Local woman and University archaeologist sorting artifacts

Throughout the salvage program a total of 37 expatriate archaeologists, 53 local villagers and 45 students and staff members of the University of Papua New Guinea have been involved. Local women have been trained in laboratory work and a number of the University participants were able to assume team leader and supervisory roles. Chance finds will be made during construction work and a number of individuals will be employed to deal with these as they arise.

REINVIGORATING LOCAL CULTURE

The influence of the salvage program has extended well beyond the people employed. Many villagers have said that the salvage program has reinvigorated their sense of history and cultural identity and some have thanked the Project publicly for taking an interest in local culture, and for encouraging Papua New Guinean people to participate in the Project.

14.0 Stakeholder Engagement

The Project is continually working to enhance the quality of community engagement with the goal of fostering understanding, trust and co-operation on key issues. Stakeholder Engagement takes many forms and the outcomes of these interactions are described below.

The Project has set up several teams to facilitate interfacing with stakeholders, such as Public and Government Affairs, Government Interface, Social Programs, Training and Development (focusing on recruitment of trainees for the Construction and Production/Operations Phases of the Project), Environmental, Resettlement, and Land and Community Affairs. Internal coordination of engagement is managed by the Stakeholder Engagement Coordination Team, made up of representatives from each team. As work on the Project progresses, contractors will also be involved with stakeholder liaison.

14.1 GOVERNMENT

In early March 2010, Esso Highlands Limited met with over 60 members of the National Parliament to discuss recent National Content-related initiatives. Highlights included the creation of the two new representative Lancos – Laba and Hides Gas Development Corporation. The recent establishment of the Enterprise Center was also discussed along with ongoing recruiting activities, including recruitment for Project operations, and strategic community investments. A two day Project alignment workshop was also held with key ministers, secretaries and directors in March 2010. Additionally, a number of new team members joined the Government Interface Team, more than half of which were Papua New Guinean Citizens.

Plate 14.1: Workshop with the Papua New Guinean Government

Over 150 representatives from the Government and contractors took part in a workshop to assist in Project execution planning and permitting. The Project Government Interface team was also well engaged with the appropriate Papua New Guinean Government Departments who are to interface with local landowners and villagers to address Government related grievances.

14.2 COMMUNITIES

The objectives outlined in the Community Engagement Plan are to establish and maintain positive community relations through effective communication and consultation. Both the Project and contractors are responsible for engagement with communities.

The Project undertakes verification and reporting on community engagement, typically addressing:

- interactions with communities such as community safety briefings, general village meetings, meetings with village leaders, distribution of project information, pamphlets and posters
- issues and concerns which have arisen – details on issues, actions taken and proposed actions
- notifications given to communities about construction activities.

The aim is to highlight issues, trends, positive achievements, concerns and to provide a general context of how issues are being managed according to the Community Engagement Plan objectives.

Plate 14.2: Reviewing engagement material

Plate 14.3: Community consultation

14.2.1 ENGAGEMENT ACTIVITIES

The activities from the Stakeholder Engagement Coordination team are tracked by a Stakeholder Engagement Database. Extensive stakeholder mapping has identified approximately 120,000 stakeholders. Over 53,000 of these stakeholders are in the Project impact area, another 20,000–30,000 along the Highlands Highway (Mendi to Hides), and 30,000–40,000 in Port Moresby. This number may increase with the inclusion of coastal communities in the Gulf Province. For these communities, consideration is being given to the development of information materials for distribution ahead of contact from the Stakeholder Engagement Coordination team.

Plate 14.4: Project roadshow

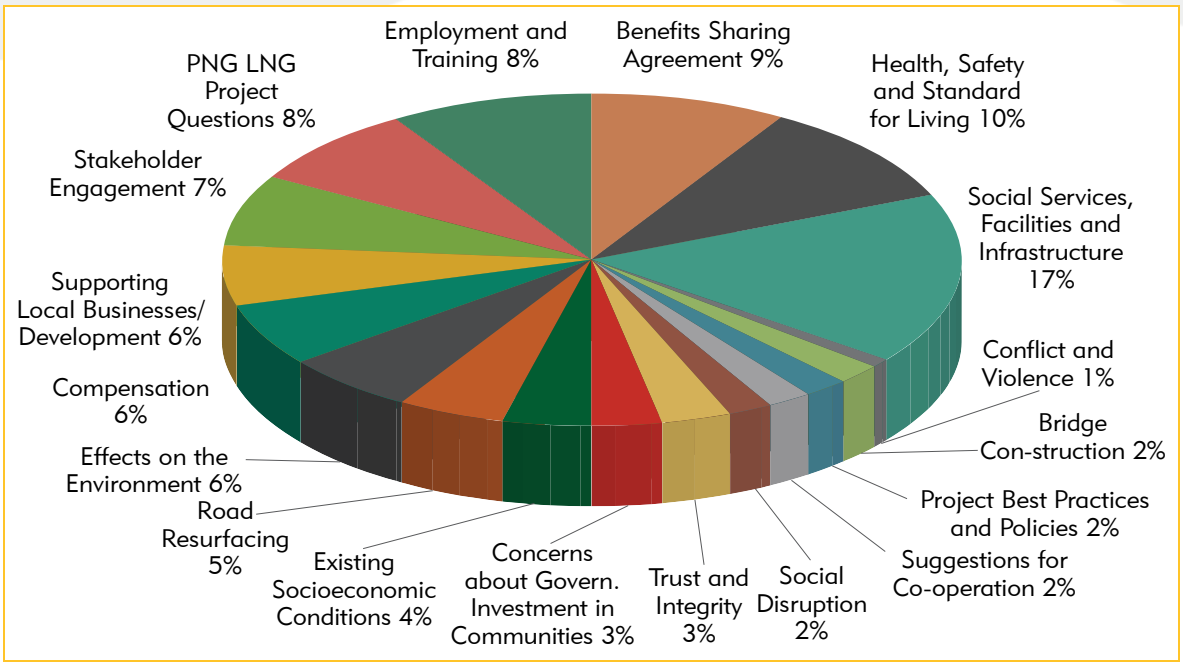
In early December 2009, community engagement continued in the form of meetings with community groups focusing on the Mendi area of the Highlands Highway. This is where a road maintenance and bridge building program is initially concentrated. A total of 17 meetings were held with approximately 1,600 stakeholders.

Meetings were held in an open house format to encourage smaller group meetings and allow all stakeholders the opportunity to receive responses to their questions. Posters and flyers were also used to provide information on the Project. Comments, issues and questions were recorded.

To overcome the constraints of a written format for semi- or non-literate stakeholders, two radio programs were developed, to provide feedback along the Highlands Highway. More radio programs are planned, together with an evaluation of other feedback mechanisms.

Figure 13.1 illustrates the comments raised by stakeholders during the first quarter community engagement activities.

Figure 14.1: Stakeholder Engagement comments, first quarter 2010



A five day formal open house is planned in Port Moresby for April 2010, where posters and videos will be displayed and flyers will be available to take away. Posters will be explained to stakeholders and comments recorded. In addition, a five hour briefing session will be held each day for specific stakeholder groups, such as businesses, suppliers, diplomatic missions, NGO and development agencies.

Other forms of communication are being considered as follows:

Drama: The use of drama is planned throughout the Project, as an accessible way to share key Project information with stakeholders. Drama groups could initially be launched by an expatriate drama specialist, but made up of national professional actors, working together with members of each community, who would form part of the cast.

Information Centers: Plans are underway to develop two Information Centers (more may be added as needed), one in Port Moresby (2010) and the other in the Hides region (2011). The Centers will contain information about the Project, and provide flyers, documents, and other informational materials. The aim is to provide a forum for stakeholders to comment, raise issues and learn more about the Project. The Information Centers will double as Stakeholder Engagement offices in these regions.

Schools campaigns: Planning has begun for a schools campaign around the LNG plant site to raise traffic safety awareness and provide child-friendly information about Project changes in the local area.

In this quarter, the Stakeholder Engagement Coordination team comprised five expats and three citizens and is being strengthened with the addition of further staff. Plans are underway to recruit three regional coordinators, who will coordinate all Stakeholder Engagement in areas of the Project, to ensure ongoing engagement and constant feedback. These teams will initially be led by experienced expatriates who will train the Papua New Guinean citizens on the job to fulfill these roles as soon as possible.

Plates 14.5-7: Stakeholder Engagement activities

Land and Community Affairs Officers continue daily interactions with individuals in communities on such activities as In-Principle Compensation Agreements, support and assistance to resettlement, centerline and route review surveys, compensation payments, environmental damage and improvement assessments, and to address concerns related to site work activities.

Meetings and workshops were held with the Government including the Government Project Coordination Office, Department Petroleum and Energy, Department of Land and Physical Planning, Department of Works as well as Lanco Directors, village counselors and leadership, and village liaison committees.

Matters raised have been documented for reference and follow-up, as required. Topics raised were both Project related and concerning Government matters including some legacy issues from previous development activity in the area. Project related issues have been dealt with and resolved, or are being addressed, while non-Project related issues have been referred to the appropriate bodies and organizations to respond.

Verbal presentations and discussions, either one-to one or between a Land and Community Affairs officer and multiple clan members, were undertaken at Highlands Highway bridges and temporary camps. This is to ensure an understanding of the need for the Project to secure land access for bridge replacement and construction and the purpose of an In-Principle Compensation Agreement. Issues raised related to the nature of the In-Principle Compensation Agreement, resettlement and business opportunities. In order to raise awareness, address enquiries and manage expectations, discussions were held regarding surveys e.g. weeds survey on Kikori/Omati, hydrobiology survey, water sedimentary study survey, fisheries survey. Information was provided on the need for the surveys, schedules, nature of the work, potential impacts, requirement for local labor hire, rates of pay and duration of employment, etc.

Community meetings, consultations and awareness raising was also undertaken in selected Kikori River villages. Meetings provided information and addressed issues and grievances raised in these villages. These activities were also undertaken in villages for waterway users of the barge section of the Southern Logistics Route (Paia Inlet into the Kikori River). Groups belonged to the Porome and Urama tribes that are not currently direct beneficiaries of the Project. Negotiations were undertaken for a Memorandum of Understanding between the Project and the communities along the barge route to investigate ways to assist the communities with small development projects.

Community awareness raising consultations were completed in Hides area villages (36 villages/sites) on the application and selection processes for jobs during operations.

Project operations in Papua New Guinea provide a number of security challenges which are met by applying the significant global experience of ExxonMobil. This allows the Project's security department to tailor an effective security program designed to mitigate risk. Partnerships with the community remain the underpinning foundation of the security strategy. The Land and Community Affairs team work closely with the security team to achieve this goal. Similarly, partnerships are forged with contractors who adhere to the Project's philosophy and strategy while remaining responsible for security on their sites.

The National Content team undertook briefings for key stakeholders on provisions and requirements of the NCP. Regular meetings with these stakeholders will take place to provide local workforce development and local business development plans and results.

15.0 Acronyms

AIDS	Acquired immune deficiency syndrome
AQTF	Australian Quality Training Framework
AusAID	Australian Agency for International Development
DEC	Department of Environment and Conservation, Papua New Guinean Government
EHA	Environmental Health Areas
EIS	Environmental Impact Statement
EPC	Engineering, Procurement and Construction
ESMP	Environmental and Social Management Plan
FAC	First Aid Case
FO	Field observation
Hazobs	Hazard observations
HGCP	Hides Gas Conditioning Plant
HIV	Human Immunodeficiency Virus
HQ	Hides Quarry
IBBM	Institute of Bankers and Business Management
IESC	Independent Environmental and Social Consultant
IFC	International Finance Corporation
JHA	Job Hazard Analysis
Juni CTF	Juni Construction Training Facility
Lanco	Land Owner Company
LNG	Liquefied Natural Gas
M/S	Management System
MCCP	Malaria Chemoprophylaxis Compliance Program
MCP	Malaria Control Program
ME	Mendi
MR	Moro
MRDC	Mineral Resources Development Company
MTI	Medical Treatment Incident
N/A	Not available
NCP	National Content Plan
NGO	Non-government Organization
O & I	Safety Observation and Intervention
OSL	Oil Search Limited
PIIM	Project Induced In-Migration
PNG	Papua New Guinea
POM	Port Moresby

POM Tech	Port Moresby Construction Training Facility
Pos FO	Positive field observation
PTW	Permit To Work
QA	Quarry
SSHE	Safety, Security, Health and Environment
SSHES	Safety, Security, Health, Environment and Social
US	United States
US$	United States Dollars

Appendix 1 - Definition of Monitoring, Verification, Assessment and Audit

The Environmental and Social Management Plan (ESMP) commits to:

The Project monitoring (sampling and analysis) of the management and mitigation activities for which it is responsible:

- Contractors having a field based environmental monitoring (sampling and analysis) program.
- The Project checks and revises of the contractors' monitoring documentation.
- The Project undertakes environmental monitoring (sampling and analysis) at all worksites.

The contractors provide a Construction Environmental Report and a Construction Social Report each monthly to the Project. These reports provide details and results of all monitoring undertaken during the reporting period.

VERIFICATION, MONITORING, ASSESSMENT AND AUDIT

The ESMP requires:

VERIFICATION

The Project will undertake verification of the management and mitigation activities for which it is responsible as defined in the ESMP.

In addition to the checking and review of the contractors' and subcontractors' inspection and verification documentation, the Project will undertake inspection and verification at all worksites.

Contractors and subcontractors shall implement a field based inspection program in order to verify and document the due implementation of, and in some cases the effectiveness of, mitigation measures identified in the contractor and subcontractor ESMP documents.

MONITORING

The Project will undertake monitoring of the management and mitigation activities for which it is responsible as defined in the ESMP.

In addition to the checking and review of contractors' and subcontractors' monitoring documentation, the Project will undertake environmental monitoring (sampling and analysis) and social monitoring at all worksites.

Contractors and subcontractors shall implement a field based environmental monitoring (sampling and analysis) program and a social monitoring program in order to monitor the effectiveness of management and mitigation measures, assess impacts and demonstrate compliance with applicable legal and other requirements.

ASSESSMENT

The Project will undertake internal assessments of the management and mitigation activities for which it is responsible as defined in the ESMP.

The Project will undertake periodic assessments to evaluate the implementation and effectiveness of the contractors' and subcontractors' environmental and social programs. Such assessments will be undertaken in accordance with predetermined protocols agreed with the contractor.

Contractors shall undertake internal assessments in order to evaluate the implementation and effectiveness of the contractors' and subcontractors' Environmental And Social Program.

AUDIT

The Project may undertake environmental and social audits, at its discretion, of the contractors' and subcontractors' activities and work sites, including camps.

The Independent Environmental and Social Consultant (IESC) will, on behalf of the Lender Group, undertake periodic environmental and social audits of the Project activities and work sites, including camps.

Co-venture parties may, at their discretion, undertake environmental and social audits of the Project's activities.

The DEC may, at its discretion, undertake environmental and social audits of the Project's activities.

Appendix 2 - Definition of Non-conformances

The Project has assigned three levels of non-conformance and two additional field observations levels, as presented in Table A2.1

Table A2.1: Non-conformance levels

Level	Description	Disposition
Positive field observation (Pos FO)	A positive field observation of a mitigation, commitment or situation that is properly being implemented or handled in alignment with the ESMP requirements. Potential for sharing as lessons learned or environmental point of emphasis.	Positive field observations are examined regularly to determine if sharing across the Project and contractors would be beneficial.
Field observation	A potential non-conformance situation that could eventually become inconsistent with stated ESMP requirements and where an observation, intervention, and rapid resolution is achieved and noted by the Project and/or contractor personnel. Potential for sharing as a lessons learned or environmental point of emphasis.	Field observations will be communicated to contractors for further action. Field observations that are not closed-out in a timely manner or repeat field observations may also generate a formal Non-Conformance Notice.
Level I	A non-conformance situation not consistent with stated ESMP requirements, but not believed to represent an immediate threat or impact to an identified important resource or community. Typically aligned with the Project's definitions for Severity level 0 and <0 Incidents.	Level I non-conformances will generate a corrective action request or a recommendation for further action. Level I non-conformances that are not closed-out in a timely manner or repeat non-conformances may also generate a formal Non-Conformance Notice. Repeated level I non-conformance may have the disposition and tracking escalated to a level II non-conformance level if left unresolved.
Level II	A non-conformance situation that has not yet resulted in clearly identified damage or irreversible impact to a sensitive or important resource, but requires prompt corrective action and site-specific attention to prevent such effects. Typically aligned with Project definitions for Severity level 1 Incidents with the additional inclusion of any violation of a stated numerical limit (permit condition, mitigation measure, etc.) and any Severity level 0 spill incidents.	Level II non-conformances will generate a corrective action request and a formal Non-Conformance Notice. Level II non-conformances will result in a Stop Work Order, in those situations where work activity is ongoing and will cause immediate damage/impact. Repeated level II non-conformance may have the disposition and tracking escalated to a level III non-conformance level if left unresolved.
Level III	A critical non-conformance situation, typically including observed damage to, or a reasonable expectation of, impending damage or irreversible impact to an identified resource or community. Typically aligned with Project definitions for Severity level 2 and 3 Incidents. Intentional disregard of specific prohibitions or Project standards is also classified as level III non-conformance.	Level III non-conformances will result in a Stop Work Order, in those situations where work activity is ongoing, and will generate a corrective action request and formal Non-Compliance Notice.

The contractors' monthly Construction Environmental Report and Construction Social Report shall include details and status of all non-conformances and field observations identified during the contractors' verification, monitoring, assessment and audit processes.

The Project shall report to the IESC/Lender Group non-conformances identified during the verification, monitoring, assessment and audit processes as described below.

- Level III non-conformances will be notified to the IESC/Lender Group as an incident using an Incident Reporting Form.
- Level II non-conformances will be reported to the IESC/Lender Group in summary form as part of the Quarterly Environmental and Social Report.
- Level I non-conformances will be reported to the IESC/Lender Group as a numeric total as part of the Quarterly Environmental and Social Report.

All documentation relating to these non-conformances will be made available as part of the periodic audits undertaken by the IESC/Lender Group.

Field observations will not be reported to the IESC/Lender Group directly, however, all documentation relating to the field observation will be made available as part of the periodic audits undertaken by the IESC/Lender Group.

INCIDENTS

All environmental and social incidents will be documented and reported in accordance with established Project procedures. An Incident Management Procedure has been developed by the Project, which indicates the method, level and timing required for reporting an incident dependent upon the severity classification level (Level <0, 0, 1, 2, 3).

A summary of the requirements of the Incident Management Procedure, as it pertains to environmental and social incidents, is presented below.

Contractors must notify the Project immediately following the occurrence/discovery of an environmental or social incident at any Project worksites.

Environmental or social incidents include, but are not limited to:

- spills (e.g. oil, chemical, drilling fluids)
- chemical and light hydrocarbon releases into the atmosphere (reportable quantities)
- unauthorized use of land
- community incidents (contractors shall work closely with the Project prior to commencement of work to define these)
- damage to, or destruction of, public infrastructure
- unauthorized damage to cultural artifacts
- permit and regulatory compliance excursions (for an event that involves multiple excursions, each excursion must be reported independently)

- violations of any applicable local, state, national or international law or rule, regardless of whether or not it is cited in a permit
- fines
- enforcement proceedings
- near miss incidents
- worker unrests/strikes.

In all cases the report shall contain, as a minimum, the date, time, location and description of events, materials involved, volumes for spills and releases, root cause analysis, remedial actions taken and corrective actions required to prevent future occurrences.

CORRECTIVE ACTIONS

An Environmental and Social Action Tracking System is maintained by both the Project and contractors to include the details of all environmental and social incidents, identify the remedial/corrective action required, assign actions/timings to responsible parties and indicate the status of the remedial/corrective action. The monthly contractors Construction Environmental Report and Construction Social Report will include a summary of all incidents having occurred in the reporting period and the status of the associated remedial/corrective action.

This Quarterly Environmental and Social Report, which is provided to the IESC/Lender Group, includes a summary of all incidents (including contractor and subcontractor incidents) having occurred in the reporting period.

QUARTERLY ENVIRONMENTAL AND SOCIAL REPORT FIRST QUARTER 2010

PNG LNG

www.pnglng.com

Port Moresby - Project Headquarters
Esso Highlands Limited
Level 5, Credit House, Cuthbertson Street
GPO Box 118
Port Moresby NCD
Papua New Guinea

Email: miles.j.shaw@exxonmobil.com

ExxonMobil

PNG LNG is operated by a subsidiary of ExxonMobil in co-venture with:

OIL SEARCH LIMITED

IPBC
INDEPENDENT PUBLIC BUSINESS CORPORATION

Santos
We have the energy.

ENEOS

NIPPON OIL EXPLORATION
Your Choice of Energy

MRDC

EDA OIL