



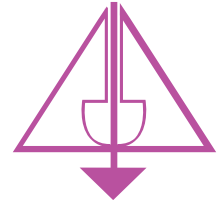
National Sustainable Land Use Policy of Papua New Guinea 2022 - 2032



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Independent State of Papua New Guinea

Papua New Guinea National Sustainable Land Use Policy (NSLUP)

Government of Papua New Guinea
Department of Lands and Physical Planning (DLPP)

2022 - 2032

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FOREWORD

Minister's Statement

It gives me great pleasure to provide the introduction of this important document



containing the National Sustainable Land Use Policy (NSLUP). This National Sustainable Land Use Policy has been in drafting for some time and its finalization and implementation is an initiative we look forward bringing into fruition in 2022 and beyond.

As the Minister for Lands and Physical Planning, I am tasked with the huge responsibility over the Physical Planning field and its extensive and important functions for making land available for proper planning. Under the current legislation, the National Sustainable Land Use Policy strengthens the Physical Planning Act 1989 by establishing a mechanism at the national and

provincial levels of government covering the whole nation for the sustainable use and management of land.

Papua New Guinea's aim to implement the National Sustainable Land Use Policy is also aligned to international development policy goals geared towards strengthening PNG's economic and spatial planning systems across the national, provincial and local level governments. The following are the important pieces of international development goals relevant to the land use planning policy framework (NSLUP):

- Millennium Development Goals 2015
- United Nations Framework Convention on Climate Change (UNFCCC)
- United Nations Convention on Biological Diversity (UNCBD)
- United Nations Convention on Combating Desertification (UNCCD) as well as international agreements such as the Agenda 21 and the Declarations on Forests
- Sustainable Development Goals (SDGs) 2030
- United Nations Convention on Environment and Development (Rio Declaration)
- United Nations Convention on Human Settlement (UNCHS)
- The Cartagena Protocol on Biosafety
- The Kyoto Protocol on Stabilizing Greenhouse Gas Emissions
- The Paris Agreement on keeping global temperature well below two degree Celsius

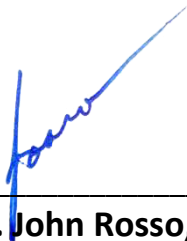
Land use planning for sustainable development became an important global agenda at the United Nations Convention on Environment and Development (UNCED) Agenda 21 which was first held in Rio de Janeiro, 1992. Agenda 21 has been adopted by many countries often at their national, provincial and local levels. Agenda 21 processes have

given an important impulse to land use planning as they focus on participatory land-use planning and action at local levels to achieve sustainable development.

One of the key agendas discussed in the UNCED Agenda 21 was on climate change mitigation, biodiversity protection, and combating desertification through which the convention mentions land management as a key instrument on combating desertification. For Papua New Guinea I have no doubt that land use planning shall contribute important strategies outlined into the National Sustainable Policy towards achieving the objectives of the convention which PNG signed.

Land-use planning can contribute to mitigating climate change by identifying areas of forest protection or afforestation as well as adapting to climate change by identifying risk areas or newly suitable areas for agricultural productions. Land use planning can contribute to protecting biodiversity through zoning of protected areas.

The purpose of this policy is to advance and guide land use and planning and the development of a Strategic Land Use Plan for Papua New Guinea, which reiterates Papua New Guinea's domestic and international obligations to protect and sustain land and its resources for future generations.



Hon. John Rosso, DPS, MP

Minister for Lands and Physical Planning & Urbanization

Secretary's Statement



I am pleased to introduce this policy on the National Sustainable Land Use Policy (NSLUP) for Papua New Guinea. The release of this key strategic document is the first step in establishing a benchmark to provide a framework for national land use planning in the country, with particular emphasis on sustainability.

The paradigm shift from short, medium and long term planning as a result of higher-order policies such as the National Constitution, Vision 2050, Responsible Sustainable Development, Development

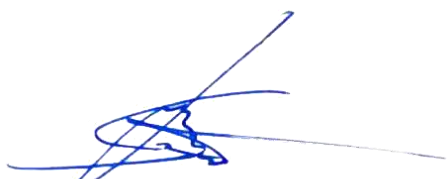
Strategic Plan 2010-2030 and National Urbanization Policy and the National REDD+ Strategy has created a conducive environment to introduce the National Sustainable Land Use Policy. The framework established by this policy should guide the way on how we manage and use the land and its resources. The journey to achieve the goal of NSLUP will have many obstacles and challenges for us but we must start to move forward at this critical time in PNG's development.

With increasing population and rapid economic development through the current trend of unsustainable utilization of resources has prompted the government to develop an over-arching policy framework that will guide the planned allocation, development, management and best use of land and land resources in Papua New Guinea. Following the successful launching of the home-grown land reform program introduced by the Government to free up customary land for development purposes, this policy document will assist in the planned allocation, development, management and best use of land in Papua New Guinea.

Papua New Guinea's long-term prosperity, environmental conservation, sustainable economic growth and social wellbeing and inclusion depend on prudent management and promoting best use of land and development patterns. Wise and efficient use of land supports strong, livable and healthy communities thus protecting the environment, public health and safety and facilitating economic growth. NSLUP will provide strategic guidance on balancing competing land uses and to identifying those uses and set targets so that sustainable development can be achieved.

Given the complex nature of the land tenure system and land use in the country, the policy initiative was delayed at that time to allow a proper study to be conducted to understand the underlying complex socio-economic and cultural issues in the formulation of the National Sustainable Land Use Policy. The underlying problems and issues that NSLUP will tackle are by nature complex socio-economic problems, which require careful attention and landowner participation, including all the stakeholders.

This policy will provide a pathway on how the land and its resources will be better utilized through using proper policy approaches and working within the confines of the international and national development goals.



Mr. Benjamin Samson

Secretary

Chief Physical Planner's Statement



The current physical planning system provides the framework for spatial planning in Papua New Guinea. However, the sphere of influence of physical planning has been restricted to less than three percent of the land declared as physical planning area throughout the country. The physical planning system in Papua New Guinea is in its infancy of development; as such the application of the legislation has been restricted to urban areas throughout the country.

Over the years and in line with the Physical Planning program for the development of this policy, the Department of Lands and Physical Planning has undertaken extensive research in understanding this phenomenon. A large volume of information has been compiled in the form of documents, reports, and discussion papers.

The functional responsibilities of physical planning include:

- Promoting best use of land in Papua New Guinea in the interest of each citizen and the economic advancement of the country,
- Formulating and over-sighting the implementation of policies in certain areas of land use planning and subdivision discovery as well as infrastructure needs for urban and rural areas.
- Supervising and preparing physical plans and exercising planning control, administering the provision of physical planning regulations and physical planning boards.

Physical Planning has played an important role in allocation, best use and management of land throughout PNG. However, the major challenge is that customary land has been denied physical planning. The purpose of National Sustainable Land Use Policy (NSLUP) is to address the issues of land usage and planning and the development of a Strategic and Sustainable National Land Use Plan for Papua New Guinea, which reiterates Papua New Guinea's domestic and international obligations to protect and sustain land and its resources for future generations.

This policy provides an overview of the current status and issues including (i) focus on land use patterns (ii) discuss in critical terms the current approaches of policy and planning that includes, among others; sustainable livelihoods; rural and social development; gender equality; empowerment; sustainable infrastructure; sustainable economic development; biodiversity and wildlife; depletion of finite resources; food security; poverty eradication; social stability; management of best use of land through

identification of existing zoning mechanisms; local control of land use management and land tenure conversion that lays the groundwork of the development of the policy.

The NSLUP does not pretend to have all the answers to sustainable land use and planning, however, it provides the impetus to using necessary tools and prevailing processes to ensure land and its resources are well utilized for the benefit of current and future generations.

A handwritten signature in dark ink, appearing to read 'Linus Billy', is written over a horizontal line.

Mr. Linus Billy
Chief Physical Planner

Acknowledgements

The development of the National Sustainable Land Use Policy (NSLUP) would not have been possible without the support of the Minister for Lands and Physical Planning, Hon. John Russo, countless number of individuals and organizations. Your significant contributions and high level of commitment has successfully led to the delivery of the Sustainable Land Use Planning Policy. This is also a testament of the immense wealth of knowledge and experience imparted into the framework of the policy dating back to the 1990's which laid the foundation for current reviews and drafting of PNG's homegrown National Sustainable Land Use Policy.

We would like to acknowledge and thank the people involved in developing the NSLUP. These included Officers of the Physical Planning Division, especially the Physical Planning Policy Unit for their tireless efforts in initiating the drafting of the NSLUP since 2000 with special thanks to Development Planning and Development Assessment Unit, the Chief Physical Planners Office, the Incorporated Land Group Division and Customary Lands Divisions, Corporate Services and the Policy and Legal Division, Office of the Secretary and the Department of Lands and Physical Planning for their continued support over the years.

On behalf of the Minister for Lands and Physical Planning and the Secretary for the Department of Lands and Physical Planning we would like to further acknowledge the following development partners and stakeholders, the community and NGOs, sector agencies and all those who have contributed immensely to the formulation of NSLUP.



Abau District Administration	Jiwaka Provincial Administration
Aid Agencies	Kairuku Local Level Government
Apostolic Church PNG (Mt. Hagen)	Kerema Urban Local Level Government
Bank of Papua New Guinea	Kokopo/Vunamami Local Level Government
Bereina District Administration	Kumul Agriculture Ltd
Border Development Authority	Kuni Local Level Government
Business Partners	KWMA
Caritas PNG	Lae District Administration
CELCOR PNG	Lae Urban Local Level Government
Central Provincial Administration	Laloki High School
Civil Societies	Livestock Development Corporation
Climate Change and Development Authority	Magisterial Services
Countrywide Realty Ltd	Manus Provincial Administration
Department of Agriculture and Livestock	Mekeo Local Level Government
Department of Community Development	Milne Bay Provincial Administration
Conservation and Environment Protection Authority	Mineral Research Authority
Department of Education	Morobe Provincial Administration
Department of Finance	Mt. Hagen City Authority
Department of Health	National Agriculture Quarantine and Inspection Authority
Department of Implementation and Rural Development	National Agriculture Research Institute
Department of Mineral Policy and Geohazards	National Disaster Center
Department of National Planning and Monitoring	National Fisheries Authority
Department of Personnel Management	National Forest Authority
Department of Prime Minister and NEC	National Information and Communication Technology Authority
Department of Provincial and Local Government Affairs	National Marine time Safety Authority
Department of Trade and Industry	National Physical Planning Board
Department of Transport	National Research Institute
Department of Treasury	National Statistical Office
Department of Works	NIHT/NI Holdings Ltd
Donors	Nimoma Ltd
Eastern Highlands Regional Office	Non-Government Agencies
Enga Provincial Administration	North Waghi District Administration
Evangelical Lutheran Church of PNG	Office of Urbanization
FMC	OISCA International PNG
Fresh Produce Development Agencies	Oro Provincial Administration
Genoka TRDG	Paisat Lawyers
Gulf Provincial Administration	Papua New Guinea Forest Authority
Hornibrooks NGI	PNG Council of Churches + Catholic Bishop Conference
Institute of National Affairs	PNG Electoral Commission
Jimi District Administration	PNG Tourism Promotion Authority
	PNG University of Natural Resources and Environment
	PNG University of Technology

Provincial and District Representatives
Rabaul Volcanoes Observatory
Rigo District Administration
Sandaun Provincial Government
Simbu Provincial Administration
Solomarck
Suenatimber Co.
Survey Image Solutions
Tavolo WMA
Telikom PNG Ltd
Tolasa Ltd
Transparency International PNG

Tzen Niugini Ltd
United Nations Development Program
University of Papua New Guinea
VJ Holdings Ltd
Water PNG Ltd
WBCA
West Coast Development Foundation
Western Highlands Provincial
Administration
World Wide Fund of Nature
Woitape Local Level Government
Women's Representatives



Table of Acronyms & Abbreviations

CCDS	Climate Compatible Development Strategy
CEPA	Conservation and Environment Protection Authority
CI	Conservation International
CLRC	Commission for Law Reform Committee
COP	Conference of Parties
DAL	Department of Agriculture and Livestock
DLPP	Department of Lands and Physical Planning
DSP	Development Strategic Plan
ED	Economic Development
EMP	Environment Management Plan
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIS	Geographical Information System
LaGIS	Land and Geographical Information Systems
ICAD	Integrated Conservation and Development
ILG	Incorporated Land Groups
IUCN	International Union for Conservation of Nature and Natural Resources
LUP	Land Use Planning
MDG	Millennium Development Goals
MTDS	Medium Term Development Strategy
NARI	National Agricultural Research Institute
NC	National Constitution
NDC	Nationally Determined Contribution (under the United Nations Paris Agreement (Implementation) Act 2016 (PNG)
NDGDP	National Development Goals and Directive Principles
NGO	Non-Governmental Organization
NLDT	National Land Development Taskforce
NPPB	National Physical Planning Board
NRI	National Research Institute
NRS	National REDD+ Strategy
NSDS	National Sustainable Development Strategy
NSLUP	National Sustainable Land Use Policy
NUMP	National Urbanization Management Plan
NUP	National Urbanization Policy
OCPP	Office of the Chief Physical Planner
OCCD	Office of Climate Change and Development
PNG	Papua New Guinea
PNGAT	Papua New Guinea Physical Planning Appeals Tribunal
PNG LNG	Papua New Guinea Liquefied Natural Gas
PPD	Physical Planning Division
STaRS	National Strategy for Responsible Sustainable Development for PNG
PRAEC	Petroleum Resources Areas Economic Corridor
REDD	Reducing Emissions from Deforestation and Degradation

REDD+	Reduction in Emission in Deforestation and Forest Degradation including the role of Conservation, Sustainable Forest Management and Enhancement of Carbon Stock
SABL	Special Agriculture and Business Leases
SDG	Sustainable Development Goals
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCED	United Nations Convention on Environment and Development
UNDP	United Nation Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNITECH	University of Technology
UNRE	The Papua New Guinea University of Natural Resources and the Environment
UPNG	University of Papua New Guinea
WCS	Wildlife Conservation Society
WHO	World Health Organization
WMA	Wildlife Management Area
WWF	World Wide Fund for Nature

1.1 PNG's Development of the National Sustainable Land Use Policy

The National Sustainable Land Use Policy (NSLUP) has been formulated to provide a framework to substantially improve land use planning in Papua New Guinea. NSLUP responds to the country's need for policy coherence and coordination. To achieve the policy objectives, the NSLUP provides guidelines for planning, allocation, wise use and management of land and the resource management.

Policy Audience

The policy is for the benefit of the people of Papua New Guinea. Furthermore, the policy is intended to provide clear guidelines on the effective use of land to enable meaningful participation in land and resources management.

The conception of this policy resulted from the United Nation's Convention on Environment and Development (UNCED) in 1992 in Brazil where Papua New Guinea was a participant member country. The convention emphasized the need to undertake sustainable development by all member countries. During the Waigani Seminar following the UNCED, the convention emphasized a need for a National Sustainable Development Strategy (NSDS) for PNG, which would encourage sector agencies to develop sustainable development strategies.

In 2000, National Executive Council (NEC) Decision No. 236/2000 instructed the Department of Lands and Physical Planning to develop a Land use policy. There has been a lot of research conducted into the fields of land use planning, land and resources use.

The importance of the national policy on land use was further endorsed during the Physical Planners Conference in Madang in late 2000. In recognition of the centrality of land to development and as a critical development factor of production in Papua New Guinea, extensive research and desktop review have been conducted since 2011. After a stakeholder's consultation conference, a Discussion Paper was compiled and endorsed by the Department of Lands and Physical Planning in 2013. Additional review was conducted from 2008 to 2020 with one-to-one and focus group interviews as well as additional national and regional consultations that resulted in the current policy document.

Chapter 2 RELEVANT DEFINITIONS

- a. **Protected Areas** – an area or areas with biological, topographical, geological, historical, scientific or social significance or other special value for the present community or future generations, declared as a conservation area. Areas declared under CEPA or endorsed by any of the Physical Planning Boards or approved by National Physical Planning Board, NCD Physical Planning Board or Provincial Physical Planning Boards as conservation area zones.
- b. **Development Promotional Areas** – an area considered suitable for urban expansion and economic development based on evidences of urban influence within urban and peri-urban areas in PNG or an area declared on its merit by NEC. Includes all existing Urban Development Planning Areas mainly cities and towns
- c. **Land** – means the actual land (i.e. soil, ground and earth), which includes also things below and above the surface and over time. It includes the land of any tenure, right privilege or benefit in, over or derived from the land and;

“Land” means the soil and everything above and below the soil and includes;
 - (a) The Land below the low-water mark and within the jurisdiction; and
 - (b) Land covered with water; and
 - (c) Rights to river and streams
- d. **Land Use** – the activities to which land is subjected to and is often determined by; economic returns, socio-cultural practices, ecologies zones and public policies. In the context of this policy, land use is defined as the economic, social, cultural and environmental activities practices on the land.
- e. **Land Use Planning** – it is a systematic and interactive procedure carried out that assesses the scientific, aesthetic, physical, cultural, socio-economic, institutional, and legal potentials and constraints with respect to an optimal, responsible, and wise use of land resources with a view to securing the physical, economic and social efficiency, the well-being of urban and rural communities, empowering people to make informed decisions about how to allocate those resources.
- f. **Physical Planning** – proposes the optimal physical infrastructure, both rational and orderly, for the allocation of land for development purposes that consider all the land use aspects
- g. **Rural Areas** - refer to a geographic area that is located outside towns and cities. These include villages in which settlements are organized according to their traditional ways and where there is no presence of major government services

- h. Sustainable Rural Areas** – An area or areas which contain features and development activities considered rural in nature. Includes all community settlement areas, basically customary land areas or village settings.
- i. Public Domain Areas** – area declared or approved for important public use/interest and national asset or utility to be used by everyone, such as, but not limited to, national roads and highways, mega cities and cities, power grid.
- j. Urban Areas** - refer to town, cities and suburbs. Include towns and cities that are demarcated from customary land declared through gazettes. These are built-up areas containing a central area surrounded by growing settlements both planned and unplanned and are classified according to their administrative services and functions.
- k. Sustainable Land Use Policy** – the process of planning, coordinating and managing the best and equitable use of the land resources of Papua New Guinea for the present and future generations.
- l. Sustainable Development** – the four pillars of sustainability include (i) social equity (ii) environmental protection (iii) economic viability and (iv) transparent governance. Development refers to meeting the needs of the present generation without compromising the ability of future generations to meet their own needs, meaning consideration of long term direct and indirect impacts of the proposed development to PNG people.
- m. Responsible Sustainable Development** – ensures that best practices are intrinsic to development measures from the inception, respecting and balancing social equity and environmental protection.
- n. Waterways** – includes freshwater and tidal waters, both permanent and ephemeral waterways, and includes drainage features also river beds sea (underwater, sea bed) as a resources be considered and dealt with as an integrated part of the policy which serves various purposes and essential to human survival.
- o. Watershed** - area of land that contains a common set of streams and rivers that all drain into a single larger body of water. Such as a larger river, a lake or an ocean.
- p. Cultural Area** – an area including tangible and intangible heritage, having spiritual, historic or social value for past, present and future generations, including a significance of natural elements of land, water or vegetation, and protected for customary, education and tourism purposes.

- q. **Land Degradation** – temporary or permanent lowering of the productive capacity of land.
- r. **Marginal Land** – land of low productivity with respect to a given land use.
- s. **Food Security** – the fulfillment of food requirement of a country through imports or local food production. Therefore food security is not synonymous with self-sufficiency in food.



Figure 1 Participants having high level group discussions at NGI Regional Consultations Workshop for NSLUP in Gazelle International Hotel, ENBP, PNG (2020)

Chapter 3 POLICY VISION AND APPROACH (Policy Rationale, Vision, Mission, Goals and Objectives)

There is an obvious need for Papua New Guinea to have a comprehensive Sustainable Land Use Policy (NSLUP), to ensure protection and sustainability of land, its resources and environments for future generations, while at the same time ensuring that current generations enjoy social and economic welfare. However, the on-going socio-economic adverse impacts which pose cause of concern that gives rise for the need to have this policy for a broader and holistic but varying stakeholders approach.

These is also evidence of certain development partners and key stakeholders lacking effective and efficient partnership skills for joint and collaborative concerted efforts in certain instances during the implementation of socio-economic development projects for national development; this problem has created considerable issues of concern generally.

Furthermore, there are of course certain existing legislative and policies issues, lack of state agencies, capacity issues, and institutional establishments to effectively provide for ever increasing population needs in one form or other. These issues have and are contributing to this broader concern being expressed by various land and resource owners, non-government organizations, political leaders, other responsible state agencies and concerned public on the lack of sustainable land use planning and proper free, prior and informed consent from customary landowners. These result mainly from the adverse effects of non-renewable and renewable commercial activities and major infrastructure development projects. Another important concern are the effects of worsening climate change that are threatening and damaging the natural and built environments, livelihoods, cultural and traditional values among others.

Thus, the NSLUP comes into this perspective to draw attention to all stakeholders to have a common understanding, see where concerted effects are or would be required to address those issues of concern and attempt to at least have control where possible and minimize such negative impacts.

The 4th Goal of Papua New Guinea's National Constitution provide for this, which articulates;

"We declare our fourth goal to be Papua New Guinea's natural resources and environment to be conserved and used for the collective benefits for us all, and to be replenished for the benefit of future generations"

3.1 Vision

Land and the natural resources and environment on it throughout Papua New Guinea benefit the citizens and are enjoyed from generation to generation through wise planning and sustainable management approaches.

3.2 Mission

To promote the best sustainable use of land in Papua New Guinea for the interest of all people with effective partnership with stakeholders to achieve responsible sustainable social, economic, infrastructural, environmental and physical advancement consistent with our National Goals and Directive Principles, and coherent with all other relevant policies and pieces of legislation.

4 Policy Goals

The National Sustainable Land Use Policy aims to effectively promote and implement sustainable land use and management in Papua New Guinea in accordance with the policy objectives and guiding principles.

5 Policy Objectives

The objectives of the National Sustainable Land Use Policy (NSLUP) are:

- a. To promote sustainable land use management and protect cultural heritage areas, the environment, and natural resources for the benefit of all Papua New Guineans;
- b. To promote people-centered development, participatory decision making, responsible investments and accountable land use administration to support the equitable economic and inclusive development of the country;
- c. To recognize and protect customary land tenure rights and procedures of the customary landowners;
- d. To establish transparent, fair, affordable and independent dispute resolution mechanisms per with the rule of law;
- e. To develop bottom-up land-use plans at all administrative levels (local, urban, district, provincial, national), while integrating relevant sectorial plans in contributing to the social and economic development;
- f. To strengthen, improve and effectively monitor the Physical Planning system that drives the process of decentralization;
- g. To develop, integrate and establish a centralized National Land-use Information Management System that encompasses all appropriate sectorial Land-use Information;
- h. To promote capacity building for public servants at all levels in the maintenance of professional and ethical standards;
- i. To strengthen and establish institutional structure at all levels of Government to facilitate land-use planning;

- j. To guide and promote responsible sustainability and integrated social and economic development in accordance with all approved land-use plans and with national development plans like StaRS and etc.;
- k. To develop a national system of bottom-up participatory sustainable land use planning by customary landowners starting at the Ward Levels, forming the basis of LLG, District and Provincial Sustainable Land Use Plans.
- l. To coordinate with all relevant Government Authorities to produce National Sustainable Land Use Advice and Guidance and disseminate this down to the lower Government levels to inform the bottom-up sustainable land-use planning process.

6 Guiding Principles

The basic principles of the National Land Use Policy (NSLUP) are as follows:

- a. **Accountable** – To be transparent, using good administrative and decision-making principles that can be explained and justified to the public;
- b. **Benefit Sharing** – To support and promote transparent, fair and equitable sharing of benefits, monetary or non-monetary resulting from sustainable uses and development of land (customary and alienated lands), with maximum benefits going to the alienated landowners or customary land-owning communities;
- c. **Capacity Building** - To promote individual and institutional capacity building to deal with land, land use, management, and development;
- d. **Cultural Sensitivity** - To recognize, respect, protect and uphold existing customary rights, values, authorities, institutions, and processes;
- e. **Efficiency** - To ensure the desired results of land use and development are achieved cost-effectively;
- f. **Empowerment** - To encourage and support landowners to pursue better livelihoods and to make informed decisions regarding land and resource usage and management;
- g. **Equality** - To promote gender equality, and equal opportunities for men and women over land management and resources, including vulnerable groups, such as people living with disabilities, widows and orphans;
- h. **Equitable, Effective Public Participation** - To promote public participation and consultation in the decision-making process related to land use and land resource management;

- i. **Fair Governance** - To develop and implement fair procedures relating to land acquisition, compensation, relocation, rehabilitation, restitutions, and reclaiming land tenure rights;
- j. **Free Prior Informed Consent (FPIC)** – To promote, support, and ensure the application of meaningful and effective FPIC processes in all land use planning on alienated and customary land;
- k. **Good Governance** - To ensure transparent, responsible, accountable, democratic, legitimate practices are applied in land and natural resource governance, including, spatial planning, management, and land development;
- l. **Grievance Mechanism** - To ensure easy access to judicial review or other dispute resolutions mechanisms that are independent, fair, transparent, and affordable;
- m. **Integration** - To ensure an integrative approach where separate and diverse elements involved in development planning are combined and coordinated to achieve a complete and harmonious whole;
- n. **Integrity** - Uphold highest ethical standards of people and processes involved in addressing land and land use issues;
- o. **Information Management** - To establish and develop a reliable national physical planning information management system, that is easily accessible by the public;
- p. **Leadership** - Provide and demonstrate responsible and ethical leadership;
- q. **Performance and Outcome-based Planning** – assesses sustainable land use issues focusing on outcomes and difference ways to achieve the outcomes, whilst providing for flexibility and innovation to achieve the outcomes. Balance social, environment and economic considerations when making land use decisions.
- r. **Recognition of Customary Rights** - To recognize, uphold and protect customary rights as stipulated in the national constitution;
- s. **Rule of Law** - To strengthen the rule of law and good governance, including simplifying procedures, ensuring transparency, increasing accountability and responsibility;
- t. **Sustainability** - To enhance responsible sustainable land use in development and management related to land and natural resources aiming to benefit the present and future generations, while at the same time protecting the environment.

Chapter 4 NSLUP ACTION PLAN: POLICIES AND MEASURES

4.1 Background and Context

Papua New Guinea occupies the eastern half of New Guinea Island, sharing a border with Indonesia. It has an area of approximately 463 000 square kilometers of land. It has an economic exclusive zone of 2.4 million kilometers, which encompasses 17 000 kilometers of coastlines and almost 2000 coastal villages. Communities in Papua New Guinea have developed more than 800 languages as well as unique customs and traditions, in part due to the isolation that results from the country's rugged terrain.

Currently, the Physical Planning Act 1989, as amended provides for land use planning of any resource's development and of all land which is executed through the National, Provincial and Local Physical Planning Boards. Still there is little influence exercised on customary land use, and only 3% (most of which is government leased land, sub-leased for development purposes) is subject to the Physical Planning Act 1989. The result is a lack of drive where strategic planning, sector investment planning, budget allocation and programme coordination are all neglected.

The legislative framework defines the powers, roles and responsibilities of all levels of government in delivering public services. The recent paradigm shift in Government policy and planning from short to medium term

planning to long term planning through the introduction of higher-order policies such as Vision 2050, Development Strategic Plan 2010-2030 and National Urbanization Policy 2010-2030 has created a shift in focus in development to increase delivery of public services to rural areas while empowering communities. Hence, land use planning was identified as crucial for identifying a range of land uses, zones, and management.

The content of the NSLUP considers, through physical planning and spatial definition, three broad land use and zoning themes, which include Development Promotion, Conservation and Rural Sustainability. These three broad zones are policy-based zones, where boundaries are general and indicative and so are the zones. These are to be modified at the actual practical sustainable land use planning stage through the preparation of lower-level development plans.

The second broad policy area is the land areas covered by the public domain and national grid which includes but are not limited by national roads, highways and national power grid.



Figure 2: Group photo session during the NSLUP National Technical Workshop at National Convention Center, Waigani, Port Moresby, PNG 2019.

Further sub-definition of land use zones should be considered after surveys consultations and with the collaboration of sector agencies during the NSLUP implementation. These include, but are not limited to;

- a. Physical constraints zones (land use unavailable or inappropriate for development);
- b. Food security zones (requirements to feed local populations and projected growth to 2050);
- c. Fresh-water security zones (to manage key sources of fresh water and keep their catchments intact);
- d. Health and well-being (to ensure that malnutrition-related diseases and incidence of water-borne diseases are significantly less);
- e. Commercial agriculture zone;
- f. Forestry zone;
- g. Fisheries zone;
- h. Urban development zone;
- i. National security zone;
- j. Commercial, industrial and mining zones;
- k. Recreational areas;
- l. Cultural and Archaeological zone
- m. Tourism and / or
- n. Identified zones during participatory consultation processes to be conducted in the country.

The next section aims to describe the current status regarding land use and management and their respective challenges in PNG. The following section provides a detailed analysis of the identified challenges with strategies for addressing them while pointing out the desired policy outcome.

4.2 Policy Action Plan

This policy document aims to significantly integrate and promote sustainable development by following the guiding principles aforementioned and the following strategies;

- a. Sustainable Economic Growth
- b. Food Security
- c. Environmental Conservation
- d. Climate Change, Natural Disasters & Geo-hazards
- e. Land Use Information Management System
- f. Institutional and Capacity Building



Figure 3: Six (6) thematic areas of the NSLUP

4.2.1 Strategy 1: Sustainable Economic Growth

Land in PNG is categorized into three (3) main broad zones;

- i.** Development Promotion
- ii.** Sustainable Rural; and
- iii.** Conservation Areas

The strategy on sustainable economic growth will be implemented in all land use classification above and various stakeholders will be involved in ensuring that land use is planned according to spatial or terrain and potential of economic activities.

Reducing poverty and increasing the diversity of cash income sources will have many positive implications for urban and rural Papua New Guineans, apart from improved food security. These include enhanced access to health, education, especially post-primary school and access to information.

4.2.1.1 Development Promotional Areas

These areas include declared physical planning areas (existing state land or towns in the country).

- 1)** Identification of land suitable for Urban Development Leases and further subdivisions in urban areas which makes land available for economic development;
 - a)** Verification and updating of zoning plans (land use survey activities)
 - b)** Preparation of all types of Development Plans for the towns and cities
 - c)** Promotional Areas - Updating of zoning plans and making more land available through zoning and rezoning, consolidation, and review of redevelopment Zone Area Boundaries;
 - d)** Conducting land use surveys stocktaking state land and making land available through forfeiture and public tender;
 - e)** Achieving sustainable economic growth with dispersed income-earning activities through promoting a strong, stable, and productive economy that aims to create jobs and prosperity for all by 2030;
 - i.** Aligning Spatial Plans to Economic Plans by identifying all the stakeholders' plans;
 - ii.** Ensuring that suitable locations are available for industrial, commercial, retail, public sector (e.g. health and education, tourism and leisure development, so that the economy can prosper;
 - iii.** Ensuring the provision of enough, livable, good quality new homes (including an appropriate mix of housing and adequate level of affordable housing) in suitable locations, whether through new developments or the conversion of existing buildings. This will aim to ensure that everyone has the opportunity of a decent home, in locations that are convenient;
 - iv.** Ensuring that infrastructure services are provided to support new and existing economic development;

- v. Minimizing risk of public health and safety from facilities such as airports, transportation infrastructure, sewage treatment plants, waste management systems, oil and gas pipelines, industries and resource extraction camps and other sensitive land uses and making sure these facilities are appropriately designed, buffered or separated from each other to prevent adverse effects of odor, noise and other forms of pollutants or contaminants;
- 2) A strong, stable and productive economy that aims to bring jobs and prosperity which should be supported by promoting energy efficiency and improvement through standard land use and development patterns which;
- i. Advocate compact development;
 - ii. Promote smooth mass transit and alternative modes of transportation in between residential, employment and other activity areas;
 - iii. Improve mix of employment and housing types to shorten intra-urban movements and decrease transportation congestion;
 - iv. Promote design and orientation, which maximizes the use of renewable energy;

4.2.1.2 Sustainable Rural Areas

- a. Liaise with economic development sectors such as forestry and agriculture and identify suitable land use requirements for sectoral development, through the bottom-up-land use planning strategies.
- b. Build and maintain the capacity of LLG, District Authorities and Provincial Government to facilitate bottom-up Ward Sustainable land use planning as part of all Ward Development Plans and to amalgamate these plans into the higher-level spatial planning.
- c. Liaise with economic sectors and other key government stakeholders to compile National Sustainable Land Use Planning Advice & Guidance, and ensure dissemination of this information to all lower government levels.
- d. Liaise with economic sectors and other key government stakeholders and integrate all their sectoral plans in the national and regional land use plans;
- e. Liaise with key stakeholders engaged in climate change mitigation and adaptation and conservation activities, and identify extension and other support services needed at LLG and District levels, based on all identified relevant land uses in the LLG and District spatial plans.
- f. Liaise and work in partnership with social infrastructural service providers such as health, education, transport, and pipe-borne water supply to identify suitable land for effective and efficient delivery of services.
- g. Liaise and work in partnership with arts and cultural services providers to identify cultural sites and promote tourism.

4.2.1.3 Conservation Areas

- a. Identify key stakeholders engaged in conservation activities and work with them;
- b. Develop various land -use plans with assistance from stakeholders;
- c. Identify key impact projects and affected villages; and
- d. Identify key stakeholders to engage in cultural protection and work with them

4.2.2 Strategy 2: Food Security

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996). Food security encompasses the following dimensions:

- a. Availability of food
- b. Access to food
- c. Safe and healthy utilization of food
- d. Stability of food availability, access and utilization

There are a several factors that could have a positive or negative impact on future food security. The following intended number of outputs and outcomes of the NSLUP would potentially improve food security in PNG.

- a. Improved food production technology focused on vulnerable environments, particularly where people depend mainly on staple food;
- b. Through the integration of policies and regulations that promote equitable access to land and/or improving tenure security; food production can be improved as farmers will invest in long term measures to improve the soil or start more expensive cultivations that provide higher yields in the long run;
- c. Through land use planning, areas of food production can be defined, zoned, and protected from being converted into urban development land;
- d. Better access to markets through improved transport and marketing arrangements for cash crops;
- e. Maintenance of roads, bridges, wharves, and other transport infrastructure;
- f. More information for rural settlers, especially those dependent on sustainable farming and cash cropping;
- g. Addressing risks to food security through land use planning and identifying land suitable for long-term sustainable agricultural production;
- h. To support conservation, improvement, and sustainable use of natural resources for food and agriculture.

4.2.3 Strategy 3: Climate Change, Natural Disasters & Geo-hazards

The natural environment throughout PNG is extremely fragile and highly vulnerable to both natural and human impacts. During the last 50 years, increasing pressures on the resources are intensifying the country’s exposure to extreme events such as natural hazards like cyclones, droughts, earthquakes and tsunamis. In addition to these threats

and pressures to the environments of PNG are the expected changes that may arise from climate change and climate variability, which will likely further exacerbate these impacts and deplete the resources that are most essential for basic life support systems.

The natural environments of the country have developed a capacity over the years to adjust to human activity and changes to the climate. However, in the past few decades, rapidly changing climate patterns, increasing population growth and intensity and levels of uses of natural ecosystems may affect the ability of these systems to continue to respond to such changes. The actions required in this policy are to ensure that land use plans are developed for these risks and to ensure PNG meets its legal responsibilities such as the National Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change, developed to abate the risks of Climate Change. The two (2) key measures to address climate change include;

- i. Adaptation; and
- ii. Mitigation Strategies.

4.2.3.1 Climate Change Adaptation

Adaptation to Climate Change involves building resilience to cope up with the negative impacts on the people, livelihoods, economic activities, and places by reducing their vulnerability to climate change impacts. Adaptation means the adjustment in natural or human systems in response to actual or expected climate change effects, which moderates harm or exploits beneficial opportunities. It is a local response to global issue because activities must be tailored to the particular vulnerabilities of the locality.

It is important that sustainable land use planning includes measures to facilitate adequate adaptation to climate change, which is particularly vital for ensuring production of food and resources are not threatened. Preparing for most likely risks such as drought or flooding while maximizing beneficial opportunities associated with these changes simultaneously is important, such as developing new product. Examples of adaptation include changing building codes, for instance, to make construction more resistant against hurricanes, as envisaged by the climate building standards at Part 5 of the *Climate Change Management Act 2015*, building infrastructure to protect communities against increased flooding, relocating the building to higher grounds and making changes in land use such as switching to more drought-resistant crops or substituting intensive with extensive agriculture.

The following number of outputs and outcomes resulting from this policy is foreseen in relations to climate change adoption in PNG;

- a. To assess and conduct vulnerability mapping to include in the analytical phase of land use planning;
- b. To Identify and prioritize adaptation options can be discussed jointly and agreed upon by all stakeholders with support from technical experts such as engineers, and specialists from biology, forestry, and agriculture;
- c. To enable site specific adaptation in land use planning, such as by adjusting the assessment of guiding parameters like land suitability for different purposes

- d. To promote climate sensible land use planning at all levels and scales of planning,
- e. Involving key stakeholders such as CCDA to guide design of building codes for infrastructure
- f. Develop disaster awareness programs that sensitize the communities on best land use practices that incorporate disaster mitigation, incorporate climate change, adaptation and preparedness.

4.2.3.2 Climate Change Mitigation

Climate change mitigation includes actions we take globally, nationally, and individually to limit changes caused in the global climate by human activities. Mitigation activities are designed to reduce greenhouse gas emissions and/or increase the amounts of greenhouse gases removed from the atmosphere by greenhouse sinks.

The Second Papua New Guinea NDC report potential policies and measures (PaMs) proposed within the PNG National REDD+ Strategy (2017-2027) which would contribute to the abatement of GHG emissions from the country's LULUCF sectors. These PaMs will act as proxies to verify the implementation of the REDD+ (reducing emissions from deforestation and forest degradation and foster conservation, sustainable management of forests, and enhancement of carbon stocks) at the National level. Global efforts for mitigation are prerequisites for sustainable development.

The following number of outputs and outcomes resulting from this policy are foreseen in relation to climate change mitigation in PNG;

- a. To limit or minimize agricultural expansion, conversion of forests, wetlands and other important climate stabilizing ecosystems to other land use
- b. Identify areas of carbon sequestration through afforestation or introduction of agroforestry
- c. Identification of suitable sites for renewable energy or clean energy production.
- d. Promote energy efficiency and conservation through renewable energy. Explore all opportunities before final disposal of waste. Waste can be utilized for renewable energy production and consumption.

4.2.3.3 Natural Disaster Risks Management

Natural disaster risks management aims to avoid, lessen or transfer the adverse effects of hazards such as storms, earthquakes, floods, droughts, or landslides through a variety of activities and preventive measures, mitigation, and preparedness.

The following numbers of outputs and outcomes resulting from this policy are foreseen in relation to natural disasters risk management in PNG:

- a. To achieve utilization of land and natural resources which is adapted to local conditions and needs and takes into account disaster risks.
- b. To integrate natural disaster risks management into all phases of land use planning, from its preparation and baseline assessments through decision-making, implementation, and monitoring.

- c. Risk assessment (basis on hazards and vulnerability analysis) should be integrated into the baseline assessment of land use planning.
- d. Risk mapping should be part of zoning and other methods of scenario building.
- e. Natural disaster risks management measures should be integrated into the land use plan, e.g. introduction of sustainable agriculture to avoid soil degradation.
- f. Local regulation to enforce land use criteria and the decision should be explicitly mentioned if relevant natural disaster risks management strategies and criteria.
- g. Natural disaster management indicators should be integrated into the established monitoring and evaluation mechanisms.
- h. Natural disaster management should be considered in the involvement of relevant actors and organizational mechanisms.
- i. To develop a natural disaster risk management checklist which should be elaborated and integrated into the land use planning guidelines to help identify an adequate manner for considering disaster and risk management in land use planning within the national context.

4.2.4 Strategy 4: Environmental Conservation

The sustainable use and protection of biological diversity is an integral component of successful land use planning. The guiding principle here is to catalogue biodiversity together with local communities and thus to perceive it more clearly and appreciate the importance of its maintenance, both for community livelihoods as well as for the national economy. Identification and management of High Conservation Values has to be part of all land use planning.

The following possible outputs and outcomes resulting from this policy are foreseen in relation to environmental conservation in PNG;

- a. Involvement of key stakeholders like CEPA to play a leading role in using biodiversity protection as an activity to reduce land degradation and thereby improve value creation;
- b. Involvement of non-government agencies, private sectors agencies, and environmental NGOs to identify and maximize all values of biodiversity conversation
- c. Document and use traditional ecological wisdom and practice as a prerequisite for biodiversity conservation;
- d. Inclusion of access to and benefits sharing from ecosystem services where relevant, through Free, Prior and Informed Consent (FPIC) from the landowning communities; such as climate change related project agreements set out at Part 8 of the Climate Change Management Act 2015.
- e. Improvement of the interconnection of ecosystems through conservation networks which can help to avoid genetic impoverishment;
- f. Integrating environmental conservation with sustainable development to maintain essential ecological processes and life-support systems on which human survival and economic activities depend;
- g. Preserving species diversity and genetic diversity;
- h. Ensuring that any use of species and ecosystems is manageable and sustainable;

- i. Minimizing the depletion of non-renewable resources;
- j. Improving the quality of human life;
- k. Ensuring full community participation, including women, youth, and other disadvantaged groups in the identification of High Conservation Values and the development of conservation plans;
- l. Promoting an ethnic identity that includes protection of plants and animals as well as people;
- m. Encouraging recognition of harmful environmental effects of armed conflicts and economic insecurity;
- n. Encouraging rehabilitation of degraded ecosystems upon which humanity depends on for food and fiber;
- o. Ensure subdivisions demarcate High Conservation Values (HCV), high carbon stock areas (HCS) Rare, Threatened and Endangered (RTE) species, protected areas, wildlife management areas, reforestation and degradation areas;
- p. Integrating environmental conservation with sustainable development to maintain essential



Figure 4: Deforestation and land degradation in one of the logging areas on Pomio, ENBP

- ecological processes and life-support systems on which human survival and economic activities depend
- q. Resettlement schemes for mining-affected areas;
- r. Constructions of transport infrastructure;
- s. Developing new or strengthening existing strategies and action plans for the conservation of biological diversity and the sustainable use of biological resources;
- t. Minimizing hazard and maintaining the environment to a degree that human health and safety is not impaired or endangered.
- u. Extending the provision of more energy-efficient technology and renewable energy for human settlement and to reducing negative impacts of energy production and use on human health and on the environment.
- v. Ensuring all people, especially those that are in disaster-prone areas mitigate the impacts of natural and man-made disasters on human settlements, national economy and the environment;
- w. Developing land use plans for conservation, rehabilitation, and development of environment that is considered at risk;
- x. Ensuring that development is sustainable by designing and implementing activities that meet local needs and community participation;

- y. Supporting appropriate environmental legislation, structure and management practices.
- z. Minimizing the impacts of development and the need for environmental impact offsets and social impact offsets, through improved planning processes.

4.2.4.1 Development Promotional Areas

- a. Acting where necessary for both in-situ and ex-situ conservation of biological diversity;
- b. Designing and allocating many areas within an urban setting for conservation areas or open spaces;
- c. Making sure that declared open spaces are not rezoned to other uses;
- d. Ensuring urban planning includes as much space as possible for road side tree planning, and green zones and belts, to assist in climate change adaptation and mitigation;
- e. Improving social, economic and environment quality of human settlements and the living and working environments of all people, especially the urban and rural poor;
- f. Ensuring sustainable management of all urban settlements in order to enhance their ability to improve the living conditions of residents, thus contributing to the national economic development goals;
- g. Establishing legislation and strategies to guide the implementation of public policies for environmentally sound urban development, land utilization, housing and improved management of urban expansion;
- h. Providing for land requirements of human settlement development through environmentally sound physical planning and land use policies to ensure access to land by all households;
- i. Ensuring urban planning includes as much space for road side tree planting as possible, also for climate change adaptation and mitigation initiatives;
- j. Rezoning and allocating enough space for cultural activities to support and boost economic growth.

4.2.4.2 Sustainable Rural Areas

- a. Integrating strategies for conservation of biological diversity and the sustainable use of biological and genetic resources into relevant sectoral and cross-sectoral plans, programmes and policies, with emphasis on food and agriculture; and ensuring these strategies are included in the National Sustainable Land Use Planning Advice and Guidance;
- b. Taking effective economic, social and environmental incentive measures to promote sustainable production systems such as traditional methods of agriculture, agroforestry, forestry, livestock ranching and wildlife management, which use, maintain or increase biodiversity;
- c. Making it compulsory in Environmental Impact Assessments for all stakeholders involved to visit the site and contribute meaningfully in the assessment, which

must consider the Ward-LLG sustainable land use zoning and include on-site public community meetings with all affected landowners.

4.2.4.3 Conservation Areas

- a. Liaising with CEPA and mapping out all existing, proposed and potential land uses for conservation areas in Papua New Guinea;
- b. Identifying processes and activities with significant impacts upon biological diversity, evaluating the potential economic implications of the conservation of biological diversity and genetic resources and suggesting priority actions;
- c. Promoting mechanisms to involve local communities including women and vulnerable people in the conservation and management of biological diversity;
- d. Promoting the rehabilitation and restoration of damaged and degraded ecosystems and instituting recovery of threatened and endangered species;
- e. Supporting national development and productivity through environmentally sound management of water resources;
- f. Providing on a sustainable basis, access to safe water in sufficient quantities and proper sanitation for all people by introducing watershed management planning;
- g. Evaluating the consequences, which the various users of water have on the environment and aquatic ecosystem, to support measures aimed at controlling water-related diseases and protecting ecosystems through land use planning;
- h. Improving social, economic and environmental quality and the living environment of all people;
- i. Understanding and quantifying the threat of impact of climate change on the environment and developing and initiating responsible strategies to counter the adverse effects of climate change;
- j. Providing relevant information to communities for climate change-related considerations during their sustainable land use planning process.

4.2.5 Strategy 5: Land Use Information Management System

The use of adequate, locally adapted information systems that provide information on the availability of land, existing land rights and land use can create transparency at national and decentralized levels. This transparency is an important basis for all future planning and responsible decision-making on the use of land.

The following possible outputs and outcomes resulting from this policy are foreseen in relation to land use information management in PNG:

- a. Updating of Physical Planning Guidelines;
- b. Development and management of an effective and reliable Physical Planning Information Management System in consultation with Lands Information Services;
- c. Compilation and regular updating of National Sustainable Land Use Planning Advice & Guidance through liaison with economic sectors and other key government stakeholders

- d. Dissemination of National Sustainable Land Use Planning Advice & Guidance to Provincial Governments, District Development Authorities and Local Level Governments.
- e. Coordination of Physical Planning Information and effective stakeholder consultations and collaboration in information dissemination;
- f. Conducting regular necessary review research to have profiling of land and land suitability study to identify the best suitable land for different agricultural and cash crops farming purposes;
- g. Establish Ward, LLG's and District Profiles, based on existing varying land uses and sector soil and crop suitability and market development information, to aid future best bottom-up sustainable land use planning, effective and efficient implementation and management.
- h. Collation of bottom-up Ward Sustainable Land Use Plans into LLG SLUP, LLG SLUPs into District SLUPs, and District SLUPs into Provincial SLUPs
- i. Collation of all Provincial SLUPs into PNG's National Sustainable Land Use Plan.
- j. Review and where necessary revision of Ward SLUPs every ten (10) years, with consequent revision of all higher government level SLUPs

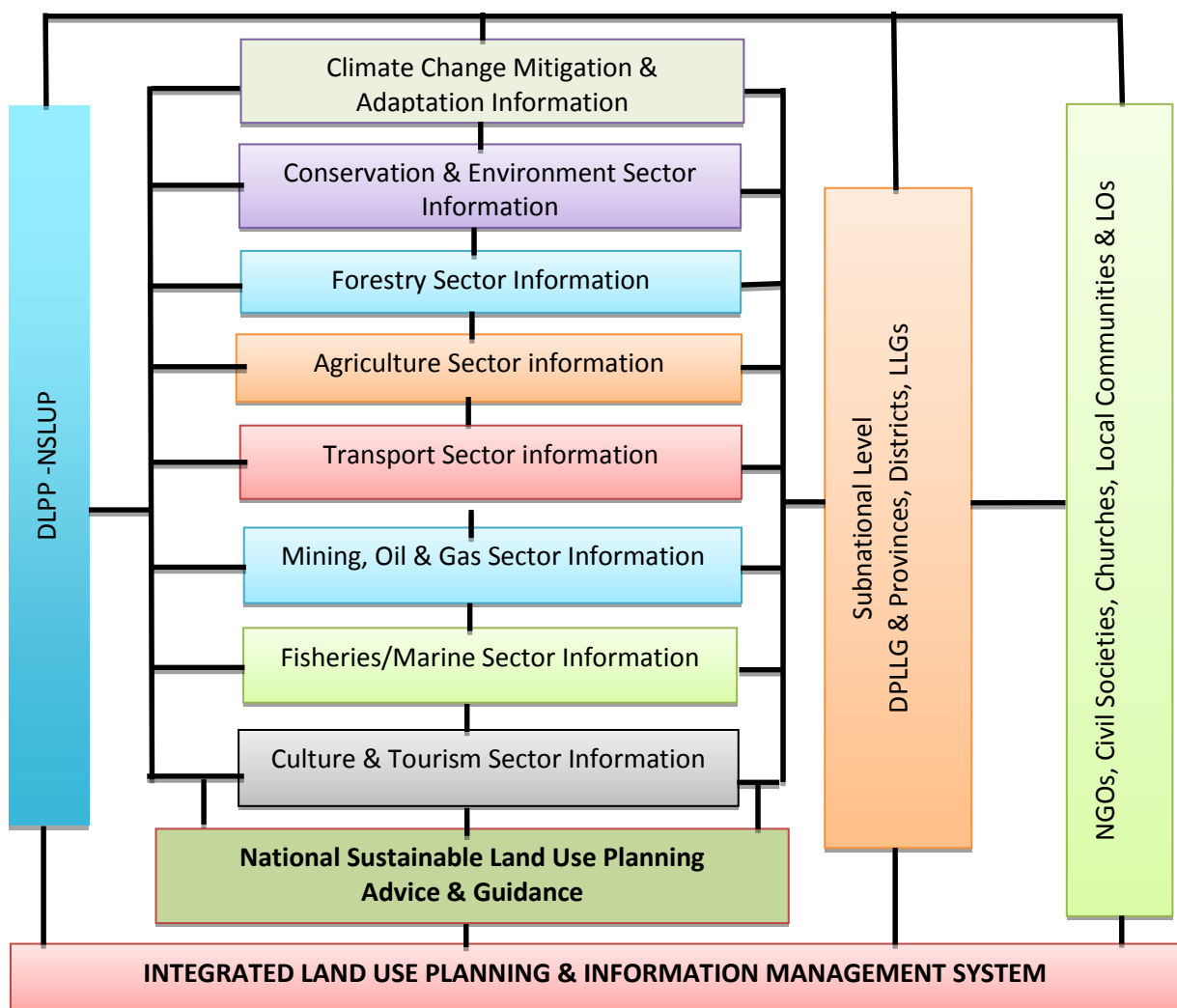


Figure 5: Proposed Integrated Land Use Planning System in PNG

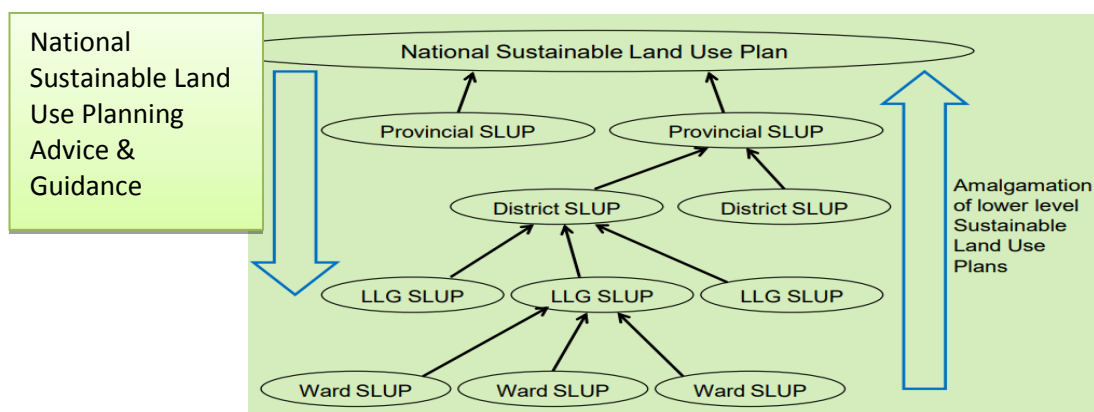


Figure 6: Approaches of land use planning (top & bottom)

4.2.6 Strategy 6: Institutional and Capacity Building

Strengthening existing institutional capacity and recruiting more personnel to implement activities spelt out in this policy will ensure that most programs will be implemented. The National Sustainable Land Use Policy will be implemented by various tiers of Government split up into administrative levels, based on their roles and responsibilities. The municipal authorities might for instance exercise authority over the built environment. Accordingly, the different administrative levels must deal with different kinds of issues, challenges and problems. National approaches from a “macro-perspective” level considering the development of the entire country, ‘regional levels have “meso-perspectives,” with focuses on regional issues, and the municipal levels have “micro-perspectives,” focusing mainly on the development of certain jurisdiction of a town or province. The macro-and meso-perspectives need to inform actual participatory sustainable land use planning for all customary land, which will take place at the local level government or ward level in districts and villages.

The institutional structure has already been in place for the implementation of the National Sustainable Land Use Policy. At the National Level, the Department of Lands and Physical Planning plays an advisory and coordination role. The National Physical Planning Board and the PNG Appeals Tribunal are the highest bodies that approve developments of National Interests.

At the Provincial Level, the Provincial Division of Lands and Physical Planning is in place and we also have the Provincial Physical Planning Boards. At the Local Level, we have the District Development Authorities with the Local Physical Planning Boards to oversee land use planning in districts and ward levels.

The actual participatory sustainable land use planning will be done at the Ward level and will be the responsibility of the Local Level Governments. The DDA Local Physical Planning Boards will only confirm correct implementation process and outcomes of the LLG Sustainable Land Use Plans, which when amalgamated will form the District Sustainable Land Use Plan. The LLGs will be directly responsible for the implementation of their Sustainable Land Use Planning process at all the Ward level

To be successful, land use planning needs to be integrated into institutions responsible for it. Therefore, a thorough analysis of the existing institutional capacities needs to be done to identify the right institutions with an official mandate for land use planning and the need for capacity development. Based on this assessment a capacity development concept can be developed for on-the-job-trainings or external trainings that will then be implemented concurrently with land use planning. This will start with the need for capacity development with LLGs on participatory community land use planning, as this will form the basis for all higher-level Government spatial planning as follows:

- a.** Decentralization of physical planning powers and function to provinces and districts, to be linked with the addition of Spatial Planning to the Ward and LLG Development Process;
- b.** Building and strengthening capacities at national, provincial, and local levels to meet the required skills and knowledge for land use planning processes at all levels;
- c.** Strengthening the core functional roles of the Office of the Chief Physical Planner;
- d.** Promoting stakeholder coordination at all levels of government for efficient and effective service delivery;
- e.** Promoting on-the-job-training or external training to boost human resources for effective land use planning, using the experience and expertise in bottom-up participatory sustainable land use planning of NGO's in PNG;
- f.** Promoting and increasing institutional and professional capacity to oversee development and undertake forward planning for declared physical planning areas;
- g.** Controlling restrictive mechanism by the introduction of a more facilitating mechanism of certification and compliance;
- h.** Recruiting and training professional physical planning staff that is adequately competent to manage and implement the Integrated Land Use Planning & Information Management System;
- i.** Conservation and Environmental Protection Authority, Department of Agriculture and Livestock, Office of Urbanization, PNG Forest Authority, and many other line agencies support the integration of sustainable land use planning into National, Sectoral and Provincial and District planning processes;
- j.** Conduct regular training on physical planning and land use planning to Provincial Physical Planning Board Members and the Physical Planning Officers in the Provinces on the implementation of the Integrated Land Use Planning & Information Management System;
- k.** Capacity building and training programmes supported by scholarships for the Department of National Planning and Monitoring, Department of Personnel Management, Department of Higher Education Research Science & Technology, Department of Lands & Physical Planning, and other relevant state agencies. Creation

of a School of Sustainable Land Use Planning within the University of Papua New Guinea.

- I. Land use planning officers (teams of one male plus one female) will be needed at each LLG to facilitate the participatory sustainable land use planning by the customary landowning communities at the Ward level, and to amalgamate those into the LLG sustainable land use plans.

4.2.7 Resource Implications

4.2.7.1 Physical Planning Division

- a. The Physical Planning Division has its head office in Port Moresby. The staff ceiling is 40 for the Physical Planning Division within the Department of Lands and Physical Planning. Establishing and running the office will cost approximately K3million per annum which the cost for training and capacity building both at the national and regional office.
- b. There is already a structure instituted into the provincial level as well as establishing the statutory statutory bodies known as the Provincial Physical Planning Boards and offices in all the Provinces linked to the establishment of local Physical Planning Boards and Offices at the District level. The provincial and District/Local-level Governments are responsible for the operation and functioning of these offices.

4.2.7.2 Additional Manpower for Physical Planning Sector

- a. A significant number of human resource is required if the policy targets are to be achieved. Personnel are required to implement land use plans and development plans in all the districts and provinces and to support operation in professional standards and maintenance of physical planning systems throughout Papua New Guinea. These will need to be recruited through the method identified under policy strategy on capacity building and training;
- b. Achieving the policy targets will require significant investment in human resource capacity building, stakeholders' coordination and networking through effective funding made available through Public Investment Programs (PIPs) and donor funding. The key human resource capacity building will need to take place at the LLG level, with the establishment of Sustainable Land Use Planning Teams, and the initial technical support for these Teams.

5.1 Institutions

The implementation of this Policy will require a well-coordinated institutional and legal framework. The success of a good land use policy depends largely on the willingness and ability of government and other institutions to implement prescribed recommendations.

Currently, land use functions involve uncoordinated multiple players with overlapping mandates leading to jurisdictional, legal, policy conflicts and contradictions. Weak enforcement of and compliance with existing policies, legislations and regulations have compounded the implementation problem.

To address the problem of implementation of this policy, the government shall capacitate relevant institutions to enforce land use plans and compliance with laws and regulations as per Annex 7 of the NSLUP.

a. Department of Lands and Physical Planning (DLPP)

– Administrative responsibilities for the NSLUP management and implementation vested in the Ministry responsible for land use and physical planning.

b. Sector Coordination and Harmonization

- Further collaboration should be established through sector coordination to allow effective implementation and avoid overlapping of responsibilities. Various government agencies have different land use needs and have often conflicted due to poor coordination. There are inadequate consultations between sectors both in land use allocation and formulation of laws. Inadequate common guiding principles have led to each sector or institution pursuing sectoral objectives in land use planning. To enhance coordination among various sectoral land-use activities to promote integrated land use planning and management, the government shall:

- i. Develop a legal instrument to define how sectors should coordinate efforts among agencies and integrate land use plans across sectors. A cross-sectoral and multi-sectoral approach should be included.
- ii. Ensure land use integration shall include proposed township development for the respective sectors' plans, with formal integration of the new township into urban development planning.
- iii. Use the NSLUP principles, with emphasis on accountability and transparency to guide the linkages of bottom-up sustainable land use plans with the objectives and priorities of the coordinated Sectors' information.
- iv. Ensure NSLUP is used as the basis for, and is recognized as the overall guide to develop, review and harmonize policies, and legislations of the different sectors relating to land-use and management
- v. Disseminate land-use information for use by a variety of stakeholders, land administrators, researchers, students, investors, and others

- vi. Strengthen enforcement institutions, through capacity building, and regulation.

c. Sub-national and Community Partnerships

- i. Recognizing and respect customary landownership and user rights and empower communities in sustainable land use planning and management, support and enact FPIC implementation, support for improved information sharing from all relevant sectors and other stakeholders;
- ii. Empowering Provincial, District, Local Level Government, and Wards through close collaboration with the Department of Provincial and Local Level Government Affairs (DPLLGA) through the Provincial Level Services Monitoring Authority (PLLSMA);
- iii. Strengthening of local institutions, through collaboration and capacity building, for increasing their roles and responsibilities over time;
- iv. Supports NSLUP implementing agencies action plan, defined in the annex 7.1;
- v. Promoting dialogue, clear communication, and awareness training across institutions, stakeholders and individuals;
- vi. Promoting sub-national government's communication, acknowledging and addressing any concern and/or supporting complaints through grievances mechanisms.

5.1.1 Mechanisms & Instruments

5.1.1.1 Legal Revision and Harmonization

- a. Identification and harmonization of land-use related laws and regulations is required to promote NSLUP implementation, eventually leading to the revision and enacting of new laws. Land laws with respect to State Land, customary, and freehold, need to be considered. Land Use Plans at all levels should be legal instruments.
- b. Developing enabling legislation to harmonize laws across agencies, such as mining, oil and gas, forestry, and agriculture and districts to comply with sustainable land use policy.
- c. Liaising with the communities to identify traditional laws that govern the administration of tradition customary lands.

5.1.1.2 Thematic Policies and Plans

Thematic policies and plans defined in this document will be developed in detailed guidance on design, implementation, monitoring, and review of the land use areas.

5.1.1.3 Information Strategies

Land information management will be developed and be implemented through collaborative initiatives and partnership among government sectors and institutions. It will include:

- a. **Data Accessibility** – will be promoted through collaborative partnership and coordination among government institutions. In addition, access to information on natural resource depletion and land use should be available to PNG people.
- b. **Data Source Collaboration** – including DLPP UPNG, UoT, DAL, NARI, PNGFRI, UNRE, NGOs, NDoH, WHO, FAO, and ITTO (International Timber Trade Organization);
- c. **Information Sharing Coordination** – through assessment of internal information, transparency about the information available, information sharing coordination, and promotion of partnerships and collaborative systems;
- d. **Methodology and Standards** – will be established to support and grant data credibility inside government institutions;
- e. **Quality information** – ensuring the need of the people, land resources, economic, social, and environmental consequences of alternative decisions.

5.1.1.4 Inclusive, Equitable, Effective Participatory Sustainable Land Use Planning Processes

- a. The land-use plans through zoning at the ward level are vital for community land and resource use and will define the various land use areas for food gardens, cash cropping, conservation, fresh-water supply, physical constraints zones (i.e. unavailable or inappropriate: steep, flooded, infertile), health and well-being, and national disaster risk management
- b. Sector level projects will be guided by the LLG-District level SLUP and apply consultation processes and a participatory approach to stakeholders' representation. Individuals should be informed about these processes, and participation should be inclusive, promoted and facilitated, especially at the provincial, district, LLG and community levels.
- c. Consultation with resource owners at the district, LLG and ward levels to obtain Free, Prior and Informed Consent for projects on customary land and future integration of the project into new urban/township development planning.
 - i. The land-use plans through zoning of the ward level are vital for community land use and will help demarcate certain areas for conservation, food security, fresh-water security, physical constraints zones (i.e. unavailable or inappropriate: steep, flooded, infertile), health and well-being, and national disaster risk management.

5.1.1.5 Dispute Resolution and Appeal

The recognition of measures that protect individual rights and inform the ways to access those rights are essential. In the case of communities, public participation is required and Free Prior Informed Consent (FPIC) must be recognized as well as alternative methods of legal disputes resolutions, such as traditional or communal land disputes; namely process set out in the mediation, Land Dispute Settlement Act.

5.1.2 Implementation Phases

The implementation plan comprises of three (3) phases:

- a. A strategic plan will be carried out to prioritize government and policy measures towards NSLUP implementation. The activities and tasks leading up to the establishment of the Physical Planning Division as presented in Phase 1 (Annex table). The operationalizing activities are undertaken by PPD, including: staff recruitment and the production of development plans and operations manual that will equip the authority to carry out its remit.
- b. The Physical Planning Division may also be expected to establish a Taskforce or Technical Working Committee (PPA sector review Group in phase 2 Annex table), to assist it in developing, monitoring, and reviewing land use/physical planning sector developments. This group will include representatives from a broad selection of stakeholders, not just board member organizations.
- c. The Physical Planning Division conducting its operational activities its development plans. Detailed implementation activities comprising this last stage cannot at present be described, as they will be defined in the development plan.



Figure 7 Participants having high level group discussions and Group Presentations at Momase Regional Consultations Workshop for NSLUP in Lae International Hotel, Morobe Province, PNG (2020)

However, some key events (see Phase 3 annex table) can be identified and these include;

- a. The Physical Planning Division will produce Annual Reports detailing its activities over the past twelve months, its achievements in reaching its goals and targets, and its priorities for the forthcoming year.
- b. The Physical Planning Division will be expected to contribute to the land use planning sections of the future five-year Medium-Term Development Plan, prepared by the Department of National Planning and Monitoring.

6.1 Monitoring and Progress

- a. **Government Monitoring:** Respective government officials at the national, provincial, and district levels will operate appropriate monitoring systems to support policy feedback loops;
- b. **Implementation Progress Review:** The Physical Planning Office through the Department of Lands & Physical Planning (DLPP) will compile land use planning monitoring data and produce summary reports as part of its annual reporting process;
 - i. Action plans coordinated by the implementing agencies (Annex 7.1) should be reported to the Department of Lands and Physical Planning as part of the monitoring and evaluation process.
- c. **Monitoring and Evaluation for Sectors' Achievement:**
 - i. The legal instrument enabling sector coordination shall include action plans for sectors' implementing agencies in relation to the NSLUP. This measure can capture and provide feedback to the Department of Lands and Physical Planning as part of the monitoring and evaluation process for sectors' achievements.

6.1.1 Policy Evaluation

- a. Evaluations will be reported to the Parliament, relevant departments and the public through the government's standing annual reporting processes;
- b. This data will be used to measure progress against the development plan and NSLUP policy targets.
- c. Achievements will be compared against additional development indicators, such as improved standard of living to evaluate impact and progress towards the policy's broader goals;
- d. This information will be made available promptly to contribute to the regular updating of the development plans.

6.1.2 Research and Development

- a. Pilot procedures for participatory land-use planning and zoning will be consulted or created to determine the best methodologies;
- b. Understanding the best methodology to protect the rights of vulnerable groups
- c. Determining the best methods for land valuation, taking into consideration of current economic values and natural systems (i.e. climate change, forest cover, conservation, and extractive resource activities);
- d. Determining the best land use management to promote sustainable land use in different types of land;
- e. Incorporating research findings and lessons learned in future policies; and
- f. Stimulating capacity building across officials and universities' courses in physical planning.

6.1.3 Policy Time Frame

Based on evidence and results of research on land use management and administration, and recommendations of stakeholders recorded during transparent and inclusive public consultation processes, this National Sustainable Land Use Policy (NSLUP) will be reviewed, updated, and revised at least every ten (10) years.

This entire policy will be reviewed every ten (10) years following its approval.



Figure 8 Participants with Minister, Secretary, Development Partners and Key-Land-Use Stakeholders setting for a group photo for the Southern Regional Consultation Workshop in Airways Hotel, Port Moresby, 2020.

Chapter 7 GOVERNANCE STRUCTURE OF NSLUP 2022-3032

7.1 Institutional Arrangement

7.1.1 NSLUP Steering Committee

The National Land Use Policy (NSLUP) will be chaired by the Minister for Lands & Physical Planning or the minister's alternate. The composition of this steering committee will comprise:

Chairman: Minister for Lands & Physical Planning /Minister's alternate

Composition: Heads of Department/Agencies/Industry Representatives of Land Use Sectors

This Committee shall meet at least twice each year at such time to provide direction and advice to the NSLUP TWG. The decisions made at the Steering Committee level will be implemented by the NSLUP TWG.

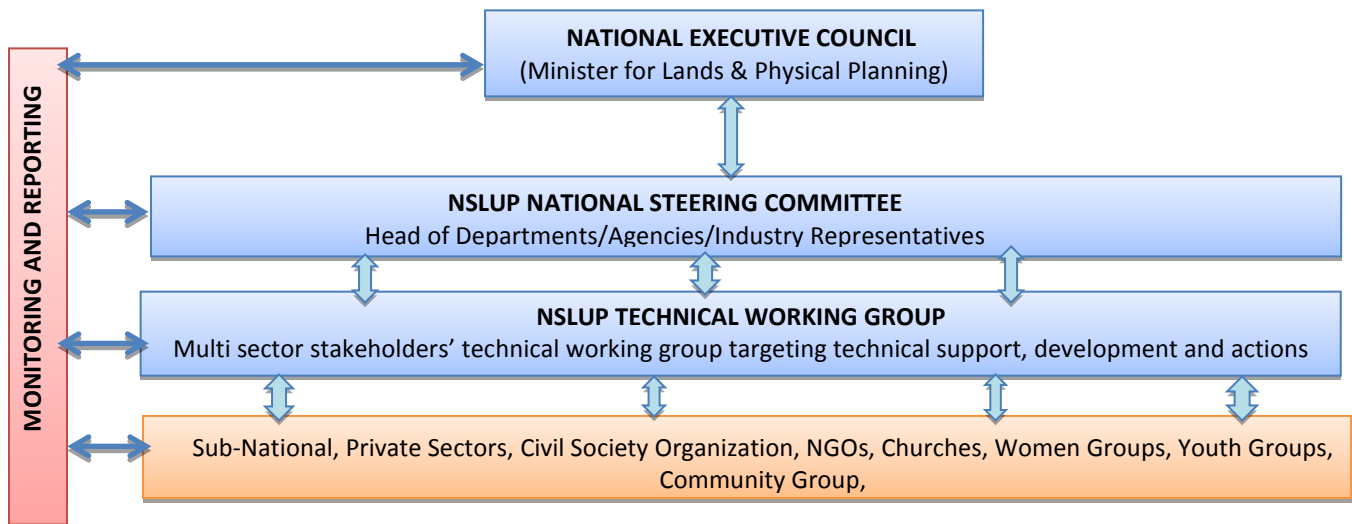


Figure 9: NSLUP Steering Committee

7.1.2 NSLUP Technical Working Group

The NSLUP TWG will comprise representatives from a wider range of government, private sector, civil society, NGOs etc. Technical expertise will be sought at the working group level to guide and implement strategies outlined in this document.

The NSLUP TWG will meet every quarter to, but not limited to:

- a. Identify cross-sectoral issues and/ or opportunities
- b. Determines strategy implementation actions
- c. Demarcate roles and responsibilities
- d. Report to the NSLUP Steering Committee in the form of an executive summary brief

The NSLUP TWG will comprise:

Chair : Secretary _DLPP

Composition : Sector/section/division heads of GoPNG departments, agencies/industry representatives.

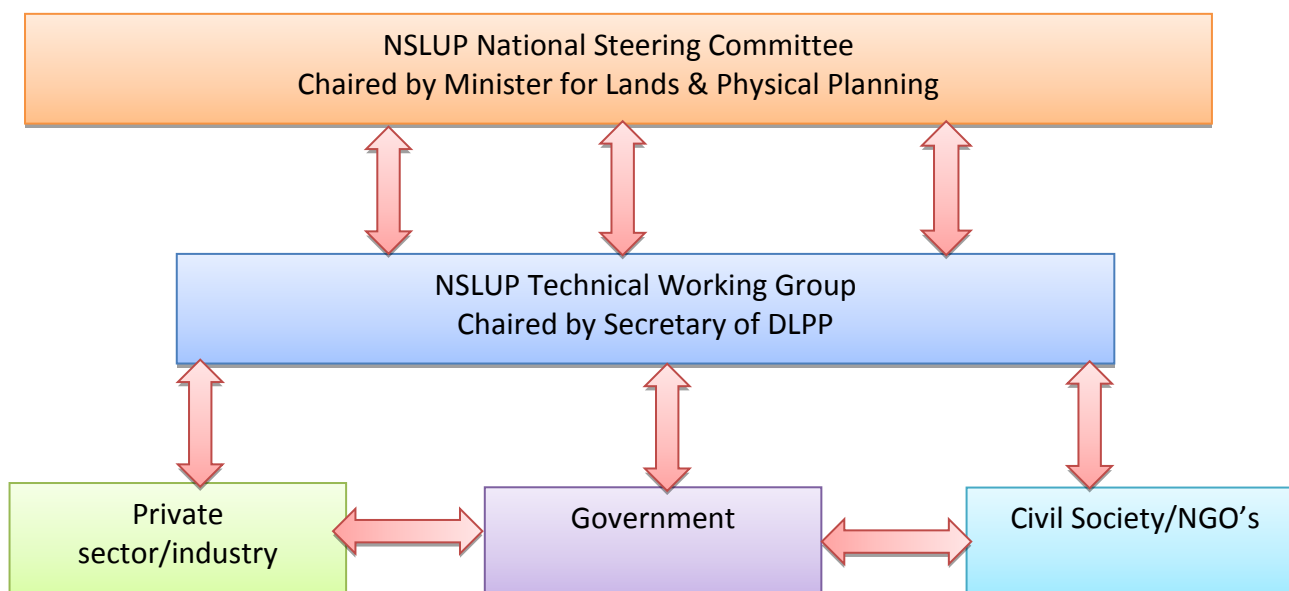


Figure 10. NSLUP Implementation Structure

7.1.2.1 Provincial Government, District Development Authority and Local Level Government (LLG)

At the sub-national level, both Provincial and District Levels, formal understandings and agreements shall be formed through Memorandum of Understanding (MoU), and or Memorandum of Agreement (MoA) to ensure:

- a. Integration and alignment of development plans into Provincial, District, LLG and Ward development plans.
- b. Support for effective and efficient collaboration by provincial government and its administration with the Ministry and the Department of Lands & Physical Planning and NSLUP Steering Committee for the advocacy and implementation of the policy.
- c. NGOs, Civil Societies, Church Groups, Women Groups, Donors, Community and Youths Representatives to be part of the implementing team for fair and equal participation.

7.1.3 Resource Mobilization

The government will provide an allocation of funding for the full implementation of this policy over a ten (10) year time. The total indicative amount required by the Government towards the sector's development programs, over the period of ten (10) years, is estimated at K100 million.

7.1.4 MTDP Log Frame: Aligning with the targets

The Department of National Planning and Monitoring sets an annual target to be achieved by the respective sectors to reflect the return on investment by government.

These are economic, social and physical plans. The NSLUP is slightly in terms of spatial plans which are vital in recording; reporting and ensuring the land-use sector in PNG meets the annual targets to justify annual budgetary allocations.

7.1.5 Legislative Framework

Papua New Guinea's aim to implement international policy obligations will be harmonized when we have the National Sustainable Land Use Policy, national plan, use plan and integrating spatial planning into the economic planning system and strengthening subnational planning. International development goals defined within international processes provide a useful framework for land use planning.

The existing Physical Planning system provides the legal framework for spatial planning in Papua New Guinea. However, the sphere of influence of physical planning has been restricted to less than 14% of landmass in Papua New Guinea. This is due to the limitation in zoning mechanism to allow zoning for different land uses outside urban areas.



Figure 11. Minister, Secretary, Development Partners and Key Land Use Stakeholders during Inter-Government Agency Workshop for NSLUP at Laguna Hotel, Port Moresby, PNG (2019)

Chapter 8 ANNEXES

8.1 Annex 1 – Organizational Functions: Roles and Responsibilities

The table below summarizes the roles and responsibilities that should be carried out by organizations who are primarily engaged in either the Sustainable Land Use or Physical Planning Sector service delivery.

Organization	Roles and Responsibilities
Physical Planning Division	To give effect to a range of responsibilities and obligations of the Chief Physical Planner. A number of separate units and regional offices to carry out specific sets of functions. Comprises the Office of the Chief Physical Planner, Houses the PNG Appeals Tribunal (PNGAT), Houses the National Physical Planning Board (NPPB) and the development matters that arise as the national interest is taken care of by this office.
Minister for Physical Planning	For the processing of policy through to the NEC and for appointments to statutory boards at all levels, and exercise of decentralization statutory responsibilities.
Provincial Executive Councils and Executive Chairman	For the exercise of decentralized statutory responsibilities
Chief Physical Planner	With responsibilities for the administration of the legislation, recommendations and conversion of policies into strategies and programs for implementation. Maintenance of professional standards and quality control.
National Physical Planning Board	For processing statutory matters of the national interest including those matters where a provincial board is not yet established or is under suspension for an interim period.
Provincial Physical Planning Boards	Exercise of statutory responsibilities in matters of the provincial interest. Advisory capacity for matters of the national interest.
Provincial Physical Planning Offices	These are responsible to Provincial Administration in matters of physical development. Administrative support for Provincial Physical Planning Boards. Provincial – comprises the Provincial Administrations and the Provincial Physical Planning Board. Whatever development issue arises in the Province is taken care of these two bodies. However, if they think that the issue at hand is of national interest then it is recommended and brought forward to the National Physical Planning Board for further deliberations.
Local Physical Planning Boards	Exercise of statutory responsibilities in matters of the District interest. Advisory capacity for matters of the Provincial interest.
Local Physical Planning Offices	These are responsible to District Development Authorities in matters of physical development. Administrative support for Local Physical Planning Boards. Local – comprises the Local Physical Planning Offices and the District /Local Physical Planning Board. Whatever development issue arises in the District is taken care of by these two bodies. However, if they think that the issue at hand is

	of provincial interest then it is recommended and brought forward to the Provincial Physical Planning Board for further deliberations.
PNG Appeals Tribunal	For advisory and referral to the Minister for a decision on all matters appealed against in respect of decisions or notices issued under the Physical Planning Act.
Regional Physical Planning Offices	A support system to carry out the inspectorate activities. To establish and maintain norms of performance in quality and quantity of work programmed by each Physical Planning Office within the region. Monitors the output of Physical Planning Offices nationwide and report to the Chief Physical Planner accordingly.
Department of Lands and Physical Planning	To promote and facilitate physical planning activities throughout the country. To align the functions of physical planning to the NSLUP framework. We need to maintain the existing physical planning and environment legislative framework
NSLUP Committee	The National Land Use Policy (NSLUP) will be chaired by the Minister for Lands & Physical Planning or the minister's alternate. The composition of this steering committee will comprise heads of Department/Agencies/Industry Representatives of Land Use Sectors
NSLUP Technical Working Group (TWG)	The NSLUP TWG will comprise representatives from a wider range of government, private sector, civil society, NGOs etc. Technical expertise will be sought at the working group level to guide and implement strategies outlined in this document
National Capital District Physical Planning Office and Board	Responsible for administering the Physical Planning Laws and Guidelines in the National Capital District.
Provincial Governments	Collaborate with DLPP to disseminate the national sustainable land use planning advice & guidance down to the District level. Responsible to amalgamate the District's sustainable land use plans with the Provincial sustainable land use plan.
District Development Authorities	Responsible to ensure that the necessary support for LLG's to undertake the Ward level participatory sustainable land use planning is available. This includes collaborating with DLPP to disseminate the national sustainable land use planning advice & guidance down to the LLG level. Also, responsible to amalgamate all LLG sustainable land use plans with the District sustainable land use plan.
Local Level Governments	Responsible to establish and equip officers (teams of one male plus one female) to facilitate the participatory sustainable land use planning by the customary landowning communities at the Ward level, and to amalgamate them with into the LLG sustainable land use plans. Also responsible to collaborate with other stakeholders who have expertise in community Land Use Planning to assist with facilitation and monitoring of the SLUP process at the Ward and LLG levels.
Department of	Strengthen subnational planning through a combination of capacity

Provincial & Local Level Government Agency	building and support for coordination and strategic planning. The various government sanction committees, including : Provincial Coordinating & Monitoring Committees, PLASMA, Provincial Management Team and respective responsible line agencies to be aligned and made aware of accordingly to assist in the implementation of the NSLUP down to the district, LLG's and respective Wards Areas.
Department of National Planning & Monitoring	Coordinate and facilitate appropriate national and international initiatives that address and promote equitable and sustainable development of Papua New Guinea. Advise key government agencies to have an integrated land use planning in PNG. Incorporate Land use plans into economic plans and approved and endorse NSLUP programs.
Department of Implementation & Rural Development	Coordination of integration of land use planning into economic development plans in the provinces and districts.
Conservation and Environment Protection Authority	Responsible for maintenance in environment and conservation and Protecting areas land use. Alignment of Physical Planning with Protected Areas and Wildlife Management Areas and other conservation land use planning with respective zonings.
PNG National Forest Authority	Sustainable Forest management, development and protection of the forest resources and environment
Department of Agriculture & Livestock	Promote improvement and expansion of food crops and livestock program and projects in a bid to assist the people of PNG meet their local requirements in nutrition and household food security
Mineral Resources Authority	Ensures that exploration and mining activities in PNG are done within the regulatory and policy framework, with benefits from these activities being distributed fairly and transparently to all beneficiaries and stakeholders. Strengthen relations with other relevant state agencies through the sharing of information on mining projects.
Department of Petroleum & Energy	Develop the Nation's discovered and potentially discoverable petroleum resources by promoting, monitoring, and regulating all activities directly related to the exploration of petroleum and also policies and oversees the non-fossil energy sources and renewable energy sector.
National Fisheries Authority	Responsible for the management and development of the fisheries sector and social and economic benefits through the responsible sustainable use of our fisheries and marine resources through participation. Ensure that Coastal Zone is also gifted with a wide range of ecosystems like coral reefs, mangroves, salt marshes, sea grasses, estuaries, and dunes, and lagoons.
Department of Commerce & Industry Department of International Trade	Identify locations for investment zones, special economic zones, industrial estates, industrial corridors and prepare master plans for these areas and proper land use planning of industrial areas in PNG. Promote economic development in the SEZ areas through sustainable land use planning in close consultations with the relevant sector agencies

and Investment	by aligning SEZs with International, national and regional strategies to ensure coherence and complementarity with other policies and initiatives. Adopting a holistic and adaptive approach to SEZ design and management, taking into account the environmental, social, and economic impacts of SEZs and the changing needs and preferences of investors and workers. Enhancing coordination and collaboration among different levels of government, SEZ authorities, private sector, civil society, and other stakeholders to ensure effective governance, transparency, accountability, and participation in SEZ development. Leveraging new technologies and financing partners to improve the efficiency, productivity, and sustainability of SEZ operations and infrastructure, as well as to diversify the sources of funding and reduce the fiscal burden on the government.
Department of Transport	Provide leadership in the coordination& monitoring of the NTS and in developing transport sector policies, identifying and setting strategies, planning, budgeting, and monitoring & coordination of those policies and land use plans for the three modes of transportation: air, land and sea in PNG.
Department of Works	Provide and maintain an adequate and safe priority road network in an accountable, transparent, and environmentally sustainable manner in consultation with stakeholders to facilitate national development and embrace the standard of living as embodied in the Constitution of PNG.
Department of Treasury	Allocate appropriate funding made available for the implementation of the NSLUP programs
Department of Finance	Release approved finance/funds allocations for the implementation of the NSLUP programs
Constitutional Law & Reform Commissions	Facilitate policy and legislative reviews regarding land use planning and ownership on both state and customary land in PNG.
National Cultural Commission	Responsible for National Cultural Heritages including sacred and historical sites, social & cultural mapping, clan vetting, documenting of any culture related items. Operate in collaboration with Conservation and Environment Protection Authority (CEPA). And PNG Tourism Promotion Authority.
NGOs, Civil Societies, Youths, Women Refs, Community Refs	Support community awareness and engage in land use planning at the ward and LLG level to have an integrated land use planning so that it will be linked up to the top level development plans.
Development Partners & Donors Agencies	To provide financial and technical assistance to support the design, implement, monitor and evaluation of NSLUP – related projects and activities through partnerships. Support finance and technical for policy development and institutional reform by helping to identify the constraints and opportunities for sustainable land use planning, promoting evidence-based and context-specific solutions, and strengthening the capacity and accountability of NLSUP

8.2 Annex 2 – Implementation Phases

Implementation Phase 1													
Implementation Activities	Year 1 (2022)												Responsible Agency
	1	2	3	4	5	6	7	8	9	10	11	12	
Launching of NSLUP													DLPP
Establishment of implementation partnership with stakeholders (Donors, NGOs)							▲						DLPP & stakeholders
Regional & Provincial workshop programs to rollout of the NSLUP program nationwide. Media Awareness – awareness in the media to inform the nation of the NSLUP.											▲		DLPP
Development of NSLUP Implementation Plan												▲	DLPP

Implementation Phase 2													
Implementation Activities	Year 2 (2023 - 26)												Responsible Agency
	1	2	3	4	5	6	7	8	9	10	11	12	
Creation of NSLUP Committees (National Steering Committee & TWG)								▲					DLPP
Commence initial workshops and programs			▲										DLPP
Produces development plan													DLPP
Produces operational manual					▲								DLPP
Policy and Legislative reviews (Physical Planning Act 1989 & Regulation Review)			▲										DLPP
Produces National Capacity Building Action Plan						▲							DLPP

National Land Use Information Management System																		DLPP
Establishes M & E framework																		DLPP
NSLUP Sector Review Group established and meeting																		DLPP Stakeholders
Produces Annual Reports																		DLPP

8.3 Annex 3 - PNG's Land Use and Current State of Affairs – Background Analysis and Main Challenges

8.3.1 Sustainable Economic Growth

This policy defines land use and management following three broad land use zones for the current applied analysis and overview, which includes development promotion areas, sustainable rural areas and conservation areas. Below we provide an overview of the main challenges in each of these areas.

8.3.2 Development Promotional Areas (Declared Physical Planning Areas)

Implementation Phase 3																	
Implementation Activities	Year (2026-2033)												Responsible Agency				
	1	2	3	4	5	6	7	8	9	10	11	12					
Implements its development plan													DLPP, stakeholders				
Midterm reviews & Produces Annual Reports													PPD				
National Land Use Information Management System													PPD				
National Land Use Plan													DLPP, stakeholders				
Ten-Year NSLUP Evaluation and Review 2033													PPD				

8.3.2.1 Defined Land Areas

1) Urban Areas-Associated Problems

- a. Squatter Settlements
- b. Law Enforcement
- c. Traffic Congestion
- d. Population Growth & Pressure

- e. Sanitation and Health and Hygiene
- f. Unemployment
- g. Infrastructure development not complying with standards
- h. Customary land restrictions (pockets of customary land)
- i. Real Estate – Market Price (interplay of land supply and demand)
- j. Inadequate Utility services (road, electricity & water, sewerage, communications)
- k. Illegal easement development
- l. Illegal development on recreational and reserve areas
- m. Air pollution
- n. Noise pollution
- o. Water Pollution
- p. Land contamination
- q. No proper waste management systems
- r. Natural disasters
- s. Climate change issues
- t. Fire (substandard building materials)
- u. Abuse of local language and culture
- v. Illegal markets, car parks and bus stops places in undesigned areas

2) Urban Periphery

- a. Illegal development encroaching onto Customary Land
- b. Land Grabbing
- c. Ill-Advised selling of Customary Land
- d. No support to customary landowners
- e. No awareness and capacity building
- f. No proper demarcation of state and customary land boundaries

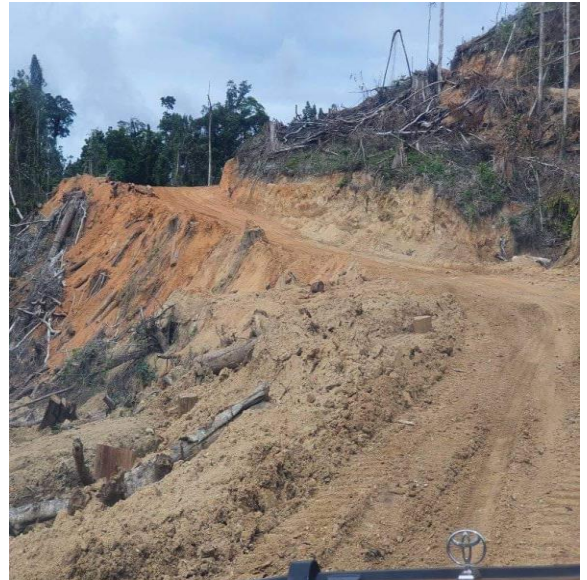


Figure 12: Landslide, land degradation and deforestation in one of the logging sites in ENBP.

8.3.2.2 Sustainable Rural Areas

- 1) Extractive Industry (mining, oil, gas)
 - a. No land-use plan
 - b. Isolation and non-alignment with other relevant laws
 - c. No specific standard area of land allocated
 - d. Destruction and disturbance to the natural environment
 - e. Tailings polluting the waterways
 - f. Health and sanitation issues for downstream people
 - g. No coordination and consultations with relevant sectors
 - h. Displacement of customary landowners without adequate compensation
 - i. Illegal settlements
 - j. No Resettlement Plans
 - k. No proper land use plans surrounding the demarcated boundaries
 - l. No Rehabilitation Land Use Plans
 - m. No consultation and coordination between relevant stakeholders and developers

- n. No proper Free, Prior & Informed Consent (FPIC) process with all the affected customary landowners
- o. No proper EIA/EIS analysis and approved process

2) Sustainable Energy

- a. No synergy between PNG National Energy Policy (2018-2028 and the NSLUP
- b. No proper land-use plan
- c. No standard land requirement
- d. No proper consultation with landowners
- e. No coordination between relevant sectors
- f. No information sharing
- g. No proper Free, Prior & Informed Consent (FPIC) process with all the affected customary landowners
- h. No proper EIA/EIS analysis and approved process
- i. No proper social mapping and clan vetting
- j. No proper relocation plans

3) Tourism

- a. No Land Use Plan
- b. No proper consultation and coordination with relevant stakeholders.
- c. No proper land demarcation for tourism sites
- d. No awareness and capacity building
- e. No information sharing

4) Forestry Industry

- a. No proper Free, Prior & Informed Consent (FPIC) process with all affected customary landowners
- b. No proper EIS/EIA analysis and approval process
- c. No Land Use Plan
- d. No proper consultation and coordination with relevant stakeholders
- e. No sharing of land use information
- f. No proper ILG and clan vetting (social mapping)
- g. Deforestation and Forest Degradation
- h. No proper monitoring and enforcement of Logging Coupes

5) Industrial Agriculture

- a. Lack of adequate opportunities for mechanized farming
- b. No proper Free, Prior & Informed Consent (FPIC) process with all affected customary landowners
- c. No proper EIS/EIA analysis and approval process
- d. No proper feasibility studies and business plans
- e. No land-use plan
- f. Mono cropping threatens soil quality
- g. Higher rate of imported food

- h.** Soil erosion
- i.** Over-cultivation
- j.** Desertification and degradation
- k.** Deforestation
- l.** Lack of proper consultation and coordination with relevant sectors
- m.** No proper information sharing
- n.** No irrigation
- o.** Outdated soil information
- p.** Displacement of customary landowners
- q.** No resettlement plans

6) Fisheries (Water & Aquaculture)

- a.** No proper land-use plan for inland fisheries
- b.** No proper land use planning and land demarcation for a wide range of ecosystems (coral reefs, mangroves, salt marshes, sea grass, estuaries, sand dunes and lagoons.
- c.** No sharing of information
- d.** No proper access to clean water
- e.** No proper consultation and coordination with relevant sectors

7) Infrastructure (Roads, bridges, health, education, sports facilities, airports etc.)

- a.** No proper land-use plan
- b.** No proper consultation and coordination with relevant sectors
- c.** Built infrastructure not to standards.
- d.** Natural disasters (earthquakes, flash flood and wild fires)
- e.** Climate change

8) Human Settlement (Customary Village Setting)

- a.** No proper land use plan
- b.** No awareness and capacity building
- c.** ILG registrations process must be short and accessible with more awareness
- d.** No proper coordination and consultation
- e.** Population growth and pressure
- f.** Destruction of natural ecosystems
- g.** Climate change
- h.** Natural disaster (earthquakes, flash flood and wild fires)
- i.** No proper demarcation and protection of Heritage sites

8.3.3 Environment Protection and Conservation Areas

Protection Areas are not necessarily located in remote or isolated area but an area of notable environmental or historical interest or importance that is protected by law against undesirable change. When new development activities are introduced in these

land use zones, then the destruction of the natural environment is evident. Major activities and challenges include:

1) Development

- a. No proper stakeholder consultations and coordination
- b. No land-use plan
- c. No information sharing
- d. Promote sector participation (EIS & UNCCD)
- e. Conservation
- f. Pro development and anti-conservation
- g. No incentives for conservation efforts

2) Promote establishment of Community Conservation Areas

The process of establishing Conservation Areas in Papua New Guinea must be simplified. At present, there are many customary land-groups who have commenced the process of establishing conservation areas, however, have not completed the process. There is little (actual) assistance available to landowning groups to complete the process of establishing Conservation Areas.

- a. No information on conservation land use
- b. Lack of awareness to local people or customary landowners.
- c. Conservation deeds have to be properly identified and recognized by the DLPP.
- d. Climate Change
- e. Natural Disasters (earthquakes, flash flood and wild fires)

8.3.4.Land Use Information Management System and Institutional & Capacity Building

Regarding institutional and capacity building the following topics were considered critical:

1) DLPP existing information

- a. No land use information management system in place for physical planning purposes
- b. Outdated zoning plans
- c. Lack of updated based maps (spatial data)
- d. Lack of compatible GIS and related spatial software
- e. No coordination between different divisions
- f. Fragmentation of divisional data or information
- g. Lack of man-power

2) No integration of sectoral land use information management systems

- a. Lack of proper stakeholder consultation and coordination
- b. Fragmented relevant sectoral land use information management system.
- c. Availability of disorganized information
- d. Lack of information sharing amongst stakeholders

- e. Lack of centralized information management system
- f. Administrative, policy, and legislative boundaries
- g. Lack of national, provincial, and local-level government support

8.3.4.1 Institutional and Capacity Building

1) Institutions

- a. Lack of land-use plans
- b. Lack of good governance to support land-use planning
- c. Inadequate institutions
- d. Lack of office space and equipment
- e. Inadequate Institutional Structures
- f. Lack of resource allocation
- g. Lack of land-use plans
- h. Lack of national, provincial and local level government support

2) Capacity Building

- a. Lack of proper training
- b. Inadequate qualified professional planners
- c. Lack of incentives for existing skilled human resources
- d. Lack of resource allocation
- e. Lack of national, provincial and local level government support
- f. Fuzzy administrative, policy and legislative boundaries amongst stakeholders at national and sub-national levels
- g. Lack of national, provincial, and local-level government support

8.4 Annex 4 - Background Analysis: Policy Strategies

8.4.4.1 Sustainable Development Growth

Land use planning is the balance attained after competing land uses are reconciled to identify those uses and set targets that can permit the highest and best uses of land to be achieved for purposes of sustainable development. Therefore, land-use planning is a prerequisite for development that aims at social, economic and ecological sustainability. It contributes towards achieving important development goals such as food security, sustainable livelihoods, poverty eradication, social stability, rural and social development, mitigating and adapting climate change, protecting biodiversity, initiating economic growth, protecting people from natural disasters, resolution of conflicts in the land tenure system, water resource management, sustainable forest management, protecting of national and cultural heritage.

Papua New Guinea's long-term prosperity, environmental conservation and social wellbeing and inclusion depend on responsible management and promoting the best use of land and development patterns. Wise and efficient use of land supports strong, liveable, and healthy communities thus protecting the environment, public health, and safety and facilitating economic growth.

Development issues differ from place to place. Within certain parts of the country, there are limited physical and economic resources. However, with an increasing demand from the people due to increasing urbanization, unplanned expansion of settlements, denied access to land, lack of institutional integration, excessive demand and exploitation of natural resources, depletion of non-renewable resources, transportation choices, water and sanitation needs and many others, there is an extra burden on available resources. Currently, the challenges identified in urban areas of PNG are as following:

Defined Land Areas	Associated Problems	Desired Outcomes
Urban Areas	Squatter Settlements Land Disputes Traffic Congestion Population Growth & Pressure Sanitation, Health and Hygiene Unemployment Infrastructure development not complying with standards Customary land restrictions (pockets of customary land) Real Estate – Market Price (interplay between and supply and demand) Inadequate Utility services (road, electricity & water, sewerage, communications) Illegal easement development Illegal development on recreational and reserve areas Air pollution Noise pollution No proper waste management systems Climate Change & Natural disasters Fire (substandard building materials)	Improve & Strengthen Allocation & Planning Settlement of Land Disputes Improve existing road systems Control population growth Awareness Control influx of unemployed citizens Improve existing compliance mechanisms for respective infrastructural development Apply appropriate processes Develop a policy on Estate Market Price Provide adequate utility services Apply tougher penalties and remove illegal developments Promote greenery areas Regulate noise pollution Improve Waste Management System Establish a systemized LUIMS that captures all Climate Change and Disaster-Prone Areas Integrate land-use policy with building policy and Act
Urban Periphery	Illegal development encroaching on Customary Land Land Grabbing Selling of Customary Land No support to customary landowners No awareness and capacity building No proper demarcation of state and customary land boundaries	Apply Land Dispute Settlement Measures To promote Customary Land Owners to participate meaningfully Provide technical support Create awareness on proper land uses Demarcate & Monitor State & Customary Land Boundaries

8.4.4.2 Food Security

Agriculture needs to be intensified to meet future demands for commodities and to avoid further expansion onto marginal lands and encroachment on fragile ecosystems. Increased use of external inputs and the development of specialized production and farming systems tend to increase vulnerability to environmental stress and market fluctuations.

Land degradation is the most important environmental problem affecting extensive areas of land in the country. The problem of soil erosion, salinization, waterlogging, soil pollution and loss of soil fertility is increasing. Land degradation is serious because the productivity of huge areas of land is declining just when the population is increasing rapidly and the demand on the land is growing to produce more food. Efforts to control land degradation have been limited to date. Well planned, long term land use planning and land conservation and rehabilitation programs, with strong political support and adequate funding are now needed. While land-use planning and zoning, combined with better land management, should provide long-term solutions, it is urgent to arrest land degradation and launch land use planning programmes in the most critically affected and vulnerable areas. Possible solutions including following:

- a.** Improving the availability of food within a defined at location or national level is very challenging for PNG.
- b.** Areas of food production need to be defined, zoned and protected from being converted into other land-use types. Land classified under the Sustainable Rural Zone is ideal for agricultural development.
- c.** There is no integration of rules regulating land access and or improving tenure security, food production is not improved, as farmers are not willing to invest in long-term measures to improve the soil or start more extensive cultivations that provide higher yields in the long run;
- d.** Lack of access to market due to nil transport infrastructure reaching the most remote and rugged terrains such as Karamui in Simbu Province and Jimi in Jiwaka Province.

Despite the abundance of arable land, there is a sign of food insecurity, and malnutrition is evident in both urban and rural areas. This is because the rural people consume only what they produce in their gardens thus taking in an imbalance diet that leads to malnutrition. In urban areas, many of the people are regarded as urban poor. They are marginalized and denied basic services, which ultimately lead to malnutrition.

Over 85% of Papua New Guinea's population practices intensive subsistence agriculture, defined here as where land is cropped for up to a quarter of the entire cultivation cycle. When the number of cultivations increases, the fallow period decreases. Due to steep slopes and inundation, only 30% of arable land is suitable for commercial agriculture. Major issues identified include:

- a.** Over and/or extensive use of marginal land without proper attention to land and land conservation and/or prevention of land degradation;

- b. Mono cropping threatens soil quality as well as biodiversity.

Major Activities	Key Issues	Desired Outcomes
Agriculture	a. No land-use plan b. Mono cropping threatens soil quality c. Higher rate of imported food Soil erosion d. Over-cultivation e. Deforestation, Degradation & f. Desertification g. Lack of proper consultation and coordination with relevant sectors h. No proper information sharing i. No irrigation j. Out-dated soil information k. Displacement of customary landowners l. No resettlement plans	a. Develop land-use plans b. Grow an appropriate variety of crops c. Grow more local produce d. Reduce soil erosion e. Grow an appropriate variety of crops f. Reforestation g. Plant trees every year h. Establish consultation and coordination mechanisms i. Information sharing j. Use irrigation systems in sustainable and commercial farming k. Update soil information l. Develop resettlement plans m. Develop resettlement plans n. Identify suitable land for commercial farming and control use

8.4.4.3 Climate Change and Natural Disasters

Concerns relating to climate change and natural disasters, air pollution and ozone depletion have created new demands for scientific, economic and social information to reduce remaining uncertainties. Better understanding and prediction of the various properties of the atmosphere and affected ecosystems, as well as health impacts and their interactions with socioeconomic factors, are needed.

Land use and resource policies will both be affected by changes in the atmosphere. Certain practices related to land use can reduce greenhouse gas sinks and increase atmospheric emissions. The loss of biological diversity may reduce the resilience of ecosystems to climatic variations and air pollution damages. Atmospheric change can have important impacts on forests, biodiversity, freshwater, and marine ecosystems, increase the intensity and frequency of natural disasters as well as on economic activities such as agriculture and forestry.

PNG is vulnerable to global warming and rise in the sea levels, with certain small low-lying islands facing the increasing threats of submerging under water. PNG is experiencing the more immediate impacts of the increased frequency of cyclones, storms, landslides and earthquakes associated with climate change. These are causing major setbacks to our socio-economic developments.

The human response to global climate change and climate variability can be characterized in two key areas, adaptation and mitigation. Adaptation includes developing ways to avoid negative impacts, their livelihoods, economic activities and places by reducing their vulnerability to climate impacts. Adaptation is about doing things differently because of climate change. Examples of adaptation include changing building codes, for instance, to make construction more resistant against hurricanes, building infrastructure to protect communities against increased flooding, relocating the building to higher grounds and making changes in land use such as switching to more drought-resistant crops or substituting intensive with extensive agriculture.

Mitigation involves attempts to slow the process of global climate change by lowering the level of greenhouse gases in the atmosphere. Examples include mechanisms such as reducing emissions from deforestation and forest degradation or planting trees that absorb carbon dioxide from the atmosphere and storing it in the soil or their trunks and roots. Global efforts for mitigation are prerequisites for sustainable development.

Natural disaster risks management aims to avoid, lessen or transfer the adverse effects of hazards such as storms, earthquakes, floods, droughts and landslides through a variety of activities and preventive measures of mitigation and preparedness.

Major Activities	Key Issues	Desired Outcomes
1. Adaptation 2. Mitigation	a. The loss of food gardens due to extensive flooding combined with extended periods of drought. b. Rising sea level is causing some of PNG's islands to be gradually submerged c. low-lying coastal islands are sinking d. Coastal erosion, king tides, cyclones e. Storm surges are more frequent. f. Coastal and inland flooding g. Bleaching of coral reef degrading marine ecosystems h. Diminishing of marine species i. Changing environmental conditions j. Irregular rainfall patterns with period of prolonged dry seasons k. soil fertility and yields l. spread of infectious diseases and pests m. Decreasing agricultural productivity	a. All Maritime Provinces must have a land-use plan b. Integrate climate change issues in all planning systems c. Capacity building, training and awareness at all levels d. Encourage reforestation and afforestation of cleared areas and grassland. e. Planting different local tree species of cultural and economic values f. Information sharing among relevant agencies/sectors g. Relevant national government agencies/sectors involved in land use planning h. Mitigating the impacts of and adapting to climate change, while applying social and environmental safeguards that are consistent with national and international law i. Local consultation where applied and on matters involving customary land

	n. Increase episodes of hailstorm and destruction of food gardens.	
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8.4.4.4 Protected Areas

Due to the increase in human population and related socio-economic desires, policies that have failed to value the environment and its vital ecosystems services, unsustainable exploitation has persisted. The rapid population growth and poverty has pushed the poor to cut forests, grow a crops on marginal land, overgraze, over harvest marine resources and feed on endangered species.

Unsustainable logging practices result in adverse environmental impacts (e.g. soil erosion, flooding, sedimentation and degraded water quality, and loss of habitat and biodiversity). In the forestry sector, poorly managed commercial logging is a major cause of deforestation, as is subsistence agriculture, with lesser causes being fires in plantations and mining. There is social awareness about problems associated with forest harvest and degradation, but systematic analysis has been limited, and governmental programmes to address these issues are significantly underfunded.

Destructive fishing practices and harvesting of corals for cultural purposes destroys natural barriers (reefs) and results in exposing coastal areas including assets and people to coastal erosion. Increased destruction of mangroves and contaminated runoffs from land-based activities as well as oil spills causes adverse impacts on the environment and its flora and fauna.

Environmental impacts of large-scale mining operations (e.g. discharge of heavy metals, cyanide, and acids into rivers and waterways) cause adverse impacts on flora and fauna and water quality. Through increased sedimentation, this also has an impact on river flow level, flood plain inundation and water turbidity.

An increase in population and need for income to meet necessities have led to unsustainable fishing practices that further contribute pressure on coastal and marine biodiversity. There are already growing concerns of overfishing on certain species and associated with the pressure on demand for access to mangrove forests for building materials, smoking of fisheries resources as well as requirements for processes related to cultivation and harvesting of marine resources such as beche-de-mer and prawn farming.

The clearance of mangrove forests has also affected the breeding grounds of some fish species and thus threatens food and income security. Furthermore, unsustainable fishing practices such as the use of dynamic fishing have affected coral reefs have led to the extinction of some aquatic species. The combined loss of reefs and mangroves exposes the coastal communities to coastal erosion from sea-level rise and increased effects from coastal flooding which consequently affects people's lives and can displace communities who search for land elsewhere to settle which in turn brings social conflict over land and other law and order problems.

The impacts of climate change-related hazards in the country have increased in intensity and frequency, which is particularly evident in frequent occurrences of tropical storms and cyclones which can produce significant natural disasters. Further impacts of climate change have drastic effects on the natural environment as well as people. Climate Change is both an environmental and developmental issue and its ramifications include;

- a. The loss of food gardens due to extensive flooding combined with extended periods of drought;
- b. The rising sea level resulted in submerging of low-lying islands, salt water intrusion which degrades the ground water, coastal erosion, affects food production, introduces malaria and vector-borne diseases;
- c. Inland flooding have pronounced and thus aided in transporting flood sediments down to the sea, which aids in the bleaching of coral reefs, degrading marine ecosystems and thus assists in the diminishing of marine species that were unable to adapt to the changing environmental conditions;
- d. In the highlands, increased episodes of hailstorm and frosts has destroyed of food gardens;
- e. Irregular rainfall patterns with periods of prolonged dry seasons affects soil fertility and yields while increasing the spread of infectious diseases and pests which are further decreasing agricultural productivity and thus result in food shortage in some areas;
- f. Mitigating the impacts of and adapting to climate change through the reduction of greenhouse gas emissions and the use of renewable energy, air quality and pollution, land contamination, aquifer protection and noise pollution.

Major Activities	Key Issues	Desired Outcomes
Protection of biodiversity	a. Destruction of important geographical features b. No land-use plan for conservation areas c. Disappearing of endangered species d. Disappearing and destruction of important cultural and sacred sites e. Mismanagement & destruction of conservation areas f. Forest destruction by unplanned logging g. Disturbance or alteration of fresh water/river systems h. Depletion of natural resources by man-made hazards and natural hazards	a. Natural geographical features of importance shall be protected and conserved b. Map of all conservation areas in PNG c. Development should not be permitted in conservation areas d. Protect, restore and maintain the quality and quantity of water e. Promoting selective logging practices f. Protect, maintain and restore rare, endangered and threatened species g. Important cultural and sacred sites shall be protected, conserved and maintained h. Preserving species diversity and genetic diversity
Sustainable Environment Management	a. Poor urban and rural design and subdivision. b. Impact of natural and man-made disaster on the	a. Proper master & centralized urban & rural planning/designs b. Support and encourage

	environment c. Extensive use of marginal land without proper attention to land improvement d. Mono cropping threatens soil quality as well as biodiversity e. Food Security for the growing population. f. No proper national land-use planning system g. Invasive species threatening endemic species. h. Prone to natural disasters such as earthquakes, volcanic eruptions, tsunamis as well as excessive rainfall that cause mass land slips.	agriculture in rural areas. Urban agriculture is also becoming popular in many countries c. Training of local farmers in innovative crop farming d. Maintenance of soil quality for crop quality and quantity production e. Strengthening forest law enforcement f. Environment risks assessments should be properly inserted in the development framework in terms of both preparedness, compensation and mitigation g. Providing opportunities for sustainable tourism development with possible facilities at suitable tourism locations in the country, e.g. Rabaul Volcano area. h. Important cultural and sacred sites shall be protected, conserved and maintained using the existing laws on protection.
Sustainable Utilization of Resources	a. Cultivating land without proper soil management b. Soil erosion and depletion of plant nutrients c. Destroying wetlands and coral reefs d. Downstream pollution e. Polluting air, water and soil so are unusable and contribute to general environmental degradation f. Overpopulation due to increasing urbanization g. Overconsumption of resources h. Poor political and economic management i. Deforestation-for logging, agriculture and urban expansion	a. Mapping of suitable land for protection land use for the rehabilitation, conservation and management of sensitive or critical ecosystems. b. Proper Waste Management system with legislation and standards c. Minerals and petroleum resources shall be sustained for long-term use and sustainability d. Protecting and enhancing the quality of the historic sites and natural environment in both urban and rural areas e. Promoting energy efficiency and improving through land use and development patterns f. Developments shall be restricted at the catchments and aquifers. This is relevant for watersheds where water is abstracted for communal use. g. Promoting selective logging practices

		h. Prohibiting clear-felling methods i. Restricting wild or forest fires j. Maintaining the natural ecological services by conserving high priority areas.
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8.4.4.5 Land Use Information System

An up-to-date land use information system is not available in Papua New Guinea. There is a suboptimal data collection system. In addition, some institutions operate standalone systems, but these are confined to their respective mandates. Although land-use planning depends on data availability, it can also become a tool to create and /or share data.

Even though relevant data for planning exists, the data situation is chaotic (i.e. unorganized data, or no data documentation), regulated data sharing is not practiced and the understanding of the importance of information for land use planning is limited. This makes it rather difficult to access reliable data for land use planning. A key role for spatial data maintenance is given to the Department of Lands and Physical Planning. However, the responsibility of the DLPP to provide spatial data for decision-making and planning has not been well appreciated and implemented due to funding cuts and capacity issues. Consequently, institutions acquire their data through other sources and apply their standards, often with conflicting interests with other sectors leading to the present chaotic situation. There is a lack of a legal mechanism, law or regulation that enables the data and information aggregated to be disseminated and shared in a coordinated manner.

Major Activities	Key Issues	Desired Outcomes
Department of Lands & Physical Planning Information Management System	a. No land use information management system b. Out-dated zoning plans c. Lack of updated maps (spatial data) d. Updated compatible GIS and related spatial software's e. Lack of coordination between different divisions f. Fragmentation of divisional data or information g. Lack of funding	a. Integrated land use information management system with DLPP's LIS system b. Updated zoning plans c. Equipped with GIS equipment d. Loaded & updated GIS software e. Linked & coordinated information systems f. The information available for public and office consumption

Sectoral Land Use Information Management System	a. Lack of proper stakeholder consultation and coordination b. Fragmented relevant sectoral land use information management system. c. Availability of disorganized information d. Lack of centralized information management system e. Lack of funding/resources	a. Integrated land-use management system with all stakeholders b. Linkages at all levels for effective land use planning c. Incorporate all land uses into DLPP's integrated land use information management system d. Coordinate with provincial, district & local level government for land use planning e. Aligning with provincial, district, & local level governments for implementing land use planning/activities.
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8.5 Annex 5 - Policy Statement Overview

The land is a finite resource, while the natural resources that land supports can vary over time and according to management conditions and uses. Expanding human requirements and economic activities are placing increasing pressure on land resources, creating competition and conflicts and resulting in suboptimal use of both land and its resources. If, in the future, human needs are to be met sustainably, it is now essential to resolve these conflicts and move towards more effective and efficient use of land and its resources.

The National Strategic Plan 2010-2050 and the Vision 2050 aims for Papua New Guinea to have a strong, dynamic and competitive economy focusing on developing manufacturing, agriculture, forestry, fisheries and tourism in the renewable sector while the non-renewable sector concentrates on mining, petroleum and gas extraction. It is, therefore, incumbent on the individual sectors to develop strategies and implementation plans for meeting the higher-level planning objectives.

While the government's higher-order policies target sustainable economic growth and development, there are currently no policies, strategies and or plans that targets how these could be achieved.

Historically, the land use-planning component is only centered on the town boundaries; little or nil attention is being given to land use planning outside the physical planning areas, e.g. on customary lands. This complicates why banks and other lending institutions are unwilling to accept customary land and structural improvements on such lands as collaterals for mortgage lending purposes.

Through the Physical Planning Act, 1989 and its regulation, land in Papua New Guinea (PNG) is categorized into three types:

- a. Development Promotion Areas
- b. Sustainable Rural Areas
- c. Conservation Areas

As a result, progress has largely been driven from outside the government, by community-based organizations, NGOs with the assistance from development partners. Better coordination by government and commitment to the sector with potentially significantly increased financial support and improved focus of NSLUP implementing agencies. Papua New Guinea will not continue to rely on extractive industries to drive its economy because they are terminable/wasting assets that are non-renewable. As such, sustainable options are necessary for the future development of the country.

The economic zones and special economic zones should be aligned this Policy & Guidance, therefore it should be established in accordance with the Physical Planning policies and gridlines and legislation to have an informed decision making to make sure to promote sustainable development. There should be no prior identification of the many arbitrary economic zones and special economic zones, as the landowning communities of these zones have not been consulted on these decisions. Economic corridors and special economic zones are promoted to alleviate poverty and transform the lives of the people of Papua New Guinea.

However, after more than 30 years of making available customary land for large scale projects, the vast areas of the country has not felt much tangible infrastructure development and long-term economic benefits and services in our rural communities. Through linking bottom-up sustainable land use planning with the Ward and LLG Development Planning System, the informal rural economy, which is already many times larger than our formal economy, can be properly included in the Government planning system and further developed. This will enable local rural economic development driven and owned by the people, and with direct benefits for the people.

Sectoral Policy Areas	Key Issues	Desired Outcomes	Policy Statement
1. Sustainable Economic Growth	1.Land areas not readily accessible for infrastructure development	a. Inclusion of infrastructure development in all levels of land use plans	a. Encourage the inclusion in land use plans of infrastructure development for the increasing population, urban development and economic growth
	2.Illegal use and occupation of land	a. Proper administration of	a. Encourage the use of existing

		land-use and land allocation processes	legislations to ensure that land is available for development when needed
	3.Lack of proper land use planning and identification of land for urban uses and economic development	1 Proper land-use planning and provision of land for all uses at the right time	a. Promote and facilitate plan-making as an essential tool for development b. Identify and secure land together with the involvement of stakeholders for development promotion and economic growth.
2. Environmental Conservation	a. Lack of proper information regarding existing locations and land areas covered by REDD Plus. Information is available for conservation areas. b. Lack of consultation and participation by various stakeholders regarding land to be set aside for REDD plus. Consultations are currently conducted before an agreement is reached for conservation areas.	a. Proper records of all sites and areas set aside for Conservation b. Adequate stakeholders' involvement in Conservation and REDD plus program & projects c. Proper information both in written form and spatial representation of land zoned for Conservation and REDD plus	a. Ensure holistic information regarding sites and areas set aside or to be set aside for Conservation b. Facilitate the involvement of relevant stakeholders to provide essential information toward preserving land areas required for Conservation and REDD plus
3. Food Security	1.Inadequate information on land required for food security 2.Inadequate information on	a. Ensure proper information and database on land required for food security b. Ensure proper information on	a. Facilitate land use plan, to ensure the adequate land area for food security for current and future population

	agriculture and related activities in the country	agriculture and related activities c. Provide proper land-use plan that accommodates land requirements for both food security and agriculture and related activities	of the country. b. Facilitate land-use plan to ensure the adequate land area for agriculture and related activities c. Facilitate land-use plan to accommodate land requirements for both food security and agriculture and related uses
4. Climate Change, Natural Disaster and Geo-hazard	1. Insufficient information on both existing climate affected areas and likely affected areas and likely affected areas 2. Insufficient information on areas prone to natural disaster and geo-hazard areas	a. Ensure availability of information and land use plans for all affected and likely affected areas of climate change b. Ensure availability of information on land areas prone to natural disaster and geo-hazard	a. Facilitate land-use plan to accommodate land affected by climate change b. Facilitate land-use plan to accommodate land areas prone to natural disaster and geo-hazard
5. Land Use Information Management System	1. Insufficient information 2. No land use information registry 3. Fragmented sectoral information management systems	a. Develop an information registry on land use. b. Integrate and consolidate all sectoral land use information. c. Integrate land use information into the existing DLPP information systems	a. Integrate land Use Information and establish Registry in DLPP. b. Make land use information available to all stakeholders. c. Come up with an MOU with land-use stakeholders for sharing of information (compatible data)
6. Institutional	1. Inadequate	a. Ensure	a. Facilitate

and Capacity Building	capacity of the current agency to carry-out the implementation, coordination and monitoring of the PNG's NSLUP	realignment, reinstitution and empowerment of the Physical Planning Office	restructure to the current Office or establish a new authority to take charge of the implementation of the NSLUP
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8.6 Annex 6 – International Conventions, National Strategies and Plans, Thematic and Sectoral Policies and Legislations Influencing NSLUP

8.6.6.1 International Conventions and National Strategies and Plans

(1) The Constitution of the Independent State of Papua New Guinea

The Constitution provides for PNG's National Goals & Directive Principles, which are as follows:

- a. National Goal and Directive Principle 1: Integral human development
- b. National Goal and Directive Principle 2: Equality and participation
- c. National Goal and Directive Principle 3: National sovereignty and self-reliance
- d. National Goal and Directive Principle 4: Natural resources and the environment
- e. National Goal and Directive Principle 5: Papua New Guinean Ways

The fourth goal states that "PNG's natural resource and environment should be conserved and used for the collective benefits of all and should be replenished for the future generations"

(2) International Conventions

PNG is a signatory to several international conventions. Those that are relevant to the NSLUP discussion are:

- a. United Nations Sustainable Development Goals;
- b. United Nations Framework Convention on Climate Change;
- c. United Nations Convention on Environment and Development (Rio Declaration);
- d. United Nations Convention on Biological Diversity; and
- e. United Nations Convention on Human Settlement.

(3) National Development Vision, Strategies and Plans

The NSLUP must align with and support the implementation of the National Constitution and current government policies. The national strategic planning documents and mechanism are as follows:

- a. Vision 2010-2050 (40 -year Economic Strategy),
- b. Medium Term Development Plan III (2018-2022)
- c. Development Strategic Plan 2010-2030 (DSP)
- d. Development Planning Framework and Strategic Priorities
- e. National Land Development Program

f. National Strategy for Sustainable Responsible Development

(4) National Strategic Vision 2050

The National Strategic Vision 2050 was launched in 2009 and it reflects government's aspiration to improve PNG's human development index (HDI developed by the World Bank in 2010) through human capital development.

Core Focus Areas of Vision 2050 are as follows:

Core Focus Areas:

- a.** Strategic planning and control
- b.** Institutional development and service delivery
- c.** Human capital development, gender, youth, and people empowerment
- d.** Wealth creation, natural resources , and growth nodes
- e.** Security and international relations
- f.** Climate change and environmental sustainability

(5) Development Strategic Plan 2010-2030

Regarding land use, the main strategy is promoting land access for development. The policy informs the difficulty behind land access attributed to poor administration and inadequate legal framework for customary land and alienated land. Challenges are associated with inadequate supply of secure customary and State lands, such as weaknesses in legislation and administration that have slowed the number of registered Incorporated Land Groups (ILGs), land disputes have slowed resolutions in the court system.

The strategic plan includes increasing land use within the formal administrative system, improving ILG registration, and ensuring a fully functional land court system. It also sets out the strategy to achieve the Vision 2050 in the first 20 years.

(6) National Land Development Program

Land reform is considered essential for poverty reduction and alleviation. The strategy requires changes to land policy and land use planning on customary and state-owned land, with several potential outcomes, namely:

- a.** Amendments to the Land Group Incorporation and Land Registration Act enabled customary land to be registered and leased for development purposes by landowners;
- b.** The establishment of the Land Court Division, the establishment of the Customary Land Division, preparation of the National Development Land under the PNG Development Strategic Plan and Medium-Term Development Plan, and the development of the National Land Framework under the National Research Institute.

(7) National Strategy for Responsible Sustainable Development (StaRS 2014)

Responsible development means "we don't undertake activities that compromise the world's biodiversity or puts our children future at risk". Natural assets such as gas reserves, fertile land, clean water, forests, and tourism are considered to represent the

comparative advantage of the country; and to be managed accordingly. The three pillars of sustainable development are:

- a. Enabling conditions for green growth,
- b. The mainstreaming of green growth, and
- c. The development of green growth policy instruments

Strengthened national development and land use planning through development targets and indicators like, legislation, plans and tools integrated by sub-national planning are needed to support ward and LLG land use planning. These should be linked to development plans in support of integrated strategic planning at provincial and district levels.

8.6.6.2 Thematic and Sectoral Policies

(1) National Urbanization Policy 2010-2030

The policy provides the basis for strengthening economic, social, and environmental arrangements in towns and cities. Regarding land the three most important themes pointed out as critical for improvement were land administration, land dispute settlements and customary land developments. It informs about the developments on assisting unplanned settlements in urban areas, and managing customary land as part of a planned urban development.

(2) National Protected Areas Policy 2014

The policy provides the basis for strengthening economic, social, and environmental arrangements in towns and cities. Regarding land, the three most important themes pointed out as critical for improvement were land administration, land dispute settlements, and customary land developments. It informs about the developments on assisting unplanned settlements in urban areas, and managing customary land as part of planned urban development.

(3) National Food Security Policy

Reducing poverty and increasing the diversity of cash income sources allows for many positive implications for urban and rural Papua New Guineans, not just improved food security. Risks to food security can be addressed and minimized through land use planning aimed at increasing sustainable livelihood, such as the identification for areas most suitable for sustainable agricultural production.

(4) National REDD+ Strategy 2017-2027

REDD+ strategy aims to advance on including the climate change agenda within a cross-sector development planning, by strengthening:

- b. Land use and development planning,
- c. Environmental management, enforcement and protection and
- d. Enhancing economic productivity and sustainable livelihood in forest areas.

This includes supporting the national development framework of national land use policy, planning and legislation and integrating ward and local level government (LLG) level planning and linkages between levels of planning

(5) Climate Compatible Development Management Policy 2014

The policy aims to support, drive and stimulate climate-compatible development, to build a Climate resilient and carbon-neutral pathway for robust and sustainable economy through a low carbon growth pathway and green economic growth. Land use and change are crucial for mitigation policies, and the policy supports sustainable land use planning in country as well as bottom-up approach land planning to start at the community-ward-LLG level.

(6) Public- Private Partnership Policy

Requirements include the assessment of land acquisition, environmental approval and other statutory approval issues.

8.6.6.3 Legislations

8.6.6.3.1 Land Use Sector Legislations

(1) Land Act 1996

The Land Act 1996 elaborates on the ownership, allocation and release of state land for development purposes to alleviate poverty and improve the lives of the people. According to Chandler (2011), 86% of the land in PNG is customary land while 14% is state or alienated land. Customary land is controlled, allocated and managed by the landowners themselves in accordance with their customs. State land use and planning happen in the 14% that are allocated for development in urban areas or areas declared as physical planning areas. Some state vacant land areas have been occupied by illegal settlers and these contribute to state land shortage.

(2) Physical Planning Act 1989

The Physical Planning Act provides for the development and management of infrastructure in urban areas. Outside urban areas the Environmental Act 2000 can be applied to the management, protection and conservation of the environment.

The Act defines which categories of development or land use are exempt or subject to control under the planning system, these are as follows:

- a. Development or use of land, which is outside of physical control
- b. Development or use of land, which is within the sphere of planning control, and are automatically approved,
- c. Development or use of land, which is within the sphere of planning control,
 - a. Access to customary land for resettlement of people affected by natural disasters and government needs on sustainable infrastructure and public services

The Acts bind all land – state and customary – to land use planning.

(3) Land Registration (Amendment) Act 2009

This Act refers to the rights of the person who is the legal owner of the land. Registration of land is done to recognize the owner of the land by issuing a title to the land. The amendments to the Land Registration Act 2009 are intended to provide a system of registrations of those portions of customary land, which the customary landowners through their ILG decide to register to put to economic development activity. Customary land management is the social contract that sets the conditions for land use within the land group. The communal land ownership and the social contract remain intact after registration. After the title is issued the owner has the power to lease the land to a developer who has an interest over in that land. Direct outcomes of customary land registration have been identified in national reports as:

- b.** Land title for customary land, and use of land as loan guarantee for development activities
- c.** Helping to reduce land disputes over boundaries
- d.** Access of customary land for resettlement of people affected by natural disasters and government needs for sustainable infrastructure and public services

(4) Incorporated Land Group (Amendment) Act 2009

This legislation recognizes the corporate nature of customary land groups and allows them to hold, manage and deal with land in their respective customary areas. The purpose of this Act is to encourage greater participation by local people in the national economy through judicious use of land, greater certainty of title and better and more effectual settlement of land disputes. The Act empowers customary landowners to meaningfully participate in economic activities without challenging their land rights. Most vulnerable groups in customary groups do not enjoy a fair and equitable economic share from the use of their collective customary land; individuals with stronger political and economic position will deprive them of their rights. Legal amendments in the ILG and Land Registration Act 2009 aimed to require that:

- a.** ILG members are given equitable benefit sharing, protecting the most vulnerable;
- b.** Proof of birth, through formal birth certificate, for instance, is required for confirming individual membership under the ILG;
- c.** Multiple ILG membership is prohibited
- d.** A map with land boundaries is provided
- e.** Greater transparency and accountability of ILG Management Committee is also required.

(5) Organic Law on Provincial Governments and LLGs

Allows the preparation by provinces and local level government of a rolling five-year development plan to guide development activities including rolling out priority services and infrastructure. These five-year plans identify programs and projects intended to drive the provincial, district and local level government budgeting processes. The main aim was to bring about a more decentralized “bottom-up” approach to Government and improve the delivery of services and infrastructure throughout PNG. The law allows that each of the 89 districts should adopt a rolling five-year development plan as above mentioned:

- a.** Weakness: Reportedly, this system has not been effective to improve infrastructure and services to communities

- b. Opportunity: Debate to understand how to best address the current challenges – in terms of legislation, governance, institutional arrangement, and so forth
- c. Threat(s): Not addressing community demands on service and infrastructure can have short and long term impacts on individuals' well-being and PNG economic development
 - The opportunity the NSLUP presents for the subnational planning process is to capture the requirements for all plans to have a spatial element (i.e. provincial plan must contain a provincial spatial profile, including District, LLG, and Ward Plans).

(6) Environment Act 2000

This legislation protects and regulates the environment from impacts of development activities to promote sustainable development. It provides for the management, conservation, and protection of the environment from unsustainable land-use activities. Three broad land uses includes:

- a. Development promotion - under the responsibility of the Department of Physical Planning;
- b. Sustainable rural development - under the responsibility of the Department of Environment and Conservation and Physical Planning; and
- c. Conservation areas – under the responsibility of the Conservation and Environment Protection Authority (The purpose of the *Conservation Areas Act* is to provide for the conservation and protection of the environment in accordance with the environmental conservation laws and any additional policy considerations)

(7) Climate Change (Management) Act 2015

This legislation aims to provide a regulatory framework to:

- a. Promote and manage climate compatible developments through climate change mitigation and adaptation activities;
- b. Implement any relevant obligations of the State under applicable rules of international law and international agreements related to climate change; and
- c. Establish Papua New Guinea's Designated National Authority or an equivalent entity for the purposes of the Kyoto Protocol and any such other or subsequent arrangements or agreements made under the Kyoto Protocol and for related purposes.

(8) Mining Act 1992

All minerals – in or below 6 feet of land surface or water – belongs to the State. Companies must consider national interest and promoting sustainable development when performing their activities

(9) Oil and Gas Act

The Oil and Gas Act 1998 (as amended) is the principal legislation that governs petroleum exploration and development and State Entitlement and Benefits in Papua New Guinea. It spells out the role and purpose of the legislation in key areas including the exploration, development, processing, and transportation and makes provisions for grant of benefits to traditional landowners, Local Level Governments and Provincial

Governments arising from the production, processing and transportation of petroleum in Papua New Guinea.

8.6.6.3.2 Urban Areas Legislations

(1) Building Act – Chapter 301

This legislation regulates the construction of physical structures throughout the country. The focus is to regulate the construction of building structures within urban areas in the country. It further regulates controls, the use of a building and the land on which the building is erected, both during and after construction of the building.

(2) National Housing Commission Act

The purpose of this legislation is to plan for the better use of land in providing adequate and decent housing to all people in Papua New Guinea. Adequate housing is critical to fostering healthy living standards, which in turn enhances development in other sectors such as health, education, economic development, and employment.

(3) Informal Sector Development and Control Act 2003

The purpose of this legislation is to optimize the use of land to promote the development of the informal economy. The act encourages and facilitates the development of informal businesses in urban areas. It also gives a mandate to the underprivileged and disadvantaged people to be actively involved in small business activities to sustain themselves.



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