

THE COMMUNITY GOOD

Examining the Influence of the PNG LNG Project
in the Hela Region of Papua New Guinea



National Centre for Peace
and Conflict Studies
Te Ao o Rongomaraeroa



ACKNOWLEDGEMENTS

Lead author

James McLraith

Co-authors

Sarah Robinson, Lily Lesley Pyrambone, Luke Petai, Darshiney Sinebare and Sylvia Maiap.

Research team support

The research team would like to thank independent field staff in the Hela region and support staff from the Oxfam Highlands Programme based in the Eastern Highlands Province whose assistance made this research and report possible. Special thanks to Tweedy Liberto Malagian, Max Sikoro, Michael Joppa, Raikos Hateh and Hannah Boga from the Oxfam Highlands Programme. The research team would also like to thank those who reviewed the report as well as Zoe Coulson-Sinclair, Wendy Lee, Bryan Cussen and Stephanie Walters for their contributions to this work. Most importantly, the research team would like to thank the people of the Hela region for their generosity and participation.

Partner organisations

The research team is also grateful to the organisations who contributed to this research project. Primary funding contributions and time came from ChildFund Australia, the National Centre for Peace and Conflict Studies, the PNG Church Partnership Programme and the Oxfam Highlands Programme. Support was also received from Jubilee Australia and the Melanesian Institute. Together these organisations are committed to the provision of high-quality research into important issues affecting the lives and wellbeing of people in Papua New Guinea.

Published May 2012

© All rights reserved 2012

ISBN 978-0-473-21458-6 (PRINT)

ISBN 978-0-473-21459-3 (PDF)

Design and printing
University of Otago

CONTENTS

Acknowledgements	i
Table of contents	ii
List of figures	iii
List of graphs	iii
List of abbreviations	iv
Executive Summary	v
Introduction	1
Papua New Guinea	8
Responsibilities, practices and standards	12
The Hela region	20
Awareness and community relations	25
Landowner issues	29
Benefit sharing	34
Business and employment	39
Social changes and impacts	45
Project resettlement	56
Conclusion	64
Recommendations	68
References	69

LIST OF FIGURES

Figure 1: The PNG LNG Project	2
Figure 2: Human security	4
Figure 3: Objectives of this report	5
Figure 4: Corporate social responsibility and corporate sustainability	14
Figure 5: The rights of vulnerable groups	16
Figure 6: Legislation and standards	17
Figure 7: Agreements between different parties	31
Figure 8: Summary of different benefit streams	36
Figure 9: Performance Standard Five	56
Figure 10: The resettlement process	57
Figure 11: The basic resettlement package	60

LIST OF GRAPHS

Graph 1: Well-informed about the PNG LNG Project	26
Graph 2: Ranking of information sources	26
Graph 3: Views of the PNG LNG Project	27
Graph 4: Fairness of the benefit sharing negotiations	31
Graph 5: Benefits of the PNG LNG Project fairly shared	43
Graph 6: Summary of general PNG LNG Project concerns	43
Graph 7: Prices increases at markets and stores between June 2010 and June 2011	46
Graph 8: Summary of governance issues	50
Graph 9: Triggers of violent conflict related to the PNG LNG Project	52
Graph 10: Triggers of potential conflict related to the PNG LNG Project	53
Graph 11: Summary of human security concerns	54
Graph 12: Resettlement concerns	58

LIST OF ABBREVIATIONS

ATM	Automatic Teller Machine	IPBC	Independent Public Business Corporation
BDG	Business Development Grants	K	Kina
BSA	Benefit Sharing Agreement	LANCO	Landowner Company
BSP	Bank South Pacific	LBSA	Local Licence Based Benefit Sharing Agreement
CDOA	Coordinated Development and Operating Agreement	LCA	Lands and Community Affairs
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women	LESR	Lender Environmental and Social Requirements
CIF	Community Investment Fund	LNG	Liquefied Natural Gas
CRC	Convention on the Rights of the Child	LNGA	PNG LNG Gas Agreement
CSS	Community Support Strategy	LLG	Local Level Government
CST	Census and Survey Team	LNGP	PNG LNG Project
CTA	Common Terms Agreement	LRT	Livelihood Restorations Team
DCI	Department of Commerce and Industry	MDGs	Millennium Development Goals
DEC	Department of Environment and Conservation	MMR	Mixed Method Research
DPE	Department of Petroleum and Energy	MOU	Memorandum of Understanding
EA	Environment Act 2000	MRDC	Mineral Resources Development Corporation
EHL	Esso Highlands Ltd	MSF	Médecins Sans Frontières (Doctors Without Borders)
EIC	Expenditure Implementation Committee	NCP	National Content Plan
EITI	Extractive Industries Transparency Initiative	NGO	Nongovernmental organisation
ELC	Environmental Law Centre	NPCP	National Petroleum Company of Papua New Guinea
EIS	Environmental Impact Statement	OGA	Oil and Gas Act 1998
ESMP	Environmental and Social Management Plan	PDL	Petroleum Development Licence
FGT	Future Generations Trust	PIA	Project Impact Area
G8	Group of Eight	POMtech	Port Moresby Technical College
GNI	Gross National Income	PMV	Public Motor Vehicle
GDP	Gross Domestic Product	PNG	Papua New Guinea
HGCP	Hides Gas Conditioning Plant	RAP	Resettlement Action Plan
HGDC	Hides Gas Development Corporation	RIT	Resettlement Implementation Team
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome	RPF	Resettlement Policy Framework
IBD	Interest Bearing Deposit	SHP	Southern Highlands Province
IDG	Infrastructure Development Grant	SIA	Social Impact Assessment
IESC	Independent Environmental and Social Consultant	SMLI	Social Mapping and Landowner Identification
IFC	International Financial Corporation	UBSA	Umbrella Benefit Sharing Agreement
ILG	Incorporated Land Group	UNDP	United Nations Development Programme
		USD	United States Dollars
		WHO	World Health Organisation

EXECUTIVE SUMMARY

This report examines the influence of the PNG LNG Project (LNGP) in the Hela region of Papua New Guinea (PNG). Its main purpose is to investigate immediate social changes and impacts associated with the LNGP. It focuses particularly on threats to human security, but also includes broader LNGP concerns of importance to the local people in the Hela region.

The LNGP is taking advantage of natural gas resources primarily located in the Hela region. The LNGP will extract the natural gas from the Hela region, condition and convey it to the coast for liquefaction before exporting the natural gas to overseas markets. The initial construction phase of the LNGP began in 2010, with its completion expected in 2014.

The report draws on research undertaken in the Hela region between late 2010 and mid 2011. Two surveys of 164 people from 17 communities, 70 individual and focus group interviews as well as stakeholder consultations and secondary research feed into this report. This executive summary highlights the contents of this report, the key issues raised during the research and the report recommendations.

Background

Resource development poses challenges for countries worldwide. In many respects, the experiences of PNG illustrate the difficulties involved. PNG relies heavily on its natural resource wealth for overseas income. However, it has struggled to take full advantage of this abundance and, in some cases, has suffered serious environmental and social harm in the wake of resource development.

Governance issues compound resource development challenges. The evident potential of resource development is offset by the possibility of serious socio-economic harms in the absence of good institutions and sound economic policy. Resource development too often affects those who are most vulnerable and fails to provide sustainable human development outcomes.

It is especially important to focus on distributing the benefits of resource development by investing in the wider population's human potential. This includes taking steps towards improvements in education and healthcare as well as moving to diversify the economy in pursuit of a sustainable economic future.

As major stakeholders, the community, company or government, must accept and discharge wider responsibilities beyond the narrow remit of self-interest. Such stakeholder responsibilities are numerous and provide a challenge at the best of times. It entails engaging in credible multi-stakeholder dialogue in pursuit of common human development goals.

A number of legislative and normative standards reinforce this responsibility. They oblige the LNGP operator, for example, to undertake environmental and social impact planning. Similarly, the LNGP operator has guidelines and performance standards. A

number of international initiative and normative principles also influence stakeholder actions.

The LNGP is taking place in a difficult environment in terms of the challenges facing the Hela region and the vulnerabilities of the Hela population. Critical indicators show people in the Hela region suffer from especially low levels of literacy and high levels of childhood and maternal mortality, although such problems are not uncommon throughout PNG.

This research starts by detailing the livelihood, education and healthcare situation in the Hela region as an estimate of the overall human development context and the challenges faced. While some of these indicators are improving in absolute terms, there are questions surrounding the relative gains and the sustainability of progress.

Key findings

There are a number of general and specific findings in this report. The general findings relate to LNGP issues raised by people in the Hela region. The specific findings relate to the focus of this research on human security threats. These threats are to varying degrees influenced by the LNGP.

Awareness and community relations: Most people gather information on the LNGP through local talk in the village and for those in areas directly affected by the LNGP, attendance by company officials was also reasonably regular. Among the general findings is the concern that there has not been enough awareness raising about the LNGP amongst the Hela population.

There are significant challenges to building community relations in the Hela region. In the absence of means to convey information easily to affected areas and to the wider Hela populace, people feel poorly informed about the LNGP's progress in their community. This has led to feelings of exclusion and frustration. Even in cases where people interact regularly with the LNGP, many still express dissatisfaction with the level of information conveyed. Many feel there is also a particular lack of awareness activities by government.

This research also suggests that strained community relations are undermining positive views of the LNGP. Earlier research in the region has pointed to the high levels of support for the LNGP. Although support remains, people are less sure about the personal benefits from the LNGP and the sharing of benefits fairly amongst the Hela population. People in the Hela region are increasingly negative in their outlook.

Landowner issues: The issue of poor awareness and strained community relations carries over to problems raised in relation to landowner agreements, social mapping and landowner identification (SMLI). The government is required to agree and execute LNGP benefit sharing agreements (BSAs) between the state and landowners as well as affected local level and provincial governments.

Complaints about the extent of the SMLI studies undertaken by the LNGP and accepted by the government are widespread. People point out earlier SMLI studies should have been more comprehensive as they did not capture significant numbers of legitimate landowners. In this respect, they argue for the completion of further in-depth SMLI studies. Some of those participating in this research raised the possibility of sanctions from landowners over this outstanding issue.

Benefit sharing: There are significant future benefit streams available to varying stakeholders after 2014. LNGP area landowners will receive cash benefits, such as royalties and equities in addition to benefits such as community and infrastructure developments. With the BSAs signed, the problem of legitimate landowner exclusion and the potential for misappropriation of future benefit streams is the greatest concern.

A significant risk associated with inadequate landowner identification concerns mechanisms for sharing the eventual benefits between landowners. Incorporated Landowner Groups (ILGs) are the favoured option for distributing benefit streams. There are several different ILG models, each having their own benefits and costs. However, government progress in establishing ILGs remains slow and unclear.

The failure to carry out 'full' landowner identification undermines the LNGP and future progress. If landowners and the government do not adopt an effective ILG regime based on sufficient landowner identification studies, with appropriate controls to guarantee accountability and transparency, there will likely be damaging problems associated with future benefit streams.

Business and employment: Business and employment offers one of the greatest benefits of the LNGP and there have been efforts to maximise the opportunities provided. There are several contending elements in progressing business and employment in the Hela region.

As an incentive to develop opportunities in relation to the LNGP, the government offered K120 million in business development grants (BDGs). However, only a small proportion of applicants met the criteria for these oversubscribed grants.

There were few checks and balances associated with these grants. Consequently, the contestation and accusations of misappropriation led to litigation in the courts. At the time of writing this report, there are still no mechanisms in place to ensure the veracity of those applying and the appropriate handling of grants allocated.

There are also a myriad of local landowner companies (LANCOs) operating in the hopes of gaining LNGP business. Local LANCOs are favoured under section 129 of the Oil and Gas Act (OGA) and BSAs. For the most part, smaller LANCOs are grouped under a single entity, referred to as an umbrella LANCO. In the research area, the main umbrella LANCO was the Hides Gas Development Corporation (HGDC).

There are concerns about the incorporation of LANCOs, the formation of many occurring before local landowner identification. There are frequent charges of 'outsiders' fraudulently registering local LANCOs, depriving legitimate local landowners of LNGP business as well as complaints about the structure of many LANCOs, operating for the benefit of those in leadership positions and not the community.

There are a number of obligations on the LNGP operator to assist with the development of business and employment opportunities. PNG citizens now comprise a significant proportion of the total workforce on the LNGP. Many of these are local hires in the Hela region, which has undoubtedly boosted the local economy. Over-hiring takes place and people share cash benefits, but many locals are still falling behind.

The end of construction will result in a large pool of unemployed people who have become used to a regular wage packet. This will likely increase social tensions. There are also widespread concerns about transferable skills and the sustainability of business and employment in the absence of the heightened needs of the LNGP construction period.

Nonetheless, people are still clearly benefiting from and taking advantage of the increased cash flow in the Hela region. Militating against this are relative price increases, which undermine real income growth, as well as the absence of appropriate market facilities. People expressed clear sentiments about the need to share the benefits and there are worries about growing inequality.

Social changes and impacts: Flowing on from such difficulties is a range of social changes and impacts not easily captured under a single heading. The varied pressures are evident in the Hela region and generally raise concerns about human security threats:

- **Demographics:** Issues relate to the movement of people within the Hela region and the arrival of people from elsewhere in PNG. The presence of 'outsiders' changes the community dynamic and increases pressure on local resources.
- **Economic wellbeing:** Cash 'windfalls' are quickly spent and there is little evidence of improved saving habits. Income inequality is matched by problems related to food security. These difficulties are largely blamed on inflationary pressures. There are also concerns around production and consumption levels. People further worry that a sustainable economy is not emerging in the Hela region.
- **Family and households:** There are undoubtedly financially induced changes affecting family and household circumstances. This includes the effects of greater cash sums and how they are spent. While some argued that these sums were leading to increased family breakdown and social problems, others recognised the positive impact they were having on many people's livelihoods.
- **Health and social wellbeing:** People's primary concerns relate to the accessibility, quality and cost of education and healthcare. These factors are influenced by the LNGP. For example, resources are stretched by additional demands, with teachers and healthcare workers leaving to work for the LNGP. Conversely, the LNGP is opening up opportunities for better access and greater sponsorship of education and health. Although not directly associated with the LNGP, the future of Tari hospital is a preeminent concern for Hela residents.
- **Freedom and participation:** People surveyed and interviewed are most concerned about participation of people generally and landowners specifically in relation to the LNGP and the future of their communities. The range of existing inequalities, especially economic and gender related divisions are evident and discussed as an impediment to human development.

- **Institutional and political:** The above issues carry over to the institutional and political context. Leadership is valued, but too often people feel let down by those in leadership positions. There is a viewpoint that the concentration of power in the hands of few frequently leads to poor outcomes. Good governance, the capacity and role of government in the Hela region are also central to discussions.
- **Environmental considerations:** Many see amenity values affected, through for example some dust and waterway pollution, while some note the growing consumer culture and its effects on the environment. The landslide tragedy that struck the Hela region in January 2012 has also raised questions over the stewardship of land in the area and compounded the challenges facing the LNGP.
- **Security and social problems:** There are a number of critical security and social problems in the Hela region. While the contribution of the LNGP and increased police presence to a reduction in serious crime is welcome, there is concern about increases in petty and other forms of criminality, with more people feeling unsafe since the LNGP arrived. People highlight problems associated with alcohol and reaffirm the importance of an alcohol ban. While the LNGP has brought optimism and peacefulness to the area, there is an expectation and fear the situation would deteriorate into conflict, especially if landowner issues are not resolved satisfactorily.
- **Socio-cultural factors:** People discuss the direct challenge to local culture from changing socio-economic circumstances including concerns about changing personal and group dynamics as well as declining affiliation with the church. People surveyed and interviewed note the wider implications of socio-cultural transformation in the wake of introduced global practices.

Project resettlement: Resettlement affects people in areas required for the construction or operation of the LNGP. It can involve both physical and economic displacement. Many of the steps taken by the LNGP are reassuring given the significant resettlement activities. However, some general observations and points of criticism remain.

There is a repeated call for improved awareness amongst those in affected areas and throughout the wider Hela region in relation to resettlement and the activities of the LNGP. Although banking facilities are expected soon, to date, problems regarding the distribution and management of large payments in the absence of proper financial guidance and banking facilities are notable amongst those resettled. There is also a need for an improved grievance mechanism.

Reports from some of those resettled, particularly those physically relocated, suggest that some are unhappy about the move and their eventual locality (despite the compensation paid and benefits received). A future challenge may be if those moved want to revisit their agreements. Another important consideration is the inclusion in some manner of the wider community in related activities seen as beneficial, such as the livelihood restoration field days.

Recommendations

The report concludes with recommendations on several specific areas, highlighted in stakeholder discussions as being especially important to the LNGP and the progress of human development in the Hela region. They act as a point of reference for dialogue and future stakeholder action.

Awareness and community relations

- The LNGP operator and government should improve public awareness and community relations in the Hela region through the wider use of public forums to inform local people and community leaders. This includes establishing an information and liaison office headquartered in Tari and ensuring it is properly resourced for this purpose.

Landowners and benefit sharing

- The government should prioritise the completion of landowner identification and ILG registration on an informed basis. This necessitates increased capacity and support from the LNGP operator.
- The government should further establish effective systems to evaluate and monitor future benefit-sharing disbursements at all levels to ensure accountability and transparency.
- The government, with the support of the LNGP operator, should monitor and continue research into best practice benefit sharing mechanisms and community investment models to ensure the sustainability of LNGP funds.

Community development and education

- The government, development agencies, civil society and the LNGP operator should cooperatively examine ways of improving the financial and livelihood skills of Hela residents through the creation and delivery of quality training and livelihood programmes.
- The government, church and other development partners should make education a priority. This includes giving emphasis to increased school enrolments and developing education facilities, particularly under the tax-credit scheme. The government should also examine best practice and enhance teacher training to maximise the benefits of education in the Hela region.
- The government, LNGP operator and community representatives should work together to establish community planning committees. Given appropriate financial and managerial support, they would take responsibility for the prioritisation and implementation of community development projects at the ward level.
- The churches, in collaboration with civil society and development agency partners, should establish a community development body or forum to liaise and work with government and the LNGP operator on community development projects.

Safeguarding the environment

- The implementation of broader stewardship principles and practices in the Hela region is the joint responsibility of all stakeholders in the area. Accordingly, appropriate stakeholders should establish a body that accounts for and reinforces local values and PNG laws on issues of environmental importance.

Improving human security

- The government, development agencies and civil society must engage in joint efforts to ensure food security. These stakeholders should carry out further research and implement the necessary steps to ensure food security in the Hela region.
- The government, development agencies and civil society must work together to address the threats posed by alcohol, communicable diseases and violence. This includes extending preventive health, education and human rights programmes as well as strengthening existing groups who are working on mitigation and reduction strategies in the Hela region.

- All stakeholders have a responsibility to care for those who are most vulnerable to social changes and impacts in the Hela region. Women and children face particular risks. All development and human security activities must consider their rights and wellbeing in an effort to reduce these risks and improve their overall human development.
- The government, development agencies and civil society should guide these development and human security activities. However, the LNGP operator has an important role to play, engaging in a meaningful and effective way and assisting wherever possible in efforts to improve human development in the Hela region.

Sharing responsibility for the social changes and impacts occurring in the Hela region, stakeholders should establish a review body to facilitate dialogue and oversee the effective implementation of these recommendations. Building on existing and new initiatives by stakeholders, the overall objective of collective action in relation to these recommendations is improved human development in the Hela region for present and future generations.



INTRODUCTION

The PNG LNG project (LNGP) represents a significant opportunity for Papua New Guinea (PNG). It comes at a critical juncture in the country's development as it attempts to shake off past decline and improve the lives of its people. Social change and impacts accompany the significant economic promise of the LNGP. The challenge for stakeholders is to ensure the influence of the LNGP is positive, rather than negative for the people affected and PNG.

The purpose of this report is to examine the immediate social changes and impacts associated with the LNGP in the new Hela region of PNG. It also addresses relevant LNGP concerns raised by people in the Hela region. It brings together several months of research in the Hela region beginning in late 2010 and ending in mid 2011, incorporating two surveys of 164 people in 17 communities and 70 individual and focus group interviews. The broader purpose is to contribute to open dialogue and knowledge surrounding the LNGP. Recommendations are included in support of improved human development outcomes for the people of Hela and other stakeholders.

The proponents of the LNGP have already done much to assess the potential social changes and impacts on those areas affected by the LNGP. By addressing the particular concerns and commitments of the partner organisations, this report provides additional insight into changing circumstances in the Hela region. It also provides a platform for a broader discussion on the costs and benefits of the LNGP. The report stresses the critical need for ongoing dialogue between stakeholders in relation to the LNGP and the pursuit of shared human development goals in the Hela region and PNG.

The PNG LNG Project

The LNGP is the largest resource development project ever undertaken in PNG, requiring direct capital investment of K36 billion and generating between K200 billion and K443 billion in output value over the 30-year expected life of the LNGP, with recurrent expenditure amounting to a maximum of K705.6 million each year.¹ The total value of PNG's oil and gas exports is predicted to rise from the 2006 level of K2.6 billion to K11.4 billion.² Overall, the LNGP is forecast to more than double the Gross Domestic Product (GDP) of PNG, which would rise from the 2006 level of K8.65 billion to an average of over K18.2 billion per year.³

The LNGP will extract gas resources from reserves located at Hides, Angore, Juha and South East Hedinia, as well as from the associated gas produced from oil fields at Kutubu, Gobe, Agogo and Moran. The initial construction phase of the LNGP began in 2010, with completion expected in 2014. A number of subsequent phases will extend the capacity and production of the various fields.⁴

The main LNGP infrastructure now under construction includes a gas conditioning plant at Hides in the Hela region, extensive pipelines down to the coast and an LNG facility near Port Moresby. Modifications to existing facilities are also taking place. Following extraction and conditioning, the gas will be transported via an onshore pipeline to the Gulf of Papua and then an offshore pipeline to a liquefied natural gas (LNG)⁵ plant north-west of Port Moresby at Caution Bay. The gas will then be liquefied for transport by LNG carrier ships to the international market.⁶

Figure 1: The PNG LNG Project⁷



The LNGP offers significant direct resource revenues. The PNG Government is predicted to benefit from taxation revenue totalling approximately K67 billion over the 30-year lifetime of the LNGP in addition to dividends from its equity shareholding. Royalty payments to provincial governments, local level governments (LLGs) and landowners are divided 30 percent, 10 percent and 60 percent respectively and are predicted to total K5.3 billion.⁸

There are also important indirect opportunities for wealth generation in the context of PNG’s wider development aspirations, potential employment and associated business ventures. Employment, which is expected to reach a peak of around 12,000-15,000 during initial construction, before falling back, will provide both wage and training benefits. PNG businesses are profiting from supplying the LNGP and through the creation of additional business opportunities.⁹

It is hoped that the LNGP will also provide additional impetus to advance broader development goals in PNG. LNGP proponents will likely take advantage of the tax credit scheme, which offsets tax payments against contributions in areas such as education and health, in addition to making voluntary social programme contributions.¹⁰ Furthermore, under existing agreements with landowners, the PNG Government has agreed to a range of infrastructure developments. The PNG Government is also committed to using resource development revenues to support improved social services throughout PNG.¹¹

The LNGP is a joint venture between several parties.¹² Esso Highlands Ltd (EHL) is the operator of the project on behalf of Exxon Mobil (33.2 percent), Oil Search (29.0 percent),

Santos Ltd (13.5 percent), JX Nippon Oil and Exploration Ltd (4.7 percent) and the PNG state and landowners (19.6 percent).¹³ The PNG Government stake is held through Petromin, the Mineral Resources Development Corporation (MRDC) and the Independent Public Business Corporation (IPBC) of PNG.¹⁴

The Hela region

The focus of this research is the Hela region of PNG where a majority of LNGP activities are occurring.¹⁵ Comprised of three districts (Komo-Margarima, Koroba-Lake Kapiago and Tari-Pori), the Hela region covers an area of 10,498 square kilometres. It is currently part of the Southern Highlands Province (SHP), although it is expected to become the Hela Province sometime in 2012. The population of the Hela region is 185,947 accounting for 34 percent of the total SHP population of 546,265.¹⁶

The Huli are the largest ethno-linguistic group in Hela.¹⁷ The Huli continue to rely on subsistence agriculture, although there is a need for some cash to pay for services such as school fees and mobile phone usage, as well as an increasing array of household consumables and goods, such as tinned fish, rice and clothing. Limited formal employment opportunities mean most people earn the necessary cash through the sale of food crops, coffee and livestock. Remittances from family members are also an important source of income.¹⁸

The largest township in Hela is Tari, with a population of 8,186.¹⁹ Tari is a centre of local commerce and services. It houses local government and in the future the new Hela provincial government and is home to the area’s main hospital. Tari and the Hela region are accessible by air or via the Highlands Highway,

which runs from the coastal city of Lae, through to Mendi, the Southern Highlands Province capital, and thereafter to Tari in the Hela region. There are regularly scheduled flights between Tari and Port Moresby.

Hela is a resource rich area that even prior to the LNGP brought significant investor interest and opportunity to PNG. However, the Hela region has some of the poorest indicators of human development in PNG. Only 40 percent of school-aged children attend school;²⁰ literacy levels are 30 percent for women and 41 percent for men;²¹ and the mortality of children under five is 15 percent higher than the national average.²² It remains one of the poorest parts of PNG, due in large part to poor agricultural potential and limited access to roads, markets and services.²³ Public service provision has been on the decline since the 1980s and during the 1990s.²⁴ There is no mains electricity coverage throughout Hela and many parts of the region remain inaccessible by road.

Papua New Guinea

The human development situation in the Hela region is representative of PNG's broader circumstances. Although PNG made considerable progress in relation to a number of social indicators during its first 15 years of independence since 1975, subsequent years saw a noticeable decline. This was particularly marked during the 1980s and 1990s when a combination of factors, including a faltering economy, deteriorating law and order and waning public services, led to falls in several measures of wellbeing. Only in the latter half of the 2000s did PNG regain something resembling a steady footing, with steps taken towards reversing the poor performance of previous years. However, much remains fragile and uncertain about the future of PNG's development.

The population of PNG now stands at approximately six million. The vast majority of people continue to reside in rural areas. Only 13 percent of people live in urban locations. As in Hela, a significant proportion of the wider population exists on the margins of the cash economy, with subsistence agriculture remaining central to most people's livelihoods. Poverty is a considerable concern. An estimated 37 percent of the population continues to live in poverty, the majority of whom reside in rural areas of PNG. Poverty is accompanied by high levels of inequality, which may well have been exacerbated in recent years by changing economic circumstances. The average per capita income in PNG now stands at USD\$1,300.²⁵ The continuation of subsistence agriculture masks many of the hardships faced by individuals and communities throughout the country.

These circumstances are indicative of the wide-ranging development issues noted in the Hela region and facing PNG. PNG's human development indicators are very low. School enrolment and adult literacy rates are low, while infant and maternal mortality rates are high. Overall access to quality education and healthcare services is lacking, particularly in more disadvantaged and rural areas of PNG. The average life expectancy in PNG now stands at 62 years.²⁶ PNG ranks much lower than most other countries included in the United Nations

Development Programme (UNDP) Human Development Index.²⁷ The period of stagnation and deterioration in areas such as health and education during the 1990s and early 2000s mean PNG is unlikely to meet any of its Millennium Development Goals (MDGs) or tailored national targets in the near-term.²⁸

Children and women are particularly vulnerable under these circumstances, with gender inequality exacerbating the previously mentioned conditions. Women have more limited access to education, a lower income and life expectancy than men in PNG. Poverty and violence are resounding features in the lives of most children and women throughout PNG.²⁹

Improving the human development status of PNG's sizable younger population is especially important. Problems in education and healthcare are compounded by the ongoing failure to include school leavers in formal employment, adding to already chronic under- and unemployment. Engaging the young on issues as wide-ranging as employment, livelihoods, HIV/AIDS and violence is crucial for PNG's future.³⁰

The previous PNG government medium-term development strategy (2005-2010) advocated four priorities: "export-driven economic growth, rural development and poverty reduction through good governance and the promotion of agriculture, forestry, fisheries and tourism on a sustainable basis."³¹ The strategy included priority areas of expenditure, including basic infrastructure, income-earning opportunities, basic and adult education, primary healthcare and HIV/AIDS prevention as well as spending in the law and justice sector.³²

The current PNG government medium-term plan (2011-2015) focuses on a number of key sectors, including land development, law and order problems as well as investment in primary, secondary, higher and technical education, health, utilities and a quality transport infrastructure.³³

It seeks to lay the foundations for the longer-term prosperity of PNG, as set out in 'Papua New Guinea Vision 2050'. The 'Vision 2050' document outlines the underlying themes driving PNG's development agenda:

Papua New Guinea has great potential through its natural resources – land, cash crops, forests and fisheries – to improve its socioeconomic development status. Equally important are other areas that can contribute to economic growth and better living standards for the people, including human capital development, an improved infrastructure networks and an efficient service delivery mechanism for public goods and services.³⁴

Human Development

Resource development projects such as the LNGP add to the complexities of human development in PNG. Human development "embraces every development issue, including economic growth, social investment, people's empowerment, provision of basic needs and social safety nets, political and cultural freedoms and all other aspects of people's lives."³⁵

Human development is about enlarging people's choices. It seeks to extend human capabilities and freedoms, so that with access to knowledge and a good standard of living, people are able to lead long and healthy lives. It also means they are able to participate in community and decision making that affects their lives.³⁶

This research orientates itself towards the human development approach and the goal of enlarging people's choices, and consequently establishing an enabling environment for people to enjoy long, healthy and satisfying lives.³⁷ This approach allows for any number of pathways to improved human development including the contribution of resource development.³⁸

However, as most observers will know, PNG's experience with resource development has at best been mixed, with few long-term benefits being passed on to the wider population. Proponents and critics of resource development are also aware of the 'resource curse,' which suggests resource dependence can lead to harmful human development outcomes.³⁹

The role of resource development projects such as the LNGP should not just be income generation, but the promotion of wider human development aspirations such as improved livelihoods, greater access to education, better nutrition and healthcare, surety against crime and physical violence, cultural and political freedoms and a feeling of participation in community life.⁴⁰

An essential aspect of human development is human security. Human development is a broader concept than human security. While human development relates to expanding people's freedoms, human security is the component that relates to threats against those freedoms.⁴¹

Figure 2: Human security⁴²

In their 1994 Human Development Report, the UNDP defined human security as "freedom from fear and freedom from want." They listed several human security categories:

- Economic security requires a basic income to reduce the threat of poverty.
- Food security requires physical and economic access to food to reduce the threat of hunger and famine.
- Health security requires good nutrition, access to safe drinking water and basic healthcare to reduce the threat of disease and injury.
- Environmental security requires care of the physical environment to reduce the threat of environmental degradation, pollution and resource depletion.
- Personal security requires a safe physical setting to reduce the threat of physical violence.
- Community security requires a coherent and supportive community to reduce the threat of social instability and unrest.
- Political security requires human rights adherence to reduce the threat of civil and political repression.

This report gives adopts a refined definition of human security, emphasising the protection of the essential aspects of human lives from critical and pervasive environmental, economic, food, health, personal, community and political threats.⁴³ This definition is also appropriate for the nuanced local level assessment of human security, something that will lead to an improved picture of human development challenges in the Hela region.⁴⁴

Human security is also about prevention. It is much easier to prevent human security threats than to intervene later to either mitigate or resolve them. In the context of resource development, for example, it is much easier to prevent problems that often arise, such as environmental degradation and the spread of HIV/AIDS. This is a particular challenge for the LNGP.⁴⁵

In meeting the aspirations of the local community, there are several key human development questions for the following chapters:

1. **Equitability:** Is the LNGP equitable for all stakeholders?
2. **Sustainability:** Is the LNGP sustainable over the long-term, in relation to environment, social and community changes and impacts?
3. **Acceptability:** Is the LNGP acceptable to the community at large, and have any objections been adequately addressed?
4. **Human development:** Is the LNGP going to contribute to both local and national human development?
5. **Human security:** Is the LNGP going to mitigate against or reduce local and national human security challenges?

While setting out these human development questions is relatively simple, determining the answers in light of resource development projects and their contrasting effects is by no means straightforward.⁴⁶

Methodology

The main purpose of this research is to examine the immediate social changes and impacts associated with the LNGP in the Hela region of PNG. The research employs mixed method research (MMR), a theoretical and practical approach to research that attempts to consider multiple perspectives and positions using both qualitative and quantitative techniques.⁴⁷

The employment of MMR leads to the corroboration of findings; elaboration during analysis to provide richer data; and allows for the initiation of new modes of thinking in light of contradictions that appear between data sources.⁴⁸ MMR helps overcome "problems that stem from studies relying upon a single theory, a single method, a single set of data ... and from a single investigator."⁴⁹

This integrated approach also provides flexibility and allows insight to be garnered from different perspectives. Carrying out the research in this way and seeking multiple points of view further improves the reliability and validity of results. This is especially important when looking into local circumstances. MMR can provide an added level of detailed, contextual information.⁵⁰ A number of further factors, including the purpose and timing of the research, the size of the research area and population as well as the availability of secondary data, determined the choice of methods from within this framework.⁵¹

Figure 3: Objectives of this report

The objectives of this report are to:

- Examine the immediate social changes and social impact of the LNGP in the Hela region.
- Report related LNGP concerns raised by people in the Hela region.
- Elaborate on particular human development and human security issues in the Hela region.
- Provide a resource that contributes to open dialogue and knowledge surrounding the LNGP.
- Provide recommendations to support improved outcomes for stakeholders, including improved human development for the people of Hela.

The field research took place in three phases. In late 2010, a scoping visit was undertaken in the Hela region to inform the following stages of the research. In early 2011, a three-month field research phase took place, completed by June 2011. A final follow-up field research phase took place during July and August of 2011.

This research carried out two surveys. The first survey captured the views of 124 people from 12 communities on a range of social change and impact issues related to the LNGP. A second, smaller survey captured the views of 40 people from five communities in relation to a baseline set of social change and impact questions related to the LNGP. In total, 164 people were surveyed from throughout the Hela region.

The survey sample for this research potentially included any “persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively.”⁵² While the social assessment work carried out for the LNGP defines this area as inclusive of the 117 communities “where the major impacts are likely to be felt in the short-to-medium term, and where the majority of the affected populace presently reside,” this research sought to capture samples from across the wider Hela region.⁵³

As the social changes and impacts of the LNGP vary across the Hela region, the sample frame accounts for the relative influence of the LNGP inside or outside Petroleum Development Licence (PDL) areas. It also accounts for the practical challenges of undertaking field research in the Hela region. In particular, access to local communities is limited and there are ever-present security risks in the Hela region. These factors limited freedom of choice and movement. This eventually led to an altered research programme and reduction in the sample size.

These are further problems carrying out probability sampling in the Hela region. The lack of freely available population and location data for the areas as well as restricted freedom of choice and movement makes the generation of a random sample in the Hela region extremely difficult. For these reasons, this research uses non-probability sampling.

However, there are some risks using non-probability sampling.⁵⁴ There is no guarantee that the sample is fully representative of

the whole population. Beyond the circumscribed boundaries of the sample selection, there is also an element of self-selection and therefore the potential for positive and negative bias in the sample.⁵⁵ The research aimed to ensure balanced participant selection as best as possible, in addition to triangulating data to ensure its reliability.

The research surveys sampled inside the PDL areas, focusing on Hides and Komo (PDLs 1, 7 and 8) where a large proportion of the LNGP affected area is located (37 percent).⁵⁶ The smaller survey focused especially on these areas. Outside the PDLs, communities participating in the larger survey came from in and around the Tari area. An additional determination was made within these boundaries based on the geographical distribution of communities and the proximate influence of the LNGP. Communities further away from the influence of the LNGP in and around Koroba Station were included in the research as a control group.

After the granting of initial access to communities and confirmation of security arrangements, further selection of survey participants took place within communities. Liaising with local partners and local leaders the determination of survey participants took place: based on gender, age and community position as well as participant’s landownership and resettlement status. Although not random, this selection process provided a representative sample of people from the communities visited, which in turn contributed to a more complete picture of the social changes and impacts taking place within the Hela region.

Numerous interviews were also carried out with individuals and groups. This included key informant interviews and focus groups with local community members. There was a particular focus on women and vulnerable groups. In total, 70 individual and focus group interviews were undertaken during the main field research phase. These interviews predominantly took place in the Hela region and Port Moresby.

The research used local partners to facilitate access to local communities and assure the safety of research activities for those involved. Specifically, local partner organisations in the Hela region helped communicate, organise and carry out surveys and interviews in the area based on agreed criteria and protocol. Individuals from partner organisations who worked with the research team were critical to the success of the research and received survey training prior to the research commencing.

Additional primary and secondary research utilised published and unpublished material. This included newspapers, secondary and LNGP documentation as well as government and organisation reporting on related subjects. Consultations with experts on the various topics under consideration also took place.

Following the conclusion of research and initial write-up phase, a detailed review and further stakeholder consultations took place to ensure the accuracy and validity of the research and to open the research and report up to comment and further feedback into changed or new circumstances. The views and contributions of as many stakeholders as possible are included in the final recommendations.

Social changes and impacts are consequential for people and communities. A resource development project can cause social

changes, while an individual, family, household, community or society actually experiences social impacts. For example, resettlement is considered a social change, while any anxiety, stress, uncertainty and disruption to daily living are considered a social impact.⁵⁷ A plain typology of social changes and impacts includes:

- Direct changes/impacts are specifically related to project activities, for example, resettlement, employment and construction.
- Indirect changes/impacts are due to influences resulting from direct impacts, such as increased turnover for local storekeepers from project employees.
- Induced changes/impacts are removed several times over from project activity, resulting from things such as increased corruption or land speculation.
- Cumulative changes/impacts are usually more fundamental shifts that result over time and likely affected by other social changes, such as altered social practices and cultural beliefs.

It is important to note this distinction given there are difficulties in measuring distinct social changes and impacts.⁵⁸ The complexities of people's lives and daily life mean they are sometimes difficult to isolate. This report reflects that difficulty. These changes and impacts must also be placed in the context of broader transformations taking place within PNG. While the LNGP may have a significant association with one issue or another for many people in the Hela region, such changes and impacts might also stem from broader influences affecting the country.

Hence, this research does not distinguish whether the issues are social changes or impacts, nor does it delve directly into the proximity of these effects to the LNGP. Rather, it brings the points of attention raised by community members and other stakeholders to the fore for review and discussion. In this respect, this research report primarily addresses the contribution of the LNGP to social changes and impacts in the Hela region.

Focusing on the contribution of the LNGP does not mean that attribution will not take place or diminish any responsibility for the social changes and impacts. It is an acknowledgement that attribution and responsibility are sometimes difficult to address and that substantive discussion should focus on collectively addressing social changes and impacts.

Contents and structure

This introduction describes the main areas of the report. The research chapters address matters related to the social changes and impacts taking place in the Hela region of PNG.

1. *Papua New Guinea*: Discusses the challenges posed by resource development in PNG, particularly in relation to the economy, government, environmental and social effects.
2. *Responsibilities, practices and standards*: Considers resource development and the respective roles of major stakeholders in addition to setting out practices and standards applicable to the LNGP.
3. *The Hela region*: Gives some background to those in the Hela region engaged with, particularly in relation to the key issues of livelihood, education and healthcare.
4. *Awareness and community relations*: Presents one of the fundamental concerns raised by those surveyed and interviewed regarding the LNGP, namely, the need for greater awareness about the LNGP and better community relations throughout the Hela region.
5. *Landowner issues*: Addresses the difficult issues of landowner agreement, social mapping and landowner identification. These interrelated difficulties continue to challenge all stakeholders.
6. *Benefit sharing*: Reviews the varying benefit streams and benefit sharing arrangements, touching on some of the complexities involved.
7. *Employment and business*: Examines the employment and business opportunities provided by the LNGP and efforts to foster employment growth and business development.
8. *Social changes and impacts*: Looks at a range of social changes and impacts related to the LNGP.
9. *Project resettlement*: Looks into the pivotal activity of resettlement, including the challenges that arose during this still ongoing process.

The report concludes by reflecting on the report's themes, broader general issues and human security concerns, in addition to setting out core recommendations for the future.

1 ACIL Tasman assumed a currency conversion rate of \$1.00 USD to 3.60 PGK.

2 ACIL Tasman, "PNG LNG Economic Impact Study: An Assessment of the Direct and Indirect Impacts of the Proposed PNG LNG Project on the Economy of Papua New Guinea (Prepared for Exxon Mobil)," (Melbourne: ACIL Tasman Pty Ltd, 2008), pp.9-11.

3 The authors of a separate review caution against these figures, saying, "The ACIL Tasman report indicates that the project will double GDP for PNG. This may be exaggerated. On page vi of their report, they talk about annual product from the LNG project of K11.4 billion. We suspect this is in 2008 prices and should be compared with PNG's GDP for 2013 in 2008 prices. This will be about K22.5 billion. Thus we think the GDP effect of the LNG project will be about 50% (a K11.4 billion boost to K22.5 billion). However, none of this really matters. As argued in the text, what is important is the effect on GNP. Throughout the life of the project, the GNP effect will be between 4% and 10%." See: P.B. Dixon, G. Kauzi, and M.T. Rimmer, "Effects on the PNG Economy of a Major LNG Project," *Economic Papers: A Journal of Applied Economics and Policy* 29, no. 2 (2010): p.145.

4 Esso Highlands Limited, "Environmental Impact Statement," (Melbourne: Coffey Natural Systems Pty Ltd, 2009), pp.3-5.

5 Liquefied natural gas or LNG is natural gas converted into its liquid form. LNG is primarily methane with small amounts of other hydrocarbons. LNG is useful for transporting natural gas to markets. When regasified or warmed to make natural gas, it is mainly used for cooking and heating as well as electricity generation and other industrial uses. LNG can be used in its liquid form as an alternative transportation fuel. See: Esso Highlands Limited, "What Is LNG?" <http://pnglng.com/project/lng.htm>.

6 Esso Highlands Limited, "Environmental Impact Statement," pp.3-5.

7 Source: Esso Highlands Limited. Please note the boundary lines on this map are out-of-date and do not show the Hela region.

8 Esso Highlands Limited, "Environmental Impact Statement," c.23; pp.13-14.

9 Esso Highlands Limited, "Environmental Impact Statement," c.23; pp.14-16.

10 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.7.

11 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.16.

12 Through the LNGP, it has been stated that these actors have put together the largest private sector investment yet seen in the Pacific. See: Jubilee Australia, "PNG LNG Project Investigation," (Forthcoming).

13 Esso Highlands Limited, "Fact Sheet: Project Overview," (Port Moresby PNG LNG, 2010), p.2.

- 14 Petromin PNG Holdings Ltd. is an entity owned by PNG government to hold its interests in petroleum and mining resource projects, it owns 0.2 percent of project equity through a stake in the Moran field. The bulk of government equity in the project, 16.6 percent, is held under The Independent Public Business Corporation (IPBC), which holds assets and liabilities that have been vested in or acquired by it on behalf of the state, such as nationalised industries. The petroleum assets held by the IPBC are managed by a subsidiary called the National Petroleum Company (NPCP), formerly known as Kroton no. 2. The NPCP is currently undergoing restructuring. A further 2.78 percent of so called CDOA (Coordinated Development and Operating Agreement) Equity will be held by subsidiaries of the Mineral Resources Development Company (MRDC) a state owned company which holds and manages landowner equity interests in petroleum and mining projects.
- 15 The Hela region was formerly part of the Southern Highlands Province (SHP).
- 16 The population of the Hela region has increased significantly since these Census figures were collated in 2000. However, this is the last reliable full-Census and is generally used in the absence of other data. National Research Institute, "Papua New Guinea: District and Provincial Profiles," (Port Moresby: National Research Institute, 2010), pp.87-98. Preliminary figures from the 2011 National Census released by the National Statistical Office of Papua New Guinea show the country's population has increased by 36 percent from the 2000 National Census. See: 2011 Population Report Release, The National, 4 April 2012.
- 17 Nicole Haley and Ronald J. May, "Introduction: Roots of Conflict in the Southern Highlands," in Conflict and Resource Development in the Southern Highlands of Papua New Guinea, ed. Nicole Haley and Ronald J. May (Canberra: E Press, Australia National University, 2007), p.9.
- 18 National Research Institute, "Papua New Guinea: District and Provincial Profiles," pp.87-98; H. Wardlow, "Men's Extramarital Sexuality in Rural Papua New Guinea," *American Journal of Public Health* (2007): p.1007.
- 19 National Research Institute, "Papua New Guinea: District and Provincial Profiles," pp.87-98.
- 20 National Research Institute, "Papua New Guinea: District and Provincial Profiles," p.89.
- 21 National Statistics Office, "National Census 2000: Southern Highlands Provincial Report.," (Port Moresby: National Statistics Office (NSO), 2002), p.40.
- 22 World Bank, "World Development Indicators (CD-ROM).," ed. World Bank (Washington D.C.:2008).
- 23 B. J. Allen, "The Setting: Land, Economics and Development in the Southern Highlands" in Conflict and Resource Development in the Southern Highlands of Papua New Guinea, ed. N. Haley and R. May, State, Society and Governance in Melanesia Studies in State and Society in the Pacific 3 (Canberra: ANU E-Press, 2007), p.41; L. W. Hanson et al., Papua New Guinea Rural Development Handbook (Canberra: The Australian National University, 2001), p.92.
- 24 N. Haley and J. R. May, "Introduction: Roots of Conflict in the Southern Highlands," in Conflict and Resource Development in the Southern Highlands of Papua New Guinea, ed. N. Haley and R. May, State, Society and Governance in Melanesia Studies in State and Society in the Pacific 3 (Canberra: ANU E-Press, 2007), p.8.
- 25 Gross National Income (GNI) measured in USD (2010) using the Atlas method. See: World Bank, "Papua New Guinea," World Bank, <http://data.worldbank.org/country/papua-new-guinea>.
- 26 PNG currently has a ranking of 137 out of 169 countries worldwide according to the 2010 Human Development Index. See: United Nations Development Programme, "Papua New Guinea: Country Profile of Human Development Indicators," <http://hdrstats.undp.org/en/countries/profiles/PNG.html>.
- 27 PNG is currently the worst performer in the East Asia and Pacific Region, with a score of 0.431.
- 28 See: United Nations Development Programme, "Second National MDG Progress Summary Report 2009," (Port Moresby: United Nations Development Programme, 2009).
- 29 See: Andrew Egan, Amy Haddad, and AusAID, "Violence against Women in Melanesia and East Timor: A Review of International Lessons," (Canberra2007); M. Kopi et al., "Insecurity in the Southern Highlands: The Nature, Triggers and Consequences of Violence in Hela Region," *State, Society and Governance in Melanesia Discussion Paper* (2011).
- 30 See: Sylvia Maiap, "Youth Idleness, an Aspect of Insecurity in the Hela Region of Southern Highlands Province," (Goroka: Oxfam Highlands Programme, 2011).
- 31 Ministry for National Planning and Monitoring, "The Medium Term Development Strategy (2005-2010)," (Port Moresby: Government of Papua New Guinea, 2004).p.iii.
- 32 Ministry for National Planning and Monitoring, "The Medium Term Development Strategy (2005-2010),"p.iii.
- 33 See: Department of National Planning and Monitoring, "The Medium Term Development Plan (2011-2015)," (Port Moresby: Government of Papua New Guinea 2010).
- 34 National Strategic Plan Taskforce, "Papua New Guinea Vision 2050," (Port Moresby: Government of Papua New Guinea, 2009), p.xiv.
- 35 Mahbub ul Haq, "The Human Development Paradigm," in *The Development Economics Reader*, ed. G. Secondi (Milton Park, Oxon: Routledge, 2008), p.33.
- 36 United Nations Development Programme, "The Human Development Concept," <http://hdr.undp.org/en/humandev/>.
- 37 Haq, "The Human Development Paradigm," pp.28-33.
- 38 Jeni Klugman and United Nations Development Programme, "The Real Wealth of Nations: Pathways to Human Development," in *Human Development Report 2010* (New York: United Nations Development Programme, 2010), p.v.
- 39 See: J.A. Frankel, "The Natural Resource Curse: A Survey," (Cambridge: Harvard Kennedy School, 2010); P. Stevens, "Resource Impact: Curse or Blessing? A Literature Survey," (IPIECA, 2003).
- 40 Haq, "The Human Development Paradigm," pp.28-33.
- 41 United Nations Development Programme, "New Dimensions of Human Security," in *Human Development Report 1994*, ed. Inge Kaul (New York: United Nations Development Programme, 1994), p.23. Klugman and United Nations Development Programme, "The Real Wealth of Nations: Pathways to Human Development," p.17.
- 42 Source: United Nations Development Programme, "New Dimensions of Human Security," pp.24-25.
- 43 Taylor Owen, "Challenges and Opportunities for Defining and Measuring Human Security," in *Human rights, human security and disarmament* (Disarmament Forum, 2004), p.20.
- 44 Owen, "Challenges and Opportunities for Defining and Measuring Human Security," p.22.
- 45 United Nations Development Programme, "New Dimensions of Human Security," p.22.
- 46 F. Vanclay, "Social Impact Assessment," (Contributing paper to World Commission on Dams 1999), p.15.
- 47 R. Burke Johnson, Anthony J. Onwuegbuzie, and Lisa A. Turner, "Toward a Definition of Mixed Methods Research," *Journal of Mixed Methods Research* 1, no. 2 (2007): p.113.
- 48 Gretchen B. Rossman and Bruce L. Wilson, "Numbers and Words," *Evaluation Review* 9, no. 5 (1985): pp.632-33.
- 49 B. Mikkelsen, *Methods for Development Work and Research* (Thousand Oaks, CA: Sage Publications, 2005), p.96.
- 50 M. Bamberger, V. Rao, and M. Woolcock, *Using Mixed Methods in Monitoring and Evaluation: Experiences from International Development* (World Bank, 2010), p.8.
- 51 S.A. Joyce and M. MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," *London: International Institute for Environment and Development (IIED)-Mining, Minerals and Sustainable Development* (2001): p.7.
- 52 International Financial Corporation, "Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets," (Washington D.C.: International Finance Corporation, World Bank Group, 2007), p.10. See also Nick Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," (2009), p.2-1.
- 53 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.2; p.1.
- 54 Non-probability sampling is not ideal as it relies on the judgment of researchers to best choose a representative sample. This inherently leads or reinforces selection bias of the particular sample.
- 55 Bamberger, Rao, and Woolcock, *Using Mixed Methods in Monitoring and Evaluation: Experiences from International Development*, p.5.
- 56 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," p.2-26.
- 57 Vanclay, "Social Impact Assessment," p.3.
- 58 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.16.



CHAPTER 1

Papua New Guinea

Resource development typically relates to the exploitation of renewable and non-renewable resources. In this report, it refers to the exploitation of non-renewable resources, which are processed and traded as a means of generating opportunities and wealth for a range of national and international stakeholders.¹ The experiences of PNG illustrate the many challenges of resource development.

PNG is a resource abundant country. However, resource development revenue has brought few long-term human development benefits for the majority of PNG's population, whilst creating serious environmental and social problems for communities. Nonetheless, there is significant optimism surrounding the LNGP and, more broadly, resource development in PNG. This reinforces the importance of considering and exploring the resource development experience of PNG, both as a precursor to the LNGP and an alert to the potential difficulties associated with resource development.

Economy and government

At the time of independence in 1975, PNG only had one major operating mine, the now well-known Panguna copper mine in Bougainville. Subsequent increases in the prices for minerals, particularly gold, over the following years led to increased attention and applications for mineral exploration in PNG. The country experienced something of a 'gold rush' in the 1980s, before domestic and international factors contributed to a slump in the 1990s.²

This downward trend reversed at the turn of the century as international commodity prices boomed. Mining operations in PNG now centre on the extraction of minerals such as copper, silver, gold and nickel. There are currently several major mining operations in

the country, the largest of which are the Ok Tedi, Lihir and Porgera mines.³ Petroleum output comes primarily from production fields at Kutubu, Gobe and Moran in the Highlands. PNG also sits on significant gas reserves, especially in the Hela region.⁴

The PNG Government has devoted considerable energy to the resource development sector over the years since independence. This is a reflection of the perceived and actual benefits derived as well as the ongoing need to improve policies and practices surrounding resource development. PNG has been relatively successful in dealing with the complexities of resource development.⁵ However, significant problems remain for those investing in resource development projects in PNG.⁶ Particular issues arise in relation to oversight and regulation, stakeholder management and the need to address the broader concerns of affected communities.⁷

The fragmented political context in PNG and contestation between groups over resource development revenues is closely associated with problems related to government accountability and transparency. The failure to deliver basic government services to many parts of the country, which many see as the inability of government to pass on the benefits of resource development, further reinforces the negative view many have of resource development. It also undermines government in the eyes of people and weakens the legitimacy of state action in relation to resource development projects.⁸

The macroeconomic implications of resource development in PNG also present a range of difficulties. PNG finds itself increasingly dependent on resource revenues for investment, government receipts and foreign exchange.⁹ For example, gold, silver and copper exports over the three decades from 1972-2000 were worth K21.5 billion, which accounted for 47 percent of total exports.¹⁰ Resource receipts currently account for over

50 percent of GDP and over 75 percent of exports. In contrast, agricultural products amount to around 20 percent of exports and manufacturing goods just over 4 percent of exports.¹¹

This lack of diversification in the economy is challenging, as it means the fortunes of PNG are largely driven by international commodity prices. PNG's growth rate has averaged three percent since independence.¹² Although generally positive, it has fluctuated significantly, from a high in the early 1990s of 15 percent to negative growth rates later that same decade. The average growth rate of three percent has only just managed to keep up with population growth.

This otherwise positive economic growth rate also hides a period of decline in a range of other non-economic measures during the 1990s.¹³ This includes problems with good governance, increasing law and order problems as well as difficulties with infrastructure in rural areas that hamper agricultural production. The decline was worsened by a decrease in exploration spending and the related fall in export receipts as demand for international commodities dropped. Investor confidence in the PNG economy was consequently undermined and capital flowed out of the country depreciating the kina further. This contributed to a fall in international revenues for PNG.¹⁴

In recent years, however, optimism about the future has grown. Recent resource development growth has been buoyed by stronger international commodity prices. PNG has also experienced several years of non-mining related GDP growth in excess of population increases, which has also given some confidence to policymakers and political leaders in PNG. While a range of resource development challenges still face the country, if future revenue windfalls are used wisely many believe PNG could improve its long-term development position.¹⁵

Environmental and social issues

Communities often welcome the arrival of resource development projects given the economic opportunities on offer. Benefits may include wage income from employment, grant funding for projects, access to improved infrastructure and services, compensation for damage or occupied lands as well as dividends and royalty payments associated with the resource development project.¹⁶ Over the years, the economic benefits received from different resource development projects around PNG have varied greatly.¹⁷

Conversely, resource development projects can also bring costs to those affected. In many instances, they have led to what has been described as 'hyper-development,' where the sudden arrival of large amounts of cash, services and infrastructure over a short period has a disproportionate impact on a community.¹⁸ Under such conditions, resource development projects can exacerbate existing social problems and neglect to take account of longer-term socio-economic development.¹⁹

The range of social changes and impacts can differ in character and degree depending on the resource development project being undertaken. Cash windfalls often bring about substantial social change and impacts. There is some evidence that costs associated with the individual receipt of money are mitigated by its distribution within the community as the economic benefits of the

resource development project are shared. However, the amount of cash given to others is usually small and easily spent, making longer-term savings and asset growth within the community less likely.²⁰ Moreover, the 'trickle-down' effect of money regularly witnessed in traditional societies does not necessarily provide a better outcome for people. In many cases, appropriate practices to deal with the distribution of significant cash payments are not available. With the advent of significant resource development windfalls, traditional mechanisms for customary trade and exchange of items simply cannot meet demands for equality.²¹

Creating sustainable communities is especially difficult in the context of traditional cultures and a fragile state that works against long-term wealth accumulation and widespread cooperation. Resource development compounds this, with companies and migrants seeking short-term gains, rather than looking to invest in the future wellbeing of an area and its people. This is the fear many have in relation to the LNGP.

There are also identifiable patterns of consumption associated with large cash disbursements from resource development projects.²² These patterns take both traditional and modern forms. For example, men with increased incomes can afford to pay 'bride price' and marry more women, while studies have also shown increases in spending on items such as alcohol, new vehicles and air travel. These consumption patterns are often framed within the traditional context of 'big men' and the building or maintaining of power networks within the community.²³

When a community moves from a predominantly subsistence lifestyle to a cash-based one with the arrival of the resource development project, it can be left in a more vulnerable position without the means to continue participation in the wider economy.²⁴ Being of finite duration, the end of construction employment or the resource development project itself creates an uncertain future if people have come to rely on a cash income for their livelihood and lost their subsistence agriculture skills.²⁵ Existing inequalities are exacerbated and pressure on the already unsatisfactory living standards of the poorest and most vulnerable, is increased, particularly in rural areas.²⁶

The unequal distribution of benefits and costs among the local population can disrupt social relations and have detrimental socio-cultural consequences.²⁷ Cash inflows and the influx of new services can "cause confusion, apathy and a culture of dependency."²⁸ The resulting discontent mixed with the challenges of the old traditions and new circumstances, lead to damaging outcomes for many, including higher rates of sexually transmitted infections, problems with alcohol abuse, gambling and disaffected young people. As a result, dissatisfaction increases amongst the local populace.²⁹

Better economic opportunity is perhaps the primary reason for people in PNG moving to sites of resource development projects. Absolute poverty levels may decrease around resource development projects as cash and other benefits flow into the community. However, this is usually contrasted by rising inequality within the community as some individuals profit more than others. These patterns of inequality can involve geography, hierarchy, gender and residential status within the community. More broadly, there is little evidence to suggest that resource development has reduced inequality and poverty across in PNG.³⁰

A considerable proportion of the rural populace in PNG face environmental constraints. The Hela region is no exception. Locality is often a greater determinant of poverty than household or family attributes. Very high altitude, high rainfall, steep slopes, flooding and poor soils in rural areas, for example, all act as significant determinants of poverty. Limited access to market opportunities hampers many of the poorest areas in PNG. Moving to locations near roads that provide access to markets, education and health services is one of the few practical options for those occupying difficult terrain.³¹

Resource development projects can also cause considerable damage to the environment. Many such projects in PNG have poor environmental records.³² One of the most well known is the Ok Tedi mine in the Western Province. Communities in such cases face the all too common problem of wanting to take full advantage of the economic benefits, but ultimately doing so at great expense to the surrounding environment.³³

Hard-rock mineral extraction and oil and gas extraction are both potentially damaging to the environment, despite their differences. With hard-rock mineral extraction in open cast mines, the most serious concern surrounds the disposal of tailings and overburden as well as the damaging toxins associated with the mining process, which are frequently dumped untreated into at-risk waterways and surrounds with destructive results.³⁴ Conversely, oil and gas extraction leaves a much smaller footprint than open cast mining. Immediate environmental impacts arise from the clearing of land, construction, waste management and building of project facilities. Environmental harms can also result from pollution such as oil spills, gas flaring and gas emissions. Examples of environmental problems surrounding oil and gas extraction occurred in the Niger Delta³⁵ and in the Indonesian province of Aceh. Heightened social tensions usually accompany such environmental problems.³⁶

Many environmental costs and risks are dependent on the location and scale of the resource development project as well as the environmental protection measures in place. The importance of environmental assessments and minimisation of damage to the environment is becoming more widely accepted in the resource development sector worldwide. However, environmental destruction caused by resource development projects in PNG is too often seen as an acceptable cost in light of the economic benefits provided. It is evident that the environmental impact of many resource development projects will endure and in many cases prove extremely costly for the people of PNG.³⁷

Problems of insecurity also trouble PNG and impede resource development in the country.³⁸ Much conflict is a direct result of existing resource development projects in PNG. For example, intensified fighting in the Southern Highlands during the 1990s was in part associated with the arrival of large-scale resource development projects with ongoing conflicts over the distribution of oil and gas royalties and access to other project-related benefits.³⁹

The PNG province of Bougainville experienced particularly severe conflict in relation to the operation of the Panguna mine. Problems highlighted in Bougainville included the loss of land; limited and unequal apportioning of compensation; the diversion of social inconvenience compensation into businesses that did not

deliver real returns to landowners; environmental damage; and problems with housing and other facilities in villages that were relocated.⁴⁰

In PNG, resorting to conflict is perceived as justifiable in response to grievances.⁴¹ Conflict itself is not contrary to social order, rather “fighting is both a recurrent and legitimate means of prosecuting claims or seeking restitution.”⁴² What is important is the “way people engage with, handle, and control conflict in a particular context.” When mediated properly, conflict is a central feature of sociality. Only when conflict is uncontrolled does it present problems.

Conflict in PNG is strongly associated with historical factors, individual and group identity as well as social relationships. These factors are situated in the context of the strong linkages between identity and resources.⁴³ Most landholders in PNG have an intense affiliation with their land. The land and movements across the landscape are central to identity.⁴⁴ Land is an everlasting feature that situates humans in the world – a permanent resource and connection with both the past and future.⁴⁵

It is in this context that people in the Highlands now seem less able to regulate conflict, perhaps in part because of a growing disregard for traditional norms and values as well as a lack of mechanisms for dispute resolution by the younger generation.⁴⁶ Because the causes and impact of conflict differ from pre-colonial times, resource development and the greater goal of improved human development seems unachievable without changes to the present conflict management and resolution system.⁴⁷

These factors are located amidst the significant political and ethnic fragmentation of PNG. Such fragmentation creates “distinctive problems of interest aggregation, of policy coordination, and of effective governance – problems that hamper political stability and undermine economic development.”⁴⁸ The challenge under these circumstances is dealing with the many groups within PNG and their competing claims.

This political situation contributes to overall weaknesses surrounding governance that underlie many problems related to resource development. Government fails to pursue human development objectives on behalf of the people, leading to what most people view as poverty in PNG, which presents as the reduction of basic public services such as health and education as well as the deepening isolation of communities.⁴⁹

Summary

PNG continues to face resource development challenges. These are of significance to the LNGP and to the future of resource development in PNG. There are several areas of concern, including the broad economic implications of resource development and the role of the PNG Government and institutions. Localised environmental and social costs associated with resource development projects are also vitally important.

There is a need for sound macro-economic policy as well as good governance and institutions. Improvements to human development rely on the sharing of resource development benefits across all communities within a country, rather than higher economic growth rates alone. Focusing on widespread investment in human capital over time will contribute to a reduction in

challenges such as conflict and poverty, ultimately benefiting human development.⁵⁰

It is critical to maintain an awareness of the effects of resource development on the poor and those most vulnerable.⁵¹ Localised environmental and social costs are frequently overlooked in

the rush to secure benefits for the country as whole. Given the damage caused, attending to patterns of consumption, inequality and changing community dynamics are of pivotal concern for all stakeholders. In the Highlands of PNG, the place of land as well as the role of conflict in people's lives is also great consequence.

- 1 Broadly, the exploitation of non-renewable mineral resources, including oil and gas as well as metallic ores, with implications for the LNGP, constitutes resource development in this study. See: Colin Filer and Benedict Imbun, "A Short History of Mineral Development Policies in Papua New Guinea," in *Policy Making and Implementation: Studies from Papua New Guinea* ed. R. J. May, *Studies in State and Society in the Pacific*, No 5 (Canberra: E Press, Australia National University, 2009), p.75.
- 2 A. Williamson and G. Hancock, "The Geology and Mineral Potential of Papua New Guinea," (Port Moresby: Papua New Guinea Department of Mining, 2005), pp.12-13.
- 3 PNG has eight producing mines: one (Ok Tedi) producing copper, gold and silver; three (Porgera, Simberi and Tolukuma) producing gold and silver; and two (Lihir and Sinivit) producing gold and silver. Hidden Valley which produces gold and Ramu which produces nickel/cobalt have recently begun production. See: Chris Hinde, "Papua New Guinea," *Mining Journal Supplement* 11/09(2009).
- 4 See: Economist Intelligence Unit, "Papua New Guinea Country Profile 2008," (London: The Economist, 2008).
- 5 Filer and Imbun, "A Short History of Mineral Development Policies in Papua New Guinea," p.75.
- 6 See: Behre Dolbear, "2012 Ranking of Countries for Mining Investment Where "Not to Invest" (Behre Dolbear Group Inc., 2012). This risk assessment listed PNG as the fifth worst country for mining investment, pointing particularly to social issues, permitting delays and corruption as the main impediments.
- 7 Filer and Imbun, "A Short History of Mineral Development Policies in Papua New Guinea," p.106.
- 8 Glenn Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector," *Focaal - European Journal of Anthropology* 46(2005): p.131.
- 9 This dependence also extends to a reliance on foreign assistance. PNG's Official Development Assistance (ODA) amounted to K12.8 billion in 2005.
- 10 Glenn Banks, "Papua New Guinea Baseline Study," in *Report for MMSD Project* (London: International Institute for Environment and Development (IIED), 2001), p.27.
- 11 New Zealand Ministry of Foreign Affairs and Trade, "Papua New Guinea," New Zealand Ministry of Foreign Affairs and Trade, <http://www.mfat.govt.nz/Countries/Pacific/Papua-New-Guinea.php>.
- 12 Some reports put this as high as four percent average growth since independence.
- 13 See: S. Chand, "Papua New Guinea Economic Survey: Transforming Good Luck into Policies for Long-Term Growth," *Pacific Economic Bulletin* 19, no. 1 (2004).
- 14 International Monetary Fund, "IMF Country Report No. 03/178 (Papua New Guinea)," (Washington D.C.: International Monetary Fund, 2003), p.4.
- 15 Jonathan Gouy et al., "Parting with the Past: Is Papua New Guinea Poised to Begin a New Chapter Towards Development?," *Pacific Economic Bulletin* 25, no. 1 (2010): p.1.
- 16 C. O'Faircheallaigh, "Resource Exploitation and Indigenous People: Towards a General Analytical Framework," in *The Challenge of Northern Regions*, ed. P. Juli and S. Roberts (Darwin: Australian National University, 1991), p.230.
- 17 The share of community mining royalties for example, rose from five percent at Ok Tedi in the early 1980s, to 50 percent of royalties and a 15 percent equity share at Lihir in the late 1990s. See: Glenn Banks, "Compensation for Mining, Benefit or Time Bomb? The Porgera Gold Mine," in *Resources, Nations and Indigenous Peoples: Case Studies from Australasia, Melanesia, and Southeast Asia*, ed. R. Howitt, J. Connell, and P. Hirsch (Melbourne: Oxford University Press, 1996); C. Filer and R.T. Jackson, *Landowner Compensation in Papua New Guinea's Mining and Petroleum Sectors* (PNG chamber of Mines and Petroleum, 2000); S. Toft, *Compensation for Resource Development in Papua New Guinea* (Canberra: Australian National University (Faculty of Law), 1997). R.T. Jackson, *Cracked Pot or Copper Bottomed Investment?: The Development of the Ok Tedi Project 1982-1991*, a Personal View (Melanesian Studies Centre, James Cook University, North Queensland, 1993). C. Filer, "Participation, Governance and Social Impact: The Planning of the Lihir Gold Mine," *Mining and Mineral Resource Policy Issues in Asia-Pacific: Prospects for the 21st Century* (1995).
- 18 See: Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector."
- 19 Emma Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," (Durham: Drrham University, 2009), p.2.
- 20 Banks, "Papua New Guinea Baseline Study," p.46.
- 21 Banks, "Papua New Guinea Baseline Study," p.68.
- 22 Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector," p.135.
- 23 See: Susanne Bonnell, "The Impact of Relocation," in *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989-1994*, ed. C. Filer (Canberra, Port Moresby: Asia Pacific Press and National Research Institute, 1999). Banks, "Papua New Guinea Baseline Study," p.46.
- 24 Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," p.2.
- 25 Banks, "Papua New Guinea Baseline Study," p.48.
- 26 Gouy et al., "Parting with the Past: Is Papua New Guinea Poised to Begin a New Chapter Towards Development?," p.4.
- 27 F. Remy and G. McMahon, "Large Mines and Local Communities: Forging Partnerships, Building Sustainability," (Washington, DC: Mining Department, World Bank Group, 2002), p.3.
- 28 Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," p.8.
- 29 Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector," p.135.
- 30 Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector," p.132.
- 31 B. Allen, R.M. Bourke, and J. Gibson, "Poor Rural Places in Papua New Guinea," *Asia Pacific Viewpoint* 46, no. 2 (2005): pp.213-14.
- 32 See: Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," Banks, "Papua New Guinea Baseline Study."
- 33 Stuart Kirsch, "Indigenous Movements and the Risks of Counterglobalization: Tracking the Campaign against Papua New Guinea's Ok Tedi Mine," *American Ethnologist* 34, no. 2 (2007): pp.308-14.
- 34 Banks, "Papua New Guinea Baseline Study," p.52-54.
- 35 See: E. Okoko, "Women and Environmental Change in the Niger Delta, Nigeria: Evidence from Ibeno," *Gender, Place and Culture: A Journal of Feminist Geography* 6, no. 4 (1999).
- 36 See: Tim Kell, *The Roots of Acehese Rebellion, 1989-1992* (Singapore: Equinox Publishing, 2010); John F. McCarthy, "The Demonstration Effect: Natural Resources, Ethnonationalism and the Aceh Conflict," *Singapore Journal of Tropical Geography* 28, no. 3 (2007); Michael L. Ross, "Resources and Rebellion in Aceh, Indonesia," in *Report prepared for the Yale-World Bank project on 'The Economics of Political Violence'* (Yale University, 2003).
- 37 Kirsch, "Indigenous Movements and the Risks of Counterglobalization: Tracking the Campaign against Papua New Guinea's Ok Tedi Mine," p.306.
- 38 See Sinclair Dinnen, *Law and Order in a Weak State: Crime and Politics in Papua New Guinea*, Pacific Islands Monograph Series ;17 (Honolulu: Center for Pacific Islands Studies, School of Hawaiian, Asian, and Pacific Studies, University of Hawai'i Press, 2001).
- 39 Haley and May, "Introduction: Roots of Conflict in the Southern Highlands," p.4.
- 40 Anthony J. Regan, "Causes and Course of the Bougainville Conflict," *The Journal of Pacific History* 33, no. 3 (1998): p.276.
- 41 James Weiner, Abby McLeod, and Charles Yala, "Aspects of Conflict in the Papua New Guinea Highlands," in *State, Society and Governance in Melanesia* (Canberra: Australia National University, 2002), p.4.
- 42 Laurence Goldman, "'Hoo-Ha in Huli': Considerations on Commotion and Community in the Southern Highlands," in *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, ed. Nicole Haley and Ronald J. May (Canberra: E Press, Australia National University, 2007), p.70.
- 43 See: Glenn Banks, "Understanding 'Resource Conflicts in Papua New Guinea,'" *Asia Pacific Viewpoint* 49, no. 1 (2008).
- 44 George Westermark, "Clan Claims: Land, Law and Violence in the Papua New Guinea Eastern Highlands," *Oceania* 67, no. 3 (1997): p.220.
- 45 Paul Sillitoe, "Beating the Boundaries: Land Tenure and Identity in the Papua New Guinea Highlands," *Journal of Anthropological Research* 55, no. 3 (1999): p.349.
- 46 Haley and May, "Introduction: Roots of Conflict in the Southern Highlands," p.4.
- 47 Goldman, "'Hoo-Ha in Huli': Considerations on Commotion and Community in the Southern Highlands," pp.70-71.
- 48 Benjamin Reilly, "Ethnic Conflict in Papua New Guinea," *Asia Pacific Viewpoint* 49, no. 1 (2008): p.19.
- 49 D. Cammack, "Chronic Poverty in Papua New Guinea," in *Background paper for The Chronic Poverty Report* (Chronic Poverty Research Centre, 2008), p.58.
- 50 Source: Nancy Birdsall, Thomas Pinckney, and Richard Sabot, "Natural Resources, Human Capital, and Growth," (Washington D.C.: Carnegie Endowment for International Peace, 2000).
- 51 See: Michael L. Ross, "Extractive Sectors and the Poor," (Boston: Oxfam America, 2001).



CHAPTER 2

Responsibilities, practices and standards

An over-reliance on resource development can affect a country's level of human development. Many countries have suffered due to environmental and social failings and the squandering of resource wealth. Considerable research has revealed the complexities of resource development and sought to understand the reasons for success and failure in different countries.¹

Countrywide and localised difficulties often result in what is known as the 'resource curse.' A growing body of empirical research in the 1990s demonstrated that resource abundance² tended to have a detrimental effect on a country's economic growth.³ Additional problems associated with the resource curse include a lack of diversification in the economy, the poor use of resource rents by government and institutional failings.⁴

Perhaps the most widely held macroeconomic explanation for the resource curse is 'Dutch disease'. The term originated from the experience of the Netherlands in the 1960s following the discovery and development of the Groningen natural gas field which led to sizable resource revenues. The spending of these resource revenues resulted in inflation, an appreciation of the exchange rate and a subsequent contraction of the manufacturing sector.⁵

Dutch disease implications are different for developing countries, where observers note for example, that agriculture rather than the manufacturing sector contracts. Recent treatments of the Dutch disease have also placed greater emphasis on other factors, such as government policies and market distortions.⁶ Numerous country studies support the existence of Dutch disease.⁷

The economic impact study carried out for the LNGP pointed to the adverse sectoral impact the LNGP is likely to have in PNG, especially on agriculture and smallholder production of cash crops such as coffee particularly. In this respect, good revenue management and investing offshore can help to offset domestic absorption, an appreciation of the exchange rate and contraction of the agricultural sector.⁸

As highlighted in the previous chapter, PNG has experienced many of these problems. However, the idea of a generalised resource curse is discounted given the different experiences of resource abundant countries where many have proven extremely successful at utilising their resources. Botswana and Chile are developing country examples, not to mention the many already developed resource abundant countries, such as Australia, Canada and the United States.⁹

The economic importance of resource development to many countries reduces any thoughts of a diminished role. The greatest hope is that resource development – as has been seen in some countries around the world – can contribute to economic development and in turn sustainable human development. The challenge is to adopt policies and practices that harness the potential for resource development to achieve human development objectives.¹⁰

There is clear evidence that strong economic growth rates lead to improved living standards. However, resource dependent countries often exhibit inadequate and unequal growth patterns, failing to pass on benefits of resource development to their people. The difficulties arising from resource development often fall disproportionately on the poor and most vulnerable.¹¹ Research also shows that resource dependence can worsen income inequality and poverty.¹² Together, higher levels of inequality and poverty increase the likelihood of a country experiencing conflict.

If a country is resource dependent, then greed and grievances are likely to be exacerbated, which in turn can aggravate or lead to new conflicts.¹³

A focus on resource development must also consider struggles that occur on the ground over resource development projects.¹⁴ In any given situation, a range of stakeholders might contribute in any number of ways to produce a successful outcome. There are two particularly salient issues related to resource development that necessitate ongoing consideration.

The first is that the various stakeholders, admittedly to differing degrees, ultimately determine whether resource development is a blessing or a curse. If resource development is viewed as part of a finite enterprise and resource development ‘windfalls’ as unconnected to past and future investment in human development, then problems stem from the division of profits, rather than generating sustainable opportunities and wealth.¹⁵

The second is that resource development, unlike human development, is not defined by social policy or practice. Rather, for ‘resource developers’ the primary motivation is most often profit maximisation, with further initiatives stemming from this pursuit. In this respect, resource development is purely an economic undertaking. The pursuit of human development is not of principal concern in relation to the national or international investment made.¹⁶

Arguably, this does not preclude other stakeholders from making human development a priority. In relation to the great variety of salient social and environmental issues raised, resource development must take account of how the opportunities and wealth generated can balance competing objectives in favour of human development.

It is clear that successful resource development is both complex and difficult. The issues detailed above raise questions in relation to ongoing resource development in PNG. While the LNGP is undoubtedly an exciting and unique opportunity for PNG, the many stakeholders are compelled to review and reduce the potential harm that the LNGP may cause at all levels, but particularly in relation to those who are most at risk in affected areas.

Stakeholder responsibilities

There is no definitive list of stakeholder responsibilities in relation to resource development. This brief review of primary stakeholder responsibilities – community, company and government – is indicative only of the great variety of responsibilities required to manage and meet successful outcomes. Although the triad model is a useful one for basic analytical purposes, it cannot fully capture the complexity surrounding a resource development project.¹⁷

Resource development now places a greater emphasis on stakeholder partnership.¹⁸ Community stakeholders are seen as central to resource development, whereas in previous decades developers and governments may have marginalised them. In PNG, issues around resource development projects include decision-making powers and representation as well as socially derived contests over resource use and control.¹⁹ This is in the context of often-divisive benefit streams and harmful social impacts.²⁰

Companies and government are the primary agents in resource development projects and should bear the burden for reducing overall costs and translating any benefits into improved human development outcomes. However, communities and their representatives play an equally important role. They must be active participants in the process in order to facilitate dialogue, organisation and change for the better within their respective areas. While equal participation is important, stakeholders must also recognise each other’s respective limitations.²¹

The local community should be involved in the wide-ranging measures needed to prevent, mitigate or resolve social impacts. Local insight can provide alternative solutions that are often not evident to other stakeholders.²² Promoting accountability and transparency and giving special attention to human security issues in the broader context of multi-stakeholder dialogue within the community reduces the likelihood of conflict.²³

It is especially important to establish credible, ongoing multi-stakeholder dialogue within a community.²⁴ The act of including people in the information exchange and decision-making process of a resource development project has an empowering effect within the community. This contribution, in addition to capacity building, reporting and networking, helps to strengthen civil society and representative community processes.²⁵

Establishing a sense of certainty locally through dialogue and participation results in greater political and social stability.²⁶ This is complicated by the multifaceted nature of community relations and the competing demands of community stakeholders. The diffuse nature of communities presents difficulties that are often represented as a power imbalance between a community and a company or government.

However, from the beginning, communities need to feel they are partners in decisions that will significantly affect their lives. Human development is limited in the absence of participation and free, prior and informed consent before and during the resource development project. This can be a challenging process, especially in relation to determining community representation. There are a number of good reasons for incorporating community consent:

- When businesses get it right, achieving consent can benefit both the community and the project.
- The business risks of going forward with a large-scale project in a community without its acceptance can threaten the viability of the project.
- Community opposition can arise from impacts that are generated at any stage in the project cycle.
- Addressing issues of community concern before the project begins is likely to be more successful and cost-effective than responding to community opposition later on.
- The risks of failing to achieve community consent are not borne exclusively by the project sponsor. Other stakeholders, such as shareholders, financiers and host governments can also have their interests adversely affected by conflicts that may result from the failure to achieve community support for a project.

- Engagement or consultation may not always be sufficient to fully address these risks. Consultations that do not resolve a community's reasons for opposition or achieve consent will provide little assurance and could prove costly and disruptive.²⁷

Company stakeholders are both part of the problem and part of the solution. Poor community relations tend to stem from local views that the resource development project is encroaching on their environment, culture and history. The challenge is to build durable relationships between parties based on an equitable partnership that will leave a lasting human development legacy.²⁸

Current best practice emphasises the need for good community relations from the beginning. To redress power imbalances and progress successfully, resource development projects need to establish negotiating partners, despite any difficulties they may have in finding such partners, as government is frequently unable to undertake this role.²⁹

There is also a strong business case for companies to support human development goals, including improvements in reputation, reduction in risk and uncertainties as well as the continued provision of a local licence to operate.³⁰

Figure 4: Corporate social responsibility and corporate sustainability³¹

Transition towards greater human development advocacy involves attention to social planning and programmes, often referred to as Corporate Social Responsibility (CSR) and Corporate Sustainability (CS). CSR refers to “phenomena such as transparency, stakeholder dialogue and sustainability reporting,” while CS centres on value creation, environmental management, environmentally friendly production systems, human capital management and so forth.³²

A range of factors drives attentiveness towards both CSR and CS. This includes compliance with local regulations or obligations; profit, where CSR and CS make financial sense; care for human potential, social and environmental responsibility; synergies where CSR and CS contribute to well-balanced and functional solutions; and as part of an holistic enterprise, residing at the core of the companies’ intentions and ethics.

Accordingly, CSR is an intermediate step towards the ultimate goal of CS, as companies seek to balance the “triple bottom line,” which refers to improved economic, environmental and social partnerships. CSR and CS programme concerns surround appropriate levels of spending relative to profits generated and the determination of spending priorities. Of importance is the degree of community participation and who in the local community participates.

However, there are concerns about the role corporate social programmes may play in the development strategy of a country. Whatever the motivations for undertaking them, and although they can make an important contribution, at issue is whether they may end up undermining local community networks or the role of the state, given such programs cannot be relied upon to provide enduring and equitable solutions for the local and national populace.³²

The establishment of social services and infrastructure is usually the responsibility of government. However, there are often heightened expectations that resource development companies will deliver the social services and infrastructure that government cannot. These companies, although sizable and well resourced, are generally reluctant to assume roles that would normally be regarded as those of government. There is an obvious concern about cost in the face of demands for contracts, jobs, services and other funding.³³

Nonetheless, provision is often made for social services and infrastructure in resource development projects as well as in company social programs. Such provisions may include, for example, construction of schools and health centres. In providing social services and infrastructure, sustainability is of critical importance; for example, assurance that the government or community can provide teachers or nurses on a long-term basis.³⁴

Nonetheless, companies must bring ongoing benefits to a community, not just mitigate the impacts of projects. Community diversification and investment in human capital are important throughout the lifecycle of a resource development project.³⁵ The sustainability of a resource development project is ultimately evidenced by improved human development based on the creation of social capital and physical infrastructure that allows a community to flourish after the end of the project.³⁶

Government stakeholders play a pivotal determinative and mediating role in relation to resource development. The need to strengthen governance and institutional capacity seems to be especially important in resource dependent countries, as opposed to those not reliant on resource wealth but facing similar weaknesses.³⁷

Resource dependent countries tend to suffer from poor governance and weak institutions. There is a failure or unwillingness to diversify the economy, invest in human potential and deliver crucial public services. Moreover, in extreme cases, such resource dependence may lead to oppressive regimes and an increase in discontent amongst the general population.³⁸

The quality of governance and institutions is therefore central to understanding whether resource development will become a blessing or a curse.³⁹ The overall conclusion is that governance and institutional reform is a necessary first step in order for countries to take full advantage of their human development potential. The alternative is that countries with poor governance and institutions are more likely to be constrained by conditions that result in ineffectual policy and practice.⁴⁰

The necessity of government stakeholders’ authority and legitimacy within the context of national identity is also of importance. In many communities in PNG and around the world, where resource development projects are being initiated,

government claims to ownership are often rejected and contested.⁴¹ This derives in part from the minimal government presence in the remote areas where resource development projects are located. Government claims to authority and legitimacy are therefore more likely to be dismissed. Material and visible actions of the government in areas such as education and healthcare as well as law and order, can counteract this stance in the main, so that government claims are more likely to be respected.⁴²

To evince claims in relation to resource development projects and ultimately serve the interests of the population, government stakeholders should look to diversify the economy away from a reliance on resource exports, towards sustainability in the agricultural and manufacturing sector. This is likely to provide balanced growth and more readily assist human development. Furthermore, there is a critical need for accountability and transparency in relation to resource development projects to provide additional support to the pursuit of human development goals.⁴³

According to the World Bank, the expectation of constituencies and the international community is that governments in underperforming countries with abundant resources should make improvements through “programs specifically dedicated to strengthening governance, economic management, and institutional capacity.”⁴⁴

Where possible, a resilient system of local governance needs to be established, involving a range of parties, not just local politicians. Interactions should occur throughout the lifecycle of the resource development project. Good local governance helps human development as communities are better able to respond to changing circumstances and companies benefit from consistent local capacity and policy.⁴⁵ Poor government effectiveness at all levels has the potential to derail resource development projects. This holds for both government service delivery and government legal-regulatory activity of resource development projects where the role of government at all levels, in order to encourage human development and minimise any negative impacts is fourfold.⁴⁶ Government should:

- Provide a clear and consistent legal and regulatory environment for resource development projects, in tandem with effective government processes that are both accountable and transparent.
- Carry out redistribution of tax revenue where appropriate to all levels of government and make certain of its correct handling and usage. Accompany this with capacity building and an emphasis on human development.
- Encourage social responsibility of resource development operators and projects within their respective communities. This should be accompanied – at least initially – by acting as an intermediary between the company and community, identifying the fundamental nature and legitimate aspirations of each side.
- Play a proactive role in community development, either directly or indirectly by improving service delivery through nongovernmental organisations (NGOs), community-based organisations and church organisations.⁴⁷

Challenges in relation to government stakeholders include the potential for corruption and rent seeking. The situations of government stakeholder as both participants in and regulators of resource development projects can also raise conflict of interest and political questions.⁴⁸

Practice and standards

It is clear that over the past several decades, standards have been established in an effort to protect those individuals and groups most at risk and to enhance the social values of stakeholder engagements. These standards exist within the context of national frameworks and broader international initiatives and normative changes.

Based on the above discussion, the importance of national and international standards becomes particularly salient. The PNG Government, LNGP proponents and associated third parties are constrained by numerous national and international standards. These include domestic legal requirements, company operating guidelines, lender requirements and voluntary standards, as well as a number of overarching international principles.

The resource development industry has increasingly adopted policies and guidelines in relation to social and environmental standards. This might include internally or externally derived policies and guidelines. However, particular criticism is often levelled at the piecemeal approach of self-regulation and voluntary action by the resource development industry.⁴⁹ The resource development industry has been encouraged by international financial institutions, multilateral bodies as well as civil society to adopt a more concerted approach.⁵⁰

Guidelines as well as social policies and programmes are also in place within multinational corporations and international financial institutions. Numerous international initiatives now define resource development standards, many with the specific goal of improving transparency and reporting in addition to overall environmental and social practices. These international initiatives are situated in the context of international normative standards, including international human rights standards and the MDGs.

For resource development proponents, adhering to such standards represents a significant departure from past practices. The most challenging aspect of such changes seems to be allowing access to information and transparency, and engaging stakeholders beyond those immediately affected. Compliance with these guidelines mainly stems from the permitting and financing processes involved for resource development projects.⁵¹ However, as was noted, various benefits are garnered from adherence to standards beyond those that are mandated, not least of all gaining a local licence to operate.

Figure 5: The rights of vulnerable groups⁵²

In the context of broader stakeholder responsibilities, there is a particular obligation to attend to the needs of those most vulnerable to social changes and impacts brought about by resource development projects. Such groups may come from a number of walks of life and be susceptible for any number of reasons. Children and women face particular challenges and are usually foremost amongst those at risk to harmful social changes and impacts.

Both the rights of both children and women are recognised in the Universal Declaration of Human Rights. More specifically, two important documents outline these rights: the Convention on the Rights of the Child (CRC) and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).

CRC outlines the basic rights of children including the right to survive; to develop to the fullest; to protection from harmful practices, abuse and exploitation; and to participate fully in family, cultural and social life. CEDAW defines the right of women to be free from all forms of discrimination and sets out core principles to protect this right. It also establishes an agenda for national action to end discrimination and provides the basis for achieving equality between men and women.

In PNG and elsewhere, the rights of these two vulnerable groups are often ignored or neglected. Difficulties include a failure to recognise human rights as universal; a public/private split, with human rights often left at the door of the family home; neglect of social and economic rights, which although progressively realised, usually have a significant impact on people's lives; and too often weak human rights promotion, monitoring and enforcement at the local and national levels. The rights of these two vulnerable groups therefore deserve particular attention from community, government and company stakeholders.

Papua New Guinea acceded to the CRC on 2 March 1993 and CEDAW on 12 January 1995. In addition to the vital role of government promoting and supporting the rights of children and women, civil society also has an important part to play in caring for the rights of these vulnerable groups. Improving the social resilience and capacities of these vulnerable groups is also one of the LNGP's stated community development goals.

In PNG, there is a legal mandate for resource development operators to undertake social and environmental steps, most especially in relation to the Environment Act 2000 (EA) and Oil and Gas Act 1998 (OGA). For example, an Environmental Impact Statement (EIS) is required under the former and social mapping, landowner identification and a socio-economic study under the latter.

An extensive Social Impact Assessment (SIA) was conducted for the LNGP in 2008. The assessment covered a number of social risks and issues such as cultural heritage, gender and women's issues, migration, law and order and post-project sustainability.⁵³ This fed into the Environmental and Social Impact Management Plan (ESMP), which outlined the potential environmental and social impacts of the LNGP and described mitigation activities and ongoing monitoring requirements.⁵⁴

However, the problem with these activities – the EIS, SIA and ESMP – is the predominant focus on affected PDL areas. For example, although comprehensive, the surveys carried out for the SIA largely concentrated on directly impacted LNGP areas. This orientation results in the exclusion of people in the wider Hela region, many of whom have links with PDL areas or are still substantively affected by the LNGP.

Exxon Mobil Corporation and its subsidiary EHL state they act in accordance with guidelines set out in their Standards of Business Conduct. Their material explains that they endeavour to meet international benchmarks, such as the Equator Principles and are committed to various international initiatives such as the Extractive Industries Transparency Initiative (EITI),⁵⁵ the Group of Eight (G8) Transparency Initiative and the United Nations Convention Against Corruption.⁵⁶

EHL has also undertaken extensive social assessment and mitigation planning in conformance with these standards. Included in their work are efforts to address a number of the areas discussed in this report. There are six Company Social Management Plans.⁵⁷ This report does not fully describe their contents. As an example, the Community Support Strategy (CSS) suggests a range of early community development projects, based on three components (strengthened social resilience, local economic development and community capacity building and partnership),⁵⁸ while the National Content Plan (NCP) outlines plans for local employment, inclusion in business opportunities and strategic business investments.⁵⁹

A brief description of some of the standards applicable to the LNGP and more generally resource development projects in PNG is provided below. It is important to note that not all of these standards are mandatory or legally required for resource development projects in PNG.

Figure 6: Legislation and standards

Papua New Guinea legislation⁶⁰	
Environment Act 2000	Summary The Environment Act is the legal framework regulating the environmental effects of the PNG LNG Project and is administered by the Department of Environment and Conservation (DEC). Under the provisions of the Act, the LNGP operator is required to undertake an environmental impact assessment and submit an Environmental Impact Statement.
Oil and Gas Act 1998	The Oil and Gas Act is the principal legislation governing the exploration, development, processing and transportation of petroleum in Papua New Guinea and is administered by the Department of Petroleum and Energy (DPE). The Act requires a number of environmental and social undertakings, including social mapping and landowner identification and the submission of a socio-economic impact statement.
PNG Constitution	The fourth goal of the Constitution declares “Papua New Guinea’s natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.”
Lender and voluntary standards⁶¹	
International Financial Cooperation (IFC) Performance Standards	The IFC’s Performance Standards provide guidance on how to identify, help avoid, mitigate and manage risks and impacts in a sustainable way. In the case of its direct investments (including project and corporate finance provided through financial intermediaries), IFC requires its clients to apply the Performance Standards to manage environmental and social risks and impacts, so that development opportunities are enhanced. The IFC updated its Sustainability Framework from 1 January 2012, which includes newly revised Performance Standards.
Exxon Mobil Corporation’s Standards of Business Conduct	Exxon Mobil’s manual on Standards of Business Conduct reads, “We commit to be a good corporate citizen in all the places we operate worldwide. We will maintain high ethical standards, obey all applicable laws, rules and regulations and respect local and national cultures.”
Voluntary Principles on Security and Human Rights	The Voluntary Principles on Security and Human Rights are a set of principles designed to guide companies in maintaining the safety and security of their operations within an operating framework that encourages respect for human rights.
International standards⁶²	
Equator Principles	The Equator Principles (EPs) are a framework for determining, assessing and managing environmental and social risk in project finance transactions. The EPs are adopted voluntarily by financial institutions and are applied where total project capital costs exceed USD\$10 million, who commit to not providing loans to projects where the borrower will not or is unable to comply with their respective social and environmental policies and procedures that implement the EPs.
Extractive Industry Transparency Initiative (EITI)	The EITI is a global standard that aims to strengthen governance by improving revenue transparency and accountability in the extractives sector (oil, gas and mining). Each implementing country creates its own EITI process, overseen by participants from the government, companies and national civil society.

Universal Declaration of Human Rights

The UN General Assembly adopted the Universal Declaration of Human Rights on 10 December 1948. It represents the universal recognition that basic rights and fundamental freedoms are inherent to all human beings, inalienable and equally applicable to everyone, and that every one of us is born free and equal in dignity and rights.

Millennium Development Goals (MDGs)

In 2000, 189 nations made a promise to free people from extreme poverty and multiple deprivations. This pledge became the eight Millennium Development Goals to be achieved by 2015.

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality rates
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria, and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

In September 2010, the world recommitted itself to accelerate progress towards these goals.

Summary

Stakeholders have responsibilities in addition to the practices and standards associated with development projects. There is now greater awareness of the need to incorporate a multitude of stakeholders to ensure both fair and successful resource development projects. Likewise, this awareness has increased in tandem with and in part because of, the growing body of national and international standards related to resource development.

The 'resource curse' raises a series of concerns about resource development, particularly in relation to economic, governance and institutional problems. In this respect, human agency is the determinative factor to improve resource development outcomes.

It is therefore of consequence that all stakeholders act according to their own and broader responsibilities. Particular responsibility falls on those with the obligation and ability to act in a concerted and consequential way.

When a government supports a resource development project, human development issues should be paramount. In the case of the LNGP, in addition to community and company engagement on an equitable and productive basis, government must play its part in mediating issues for the good of those affected in the Hela region. Existing regulations and laws as well as international benchmarks provide appropriate standards for stakeholder engagement.

- 1 See: Frankel, "The Natural Resource Curse: A Survey"; Stevens, "Resource Impact: Curse or Blessing? A Literature Survey."
- 2 Research now also recognises a distinction between resource abundance and resource dependence. See: Frankel, "The Natural Resource Curse: A Survey"; Stevens, "Resource Impact: Curse or Blessing? A Literature Survey."
- 3 See: R.M. Auty, *Resource Abundance and Economic Development* (Oxford: Oxford University Press, 2001); R.M. Auty, *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (London: Routledge, 1993). J. Sachs and A. Warner, "Natural Resource Abundance and Economic Growth," (Cambridge, MA: Center for International Development and Harvard Institute for International Development, 1997); J.D. Sachs and A.M. Warner, "The Big Push, Natural Resource Booms and Growth," *Journal of development economics* 59, no. 1 (1999). J.D. Sachs and A.M. Warner, "The Curse of Natural Resources," *European Economic Review* 45, no. 4-6 (2001).
- 4 Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector," p.132.
- 5 See: J.P. Neary and S. Van Wijnbergen, eds., *Natural Resources and the Macroeconomy* (Oxford: Centre for Economic Policy Research, Blackwell, 1986).
- 6 See: S.M. Pendergast, J.A. Clarke, and G.C. van Kooten, "Corruption, Development and the Curse of Natural Resources," in *Working paper* (Victoria, B.C.: Department of Economics, University of Victoria, 2010).
- 7 Stevens, "Resource Impact: Curse or Blessing? A Literature Survey."
- 8 ACIL Tasman, "PNG LNG Economic Impact Study: An Assessment of the Direct and Indirect Impacts of the Proposed PNG LNG Project on the Economy of Papua New Guinea (Prepared for Exxon Mobil)," pp.31-34.
- 9 See: Auty, *Resource Abundance and Economic Development*. M. Humphreys, J. Sachs, and J.E. Stiglitz, *Escaping the Resource Curse* (Columbia University Press, 2007).
- 10 I. Bannon and P. Collier, "Natural Resources and Conflict: What Can We Do?," in *Natural Resources and Violent Conflict: Options and Actions*, ed. I. Bannon and P. Collier (Washington D.C.: World Bank Publications, 2003), p.11.
- 11 See: Ross, "Extractive Sectors and the Poor."
- 12 See: R. M. Auty, "The Resource Curse Thesis: Minerals in Bolivian Development 1970-90," *Singapore Journal of Tropical Geography* 15, no. 2 (1994). M. Sarraf and M. Jiwani, "Beating the Resource Curse: The Case of Botswana," in *Environmental Economics Series, Paper 83*

- (Washington D.C.: World Bank Group, 2001). M. Weisbrot, L. Sandoval, and D. Rosnick, "Poverty Rates in Venezuela: Getting the Numbers Right," *International Journal of Health Services* 36, no. 4 (2006).
- 13 See: K. Ballentine and J. Sherman, *The Political Economy of Armed Conflict: Beyond Greed and Grievance* (Lynne Rienner Pub, 2003); Paul Collier and Anke Hoefler, "Resource Rents, Governance, and Conflict," *The Journal of Conflict Resolution* 49, no. 4 (2005); Paivi Lujala, "Deadly Combat over Natural Resources," *Journal of Conflict Resolution* 53, no. 1 (2009).
- 14 Colin Filer, "Local Custom and the Art of Land Group Boundary Maintenance in Papua New Guinea," in *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, ed. James E. Weiner and Katie Glaskin, *Asia-Pacific Environment Monograph 3* (Canberra: ANU E Press, 2007), p. 139.
- 15 G. Wright and J. Czelusta, "Mineral Resources and Economic Development" (paper presented at the Conference on Sector Reform in Latin America, Stanford Center for International Development, 13-15 November 2003), p.26.
- 16 Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," p.7.
- 17 Chris Ballard and Glenn Banks, "Resource Wars: The Anthropology of Mining," *Annual Review of Anthropology* 32(2003): p.289.
- 18 Remy and McMahon, "Large Mines and Local Communities: Forging Partnerships, Building Sustainability," p.11.
- 19 Banks, "Understanding 'Resource Conflicts in Papua New Guinea,'" p.31.
- 20 Gilberthorpe, "Development and Industry: A Papua New Guinea Case Study," p.8.
- 21 Kathryn McPhail and Aidan Davy, "Integrating Social Concerns into Private Sector Decision-Making: A Review of Corporate Practices in the Mining, Oil, and Gas Sectors," in *World Bank Discussion Paper No.384* (Washington D.C.: World Bank, 1998), p.xv.
- 22 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," (Washington D.C.2003), p.15.
- 23 Ross, "Extractive Sectors and the Poor," p.19.
- 24 Ross, "Extractive Sectors and the Poor," p.24.
- 25 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.18.
- 26 Marcello M. Veiga, Malcolm Scoble, and Mary Louise McAllister, "Mining with Communities," *Natural Resources Forum* 25, no. 3 (2001): p.200.
- 27 S. Herz, A. La Vina, and J. Sohn, "Development without Conflict: The Business Case for Community Consent," (Washington D.C.: World Resources Institute, 2007), p.3.

- 28 Veiga, Scoble, and McAllister, "Mining with Communities," p.192.
- 29 John Bray, "Attracting Reputable Companies to Risky Environments: Petroleum and Mining Companies," in *Natural Resources and Violent Conflict: Options and Actions*, ed. I. Bannon and P. Collier (World Bank Publications, 2003), p.317.
- 30 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," p.17.
- 31 See: John Elkington, "Partnerships with Cannibals with Forks: The Triple Bottom Line of 21st-Century Business," *Environmental Quality Management* 8, no. 1 (1998); Darryl Reed, "Resource Extraction Industries in Developing Countries," *Journal of Business Ethics* 39, no. 3 (2002); Marcel van Marrewijk, "Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion," *Journal of Business Ethics* 44, no. 2 (2003).
- 32 Reed, "Resource Extraction Industries in Developing Countries," p.218.
- 33 Banks, "Understanding 'Resource Conflicts in Papua New Guinea,'" p.24.
- 34 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," pp.21-22.
- 35 Veiga, Scoble, and McAllister, "Mining with Communities," p.192.
- 36 Remy and McMahon, "Large Mines and Local Communities: Forging Partnerships, Building Sustainability," p.11.
- 37 Monika Weber-Fahr, "Treasure or Trouble? Mining in Developing Countries.," in *Mining and Development: Global Mining* (Washington D.C.: World Bank, 2002), p.14.
- 38 Christa N. Brunnschweiler and Erwin H. Bulte, "Natural Resources and Violent Conflict: Resource Abundance, Dependence, and the Onset of Civil Wars," *Oxford Economic Papers* 61, no. 4 (2009): p.633.
- 39 Halvor Mehlum, Karl Moene, and Ragnar Torvik, "Cursed by Resources or Institutions?," *World Economy* 29, no. 8 (2006): p.1127.
- 40 Erwin H. Bulte, Richard Damania, and Robert T. Deacon, "Resource Intensity, Institutions, and Development," *World Development* 33, no. 7 (2005): p.1039.
- 41 Ballard and Banks, "Resource Wars: The Anthropology of Mining," p.296.
- 42 Ballard and Banks, "Resource Wars: The Anthropology of Mining," p.296.
- 43 Ross, "Extractive Sectors and the Poor," pp.17-18.
- 44 Weber-Fahr, "Treasure or Trouble? Mining in Developing Countries.," pp.12-13.
- 45 Veiga, Scoble, and McAllister, "Mining with Communities," pp.201-02.
- 46 Bray, "Attracting Reputable Companies to Risky Environments: Petroleum and Mining Companies," p.316.
- 47 Remy and McMahon, "Large Mines and Local Communities: Forging Partnerships, Building Sustainability," p.18.
- 48 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.21.
- 49 Corporate Europe Observer, "Industry's Rio + 10 Strategy: Banking on Feelgood PR," *CEO Quarterly Newsletter* 10(2001).
- 50 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.217.
- 51 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.13.
- 52 See: Lois Jensen, "Women's and Children's Rights: Making the Connection." (New York: United Nations Population Fund; United Nations Children's Fund, 2011).
- 53 See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."
- 54 See: Esso Highlands Limited, "Environmental Impact Statement."
- 55 Although not a candidate country, the PNG Government has announced its intension to join EITI. As of March 2012, government, civil society and the private sector have put together an informal stakeholder group to develop guidelines for PNG's participation. Personal communication, 2012.
- 56 See: ExxonMobil, "About Us," <http://www.exxonmobil.com>.
- 57 This includes Community Development, Stakeholder Engagement, National Content, Community Health, Safety and Security, Resettlement Policy Framework and Contractor Management.
- 58 See: Esso Highlands Limited, "Community Development Support Plan," in Community Support Strategy (Port Moresby: PNG LNG, 2011).
- 59 See: Esso Highlands Limited, "National Content Plan," (Port Moresby: PNG LNG, 2009).
- 60 See: Esso Highlands Limited, "Environmental Impact Statement," c.8.
- 61 See: ExxonMobil, "About Us."; International Financial Corporation, "International Finance Corporation's Performance Standards on Social & Environmental Sustainability," (Washington D.C.: International Financial Corporation, 2006); Secretariat for the Voluntary Principles on Security and Human Rights, "Voluntary Principles on Security and Human Rights," <http://voluntaryprinciples.org>.
- 62 See: EITI International Secretariat, "What Is the EITI?," <http://eiti.org/>; Equator Principles Secretariat, "About the Equator Principles," <http://www.equator-principles.com/>; United Nations General Assembly, "United Nations Millennium Declaration," (New York: United Nations, 2000); United Nations General Assembly, "Universal Declaration of Human Rights," (1948).



CHAPTER 3

The Hela region

This chapter reviews the livelihood status of people in the Hela region and two important concerns, namely, improved education and healthcare. Livelihood serves as a critical basis of human development. Both education and healthcare were consistently referenced in the interviews and surveys. All function as indicators and drivers of human development.

It is important to outline their standing in order to determine and ultimately improve upon aspects of human development that are vital to the people of the Hela region. If human development is about enlarging people's choices and more, many factors could potentially be considered, however, this chapter limits its scope to these foundational areas.

Historically the Hela region has very poor indicators of human development. As noted earlier, previous surveys have reported that only 40 percent of school-aged children attend school;¹ literacy levels are 30 percent for women and 41 percent for men;² and the mortality of children under five is 15 percent higher than the national average.³ It is also one of the poorest parts of PNG, due in large part to poor agricultural potential and limited access to roads, markets and services.⁴

The situation is now changing with the arrival of the LNGP. Of current concern are the disparities and increasing costs for the people in the Hela region. Evidence of absolute gains are largely offset by rising inequalities. There is also considerable worry about such social changes and impacts taking place across the Hela region and the influence this is having or will have on human development.

This chapter begins by looking at a number of key indicators in relation to livelihood, before engaging with the topics of education and healthcare. As the data gathered during the field

research is limited in scope to a recent time-period, this chapter also incorporates comments from other reports that reflect more widely on these critical factors.

Livelihoods

The rural population of Hela is dependent on agriculture, while also trying to acquire a monetary income and greater access to the benefits of a cash economy. The majority of people in the smaller survey carried out for this research listed 'self-employment,' including small scale trading, as their main income source. This 28 percent included a significant proportion of female traders. A further 23 percent are formally employed. Some 23 percent of households also listed a reliance on family assistance as one of their main sources of income. Many households also reported a reliance on family assistance as a secondary income.⁵

In the main, those formally employed, work in some capacity in the resource development industry. This ranges from cleaning and security roles to skilled occupations such as heavy machinery drivers. There are also a number of people formally employed in education and healthcare. The small-businesses predominantly sell garden vegetables, cooked foods and livestock at market. The median weekly income of participants was between K100 and K150.⁶

The sample size of this smaller survey likely produced a positive bias in favour of larger incomes. The circulation of cash in the economy may be especially high now, with large numbers of people having disposable income.⁷ In the larger survey, expenditure patterns by people were similar to other field survey findings,⁸ with the top expenditure items including food, help for relatives or *wantoks*⁹ and household improvements, followed by education and training expenses. The cost of travel was also significant, while savings rates are relatively low.¹⁰

Over 83 percent of people surveyed have no electricity. There is no mains power in the Hela region, although the Hides Gas to Electricity scheme powers the distant Porgera gold mine. Those with access to electricity rely on generators and increasingly solar power for lighting and recharging mobile phones. Mobile phone usage is high, with some 78 percent of households reporting they have one or two phones.¹¹

The respondents all have access to water in the form of a river or stream. A third of the respondents have access to water in the form of a water tank, while 13 percent have access to a water-well. In terms of primary usage, 87.5 percent of people surveyed use a river or stream, while the remainder, 12.5 percent use water tanks. Those with a water tank generally only have to walk only a few hundred metres to their water supply. Most others have to walk between 500-1000 metres, while a small minority must walk anywhere up to two kilometres.¹²

Perhaps unsurprisingly, with the changing characteristics and preferences of the population only 83 percent of those surveyed have access to or use a garden. This translated into only half of people saying they favoured the use of gardens as their main food source, although most people are reliant on gardens as their main food source. Survey participants reported a trend away from gardening, with cultivated areas becoming smaller as a result.¹³

All the respondents make use of markets and stores in their local areas to some degree. A third of people prefer store bought goods as their main food source, while 13 percent prefer local markets. People tend to purchase such staple items as vegetables and poultry from their local market or rice and tinned fish from their local store if money is available. The increasing cost of market and store bought items is becoming prohibitive for many, although many of the respondents are also selling produce or livestock and taking advantage of the higher prices.¹⁴

In this regard, markets and stores prove relatively more expensive than gardens in monetary terms. While a garden usually costs less than K30 a week to maintain, visiting the market could cost up to twice as much. This consideration is balanced against the greater amount of time it takes to care for a garden. Most of those involved in gardening spent 8-12 hours each week attending their garden, sometimes more. In contrast, visiting the local market took less time and the local store an even briefer duration, although it took additional time to travel to the market and store.¹⁵

Education¹⁶

Almost two-thirds of those in the small survey have children under 18 attending school. Twenty percent are enrolled in elementary school (years 1-2), 49 percent in primary school (years 3-8) and the remainder in lower secondary school (years 9-10) and upper secondary school (years 11-12). Gender inequality remains a problem. While girls are represented equally in primary school within this sample, they are less well represented in older age groups.¹⁷

The earlier EIS prepared for the LNGP outlined a number of circumstances that contribute to poor educational outcomes in the established project impact areas. This included the threat or fear of conflict, damage to school property during conflicts, poor

staffing levels and schools falling into disrepair, as well as falling attendance when local children receive or seek project benefits.¹⁸

This research encountered a number of similar challenges facing the school system and the desire of many parents to ensure a good education for their children. Parents and caregivers display pride in relation to children attending and doing well at school. Many acknowledge the evident need for education to improve the future prospects of their children commenting that children or relatives missed job opportunities due to their poor education, often losing out to people from outside the Gela region. Research participants also regularly question the overall quality of education in the Hela region.¹⁹

Those surveyed and interviewed repeatedly affirmed the great importance of education to people in the Hela region. However, a number of concerns stand out in the context of the LNGP. The difficulties of access to education were highlighted in the context of clan conflict and rivalries over LNGP monies. Health and safety issues were raised in relation to attendance at schools in the LNGP construction area, with some parents raising concerns about the construction activity presenting a threat to children travelling to and from school.²⁰

People who do not make it to school are left in the dark for the rest of their lives.

Hela resident

More generally, issues were raised in relation to distance and the lack of school facilities in many areas. Some rural areas lack the numbers to establish schools, while others have been set up or falsely registered for status or financial gain.²¹ For many, the lack of facilities is not at issue; rather the failure to maintain and improve existing school infrastructure and capacities.²²

There is also widespread concern surrounding the school attendance of children, particularly in PDL areas.²³ People gave accounts of children and teenagers leaving school in the hope of gaining LNGP employment or leaving with the expectation of receiving financial benefits from the LNGP.²⁴ EHL has specified it does not employ children and requires its contractors to follow labour laws.²⁵ However, in the case of many young people, the direct and indirect possibilities of the LNGP often prove too tempting.

The high and increasing cost of education for some is prohibitive. With few exceptions, school fees are trending upwards, from an estimated range of K30-80 for primary school children, to a very high K1,200-1,600 for upper secondary children. Costs increase with additional charges for school attendance, such as stationery. The cost again increases as children progress, with primary school parents spending K20-50 and upper secondary parent spending K100-200 in additional costs per year.²⁶

Given the finite nature of the LNGP and resource development projects generally, the community emphasised the necessity of investing in education now. Many people question the LNGP operator's current contribution to education in the Hela region, in relation to opportunities during construction and to education more broadly in the Hela region. In one example, the distribution of school bags and stationery to Hela schoolchildren was seen as

valuable. However, it was generally agreed that greater support for education is desirable and would make a valuable contribution to stakeholder relations.²⁷

A number of people interviewed stressed that the requirements of the LNGP construction phase determined the training schedule for investment in human capital.²⁸ Nonetheless, many people feel that opportunities to gain the requisite skills and participate in the LNGP are limited, particularly given the short lead period for the LNGP did not seemingly allow for greater training opportunities. This is a subject of ongoing controversy.²⁹

There are also questions about on-the-job training received by those employed on the LNGP, such as whether training for locally unskilled positions added real value and whether skills gained are transferable to other positions once the initial LNGP construction period ends. There is a fear amongst many that even if the answers to these questions are positive; there will still be few job opportunities once the LNGP ends. This will leave a large cohort of unemployed people, adding to social tensions.³⁰

The LNGP operator and many other stakeholders see the delivery of education as a government role. There is a stark absence of government capacity and planning in relation to education in the Hela region. The church plays a significant part in managing schools and healthcare services in the province and, to a degree, makes up for the lack of government presence, although are largely government funded.

There has been a failure to invest wisely in education in PNG. Based on two decades of petroleum development in PNG, the EIS commented on the need for government to spend project benefits on education. The EIS also emphasised the continuing role of nongovernmental organisations and the importance of using tax credits and discretionary expenditure generated by the petroleum industry on education and training.³¹

Many expressed the view that education is the greatest potential benefit of the LNGP for the people of Hela. It offers an avenue for community development and a means for the LNGP to connect with the community in a beneficial and widespread manner. More active and visible engagement with stakeholders to support education on a sustainable basis would be mutually beneficial. Assisting with localised government capacity and planning support as well as dialogue with the church on matters related to education in Hela is pivotal.³²

Healthcare³³

Overall, healthcare in PNG is provided through a network of 614 healthcare facilities, 19 provincial hospitals, 52 urban clinics, 201 health centres, and 342 sub-centres or aid posts. This amounts to 12,400 staff across the entire healthcare system. The church managed component is sizable, accounting for 23 percent of all staff and 44 percent of facilities in PNG.³⁴

Half of those in the smaller survey attended a healthcare centre at least once in the past 12 months. Thirteen percent have attended an aid post and three percent have visited the hospital. The remaining 35 percent have not visited a healthcare facility over the past year. Women made more use of healthcare facilities. As was indicated by the respondents, the ease of access to these facilities and their overall quality varied. This included issues

such as long distances to the nearest facility and tribal conflict preventing access to healthcare centres.³⁵

As the LNGP Social Impact Assessment (SIA) noted, despite significant revenues to provincial governments over recent decades from resource development projects, there has been little improvement in healthcare within PDL areas. Indeed, many health statistics show evidence of decline, with many healthcare services reliant on external donors and organisations.³⁶ External partners spent K284 million, about K47 per person on PNG healthcare in 2008.³⁷

The World Health Organisation (WHO) indicates the leading health problems in PNG stem from communicable diseases, with malaria, tuberculosis, diarrhoeal diseases and acute respiratory disease major causes of both morbidity and mortality. Other serious concerns surround maternal mortality and gender based violence. PNG is also experiencing a generalised HIV/AIDS epidemic with between one and two percent of the population infected, mainly in rural areas.³⁸

The EIS reported concerns with the poor awareness and knowledge about health; high healthcare worker absentee levels; healthcare vacancy rates of up to 40 percent and abandoned health facilities in some areas; shortages of medications and medical supplies; poor transportation support for healthcare work and healthcare worker unwillingness to visit villages. It mentioned theft and destruction of village health centres, preferential and uneven quality of healthcare services as well as cultural barriers to treatment, especially in relation to sexually transmitted diseases. There is also inadequate reporting and monitoring of health data.³⁹

The community raised a number of concerns related to healthcare during this research. Problems immediately related to construction of the LNGP include the generation of dust from roads and construction work, which affects the air quality and amenity values. Some people suggested it was the cause of respiratory and stomach complaints, although it is difficult to establish the seriousness of this assertion.⁴⁰

There were also widespread complaints about water quality. Criticism was most vocal in relation to waterways abutting construction sites and roadways that adjoined waterways.⁴¹ Construction and heavy traffic causing water supply problems has led to increasing frustration. Hides landowners, for example, recently blocked onsite work to demand a better fresh water supply free of contaminants.⁴²

There are anecdotal indications that malaria cases are decreasing in the area, following the arrival of the LNGP and the proactive steps taken by EHL amongst other stakeholders. General screening and the use of vaccinations aim to reduce infection and transmission levels of targeted diseases, such as measles, mumps and rubella. Resource development companies in the Hela region also support a number of health related programmes.⁴³

The threat posed by HIV/AIDS concerns people in the Hela region. A number of factors add to the already dangerous situation. Although education is breaking down barriers, discussions of sexual health in Huli culture remain difficult. Males especially are wary of condoms and the 'safe sex' message. This reinforces the need for the establishment or expansion of preventive public health programmes.⁴⁴

People surveyed also worry about infectious diseases brought through increased migration to the area and associated social issues, such as increased prostitution. People with HIV/AIDS suffer significant discrimination and stigma.⁵⁵ Some of those interviewed expressed the view that circumstances in the Hela region represent a perfect storm that will increase HIV/AIDS rates.⁴⁶

PNG's maternal mortality rate sits at 733 per 100,000 live births. Common causes of death for children under five include pneumonia, birth asphyxia, prematurity, malaria, neonatal sepsis and diarrhoea. There is a lack of accessible quality antenatal and postnatal healthcare.⁴⁷ Many people, predominantly males, are reluctant to undertake family planning.⁴⁸

I think the main aims are health and supporting village midwives training because in the rural areas there are no health services accessible, no transport and no health workers for women when they face problems during childbirth.

Hela resident

Basic health services and infrastructure in the Hela region raises questions. Despite staff shortages in many areas of the health sector, there are cases of excess staffing levels and phantom employees. For example, many people are employed in unskilled positions but do not undertake work or are surplus to requirements. Other non-existent or previously employed staff members remain on the payroll. The misappropriation of healthcare funds and medicine shortages is a common occurrence.⁴⁹

For many in Tari, the status of Tari Hospital raises some apprehension. The hospital is the main healthcare facility in the Hela region. Now Hela is a province, the hospital in Tari should be upgraded to provincial status, but significant uncertainties remain. Positions are currently open for health professionals in Tari.

Médecins Sans Frontières (MSF) currently fills the gap in the surgical services of the hospital's operations significantly aiding the hospital and people of Hela. The hospital is also threatened by construction work on the Tari Airport, a project not affiliated to the LNGP and initiated by the Southern Highlands Provincial Government. This is a particular concern for local Tari residents and is likely to be an ongoing point of contention unless resolved. The construction work on the Tari Airport also causes a loss of amenity.⁵⁰

There is also a general problem with people leaving the teaching and healthcare professions for improved pay and conditions with the LNGP (and more generally the resource development industry). With public servant salaries also often going unpaid, a move to the LNGP is an understandable one. However, such cases have affected education and healthcare service delivery. There are also difficulties with recruitment of new staff to the Hela region, as the area is seen by many as a challenging posting.⁵¹ Recruitment to

the region is hampered by the attractiveness of the salaries offered in comparison to those for LNGP workers. The rising cost of living in the Hela region, which public service salaries have failed to keep pace with, is also a problem, along with the difficulties of finding suitable local accommodation for public service staff, including teachers, doctors and nurses.⁵²

Summary

In the context of human development objectives, livelihood means ensuring an adequate and sustainable income to meet basic needs; education to assist with adequate and sustainable access to education and school facilities; and healthcare to assist with adequate and sustainable access to healthcare and healthcare facilities. These three human development indicators were repeatedly emphasised by those interviewed during this research.

There are a number of human development indicators relevant to assessing communities in the Hela region. For the sake of brevity, this chapter detailed three important ones: livelihood, education and healthcare. A number of points are of relevance:

- People in the Hela region are facing significant livelihood challenges, especially relative to the increasingly high price of foodstuffs at markets and stores.
- Uncertainty exists about the future and problems that might arise in relation to the livelihood status of people in the Hela region and the landholding capacity of the region.
- There is widespread concern about the increasingly prohibitive costs of education, with people welcoming opportunities for greater participation.
- The maintenance and improvement of existing school and healthcare facilities, rather than the establishment of new ones, is a high priority.
- There were numerous concerning reports that school attendance is declining as school children leave to pursue possibilities associated with the LNGP.
- Education and healthcare staff are leaving to work on the LNGP, placing further stress on these limited resources. Those interviewed emphasised the need to better train and retain education and healthcare workers.
- Accommodating public employees in the Hela region is proving difficult.
- People are supportive of preventive healthcare programmes given concerns about the spread of communicable diseases such as HIV/AIDS in the Hela region. Child and maternal healthcare are also important concerns.
- In both education and healthcare, girls and women continue to face challenges, such as low enrolment rates and poor maternal care.

1 National Research Institute, "Papua New Guinea: District and Provincial Profiles," p.89.
 2 National Statistics Office, "National Census 2000: Southern Highlands Provincial Report," p.40.
 3 World Bank, "World Development Indicators (CD-ROM)."
 4 Allen, "The Setting: Land, Economics and Development in the Southern Highlands," p.41; Hanson et al., *Papua New Guinea Rural Development Handbook*, p.92.
 5 Second field survey, 2011.
 6 Second field survey.
 7 Second field survey.

8 Eso Highlands Limited, "Environmental Impact Statement," c.15; p.37.
 9 From Tok Pisin, *wantok* literally means "one talk" and indicates a relationship with a strong social bond, usually with someone from the same home area or who speaks the same language.
 10 First field survey, 2011.
 11 Second field survey.
 12 Second field survey.
 13 First field survey; Second field survey.
 14 Second field survey.

- 15 Second field survey.
- 16 Recently, the PNG Government made announcements committing to the provision of free education. See: Govt gives K649m to fund free education policy, The National, 7 December 2011.
- 17 Second field survey.
- 18 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.21.
- 19 Second field survey.
- 29 Second field survey.
- 21 See: PM: 2,000 ghost schools getting funds, The National, 9 January 2012. Field communication, 2011.
- 22 Field communication.
- 23 These are the primary affected areas in relation to the LNGP, where the LNGP is licensed to exploit oil and gas resources.
- 24 Field communication.
- 25 Personal communication.
- 26 Second field survey.
- 27 Field communication.
- 28 Field communication.
- 28 Field communication.
- 29 Field communication.
- 30 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.23.
- 31 Field communication.
- 32 Recently, the PNG Government also made announcements committing to the provision of free healthcare. See: Whopping K350mil and free health care, The National, 19 January 2012.
- 33 Esso Highlands Limited, "Environmental Impact Statement," c.15; p.14.
- 34 Second field survey.
- 35 Esso Highlands Limited, "Environmental Impact Statement," c.15; p.14.
- 36 World Health Organisation, "Country Cooperation Strategy at a Glance," (Port Moresby: World Health Organisation, 2010), p.2.
- 37 World Health Organisation, "Country Cooperation Strategy at a Glance," p.1. The WHO lists a number of particular challenges facing healthcare in PNG over the coming years. They include high maternal mortality; gender based violence and gender inequality; increased health security risks from emerging diseases, multi-drug-resistant tuberculosis and other communicable diseases such as cholera; generalised HIV epidemic now affecting between one and two percent of the population; inadequate access to safe water and sanitation for large part of the population; high level of fragmentation in the institutional and fiscal relationships between national, provincial and lower levels of government; inadequate human resources in particular midwives and medical doctors in rural areas and an ageing work force; and a dysfunctional medical supply system
- 38 Esso Highlands Limited, "Environmental Impact Statement," c.15; pp.15-16.
- 39 First field survey.
- 40 First field survey.
- 41 See: Hides landowners block plant, The National, 19 January 2012.
- 42 Field communication.
- 43 Field communication.
- 44 Field communication.
- 45 Field communication.
- 46 See: World Health Organisation, "Papua New Guinea Country Profile 2011," (Port Moresby: World Health Organisation, 2011).
- 47 Field communication.
- 48 Field communication.
- 49 Although a new larger LNGP airport is being constructed at Komo, there is a general feeling that the expansion of Tari Airport would not be taking place if the LNGP were not taking place. The LNGP is also using Tari Airport for transportation purposes in the absence of a completed Komo Airport. Field communication.
- 50 Field communication.
- 51 Field communication.



CHAPTER 4

Awareness and community relations

Improving public awareness and community relations are crucial to the success of the LNGP for both proponents and people in the Hela region. Awareness through good community relations facilitates access to information and promotes understanding of changes related to the LNGP. This reduces uncertainty and allows people to make informed choices.

Credible and ongoing multi-stakeholder dialogue within a community – the act of including people in the information exchange and decision-making process of a resource development project – is especially important as it empowers the community.¹ Promoting accountability and transparency, for example, and giving special attention to human security issues through multi-stakeholder dialogue helps reduce the likelihood of conflict.² This, in addition to capacity building, reporting and networking, strengthens civil society and representative community processes.³

Awareness

Those living inside and outside PDL areas consistently raised the issue of awareness and the need for improved LNGP community relations. As noted, active community dialogue and participation provides confidence and results in greater local, political and social stability.⁴

In the PDL areas, EHL and LNGP contractors carry out community awareness on an informal and formal basis through for example, chance encounters on the side of the road with locals or arranged community awareness meetings. Many of these Community Affairs Officers belong to the contracting firms undertaking work for EHL and the LNGP. There were reported instances of officers speaking at cross-purposes⁵ and mention of women being less able to garner information from these officers.⁵

The research asked about the frequency of such meetings. The visits by EHL were for the most part quite regular. Fifteen percent of people reported seeing an EHL representative every day, 15 percent of people several times a week and 20 percent of people at least once a week. A good proportion of people, especially those a little further way from LNGP, activities reported only seeing an EHL official once over the past year to two years. The majority of those who responded to this question lived in PDL areas, confirming the predominant focus of EHL is in PDL areas.⁶

The company think it's the government responsibilities, but they are here with the community. They've come to live with the community, they've come to be a member of the Hela community. So for the community to accept them and not see them as exploiters of the resources they have to come to the community. Like any outsider who comes to a community, you have to partake in the activities that they are doing so you will be accepted as a member of the community. They must establish and strengthen the ties with the community.

Hela community leader

EHL relayed that Community Affairs Officers participated in 232 events that reached 14,500 people in the Hela region on behalf of the LNGP up until the period ending December 2011. Moreover, of the 13 Community Affairs Officers working on the LNGP's outreach programme, seven are Huli speakers.⁷ This level of awareness activities frames the ongoing concerns of local people and clearly point to the challenges facing community relations work in the Hela region.

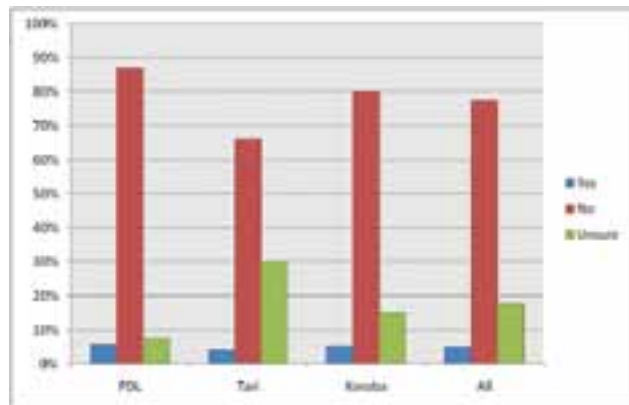
In contrast, most respondents reported only seeing government officials once a year. A smaller number saw government officials every four to eight months. While one would expect to see government officials on a less regular basis than company officers, it is important to note that under the circumstances, the government presence should both be more regular and more visible. In the absence of government in the area, landowners inevitably direct demands and frustrations at the LNGP as they carry out majority of interactions.⁸

Overall, complaints about the lack of awareness and information on the LNGP held across all levels of engagement. Although there have been efforts to avoid raising undue expectations and misinformation about the LNGP, there has clearly been an element of both, particularly in the lead up to the Development Forums.⁹ Some interviewed identified the raising of expectations amongst several communities as being the most damaging and likely to lead to conflict. In the main, such problems relate to the generation of support for the LNGP by politicians.¹⁰

It was further suggested that awareness raising and implementation of better community relations should be part of an active community development programme, in conjunction with government and civil society partners. Crucial to the awareness and community relations process is trust, something built through consistent engagement with the community on topical issues.¹¹

In the absence of better practices, many in the community commented that anger is likely to build up and eventually lead to conflict. In this respect, many felt the awareness programme should have been implemented sooner, with LNGP operator's community relations role made harder because of the delay.

Graph 1: Well-informed about the PNG LNG Project¹²



Despite this charge, survey respondents and many of those interviewed suggested it was not too late to instigate a more vigorous and wide-ranging community awareness programme that would benefit overall community relations in the Hela region.¹³

As one would expect, the most information people get about the LNGP stems from conversations in their own communities. When ranking the best information sources for this study, 60 percent of people listed village talk as their most important source of information on the LNGP.

When asked about village talk, many related the variety of sources of information about the LNGP, including family

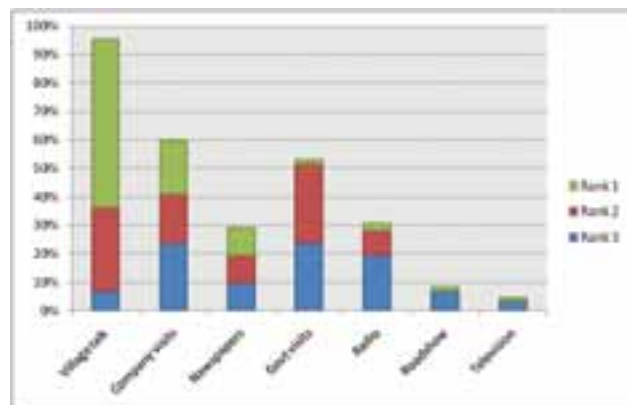
and friends, pastors in the church and people returning from elsewhere, including Port Moresby. Information could also come from a number of people involved with the LNGP, from those employed on the LNGP, contractors as well as EHL staff, such as community affairs officers.¹⁴

In this respect, the LNGP operator performed favourably with 19 percent of people ranking it as their best source of information on the LNGP. The LNGP operator also performed reasonably consistently, with sizable numbers ranking it their second and third best sources of information on the LNGP.¹⁵

Newspapers were the only other source of information to rank favourably as a source of information, with 10 percent of people indicating it was their best source of information on the LNGP. Many ranked radio as their third most favoured source of information. This reflects factors such as limited access to radio and limited means of powering radios within communities. Television garnered little support, with few people having the capacity to buy or access a television.¹⁶

The role of government officials is notable. Although few favoured government as their best source of information on the LNGP in this survey, 28 percent and 24 percent respectively ranked government as their second and third best sources of information in relation to the LNGP. Government visits include LLG and central government officials carrying out some form of community awareness.¹⁷

Graph 2: Ranking of information sources¹⁸



A series of questions was also asked about the best source of official and unofficial information (rather than just the best source of information). In this context, 78 percent of people acknowledge the company as the best source of official information in contrast to 10 percent viewing the government as the best source of official information.¹⁹

The vast majority of people still rely on village talk for unofficial information on the LNGP. Ninety-three percent of people engaged with their community on a daily basis, while only a small number of people, five percent, read the newspaper every day. However, 28 percent read the newspaper once a week and 25 percent read it once every two weeks. These are reasonably high numbers and evidence the important place of newspapers. A number of respondents were unable to read the newspaper given their literacy level and the fact newspapers are in English. A number of people also stated that newspaper reports often contradict what people hear in villages.²⁰

The use of radio is worth noting. While no one reported listening to the radio every day, eight percent stated they listened three times a week, 28 percent once a week and 18 percent once every two weeks. Despite the reduced use of radio, it is an important component in many people lives. The recently installed FM station in the Hela region has given rise to another potential information source on the LNGP. The difficulty some respondents pointed to with radio was the predominant use of English rather than the local Huli language or even Tok Pisin.²¹

Nonetheless, many people still felt uninformed about the LNGP. Some 80 percent of women and 75 percent of men felt they were uninformed about the LNGP. It is important to note that the perception of being informed or uninformed is a relative one and to a large degree relates to satisfaction rather than saturation. The prevalence of people who felt this way was highest inside PDL areas, where people are most affected by the LNGP. This indicates the relatively greater need for those most affected to be more informed about the LNGP.²²

We had been observing and hearing that LNG is happening at Hela and Hela name is well heard in Port Moresby and other places, but we the women from Hela have no idea what it is and what's actually happening.

Hela resident

Nonetheless, those who are least affected in the Koroba-Lake Kopiago district still reported a high level of dissatisfaction about being uninformed. Of the people surveyed in the Tari-Pori district, only 66 percent reported being uninformed, although a large number felt unsure. In this context, the overwhelming majority of all those surveyed desired more information and better community awareness on the LNGP.²³

There was a range of subjects about which people sought more information. Foremost amongst these was how the LNGP was going to benefit communities and people in the Hela region. Often this related to core human development issues, such as funding for education and healthcare. Numerous respondents also desired general information on the LNGP, on topics such as job opportunities and construction progress. Understandably, those affected by resettlement were also particularly eager to garner news on their situation.²⁴

There is limited capacity to inform people through the modern media, such as newspapers, radio and television. Many cannot read, and the ability to purchase and access radio and television sets is minimal. Maintaining consistent community awareness interactions in the absence of such media is important. EHL and associated contractors have community affairs officers and other staff on the ground undertaking such work. However, problems present in the number of staff dedicated to this role and the predominant focus on the PDL areas, rather than the wider Hela region.

Discussions with those surveyed and interviewed acknowledged these problems. They also affirmed the difficulty of carrying out awareness in the absence of effective information dissemination through the community grapevine, from leaders to their people. Many people highlighted that community

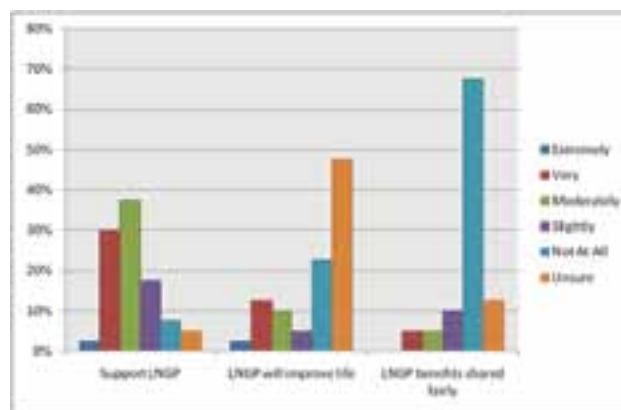
engagement on a regular basis was not happening, especially visits from government, although these were necessary first and ongoing activities. Despite any attempts to set up channels of communication via community leadership, many individuals also wished, as a form of acknowledgement and certainty, to see an official representative on a semi-regular basis.²⁵

Community relations

Touching on the issue of community relations and people's feelings about the LNGP, the surveys show that people are relatively hesitant in their support for the project, unsure of whether it would improve their lives and whether the benefits were being shared fairly.

The smaller survey showed moderate to strong support for the actual LNGP. However, people were predominantly unsure or doubtful as to whether it would improve their lives to any degree. From the results, this disjuncture – between support on the one hand and the view that the LNGP would not improve the lives of locals – relates to the perception or fact that existing benefits are not being shared fairly. Many interviewed also believed this situation was unlikely to change during the life of the LNGP.²⁶

Graph 3: Views of the PNG LNG Project²⁷



A number of surveys carried out over past years have shown overwhelming support for the LNGP.²⁸ This view was not reinforced in the surveys. Rather, despite there being strong support, people seem to have an increasingly negative view of the LNGP. The larger survey carried out asked people across the Hela region to elaborate on whether they were generally negative or positive about the LNGP. Forty-six percent of people felt negative about the LNGP, with 29 percent remaining unsure. The remaining 25 percent were generally positive about the LNGP. The greatest scepticism came from those in Koroba, followed by those in PDL areas and then Tari.

Exxon Mobil has to build bridges to the community: bridges to the churches, bridges to the women, to youth, to every member of Hela society. You build bridges, you don't put up fence. When you put up fence then people will be suspicious. You open up, you put up bridge, you put up the bridge and then there is a relationship.

Hela community leader

Summary

This chapter focused on the importance of awareness and community relations in relation to the LNGP. There are obvious difficulties in terms of the ability to convey information to a substantial audience, especially when the modern mass media is not available. However, the failure to include many parties from throughout the Hela region in these fundamental processes

is concerning. Awareness and community relations are about ensuring people in the Hela region are empowered and able to participate fully in the future of their community. Efforts by the LNGP and government seem largely restricted to areas directly affected. In many cases, even within these areas, people still felt overlooked. Poor awareness and community relations hamper overall chances of success.

-
- 1 Ross, "Extractive Sectors and the Poor," p.24.
 - 2 Ross, "Extractive Sectors and the Poor," p.19.
 - 3 Joyce and MacFarlane, "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions," p.18.
 - 4 Veiga, Scoble, and McAllister, "Mining with Communities," p.200.
 - 5 First field survey; Second field survey.
 - 6 Second field survey.
 - 7 Personal communication.
 - 8 Second field survey.
 - 9 Development forums bring together landowners in a mining or petroleum area with National Government and provincial governments to discuss respective obligations and responsibilities in relation to the proposed resource development project as well as the division of benefits accruing to each of the groups before approval for the resource development project is given to the developer. The Development Forum process is included in both the Mining Act 1992 and the OGA. See: Mel Togolo, "The 'Resource Curse' and Governance: A Papua New Guinean Perspective," in *Globalisation and Governance in the Pacific Islands*, ed. Stewart Firth (Canberra: ANU E Press, 2006), p.281.
 - 10 Field communication.
 - 11 Field communication.
 - 12 First field survey.
 - 13 Field communication.
 - 14 First field survey; Second field survey.
 - 15 Second field survey.
 - 16 Second field survey.
 - 17 Second field survey.
 - 18 First field survey.
 - 19 Second field survey.
 - 20 Second field survey.
 - 21 Second field survey.
 - 22 Second field survey.
 - 23 Second field survey.
 - 24 First field survey.
 - 25 Field communication.
 - 26 Second field survey.
 - 27 Second field survey.
 - 28 See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."



CHAPTER 5

Landowner issues

Problems with awareness and community relations are closely associated with those surrounding landowner agreements and landowner identification. Difficulties are somewhat inevitable given the complexities of landownership in Hela and the scale of the LNGP. However, it remains important the LNGP and government better engage with landowners to resolve grievances as many landowners feel excluded and marginalised.

The complexities of landownership in Hela make landowner agreements and landowner identification problematic. Living in residential settlement patterns characterised by scattered households, rather than nucleated villages, the Huli majority population in the Hela region form some 300-400 named patrilineal clans, each of which is further divided into lower-order sub-clans and lineages across the Hela region.¹

Formed through successive waves of migration, social mapping and genealogical data shows that on the margins, many Huli trace their origins to neighbouring ethnic groups.² For reasons such as conflict, drought and flooding as well as better hunting grounds or personal preference, Huli people migrated to temporary or permanent residence elsewhere in the Hela region with friends or relatives.

The Huli population therefore do not fit the simple 'one clan, one piece of land' schema.³ Migrant Huli can come to make up to 99 percent of the residential population, forming a complex web of interconnections between people and land, with each Huli group maintaining a strong familial knowledge of their home clan and land.⁴

Land remains central to the identity and lives of people in Hela as it is elsewhere in PNG.⁵ Most land throughout PNG is also customarily owned.⁶ General principles that determine customary landownership include descent, locality or residence and involvement in common activities such as gardening and defence.⁷ In the case of the Huli, descent claims can stretch back up to eight generations on both the maternal and paternal sides. Given these seemingly close relationships, there is an often-vocalised thought that all Huli share an entitlement to the wealth of Hela.

Under these circumstances, mechanisms exist to bring customarily owned land into the formal economy. The main one being incorporation under the Land Groups Incorporation Act 1974. Incorporated Landowner Groups (ILGs) give status to customary landowner groups in the formal legal system, immediately offering formal title and management rights over their land.

The creation of ILGs allows for the alienation of the land through the 'lease lease-back scheme'. Under this scheme, incorporated land is leased to the state and then leased-back to the customary landowners, other persons or organisations for up to 99 years.⁸ This creates an asset for the customary landowner group, enabling them to use it as collateral for borrowing. The land can also be leased by the ILG to a third party for exploitation or development.⁹

This is the case for resource development projects. Companies involved in such resource development projects must compensate landowners. In negotiations with government, customary landowners in PDL areas are also usually eligible for ensuing benefits, for example, from royalty and equity payments. ILGs are the preferred mechanism for distributing such benefits, although individual talks can also take place with particular land users in relation to compensation issues.

In these circumstances and as detailed later in this chapter, it is the government's responsibility to identify customary landowners. However, government frequently lacks the capacity to undertake this role, meaning the identification and incorporation of ILGs is not satisfactorily undertaken or relies on reluctant resource development companies. This latter situation can also result in landowners thinking it is the responsibility of resource development companies, rather than the government, to provide services in areas such as health and education.¹⁰

Under these circumstances, customary land ownership is often embittered by competing claims. As part of the contest over land in recent years for example, there are increasing numbers of competing elaborations of clan stories and genealogies, which often serve as the foundation for land claims and the proceeds that potentially arise from such ownership.¹¹

There is a sense in which people in PNG have only become landowners since the 1990s, an 'artifact' of PNG's recent experiences with resource development and the need to formalise customary landownership.¹² In such cases, the "process by which often malleable and complex rules of 'belonging' become simplified lists of 'landowners', and social boundaries become cartographic ones has been the cause of conflict at all major projects."¹³

Many of the difficulties associated with landowner agreement and landowner identification in the context of the LNGP are understandable given these complexities. Nonetheless, those who were surveyed and interviewed on these subjects felt the process were unsatisfactory. Although efforts are continuing by the LNGP and government, many feel they are taking place far too late. The LNGP could come under serious threat if there is no resolution to disagreements about the landowner agreements and landowner identification. This chapter elaborates on these topics.

Landowner agreement

Before details were known about project landowner representation in benefit sharing agreement (BSA) negotiations, the EIS set out a number of related principles and consideration of how to share benefits from the LNGP:

- **Transparency:** Community consent to and knowledge of all aspects of the BSA process.
- **Equity:** That no project stakeholder group – ethnic, gender, generational or other – is disadvantaged or disempowered by the BSA process.
- **Manageable:** Representation is such that it can be numerically assembled at any one time and into manageable groups to facilitate negotiation.
- **Mandated:** That the selected representation reflects, and is publically seen to reflect, the mandate of the affected and impacted project landowners.¹⁴

The EIS noted that the BSA was the cornerstone for social development in the project area over the next 30 years. However, it warned that following the principles outlined above would be hindered by "inter-ethnic baggage" in the region.¹⁵

We want people to live in peace and the company to develop the resources. We want the stakeholders to benefit from the land's resource; we want the company to give to the people of Hela what they should give and the government leaders to give to the people.

Hela community leader

Under section 50(1) of the OGA, the government is required to agree to and execute a benefit sharing agreement between the state and project area landowners as well as affected local level and provincial governments in relation to the LNGP. Project area landowners under the OGA are defined as "persons who have customary rights of ownership of or registered title to (a) any part of the licence area of a petroleum development licence the operations under which are part of that petroleum project; or (b) any land within the buffer zone of that petroleum project."¹⁶

The SIA defines the project impact area (PIA) for the LNGP as inclusive of the 117 communities "where the major impacts are likely to be felt in the short-to-medium term, and where the majority of the affected populace presently reside."¹⁷ A sizable proportion of the population in these 117 communities are project area landowners. This includes those with "land rights within PDLs or within the 5 km buffer zone inside or around project facilities such as plant sites and pipelines."¹⁸ According to the SIA, the PIA population is 33,781.¹⁹

The PNG LNG Gas Agreement (LNGA) between the LNGP proponents and the State was signed in May 2008. In addition to setting out the fiscal and regulatory framework of the LNGP over its lifetime, the LNGA also detailed the State's position on social mapping and landowner identification (SMLI) studies as prescribed under the OGA and is discussed in further detail in the following section.²⁰

The adoption of submitted SMLI studies carried out under the LNGA set the stage for the determination of project area landowners. The Department of Petroleum and Energy (DPE) undertook awareness and selection of landowner representatives over two intensive weeks in Hela,²¹ with the help of the LNGP companies. Under the terms of the LNGA, the LNGP companies agreed to assist and support the development of the BSA process and BSA terms; although EHL stressed they did not participate in negotiations and were not a signatory to any of the BSA's.²²

The BSA process subsequently moved to the Development Forum and BSA execution stages. The Umbrella Benefit Sharing Agreement (UBSA) was negotiated at Kokopo in May 2009. The UBSA provides an overarching framework for the sharing of revenues between the State and project area landowners as well as local level and provincial governments. It also committed the government to infrastructure projects in LNGP areas. The UBSA further provided the framework and was followed by a number of local Licence Based Benefit Sharing Agreement's (LBSAs), which applied the UBSA at the local project area level.

Figure 7: Agreements between different parties²³

Agreement(s)	Description
PNG LNG Agreement (LNGA)	The Independent State of Papua New Guinea and the PNG LNG Licensees, led by Esso Highlands Limited, signed the PNG LNG Gas Agreement on 22 May 2008. The Agreement set out the terms of State and Licensee participation in the PNG LNG Project, in addition to fiscal provisions, such as taxes and royalties and domestic requirements, such as social mapping and landowner identification as well as education and business development.
Umbrella Benefit Sharing Agreement (UBSA)	The Independent State of Papua New Guinea, representatives of project area landowners and the four provincial and 10 local level governments, executed the UBSA on Saturday May 23, 2009. The UBSA is an overarching agreement, which outlines how a number of the State’s project revenue streams (royalty, development levy and equity dividends) over the 30-year project life will be shared. In addition, the UBSA will commit the State to a number of infrastructure projects in each project area.
Licence agreements (LBSAs)	The License Agreements focus on how benefits allocated under the UBSA will be distributed to bona fide landowners within each license area or within a buffer zone around the pipeline and LNG plant. Development Forums and community representatives address a number of questions, such as the allocation of benefit between different areas and the sharing of benefits amongst landowners within these areas.

Of the people in the main survey, 75 people considered themselves landowners with respect to the LNGP. A number of additional people who were not landowners were related to those who were, by for example, marriage into a landowning community. This meant 60 percent of those surveyed were landowners within PDL areas, of which, 29 percent were resident outside the PDL areas and 71 percent were resident inside PDL areas.²⁴ This confirms the pattern of interconnected and sometimes distant landownership by the Huli.

Only 15 percent of the sample participated in some respect in local benefit sharing negotiations. The vast majority of these participants were male. A lesser number participated in the UBSA. Of those who participated in the LBSA, 78 percent were from inside PDL areas. While it is a challenge to include in some manner everyone in the landowner agreement process, the hurried preliminary selection process left many people feeling left out of the landowner agreements.²⁵

The agreements were not signed properly and only a small number of people are benefiting. Many communities did not participate and did not benefit; that’s where the frustration is, why people are angry, and that’s going to cause a problem.

Hela resident

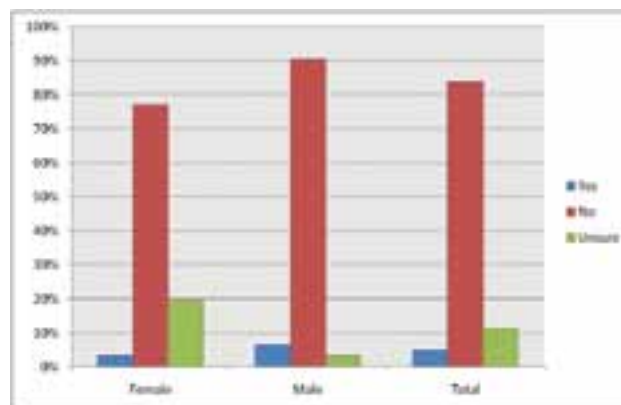
There were numerous accounts of the confused and haphazard nature of the Development Forums. Reports of significant allowances being paid to some and not others, little effort being given to explaining the details of the BSAs to those landowners

attending, only a few handpicked people being invited to sign final documents and the last minute arrival of political leaders to sign the agreements, paints a reasonably unflattering picture of the BSAs.²⁶

There were also reports that the UBSA did not follow protocols and lacked an independent observer.²⁷ A number of people interviewed further suggested that many fraudulently attended the BSA negotiations as landowners in the hopes of capturing associated benefits. There were also disturbing reports of violence in relation to the BSA negotiations, including attacks on officials overseeing the process.²⁸

Thus, whether as bystanders or participants, the overwhelming majority of people sampled considered the benefit sharing negotiations unfair and non-transparent. The 84 percent of people who felt this way contrasted with a low five percent who felt it was fair and transparent. The remainder were unsure.²⁹

Graph 4: Fairness of the benefit sharing negotiations³⁰



More women declined to register a view on the fairness and transparency of the BSAs, which suggests less involvement and greater uncertainty about the agreements amongst women. That is to say, a greater proportion of women felt unable or unwilling to register a view given their everyday separation from these matters.³¹ In total, 28 percent of people in the smaller survey continued to feel that problems with landowner agreements were a very serious problem and 40 percent thought they were a serious problem.³²

A number of respondents recounted that landowners tore up an LBSA document at a Development Forum meeting, so great was the frustration at the agreement's contents and situation. They also recounted instances of intimidation and pressure on landowners to sign. Overall, there was a sense that the whole process has been rushed by government and, to some degree, LNGP proponents.³³

Social mapping and landowner identification

At the centre of much discontent is the process of social mapping and landowner identification. The delays in establishing some certainty in relation to landowner identification led to concern amongst those surveyed and interviewed. Of people in the small survey 28 percent felt landowner identification was a very serious problem and 35 percent of people thought it was serious problem. A further 33 percent of people thought landowner identification was a moderate problem.³⁴

Under section 47 of the OGA, project proponents are expected to conduct SMLI studies. Preliminary SMLI should take place prior to initial entry into the licence area by the licence holder. Upon discovery and confirmation of the project, the licensee is then required to conduct "(a) A full-scale social mapping study; and (b) A full-scale landowner identification study of customary owners and the occupants of the land which will be comprised in the licence area of a petroleum development licence or licences."³⁵

The early identification of landowners is crucial to any resource development project.³⁶ Under section 47 of the OGA, the responsible Minister "may by regulation prescribe the scope and method of a social mapping study or landowner identification study conducted in accordance with this section, and requirements as to reports of such studies."³⁷ The LNGA detailed the State's acceptance of SMLI studies, indicating they satisfied the requirements of the OGA for full-scale SMLI studies.³⁸ The protocols for SMLI were also set out in the LNGA. Despite the considerable detail required, in order to constitute a "full-scale" SMLI study, the protocols only requested a "preliminary distribution map showing the relative distributions of major groupings, such as clans in the area – a group to ground grid – with an understanding of applicable land tenure principles and concepts."³⁹

There was significant confusion amongst those interviewed and surveyed regarding definitions of social mapping and landowner identification.⁴⁰ This research recognises that social mapping essentially lists clan groups with customary rights of ownership or registered title; it does not demarcate boundaries or specify landholdings by producing lists of individual landowners.

By contrast, landowner identification is a census that ultimately lists individual landowners (or land users) within these clans or groups. Landowner identification also aids the formation of Incorporated Landowner Groups (ILGs), mechanisms for the eventual distribution of benefit streams to landowners.⁴¹

When they do the payments for royalty and equity, how will they identify landowners? We don't know, but we are just giving our land freely and they are bulldozing our land.

Hela resident

Based on this understanding of social mapping, it is clear that only social mapping and not landowner identification was carried out prior to the Development Forums.⁴² According to the DPE, most of the results from these reports were accepted by the applicable clans, although there are cases where the findings have been contested, such as at Juha.⁴³ As noted earlier, the following determination and selection of representatives to attend the Development Forums was widely criticised by those surveyed and interviewed.⁴⁴

Landowner identification is now running very late, and was ongoing at the time of writing, two years after the signing of the UBSA. Some clans are still disputing the social mapping studies that foreshadowed the signing of the UBSA and LBSAs. Landowner companies (LANCOs) were formed and interact with the LNGP operator, while the ILG process, with the associated listing of individual members and verification of clan groupings has not been completed.⁴⁵

The government has contracted out the identification and incorporation of landowners to Heritage Consultants Ltd. Work started at Portion 152 (Central Province) in early 2011⁴⁶ and it is expected that the identification process will be completed by the end of 2011.⁴⁷ In addition to Heritage Consultants, this process should include a state team of representatives from the Lands Department, DPE, LLGs, ward councillors, district and provincial representatives.⁴⁸ In the latter half of 2011, landowner identification and the ILG incorporation process were ongoing in the Gulf Province. However, the coming election in mid-2012, in addition to a variety of security issues, has further delayed progress in the Hela region.⁴⁹

Beyond the limited detail provided by social mapping studies, there is disagreement about the viability of carrying out landowner identification. A number of factors complicate the situation in the Hela region. The difficulties of undertaking a large-scale genealogical enquiry are immense. Tracing of ancestors and claims to landownership by Huli up to eight generations on both the maternal and paternal sides imposes difficulties given the potentially large pool of people with links to the project area.⁵⁰

However, the failure to carry out 'full' social mapping and landowner identification – effectively underway now – before the Development Forums has left many people feeling aggrieved and excluded from the LNGP. It would have been ideal to carry out a full census and genealogical study to establish the basis of individuals' residence and relationships as well as clan connections well before the LNGP construction phase.⁵¹

Well at the moment, we don't know who is the landowner? What is the law that we have in here? What is the thing that is supposed to be done for this LNG Project? Who is the principal landowner? What are the benefits we should get for that? We are all in darkness.

Hela resident

In the interim, the social surveys carried out by the LNGP were unable to capture all those with legitimate claims to LNGP benefits over time. This is particularly the case in Komo where significant tribal conflict in the late 1990s led to an exodus of people to safer areas. This consequently excludes many legitimate landowners, as they came back between the social surveys and the start of the initial LNGP construction phase. It is significant that in Komo the LNGP has fostered peace and encouraged people to return.⁵²

There are clearly a number of remaining issues related to social mapping and landowner identification. Many of these disagreements are now under consideration by the courts. The onus is on both LNGP proponents and the government to address landownership and benefit distribution issues. If social mapping

and landowner identification do not effectively represent LNGP landowners in the near-term, including their understanding of relationships with the land and LNGP, growing frustrations will likely lead, firstly to disruptions, then to chronic levels of conflict, as compensation and other benefit streams fail to reach their intended beneficiaries.⁵³

Summary

Landowner agreements and landowner identification remain serious outstanding matters. For many they represent a failure to include the community on a fair and equitable basis, resulting in the exclusion of many legitimate landowners from the LNGP. In part, this exemplifies the disparity between parties in relation to the bureaucratic milieu of the LNGP.

Highlighting poor landowner empowerment and participation in the LNGP is the failure to fulfil the principles of transparency, equity, manageability and representation during the BSAs. This carried over from the failure to identify landowners within affected communities at an early stage. The challenge now is to ensure processes going forward capture relevant stakeholders within these communities.

- 1 Goldman, "Hoo-Ha in Huli: Considerations on Commotion and Community in the Southern Highlands," pp.72-79.
- 2 Goldman, "Hoo-Ha in Huli: Considerations on Commotion and Community in the Southern Highlands," p.71.
- 3 Laurance Goldman, "Incorporating Huli: Lessons from the Hides Licence Area," in *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, ed. James F. Weiner and Katie Glaskin, Asia-Pacific Environment Monograph 3 (Canberra: ANU E Press, 2007), p.106.
- 4 Goldman, "Incorporating Huli: Lessons from the Hides Licence Area," p.106.
- 5 Westermark, "Clan Claims: Land, Law and Violence in the Papua New Guinea Eastern Highlands," p.220.
- 6 It is most often stated that 97 percent of land is under customary ownership in PNG. See: AusAID, "Making Land Work: Reconciling Customary Land and Development in the Pacific (Volume One)," (Canberra: AusAID, 2008), p.4.
- 7 AusAID, "Making Land Work: Reconciling Customary Land and Development in the Pacific (Volume One)," p.5; Michael J. Trebilcock, "Communal Property Rights: The Papua New Guinean Experience," *The University of Toronto Law Journal* 34, no. 4 (1984): pp.382-83.
- 8 It is noted that significant portions of land are being alienated under the 'lease-leaseback scheme', which allows the state to lease land, then lease it back to the customary owners, other persons or organisations for up to 99 years. See: Colin Filer, "The Political Construction of a Land Grab in Papua New Guinea," in *Global Land Grabbing* (Institute of Development Studies, University of Sussex 2011).
- 9 Tony Power, "Incorporated Land Groups in Papua New Guinea," in *Making Land Work: Case Studies on Customary Land and Development in the Pacific (Volume Two)*, ed. AusAID (Canberra: AusAID, 2008), p.8.
- 10 Power, "Incorporated Land Groups in Papua New Guinea," p.9.
- 11 Westermark, "Clan Claims: Land, Law and Violence in the Papua New Guinea Eastern Highlands," pp.218-19.
- 12 James F. Weiner, "The Foi Incorporated Land Group: Group Definition and Collective Action in the Kutubu Oil Project Area, Papua New Guinea," in *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, ed. James F. Weiner and Katie Glaskin (Canberra: ANU E Press, 2007), p.120.
- 13 Banks, "Understanding Resource Conflicts in Papua New Guinea," p.29.
- 14 Esso Highlands Limited, "Environmental Impact Statement," c.23; pp.2-3.
- 15 Esso Highlands Limited, "Environmental Impact Statement," c.23; pp.2-3.
- 16 Government of Papua New Guinea, "Oil and Gas Act," (Papua New Guinea 1998), p.11.
- 17 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.2; p.1.
- 18 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.2; p.1.
- 19 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.2; p.26.
- 20 The Independent State of Papua New Guinea and PDL Licensees, "PNG LNG Gas Agreement," (Papua New Guinea 2008), p.69.
- 21 Field communication.
- 22 Field communication.
- 23 Source: Esso Highlands Limited, "Fact Sheet: Benefit Sharing Agreement," (Port Moresby PNG LNG, 2009).
- 24 First field survey.
- 25 First field survey.
- 26 Field communication.
- 27 Transparency International was meant to be an independent observer but had its invitation revoked. It has also been suggested that holding the signing at Kokopo, a location remote from any of the landowner areas, was contrary to section 48(1) of the OGA. See: Jubilee Australia, "PNG LNG Project Investigation." Lastly, it has been alleged that the agreement was rushed through by project financiers in order to try and get the project on stream before a possible glut in market LNG prices in 2017 and to secure markets for the gas. See: PNG LNG gas pact not rushed, *The National*, 3 February 2011; Government admits to rushed gas agreement, *The National*, 31 January 2011; PNG urged to speed up gas devt or lose buyers, *The National*, 7 December 2010.
- 28 Field communication.
- 29 First field survey.
- 30 First field survey.
- 31 First field survey.
- 32 Second field survey.
- 33 Field communication.
- 34 Second field survey.
- 35 Government of Papua New Guinea, "Oil and Gas Act," s.47.
- 36 Meg Taylor and Kathy Whimp, "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study," in Report to the Asian Development Bank and PNG Department of Petroleum and Energy (Wellington 1997), 124.
- 37 Government of Papua New Guinea, "Oil and Gas Act," s.47.
- 38 The Independent State of Papua New Guinea and PDL Licensees, "PNG LNG Gas Agreement," p.69. The LNGA agreed to SMLI studies from already mapped areas and accepted forthcoming SMLI studies as being "full-scale" if they followed the protocols set out in Exhibit J of the LNGA.
- 39 The Independent State of Papua New Guinea and PDL Licensees, "PNG LNG Gas Agreement," p.126. (Exhibit J).
- 40 Field communication.
- 41 This point is discussed further in the following chapter.
- 42 Twenty-four Social Mapping and Landowner Identification (SMLI) studies were previously completed in these areas between 1997 and 2006. A further 8 SMLIs were commissioned for the LNGP. These included new social mapping studies in Hides (PDL1, PRL12), Komo (PRL 11), Juha (PRL2) and pipeline areas PL-D and PL-B. Laurence Goldman, "Social Impact Assessment," (2009), c.1; p.33.
- 43 See: Juha land group await court ruling, *The National*, 7 October 2010. Interviewees suggested that one of the consequences of conflict over landowner identities is that benefit payments are frozen whilst the matter is resolved. Trust funds holding such funds for long periods may be open to abuse, and costs of pursuing the matter through the courts are met against the trust fund, which is slowly whittled away.
- 44 Field communication.
- 45 Field communication.
- 46 See: Mapping begins at portion 152, *The National*, 1 February 2011.
- 47 Field communication.
- 48 During the Portion 152 exercise, only the DPE and the Lands Department could take part due to funding availability. Field communication.
- 49 Field communication.
- 50 Field communication.
- 51 A leading observer relayed that a full census and genealogical study would only have to extend back a few generations. Field communication.
- 52 Field communication.
- 53 Field communication.



CHAPTER 6

Benefit sharing

Undertaking social mapping at the exploration stage and landowner identification following confirmation of the potential for commercial exploitation is crucial.¹ Failure to do so has marked flow-on effects. In the absence of a clear delineation of individuals and groups, monies are misused and frustration grows on the part of many genuine landowners.

An uneasy calm now exists between landowners and the LNGP as employment benefits are captured by a good proportion of the local population during construction. However, that calm may not last as tensions in relation to land ownership erupt into competing claims and conflict between stakeholders. Landowner representation and the mechanics of benefit sharing on the ground are likely to remain a contentious issue.

An important distinction relates to the benefit sharing agreements and the parties to different agreements. As numerous stakeholders have noted, the LNGP proponents make royalty and development levy payments to Central Government, while the BSAs between the Central Government, Provincial Governments, LLGs and landowners are quite separate. In the latter case, the State apportions the benefit streams under the OGA to the appropriate parties. These and other benefit streams, as well as the mechanism for distributing them amongst landowners, are discussed below.²

Benefit streams

As noted earlier, under section 50(1) of the OGA, the government is required to agree to and execute a benefit sharing agreement between the state and project area landowners as well as affected local level and provincial governments. These benefit streams were set out in the UBSA and LBSA as well as other commitments.³

The benefit streams, based on LNGP output, include royalties, development levies and dividends on government equity held in the LNGP. Royalties are calculated at two percent of the net wellhead value of the gas (as a percentage of sale value), an estimated K5.268 billion over the life of the project. Landowners are to receive 70 percent of these royalties and provincial governments and LLGs 30 percent under the UBSA.⁴

Of royalty income, 30 percent is paid into a Future Generations Trust (FGT) and another 30 percent into a Community Investment Fund (CIF), leaving 40 percent as cash payments to beneficiaries.⁵ These funds are managed by nominated trustee companies, which are subsidiaries of the government owned MRDC.⁶ The FGT is to be invested over the long term to generate income, whilst the CIF is to be used for projects of community value in areas such as health, education and welfare.⁷

The government holds a 19.6 percent equity interest in the LNGP; landowners and sub-national governments may acquire up to seven percent total equity interest, around 35 percent of the state's participating interest. There are two types of equity arrangement: firstly, state interests of 16.6 percent are held by the National Petroleum Company (NPCP), formerly Kroton no. 2, and are referred to as Kroton equity in the UBSA.⁸ Landowners and provincial governments have a commercial option to purchase 25.75 percent of this equity.⁹ The second type is known as Coordinated Development and Operating Agreement (CDOA) equity, which is available to landowners and LLGs only and comprises a 2.78 percent interest in the LNGP.¹⁰

According to the PNG LNG Economic Impact Study carried out by ACIL Tasman, the total revenue from all government-held equity is estimated at K38 billion over the life of the project. Of this, CDOA equity alone would generate around K5.4 billion for landowners and LLGs.¹¹ As with royalties, those equity dividends

accruing to landowners and sub-national government will be managed by MRDC; they will also be split between the CIF, FGT and cash payments in the same proportions as royalties.¹²

Development levies are calculated at two percent of wellhead value and are provided as grants by central government to provincial and LLGs to augment their revenues. They may be used for infrastructure or for other purposes and, like royalties, are predicted to be worth K5.268 billion over the 30-year life of the project.¹³ There is considerable confusion regarding the channels through which these funds are to be disbursed.¹⁴

In addition to the benefits described above, calculated as percentages of wellhead value and equity dividends, a number of other benefits will be available:

- Infrastructure Development Grants (IDGs): K1.2 billion will be allocated equally over two five year periods, commencing in 2010 for infrastructure development and maintenance in the affected provinces. This will initially allow infrastructure to be built before the gas flows and thus, before development levy funds become available. These grants are to be paid directly from central government to affected provincial and local governments,¹⁵ and are not depended on project output. Specific projects are listed in the LBSAs specific to the various PDL's.¹⁶
- High Impact Infrastructure: Additional to the above, some specific high impact infrastructure is planned, including township developments and some key roads and bridges.
- Business Development Seed Grants (BDGs): K120 million is to be made available to LANCOs for investment; 20 percent between commencement of early works and the LNGP decision and 80 percent subsequent to the project decision.¹⁷
- Tax credits: Joint venture partners have the option to expend up to 1.25 percent of the tax payable on their assessable income on approved infrastructure construction or maintenance.¹⁸ Their estimated value is K490 million over the 30-year life of the LNGP.¹⁹

Most of the benefits described here have not yet come on stream: development levies, equity, royalties and tax credit

projects will not be available until gas flows in 2014. At the time of this research, the main benefits listed above and received by landowners were BDGs (seed grants) and a number of infrastructure development grants.

LNG is a blessing if the government and the landowners share together and follow the agreement. If the money comes down straight to the grassroots people and the owner of the gas, I think that the people should be enjoying and should be very happy.

Hela community leader

How local, provincial and national government use these benefit streams is of fundamental importance to the success of the LNGP. For example, the government has committed itself to free education and healthcare, the ability to do in part due to LNGP derived revenues, as well as various infrastructure developments under the UBSA.²⁰ However, resource development monies have historically brought few benefits to the general populace of PNG. Investment in education and healthcare has been inadequate and the country's human development level remains low.²¹ Significant investment in infrastructure is also required to improve human development in the country.²²

There is rightly a need to focus on the equitable sharing of benefit streams through accountable and transparent institutions. This includes helping those who are affected most by social changes and impacts, with particular attention given to vulnerable groups. The great challenge for government is to ensure overall benefits are fairly apportioned according to the social changes and impacts taking place and the relative human development needs of the Hela region and PNG. In the absence of government institutional capacity, this agency role may fall more heavily on the LNGP.

We do share and invite and participate in social activities and all this, but with this project people are not sharing.

Hela resident

Figure 8: Summary of different benefit streams²³

Recipient	Description
National Government	Company taxation Salary and wage tax Stamp duty and import duties Business withholding tax Equity dividends
Landowners (cash)	Royalties Land compensation National wages Land rentals Equity dividends Landowner company dividends Business development seed capital grants Scholarships and donations
Landowners (other)	Landowner company contracts Community infrastructure projects Employment and training
Local and Provincial Government	Development levies Infrastructure grants Royalties Equity dividends

Whilst estimates of project benefits vary widely according to economic conditions and the exact numbers of landowners are unknown, it is useful to make some tentative calculations regarding total benefits possibly accruing to landowners in order to get an idea of the order of magnitude of benefits under consideration.

Using the figures, an estimated total of K3.7 billion in royalties, K4.5 billion in CDOA equity and potentially around K6 billion in Kroton equity, will accrue to landowners alone. Taking only the 40 percent of royalty and CDOA equity payments to be provided as cash payments, the estimates suggest that around K3,200 would be available per person per year; this would amount to around K18,000 per year for each household.²⁴

This is significant in areas where cash incomes in the 1990s could be as little as K20 per person per year.²⁵ CIF and FGT funds as well as royalty and CDOA equity are worth an additional K28,000 per household per year. If landowners take up their share of Kroton equity then net benefit estimates will be much higher.

One can also include the K120 million in BDGs and that LANCOs have already received over K500 million of project funding through construction contracts.²⁶ The bulk of EHL’s voluntary community development investments (around K450 million over the life of the project) will focus on the 117 communities directly affected by the LNGP and much of the IDG expenditure is likely to be made in and around LNGP areas. Combined the sums going to this relatively small group within the larger Hela region are immense.²⁷

Landowner benefit sharing

Perhaps the fairest way of distributing benefits would be to make equal payments to all eligible landowners based on a landowner census and using direct payments to bank accounts. However, customary land ownership presents difficulties; members of landowner groups live in remote locations; many people are illiterate and rarely have bank accounts.

Thus, the challenges of identifying and providing cash payments to individual landowners are obstacles to direct individual payments. Instead, operators or government has usually dealt with landowning group representatives in the form of clan agents or through ILGs. In the case of the LNGP, the latter is the preferred option.²⁸

There are three issues to be resolved concerning ILGs. The first is the basis for defining membership. ILGs are normally formed along ‘clan’ lines according to descent,²⁹ but Huli people may inherit land from both parents; individuals may have land parcels in many areas and claim affinity with multiple groups. Identification of groups for ILG formation is extremely difficult. For this reason, the LNGP social consultant recommended a different mechanism of ILG formation, known as Zone ILGs.³⁰

The second issue is how benefits are to be shared between ILGs. There are a number of different mechanisms by which benefits may be shared between ILGs.

- Payments may be made equally to each ILG, regardless of the number of members. This mechanism does not require full lists of ILG members or land ownership boundaries, but the rather predictable outcome here is 'ILG fission' by which ILGs split into smaller and smaller groups, prompting concerns about increased community division and wider breakdown of customary groups.³¹ This was the experience in Kutubu.³²
- Payments may be made to each ILG in accordance with the area of land which they own, in which case boundaries must be drawn up. This is a long and expensive process and has caused land disputes that disrupt project activities. This is exemplified at Moran.³³
- Payments may also be made to each ILG on a pro rata basis in accordance with the number of members. Such a mechanism requires membership lists to be made.³⁴

A combination of mechanisms may also be implemented; for example payments may be split between language groups initially by land ownership, and then by ILG using one of the above mechanisms.³⁵ The OGA itself seems to support distribution calculated on a per capita basis: section 176(3) (g) states that "where project area landowners... are represented by more than one ILG... the incorporated land groups or other representatives shall be allocated the benefit in proportion to the number of project area landowners each represents."³⁶

In the case of the LNGP, because it is building on a number of previous oil and gas projects in the region, each PDL has its own distribution principles so there is no uniformity across adjacent license areas. Thus, it is possible that people in different license areas will see discrepancies as unfair, which may cause dissatisfaction with the LNGP.

The third major issue is how benefits are distributed within ILGs. Payments to ILGs have usually been provided as public cash payments in communities, although ILGs in Kutubu and Moran have access to passbook accounts into which payments are made.³⁷ In all cases, payments are made to ILG chairperson/treasurers (or to single ILG accounts) only, not to individual members.

It is thus up to ILG executives to distribute the funds.³⁸ For this reason, public cash payments in communities may be far more transparent than payments into bank accounts. Indeed, the SIA notes that problems have been most acute when payments have been made through passbook accounts, for example, there is a reluctance to make payments to female members.³⁹

Member satisfaction with ILGs is low. Successive SIAs in petroleum project areas between 1998 and 2005 showed dissatisfaction with ILGs to be between 60 percent and 70 percent.⁴⁰ Lack of adequate community consultation and feedback, financial misappropriation, unpaid and unequal distribution of equities/royalties and leadership problems were cited as the basis of poor performance and dissatisfaction.⁴¹ Numerous people interviewed in relation to their satisfaction with their ILGs confirmed this viewpoint. Many also remained largely unfamiliar with the workings of their respective ILG.⁴²

Hela society is a very unpredictable, like the weather is unpredictable. But one thing I can say is if the people see they have been cheated, if the people see that their rights have been deprived, then there may be problems.

Hela community leader

The project SIA argued there would be a strong social benefit from merging the existing petroleum benefit and prospective LNGP system into a single coordinated vehicle. It was recommended that using a register of accredited landowners identified by census (without ILGs) or instituting a Zone ILG system would both address some of the issues associated with ILGs so far in the project. In the event, written documents were not available on decisions taken on these issues, however, interviews with government indicated the following.

1. The zone ILG system will not be used.
2. ILGs in existing PDL's will be reviewed to ensure that incorporation is along 'clan lines' but they will not be reformed and re-registered, thus the existing and different systems will persist.
3. In new PDL's it appears that the stock clan method is to be used to form ILGs despite mention by the SIA author that this mechanism is particularly unsuited to Huli systems of land inheritance. Early indications at Portion 152 suggest that, as with previous petroleum projects, the clans identified in the social mapping report are already splitting into a number of different ILGs for registration.
4. Following ILG formation, benefits would not be shared between ILGs according to land area as in Moran, or provided equally per ILG as in Kutubu. Rather, landowning groups will come together and decide on benefit sharing depending on a mix of factors such as land size, population per capita, location of significant project facilities and traditions. If this is the case then protracted negotiations will be necessary. However, interviewees working on ILG formation thought that benefits were to be shared on a per-area basis as in Moran. Overall, it is probable that the final decision on the mechanism to be used had not yet been finalised at the time of writing.

Whatever the final decisions taken on ILG formation and benefit sharing, it should be noted that the operator has so far taken no part in them; EHL considers such intervention to be inappropriate and they do not have a public policy or preference regarding the form which ILGs should take.⁴³ ILG incorporation has begun for the LNGP, but there are doubts about the capacity of the Lands Department to administer the process.⁴⁴

In particular, recent legislative amendments affecting ILGs will require applicants to have their land surveyed (at their own expense) and to provide membership lists with birth certificates. Whilst these are important changes, the ability of ILGs to implement them must be in doubt⁴⁵ and the LNGP operator does not have any plans to support ILG capacity building.⁴⁶ It is perhaps unfortunate that, despite logistical difficulties involved,

the approach of equal individual payments based on a list of individual landowners was not considered further, as this would have avoided many of the issues with ILGs.⁴⁷

Summary

There are significant benefit streams due in the coming years to people in the Hela region. Already, sizable payments have been made through BDGs and LANCOS. These are bringing about critical changes to the socio-economic landscape in the Hela region.

The benefit sharing processes have failed to proceed in an equitable, fair and impartial manner. Many landowners and those in the general populace feel explanations of the BSAs were insufficient. There are also questions about the future distribution and management of the varying benefit streams.

The contestation and misappropriation associated with BDGs and LANCOS, something discussed in the next chapter, does not bode well for the use of future benefit streams. Exclusion from benefit sharing is also exacerbating existing inequalities. This has particular implications for the management of LNGP benefits and human development in the Hela region.

- 1 Recommendations also made by Lawrence Goldman and UPNG's social research arm, Unisearch. See: Taylor and Whimp, "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study," p.125.
- 2 Field communication.
- 3 Government of Papua New Guinea, "Oil and Gas Act," s.50(1).
- 4 Goldman, "Social Impact Assessment," c.3; p.65.
- 5 Government of Papua New Guinea, "Oil and Gas Act," s.176(3)(h). In the UBSA, this section has been interpreted as meaning that the 30/30/40 split should be enacted on the actual benefit stream; however, another possible interpretation is that the entire benefit stream should be invested and the 30/30/40 split should be made on the income from the investment. Under this second scenario the benefits of the LNG project would last for far longer and be disbursed at a far slower rate.
- 6 Trust companies include representatives from sub-national government and ILGs. According to the UBSA (Clause 9.2), royalties are to be paid directly to these trustee companies by the operator, cutting out the state and MRDC and contrary to the OGA, according to which these funds should be paid by the project company to the state then to the MRDC. According to clause 3(f) of the UBSA, in the event of inconsistency, the OGA overrides the UBSA so royalties will first go to the state. See: Jubilee Australia, "PNG LNG Project Investigation."
- 7 Government of Papua New Guinea, "Oil and Gas Act," s.176(3)(h)(ii).
- 8 Any dividends from Kroton equity not taken up by landowners or sub-national government will be managed and invested by the NPCP under the IPBC, so this equity should perhaps be referred to as NPCP equity. The NPCP is currently undergoing restructuring with core functions being transferred to a project management unit in the IPBC.
- 9 In order to exercise the option the PIA landowners and Provincial Governments would need to make a lump sum payment to IPBC of \$US240 million per percentage point of project interest corresponding to Kroton (UBSA Clause 6.2.1 (ii)). This must be exercised between 1 January 2016 and 30 June 2016 (UBSA Clause 6.2.1 (i)). This amount multiplied by the 4.22 percent of total project equity available to them through Kroton would come to around K1 billion in required investment; revenue from this 4.22 percent would be around K8 billion over the life of the project, given the study case scenario in the PNG LNG Economic Impact Study ACIL Tasman, "PNG LNG Economic Impact Study: An Assessment of the Direct and Indirect Impacts of the Proposed PNG LNG Project on the Economy of Papua New Guinea (Prepared for Exxon Mobil)," 19; Jubilee Australia, "PNG LNG Project Investigation."
- 10 CDOA equity comprises both free and paid equity. In the case of free equity, the purchase of the initial investment in the project is borne by the government, so in effect the beneficiaries receive dividends without making any investment of their own (UBSA Clause 6.2.2).
- 11 ACIL Tasman, "PNG LNG Economic Impact Study: An Assessment of the Direct and Indirect Impacts of the Proposed PNG LNG Project on the Economy of Papua New Guinea (Prepared for Exxon Mobil)," 19.
- 12 The Independent State of Papua New Guinea et al., "Umbrella Benefit Sharing Agreement (UBSA)," (Papua New Guinea 2009), s.6.
- 13 Goldman, "Social Impact Assessment," c.3; p.65.
- 14 Contradictory clauses from the Organic Law on Provincial Government and Local Level Government, the OGA and UBSA mean that it is not clear whether these levies will be (i) transferred directly by the licensee to sub-national governments in question (section 160 (4) of the OGA); (ii) transferred to a national government trust account and appropriated to sub-national governments through the national budget (Section 98 of the Organic Law); or (iii) held in trust by MRDC and paid to provinces through the Expenditure Implementation Committee (EIC) (Section 176(5) of the OGA).
- 15 The proportions accruing to each affected party were to be decided by the NEC before the project decision (UBSA clause 6.1 (d))
- 16 For example, the Hides PDL 7 LBSA lists specific projects worth K100 million including named roads, schools, bridges and police stations, with more general references to rural electrification, agricultural investments and housing (Clause 6.7 (iii)).
- 17 Further details of BDG's is given in the following chapter.
- 18 The Independent State of Papua New Guinea and PDL Licensees, "PNG LNG Gas Agreement," Exhibit F.
- 19 Goldman, "Social Impact Assessment," c.3; p.65.
- 20 See: Govt gives K649m to fund free education policy, The National, 7 December 2011 and Whopping K350mil and free health care, The National, 19 January 2012. The Independent State of Papua New Guinea et al., "Umbrella Benefit Sharing Agreement (UBSA)."
- 21 See: United Nations Development Programme, "Papua New Guinea: Country Profile of Human Development Indicators."
- 22 See: John Gibson and Scott Rozelle, "Poverty and Access to Roads in Papua New Guinea," *Economic Development and Cultural Change* 52, no. 1 (2003).
- 23 See: Esso Highlands Limited, "Environmental Impact Statement," c.23; p.13.
- 24 Given a household size of 5.7 taken from the 2000 National Census data. This matches the assessment of the EIS noted earlier.
- 25 Hanson et al., *Papua New Guinea Rural Development Handbook*, p.93.
- 26 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011," (Port Moresby: PNG LNG, 2011), p.9.
- 27 This amounts to approximately K56 million during the construction phase and an estimated K14 million each year over the 30-year life cycle of the LNGP. Esso Highlands Limited, "National Content Plan," p.48.
- 28 Field communication.
- 29 Indeed, the Land Department state that all ILGs for the PNG LNG project will be formed along "clan" lines. Field communication.
- 30 According to this model, ILGs would be formed over broad geo-social zones and incorporate existing ILG's formed along clan or other lines. Zones do not correspond to clan boundaries but to larger areas defined by social mapping. The benefits flowing to each zone ILG would be in proportion to the number of landowners in each, thus, final benefit allocation is on a per capita basis. ILG's in each zone would be incorporated along customary lines in whichever way their members desired, government and industry would deal only with the "umbrella" zone ILG, not with the individual ILG's within it, thus reducing transaction costs. The system is described as being better suited to the Huli land tenure system than others, boundary definitions are necessary only at a large scale and it discourages ILG fragmentation. Zone ILG's have been established at Hides 1 in anticipation for a gas project, but were never operational.
- 31 Laurence Goldman, "Incorporating Huli: Lessons from the Hides Licence Area," in Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives, ed. James Weiner and Katie Glaskin (Australian National University e-press, 2007); James Weiner, "The Incorporated Ground: The Contemporary Work of Distribution in the Kutubu Oil Project Area, Papua New Guinea," RMAP Working Papers: Resource Management in Asia-Pacific (1998).
- 32 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.10.
- 33 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.10.
- 34 The DPE keeps a database of ILG's, but these include only the chairperson, secretary and accountant, they do not have lists of members. Field communication. The SIA found that many people may be registered in multiple ILG's and many self-registered ILG's were not on official lists. See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.5.
- 35 Such was the case at Kutubu, whereby benefits were split 9:1 between Fasu and Foi by land ownership (even though each have the same number of members) then within each language group benefits were split equally per ILG Taylor and Whimp, "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study." Under the draft Gobe agreement, landowner benefits were to be distributed between local 'clans' in proportion to the amount of land which they owned within the boundaries of the Petroleum Development Licence (PDL), and then subdivided between a number of ILGs in each "clan" in proportion to the number of members which they contained, Taylor and Whimp, "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study," p.81.
- 36 Government of Papua New Guinea, "Oil and Gas Act," s.176(3)(g). See also: Colin Filer, "Local Custom and the Art of Land Group Boundary Maintenance in Papua New Guinea," in Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives, ed. James Weiner and Katie Glaskin (Australian National University e-press, 2007), p.154.
- 37 Such a mechanism will be challenging in Tari due to a lack of banks. See: No banks in Tari says councillor, The National, 31 January 2011.
- 38 The difficulty with relying on ILG executives is that they often act to capture the monies for personal benefit.
- 39 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.16.
- 40 See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."
- 41 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.342.
- 42 First field survey.
- 43 Field communication.
- 44 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," (Genova, Italia: D'Appolonia, 2011), p.73.
- 45 These recent amendments to the Land Groups Incorporation Act and Land Registration Act have not been gazetted; once this occurs, the recently formed ILGs will have to re-register.
- 46 Field communication. The organisation will however have a role in supporting logistics of payments in remote regions, and is trying to facilitate the introduction of banking services.
- 47 Environmental Law Centre in Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," p.73.



CHAPTER 7

Business and employment

Many of the benefits identified in relation to the LNGP stem from the potential for employment and business growth. The extent to which these are realised depends in part on the degree of community participation in the LNGP. It is vitally important to focus on employment and business opportunities to maximise the human development benefits.

The LNGP is currently in the construction phase. This is when significant, albeit temporary, economic and social opportunities are on offer to the local community and those people residing within affected LNGP areas. A number of crucial activities can be undertaken to help ensure a viable long-term employment and business setting in the Hela region.

- Provision of training or skills enhancements for local people (in advance of the applicable construction work) to allow them to benefit from higher wages during construction and improve their potential for similar work in future.
- Facilitating the local supply of goods and services required for project construction.
- Training in money management and facilitation of banking services.
- Transforming earnings from temporary employment into a long-term income stream through assistance with savings, basic business management and the investment of money made during construction in sustainable businesses or improvements in existing enterprises.
- Provision of credit to assist local people with development of accommodation or other services to cater for a large workforce.¹

Investing in training and skills enhancement is particularly important over both the short and long-term. In the first instance, such an investment opens up the possibility of augmenting current or creating new sources of income for the local population. In the second instance, such an investment helps increase the long-term capacity and wellbeing of the local population through, for example, growth in the skilled workforce and improved living standards.²

The location of LNGP in the remote Hela region works against development and growth opportunities. Limitations on capital, labour and technology can constrain productivity. These circumstances occur in the context of inadequate infrastructure, poor access to markets and insufficient institutional support. Improvement initially stems from steps to develop market access as well as opportunities and support for increasing and diversifying existing production capacity.³

The sustainability of the LNGP is based on its capacity to promote additional businesses or industries, related or otherwise. This includes the promotion of upstream industries, which supply resource development projects; the fostering of downstream industries, which process and add value to the natural gas; and the advancement of lateral industries in unrelated sectors of the country's economy. This may happen as a matter of course or with active support of government. Unfortunately, this often fails to occur in practice.⁴

Business development

In the UBSA and subsequent LBSAs, the government agreed to make K120 million available to “assist landowner companies in business development activities.”⁵ According to the UBSA, 20 percent of these BDGs would be distributed prior to the commencement of early works and the LNGP decision and the balance paid following the LNGP decision⁶

BDGs, also known as 'seed capital,' are government grants for business development, rather than cash handouts, although many people reported that the BDG money given was often used for other purposes, such as housing or school fees. Their purported purpose is to support sustainable business development in project-affected areas in relation to the LNGP.⁷

BDGs are the responsibility of the Department of Commerce and Industry (DCI). DCI provides grants to LANCOS based on a number of conformance criteria.⁸ Thus far, competition has been intense, with applications of around K1.5 billion being made for the K120 million worth of available funds.⁹ The intensity of the BDG processes extended to three DPE officials who were briefly taken hostage by landowners over payments.¹⁰

The lack of checks and balances has undoubtedly led to widespread misappropriation of BDGs. This includes payments of BDGs to "bogus landowner companies," many of whom have never been heard of in the project-affected areas.¹¹ Moreover, many landowners have spent significant periods in Port Moresby chasing BDGs, with the suggestion many do so on borrowed money and the prospect of an eventual BDG payment. If the BDG payment is made, it is used to pay off debts.¹²

In January 2011, the National Court froze all seed capital due to misappropriation,¹³ but by 24 May 2011 about 80 percent of the K120 million available has been disbursed.¹⁴ Some payouts were still held up due to court proceedings over contested payments, the legal fees for which are apparently paid out of the BDGs themselves.¹⁵ Initial payments were made at locations close to Port Moresby, such as the single K66 million payment paid out at the March Girls resort in January 2011.¹⁶ However, some monies have also been distributed onsite, notably an exceptional K6 million payment at Hides 4.¹⁷

At the time of writing, no monitoring of BDG distribution or use has occurred, although this is planned in the future.¹⁸ The challenge in doing so relates to priorities and available government capacity to carry out monitoring of these disbursements. The instances of misappropriated funds in the absence of monitoring that resulted in contestation and delays by landowners and the courts has ultimately led to a breakdown in the BDG allocation process. Such difficulties are costly and shorten the window of opportunity for local landowners to take advantage of the LNGP. Hence, earlier investment in a monitoring capacity would likely have made things less costly for all concerned.

Despite the significant interest from local landowners in the BDGs and the subsequent over-subscription to the BDG fund, only a fraction of those who applied met the criteria for receiving a BDG. Many people interviewed and surveyed in this regard felt there was a two-fold problem: a failure to provide adequate guidance and support to those wishing to start a business and a systemic failure in delivering the BDGs to those who should rightfully receive them. Help must extend beyond guidance and support to the effective access and management of business activities.¹⁹

It was also suggested that expectations surrounding the BDGs contributed to a general malaise amongst the local community. Like other forms of cash benefits, it meant people changed their behaviour in anticipation of the arrival of BDGs.²⁰ When people

missed out or were excluded, it added to the aggrieved feeling of many, including those outside PDL areas, but inside the Hela region.²¹

They are just waiting. Seed capital won't just fall down like the leaf off a tree.

Hela resident

Another point that was strongly raised by some of the people interviewed was the exclusion of women from the BDG process and subsequent funding of businesses in the Hela region. This seemed to be both a reflection of gender bias and failures in the BDG process. Some women interviewed claimed that despite support for their business proposals from officials, they failed to receive promised BGD money, while others were simply left wondering about the outcome of their applications.²²

Landowner companies

LANCOs are incorporated under the PNG Companies Act 1997 to provide an avenue for employment and income generating activities. Local LANCOs ostensibly represent local communities with shareholders including individuals, smaller LANCOs, ILGs, unincorporated land groups and sometimes clans. The formation of LANCOs now generally occurs through share subscriptions for cash. The workings of LANCOs remain largely misunderstood by community members.²³

Local LANCOs are favoured under section 129 of the OGA and BSAs, which specify that the LNGP must make maximum use of comparable local contractors and subcontractors.²⁴ LANCOs are important players: LANCOs and joint ventures involving LANCOs received contracts worth K866 million since the start of the Kutubu and Hides projects to the end of 2007.²⁵ As noted earlier, LANCOs have also already received over K500 million in construction contracts.²⁶

As with other types of landowner organizations, LANCO decision-making is concentrated in the hands of a few representatives. In the eyes of many project landowners, they conduct affairs without reference to the directors or shareholders they represent. There is limited community level understanding of LANCO ownership, the responsibilities and role of shareholders, directors or management as well as a lack of information from LANCO managers that leads to distrust and accusations of embezzlement. Consequently, satisfaction levels with LANCOs are low.²⁷ Management capacity is also poor and resource developers rather than the government usually support often-struggling LANCOs.²⁸

The Environmental Law Centre (ELC), the independent advocate designated by the company for resettlement, also has its own concerns around LANCOs, in particular that these were formed before ILGs and thus before the official identification and registration of actual landowners.²⁹ Thus, it is difficult to verify the extent to which they represent 'real' landowners. This was one reason why disputes around BDGs were so intense. LANCOs may also get into disputes around competition for contracts and over the perception that they are not providing employment opportunities to members.³⁰

EHL requires that contractors use local labour forces contracted through these LANCOS.³¹ Smaller contracts, such as those for construction and labour, pipeline and access road right-of-way clearing, are usually given to individual LANCOS representing landowners areas, by larger LANCOS to whom the LNGP contracts are awarded. These larger LANCOS are known as umbrella LANCOS.

Umbrella LANCOS are an essential component that militates against the fragmented nature of LANCOS in LNGP areas. A large component of umbrella LANCO work is administrative, overseeing the distribution of contracts and payments to smaller LANCOS as well as a range of logistic and organisational tasks.³²

The largest umbrella LANCO in the Hela project-affected area, Hides Gas Development Corporation (HGDC), has struggled to cope with both the demands of business and the tensions with landowners and smaller LANCOS. Although some progress has been made towards improving its business affairs, significant steps could still be taken both at HGDC itself and upstream and downstream of the organisation. Significant losses have been recorded on some business activities and improved support is necessary to ensure the viability of HGDC.³³

The SIA refers to LANCO “consortia” which span a number of project catchments to form these large LANCOS. Many of the larger contracts for the LNGP have gone to these consortia, such as Trans Wonderland Ltd.³⁴

General business and employment

The LNGP operator is under a number of obligations to ensure PNG nationals, especially those living in project affected areas, benefit from business and employment opportunities. Under section 129 of the OGA, the operator of a petroleum licence is required to use and purchase goods and services made in PNG; encourage and assist citizens who want to establish related businesses; and maximise the use of PNG contractors and subcontractors who are of a comparable standard to other prospective companies.³⁵

This obligation on the operator of a petroleum licence is also incorporated in the LNGA, UBSA and LBSAs. The LNGA states that as far as practical the operator shall replace foreign staff with locals and in this regard give first preference in training and employment of citizens to those who are from a project-affected area. It also requires the operator to prepare a local business development plan in accordance with section 129 above, now represented in the operators NCP.³⁶

The UBSA further outlined a series of steps that obligated both the state and the operator to support local business development and the supply of local good and services to the LNGP. Despite the modest wording of many obligations, the state was committed to ensuring proposals in the business development plan included the creation of business opportunities for LNGP area landowners and umbrella companies as well as giving, as far as possible, first preference to service providers in the LNGP area.³⁷

By September 2011, PNG citizens made up 65 percent of the total workforce, which stood at around 11,000. Almost half of these workers are employed through LANCOS.³⁸ However, this number will radically drop off at the end of the construction phase, leaving

a large pool of unemployed labour, although it is possible that some of this labour will be taken up by spending on IDGs and Development Levy projects. Once a steady level of employment is achieved, the total number will amount to around 1,200 people, of which 80 percent are expected to be PNG citizens.³⁹

The LNGP does offer a range of activities that locals can participate in during the construction phase, whether employed directly, contracted or sub-contracted through a LANCO. This includes contracts for such things as food supply, security, vehicle hire and transportation as well as manual unskilled labour. The purpose of the BDGs was to spur business development activities in these and other areas.⁴⁰

This is one of the positive aspects of the LNGP for many people. A good proportion of the research respondents found employment either with a LANCO or directly with the LNGP. However, many others feel excluded from employment in relation to the LNGP. This creates division between those employed and those who remain unemployed. Traditional Huli culture militates against this issue through the sharing of employment wages and other benefits.⁴¹

The LNGP has largely utilised the skilled labour available and a significant segment of the unskilled labour in respective PDL areas. Clan and cultural considerations complicate hiring practices at the local level and perhaps beyond. For example, clan leaders are known to bring relatives from outside the PDL areas, in an attempt to have them hired as locals. There was anecdotal evidence of bribery and fraudulent endeavours to gain employment on the LNGP. Many employees hired on the local system are from outside PDL areas.⁴²

Throughout the PDL areas, there is a tendency to over-hire from project-affected areas, particularly from the unskilled labour pool. The community welcomes this practice as it boosts employment. Those who are hired receive medical checks and are well paid by PNG standards. Many local hires receive ration packs and a housing allowance. For a full-time general labourer the combined package can add up to approximately K1,500 a fortnight. Many workers also sell portions of their ration packs.⁴³

There have been complaints about pay and conditions differing between those who are local hires, with LANCOS and those employees who are hired directly by the LNGP. According to some interviewed, the discrepancies are generally accounted for by respective skill and productivity levels of the workforce, although there were some differences, such as in holiday pay. Many interviewed felt the pay and conditions of the local workforce were very good.⁴⁴

The question for many in the Hela region relates to what many see as an arbitrary distinction between those within PDL areas and those outside PDL areas. Within PDL areas, there is often further resentment from those who have been unable to find employment. Many were also concerned about the limited employment opportunities. This is equalled by a desire to upskill in order to participate more fully.⁴⁵

The LNGP operator has constructed two training facilities, one at Port Moresby Technical College (POMtech) in the Capital and one at Juni (Hides); the former is already in operation but constitutes a separately managed facility at the POMtech site. It is

aimed at building capacity of young people from nearby project sites, whilst POMtech itself has a national intake. At the time of writing, the Juni training facility was completed, with training planned to start shortly.⁴⁶ There is also an Enterprise Centre in Port Moresby to support business development, which by September 2011 provided services to over 9,900 entrepreneurs and businesses.⁴⁷ However, it is unclear how much these operating facilities will benefit people from the Hela region over the long-term.

The majority of respondents who participated in the smaller survey listed self-employment, including small scale trading as making up their main cash income source. This 28 percent included a significant proportion of women traders.⁴⁸ Of the people in the main survey, 20 percent were either employed in some capacity in relation to the LNGP or have one or more family members employed in some capacity on the LNGP. Eight percent of those employed came from inside PDL areas, 12 percent from around Tari and just 8 percent from around Koroba. A number also mentioned that clansmen had jobs with the LNGP.⁴⁹

They were telling people to grow foods, look after chicken and all these things. They spoke about it. We are doing it and we are out of breath for nothing, and our money is wasted for nothing because no one comes and buys from us.

Hela resident

People interviewed and surveyed discussed how they were encouraged to plant vegetables, such as cabbage and sweet potato, as well as rearing livestock in order to take advantage of the LNGP. Encouragement came from a number of sources including government, the operator and civil society groups. Some people have produced surplus agricultural goods with the expectation that they would on-sell to the LNGP. However, many local people interviewed and surveyed viewed the prospects of selling produce to the LNGP as unlikely. This realisation is especially evident amongst those who reside outside PDL areas, but still in the Hela region.⁵⁰ However, those close to the LNGP told us that opportunities do exist, particularly for communities inside PDL areas to sell more produce to the LNGP during this initial construction phase.⁵¹

The research asked if anyone owned or ran a business or investment that benefited directly or indirectly from the presence of the LNGP. Thirteen percent of people indicated they have such a business or investment, while the remaining 87 percent indicated they did not. Of those who affirmed they have a business or investment that was benefiting from the LNGP, 69 percent were men and 31 percent were women.⁵²

Of that 13 percent of people with a business or investment, 31 percent were located inside PDL areas and 63 percent were located in or around the Tari area. The high number of responses in the Tari area is indicative of the businesses and investments opportunities available in and around Tari. In the main, this meant selling vegetables or meat at market or involvement in a

small trade store. As a reasonably vibrant township, Tari attracts both buyers and sellers of such items, boosted by the higher than normal cash flows.⁵³

Many people have also accessed or sought to access markets in PDL areas, travelling to Komo for example to sell their produce. Rather than using their own gardens, some people are buying produce, cooking it, and selling it on at a profit. Those interviewed suggested such arbitrage opportunities never existed or occurred prior to the arrival of the LNGP.⁵⁴ Militating against such entrepreneurial activities are the poorly developed roads and market facilities. There were also reports of sellers being charged exorbitant market fees and of theft of both produce and money from sales.⁵⁵

Although the saving and investment rate in the Hela region is notoriously low, there was also evidence from some interviewed of a slow change. As the local economy grows, there are growing incentives to save and invest. For example, for one local group the rental of a guesthouse allows for the reinvestment of a steady and relatively good income in agriculture and the raising of livestock.⁵⁶ However, it remains very difficult to save and invest in the Hela region, particularly in the absence of practical mechanisms to do so as well as a culture of saving and investment.

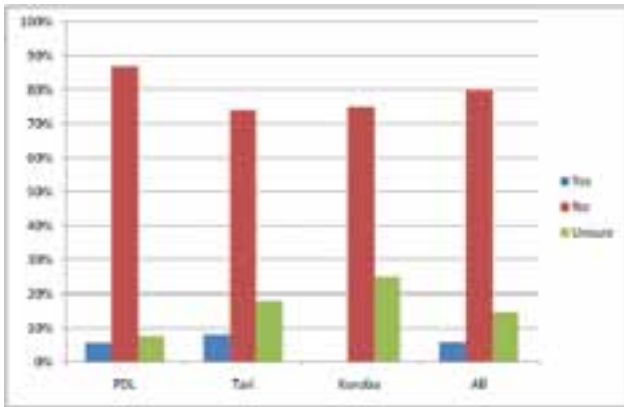
We are trying to change our life through doing new things like baking, raising poultry, doing vegetable farming in agriculture to get the money. But we are having some problems with doing business. We don't have proper banking to do our saving and then we don't have a market to sell our produce.

Hela resident

The people who are able to participate in such opportunities, whether on a small or large scale are pleased by the ostensibly greater access to the cash economy. However, the steady and higher incomes many are currently experiencing are qualified by the relative price rises seen in the Hela region and across PNG, which undermine real gains in income growth. As people have increased the prices for their produce, this has been offset by the rise in prices elsewhere and the higher cost of living. This has proven particularly burdensome for those who are excluded and cannot keep up with the rising livelihood costs.⁵⁷

In this context, the research asked the respondents to the main survey to comment on whether the positive benefits from these kinds of opportunities were being fairly shared amongst the population of the Hela region. A majority of 87 percent within PDL areas felt they were not being shared, followed closely by 74 percent and 75 percent of people respectively in Tari and Koroba. Eighty-two percent of women felt the benefits were not being shared fairly in comparison to 78 percent of the men asked this question. There was also some uncertainty, suggesting many are waiting to see if the benefits will be fairly shared. Around 15 percent of both men and women remained uncertain.⁵⁸

Graph 5: Benefits of the PNG LNG Project fairly shared⁵⁹



There was some criticism laid at both the feet of government and the LNGP operator, that too little support has been given to business development in the Hela region that would in turn help to spread the benefits of the LNGP more widely. In particular, there was a lack of support surrounding the disbursement and management of BDGs as noted earlier. For example, some LANCOs invested in vehicles that were soon deemed inadequate or unsuitable for hire to the LNGP. Subsequent attempts to channel resources to business development have resulted in misdirection or misuse by recipients. The research also indicated that there is insufficient focus on ‘grass roots’ business development in the Hela region and more generally outside PDL areas in the wider Hela region.⁶⁰

A significant number of people interviewed argued for an intensified focus on the basics and what might be described as the comparative advantage of people in the Hela region, namely agriculture and raising livestock. Many encouraged EHL to take

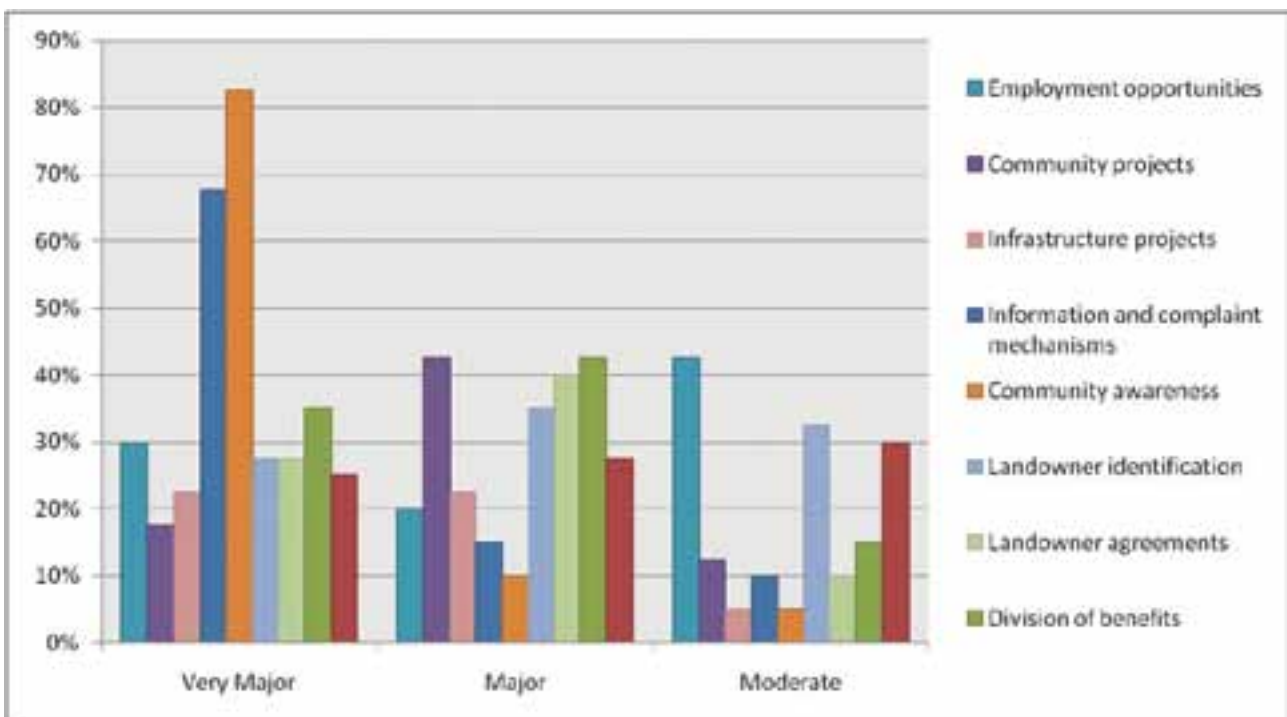
the lead with local government in establishing markets and a better market system for the area, in order for locals to take greater advantage of the potential opportunities. However, there remains a disjuncture between the aspirations of local people and their ability to produce the quality and quantity of produce required as well as supply it in a manner that meets prescribed standards. There is for example, little capacity to pack and store produce for transportation.⁶¹

As it currently stands, a great proportion of the local populace rely on the ‘trickle-down’ effect and produce sales on the roadside or in the local market. There are numerous problems under these circumstances. For example, in order to sell produce to consumers, some people have to travel significant distances, which is costly and time consuming, limiting their ability to access the cash economy. As the construction phase of the LNGP progresses, opportunities to sell local produce will effectively lessen.⁶²

The significant number of people in employment (predominantly from PDL areas) related to the LNGP is appreciated by the community and provides many benefits. It has boosted livelihood capacity of those employed and former protagonists in areas such as Komo now work on the LNGP, in some cases putting the monetary benefits received from the LNGP towards compensation for tribal conflicts.⁶³

However, people repeatedly brought up two issues of concern. The first related to the potential for social discontent and conflict following the relatively quick drawdown on the workforce over six months to one year as the first phase of construction comes to an end in 2014.⁶⁴ The second relates to sustainable employment and business: the workforce being able to secure new jobs after the end of the construction phase and there being ongoing business opportunities in the Hela region.⁶⁵

Graph 6: Summary of general PNG LNG Project concerns⁶⁶



Summary

There are several areas of importance in relation to LNGP business and employment. People in the Hela region seek fair business and employment opportunities with the LNGP. Many saw this as an important pre-condition of the LNGP. However, much misplaced optimism and ongoing difficulties suggest future problems will arise in these critical areas.

There are specific concerns about the ability of locals to access and provide goods and services to the LNGP during the construction phase, especially in relation to the provision of basic agricultural products. The inability to do so regularly stems from local limitations. The Hela region does not have a good market network (allowing producers to come together) or good local market facilities (infrastructure supporting the sale of goods). There is also little support for local business development, through credit, or financial or managerial guidance.

The end of the construction phase is a particularly worrying time, threatening increased social problems and ending the benefits associated with large numbers of locally employed people. The ability to take advantage of the LNGP and plan for the future is dependent on community awareness of opportunities and changes. However, many interviewed and surveyed felt this was lacking and furthermore, that LNGP hiring practices often led to local people missing local jobs.

A range of stakeholders also noted the importance of developing upstream, downstream and lateral industries. Perhaps most importantly in this regard is the advancement of human capital. A number of those interviewed suggested the provision of training or skills enhancements to local people (in advance of construction) was lacking. There is also concern that the job skills acquired on the LNGP may not be transferable and that people will be unable to transform current earnings and employment into an enduring income stream.

- 1 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," p.20.
- 2 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," pp.21-22.
- 3 International Financial Corporation, "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects," pp.21-22.
- 4 Ross, "Extractive Sectors and the Poor," p.10.
- 5 The Independent State of Papua New Guinea et al., "Umbrella Benefit Sharing Agreement (UBSA)," p.23.
- 6 The Independent State of Papua New Guinea et al., "Umbrella Benefit Sharing Agreement (UBSA)," p.28.
- 7 Field communication.
- 8 Including proposal quality; listing of LANCO in UBSA and LBBSA; evidence of landownership such as social mapping report from DPE; and tax registration.
- 9 Department of Commerce and Industry, "Update on LNG Business Development Grant (BDG) - Seed Capital Disbursement, 04 October 2010," (2010), 4.
- 10 See: Three rescued in LNG hostage drama, The National, 25 February 2011.
- 11 Field communication.
- 12 Field communication.
- 13 See: National Court stops all LNG payments, The National, 21 January 2011; Seed capital into wrong hands, Post Courier 4 January 2011; Landowners welcome investigation, Post Courier, 6 January 2011.
- 14 The official deadline for expenditure was mid June 2011 to clear all disputes before state starts to roll out other UBSA and LBSA commitments such as IDGs. Field communication.
- 15 Field communication.
- 16 See: Landowner group wants probe into March Girls Payout, The National, 13 January 2011.
- 17 The payment was made opportunistically in response to a shutdown of the Hides 4 LNG Conditioning Plant due to landowner protests. A government team including the Deputy Primary Minister, two other ministers, the Attorney General, local MPs, and the Police Commissioner travelled to Hides to present cheques for Business Development Grants (K6 million) and IDG grants (K10 million) to the Hides Special Purpose Authority (HSPA) for distribution to LANCOs. See: K16m paid on site at Hides 4, The National, 14 February 2011).
- 18 Field communication.
- 19 Field communication.
- 20 Field communication.
- 21 Field communication.
- 22 Field communication.
- 23 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; pp.103-04.
- 24 Government of Papua New Guinea, "Oil and Gas Act," s.129.
- 25 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," c.3; p.104.
- 26 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011," p.9.
- 27 Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."
- 28 See: Taylor and Whimp, "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study."
- 29 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," (Genova, Italia: D'Appolonia, 2010), p.60.
- 30 Field communication.
- 31 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," p.8.
- 32 Field communication.
- 33 Field communication.
- 34 The major consortia at the time of the SIA were Landowner Contractors Consortium, Transwonderland and Welgris Fuel Distributors Ltd. Transwonderland, representing seven landowner companies signed K500 million deal with EHL to provide logistics. See: Transwonderland Umbrella Landowner Company Rated Best Local Business Concern, The National, 22 September 2010).
- 35 Government of Papua New Guinea, "Oil and Gas Act," s.129.
- 36 The Independent State of Papua New Guinea and PDL Licensees, "PNG LNG Gas Agreement," p.70.
- 37 The Independent State of Papua New Guinea et al., "Umbrella Benefit Sharing Agreement (UBSA)," pp.35-36.
- 38 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011," p.27.
- 39 Esso Highlands Limited, "National Content Plan," p.21.
- 40 Field communication.
- 41 Field communication.
- 42 Field communication.
- 43 Field communication.
- 44 Field communication.
- 45 Field communication.
- 46 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Second Quarter 2011," (Port Moresby: PNG LNG, 2011), p.29. One of the reasons for late completion was problems with landowners. Field communication. See also: Work on LNG College Halted, The National, 13 August 2010.
- 47 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011," p.9.
- 48 Second field survey.
- 49 First field survey.
- 50 Field communication.
- 51 Field communication.
- 52 Second field survey.
- 53 Second field survey.
- 54 Field communication.
- 55 Field communication.
- 56 Field communication.
- 57 Field communication.
- 58 First field survey.
- 59 First field survey.
- 60 Field communication.
- 61 Field communication.
- 62 Field communication.
- 63 Field communication.
- 64 Field communication.
- 65 Field communication.
- 66 Second field survey.



CHAPTER 8

Social changes and impacts

The social effects of the LNGP will vary over time. Each phase of the LNGP will give rise to a variety of challenges, while different areas will be affected more directly than others. The greatest concerns about the LNGP relate to the construction phase, when many of the most serious social changes and impacts occur.

There are direct consequences resulting from the commencement of the construction phase. For example, the relocation and resettlement of people in the project area; the use and effect of heavy machinery for project construction; and damage and loss of surrounding environment. There are also indirect social impacts during the construction phase. Indirect social impacts may incorporate consequences of increases in employment and the influx of cash into the local economy. There may also be unintended and unforeseen difficulties associated with the migration of people attracted by employment opportunities.

As the construction phase ends, there will be a relatively fast drawdown of the labour force required for the LNGP. This will cause stresses related to the sudden loss of employment and income for a large number of people. It will be particularly felt in the Hela region. While some of the highly skilled workers will move on to other projects, for many of those locally hired or unskilled, other employment opportunities will be harder to find.

Although the ending of employment for many will be countered by the arrival of other benefit streams, such as equity and royalty payments, the exact changes and consequences that will result remain unclear. Many of these future benefits will accrue to a relatively small number of LNGP landowners in the Hela region. Moreover, given the long-term role the LNGP is going to play in the Hela region, concern surrounds current sustainable investment in communities by the LNGP.¹

Demographic

It is clear that migration to the Hela region has increased due to the LNGP.² Although no accurate figures are available, the twofold increase of active hires for the LNGP and those coming to the area in the hope of seeking work with the LNGP has impacted significantly on the Hela region.³

The LNGP labour force is composed of local, national and expatriate employees. Those hired from outside the Hela region are usually housed in LNGP camps with community interaction limited to daily work tasks. On the other hand, those hired locally – whether they are locals or not – tend to reside in the community. Aside from the obvious demands placed on the local community by a large labour force, significant pressures have also arisen from those who have arrived in the Hela region seeking work.⁴

From the research, this aspect of migration to the area is the most challenging. However, given the close nature of Huli communities, the opportunities for those who come to the area looking for work are limited by the willingness of the local communities to accept them. Many locals worry about the arrival of migrants. Work opportunities are also ostensibly limited by the hiring practices of the LNGP, which legally favour local landowners. Having family or *wantoks* in local clans may be of assistance to those who come to get work.⁵

However, in the absence of accessible rural communities and local assistance, much of the migration has tended to focus on what might be described as the urban areas of the Hela region, such as Komo, Hides and Tari. In the case of Komo, the LNGP has prompted people to return after its abandonment due to tribal conflict. Some people in Komo also observed that a significant proportion the population were new migrants from throughout PNG.⁶

These urban areas attract migrants from within Hela and from outside the Hela region, for both short and long-term stays. With

cash incomes from employment and the businesses, the townships are the best location for people to try to access money or spend their free time as they wait for opportunities to arise. Some will integrate into the local community, while others will remain aloof from the local population and cause social problems.⁷

Discussion of some fundamental issues related to migration revealed that although some were positive about the need for migration, few welcomed the added pressure on basic services and resources required to support the migrant population. There is already concern in some quarters about the overall quality and capacity of landholdings to sustain the local populace, without adding the further burden of catering for a migrant population.⁸

A critical component of the LNGP and the changing circumstance of those in the Hela region are the roads that provide access and facilitate movement around the province and from elsewhere. Many people commented on the improvements to main roads, which have led to an increasingly mobile population and greater cultural and communal interaction for good or ill. The increasing ease of movement has also contributed to the strong element of internal migration within Hela, primarily in pursuit of economic advantage.⁹

Many locals interviewed and surveyed made a clear distinction between ‘insiders’ and ‘outsiders’. They frequently noted the presence of new faces in the community and the perception (or reality) of associated threats, such as an increase in petty crime and risks to health through, for example, disease transmission.¹⁰

This ‘insider’ ‘outsider’ distinction, and subsequent wariness, is applied equally to the LNGP workforce such as construction crews as well as EHL teams working on matters such as resettlement. This collective and varied grouping of ‘outsiders’ adds a discordant note to the social dynamic of communities. ‘Outsiders’ face additional security worries as the local community are placed under growing pressure to interact and respond to their demands.

Economic wellbeing

The LNGP presents some very real economic challenges for the people of the Hela region. Some have incomes through employment with the LNGP, while others have received cash windfalls from resettlement compensation or from the disbursement of BDGs. In the future, other benefit streams will become available. However, a larger proportion of people, particularly outside the PDL areas, are excluded from these benefits.

An immediate issue that has not been addressed in the context of other resource development projects in PNG is the management and use of cash incomes or windfalls.¹¹ Money is usually spent very quickly. Relatively few people surveyed reported investing or saving their money for the future, although some commentators suggested this is improving. However, it remains very difficult to invest or save money, and there were numerous reports of the misspending of money on alcohol, drugs, travel and women. Such problems with money carry over into family life. Interviewees frequently pointed out that women and children faced added financial pressures when cash windfalls were misspent.¹²

There is poor money management in the Hela region. One criticism in this regard is the lack of education offered by appropriate stakeholders to people or groups to look after their finances, although there were doubts as to whether any financial advice would be heeded. There are few practical mechanisms to support a culture of saving and investment. Many also expressed concern that much of the money, rather than being invested or spent within the Hela region, ended up being used elsewhere in the larger centres of Mt Hagen or Port Moresby.¹³

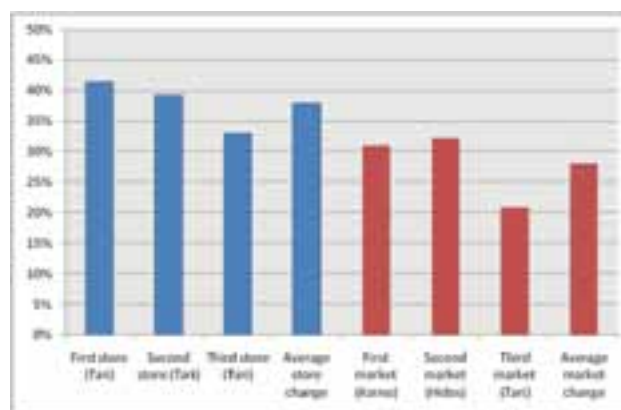
There is some resentment from those missing out on steady employment and other larger LNGP cash benefit. Many people in Hela continue to struggle, despite the increased cash flow in the community. People living away from PDL areas particularly commented that they saw little in the way of extra cash income, noting only the added pressure of having to cope with price rises.¹⁴

Today the garden vegetables and the store goods prices are increasing rapidly. The outsiders, older people and those who are unfortunate and cannot do marketing are facing problems with prices.

Hela resident

By far the greatest concern for people surveyed was the high cost of food which was equally concerning for both men and women. Many commented they were struggling to feed their families. Eighty-five percent of people viewed it as a very serious problem, while the remaining 15 percent saw it as a serious problem. Given the fundamental importance of food security in people’s lives, it is not surprising that the significant price rises currently accompanying the LNGP are a cause for concern.¹⁵

Graph 7: Prices increases at markets and stores between June 2010 and June 2011¹⁶



Surveys undertaken of stores in Tari and markets around the Hela region gauged price increases in relation to a basket of everyday goods between June 2010 and June 2011.¹⁷ The price increase averaged across stores in Tari was 38 percent, while the price increase averaged across markets in the Hela region was 28 percent. The most significant increases were in basic items. For example, the greatest rise in the basket of goods was kaukau (sweet potato) from the local market. The price of one large kaukau has risen from around 50 toea to around three kina in Tari, an increase of 350 percent. For the same item, Komo has seen an increase of around 220 percent.¹⁸ Other examples include

chickens, which have gone up by 35 percent, the price of betel nut by 70 percent as well as other costs such as public motor vehicle (PMV) fares. The price of PMV trips departing from Tari have increased by an average of 36 percent between June 2010 and June 2011.¹⁹

With the LNGP comes demands to alter or diversify the use of the land. Such pressures have come from external stakeholders, as well as from landowners wanting to take advantage of their landholdings, through for example, the sale of appropriate produce to the LNGP camps. This trend also works in reverse, with some land left unused, as landowners take up employment or move towards a greater reliance on market and store bought goods.²⁰

There is evidence that some people are changing their dietary and food production habits away from agriculture and raising livestock towards market and store bought goods. Some experts expressed a concern that the decline in gardening capacity and skills of the younger generation will return to haunt many in the Hela region, when the construction period and employment comes to a relatively quick end.²¹ Conversely, many of the livelihood programmes run by the LNGP are making an important contribution to the wellbeing of people in PDL areas.²² The wider Hela community would welcome an extension of these programmes.²³

The limited amount of good land and mixed reports on whether production of foods has increased is married with increased demand for foodstuffs because of migration pressures and natural population growth. Although the distribution of foods is now easier because of the improved road network for example, this combination of factors has undoubtedly increased demand and consequently cost, presenting problems for the future. The appropriate response seems to centre on improving the supply of food in the Hela region.

However, there is now only modest evidence of sustainable businesses unrelated to the LNGP emerging in the local economy. The Hela region is still heavily reliant on the LNGP and will likely be so for many years to come. As noted by many people interviewed, the lack of diversified employment and business opportunities will pose socio-economic challenges for Hela in the future.²⁴

Nevertheless, the significant number of jobs created is considered of great benefit by those fortunate enough to have gained employment with the LNGP.²⁵ However, the long-term benefits of employment are not evident and there is a lack of financial guidance to improve sustainability. Numerous social problems have also arisen in the context of heightened cash flow within the Hela region, something discussed later in this chapter.²⁶ Another consideration is the ready inclusion of local people, LANCOs and others in the global processes of the LNGP. Although Hela has some experience with resource development, the scale of the LNGP is unmatched. The economic implications over the long-term are not fully understood by any of the stakeholders. There is a need for greater mutual support and strategic planning amongst the stakeholders.

Family and households

There are challenges facing families and households in Hela. The extent to which the LNGP is contributing to these challenges such changes is debatable. As foreshadowed in much of the report, social stresses increase due to the cash benefits and conditions brought about by the LNGP.

Monetary rewards and the new cash economy are to some extent distorting traditional family values and structures. Many men are moving away from their spouses to take up employment with the LNGP. This can result in difficulties over the provision of money to support family and questions over the manner in which money is spent.²⁷

It provides a lot of job opportunities, but there are problems. We saw that the families are at risk because our husbands are living alone by themselves. Due to LNG name people are going in and out of the project areas. I see family life is not very good with this kind of separation, despite getting good income.

Hela resident

Some observers noted the ability of men with increasing LNGP wealth to pay high 'bride price' for more wives. This creates a twofold problem: fewer women are available or willing to marry men with less money and the cost of 'bride price' is rising. This research estimates that 'bride price' increased by up to 40 percent from June 2010 to June 2011.²⁸ This puts ever-greater pressure on young men and their families to raise unaffordable sums.

Although such challenges are not unheard of in polygamous societies, the views of people in this research suggested greater access to cash is distorting marriage and marital relations. Interviewees felt an increased number of divorces were occurring as husbands and wives either viewed their spouses unfavourably or sought opportunities elsewhere. Numerous examples were given of men taking several wives following cash windfalls from the LNGP.²⁹

There was also some debate over the role cash played in household violence. On the one hand, many argued that family disagreements about sharing money led to violence. The use of cash to purchase alcohol and other unnecessary or luxury items also contributed to violent encounters in the home. However, others noted the importance of improved incomes from the LNGP in some households, which eased the pressure on their livelihood.³⁰

Women surveyed viewed domestic and household violence as a more serious issue than men. Fifteen percent of women classified domestic and household violence as either a very serious or a serious problem. Only five percent and 10 percent of men respectively classified domestic and household violence as either a very serious or serious problem. Almost 20 percent of men viewed domestic and household violence as a minor problem. Domestic and household violence remains a largely hidden issue in communities.³¹

These changing circumstances obviously have wider and serious implications for women. Huli and PNG culture is male dominated, with women excluded from broad participation in community life. The LNGP is challenging traditional viewpoints on women. For example, there have been challenges mandating the inclusion of women in the LNGP workforce. Many women in the Hela community are actively seeking to participate in the LNGP, if not through direct employment, then through avenues such as selling produce and raising livestock for sale.³²

The wellbeing of children is very important. Those participating in this research advocated vigorously for improved education and healthcare for their children. Critical concerns stem from existing deficiencies, including child morbidity and mortality as well as literacy and numeracy levels. Although history is not kind, people hope LNGP benefits will include investment and improvements in these areas over the long-term. Also of consequence is the neglect of children and how cash windfalls are spent or misspent to their benefit or detriment.³³

Health and social wellbeing

The subjects of education and healthcare were addressed in the earlier chapter on the community. As noted in that chapter, education and healthcare are two of the most important areas of concern for the people in the Hela region. Most people interviewed and surveyed discussed the future and the importance of good education and healthcare for their children. There are three major concerns in relation to these matters: access, quality and cost.

People want to be able to easily attend or travel to a school or health facility. Likewise, they want both to be of a high standard and affordable. In many regards, the LNGP, through some road improvements for example, was making accessibility to education and healthcare easier. To the contrary, however, the increasing cost was affecting the affordability of education, although price increases influencing the health system have not yet been passed onto the public in Hela. Notably, the flow-on benefits from the LNGP, where the economic benefits are put to good use in health and education for women and children are potentially significant.³⁴ Particular issues related to the LNGP include the resignation of teachers and health workers in lieu of better pay and conditions with the LNGP. Taking up better opportunities is understandable. However, this has affected the standard of education and healthcare available to people. Increased pressure on limited healthcare resources is also an area that requires urgent attention, particularly in relation to child and maternal health as well as communicable diseases, such as HIV/AIDS.

In this respect, most people interviewed and surveyed felt the LNGP and its proponents have both an opportunity and a responsibility to contribute in a proactive and sustained manner with education and healthcare in the wider Hela region.³⁵

Freedom and participation

There was some concern that the wider community did not play a role in local governance or at least have a say in decisions that affected the lives of inhabitants.³⁶ One especially salient issue for respondents was landowner rights. Fifty-five percent of people felt that government support for landowner rights was very poor. In the context of the LNGP, this is clearly a response to the lack of capacity and involvement of government in playing a positive mediating role between landowners and the developer.³⁷

There was a high level of organisational participation reported. Of the respondents 58 percent stated they were involved to some degree in non-LNGP organisations, in this case either formal or informal civil society organisations. By contrast, 60 percent of respondents reported being in LNGP related organisations, predominantly private landowner organisations, for the sharing of benefits.³⁸

However, this did not translate into the grass-roots autonomy and decision-making capacity some people thought was both necessary and desirable. When it comes to directing and holding people accountable for the community development projects that may flow from the LNGP, many in the local community felt removed from the process.³⁹

These circumstances were roundly criticised in some quarters. Several people interviewed addressed the failure to empower the local community, facilitate improved local governance and assure a sustainable development pathway. Many emphasised that current systems for distributing or managing benefit streams to the people are also unsustainable, with a high likelihood of group conflict in the absence of attempts to foster a broader sense of community and responsibility.⁴⁰

The need to empower groups extends to those who are most vulnerable to the changes wrought by the LNGP. Any current difficulties have the greatest impact on children and women. If, for example, unemployment becomes a damaging feature of the local landscape when construction of the LNGP ends in 2014, children and women will likely feel the greatest impact. Hence, there is a need for ways to enable greater participation in community decision-making.

One complaint noted regularly, concerned the locus of decision-making power. Many people contended that the gas was in the Hela region, yet those who sought to control or regulate its exploitation were in Port Moresby. People flew to Port Moresby to collect sums of money and argue their case, only to lose all their money and return nothing to the people. Many felt greater effort should be made to move such LNGP related activities into Hela.⁴¹

Another prominent issue, and one that should be of concern to all stakeholders, is the growing problem of inequality.⁴² Following the arrival of the LNGP, people in the Hela region now more readily perceive inequality. Growing inequality is visible at a number of levels and, according to those interviewed and surveyed, a number of factors determine inequality.

In this male dominated society, women are significantly disadvantaged in relation to the benefits of the LNGP. In matters such as negotiations over economic receipts from the LNGP, both EHL and the government have a pivotal role to play in empowering women.⁴³

Furthermore, those who are in PDL areas are eligible for benefit streams, such as equity and royalty payments, while those who live outside the PDL areas are not. Those, people who have been resettled also received significant compensation in contrast to those who may live only a short distance away, but were not moved.⁴⁴

Those who are within PDL areas also have greater access to employment as local landowners, in contrast to those residing outside PDL areas. This also holds for LANCO access to BDGs. Many interviewed and surveyed attached some importance to the prominent role of the educated and political elite of Hela and PNG, suggesting they effectively act in an opportunistic manner to usurp control and benefits from local people.⁴⁵

The determination of these levels of inequality stemming from culturally ingrained views of gender, limited educational opportunities, income and price differences within the community, failure to spread the benefits more widely, as well as distortive practices of government (such as corruption) has implications for the contested and equitable distribution of benefit streams from the LNGP.

Some people interviewed argued there was a measure of redistribution within communities, a 'trickle-down' effect borne of traditional networks and relationships seen in the *wantok* system.⁴⁶ However, this redistribution is limited in its effectiveness when dealing with such large sums of money. As many argued, EHL and government should spread the benefits as widely as possible, addressing core issues of inequality and concern, such as education and healthcare. A number of people felt strongly that the failure to do so would result in tensions and potentially, conflict.⁴⁷

Institutional and political

The wide-ranging framework of engagement in the Hela region has raised serious concerns for local people and many observers. While the operator must be given credit for their considerable work on these subjects under difficult circumstances, evident flaws and broader systemic issues have challenged all stakeholders. In many cases, it has led to significant community dissatisfaction with the LNGP that in time may lead to persistent levels of conflict.

Earlier chapters noted the problems surrounding landowner agreement and identification. The challenges of benefit sharing were also considered. In addition to these concerns, fundamental social changes and impacts have been provoked by the LNGP. Given the cultural dynamic of the predominantly Huli community, especially the affinity with the land and fractured nature of much of their dealings, many of these issues should be unsurprising.

The closeness of people with the land is a resonant feature of life in the Hela region. In the first instance, the manner in which state and LNGP proponents initially rushed engagement with only modest capacity to try to effectively nominate and group landowners together in preparation for the Development Forums has proven damaging. It flawed the initial basis for engagement and undermined the important progression of dealing with local landowners and the wider community.

Hela society as a whole has been affected very much. Nowadays we see people are restless. They don't know what's happening: if there are going to be benefits, what, when are their going to get their benefits. You know their expectations are high, but what benefits they are going to get? They are not really sure yet.

Hela community leader

Many in the area also view the overlaying of state strictures in the context of the LNGP as effectively appropriating customary landholding rights. Although the process has been adequately dealt with in some regards, such as mutual agreement on terms of resettlement, this is only the first stage in an ongoing process of negotiation in relation to access and control over the land used by the LNGP.⁴⁸

The political and legal processes surrounding the LNGP are immensely complicated. Communities are diffuse groups with sometimes contrary interests, as well comparatively less knowledge and negotiating power in relation to other LNGP stakeholders. Failure to empower them to address political, financial and legal issues reduces the integrity of any agreements or processes related to the LNGP.

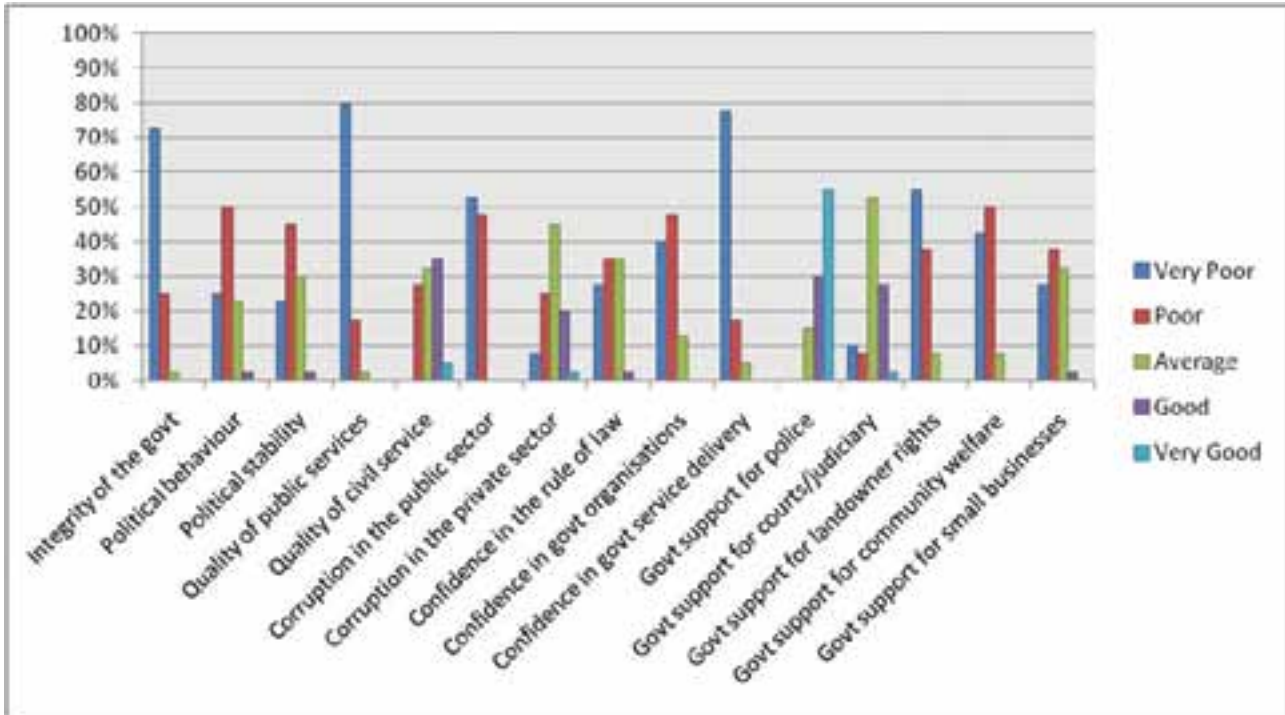
Many people acknowledged the negotiating skill of the Huli in relation to their own lands and the LNGP.⁴⁹ However, negotiating skill is no substitute for informed choice and tangible support in relation to the varying agreements and processes between stakeholders. The establishment of the ELC is one example of efforts to redress the imbalance between parties, with the ELC acting as an advocate for those affected by the resettlement process. However, fundamental imbalances between parties have not been sufficiently addressed.

While many people expressed positive sentiments about the current political leadership and some of the activities they were undertaking on behalf of the community, there were concerns surrounding the concentration of power in the hands of political leaders. Huli and much of PNG culture centres around the installation of 'big men', essential networks and relationships founded on mutual reward. This has changed to a degree as the state has enlarged its role and other factors beyond oratory and fighting, such as education, have become more important.

Many people advocated for political leaders to play a more forthright role in informing and including the local community in the LNGP. However, there was some disapproval of the political leadership for poor coordination with LNGP stakeholders, the unwarranted interference in due processes surrounding the LNGP and sometimes self-interested behaviour to the detriment of local people.⁵⁰

The apparent pluralism of much debate and process in PNG frequently hides deeper issues. The Development Forums, for example, were clearly rushed which resulted in deep dissatisfaction amongst landowners. Corruption and misappropriation of benefit streams, such as BDGs and later perhaps equity and royalty payments, further undermines the LNGP.

Graph 8: Summary of governance issues⁵¹



The views of people on a number of specific governance and government issues were elicited. Many were particularly concerned with the quality of public services. Some 80 percent of people felt it was very poor. Similarly, 78 percent of people have a very poor opinion of the government’s ability to deliver services to the community. The integrity of government and corruption in government also attracted low ratings.⁵²

Amongst a relatively strong condemnation of governance in the Hela region, the respondents felt that government support for the police was very good. The police and EHL signed a Memorandum of Understanding (MOU), which subsequently led to the deployment of EHL subsidised mobile police squads in the Hela region. This resulted in criticism and confusion with the regular police. Locals expressed the sentiment that the police were operating on behalf of the company and ignoring their concerns,⁵³ while an independent inquiry suggested terminating the MOU given it impinged on PNG’s sovereignty.⁵⁴

We want the police to be fair with the problems of the company and the people of Hela. When people have problems like land dispute with the company, the police are up front to deal with the issues, but when the community have problems like tribal fight, the company police are not interested in handling our problems, so we consult the station police rather than company police.

Hela resident

There have also been questions about police practices and training, with the research team informed of several instances of police beatings. Establishing the veracity of these claims is difficult, with such human rights violations usually going

unreported. Nevertheless, it is of fundamental importance that adequate training and reporting systems are in place to ensure that all police use of force is proportional and in accordance with the law. Currently, both security service providers and police deployed in support of the LNGP undergo training in the Voluntary Principles on Security and Human Rights.⁵⁵ However, some of those interviewed suggested police training generally and for the challenging situation in the Hela region was inadequate. However, the Hela population welcome their presence for the most part given the role they play in ensuring an improved security situation.⁵⁶

Environmental considerations

Interestingly, environmental issues raised significant concerns. Some 40 percent of people considered environmental problems to be a very serious issue, while a further 38 percent considered them a serious issue.

Comparatively, although the LNGP infrastructure covers great distances, it has a relatively small footprint over-time when compared to the environmental impact of hard-rock mining. The greatest environmental considerations arise during the construction phase, when areas of forest are destroyed or altered affecting the land and biodiversity.⁵⁷ Most significantly, the airport at Komo and the Hides Gas Conditioning Plant (HGCP) at Hides involved considerable changes to the landscape as will pipeline construction and the LNG plant near Port Moresby.

The construction of the LNGP itself is a large operation, requiring quarrying, roadways and supporting infrastructure that ultimately affects the surrounding environment.⁵⁸ Much of this work extends upon existing encroachments, for example, the heavy haul road from the new airport at Komo to the HGCP involves a widening of an existing smaller thoroughfare. There

are also new works that substantially alter existing pristine environment in the Hela region.

The construction process also brings with it environmental considerations that influence surrounding communities. Most apparent according to those interviewed and surveyed were issues related to construction damaging local waterways and construction traffic causing pollution. The research does not have access to the water testing carried out by EHL, although it is understood there is an extensive monitoring programme in place in the areas affected by the LNGP.⁵⁹ Nonetheless, a number of people informed the research team that their respective areas were suffering water quality issues as construction sites and roadway traffic have polluted local water sources, making them unsafe for consumption or use.⁶⁰

A number of those interviewed opposed this view, suggesting that the waterways were not unsafe, simply disturbed or muddied by the construction work and roadway traffic. To a degree, locals acknowledged this, although as one considered opinion suggested, even if this was the case, the water quality and utility has still deteriorated significantly. People did not want to drink the disturbed or muddied water. There are a number of seemingly contaminated waterways, both muddied and showing petroleum runoff from construction work and roadway traffic in the locality of the LNGP.⁶¹ Hides landowners recently blocked work in the area complaining about contaminated water sources and demanding a permanent water supply.⁶²

There were also widespread complaints regarding the dust created by LNGP traffic, particularly during the dry season.⁶³ The high traffic volumes are noisy and sully those walking along the roads as well as nearby gardens and homes with dust and exhaust fumes. There are dust control measures in place to dampen down the roadways using water spray trucks around the LNGP sites.⁶⁴ EHL has also placed a focus on driver speed.⁶⁵ However, people participating in this research maintained that its continuance was more than an annoyance, suggesting it also created health issues for the local populace. This includes respiratory and stomach problems, through the inhalation of dust or consumption of food made gritty by traffic.⁶⁶

One concern that seems increasingly evident in the community and to a degree related to the LNGP is the increasing volume and problems related to rubbish disposal. Although not directly addressed by this research, it seemed appropriate to touch on the subject in the context of environmental degradation. Those working and living in LNGP construction camps are improving their own rubbish disposal.⁶⁷ However, it seems that community participation in an effective regime to alter or reduce the amount of harmful materials dumped in the wider community has not been given due consideration. The use and disposal of plastics, for example, and other non-biodegradable materials are a problem in the Hela region and no doubt throughout PNG.

While the aforementioned issues largely relate to changes and impacts imposed by the LNGP and other human activities on the environment, there are also areas of concern in relation to environmental disasters. On 24 January 2012, a large landslide occurred at Tumbi, in the Komo sub-district of the Hela region

and close vicinity to the workings of the LNGP. Reports state that the landslide killed at least 25 people. The tragic loss of life and location of the landslide raised a number of questions for local people.⁶⁸

The landslide also affected the LNGP, blocking a roadway and delaying construction, particularly at Komo Airport.⁶⁹ Locals implicated a nearby quarry previously used by the LNGP in the landslide and the Independent Environmental and Social Consultant (IESC) had also flagged concerns about quarries in the area in an earlier report.⁷⁰ EHL rejected speculation at the time and a preliminary report by the National Disaster Centre pointed to heavy rainfall as the cause of the landslide.⁷¹

Nonetheless, concerns remain. There are calls for an independent report into the circumstances behind the landslide and fears that a proper investigation may not take place.⁷² The deaths from the landslide have led to shock and trauma within the community and a number of residents have moved from the area.⁷³ It has also resulted in local people raising grievances about the quarry, landslide and deaths with officials and the LNGP operator.⁷⁴ This environmental and human disaster is likely to remain a source of additional tension in the Hela region.

Security and social problems

When the prevalence of crime in the community was canvassed with participants, there was a general feeling that the presence of the LNGP and police contributed to a decrease in many of the worst crimes. However, people also expressed concerns about the increase in petty crime and targeted nature of some criminal enterprises, theft from LNGP beneficiaries who travel from the Komo and Hides areas for example, as well as the brutality of the armed robberies that seem to regularly take place on the Highlands Highway outside Tari. An area known as the Tari Gap is especially notorious.⁷⁵

A majority of respondents, some 68 percent, felt less safe since the LNGP arrived. This relates to ones feeling of personal safety and security. This consideration should be balanced against widespread community support for the LNGP. Generally, women felt more unsafe than men, although there was a small cohort of both women and men who felt safer since the arrival of the LNGP. This finding is of particular importance to the LNGP area, as the small survey sampled more people inside PDL areas.⁷⁶

They regard me as the landowner and everyone in PNG thinks I have the money. So they come after us trying to snatch our bags and rob us. They did that to us so we are afraid to travel here and there.

Hela resident

Another concerning issue for the community was alcohol. The greater availability of cash, as well as the use and abuse of alcohol in the community, has generated social problems. There was an alcohol ban in the SHP. This will presumably continue in the new Hela region. However, there are reported instances of smuggling of alcohol in addition to a thriving trade in home brewed liquor.⁷⁷

I want the government to continue tight security checks at the border. We want to see that happening here so that we will not encounter similar problems with alcohol, especially we women and children here in Hela region.

Hela resident

People interviewed noted the importance of continuing this alcohol ban in the Hela region given its effect in reducing household and community violence. Other reported social problems associated with a higher cash flow include increases in gambling and prostitution. Such worries tie in with problems associated with LNGP migration, family breakdown and the growing prevalence of HIV in the Hela region.⁷⁸

The Hela region is further characterised as beset by conflict between and within kin groups, by *raskolism* and politically motivated violence.⁷⁹ In Tari, tribal fighting re-emerged in the 1980s together with a rise in violence, criminality and a general breakdown in law and order. In 2003, there were 164 conflict-related deaths in the Tari area and 40 more over the first eight months of the following year.⁸⁰ Interpersonal violence at the household and wider family level is also endemic. There are particular concerns for women and children in such circumstances.⁸¹

The smaller survey asked respondents about their knowledge of conflicts or unrest that resulted in physical violence over the past twelve months in their local area. Adjusted for references to the same event, the 40 respondents relayed nine LNGP related and 35 non-LNGP related incidents.⁸² The majority of these incidents, some 94 percent involved individual or household conflict. The remaining six percent involved group or clan conflict.⁸³

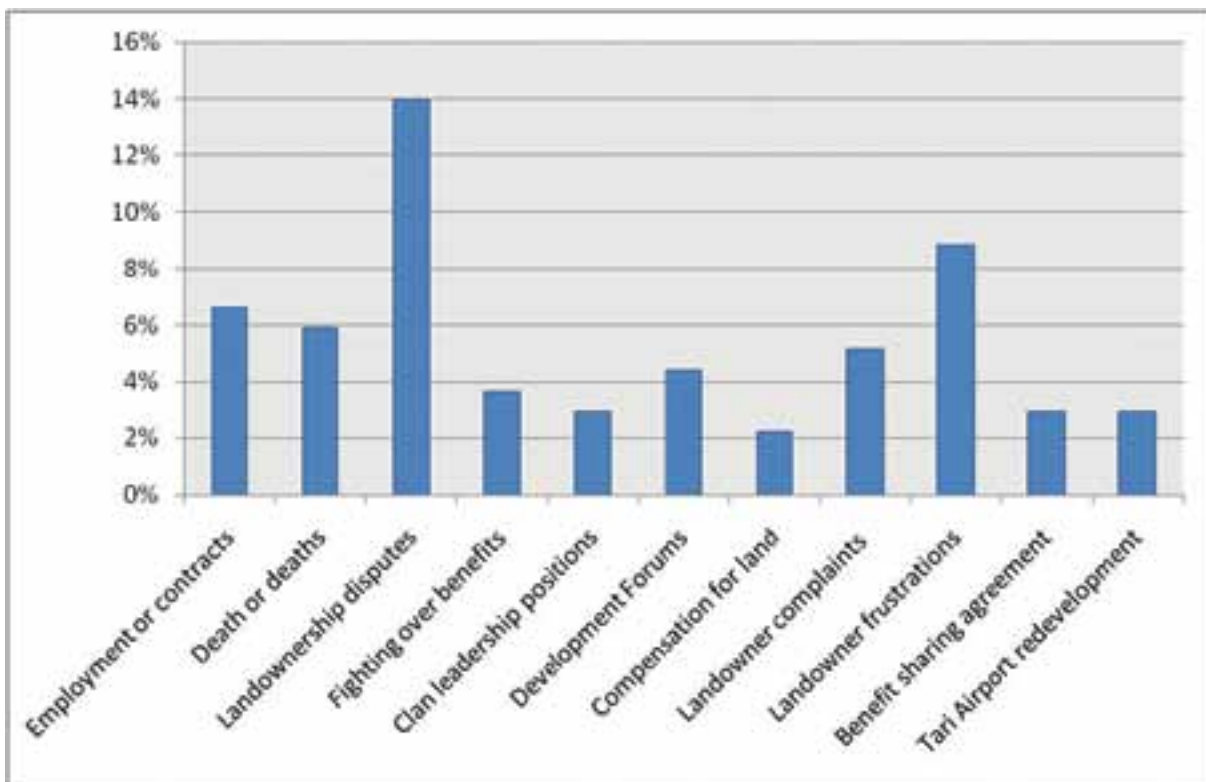
This is concurrent with opinion gathered during interviews, which suggested individual and household conflict was increasing, while group and clan conflict was decreasing because of the LNGP. Factors such as increased employment and the police presence generally have a positive influence on the rates of conflict. However, the smaller survey did point to the existence of limited conflict in relation to the LNGP over issues such as benefit sharing and landownership. Several people in the survey elaborated, suggesting greater local turmoil or violence could arise between groups or clans over the LNGP in the future, if such problems are not resolved.⁸⁴

In the past tribal fights were huge. Now they don't want to fight, because some people will go to work and they enjoy, so they are leaving tribal fights. That has changed and we are happy.

Hela resident

The larger survey revealed similar findings, exploring both existing tensions and the potential for conflicts in the area. Certainly, there is evidence of conflicts independent of the LNGP. These mostly relate to incidents of individual or household conflict. There were 81 references made to instances of physical conflict in relation to the LNGP. Major issues included tensions between landowners and the company or security forces, with numerous people mentioning roadblocks or stopping company work as courses of action. Large numbers also mentioned the LNGP difficulties as instigators of conflict between clans. Of the many and varied causes of conflict, most significantly, 14 percent of people indicated disputes over landownership, followed by landowner frustration and concerns over employment. A number of people also raised the related issue of the Tari Airport redevelopment.⁸⁵

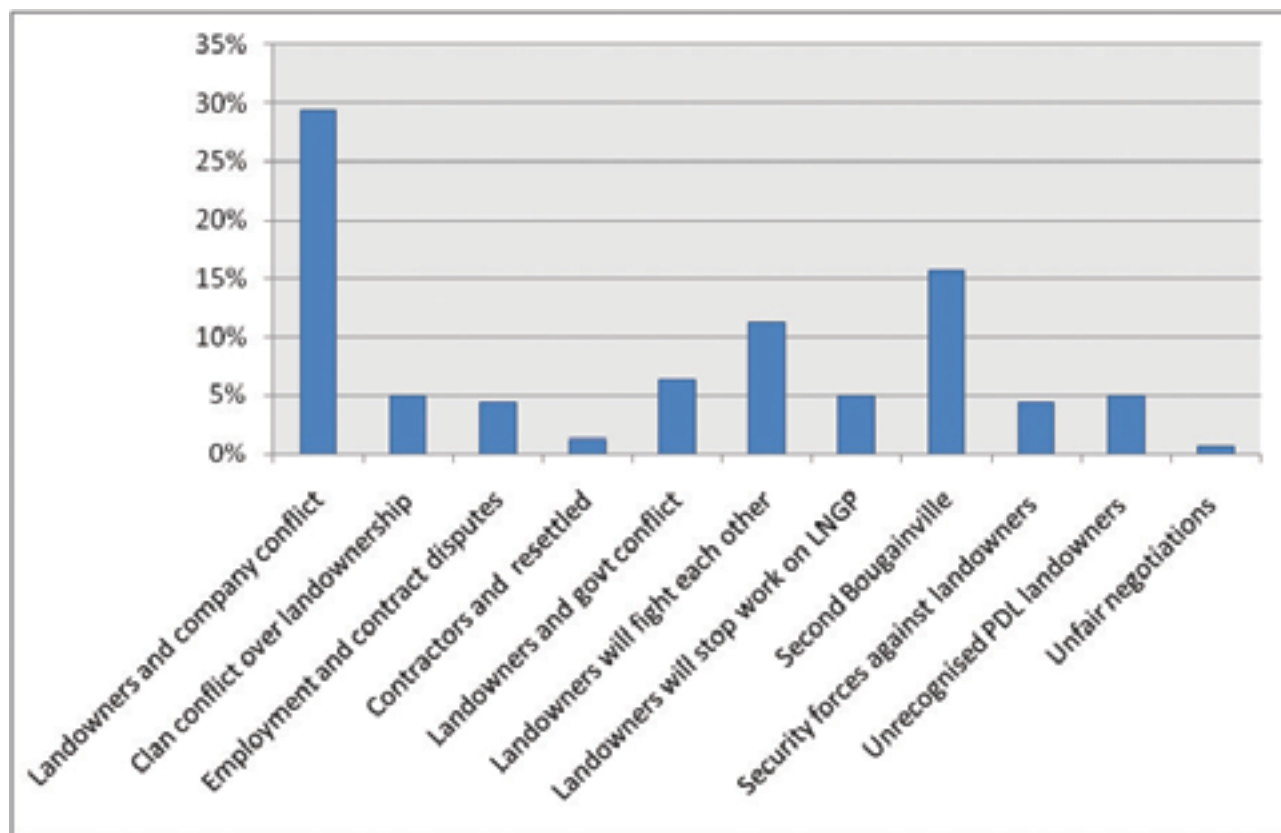
Graph 9: Triggers of violent conflict related to the PNG LNG Project⁸⁶



Further, respondents to the larger survey were asked about the potential for conflict in the area. A common reference, with some 16 percent of respondents noting it, was to a second Bougainville in the area if the situation did not work out satisfactorily for

the community. However, this seems highly unlikely given the fragmented nature of groups in the area and the significant opportunities on offer. Much depends on the varying stakeholders responses to contentious issues and events over time.⁸⁷

Graph 10: Triggers of potential conflict related to the PNG LNG Project⁸⁸



More significantly, described using a variety of phrases, over one third of respondents felt there would be some form of conflict between the company and landowners if the situation in Hela deteriorated enough. Half that number raised concerns about landowners or clans fighting each other over LNGP related issues. The greatest probable causes of these conflicts include meeting BSA agreements, community benefit distribution and disputes over landownership.⁸⁹

Small arms also remain a significant concern in the Hela region and pose a potential threat if circumstances in the area deteriorate. Small arms are seen as a very serious issue by 38 percent of respondents, while another 38 percent viewed them as a serious issue. Men more than women felt small arms are a serious issue. Many young men continue to arm themselves and government seems unable or unwilling to address the problem of illegal guns. Some interviewed suggested landowners were effectively stocking up on weapons now, in anticipation of future trouble and the need to take action over unfair benefit sharing.⁹⁰

Socio-cultural factors

Many people interviewed and surveyed contended that one of the greatest challenges was the loss of culture and traditional practices in the face of the LNGP and the outside world. In the opinion of those interviewed and surveyed there were a number of observable changes.

People were having trouble coping with the modern economy and the changes wrought by increased cash and the LNGP. Dealing with complications such as paying tax and accessing banks is made more difficult by the inadequate supporting infrastructure. Many also remarked that the influx of cash and associated paraphernalia was creating a culture of expectation and dependency that would ultimately create problems when the LNGP construction phase ended.⁹¹

This was further emphasised by what many saw as the changing attitudes of people in the Hela region, towards the LNGP and one another. In particular, it was suggested the pursuit of money was making people greedy and selfish. Accordingly, many respondents proffered the view that people were dressing differently and losing respect for cultural norms that once maintained order within the community.⁹²

The youths, both girls and boys are seeing money. They have forgotten the old ways and no longer go to church, disobey their parent; they are living as they please and only thinking of money and being a landowner.

Hela resident

There was recognition of the vitally important role the churches play in the lives and wellbeing of so many people in the Hela region. For many, including churchgoers, there was frustration at the ramifications of the LNGP on the physical and spiritual manifestations of the institution. A number of those interviewed lamented that many people seemed to be turning away from the church. There was an acknowledgement of a need for change if the churches were to continue to meet the needs of the people. In this respect, church leaders who participated in this research reaffirmed the role the church in community life as well as the desire to strengthen both the physical and spiritual wellbeing of the people and churches in the Hela region.⁹³

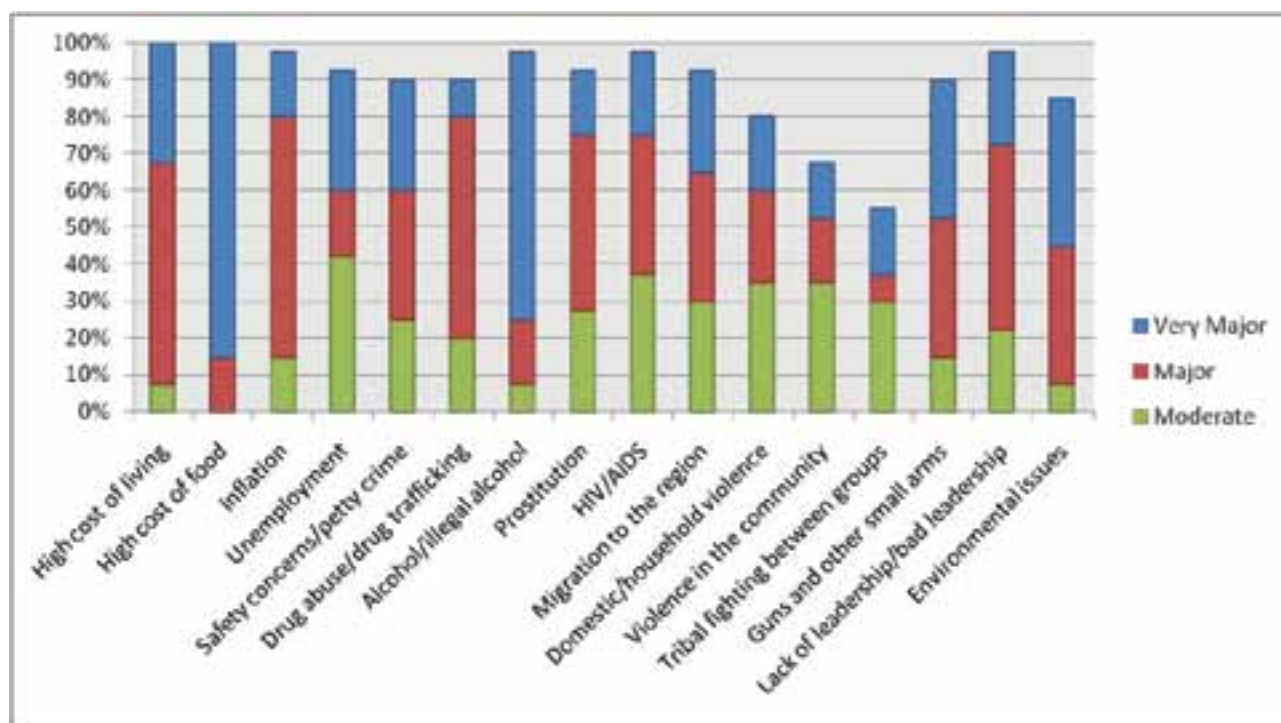
The Huli often recount the Hela Prophecy, which talks about the 'fire in the ground.' It is seen to warn against the exploitation of natural gas resources by 'outsiders' and is viewed by many as a harbinger of the serious challenges and dangers to come in relation to the LNGP. It demonstrates the unease many have

with the LNGP and how such feelings are bound closely to socio-cultural understandings and people's close affinity with the land.⁹⁴

This close affinity with the land is being further alienated by foreign conceptualisations of ownership that are contrary to traditional understandings. The dynamism that may have once been associated with customary land ownership is also becoming fixed in genealogical accounts and legal documentation. In tandem with general socio-economic changes, for many this alienation may be more permanent. The consequences of this are uncertain.⁹⁵

The lifestyle of people is also changing, with people losing traditional practices such as garden skills. For many this was a significant change, as agriculture and raising livestock has represented the basis of traditional livelihoods. This is especially worrying in light of the expected drop in formal employment following the ending of the construction phase. If gardening practices have not been maintained, it will take time to restore the capacity and skills of the community.⁹⁶

Graph 11: Summary of human security concerns⁹⁷



Summary

As illustrated in the discussion of social change and impacts, there are a variety of human security concerns in the Hela region. To a greater or lesser degree, each relates to the LNGP, although the responsibility for resolving them is often uncertain.

These human security issues are discussed in detail in the conclusion, with only a few notable points touched on in this summary:

- Substantial price rises threaten the wellbeing of people in the Hela region and increase the threat of growing inequality and poverty, which could lead to social tensions.
- People are not used to large cash windfalls and need support as far as they are able to invest and save their money. This situation is worsened by the fact there are no proper banking services in the Hela region.

- The significant incidents of communicable disease in the area are a concern for all those interviewed and surveyed, with fears increased migration was negatively affected health and the provision of healthcare in the Hela region.
- Household violence and a changing domestic dynamic are posing particular challenges to families. Criminality and conflict between groups also presents a problem that could potentially worsen over time.
- What seems most evident is the need for increased government capacity, its current absence threatening the legitimacy of the state and to the long-term stability of the Hela region.

As shown in the graph, the greatest worries relate to the high cost of food and concerns surrounding the social impact of alcohol in the Hela region. Food price rises together with changing patterns of living, raises the possibility of food insecurity. Despite

there being an alcohol ban in the area, alcohol (home-brewed or smuggled) is also still freely available in the Hela region, something people who participated in this research complained about regularly.

- 1 This report complements a community-based participatory listening project carried out by Oxfam that looked at the potential positive and negative impacts of the LNGP at the LNGP plant site in Central Province, also known as Portion 152. It found and discussed a number of similar social impacts. See: Iris Wielders, "Listening to the Impacts of the PNG LNG Project: Central Province, Papua New Guinea," (Melbourne; Port Moresby: Oxfam, 2011).
- 2 Resettlement is a demographic change, but given its significance, it is discussed in the next chapter.
- 3 First field survey; Second field survey.
- 4 Field communication.
- 5 Field communication.
- 6 Field communication.
- 7 Field communication.
- 8 Field communication.
- 9 Field communication.
- 10 Field communication.
- 11 See: Banks, "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector."
- 12 Field communication.
- 13 Field communication.
- 14 Field communication.
- 15 Second field survey.
- 16 Second field survey.
- 17 This basket of everyday good was made up of predominantly food items and is necessarily an unweighted aggregate indication of price increases across the Hela region.
- 18 Second field survey.
- 19 The Bank of Papua New Guinea reports annual headline inflation between the June 2010 and June 2011 quarters of 9.6 percent. See: Bank of Papua New Guinea, "June 2011 Quarterly Economic Bulletin," (Port Moresby: Bank of Papua New Guinea, 2011), p.13.
- 20 First field survey.
- 21 Field communication.
- 22 Personal communication.
- 23 Field communication.
- 24 Field communication.
- 25 Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011," p.27.
- 26 Field communication.
- 27 Field communication.
- 28 Second field survey.
- 29 Field communication.
- 30 Field communication.
- 31 Second field survey.
- 32 Field communication.
- 33 Field communication.
- 34 As noted earlier, the PNG Government recently made announcements committing to the provision of both free education and free healthcare. See: Govt gives K649m to fund free education policy, *The National*, 7 December 2011 and Whopping K350mil and free health care, *The National*, 19 January 2012.
- 35 First field survey; Second field survey.
- 36 Field communication.
- 37 Second field survey.
- 38 Second field survey.
- 39 Field communication.
- 40 Field communication.
- 41 Field communication.
- 42 Field communication.
- 43 Field communication.
- 44 Field communication.
- 45 Field communication.
- 46 Field communication.
- 47 Banks, "Papua New Guinea Baseline Study," p.68.
- 48 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.1.
- 49 Field communication.
- 50 Field communication.
- 51 Second field survey.
- 52 Second field survey.
- 53 Field communication; First field survey.
- 54 Radio New Zealand, "Investigation Calls for End of PNG Police/Esso Deal," <http://www.rnzi.com>.
- 55 Personal communication.
- 56 Field communication.
- 57 The EIS summarises the predicted environmental impacts. See: Esso Highlands Limited, "Environmental Impact Statement," c.28.
- 58 See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."
- 59 Personal communication.
- 60 Field communication.
- 61 Field communication.
- 62 See: Hides Landowners Block Plant, *The National*, 19 January 2012.
- 63 First field survey; Second field survey.
- 64 Field communication.
- 65 Personal communication.
- 66 Field communication.
- 67 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," p.37.
- 68 Radio New Zealand, "Calls Continue for Independent Investigation into PNG's Tumbi Landslide," <http://www.rnzi.com>; Radio New Zealand, "PNG Govt, Exxon under Spotlight over Tumbi Landslide," <http://www.rnzi.com>.
- 69 Radio New Zealand, "Landslide Stops Work at Exxon Mobil's Airport Project," <http://www.rnzi.com>.
- 70 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," p.51.
- 71 National Disaster Centre, "Tumbi (Lanjako/Nogoli Perepa) Council Ward in the Komo LLG Assessment Form," (Port Moresby: National Disaster Centre, 2012), p.2; Radio New Zealand, "Esso Highlands Dismisses Speculation Its Gas Project Is Linked to Massive PNG Landslide," <http://www.rnzi.com>.
- 72 Radio New Zealand, "Calls Continue for Independent Investigation into PNG's Tumbi Landslide"; Radio New Zealand, "Concern of Whitewash after PNG Tumbi Landslide Disaster," <http://www.rnzi.com>.
- 73 National Disaster Centre, "Tumbi (Lanjako/Nogoli Perepa) Council Ward in the Komo LLG Assessment Form," p.7.
- 74 Radio New Zealand, "Approach to PNG Landslide Cleanup Called Insensitive," <http://www.rnzi.com>; Radio New Zealand, "PNG Highlands Highway Cleared after Landslide but Local Grievances Remain," <http://www.rnzi.com>.
- 75 Field communication; First field survey; Second field survey.
- 76 Second field survey.
- 77 Field communication.
- 78 A. Kelly et al., "Askim Na Save (Ask and Understand): People Who Sell and/or Exchange Sex in Port Moresby (Key Quantitative Findings)." (Sydney, Australia: Papua New Guinea Institute of Medical Research and University of New South Wales, 2011), p.17.
- 79 See: P. Sillitoe, *An Introduction to the Anthropology of Melanesia: Culture and Tradition* (Cambridge University Press, 1998).
- 80 N. Lewis, "Conflict Vulnerability Assessment of the Southern Highlands Province," in *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, ed. N. Haley and R. May, *State, Society and Governance in Melanesia Studies in State and Society in the Pacific 3* (Canberra: ANU E-Press, 2007), p.151.
- 81 Kopi et al., "Insecurity in the Southern Highlands: The Nature, Triggers and Consequences of Violence in Hela Region"; H. Wardlow, *Wayward Women: Sexuality and Agency in a New Guinea Society* (Berkeley: University of California Press, 2006). The 2005 small arms survey found that around 50 per cent of households in SHP were victims of violent crime, with one in twelve households affected by sexual assault or rape, 26 per cent by domestic violence and 17 per cent by inter-group fighting. See: N. Haley and R. Muggah, "Jumping the Gun? Reflections on Armed Violence in Papua New Guinea," *African Security Review* 15, no. 2 (2006).
- 82 The 40 respondents also referred to another 22 non-specific incidents (where the details given did not indicate whether it was a LNGP or non-LNGP conflict).
- 83 Second field survey.
- 84 Second field survey.
- 85 Despite being a Southern Highlands Provincial Government project, those who participated in this research suggested the Tari Airport redevelopment would not have gone ahead without the LNGP. The Airport itself is used heavily by the LNGP for passenger and transportation requirements (especially in the absence of a completed airport at Komo).
- 86 First field survey.
- 87 First field survey.
- 88 First field survey.
- 89 First field survey.
- 90 A potential flashpoint that many respondents noted is the forthcoming 2012 elections.
- 91 Field communication.
- 92 Field communication.
- 93 Field communication.
- 94 Field communication.
- 95 Field communication. See also: Banks, "Understanding 'Resource Conflicts in Papua New Guinea,'" p.29.
- 96 Field communication.
- 97 Second field survey.



CHAPTER 9

Project resettlement

The construction of the LNGP requires resettlement of the local populace to make way for LNGP facilities and supporting infrastructure. Most significantly in the Hela region, the gas extraction sites, extended roadways, the airport at Komo, the HGCP and pipeline running towards the coast.¹

The process of resettlement and garnering acceptance and satisfaction from those being moved is not easy. Indeed, EHL notes that those affected will be unlikely to be satisfied with a one-off compensation and relocation agreement, suggesting cultural practices will likely mean resettlement and those being resettled will want to revisit the subject again. This also happens at other resource development sites in PNG.²

PNG legislation on compensation and resettlement for those displaced by gas projects is found in the OGA. It includes annual payments for land deprivation and compensation for damage, which is a one-time payment for damages in accordance with Valuer General Rates.³ The operator of the LNGP also provides additional compensation to resettled households, following the International Financial Corporation (IFC) Performance Standards Five guidelines.⁴

Figure 9: Performance Standard Five⁵

The objectives of Performance Standard Five (Land Acquisition and Involuntary Resettlement) are as follows:

- To avoid or at least minimize involuntary resettlement wherever feasible by exploring alternative project designs.
- To mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons' use of land by: (i) providing compensation for loss of assets at replacement cost; and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.
- To improve or at least restore the livelihoods and standards of living of displaced persons.
- To improve living conditions among displaced persons through provision of adequate housing with security of tenure at resettlement sites.

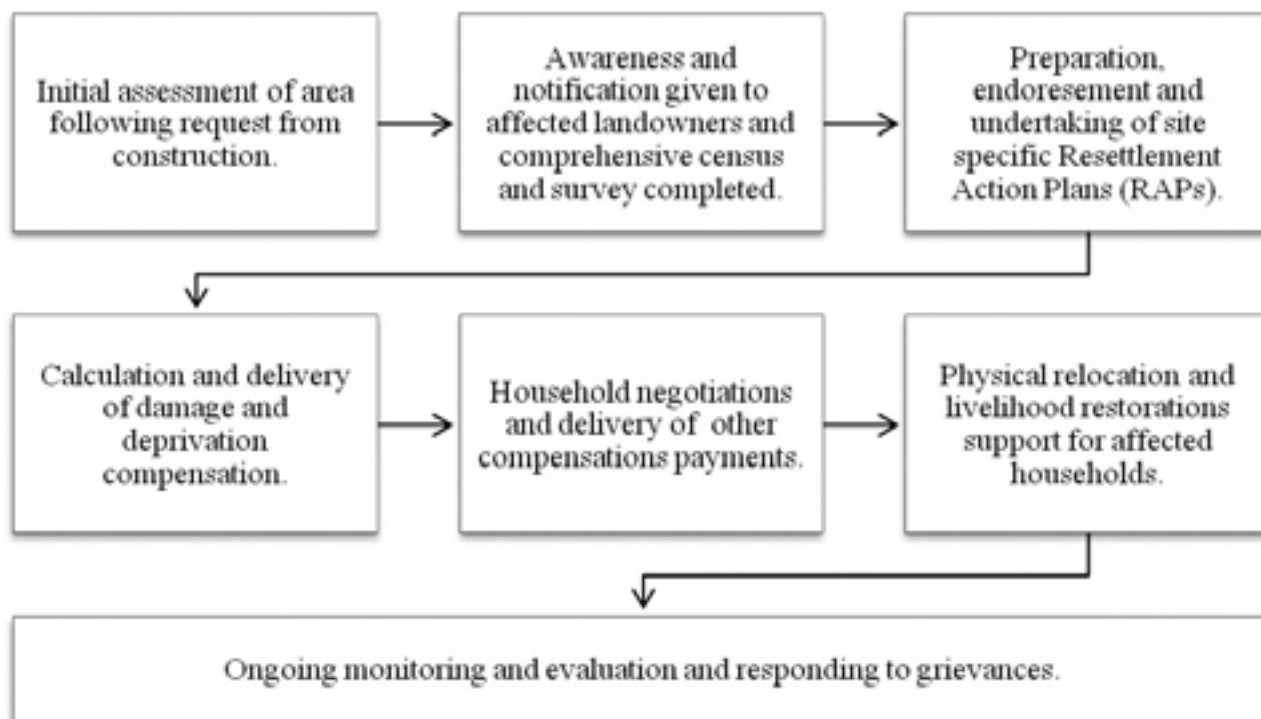
There are a number of teams involved in the resettlement process and community engagement in one form or another. Central to the resettlement process are the Census and Survey (CST), Resettlement Implementation (RIT) and Livelihood Restoration (LRT) teams. The CST assesses the assets of people, the RIT engage in resettlement negotiations and the medium-term relocation of people, while the LRT assists with the later restoration of their livelihoods. They are collectively referred to as the Resettlement Team.⁶

Resettlement involves both physical and economic displacement, the movement of people away from their homes and livelihoods. There are three basic packages for those being

resettled. ‘Type one’ people lose a house, garden and land. ‘Type two’ people lose a significant proportion of their garden and land. ‘Type three’ lose a small amount of garden and land.⁷ Resettlement packages vary based on the losses incurred. The Borealis database system records the resettlement process, including payments, deliveries and the locations of new resettlements sites.⁸

Following negotiations and agreement on resettlement, compensation is delivered in two parts: an initial cash payment and another when the house is taken down. People are not expected to remove their gardens and can utilise them until construction starts on the site in question. The compensation package for what is lost to construction is then followed by the supplementary assistance package.⁹

Figure 10: The resettlement process¹⁰



A majority of people in both surveys noted problems with the resettlement process. However, the sentiments expressed are limited by the small number of people within the survey samples affected by relocation and resettlement. They are indicative only of some of the more pressing concerns associated with relocation and resettlement, although the problems were also recounted in a number of interviews.

The coming of PNG LNG project is a good thing because it's bringing big services into our country and the province after extracting oil and gas from the land. On that aspect it is very good, but they are not doing things like having good resettlement program to place people with good housing, electricity and sanitation services.

Hela resident

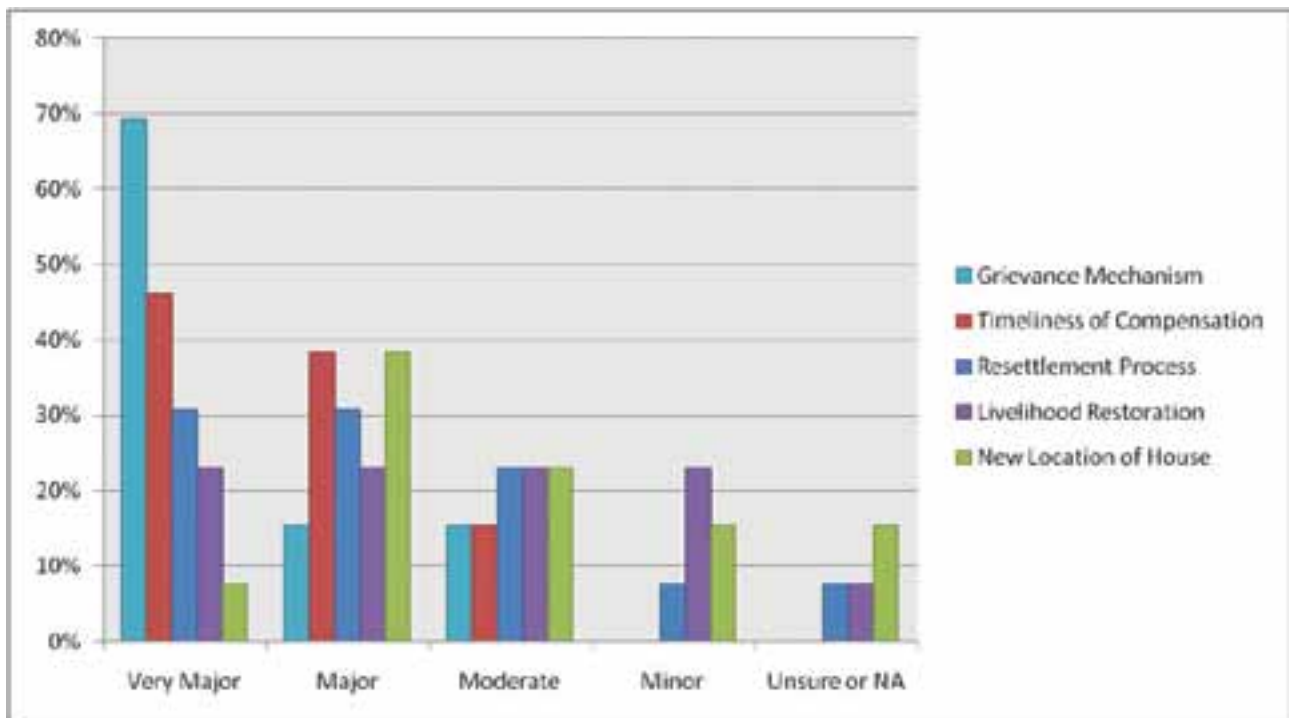
The smaller survey asked people to respond to some of the issues that were consistently raised during earlier field research and rank them on a scale of very serious to very minor. Amongst the five categories, the most pressing was the grievance mechanism, with 69 percent of people suggesting it was a very serious issue. A further 15 percent thought it was either a serious or a moderate issue. This question was asked specifically of those who were or would be resettled.

A related question in the small survey asked if there were any complaints raised in the past 12 months and sought to know whether they have been dealt with in a timely manner. Forty-three percent of people stated they had made a complaint over the past 12 months. Of that 43 percent, only 35 percent felt the complaint had been dealt with in a timely manner. The timeliness of compensation was another problem area, with 46 percent of people suggesting it was a very serious issue. The resettlement process was a very serious issue for 31 percent and livelihood restoration was a very serious issue for 23 percent of people.¹¹

Interestingly, and perhaps supportive of the thinking that most people have relative ease finding a new location to reside, only eight percent of people viewed the new location of their house as a serious issue, although some 38 percent viewed it as

a major problem and 23 percent as a moderate problem. Fifteen percent saw it as a minor problem, and a further 15 percent were unsure about the seriousness of a new location, also revealing a level of uncertainty amongst many being resettled.¹²

Graph 12: Resettlement concerns¹³



Initial resettlement concerns of the IESC focused on movement of households to new locations more distant from facilities than their original locations combined with lack of plans for ensuring post relocation access to these services.¹⁴ Compensation rates for crops and trees were lower than market value and some families moved more than once due to poor information provision on sites designated for future displacements. There was also a failure to quickly establish a grievance management system.¹⁵

The IESC authors noted that the company could be doing more to facilitate entry of banking services to the area as that was holding up disbursement of funds. The ELC, the independent advocate for those being resettled, noted that the definition of a household was sometimes culturally inappropriate, there was a lack of copies of contracts in local languages, and lack of provision made for multiple wives to sign. The IESC report also noted problems with sequencing Resettlement Action Plan (RAP)¹⁶ preparation, Lender/IESC review and approval, and disclosure before resettlement commenced.¹⁷ There were some instances where EHL entered into agreements with families in Komo without a covering RAP.¹⁸

By the IESC March 2011 report, EHL had time bound commitments to replace infrastructure and the valuations had been revised. However, banking remained a problem, as it has not been possible to persuade commercial banks to open in the region. Water access and the provision of resettlement contracts in local languages was still an issue in some instances. Some of the issues with the RAPs also remained open.¹⁹

From the beginning, there were considerable time pressures on the resettlement process. As it started in such close proximity to the construction phase, the entire resettlement process effectively began behind schedule. Many people interviewed considered that resettlement should have started well before construction. The immediate pressure of a tight schedule opened the process up to hasty decision-making and precedent setting.²⁰

Negotiations and finding agreement with those being resettled is sometimes difficult. This is occasionally due to an individual's or household's assumptions or expectations. Unfortunately, many of those most reluctant to resettle were eventually given more than the standard package. This clearly disadvantaged those people who agreeably resettled and took the standard package. In such instances, this has left people extremely dissatisfied. Early low compensation offers also contributed to difficulties with negotiations and subsequent delays.²¹

Compensation for land during building of bridges, roads and other infrastructure has also been problematic, including a lack of full consultation during land purchase deals. In some cases, such as at the new Komo Airport, landowners have prevented projects from going ahead. These delays at construction sites over compensation payments have placed additional pressure on contractors and affected landowners. Along with other delays, this has also raised questions about the scheduled completion of the LNGP.²²

The complexities involved in resettlement have prevented the expeditious movement of people from their residences. Indeed, it has often been difficult to identify the people being resettled. Although still going slowly, it is understood that the resettlement

process is now progressing well. Overall, by mid-2011, 400 households have been physically displaced and 2,715 households economically displaced, with many of the latter included only for receiving small payments for things such as trees. The majority of resettlement has taken place.²³

One concern as the LNGP construction phase began was the overall communication between the engineers and the resettlement teams on the ground. People interviewed for this research in the area noted the changes in resettlement planning, especially in relation to the heavy haul road and discussions over safety buffers around the wellheads. Some people have received inconvenience compensation because of late changes in resettlement and construction planning.²⁴

People also spoke about a lack of awareness surrounding resettlement. Despite the aforementioned difficulties, we understand that EHL has engaged directly with those being resettled in a reasonably consistent and effective manner.²⁵ Generally, these complaints then relate to general community awareness of all activities, including those related to resettlement. In this respect, many people felt abandoned and let down by EHL.²⁶

There were some reports of people in the community speculatively building houses and taking up residence in areas due for resettlement. This is a feature of the LNGP and infrastructure projects throughout the Hela region. People hope to gain compensation for recently-installed houses and gardens. Several examples were given, including at Komo and a local quarry.²⁷

The difficulty in such situations is the setting of precedents. Many locals have experience with other resource development projects and people easily discover variations in compensation packages. In some cases, additional houses and gardens were built on land already assessed by the CST, for which they were later compensated. Such mistakes complicate negotiations with others and prompt many to revisit their own compensation packages. Such building and planting can also result from people being ill-informed about the procedures as well as long delays between the CST assessment and resettlement going ahead.²⁸

There were some cases where people were reluctant to proceed with resettlement, for reasons including contesting of the CST data, family disputes about who will receive the compensation and expectations based on understandings garnered during the Development Forums and negotiations process.²⁹ Most people were satisfied with the resettlement process, although others remained firmly against signing any documents or agreeing to move.³⁰

There have also been examples of disagreements amongst families about who should receive payments and how those payments should be divided amongst the household. Although the owner of the house or garden is now the acknowledged receiver of payments by EHL, there is an overwhelming tendency for males in the household to claim the payments and then distribute accordingly.³¹

A number of people contested the variations in overall packages between sites, for example, people at Hides received more than those at Komo. Some also felt that EHL should have provided permanent housing over and above what was provided in the overall package.³²

There were also complaints over the timeliness of compensation. This included prompt payment of compensation and delivery of assistance as well as land rentals. There were cases where it was more than six months between the CST assessment and compensation being provided. People could not wait indefinitely, so planted new gardens and continued with their lives. This leads to legitimate follow-up claims being made.³³

A number of people at Komo also expressed their frustration at not being paid rent for land at the new Komo Airport. This exceptional delay seems to rest on the decision that payments are made after destruction of the property. This creates immense frustration amongst the community. Many are left in an uncertain position. People are unable to take advantage of income from the land under threat of destruction or put it to good use for that very same reason.³⁴

Figure 11: The basic resettlement package³⁵

In addition to deprivations rates or an annual rental and compensation for damage, such as the loss of a dwelling, the LNGP operator will also provide resettlement compensation, based upon selection by the household.

Housing option

- Bank Managed Fund Option (Interest Bearing Deposit); or
- Self-built bush house and 50 percent of Bank Managed Fund Option; or
- Self-built semi-permanent or permanent (as appropriate at full replacement cost) materials for a house with tin roof and gutters provided; or
- Self-built semi-permanent or permanent (as appropriate at full replacement cost) materials for a house with tin roofs and gutters provided. In addition, provision will be made to advise and support households regarding the selection of materials, design and construction methods.

Transit allowance

- Household will be provided with a transit allowance to assist with the logistics of relocation.

In-kind allowance

- Households will be given an in-kind allowance to replace household items as part of the Resettlement Assistance Package; or
- In-kind allowance up to a maximum of K20,000 to replace household items as part of the Resettlement Assistance Package of which the household can elect to use part of the allowance and have the balance deposited into a Bank Managed Fund called an Interest Bearing Deposit (IBD).

Livelihood restoration

- The Project will provide the household with targeted sustainable agricultural program assistance and support for cash-based market opportunities; affected people will be given preference in Community Development income related programs.

Rations or resettlement

- The Project will provide weekly rations to a representative of each family at a designated point from the time garden access is lost for a maximum period of six (6) months, or until gardens are re-established, whichever is the sooner.

Health care program

- The Project will provide mosquito nets for every occupant and monitor household health care.

The LNGP operator will also provide monetary support for new construction of housing as well as compensation for loss of business income in the form of a payment for proven loss of reasonable profits due to physical displacement and for loss of employment income in the form of a payment for proven loss of wages due to physical displacement.

One of the most significant resettlement problems was the requirement to withhold a portion of the resettlement payments. This decision is based on IFC guidelines.³⁶ The rationale for doing so is to avoid money being lost or spent quickly by the recipients. However, many of those who interviewed and surveyed in the community disagreed with this approach and some even commented that they have refused to sign any agreements on these grounds. Many expressed a desire to put the money withheld into use elsewhere, including towards relocation costs and engaging in business enterprises.³⁷

The withheld money was originally deposited in an interest bearing deposit account (IBD) for a period of six months. The median sum placed in these IBDs was K10,000. Thereafter the intended recipient could access the money. Interviews suggested that problems resulted with IBDs, as the expected banking facility at Hides did not materialise.³⁸ This has left the majority

of households without access to their IBDs. There were also complaints about the low interest rates paid into the IBDs.³⁹

Discussions have been ongoing to establish a bank in the area. The nearest banking agent is located in Tari. The agent's service charges are high and it is unsatisfactory for those who would have to travel large distances from the PDL areas, especially given the threat of armed robbery. Tari previously had a bank, but insecurity and numerous armed robberies resulted in its closure.⁴⁰

EHL is in a difficult position. Currently, Bank South Pacific (BSP) officers are flown up the Hides area to carry out basic banking transactions. It is understood this does not include the ability to withdraw money from BSP accounts. There are efforts to install automatic teller machines (ATMs) in or near construction camps. More recently, there has been movement to establish a bank in Tari⁴¹ and a MOU has been signed with ANZ Bank to open a branch in Para Camp at Hides in the Hela region by mid-2012.⁴²

The limited banking and financial knowledge of local people further hamper this situation. Dealing with such large sums of money is for many, a relatively new phenomena. There was impetus in the Resettlement Policy Framework (RPF) and RAPs for resettlement compensation advisors to advise on compensation investment and business options. However, it was not apparent to the research team that compensation advisors were actively engaged during the resettlement process.⁴³

The May 2010 IESC report noted their absence during the Komo airstrip resettlement and suggested that in future it would be beneficial to deploy compensation advisers as soon as practicable. It emphasised the need for their engagement before, during and after compensation payments, as well as during livelihood restoration.⁴⁴ However, as mentioned earlier, experience in the Highlands suggests people are disinclined to heed financial advice and prefer to manage their own finances.⁴⁵

Given anger in the community about the withholding of cash payments and their placing into IBDs, the resettlement team eventually negotiated an additional option to the IBDs, whereby EHL would withhold the money for six months or more (essentially deferred payment) and at the end of the term households would receive a top-up bonus of around four percent. EHL stated this option was proving popular with the community.⁴⁶

In some cases, payments originally withheld have now been made to those who were resettled earlier. Those interviewed and surveyed on the subject seemed more comfortable with this option and as a tangible entity trusted EHL to hold and later pay the money.⁴⁷ However, as noted by a number of residents and people we interviewed, the significant efforts to slow the flow of money into the community only delayed matters by six months. Thereafter, the people could use their money in any way they desired.⁴⁸

Again, the importance of compensation advisers is emphasised. Some of those interviewed and surveyed appreciated the merit of withholding money. They thought withholding money allowed people to reflect on its use after any initial enthusiasm and overspending. Hence, six months on, some felt that people were more likely to invest or save the previously withheld money in a prudent manner.⁴⁹

The resettlement of people from one area to another has given rise to some difficulties. One community member commented that some of those being resettled were without proper residences or places to sleep. With the complexities surrounding moving to another area, some were purportedly finding it difficult to find a new place to reside.⁵⁰

As noted earlier, some of the people interviewed and surveyed expressed a desire to use the withheld money for other purposes, indicating it was required to resettle or that they could better invest it elsewhere. This suggests, at least in part, that for some people the immediate upfront compensation payments of around K10,000 (plus some other moving costs) were not enough to relocate. That is to say, some people required the K10,000 placed in the IBD or the post-relocation K30,000 housing payment before moving. It is understood there is some flexibility and that special cases exist.⁵¹

So if it is resettlement, they should buy ground for me and let me settle in one area, they should build a house for me and I should be living in a better place.

Hela resident

Rather than EHL assisting in the process, people were left to find their own place to resettle. However, the research team were informed that most people have managed to find a new place to live.⁵² With so many people moving, there were indications of land pressures, for example, in Hides and Komo where some land is quite marginal. There were evident cases of winners and losers in the resettlement stakes, especially when those being resettled have few options in terms of moving to related land.⁵³

People could build either a bush or semi-permanent house following relocation. The majority of people decided to build a bush house, with the remainder building a semi-permanent house. Bush houses are attractive because of their familiarity and inexpensive nature, as well as the fear that semi-permanent houses may be burnt down by enemies. Once the building of a new dwelling was verified by the RIT, the monies for rebuilding were released (usually K30,000). The preference for EHL was to channel any savings made by building a bush house into IBDs, savings accounts or for deferred payment.⁵⁴

Another contentious issue was the amount and time period that rations were available to people being resettled. A number of people raised concerns that the six months ration period has not been long enough to establish new gardens. Early on, the weekly food rations were also generally too large, leading to the on-selling of items to supplement incomes. With migrating family staying in the area for example, women especially also complained about the amount of rations given, often being the ones having to cope with stress of overcrowding and feeding extra people in newly resettled households.⁵⁵

Although there is the possibility of extending the rations beyond six months, it remains the standard time period for ration delivery. The first IESC report noted that garden re-establishment took around eight to nine months, rather than the six-month period. It recommended reducing the amounts provided and extending rations over a longer period. The need to continue rations is monitored by EHL.⁵⁶

In discussions it seems most of those resettled have established new gardens. However, one observation made in the broader context was that, at least in part, the reluctance to re-established garden reflected a growing desire by many people to end their reliance on subsistence agriculture, in favour of market and store bought goods. However, most observers contested the sustainability of any move towards the cash economy.⁵⁷

Progress with livelihood restoration has been slow. The LRT is now expanding its work in the community, running courses and holding well-received field days. Many of those resettled and in the community argued that livelihood restoration should be budgeted for longer than two years and the benefits should be extended outside the resettled families, and even outside project impact areas. For many in the community, both resettled and not resettled, the livelihood programmes offer an important opportunity to broaden their skills and capacities for the future.⁵⁸

An important component of the resettlement process is the ability to register complaints or grievances and have them addressed satisfactorily in a timely manner. There seems to be a number of different processes in this regard. In the first instance, Lands and Community Affairs (LCA) deal with general community complaints. They also accept grievances from those who have been resettled. These are passed to the resettlement team, who address the majority of them. Thereafter, any grievances that are not addressed are passed to the ELC. The community grievance process was clearly not as well established as the resettlement grievance process, with its independent advocate.⁵⁹

So for the long term, for the good of the company, for the good of the government and for the good of the landowners and everybody involved, when an issue comes up you address that immediately. Your door must be open to listen to grievances and then address it effectively for once and for all. If it is not genuine, well you don't entertain it; if it genuine well you don't jump over and think that it will die, it will never die. It will come up again.

Hela community leader

The ELC also becomes involved when resettled landowners are still unhappy following negotiations with the RIT. They appraise the situation on its merits and make a recommendation. The ELC further plays an important mediating role, including in relation to family contestation over LNGP matters.⁶⁰ Although independent, one challenge for the ELC is to maintain the perception of independence within the community, given their close working relationship with the resettlement team. They are, for example, pragmatically located in an EHL camp; however, this does not lend itself to the perception of independence.⁶¹

Within the community, a number of people were concerned about the ability of the community to interact with EHL in relation to complaints and otherwise. EHL certainly has a relatively consistent presence on the ground in PDL areas. However, there was a perception across the Hela region that EHL has not done enough awareness work about the processes and people to engage with in order to address concerns of any sort. Although EHL has perhaps rightly noted its focus on PDL areas, as the broader impacts are felt throughout the Hela region, many perceived growing frustrations at not being able to engage with EHL on any level.⁶²

Resettlement for many was also another example of a divide between haves and have-nots. Remarks were made earlier about the unhappiness many felt about the seemingly arbitrary line distinguishing those who were resettled and those who were not, the former receiving significant sums of money and assistance for moving. So much so, that we were told many locals have argued or sought to have their homes demolished by the LNGP in order to gain what many see as the benefits of resettlement.⁶³

In this respect, it was again seen by all as critical to extend the opportunities and potential benefits of the LNGP as widely as possible through the Hela region. EHL has for the most part

determined that any substantive community development programs will follow the completion of construction. This has meant few significant resources have been provided in the interim for community development, although a good deal of planning has been done.⁶⁴

With no clear community development on the ground, the resettlement process and wider community interactions are hampered. People want to see the benefits of the LNGP shared. The resettlement team engages with the community to a degree, but there has been a broader failure so far in adopting an integrated community development approach.⁶⁵

Summary

Resettlement involves both physical and economic displacement. It is disruptive and people are often left aggrieved if they do not feel adequately compensated and their situation has worsened. There are reasonably large numbers of people affected by the need to resettle people because of the LNGP. The processes involved are guided by a variety of obligations, including applicable PNG legislation and lender performance standards on land acquisition and involuntary resettlement.

This research is not overly critical of the resettlement activities undertaken by the LNGP, although general objections might be raised on basis of involuntary resettlement being an egregious act and there are some individual cases where resettlement was unsatisfactory. Rather, concern stems from a number of discrete points raised by participants in this research, some of which are also highlighted in IESC reports.

Repeated again was the issue of awareness and community relations, this time in the context of resettlement. Although many people accorded the LNGP operator with reasonably good practices, there were inevitable gaps and wider community complaints driven by a lack of information and sense of uncertainty, in relation to both resettlement and the LNGP.

For many observers of the resettlement process there were a number of fundamental concerns. Foremost amongst these were both the manner and management of the significant funds paid to people to accede to resettlement. There were particular difficulties in clarifying the process and managing the funds in the absence of banks or other financial institutions.

Many people interviewed and surveyed during this research also pointed to disagreement over the provision of rations to those being resettled. While it seemed some flexibility came to characterise the time-period of rationing, this particular disagreement was symptomatic of the challenges that constantly arose for those resettled as well as the LNGP operator.

Delayed payments and precedent setting in relation to resettlement agreements are currently a relatively small problem. However, if reported instances of delayed payments and similar issues are not managed properly by the LNGP through an established grievance mechanism, such small problems will likely flare into larger ones. Resettled landowners were especially insistent about the intention to assert their rights in the absence of fulfilled agreements.

Resettlement has also introduced an additional conundrum for the LNGP operator in the form of community participation.

Many local people feel excluded from the perceived privileges of resettlement compensation, including involvement in the livelihood restoration programme. An opportunity exists in this regard to broaden livelihood development in the wake of resettlement completion.

There were people unhappy about the circumstances of their resettlement, including some in relation to the variable

land quality at their relocation site. This will likely provide additional challenges for EHL in meeting the criteria set out in their commitments. More broadly, as has been noted here and elsewhere, the strong attachment of people to the land in the Hela region will also prove a challenge over coming years as locals seek to improve or restore their association with land now being used by the LNGP.

-
- 1 See: Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008."
 - 2 Esso Highlands Limited, "Environmental Impact Statement," c.23; p.3.
 - 3 Government of Papua New Guinea, "Oil and Gas Act," s.118.
 - 4 International Financial Corporation, "International Finance Corporation's Performance Standards on Social & Environmental Sustainability."
 - 5 Source: International Financial Corporation, "International Finance Corporation's Performance Standards on Social & Environmental Sustainability," p.18.
 - 6 Field communication.
 - 7 Field communication.
 - 8 Field communication.
 - 9 Field communication.
 - 10 Source: Esso Highlands Limited, "Environmental and Social Management Plan, Appendix 26: Resettlement Policy Framework," (Port Moresby: PNG LNG, 2010), p.15.
 - 11 Second field survey.
 - 12 Second field survey.
 - 13 Second field survey.
 - 14 D'Appolonia has been appointed as the post-financial close IESC for the LNGP. D'Appolonia's role as the IESC is to assist the export credit agencies and group of commercial banks, collectively known as the Lenders or Lender Group, assess and report on the compliance with environmental and social provisions contained within the ESMP, the associated Lender Environmental and Social Requirements (LESR) document, and Schedule H3 Environmental and Social Milestones Schedule to the Common Terms Agreement (CTA).
 - 15 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," pp.53-60.
 - 16 As the name suggests, RAP's detail the plans for dealing with sites or individuals in relation to physical or economic displacement. They are meant to be consistent with the goals of the RPF. See: Esso Highlands Limited, "Environmental and Social Management Plan, Appendix 26: Resettlement Policy Framework."
 - 17 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," p.68.
 - 18 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," pp.27-28.
 - 19 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," pp.68-69.
 - 20 Field communication.
 - 21 Field communication.
 - 22 Field communication.
 - 23 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit July-August 2011)," (Genova, Italia: D'Appolonia, 2011), pp.60-61.
 - 24 Field communication; Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," pp.52-53; Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit October 2010)," (Genova, Italia: D'Appolonia, 2010), p.55.
 - 25 Second field survey.
 - 26 Field communication.
 - 27 Field communication.
 - 28 Field communication.
 - 29 Field communication.
 - 30 Field communication.
 - 31 Field communication.
 - 32 Field communication.
 - 33 Field communication.
 - 34 Field communication.
 - 35 Source: Esso Highlands Limited, "Environmental and Social Management Plan, Appendix 26: Resettlement Policy Framework," pp.18-19.
 - 36 International Financial Corporation, "International Finance Corporation's Performance Standards on Social & Environmental Sustainability."
 - 37 Field communication.
 - 38 Field communication. The company has introduced the option to receive these payments in cash instalments instead of using bank accounts.
 - 39 Field communication.
 - 40 People in Tari also lamented the absence of basic banking services, especially as Tari was about to become the provincial capital of the Hela region during our research.
 - 41 Field communication.
 - 42 Personal communication.
 - 43 Field communication.
 - 44 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," p.59.
 - 45 Field communication.
 - 46 Field communication.
 - 47 Field communication.
 - 48 Field communication.
 - 49 Field communication.
 - 50 Field communication.
 - 51 Field communication.
 - 52 Field communication.
 - 53 Field communication.
 - 54 Field communication.
 - 55 Field communication.
 - 56 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit May 2010)," pp.61-62.
 - 57 Field communication.
 - 58 Independent Environmental and Social Consultant (IESC), "Environmental & Social Compliance Monitoring (Site Visit March 2011)," pp.74-75. Field communication.
 - 59 Field communication.
 - 60 Field communication.
 - 61 Field communication.
 - 62 Field communication.
 - 63 Field communication.
 - 64 Field communication.
 - 65 Field communication.



CONCLUSION

This report examined the immediate social changes and impacts associated with the LNGP in the Hela region of PNG. It also touched on many of the topical concerns raised by people in the Hela region. As noted at the outset of this report, it comes at a critical stage in the country's development. Hence, the broader intent of this work is to contribute to open debate and knowledge surrounding the LNGP.

The research for this report took place over several months in the Hela region between 2010 and 2011. The social changes and impacts brought about by the LNGP vary over time and place. Different challenges will arise with each phase of the LNGP. The current construction phase raises some of the greatest concerns, when the local community feels many of the most serious social changes and impacts.

This research utilised a human development lens, with particular attention given to human security concerns, many highlighted in the summary at the end of each chapter and later in this conclusion. This report emphasised the need for parties to act in a manner that is collectively consistent with sustainable human development objectives. The recommendations that follow this chapter are provided in support of improved human development in the Hela region.

The Hela region and PNG present especially challenging circumstances when it comes to addressing social changes and impacts as well as the wide-ranging topical concerns raised by people. The LNGP proponents have achieved a good degree of success and have undertaken significant work in preparation for and occurrence of the myriad of social changes and impacts in the Hela region.

However, it is inevitable that there remain areas of concern or contestation, particularly when there is so much at stake for those affected. The size of the LNGP increases the complexities involved. The comments in this conclusion address general issues raised as well as the central purpose of this research, namely social changes and impacts in relation to the human security of people in the Hela region.

General issues

The LNGP has raised a number of general issues. As with any large-scale resource development project, affected communities suffer distress and disruption to daily life. The scale of the LNGP means its effects are widespread, with some areas experiencing a greater degree of change than others do in the Hela region.

Awareness and community relations were an overwhelming concern of people in the Hela region. At first, expectations in the Hela region were high, seen in the widespread support for the LNGP. However, over time the mood has grown weary and people more circumspect of possibilities offered by the LNGP.

Undoubtedly, many have benefited from the LNGP. However, many others feel they have been left out from the beginning of the awareness process and that community relations efforts have effectively bypassed them. There are admittedly many difficulties in undertaking awareness and community relation in the Hela region, not least of all geographical impediments, the security situation and lack of modern media.

To some extent, the debate over who is impacted remains unanswered.¹ Although EHL maintains it is necessary to focus more narrowly on PDL areas, arguably, the ramifications of the LNGP resonate far outside these boundaries to the remainder of the closely connected Hela region.

EHL have done a good job under difficult circumstances in the immediate vicinity of their work. That is to say, the focus of EHL's awareness and community relations efforts have largely been in areas directly affected by the LNGP, most especially with those who will or have been resettled.

This is understandable. However, there were outstanding complaints even from those who were receiving the greatest attention. Generally, the further away people were from the LNGP, the greater the discontent about the level of awareness and community relations engagement with the Hela populace.

The discontent was twofold: the expectations of people were not being met, and the lack of awareness prompted dissatisfaction and the feeling that they were somehow missing information crucial to improving their situation. Awareness and community relations were seen as the critical means of removing individual and community uncertainties surrounding the LNGP and again, informing people of the development possibilities of the LNGP.

Landowner agreement and identification were two issues that resonated with project area landowners and those outside PDL areas. Central to concerns was the fidelity of the Development Forums, in the first instance, based on the SMLI studies submitted under the LNGA. It was clear that in most people's minds, the rushed process led to an unsatisfactory outcome, one that left many landowners excluded and disgruntled.

There was a deeper sense that this essentially alienated rightful participants from the BSA negotiations process, the benefit streams that would flow from the LNGP and, consequently, entitlements and rights as customary landowners. In the Hela region, this alienation from the land is much aggrieved. Over the long-term, if genuine landowners are not included the likely consequence is some level of chronic conflict and instability in the Hela region.

Benefit sharing issues are already emerging. Although only a few benefits have come on stream to date, problems have been occurring, especially in relation to the disbursement of BDGs. There was contestation amongst landowners over rightful access to the monies and consequent litigation over fraudulent claims and misappropriation. Due to a lack of capacity, there has been no stringent evaluation and monitoring of BDGs.

The fear these initial problems expose is the very real threat that future benefit streams, for example, royalty and equity payments, are susceptible to misappropriation. Concerns over government corruption also accompany this apprehension, particularly in the absence of accountable and transparent avenues for distributing benefits.

The role these benefit streams play in creating greater socio-economic divisions in the Hela region is at the heart of many complaints and human security concerns. Increased inequality, with the creation of favoured groups, through compensation for resettlement or future benefit streams for example, has undoubtedly left those who are excluded feeling upset.

This may play out in any number of ways. In the short-term, there is bullish talk about the need to share the benefits widely and the ominous consequence of not doing so. There is also evidence of criminal activities and jealousies arising, especially in relation to those viewed as favoured inside PDL areas.

The long-term consequences of growing inequality are less certain. If the mechanisms for distributing benefit streams are effective and the benefits shared, the likelihood is that landowners and the community will settle into an easier relationship with the LNGP. This includes sharing through traditional networks and modern mechanisms, such as ILGs. However, if sharing of LNGP benefit streams does not occur, depending on the degree and spread of inequality, there is every reason to believe that conflict will emerge, threatening both the community and LNGP. This conflict is more likely to be in the form of chronic or sporadic acts of violence against the LNGP as well as localised fighting between groups contesting LNGP benefits.

Employment and business opportunities offer a palliative solution to the problem. Certainly, the community welcomes the current employment situation in the Hela region. However, there are those outside the PDL areas and a proportion of people inside the PDL areas who have not benefited from the employment boom provided by the LNGP.

These circumstances have led to an uneasy calm in the PDL areas, where people are currently happy taking advantage of the employment situation. The greatest concern is the sudden drawdown in those employed by the LNGP, somewhere around 2014, when the initial construction phase ends. There are not likely to be enough opportunities to absorb the excess labour and unemployment will result.

There is one important distinction between the current benefits of employment and future financial benefit streams. Employment entails direct payment to many thousands for their labour, allowing for established payments to individuals, which then has a 'trickle-down' effect in the community. However, a smaller number of people can potentially capture and misappropriate future financial benefit streams. Greater dissatisfaction and conflict would arise in the absence of a 'trickle-down' effect.

EHL's successes to date in relation to employment and business are acknowledged.² However, there is continued pressure to increase the number of employment and business opportunities for a wider pool of people in the Hela region. Concerns are evident in relation to the movement of people away from traditional occupations to an over-reliance on formal employment, especially in light of the forecasted fall in employment.

The singular relationship with the LNGP also challenges the sustainability of employment and business in the Hela region. The ending of the construction phase over the short-term and the closure of the LNGP over the long-term jeopardises human development in the absence of varied employment opportunities and a diversified business environment. It is critical, therefore, to build on the current advantages of the LNGP for the future.

Human security

This research has adopted a refined definition of human security: the protection of the essential aspects of human lives from critical and pervasive economic, food, health, environmental, personal, community and political threats.³ These interrelated threats are potentially the most severe social concerns in the Hela region, many resulting from or exacerbated by the LNGP.

Economic security requires a basic income (monetary or otherwise) to reduce the threat of poverty. The LNGP has increased the absolute cash incomes of people, especially through employment. As more money has come into the community, there has been an increase in the number of small traders, for example, taking advantage of growing demand for goods and services.

However, as noted throughout, the exclusion of many people in the Hela region from employment and small trading opportunities is widespread. In this respect, many find it difficult to maintain their situation, given their relative income declines. The fall in employment following the end of the construction phase will cause an immediate decline in the cash incomes of many, resulting in the emergence of another group in relative poverty. Continued employment and business opportunities as well as the wider sharing of future benefit streams throughout the Hela region could possibly offset such an eventuality.

Poverty continues to threaten many people in the Hela region. Relative income deprivation is a cause for concern, particularly in light of growing cash dependency. A higher cash income is of little consequence for many if the required goods and services are still unaffordable given price increases. This situation exhibits itself in growing inequalities within the Hela region, between those who have been able to maintain or increase their standard of living, and those who are falling behind.

Food security requires physical and economic access to food to reduce the threat of hunger and famine. Food security is an especially important component of human security. People in the Hela region traditionally rely on agriculture and pastoralism to provide adequate food and nutrition. The noted growth in incomes and subsequent dependency reduces this traditional emphasis.

Relative poverty is a problem. As the LNGP transitions from construction to operation, the dynamic may be such that some people suffer from food shortages. Furthermore, there were concerns about those resettled to poorer land and the need to keep monitoring the place of rations in the livelihood restoration process to avoid food insecurity.

Health security requires good nutrition, access to safe drinking water and basic healthcare to reduce the threat of disease and injury. The LNGP raised significant expectations in the Hela region, particularly in areas such as education and healthcare. This was accompanied by a great degree of optimism about the future of Hela if these expectations were fulfilled. Although support for the LNGP remains strong, this optimism is wavering.

For many, different stresses have resulted from engaging with the LNGP, from anger and frustration to feelings of abandonment and exclusion. The Hela region and PNG generally face numerous healthcare difficulties, with child and maternal health as well as communicable diseases presenting a significant threat, especially in the face of limited public health services.

Migration due to the LNGP and the resultant pressure on basic health resources as well as problems surrounding communicable disease were frequently raised. The LNGP has conversely contributed to improvements in health security. This includes, for example, supporting increasing preventive public health programmes to reduce HIV/AIDS.

There have also been changes in the number and type of conflicts reported in the context of the LNGP. The Hela region has an extremely bad record in relation to conflict and violence. It is still unclear whether these changes for instance will translate into significant reductions in violence-related admissions to hospital.

Environmental security requires care of the physical environment to reduce the threat of environmental degradation, pollution and resource depletion. Resource development is intrinsically harmful to the environment. To varying degrees, there are impacts on both flora and fauna in the locality affected. Damage to the surrounding environment usually changes people's environmental perspective and reduces environmental amenity values.

The footprint of the LNGP is geographically large, but likely less environmentally damaging than many of the mining enterprises that have operated in PNG. It was beyond the scope of this research to inquire deeply into the environmental ramifications of the LNGP. However, in the Hela region there were concerns about pollution levels during construction. There were also issues raised in relation to the role of the LNGP in the Tumbi landslide.

Moreover, as many in the Hela region increasingly engage with consumerism, a process partially catalysed by the LNGP, rubbish levels and cumulative problems with waste are likely to become increasingly problematic. Because of this, the perception of local people in relation to the environment and their heritage may change over time, with damaging consequences for the surrounding environment.

Personal security requires a safe physical setting to reduce the threat of physical violence. There is a range of contrary evidence in relation to conflict and the threat of violence in the Hela region. The Hela region suffers from significant levels of conflict and violence, putting personal security at great risk. The LNGP has introduced new reasons for peace as well as creating issues that will result in conflict between individuals and groups.

There are associated changes in the family structure that, for good or ill, will generate conflict (at least in the short-term). For example, the changing role of women in Hela, in part driven by the LNGP is creating additional tensions. The increased cash flow and disagreements over the division of benefits within families is also creating social issues that may result in family violence. In such cases, the wellbeing of women and children is of great concern.

There is a continued perception of personal insecurity by many. Much of this fear seems to stem from social changes taking place as well as the associated criminality occurring on a reasonable frequency within the Hela region. Petty crime and armed holdups, targeting PDL residents and PMVs is a widespread threat.

Another problem that spans several categories of human security threat relates to alcohol abuse. Despite the alcohol ban in the region, there is still evidence of home brew and smuggled liquor, resulting social problems and widespread community concern about the situation. Alcohol abuse has been a long-standing issue, its prevalence and consequences affected by challenges associated with issues such as economic disparity, migration to the area and greater disposable incomes.

Community security requires a coherent and supportive community to reduce the threat of social instability and unrest. Although there are some communal tensions between groups that have resulted in conflict, in the main, support for the LNGP, awareness that insecurity places it in jeopardy and a desire to participate, has led to a reduction in conflict between groups or clans. This fall is also due to the efforts of local peacemaking groups as well as the strengthening police presence in the Hela region.

The issue of migration is an immediate concern. In the context of community security and wellbeing, migration is exacerbating a number of existing social problems. It is straining community identity and social networks, as newcomers draw on familial ties and place added pressure on already stretched home and public resources. Although these changes are happening, the degree of change brought about by migration is not fully known.

To a significant extent, community security relies on traditional norms and, in some respects, on the services and structures of the state. There are widespread concerns about the change in community values that over time may threaten community security. Meanwhile, state legitimacy in the Hela region, given the ongoing problems and worrying lack of capacity at all levels of government. A great proportion of the social services in the Hela region are administered by the church.

Efforts by EHL have largely focused on infrastructure that is directly beneficial to advancement of the LNGP. Community development to date has been minimal. The LNGP has placed enormous pressure on government resources, although similarly, support for governance in Hela region has not extended much beyond arrangements that are useful to the LNGP.

Planning is progressing for increased activity in these areas. The results of this research led to the conclusion that a broader effort is needed in relation to support for essential local governance and social services, if the LNGP wishes to retain a local 'social licence-to-operate,' especially in areas such as education and healthcare.

Political security requires human rights adherence to reduce the threat of civil and political repression. The political fragmentation that is familiar to the Hela region and PNG creates immediate tensions in relation to the LNGP. As people seek to capture the enormous financial benefits flowing into the area, the stakes have never been higher. For this reason, the 2012 election will likely be vigorously contested.

In this context, there are contrary tensions associated with political security. Although the political theatre is plural, peaceful debate does not always form part of the process, nor do the mechanisms of pluralistic government extend in an effective manner throughout the Hela region. Rather, contestation melds the traditional and modern, between landowners and the state over access and control of resources.

This clash, although not especially violent yet, has the potential to worsen over the coming months and years if landowners continue to feel aggrieved about the LNGP. Part of the necessary change must entail a greater degree of community participation and empowerment in relation the LNGP and decisions about their future.

This milieu also has the effect of creating power disparities that affect human rights. There were some reports of the police using unnecessary force and criticism of their close association with EHL. However, in the main, people welcomed the police presence. Despite this, the perception and evidence of broader corruption issues damages the effectiveness and integrity of the government.

Summary

Coming at a critical juncture in the country's development, the LNGP presents a significant opportunity for PNG. The prosperity of PNG is ostensibly tied to the success of resource development. However, the resource development experience of PNG is mixed, generating considerable environmental and social harm and bringing few long-term human development benefits for PNG.

Despite being different in character to many past resource development projects in PNG, significant challenges still exist for the LNGP. There are ongoing issues surrounding the early stages of the LNGP, particularly in relation to awareness, landowner agreements and the landowner identification process. There is also genuine concern that the substance of these agreements is unlikely to be fulfilled in a satisfactory manner.

Similarly, the current construction phase is struggling to gain traction and avoid being a sizable, but nonetheless transitory occurrence for many people in the Hela region. While it is still relatively early days, the sustainability of positive construction effects and future benefit streams is in doubt. Rising absolute incomes are offset by the rising cost of living for many people. The critical areas of education and healthcare offer an area of prospective improvement if the government maintains its commitment to improve access, quality and cost in respect of these essential public services. The LNGP is also able to contribute directly to these critical areas.

The generation of these human security threats and their association with the LNGP varies in degrees. It is often difficult to ascribe full responsibility. The emphasis in this report is on addressing the most significant of human security threats in a collective manner, initiating and maintaining action through ongoing dialogue. Stakeholders must act in a jointly responsible manner to ensure opportunities are realised and the overall success of the LNGP benefits human development in the Hela region and more broadly PNG.

1 International Financial Corporation, "Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets," p.10. See also Araho et al., "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008," p.2-1.

2 See: Esso Highlands Limited, "PNG LNG Quarterly Environmental and Social Report: Second Quarter 2011."

3 Owen, "Challenges and Opportunities for Defining and Measuring Human Security," p.20.

RECOMMENDATIONS

The report concludes with recommendations on several specific areas, highlighted in stakeholder discussions as being especially important to the LNGP and the progress of human development in the Hela region. They act as a point of reference for dialogue and future stakeholder action.

Awareness and community relations

- The LNGP operator and government should improve public awareness and community relations in the Hela region through the wider use of public forums to inform local people and community leaders. This includes establishing an information and liaison office headquartered in Tari and ensuring it is properly resourced for this purpose.

Landowners and benefit sharing

- The government should prioritise the completion of landowner identification and ILG registration on an informed basis. This necessitates increased capacity and support from the LNGP operator.
- The government should further establish effective systems to evaluate and monitor future benefit-sharing disbursements at all levels to ensure accountability and transparency.
- The government, with the support of the LNGP operator, should monitor and continue research into best practice benefit sharing mechanisms and community investment models to ensure the sustainability of LNGP funds.

Community development and education

- The government, development agencies, civil society and the LNGP operator should cooperatively examine ways of improving the financial and livelihood skills of Hela residents through the creation and delivery of quality training and livelihood programmes.
- The government, church and other development partners should make education a priority. This includes giving emphasis to increased school enrolments and developing education facilities, particularly under the tax-credit scheme. The government should also examine best practice and enhance teacher training to maximise the benefits of education in the Hela region.
- The government, LNGP operator and community representatives should work together to establish community planning committees. Given appropriate financial and managerial support, they would take responsibility for the prioritisation and implementation of community development projects at the ward level.

- The churches, in collaboration with civil society and development agency partners, should establish a community development body or forum to liaise and work with government and the LNGP operator on community development projects.

Safeguarding the environment

- The implementation of broader stewardship principles and practices in the Hela region is the joint responsibility of all stakeholders in the area. Accordingly, appropriate stakeholders should establish a body that accounts for and reinforces local values and PNG laws on issues of environmental importance.

Improving human security

- The government, development agencies and civil society must engage in joint efforts to ensure food security. These stakeholders should carry out further research and implement the necessary steps to ensure food security in the Hela region.
- The government, development agencies and civil society must work together to address the threats posed by alcohol, communicable diseases and violence. This includes extending preventive health, education and human rights programmes as well as strengthening existing groups who are working on mitigation and reduction strategies in the Hela region.
- All stakeholders have a responsibility to care for those who are most vulnerable to social changes and impacts in the Hela region. Women and children face particular risks. All development and human security activities must consider their rights and wellbeing in an effort to reduce these risks and improve their overall human development.
- The government, development agencies and civil society should guide these development and human security activities. However, the LNGP operator has an important role to play, engaging in a meaningful and effective way and assisting wherever possible in efforts to improve human development in the Hela region.

Sharing responsibility for the social changes and impacts occurring in the Hela region, stakeholders should establish a review body to facilitate dialogue and oversee the effective implementation of these recommendations. Building on existing and new initiatives by stakeholders, the overall objective of collective action in relation to these recommendations is improved human development in the Hela region for present and future generations.

REFERENCES

- ACIL Tasman. "PNG LNG Economic Impact Study: An Assessment of the Direct and Indirect Impacts of the Proposed PNG LNG Project on the Economy of Papua New Guinea (Prepared for Exxon Mobil)." Melbourne: ACIL Tasman Pty Ltd, 2008.
- Allen, B., R.M. Bourke, and J. Gibson. "Poor Rural Places in Papua New Guinea." *Asia Pacific Viewpoint* 46, no. 2 (2005): 201-17.
- Allen, B. J. "The Setting: Land, Economics and Development in the Southern Highlands." In *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, edited by N. Haley and R. May, 35-46. Canberra: ANU E-Press, 2007.
- Andrew Egan, Amy Haddad, and AusAID. "Violence against Women in Melanesia and East Timor: A Review of International Lessons." Canberra, 2007.
- Araho, Nick, Chris Ballard, Bruno David, Tim Denham, John Dop, Tom Ernst, Laurance Goldman, Helen Johnson, Ian McNiven, and John Muke. "Papua New Guinea Liquefied Natural Gas Project: Social Impact Assessment 2008." 2009.
- AusAID. "Making Land Work: Reconciling Customary Land and Development in the Pacific (Volume One)." Canberra: AusAID, 2008.
- Auty, R. M. "The Resource Curse Thesis: Minerals in Bolivian Development 1970-90." *Singapore Journal of Tropical Geography* 15, no. 2 (1994): 95-111.
- Auty, R.M. *Resource Abundance and Economic Development*. Oxford: Oxford University Press, 2001.
- Auty, R.M. *Sustaining Development in Mineral Economies: The Resource Curse Thesis*. London: Routledge, 1993.
- Ballard, Chris, and Glenn Banks. "Resource Wars: The Anthropology of Mining." *Annual Review of Anthropology* 32 (2003): 287-313.
- Ballentine, K., and J. Sherman. *The Political Economy of Armed Conflict: Beyond Greed and Grievance*. Lynne Rienner Pub, 2003.
- Bamberger, M., V. Rao, and M. Woolcock. *Using Mixed Methods in Monitoring and Evaluation: Experiences from International Development*. World Bank, 2010.
- Bank of Papua New Guinea. "June 2011 Quarterly Economic Bulletin." Port Moresby: Bank of Papua New Guinea, 2011.
- Banks, Glenn. "Compensation for Mining, Benefit or Time Bomb? The Porgera Gold Mine." In *Resources, Nations and Indigenous Peoples: Case Studies from Australasia, Melanesia, and Southeast Asia*, edited by R. Howitt, J. Connell and P. Hirsch. Melbourne: Oxford University Press, 1996.
- Banks, Glenn. "Globalization, Poverty, and Hyperdevelopment in Papua New Guinea's Mining Sector." *Focaal - European Journal of Anthropology* 46 (2005): 128-43.
- Banks, Glenn. "Papua New Guinea Baseline Study." In *Report for MMSD Project*, 1-98. London: International Institute for Environment and Development (IIED), 2001.
- Banks, Glenn. "Understanding 'Resource Conflicts in Papua New Guinea.'" *Asia Pacific Viewpoint* 49, no. 1 (2008): 23-34.
- Bannon, I., and P. Collier. "Natural Resources and Conflict: What Can We Do?" In *Natural Resources and Violent Conflict: Options and Actions*, edited by I. Bannon and P. Collier. Washington D.C.: World Bank Publications, 2003.
- Behre Dolbear. "2012 Ranking of Countries for Mining Investment Where 'Not to Invest?'" Behre Dolbear Group Inc., 2012.
- Birdsall, Nancy, Thomas Pinckney, and Richard Sabot. "Natural Resources, Human Capital, and Growth." 1-24. Washington D.C.: Carnegie Endowment for International Peace, 2000.
- Bonnell, Susanne. "The Impact of Relocation." In *Dilemmas of Development: The Social and Economic Impact of the Porgera Gold Mine, 1989-1994*, edited by C. Filer, 128-59. Canberra, Port Moresby: Asia Pacific Press and National Research Institute, 1999.
- Bray, John. "Attracting Reputable Companies to Risky Environments: Petroleum and Mining Companies." In *Natural Resources and Violent Conflict: Options and Actions*, edited by I. Bannon and P. Collier. World Bank Publications, 2003.
- Brunnschweiler, Christa N., and Erwin H. Bulte. "Natural Resources and Violent Conflict: Resource Abundance, Dependence, and the Onset of Civil Wars." *Oxford Economic Papers* 61, no. 4 (2009): 651-74.
- Bulte, Erwin H., Richard Damania, and Robert T. Deacon. "Resource Intensity, Institutions, and Development." *World Development* 33, no. 7 (2005): 1029-44.
- Cammack, D. "Chronic Poverty in Papua New Guinea." In *Background paper for The Chronic Poverty Report: Chronic Poverty Research Centre*, 2008.
- Chand, S. "Papua New Guinea Economic Survey: Transforming Good Luck into Policies for Long-Term Growth." *Pacific Economic Bulletin* 19, no. 1 (2004): 1-19.
- Collier, Paul, and Anke Hoefler. "Resource Rents, Governance, and Conflict." *The Journal of Conflict Resolution* 49, no. 4 (2005): 625-33.
- Corporate Europe Observer. "Industry's Rio + 10 Strategy: Banking on Feelgood PR." *CEO Quarterly Newsletter* 10 (2001).
- Department of Commerce and Industry. "Update on LNG Business Development Grant (BDG) - Seed Capital Disbursement, 04 October 2010." 2010.
- Department of National Planning and Monitoring. "The Medium Term Development Plan (2011-2015)." Port Moresby: Government of Papua New Guinea 2010.
- Dinnen, Sinclair. *Law and Order in a Weak State: Crime and Politics in Papua New Guinea*, Pacific Islands Monograph Series ;17. Honolulu: Center for Pacific Islands Studies, School of Hawaiian, Asian, and Pacific Studies, University of Hawai'i Press, 2001.
- Dixon, P.B., G. Kauzi, and M.T. Rimmer. "Effects on the PNG Economy of a Major LNG Project." *Economic Papers: A Journal of Applied Economics and Policy* 29, no. 2 (2010): 143-55.
- Economist Intelligence Unit. "Papua New Guinea Country Profile 2008." London: The Economist, 2008.
- EITI International Secretariat. "What Is the EITI?" <http://eiti.org/>.
- Elkington, John. "Partnerships from Cannibals with Forks: The Triple Bottom Line of 21st-Century Business." *Environmental Quality Management* 8, no. 1 (1998): 37-51.
- Equator Principles Secretariat. "About the Equator Principles." <http://www.equator-principles.com/>.
- Esso Highlands Limited. "Community Development Support Plan." In *Community Support Strategy* 1-46. Port Moresby: PNG LNG, 2011.
- Esso Highlands Limited. "Environmental and Social Management Plan, Appendix 26: Resettlement Policy Framework." Port Moresby: PNG LNG, 2010.
- Esso Highlands Limited. "Environmental Impact Statement." Melbourne: Coffey Natural Systems Pty Ltd, 2009.
- Esso Highlands Limited. "Fact Sheet: Benefit Sharing Agreement." Port Moresby PNG LNG, 2009.
- Esso Highlands Limited. "Fact Sheet: Project Overview." Port Moresby PNG LNG, 2010.
- Esso Highlands Limited. "National Content Plan." Port Moresby: PNG LNG, 2009.
- Esso Highlands Limited. "PNG LNG Quarterly Environmental and Social Report: Second Quarter 2011." Port Moresby: PNG LNG, 2011.

- Esso Highlands Limited. "PNG LNG Quarterly Environmental and Social Report: Third Quarter 2011." Port Moresby: PNG LNG, 2011.
- Esso Highlands Limited. "What Is LNG?" <http://pnglng.com/project/lng.htm>.
- ExxonMobil. "About Us." <http://www.exxonmobil.com>.
- Field communication. 2011.
- Filer, C. "Participation, Governance and Social Impact: The Planning of the Lihir Gold Mine." *Mining and Mineral Resource Policy Issues in Asia-Pacific: Prospects for the 21st Century* (1995): 67-75.
- Filer, C., and R.T. Jackson. *Landowner Compensation in Papua New Guinea's Mining and Petroleum Sectors*: PNG chamber of Mines and Petroleum, 2000.
- Filer, Colin. "Local Custom and the Art of Land Group Boundary Maintenance in Papua New Guinea." In *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, edited by James Weiner and Katie Glaskin, 135-73: Australian National University e-press, 2007.
- Filer, Colin. "Local Custom and the Art of Land Group Boundary Maintenance in Papua New Guinea." In *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, edited by James F. Weiner and Katie Glaskin, 135-73. Canberra: ANU E Press, 2007.
- Filer, Colin. "The Political Construction of a Land Grab in Papua New Guinea." In *Global Land Grabbing*. Institute of Development Studies, University of Sussex, 2011.
- Filer, Colin, and Benedict Imbun. "A Short History of Mineral Development Policies in Papua New Guinea." In *Policy Making and Implementation: Studies from Papua New Guinea* edited by R. J. May. Canberra: E Press, Australia National University, 2009.
- First field survey. 2011.
- Frankel, J.A. "The Natural Resource Curse: A Survey." Cambridge: Harvard Kennedy School, 2010.
- Gibson, John, and Scott Rozelle. "Poverty and Access to Roads in Papua New Guinea." *Economic Development and Cultural Change* 52, no. 1 (2003): 159-85.
- Gilberthorpe, Emma. "Development and Industry: A Papua New Guinea Case Study." 1-72. Durham: Drrham University, 2009.
- Goldman, Laurance. "Incorporating Huli: Lessons from the Hides Licence Area." In *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, edited by James F. Weiner and Katie Glaskin, 95-115: Australian National University e-press, 2007.
- Goldman, Laurence. "'Hoo-Ha in Huli': Considerations on Commotion and Community in the Southern Highlands." In *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, edited by Nicole Haley and Ronald J. May, 69-88. Canberra: E Press, Australia National University, 2007.
- Goldman, Laurence. "Incorporating Huli: Lessons from the Hides Licence Area." In *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, edited by James Weiner and Katie Glaskin, 95-115: Australian National University e-press, 2007.
- Goldman, Laurence. "Social Impact Assessment." 2009.
- Gouy, Jonathan, Joe Kapa, Alfred Mokae, and Theodore Levantis. "Parting with the Past: Is Papua New Guinea Poised to Begin a New Chapter Towards Development?" *Pacific Economic Bulletin* 25, no. 1 (2010).
- Government of Papua New Guinea. "Oil and Gas Act." Papua New Guinea, 1998.
- Haley, N., and J. R. May. "Introduction: Roots of Conflict in the Southern Highlands." In *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, edited by N. Haley and R. May, 1-20. Canberra: ANU E-Press, 2007.
- Haley, N., and R. Muggah. "Jumping the Gun? Reflections on Armed Violence in Papua New Guinea." *African Security Review* 15, no. 2 (2006): 38-56.
- Haley, Nicole, and Ronald J. May. "Introduction: Roots of Conflict in the Southern Highlands." In *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, edited by Nicole Haley and Ronald J. May. Canberra: E Press, Australia National University, 2007.
- Hanson, L. W., B.J. Allen, R.M. Bourke, and T.J. McCarthy. *Papua New Guinea Rural Development Handbook*. Canberra: The Australian National University, 2001.
- Haq, Mahbub ul. "The Human Development Paradigm." In *The Development Economics Reader*, edited by G. Secondi. Milton Park, Oxon: Routledge, 2008.
- Herz, S., A. La Viña, and J. Sohn. "Development without Conflict: The Business Case for Community Consent." Washington D.C.: World Resources Institute, 2007.
- Hinde, Chris. "Papua New Guinea." *Mining Journal Supplement* 11/09 (2009): 1-8.
- Humphreys, M., J. Sachs, and J.E. Stiglitz. *Escaping the Resource Curse*: Columbia University Press, 2007.
- Independent Environmental and Social Consultant (IESC). "Environmental & Social Compliance Monitoring (Site Visit July-August 2011)." Genova, Italia: D'Appolonia, 2011.
- Independent Environmental and Social Consultant (IESC). "Environmental & Social Compliance Monitoring (Site Visit March 2011)." Genova, Italia: D'Appolonia, 2011.
- Independent Environmental and Social Consultant (IESC). "Environmental & Social Compliance Monitoring (Site Visit May 2010)." Genova, Italia: D'Appolonia, 2010.
- Independent Environmental and Social Consultant (IESC). "Environmental & Social Compliance Monitoring (Site Visit October 2010)." Genova, Italia: D'Appolonia, 2010.
- International Financial Corporation. "Good Practice Note: Addressing the Social Dimensions of Private Sector Projects." 1-28. Washington D.C., 2003.
- International Financial Corporation. "International Finance Corporation's Performance Standards on Social & Environmental Sustainability." 1-37. Washington D.C.: International Financial Corporation, 2006.
- International Financial Corporation. "Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets." 1-201. Washington D.C.: International Finance Corporation, World Bank Group, 2007.
- International Monetary Fund. "IMF Country Report No. 03/178 (Papua New Guinea)." 1-52. Wahington D.C.: International Monetary Fund, 2003.
- Jackson, R.T. *Cracked Pot or Copper Bottomed Investment?: The Development of the Ok Tedi Project 1982-1991, a Personal View*: Melanesian Studies Centre, James Cook University, North Queensland, 1993.
- Jensen, Lois. "Women's and Children's Rights: Making the Connection." New York: United Nations Population Fund; United Nations Children's Fund, 2011.
- Johnson, R. Burke, Anthony J. Onwuegbuzie, and Lisa A. Turner. "Toward a Definition of Mixed Methods Research." *Journal of Mixed Methods Research* 1, no. 2 (2007): 112-33.
- Joyce, S.A., and M. MacFarlane. "Social Impact Assessment in the Mining Industry: Current Situation and Future Directions." *London: International Institute for Environment and Development (IIED)-Mining, Minerals and Sustainable Development* (2001): 8-10.
- Jubilee Australia. "PNG LNG Project Investigation." Forthcoming.
- Kell, Tim. *The Roots of Acehnese Rebellion, 1989-1992*. Singapore: Equinox Publishing, 2010.
- Kelly, A., M. Kupul, W.Y.N. Man, S. Nosi, N. Lote, P. Rawstorne, G. Halim, C. Ryan, and H. Worth. "Askim Na Save (Ask and Understand): People Who Sell and/or Exchange Sex in Port Moresby (Key Quantitative Findings)." Sydney, Australia: Papua New Guinea Institute of Medical Research and University of New South Wales, 2011.

- Kirsch, Stuart. "Indigenous Movements and the Risks of Counter globalization: Tracking the Campaign against Papua New Guinea's Ok Tedi Mine." *American Ethnologist* 34, no. 2 (2007): 303-21.
- Klugman, Jeni, and United Nations Development Programme. "The Real Wealth of Nations: Pathways to Human Development." In *Human Development Report 2010*. New York: United Nations Development Programme, 2010.
- Kopi, M., R. Hinton, S. Robinson, S. Maiap, and Y. Guman. "Insecurity in the Southern Highlands: The Nature, Triggers and Consequences of Violence in Hela Region." *State, Society and Governance in Melanesia Discussion Paper* (2011).
- Lewis, N. "Conflict Vulnerability Assessment of the Southern Highlands Province." In *Conflict and Resource Development in the Southern Highlands of Papua New Guinea*, edited by N. Haley and R. May, 149-64. Canberra: ANU E-Press, 2007.
- Lujala, Paivi. "Deadly Combat over Natural Resources." *Journal of Conflict Resolution* 53, no. 1 (2009): 50-71.
- Maiap, Sylvia. "Youth Idleness, an Aspect of Insecurity in the Hela Region of Southern Highlands Province." Goroka: Oxfam Highlands Programme, 2011.
- McCarthy, John F. "The Demonstration Effect: Natural Resources, Ethnonationalism and the Aceh Conflict." *Singapore Journal of Tropical Geography* 28, no. 3 (2007): 314-33.
- McPhail, Kathryn, and Aidan Davy. "Integrating Social Concerns into Private Sector Decision-Making: A Review of Corporate Practices in the Mining, Oil, and Gas Sectors." In *World Bank Discussion Paper No.384*, 1-97. Washington D.C.: World Bank, 1998.
- Mehlum, Halvor, Karl Moene, and Ragnar Torvik. "Cursed by Resources or Institutions?" *World Economy* 29, no. 8 (2006): 1117-31.
- Mikkelsen, B. *Methods for Development Work and Research*. Thousand Oaks, CA: Sage Publications, 2005.
- Ministry for National Planning and Monitoring. "The Medium Term Development Strategy (2005-2010)." Port Moresby: Government of Papua New Guinea, 2004.
- National Disaster Centre. "Tumbi (Lanjako/Nogoli Perepa) Council Ward in the Komo LLG Assessment Form." Port Moresby: National Disaster Centre, 2012.
- National Research Institute. "Papua New Guinea: District and Provincial Profiles." 1-190. Port Moresby: National Research Institute, 2010.
- National Statistics Office. "National Census 2000: Southern Highlands Provincial Report. ." Port Moresby: National Statistics Office (NSO), 2002.
- National Strategic Plan Taskforce. "Papua New Guinea Vision 2050." Port Moresby: Government of Papua New Guinea, 2009.
- Neary, J.P., and S. Van Wijnbergen, eds. *Natural Resources and the Macroeconomy*. Oxford: Centre for Economic Policy Research, Blackwell, 1986.
- New Zealand Ministry of Foreign Affairs and Trade. "Papua New Guinea." New Zealand Ministry of Foreign Affairs and Trade,, <http://www.mfat.govt.nz/Countries/Pacific/Papua-New-Guinea.php>.
- O'Faircheallaigh, C. "Resource Exploitation and Indigenous People: Towards a General Analytical Framework." In *The Challenge of Northern Regions*, edited by P. Juli and S. Roberts, 228-71. Darwin: Australian National University, 1991.
- Okoko, E. "Women and Environmental Change in the Niger Delta, Nigeria: Evidence from Ibeno." *Gender, Place and Culture: A Journal of Feminist Geography* 6, no. 4 (1999): 373-78.
- Owen, Taylor. "Challenges and Opportunities for Defining and Measuring Human Security." In *Human rights, human security and disarmament*: Disarmament Forum, 2004.
- Pendergast, S.M., J.A. Clarke, and G.C. van Kooten. "Corruption, Development and the Curse of Natural Resources." In *Working paper*. Victoria, B.C.: Department of Economics, University of Victoria, 2010.
- Personal communication. 2012.
- Power, Tony. "Incorporated Land Groups in Papua New Guinea." In *Making Land Work: Case Studies on Customary Land and Development in the Pacific (Volume Two)*, edited by AusAID. Canberra: AusAID, 2008.
- Radio New Zealand. "Approach to PNG Landslide Cleanup Called Insensitive." <http://www.rnzi.com>.
- Radio New Zealand. "Calls Continue for Independent Investigation into PNG's Tumbi Landslide." <http://www.rnzi.com>.
- Radio New Zealand. "Concern of Whitewash after PNG Tumbi Landslide Disaster." <http://www.rnzi.com>.
- Radio New Zealand. "Esso Highlands Dismisses Speculation Its Gas Project Is Linked to Massive PNG Landslide." <http://www.rnzi.com>.
- Radio New Zealand. "Investigation Calls for End of PNG Police/Esso Deal." <http://www.rnzi.com>.
- Radio New Zealand. "Landslide Stops Work at Exxon Mobil's Airport Project." <http://www.rnzi.com>.
- Radio New Zealand. "PNG Govt, Exxon under Spotlight over Tumbi Landslide." <http://www.rnzi.com>.
- Radio New Zealand. "PNG Highlands Highway Cleared after Landslide but Local Greivances Remain." <http://www.rnzi.com>.
- Reed, Darryl. "Resource Extraction Industries in Developing Countries." *Journal of Business Ethics* 39, no. 3 (2002): 199-226.
- Regan, Anthony J. "Causes and Course of the Bougainville Conflict." *The Journal of Pacific History* 33, no. 3 (1998): 269-85.
- Reilly, Benjamin. "Ethnic Conflict in Papua New Guinea." *Asia Pacific Viewpoint* 49, no. 1 (2008): 12-22.
- Remy, F., and G. McMahon. "Large Mines and Local Communities: Forging Partnerships, Building Sustainability." 1-32. Washington, DC: Mining Department, World Bank Group, 2002.
- Ross, Michael L. "Extractive Sectors and the Poor." 1-28. Boston: Oxfam America, 2001.
- Ross, Michael L. "Resources and Rebellion in Aceh, Indonesia." In *Report prepared for the Yale-World Bank project on 'The Economics of Political Violence'*: Yale University, 2003.
- Rossmann, Gretchen B., and Bruce L. Wilson. "Numbers and Words." *Evaluation Review* 9, no. 5 (1985): 627-43.
- Sachs, J., and A. Warner. "Natural Resource Abundance and Economic Growth." 1-50. Cambridge, MA: Center for International Development and Harvard Institute for International Development, 1997.
- Sachs, J.D., and A.M. Warner. "The Big Push, Natural Resource Booms and Growth." *Journal of development economics* 59, no. 1 (1999): 43-76.
- Sachs, J.D., and A.M. Warner. "The Curse of Natural Resources." *European Economic Review* 45, no. 4-6 (2001): 827-38.
- Sarraf, M., and M. Jiwanji. "Beating the Resource Curse: The Case of Botswana." In *Environmental Economics Series, Paper 83*, 1-36. Washington D.C.: World Bank Group, 2001.
- Second field survey. 2011.
- Secretariat for the Voluntary Principles on Security and Human Rights. "Voluntary Principles on Security and Human Rights." <http://voluntaryprinciples.org>.
- Sillitoe, P. *An Introduction to the Anthropology of Melanesia: Culture and Tradition*: Cambridge University Press, 1998.
- Sillitoe, Paul. "Beating the Boundaries: Land Tenure and Identity in the Papua New Guinea Highlands." *Journal of Anthropological Research* 55, no. 3 (1999): 331-60.
- Stevens, P. "Resource Impact: Curse or Blessing? A Literature Survey." 1-33: IPIECA, 2003.
- Taylor, Meg, and Kathy Whimp. "Hydrocarbon Sector - Landowner Issues and Sectoral Framework Study." In *Report to the Asian Development Bank and PNG Department of Petroleum and Energy*. Wellington, 1997.
- The Independent State of Papua New Guinea, and PDL Licensees. "PNG LNG Gas Agreement." Papua New Guinea, 2008.

- The Independent State of Papua New Guinea, Provincial Governments, Local Level Governments, and Landowners. "Umbrella Benefit Sharing Agreement (UBSA)." Papua New Guinea, 2009.
- Toft, S. *Compensation for Resource Development in Papua New Guinea*. Canberra: Australian National University (Faculty of Law), 1997.
- Togolo, Mel. "The 'Resource Curse' and Governance: A Papua New Guinean Perspective." In *Globalisation and Governance in the Pacific Islands*, edited by Stewart Firth. Canberra: ANU E Press, 2006.
- Trebilcock, Michael J. "Communal Property Rights: The Papua New Guinean Experience." *The University of Toronto Law Journal* 34, no. 4 (1984): 377-420.
- United Nations Development Programme. "The Human Development Concept." <http://hdr.undp.org/en/humandev/>.
- United Nations Development Programme. "New Dimensions of Human Security." In *Human Development Report 1994*, edited by Inge Kaul, 1-131. New York: United Nations Development Programme, 1994.
- United Nations Development Programme. "Papua New Guinea: Country Profile of Human Development Indicators." <http://hdrstats.undp.org/en/countries/profiles/PNG.html>.
- United Nations Development Programme. "Second National MDG Progress Summary Report 2009." Port Moresby: United Nations Development Programme, 2009.
- United Nations General Assembly. "United Nations Millennium Declaration." New York: United Nations, 2000.
- United Nations General Assembly. "Universal Declaration of Human Rights." 1948.
- van Marrewijk, Marcel. "Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion." *Journal of Business Ethics* 44, no. 2 (2003): 95-105.
- Vanclay, F. "Social Impact Assessment." Contributing paper to World Commission on Dams 1999.
- Veiga, Marcello M., Malcolm Scoble, and Mary Louise McAllister. "Mining with Communities." *Natural Resources Forum* 25, no. 3 (2001): 191-202.
- Wardlow, H. "Men's Extramarital Sexuality in Rural Papua New Guinea." *American Journal of Public Health* (2007).
- Wardlow, H. *Wayward Women: Sexuality and Agency in a New Guinea Society*. Berkeley: University of California Press, 2006.
- Weber-Fahr, Monika. "Treasure or Trouble? Mining in Developing Countries." In *Mining and Development: Global Mining*, 1-32. Washington D.C.: World Bank, 2002.
- Weiner, James. "The Incorporated Ground: The Contemporary Work of Distribution in the Kutubu Oil Project Area, Papua New Guinea." *RMAP Working Papers: Resource Management in Asia-Pacific* (1998).
- Weiner, James F. "The Foi Incorporated Land Group: Group Definition and Collective Action in the Kutubu Oil Project Area, Papua New Guinea." In *Customary Land Tenure and Registration in Australia and Papua New Guinea: Anthropological Perspectives*, edited by James F. Weiner and Katie Glaskin, 117-34. Canberra: ANU E Press, 2007.
- Weiner, James, Abby McLeod, and Charles Yala. "Aspects of Conflict in the Papua New Guinea Highlands." In *State, Society and Governance in Melanesia*. Canberra: Australia National University, 2002.
- Weisbrot, M., L. Sandoval, and D. Rosnick. "Poverty Rates in Venezuela: Getting the Numbers Right." *International Journal of Health Services* 36, no. 4 (2006): 813-23.
- Westermark, George. "Clan Claims: Land, Law and Violence in the Papua New Guinea Eastern Highlands." *Oceania* 67, no. 3 (1997): 218-33.
- Wielders, Iris. "Listening to the Impacts of the PNG LNG Project: Central Province, Papua New Guinea." Melbourne; Port Moresby: Oxfam, 2011.
- Williamson, A., and G. Hancock. "The Geology and Mineral Potential of Papua New Guinea." 1-154. Port Moresby: Papua New Guinea Department of Mining, 2005.
- World Bank. "Papua New Guinea." World Bank, <http://data.worldbank.org/country/papua-new-guinea>.
- World Bank. "World Development Indicators (CD-ROM)." edited by World Bank. Washington D.C., 2008.
- World Health Organisation. "Country Cooperation Strategy at a Glance." Port Moresby: World Health Organisation, 2010.
- World Health Organisation. "Papua New Guinea Country Profile 2011." Port Moresby: World Health Organisation, 2011.
- Wright, G., and J. Czelusta. "Mineral Resources and Economic Development." Paper presented at the Conference on Sector Reform in Latin America, Stanford Center for International Development, 13-15 November 2003.

For further information on the partner organisations supporting this research or their work:

ChildFund Australia
Level 8, 162 Goulburn Street
Surry Hills, NSW 2010
Australia
www.childfund.org.au

Jubilee Australia
Level 7, 379 Kent St
Sydney, NSW 2000
Australia
www.jubileeaustralia.org

Melanesian Institute
PO Box 571
Goroka 441
Easter Highlands Province
Papua New Guinea
www.mi.org.pg

National Centre for Peace and Conflict Studies
University of Otago
PO Box 56
Dunedin 9054
New Zealand
www.otago.ac.nz/ncpacs

Oxfam Highlands Programme
PO Box 284
Goroka, Eastern Highlands Province
Papua New Guinea
www.oxfam.org.nz

PNG Church Partnership Program
PO Box 1401
Port Moresby
Papua New Guinea
www.pngcpp.org.au

Dr James McIlraith is currently a Research Fellow at the National Centre for Peace and Conflict Studies. The views expressed in this report are those of the authors and do not necessarily reflect those of partner organisations. For more information or to comment on this report, please email peaceandconflict@otago.ac.nz.

