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**THE NATIONAL LAND RESEARCH FRAMEWORK
FOR THE
PAPUA NEW GUINEA NATIONAL LAND DEVELOPMENT PROGRAM**



**NRI
The National Research Institute**

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**THE NATIONAL LAND RESEARCH FRAMEWORK FOR THE PAPUA NEW
GUINEA NATIONAL LAND DEVELOPMENT PROGRAM**

by

**Charles Yala
&
Ken Lyons**

**NRI
The National Research Institute**

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ACRONYMS AND ABBREVIATIONS

AusAID	Australian Agency for International Development
DLPP	Department of Lands and Physical Planning
GoPNG	Government of Papua New Guinea
LLB	Lease-Lease-Back
LRF	Land Research Framework
LRP	Land Research Program
NLDP	National Land Development Program
NLDT	National Land Development Taskforce
NLS	National Land Summit
NRI	National Research Institute
PNG	Papua New Guinea
UPNG	University of Papua New Guinea

EXECUTIVE SUMMARY

Property rights and development — the global context

The important role that private property rights play in spurring economic growth and development is widely acknowledged in the economics literature and has also been extensively documented by economic historians such as North and Thomas (1973), and Rosenberg and Birdzell (1986). This line of analysis has influenced the thinking of commentators, policy makers, and international donor agencies about land reforms across the developing world. The World Bank has been the main international agency sponsoring land reform initiatives in many developing countries, Papua New Guinea (PNG) included.

The impact of this policy prescription in the context of developing countries is, however, inconclusive. While the theoretical framework remains sound, the policy emphasis on the issuance of individual land titles has not been that successful. The espoused channels fail to function in many instances. While this failing has polarised the debate for and against the case of land reform, the emerging consensus is that while security of property rights may not be viewed as the panacea for development, it has a significant role to play in the development process. Further, the policy emphasis on land titles *per se* has shifted to the securing of security of tenure. Finally, context, depicting the on-the-ground realities, matter more.

Informed by the international literature, the Papua New Guinea Government (GoPNG) decided to undertake a comprehensive land reform program, starting in 2005 (National Land Summit Coordinating Committee, 2006; National Land Development Taskforce, 2007; Yala, 2010).

Property rights policy development and implementation in the PNG context

The policy conception, formulation, and implementation was informed by the broader literature but made to suit PNG's context. The economics of land titling, a branch of institutional economics, has provided the theoretical framework and empirical bases for this reform initiative because the main focus of this land reform initiative being implemented under the National Land Development Program (NLDP), is to enhance land's contribution to economic growth to meet the 5 percent per annum growth target set in the GoPNG's Medium Term Development Strategy (MTDS) 2005–2010 target. This can only be achieved by defining and ensuring security of tenure, the basis for improved productivity of land.

PNG's history is littered with failed attempts to undertake land tenure reform. As a consequence, about 97 percent of the land is owned by customary landowning social units. Learning from past mistakes and being informed by the global literature, the GoPNG invested in a process, led by Papua New Guinean institutions and experts, to conceive, formulate, and now implement the land reform program. This approach is embedded in the need to remain objective about undertaking land reform but with a clear understanding of the context, which includes the people, culture, system of government, and the state of national development. This approach calls for discipline on the part of the government and its reform advocates to remain open and frank about the idea of a land reform and the kind of reforms needed for PNG. The starting point is to realise that customary land tenure is real and is fully functional. Because the bulk of the land is owned by the people of PNG through their customary land tenure systems, the State does not have the

legitimacy nor the authority to unilaterally pursue a land reform program, including customary land tenure reform.

The GoPNG needed a mandate from the people of PNG on two important issues: (i) to pursue a land reform initiative; and (ii) on the kind of land reform. This mandate was achieved through the staging of a National Land Summit in Lae in 2005 (National Land Summit Coordinating Committee, 2006; Yala, 2010). In 2006, the GoPNG established the National Land Development Taskforce to formulate the recommendations from the summit into policy options and strategies (National Land Development Taskforce, 2007). In 2007, the National Land Development Program (NLDP) was launched to implement the land reform program. As of 2010, the NLDP is progressing towards full implementation.

The Land Research Framework

The NLDP has established a Land Research Program (LRP) within the National Research Institute (NRI) to undertake research and provide oversight of the implementation of the NLDP. The NRI-based LRP will use the Land Research Framework (LRF) designed in this report to initiate, guide, and coordinate the research activities of the NLDP.

The three objectives of the LRF as defined in the terms of reference for the design of the LRF are to:

- create a national LRF that guides research on land and its contribution to national development;
- identify research issues emerging from the PNG land reforms and establish priority research areas; and
- involve stakeholders in dialogue regarding land research in PNG.

Also included in the terms of reference was the need to have an updated review of the global and PNG literature. This need was perceived as crucial in identifying knowledge gaps (theory, empiricism, and policy), to identify priority themes, define key research questions, establish in-country capacity to undertake the research, and consult with relevant stakeholders (researchers and the policy community) to deliberate on the framework and other identified research needs.

Main elements of the land research framework

A conceptual framework was conceived using the lessons from the broader literature, the PNG context and the NLDP to provide a framework for the PNG land reform program. The framework acknowledges that emphasis has to be given to the design of the property rights system on the status of the underlying land, the design of an efficient land administration system to administer transactions on individual land titles, and institutions appropriate for a viable land and properties market. In this framework, the role of the State is reduced to defining and enforcing property rights and the safe keeping of land titles. In contrast, the private sector plays a dominating role. These features are in agreement with the four components of the NLDP.

The LRF draws implications from the conceptual framework that are consistent with those of the NLDP, and organises the research framework under the following four thematic areas to monitor the espoused outcomes:

Strategic Research — These are the kinds of research that require long-term data gathering and analysis that may lead to generating information that adds to the pool of knowledge and policy. With respect to time horizons, they need to be long-term focused. The kinds of institutions that can take the lead in this type of research are largely academic-oriented institutions such as universities. The researchers likely to be engaged in this endeavour are graduate studies students under the supervision of lead researchers in the various fields requiring research.

Enabling Research — The research undertaken should track implementation and inform policy. Specific research projects may focus on components of the NLDP or other issues captured in the conceptual framework, such as the operation and efficiency of the system of land administration, implementation of the customary land tenure reform laws, implementation of the land disputes settlements system, and development of the land, property and housing markets.

Because, the research to be undertaken will be geared towards informing the implementation processes, some could be undertaken through short-term consultancies or other modalities such as contracted research with clearly defined terms of reference. Where there is capacity, some research could be undertaken in-house by staff or in collaboration with other academic and research institutes, both within PNG and abroad.

Research on cross-cutting issues — There are issues that have cross cutting implications that require adopting multidisciplinary approaches to research. Tracking the dynamics expected within the social structure, including gender dimensions, is one example of a cross-cutting issue. Similarly, understanding the dynamics within the broader ILGs, executives of ILGs, and the kind of decisions they make with respect to the allocation and distribution of incomes would require a multi-disciplinary approach. Other examples include the impact on land use and resource management due to global warming.

Some research activities from this set of research could fall within the strategic as well as the enabling research components. Lead researchers from different disciplines could collaborate on this type of research. For strategic oriented research, encouraging graduate level students would be an ideal option. For enabling type research, in-house or contracted research by various research agencies may have to be considered.

Informing Research — Given the dynamics of the land reform program and the fact that implementation has its own process, the research framework should be able to capture this dynamism. The informing research theme should monitor developments and undertake research on emerging issues, not covered in the research framework. Such research could be either contracted or undertaken in-house. How the research is undertaken should depend on the nature of the issue.

Preceding any research activity should be a series of baseline studies. A series of baselines need to be established prior to full implementation on several of the strategic aspects of the NLDP with a view to creating a longitudinal database. This data stream will become useful for monitoring the effectiveness of the NLDP over time.

Operationalising the land research framework

With the view to operationalising the research framework, a survey questionnaire was administered. Three sets of questionnaires were aimed at determining views on the following: what research topics are considered important by a wide range of PNG stakeholders; what research topics are individual PNG researchers interested in, and their capacity to undertake the research; and what research areas are PNG research organisations interested in, and their capacity to undertake the research. The results from the analysis of the survey questionnaires support the research themes. However, there are capacity issues that need to be considered at the time of implementing the research framework. Further, collaborative arrangements with senior researchers emerged as an important issue expressed by researchers.

The analysis was taken further to define a small number of major research questions within each theme or sub area, such that the more minor research topics within it can contribute to the major research question and also inform each other where necessary. This approach is intended to make the LRF serve as a guiding framework within which specific research projects and activities can be identified, funded, and the research undertaken. As a guiding framework in selecting research projects and activities, the following questions have been formulated: *Would this research project/activity enhance our understanding of land's contribution to development? If yes, how?*

The research could be undertaken through in-house, collaborative, contracted, consultancy, and fellowship arrangements, as well as contested grants for innovative proposals. Different institutions with comparative advantage and capacity could be entrusted to take leadership in some thematic areas. However, the LRF based at NRI should manage the Land Research Framework by identifying research projects/activities, providing funding for the conduct of the research, engaging researchers through the various pathways, providing quality control mechanisms, and providing mechanisms for disseminating the findings to stakeholders.

A national land conference should be held every three years with the aim of disseminating research findings, updating the research framework, informing the broader stakeholder community about progress (and or lack of it), and identifying emerging issues for further research.

Conclusion

The aim of land reform in PNG is to raise economic growth. The above is to be achieved by raising productivity of land, the bulk of which remains under customary tenure. The productivity of land, in turn, is hypothesised to be linked to the level of investment which in turn is determined by the perceived security of tenure in the land being invested on.

Furthermore, the objectives of this land research framework highlight the importance of monitoring, evaluating, and fine-tuning of reforms. The literature provides support to the hypotheses underscoring the reform being instituted in PNG. The LRF would help in testing rigorously these hypotheses, and the lessons from them fed into finetuning the reforms.

Finally, while formulating the LRF, it became clear that research into the activities of the NLDP is expected not only to inform policy implementation in PNG but also the research findings should make significant contributions to the broader literature. These goals underscore the need to maintain objectivity and scientific rigour in the conduct of the research undertaken.

1.0 INTRODUCTION

Property rights and development

The important role that private property rights play in spurring economic growth has been extensively documented by economic historians such as North and Thomas (1973), and Rosenberg and Birdzell (1986). This line of analysis has influenced the thinking of commentators, policy makers, and international donor agencies about land reforms across the developing world. The World Bank has been the main international agency sponsoring land reform initiatives in many developing countries, PNG included.

The important role that private property rights play in spurring economic growth and development is widely acknowledged in the economics literature. The impact of this policy prescription in the context of developing countries is, however, inconclusive. The emerging consensus is that, while security of property rights should not be viewed as the panacea for development, it has a major role to play in the development process. It is within this context that the GoPNG has decided to undertake a comprehensive land reform program, starting in 2005 (National Land Summit Coordinating Committee, 2006; National Land Development Taskforce, 2007; Yala, 2010).

The PNG context

The policy conception, formulation, and implementation of PNG's land reform was informed by the broader literature but made to suit PNG's context. The economics of land titling, a branch of institutional economics, has provided the theoretical framework and empirical bases for this reform initiative (Section 2 refers), which was adopted because the government wanted to enhance land's contribution to economic growth and development in PNG to help achieve the 5% per annum growth target stipulated in the Medium Term Development Strategy (MTDS) 2005–2010 (Department of National Planning and Monitoring, 2005). The MTDS was the government's main development planning document covering the five-year period from 2005 to 2010. The Medium Term Development Plan (MTDP) 2011–2015, discussed in detail in Section 3.5, will replace the MTDS as of 2011. More significantly, the MTDP 2011–2015 has placed land as the number one priority (Department of National Planning and Monitoring, 2010a).

The PNG situation is defined by the following: the predominance of customary land tenure, which supports the livelihood of over 85 percent of the national population; a corrupt, inefficient and dysfunctional land administration system for the land under formal administration (National Land Development Taskforce, 2007); the State does not have (a) the legitimacy or the authority to unilaterally undertake a land reform initiative because the majority of the land — an estimated 97% — is held under customary tenure; and (b) the capacity to define and enforce property rights is weak (PNG is a weak State); culturally and geographically fragmented (Fearon, 2003); with a low level of development by most of the development indicators¹; and undergoing massive economic and social transformation forced by modern economic, political and social changes (see Yala, 2006; Kalinoe and Kanawai, 2010)

¹ The World Bank (2010) officially classified PNG as low middle income with 37.5% living in poverty. See <http://data.worldbank.org/country/papua-new-guinea> for full details.

2 *The National Land Development Research Framework*

Given the difficulties listed above, the GoPNG invested in a process, led by Papua New Guinean institutions and experts, to conceive, formulate, and implement the land reform program. The challenge for the GoPNG and the technical team behind the Government's initiative was to remain open and frank on the idea of a land reform and the kind of reforms needed for PNG. The starting point was to seek a mandate from the people of PNG on two important aspects — (i) to pursue a land reform initiative; and (ii) on the kind of land reform. This was achieved through the staging of a National Land Summit (NLS) in Lae in 2005 (National Land Summit Coordinating Committee, 2006; Yala, 2010). In 2006, the GoPNG established the National Land Development Taskforce to formulate the recommendations from the summit into policy options and strategies (National Land Development Taskforce, 2007). In 2007, the National Land Development Program (NLDP) was launched to implement the land reform program. As of 2010, the NLDP is progressing towards full implementation.

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- identify research issues emerging from the PNG land reforms and establish priority research areas; and
- involve stakeholders in dialogue regarding land research in PNG.

In defining the rationale for designing this LRF, the Terms of Reference acknowledges that research is to be undertaken to complement the reform process by helping to understand the issues regarding implementation, and to monitor and evaluate the impact and effectiveness of the reforms. Under the NLDP, the NRI is expected to provide leadership in research with a view to informing policy and contributing to the broader knowledge and information base. In implementing this program, NRI decided to undertake this study to develop a research framework that will provide direction for land research activities in PNG. The development of the framework should include a literature review of both the global and PNG literature aimed at updating the knowledge base and identifying knowledge gaps.

More specifically, the main thrust in the scope of work in the Terms of Reference included:

- (a) a review of international and PNG literature on land and its contribution to national development;
- (b) development of a land research framework that identifies;
 - a range of disciplinary approaches and issues;
 - priority themes and the rationale for their inclusion in the framework;
 - key research questions; and
 - existing and potential research expertise in PNG land research; and
- (c) consultation with relevant stakeholders (researchers and the policy community) to deliberate on the framework and other identified research needs.

The structure of this report

The rest of the report is organised as follows. Section 2 is a review of the broader literature on the economics of land reform aimed at drawing lessons useful for the PNG context. Section 3 reviews the literature on land in PNG, focusing on the history, policy and empirical analysis, aimed at defining the PNG context. Section 4 presents the conceptual framework, adopted from the broader literature but modified to suit the PNG context. It also discusses the espoused channels and plausible outcomes from the conceptual framework. This informed the design of a survey questionnaire aimed at gathering ideas for research from the public, areas of interest for those interested in land research, and the capacity and research interest of institutions discussed in section 5. Section 6 discusses a framework to selecting research activities, the pathways for undertaking the research, disseminating the findings, and updating the research framework. The conclusion brings the report to a close.

2.0 A BRIEF REVIEW OF THE BROADER LITERATURE ON THE ECONOMICS OF LAND REFORM

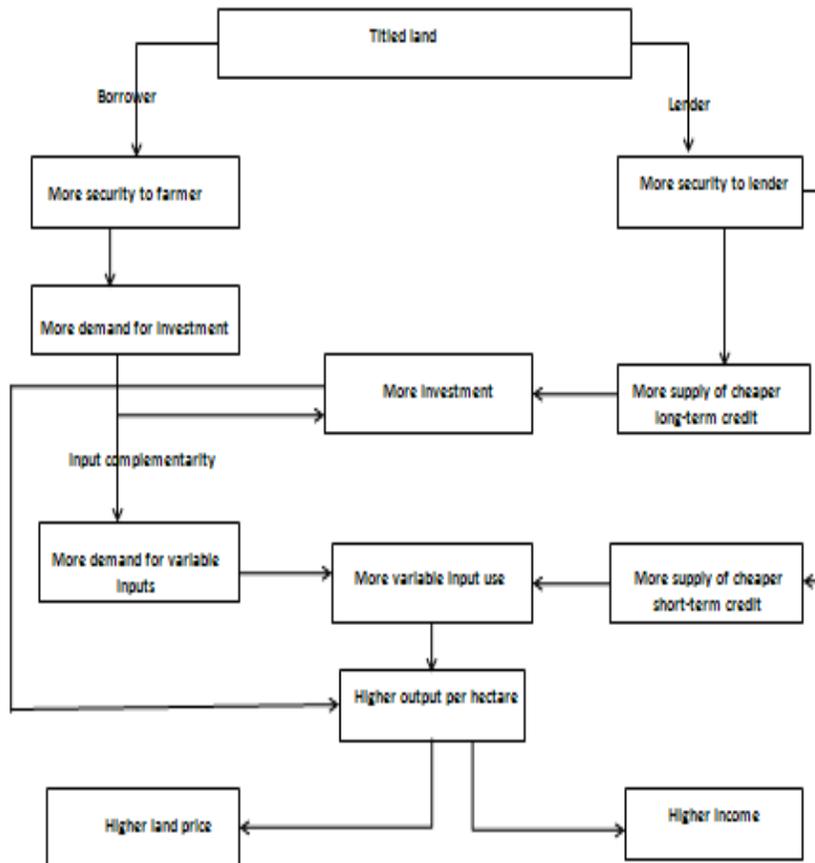
This section provides a brief review of the broader literature on the economics of land reform with the aim of placing the PNG land reform initiative within the context of the global policy and empirical literature. The conception and formulation of the PNG land reform initiative was informed by the literature on the economics of land reform.

This review has benefited from the availability of three major literature reviews (Feder and Nisho 1999; Deininger 2003; Deininger and Feder, 2009). The discussions begin with the review of the conceptual framework, followed by a review of the empirical literature, and ends with a discussion on the change in the policy emphasis.

2.1 The conceptual frameworks

There are two conceptual frameworks that explain the channels via which land titling impacts economic growth and development. The first, depicted in Figure 1, draws on the microeconomic channel, linking tenure security to levels of investment and the supply of credit. These investments, in turn, are hypothesised to have a positive impact on land productivity, land prices, and household income (Feder *et al.*, 1988).

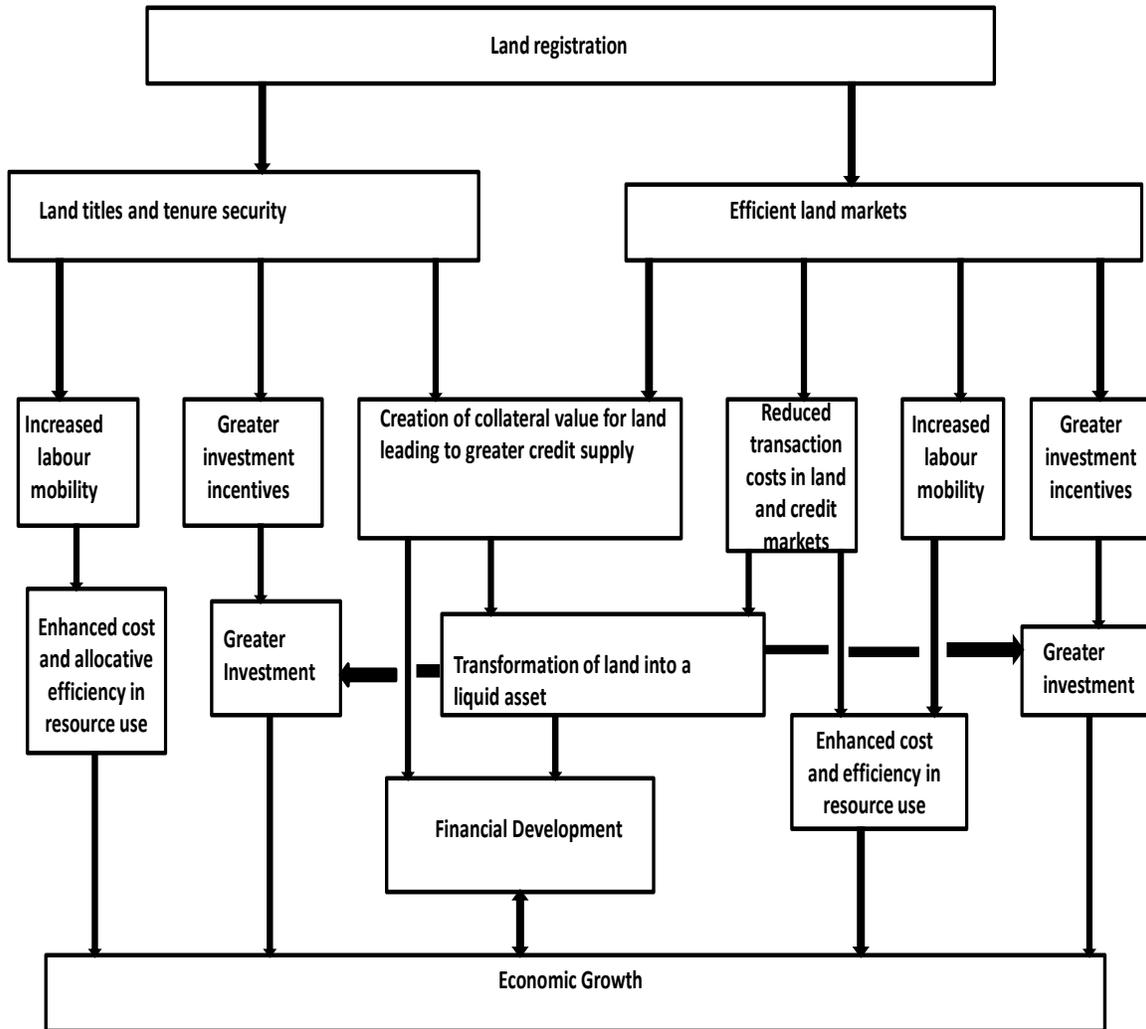
Figure 1: Conceptual framework — land ownership, security and farm productivity



Source: Feder *et al.*, (1988).

Initially, the setting for this analysis was the agricultural sector. While the channels of causation between tenure security and land productivity are distinctive, they are complementary. It has been suggested that secure land title incentivises the titleholder to save and borrow for increased investment. The secure land title acts as the collateral for accessing credit. Formal financial institutions thus extend credit to meet both the investment and operational needs of the titleholder. The combined effect is increased productivity, higher land prices and higher income.

Figure 2: Conceptual framework — linking land registration to financial development and economic growth



Source: Byamugisha (1999a)

The second channel, Figure 2, generalises the first and tries to capture the macroeconomic impacts, arguing that land reform triggers economy-wide strengthening of institutions for property rights and financial intermediation such that it raises investment and income in the economy as a whole (Byamugisha 1999a). Here, land registration which encompasses the issuance of land titles, the design of the systems of administration, and the enforcement of

property rights is argued to underpin the development and maturation of land, labour and capital markets. This leads to increased supply of credit and concomitant increases in demand for capital and labour. Further, the creation of a system of land registration leads to a reduction in the transaction costs in land and credit markets. It is thus hypothesised that the registration process transforms land into a liquid asset, provides the incentives for investment, and leads to growth in income and employment.

Recently, Deininger and Feder (2009) have expanded the list of channels through which land registration impacts on growth and development into improved governance and administrative efficiency and reduction in the need to expend resources to enforce land rights and enhance gender equality.

2.2 A brief overview of the empirical evidence

Several empirical studies have been undertaken to test the hypothesis that land reform leads to development, as espoused by the two conceptual frameworks. The theoretical basis for the second channel is sound, however, hard evidence in support of the conclusions remains elusive because little empirical analysis has been undertaken. To date, only two studies have empirically tested this channel. First, Byamugisha (1999b) used data from Thailand to test the link between land registration and financial sector development leading to economic growth. The results from this analysis supported the espoused link. Recently, De Moura *et al.*, (2009) used this framework to analyse the impact of land titling policy on the use of child labour in Brazil. The results showed reductions in child labour force participation in families that received land titles.

In contrast, the first channel, which tests the espoused link between land titling and productivity in the rural or agricultural sector, has been tested extensively. The results however, remain inconclusive. A review of a decade-long literature that applied the framework (Feder and Nisho, 1999) concluded that, while studies from South East Asia and to an extent Latin America are supportive of the theoretical predictions, the results from Africa produced inconclusive results. A major World Bank review of the literature on land policy and research (Deininger, 2003) reported findings similar to Feder and Nisho (1999). Payne *et al.*, (2008) who reviewed the literature that documented the social and economic impacts of land titling projects implemented within the urban and peri-urban informal sector, failed to provide conclusive evidence in support of the proposition that land reforms impact positively on development. One factor contributing to the inconclusive results is the absence of counterfactuals in the empirical analysis (Apelis *et al.*, 2009).

Deininger and Feder (2009) is the most recent comprehensive review of the literature on the economics of land reform. In addition to broadening the channels through which land reform impacts on growth and development, they define the role of the State as: defining and establishing property rights institutions, ensuring these property rights are enforced, improving access to reliable information on land ownership and thereby overcoming informational asymmetries, and managing externalities.

When property rights are secure, well-defined, and publicly enforced, they argued that individual landowners will not spend time and resources to guard them. Further, it reduces the risk of expropriation and ensures that the title holder lays direct claims to the stream of income and benefits that flow. This is what drives land-related investments that are long-term in nature.

Well-defined, low-cost access to reliable information on individual land transactions overcomes asymmetry of information, thereby reducing transaction costs and uncertainty that hinder the development of land market (rental or sales) and the use of the title as collateral for loans. Finally, management of externalities includes the use of land information to restrict individual land-use decisions, avoid socially and environmentally harmful outcomes, and internalise externalities through zoning and planning laws. Further, it would lead to economies in the provision of infrastructure and utilities (water, roads, sewers, and electricity) when changing land use from rural to urban by way of urban sector development.

Unfortunately, there are caveats. The authors argue that these channels would function efficiently only if the conditions are perfect and the program is well-implemented. Elaborating further, they argued that there are deficiencies in governance frameworks, variations in land scarcity, variations in the cost of service provision, and credit market imperfections. Good governance, a consistent legal and institutional framework, broad access to information, and competent and impartial institutions to enforce rights, are critical for making property rights effective and ensuring that the positive impacts from land reforms are realised.

In the real world, however, there are deficiencies within the governance structure in developing countries that undermine the effectiveness of land reforms. These deficiencies include:

Distribution of landownership reflects power structures. In this environment, land reform initiatives may lead to cementing existing unequal arrangements.

State monopoly exercise of legitimate power is a precondition for the functioning of advanced societies and security of property rights. In developing countries, State monopoly power is often abused by the unfair allocation or acquisition of land by elites and politicians.

Absence of an independent and effective judiciary. Ineffective government institutions with overlapping mandates that may issue conflicting documents regarding the same plot, and unclear and contradictory policies, that make enforcement unpredictable and costly.

These factors increase the uncertainty of property rights, thereby contradicting the original goal to eliminate uncertainty over property rights. Disadvantages that arise from an inadequate institutional framework can be exacerbated by the high cost of acquiring information on the legal regime and of how rights can be enforced. This can exacerbate inequality and create deeper problems for the marginalised, less privileged and weaker members of society.

The on-the-ground realities in developing countries are less than perfect. Therefore, either individually or collectively, these factors may work to undermine security of property rights and render any registered titles ineffective and valueless. These factors would therefore undermine the effectiveness of land reform initiatives.

2.3 Changes to policy

The policy emphasis has changed from individual land titling (World Bank, 1975) to an emphasis on security of tenure (Deininger, 2003). The latter encompasses any framework that underpins tenure security. This approach recognises the fact that land titling *per se* does not

imply security of tenure. To understand the context for this shift in policy, we first revisit the two conceptual frameworks and the contextual environment in which the policy was applied.

One distinctive difference in the two frameworks is in the starting point of the analysis. For the first framework, it begins with land titles. The issuance of a land title was predicted to unlock the investment and credit channels with significant impacts on land prices, incomes and productivity. In contrast, the second framework uses a broader description of land registration, which encompasses the issuance of land titles, the design of the systems of administration, and the enforcement of property rights. Further, the second framework, anticipates a broader impact whereby the creation of a system of land registration lowers transaction costs in both land and credit markets and therefore leads to increased supply of credit and concomitant increases in demand for capital and labour. It recognizes that a successful system of land registration would lead to the effective mobilization of all three factors of production — land, labour, and capital. This dynamic transforms land into a liquid asset, provides the incentives for investment, and leads to growth in employment and income.

Both frameworks, however, omitted the need to establish institutions defining the status of the underlying land. The basis of each individual land title is the underlying land. The institutions that define the status of the underlying land differ considerably across the globe. In the developed economies, the underlying land is either owned by the State/Crown or private ownership and ownership is defined, guaranteed, and enforced by the State. The same applies in the context of former socialist countries and communist China. In parts of Latin America and Africa, however, there are landlords who own large hectares, largely inherited in the form of private freeholds, which were created by colonial governments. In contrast, in other parts of Africa and all across the Pacific Islands region, customary land tenure predominates.

The basic premise was that communally owned land is fraught with informational asymmetry costs leading to high transaction and coordination costs and principle/agent and moral hazard problems. Land held under customary tenure, which is indeed communally or group owned with differing use and access rights, was perceived to suffer from these factors. Ambiguities in ownership and use rights and the absence of direct claims on the stream of benefits (the benefits are distributed through the wider communal network) undermine private incentives. These features collectively undermine tenure security, leading to suboptimal investment, poor access to credit, and constrained market access (Demsetz, 1967; Dorner, 1972; Johnson, 1972).

The policy emphasis on individual land titling programs was deemed as the only option for stimulating private incentives. As mentioned earlier, the World Bank launched this as its official policy in 1975. Recently, de Soto (2000), in a major contribution to this literature, argued that the issuance of individual land titles would breathe life into ‘dead capital’. de Soto sees land without titles as ‘dead capital’. Given the predominance of this idea, which spanned almost three decades, the empirical analysis that followed focused on cases where land titles were issued. This has left behind a large gap in the policy and empirical analysis on understanding the functioning of institutions within the communal owned land tenure frameworks such as customary land tenure. In their review of the literature, Deininger and Feder (2009) highlighted the lack of rigorous empirical analysis on the management and development of land held under group ownership, such as customary land tenure, as a major gap.

A new line of research

In recognition of this gap, a new line of research is emerging. Examples include Fitzpatrick (2005) who looks at modalities in half a dozen countries, Cotula (2007) in the context of Africa, AusAID (2008) for the Pacific Island countries, and Chand and Yala (2006) in the context of PNG. Unfortunately, these studies are too few from which to draw any general conclusions.

When security of tenure for the underlying land is insecure, all individual land titles issued automatically become insecure. In both conceptual frameworks, all channels fail to function as predicted. The expected outcome would be sub-optimal investment, as commercial financial institutions would refuse to accept any of the land titles as security for loans.

The second framework highlights the need to have a system that not only issues land titles but also ensures that the system functions to administer and enforce these rights. An inefficient system that fails to adequately define and enforce these rights would render an individual land title ineffective, even if the underlying status is clearly defined and enforced.

In order for the espoused channels to function, the starting point should be to define the property rights status of the underlying land. This should be followed by a system that defines the property rights status of the individual land titles. An efficient land administration system that provides safe keeping of the titles and facilitates land transactions (transfer, transmission, and reclaiming of lost titles) should be established and made to function. Finally, a competitive framework that ensures the functioning of the land, properties, labour, and capital markets should complement this policy framework.

2.4 Conclusion

The existing conceptual land reform framework is biased towards individual land titling. Unfortunately, the effectiveness of land reforms remains contested within the broader literature (Deininger, 2003; Feder and Nisho, 1999; Deininger and Feder, 2009). The broader consensus emerging from the literature is the importance of understanding the operating environment in each particular situation/country as regards aspects such as governance and political and social conditions, and the impacts they have on the outcomes.

Fitzpatrick (2005) reinforced the earlier conclusion by the World Bank (Deininger, 2003) that each country should undertake land reform initiatives that adequately reflect their political, social, and economic contexts. Further, Deininger and Feder (2009) described the realities in many developing countries; including the governance environment, effectiveness of state institutions, and socio-economic power that may undermine the impact of land reforms on development. They caution that land titling initiatives should not be seen as a panacea for development. This line of argument is made forcefully by Bromley (2008).

Land reform may not be the panacea for development but it has a significant role to play in the development paradigm. Achieving security of tenure, the basis for improved productivity of land, should be the aim of any land reform initiative. This requires the functioning of an array of institutions, including those that define the status of the underlying land, administer the land, resolve disputes, and guide the functioning of land, labour, property, and credit markets.

3.0 THE HISTORY OF LAND POLICY AND LAW AND ITS IMPLEMENTATION IN PNG

This section provides a brief overview of the history of the policy, law, and its implementation with respect to land in PNG, with the aim of defining the context for the development of a conceptual framework, informed by the broader literature, but made specific to the PNG context in Section 4.

3.1 Brief overview of the history of land policy and law, and its implementation

Pre-colonisation

Prior to colonisation, that is the period prior to 1883, all the land in PNG was held under customary tenure. In a country of over 800 languages and over 2,000 dialects, customary land tenure systems differed considerably across the country. Broadly speaking, ownership rights to a piece of land rested with a group, identified via lineage, while use rights to individual plots were held by individuals and families (Fingleton, 2004). Within this framework, landownership can be classed into two systems — patrilineal and matrilineal. Under the patrilineal system, land is inherited along the male lineage. In the case of the matrilineal system, land inheritance is along the female lineage.

The colonial period

During the colonial period (1883–1975) the German and British (and later the Australian) colonial governments pursued policies that protected land for the indigenous people. Foreigners had engaged in transactions over native land prior to official annexation by Britain and Germany in 1883 and 1885, respectively. With a view to regulating these and future land dealings, both administrations enacted their respective regulations — Land Regulation Ordinance 1888 (British) and Land Regulation Ordinance 1887 (Germany).

In British New Guinea, the colonial administration had monopoly control over the acquisition of land from the moment of annexation. In contrast, a private company, named New Guinea Kompagnie, was granted a monopoly over acquisition of what was described as ownerless native land at the time of annexation in German New Guinea. In 1903, through the enactment of the Land Ordinance 1903, the German colonial administration took control over land dealings. At the end of World War I, German New Guinea came under allied military rule. At the end of World War II, Papua and New Guinea became a UN mandated trust territory under Australian colonial rule. Consequently, the British land policy that the Australians inherited was applied throughout the remainder of Australian colonial rule in PNG.

The British land policy was more favourable than the German policy towards the protection of land for the native peoples. The first British Special Commissioner, General Scratchley, in his letter of appointment was tasked to take direct control over native land dealings (Queensland Parliamentary Papers, 1885). This started a process of controlled alienation of land from natives for public or private enterprise development under first, the British, and later, the Australian colonial administration. Land alienation was selectively permitted only in areas where the need arose, with payments made to customary landowners defined by the customary land tenure law

of the area. The general principle was that land was deemed to be held under traditional tenure unless it was deemed clearly waste and vacant by the colonial administration.²

Post-independence

After independence (1975–) 35 years on, most of the land in PNG, 95%, is still held under customary tenure. Of the 5% under formal administration, 2.5% is owned by the Government. Only a small proportion, about 0.5% is owned by private persons as freehold under statutory tenure. The remaining 2% is estimated to be land owned by customary landowning social units leased to private enterprises as business and agricultural leases using the lease-lease-back process defined by the *Land Act* (1996). In terms of ownership, 97% is owned by customary landowning social units defined by the customary law of the area. While the 2.5% is owned by the State, the remainder, 0.5% is owned by private persons as private freehold.

The predominance of customary land tenure is due to a combination of colonial policy and failed past attempts to reform customary land. As discussed above, the colonial policy was intended to avoid radical changes that may lead to complete alienation of land from the natives.

There have been a number of attempts to reform customary land tenure. The first attempt to register customary land titles started with the Native Land Commission established under the *Native Land Registration Act* (1952). However, by 1962, when the Commission was abolished, not a single title had been registered.

The Land Titles Commission, established under the *Land Titles Commission Act* (1962), envisaged the adjudication of land rights, the demarcation of boundaries, and then the conversion of the adjudicated title into a freehold estate under the *Land (Tenure Conversion) Act* (1963). A *Land Registration Act* (1924) (New Guinea) and the *Real Property Act* (1913) (Papua) provided for registration of the converted freehold title, while group titles could be registered under the *Land Registration (Communally Owned) Land Act* (1962). As the scheme was voluntary, it was similarly unsuccessful, and this attempt was brought to an end by the *Lands Registration (Communally Owned Land) Suspension Act* (1969), following the 1969 Simpson Report.

Four bills were introduced the following year however all failed due to opposition from Papua New Guinean representatives. The 1973 Commission of Inquiry into Land Matters recommended the establishment of legislation and the necessary supporting administration for registration of customary land (Papua New Guinea, 1973). By 1983 nothing further had been achieved.

In 1988 a government approved Land Mobilisation Programme saw registration once more on the agenda. Draft bills were prepared in 1992 and 1993 but these were shelved along with later proposals in 1995. Under the Organic Law on Provincial and Local Level Governments 1998, provincial governments may make laws on land and land development, provided such laws do not conflict with national laws. To date these powers have not been used and a more clearly

² Oram (1976) provides a detailed historical overview in the context of Port Moresby. See also Wright (2002) for a discussion on the views of leading Australian politicians such as Sir Paul Husluck, Minister for External Territories.

defined national land policy would be required to ensure compatibility between national and local initiatives³.

In the 1990s, there was widespread opposition to land reform. While the World Bank and the Government of PNG were identified as the proponents of land reform initiatives in 1994/95 and 2002, respectively, a coalition of Non-government organisations (NGOs) comprising of students, an array of NGOs, and unions opposed land reform. While both cases were violent and destructive, the one in 2002 turned deadly with four people, three of whom were students from the University of Papua New Guinea, shot dead by the police. Therefore, land reform became a politically sensitive issue for any government, politician, or international donor to contemplate.

3.2 Land law and administration in practice

The land held under customary tenure supports the livelihood of more than 85% of the total population, who mostly reside in rural areas and draw their livelihood from subsistence production. Customary land tenure law of the area defines and enforces property rights, including ownership, access, and use rights. This regime operates outside the formal law and administration system. Legally, however, the PNG Constitution, the *Land Act* (1996), and the *Underlying Law Act* (2000) recognise customary land tenure law.

Since independence, the official approach to dealing with customary land is a slightly adjusted version of the one adopted from the departing colonial Australian Administration. The general principle now is that all land is deemed to be held under customary tenure. The practice of assuming land as “clearly waste and vacant”, used by the colonial administration, no longer applies. Therefore, land alienation is selectively permitted only in areas where the need arises for the delivery of public services or to facilitate private enterprise development with fair and just payments made to customary landowners.

In applying this process, the State throughout the independence era, has acquired customary land, using Sections 10 and 12 of the *Land Act* (1996). These sections provide mechanisms for acquiring land that is required for public purposes by voluntary agreement and/or compulsory acquisition, respectively. While the Constitution provides for protection of property rights, and the *Land Act* (1996) restricts the purposes for which property can be compulsorily acquired, specific legislation may deem compulsory or consensual acquisition by the State to be in the ‘public interest’ and not a breach of the Constitution.

The *Land Tenure Conversion Act* (1963) and the *Land Act* (1996) provide legal frameworks that customary landowning social units could use to deal with the formal sector. The land tenure conversion process permanently terminates customary land tenure law and imparts freehold tenure rights to the applicant. The applicant has to be a PNG citizen and must have ownership rights as defined by the customary law of the area, as the ownership of freehold titles by non-citizens is prohibited by the Constitution. In contrast, the Lease-Lease-Back (LLB) framework defined in Sections 11 and 102 of the *Land Act* (1996) suspends customary land tenure for the

³ See Larmour (1994a, 2002, 2003, and 2005), Power and Tolopa (2010), and Crocombe (2010) for discussions on the failed past initiatives in PNG, Melanesia, and the Pacific Islands, more generally.

duration of the lease period. Land with LLB title could be leased to any interested party, including non-citizens and corporations.

In terms of practical application, the LLB process has been widely adopted by the large agricultural sector, especially within the Oil Palm Industry. The freehold tenure process, on the other hand, has proven to be costly, difficult, and less secure.

All land held under formal tenure is administered by the Department of Lands and Physical Planning (DLPP). Land held under formal tenure includes all the land under State ownership and those with freehold and LLB titles. The DLPP, however, has monopoly control over the planning, release, development and administration of leases on land owned by the State. In contrast, the department is responsible only for issuing the titles and providing safe keeping for both the freehold and LLB titles. All dealings on these land titles are outside of the formal administration system.⁴

3.3 Academic and policy discussion on land tenure reform in PNG

There has been a lively debate on land tenure reform in PNG. Unfortunately, this debate has failed to translate into policy, law, and implementation (Larmour, 1994b). More importantly, many of the discussions are less than helpful in articulating the case for a sound land reform agenda, largely because they either lack the backing of a sound analytical framework and/or the required empirical backing. The following is an analysis of a selected few studies that either used an appropriate conceptual framework and/or undertook some empirical analysis.

Academic discussion

Chand and Yala (2009) used a productivity analysis framework with farm-level data from smallholder oil palm growers in PNG to derive the factors that drive differences in productivity across three land tenure regimes: customary land tenure, state owned land, and land purchased informally from customary landowners. The results demonstrate that tenure arrangements that offer direct claims to income and opportunities to maximise through scale, lead to increased productivity.

Chand and Yala (2006) applied an institutional economics framework to document and analyse the development of endogenous institutions to facilitate access to land for housing within the settlements of Port Moresby, the capital city of PNG. The data generated from a randomly selected sample of households, from settlements stratified into three land tenure arrangements — customary, State and mixed (State and Customary) — depict a myriad of institutions with both traditional/customary (land invasion) and modern (receipts, Statutory Declarations, and contract documents) features working to underpin security of tenure for settler housing.

Kockberski, *et al.*, (2009) examine the range of informal land transactions between migrants and members of customary landowning units within the oil palm growing areas of West New Britain. They considered that more research is needed to understand the nature of the informal transactions. Unfortunately, the analysis is largely drawn from anecdotal evidence.

⁴ Recent evidence depicts the LLB system facilitating illegal land grabbing.

Yala (2004) used the literature on the economics of land titling, transactions cost theory, and relationship banking theory to provide explanations for the lack of access to credit from the formal financial sector for farmers with formal land titles, selected randomly from the Hoskins Oil Palm Project in the West New Britain Province. Later, Yala (2008) used the same data to take a deeper look at the functioning of the property rights system. The analysis showed that all formal land titles were not bankable for two reasons.

First, all the land within the oil palm growing areas are being reclaimed by customary landowners, thereby eroding the security of tenure for all the land on which smallholder oil palm is cultivated. Second, inefficiencies in the system of land administration had enabled farmers to engage in informal land title transactions. The findings highlighted the importance of a framework that defines the status of the underlying land that was alienated by the State from customary landowners during the colonial period, and the need for an efficient system of formal land administration that efficiently facilitates transactions such as transfers, transmissions, and the reclaiming of lost titles.

Fitzpatrick (2005) used the concept of Incorporated Land Groups (ILGs) for mobilising customary land for private enterprise development involving multinationals engaged in the natural resources sector in PNG by applying the World Bank's framework for emphasising security of tenure and concluded that this is one model applicable in the context of PNG.

Lea (2008:152), in contrast, argues that the ILGs are a "misconceived legal construct" because they are not a voluntary organisation. Membership of an ILG is defined by virtue of birth. Lea ignores the positives of being born into a landowning social unit. Further, Lea (2009) questions the basis on which customary landowners are being identified as "owners" of the land. This constitutes a fundamental error of judgement because it ignores the factual realities of the PNG society, in which customary land tenure is a functioning institution.

Koyama (2004) used data from the petroleum sector to demonstrate that ILGs are plagued with principle/agent problems. The executives of ILGs (agents) do not necessarily serve the interests of the membership (principles). This drives the misuse of incomes accruing to the ILGs from the petroleum sector.

Wycliffe *et. al.*, (2010) analysed the data recorded in the ILG registry office within the DLPP and demonstrated that the legislative and administrative system is too weak, leading to the proliferation of ILG registration, largely driven by the extractive industries sector. The ILG process is extensively relied upon by the extractive industries sector to identify customary landowners for the purpose of distributing rents accruing to landowners. Power (2008) argues that, so far, the law has been poorly administered.

The papers in Fingleton (2005) argued that customary land tenure is productive. Data gathered from selected activities is used to support their claims. Unfortunately, production on customary land is suboptimal; an issue largely ignored in their analysis.

Kalinoe and Kanawi (2010) used several National Court judgements to demonstrate the severity of the land-related disputes, which cause violence and death. In the same paper, they used a series of case studies to document the relationship between those who have developed coffee/cocoa blocks on customary land and the rest of the customary landowning social unit

membership. One issue that stands out in their analysis is that customary land had been privatised across generations. The land on which these blocks were developed has, for all practical purposes, become private freehold, although informal. A second result is the development of new kinds of institutions to manage relationships between the entrepreneur and the rest of the community to buy-in security of tenure. In one instance, the entrepreneur budgets a certain portion as business expenses to spend on community issues. Examples include funerals, bride price payments, and related social activities. In another case, there are tensions between the entrepreneur and the rest of the members from the customary land owning social unit. Collectively, these examples demonstrated the irreversible and permanent changes that are taking place on customary land.

Koczberski *et al.*, (2001) reported on the tensions emerging between customary landowners and the settler communities from the Oil Palm sector in the West New Britain and Oro Provinces. The settlers were originally from other parts of PNG, recruited and settled under a series of agricultural schemes by the Australian Colonial Government between the 1950s and 1970s (see Hulme, 1984 for a detailed discussion on this). The land was alienated from customary landowners and the settlers were provided with land and credit to resettle as smallholder oil palm growers. Growing resentment over time has led to the new generation of customary landowners reclaiming land and chasing away the settler population. This has become a widespread phenomenon throughout PNG.

Recently, Fairhead *et al.*, (2010) used a Computable General Equilibrium Model of the PNG economy to quantify the economic impacts of the current land reform initiative. The results show that, if fully implemented on schedule, this reform initiative has the potential to put the country on the path towards broad-based and sustained economic growth and development. These results are supported by the model estimations from the Department of National Planning and Monitoring (2010b).

Policy discussion

The policy discussion with respect to land in PNG is also broad. One set (see the papers in Fingleton, 2005, and the papers in Anderson and Lee, 2010, for details) argues for the protection of customary land tenure. The main line of argument is that the customary land tenure system is functional and productive. They support changes that are evolutionary and strictly consistent with traditional customary principles. Another set (see Curtin and Lea, 2005; Gosarevski *et al.*, 2005; Lea, 2008; 2009) advocates radical changes to customary land tenure. They favour reforms that issue individual land titles. They view customary land tenure as a constraint to economic growth and development.

In between the two extremes is the third cohort, (see the papers in Sullivan, 2002; Yala, 2006; Yala *et al.*, 2010; Kalinoe and Kanawi, 2010), which is highly pragmatic, consisting largely of Papua New Guineans. They see the need to reform land, not only for economic reasons but also for the following reasons: They recognise that customary land tenure is undergoing permanent and irreversible changes; productivity under customary land tenure is sub-optimal; land tenure reform is required to improve agricultural productivity to feed a growing population, and failure to do so will lead to poverty, especially when population growth is faster than food production; global warming is creating greater challenges to the subsistence way of life and threatens islands

and lower-lying areas from rising sea levels; and both the State and the private sector need to have access to secure land for housing, enterprise development, and the delivery of basic goods and services in the case of the public sector.

The Pacific Land Program, an initiative of AusAID, the Australian aid agency, aimed at supporting land reform initiatives across the Pacific Islands region, including PNG, proposes as its central theme reconciling customary land and development (see details in Chapter 1 of AusAID's main report — *Making Land Work*). The underlying assumption that the two — customary land and development — are reconcilable is a proposition that remains to be empirically tested. More importantly, what policy options are there (for Pacific Island Governments), if the empirical evidence shows that the two are irreconcilable?

Impact on policy

Larmour (1994a) noted that a lively academic debate on the case for customary land tenure reform was ongoing in PNG, but had not translated into policy, law, and implementation. The main reason for this dismal outcome, according to Larmour, was the extensive use of foreign experts and short-term consultants.⁵ This outcome raises the importance of engaging local institutions and experts in the policy discussion, conception, formulation and implementation. The role of local experts, who are aware of the global literature, the arguments being pushed by opposing teams, informed by the empirical literature, and being aware of the context — cultural, political, economic and social context, is crucial. Local institutional participation entrenches institutional ownership of the ideas and the reform process itself. Both of these featured prominently in the current land reform initiative, discussed next.

3.4 The current PNG land reform initiative — the NLDP

Land reform remains an important, yet sensitive microeconomic reform issue for PNG. Land reform is very difficult to undertake in PNG for several reasons, including the fact that customary land tenure predominates and supports the livelihood of 85 percent of the population, largely resident within the rural sector. At the same time, the country and its people are undergoing rapid changes caused by the demands of the broader modern economic and political system because PNG is part of a global community. These changes are irreversibly changing the way land is managed and used, thereby making land reform in PNG inevitable.

In 2005, the GoPNG initiated a land reform initiative that is progressing towards full implementation, as of 2010. It was conceived through the hosting of a National Land Summit (NLS) in 2005 (National Land Summit Coordinating Committee, 2006 and Yala, 2010) and formulated through the work of the National Land Development Taskforce (NLDT) in 2006 (National Land Development Taskforce, 2007). Implementation started through the National Land Development Program (NLDP) in 2007 (National Land Development Program, 2007).

There are a few important features of this land reform initiative, including the following. First, it has been a sequential process whereby the NLDT implemented the recommendations of the NLS

⁵ Larmour (2002 and 2005) argued that the transfer of land registration systems from Africa to Melanesia has been a failure. Table 2 in Larmour (2005:58) demonstratively depicts this dismal outcome. This table lists the source and target countries for these ideas, the names of consultants involved in every period, and the outcomes of their advice on policy. The latter, as mentioned above, is dismal.

and the NLDP is implementing the recommendations of the NLDT. Second, it is aimed squarely at achieving security of tenure, the basis for improving the productivity of land. Third, the kind of land reform being pursued in PNG is informed by the global literature, past failed attempts in PNG, the on-the-ground realities of PNG (cultural diversity of PNG, and the state of national development) and the collective desire of the country and its people to progress.

Finally, this reform initiative has succeeded in mainstreaming land in national development planning. Two national development plans, PNG Vision 2050 (Government of Papua New Guinea, 2009) and the PNG Development Strategic Plan 2010–2030 (DSP) (Department of National Planning and Monitoring, 2010b) recognised the important role of land in economic development. PNG Vision 2050, the Government of PNG's 50 year development vision for the country, has recognised land reform as fundamental to creating wealth for the nation and its citizens.

The PNG Development Strategic Plan 2010–2030 (DSP), is a 20 year development plan produced by the Department of National Planning and Monitoring (DNPM), recognises land reform as fundamental to creating new employment and income generating opportunities, boosting investment in agriculture and tourism, and in the development of new vibrant townships using the Economic Corridors Concept. Further, the DSP notes that the economic impact of land reform is expected to rival that of the extractive sector, namely mining, gas, and petroleum.

The activities of the NLDP have been incorporated into the development budget for 2011 and the Medium Term Development Plan 2011–2015 (MTDP). The MTDP is the first five year plan to implement the DSP (Department of National Planning and Monitoring, 2010a)⁶. At the sectoral level, the Independent Competition and Consumer Commission (ICCC) Review of the Real Estate Industry and Housing Sector (Independent Competition and Consumer Commission, 2010) draws a direct link between the implementation of the land program and the development of a vibrant housing sector in which the private sector plays the dominant role. Further, it argues that increasing the supply of secure land, which would be a direct result of the land reform initiative, would result in an increased housing stock, thereby helping to dampen the exorbitant house prices in the major urban sectors, especially Port Moresby. The implementation of the ICCC report is being led by the Department of Treasury.

3.5 Conclusion

There has been discussions in PNG about land reform over many years, at both academic and policy levels, but this has failed to translate into policy, law, and implementation. This has meant that customary land tenure has remained the predominant form of tenure in PNG. Even the alienated land under formal administration suffers from direct claims by a new generation of customary landowners, which is eroding the security of the underlying land on which State leases are issued.

The current status of land law, policy and administration is the direct result of colonial policy and failed attempts to undertake land tenure reform. This is about to change with the

⁶ The Budget documents for the 2011 National Budget are not available at the time of writing. However, the Treasurer's Budget Speech, dated 15 November, 2010 makes reference to this effect (O'Neil, 2010). The Treasurer is Peter O'Neil.

implementation of the land reform initiative conceived in 2005. Successfully implemented, this reform initiative is expected to place the country on a path toward broad-based, sustained economic growth and development (Fairhead *et al.*, 2010; Department of National Planning and Monitoring, 2010b).

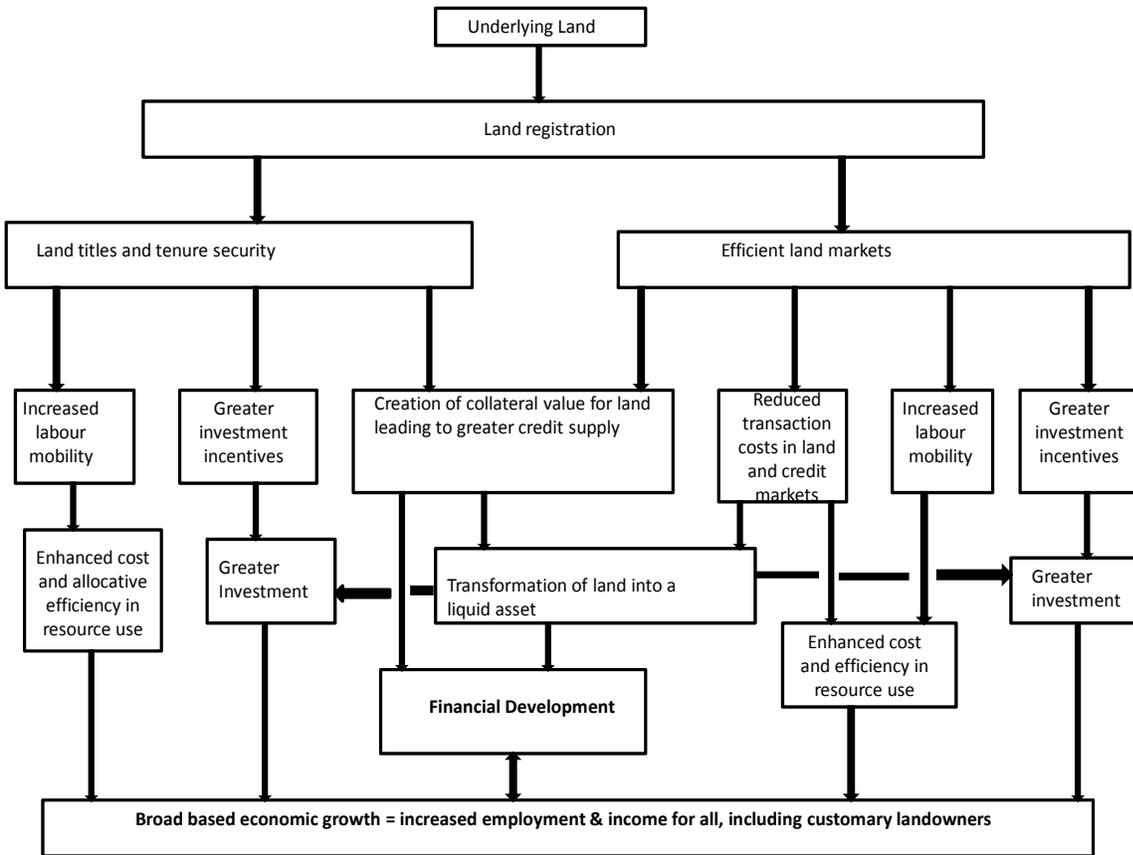
4.0 DERIVING A CONCEPTUAL FRAMEWORK FOR THE PNG LAND REFORM PROGRAM FOR INFORMING POLICY AND RESEARCH

This section develops a conceptual framework that defines the PNG land reform initiative, which is informed by the literature (both global and PNG) and the on-the-ground realities in PNG. This conceptual framework is used to inform policy, expected outcomes, and research.

4.1 The conceptual framework for the PNG land reform program

This framework is a modified version of the original conceptual frameworks discussed in Section 2. Of the two conceptual frameworks in section 2, the second, Figure 2, is more suitable, given the broad and comprehensive nature of the PNG land reform program. Figure 2 has been modified to capture the NLDP, as depicted in Figure 3. The main modification consists of the additional component at the start, shown as the underlying land. This addition is intended to identify the institutions defining the property rights of the underlying land. The underlying land is all land held under customary tenure. Without giving due consideration to this aspect, the espoused channels would fail to function and remain muted.

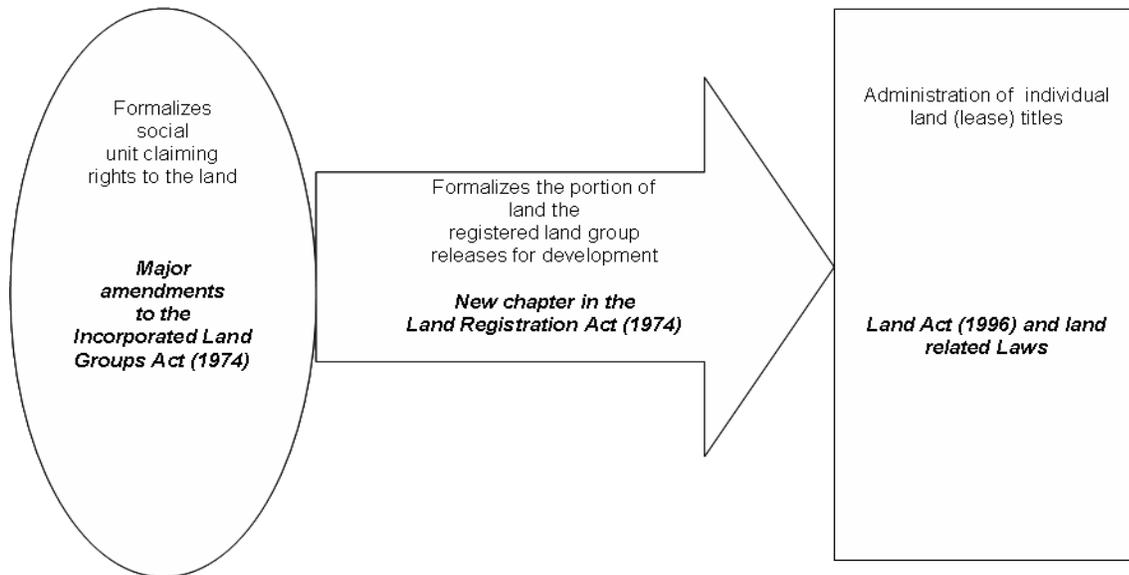
Figure 3: A conceptual framework for the PNG land reform program



With a view to ensuring that the PNG land reform initiative delivers through the espoused channels, the reform initiative firstly pays attention to the property rights regime within the customary land tenure system and secondly designs the framework to mobilise economically viable portions of customary land for development. Individual land titles, which are useful for the market, would need to be released from the portion released for development. To make this effective, customary land tenure has to cease to apply on this portion. Instead, formal land law provides the overall oversight. Customary landowning social units need to be given the legal power to decide on the allocation of land for development and benefit from the stream of income generated from the developments on this portion. These changes are expected to result in broad-based economic growth and development depicted by the increase in employment and income opportunities for all Papua New Guineans, increased income for investors (customary landowners, other Papua New Guineans, and foreigners), and increased employment and income generating incomes for customary landowning social units. In fact, customary landowners stand to benefit significantly as they become wealthy landlords.

The aim is to have an incentive compatible system that delivers time-consistent contracts so that the security of the land titles issued is assured. This is depicted in Figure 4.

Figure 4: Customary land tenure reform: a conceptual framework



Source: Fairhead *et al.*, (2010)

This conception (Figure 4) first acknowledges and legally recognises through the enactment of the *Land Groups Incorporation (Amendment) Act 2009* that customary land tenure is defined, enforced and protected against invaders at the group level. Second, it acknowledges and recognises that subgroups within the broader group have access and use rights defined for individuals, families, sub-clans, and clans for different resources within the group. For instance, a family may have the rights to make a garden, but the drinking water from a stream within the garden land is accessible by everyone from within the group. On the other hand, everyone from the group may have access rights to a particular forest area for hunting, gathering timber for building, and wood for fuel. Through the ILG, the social landowning unit is provided the

administrative mechanism to identify the respective resources, bundle the property rights to these resources, and trade with those who wish to access or use. The *Land Registration (Customary Land) (Amendment) Act 2009* achieves this outcome. The terms under which these bundles of property rights are traded are defined and administered formally, with the *Land Act (1996)* being the principle law.⁷

Linking the conceptual framework to the NLDP, we note that the NLDP has four components — improving the system of land administration, improving the system of land disputes settlement, developing a framework for customary land development, and developing a framework to facilitate the development of the land and properties market. Their origin was the recommendations from the NLS, but they are consistent with the conceptual framework depicted in Figure 3.

Further, Figure 3 flows logically and depicts the requirements to ensure security of tenure and the functioning of a viable land and properties market. This is consistent with the institutional arrangements PNG is aiming to develop through the NLDP, as discussed next:

Customary land development component — a property rights system that defines the status of the underlying land. As discussed above, the customary land tenure reforms law depicted in Figure 4.2 captures this segment of the reform agenda. In stage 1, the social unit that claims land by the customary land tenure law of the area is formally incorporated by the *Land Groups Incorporation (Amendment) Act 2009*. In stage 2, the ILG decides on the portion that it wants to release for development or deal on. This portion is deposited into a central repository created by the *Land Registration (Customary Land) (Amendment) Act 2009*. Customary land tenure law ceases to apply and the *Land Act 1996* and related laws provide the administrative and legal oversight for the access and use of this land. In return, the streams of income defined by the *Land Act 1996* accrue to the customary landowning social unit through their ILG.

Land disputes settlement component — this component aims at improving the system of land disputes settlement by establishing a land court system, which will be relied upon to identify land boundaries when incorporating ILGs. The proposed land court is expected to facilitate the verification of land boundaries when a customary landowning social unit has decided to incorporate an ILG. It is also expected to adjudicate over disputed boundaries. Later, at the time an ILG decides to release a portion for development, the land court may also be called upon to, first, verify and, secondly, adjudicate if there are disputes over ownership, especially with a neighbouring social unit. There could be subsequent disputes over land boundaries.

Incorporating the land mediation process — which is currently a provincial function and an important aspect of the land disputes settlements process — into the land court system needs considerable attention. One option worth considering is to define the roles and functions of the mediation process as witnessing and certifying land boundaries when incorporating ILGs. These witnesses could be used as evidence in subsequent disputes to be handled by the land court.

With a view to ensuring security of tenure, decisions on land boundary disputes at the stage where land is marked for development should be restricted to the proportional distribution of

⁷ See Constitutional and Law Reform Commission (2008), for details.

incomes rather than to changing the status of the land. For all practical purposes, the alienated portion should never be allowed to revert to customary land tenure law.

It is important to note that the land court system being established is to deal with land disputes related to land held under customary tenure only. Disputes on individual land titles, which are formal land titles, issued on the portion released for development will be adjudicated through the mainstream formal court system comprising of district, national and supreme courts.

Land administration component — this component is expected to be crucial at the underlying land phase — which is the registration of ILGs and the release of portions for development. The next phase of land administration will be over the management of ILGs and the planning, development, keeping records, and title registry for the individual titles issued over portions released for development. Third, it will be crucial for the provision of the administrative system needed for the transfer, transmissions and reclaim of lost titles. This phase will be on an ongoing basis.

Land and properties market development component — will establish the institutions for the development of a viable land and properties market. The development of institutional arrangements that enhance the role of the private sector would be encouraged through the development of interest groups, defining the institutions for housing industry sectoral development, and establishing the institutional framework for marketing (auction and tender procedures). For instance, interest groups for those involved in the land property market — valuers, surveyors, town planners, real estate agents, property owners and users of rented properties — would be encouraged to register, expand and extend their services.

The role of the State will be reduced to providing the institutions for defining, enforcing, and the safe-keeping of titles.

There are lead agencies responsible for providing oversight to the implementation of the respective components. The Constitutional and Law Reform Commission has provided the leadership on the customary land development component. The Magisterial Services is responsible for overseeing the creation of a land court system for the land disputes settlements component. The Department of Lands and Physical Planning is responsible for the land administration component. The Independent Competition and Consumer Commission, under the guidance of the Department of Treasury, is responsible for guiding the development of a viable land and properties market.

The overall intention is to ensure that the policy interest of the PNG government to grow the economy by enhancing land's contribution to growth is achieved without compromising the interests of the current and future generations of customary landowners. This is achieved by adopting a framework that establishes the rules of the game and enhances the incentives for each participant.

4.2 Plausible outcomes from the PNG land reform as depicted by the conceptual framework

This section discusses the plausible outcomes from the implementation of each component of the PNG land reform program as depicted by the conceptual framework in Figure 4.1. The discussion is organised into plausible outcomes from each component and broader implications.

Customary land development components

The plausible outcomes from the full implementation of the customary land development components include the following:

Dynamics within the customary landowning social unit

The implementation of the customary land tenure reform laws is expected to add new dynamics across the social structure of customary landowners, including their relationship with land tenure, use rights, and access to the land. These changes are expected to raise many issues and questions, such as the following: will they cause changes to the social structure — such as the disintegration of tribal and/or clan structures or a further consolidation of these social structures? How will landownership, use rights, and beneficiaries' change? How will social changes such as intercultural marriages and absentees ownership be managed? Will it lead to escalation in conflict and violence? What impact will it have on the welfare of the customary landowning unit, as individuals, households, and at the community level?

Registration and management of incorporated land groups

The ILGs were conceived and formulated to be the vehicle for development within the community using the land they owned by customary law. The process and requirements for the incorporation, registration, and on-going management of an ILG are defined in the *Act*. The challenges of implementation are, however, significant at each stage. At the incorporation stage, the legislation states that the landowning social unit provide a constitution, a sketch map of the land area the social unit owns as defined by customary law, and birth certificates of every member of the customary landowning social unit, amongst other requirements.

At the registration stage, a process for verification, perhaps using land mediators, who are an integral part of the Land Court System and a representative from the District Administration, as defined in the law. The Land Court system is expected to adjudicate on disputes over landownership. Drafting sketch maps would require the use of modern technologies such as Global Positioning Systems. This aspect may have to be outsourced to the private sector so that private surveyors are engaged, given their expertise.

The ongoing management of ILGs requires that the executive provides annual reports that include copies of the annual general meeting (a compulsory meeting to be held within the main village of the ILG); updated list of births, deaths and marriages into and out of the ILG; and an audited financial report. These requirements are mandatory, with severe penalties for non-compliances imposed on the ILG executives. They were designed to improve governance, address agency problems, and to institute accountability and transparency.

Land use and resource management

Under the amended legislation the ILGs could own two types of land — that held under customary tenure and that held under formal tenure. Customary law would continue to administer land held under customary tenure while formal law, the *Land Act 1996* being the principle, would administer the portion released for development, as envisaged by the amendments to the *Land Registration (Customary Land) (Amendment) Act 2009*.

The portion released for development may be utilised for the development of townships, mining, petroleum, gas, oil, forestry, agriculture, tourism, and carbon trading. The *Land Act 1996* and land related Acts would provide oversight over the use of this land.

The application of these laws has implications for the way land is used and natural resources are developed and managed in PNG. A future potential area for research is the role and use of land use plans in PNG. The NLDP will cause more land, both customary and government, to become available for development. The types of development are likely to be many and varied, ranging from the development of natural resources (minerals, oil and gas, forestry, etc), urban development (the growth of towns, the establishment of economic corridors, tourism resorts, etc), government services (schools, aid posts, police stations, etc), and environmental protection and quality of life protection.

A range of land use planning and control instruments, many with different characteristics, may be used. Typical types of land use plans could range from assessing the land's potential, its carrying capacity, showing current land use, portraying possible scenarios of future land use, and providing a spatial regulatory control/zoning framework for allowable and prohibited land uses.

These are new challenges for the new land administration system. A focused research project could be conducted to determine what could be suitable land use planning, control instruments, and mechanisms for the various areas and situations in PNG, and guide the land administration system.

With respect to natural resource development, under the present system, the State claims direct ownership over all precious metals. The Minister for Lands issues special leases for exploration and subsequently for the development of the project, if it is commercially viable. With respect to mining, the area is usually declared a Special Mining Lease. In the Petroleum, Gas and Oil projects, the areas are declared as Petroleum Licence Areas. Landowning social units from the project impact areas receive a stream of financial and development benefits. Financial benefits may include compensation, royalties, and dividends from equity participation. Development packages include preferential treatment for the awarding of contracts to landowner owned companies, employment opportunities for people from the project impact areas, and major infrastructure developments including, schools, health facilities, and roads, and housing for landowners.

In contrast, all surface resources, which include alluvial mining, belong to the customary landowners. However, in the case of Forestry, the *Forestry Act* provides the legal framework for commercial logging whereby the Forestry Management Services provides oversight over the management of the Forestry Industry, including the issuance of licences for commercial logging.

Related laws such as the *Environment Act* and *Water Act* provide oversight of the developments that occur on customary land. Otherwise, all surface resources are owned by customary landowning social units that have claims over such land by the customary law of that area.

Through the application of the customary land tenure reform laws, the relationship between the State, which claims rights over all precious metals, issuance of special mining leases, and the issuance of licenses for commercial logging; and customary landowning social units could change. These laws provide landowning social units exclusive ownership and management rights

over the land. The relationship between the State and the customary landowning social units becomes one where the State could issue licenses on terms equally agreeable to both parties. This implies that the State may not unilaterally issue licenses under terms and conditions that suits only the State's interest.

The challenge would be to ensure that the ground rules are clearly defined and all stakeholders commit to play within these rules. The main aim is to unlock the underlying incentive structures so that each party — State, customary landowning social units, and investors (both nationals and foreigners) — participate in a transparent and accountable system that delivers positive outcomes for all the stakeholders.

Landowning social units stand to gain from new sources of income from the resource-based developments on the land they own. One product is the income to be generated from the upfront lease of portions of land (jungles probably) for mineral, petroleum, oil and gas exploration. Portions of land could be auctioned off to the highest bidder for exploration purposes. This contrasts with the current practice where the State has monopoly control over the issuance of an exploration license for a fee. Landowning social units are brought to the negotiation table for benefit sharing arrangements only after a mine is found to be commercially viable. Under the new arrangement, customary landowning social units stand to earn income from leasing their land for exploration. Their involvement, subsequently, in any project that becomes commercially viable is a separate matter.

Portions of forest area may be protected in return for income to be generated from carbon trading. Likewise, vast areas of grasslands may be replanted to gain income from a carbon trading economy.

The above provides examples of the kinds of impacts the application of the customary land tenure reform laws may have on the way land and land-based resources are viewed, accessed, and developed.

Sustainable management of the stream of income that flows from the release of land for development

A stream of income is expected to flow through to the ILG from the leasing of land. There are about five types of incomes — upfront lease, annual land rent, land tax, stamp duties, and capital gains tax. The first two accrue directly to the customary landowners through their ILGs. The proposal is that incomes generated from an annual land tax would be divided between ILGs (20%) and the municipal authorities (80%). Incomes from stamp duties and capital gains would be divided equally (25% each) between the national, provincial, and local level/municipal authorities and the ILGs⁸. Additional incomes would be generated from the business enterprises that the ILGs could own.

Given the expected flows of income, it is a plausible proposition that the ILGs would be plagued by principle-agent type problems as the agents (executives of the management of ILG owned companies) may not act in the best interests of the principle (broader landowning group).

⁸ The percentage distributions are only proposals.

Land dispute settlements component

The plausible outcomes from the full implementation of the land dispute settlements component, include the following:

Land and property related dispute adjudication on customary land

Land boundaries have been relayed by oral history and marked with physical landmarks such as rivers and mountain tops. At present, there is a large backlog of cases before the land dispute settlements system, including claims against the State and Churches, over alienated land. Further, disputes related to the development of major development projects within the extractive sector have led to the numerous court cases currently before the formal courts, both the national and supreme courts. At the community level, there are localised land disputes, which have led to the high frequency of conflicts leading to violence and death. In fact, violence has been a way of resolving land-related disputes in the past, especially when mediation has failed.

The ideal outcome is clarity of land boundaries and overall reduction in the prevalence of land disputes.

Land and property related dispute adjudication on land with formal titles

Disputes over land transactions concerning land held under formal title would be adjudicated through the formal courts system. Cases may include disputes over land transfers (buyers and sellers) and transmissions (inheritance). The latter could potentially present special issues in the PNG context where the application of the *Will, Trust and Administration Act 1987* may conflict with customary forms of inheritance. The new land court system should be structured to cater for these outcomes.

Land administration component

The plausible outcomes from the full implementation of the land administration component include the following:

The land administration system should be able to facilitate the efficient registration and the ongoing management of ILGs. It should also be able to facilitate the demarcation of land for development, and provide oversight over its planning and subsequent development. Further, it should provide safe keeping of all the formal titles and their transactions, which includes transmissions. The latter would be an ongoing function of the land administration system. Over time, this component should underpin the development of a viable land and properties market leading to land playing a greater role in the national economy.

Land and property market component

The plausible outcomes from the full implementation of the land and property market development component include the following:

Land and property market and prices

At present, there are three types of land and properties markets in PNG. The first is the pure village system, which does not require any form of land transactions, either formal or informal.

The inhabitants are members of the customary landowning unit defined by the customary law of the area. The second set constitutes a vibrant informal land and housing market developing on land owned by the State and or customary landowning social units (see Chand and Yala, 2006). The third is the largely underdeveloped formal land and property market. Through the land reform initiative, one of the clear objectives is to support the growth of the formal land and properties market. The challenge will be to ensure that the benefits from engaging in the formal land and properties market are more attractive than the benefits from engaging in informal land transactions or remaining in a traditional village environment.

At present, the formal segment of the land and properties market in PNG remains restricted, underdeveloped, and highly distorted for segments where a market exists. The market for land held under customary tenure is severely constrained, as discussed extensively earlier. Land held under State ownership suffers from poor administration. In fact, the allocation of new land on land owned by the State is via the National Land Board, a State-instituted monopoly institution that allocates land at the discretion of its members. This mechanism is to be replaced by a market-based system (such as an auction or tender process) as part of the NLDP.

The land market in the major urban centres, especially Port Moresby, is highly skewed because of the restrictions on the supply of land. These restrictions are reflected in the highly prohibitive prices of property in Port Moresby. Failure to effectively implement the land reform program could be expected to lead to an increase in the price of land within Port Moresby by 41% between 2010 and 2020 (Fairhead *et al.*, 2010:27).

With respect to land held under customary tenure, there exists a viable informal market, which facilitates access to land for settler housing within the urban settlements (see Chand and Yala, 2006 for the case of Port Moresby) or within major project development areas such as West New Britain (See Yala, 2004; Kockberski *et al.*, 2009 on the informal purchase of land within the oil palm growing regions in the West New Britain Province). As discussed earlier, large scale business enterprises either lease or purchase land held under customary tenure for enterprise development because they have the scale.

Given the current situation, one of the plausible outcomes from the land reform initiative is the development of a viable formal land and properties market. The supply of land with secure title is expected to expand as land currently lying idle (either under customary tenure or state ownership) or land that is being occupied by informal settlements is brought into the formal land and properties market. This may lead to dampening of the exorbitant prices currently being witnessed within the major urban centres.

The objective is to ensure that a competitive market with demand driven by investors (members of customary landowning groups, other Papua New Guineans, and foreigners) and supply driven by customary landowners through their ILGs develops and expands over time. The main challenge, however, is to ensure that the formal land and properties market expands at the expense of the informal land and housing market.

Broader implications

The complete, efficient, and timely implementation of the NLDP as a program may have the following broader outcomes:

Investment

The theory behind the economics of land titling and the empirical evidence provides a sound basis for optimism about growth-driven investment in PNG. The main channel depicted in the literature is greater incentives for the titleholder. This is expected to be the same in the context of the PNG land reform initiative. However, another important outcome with significant impacts on investment anticipated in the PNG context is overcoming the costs associated with the asymmetry of information.

The main problem arising from the predominance of an actively utilised customary land tenure system is asymmetry of information, giving rise to high coordination and transaction costs and time inconsistency of contracts, thereby inhibiting investment — both public and private — in PNG. The full, timely, and efficient implementation of the land reform program should improve the flow and access to information. Further, time consistent contracts will be designed, leading to improvements in the quality and longevity of investments across the board. These are plausible outcomes because investors, in this context the State and/or the private sector, would be dealing with properly instituted ILGs, whose membership is annually updated. Further, the new laws have separated landownership from use and access rights; unified the institutional structure (standardised rules); provided safe keeping for land titles; and provided a transparent and market-based system to facilitate transactions.

The State has used provisions in the *Land Act* to negotiate access to land under customary tenure to deliver public goods and services in the form of roads, airports, airstrips, schools, and health centres. The law is clear that just and fair compensation should be paid to customary landowning social units for accessing their land. This is fine. However, the real issue arises in identifying claimants by applying the customary law of that area. The absence of a clearly-defined, central repository of landownership claimants by customary law raises costs associated with the identification of customary landowning social units and/or individuals within each group. This raises transactions costs of identifying and coordinating payments to landowning social units. Sometimes, disputing parties submit counter claims, thereby further raising the cost. In most cases, the process is repeated, leading to time inconsistency of contracts whereby none of the contracts is binding and all may have to be renegotiated with every new generation of customary landowners.

For instance, the Highlands Highway, the lifeline of the PNG economy frequently suffers from landslips. Numerous claimants from either side of the road demand compensation payments running into hundreds of thousands, if not millions, of kina. These are costs additional to the actual maintenance costs that the State has to incur. Some payments end up in fraudulent hands, thereby giving rise to second rounds of payments to people claiming to be the real landowners.

This has become an endlessly repeated game. Overall, all of these problems mean leakages from the public coffers and result in high costs for society, both financial and developmental.⁹

Asymmetry of information leading to rising coordination costs has undermined private sector investment. Time inconsistency of contracts is also an issue for the private sector. This is one

⁹Another good example is that it costs an estimated K10 million and more than two weeks to research an agreement on the benefits sharing agreement on the LNG project between the National Government and Provincial Governments and customary landowners affected by the project.

reason that private investment in PNG is divided between two extremes — large and small scale (Fairhead, *et al*, 2010:3). The large scale end has the capacity to manage the coordination-related transactions costs. The small scale enterprise, which is usually funded out of personal savings, does not have the scale to meet these costs. This has meant the shunning of the natural growth path for enterprises, starting from small enterprises and growing into medium and then to large scale enterprises over the years.

Enterprising individuals from a landowning social unit, although they have access to complete information, suffer from a different set of problems. First, they may not have access to the most productive portions of land. Second, even if they do, financial institutions and others with capital to lend or invest are denied complete and full access to this information. Third, the stream of income from the investment may flow to the wider community. These sets of problems constrain productive members of the landowning communities from engaging in useful investments. These problems would be addressed through the implementation of the NLDP activities.

Overall, overcoming the information constraint through the successful implementation of the NLDP should help revitalise the public sector to invest in quality public sector investment projects leading to improved delivery of basic goods and services; enable the private sector to engage in long-term investments; incentivise productive members of the customary landowning social units to engage in productive investment; and facilitate the natural progression in enterprise development — starting small and expanding into medium-sized and eventually to large scale enterprises.

At the community level, those customary landowning social units that register their ILGs and mobilise their land for development stand to benefit. They should earn sufficient income from the developments on their land, which, if sustainably managed and ploughed back into further investment, could lead to marked improvements in the collective welfare of their broader community.

Collectively, these activities should lead to greater investments in housing, the accumulation of other assets, and improvements in education and health; leading to improvements in welfare in the rural village, urban squatter, and urban village sectors.

Financial Sector development

The theory behind the economics of land titling provides a sound basis for the development of a viable financial sector, leading to greater supply of credit as land titles become available as collateral for loans. The empirical evidence, however, provides optimism only for larger loans (Carter and Olinto, 2003). The small loans market segment, unfortunately, could remain restricted because applicants suffer from lack of economies of scale. It has long been established that the transaction costs of administering small loans is a major constraint to accessing finance from the formal financial sector from both lender and borrower's points of view (see the papers in Adams and Fitchett, 1992). Further, the profitability of the business enterprise, the costs of foreclosure, the presence of a liquid land and properties market where the foreclosed land titles can be sold, and the presence of a viable financial sector are other important factors.

In the context of the PNG land reform initiative, the impact on the financial sector and the supply of credit may function through the following channels.

First, consistent with the transactions costs theory and the empirical evidence to date (see the papers in Adams and Fitchett, 1992), an increased supply of credit from the mainstream commercial financial sector to the small scale loans sector is less likely. This could include loans for housing within the settlements sector, loans for the small scale agricultural sector, and for small scale business enterprise development within Tourism and other sectors. Investments in the small scale end would still have to be funded from personal savings or through credit accessed via specialised lending agencies such as microfinance institutions. However, the increased level of investment leading to the creation of new and better paying jobs may lead to higher incomes and savings for the average citizen. Finally, economies of scale could dictate that the smallholder agricultural sector, currently a predominant sector in PNG, may have to collapse into the medium to larger agricultural sector.

Second, an increased supply of credit from the mainstream financial sector to the medium to large loans market where there are economies of scale to overcome transactions costs, profitability within the enterprise and industry more broadly, and in locations where a vibrant and liquid land and properties market exists is plausible. Carter and Olinto (2003) established that the minimum requirement for loans from the formal financial sector to an agricultural sector setting is 20 hectares. In the case of PNG, Yala (2004) established that one of the reasons why the smallholder Oil Palm growers with formal land titles were denied access to credit was the size of the loan (K2,000 on average) demanded. This was too small and economics would dictate that the lender and borrower would find their transactions costs prohibitive.

Third, the basis on which the increased supply of credit is anticipated to grow is security of tenure at two levels — the portion released for development and individual titles (section and lots) issued on the partitions released for development. However, any developments that undermine the legal and administrative systems for the portions released for development by the ILG would undermine the collateral use of all the land titles issued on that portion. With respect to the individual land titles issued on each allotment, their bankability would largely depend on the status of the individual land titles. Inefficiencies within the land administration system, such as duplicate titles, failure to facilitate transmission and transfer of land titles, and failure to protect originals from decay and fraud would also undermine the collateral use of individual land titles.

Fourth, a viable land and property market system is a requirement to ensure that a liquid land and properties market develops and operates efficiently. Financial institutions rely on a liquid market to enable foreclosure, disposition of and reclamation of their money. It is on this basis that financial institutions lend. Without this option, the land collateral system will fail to function.

Finally, failure to redeliver on the bankability of land titles would be viewed as a failure of this entire land reform initiative. Without the bankable use of land titles, investment remains sub-optimal. Subsequently, productivity remains sub-optimal. The entire economy operates at sub-optimal levels as well. Unshackling productivity growth requires that the land titles are guaranteed security of tenure, land titles are mobilised effectively as collateral for loans, and a liquid land and properties market exists.

Labour mobility

Land, labour and capital are the three factors of production. Although PNG faces severe constraints on each of the above, the NLDP is targeted at improving the productivity of land. However, it has significant implications for the labour market.

One of the features of customary land tenure in its original form is that it fails to facilitate transactions, including the freedom to migrate and settle, between unknowns. Transmissions are facilitated by the virtue of birth into a landowning social unit. The institution of marriage facilitates access and use rights. Compared to being married or born into a social unit, institutions such as adoption enable a restricted role in facilitating access to access, and use rights. Land boundaries could be shifted through violent conflicts with the winning party defining direct claims to access, use, and even transmissions rights. There is, however, no institutional arrangement that defines transfers. More significantly, there exists no institution facilitating transactions with members outside of the landowning social unit.

Labour mobility, which constitutes the freedom to move and find a place to resettle within the framework of a pure customary land tenure system, is therefore restricted largely to marriage. Because landownership is defined within a group, the landowning social units broadly sanction adoptions, marriages, and inheritance rights, even when dealing with siblings.

However, since colonisation, labour mobility has occurred in PNG. The institutions facilitating labour mobility are cross-cultural marriages, employment opportunities, and the movement of people in search of basic services, jobs, and income generating opportunities into major urban centres.

State-sponsored, large-scale resettlement programs have also occurred, largely during the colonial period (see Hulme 1984 for details). Labour mobility during the post-independence era has largely been voluntary; largely driven by the search for employment, income earning opportunities, and access to basic services. Since colonisation, voluntary labour mobility has largely been between the village of origin and the place of residence, normally the place of employment.

While there is a range of institutions facilitating access to land for housing by migrants (Chand and Yala, 2006), there is increasing tension and friction leading to large-scale violence between customary landowners and the settler population right across the country. Koczberski, Curry and Gibson (2003) reported such violent reactions against second to third generation settlers on State-sponsored settlements within the Oil Palm projects in West New Britain and the Northern (Oro) Provinces. At the time of writing, there is a major clash leading to the loss of lives and the destruction of properties involving second and third generation descendants of settlers originally from the East Sepik Province who settled in the Wau and Bulolo area within the Morobe Province.

These examples show that a land tenure reform initiative that fails to capture the underlying demand for the protection of land within the customary landowning social unit has the potential to trigger violence that would undermine rather than promote security of tenure. This fundamental issue has not only been recognised but also adequately catered for in the design of the framework for mobilising customary land for development. The *ILG Act* defines land to be

owned by the social unit into perpetuity. This addresses the underlying sense of insecurity and the fear of losing the land to migrants from other parts of the country. The *Land Registration Act* creates the central repository for customary landowners to deposit the property rights over portions they wish to deal on. This effectively creates a framework for them to earn income from those who utilise the land they release. In addition, they should have employment and other income generating ventures that they may wish to undertake collectively through the ILG, or individually. Other Papua New Guineans and foreigners wishing to utilise land for housing or other enterprise development should be able to access these lands, which are indeed secure. As discussed earlier, the rules defining these transactions are the standard laws, principally the *Land Act* and other land related laws. The role of the State is to provide safe keeping of titles, institutions for arbitration, and enforcement of these rules. Basically, the State, under this land reform program, becomes a referee in a match whose rules are clearly defined and widely understood by the match officials, players, sport administrators, sponsors, and the broader spectators.

In this framework, land would be leased to the highest bidders, thereby providing a stream of income for customary landowners. Those leasing these lands would be able to maximise the returns on their investments. They would therefore recruit the most skilled, irrespective of their place of origin. Landowning social units would have the incentive to attract and maintain good relations with the investment community, which includes the employees of these enterprises. The market for land — demand on the side of the investor and supply on the side of the ILG representing the collective interests of the customary landowning social units — is expected to develop and function to facilitate these transactions. Provincial Governments and municipal authorities also have the incentive to invest in law and order, good infrastructure, and other investments that help attract investors to their province or town because they earn a share of the tax income generated from the developments on the land (details discussed later in the text).

The above should encourage labour mobility, both in terms of inter- and intra-regional movement, and facilitate cultural integration. This should facilitate a fundamental easing of one kind of friction in the labour market peculiar to PNG and Melanesia more broadly. A by-product of this would be social cohesion and national integration. This should lead to savings of expenditure on ethnic conflicts at the private level and law and order at the public sector level, which arise from either land disputes or fear of land invasion. This should also enable businesses to save on their current outlays targeted at disgruntled customary landowners. Further, this should enable individuals and households to save on the huge private security expenditure they make in looking after relatives or congregating around tribal affinities (see Chand and Yala, 2006 for empirical evidence on this from settlements within Port Moresby). These savings would be additional to the direct economic benefits from higher levels of investment, improved supply of credit, employment creation, and income generation discussed earlier.

There are other social and economic benefits to emerge. Changes in labour mobility, creation of income opportunities, and the increased flow of income to the broader community should lead to changes in child labour and gender. In the traditional customary land tenure system, every child is expected to make a contribution to the subsistence way of life. The childhood chores include looking after younger siblings, collecting wood for fuel, providing security over valuable assets and property, and collecting water and food. The expected contributions made by children may change as alternative sources of livelihood become available through the effective mobilisation

of land as discussed above. Further, the practice of land inheritance would also undergo a fundamental change. It is anticipated that a growing number of people would want to own properties, either as investments or for housing, on land with formal titles. The change in the underlying status of the land would create incentives sufficient to make ownership of land with formal titles more valuable vis-à-vis land without formal titles. Collectively, both factors should be able to change gender relations, as any person, irrespective of gender, with the capacity to pay would be able to purchase land with formal title.

Productivity of land

Productivity of land, currently at sub-optimal levels, can be expected to improve. As discussed earlier, land held under both State and customary land tenure face severe restrictions that undermine their productive capacity. Through the land reform program, economically viable land would be put to optimal use, leading to improved productivity. Increased investment in land can be expected to result in further improvements to productivity.

Income

Income implications are discussed at three levels: national, sub-national, and household/community level.

National income

Fairhead *et al* (2010:29) estimate that gains in terms of additional GDP to be between K5.9 billion and K16.5 billion in their ‘low’ and ‘high’ impact scenarios, respectively, between 2010 and 2020.

Tax revenue implications for the various levels of Government

The land reform initiative has significant tax revenue implications for the various levels of government in PNG. While the bulk of the income generated from the lease of land is expected to accrue to the customary landowning social units through their ILGs, tax related incomes are expected to be shared between the various levels of government and the ILGs. As discussed earlier, there are five income streams. While the upfront lease and annual land lease incomes accrue directly to the customary landowning social units via their ILG, incomes from Land Tax, Stamp Duties, and Capital Gains tax would be shared between the different levels of Government and the ILGs. Incomes generated from Land Tax, which is charged by local municipal authorities, would be shared between ILGs and the municipal authorities concerned. The proposed distribution is 80% to the municipal authorities and 20% to the ILG concerned. With respect to stamp duties and capital gains tax, the proposed income distribution is 25% each to the ILG, municipal authority, provincial government, and the national government.

The justification for this distribution, as explained earlier is twofold. First, it caters for the intergenerational change within the ILG. This is crucial for ensuring time consistency in the agreements and contracts entered into across the different generations. Failure to achieve this would undermine security of tenure of land released for development because an agreement entered into by one generation may easily be revoked by the next generation. The ILG law is intended to minimise this effect. Second, there are incentives for each of these stakeholders to

invest in activities, processes, and systems that drive and sustain the value of their land, property, and developments thereon because these taxes are imposed on the value of the land and property.

In combination, these factors are expected to drive the development of a viable land and properties market. They have the underlying incentive of attracting investors to their respective land, towns, and provinces. More importantly, because the calculation of the income stream is based on the underlying value of the land, each stakeholder has an incentive to protect the growth in the value of their land and investments thereon. This implies that the revenue stream for the various stakeholders will increase with the increase in the volume of transactions.

The second source of tax income is income tax. Income tax imposed on both personal and businesses would expand commensurately with the increasing level of investment and the corresponding increase in employment. This is a national tax; therefore, revenues generated from this will accrue directly to the national government.

The third source of tax income is the goods and services tax. Increased economic activities created by the effective mobilisation of land are expected to broaden the tax base of the goods and services. This tax income is centrally collected by the Internal Revenue Commission and redistributed to the provinces. This is expected to generate increased income for provinces.

Other taxable incomes would include duties, tariffs, fees, and charges. As the economic base broadens, so will the growth in the tax and revenue base for the national government.

Household and community level income impacts

Across the board, increases in average household income levels are anticipated. However, the impact on income may not be consistent across the board. There could be several strata of income earners. One stratum consists of those who are members of a customary landowning unit engaged in land development. Their income generating opportunities should range from payments to their ILGs, income earned from employment, and income from their own savings and investments. A second stratum would consist of other Papua New Guineans engaged in the formal sector as employees of enterprises developed on land released for development. A third stratum is other Papua New Guineans and foreigners who invest in the land released by the ILG or State. Overall, we anticipate the average household income to rise for all households.

Economic development

The overall objective is to achieve sustained, broad-based economic growth and development. Development is measured in different ways. However, there are specific components that the land reform could directly impact on. These include poverty, family size, education level, and infant mortality. While poverty has several kinds of measures, we could narrow them down to a few measures that can be tracked at the household level. Examples include income, access to water and sanitation, and access to basic health and educational services. Family size is expected to decline as security of tenure and income levels increase. Level of education is expected to change as households divert their savings into human capital, and invest in quality housing with appropriate ventilation and study atmosphere. Infant mortality may decline as people use their savings and or credit to improve their housing conditions, improve their diet and quality of water intake, and meet their health expenses.

Microeconomic and macroeconomic impacts

Consistent with the theoretical predictions, significant impacts at the microeconomic level should be expected. Increases in the demand for investment should see concomitant increases in the supply of credit, leading to greater investment in the housing, agricultural, and tourism sectors. This should increase land and property prices and incomes for landowning social units, individual households, and individuals. This process should lay the foundation for a significant transformation in the microeconomic foundation of the PNG economy.

The private sector should be able to access land that optimally suits their business needs. Although, significant impacts for the medium to large scale businesses is expected, this reform program provides the opportunity for business enterprise to start small and expand over time to medium and large-scale enterprises. There would be a greater number of investment opportunities for individuals, households, and enterprises to consider. This may include investing in housing, investment property, and other business enterprises.

The increased flow of income into the community expected from the ILGs as land is released for development is expected to flow into investment in education, utilities, and housing. This investment is expected to create multiplier effects that benefit the wider community.

At the aggregate level, we anticipate significant impacts on economic growth, investment, government revenue, and employment. Fairhead *et al.*, (2010) estimated the anticipated economic impacts using a CGM framework. These estimates, though limited to only the first ten years, provide significant optimism for the PNG economy.

Role of complementary reforms

Complementary reforms are needed to deepen the role of land reform in the overall economy. Improved and reliable telecommunications systems, a competitive and vibrant financial sector, a competitive market, investment in physical infrastructure, investment in education, investments in public utilities, and the maintenance of law and order, all have a part to play in enabling land to maximise its role in the national economy.

4.3 Research implications from the conceptual framework

The presence of an accompanying research framework is crucial as implementation has its own challenges. Further, the expected channels may be conceptually sound but may not function to deliver the expected outcomes. This underpins the importance of investing in a sound research framework that defines the broad research parameters and thematic issues/areas and guides quality research into each of these areas. It also highlights the importance of providing a forum for discussing and disseminating the findings, and using the findings to inform policy and implementation. The discussion that follows defines the main features of the kind of land research framework needed. This discussion draws on the earlier discussions that focused on the expected outcomes from the conceptual framework to draw out the implications for research.

Baselines — First and foremost, baselines need to be established in several of the strategic aspects of the NLDP. Apelis *et al.*, (2009) describe the kind of methodology suitable for this kind of research. The core elements are that control and experiment groups are needed to create a

counterfactual for subsequent comparisons. Behind the creation of the baseline should be a conceptual framework built on a sound theoretical base and with sufficient empirical guidance for the formulation of the questionnaire. This is crucial to ensuring that the appropriate data is generated. The sample selection process has to be rigorous so that the selected sample has both the necessary number of degrees of freedom and is representative. Research assistants (if used) have to be provided adequate training and supervision with a view to ensuring quality control throughout the process. The data gathered should be appropriately analysed and stored securely for two reasons. First, it is an ethical requirement to keep personal information confidential. Second, this would assist immensely in terms of repeat surveys. The overall objective is to generate a longitudinal database that should be able to provide a stream of data useful for monitoring the effectiveness of the land reform initiative.

Apelis *et al.*, (2009) has created the first baseline in the context of the Taurama Valley pilot project where customary land has been identified to accommodate urban expansion within Port Moresby. A database of basic socio-economic data, assets, type of house, access to finance, and expectations of project impact at the household and community level has been captured through a survey questionnaire. This database is accompanied by a database of photographs of houses and physical location captured by a hand-held Global Positioning System device. It is planned to update this database by repeating the survey periodically. The objective is to monitor the impact of customary land tenure reform at the household and community level.

The generation of a baseline data stream should be a priority research project. A series of research projects that create baselines for different industries, sectors, and components should be established. Examples include the repeat of the Taurama Baseline in other parts of the country; a database of households engaged in the agricultural sector; property prices in all the urban centres; types and cases of land disputes; supply of credit to the various sectors; cost to the State of landowner-related expenses; expenses incurred by the private sector on landowner-related expenses; and gender profiling for land and property ownership within the formal sector.

In terms of timing, this series of research projects should be placed high on the agenda and undertaken prior to full implementation of the land research program. This is the only way to provide an objective baseline for subsequent comparative purposes.

Strategic Research — These are the kinds of research that require long-term data gathering and analysis that may lead to generating data that may add to the pool of knowledge and policy. In terms of time horizon, they need to have a long-term focus. The kinds of institutions that could take a lead in this type of research are largely academic-oriented institutions such as universities. The type of researchers likely to be engaged here are graduate studies students under the supervision of lead researchers.

Enabling Research — This set of research should track implementation and inform policy. Specific research projects may focus on components of the NLDP such as the operation and efficiency of the systems of land administration, implementation of the customary land tenure reform laws, the implementation of the land disputes settlements system, and the development of land, property, and housing markets.

Because this set of research is geared towards informing the implementation processes, some could be undertaken through short-term consultancies or other modalities such as contracted

research with clearly defined terms of reference. Where there is capacity, some of this research could be undertaken in-house by staff or in collaboration with other academic and research institutions, both within country and abroad.

Research on cross-cutting issues — There are aspects that have cross-cutting implications that would require adopting a multidisciplinary approach to research. Tracking the dynamics expected within the social structure, for example with respect to gender, is one example of a cross-cutting issue. Similarly, understanding the dynamics within ILGs, for example with respect to the kinds of decisions they make on the distribution of incomes, would require a multidisciplinary approach. Other examples include the impact on land use and resource management of global warming.

Some cross-cutting research could be strategic as well as enabling research. Lead researchers from various disciplines could collaborate on this type of research. For strategically-oriented research, encouraging participation of graduate students would be an ideal option. For enabling-type research, in-house or contracted research by the various research agencies may have to be considered.

Informing research — Given the dynamics of the land reform program and the fact that implementation has its own processes, the research framework has to be capable of capturing this dynamism. The informing-research theme should monitor developments and undertake research on emerging issues not covered in the research framework. Such research could be either contracted or undertaken in-house. How the research is undertaken should depend on the nature of the issue.

Managing the research — the NRI, through the land research program, should manage the land research framework. This role should include setting the annual research agenda, maintaining quality control (insisting on scientific rigour), and disseminating the findings. This should enable the NRI to provide independent oversight of the entire implementation phase. A series of pathways, such as nominating institutions to take on thematic leadership, contracting out with defined terms of references, and providing a pool to fund fellowships and other forms of scholarship or research grants should be considered.

4.4 Conclusion

The premise on which the PNG land reform initiative was conceived and formulated is that customary land tenure predominates. There are no relevant and successful models available anywhere to emulate. In fact, the form of land reform conceived and formulated in PNG is unique and pioneering. If successful, lessons from this initiative should inform land reform initiatives in other parts of the developing world, including other countries within the Pacific Islands region.

Customary land tenure is a functioning institution supporting the livelihoods of over 85 percent of the national population. The consequences of a poorly conceived and implemented land reform are significant. The proponents and designers (political leaders, bureaucrats, and academics) of the PNG land reform initiative consider that it has been thoughtfully conceived

and formulated, guided by the broader literature and the contextual realities within PNG. The aim is achieving security of tenure.

The recommendations of the NLS and the components of the NLDP are consistent with the conceptual framework adopted from the broader literature. The basic features of the PNG land reform program are:

- giving legal recognition to social units that claim rights to land by customary law;
- creating a repository for customary landowning social units to deposit their access and use rights to the portion they wish to deal on or develop;
- defining the terms and conditions under which these rights are deposited by ILGs;
- mechanisms for these rights to be accessed from the repository by those who wish to access these rights;
- the terms and conditions under which these rights are to be accessed from the repository;
- a system to adjudicate disputes at the incorporation of social units into ILGs, survey and registration of portions released for development, and settlement of disputes related to dealings on the individual land titles; and
- the development of a market system to ensure the optimal allocation of land.

Linking the various components of the NLDP to the conceptual framework, it is noted that the focus is on the important aspects required to achieve a functioning system. Each component is crucial in its own right. A failure to implement one segment has the potential to undermine the effectiveness of the entire program. Ensuring that each component is responsibly implemented and made to function continuously is similar to 'oiling' the process.

Monitoring the functioning of the various channels and delivering on the expected outcomes requires a dedicated land research program. To monitor the effectiveness of the land reform program, the research program should first invest in the creation of a series of baselines. The rest of the research program should be organised around strategic, enabling, informing, and cross-cutting research.

5.0 STAKEHOLDER INTEREST IN LAND RESEARCH AND CAPACITY TO UNDERTAKE RESEARCH

The purpose of this section is to: outline a structure of research themes whose results could be used to inform the implementation and further development of the NLDP; report on a series of questionnaires that were administered to determine views on the following: what research topics were considered important by a wide range of PNG stakeholders, what research topics individual PNG researchers were interested in and their capacity to undertake the research, and what research areas PNG organisations that conduct research were interested in and their capacity to undertake the research; and to outline possible research pathways by which the research could be undertaken and disseminated.

Overall, this section is intended to operationalise the research framework by identifying research topics from public input, areas of research interests, and the capacity of researchers and research institutions to undertake the research.

5.1 Questionnaire and survey administration

A survey questionnaire was designed and administered to gather views on areas of research interest from the public, areas of research interest from researchers, and areas of research interest and capacity to undertake research from institutions interested in research from within PNG.

Devising an appropriate methodology to obtain a reasonable sample of views required consideration of the following: about 95% of the land mass in PNG is held under customary tenure and supports about 85% of the population; land is an inherent “being” issue to almost all Papua New Guineans; high level of illiteracy; and the challenges in making contact with many in PNG. Collectively, these factors could raise costs in terms of time and funding, but also pose logistical complications. Being aware of these challenges, the questionnaires were developed in a variety of formats and administered in the following ways:

- as a half page newspaper advertisement,
- as an Excel spreadsheet that could be distributed as an attachment to an e-mail, and returned either by e-mail, fax or postal mail. An explanatory covering letter was provided, and
- by an online questionnaire, www.landresearchframework.com 11. 12

Three separate questionnaires were developed, termed Part A, Part B, and Part C as indicated in Table 1 below, for each of the three target groups. These three questionnaires are provided in Annex B.¹³ Where views were sought on relative importance, only a three scale rating was used, (low, medium, and high), rather than a five scale rating, which is often used. This was done in the interests of simplicity.

¹¹ This website will remain active until approximately June 2011 but the link to the online questionnaire will only remain active to early November 2010

¹² Administering surveys online is a new development in PNG as the introduction of internet for the wider population is a recent development in PNG.

¹³ The Annex is a separate document from this, the main document.

Administering the questionnaire

The following was decided as the most appropriate ways to publicise, distribute, and administer the questionnaire:

- Half page advertisements in the three national newspapers on four separate occasions.
- Direct contact — The compilation of contact information (email address, fax and phone numbers) for a wide variety of people known to have an interest in land, and who were also considered to have an extensive range of contacts in their own right — these people were contacted by a variety of means, asked to complete the questionnaire, and asked to distribute the questionnaire to others in their networks and to spread the information by word-of-mouth.
- Direct administration — All three sets of questionnaires were administered to participants at the Waigani Seminar at the University of Papua New Guinea in August, 2010. This was an ideal venue because the theme of the seminar was, “Land reform in an evolving democracy”, and people from across the country attended the conference.

Table 1: What views were sought and from whom

Part	Seeking views on	Seeking views from
A	<i>what research</i> needs to be done	any individuals or parties interested in land development or land research
B	research that <i>individuals</i> would be interested in doing, and their capacity to undertake the research	individuals with research skills and an interest in land development and land research
C	research that <i>organizations</i> would be interested in being involved in and their institutional capacity to undertake such research	research related, tertiary education organizations, state agencies, NGOs and private sector agencies, interested in land and land research

The framework of four broad themes was established. The themes were: *Strategic Research*, *Enabling Research*, *Informing Research*, and *Cross-cutting Research*. While these themes are consistent with the thematic areas from the conceptual framework discussed earlier (Section 4.3), the objective in this section is to provide a framework that would guide in operationalising the research program into actual projects and activities. A brief note elaborating on each theme, as presented in the survey questionnaire, follows:

Strategic Research — high-level and generally long-term research that relates to the achievement of the NLDP objectives and outcomes. Examples include monitoring the economic and social development impacts from successful implementation of the land reform program. In part, a focus on effectiveness and efficacy is anticipated.

Enabling Research — research, probably more of an applied nature and shorter term, which will assist in the achievement of the objectives and outputs of the specific projects and activities that comprise the NLDP. Examples include improving the operation of the Land Registry system.

Also included in this category would be issues such as individual and organizational capacity building, adaptive change and so on.

Informing Research — research not covered in the enabling category and not related to specific objectives or outputs in currently approved NLDP projects, but which could be relevant to the achievement of the strategic NLDP objectives, but not yet designated as an objective or output. This is an important inclusion, because, during implementation, it is possible that unexpected outcomes may arise.

Cross-cutting Research — research that cuts across all aspects of the NLDP and all research themes. This includes cross-cutting issues such as gender, child labour, and the environment.

These themes are not in any hierarchy but there is an interrelationship that is illustrated in Figure 5.

The main topics within each research theme

Within each research theme a number of main topics (less than 10) were identified, and these formed the basis of the questionnaires (Section 5.4.2 refers). These main topics are shown in Table 2.

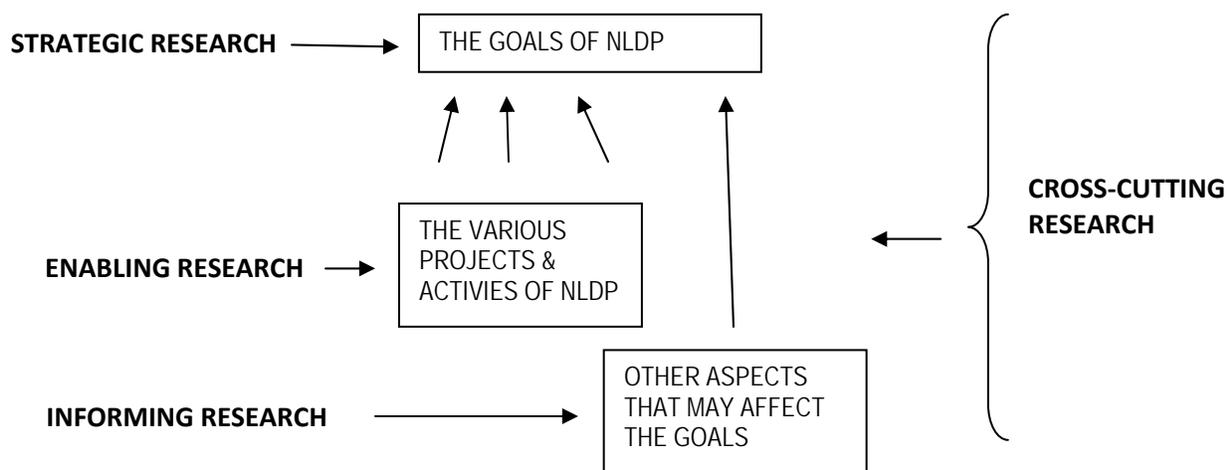
In the theme, *Enabling Research*, there are four sub themes, corresponding to the current major components of the NLDP; they are:

- the operations and efficiency of the systems of administering land, and the main government agency, the Department of Lands and Physical Planning (DLPP);
- the development of customary land via the incorporation of customary landowners and the registration of customary land;
- the settlement of land disputes; and
- the establishment and operation of markets for land, property and housing.

While there is no hierarchy of the topics listed under each theme in Table 2, there are some interrelationships, as some topics inform others. These interrelationships, for each theme or sub theme, are shown in Figure 5. The meaning of the symbols in Figure 5 is covered in Table 3.

Figure 6 has been annotated with a variety of symbols, with the meaning shown in Table 3 and discussed in Section 5.5. The aim is to depict in simple graphics how the topics are interrelated and the importance of ratings derived from the analysis.

Essentially, the more symbols set against a topic, the higher the importance assigned by those responding. Note that these ratings are only for the topics “of high importance”. As noted in Annex B, when topics are considered by combining those of medium and of high importance, the combined percentages are “high” and greatly exceed those “of low importance”.

Figure 5: The relationship between the various research themes**Table 2 Main topics within each of the research themes**

<p><i>Main topics for STRATEGIC RESEARCH</i></p> <p>How land and property markets contribute to a country's economic and social development. How well the PNG NLDP is increasing PNG's social and economic development. How well the individual projects and activities of the NLDP are achieving their objectives. The possible roles for government, its agencies, the private sector, financial institutions, and non-government organisations (NGO) in land and property markets and in the NLDP. Are adverse consequences being felt by any group in PNG society as a result of the NLDP. What lessons can be learnt from similar endeavours in other countries.</p> <p><i>Main topics for ENABLING RESEARCH</i></p> <p>This has been subdivided into four sub parts, each relating to a major thrust of the NLDP. The sub parts are: The operation and efficiency of the system of land administration. The development of customary land . The settlement of land disputes. The markets for land, property, and housing.</p> <p>The main topics within each of these sub parts follow:</p> <p><i>The operation and efficiency of the system of land administration</i></p> <ul style="list-style-type: none"> • The operations of the government land agency, the Department of Lands and Physical Planning (DLPP) (essentially a sole provider) issues include:-structure, staffing, budget, training, capability, performance, regional offices, etc. • Customer expectations concerning service delivery and how well these are being met. • The time taken to complete all types of land dealings. • The reliability of land records and public access to this information. • The policy and procedures for the leasing of government land. • The zoning of land, the approving of developments, and enforcing compliance. • The probity and transparency of land services and dealings. • Keeping citizens and businesses informed about land and property laws and their administration. • Allowing the private sector to deliver a wider range of land services so as to improve access and service levels. <p><i>The development of customary land</i></p> <ul style="list-style-type: none"> • The experience of landowning groups that are discussing or have carried out incorporation into ILGs (Incorporated Land Groups) and registration of their customary land. • The actual benefits obtained by incorporating and registering customary land; the views of members of the ILG on the adequacy of the benefits that flow to them. • Effective methods to communicate and engage with customary land owners concerning incorporation

and customary land registration.

- The experience of other countries in incorporating customary landowners and in registering their customary land.

The settlement of land disputes

- The number, type, causes, and length of disputes currently in the system; the time to resolve and the rate of reappearance or appeals, and of new cases, both with the old system and with the new system.
- Possible ways to reduce disputes and their effectiveness, particularly where NLDP pilots are being conducted for the incorporation of customary landowning groups and the registration of customary land.
- The level of knowledge of customary landowners of the legislation concerning incorporation of land owning groups and the registration of customary land, and their views on its appropriateness.

The markets for land, property, and housing

- The amount and availability of land that will be necessary to meet PNG's future housing and development needs.
- The issue of squatter settlements on both government and customary land.
- The types of land tenure and security that are necessary for banks and financial institutions to provide finance for development based on land.
- The information on land and property that is necessary to fully inform parties who are interested in developing or investing in the land, property, or housing markets.
- The regulatory and enforcement environment necessary for strong investor and consumer confidence to foster the development of land, property or housing.

Main topics for INFORMING RESEARCH

The impact indicators that could be used to measure the economic and social impact of the NLDP.

The capacity building necessary so that the non-government sector and the private sector can play a more vibrant role.

Improving PNG's ranking for transferring property in the World Bank Doing Business Indicators.

The impact that ILGs and customary land registration could have or is having on squatter housing on customary land, particularly those near urban areas.

Changes in the value of registered customary land as a result of incorporation and registration.

The governance, management, and use of the state's land assets.

The level of public and institutional confidence in aspects such as the following: the integrity of landholder and associated records; the security of land tenure; probity and transparency in land dealings.

The structure, rolls, and participants that would provide affordable and sustainable land and property arrangements, coupled with transparency and probity.

Main topics for CROSS-CUTTING RESEARCH

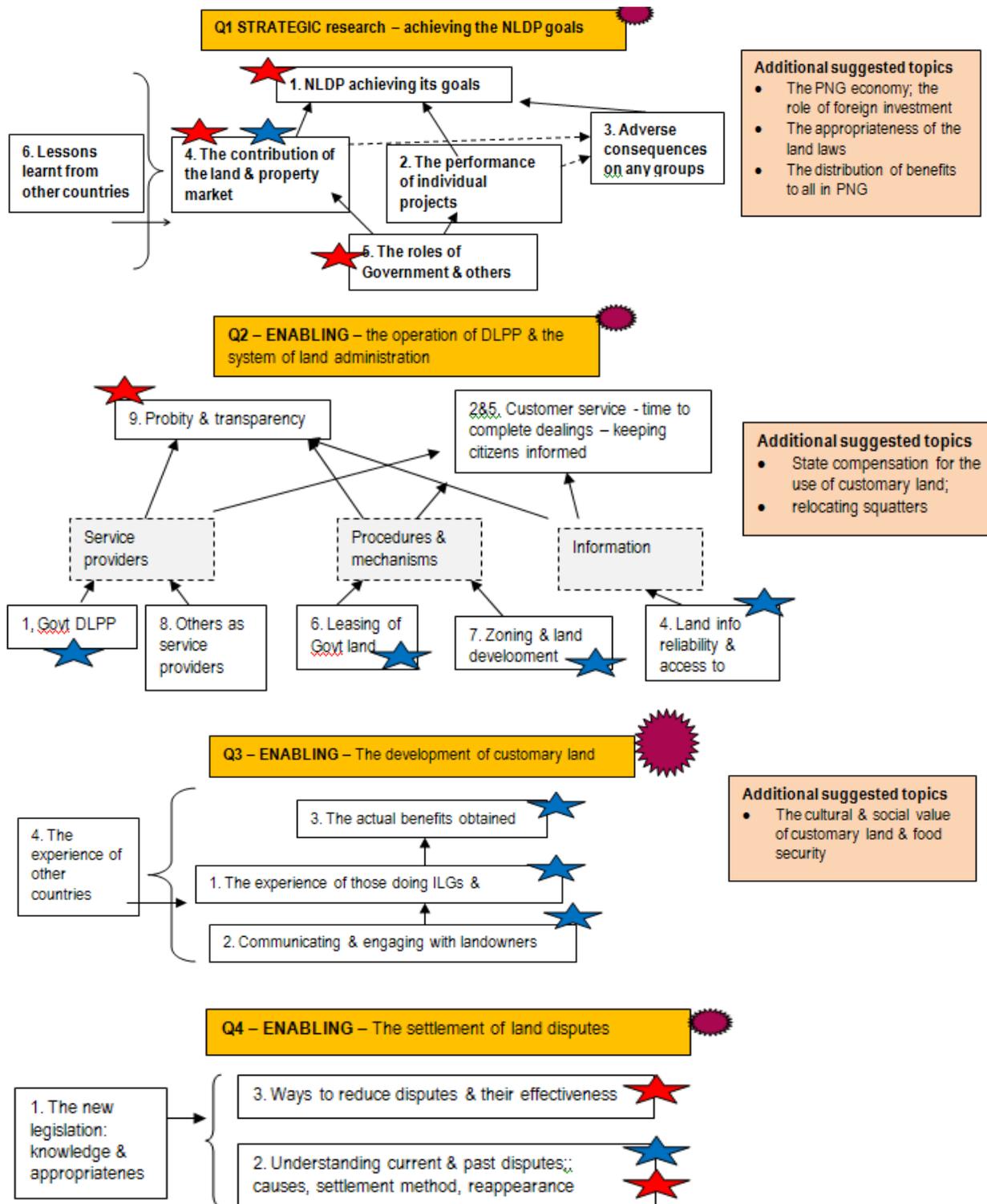
The addressing of gender issues in the incorporation of customary land groups and the registration of customary land.

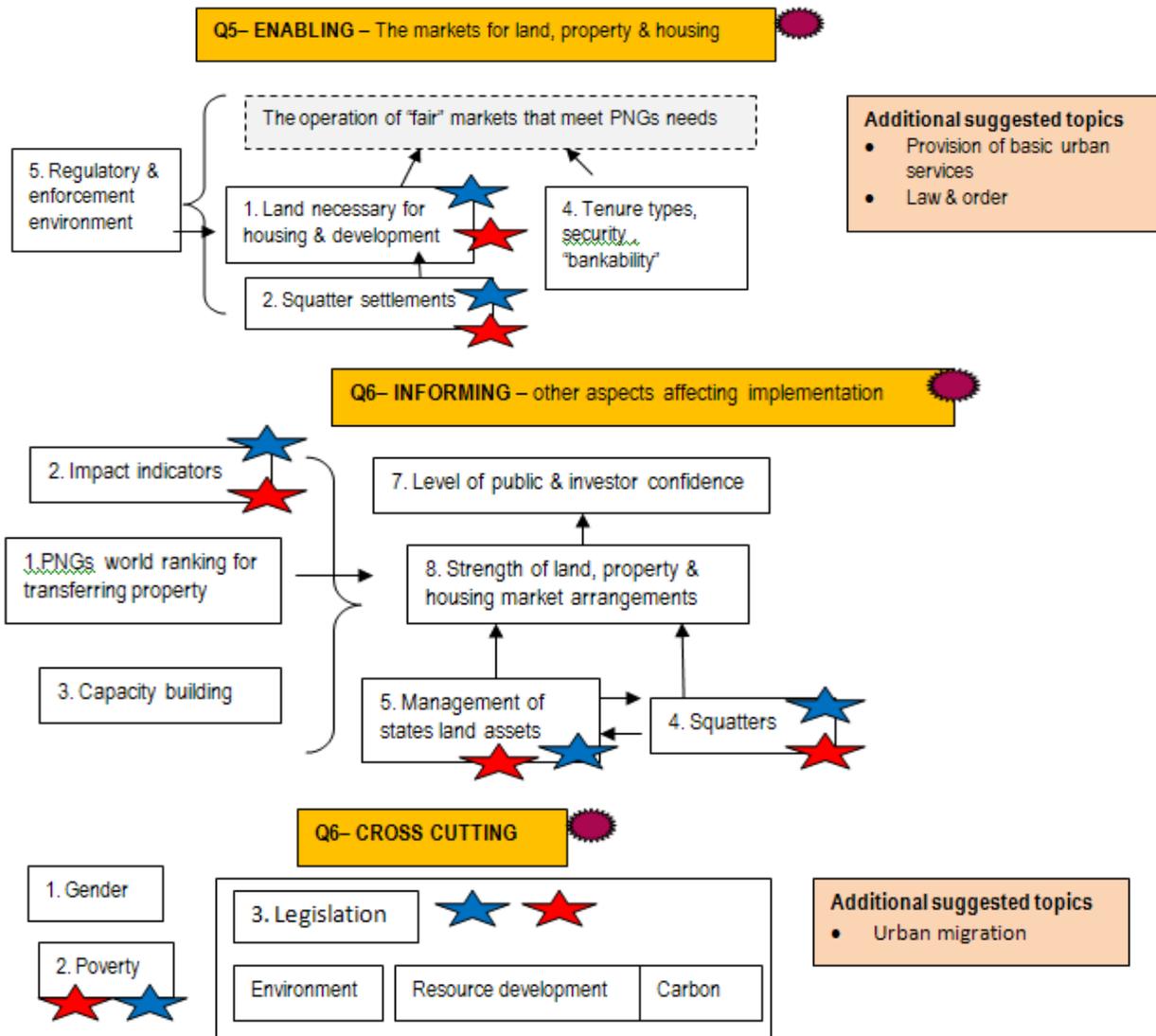
The impact on poverty as a result of the NLDP.

The effect of relevant legislation and its impact on natural resources, the environment, carbon trading and similar issues.

(Table 2 continued)

Figure 6: Results of Part A at a glance





Symbol	Meaning
	The highest or high responses for "of high importance" – considering <i>all</i> themes
	The highest or high responses for "of high importance" within a theme or sub theme
	A very high response for "topics" for additional research (Annex B Q8 for detail); numbers are the number of times mentioned
	Five or more response for "topics" for additional research (Annex B Q8 for detail)
	A topic suggested for research, that was not listed in the questionnaire

5.2 Analysis for response to the survey questionnaire

The responses came in by post, fax, email and via the online website questionnaire. All were collated using the online questionnaire collection and analysis tool, Survey Monkey¹⁴. The following is a breakdown on the mode through which the responses were returned:

- 5% return were on the advert/questionnaire printed in newspapers;
- 10% were filled out directly into Survey Monkey from the website we set up;
- 2% printed out the questionnaire from Survey Monkey and mailed in the response;
- 43% from personal contact (mainly participants at the Waigani Seminar); and
- 40% from the many emails that were sent out — the questionnaire that was attached to the email was printed out, filled out by hand and faxed or mailed back.

Since undertaking research of this nature is difficult in PNG, largely for the reasons discussed above (5.1), the response to the methodology employed provides useful lessons for the future. These include the following:

- the correct structuring of the questionnaire is important;
- keep the questionnaire simple in both the language used and the structure with a view to enhancing the interviewee's understanding;
- employ a variety of channels/means to distribute the questionnaire and collect the responses. For instance, use the web, email, survey monkey (or similar survey tools) but directly administer the questionnaire where possible; and
- Survey Monkey and other similar survey tools are useful for entering all responses and for use of their statistical analysis tools.

The number of responses was (see Table 4):

- Part A (what topics need research) — 154;
- Part B (interest from individual researchers in doing the research) — 50; and
- Part C (interest from research organisations in doing the research) — 19.

Given the challenges to bringing the questionnaire to wide attention and the limited budget, 154 responses for Part A is a reasonable number.

The 50 responses for Part B was considered high as initially it was thought that only a relatively small number would be interested in doing research in this area and that they would be mainly in academic or industry or sector research organisations. Similar comments apply to Part C.

The contact details of those who responded and provided contact details so that they could be kept informed has been consolidated into a separate listing but is not included in this report.

What the responses indicated on Part A — what research should be done?

The highest ratings, irrespective of research theme, by the top % rankings obtained for “of high importance” are shown in Table 5.

¹⁴ Survey Monkey is well known and widely used for collecting views and subsequent analysis. www.surveymonkey.net

Annex C provides details on each of the following for each of the 7 questions relating to research topics asked in Part A:

- A graph of the number of responses (out of 154) that rated a particular topic in each area as being of low, medium, or high importance. This is the easiest to comprehend;
- a table corresponding to the above providing numeric values for the number of responses and % of responses; and
- comments by the authors of this report on individual aspects.

With a view to understanding the results, we produced Table 6, which provides a list of the rated “hot topics”. These were compiled from an examination of Figure 6 and the detail in Annex C. Also included are some observations, comments, and possible considerations for NLDP.

The following main points arose from the analysis of responses to Section A of the Survey Questionnaire. Firstly, there is a need for research to support the NLDP and the research framework of four themes — *Strategic research* relating to the NLDP goals; *Enabling research* relating to each of the four thrusts of the NLDP; *Informing research* for any other matters, relating to the NLDP goals, but not covered in Enabling research; and *Cross cutting research* that affects all parts — is appropriate. Secondly, the red hot and hot topics as listed in Table 6 together with some observations and matters that the NLDP may care to consider. Thirdly, the detail and interrelationships between the individual research topics, as portrayed in Figure 6, requires some slight adjustments to finalise, and this is covered in Section 6.

What the responses indicated on Part B — what topics individual PNG researchers are interested in researching?

Part B of the questionnaire (see Annex B) was used to elicit responses with regards to research topics PNG researchers are interested in researching. The first part of this questionnaire was the same as that for Part A. The only difference being that in Part B, responders were asked to rate their interest in researching, rather than how important they considered the topic to be. The same method of analysis was used for Part B as for part of part A. The highest ratings, irrespective of research theme, in terms of the top percentage rankings obtained for “of high importance” are shown in Table 7. Further, Annex D provides the following for each of the 7 questions relating to research topics:

- A graph of the number of responses (out of 52) that rated a particular topic in each area as being of low, medium, or high importance. This is the easiest to comprehend;
- a table corresponding to the above, providing numeric values for the number of responses and percentage of responses; and
- comments by the authors of this report on individual aspects.

There is a very close correlation between Figure 5.2 and the topics that researchers were interested in undertaking. It might have been anticipated that individual researchers would not each be interested in researching so many topics. It is possible that Part B responses might be influenced by what topics an individual researcher thought were intrinsically important, as well as the subset that they would be interested in researching. Alternatively, researchers could be indicating that they are willing to work on a wide range of topics when mentored by senior and experienced researchers (Responses to Q9 and 10 refer — Annex D).

In terms of understanding what the results may be saying, Table 8, which compares the categorisation of “hot” topics from Parts A and B, indicates a high level of agreement. The main points from the analysis of responses to Part B of the survey questionnaire are as follows: firstly, there is a large area of agreement between the topics that responders considered had high priority for research, and those that researchers expressed a high level of interest in researching; and secondly, responders noted some constraints on their capacity to conduct the research and the need for linking with experienced researchers to provide mentoring, suitable facilities and infrastructure, and funding to conduct the research.

Table 3: A breakdown of those who responded

Organization of responder	Number of responses – Part A	Number of responses – Part B	Number of responses – Part C
A university or college	74*	27*	7
A PNG Government related organization	22	12	5
Industry, farmers or andowner groups	14	1	3
Private sector companies	10		1
Churches	4		
From outside PNG	6	4	2
Unclear	20		1

*The majority were from UPNG

Table 4: Top rankings across all themes — Part A

Top % rankings for “of high importance”	Research theme	Research topic
71% (of respondents)	Enabling	The issues of squatter settlements on both government and customary land.
66%	Enabling	The amount and availability of land that will be necessary to meet PNG's future housing and development needs.
64%	Strategic	How land and property markets contribute to a country's economic and social development.
60%	Cross cutting	The impact of relevant legislation on natural resources, environment, carbon trading and similar.
Others in the 50-60%		
57%	Informing	The impact that ILGs and customary land registration could have or is having on squatter housing on customary land, particularly near urban areas.
56%	Informing	The governance, management and use of the state's land assets.
54%	Enabling	The number, type causes and length of disputes, the rate of resolution and reappearance and appeals both with the old and the new system of land dispute settlement.
54%	Enabling	Ways to reduce disputes and their effectiveness, particularly where NLDP pilots for incorporation and registering customary land are being conducted.
52%	Informing	The impact indicators that could be used to measure the economic and social impact of the NLDP
51%	Cross cutting	The impact on poverty from the NLDP.
50%	Enabling	The probity and transparency of land services and dealings.
50%	Strategic	How well the whole NLDP is increasing PNG's social and economic development.
50%	Strategic	The possible roles of government, its agencies, the private sector, financial institutions and NGOs.

Table 5: Hot topics and comments

Observations	Comment	Possible consideration by NLDP
<p>The outstanding “red hot” topic by far is all aspects associated with the development of customary land, including incorporation and registration.</p>	<p>There appears to be some lack of awareness of the laws, procedures, and benefits of incorporation and registration. Some comments indicate that some are unconvinced that the development of customary land should be allowed.</p>	<p>Carefully structured research is carried out into all aspects of incorporation and registration, and the benefits derived. The conduct of a wide, deep and long-term public and landowner awareness campaign.</p>
<p>Other major “hot” topics are:</p> <ul style="list-style-type: none"> • the operations and efficiency of the DLPP and the systems of administering land. • The contribution that land and property markets can make to development. • Squatter settlements. • Legislation on and/or environment, quality, and carbon trading. • The markets for land, property and housing. • Communicating and engaging with landowners. • Understanding the nature and causes of land disputes and how they are best settled. • Availability and reliability of land information. 	<p>While high ratings of various topics are important, the interrelationships between topics (as shown in Figure 2) also needs to be taken into account when defining the research to be undertaken.</p>	<p>Consider implementing a balanced research program which, while including the hot topics, is not solely comprised of them.</p>
<p>Other “highly rated” topics were:</p> <ul style="list-style-type: none"> • The NLDP achieving its goals. • The role of government and others. • Probity and transparency. • The operation and efficiency of DLPP. • The leasing of Government land. • The management of state land assets. • Land zoning and development. • Knowledge of the new laws and procedures relating to land dispute settlement. • The land necessary for housing and development. • The indicators necessary to measure impacts. • The effect on poverty. 		
<p>A reasonable number of responders seem to consider that the existing laws relating to land, minerals, natural resources, foreign investment and resultant benefits are not appropriate or beneficial enough to the customary landowners and all PNG citizens.</p>	<p>Any law will have an effect on whether the economic and social development goals of the NLDP can be achieved to the degree desired. If the laws are widely felt to be inappropriate or are not supported, then some backlash could occur against the NLDP.</p>	<p>The various laws should be included as a topic for research in the theme, <i>strategic research</i>. It may be prudent for the NLDP to conduct a broad awareness campaign on the relevant laws.</p>

Many responders seemed to be aware of the NLDP in general, but not in any detail.		The conduct of a long-term public and landowner awareness campaign on the NLDP, its major features would be useful.
The four major thrusts of the NLDP are clear, but perhaps clarification is necessary on what projects and activities fall within each thrust, and what the objectives of these individual projects are.	It is much easier to define and design research to enable project implementation, when the projects and their objectives are clearly articulated.	That the projects and activities that are contained within each of the four thrusts of the NLDP be clearly identified, together with their objectives and their anticipated contribution to the NLDP goals.
Gender issues did not rate highly.	Some studies on development have indicated that attention to gender issues can have a significant development outcome.	The NLDP may care to consider.
Examining the lessons learnt from similar endeavours in other relevant countries was not rated highly.	Many other countries have attempted similar endeavours, aiming to increase social and economic development. Much has included customary land. The literature is extensive.	That there might be relevant lessons from the endeavours of other countries.

(Table 5 continued)

Table 6: Highest ranking across all themes — Part B

Top % rankings for “of high importance”	Research theme	Research topic
74% (of respondents)	Enabling	The amount and availability of land that will be necessary to meet PNG's future housing and development needs.
73%	Cross cutting	The impact on poverty from the NLDP.
70%	Strategic	How land and property markets contribute to economic and social development.
66%	Enabling	The issues of squatter settlements on both government and customary land.
61%	Enabling	The probity and transparency of land services and dealings.
60%	Informing	The level of public confidence in the integrity of land records, the security of tenure, probity and transparency.
Others in the 50-60%		
59%	Enabling	The policy and procedures for the leasing of Government land.
58%	Strategic	How well the NLDP is increasing social and economic development.
57%	Enabling	Keeping citizens and business informed about land laws and their administration.
56%	Enabling	The actual benefits obtained from incorporation and registration of land.
55%	Enabling	Ways to reduce disputes and their effectiveness, particularly where NLDP pilots for incorporation and registering customary land are being conducted.
55%	Informing	The governance, management, and use of the state's land assets.
54%	Strategic	The possible roles of government, its agencies, the private sector, financial institutions and NGOs.
53%	Enabling	The level of knowledge of the legislation dealing with land disputes and its effectiveness.

53%	Cross cutting	Legislating impacting on natural resource development, the environment, carbon trading and the like.
51%	Informing	The structure, roles, and participants that would provide affordable and sustainable land and property arrangements coupled with probity and transparency.
50%	Informing	The impact that ILGs and customary land registration could have or is having on squatter housing on customary land, particularly near urban areas.

Table 6 continued

Table 7: A comparison of "hot" topics between Part A and B

From Part A analysis — how important a topic is rated for research	From Part B analysis — researchers' interest in researching
The <u>outstanding</u> "red hot" topic by far is all aspects associated with the development of customary land, including incorporation and registration.	Rated as "major hot" The "red hot" topic was "achieving the goals of the NLDP".
Other major "hot" topics are: <ul style="list-style-type: none"> the operations and efficiency of the DLPP and the systems of administering land. The contribution that land and property markets can make to development. Squatter settlements. Legislation on and/or environment, quality, and carbon trading. The markets for land, property and housing. Communicating and engaging with landowners. Understanding the nature and cause of land disputes and how best settled. The availability and reliability of land information. 	Same. Same. Same. Not highly rated. Same. Highly rated. Same. Not highly rated.
Other "highly rated" topics were: <ul style="list-style-type: none"> The NLDP achieving its goals. The role of government and others. Probity and transparency. The operation and efficiency of DLPP. The leasing of Government land. The management of state land assets. Land zoning and development. Knowledge of the new laws and procedures relating to land dispute settlement. The land necessary for housing and development. The impact indicators necessary to measure the impact of the NLDP The effect on poverty of the NLDP 	Rated as "red hot". Rated as "major hot". Same. Same. Same. Rated as "major hot". Not highly rated. Same Rated as "major hot". Not highly rated Rated as "major hot"
A reasonable number of responders seem to consider that the existing laws relating to land, minerals, natural resources, foreign investment and resultant benefits are not appropriate or beneficial enough to the customary landowners and all PNG citizens.	Not to the same degree.
Many responders seemed to be aware of the NLDP in general but not in any detail.	Same.
The four major thrusts of the NLDP are clear, but perhaps clarification is necessary on what projects and activities fall with each thrust and what the objectives of these projects are.	Same.
Gender issues did not rate highly.	Same.
Lessons learnt from similar endeavours in relevant countries were not rated highly.	Same.

What the responses indicated on Part C — research organisations in PNG and their interests and capability

The Part C questionnaire (See Annex B) asked organisations interested in researching the following: (i) the level of interest in a particular theme; (ii) to identify areas of special strength; and (iii) to comment on capability to conduct research. The detailed responses are contained in Annex E.

The results show that the main research themes the respondents were interested ranked, in terms of highest to lowest, for “of high interest” was: Strategic research, Enabling research, Cross cutting research, and Informing research.

In terms of the areas of special strengths and interest, by far the highest level of interest/strength was considered to be in the development of customary land. A variety of skills was also shown.

In terms of the capability to do the research, the responses were similar to those noted by individual researchers. They included the following:

- *Time availability* — Staff would have the time available if the research is funded; staff in partner research organisations may only have a limited amount of time available.
- *Research skills and experience* — Staff would need mentoring by experienced researchers, and graduates with masters and PhDs would need to be recruited.
- *Resources/Funding* — Adequate funding would need to be provided.
- *Research facilities/infrastructure* — Those responding considered their organisations had sufficient access to computers, to the literature, and to research support. Note that, in Part B, individual researchers tended to indicate that this infrastructure was not adequate.

5.3 Conclusion

Informed by the expected NLDP outcomes, a survey questionnaire was designed and administered. The survey questionnaire was aimed at gathering data on the kinds of research seen as necessary by the general public, the research interests of researchers, and the capacity and research interests of research institutes.

The analysis of the survey questionnaire supports the research themes. There are capacity issues that needed to be considered at the time of implementing the research framework. Further, the need for collaborative arrangements with senior researchers emerged as a concern of researchers.

6.0 RESEARCH QUESTIONS, TOPICS AND PATHWAYS

Section 4 discussed the expected NLDP outcomes from the conceptual framework defining the PNG land reform program. The conceptual framework was informed by the broader literature covering the theory, policy, and empiricism in section 2 and the literature discussing the history, policy, and empiricism on land in PNG in section 3. In formulating the conceptual framework, the on-the-ground realities in terms of PNG's political, social, cultural, and development circumstances were noted in section 4. The framework was designed to reflect the government's objective to enhance land's role in growing the economy, but within the confines defined by the outcome of the national land summit.

Informed by the conceptual framework, a survey questionnaire was designed and administered to gauge input from three key stakeholders — the general public, researchers, and research organizations in PNG. The discussions in section 5 established the validity of the research framework and the main themes were established. The framework and main themes are; strategic research, enabling research, informing research, and cross-cutting research.

The enabling research has sub areas, each aligned with a major thrust, project, or activity of the NLDP. Currently there are four major components, which are; the operations and efficiency of the systems of administering land and of the DLPP, the development of customary land, the settlement of land disputes, and the development of land, property, and housing markets.

The desirability of clearly articulating the objectives and structures of these major projects was previously noted, so that the supporting research can be appropriately aligned.

The “hot” research topics resulting from the questionnaires were listed in Table 6, Figure 6, and Table 8. It was noted (in Table 6) that while the “hotness” of a research topic was important the relationship between these topics and how they inform the other areas, Figure 6 refers, is also significant.

The design of the overall research structure discussed in this section takes into account the outcomes discussed within the context of the conceptual framework and the research themes that arose from the survey questionnaire.

6.1 Research questions and topics

The approach taken has been to define a small number of major research questions within each theme or sub area, such that the more minor research topics within it can contribute to the major research question and also inform each other where necessary.

The major research questions for each theme and sub area follow. Table 9 shows these major research questions and some topics that can fit within them.

Theme — STRATEGIC Research
Increasing the Social and Economic Development of PNG through Land Reform

The major research questions are:

1. What contributions can land, property, and housing markets make to the social and economic development of PNG; how might this best be achieved, and what are the opportunities and risks to the PNG economy and its largely customary society?
2. How well is the NLDP achieving its goals and are there any significant adverse consequences to any segment of PNG society?
3. How well are the individual thrusts, projects, and activities of the NLDP achieving their objectives and contributing to the NLDP goals? Are there projects or activities missing from the NLDP that could also contribute to the goals of the NLDP?

Theme — ENABLING Research
Thrust 1 — improving the systems and operation of the administration of land and the responsible lead government agency, DLPP (the Department of Lands and Physical Planning)

The major research questions are:

1. In what ways might the systems of land administration and their operation be structured and delivered so that they are likely to lead to a long-term, sustainable improvement in the delivery and performance of land services such that the following attributes including: (i) the needs of clients and society are met; (ii) there is good governance; (iii) integrity and transparency are affordable to the government, society and businesses; and (iv) the confidence of all segments of PNG society are achieved?
2. Are the objectives of this major thrust being achieved? Where and by how much have respective or the overall systems of land administration, their operations and the DLPP been improved?
3. What are the appropriate indicators of good governance, effectiveness and efficiency? What are their current values and what values would be necessary to meet the objectives of this theme? What does it take to make a marked contribution to economic and social development, and to meet the expectations of the various sectors of PNG Society?

Theme — ENABLING Research
Thrust 2 — The development of customary land so as to increase the social and economic development of customary landowners

The major research questions are:

1. Is the incorporation of customary land groups and the subsequent registration of customary land providing significant long-term benefits and improvements in social and economic development to all members of the Incorporated Land Group (ILG), taking into account the issue of inter-generational equity?

2. Have alternative methods of increasing social and economic benefits, through the development of customary land, been tried elsewhere in countries with similar socio-cultural conditions? What were the results achieved and the key lessons learnt?

Theme — ENABLING Research
Thrust 3 — The settlement of land disputes

The major research questions are:

1. Are the new laws and new arrangements for settling land disputes leading to fewer land disputes, speedier settlements, and fewer disputes reappearing later or continuing?
2. Are there examples of experiences in other countries dealing with disputes over customary land, indicating successful approaches, which may be worth examining?

Theme — ENABLING Research
Thrust 4 — The markets for land, property and housing

The major research questions are:

1. What features and characteristics should the markets for land, property, and housing have that would enable them to contribute strongly to PNG's economic and social development?
2. What is the current status of these features and characteristics, and what outcomes are required such that these markets could make the anticipated contribution to national economic and social development?

Theme — INFORMING Research

Research under this theme is left open for any new research idea that emerges during implementation. Given the broad and dynamic nature of the reform agenda, issues not captured in the research framework are likely to emerge. Such research will be captured by this thematic area.

Theme — CROSS CUTTING Issues
Aspects that apply to several themes

The following are cross-cutting issues rather than topics requiring research in their own right. These are issues which are likely to apply to several other research questions and will need to be considered when developing the research plan.

These issues include: communication and engagement, gender, lessons from other countries with customary tenure experiences, the customary "safety net", social and spiritual connections to land, good governance, determining impact objectively, capacity building, squatters, risks, and adverse consequences.

Table 8: Major research questions and possible topics

<p>Theme — STRATEGIC Research <i>Increasing the Social and Economic Development of PNG through Land</i></p>
<p>Q1 — What contributions can land, property, and housing markets make to the social and economic development of PNG? How might these best be achieved, and what are the opportunities and risks to the PNG economy and its largely customary-based society?</p> <p>Possible Topics as well as the main question — the PNG economy and land; the role and amount of foreign investment; appropriateness of the enabling laws; the role of government, government land agencies, the private sector, and others. What are the social and economic benefits of the traditional customary land approaches, what are the perceived risks from these alternative approaches, and who are the landowners and how best are these issues determined and agreed upon?</p>
<p>Q2 — How well is the NLDP achieving its goals, and are there any significant adverse consequences to any segments of PNG Society?</p> <p>Possible Topics as well as the main question — What would be an appropriate list of possible impact indicators; what are their existing baseline conditions and how would the observed changes be measured?</p>
<p>Q3 — How well are the individual thrusts, projects, and activities of the NLDP achieving their objectives and contributing to the NLDP goals? Are there additional projects or activities missing from the NLDP that could also contribute to the goals of the NLDP?</p> <p>Possible Topics as well as the main question — similar to question (Q2) above but for each individual project; What contribution should each particular project be making towards the social and economic development goals of the NLDP?</p>
<p>Theme — ENABLING Research <i>Thrust 1 — improving the systems and operation of the administration of land and the responsible lead government agency, DLPP (the Department of Lands and Physical Planning)</i></p>
<p>Q1 — In what ways might the systems of land administration and their operation be structured and delivered that are likely to lead to a long-term, sustainable improvement in the delivery and performance of land services such that the following characteristics are exhibited: that the needs of clients and society are met through good governance, integrity and transparency; and that these are affordable to the government, society and business; and has the confidence from a cross-section of PNG society?</p> <p>Possible Topics as well as the main question — what are the various current systems that comprise land administration (land registry operations; leasing of government land; zoning and land development; land information provision; valuation); What are the current levels of effectiveness and efficiency, how might these be improved, and what targets should be aimed for in order to meet the desired attributes?</p>
<p>Q2 — Are the main objectives of this major thrust being achieved; where and by how much have individual or all of the systems of land administration, and their respective operations and the DLPP, been improved?</p> <p>Possible Topics as well as the main question — What would be the appropriate impact indicators; what are the current baseline values of this suite of indicators and how would the observed changes be measured?</p>
<p>Q3 — What are the appropriate indicators of good governance, effectiveness and efficiency; what are their current values and what values would be necessary to meet the objectives of this theme, to make a marked contribution to economic and social development, and to meet the expectations of the various sectors of PNG Society?</p> <p>Possible Topics as well as the main question — what are current baseline values for benchmark practice indicators for land, good governance, effectiveness, and efficiency? How does PNG rate itself on the global arena, with comparable countries; what lessons could be learnt from other countries that have tried to improve their governance regimes associated with land administration?</p>

<p>Theme — ENABLING Research Thrust 2 — The development of customary land so as to increase the social and economic development of customary landowners</p>
<p>Q1 — Is the incorporation of customary land groups and the subsequent registration of customary land providing significant long-term benefits and improvements in social and economic development to <u>all</u> members of the Incorporated Land Group (ILG) adequately addressing the issue of inter-generational equity?</p> <p>Possible Topics as well as the main question — who are the landowners, how are they best determined and agreed upon; the awareness of landowning groups and the best methods of communication and engagement; the structuring of "fair" deals; ensuring that benefits flow to all landowner members, and to the future generations in a sustainable manner and amount.</p>
<p>Q2 — Have alternative methods of increasing social and economic benefits, through the development of customary land, been tried successfully elsewhere in relevant countries; what results were achieved, and key lessons learnt?</p> <p>Possible Topics as well as the main question — What are the various methods of increasing social and economic development to landowners of customary land; what are their characteristics, opportunities, and risks; what does experience elsewhere indicate?</p>
<p>Theme — ENABLING Research Thrust 3 — The settlement of land disputes</p>
<p>Q1 — Are the new laws and new arrangements for settling land disputes leading to fewer land disputes, expedite settlements, resulting in fewer disputes reappearing later or continuing?</p> <p>Possible Topics as well as the main question — the degree of awareness of the new landlords and registration; statistics that will allow a comparison between past methods and the new approach; the degree of acceptance by landowners of the new approach.</p>
<p>Q2 — Does experience from other countries dealing with disputes over customary land suggest that there are successful approaches, which may be worth examining?</p> <p>Possible Topics as well as the main question — What approaches are used in countries with customary land and/or where disruption has occurred; what could PNG learn from their successes?</p>
<p>Theme — ENABLING Research Thrust 4 — The markets for land, property, and housing</p>
<p>Q1 — That features and characteristics should the markets for land, property, and housing have that would enable them to contribute strongly to PNG’s economic and social development?</p> <p>Possible Topics as well as the main question — What are the "bare bones" market features that might usefully be established first; could valuable and parallel lessons be learnt from the large-scale endeavours used to establish these markets expeditiously in the ex-Communist East European countries?</p>
<p>Q2 What is the current status of these features and characteristics, and what status would be required so that the markets can make the anticipated contributions to economic and social development?</p> <p>Possible Topics as well as the main question — the relationship between improvements in the operation of markets and the resultant improvement in social and economic development.</p>

Table 8 continued

6.2 Research Pathways to having the research undertaken

It is not considered appropriate at this stage to define any research plans. However, it is considered more appropriate to pose the questions and for individual researchers to engage with relevant major stakeholders on a particular question, and then to develop a research plan. Further, it has been previously noted that developing research plans to support the major projects will be easier when a full understanding of the aims and objectives of particular projects and activities are gained by the relevant researcher(s). In that respect, the above (section 6.1) research questions and the topics within them are appropriate at this stage of the roll-out of the NLDP. The frequency and method of updating is covered in 6.4. In this section we discuss methods or pathways of having the research done.

NRI's Land Research Program was created to manage the NLDP's land research program. It is within this context that this land research framework is being formulated. While NRI provides the overall oversight, the actual research could be undertaken by PNG universities, PNG research institutes, associated universities and research institutions based outside the country, non-government organizations, private sector agencies interested in land research, and government agencies.

Depending on the availability of skills, infrastructure, and capacity, different agencies within the country could lead different themes, sub-themes, or a specific project with a series of activities. For instance, the Central Bank could be made responsible for leading a research project that monitors the development of the financial sector and allocation of credits to different industries and sectors. Likewise, the various commodity-based institutions could be entrusted to lead research that monitors the impacts within their respective sectors and collaborate to monitor impacts at the industry level. These are two examples of how different aspects of the land research framework could be administered.

Again, depending on their respective capacities, the NRI or PNG universities and research institutes could undertake research. This is described as in-house, but could be undertaken in collaboration with other institutions, both within the country and externally.

Some research activities, especially those from the enabling themes could be undertaken through a contracted process, which could be openly tendered and undertaken as short-term consultancies.

Another innovation would be to have a land research grant. Interested researchers, mostly at graduate level could be encouraged to undertake the research. This fund could be made available to target established researchers, post-doctoral fellows, and PhD and Masters students, interested in land research. Funding a Visiting Research Fellowship position in specific areas aimed at attracting interest from both nationals and foreigners should also be encouraged.

NRI's research committee and guidelines would be applied with a view to maintaining consistency in quality control. The NRI currently has a mechanism that ensures the quality of a research proposal, plan, the conduct of the research, and the review of the research outputs.

6.3 Updating the land research agenda, themes and pathways

There will be a need to regularly review and update the research agenda, the themes, and the research topics within each theme, as the implementation of the NLDP and its constituent projects and activities progresses. The NLDP is a long-term program.

There is also a need to monitor the progress of the research, review and confirm its quality, and ensure that the research results are circulated widely and in a timely manner, to meet the task of informing the NLDP and its constituent projects and activities.

Selection of research projects/activities

At the outset, the identification and funding of research projects/activities should be guided by an objective process. The following question, which is directly linked to the NLDP objective, should be incorporated as the framework for selecting a research project/activity — *Will this research project/activity enhance our understanding of land's contribution to growth? If Yes, how?*

The answer to the first question must be in the affirmative and the response to the second question should be theoretically sound and empirically supported. This is important because the research outputs will have significant policy and empirical implications, and therefore the research has to be undertaken with scientific rigor.

Approach to updating the research agenda

In both Parts A and B of the questionnaires, responses were sought as to the most appropriate way to update the research agenda, and how frequent this should be. (Detail for Part A is in Annex C, Q10 and Q11, and for Part B, see Annex D, Q11 and Q12.

With respect to methods of updating, public responders preferred a workshop of interested parties (64%), while researchers preferred a questionnaire (52%). With respect to the frequency of update, ordinary responders preferred an update every 3 years (68%), while researchers were equally divided between every 1 or 3 years. Ideally, a 3 year update should be preferred. This should provide sufficient time for research to be undertaken and also to monitor impacts. This information should be useful for updating the framework. With respect to how the research method could be updated, a questionnaire should be used to gather data and then seek views from a workshop or conference, where the results from the responses are presented.

6.4 Channels for communicating research results and updates

Communicating the research agenda and the results of the research are important and probably a little challenging. There will be a number of distinct target groups. Some of the main ones are likely to be:

- the various researchers involved in different issues;
- the broader research community involved in land, land development, customary land, and economic and social development;
- senior PNG politicians and public officials, and key stakeholders, who set the direction for the NLDP and approve funding for its various projects and activities;

- those who manage and are involved in executing various NLDP projects and activities;
- the wide community of customary landowners, and their various organisations throughout PNG, and
- the wide variety of public and private sector and NGO organisations, that are involved/interested in one way or another with land, land development, and the system of land administration.

Identifying all of these in the detail necessary to be able to communicate effectively with them will take some time and attention to detail. The NLDP itself should probably be set up initially as an awareness campaign entity with strong communication channels with a broad national coverage. There is an opportunity to use this channel to also communicate research results and to gain feedback.

For *Enabling research*, it is inevitable that workshops must be organized when the need arises so that research findings can be fed into the policy implementation process.

At the broader program level, a national land conference should be organized every three years. This conference should be organized into the following three components:

Academic oriented — the target audience should be academics and other researchers. While the greater proportion of the papers presented in this segment should focus on the findings from the strategic research activities, some papers from the enabling research should be incorporated. The proceedings should be published in an academic format.

Policy oriented — the target audience should be the policy community. The papers presented in this segment should focus on the findings from the *enabling research* as well as policy lessons arising from the *strategic research*. The proceedings should be published in a format that is accessible to a broader audience, especially the policy community.

Updating the research framework — the third component of the conference should be used to update the research framework. This is the forum through which new themes, questions, projects, and activities for research are identified.

6.5 Conclusion

The design of the overall research structure discussed in this section takes into account the NLDP outcomes discussed within the context of the conceptual framework and the research themes that arose from the survey questionnaire. More specifically, research questions and topics were identified under each theme to provide a clear direction on how the research could be undertaken. Under the oversight of the Land Research Program at the NRI, different pathways for undertaking the research could be developed. These could include different institutions taking a lead on specific issues, in-house research by staff within NRI, PNG universities and research institutes (which may be undertaken in collaboration with external researchers), contracted with specific terms of reference, and attracting innovative research projects through a contested funding pool that could fund research fellowships, research grants, and/or scholarships for graduate students. A national conference held every 3 years should be organized to disseminate research results and to update the research framework.

7.0 CONCLUSION

PNG is implementing a comprehensive land reform program. It is informed by the broader literature on the economics of land titling, the PNG land history, policy, and empirical literature, and the on-the-ground realities. Given the complexities of land and PNG's political, economic, social, and development circumstances, successful implementation of the program remains a monumental challenge. This underpins the need for a research framework that is able to provide independent oversight of the implementation of the NLDP.

Going back to the literature, the important role that private property rights plays in spurring economic growth and development is widely acknowledged in the economics literature and has also been extensively documented by economic historians such as North and Thomas (1973) and Rosenberg and Birdzell (1986). This line of analysis has influenced the thinking of commentators, policy makers, and international donor agencies about land reform across the developing world. The World Bank has been the main international agency sponsoring land reform initiatives in many developing countries, PNG included.

The impact of this policy prescription in the context of developing countries, including PNG, is, however, inconclusive. While the theoretical framework remains sound, the policy emphasis on the issuance of individual land titles has not been that successful. The espoused channels fail to function in many instances. While this ambiguity has polarised the debate over land reform, the emerging consensus is that while security of property rights may not be viewed as the panacea of development, it has a significant role to play in solving the development puzzle. Further, the emphasis on land titles *per se* has shifted to securing security of tenure. Finally, context, depicting the on-the-ground realities, matter.

Informed by the international literature, the GoPNG decided to undertake a comprehensive land reform program, starting in 2005 (National Land Summit Coordinating Committee, 2006; National Land Development Taskforce, 2007; Yala, 2010). It is progressing towards full implementation as of 2010.

The main focus of this land reform initiative is to enhance land's contribution to economic growth and development in PNG by defining and ensuring security of tenure. The policy conception, formulation, and implementation was informed by the broader literature but made to suit PNG's context. The economics of land titling, a branch of institutional economics, has provided the theoretical framework and empirical bases for this reform initiative because the government was interested in achieving an annual growth target of 5% per annum in the MTDS 2005–2010.

PNG's history is littered with failed attempts to undertake customary land tenure reform. Learning from past mistakes and being informed by the global literature, the GoPNG invested in a process, led by Papua New Guinean institutions and experts, to conceive, formulate, and now implement the land reform program. This approach is embedded in the need to remain objective about undertaking land reform but with a clear understanding of the context, which includes the people, culture, system of government, and the state of national development. The process calls for discipline on the part of the government and its reform advocates to remain open and frank about the concept of land reform and the kind of reforms needed for PNG. The starting point is

to realise that customary land tenure is real and is fully functional. The State therefore does not have the legitimacy or the authority to unilaterally pursue a land reform program.

The GoPNG needed a mandate from the people of PNG, who own the land, on two important aspects — (i) to pursue a land reform initiative and (ii) on the kind of land reform. This was achieved through the staging of a National Land Summit in Lae in 2005 (National Land Summit Coordinating Committee, 2006; Yala, 2010). In 2006, the GoPNG established the National Land Development Taskforce to formulate the recommendations for the summit into policy options and strategies (National Land Development Taskforce, 2007). In 2007, the NLDP was launched to implement the land reform program. By 2010, the NLDP is progressing towards the phase of full implementation.

The NLDP has established a LRP within the NRI to undertake research and provide oversight of the implementation of the NLDP. The NRI-based LRP will use the LRF designed in this report to initiate, guide, and coordinate the research activities of the NLDP.

The terms of reference for the design of the LRF defined the three objectives of the LRF as to: (i) create a national LRF that guides research on land and its contribution to national development; (ii) identify research issues emerging from the PNG land reforms and establish priority research areas; and (iii) involve stakeholders in dialogue regarding land research in PNG.

In formulating the framework, an updated review of the global and PNG literature was perceived crucial in identifying knowledge gaps (theory, policy, and empiricism), to identify priority themes, define key research questions, establish the in-country capacity to undertake the research, and consult with relevant stakeholders (researchers and the policy community) to deliberate on the framework and other identified research needs.

A conceptual framework was conceived using the lessons from the broader literature, the PNG context, and the NLDP. The framework depicts that emphasis has to be given to the design of the property rights system on the underlying land, the design of an efficient land administration system, and institutions for a viable land and properties market. In this framework, the role of the State is reduced to defining and enforcing property rights. In contrast, the private sector plays a dominating role. These features are in agreement with the four components of the NLDP.

The LRF draws on the implications from the conceptual framework, which are the same as those of the NLDP, and organises the research framework under the following four thematic areas:

Strategic Research — These are the kinds of research that require long-term data gathering and analysis, which may lead to generating data that may add to the pool of knowledge and policy. In terms of time horizon, they need to be long-term focused.

Enabling Research — This set of research should track implementation and inform policy. Specific research projects may have to focus on the four components of the NLDP or the same captured in the conceptual framework.

Research on Cross-cutting issues — There are issues that have cross-cutting implications that will require adopting a multidisciplinary approach to research. Tracking the dynamics expected within the social structure, including gender dimensions, is one example of a cross-cutting issue.

Informing Research — Given the dynamics of the land reform program and the fact that implementation has its own process; the informing research component has been conceived to capture new research activities that may arise from implementation. The informing research theme should monitor developments and undertake research on emerging issues not covered in the research framework.

Preceding any research activity should be establishment of a series of baselines. These need to be established prior to full implementation in several of the strategic aspects of the NLDP with a view to creating a longitudinal database that will be useful for monitoring the effectiveness of the NLDP.

With a view to operationalising the research framework, a survey questionnaire was administered aimed at identifying research topics from the public and areas of research interest and the capacity of researchers to undertake the research by individual researchers and institutions interested in land research.

The series of questionnaires that were administered were aimed at determining views on the following: what research topics were considered important by a wide range of PNG stakeholders; what research topics individual PNG researchers were interested in, and their capacity to undertake the research; what research areas PNG organisations that conduct research were interested in, and their capacity to undertake the research.

The analysis of the survey questionnaire supports the research themes. There are capacity issues that will need to be considered at the time of implementing the research framework. Further, the desire for collaborative arrangements with senior researchers emerged as one concern expressed by researchers.

The analysis was taken further to define a small number of major research questions within each theme or sub area, such that the more minor research topics within it can contribute to the major research question and also to inform each other where necessary. This is intended to make the LRF serve as a guiding framework within which specific research projects and activities can be identified, funded, and undertaken.

As a guide in selecting research projects and activities, the following question was formulated: *Will this research project/activity enhance our understanding of land's contribution to growth? If yes, how?*

The research may be undertaken in-house, or by means of collaborative arrangements, contracted out through consultancies, through fellowships, and through contested grants from innovative proposals. The LRF based at NRI would manage the LRF, the research program, and ensure quality control. Institutions with comparative advantage and capacity within specific areas should be entrusted to take leadership in some thematic areas.

A national land conference should be held every 3 years with the aim of disseminating research findings, updating the research framework, and identifying emerging issues for research.

Finally, the aim of land reform in PNG is to raise economic growth. The above is to be achieved by raising productivity of land, the bulk of which remains under customary tenure. The productivity of land, in turn, is hypothesised to be linked to the level of investment which in turn

is determined by the perceived security of tenure in the land being invested on. Furthermore, the objectives of this land research framework highlight the importance of monitoring, evaluation, and fine-tuning of reforms. The literature provides support to the hypotheses underscoring the reform being instituted in PNG. The land research framework would help in testing rigorously these hypotheses, and the lessons from them fed into finetuning the reforms. While formulating the LRF, it became clear that research into the activities of the NLDP is expected not only to inform policy implementation in PNG but also the research findings stand to make significant and substantial contributions to the broader literature. This underscores the need to maintain objectivity and scientific rigour in the conduct and analysis of the research undertaken.

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