

# **PAPUA NEW GUINEA**

# **MEDIUM TERM DEVELOPMENT PLAN**

# **2011-2015**

“Building the foundations for prosperity”

**Department of National Planning and Monitoring**

**Port Moresby**  
**August 2010**

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## Foreword



Since independence we have dreamt of prosperity. We have aspired to be a well educated, healthy, united nation as described so well in Vision 2050. But for thirty-five years we could not see how to make our dream a reality. We have been without clear, long term direction. As a result, the living standards of most Papua New Guineans today are no better than they were for our forefathers at independence.

The Papua New Guinea Development Strategic Plan, 2010-2030 has ushered in a new era of development planning for our country. Building on the Vision 2050, this strategic plan now marks the way to prosperity. This plan is the substance of Vision 2050, clearly describing where we want to be by 2030. It is the map for our nation, explaining how we can attain prosperity for all our people. But the Papua New Guinea Development Strategic Plan, 2010-2030 is only the first step. The next step is to detail what we will do to move forward. The next step is the Medium Term Development Plan, 2011-2015.

How are we going to achieve the sector targets detailed in the Papua New Guinea Development Strategic Plan, 2010-2030? How much will it cost? Who will be held accountable? All of these questions are answered by the Medium Term Development Plan, 2011-2015.

The Medium Term Development Plan 2011-2015 now becomes the touchstone for all sectoral, provincial, district and LLG plans. It describes the resource envelope within which the National Government will operate for the next five years. It sets out clearly what is to be achieved by National Government expenditure. It provides both direction and accountability for all sector activities. The Medium Term Development Plan 2011-2015 pulls together the whole of the nation in a team effort to realise the Vision 2050.

We are a young nation and therefore we must dream big. But we are a developing nation and therefore we cannot afford to make mistakes. Let us continue to dream of greatness. But let us also plan carefully and let us move together. Then we may step out with confidence.

I acknowledge my team of hardworking staff of the Department of National Planning and Monitoring, led by Secretary Joseph Lelang, who have produced this document just three months after the completion of the Papua New Guinea Development Strategic Plan, 2010-2030.

I therefore humbly commend to you the Medium Term Development Plan, 2011-2015, an action plan for pursuing our vision.

Thank you and God bless Papua New Guinea.

**Hon. Paul Tiensten, LLM, MP**  
**Minister for National Planning & District Development**

## Introducing the MTDP



Let me take this opportunity to introduce the first Medium Term Development Plan (MTDP) 2011-2015 for Papua New Guinea (PNG) and briefly highlight what it sets out to achieve. The MTDP 2011-2015 is the first of four (4) rolling Medium Term Development Plans to implement the Papua New Guinea Development Strategic Plan (PNGDSP), 2010-2030. The PNGDSP clearly sets out the 20-year strategies and targets to achieve Vision 2050. This first MTDP will be a crucial foundation and its implementation will be monitored closely.

This MTDP is revolutionary. Emphasis is no longer on expenditure priorities, as previously done under its predecessor plan (MTDS 2006-2010). It is a policy driven plan, supported by specific targets and projected estimated costings to achieve the desired results. The last MTDS revolutionised planning and budgeting practices in PNG as for the first time it prioritized budgetary resources to priority areas under the development budget. The MTDS review indicated that sectoral alignments in terms of the size of budgetary resources meeting the expenditure priorities has been significant, with close to 80 percent of resources over the last 5-years being spent on MTDS priorities. Lessons learnt from the MTDS period 2005-2010 has helped us to design this MTDP better by setting clear sectoral strategies, targets, indicative resource requirements and clarifying the agencies responsible for delivering results.

This MTDP is also designed following the sequencing principles detailed in the PNGDSP, 2010-2030. Its theme will be to improve and develop the governance and institutional capacity together with essential infrastructure and the necessary policy mix required to prepare PNG to advance into higher productivity and improve the quality of life of all Papua New Guineans. The emphasis will now be on getting the preconditions right, the basic infrastructure, institutions, and systems and processes to a compatible standard to pave the way for effective service delivery and private sector led-growth. A significant amount of resources in the first 5-years will be focused on improving the efficiency and governance of the institutions that deliver services as well as opening up and expanding the productive capacity of the economy through transport and infrastructural connectivity.

With a clear theme, this MTDP sets out projected estimate costed strategies and demanding targets for all sectors to work towards achieving the kind of development outcome PNGDSP demands. The setting of clear deliverable targets has shifted the focus away from Treasury and Planning Departments to implementing agencies. The lime-light is now on implementing agencies, government institutions, provinces, and districts to deliver results. Under the MTDP implementing agencies will be held accountable as to whether they are delivering results or not. The MTDP provides the clarity and justifies resources for sectoral plans, strategies, programs, investment, and activities. It calls for performance in terms of delivering the desired results and should promote a performance-based culture throughout the public service system. It will impinge on institutional restructuring and alignment to achieve the set deliverable targets, and tie in contracts of heads of agencies to perform. This also provides the basis for effective monitoring of sectoral performance by the Department of National Planning and Monitoring and others on governance issues.

It is now necessary and mandatory for all the agencies and institutions of Government to align their plans, strategies, programs, and activities to the Medium Term Development Plan, 2011-2015. The funding to sectors starting in 2011 will be based on sectors annualizing their programs and activities to achieve the strategies and deliverable targets. With collaboration, tireless effort, and determination we will be able to translate PNG into a middle-income country with an improved quality of life for all citizens. The time and avenue to start is MTDP 2011-2015. Let us now begin because a step at a time will take us on the journey to our destiny.

**Joseph Lelang**  
**Secretary**

## **Part 1: The MTDP approach**

### **1.1 The objectives of the Government**

The Medium Term Development Plan 2011-2015 (MTDP) is a 5 year rolling development plan providing a clear, accountable plan for investment. It sets the sector strategies, targets, deliverables and their projected estimate cost to implement. The MTDP is aimed at translating the Papua New Guinea Development Strategic Plan 2010-2030 (PNGDSP) into tangible results. It also takes into account the lessons and experience learnt from the past MTDS 2005-2010. The plan outlines the specific players who will be responsible for achieving key deliverables. It strengthens the National Government's ability to monitor and evaluate investments over the coming years during the life of the PNGDSP 2010 – 2030.

Therefore, the MTDP implements the PNGDSP and the Vision 2050 and will be a sequencing mid-term plan. The MTDP 2011-2015 will concentrate on the **enabling activities** under each sector to be funded and implemented by the sector agencies, provincial governments, CSOs and development partners<sup>1</sup>. The progress of this plan guides the following 3 mid-term plans, thus high priority will be given to the enabling activities such as road infrastructure, education, health and economic sectors among others.

The desired deliverables under the MTDP 2011-2015 will be supported by:

- Targets for the remaining 3 MTDPs to ensure we **'stay on track'**,
- The identification of risks and assumptions to ensure sectors coordinate and link with each other,
- Demarcation of the respective agency's responsibilities and finally,
- Resource requirements are detailed in this Plan from various financing sources.

The linkage between the MTDP to the PNGDSP and the Vision 2050 is that:

1. The Vision 2050 maps out PNG's development initiatives for the next 40 years and identifies seven strategic pillars underpinning economic growth and development. The PNGDSP translates the seven strategic focus areas of Vision 2050 into directions for economic policies, public policies and sector interventions with clear objectives, targets and indicators.
2. The MTDP is guided by the PNGDSP on how best development in PNG will be undertaken under the Public Investment Program (PIP), outlining resource utilization by focusing development efforts on key policy areas.
3. The MTDP guides the development of sector policies, plans and strategies. Vision 2050 and DSP both provide economic development frameworks and performance indicators that enable policy proposals to be prioritized and closely monitored through implementation of the MTDP. Budget submissions by sectors, provinces, CSOs and other development partners will be aligned with the expenditure and development priorities outlined in Vision 2050, translated in the PNGDSP and articulated in the MTDP.
4. Importantly, scarce resources will be prioritized across sequenced targets and deliverables over a 5 year period, the term of each MTDP. Sectors, provinces, CSOs and development partners' PIP programs and budget appropriations will be aligned to priorities of Vision 2050, PNGDSP and the first MTDP.

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<sup>1</sup> The alignment of the development partners under the Accra Declaration and other partner agreements will be adjusted and reviewed straight after the adoption and endorsement of the MTDP 2011 -2015 by NEC.

## 1.2 Addressing supply-side constraints

The success of *PNGDSP 2010-2030* implementation will depend on how well strategies and expenditures are sequenced. Although each Medium Term Development Plan (MTDP) is designed to achieve progress in every aspect of the *PNGDSP*, some parts will be given higher priority in the early MTDPs. In this case, the first MTDP 2011-2015 will concentrate on policy areas referred to as “key enablers” to lay the foundation for the success of all other parts of the *PNGDSP*.

The *PNGDSP* identifies the key enablers that will establish PNG on a path towards prosperity. The Government will integrate its investment to lay the foundation for growth by addressing the supply-side constraint and expanding the productive capacity of the economy in the first MTDP 2011-2015. As part of laying the foundation for growth the Government will ensure fiscal and monetary stability is attained, land is sufficiently unlocked for development, law and order problems are normalised, and quality infrastructure connectivity are established to connect rural populations to markets and services. All of these are essential for attracting investment in agriculture and in other major sectors of the economy.

In the same manner, encouraging competition in the first MTDP 2011-2015 period is a low cost policy that facilitates both economic progress and efficient delivery of services. Introducing competition into the mobile phone sector for example, has generated an unprecedented improvement in phone services throughout PNG.

Likewise, education needs to be given high priority in the first MTDP. While the benefits of primary and secondary education will not manifest until about 10 years later, a highly productive workforce will be essential by then to ensure the success of the *PNGDSP*. Higher and technical education is also a key priority to equip the workforce to implement the *PNGDSP* and build the nation. Moreover, short term economic gains from higher education are available by replacing expensive foreign workers.

Equally, transport and the provision of key public utilities of electricity, clean water and sanitation are priorities in the first MTDP 2011-2015 as they are needed to facilitate investment across the economic sectors of PNG, from agriculture to manufacturing to tourism. However the costs of providing this infrastructure are lower and the returns are higher when land is accessible, when crime is not an impediment, when funds are well managed, and when providers are competing by offering higher service and lower prices. At the same time, effective infrastructure services help to reduce the cost of providing rural education and law and order.

Underpinning the Government’s success in implementing these priorities in the first and subsequent MTDPs is the public sector’s performance and governance issues. High standards of public sector management involve high standards in the various institutions, departments and agencies through which the Government conducts its business. For PNG to have a prosperous future, good public sector management is crucial as it is the Government that will be relied upon to deliver the foundations of nation building outlined in the *PNGDSP*.

These aspects of the *PNGDSP* discussed above will be given the highest priority in the first MTDP 2011-2015 as it will create a virtuous cycle of growth and development. The rationale is that these priority areas are the enablers for growth, the policies that will lay the foundation for PNG to progress rapidly toward middle income status by 2030. If significant progress is not made on each of the enablers by 2015, PNG will not realise the status of a middle income country by 2030. Therefore this is where development budget expenditure will bring the greatest returns.

The proceeds to these investments as highlighted by the *PNGDSP* will be massive. For instance, over 710,000 full time equivalent jobs will be created in rural PNG as a result of opening up of rural access to markets and to electricity under the *PNGDSP*. Infant mortality will drop substantially as investment in roads and law and order ensure mothers have access to health facilities. The causes of cholera and typhoid will be removed by the provision of clean water and sanitation. PNG’s population will be equipped to participate in the global demand for skilled labour through investment in quality education, generating at least K6,400 million of additional GDP by 2030.



### 1.3 The MTDP framework

To explain what will be done over the next 5 years in order to achieve the PNGDSP goals, a framework for each of the sub-sectors has been developed. Each framework is accompanied by a one-page write-up. The MTDP framework has been developed in line with results-based monitoring and evaluation.

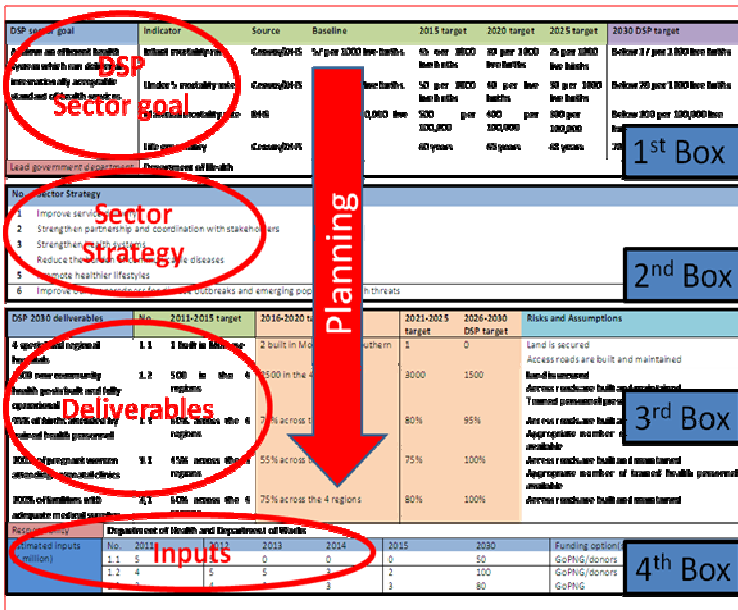


Figure 1: The MTDP Framework

The **first box** of the framework reiterates the DSP goal for the sub-sector. E.g. for utilities – “all citizens and visitors to have access to reliable and affordable public utilities by 2030”. To monitor the sub-sector goal, indicators and targets have been developed. These indicators incorporate international obligations and local priorities and signify whether or not progress has taken place to meet the higher order objective. The source column details where the data will come from.

In the **second box** of the framework the sub-sector strategy is reiterated.

The **third box** of the framework details the ‘deliverables’ of MTDP. Subject to the availability of resources, investment will take place in support of the detailed deliverables. The deliverables are in line with the sub-sector strategies and contribute to the sub-sector goal. Deliverables for the remaining MTDPs under PNGDSP are also discussed to ensure we ‘stay on track’ towards reaching the PNGDSP higher order objectives.

Risks and assumptions are detailed in the third box of the framework to ensure sectors link together and that effective sequencing and prioritization of expenditure within and across MTDPs is followed. Lastly, the agency or government department responsible for ensuring the deliverables can be seen “on the ground” is detailed.

The **fourth box** provides information on the estimated resource requirements needed for the deliverables. Resources are detailed by amount and by funding option – donor, government or other.

### 1.4 The economic impact of the MTDP

Implementation of the MTDP will be the first step towards reaching the target outlined in the PNGDSP of Papua New Guinea becoming a prosperous middle-income country by 2030. This will be underpinned by the rapid economic growth driven by the MTDP policies and investments. Over the years 2011-2015, economic growth is expected to average 8.7 per cent a year (see figure 2.1 in part 2). This will result in a healthy rise in the average GDP per person from K3430 in 2010 to K4681 by 2015 (see figure 1.1).

In comparison, economic growth would be much lower in the absence of the MTDP, averaging 5.7 per cent a year. GDP per person in 2015 would be K4065. The MTDP will therefore add an average of 3 percentage points to growth each year, adding K616 to GDP per person in 2015.

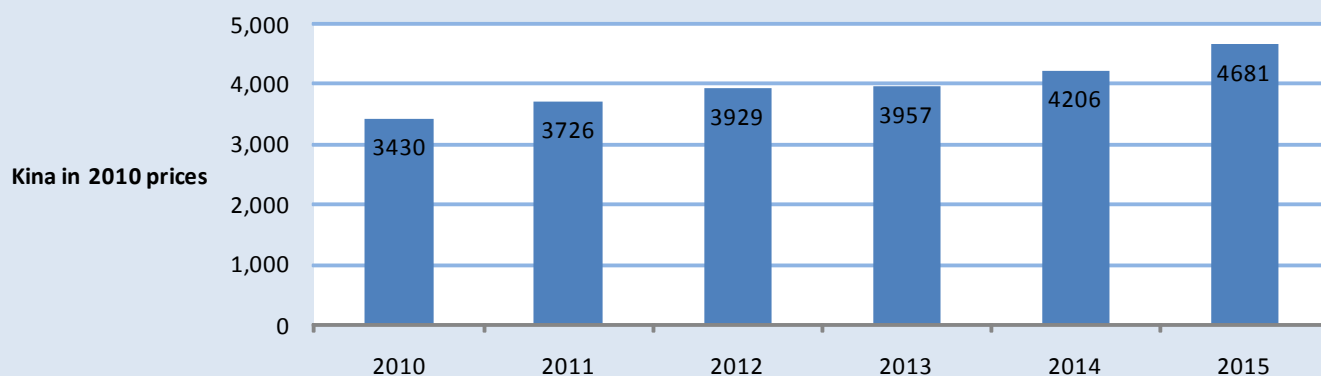
Importantly the expected economic growth will be shared amongst Papua New Guineans with the MTDP putting in place the PNGDSP policies for broad based and inclusive growth. In fact non-mining GDP growth is expected to exceed total GDP growth over the years 2011-2015, averaging 9.0 per cent (see table 2.2). The key principle for achieving this is to bring development to rural areas and this will be done through the implementation of economic corridors and the development of core infrastructure in rural areas.

The twin approach of increasing economic growth and spreading the benefits of growth will result in substantial progress in overcoming the poverty of opportunity that exists in Papua New Guinea. In doing this, important progress will be made against the first Millennium Development Goal (MDG) of eradicating poverty.

The growth in GDP per person outlined in figure 1.1 and the rise in employment in both rural and urban areas outlined in figure 1.2 are key indicators of progress against MDG 1.

## 1.1 Growth in GDP per person, 2010-2015

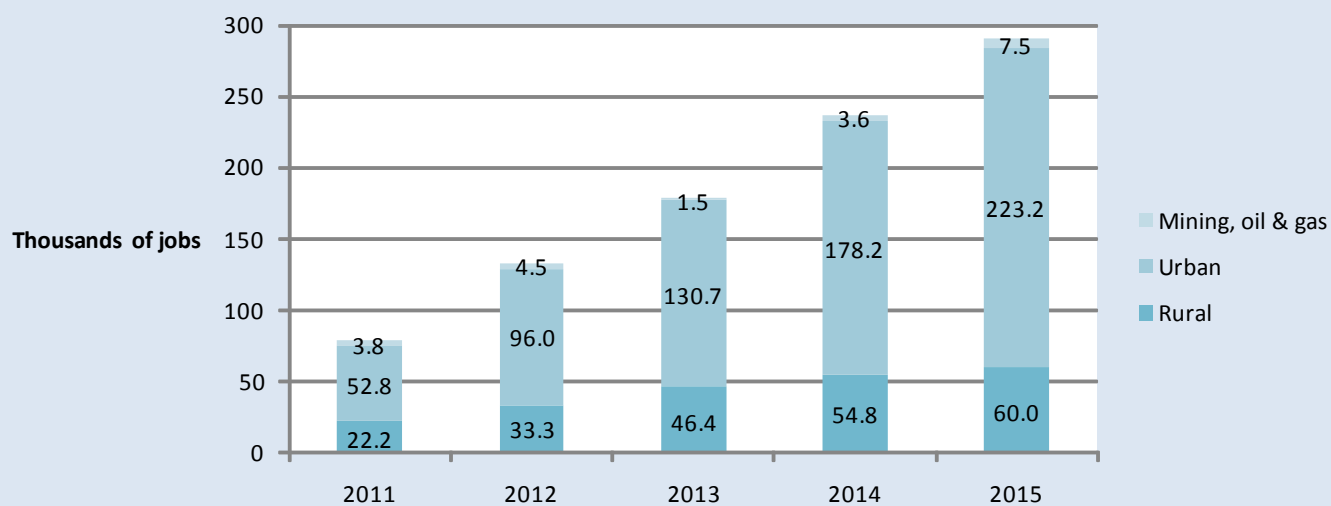
Kina per person in 2010 prices



Source: These forecasts are calculated using the Government's high-tech model of the PNG economy, PNGGEM

## 1.2 Job creation, 2011-2015

Thousands of jobs created by sector



Village informal	17,500	25,500	31,100	35,800	37,400
Rural formal	4,700	7,800	15,300	18,900	22,700
Mining, oil & gas	3,800	4,500	1,500	3,600	7,500
Manufacturing	4,000	6,700	9,100	12,000	14,800
Construction	16,400	28,000	37,300	51,300	64,300
Commerce	7,900	13,500	18,100	24,600	31,600
Transport	2,900	4,700	5,800	7,700	9,400
Other services	18,500	38,200	54,400	74,600	93,400
Urban informal	2,900	5,000	6,000	8,000	9,800
<b>Total jobs created</b>	<b>78,800</b>	<b>133,800</b>	<b>178,700</b>	<b>236,600</b>	<b>290,800</b>

Source: These forecasts are calculated using the Government's high-tech model of the PNG economy, PNGGEM

Perhaps the best way to measure the success of the MTDP is to gauge how many jobs are created. By 2015 there will be an additional 290,800 people who will have jobs (see figure 1.2). This compares with about 121,700 additional jobs without the MTDP. About 244,000 of these jobs will be in the formal sector with most of the balance representing additional rural employment at the informal level in the village environment (figure 1.2).

More than 223,000 jobs are expected to be created in urban based industries. Most of this reflects job creation in services – particularly in construction (see figure 1.2). This is a result not only of the construction phase of the LNG Project, but a surge in MTDP infrastructure investment initiatives and the associated stimulus to private sector investment. Education and health are other services industries expected to generate a sharp increase in employment as a result of MTDP initiatives. The commerce industry too will generate strong job growth on the back of higher consumption and investment.

Despite the focus of the MTDP on rural development, the gain in jobs for rural based industries is expected to be 60,000, which is less than the growth expected in urban based industries. This is because the emphasis is on the development of rural infrastructure which will take time to build and for which the economic benefits to the rural population will not be felt in full until future years. Much of the employment growth in urban based industries will be due to the development of rural infrastructure.

Amongst the initiatives outlined in the MTDP, the areas that will deliver most impact to jobs and economic growth will be in land, law and order, higher education, transport, and electricity infrastructure. The economic impacts of initiatives in each of these areas is outlined in table 1.1. For example, the economic benefits associated with implementing the MTDP initiatives for higher education will result in an additional K464 million in GDP in 2015, K144 million additional tax revenue, and nearly 30,000 more jobs (table 1.1).

**Table 1.1 – The economic gains in 2015 from the implementation of selected MTDP initiatives**

	Gain in GDP K million	Gain in tax revenue K million	Number of jobs created
Land	864	460	22,446
Law and order	1002	834	41,947
Higher education	464	144	29,847
Road transport	2362	702	52,396
Water transport	857	266	17,726
Electricity	572	165	17,522

## **Part 2: Conducive environment required for implementation of MTDP 2011-2015**

The first MTDP 2011-2015 is designed to ensure necessary conditions are met, enhancing institutional capacity and key enablers in order for the economy to ride on the gains to advance into high productivity mode. The success of this MTDP will be underpinned by a stable political environment and a productive and proactive public service machinery. The implementation of key impact programs under the MTDP will require accommodative macroeconomic management, especially where both the fiscal and monetary policy regimes are responsive to the development needs of the country and yet serve the fundamental role of maintaining macro stability.

The development of the financial sector to encourage an entrepreneurial culture and a vibrant business and investment sector that competitively promotes private sector led growth is crucial under the MTDP. To lay the foundation for competition and growth State owned enterprises will also be required to play key roles in mobilizing resources and investing in the key enablers such as transport infrastructure, utilities, and human resources, including for the Economic Corridor development. A pragmatic trade policy regime will have to be pursued under the MTDP to ensure that the Government's intention for international trade diplomacy is effectively pursued and PNG gains from such arrangements.

### **2.1 Current policies and potential risks**

The Government will implement the MTDP under the existing policy environment. Important policy initiatives of the Government that are already in place will be reinvigorated to accommodate the development agenda of PNG. The policy environment that the MTDP will operate is expected to be responsive, accommodative, and pro-growth. There are already important policies in place and they will be reinforced while necessary policy initiatives will be introduced to accommodate the pursuit of the PNGDSP for achieving the Vision 2050.

The macroeconomic policies of the Government have been to promote sustainable growth led by private sector investment in the non-mining sector. This has already proven to be fruitful. Over the last 5-years since 2005 non-mining GDP growth has exceeded mining GDP growth, signifying a considerable policy achievement where growth has been broad-based. With the LNG Gas Project coming on stream in 2014 the Government is well aware of some of the adverse impacts of large inflows of foreign currency earnings and will now use the MTDP 2011-2015 to expand the supply-side constraints and the productive capacity of the economy.

The existing macroeconomic policies will provide the umbrella for the MTDP to operate. The economy has enjoyed considerable stability in the fiscal performance of the Government because the Government has adhered to the principles under the Fiscal Responsibility Act and has been guided by both the Medium Term Fiscal Strategy (MTFS) and the Medium Term Debt Strategy (MTDS). The Government will continue to adhere to the guidelines under these important policy documents and where necessary review certain aspects to accommodate the agenda under the MTDP.

The monetary policy conduct of the Government has also been guided by the objective of attaining price stability and promoting a vibrant domestic financial system, including the payment and settlement systems. The economy has done well in realising price stability and even safeguarding itself from the adversity of the 2008 global financial meltdown. The challenges in the conduct of monetary policy will be ever increasing as the economy grows under the PNGDSP. It is anticipated that monetary policy will broaden its objective to accommodate the Government development agenda and not just stabilization.

The trade policy initiatives of the Government will be pursued in the MTDP with greater emphasis on trade and investment promotion to realize a broad-based private sector led growth. The Government will pursue trade liberalization and export promotion with more vigour and determination under the MTDP. It will continue to pursue its trade and investment strategies through accommodative sectoral policies, especially by making land available in the Economic Corridor areas for special free-trade and industrial zones to be developed within those areas and ensuring a well connected transport and utilities services throughout PNG.

In international trade and relations, PNG has a mutual relationship with all its partners and will continue to engage with them. The 'Look-North' policy will be pursued with emphasis on trade-diplomacy in order for PNG to become involved in the production network of the East Asian economies.

On the domestic front, key sectoral policies and initiatives will continue to be pursued with closer collaboration and coordination among the sectors. Mineral exploitation will follow the existing arrangements with the State taking more stake in future project development. Likewise investment in forestry, agriculture, and fisheries resources and in downstream activities will comply with existing environment law and policy guidelines. The Government will continue to promote income earning opportunities by providing linkages to markets, encouraging provision of credit to small business activities, and encouraging the activities of the informal market to sprout.

The Government is committed to pursuing its human development policies through existing health and education initiatives. PNG has taken the challenge to reverse the regressing conditions of human development and will strategically pursue all its sectoral policies and strategies to reverse the trend, hence achieving the targets of the PNGDSP. By intervening in the 'poverty hot-spots' of PNG, mostly in rural PNG, the Government will be able to achieve the tailored MDG goals by 2015.

The momentum of the reforms pursued since 1995 will continue under the MTDP where structural impediments to business and investment will be addressed to allow for competition in the economy. State-owned enterprises have been corporatized and in their areas of operation competition has been gradually introduced for consumers to benefit more. The introduction of competition to the telecommunication industry speaks for itself. The open-sky policy has brought competition, lower prices and increased services to both international and domestic destinations in the airline industry. The Government will continue to promote level playing fields by avoiding preferential treatment, including tax concessions and subsidies. The Government will safeguard investors by enforcing contract and property rights law. In all its endeavor, the objective will be to promote a private sector led-growth for the economy.

Competition is not however the panacea for delivering services and improving the living standards of all the Papua New Guineans because market failure exists. The Government's role in the modern PNG is well defined as it will continue to play its traditional role in delivering basic services to its people. The Government will rely on the Public Private Partnership (PPP) modality and other arrangements to deliver the services to the people of PNG, while providing the necessary conditions and enforcing the rule of law for business and investment to come into play.

To effectively deliver results to rural PNG the Government has initiated policies in the PNGDSP. Some of the policy initiatives that will give more weight to the MTDP implementation include: a Corridor Development Policy, an Electricity Development Policy, a Land Use/Development Policy and a Rural & urban development policy.

The implementation of the PNGDSP and its subsequent rolling MTDPs are subjected to various risks. Paramount on the list of possible risks is political instability or discontinuation of development focused policy under future political regimes. The political environment has been stable over the last 8 years largely due to the Political Integrity Act. This was crucial for the reform process and was a core reason for the robust private sector led growth. Sustaining political stability will be necessary for realizing Vision 2050.

Law and order and social unrest or conflicts are also areas that pose risks, especially for deterring potential investors and inhibiting delivery of services to the rural populace. The LNG gas project is expected to lay the foundation for significant resources to flow into PNG which will be used to leap-frog development. From the construction phase through to production there will be a delicate balance of landowner interest and conflicts which the Government has the prerogative to manage.

PNG relies heavily on the exports of its traditional commodities. This exposes PNG to important risks of negative shocks to the global economy, including declines in commodity prices. Global economic and financial crisis have the potential to destabilize the PNG economy because of its integration through trade and financial channels. However, there are upside risks too as commodity prices and the global economy may experience periods of unexpected growth.

## 2.2 Economic outlook for 2011-15

Since 2005, PNG has experienced sustained and strong economic growth that has not been seen before. Growth averaged 5 per cent between 2005 and 2009 despite the global financial crisis. This growth can be traced to four key factors:

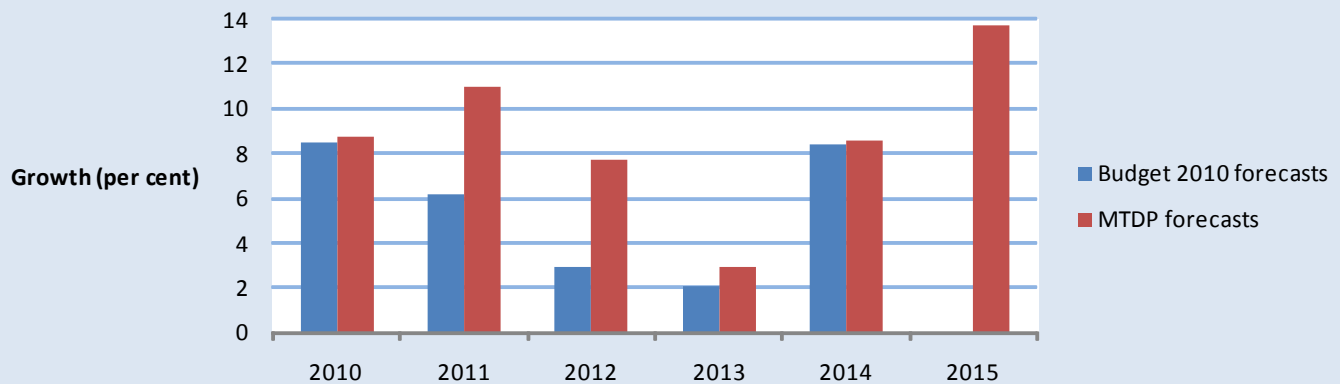
- the new era of political stability that has resulted in improved governance and increased private sector confidence;
- a return to macroeconomic stability underpinned by exchange rate and interest rate stability;
- improvements in infrastructure, especially telecommunications; and
- increased Government development expenditure investments.

The 2010 Budget forecasts anticipate this rate of average growth to continue in the period 2010-2014 (see figure 2.1). These forecasts are based on an assumption of continued political and macroeconomic stability and take into consideration the considerable investments associated with establishing PNG's first LNG project. Also taken into consideration is the anticipated winding down in production at the Ok Tedi mine by 2013.

A surge in development expenditure for MTDP initiatives to improve infrastructure and services points to even higher growth than previously anticipated in the Budget 2010 forecasts. Figure 2.1 outlines the MTDP forecasts for economic growth using the PNGGEM model of the PNG economy taking the additional MTDP initiatives into consideration. Implementing the MTDP is expected to result in an average rate of growth of 8.7 per cent between 2011 and 2015. Growth is expected to average 7.6 per cent through to 2014 before surging to nearly 14 per cent in 2015 as a result of the LNG Project commencing production.

### 2.1 Growth in real GDP, 2010-2015, Budget 2010 and MTDP forecasts

per cent growth



Source: The MTDP forecasts are calculated using the Government's high-tech model of the PNG economy, PNGGEM

After navigating through difficult times since 2008, the global economy has begun to recover and is expected to return to normal growth levels during the MTDP period. Importantly, PNG's main trading partners fared well during the global downturn with Australia avoiding recession and China continuing on its path of very strong growth. Robust growth in China is particularly important for PNG as the revenues received for PNG's mineral exports will increasingly become dependent on the dominant China market.

Growth in China is expected to underpin robust prices during 2011-2015 for PNG's key mineral commodities. However, the current high level for gold prices is expected to recede until a small recovery after 2012 (see table 2.1). Oil prices are expected to rise steadily to approach US\$100 a barrel by 2015, and copper prices are expected to remain at current high levels. Strong prices in gold, copper and oil point to a healthy revenue base for the Government over 2011-2015.

**Table 2.1 - Forecast world prices for oil, gold and copper, 2010-2015**

	2010	2011	2012	2013	2014	2015
Oil US\$ a barrel	\$72	\$76	\$84	\$92	\$100	\$105
Gold US\$ an ounce	\$1118	\$1010	\$873	\$885	\$933	\$975
Copper US\$ a tonne	\$6762	\$7025	\$7779	\$7434	\$7021	\$6588

Source: Official forecasts of the Australian Government

In table 2.2 is provided detailed forecasts of a range of key macroeconomic variables for 2011-2015 with the implementation of the MTDP. Strong capital inflows associated with the investment in the LNG Project and robust commodity prices are expected to underpin a strengthening of the exchange rate over most of the MTDP period. This is despite growth in import volumes exceeding growth in export volumes. Strong import growth is associated with a surge in investment driven by the LNG project as well as robust growth in consumption. Papua New Guinea's national income is expected to expand at an unprecedented pace during 2011-2015 providing the basis for the strong growth in consumption.

**Table 2.2 – Forecast growth for key macroeconomic variables, 2011-2015**

	2011	2012	2013	2014	2015
Real exchange rate (positive is appreciation)	6.7%	2.8%	-2.9%	4.2%	2.4%
Real GDP	11.0%	7.7%	2.9%	8.6%	13.7%
Real non-mining GDP	11.2%	9.1%	7.3%	9.0%	8.4%
Real Gross National Income	11.1%	10.5%	3.7%	9.0%	11.9%
Real consumption	13.6%	8.9%	2.8%	7.8%	6.6%
Real investment	28.6%	12.7%	6.8%	12.0%	6.5%
Export volumes	7.6%	5.6%	-5.8%	7.4%	23.1%
Import volumes	14.5%	11.5%	1.5%	10.8%	12.5%

Source: Forecasts are calculated using the Government's high-tech model of the PNG economy, PNGGEM

### 2.3 Political stability

The sustained, rapid growth experienced by PNG since 2005 can be largely attributed to the nation's newfound political stability.

Prior to the adoption of the Organic Law on the Integrity of Political Parties and Candidates (OLIPPAC) PNG's political, social and economic conditions were in a poor state. A key problem was political instability resulting from frequent changes of Government through votes of no confidence. Frequent re-structuring and policy reversals, ad-hoc decision making processes, unclear policy settings and development strategies all contributed to a breakdown in the delivery of vital services such as health, education and infrastructures to the people.

In 2001 the Mekere Government introduced the OLIPACC to stabilize PNG politics by enhancing the role of political parties in Parliament and at the same time provide a stable political climate. What ensued was almost ten years of political stability under the National Alliance-led Government until the ruling in July 2010 by the PNG Supreme Court which nullified specific provisions of the OLIPACC.

OLIPPAC helped to assure PNG a stable political climate. In the years since its inception investor confidence climbed and PNG experienced its longest period of sustained, high economic growth since independence. Although the exact impact of OLIPPAC may be debatable, it provided PNG the foundations conducive to long

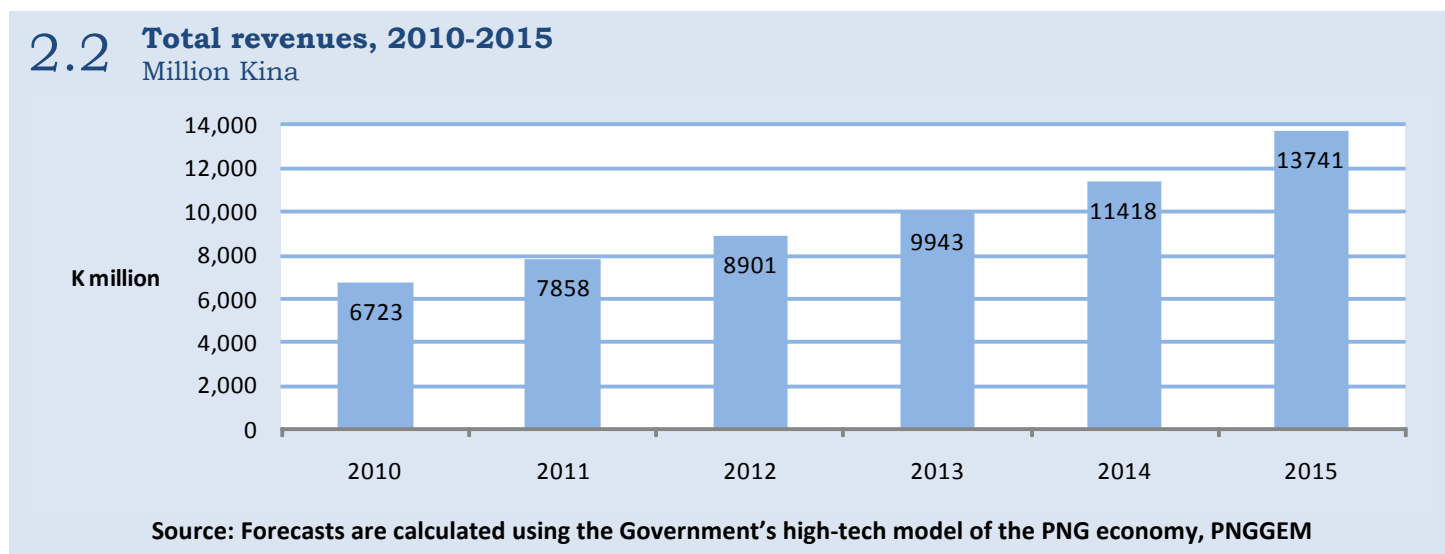
term economic growth and prosperity. In the same way, political stability was essential for the sustained rapid growth achieved by PNG's neighbouring countries Indonesia, Malaysia and Thailand. Interruptions to political stability on the other hand undermine investor confidence and economic growth.

It is now a matter for Parliament to review the provisions of OLIPPAC that have been ruled to be unconstitutional and redraft this very important law. The big challenge is to introduce constitutionally valid legislative settings that will give effect to political stability and set the conditions for positive economic growth aided by clear strategic development policy thinking and settings.

## 2.4 Fiscal situation

### *The outlook for Government revenue*

Government revenues are expected to experience robust growth over the years 2011-2015 (see figure 2.2). This is in line with the rapid economic growth discussed in section 2.2 and is supported by the expectation that healthy commodity prices will continue as outlined in table 2.1. A surge in revenue in 2015 is associated with production commencing in the LNG Project. Mining and petroleum revenues will continue to be dominant, particularly from 2015 as production from the LNG Project ramps up. However, much of the growth in revenues is expected to be sourced from the broader economy. GST, personal income tax and non-mining corporate tax collections are all expected to rise rapidly during 2011-2015.



### *The existing fiscal regime*

Since the early and mid 2000s, the fiscal situation in PNG has undergone substantial change. In 2010, the circumstances are very different to what they were when the Medium Term Debt Management Strategy, the Medium Term Fiscal Framework and the Fiscal Responsibility Act (2006) were formulated. PNG is now beginning to outgrow the current system of fiscal management and some adaptations will be needed for implementing the MTDP, as outlined in section 2.1.

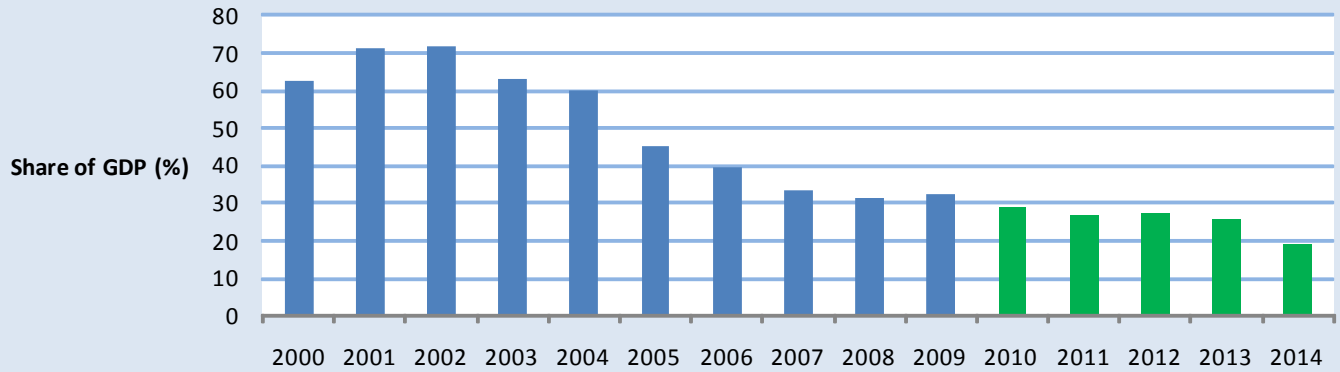
On the global stage, PNG is in the enviable position where public debt has fallen sharply since the early 2000s to reach 32 per cent of GDP in 2009 (see figure 2.3) and is expected in the 2010 Budget to drop further to 29 per cent of GDP in 2010 and then to just 19 per cent by 2014. This positions PNG as a country with very low public debt on the international stage and contrasts sharply with the high public debt levels of many advanced countries - in many cases exceeding 100 per cent of GDP.

As outlined in the PNGDSP 2010-2030, PNG is now reaching a position where it may be counterproductive to make any further significant reductions in debt. Borrowing money to finance nation building activities can accelerate economic growth, and when the finance is provided by international institutions such as the World Bank or Asian Development Bank it is available at very low interest rates. Further discussion on this matter is provided in Part 7 in the context of resourcing the MTDP.



## 2.3 Public debt, 2000-2009 and Budget 2010 forecasts for 2010-2014

Public debt as a share of GDP



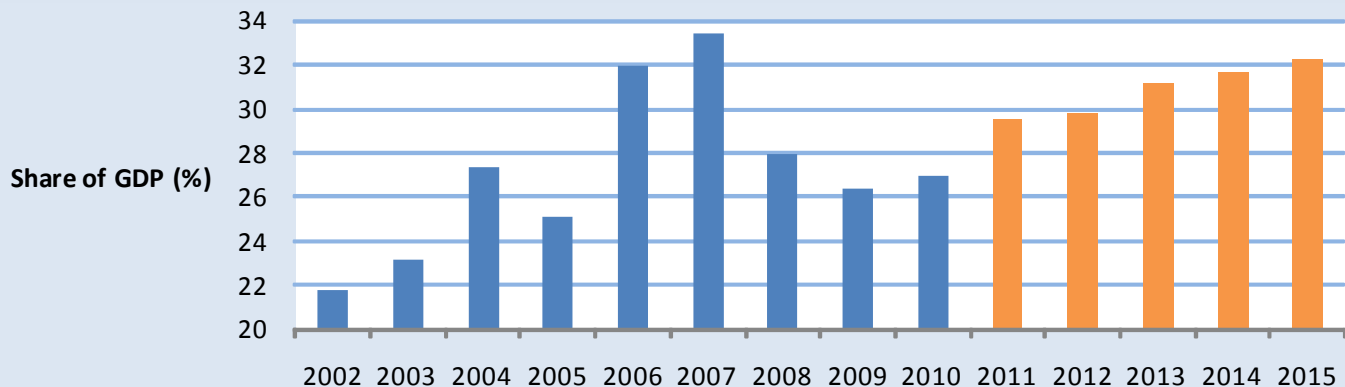
Source: 2010 Budget Papers.

The Fiscal Responsibility Act has been particularly effective in delivering a stable and prudent Budget bottom line. Since 2005 there have only been two years when the Budget has fallen into deficit. The global financial crisis led to an unexpected slump in revenues late in 2008, resulting in a modest Budget deficit of 2.2 per cent of GDP. A further deficit of 0.2 per cent of GDP in 2009 was a very good outcome considering the global recession and the difficulty governments around the globe have had in reigning in deficits.

However, the stability in the Budget bottom line is masking an alarming volatility in government revenues (figure 2.4). In order to maintain a stable Budget bottom line, it has been necessary to match the volatile revenues with equally volatile expenditures. This has significant consequences for macroeconomic stability, including stability in the balance of payments. Government revenues rose from 25 per cent of GDP in 2005 to 33 per cent in 2007 before falling back to 26 per cent in 2009 (figure 2.4). This is because government revenues have increasingly become dependent on taxes and dividends from mining and petroleum. In turn, these revenues depend on global prices for the commodities produced and the volatile and unpredictable nature of the international commodity markets is reflected in government revenues. Of concern is that the volatility in revenues have been unpredictable.

## 2.4 Government revenue, excluding grants, 2002-2009

Revenue as a share of GDP



Source: Budget Papers for 2002-2010 and PNGGEM modelling for 2011-2015

The result has been that forecast government revenues can differ sharply from actual revenue outcomes. For example, in 2007 the forecast in the budget was for revenue to reach K4.5 billion but actual revenues in 2007 were in fact K6.3 billion. Since 2004, government revenues have exceeded the amounts forecast in the annual Budgets by K4.8 billion in aggregate – equivalent to 22 per cent of 2009 GDP. This is a considerable discrepancy that has had to be dealt with through supplementary budgets and allocations to trust accounts.

This makes expenditure planning very difficult. When the LNG project comes on stream this situation is set to get much worse as a result of the direct link of the revenue stream to global prices for oil.

For the years 2011-2015, Government revenue is expected to steadily increase to 32 per cent of GDP. However, this remains subject to uncertainty so long as world commodity prices are unpredictable. In section 7.4 of part 7 is provided alternative revenue projections to account for alternative commodity price scenarios.

### ***Moving forward to a new fiscal regime***

A plan for moving the fiscal regime forward to accommodate the new circumstances and to resource the MTDP is described in Part 7. This includes a discussion on the adaptations needed in the legislation that governs fiscal responsibility. A way forward for dealing with the uncertainty of Government revenues is outlined in section 7.4 of Part 7. The key elements are:

- to identify areas of expenditure that are made flexible so that expenditure in these areas is increased if revenues are higher than anticipated and reduced if revenues are lower than anticipated; and
- to allow flexibility in borrowing for MTDP initiatives so that borrowing is reduced when revenues exceed forecasts and increased in the event of low revenues.

## **2.5 Monetary situation**

### ***Price stability and low interest rates***

Achieving and maintaining an economic environment of stable prices and lower interest rates is critical in order to implement the key sectoral strategies outlined in the first MTDP period and onwards. This is because stability in prices will support further investment expansion in key infrastructures that PNG badly needs in order to lay the foundation for future growth in other sectors of the economy going forward. Stable prices will also help maintain the real value of the kina, providing certainty for Papua New Guinean wage earners.

As outlined in section 2.2, low and stable interest rates have been central to the recent period of healthy economic growth. It will be important to maintain this in order to underpin investor confidence. High or volatile interest rates would make it difficult for businesses to borrow and invest in PNG and would increase the cost of living for most citizens.

Successful implementation of the key enabling sector strategies in the first MTDP will largely depend on maintaining a stable price and lower interest rate environment going forward. In fact doing that will not only ensure macroeconomic stability but also economic development as more businesses will be encouraged to embark on more investment.

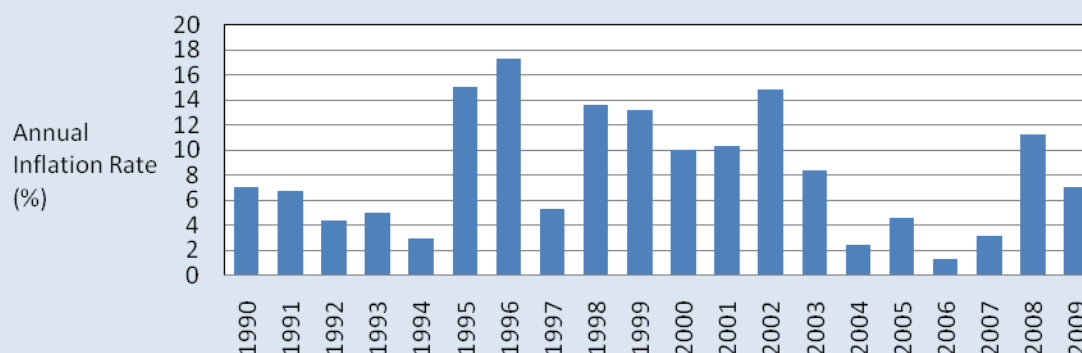
PNG's policy approach thus should put an emphasis on addressing the causes of inflationary pressures rather than relying solely on monetary policy to treat rising inflation with high interest rates.

### ***Monetary policy***

PNG's inflation rate was high and volatile from the 1990s until 2002 as demonstrated in figure 2.5. However, this changed with the introduction of the *Central Banking Act 2000* which removed political interference and granted full independence to the Bank in conducting monetary policy. This has continued to make the Central Bank successful in managing the exchange rate with an emphasis on stability and preventing the sharp fluctuations that prevailed before 2002. As a result, inflation since 2003 has been low and stable, apart from 2008 when global fuel prices surged – a factor outside the control of PNG. Similarly, interest rates have become stable.

It is important for the independence of the Bank of PNG to be maintained in order to create a conducive environment for business and investment so as to underpin the successful implementation of the first MTDP 2011-2015.

## 2.5 Annual inflation rate, 1990-2009 per cent



As experienced in the late 1990s, movements in the Kina are a major influence on inflation. When the Kina depreciates, imports become more expensive in Kina terms, fuelling inflation. This explains the high degree of correlation between the exchange rate and PNG's inflation rate. The Bank of PNG has moderated short term fluctuations in the exchange rate, and in that way has helped to cushion PNG from short term inflationary impacts. However this policy would be more effective if the exchange rate was stable against a trade weighted mix of currencies, rather than against the US dollar only.

### ***Alleviating inflationary pressures***

Monetary policy can be effective as a short term response to inflationary pressures, but there are limits to how much monetary policy can control inflation when it is caused by factors outside of PNG's control – for example rises in global oil prices. Over the medium to longer term, other policy measures rather than monetary policy are required. In particular, policy measures that boost productivity, lower costs of production, and that address supply constraints that lead to inflationary pressures.

Among the key causes for inflation in PNG is that PNG lacks the productive capacity to respond to rising demand. In particular, land is not available for productive development, resulting in high and rising costs for real estate. Further, there is a severe shortage of skills in PNG that imposes a high cost on the economy from having to import labour. Addressing these two supply constraints are among the key policy initiatives of the MTDP 2011-15.

Maintaining an open and competitive economy is another key element of the MTDP 2011-15 that will be important for keeping prices down. This is because the threat of competition provides a strong incentive for businesses to innovate in order to ensure their prices are attractive to customers.

## 2.6 Financial sector development

The development of the financial and banking sector is an essential element of the growth and prosperity espoused under the PNGDSP 2010-2030 to achieve the objectives of Vision 2050. This MTDP is to be implemented under an environment where the financial sector is responsive to the transaction and investment demands of both the private sector and the people at all levels of society. The Payment and settlement systems should operate with some level of efficiency that is comparable to international standards and the transaction and unnecessary overhead or hidden costs to the sector and the economy should be minimized.

The Bank of PNG (BPNG) has supervisory and regulatory responsibility of the financial and banking sector and oversees the payments and settlements system in PNG. As part of developing the sector, the BPNG is to ensure innovation and competition is encouraged, including diversification of financial products that not only give more opportunities to business and investment but opens up access for the rural communities to integrate the informal systems to the financial and real sectors.

In the MTDP period the BPNG is expected to consolidate its policy initiatives and reforms while at the same time lay the foundation for the sector to attain the depth, buoyancy, and elasticity that is comparable to global best standards.

***The Medium Term Strategies for Consolidation:***

- Stable interest rates underpinned by the pursuit of an optimal inflationary target.
- Expansion of credit to the private sector, especially for productive investment in the construction, extractive, agriculture, and downstream manufacturing industries.
- Further develop financial products that meet the demands of small enterprises and newcomers as they have difficulty securing investment funds from commercial banks due to their higher risk premium.
- Encourage innovation and initiatives from the banking sector to improve efficiency in services by cutting down on transaction and overhead costs and other hidden costs, such as waiting-costs, that add inefficiency to the economy as a whole.
- Continue to encourage the outreach of financial services to the grassroots level through the microfinance and other credible facilities.

***The Medium Term Initiatives for long term growth:***

- The depth of services remains thin in the formal sector by international comparison. As the economy grows and expands complexity and diversification of products should be tailored to meet specific demands.
- Financial services to rural areas are still underdeveloped and the majority of the population is cut off from the formal market system. Product diversification is to be encouraged to meet the demands of informal business activities and for more rural outreach aimed at integrating the non-monetary sector to the formal sector.
- Immediately undertake a financial sector review with the objective to develop strong capital markets with sufficient liquidity that will meet domestic credit demand as well as attracting foreign investors to tap in.

## **2.7 Business and investment**

The PNGDSP goal for business and investment is for PNG to offer an attractive environment that encourages business in PNG. The Government will ensure rules on governance, institutions, and legislation is enforced. The law and order problem must be kept at bay while investment in public infrastructure and utilities is undertaken to accommodate the growth of economic activities.

The Government, in partnership with development partners and state-owned enterprises, will invest broadly in the key enablers to pave the way for business activities and investment to take place in the 10 Economic Corridors of the PNGDSP. The Government will continue to supervise the free market to ensure it functions efficiently with clear rules and regulations while at the same time intervening in areas where markets fail to maximize its social welfare function.

***Medium Term strategies to promote Business and Investment activities will concentrate on:***

- Ensuring administrative and institutional systems and processes that facilitate business and investment attain levels of efficiency compatible with international standards. This MTDP will focus on promoting;
  - a sound legal system;
  - well-defined and protected property rights;
  - a transparent and mature property market;
  - a reliable and competitive financial system; and
  - low transaction costs in setting up and running businesses.
- Investing in transport infrastructure and connectivity.
- Investing in utilities, energy, telecommunication, ICT, through PPP.
- Investing in human resource to build a local skilled workforce.
- Promoting domestically owned businesses to invest abroad.

## **2.8 Competition and consumer protection**

### ***Recent successes***

PNG has achieved success in competition policy in recent years, showing the way forward for other developing nations. The introduction of competition into the mobile phone sector, for example, has resulted in the proliferation of mobile phone services throughout the country. Similarly competition in the international and domestic air sectors has resulted in lower fares, and more innovative service, helping to connect the nation. Similar success is envisaged under the MTDP 2011-15 across a broader range of industries.

### ***The way forward***

Fair competition and consumer protection policy are key elements of the MTDP 2011-15. Fair competition and consumer protection will provide the right environment for businesses to flourish to the benefit of all Papua New Guineans. Businesses will focus on serving their customers well and on investing for growth instead of on keeping competitors out of their industry or on attempting to influence Government administration in their favour. In this regulatory environment, PNG's economic growth will be enhanced and will lead to higher living standards for all Papua New Guineans.

The Independent Consumer & Competition Commission (ICCC) plays an essential role in enforcing competition, fair trade and consumer protection regulations. The ICCC will be well resourced under the MTDP to fulfill this role effectively, particularly in the key services sectors of ICT, transport, electricity and construction and in the key goods sectors of processed foods and construction materials.

The introduction of mobile phone competition has delivered substantial efficiency and lifestyle dividends across the country. Under Phase 2 of the Government's ICT policy, competition will be extended to the provision of internet services and to the international gateway, helping to substantially lower ICT costs in PNG and allowing service providers to extend services across PNG. Where the provision of internet and phone services is not commercially viable, public private partnership will be considered to enable all Papua New Guineans to have the opportunity to share in the gains from ICT. Tenders for private participation in PPP will be competitive in order to obtain the most beneficial partnership for PNG.

As outlined in section 2.8, competition has a role in key sectors that are overseen by State owned enterprises, including air transport, electricity supply and water and sewerage services. State owned enterprises will use a competitive tender process to identify the most cost effective options for the Government to provide essential infrastructure and essential services. Through this competitive process, private parties will be contracted to help State owned enterprises meet the MTDP targets for their sectors.

PNG's future living standards depend on the construction undertaken under the MTDP 2011-15. The construction sector will be relied upon to build the roads, airports, water ports, ICT networks, and electricity infrastructure identified as critical in the MTDP. However there is a serious shortage of skills within PNG that will prevent the domestic sector from delivering the level of service PNG needs. Given the extent of infrastructure development required under the MTDP 2011-15, there is also likely to be a shortage in equipment and finance in the domestic sector. PNG will therefore need foreign construction businesses to operate in PNG. The Government will actively pursue foreign participation by advertising all construction tenders overseas. Tenders will provide clear guidelines about the taxation and legal treatment of businesses. Conditions on tenders will be designed both to encourage foreign participation and to encourage investment in local skills development, for example through joint venture arrangements.

Furthermore, because of the importance of construction for PNG's future, it is critical that construction materials are readily available and at a reasonable price. Therefore the ICCC will be tasked to ensure the supply of construction materials is competitive.

Processed food is also important under the MTDP, because its development will pave the way for value adding to PNG's agricultural sector. The ICCC will therefore also be tasked to focus on this sector and ensure the business environment allows new entrants into every part of this important sector.

Raising awareness is a key strategy of the PNGDSP for improving consumer protection and fair trade practices. For this reason, the ICCC will be mandated and resourced to raise awareness of rights and responsibilities among business and among consumers.

The ICCC has to date played the additional role of reviewing and recommending competition policy reform. This responsibility had been conferred on the ICCC because of both its expertise and its independence from industry. ICCC has performed remarkably well, contributing key reports such as the PNG Housing and Real Estate Industry Review of 2010. However it is good practice for policy formulation to be undertaken independently of both industry and of ICCC. ICCC's role in prosecuting anti-competitive behaviour often puts ICCC in legal conflicts with business, and this may lead ICCC to prefer policies or regulations that unfairly undermine the rights of business. To avoid this situation, under the MTDP, the responsibility for reviewing and recommending competition policy reform will be vested in a body that is independent of both industry and of the ICCC. To this end a Competition for Development Branch will be established in the Department of National Planning and Monitoring to advise on how to achieve the ultimate goal of the PNGDSP through competition and consumer protection policy.

## **2.9 State owned enterprise reform**

### ***State Owned Enterprise policy framework***

The PNGDSP outlines the broad policy framework to position State owned enterprises (SOEs) as crucial institutions for PNG's development into a middle income country by 2030. The key ingredients are as follows.

- Public enterprises will play a pivotal role in service delivery and infrastructure development. Although privatisation may be further considered as a means for improving efficiency and effectiveness.
- Private sector competition will impose an ongoing obligation for SOEs to operate efficiently using cutting edge industry technology. This is because the performance of SOEs can be measured against their private sector competitors. The substantial benefits of this approach have already been proven with private sector competition leading to the revolution of the telecommunications industry. As a result, the efficiency and effectiveness of Telikom has improved substantially.
- Through partnership with the private sector, SOEs can gain access to the skills, technology and finance that is needed to improve performance and expand infrastructure.
- In areas where service delivery is not commercial, the Government will subsidise investments by funding SOEs to fulfill Community Service Obligations.

### ***State Owned Enterprises in 2011-2015***

Since 2002, the main SOEs have been placed under the control of the Independent Public Business Corporation. This institutional arrangement will continue as it has been effective for better organising SOEs, improving their accountability and governance, and raising their standard of performance.

Air Niugini has faced much tougher competition on international air routes since 2008, resulting in significantly lower airfares. But in the face of competition, Air Niugini has become stronger recording a healthy profit in 2009 in a year when most international airlines suffered heavy losses, yet managing to lower airfares and improve service. As outlined in section 2.7, the success of competition will be continued by welcoming new carriers on international routes, while encouraging Air Niugini to expand its reach in the Asia-Pacific region. Barriers to domestic competition will also be broken down to ensure that Papua New Guineans receive a highly competitive and low cost service.

The PNGDSP outlines a broad plan for a national grid with an electricity transmission super-corridor. The investments required in 2011-2015 and beyond for electricity generation, transmission and distribution infrastructure will require financial resources beyond the capacity of PNG Power Ltd. Partnership with the private sector will be needed for PNG Power to have the needed financial capacity. In areas where building transmission and distribution lines is less commercial, partnership with donors may be needed. Alternatively, dividends may be reinvested for this purpose. The scope for competition in electricity generation is high, so private sector investment under competitive conditions will be relied upon to build generation capacity. For PNG Power, the bulk of its financial capacity for investment should be directed toward building the grid where competition is less feasible.

The rapid improvement in the performance of Telikom since the introduction of competition will need to continue. Over the period 2011-2015, Telikom will need to focus on the process of building and extending a reliable and technologically advanced internet service. This will need to track closely the extension of electricity services into rural areas. Through B-Mobile – the 50 per cent Telikom owned mobile phone company established in 2008 - Telikom will need to pay attention to ensuring that those rural areas that are yet to receive mobile phone services get connected. This may require reinvesting dividends in cases where building the infrastructure is not commercial.

PNG Ports Corporation Ltd operates 16 of the 21 major ports in PNG. Implementation of the PNGDSP will result in rapid growth in the demand for port services driven by rapid and broad based economic growth. It is estimated in the PNGDSP that throughput will nearly double by 2015 and increase 5-fold by 2030. As such, PNG Ports Corporation Ltd has a responsibility to build the capacity to meet the demand. The extent of the investments required will mean that partnering with the private sector will be essential.

The National Development Bank was established in 2007 to provide financial services to small and micro businesses, with a particular focus on rural areas. This is a valuable institution as making finance available to small and micro businesses will be the cornerstone of broad-based growth that benefits the whole community. Over the period 2011-2015 there will be a continued focus on building the strength of this institution both by securing more resources to make available for lending and by facilitating private sector competition to ensure the efficiency and effectiveness of the National Development Bank.

The MTDP 2011-15 will be a period in which the substantial upgrading of water and sewerage services envisaged by the PNGDSP will get underway. Eda Ranu Ltd is responsible for water and sewerage services in the NCD and should be able to extend services across the NCD population on commercial grounds. Partnering with communities may be needed to extend services into settlements. The provision of water and sewerage services in the rest of PNG is the responsibility of the PNG Waterboard. Much of the investments required for extending water and sewerage services will not be commercial which will require the PNG Waterboard to engage with communities, the private sector and development partners. Competition is generally not feasible in the provision of water and sewerage services. The efficiency and effectiveness of Eda Ranu and the PNG Waterboard will therefore need to be measured against key indicators – in particular, the standard of service delivery and the extent of infrastructure investment to extend services.

## **2.10 Trade**

In the PNGDSP the goal for trade is for PNG to realise the benefits of trade by effectively engaging with the rest of the world through international and regional trade negotiations. Trade provides PNG with market opportunities to have its products exported to earn foreign exchange and to import essential goods and services, including technological and skills transfer. The world has recently become more integrated with considerable reduction in trade barriers and the new and emerging markets in East Asia and other regions have provided PNG with many opportunities for trade.

### ***Strategies Under MTDP***

The Government will continue to concentrate on trade facilitation and bilateral negotiations to promote private sector participation. The following areas will be pursued in 2011-2015;

#### **a. Initiatives for immediate action:**

- Concentrate on developing transport infrastructure and utilities to give cost advantage to domestic exporting industries.
- Open up access to export markets by:
  - developing domestic marketing and technological capabilities to improve productivity;
  - start implementing programs and initiatives to minimise the burden upon export oriented businesses; and
  - providing a low cost, low risk environment to run a business to enable export oriented businesses to be highly competitive.
- Promoting export led growth in all industrial sectors through careful planning and sequencing.
- Promoting targeted investment through the economic corridors, and establishing at least 3 free trade and export processing zones within the corridors.
- Establishing international standards in the handling and marketing of agricultural produce in order to gain access to foreign markets.
- Establishing a Trade Development Board that will effectively and strictly coordinate and pursue trade, especially exports promotion.

#### **b. Promoting strategic policies**

- Pursue trade diplomacies where PNG's foreign policy will be focused on supporting PNG's trade and development in the following areas;
  - address both trade barriers and technical barriers to trade through systematic reforms and trade dialogue;
  - proactively engage in global integration through regional trade agreements and regional production networks, including taking a leadership role amongst Pacific island countries in global and regional trade negotiations.



- Promote outward-oriented trade policies by moving away from liberalisation of imports to facilitation of exports.
- Pursue accommodative trade policies that are aimed at supporting trade and growth by strengthening institutions, improving governance and ensuring macroeconomic stability

## **Part 3: Key sectors**

Unlocking land for development, normalizing law and order issues, investing in primary, secondary, higher and technical education, health, utilities and a quality transport infrastructure are all crucial enablers that will lay the foundations for PNG's prosperity. As such they have been grouped together in part 3. While the benefits of primary and secondary education will not manifest until about 10 years later, a highly productive workforce will be essential by then to progress is made in achieving the higher order objectives set out in the PNGDSP. Higher and technical education is also a key priority to equip the workforce to implement the PNGDSP and build the nation.

### **3.1 Land Development**

**Goal: Provide a secure, well administered land market that serves the needs of landowners and contributes to the nation's strategic development.**

#### ***Introduction***

The issue of land is central to all development initiatives whether it is a social development such as building of a hospital or a major infrastructure development such as a highway. For countries where the land is state-owned, issues relating to land are minimal. In contrast, land-associated issues for development on a customary owned land is substantial. Such is the case in PNG where a significant 97 percent of land is customarily/communally owned by tribes and clans, and only 3 percent is alienated land owned by the State.

A major hindrance to PNG's economic and social development to date is land related. It is a long and costly exercise for both the private sector and the government to negotiate for customarily owned land. Whilst the State owns 3 per cent of land, the current administration of this land is ineffective, inaccurate and lacks transparency. There's a huge backlog of resolved land related cases. Professional bodies such as the physical planners, surveyors, and engineers are essential for actual land development; however, the current skill capacity in these bodies is very low.

#### ***MTDP 2011-2015***

Informed by the PNGDSP's land development goal, the Government's National Land Development Program (NLDP) has shifted focus from addressing land administration in the central agencies to land administration at the Provincial and local levels. The NLDP 1 Implementation Plan 2011-2015 outlines the strategic areas of:

- **Land Administration and Support** – Strategic components include building capacity in Provincial Land offices in the four priority economic corridors, strengthening the lands record maintenance, storage and land services function of the Department of Lands & Physical Planning (DLPP), reviewing the land administration legislation, and development of a National Land Information System.
- **Customary and Alienated Land Development** – One of the key objectives is to release customary land for development and to ensure that the arrangement under which this is undertaken is satisfactory to all stakeholders and especially the indigenous landowners. A mechanism such as the Incorporated Land Groups (ILGs) formalizes a group of landowners to engage in leasing their land for development. The economic corridors will be implemented on customary land; therefore, the Economic Corridor Implementation Authorities (ECIA) must have capacity to deal with land issues. The current pilot projects on customary land development will be continued and will be useful for providing lessons on customary land issues to the economic corridors. The Urbanization Policy will inform the development. A special land development advisory service will be established.
- **ILGs and Dispute resolution** – The ILG amendment Act will be fully implemented within the medium term. The work on dispute resolution will be pursued in alignment and coordination with work on land administration, and customary land development.

- **Institutional Development and Capacity Building** – Institutional development and capacity building will be undertaken to strengthen partner agency operational and management capacity. This component will include land related training and education. The NLDP Office will be operational and for the first five years take carriage of coordinating the various aspects of the land program.
- **Land Use Planning** – The Government will develop a Land Use Planning Scheme to guide the best use of land. This will ensure that natural environment supporting the diverse culture is protected, that a particular economic activity is suitable for a land, and that there is sustainable economic development.
- **Housing and Land** – Housing shortage has a strong interrelation to land shortage and therefore, the Government will need to address the problem

### ***Building on MTDP 2011-2015***

The first MTDP sets in place the necessary reforms or administrative system for the land sector and the subsequent MTDPs shall build on through actual implementation. The NLDP 1 Implementation Plan 2011-2015 outlines all the deliverable within the five year plan.

In the area of land administration and decentralization, all the database systems for land records such as titles and the Land Area Geographical Information System (LAGIS) should have been fully established within the first MTDP. Subsequent MTDPs will direct that all of the land and property titles are accurately updated. The same will apply to other components.

One of the important emerging areas of interest within the current Land Program is the need to revitalize and build capacity in the provincial land offices, and decentralizing some of the central land functions to the provinces. This strategy strongly supports the concept of economic corridors. The subsequent MTDPs shall implement the strategy.

Any change or shift in the land program maybe born as a result of lessons learnt from the implementation of the program. These changes shall be incorporated in the subsequent MTDPs.

### ***Challenges in implementation***

Land is a key enabling factor for development and is also the most complicated issue in the PNG landownership context. Therefore, the Land Program must be delivered with diligence. There are many challenges and obstacles facing the implementation of the Land Reform. They include attempting to win NGOs support for the land program, inadequate funding for the program, and inactive agency participants

Another important risk is the possibility of shifting the current PNG driven land program to change to foreign driven. The current land program is driven by PNG government and must continue to be so that the cultural element of it is maintained to some extent.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Provide a secure, well administered land market that serves the needs of landowners and contributes to the nation's strategic development	<b>Land Administration and Decentralization</b>						
	LAGIS data audited and maintained	DLPP	40%	95%	99%	100%	100%
	Client satisfaction with land services	DLPP	10%	75%	95%	99%	100%
	Provincial land offices providing mandated services	DLPP, DLPGA	0%	5	12	20	20
	New land parcels available for development on alienated land	DLPP DLPGA Provincial Government, NCDC	Audit	1,000 additional parcels from base	5,000 additional parcels from base	10,000 additional parcels from base	20,000 additional parcels from base
	<b>Customary Land and Dispute Resolution</b>						
	Customary land parcels available for development	DLPP	Audit	2,500 additional parcels from base	5,000 additional parcels from base	10,000 additional parcels from base	15,000 additional parcels from base
	Number of ILGs registered in accordance with legislation	DLPP	0	7,000	15,000	20,000	25,000
	Backlog of unresolved land related disputes (more than 6 months)	MS DLPGA	Audit 15,000	13,000	7,000	2,000	1,000
	<b>Urbanization and Physical Planning</b>						
Number of approved urban plans on alienated and customary land	OoU, NCDC, DPLGA Provincial Government	0	10	30	50	70	
Lead government department	Department of Lands & Physical Planning (DLPP), Office of Urbanization (OoU), Magisterial Services (MS), National Capital Development Commission (NCDC), Office of Civil Registry (OCR), Department of Provincial and Local Government Affairs (DPLGA), National Research Institute (NRI)						

No.	Sector Strategy
1	Land administration and decentralisation
2	Incorporated Land Groups and dispute resolution
3	Customary land and alienated land development
4	Expedite economic corridors

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
<b>Land Administration and Decentralization</b>						
Accurate and updated land records that meet user requirements	1.1	95% of data is accurately updated	99% of data accurately updated	100 % of data accurately updated	100 % of data accurately updated	
Land services meeting the needs of clients	1.2	DLPP will be effectively and transparently performing its core functions  Pilot Provincial Land Offices would be established	Land services are installed and operational			
Decentralize core land administration and management functions	1.3	Pilot Provincial Land Offices established	Establishment of Land Offices in more provinces	All Provinces have land offices		
<b>Incorporated Land Groups and Dispute Resolution</b>						
Successfully resolved disputes through mediation / land courts	2.2	Backlog of disputes are settled  Mediators are trained and resourced				
<b>Customary Land and Alienated Land Development</b>						
Planned urban development on alienated	3.1					
Develop alienated land	3.2	Audit of Alienated Land is completed				
More customary land available for development	3.3					
Customary owners are aware of their land rights and land development opportunities	3.4					
<b>Economic Corridors</b>						

Expedite Economic Corridor development through the support of land administration and land management services		4.1						
Responsibility								
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1							GoPNG, donors
	2							
	3							
Total		52.8	37.1	27.8	19.7	18.2	155.7	

## 3.2 Law and Order

**Goal: Provide a Safe, Secure, and Stable Environment For All Citizens, Visitors, Communities, and Businesses to Conduct Their Affairs Freely.**

### *Introduction*

The issues of Law and Justice have a significant impact on the social and economic development of PNG. It is both a basic Human right and a fundamental precondition for a well functioning market economy. The Law and Justice programs therefore have been identified as an expenditure priority under the PNG Development Strategy 2010 - 2030.

The rule of Law is necessary to maintain the incentive to save, invest and accumulate the necessary assets that underpin higher living standards. Even for semi- subsistence village communities, the rule of law is an essential requirement for encouraging participation in the market economy. If cash incomes and assets (such as coffee trees) are under constant threat of destruction or theft, smallholders are likely to withdraw from the cash economy and revert back to conservative, but low risk subsistence livelihoods.

More importantly, crime and violence substantially reduces the quality of life in both rural and urban communities, with woman being at particular risk from violent assault. In addition, individual communities and the national as a whole bear the cost of the destruction of public assets. Local disputes can result in the destruction of community assets such as aid posts and schools and children are often prevented from attending school from fear of attack from rival groups. Criminal activities often greatly increase the cost of business operating in the formal sector and are a major deterrent to foreign investors.

### **MTDP 2011-2015**

Under the MTDP 2011-2015, a ratio of 1:900 (police: population) will be reached thus boosting the operational performance of the police force in carrying out its duties. An increase in magisterial personnel by 5% and the establishment of district courts will also help to bring judicial services to the majority of the population in the rural areas, cutting back waiting time, and reducing high costs of circuit service. Increasing backlog of cases in the National and Supreme Courts will be addressed under the MTDP 2011-2015 by ensuring that a resident judge is located in each province or region to attend to cases in a timely manner.

Rehabilitation programs for detainees in correctional institutions will be developed and infrastructure rehabilitated or developed in each province to cater for the needs of the prison population. Work towards reintegration of offenders back into the communities will be given assistance through partnerships with CSOs, FBOs, and other government agencies to cut down on repeat offenders and ensure a high number of offenders re-entering society fully rehabilitated. Capacity will be built within strategic government agencies to fight corruption at the highest level and ensure a high rate of disposition of fraud and corruption cases in the courts.

The Law and Justice Sector as is known widely is a System made up of interdependent parts. Shortcoming in one part of the system will affect the workings of the other parts thus, for the system to be fully functional, it is critical for all the parts to operate smoothly. Thus the aim of the government is to improve sectoral coordination and the functioning of the formal law and justice agencies to increase focus on crime prevention and Restorative Justice. By coordinating the sectors planning and budgeting systems, the government can ensure that the law and justice agencies operate effectively as an integrated system. The adoption of the sector wide approach by the Law and Justice Sector will see **increased coordination** of procedures, activities and funds of all stakeholders in the sector as well as **increase ownership** by the government.

The targets are projections of what we intend to achieve within the four intervals or during the four MTDPs in order to fully achieve the PNGDSP. The targets set for each interval/MTDP depends entirely on the availability of resources/funding. As can be seen the targets for the first MTDP is projected at a lower percentages because of lack of adequate funds to mobilize for higher gains. Nevertheless, the targets

increases as we move to subsequent MTDPs because of gains from the LNG dividend revenues and other triggered sources of income due to the Economic Corridor Concept. The targets are derived from indicators as provided by the agencies and they are selected because the status-quo of each indicator given needed to be looked at in great detail to address law and justice issues effectively.

The five sector strategies were derived from the Law and Justice Sector Strategic Framework which is a policy document guiding the sector agencies to operate in coordination to address law and justice issues. These five strategies were seen as fundamental issues affecting the sector and its delivery of services thus, the focus is placed upon these strategies to improvise existing capacity in the sector and developing capacity to improve service delivery and bring about development. The deliverables are tangible needs that are derived from the strategies in order to ensure that the DSP targets are achieved in 2030.

### ***Building on MTDP 2011-2015***

The MTDP 2011-2015 will set the stage for progress during the next three MTDPs towards 2030. Police manpower will increase from current police: population ratio of 1:1,200 to 1:400 by 2030. Adequate infrastructure development and increased capacity building within the judiciary will lead to greater number of magistrates and judges stationed at district and provincial level by 2030 and will ensure that outstanding backlog cases will also be reduced by 50%. Improvement in inter-agency cooperation and partnerships with CSOs, FBOs, and CBOs will increase community awareness and involvement in dispute resolution and crime prevention activities. If we achieve this target, then there will be a big gain or benefit in the sector meaning the huge amount of claim against the state is being reduced and there is no wastage.

The establishment of Provincial Justice Centers through the office of the Public Solicitor and the Department of Justice and Attorney General will see that 50% the rural population will have access to law and justice service. The subsequent MTDPs will build on the pillars of deterrence of crime, coordination of law and justice agencies and restorative justice. This will ensure that the target of 55% reduction in crime rate is achieved.

### ***Challenges in implementation***

The key constraints of the sector are covered broadly under the following categories:

#### ***Organizational governance:***

- Understanding the roles and responsibilities and how each agency is linked to the others within the sector
- Structure and manpower to complement the roles and responsibilities
- Leadership capacity lacking
- Capacity building resources constraints

#### ***Financial Management***

- Effective utilization of financial resources in areas that matters most
- Systems and processes of effective financial management
- Managing the implementation of activities especially under the development budget is not effective.

#### ***Sector Coordination***

- Lack of coordination and communication between the different levels of government. Sub-national engagement.
- Sector Planning and Budgeting and Monitoring Systems needs to be improved.
- Sector Performance Monitoring and Reporting with focus on achieving results, very limited
- Law and Justice Engagement on Law and Justice Issues of a regional nature. This includes transnational crimes, money laundering, gun and human smuggle, border surveillance, etc. Very little engagement in this area.

#### ***Infrastructure Maintenance and Rehabilitation***

- Most of the infrastructure within the sector has deteriorated badly to a point where renovation is simply not an option.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Provide a safe, secure and stable environment for all citizens, visitors, communities and businesses to conduct their affairs freely	Crime rate	Sector PMF Crime survey Report	Average victimization rate 9.7%	Reduction by 25%	Reduction by 35%	Reduction by 45%	55% crime reduction (Crime managed at a reasonable rate)
	Incidence of Major Crime	Police Annual Report APR	600,000 estimated; 150,000 reported in 2005	300,000 reduction in the number of reported cases	150,000 reduction in the number of reported cases	75, 000 reduction in the number of reported cases	Reduce to 37,000 actual
	Increase police knowledge, skills & manpower	Annual Report & Police Review Report	5160 (there is one police per 1200 people) and not skilled in varying capacity	1:900 Maintain ratio between police and number of population with relevant skills and knowledge	1:750 Maintain ratio between police and number of population with required skills & capacity	1:500 Maintain ratio between police and number of population with required skills & capacity	Meet world standard or requirement i.e..one policeman to 400 people and with latest skills and knowledge (1:400)
	Number of Magisterial personnel & Establishment of District Courts	NJSS Annual Report, MS annual report	No of cases heard per magistrate per month - 98	Increase by 5% & 17 established District Courts	Increase by 25% & 30 more established District Courts	Increase by 50% & 70 established District Courts	Increase in the number of Well trained magistrates & District Courts Established in all districts
	Participative and well-informed Communities in Law, Order & Justice initiatives	NGOs, CSO, CBOs, FBO reports	Lack of community involvement and participation in maintaining law, order & justice initiatives	Develop and manage crime prevention strategies and empowering communities with justice/mediation skills	20% establishment of community justice through pub.sol office in each districts	50% establishment of community justice through pub.sol office in each districts	Effective operationalised the community/district/provincial justice centres5
	Illicit use/sales of Firearms	Gun Summit Report	Smuggling, use and illegal sales of unlicensed firearms to the general public	Increase border surveillance and monitoring/patrols and intelligence sharing. 25% into implementation of Gun summit recommendations	40% implementation of Gun Summit Recommendations	65% implementation of Gun Summit Recommendations	Fully implement the Gun summit Report Recommendations
	Logistics & Infrastructure Rehabilitation for police	RPNGC Annual Report	Ineffective and lacking	Increase Police logistics and rehabilitation of infrastructure	50% increase in rehabilitation of barracks, stations and highway bases	80% increase in rehabilitation of barracks, stations and highway bases	100% logistics & infrastructure rehabilitation for police
	Supreme and National Court cases registered and complete in a year	National Court House	Inconsistency in hearing times & backlog of court cases	1 resident judge in each province	2 resident judges in each province	3 resident judge in each province	4 resident judges to each province, No backlog of cases

	Number of programs and activities that caters for victims of crime	CIS/RPNGC Or Magisterial Services	Less (1%) programs in place for victims of crimes by CBOs and agencies	1 rehabilitation centre/program in each province	50% rehabilitation centres/programs in each province	80% rehabilitation/programs in each province	100% rehabilitation centres/programs in each province
	Number of Diversion of juveniles from prisons	CIS	Too much diversion of juveniles from prisons	1 juvenile centre in each province with introduction of harsher but rehabilitative system of correction	55% improvement	85% improvement	Penalise juvenile law offenders accordingly
	Prison facilities & CS manpower and capacity	CIS	100% run down facilities & lack of management skills/knowledge	Upgrade existing run down prison facilities/erecting Supermax and building knowledge capacity	Increase prison holding capacity to humane standards & CS human resource/capacity building	Reduce remanded cases to uphold human rights through empowering CS officer by way of training & capacity building	100% world standard prison facilities and well resourced (both human and physical) CIS
	Increase in level of Fraud and corruption prosecution	RPNGC, OC & DJAG	Lack of police capacity to prosecute fraud and corruption cases	Increase police fraud and corruption prosecution capacity	50% reduction in fraud and corruption cases	80% reduction in fraud and corruption cases	100% Reduction in fraud and corruption cases
	Rate of disposition of fraud and corruption cases	RPNGC, OC & Pub. Prosecutor	Lack of capacity in relevant agencies	Capacity building in respective agencies	50% increase in the rate of disposition of fraud and corruption cases	80% increase	100 increase in the rate of disposition of fraud and corruption
Lead government department	Law & Justice Sector Agencies						

No.	Sector Strategy
1	Improve access to law and justice services
2	Effective personnel in law and justice services
3	Adequate infrastructure for law and justice sector
4	Appropriate control of weapons, private security services
5	Public well aware of rights and responsibilities in all spheres of society

DSP 2030 deliverables	No.	2011-2015	2015-2020	2020-2025	2025-2030	Risks and Assumptions
<b>1. Improved Service delivery of selected core operational tasks by key law and justice agencies</b> 1.1. Built rural lockups and improved village courts 1.2. District courts resources 1.3. Pub.Sol.- Capacity building in province 1.4. Land mediation capacity building	1					- Lack of effective coordination agencies and different levels of

2. <b>Effective personnel</b> 2.1. Increased manpower/resources/capacity law and justice agencies 2.2. All personnel highly trained with emphasis on early & lasting resolution	2							governments - Lack of ownership by the sector agencies.
3. <b>Adequate infrastructure</b> 3.1. Facilities of adequate standard and maintained 3.2. Provision of new infrastructure as needed based on prioritization with Law and Justice Secretariat 3.3 Develop database system for Ombudsman	3							
4. <b>Control of weapons and private security services</b> 4.1. Develop and implement guns and weapons security policy following gun summit 4.2. Develop and implement private security policy to ensure is in national interest	4							
5. <b>Effective program management supporting agencies and civil society to meet sector needs and priorities</b> 5.1. Improve human rights practices in compliance to international standards	5							

Responsibility	Law & Justice Sector Agencies							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1							
Total		170.4	175.4	175.4	270.4	320.4	1112.2	GoPNG/donors

### 3.3 Health

**Goal:** Achieve an efficient health system which can deliver an internationally acceptable standard of health services.

#### *Introduction*

The current status of the sector is depicted by low life expectancy brought about by unfavourable human development indicators such as high infant and neonatal mortality rates, high maternal mortality ratio, low literacy rates of adults as well as deteriorating conditions of infrastructure such as roads and bridges, health centres and hospitals. Unfavourable economic conditions in terms of access to markets and opportunities for economic activities (mainly through paid jobs) also contribute towards the status of the quality of lives of the people.

Recent maternal mortality indicates that PNG ranks amongst the highest in the world and currently a woman in rural PNG will have a 1:25 chance of dying in her lifetime as a result of childbirth. Immunisation coverage has been low over the years and the implications are that a lot of children miss out on vital immunization and hence an increase in the number of children dying before they reach their first or fifth birthday. According to the 2006 Demographic and Health Survey, there were 57 infants between ages 0-12 months dying for every 1,000 live births; for children aged 0-5 years, there were 75 deaths out of 1,000 live births; while 733 mothers were dying during and after child-birth for every 100,000 live births. The fragmentation of health service delivery at the provincial level has contributed towards the deterioration in health service delivery in the provinces, districts and local communities. Furthermore, other challenges due to the general social, economic and political environment include population growth of 2.7%, HIV/AIDS, deteriorating law and order, and transport, communications and other infrastructure, and low provincial capacity to finance, manage and deliver social services poses a biggest challenge for the sector.

The government aims to achieve within the next 20 years an efficient health system which can deliver an internationally acceptable standard of health services by rehabilitating aid posts, health centres and district hospitals as well as trialing community health posts in strategic locations. Furthermore, there will be improvements in the storage, distribution and procurement of basic drugs, vaccinations and medical equipment through the rolling out of the Provincial Health Authority reforms. The Pacific Medical Centre will also enhance delivery of health services and promote training of health personnel, while the capacity of Angau Memorial Hospital will be developed further to distinguish it as the first “specialized” hospital equipped with modern medical equipment for the Momase Region. The other 3 “speciliased” regional hospitals will be Port Moresby General Hospital (Southern), Mount Hagen Hospital (Highlands) and the Nonga Base Hospital (New Guinea Islands).

The proposed MDG targets and indicators for PNG for the health sector have been integrated into the sector framework within the Medium Term Development Plan (2011-2015) as well as the PNGDSP (2010-2030), hence, achieving the goal of the sector as envisaged in the next five years will contribute towards achieving the ultimate goals of the PNGDSP 2010-2030 and Vision 2050.

The focus of the government within the next five years will include: (i) implementing the health reforms to improve service delivery; strengthening and coordinating partnerships with stakeholders at all levels; strengthening the primary health care systems at all levels by focusing on getting “back to basics” right, hence improving child survival and maternal health of mothers as well as reducing the burden of communicable diseases and promoting healthier lifestyles. The government will also focus on improving the health systems’ preparedness for disease outbreaks and emerging population health threats, focusing on rolling out the Community Health Posts concept and the Provincial Health Authority concept as well as establishing Angau Memorial Hospital as the first specialized regional hospital.

Pooling together and successfully implementing the efforts of all sectors including health, education, human resource development and training, transport, law & order, utilities, agriculture and livestock, mining and petroleum, non-agricultural informal sector as well as cross-cutting sectors will achieve the overarching Goal and Vision of the PNGDSP (2010-2030) which are to achieve “a high quality of life for all Papua New Guineans” and for “Papua New Guinea to be a prosperous middle-income country by 2030”. Hence, the vision and mission of the Vision 2050 will be achieved whereby, “we will be a smart, wise, fair, healthy and happy society by 2050” and “We will be ranked in the top 50 countries in the UNHDI by 2050, creating

opportunities for personal and national advancement through economic growth, smart innovative ways, quality service and ensuring a fair and equitable distribution of benefits in a safe and secure environment for all citizens”.

### ***MTDP 2011-2015***

In order to achieve the PNGDSP goal for health by 2030, the government will within the next 5 years (2011-2015) focus on getting ‘back to basics’ with rehabilitation of the foundations of our primary health care system focusing on improving maternal health, child survival and reducing the burden of communicable diseases. Infectious disease and maternal and child health matters account for the greatest burden on the health services and our desire to eradicate these concerns is reflected in our commitment to achieve MDG 4, 5 and 6.

The government will focus on rehabilitating the current system to a level where each facility is fully operational. As such, key deliverables during the next five years will include rehabilitation of aid posts, the trialing of community health posts in strategic locations, rehabilitation of health centres and district hospitals. Alongside these deliverables will be improvements in the storage, distribution and procurement of basic drugs, vaccinations and medical equipment. These interventions will be enhanced through the implementation of the provincial health authority reforms, which will commence during MTDP 2011-2015 and be rolled out across the country over the next ten years. This reform will be a cost effective way of strengthening management of the health system. Feasibility studies will be conducted during this period on the four regional hospitals and their ability to be upgraded to become specialized hospitals in later MTDPs. Partnerships with the private sector, churches and non-governmental organizations health services providers will remain important during this time.

The Pacific Medical Centre will be constructed and will be the nation’s center of excellence in healthcare where the world’s best practices in healthcare and medical practice will be provided and demonstrated to benefit Papua New Guineans in collaboration with public hospitals and some of the world’s leading teaching hospitals. It will be the nation’s leading referral hospital with respect to urgent and critical care needs that are beyond the capacity of any public hospital in PNG. The Centre will be the center of excellence in postgraduate and continuing medical education and professional training aimed at improving the skills of national physicians, nurses, hospital administrators, biomedical engineers and other ancillary staff working in public hospitals in PNG and it will further be the nation’s center of excellence in medical research in useful areas of health and medicine in collaboration with national institutions. The Angau Memorial Hospital will also be recapitalized to become the first specialized regional hospital.

### ***Building on MTDP 2011-2015***

The government will within the next 15 years continue to rehabilitate and open aid posts, health centres, community health posts and the Pacific Medical Centre, taking advantage of prior investment in the transport and utilities sector. With time aid posts and sub-health posts will progressively be replaced with community health posts and health facilities will be modernised. Moreover, district health centres will be upgraded to hospitals in accordance with population and geographical requirements<sup>2</sup>. Rehabilitation of key provincial hospitals including teaching hospitals and PMGH as well as the construction of the Pacific Medical Centre will take place during the first 10 years. The following 10 years will focus on the remaining provincial hospitals as financing allows. The focus of the government in operationalising the Pacific Medical Centre will remain a priority throughout the next 10 years.

### ***Challenges in implementation***

For effective implementation of deliverables within these 5 years (2011-2015), recruitment and training of health personnel within hospitals and Community Health Posts (doctors, nurses and community health workers with midwifery skills) is of paramount importance. By 2015, 325 physicians and 3,628 nurses will have to be recruited, while these numbers will increase to 4,900 physicians and 19,500 nurses by 2030. Moreover, the provision of transport infrastructure and key utilities - water, sanitation, telecommunications and electrification - to our health facilities, a functioning cold-chain and consistent government funding for operations are essential.

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<sup>2</sup> In districts without co-located provincial hospitals

DSP goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Achieve an efficient health system which can deliver an internationally acceptable standard of health services	Infant mortality rate	Census/DHS	57 deaths per 1000 live births (2006)	43 deaths per 1000 live births	35 deaths per 1000 live births	26 deaths per 1000 live births	Below 17 per 1000 live births
	Neonatal mortality rate (%)	DHS	29 deaths per 1000 live births (2006)	22 deaths per 1000 live births (2006)	18 deaths per 1000 live births (2006)	13 deaths per 1000 live births (2006)	9 deaths per 1000 live births (2006)
	Under 5 mortality rate	Census/DHS	75 deaths per 1000 live births (2006)	56 deaths per 1000 live births	44 deaths per live births	32 deaths per 1000 live births	Below 20 deaths per 1000 live births
	Maternal mortality ratio	DHS	733 deaths per 100,000 live births (2006)	500 deaths per 100,000	360 deaths per 100,000	230 deaths per 100,000	Below 100 per 100,000 live births
	Life expectancy	Census/DHS	57 years	Males: 62.2 years Females: 62.7 years	Males: 64.2 years Females: 64.7 years	Males: 66.2 years Females: 67.2 years	70 years
	Annual Incidence (%) associated with malaria	NHIS	230 cases/1000 population (2009)	180 cases/1000 population	150 cases/1000 population	120 cases/1000 population	100 cases/1000 population
	Proportion (%) of 1 year old children immunized against measles	NHIS/DHS	58% (2009)	73%	80%	87%	94%
	Proportion (%) of 1 year old children immunized with 3 doses of DTP-HepB-Hib per year	NHIS	70% (2009)	80%	86%	92%	97%
	Proportion (%) of births attended by trained health personnel	DHS/NHIS	40% (2009)	54%	68%	81%	95%
	Contraceptive Acceptor Rate (/1000 Women of Reproductive Age)	NHIS	263/1000 WRA (2009)	320	360	400	450
	Contraceptive Prevalence Rate (%)	DHS	32% (married women 15 – 49 yrs)	40%	65%	67%	70%
	Couple years protection	NHIS	105/1000 WRA	115	125	135	145
	Proportion (%) of children born to mothers outside the age range 20-34	DHS/Census	28%	25%	22%	20%	18%
	Proportion (%) of births of parity $\geq$ 4 Mean number of children ever born and living $>/=$ 4	DHS	30% (all women 15 – 49 yrs)	27%	24%	20%	15%
	Proportion of births (%) with birth interval < 2 years	DHS	27% (2006)	24%	21%	18%	15%
Proportion (%) of pregnant women who received at least: one ANC visit four ANC visits	DHS/NHIS	1 visit DHS (2006) – 84% NHIS (2009) – 59% 4 visits	1 visit: 70% 4 visits: tba	1 visit: 75% 4 visits: tba	1 visit: 82% 4 visits: tba	1 visit: 88% 4 visits: tba	

			DHS (2006) – 55%				
	Women aged 15-49 with unmet need for family planning (%)	DHS	27.4% (2006)	25%	22%	18%	15%
	Underweight births as a proportion (%) of total births	NHIS	9.4%	9.1%	8.9%	8.6%	8.2%
	Proportion (%) of underweight children under 5 years of age	NHIS	28%	26%	24%	22%	20%
	Proportion (%) of children under age 5 with height-for-age z-score below minus two	NHIS/MNS	N/A				
	Proportion (%) of children under 5 sleeping under long life impregnated nets (LLIN)	DHS/IMR survey	40%	80%	90%	95%	95%
	Proportion (%) of households owning mosquito nets(s)	DHS/IMR survey	38%	65%	85%	90%	95%
	Proportion (%) of children under age 5 with fever who are treated with appropriate anti-malarial drugs	NHIS/IMR Survey	22%	80%	90%	100%	100%
	Case detection (%) of sputum positive TB cases	NHIS	34/100,000	60/100,000	85/100,000	100/100,000	110/100000
	Treatment completion rate (%) of sputum positive TB cases	NHIS	64%	75%	85%	90%	95%
	Malaria per 1,000 population per year by sex	NHIS (Malaria)	230/1000	210/1000	190/1000	170/1000	150/1000
	Case fatality rate (%) of pneumonia by sex (children under five)	NHIS	3.0%	2.9%	2.7%	2.4%	2.1%
	Proportion (%) of population with access to affordable essential drugs on a sustainable basis	DoH	75%	78%	80%	85%	90%
Lead government department	Department of Health						

No	Strategies for developing a world class health system
1	Improve service delivery
2	Strengthen partnership and coordination with stakeholders
3	Strengthen health systems
4	Improve Child Survival
5	Improve Maternal Health
6	Reduce the burden of communicable diseases
7	Promote healthier lifestyles
8	Improve our preparedness for disease outbreaks and emerging population health threats

DSP 2030 deliverables	No.	2011-2015 target	2016-2020 target	2021-2025 target	2026-2030 DSP target	Risks and Assumptions
Outreach services: Ratio of rural outreach clinics to children 5 years	1.1	30 clinics /(1000 children under 5 yrs)	40 clinics /(1000 children under 5 yrs)	50 clinics /(1000 children under 5 yrs)	80 clinics /(1000 children under 5 yrs)	<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present</li> </ul>
95 % of health facilities with adequate medical supplies and equipment.	1.2	<ul style="list-style-type: none"> <li>50% provincial transit stores operational.</li> <li>Rationalize to 3 AMS.</li> <li>75% of all facilities have adequate medical supplies.</li> </ul>	<ul style="list-style-type: none"> <li>100% provincial transit stores operational.</li> <li>Rationalize AMS to 2.</li> <li>90% of all facilities have medical supplies</li> </ul>	<ul style="list-style-type: none"> <li>100% provincial transit stores operational.</li> <li>Rationalize AMS to 2.</li> <li>95% of all facilities have medical supplies.</li> </ul>	<ul style="list-style-type: none"> <li>100% provincial transit stores operational.</li> <li>Rationalize AMS to 2.</li> <li>95% of all facilities have medical supplies.</li> </ul>	<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present in CHPs</li> <li>Cold-chain maintained</li> <li>Effective utilities</li> <li>Funding is secured and released on time</li> </ul>
7,500 Aid Posts and Community Health Posts (CHP) established and fully operational. <sup>3</sup>	1.3	<ul style="list-style-type: none"> <li>2,200 aid posts staffed &amp; resourced</li> <li>Trialing and establishment of 20 community health posts in strategic locations.</li> </ul>	<ul style="list-style-type: none"> <li>3,200 aid posts staffed &amp; resourced minimum 178 CHP built and functioning.</li> </ul>	<ul style="list-style-type: none"> <li>4,500 aid posts staffed &amp; resourced 1,000 CHP established.</li> <li>Aid posts and sub-centres in key locations upgraded to be CHPs</li> </ul>	<ul style="list-style-type: none"> <li>6,000 aid posts staffed &amp; resourced</li> <li>1,500 CHP established</li> <li>Aid posts &amp; sub-centres in key locations upgraded to CHPs</li> </ul>	<ul style="list-style-type: none"> <li>Land is secured</li> <li>Access roads are built and maintained</li> <li>Trained personnel present in CHPs</li> <li>Funding is secured and released on time</li> </ul>
50% of district health centres upgraded to hospitals.	1.4	50% current district health centres rehabilitated.	<ul style="list-style-type: none"> <li>100% district health centres rehabilitated.</li> <li>Min 5 district health centres upgraded to district hospitals.</li> </ul>	Continued expansion of district hospital network.	All districts have access to functioning health centres.	<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present</li> <li>Cold-chain maintained</li> <li>Effective utilities</li> <li>Funding is secured and released on time</li> </ul>
100% District Hospital rehabilitated.	1.5	50% District Hospitals rehabilitated		100% District Hospital rehabilitated		<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present</li> <li>Cold-chain maintained</li> <li>Effective utilities</li> <li>Funding is secured and released on time</li> </ul>
Rehabilitation of provincial hospitals	1.6	<ul style="list-style-type: none"> <li>Rehabilitation of key provincial hospitals (Kerema, Goroka, Angau and Nonga)</li> </ul>		<ul style="list-style-type: none"> <li>Rehabilitation of remaining provincial hospitals</li> <li>Rehabilitation of PMGH</li> </ul>		<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present</li> <li>Cold-chain maintained</li> <li>Effective utilities</li> <li>Funding is secured and released on time</li> </ul>
4 regional specialist hospitals established and fully equipped.	1.7	Feasibility studies conducted on all four	4 regional hospitals upgraded to	4 regional hospitals maintained as	4 regional hospitals	<ul style="list-style-type: none"> <li>Access roads are built and maintained</li> <li>Trained personnel present</li> </ul>



		regional specialist hospitals.	become specialist hospitals over 20 years starting with Angau Memorial Hospital.	specialist hospitals.	maintained as specialist hospitals.	<ul style="list-style-type: none"> <li>• Cold-chain maintained</li> <li>• Effective utilities</li> <li>• Funding is secured and released on time</li> </ul>
Upgrade training institutions	1.8	<ul style="list-style-type: none"> <li>• Number of doctors commencing training to increase by a minimum of 40 per year.</li> <li>• Number of nurses/ CHW with midwifery skills commencing training to increase by 20% per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of doctors commencing training to increase by a minimum of 70 per year.</li> <li>• Number of nurses/ CHW with midwifery skills commencing training to increase by 30% per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of doctors commencing training to increase by a minimum of 100 per year.</li> <li>• Number of nurses/ CHW with midwifery skills commencing training to increase by 30% per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of doctors commencing training to increase by a minimum of 130 per year.</li> <li>• Number of nurses/ CHW with midwifery skills commencing training to increase by 30% per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> <li>• Trained personnel present</li> <li>• Cold-chain maintained</li> <li>• Effective utilities</li> <li>• Funding is secured and released on time</li> <li>• Provinces take up the Community Health Post initiative requiring additional CHW.</li> </ul>
Pacific Medical Centre constructed and operationalised	1.9	<ul style="list-style-type: none"> <li>• Feasibility study conducted;</li> <li>• Construction commences</li> </ul>	Pacific Medical Centre constructed	Pacific Medical Centre operationalised	Pacific Medical Centre operationalised	<ul style="list-style-type: none"> <li>• Funding is secured and released on time</li> <li>• Trained personnel recruited and present</li> <li>• Effective utilities</li> <li>• Security is guaranteed</li> </ul>
Strengthen partnership and coordination with stakeholders	2.1	<ul style="list-style-type: none"> <li>• PPPs in the health system investigated.</li> <li>• Improved purchaser-provider relationships between private health providers, CSOs and Churches</li> </ul>	<ul style="list-style-type: none"> <li>• PPPs in the health system implemented</li> <li>• Improved purchaser-provider relationships between private health providers, CSOs and Churches</li> </ul>	<ul style="list-style-type: none"> <li>• PPPs in the health system implemented</li> <li>• Improved purchaser-provider relationships between private health providers, CSOs and Churches</li> </ul>	<ul style="list-style-type: none"> <li>• PPPs in the health system implemented</li> <li>• Improved purchaser-provider relationships between private health providers, CSOs and Churches</li> </ul>	<ul style="list-style-type: none"> <li>• Funding is secured and released on time</li> </ul>
Governance reform: Provincial Health Authorities rolled out to all provinces.	3.1	<ul style="list-style-type: none"> <li>• Provincial Health Authority reforms commence.</li> <li>• Min 5 PHAs established in 5 provinces.</li> </ul>	<ul style="list-style-type: none"> <li>• PHA established and fully operationalised in all provinces.</li> </ul>	<ul style="list-style-type: none"> <li>• PHA established and fully operationalised in all provinces.</li> </ul>	<ul style="list-style-type: none"> <li>• PHA established and fully operationalised in all provinces.</li> </ul>	<ul style="list-style-type: none"> <li>• Political and Administrative support</li> <li>• Existing legislations are amended accordingly</li> <li>• Smooth transfer of personnel</li> </ul>
95% children under the age of 1 immunized in accordance with childhood schedule  (please note that the vaccines are likely to change over time in accordance with epidemiology, available vaccines etc)	4.1	<ul style="list-style-type: none"> <li>• 73% of all children immunized.</li> <li>• 1 SIA completed</li> <li>• 100% of all health centres able to provide immunization.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of all children immunized</li> <li>• 2 SIA completed</li> <li>• 100% of all health centres, aid posts/ CHPs able to provide immunization.</li> </ul>	<ul style="list-style-type: none"> <li>• 87% of all children immunized.</li> <li>• 100% of all health centres, aid posts/CHPs able to provide immunization.</li> </ul>	<ul style="list-style-type: none"> <li>• 95% of all children immunized.</li> <li>• 100% of all health centres and CHPs able to provide immunization.</li> </ul>	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> <li>• Trained personnel present</li> <li>• Cold-chain maintained</li> <li>• Effective utilities</li> <li>• Funding is secured and released on time</li> </ul>

450 /1000 women of reproductive age access family planning each year (contraceptive acceptor rate)	5.1	<ul style="list-style-type: none"> <li>• 320/1000 WRA</li> <li>• 50 % of facilities capable of delivering family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• 360/ 1000 WRA</li> <li>• 75% of facilities capable of delivering family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• 400/1000 WRA</li> <li>• 100% of facilities capable of delivering family planning services.</li> </ul>	<ul style="list-style-type: none"> <li>• 450/1000 WRA</li> </ul>	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> <li>• Trained personnel present</li> <li>• Communities have positive perception of family planning services</li> </ul>
95% of deliveries supervised	5.2	<ul style="list-style-type: none"> <li>• 80% of hospitals and health centres capable of providing quality service/support before, during and after pregnancy</li> <li>• 55% of health facilities capable of providing supervised deliveries.</li> </ul>	<ul style="list-style-type: none"> <li>• 90% of hospitals and health centres capable of providing quality service/ support before, during and after pregnancy</li> <li>• 55% of health facilities capable of providing supervised deliveries.</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of hospitals and health centres capable of providing quality service/ support before, during and after pregnancy</li> <li>• 58% of health facilities capable of providing supervised deliveries.</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of hospitals and health centres capable of providing quality service/ support before, during and after pregnancy</li> <li>• 68% of health facilities capable of providing supervised deliveries.</li> </ul>	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> <li>• Presence of reliable means of transportations</li> <li>• Trained personnel present</li> <li>• Effective utilities</li> <li>• Funding is secured and released on time</li> </ul>
All households have access to at least 1 impregnated mosquito nets.	6.1	70 %	80 %	90 %	100 %	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> </ul>
100 % provinces with TB Dots	6.2	50 %	75 %	100 %	100% of provinces with TB Dots	<ul style="list-style-type: none"> <li>• Access roads are built and maintained</li> <li>• Funding is secured and released on time</li> </ul>

<b>Responsibility</b>		Department of Health									
Estimated inputs (K million)	<b>Focus Area</b>	<b>Budget line</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2020</b>	<b>2030</b>	<b>Funding option(s)</b>	
	Personnel (all)	Recurrent						4,265	TBD	GoPNG plus donors	
	Medical supplies <sup>4</sup> (1.2,4.1)	Recurrent						1,973	TBD	GoPNG plus donors	
	Operating costs (all)	Recurrent						4,559	TBD	GoPNG plus donors	
	Rural health services <sup>5</sup> (1.3,1.4)	Development						454	TBD	GoPNG plus donors	
	Rural water supply	Development						215	TBD	GoPNG plus donors	
	General hospitals (1.5,1.6,1.7,1.9)	Development						2,625	TBD	GoPNG plus donors	
	Central (3.1)	Development						79	TBD	GoPNG plus donors	
<b>Total Development</b>			K1,425.5					K14,170	TBD	GoPNG plus donors	

<sup>4</sup> Includes supplies for general hospitals, rural health services, LLINS and condoms.

<sup>5</sup> Rural health services includes health centres/rural hospitals, aid post and community health posts

### 3.4 Primary and Secondary Education

**Goal:** Achieve a better future by promoting and enhancing integral human development.

#### *Introduction*

The current status of the sector is depicted by low life expectancy brought about by unfavourable human development indicators such as low enrolment and literacy rates as well as deteriorating conditions of infrastructure such as classrooms, libraries, teachers' houses, dormitories and administration blocks.

The rapid expansion of the education system since 1995 has created problems for the system. While access to education has been improved significantly, the quality of that education has become a concern as the school population has increased and the system has struggled to adequately plan for, fund and administer those increases. There is considerable pressure in areas such as infrastructure and teacher numbers, teacher training, materials development and distribution, and the capacity at all levels to monitor and administer the education system, as well as greater community and parental demands for access to education.

Furthermore, other challenges include: improving retention through the years of basic education; improving delivery of education services in rural and remote areas; completing reform of the secondary curriculum and supporting effective implementation of the curriculum at all levels; strengthening the vocational education and training sector to support appropriate courses and make better use of partnerships with the private sector and community agencies; and securing adequate government budget support to match the enrolment growth. Furthermore, other challenges due to the general social, economic and political environment include population growth of 2.7%, HIV/AIDS, deteriorating law and order, transport, communications and other IT infrastructure, as well as low provincial capacity to finance, manage and deliver quality primary and secondary education services poses a biggest challenge for the sector.

The net enrolment ratio in Grade 1 was 52.9 percent in 2007, while the net admission rate for children between ages 6-14 years was only 11.5 percent. The class size was 45 students per class in 2007, which indicated that there were large classes and whether or not the teacher was able to attend to needs of individual students was an issue.

The government aims to achieve within the next 20 years a better future by promoting and enhancing integrated human development. Focus will be on building capacity within the system through investment in the training of teachers, rehabilitating existing primary and secondary school infrastructure, investing in new classrooms<sup>6</sup> and dormitories as financing allows, enhancing universal access to basic<sup>7</sup> education, a phased reduction in school fees and enhancing early childhood learning to help develop the basic foundations of young children so that transition into the next level of education becomes easier. Focus will also be on rehabilitating the existing National High Schools to make them become Schools of Excellence where intakes from universities will be drawn from.

The proposed MDG targets and indicators for PNG for primary education have been integrated into the sector framework within the Medium Term Development Plan (2011-2015) as well as the PNGDSP (2010-2030), hence, achieving the goal of the sector as envisaged in the next five years will contribute towards achieving the ultimate goals of the PNGDSP 2010-2030, Vision 2050 and the MDGs.

The immediate focus of the government within the next five years will include: (i) implementing the education reforms to improve service delivery; strengthening and coordinating partnerships with stakeholders at all levels; enhancing universal access to basic education, ensuring effective distribution of education materials and supplies and implementing other legislative reforms.

Pooling together and successfully implementing the efforts of all sectors including primary and secondary education, higher education, health, human resource development and training, transport, law & order, utilities, non-agricultural informal sector as well as cross-cutting sectors will achieve the overarching Goal

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<sup>6</sup> In accordance with population and geographical requirements.

<sup>7</sup> Basic education refers to elementary and primary education.

and Vision of the PNGDSP (2010-2030) which are to achieve “a high quality of life for all Papua New Guineans” and for “Papua New Guinea to be a prosperous middle-income country by 2030”. Hence, the vision and mission of the Vision 2050 will be achieved whereby, “we will be a smart, wise, fair, healthy and happy society by 2050” and “We will be ranked in the top 50 countries in the UNHDI by 2050, creating opportunities for personal and national advancement through economic growth, smart innovative ways, quality service and ensuring a fair and equitable distribution of benefits in a safe and secure environment for all citizens”.

### ***MTDP 2011-2015***

In order to achieve the PNGDSP goal for primary and secondary education by 2030, the government will within the next 5 years (2011-2015) focus on building capacity within the education system through investments in the training of teachers, rehabilitation of existing primary and secondary school infrastructure, investing in new classrooms<sup>8</sup>, teachers’ houses and dormitories as financing allows, enhancing universal access to basic<sup>9</sup> education and a phased reduction in school fees.

These interventions will be supported by curriculum reform across all levels of schooling and legislative changes to ensure educational materials can be easily distributed throughout the country. Another legislative change critical during the next five-years is the centralizing and standardizing of the delivery of education functions as well as its effective management and administration.

The costs and benefits of publishing uniform exam results will be investigated, including through trials with interested provinces. Similarly an incentive fund to reward well-performing schools will be piloted during this 5 year period. Partnerships with the private sector, churches and the International Education Agency will also be pursued.

Interventions in the next 5 years (2011-2015) will strengthen education pathways into higher education institutions and technical and vocational colleges. In particular, the flexi-high school system will be developed during this period and will be rolled out to students who are still at secondary schools as well as to school leavers by 2030.

Early childhood care and development will be utilised to prepare pathways for younger children to move up to the next level of education. This will assist to develop the basic foundations of young children so that transition into the next level of education becomes easier. Focus will also be on rehabilitating the existing secondary high schools so that they are able to prepare students of high educational qualifications which the National High Schools can draw from.

### ***Building on MTDP 2011-2015***

The government will in the next 15 years continue to build the capacity of the education system through the expansion, rehabilitation and upgrading of education institutions. Moreover, the government will also provide quality educational materials and supplies across the country, taking advantage of prior investment in the transport and utilities sector. Universal access will be expanded to encompass secondary education through to year 10 and mechanisms that retain students to year 12 will be expanded.

### ***Challenges in implementation***

For effective implementation of deliverables within these 5 years (2011-2015), the education and training of teachers, improved transport links, the provision of safe learning environments free from violence, land reform to enable construction of new classrooms and teachers’ houses and effective management and administration of the entire education system are of paramount importance

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<sup>8</sup> In accordance with population and geographical requirements.

<sup>9</sup> Basic education refers to elementary and primary education.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Achieve a better future by promoting and enhancing integral human development	Net admission rate (% of ages 6-14)	SS-DOE	11.5%	30%	50%	60%	Close to 70%
	Gross enrolment ratio in grade 1 <sup>10</sup>	SS-DOE	52.9%	74.3%	85%	100%	100%
	Cohort retention ratio (%) between grade 1 and grade 6	SS-DOE	30%	40%	50%	60%	70%
	Gender parity ratio of students in basic education.	SS-DOE	91%	97%	100%	100%	100%
	Pupil: teacher ratio	SS-DOE	1:45	1:44	1:43	1:42	1:40
	Completion rate to level 8		45.4%	49.4%	77.5%	80-90%	Close to 100%
Lead government department	Department of Education						

No.	Sector Strategy
1	Education reform
2	Universal access to quality education
3	Effective distribution of school materials and supplies
4	Partnering with the private sector
5	Other legislative reforms

DSP 2030 deliverables	No.	2011-2015 target	2016-2020 target	2021-2025 target	2026-2030 DSP target	Risks and Assumptions
Quality elementary, primary and secondary curriculum developed, implemented and monitored	1.1	English literacy, and not local vernacular will be taught in elementary. Quality primary curriculum developed. Secondary curriculum panel established including a University representative and a Technical college representative, selected with the support of all the institutions they represent.	Quality primary and secondary curriculum implemented and monitored	Quality primary and secondary curriculum implemented and monitored	Quality primary and secondary curriculum implemented and monitored	Curriculum reform is supported by legislative changes
Publish school results each year from all national exams	1.2	Begin to publish school results annually from all national exams in newspapers.		Curriculum reform is supported by legislative changes; funds are available		
Establishment of incentive fund for performing schools	1.3	Incentive fund piloted	Learn from pilot project and expand incentive fund to other schools	National incentive fund established and functioning	Incentive fund established and functioning	Funds are available
Reinvigoration of National High School system	1.4	National High Schools will be well resourced to prepare students for higher education. Selection for entry into National High Schools will be by	National High Schools will be the main source of University entrants. National High School	Consistent government funding towards NHS; No land issues; Students take		

<sup>10</sup> Pre-reform structure

		performance in national grade 10 exam on academic subjects.	students will not pay school fees.	their studies seriously		
<b>Universal education access: elementary and primary</b> <ul style="list-style-type: none"> <li>Sufficient primary schools established</li> <li>An appropriate amount of teacher housing</li> </ul>	2.1	Primary school entry age will be 6. Existing primary schools will be extended to accommodate growth. Existing public elementary schools will be converted into primary schools.	Sufficient number of primary schools established	Access roads are maintained and built Sufficient resources (financial and human) are made available		
<b>Universal education access: secondary</b> <ul style="list-style-type: none"> <li>An appropriate number of secondary schools established</li> <li>Maintenance of all secondary schools</li> </ul>	2.2	National High schools upgraded and transformed in Schools of Excellence. Current 191 secondary schools maintained.	191 secondary schools maintained.	Sufficient number of secondary schools established Appropriate number of secondary schools upgraded consistent with National High School system and Flexi Technical training system.	Sufficient number of secondary schools established and all well resourced.	Access roads are maintained and built Sufficient resources (financial and human) are made available
<b>Development of flexi-high school / vocational training system</b>	2.3	Technical training introduced in Secondary Schools. Review of how best to develop high quality technical skills through Secondary schools and Technical training institutions.	Implementation of key recommendations of review in pilot projects.	Based on results from pilot projects, implement review nationally.	Flexi high school-technical institution training system that supplies young people with the skills PNG needs.	Access roads are maintained and built Sufficient resources (financial and human) are made available
<b>No school fees for children aged 6 to 15 in grades 1 to 10</b>	2.4	Abolition of primary school fees for children aged 6 to 10 years.	Abolition of school and technical college fees for children aged 11 to 15.	Abolition of technical college fees for children aged 16 to 17.	Provision of water and sanitation facilities in schools	
<b>Parents value education of their children</b>	2.5	Advocate and raise awareness on value of education	Advocate and raise awareness on value of education	Advocate and raise awareness on value of education	Advocate and raise awareness on value of education	Consistent government funding; Change in mind-set of parents
<b>Quality teachers</b> <ul style="list-style-type: none"> <li>Quality teacher education and training pre and in-service</li> </ul>	2.6	29,600 teachers	39,600 teachers	46,000 teachers	54,000 teachers	Universities expand capacity
<b>8532 well maintained schools with safe drinking water</b>	2.7	5,063 schools, 40% with safe drinking water.	6,766 schools, 60% with safe drinking water.	7,602 schools, 80% with safe drinking water.	8,532 schools, all with safe drinking water.	Access roads are maintained and built Sufficient resources (financial and human) are made available
<b>Enhance equity</b> <ul style="list-style-type: none"> <li>Special needs education</li> <li>Remote and overcrowded/equity</li> </ul>	2.9	There are schools in every major city that provide access to children with special needs.	There are schools in every province that provide access to children with special needs.	All primary aged children with special needs have access to primary school.	All children aged 6-14 with special needs have access to school and vocational training.	
<b>All schools well resourced</b> <ul style="list-style-type: none"> <li>Provision of education</li> </ul>	3.1	Pilot project where responsibility for organizing materials and supplies	Pending success of pilot project, extend to wider	Pending success of program, extend		Access roads are maintained and built

materials and supplies to all schools		delegated to schools. Level of Government financial payment based on accessibility to nearest major supply centre.	coverage.	nation-wide.		Sufficient resources (financial and human) are made available		
Partnership and coordination with stakeholders strengthened	4	Enabling environment developed and strengthened	Extend incentive fund to selected private schools	Include private schools in incentive fund	Enabling environment developed and strengthened	Political commitments		
Legislative reforms	5	Legislative change to centralise and standardise delivery of education passed	n/a	n/a	n/a	Sufficient resources are made available		
<b>Salaries and other costs met</b>	7	n/a	n/a	n/a	n/a	n/a		
<b>Responsibility</b>	Department of Education, Department of Works and LLGs							
<b>Estimated inputs (K million)</b>	No.	2011	2012	2013	2014	2015	2030	Funding option(s)
	1.1	N/A	N/A	N/A	N/A	N/A	N/A	GoPNG/Donors
	1.2	N/A	N/A	N/A	N/A	N/A	N/A	GoPNG/Donors
	2.1	60m	60m	65m	70m	75m	3.7bn	GoPNG/Donors
	2.2	41m	55m	60m	70m	80m	820m	GoPNG/Donors
	2.3	14m	30m	35m	45m	60m	12bn	GoPNG/Donors
	2.6	20m	20m	25m	40m	50m	4.5bn	GoPNG/Donors
	3.1	60m	60m	60m	70m	80m	4.5bn	GoPNG/Donors
	4	5m	5m	5m	5m	5m	5.8bn	GoPNG/Donors
	5	N/a	N/a	N/a	N/a	N/a	N/a	GoPNG/Donors
7	N/a	N/a	N/a	N/a	N/a	N/a	GoPNG/Donors	
		<b>200m</b>	<b>230m</b>	<b>250m</b>	<b>300m</b>	<b>350m</b>		
<b>Total:</b>	<b>1,330 for 2011-2015</b>							

### **3.5 Higher Education**

**Goal:** To develop the higher skills needed for PNG's prosperity with a world class tertiary education sector

#### ***Introduction***

Papua New Guinea's institutions of higher education have made significant contributions to nation building in its early years. The universities adequately met the extraordinary demands that were placed on them in the early years of Independence in the provision of leaders for public institutions. They can do so again but, right now, the quantity and quality of graduates is far short of what is needed due to inadequate resources and a range of governance and general service quality issues. Major changes in the institutions of higher education are necessary if they are to be successful in meeting the even larger contemporary challenges set in the Vision 2050 and the PNGDSP 2010-2030.

In the next 20 years, the government aims to develop within the Higher Education the higher skills needed for PNG's prosperity with a world class tertiary education sector. Having a national manpower plan in place to train the required number of personnel in technical and professional fields such as medical doctors, nurses, teachers, engineers, geologists, etc will attempt to address the current issues of uncoordinated and fragmented provisions of higher education.

Open and distance or lifelong learning, is regarded as the driving force for building a knowledge society as well as for development and improving quality of life. While education and lifelong learning play a key role in knowledge society, it is also realised that traditional or conventional educational systems no longer suffice. The status of the current education and learning opportunities and future prospects demonstrated that the conventional education system at all levels is not adequate to provide formal education as well as learning opportunities of thousands of rural population in Papua New Guinea. In addition, the system is not capable to provide adequate opportunities for lifelong learning of the current workforce and the disadvantaged who for some reason or another could not pursue formal studies. More specifically, women empowerment requires providing opportunities for learning where they are. The Technical and Vocational component of Higher Education will further enhance this by building the life skills capacity of the people to sustain themselves through polytechnic and community colleges.

In the next five years institutions of higher education will be moving into the path of self-financing with the establishment of a Higher Education Endowment Fund which will have its priority expenditure areas clearly outlined. The List will be developed within the revamped Commission for Higher Education, under the general supervision of the Department of National Planning and Monitoring, to define opportunities for productive investment in the capital assets of the universities, and to establish priorities for allocation of capital contributions from the universities business arms, contribution from private sector, revenue from the Higher Education Contribution Scheme (loan repayment), utilizing the 2% training levy and other development partners contribution to the endowment fund for higher education. The introduction of a Government-supported loans scheme to students in the form of a Higher Education Contribution Scheme (HECS) will have the following characteristics: loans available to cover tuition fees imposed by universities, accommodation, plus a specified maximum "incidentals allowance". It is anticipated that the Higher Education Endowment Fund Trust would become a major source of funding for new capital investment, maintenance of faculties, twinning arrangements, industrial partnership and courses field work practice and wide range of scholarships to suite industry needs as well as the public service.

#### ***MTDP 2011-2015***

In order to achieve the PNGDSP goal for higher education, the government will in the next 5 years focus on implementing higher education reforms as well as mobilising resources for recapitalization and physical expansion of existing institutions. The public funding for higher education will be realigned towards targeted training scholarships. Furthermore, the flexi high school system will also be expanded and strengthened to enable more young people to have access to more technical and tertiary training as well as open and distance learning options. The government will also focus on improving internet access and communication technologies, forging and strengthening partnerships and twinning arrangements with relevant stakeholders (both within and outside PNG), as well as ensuring that a scholarship system is established for those in the provinces and districts. Whilst doing all these, the government will ensure that all training standards are



aligned to the PNG National Qualification Framework by 2015. To effectively implement the PNGDSP 2010-2030, Papua New Guinea will need a wide range of leadership roles that is complex and demanding.

### ***Building on MTDP 2011-2015***

Future plans of government will continue to implement the higher education reforms and continue to mobilize resources for capitalization and physical expansion of existing institutions. Recapitalisation and expansion of universities, technical colleges, business colleges, polytechnic colleges, teachers' colleges, nursing colleges and vocational training institutions will also be the focus of government priorities. Forging partnerships with relevant stakeholders and engaging in twinning arrangements with reputable international institutions of higher education will also be encouraged and supported. The government will also focus on forging strategic partnerships with relevant industries by 2030.

### ***Challenges in implementation***

The higher education sector in PNG has been faced with many challenges and difficulties relating to under financing of institutions of higher education, quality and access to tertiary education, staff development, skills-based training, enhancement and preservation of quality in teaching, research and services, relevance of programmes, employability of graduates, establishment of efficient co-operation agreements and equitable access to the benefits of international co-operation. External challenges include insufficient provision of key utilities (water, sanitation, telecommunications, electrification and information and communication technology) to the learning and teaching institutions of higher education.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
To develop the higher skills needed for PNG's prosperity with a world class tertiary education sector	Number of Graduates from Institutions of Higher Education	OHE	6,496 graduates in 2008	52,000 graduates since 2010	112,000 graduates since 2010	183,000 graduates since 2010	265,000 graduates between 2010 and 2030
	Proportion of graduates absorbed into the workforce annually	OHE (Tracer Study)					
<b>Lead government department</b>	Office of Higher Education / Department of Education / Department of Community Development						
No.	Sector Strategies						
1	Higher Education Reform						
2	Physical Expansion and Recapitalisation of existing institutions.						
3	Realign public higher education funding through establishment of the higher education endowment fund and its priorities						
4	Strengthening and expanding of flexi high school system for more technical & tertiary training, open and distance learning options (see Part 4.4 for detail)						
5	Access to internet and communication technologies						
6	Forging partnerships and twinning arrangements with reputable international institutions of higher education						
7	Forge government and industrial partnerships						
8	Alignment of training standards to the PNG qualification framework						
DSP DELIVERABLES	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions	
Effective coordination and oversight of institutions of higher education and trade skills colleges by CHE and OHE	1.1	Revamp Commission for Higher Education and Office of Higher Education in overseeing assessment standards and external auditing for all higher education and technical institutions. Commence annual external audits of each institution and review of legislation	-	-	-		
Institutions strengthen with autonomy over management of staffing, teaching and finances	1.2	Provide institutions with autonomy over management of teaching. Provide incentives to institutions to develop their management skills and knowledge	Provide institutions with autonomy over staff and finances			Not being receptive to change	
Prioritise public expenditure on higher education and technical training to address PNG's skills shortage	2.1	OHE and DNPM will prioritize the skills PNG requires 2011-2030. All public expenditure on higher education & technical training, including scholarships will be directed by those priorities.			-		
Establish endowment fund including indentifying priority expenditure areas	3.1.	Establishment and operationalisation of the fund					
21,500 University places and at an international standard (including open & distance learning)	3.1	Recapitalise 4 state and 2 private universities. 14,400 places by 2015.	17,200 places by 2020	19,600 places by 2025	21,500 places by 2030		
6,800 technical and business college places (including open & distance learning)	3.2	Recapitalise 4 Technical colleges; 2 business colleges; 1 polytechnic college 3,800 places by 2015	4,900 places by 2020	5,900 places by 2025	6,800 places by 2030		
8,000 teacher places (including open & distance learning)	3.3	Recapitalise facilities of teachers' colleges 6,300 places by 2015	7,200 places by 2020	7,700 places by 2025	8,000 places by 2030		
5,000 nursing places (including open & distance learning)	3.4	Recapitalise nursing colleges 1,600 places by 2015	2,700 places by 2020	3,900 places by 2025	5,000 places by 2030		

3,700 vocational training institution places (including open & distance learning)	3.5	Recapitalise vocational training institutions 2,000 places by 2015	2020	2,600 places by 2020	3,200 places by 2025	3,700 places by 2030		
All high performing high school graduates to move into higher education in the skills PNG requires.	4.1	Establish a National Scholarship fund for highest performing students in year 12 national exams. Scholarship paid to cover study expenses at any national institution (air fares/course fees/accommodation/reimbursement of required study materials) plus living expenses. Scholarships only provided for priority courses.						
All provinces and districts accessing higher education opportunities	4.2	Establish a Tertiary and technical education Scholarship fund specifically for provinces and districts. National budget will match Provincial and District contributions K1:K1. Scholarship paid to those who have been accepted for studies, and paid in kind (air fares/school fees/campus accommodation) plus living allowance. Scholarships only provided for priority courses.			-	-		
Improved access to internet and communication technologies	5.1	Increase in procurement and installation of ICT facilities and equipment					National internet access is of international standard	
Alignment of training standards to the PNG qualification framework	8.1	Increase in number of training standards aligned to PNG qualification framework						
<b>Responsibility</b>	Office of Higher Education / Department of Education / Department of Community Development							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							GoPNG; Donors
	1.2							GoPNG; Donors
	2.1							GoPNG
	3.1							GoPNG; Donors
	3.2							GoPNG; Donors
	5.3							GoPNG; Donors
	5.4							GoPNG; Donors
	3.3							GoPNG; Donors
	3.4							GoPNG; Donors
	3.5							GoPNG; Donors
	3.6							GoPNG; Donors
	5.1							GoPNG; Donors
	11.1							GoPNG; Donors
	6.1							GoPNG; Donors
<b>Grand Total:</b>		<b>208</b>	<b>231</b>	<b>317</b>	<b>500</b>	<b>565</b>	<b>1821</b>	GoPNG; Donors

### **3.6 Human Resource Development and Training**

**Goal: Provide a workforce that is professional and skilled by developing a coherent human resource development strategy**

#### ***Introduction***

Human resource development and training is a long-term investment and is central to sustainable economic development and the well being of PNG. It must therefore be promoted as an integral part of any development initiative. Over the years, human resource development has become increasingly fragmented and uncoordinated to the extent that, planning and coordination amongst sub-sectors and various training institutions including NGOs run training institutions are disjointed and lack coherence. Consequently, investment in training and human resource development is undertaken in almost total isolation of the public service needs and requirements. In the absence of a National Human Resource Strategy tailored to development and industrial needs of the country, coordination of resource assistance is distorted, resulting in an unpredictable availability for disposal.

Furthermore, other challenges due to the general social, economic and political environment include population growth of 2.7%, HIV/AIDS, deteriorating law and order, and transport, communications and other infrastructure, and low provincial capacity to finance, manage and adequately meet the capacity needs of the public service workforce poses the biggest challenge for the sector.

Providing a workforce that is professional and skilled by developing a coherent human resource development strategy is the aim of the agencies that are responsible for Human Resource Development and Training. The establishment of a human resource scholarship fund for both domestic and international training will further enhance the skills and knowledge base of officers. The cadetship scheme will also be enhanced to allow for a systematic flow of competent staff to replace outgoing retired or retrenched staff.

Collaborative programs with the private sector and other institutions for in-country and overseas training, through twinning arrangements will be fostered in order to enhance new knowledge, skills and experience of officers.

Pooling together and successfully implementing the efforts of all sector agencies as well as transport, law & order, utilities, agriculture and livestock, mining and petroleum, non-agricultural informal sector as well as cross-cutting sectors will achieve the overarching Goal and Vision of the PNGDSP (2010-2030) which are to achieve “a high quality of life for all Papua New Guineans” and for “Papua New Guinea to be a prosperous middle-income country by 2030”. Hence, the vision and mission of the Vision 2050 will be achieved whereby, “we will be a smart, wise, fair, healthy and happy society by 2050” and “We will be ranked in the top 50 countries in the UNHDI by 2050, creating opportunities for personal and national advancement through economic growth, smart innovative ways, quality service and ensuring a fair and equitable distribution of benefits in a safe and secure environment for all citizens”.

The major strategies to be employed across the sector agencies include: (i) implementing the Public Sector Reforms; (ii) improving service delivery mechanisms within and between the sectors; (iii) strengthening and formalising partnerships and coordination with stakeholders at all levels; (iv) building capacity and skills development at all levels; (v) mobilising resources for effective service delivery at all levels; (vi) expanding and enhancing opportunities and incentives to rural areas; and (vii) enhancing and developing a coherent strategy for the sector to guide its efforts towards implementing and achieving the vision and mission of the MTDP (2011-2015), PNGDSP (2010-2030) and the Vision 2050.

#### ***MTDP 2011-2015***

PNG lacks a labour market information system. To plan for the human resource development and training needs of the workforce adequately information is needed about current numbers of people in jobs, wages by occupation, estimates of growth and declining occupations and turn-over of staff in jobs. In order to achieve the PNGDSP goal for human resource development and training, the government will in the next 5 years focus on raising the levels of primary, secondary, higher education including technical and vocational education as well as on-the-job training in the public and private sectors by enhancing and building the capacity of institutions and personnel that will provide these trainings. The current lack of a coherent human resource development strategy accounts for the uncoordinated and fragmented system in terms of human resource development and training.

In the first 5 years, the government will focus on developing a coherent human resource strategy whereby all efforts towards developing the capacity of the workforce will be coordinated and streamlined to reflect the development needs of the industries as well as the country. As such, key deliverables during these 5 years will include formalizing partnerships with the private sector; enhancing and expanding training for the workforce through the National Training Council; establishing a Human Resource and Training Scholarship Fund for both overseas and domestic training; enhancing performance appraisals and remuneration incentives for public institutions; ensuring that skilled labour is accredited by higher learning institutions and recognizing outstanding skilled labour by awarding of excellence. These interventions will be enhanced through the implementation of clear plans and schedules, which will focus on achieving tangible targets for all public institutions.

Expanding and enhancing human resource training to rural areas as well as establishing and formalizing partnership arrangements with the private sector in the resourcing and provision of training will remain important throughout the first 5 years.

### ***Building on MTDP 2011-2015***

Future plans of government will continue to raise the levels of general education, higher education and technical and vocational education as well as on-the-job training for the workforce. The Training Scholarship Fund will also be further enhanced to meet the demands of training requirements. These plans will also develop further the capacity of learning and training institutions and personnel. The PNGIPA will be improved and developed further into the Somare School of Governance as efforts are made to improve governance and service delivery.

### ***Challenges in implementation***

For effective implementation of deliverables under within the first 5 years, building capacity of training institutions and personnel is of paramount importance. Establishing and enhancing the capacity of our government institutions and personnel is also a priority. Moreover, the provision of transport infrastructure and constant key utilities - water, sanitation, telecommunications and electrification - to our government offices, training and learning institutions especially in districts and LLGs must also be given priority.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Provide a workforce that is professional and skilled by developing a coherent human resource development strategy	Proportion of the public sector workforce that have undergone Public Service Induction Course	DPM					Entire public service workforce
<b>Lead government departments</b>	Department of Personnel Management Department of Education, Office of Higher Education, National Training Council						

No.	Sector Strategies
1	Develop coherent human resource strategy
2	Expand and enhance human resource training to rural areas
3	Formalise arrangements with private sector in the resourcing and provision of training
4	Policy and fiscal incentives for employers
5	Clear training plans and schedules to meet targets in all public institutions
6	Enhance On-the-Job Training in all public institutions
7	Accreditation for skilled labour into Higher Education programmes
8	Establish a Human Resource Training Scholarship Fund

DSP 2030 deliverables	No.	2011-2015 target	2016-2020 target	2021-2025 target	2026-2030 DSP target	Risks and Assumptions		
Human resource strategy tailored to industries and development needs	1.1	National Manpower plan and HR strategy developed.	HR strategy implemented and monitored			All stakeholders are consulted; National Manpower Plan is developed; HR Strategy is developed; Funding is released on time		
Formalise partnerships with private sector	3.1	Increase in number of Formal Agreements in place				Private sector is rewarded; There is political stability		
Enhance and expand HRT for workforce through the NTC	3.2	Increase in number of current scholarship holders				Law and Order; NTC is fully funded; All training providers are accredited;		
Performance appraisals and remuneration incentives for public institutions	4.1	Regular appraisals conducted and increase in current level of incentives				Regular appraisals are done; Recommendations are implemented;		
Award of excellence for outstanding skilled labour	4.2	Increase in current proportion of Award of excellence for outstanding skilled labour				Skilled and competent workers are rewarded		
Focus plans and schedules to achieve tangible results for all public institutions	5.1	Increased number of plans and schedules producing tangible results				Plans and schedules are realistic and fully costed		
Skilled labour accredited by higher learning institutions	7.1	Increase in current proportion of skilled labour accredited by higher learning institutions				Clear pathways are set by higher learning institutions; There is interest by workers to progress further		
Human Resource Training Scholarship Fund	8.1	Establish fund and Award scholarships	Award scholarships		One scholarship scheme established	All stakeholders are consulted; National Manpower Plan is developed; HR Strategy is developed; Consistent government funding is released on time		
<b>Responsibility</b>	Department of Personnel Management, NSO, NTC & OHE							
<b>Collaborating agencies</b>	Department of Education, Office of Higher Education, National Training Council							
		<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	GoPNG/ Donors
								GoPNG/ Donors

							GoPNG
							GoPNG
							GoPNG
							GoPNG/ Donors
							GoPNG
							GoPNG
		<b>25.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>27.5</b>

### **3.7 Research, Science and Technology**

**Goal: To accumulate a world standard science and technology through research and development to drive strong and sustainable growth**

#### ***Introduction***

The advancement of research, science and technology is important for our nation's future. It is relevant in terms of manpower to public and private sectors and the well-being of all sections of the community.

To become a middle income economy by 2030, PNG will undergo rapid economic growth which will be export oriented through ongoing industrialisation. PNG will advance from an agriculture and primary commodity based economy to broad-based industrialised and modern economy. As such, a knowledgeable, innovative and entrepreneurial workforce is essential to drive PNG to become a middle income economy.

PNG can benefit from global integration by adapting appropriate science and technology to provide the driving force for development. It need not only benefit from the global knowledge and technological pool already existing but by institutionalizing appropriate systems and processes, such as research and development mechanisms, can make strides in this path to greatly benefit the country. However, financial resources and determination to pursue this vital component of development remains a challenge because developing new technologies has a prohibitive cost. Long term economic growth will depend on PNG fully adapting appropriate technology and the creation of national technology stock.

Within the first five years (2011-2015), the government will ensure that the agencies responsible for Research, Science and Technology aim to accumulate a world standard science and technology pool through adaptation and research and development processes which can be effectively and competitively utilised to drive strong and sustainable growth. Collaborative programs with research, teaching and training institutions for in-country and overseas training, through twinning arrangements will be fostered in order to enhance new knowledge, skills and experience of officers. Research institutions and universities will be encouraged to undertake innovative and applied technological research through the provision of government grants to support research.

Increased investment in new technology and knowledge will be needed to improve the availability of a skilled workforce essential in improving the business environment and attracting more foreign direct investment to increase employment growth. The government will also focus on developing laws on patent rights or copy right laws to safe guide the originality of discoveries, development and composition of items so that foreigners and businesses do not exploit these for commercial purposes.

Pooling together and successfully implementing the efforts of all sector agencies will achieve the overarching Goal and Vision of the PNGDSP (2010-2030) which are to achieve "a high quality of life for all Papua New Guineans" and for "Papua New Guinea to be a prosperous middle-income country by 2030". Hence, the vision and mission of the Vision 2050 will be achieved whereby, "we will be a smart, wise, fair, healthy and happy society by 2050" and "We will be ranked in the top 50 countries in the UNHDI by 2050, creating opportunities for personal and national advancement through economic growth, smart innovative ways, quality service and ensuring a fair and equitable distribution of benefits in a safe and secure environment for all citizens".

#### ***MTDP 2011-2015***

It has been considered important to set new goals and objectives for research, science and technology by 2015. Research Science and Technology has been identified as the major determinants of PNG's future with regards to human resource development. The focus of the government in the next five years will be to establish research coordination mechanism supported by a prudent governance and administrative system followed by social science and scientific research in industrial technology, infrastructure technology, science technology and knowledge based technology including establishment of research incentives to encourage more research in all fields.

To lay a strong foundation for sustainable and strong economic growth in the longer term, the government will in the first 5 years, promote and pursue deliberate strategies that increase the promotion of scientific



research and development of new technologies that are relevant, affordable and easily accessible to local industries and the people of PNG. The government will also pursue this with a global perspective to enhance its participation in global trade by using appropriate technology to attain scale activities and productivity in the area in which it has a comparative advantage.

### ***Building on MTDP 2011-2015***

Future plans of the government will continue to develop and enhance the capacity of institutions that focuses on research and development. Incentives in the form of research grants will be given to institutions that undertake applied and innovative technological research to encourage them to pursue further and develop innovative ideas and technologies. The government will also develop legislation on patent rights or copy right laws to protect new ideas and technologies that are endemic to PNG from being exploited by foreigners or businesses for commercial purposes.

### ***Challenges in implementation***

For effective implementation of deliverables within the first 5 years, a prudent governance and administrative system is desirable. To set the foundation and build the capacity of science and technology and effectively implement the government policy, prudent administration, improved coordination and systemic planning are of paramount importance.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
To accumulate a world standard science and technology base through research and development to drive strong and sustainable growth	Government expenditure on research and development		Lack of serious government investment in science and technology				At least double public and private sector investment in science and technology
Lead government department	Office of Higher Education / Department of Education / Department of Community Development						
No	Sector Strategy						
1	Mobilise resources and strengthen capacities of all research Institutions						
2	Develop strategic partnership and alliances with internal and external research and development organisation and institutions as well as PNG Universities.						
3	Reinforce research, science and technology in secondary and tertiary institutions.						
4	Establish and coordinate industrial research and technology development initiative with increase support from private sector						
5	Prioritise and coordinate funding of research and development programs aligning to PNG Development needs.						
6	Introduce industrial research and technology development						
7	Increase private sector contribution and participation to research and development						
8	Enforce auditing of all research and development expenditures						
9	Access to internet and communication technologies						
10	Develop "Patent right" or "Copy right" laws						

DSP DELIVERABLES	No	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Increase capacities of institutions that do research.	1.1	Increase capacities of institutions that currently conduct research				Consistent	increase in government funding	
Research cadetship	3.1	Initiate and increase current number of cadetship awardees				Consistent	increase in government funding	
Institutionalise research and technology through education reform programs	3.2	Introduce into and increase current number of education institutions that conduct research				Consistent	increase in government funding	
Establishment and coordination of industrial research and technology development initiatives	4.1	Increase number of current industrial research and technology development initiatives				Consistent	increase in government funding	
Establishment and procurement of information communication technology infrastructures	9.1	Increase in number of current information communication technology infrastructures				Consistent	increase in government funding	
Patent Right or Copy Right Law	10.1	Develop Patent Right or Copy Right Law	Implementation and awareness of Patent Right or Copy Right Law			Consistent	increase in government funding	
Responsibility	Office of Higher Education / Department of Education / Department of Community Development/							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1.1							GoPNG/Donors
	3.1							GoPNG/Donors
	3.2							GoPNG/Donors
	4.1							GoPNG/Donors
	9.1							GoPNG/Donors
10.1							GoPNG/Donors	
<b>Grand Total:</b>		<b>10.9</b>	<b>10.9</b>	<b>20</b>	<b>20</b>	<b>30</b>	<b>91.8</b>	

### **3.8 Road Transport**

**Goal: Establish a transportation network that links all of PNG**

#### ***Introduction***

Transport infrastructure facilitates social development and economic growth. It enables improvements in international competitiveness, exports, imports, investment, employment, accessibility to vital services and markets, and increases in household incomes. Poor transport infrastructure is an impediment to these improvements and imposes high economic and social burdens, especially on the poor.

Well-maintained transport infrastructure is essential for the efficient flow of produce to markets and for the flow of consumer goods and services to village communities. It is widely accepted that the decline in the quality of PNG's transport infrastructure over the years has had a major adverse impact on service delivery and the capacity of Papua New Guineans to earn cash incomes.

Policies will be developed to grow the capacity of local industry. This will be assisted by the introduction of appropriate sized contracts and multi-year funding to create the certainty industry needs.

A full review of all transport related legislation will be completed and provide the sector with a most efficient framework within which to operate.

The Department of Transport currently undertakes a coordination role for the sector. This will continue and be strengthened

There are approximately 30,000km of road in Papua New Guinea. 8,460km of these are National Roads, and approximately 22,000 km of these are Provincial and District roads. The condition of roads in PNG is measured by the Roads Asset Management System (RAMS). The current assessment of National roads condition is 39% good, 40% fair and 21% poor while other roads are in critical need of urgent maintenance.

The Transport sector will achieve the PNGDSP through the implementation of the MTDP sector strategies and deliverables. This MTDP 2011-2015 will lay the foundation for further expanding the National Roads network that will link all of PNG. Roads will be in good condition, properly planned and with prioritized rehabilitation and maintenance. Papua New Guinea's existing and new road transport infrastructure will underpin economic and social development. Improved road transport infrastructure will improve access to markets and improve the flow of essential goods and services (including basic services such as health, education and law and order) to both rural and urban communities. Specifically it will deliver improved transport infrastructure which will help address the Millennium Development Goals (MDGs) for poverty alleviation and improved education and health outcomes.

#### ***MTDP 2011-2015***

To achieve the target of 25000kms of road in good condition work must commence immediately on several fronts. Government has identified the Economic Corridors and Missing Link roads as very important to the country's future. Work will commence immediately on feasibility studies, route identification, road survey and design and land acquisition. It is likely, however, that these issues in particular land acquisition may take some years to complete.

It is possible to commence work immediately to bring the existing national roads (8460kms) to good condition. Maintenance, rehabilitation and upgrade of the existing network will be a significant contribution to the final target and will quickly deliver real improvements to citizens.

The focus of the land transport sector is primarily on the national roads and other roads which are strategically aligned to the overall development of PNG and are of national importance. The roads that are inherent in the deliverables for the PNGDSP 2030 have been selected based on the uniqueness of populations served and economic potentials.

### ***Building on MTDP 2011-2015***

The total national road network of PNG is some 8,500 kilometers as of 2010. This is one of the baseline indicators established as a benchmark to measure progress towards achieving the 25,000 kilometers of good road conditions by 2030. The targets at the end of each of the four MTDPs are aimed at bringing the existing national roads to good condition and then adding about 5,000 kilometers of good roads at the end of each subsequent MTDP. There are four sector strategies which are consistent with the overall DSP sector goal aimed at expanding the national road network to good condition.

The strategies are as follows:

- Rehabilitate and upgrade priority national roads and other national roads to good condition
- Undertake feasibility studies and construct missing links roads to good condition
- Undertake feasibility studies and construct Economic corridor roads
- Provincial and District Roads

The DSP 2030 deliverables as per the MTDP sector strategies are as follows:

- Rehabilitate and upgrade 16 priority national roads
- Maintenance of other national roads
- Construct 16 missing links
- Construct 8 Economic corridor roads
- Road safety support

It is also noted that while the Government's priority is the maintenance of existing transport assets, major new transport projects may be considered for funding if, through the application of rigorous cost-benefit analysis, it is clearly demonstrated that the proposals will have very high economic and social returns. Moreover, once PNG's existing transport infrastructure is restored and maintained to a good condition, the economic justification for expanding the network is likely to be stronger and major new projects missing link roads, economic corridor roads will gain momentum under the MTDP 2011-2015 and subsequent MTDPs

### ***Challenges in implementation***

The major challenge facing the transport sector is Government's funding priorities. Past experience shows that where resources have been diverted to other non-core areas, development plans are not being achieved. The other challenge is for Government to demonstrate adequate funding to the sector so that donors and the private sector will be able to commit their financial and technical resources to achieving the deliverables by 2030.

Compensation claims and availability of land is also a development constraint where 97 percent of PNG's land is held under customary tenure. The challenge is for Government to ensure certainty and gain prompt access to land for Government's purpose perhaps by fully implementing the Voluntary Land Registration Act or by direct acquisition.

The capacity for local contractors in PNG is also limited to implement large/multiple projects and as such there are on occasion delays to the completion. A commitment to longer term, program funding will provide the confidence industry needs to grow its capacity.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Expand PNG's national road network that links all of PNG and is in good condition.	Length of network	NTDP (2006-2010) DSP 2030	2010: 8460Km of national roads.	10,000 km of roads	15000 km of roads	20000 km of roads	25,000Km of roads
	Quality of road – sealed, good drainage. good Bridges	NTDP (2006-2010) DSP 2030	28.7% (2512km) are in good condition.	Less than 1,200 km in poor condition	50% of National Roads are in condition	75% of National Roads are in condition	100% in good condition
Lead government department	Department of Works & Implementation						

No.	Sector Strategy
1	Improve conditions of 16 priority national roads links and other national roads to good condition
2	Construct 16 missing links roads
3	Construct 8 Economic Corridor roads
4	Re-construction and upgrade to seal of an additional quantity of existing Provincial/District Roads to attain an overall length of National Roads in "good" condition of 25,000 km by 2030.
5	Road safety, awareness and enforcement

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Rehabilitate and upgrade the 16 National Priority Roads to a "good" condition (4216km)	1.1	4216 km of Priority National Roads in good condition. 2500 km sealed	3500 km sealed	4000 km sealed	4216 km sealed	Adequate funding Industry capacity
Rehabilitate and upgrade the remainder of the current National Road Network to a "good" condition (4244 km)	1.2	1000 km in good condition and sealed	2000 km in good condition and sealed	3000 km in good condition and sealed	4244 km in good condition and sealed	Adequate funding Industry capacity
Construct the 16 "Missing Link" roads to good condition (approx. 2,280 km)	2.1	Undertake survey and feasibility studies for 16 missing links roads. Land Acquired. 1 constructed.	5 missing Links roads constructed	5 missing Links roads constructed	5 missing Links roads constructed	Land is secured Adequate funding Industry capacity
Construct the 4 additional Economic Corridor national roads to good condition	2.1	Undertake survey and feasibility studies for 4 Economic Corridor roads. Land Acquired.	2 constructed.	1 constructed.	1 constructed.	Land is secured Adequate funding Industry capacity
Re-construction and upgrade to seal of an additional quantity of existing Economic Corridor Provincial/District Roads to attain an overall length of National Roads in "good" condition of 25,000 km by 2030.	4.1		2000 km upgraded and sealed	3000 km upgraded and sealed	4000 km upgraded and sealed.	Land is secured Adequate funding Industry capacity
Conduct regional awareness, enforcement and road safety audits	5.1	Conduct road safety education, road safety promotion, random vehicle	Conduct road safety audits on National	Conduct Driver Education	Traffic rules enforcement	Adequate funding

			inspections		Roads			
<b>Responsibility</b>	<b>Department of Works</b>							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							GoPNG/Donor
	1.2							GoPNG/Donor
	2.1							GoPNG/Donor
	3.1							GoPNG/Donor
	4.1							GoPNG/Donor
	5.1							
	<b>Total</b>	<b>1151.7</b>	<b>3450.7</b>	<b>4857.5</b>	<b>4764.5</b>	<b>4771.3</b>	<b>18995.7</b>	GoPNG/Donor

### 3.9 Water Transport

**Goal:** Establish a transportation network that links all of PNG

#### **Introduction**

With its dispersed population, Papua New Guinea's coastal shipping services takes on special significance in providing access to rural communities. 17 commercial ports, mostly very small, and innumerable small wharves, jetties and beach landings provide the basic infrastructure for maritime services, but the majority of these are in poor condition and carry very little traffic. Based on the current schedule of fees and user charges, only Lae and Port Moresby ports are financially viable. The other 15 ports are such smaller, and subsidized by these two operations.

#### **MTDP 2011-2015**

Consistent with the *Papua New Guinea Vision and PNGDSP*, the *MTDP 2011-2015* will guide the implementation of the National Transport Strategy and the Medium Term Transport Plan to improve the country's transport infrastructure.

Like roads and airports, Papua New Guinea's international and coastal shipping services take on special significance in providing access to rural communities. The strategy for the maritime sector include: (i) National ports and port facilities rehabilitation and upgrade, (ii) National ports' security systems improvement and upgrade, (iii) rehabilitation of wharves and jetties for domestic sea and water transport, and (ii) maritime safety-replacement and rehabilitation of all damaged or missing navigational aids and installation of new navigational aids along coastlines and inland waterways. with the assistance of the Nav aids Project and CWTP; (ii) establishment of community-based procedures for ensuring the security and maintenance of nav aids; (iii) strengthened resources for carrying out hydrographical surveys, storing and retrieving digital hydrographical data and printing high-quality charts; (iv) formalized arrangements

Maritime transport is an important mode of transport to serve the coastal and inland waterway areas. The focus of the sector is primarily on rehabilitation and extension of the major key ports and community water transport to achieve the targets of DSP by 2030. Priority ports and wharves in the MTDP are selected based on their volume of exports as contribution to the economy and international and inter-regional trade, and population served.

The baseline indicators are that international port turnaround time is three days and that only five percent of shipping route services is being provided. The current conditions of the international ports limit the accommodation of an increased number of vessels and as such the handling time for transiting vessels is high. The high cost of operations for local vessels and deteriorated wharves and jetties also constrain vessels to service only the maritime population where there are no links by road or air.

There are four sector strategies which are consistent with the overall DSP sector goal aimed at establishing a reliable water and sea transport system. The strategies are as follows:

- Rehabilitation and upgrade of all national ports and port facilities to cater for increased traffic and cargo
- Relocation of Port Moresby and Madang ports to minimize congestion
- Improve inland/coastal water transport for marginalized communities
- Safety compliance of maritime vessels and facilities

The DSP 2030 deliverables as per the MTDP sector strategies are as follows:

- Rehabilitate and upgrade national ports and port facilities
- Port Moresby Port redevelopment
- Port Moresby and Madang ports' feasibility studies and relocation
- Rehabilitate wharves and jetties for domestic water transport
- Maritime safety support-navigational aids and communication systems

The total estimated cost for the maritime transport sector in the MTDP 2011-2015 is K2.0 billion. Ports rehabilitation and upgrade take up the bulk of the funding with an estimated total cost of K1.3 billion. The expenditure is targeted at urgent maintenance and rehabilitation of the priority ports in the 1<sup>st</sup> MTDP. The other expenditure area is for the completion of the ADB Community Water Transport Project which will see the upgrading and construction of wharves and jetties and subsidization of costs relating to domestic shipping vessels for the travelling public. Another area of expenditure is targeted for the feasibility studies and design for the relocation of the Port Moresby Port and construction will follow in the next MTDP's.

### ***Challenges in implementation***

The major challenge facing the maritime sector is the adequate resource appropriation to the port rehabilitation and extension. Due to the magnitude of scope and costs associated to port development, resources need to be secured in the 1<sup>st</sup> MTDP otherwise costs will be increased tremendously in the next MTDP's if works are not being done thus straining future budgetary expenditures. Compensation claims is also a hindrance but will be addressed by Government.

As only two ports are financially viable the remaining fifteen ports are serviced as a Community Service Obligation (CSO). Adequate budget funding is required until trade levels increase to the point where these ports are financially self supporting.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Establish a water and sea transport system that links all of PNG that is secure, safe and efficient	Domestic Water transport capacity			25% increase in the numbers of routes services, number of vessels and upgraded ports	50 increase in the numbers of routes services, number of vessels and upgraded ports	75 % increase in the numbers of routes services, number of vessels and upgraded ports	Triple number of routes serviced, number of vessels and upgraded ports
	International port Turn around period		3 days turnaround	2 ½ days turn around	2 days turn around period	1 ½ days turn around period	1day turn around period
Lead government department	PNG Ports Limited , Department of Transport, IPBC and NMSA						

No.	Sector Strategy
1	Rehabilitate and upgrade all National Ports facilities
2	Community Water Transport services
3	Rehabilitate Navigational Aids

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Rehabilitate and upgrade 16 national ports	1.1	4	4	4	4	Adequate funding Industry capacity		
Relocate POM and Madang ports	1.2	Undertake 2 Feasibility studies	Relocation of POM port		Relocation of Madang port	Adequate funding Industry capacity		
Rehabilitate 200 jetties	2.1	10	50	60	80	Adequate funding		
Rehabilitate and Restore Small Navigational Aids	3.1	Restore 47 small navigational aids				Adequate funding		
<b>Responsibility</b>	PNG Ports Ltd, Department of Transport IPBC, NMSA							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							GoPNG/donors
	1.2							GoPNG/donors
	2.1							
	3.1							
Total	<b>167.2</b>	<b>145.7</b>	<b>210.6</b>	<b>131.7</b>	<b>721.5</b>	<b>1376.5</b>		

### 3.10 Air Transport

**Goal:** Establish a transportation network that links all of PNG

#### **Introduction**

Airports play an important role in linking Papua New Guinea's widely fragmented population. The Government of Papua New Guinea has adopted a system of certification that requires airports to achieve and maintain compliance with minimum operating standards. Compliance with these certification standards is required for all 22 national airports. Airport Certification is a process whereby the Civil Aviation Authority Regulator approves airports for use by civil aircraft. Currently 12 airports are certified out of the 22 National Airports. Almost 95% of the rural airstrips are closed and not in operation.

The air transport sector is aimed at achieving the PNGDSP through the implementation of the MTDP sector strategies and deliverables. This MTDP 2011-2015 will lay the foundation for improving and expanding the air transport services that is safe, dependable, affordable and accessible to all sections of the community.

Properly planned and prioritized rehabilitation and maintenance of Papua New Guinea's existing air transport infrastructure is an essential part of our relationship with countries in the region and indeed the global perception of our nation. A quality air transport industry is critical not only for access to services by our citizens but in attracting tourists and foreign investment to help build the future.

#### **MTDP 2011-2015**

Consistent with the *Papua New Guinea Vision and PNGDSP*, the *MTDP 2011-2015* will guide the implementation of the National Transport Strategy and the Medium Term Transport Plan to improve the country's transport infrastructure. As such, within the next five years, the sector will be embarking on maintenance and rehabilitation of all national airports including navigational aids; communication and surveillance systems to ensure compliance with international operating standards., In addition rehabilitation will be undertaken of rural airstrip to basic safety standards to open up access to rural areas which are inaccessible by road or sea. Regional airports will be upgraded to take higher sitting capacity jets to cater increase in the number of passengers as result of LNG project and increased economic activities.

Due to the geographic and topographic nature of the country, air transport is the only mode of transport that interconnects the whole of PNG and apart from the maritime transport, to the entire world. The focus of the aviation sector in the MTDP 2011 – 2015 is mainly on national and regional airports and airstrips.

The baseline indicators are such that only 15 airports conform to safety standards, over 50 airstrips are not operating and only one regional airport has capacity for larger jet aircraft. The airports and airstrips will need to conform to international air safety standards established by the ICAO and CASA, who are the international and regional aviation regulatory bodies.

There are three sector strategies which are consistent with the overall DSP sector goal aimed at establishing a reliable civil aviation transport system. The strategies are as follows:

- Upgrading and rehabilitation of national airports to international safety and security standards
- Rehabilitation of rural airstrips to basic operating levels
- Upgrading of regional airports to cater for larger jet aircrafts

The DSP 2030 deliverables as per the MTDP sector strategies are as follows:

- National and regional airports rehabilitation and upgrading
- Rehabilitation and upgrade of navigational aids; surveillance and communication systems
- Rural airstrips rehabilitation

With the timely support of the Asian Development Bank (ADB), the Government is investing close to K2.0 billion to rehabilitate and upgrade the 22 national airports to comply with international safety and security standards and to serve future needs. This will aid in realizing the majority of the deliverables, and this program comes in three phases with the first phase in the MTDP 2011-2015.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Improve and expand air transport services that is safe, dependable, affordable and accessible to all sections of the community	All National airports complying with international Safety and security Standards		15 airports certified	22 airports certified			22 National Airports complying with safety certification
	Number of unused airstrips rehabilitated to basic safety levels		10	10	20	20	50 airstrips rehabilitated
	Number of Regional airports upgraded for higher seating capacity jets		1	3	3	4	10 airports upgraded for larger jets
Lead government department	National Airports Corporation						

No.	Sector Strategy
1	Rehabilitate and upgrade and all National Airports to international safety standards
2	Number of Regional Airports upgraded for larger seating capacity jets
3	Annual Routine Maintenance for National airports
4	Rural airstrips rehabilitated to basic safety operational levels

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Rehabilitate and upgrade all National Airports	1.1	22 National Airports certified				Adequate funding Industry capacity		
Rehabilitate and upgrade all navigation aids, surveillance and communication systems in all National Airports	1.2	<ul style="list-style-type: none"> <li>Replace ATM at POM</li> <li>Install ADS at Wewak, Tokua, Momote, Alotau &amp; Nadzab</li> <li>Install GNSS in 20 National Airports</li> <li>Upgrade Radio Navigation Aid in POM, Madang, Gurney, Buka, Momote, Girua and Finschafen</li> </ul>				Adequate funding Industry capacity		
Upgrade, extend and expand regional airports for larger jets	2	2	2	3	3	Adequate funding Industry capacity		
Annual routine maintenance for national airports	3	Selected national airports	Selected national airports	Selected national airports	Selected national airports			
Rehabilitate rural airstrips to basic operating levels	4	Rehabilitate 10 airstrips	Rehabilitate 15 airstrips	Rehabilitate 15 airstrips	Rehabilitate 10 airstrips	Adequate funding Industry capacity		
Responsibility	National Airports Corporation							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2030	Funding option(s)
	1.1							GoPNG/donors
	1.2							GoPNG/donors
	2.1							
	3.1							
	4.1							
<b>Total</b>	<b>378.8</b>	<b>395.5</b>	<b>383.4</b>	<b>386.1</b>	<b>375.0</b>	<b>1918.8</b>		

### **3.11 Utilities**

**Goal:** All citizens and visitors to have access to reliable and affordable public utilities by 2030

#### ***Introduction***

Access to public utilities such as water and sanitation, postal services, electricity and communication are becoming an increasing necessity in today's modern society. Papua New Guinea's ability to provide these services is well below international standards for a developing country.

The long term goal for the utilities sub-sectors is to ensure that there is wider access to reliable and affordable public utilities for all citizens and visitors by 2030. There are specific sector strategies outlined for the next five years that aim to achieve this long term goal.

Papua New Guinea is ranked low in terms of access to clean water and safe sanitation in the Pacific Region. Only 30% (3.5 million) of the total population have access to clean water while only 22% have access to adequate sanitation services. Unsafe drinking water and poor personal hygiene practices contribute to water and food borne diseases including diarrhea, dysentery and typhoid. Diarrhea accounts for 1,610 per 100,000 deaths in the country and is ranked as one of the main causes of deaths from a curable disease. Typhoid accounts for 2.9% of all deaths as indicated in the National Health Plan 2001-2010. The limited access to clean water and safe sanitation poses major risks of cholera and other related epidemics. Of the 80% of the rural population, only 20% have access to clean and safe water and only 15% have access to safe sanitation disposal options. In the urban areas only 60% of the urban population has access to safe water, while only a minority has access to proper sanitation disposal facilities and services.

The delivery of postal services in PNG is an area that needs a more concerted effort for it to be fully realized, hence the government is committed to providing this service to all the 89 districts in the long term. The plan for the next five years will clearly identify the specific deliverables in terms of postal services and the resources required to achieve the specified targets.

#### ***MTDP 2011-2015***

In the next five years, the utilities sector aims to achieve certain targets through the specific development strategies. The main focus will be on the provision of public utilities to the urban and rural population in order for the majority of the country's population to access the basic public utilities for their livelihoods. Accessibility to these public utilities will increase standards of living of the people and relatively reduce the potential epidemics of diseases that have diverse impacts on the lives of the people and development of the country.

The long term strategy aims to achieve over 70% of the population having access to improved water source and sanitation and all education institutions to have access to safe water. These targets may seem too ambitious but is achievable through options like Public Private Partnership (PPP) where private sector will be called to partner with government to invest in the expansion of the reticulated water and sewerage system for the growing population of the country.

The participation of the Private Public Partnership is also encouraged in the five year plan to achieve the Millennium Development Goals (MDG) "to increase 60% the number of households with access to safe water by 2010 and at least 85% by 2020". This will be addressed through this medium term plan. While the MTDP aims to increase access to safe water, proper sanitation and postal service's, it is the main focus of the sector's MTDP to ensure that provision of safe water is fully accessible by the urban population and the service is affordable to the peri-urban and low income earning population.

It is the aim of the first five year plan to have five postal buildings constructed to improve postal services in PNG. The necessary policy framework will be required to facilitate and guide the future development of postal services in the country.

The long term targets will be progressively achieved through the implementation of the rolling MTDPs. Responsible agencies and institutions are required to work together in order to deliver the services in an accountable and transparent manner under the enabling legislative and policy frameworks.

### ***Building on MTDP 2011-2015***

The following rolling five year plans will concentrate on ensuring the development of rural districts centers water and sanitation infrastructure which intends to achieve 85% of all districts to access clean and safe water and 70% to have proper sanitation. Partnership with communities and provinces to improve rural and peri-urban communities with proper water and sanitation methods and technologies will also be pursued in this plan. This is also in line with the MDG goal no. 7 on “Ensure environmental sustainability” targeting improvements in environmentally friendly technologies and methods of production.

Investigations and feasibility studies will be undertaken to pilot and implement appropriate urban settlements with water and sanitation service systems. Investigations to determine appropriate septic and trade waste business models in pilot areas of the country to optimize viable sanitation and trade waste business opportunities are encouraged while environment and health issues and concerns are addressed simultaneously. The provision of utilities to education institutions is part of the Education Development plans and therefore service providers can only provide this service on request from concerned institutions.

### ***Challenges in implementation***

In the rural areas rain water, shallow wells, spring and creeks are the main sources of potable water but they have their own water quality problems. Rain water stored in tanks is potentially the safest, cost efficient and sustainable option in improving rural water access. However, the rural average household finds the cost of owning water tanks and maintaining the logistics of the tanks very expensive and unaffordable.

Reticulated water supply services are provided in most rural districts centers but most of those reticulated services need urgent maintenance and upgrade.

It is truly a challenge under the first five year plan to meet the target of the long term strategy and specifically the Millennium Development Goals (MDG) target “to increase 60% the number of households with access to safe water by 2010 and at least 85% by 2020”. This will be addressed by this plan on its 2030 target of 70% where for every five year rolling plan targets to achieve a rate of 7.75% in addition to the current baseline. It is the main focus of the sector to ensure that provision of safe water and good sanitation is accessed fully by the urban population and the service is affordable to the peri-urban and low income earning population.

PNG does not currently have a postal service policy which can provide a clear direction on the future development of postal services, which is vital for the development of this country.

The main aim of the long term strategy on the development of postal services in PNG is to for all districts to have access to formal postal services. Through the integrated development approach using the corridor development concept and other government integrated services roll outs programs, it will ease the accessibility of postal delivery services to all districts in PNG.

There is considerable scope to extend and modernize postal delivery services including the introduction of delivery to places of residence in urban centers. The postal services will integrate other quick services such as money transfers to make life easier for people in the rural districts which will save time and travelling cost to access the same services in urban centers.

Thus, the enabling legislation and policy framework is required to facilitate the effectiveness of postal services in PNG. The MTDPs will facilitate enablers to create conducive environment for such essential services to be delivered for public benefit and efficiency.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Citizens and visitors to have access to reliable and affordable public utilities by 2030	Access to improved water source	PNG Water Board	39% of total population (30% of rural population in 2008)	46.75% of total populations	54.5% of population	62.25% of total population	70% of total population
	Access to improved sanitation	PNG Water Board	44% of population	50.5% of population	57% of total population	63.5% of total population	70% of total population
	Proportion of education institutions having access to safe water	DOE/Eda Ranu	30% in 2008	47.5% of education institutions	65% of education institutions	82.5% of education institutions	100% of education institutions
	Access to reliable postal services	PNG Post	72 districts have access to formal postal services	77 (5) postal buildings	82 (5) postal buildings	86 (4) postal buildings	89 (3) postal buildings in the 89 districts
Lead government department	PNG Water Board, IPBC, Post PNG						

No.	Sector Strategy
1.	Increase in access to proper and safe water supply
2.	Increase in access to proper sanitation system
3.	Increase in proportion of education institution having access to safe water supply
4.	Increase in number of districts having access to formal postal services.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Increase current 39% to 70%	1.1					Lack of funding and delay in implementation		
Increase current 44% to 70%	2.1	Rehabilitate and expand Port Moresby sewerage system.				Lack of funding and delay in implementation		
Increase current 30% to 100%	3.1					Lack of funding and delay in implementation		
17 postal buildings built in 17 districts	4.1	Build postal buildings	Build 5 postal buildings	Build 4 postal buildings	Build 3 postal buildings	Lack of funding and delay in implementation		
Responsibility								
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1.1							
	2.1	41.8	41.8	41.8	41.8			donor
	3.1							
	4.1							
Total		41.8	41.8	41.8	91.8	50	267.2	

### **3.12 Information Communication Technology**

**Goal:** A modern and affordable information and communications technology that reaches all parts of the country

#### ***Introduction***

The use of Information Communication Technology has transformed the World, and many countries today adopt new technology that provides for opportunities to do business, opens access to market places, delivers a wealth of information enhancing social interaction and enabling far greater community participation. For PNG to achieve the level of development experienced by many of the developed countries and to achieve PNG vision 2050 for a healthy wealthy population there must be efficient ICT infrastructure with the use of technology that is appropriate to PNG circumstances.

The objective of ICT policy has been centered on ensuring availability of ICT infrastructure to as many Papua New Guineans as possible and at affordable prices. This goal will assist the people of Papua New Guinea to face the many challenges associated with our economy, geographical isolation, and ease of ICT in education health and other service delivery of the government. The long term goal of the ICT sector is to provide a modern and affordable information and communication technology that reaches all parts of the country.

Information Communication Technology (ICT) plays a major role in the creation of enabling environment for social and economic development of the country. Securing of socio-economic benefits is brought about when the country has modern technology that reaches all parts of the country and at an affordable rate

#### ***MTDP 2011-2015***

Proper planning and implementation consistent with ICT policy in a timely manner is critical as reflected in the first five year medium term plan.

This target set for the next five years is ambitious and involves a lot of challenges considering the current low geographical coverage of telecommunication services mainly in larger population centers, the poor quality of service and the lack of institutional capacity. These limitations result in the high retail charges associated with ICT which impede the development of broadband services. Consequently, PNG has one of the lowest levels of voice and internet penetration in the world and there are very limited broadband services available.

With the launch of the ICT policy in 2008, a number of reforms have taken place. The introduction of B mobile and Digicel have seen a dramatic increase in the use of cellular phones with Digicel alone recording 500,000 subscribers since coming into network in 2007.

Another major project is to have all government departments and agencies integrate into one government information platform. This project will have a huge impact on the overall service delivery of the government in terms of cost by, removing duplication and ultimately improving governance. The proposed space initiative and the satellite project are concepts that will expand the ICT capacity and service provision.

#### ***Building on the MTDP 2011-2015***

The rolling Medium Term Plans to 2030 will enable the implementation of strategies to improve the access to telephone, internet and media coverage to substantially increase competition and impact on affordability. Considering the current situation and to achieve the set target goal in the DSP and the PNG Vision 2050, substantial investment is required in the MTDP to expand the ICT sector.

Appropriate level of funding is critical to ensure flow of tangible benefits during the subsequent five year plans to deliver the DSP goal and the set targets by 2030. PNG with limited capacity needs to move into international partnerships to deliver the much needed technical expertise ensuring ICT development conforms to international standards and especially in the areas of capacity development to ensure sustainability of these developments.

#### ***Challenges in implementation***

The situation concerning access to telecommunication services in PNG is that the level of access to Telecommunications services across PNG is very low by world standards even with 2% mobile penetration in 2007. The following is evident in this sector;

- The level of access in rural areas is lower than national average.
- The majority of census units in PNG have no access to services at all.
- Only 87 districts have access to PNSTN network.
- The fixed telephony network has approximately 65,000 lines, 65% of which are business lines. This which means 1/3 of lines are residential uses

The major challenges affecting the development of this sector includes the availability of land for the development of ICT, political support for strategies that promote the advancement of ICT development in the country, resource availability and appropriate policies and strategies as well as legal issues which directly affect the development of this sector.

Given our situation substantial network investment is required to improve the technical capabilities of existing infrastructure and to extend its availability to rural and remote areas of PNG. The costs alone in undertaking such initiatives are very high due to the rugged and remote terrain that characterizes the majority of PNG's landmass. The implementation of a properly functioning community service obligation (CSO) under a Public Private Partnership approach is critical in achieving the overall goal of the ICT Sector. The urgency to introduce an equitable and properly managed CSO scheme is increasing with implementation of government policy to introduce open competition in the communication sector. With open competition traditional cross subsidies between services and geographic areas become impossible to sustain if competitors are able to cherry pick the most profitable customers in the lower cost areas. With the recent engagement of World Bank assistance to assist in the establishment of rural connectivity fund (RCF) and eventually setting up Universal Access Scheme will provide for entrepreneurial development in sustaining management of ICT services into rural areas in PNG.



DSP sector goal	Indicators	Source	Baseline in 2010	2015 target	2020 target	2025 target	2030 DSP target
A modern and affordable information and Communication Technology that reaches all parts of the Country.	Access to a telephone	DCI	150 mobile subscribers per 1000 people	312.5 mobile subscribers at 32.5 annual growth rate.	475 mobile subscribers	637.5 mobile subscribers	800 mobile subscribers per 1000 people
	Access to internet	DCI	2.3% of population use internet	19.2% of population at 5 year approximate increase of 16.9%.	36% of population use internet	53% of population use internet	70% of people using internet
	Media coverage	DCI / DPM	55% access radio; 26% access television mostly in the urban areas.	Radio: 66.25% with a 5 year increase of 11.25% Television: 44.5% with a 5 year increase of 18.5%	Radio: 77.5% Television: 63%	Radio: 88.75% Television: 81.5	100% access to radio and television
	Access to Government Information / E - Government	DCI	Lack of information sharing in all government departments.				100% e - government
Lead government department	Department of Communication & Information (DCI)						

No.	Sector Strategies to achieve goal
1	Carryout phase 2 reforms of the Government's ICT Policy through competitive market in areas considered viable for access to mobile phones and broad band internets services.
2	Increasing coverage in the provinces by Improving the existing infrastructure and develop new network infrastructure
3	Maintaining mutual relationships with international ICT organizations in ensuring compliances with international conventions, standards practices and trends and develop, expand government e-services to rural communities.
4	Sustain Management of the ICT industry through the introduction of Industry levy on long term bases under the Universal access scheme.

DSP 2030 deliverables	No.	2011-2015	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Access to phone and internet access throughout most of PNG	1.1	Establish NICTA to oversee competitive rollout of phone and internet service. Where rural access to phone and internet inadequate because not profitable, trial telecentres.				Land is secured Improve project management unit and capacity. Policies and legal issues are addressed with political support		
Rehabilitate and upgrade all Provincial Radio Stations.	1.2	Rehabilitation of five provincial stations annually on the bases of satisfactory level of performances.	All provinces to come under rehabilitation plan	Sustainable level of management		Sustainable management performances. Sufficient funds are allocated		
Integration of Government Information System (IGIS) and E-Government	1.4	Cost benefit scoping study of IGIS Network infrastructure and Data Management Centre in NCD and six (6) selected Provinces.	Full integration of management Information system at National level	Management Information System, fully integrated at Provincial and District level		Policy and legal issues are addresses,		
Responsibility	Department of Communication & Information,							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
								GoPNG
Total		25.2	29.0	5.0	5.0	5.0	69.2	

### **3.13 Energy Development**

**Goal:** All households have access to a reliable and affordable energy supply, and sufficient power is generated and distributed to meet future energy requirements and demands.

#### ***Introduction***

PNG currently has four sources of energy generation capacity that provide electricity in the country. These are gas, hydro, geothermal and diesel energy. Due to the current demands in the infrastructure developments and the growing population, energy is one main component that is currently lacking capacity and badly needs to be upgraded and rehabilitated to meet current and future demands.

Electricity is an important input to production and is the most versatile form of energy available. It is an essential development component that sustains economic, social growth and well-being where it triggers and supports growth in various areas of development and improves living standards.

There is approximately ninety per cent (90%) of the population lacking access to electricity, and the progress in rural electricity has been slow. Achievement of increase access through the operations of PNG Power (PPL) has not been satisfactory despite honoring its Community Service Obligations. The level of electricity services has since deteriorated with the lack of maintenance to generation and distribution assets and the lack of the capacity to discharge the task of providing these services.

#### ***MTDP 2011-2015***

The 2011-2015 MTDP for the energy sector will focus on increasing access to electricity for all households in the country. Access to electricity will be improved by using infrastructure that is quick to construct, while at the same time feasibility studies will assess possible large scale developments. Electricity will be provided to rural aid centres and schools by using renewable energy such as solar, wind and micro hydro. Diesel will also be used but only as an interim measure while renewable sources are developed. The MTDP will also try to address the establishment of clear and specific frameworks for utilizing gas energies in electricity generation. New investments from private sectors in the photovoltaic technology retail market in the country are also expected during the period of the first MTDP.

A feasibility study will be undertaken to develop a national grid. While this study is underway, major maintenance work will be undertaken on the existing regional grids, Rouna, Ramu and Gazelle to upgrade current supplies of electricity. Maintenance will first of all be carried out on the Port Moresby Rouna Grid system as it is the national capital where much of the energy demands are present. The second will be on the Ramu Grid system as it is the second largest city and the third will be the Gazelle grid. The maintenance work on the grids will also prepare the grids for national connection. Pending the outcome of the feasibility study and available funding, work may commence on the national interconnection in the first MTDP, but will otherwise commence in the second MTDP period.

Comprehensive analysis is also required into the cost effectiveness of various alternative sources of power. This analysis will then form the basis for PNG's plan to invest in generation and distribution capacity. To this end, feasibility studies will be conducted on establishing geothermal power plants and other renewable energy technologies to replace diesel. A feasibility study will also consider the cost competitiveness of clean coal fired power in PNG. For the transport sector, bio-fuel will be assessed as a low cost alternative to diesel.

Inefficiencies in the electricity systems will be addressed in the MTDP 2011-2015 period. In particular, 50% of technical losses in electricity systems will be rectified and a framework will be established for eradicating non-technical losses.

#### ***Building on MTDP 2011-2015***

The follow on Energy MTDPs 2015-2020 will continue most of the activities from the first MTDP. This will contribute to meeting the targeted outputs and deliverables for the 2025-2030 Energy MTDP where maintenance and rehabilitation of the existing three regional grids to generate and distribute sufficient energy to meet current and future demands will be the main focus.

It will also focus on increasing gas, hydro and other renewable generation capacity and increase ease pay domestic customers and decrease in diesel generation.

Establishing the national grid for the country will become the target of subsequent MTDPs.

The Government shall provide the Energy Sector with adequate level of human and financial resources and facilities to build its capacity. This in turn will provide the Energy Sector to manage and promote Research and Development for cost-effective alternative energy sources due to escalating prices. The national government therefore will have to establish appropriate arrangement to go into carrying out its policy on electrification both under and for facilitating commercial investments.

### ***Challenges in implementation***

There is a lack of investment to maintain infrastructure and to do operational maintenance on existing generation, transmission and distribution assets. Lack of generation, management, network and financial capacities have also impacted negatively.

Inefficient operation by power companies is one reason why power is more costly. There is a need to decrease operating costs in the supply of electricity by power companies through improved efficiency. Uneconomic areas, particularly rural areas are naturally high cost areas for investment and therefore power companies would naturally set high prices or be subsidized by Government through the PPP and CSO frameworks.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
All households have access to reliable and affordable energy supply and sufficient power is generated and distributed to meet current and future energy requirements and demands.	Access to electricity	PNG Power, DPE-ADB Power Sector Development Plan Report	12.4% of Households	26.8 % of Households (rise of 14.4% per 5 years)	41.2% of households	55.6% of households	At least 70% of Households
	Capacity of electricity generation utilizing gas	PPL	70 MW	130 MW	280 MW	390 MW	390 MW
	Capacity of electricity generation utilizing hydro	PPL	215 MW	430 MW	580 MW	750 MW	1020 MW
	Capacity of electricity generation utilizing geothermal	DPE	56 MW	63 MW	112 MW	196 MW	350 MW
	Capacity of solar photovoltaic installations	DPE	0 MW	4 MW	8 MW	14 MW	25 MW
	Installed capacity of wind power technologies	DPE	0 MW	7 MW	13 MW	22 MW	40 MW
	Electricity generation capacity utilizing biomass	DPE	0 MW	14 MW	24 MW	42 MW	75 MW
	Electricity generation capacity utilizing biogas	DPE	0 MW	2 MW	3 MW	6 MW	10 MW
	Diesel-based electricity generation capacity	PPL	160 MW	100 MW	60 MW	40 MW	30 MW
	Coal-based electricity generation capacity	(DPE)	0 MW	30 MW	30 MW	30 MW	30 MW
	Existence of a national grid	DPE	(NIL)	(nil)	(nil)	(nil)	exists
	Number of households installed with easipay (pre-paid) system	PPL	4%	9%	18%	23%	>50%
Lead government department	Department of Petroleum and Energy (DPE)						

No.	Sector Strategy
1	1.1: Increase the number of independent power producers (IPPs) in generation market to feed power into existing electricity systems. 1.2: Increase numbers of private sector investments in isolated market pockets/enclaves, (with State subsidies provided where necessary). 1.3 Increase public investments in rural electrification (by government) in target areas and groups (schools and health posts) where commercial investments are not viable.
2	2.1 Increase capacity of gas-based electricity generation.
3	3.1 Increase electricity-generation capacity utilizing hydro.
4	4.1 Increase electricity-generation capacity utilizing geothermal.
5	5.1 Increase use of solar photovoltaic technology for electricity generation.
6	6.1 Increase electricity generation capacity utilizing wind.
7	7.1 Increase biomass-based electricity generation capacity.
8	8.1 Promote/increase biogas-based electricity generation capacity.
9	9.1 Relegate the importance of diesel-based power generation to strategic niches of “rapid-response capacity”, buffer-capacity and/or backup (standby) capacity.

<b>10</b>	10.1 Maintain a strategic share of power generation capacity utilizing coal (clean coal technology) that underpins energy security and competitive electricity tariffs.
<b>11</b>	11.1 Establish a national grid.
<b>12</b>	12.1 Increase number of households utilizing easipay (pre-paid) system for payment of electricity charges.
<b>13</b>	13.1 Create, establish and operate a robust system for data collation, analyses and storage to inform sector policies and strategies.

<b>DSP 2030 deliverables</b>	<b>No.</b>	<b>2011-15</b>	<b>2015-2020</b>	<b>2020-2025</b>	<b>2025-2030</b>	<b>Risks and Assumptions</b>
S1.1(a) Conclusion of feed-in tariffs, access arrangements, and regulatory contracts and issuance of licenses for new IPPs feeding electricity into Port Moresby system	1.1(a)	Advent of 2 IPPs employing “rapid response” sources of power generation such as diesel generators under feed-in tariff arrangement and short-term possible regulatory contract	Advent of 2 new IPPs with established feed-in arrangement and regulatory contract, more than the 2011-2015 target	Advent of 1 new IPP with established feed-in arrangement and regulatory contract, more than the 2015-2020 target	Existing 5 IPPs increase their generation capacities by the quotas allocated by the government to meet growing demand	1. EIP is approved by NEC and its implementation, monitoring and evaluation framework is established before end of 2010 2. Implementers of the feed-in tariff, access arrangements and regulatory contracts accept them and are comfortably prepared to implement these
S1.1(b) Conclusion of feed-in tariffs, access arrangements, and regulatory contracts and issuance of licenses for new IPPs feeding electricity into Ramu system	1.1(b)	As above	As above	As above	As above	As above
S1.1(c) Conclusion of feed-in tariffs, access arrangements, and regulatory contracts and issuance of licenses for new IPPs feeding electricity into Gazelle System	1.1(c)	Advent of 1 IPP employing “rapid response” source of power generation such as diesel generators under feed-in tariff arrangements and short-term possible regulatory contract	Existing IPP increase its capacity by the quota allocated by the government to meet growing demand	Advent of 1 new IPP with established feed-in arrangement and regulatory contract, more than 2011-2015 target	Existing 2 IPPs increase their capacities by the quota allocated by the government to meet growing demand	As above
S1.2(a) Isolated market enclaves (pockets) developed using the CSO model under the EIP, and appropriate licenses issued to IPPs	1.2	5 isolated market enclaves (pockets) developed and established in PNG	15 new isolated market enclaves developed and established in PNG, more than 2011-2015 target	15 new isolated market enclaves developed and established in PNG, more than 2016-2020 target	15 new isolated market enclaves developed and established in PNG, more than 2021-2025 target	1. CSO model well promulgated to the understanding of and acceptance by concern stakeholders 2. Funding is available from the State to finance the capex subsidy component of the construction phase of CSO projects 3. Markets are assessed and proven to be feasible for the employment of the CSO model 4. Provincial governments are willing to allow for this model to be implemented with regard to providing electricity at “C” centres
S1.2(b) Large loads concluded power purchase agreements (PPAs) with existing IPPs or PPL, and appropriate licenses issued	1.2	2 new large-load markets established	2 new large-load markets established, more than 2011-2015 target	2 new large-load markets established, more than 2016-2020 target	2 new large-load markets established, more than 2021-2025 target	1. Large loads are conducive for attracting IPPs to supply the markets 2. IPPs are keen to invest in large load markets
S1.3(a) Rural schools having	1.3	200 rural schools	400 rural schools	600 rural schools	800 rural schools	1. Funding is available from the Budget to

access to electricity from small renewable energy systems	a)	electrified through the use of renewable energy systems (solar, wind, and micro-/pico- hydro)	electrified through the use of renewable energy systems (solar, wind and micro-/pico- hydro)	electrified through renewable energy systems (solar, wind and micro-/pico- hydro, etc)	electrified the use of renewable energy systems (solar, wind and micro-/pico- hydro, etc)	carry out these projects 2. Costs of technologies to be employed do not rise significantly over the years 3. Sufficient manpower in the DPE to implement these projects
S1.3(b) Rural health posts having access to electricity from small renewable energy systems	1.3(b)	200 rural health posts electrified through the use of renewable energy systems (solar, wind, and micro-/pico- hydro)	400 rural health posts electrified through renewable energy (solar, wind and micro-/pico- hydro systems) 280MW	600 rural health posts electrified through renewable energy (solar, wind and micro-/pico- hydro systems, etc) 390 MW	800 rural health posts electrified through renewable energy (solar, wind and micro-/pico- hydro systems, etc) 390 MW	As above
S2.1 Increased electricity output generated from gas using efficient and modern technology	2.1	130 MW				Private sector is willing and prepared to invest in gas fired power plants
S3.1 Increased electricity output generated from hydro, using cost-effective means and appropriate technology	3.1	430 MW generation capacity from hydro	1. 580 MW generation capacity from hydro	1. 750 MW generation capacity from hydro	1. 1020 MW generation capacity from hydro	Private sector is willing and prepared to invest in hydroelectric plants
S4.1 Advent of geothermal power into grid electricity supply	4.1	63 MW	112 MW	196 MW	350 MW	Government, development partners and private sector are willing and prepared to invest in geothermal energy resource development
S5.1 Growth in the market for solar photovoltaic technology	5.1	4.5 MW	8 MW	14 MW	25 MW	Government, development partners and private sector are willing and prepared to invest in solar photovoltaic industry development
S6.1 Increased utilization of wind resource to generate power	6.1	7.2 MW	12.8 MW	22.4 MW	40 MW	1. Marketplace is attractive for investments in wind power generation projects
S7.1 Advent of biomass-generated power into the electricity grid	7.1	13.5 MW	24 MW	42 MW	75 MW	1. Government, development partners and private sector are willing and prepared to invest in biomass development for grid connected electricity generation 2. biomass fuel is available in sustainable supply to be used
S8.1 Advent of biogas-generated electricity into electricity grid	8.1	1.8 MW	3.2 MW	5.6 MW	10 MW	1. Marketplace is conducive and attractive for investments in biogas plants for power generation
S9.1 Significant reduction in diesel-thermal generation, replaced by renewable energies and other sources of electricity	9.1	1. 130 MW of diesel-thermal plants operational in PNG	60 MW of diesel-thermal plants operational in PNG	40 MW of diesel-thermal plants operational in PNG	30 MW of diesel-thermal plants operational in PNG	1. Options for replacing diesel plants are economically more attractive 2. Policy and regulatory requirements for cutting down on diesel use are in place and thoroughly enforced.
S10.1 A strategic capacity of coal generated plants are maintained, utilizing clean coal technology	10.1	0 MW	30 MW	30 MW	30 MW	1. Coal is accepted widely in PNG for a strategic capacity of electricity generation. 2. Policy and regulatory requirements for maintaining strategic coal capacity are established and enforced.
S11.1 National electricity grid established	11.1	No national grid (preparatory work initiated for development of national	monitoring of market and industry development that should underpin	(develop strategy and finalize feasibility assessments for	National grid is established	1. A national electricity grid is feasible. 2. Private sector is willing and prepared to enter into PPP arrangement with PPL to develop national grid.

		grid)	establishment of national grid	development of national grid)				
S12.1 Growth in number of households with easipay systems installed	12.1	4% of households (51,000 households)	9% of households (114,750) have access to easipay	18% or 178,500 households have access to easipay	23% or 242,250 households have access to easipay	>50% of paying commercial electricity have access to easipay		
S13.1 Established system and process of operations of data collation, analyses, storage and use (retrieval)	13.1	1. Developing system and process for energy data collation, analyses, storage and use (retrieval) 2. Develop and “operationalize” work plan for data collation and processing and use	1. Review system and process for data collation, analyses, storage and use (retrieval) 2. Review and “operationalize” work plan for data collation, processing and use	1. Review system and process for data collation, analyses, storage and use (retrieval) 2. Review and “operationalize” work plan for data collation, processing and use	1. Review system and process for data collation, analyses, storage and use (retrieval) 2. Review and “operationalize” work plan for data collation, processing and use	1. Capacity is available to establish the system and process of data collation 2. Constraints relating to data collation are removed (e.g. reluctance by private sector to release data)		
<b>Responsibility</b>	Department of Petroleum and Energy (DPE)							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Funding option(s)</b>	
	1.1(a)	*	*	*	*	*	[no costing done as private sector is fully expected to deliver]	Private sector investments
	1.1(b)	*	*	*	*	*	[no costing done as private sector is fully expected to deliver]	Private sector investments
	1.1(c)	*	*	*	*	*	[no costing done as private sector is fully expected to deliver]	Private sector investments
	1.2(a)						DPE est. based on avg. capital costs for small hydro	GoPNG/ donors/ private sector investments
	1.2(b)	*	*	*	*	*	[no costing done as private sector is fully expected to deliver]	Private sector investments
	1.3(a)						DPE est. based on projects developed already	GoPNG/donors
	1.3(b)						DPE est. based on projects developed already	GoPNG/donors
	8.1						Based on biomass cost estimates	GoPNG/donors/private sector
	9.1	-	-	-	-	-		GoPNG/donors/private sector
	10.1						US EIA standard estimates 2007	GoPNG/ donors/ private sector
	11.1						DPE est.	GoPNG/donors/public private partnership
	12.1						DPE est. K750/ connection	PPL/Private sector investments
	13.1						DPE est.	GoPNG
<b>Total</b>		59.9	59.9	59.9	59.9	59.9		





### **3.14 Rural Development**

**Goal:** Rural prosperity

#### ***Introduction***

Economic development and prosperity for rural areas have been either slow or stagnate since Independence. Mining townships and the two main cities of the country have had economic development being concentrated around them. This pattern of development lures rural people into cities and mining towns. Putting a strain on services provided within these centres. Rural prosperity needs to be realised at the expense of major cities and mining towns, not saying to stop the process of urbanisation but in redirecting the flow of people back to rural areas to strike a balance between the two.

The Government's priority is to improve service delivery in rural areas. There is a need for real change in rural areas. All sectoral strategies are therefore focused on the rural communities. This reflects the priority given by the government to ensuring that the benefits of growths are experienced by the rural majority.

#### ***MTDP 2011-2015***

In this first five years, Improving service delivery and income earning opportunities in the rural areas is essential to trigger rural prosperity. Hence specific deliverables in service delivery and economic opportunity sectors mentioned in this document play contributing factors towards this goal.

Specific interventions for certain rural areas of PNG which are ranked low in achieving the Millennium Development Goals (MDGs) and known as the 'hot spot' areas will be strategically targeted to improve the performance of these indicators with the aim to improve the national average MDG indicators at large.

The concept of the economic corridors identified by Government, with the first, out of the ten (10) *Priority Areas* being the *Petroleum Resource Area Economic Corridor* (PRAEC) is one main intervention. This will allow for service opportunities as well as economic activity and income generating opportunities to take place in parts of PNG that have not been easily accessible by land, air or water transportation. Opening access through means of transportation is paramount to rural prosperity.

#### ***Building on MTDP 2011-2015***

Future MTDPs will subsequently pick up respective activities required in the process of delivering on the PNGDSP targets for 2030, in support of fostering prosperity in rural areas. Initially, addressing the least fortunate rural areas/ hot spots who need dire attention in basic service delivery (accessible health, education, etc) as well as those who have a potential to open up economic opportunities (e.g. ecotourism, floriculture, etc) for a better quality of life will be programmed accordingly through the PIP. Whatever improvements made in these hot spot areas will be maintained and progressed into other areas ranked next, taking into account relevant baseline data reported. Public private partnerships and partnerships with NGOs, churches and civil society as key players will assist to progress such development in the remotest areas where government cannot reach.

Before 2030, *Growth Centres* should be established in strategic locations across the country where out-migration is high, in order to maintain a balance in population and hence control the strain on services provided in a particular area (e.g. Lae city).

#### ***Challenges in implementation***

The major challenge to the implementation of opening up the rural areas to better services and economic activity will be land issues by traditional landowners which will likely hinder the process of unlocking land for development purposes at a very high cost.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Rural prosperity	Household income and wage rates	NSO	n/a				Parity with urban areas, adjusted for the cost of living
	Access to electricity	PNG Power Limited	Only 3.7% of PNG's rural population have access to electricity				More than 60% of PNG's rural population will have access to electricity
Lead government department	Office of Rural Development						
Collaborative dept/ agency	Department of Personnel Management, Office of Higher Education, Labour Dept. And DNPM						

No.	Sector Strategy
1	Strengthen lower levels of Government
2	Extend basic services to all districts
3	Promote cooperative societies in all rural areas as an effective mechanism for developing agriculture and fisheries enterprises
4	Establish microfinance banking agencies in all districts by 2030
5	Encourage eco-tourism and cottage industries as these open up opportunities for employment and income for many locals
6	Deliver specific training programs at the district level
7	Create growth centres at all key areas in all districts
8	Ensure that programs introduced by foreign stakeholders are culturally sensitive and consistent with traditional structures, PNG values and local ways of life

### **3.15 Urban Development**

**Goal:** Urban centres developed according to international town planning standards in order to cater for urbanization and socioeconomic progress and deliver quality of life for all urban people

#### ***Introduction***

The urban population is growing rapidly in towns and major cities. The rural population is expected to double in 2030 due to increased rural to urban migration and increased population growth. This flow of people into cities and towns is giving rise to urban settlements, which in turn makes urban planning complicated.

Proper town planning is needed to drive the growth in urban areas and lift the quality of life for people in urban areas. Land needs to be secured and apportioned for specific activities including that for housing. Private sector partnerships should be encouraged to facilitate housing estates that will be affordable.

#### ***MTDP 2011-2015***

The aim of this first five years is to discourage the rural to urban drift by developing rural areas and mitigating the interest in moving to the cities thus creating growth centres within rural pockets of the nation to retain rural people within their communities.

Growth centres as explained in 4.14 Rural Development is the expansion of a rural centre by providing the basic necessities of health services, education, electricity, water and sanitation, postal services, microfinance, commercial banks and opening up access through transportation networks which are the prerequisites to rural prosperity.

At the same time, international standard town/ urban planning will be the focus of the responsible agencies in urban areas to improve and fix practices in urban development that have not met the relevant standards. Major cities and towns will have to develop and implement “master plans” of international standards in long and short range planning. Identification Card Systems will be introduced and legislated and possibly trialed in one or two major centres to assist with urban planning.

Housing and real estate investment opportunities to be ventured with the private sector within the first five years, introducing stringent yet bulk investment in new housing and real estate where land is properly zoned, land titles properly secured while increasing competition amongst financial institutions that provide housing finance.

#### ***Building on MTDP 2011-2015***

Subsequent to the scene that the first MTDP sets for urban development, relevant activities and programmes will follow in respective provinces in order to cater for urbanisation and socioeconomic progress to delivering a quality of life of urban dwellers, including those living in the settlement areas. The realisation of urbanisation goes hand in hand with rural prosperity and so the process of developing the two must be resourced at reasonably equivalent or almost equivalent level.

#### ***Challenges in implementation***

Land owner issues remain a risk in achieving the aspirations of this development plan. Within the peripheries of the metropolitan centre, land owners must be willing to sell their land for urban planning to be effective. While in the rural areas, compensation claims from land owners could delay the development of selected areas to be developed into growth centres.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Urban centres developed according to international town planning standards in order to cater for urbanisation and socioeconomic progress and deliver quality of life for all urban people	Urban population		13%				Contained at 20%
	Population living in urban settlements		28% of the urban population live in settlements				Less than 15% of the urban population live in settlements
	Town spatial planning		Very weak				Meet minimum international standards
	The supply of affordable housing		Rent and purchase prices very high relative to average earnings				Adequate supply of affordable housing
Lead government department	NCDC and Provincial Government Town Councils						

No.	Sector Strategy
1	Develop urban development plans
2	Develop Housing Policy
3	Increase private sector investment in housing
4	Zone land and make available for large scale housing estate developments
5	Legislate the National ID card system

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Number of 5 year Urban Development Plans	1.1	21	21	21	21	DNPM to guide the development of these plans
Number of urban areas meeting international town planning standards	1.2					
Housing Policy in place	2.1	Housing Policy in place and implemented	Review of Housing Policy (amended if necessary)			
Number of partnership agreements signed between Urban Authorities and the private sector (including foreign investment) ONLY in construction of new buildings	3.1	3 per province	5			
Number of MOUs with customary land owners in peri-urban areas to open up land for urban housing and development	4.1	2	5			
Number of urban areas fully utilising the National Identification System	5.1	2				
Responsibility	NCDC and Provincial Government Town Councils					

## **Part 4: Economic sectors**

The overall goal of the economic sector strategies is *to diversify the economy by increasing the production base so that production is not heavily dependent on the Non-renewable sub-sectors like our natural resources*. PNG's economy is currently dominated by primary production which contributes 63.4 percent of the GDP. The goal under the PNGDSP 2030 is to move the sector from primary to commercialisation through the promotion of downstream processing activities. Of these key sectors, Agriculture provides the livelihood of approximately 85 percent of Papua New Guineans. The oil, gas and mining sector provide an important source of revenue for the Government.

In a drive towards achieving sustainable development, the key strategy of the Economic Sector is to expand the economy so that production is not overly dependent on any one sector, chiefly to concentrate effort and resources on the Agriculture sector and other income generating activities in the renewable sector such as SME development, manufacturing, informal sector and eco-tourism. Importance of these sectors lies in wealth and employment creation, poverty reduction and empowerment of people to become self-reliant thus contributing towards the achieving the MDG goals, especially MDG goal one, Poverty Reduction.

The first MTDP 2011-2015 sets the policy and legislative framework to establish an enabling environment for economic activities to prosper. Through the sector strategies outlined in the PNGDSP, the MTDP 2011-2015 has identified key deliverables for land, agriculture & livestock, fisheries, petroleum, minerals, small and Medium Enterprise, manufacturing, non agriculture, informal sector, and tourism to meet the desired targets of the MTDP by 2015 and beyond. Major projects within this sector that will have significant impact within this sector include the LNG project, Pacific Marine Industrial Zone, Ramu Nickel Project, Hidden Valley, Nautilus Solwara I Project and the extension of the Ok Tedi mine to 2022.

### **4.1 Agriculture and Livestock**

**Goal: A world class agriculture sector that is responsive to international and domestic markets for a diverse range of products and provides the best available income and job opportunities.**

#### ***Introduction***

The agriculture sector in PNG continues to be the backbone of the economy for the rural majority. Commodity tree crop plantations, smallholders and subsistence farmers sustain this sector. The sector contributes 19% of total exports and 25% of GDP. Though an estimated 30 percent of the land in PNG is suitable for agriculture, only 4 percent is currently being utilized for commercial agriculture production. In addition, PNG's agricultural sector is generally less productive, and thus less profitable than agricultural sectors in many countries due to the decline in both resource and infrastructure support to the sector over the last 25 years.

#### ***MTDP 2011-2015***

To achieve the agricultural sector goal, the first MTDP will focus on number key strategies. Land access for agriculture development will be a priority and land reform will provide the incentive for landowners to release their land for agricultural development. A key focus of the reform would be improving land administration as it underpins the security of land whether customary or alienated land.

Providing adequate extension services will assist land holders to replant with new, high yielding varieties of cash crops. At an institutional level, the roles and functions of the Department of Agriculture and Livestock and other agencies within the sector need to be clarified. Role clarity will improve the delivery of the essential support functions of providing extension services, credit services and training.

Developing and improving roads and other agricultural infrastructure in the first MTDP is critical for the sector's development. Roads are critical in connecting fertile regions of PNG with markets. Without roads, fertile land will remain idle or underutilised, despite extension services. The better the roads, the easier for farmers to supply markets and the more profitable farmers will be. Other strategies for implementation are major rehabilitation and development program at the tree crops subsector and livestock industry, control and

eradication of exotic pests and disease and enforcing codex food safety and fair trade standards which in turn will support marketing of PNG's food exports

### ***Building on MTDP 2011-2015***

Subsequent MTDPs will focus on the transformation of the subsistence rural agriculture sector into semi-commercial and commercial farming. Priority will be given to extension services to continue improving and maximizing output of all agriculture and livestock produce. Research will be concentrated on producing high yielding varieties of commodity tree crops and improved breeds of livestock. Extension services will impart adaptable practices to farmers with latest technologies and information. Further research and extension strategies and efforts will be directed at the containment and eradication of pests and diseases currently affecting the tree crop industry. Major quarantine facilities will be built to ensure that exotic pests and diseases are identified immediately and contained.

Organic certification will be required for both organically produce crops and processing facilities to attract organic markets. The MTDPs will ensure that organic certification is awarded to areas where it is due and an institution such as NARI will be capacitated to facilitate internationally recognized organic certification. Commercialisation of agriculture products with a greater emphasis on accredited handling and packaging methods are a norm in food processing. To ensure that there is food security, increased production and downstream processing of staples that have competitive advantage will be promoted for domestic demand and international markets. The National Food Authority will be established to enforce codex food standards that will enable access of Papua New Guinea's food products competitively to global markets.

The impact of the MTDP on the agriculture sector will be such that over the 20 years, the sector will have increase five fold in current level of production, contributing 267,400 additional jobs and will be a sector worth K7.2 billion in 2030.

### ***Challenges in implementation***

Land accessibility and land administration along with the lack of infrastructure development remain key challenges. Establishing a well coordinated transport network is a prerequisite to ensure growth in the sector. Continuity of Government funding to fully implement sector strategies will also be another challenge to address. Complementing this is the need to ensure impact evaluation, monitoring and reporting of achievements in the sector to be done continuously and timely to the government so that the funding is justified and sustained.

Lack of clarity and compliance in institutional responsibilities and mandates between DAL and subsidiary agencies compounds on the implementation challenges. Collaboration between DAL and its subsidiary agencies still remain weak.

Imminent threats from Exotic Pests Diseases is current and can be adversely reduced the potential of commodity crop production. Containment and eradication is paramount prior to redevelopment and expansion of current and new plantations and smallholder establishments. Climate change remains a key challenge in this sector. The El Nino and various other climatic extremes continue to have significant implications.

Un-coordinated and lack of integrated development is a key issue, such as construction of dams and others such as mining development effects on river systems, will have their effects on land area and water systems. Consultative approach with the other sectors is necessary in the implementation of the PNGDSP so that Agriculture benefits from climate change and man-made impediments. Global commodity price fluctuations will remain a major factor in the growth of the sector.

DSP sector goal	Indicator	Source	Baseline	2015	2020	2025	2030 DSP target
A world class agriculture sector that is responsive to international and domestic markets for a diverse range of products and provides the best available income and job opportunities'	Meat production, including organic	LDC, DAL	407,000 tonnes in 2007				4 million tonnes.
	Coffee production	CIC, CRI, DAL	63,000 in 2008				500,000 tonnes.
	Oil Palm Production	OPIC, OPRA, DAL	556,000 tonnes in 2007				1.6 million tonnes.
	Cocoa Production	PNGCB, PNGCCI, DAL	56,000 tonnes in 2008				310,000 tonnes (minimum of 100,000 tonnes required to allow the development of a local processing industry).
	Copra Production	KIK, PNGCCI, DAL	110,000 tonnes in 2007				440,000 tonnes.
	Horticulture production including organic	DAL, NARI	10,000 farmers				Increased by 5 times.
	Rice Production	NARI, DAL	Domestic market dominated by foreign products				Strengthening the bargaining power of local growers and encourage local processing.
	Sago Production	DAL	Nil				Establish 2 large sago plantations by 2030 and venture into full commercialization.
	Staples (potato, cassava, taro, banana) production	DAL, NARI	Nil				Increase production to levels sufficient to feed the population and supply downstream industries
	Subsistence Agriculture	DAL, NARI	80% of population in subsistence agriculture				70% of subsistence farmers will expand into small and medium primary agricultural enterprise
	Land Use for Agriculture	DAL, Lands	Less than 4% currently used for Agriculture				Over 50% of available potential land for agriculture utilized.
	Organic Certification	NARI	Nil				1 Globally accredited Institution that can facilitate organic certification
	Codex Standards	NAQIA, NISIT	Nil				All processing facilities adhering to Codex standards
Lead government department	DAL, PNGCCI, KIK, COCOA BOARD, NARI, NAQIA, OPIC, OPRA, CIC, CRA, RUBBER BOARD, LDC, SPICE BOARD						



No	Sector strategy
1	Achieve efficient institutional structure in industry
2	Efficient land administration – enabling environment for people to engage in agriculture – allowing land owners to profit from their land.
3	Develop roads and key agriculture infrastructure (mills, factories, downstream processing plants) – supply chains to generally link producers to markets.
4	Adequate extension services (including control and eradication of pests and diseases, research & development)
6	Enforcing CODEX marketing standards to facilitate processed food exports
7	Utilization of economic corridors for agriculture development
8	Interventions will be transparent, cost effective and non-discriminatory.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Efficient institutional structure serving agriculture industry	1	Review roles of various agriculture agencies and recommend an efficient structure. Ensure all agencies fulfill their roles effectively.				•
Access to land for agriculture	2	Provide input and assistance to implementation of Land Development Program				•
Adequate transport services	3	Provide input and assistance to implementing national transport strategy				•
Smallholder livestock industry	4.1	Rehabilitation of breeding centres and introduction of improved breeds.				•Land issues
Smallholder coffee industry	4.2	Efficient regulations and effective information dissemination.				•World commodity prices fluctuations; •Lack of continuous government support
Pest & Disease free oil palm industry	4.3	Capacity for regulation and control.	50% of pest under control.	100% pest management.	Focus will be strengthening pest control facilities.	•Pest mutations and resistance ;
Eradication of Cocoa Pod Borer	4.4	Containment strategies to be concentrated in affected provinces.	CPB management and eradication strategy commences.	100% CPB Eradication.	Focus on strengthening quarantine facilities.	•CPB resistance and adaptation
Eradication of the Coconut Beetle	4.5	Containment strategies to be concentrated in affected provinces.	Coconut beetle management and eradication strategy commences.	100% Coconut Beetle Eradication and other potential pests.	Focus on strengthening quarantine facilities.	•Pest mutations and resistance ;
Other commodities (Rubber, Sago,spcies, apiculture, etc)	4.6	Capacity building and regulation of the industry.				•Land access and commodity market price fluctuations

Vibrant rural rice farming industry with rice becoming a dominant alternate to staple food crop production	4.7	Capacity on research for adopting rice farming in rural PNG.	Major institutions such as schools and prisons growing own rice for consumption.	Economic Corridors introduced to rice farming.			•	
Downstream processing and export of staples such as potato and banana	4.8	Research and promotion of improving quality and yields of local staples and research to enhance capacity of downstream processing.			-		•Continuous Government support and capacity issues.	
Agriculture survey with NSO	4.9	Undertake agriculture survey in 2012					•	
1 Establishment for Codex certification	6.1	Improving capacity to undertake the process of facilitating codex standards. Establishment of a National Food Authority.	Establishment of links with Global organizations in the development of codex standards in PNG.	Established institutions in PNG controlling codex standards.	Codex standards a norm in Agriculture production and downstream processing.		•Appropriate policy to avoid duplication of functions of other established organisations.	
Global standard quarantine facility	8.1	Capacity upgrading of current quarantine facilities.	1 major global standard facility to be build in Port Moresby	Regional / Provincial quarantine facilities to be built.	Institutional quarantine facilities established and strengthened.		•Funding support	
Regional organic certification establishments	8.2	Facilitate process in which an institution(s) in PNG can be accredited with organic certification.	1 internationally recognized organic certification institution in PNG.	-	-		•No assumptions	
NADP	8.3						•	
<b>Responsibility</b>	DAL, PNGCCI, KIK, COCOA BOARD, NARI, NAQIA, OPIC, OPRA, CIC, CRA, RUBBER BOARD, LDC, SPICE BOARD							
<b>Estimated inputs (K' million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
								GoPNG/donors
	4.9	50	50					GoPNG/donors
								GoPNG/donors
	8	44.5	44.5					GoPNG/donors
								GoPNG/donors
								GoPNG/donors

								GoPNG/donors
Total		109.3	109.3	14.8	14.8	14.8	124	

## 4.2 Fisheries

**Goal:** Develop fishery sector that is both sustainable and highly profitable for PNG, with PNG becoming a world leader in the supply of tuna.

### *Introduction*

PNG has abundant marine resources with the largest fisheries zone in the Pacific, covering an area of 2.4 million square kilometers. The fisheries sector is extensive and includes inland river fisheries, aquaculture, coastal beche-der-mer, reef fisheries, prawn trawl and large scale deepwater tuna fisheries. The sector ranges from artisanal communities to medium sized domestic prawn and tuna longline operators to large international purse seine fleets. The key strategy is to promote downstream processing especially in the tuna industry for the domestic market and for export.

### *MTDP 2011-2015*

The development of the fishing industry is a priority for the government which is committed to ensuring both that the potential of the sector is realized and that the resource is managed in a sustainable manner. The first MTDP will look at reviewing existing legislative framework and policies of the sector to strengthen and enhance the capacity of the NFA to promote development of the sector.

The capacity of National Fisheries Authority (NFA) to do stock assessment on commercial species and conduct policy enforcement will be strengthened and enhanced. Research, extension services and marketing capacities will be further developed to support the industry in managing risks and in providing direction to the industry. To meet the skills requirement of the industry the Fisheries College needs to be rehabilitated and the curriculum upgraded. There will be established a degree course in fisheries management at Maritime College with which NFA will coordinate to boost experts in the whole fisheries sector.

In addition, the current lack of maritime surveillance capacity is resulting in the loss of millions of Kina in illegal or under-reported fishing activities. Development of the maritime surveillance capacity of appropriate agencies is critical. It is essential that the responsible agencies need to be adequately resourced to effectively undertake surveillance.

In the period 2011-2015, a number of marine industrial parks will be established in maritime provinces of PNG. These will provide an outlet for local fishers which will support fishing incomes. The marine industrial parks will also support the development of onshore processing; adding to PNG's manufacturing capacity. The first development of the maritime park is the PMIZ in Madang. The Coastal Fisheries Development Authority through the concept of Fish Port Development will mobilize and enable local fishermen to improve traditional fishing methods to enable them to increase their catch. CFDA will also facilitate downstream processing of the catch supplied by rural fishing communities including inland aquaculture.

Licenses will be reviewed in terms of property rights and terms to bring greater certainty to the holders. License fees, excise and other revenue raising arrangements will be revised to ensure that PNG is raising revenue efficiently but without discouraging domestic production.

In the first MTDP, it is estimated that to implement these strategies to achieve the sector targets it will cost approximately K165 million in the period 2011-2015.

### *Building on MTDP 2011-2015*

Most of the projected revenues are derived from the license fees that are issued to domestically base foreign boats and the license fees from tuna fisheries for accessing PNG fish. A typical processing/fishing company in PNG offloads about 60% of its catch as exports to overseas markets. The balance is utilized by the onshore processing facility. Increasing and upgrading onshore processing facilities provides the opportunity to value add the product in PNG and creates large numbers of additional local jobs.

As well as optimizing the return from the wild catch fisheries the sector will investigate and seek to establish large and small aquaculture enterprises which can be built on our unique marine life. There is, for example, a

significant global market for tropical aquarium fish the propagation of which may well suit small scale local producers.

***Challenges in implementation***

The potential challenges will be the establishment of a well coordinated baseline database by 2010-2011. The Ministry of Fisheries will need to liaise with NFA and engage the support of the PNGDF navy through updating monitoring, control & surveillance equipments and technology.

Sections of the industry may initially resist the increased monitoring and surveillance of their industry. As their rights increase and additional investment capital is attracted a secure and mature industry will develop.

DSP sector goal	Indicator	Source	Baseline	2015	2020	2025	2030 DSP target
Develop a fisheries sector that is both sustainable and highly profitable for PNG, including the establishment of PNG as a world leader in the supply of tuna.	License/ Access fees generated from tuna fisheries	NFA	K60 million in 2008	K100 million	K100 Million	K100 Million	K100 million in 2008 prices.
	Stock assessment of the Gulf prawn fisheries.	NFA	Stock assessment is currently "Under exploited".	Revive the GOPPF			Increase catch by 25% and raise stock assessment to fully exploit.
	PNG processed fisheries exports	NFA	K189 million (21,940 tonnes in 2007, and 34% of total exports).	K450 Million	K1. Billion	K2. Billion	Triple volume and real value of processed fisheries export.
	Quantity share of catch caught by PNG vessels	NFA	Less than 1% in 2007.	5%	10%	15%	Increase to at least 20% by 2030.
Lead government department	National Fisheries Authority						

No.	Sector Strategy
1	Stock assessments for all commercial, artisanal and recreational fisheries to calculate Maximum Sustainable Yield (MSY).
2	Revamp fisheries licenses providing greater property rights but with additional development conditions.
3	Establish a system of monitoring and enforcement to reduce Illegal, Unreported and unregulated (IUU) fishing and to assist with research
4	Pursue fisheries development for aquaculture and other small wild capture fisheries such as trepang or aquarium
5	Fully rehabilitate Fisheries Colleges & upgrade the curriculum.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Stock assessments for all fisheries	1	Assessments for all fisheries	Annual assessment reports	Annual assessments	All fisheries graded sustainable	Lack of quality data Illegal fishing		
New licensing system delivering greater property rights to holders but greater returns to GoPNG via increased fees and license conditions e.g. local processing of catch.	2	Revamped licenses in place for tuna industry	Revamped licenses in place for Gulf prawn fishery	Revamped licenses in place for all commercial fisheries	Fisheries Act amended to license for artisanal and recreational fisheries.	Existing license holders may resist change and new conditions		
Effective monitoring and enforcement unit established with the support of PNG Navy.	3	Data for monitoring and fee calculation	IUU fishing can be reduced and deterred.	Industry efficiency improved	Fisheries profitable and sustainable	Lack of capacity to monitor all PNG's waters		
Smaller fisheries developed i.e. aquaculture, aquarium, pearls, live fish export	4	Development opportunities identified	Pilot projects completed	New ventures established	Aquaculture production tripled; 3 new fisheries	Lack of set up capital		
Fully rehabilitated Fisheries Colleges & upgraded the curriculum.	5	Existing colleges rehabilitated	Cooperation agreements with other regional institutions	Highly skilled PNG industry sector	Highly skilled regional industry sector	Funding available		
Responsibility	National Fisheries Authority, Department of Trade & Industry, Investment Promotion Authority, Department of Environment & Conservation, Boarder Development Authority, Internal Revenue Commission. PNG Defense Force, Customs.							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1							GoPNG
	2							
	3							
	4							
Total		76	76	5	5	5	153	GoPNG

### **4.3 Forestry**

**Goal:** Build a forestry sector that is sustainable & highly profitable.

#### ***Introduction***

The forestry sector has contributed immensely to the national economy as well as improving the livelihoods of the local people. The forest industry operates in remote areas of Papua New Guinea, thus creating opportunities for rural communities to engage in formal employment to improve their living standard using the money earned as wages. Companies involved in the sector have provided basic services and infrastructure such as roads, bridges, schools and health centers. In the absence of government support, the presence of forest industry in rural areas is vital since it is the government body and the business entity to provide service to the community.

#### ***MTDP 2011-2015***

The first MTDP will mainly focus on improving the forest policy and regulation since it will lay the strong foundation for other strategies and output in the subsequent MTDPs to build on. Papua New Guinea forestry sector will move forward to give effect to constructive and progressive aspects of forest policy and regulation in order to wisely use and develop its forest resource. A strong forest regulatory and policy framework is vital since it will give full effect to government policy in forestry sector so as to achieve the overall sector goal that is to “build a forestry sector that is sustainable and highly profitable”.

A review of all existing policy documents within the framework of objectives and practices of PNG Forest Authority is required. This includes: an overview of the National Forest Policy to better address operating challenges of new initiatives related to international environmental issues; the progressive evolution of PNG Forest Authority activity in areas such as phasing out of log export, research, carbon trading, operation of the State Marketing Agency, revenue arrangements under financial autonomy, etc; continuous review of the PNGFA’s Corporate Plan to ensure it is in line with Government Policy and the needs of our country; the development of national enterprises within the forestry sector; all subordinate policy documents produced for reforestation, processing and phasing out of log exporting, research, etc.

The PNG Forest Authority will continue to improve Field Manuals to assist field officers in their duties. Operational reviews of field practices should be of a procedural and structural nature to improve management of the nation’s strategic forest resources. The establishment of financial autonomy will significantly assist capacity development of the PNG Forest Authority’s role under the Objectives of the Forestry Act. It is anticipated that financial autonomy will assist greatly in reversing the current negative trends in PNG Forest Authority capacity and enable much needed sustainable reform to proceed with significant dividends directed to the National Government.

#### ***Building on MTDP 2011-2015***

The application of the National Forest Policy and Forestry act has seen the development of existing systems and practices. This transition phase is now over and it is time to move forward to better service current performance demand and to prepare for the challenges of the future. The forestry sector is tasked to: increase the processed timber export to 80 percent by 2030 from the current rate of 20 percent; all logs to be provided by plantations and manage forest by 2030; and increase in plantation forest from 62, 000 hectares to well over 150,000 hectares by 2030. The policy and regulatory framework will form the base of other strategies that will be implemented in subsequent MTDPs. From the current situation, most of the structural policy and legislative requirements have been achieved while some other important provisions of the forest have not been implemented due to constraints in finance, manpower, equipments, infrastructure and technology.

#### ***Challenges in implementation***

There are certain challenges that need to be addressed in order to implement strategies in the sector. This includes; land, finance, manpower, equipments, infrastructure and technology. However, some of these issues will be addressed when the LNG project and the economic corridor system is in operation. The availability of secure land tenure is one of the important challenges in the forestry sector and remains as a continuing obstacle which must be addressed.

DSP sector goal	Indicator	Source	Baseline	2015	2020	2025	2030 DSP target
Build a forestry sector that is sustainable and highly profitable.	Share of processed timber increased 2007 base year	PNGFA	20% of log harvest in 2007 processed for export and domestic markets	30% of total harvest to be processed for export and domestic markets.	40% of total harvest will be processed for export and domestic markets.	50% of total harvest will be processed export and domestic markets.	60% of total harvest will be processed.
	Decrease share of log harvested coming from natural forest	PNGFA	2,066,000 million cubic metres	2.5 million cubic metre	2.5 million cubic metre	3.0 million cubic metre	Logs will be provided by plantations and managed forests
	Increase area of plantation forests	PNGFA	62,000 hectares	80,000	100,000	150,000	Substantial increase in plantation forest
Lead department	PNG Forest Authority						

No.	Sector Strategy
1	National forest inventories shall be undertaken every ten (10) years to ensure policy decisions are well informed.
2	Promote sustainable forest management through the establishment of permanent forest estates.
3	Prevent felling of natural forests unless the land is developed to provide sustainable jobs and income, whether through agriculture, plantation or other profitable land use.
4	Pursue downstream processing of forest products such that 60% of PNG timbers are processed in-country by 2030.
5	Strengthen the regulatory and policy framework, including ensuring compliance in order to give full effect to government policy.
6	Enhance the research and extension services of the forest industry so that the industry is profitable and sustainable to benefit current and future generations.
7	Develop forest plantations to meet the impact of climate change and for meeting future timber demand for both domestic and international markets.
8	Promote community forestry activities with the view of empowering rural communities and alleviating poverty
9	Promote Reduced Emission from Forest Degradation & Deforestation ( REDD+) initiatives to assist with mitigation adaptation measures in climate change.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
80% of processed timber to be exported	1					All strategies are achieved		
Logs to be provided by plantations and managed forest	2					All strategies are achieved		
Substantial Increase in plantation forests	3					Insecure land tenure		
Responsibility	PNG Forest Authority							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
		1	1	1	1	1	5	GoPNG



## 4.4 Petroleum

**Goal:** Build a world leading petroleum industry that maximizes benefits to PNG and landowners, minimizes impacts on the environment and social welfare, and provides PNG with energy security.

The petroleum sector is relatively new which commenced in 1991 with crude oil production. In 2005, PNG's first oil refinery commenced production, sourcing crude oil from both local oil fields and externally. PNG has a substantial wealth in natural gas reserves providing the platform for a prosperous future for the gas industry and for the nation as a whole.

### ***MTDP 2011-2015***

In order to achieve this goal and target in the first MTDP requires a corresponding strengthening of the state institutions responsible for policy making, administration and enforcement of regulations for the gas industry. An important strategy for growth in the sector that will also contribute to the sector goal is to have an efficient and effective delivery mechanism established to achieve the targets.

Further, there are deliverables identified that will also contribute to the sector goal which include, improving the capacity of the agency responsible for standards acceptable anywhere and that would be to have all the staffs well trained and state of the art equipment bought and installed so that all regulatory and administrative processes will flow.

Gas production has a huge potential for contributing to the economy and the government's revenue. Consistent with the DSP (210-2030) the need for specialized expertise and considerable resources means that the private sector will need to lead exploration and investments in the petroleum industry. There are two gas commercialization projects which are now at advanced stage; the LNG project which is headed by Exxon Mobil; and the LNGL which is headed by Interoil.

The LNG project alone is expected to generate K11 billion in revenue per annum and this will attract new revenue flows to the state. For future generations, the revenue generated should be reinvested for more growth in the country. The PNG Economy is likely to be significantly impacted by the emergence of a new resource sector through LNG Production. In considering the fact that revenue generated by LNG will be enormous and as such a Sovereign Wealth Fund is to be set up. Sovereign Wealth Fund can be set up for a variety of purposes and in PNG's circumstances suggest that the following are the most important considerations; macroeconomic stabilization, Avoidance of Dutch Disease, Assets Management and to build up wealth for future generations.

Invest the revenue from the sector so that this will benefit all Papua New Guineans in the future. For future generations, the revenue generated should be reinvested for more growth in the country. Incentives are to be provided by the government to attract more foreign investors to the country and that includes tax, etc. Liquefied Natural Gas (LNG) would bring more revenue into the country that should be distributed equally across the country so everyone benefits from it through the implementation of infrastructure and improved living standards.

### ***Building on MTDP 2011-2015***

The progress and development of petroleum sector also depends on the other sectors such as law and order, land, transport and infrastructure. As Liquefied Natural Gas (LNG) will bring about huge benefits to the land owners and the country, the pressure is on the Government from both the developers and land owners. The developers want road and bridges in place so that they can move their equipments to the project sites more easily and with less cost and also law and order problems to be solved by the Government.

The landowners want the Government to meet its obligations under the Umbrella Benefit Sharing Agreement (UBSA) and the License Based Benefit Sharing Agreement (LBBSA) and the law and order problems are already threatening the progress of this sector and land is a big problem when it comes to big projects with huge benefits.

For the petroleum sector's goal to be achieved in the next 20 years, the revenue that the Liquefied Natural Gas (LNG) will bring into the country should be used to improve the infrastructures in the country and should be reinvested in the future by the people in the country. It is anticipated that between 2015 – 2020, the Liquefied Natural Gas (LNG) project will begin to pay tax revenues which will support the Government's investment in all the sectors. Also the Economic Corridors will be set up and used to develop and link provinces. As Petroleum Resource Area Economic Corridor (PRAEC) is one of the Economic Corridor, revenue from the Liquefied Natural Gas (LNG) should bring about big development in the area. From 2020-2030, it is anticipated that development will progress at a high rate because of the benefits from the Liquefied Natural Gas (LNG).

### ***Challenges in implementation***

Potential challenges to this sector are governance and landowner issues. Without good governance, revenues and other benefits from the Liquefied Natural Gas (LNG) may not be used to improve infrastructures in the Economic Corridors and also revenues may not be reinvested for the benefit of the future generations. Given the nature of PNG politics being volatile and unstable and our huge dependence on foreign loans, there may be risks of political manipulation of the benefits derive from Liquefied Natural Gas (LNG) and other oil and gas related projects. The major risks relates to revenue sides relates to market price, but the possibility remains of supply disruptions through landowner disputes, employee strikes and weather related problems.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Build a world leading petroleum industry that maximizes benefits to PNG and landowners, minimize impacts on the environment and social welfare, and provides PNG with energy security.	Total number of Petroleum Licenses	DPE	2009: 75 existing licenses	Issue at least 5 or more new exploration licenses and maintain work program in existing licenses	Issue at least 5 or more new exploration licenses and maintain work program in existing licenses	Issue at least 5 or more new exploration licenses and maintain work program in existing licenses	120 active Petroleum Licenses and expanded exploratory work in the remaining 4 Sedimentary Basins(North New Guinea, Cape Vogel, Bougainville and New Ireland)
	Petroleum License Expenditure	DPE	2009: K720.5 million	Acquire at least 5 new licenses, maintain existing exploration incentives and increase 2009 expenditures by 10%	Acquire at least 5 new licenses, maintain existing exploration incentives and increase 2015 expenditures by 10%	Acquire at least 5 new licenses, maintain existing exploration incentives and increase 2020 expenditures by 10%	30% increase in exploration expenditures from 2009 expenditure level. From K720.5million- to K937.3 million
	Volume of crude oil production and exports	DPE	2009: 13.7 million barrels produced: 16.1 million barrels exported	Produce more than 13.7 million barrels Export more than 16 million barrels	Produce more than 13.7 million barrels Export more than 16 million barrels	Produce more than 13.7 million barrels Export more than 16 million barrels	Sustain crude oil production and exports at 2009 levels
	Remaining Oil Reserves	DPE	2009: 575.5 million barrels	Increase Proven(1P) reserves by 20%	Increase Proven(1P) reserves by 20%	Increase Proven(1P) reserves by 20%	Increase proven reserves by 60%
	Refinery production	DPE	2009: 5.8 million barrels of oil processed	Increase 2009 feedstock level by 1 million barrel	Increase 2015 feedstock level by 1 million barrel	Increase 2020 feedstock level by 1 million barrel	9 million barrels processed
	Refinery Sales Volume	DPE	2009: 6.3 million barrels of refined products sold	Increase 2009 dispensed products volume by 1 million barrels	Increase 2015 dispensed products volume by 1 million barrels	Increase 2020 dispensed products volume by 1 million barrels	9 million barrels of finished products sold
	Number of LNG projects	DPE	2009: 3.6 MTA LNG Plant under construction. Commissioned in 2014	6.3 million tonnes of LNG produced and exported	6.3 million tonnes of LNG produced and exported	6.3 million tonnes of LNG produced and exported	At least 3 LNG projects and more than 6.3 million tonnes of LNG produced and exported
	Number of Petrochemical Plant	DPE	NIL	Petrochemical Plant proposals	Petrochemical Plant Proposals	Petrochemical Plant Proposals	1 Petrochemical Plant
	Number of Gas-to - Electricity Plant	DPE	2009: 2Medium Scale (Stanley and Hides)	1 Gas to Electricity Plant	1 Gas to Electricity Plant	1 Gas to Electricity Plant	5 Gas to Electricity Plant meeting industrial and domestic energy demand
	Revenues received from petroleum projects	DPE	2009: K2.6 billion	K0.4 billion increase in petroleum revenues	K0.4 billion increase in petroleum revenues	K0.4 billion increase in petroleum revenues	At least K5 billion a year
Lead government department	Department of Petroleum and Energy						

No.	Sector Strategy
1	Strengthen state institutions responsible for policy, administrative, regulatory, and enforcement of the gas industry.
2	Promote investment in petroleum/oil/gas exploration.
3	Ensure the fair and equitable distribution of benefits from the petroleum industry
4	Ensure that the revenue flows from the petroleum industry are sustainably invested for maximum benefit for current and future generations

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
DPE capacity improved to world standards	1.1	5 officers to be on Technical training and job twinning programs of personnel	5 officers to be on Technical training and job twinning programs of personnel	5 officers to be on Technical training and job twinning programs of personnel	5 officers to be on Technical training and job twinning programs of personnel	Skilled government officers are easily lured by private petroleum firms offering attractive salary packages, unmatched in the public sector Most gas-based technical training programs and institutions are overseas-based and expensive
Increase investments in the industry	2.1	Provide new incentives (e.g. tax) for exploration				Incentives may not be attractive at all or achieve the target envisaged Most incentives are designed to favour foreign firms, economic wise , and often host countries lose out on potential revenues Incentives are economical mechanisms that may rapidly and blindly accelerate uneconomical and unsustainable resource extraction in a country, contributing not only to natural resources impoverishment, but environmental and social degradation. Most of PNG's prospective hydrocarbon basin may be quickly and fully explored before 2030 and if PNG is found to be barren, petroleum activities will have ceased. Despite incentives PNG's prevailing overall investment climate, superimposed by current law and order situation, land tenure system and political dynamics ,unless improved will continue to deter potential investments, not only in the Petroleum sector.
	2.2	Market PNG as a highly prospective country in the industry				PNG needs to expand its understanding on the prospects of other sedimentary basins, apart from the Papuan Basin before it can truly market its prospect to the outside world. Effective marketing will utilize existing data, which PNG is yet to fully acquire. Marketing efforts, to some extent, will be hindered by PNG's overall investment climate, which has remained an apparent deterrent factor for investment decisions.
Equitable distribution of benefits to LOs as well as to the broader economy	3.1	2 Economic corridors (PRAEC & Border Corridor)	2 Economic Corridors (South Coast Corridor & Enga Sepik Corridor)	2 Economic Corridor (Central Corridor & Madang-Baiyer-Karamui-Gulf Corridor)	3 Economic Corridor (Momase & Solomons & Free Zone Corridors)	Landowning issue and management of landowners will still remain as a major issue confronting any development efforts in PNG Extreme opposition (legal or confrontational) may prevent prospective development concepts from being implemented in PNG Greed, corruption and misrepresentation amongst landowners, may prevent equitable distribution of project development benefits amongst landowners. The same applies to equitable distribution of such benefits, nationally.
	3.2	Fund relevant District				

		Development Plans						
Sustainable investment of revenues to benefit current and future generations	4.1	1 Future Generations Fund	1 Future Generations Fund	1 Future Generation Fund				Funds are susceptible to miss-use by both politicians and bureaucrats, if not protected by appropriate laws or policies Fund also susceptible to general investment risks such world economic crisis Many will resent the meaning of future generations funds, as it is too vague and unclear on who the beneficiaries are and when these funds will be used because it only says "future generations". Given the nature of PNG politics being volatile and unstable, and our huge dependence on foreign loans, there may be risks of <b>political manipulation of the fund, in worse case scenarios.</b>
	4.2	Establish the Sovereign Wealth Fund						Tendency for funds to be misused by politicians and bureaucrats if not secured with appropriate binding laws and policies Establishing and managing sovereign funds may not be as easy as the case in developed countries like the Norway. They too have challenges and problems which PNG must study before establishing its Sovereign Wealth Fund
	4.3	Funds into the Development Budget						
Government obligations well managed	5	Pay MOAs, LNG allocations & SSG						
Responsibility	Department of Petroleum and Energy							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2030	Funding option(s)
	1.1							GoPNG via Dept of Personnel Management
	1.2							
	5	<b>220</b>	<b>223</b>	<b>188</b>	<b>375</b>	<b>425</b>		
Total		<b>220.06</b>	<b>223.06</b>	<b>188.06</b>	<b>375.06</b>	<b>425.06</b>		

## **4.5 Minerals**

**Goal: Double mineral exports, while minimizing the adverse impact on the environment.**

### ***Introduction***

The minerals sector is one of the main sources of exports and revenues for PNG. This sector will continue to play a critical role in the country's development as there is so much mining potential in the country going forward.

### ***MTDP 2011-2015***

The first MTDP will set a base for other MTDPs to build on from and there are a number of approaches that will be adopted to address it. The capacities of the stakeholder agencies will have to be significantly improved and that will include recruitment and training of staff and technical equipment purchased and installed, so as to effectively administer and enforce the Government's policies and regulations in the industry. In addition, reviews of the environment and mineral policies will address landowners' participation in the industry and will assist in the pursuit of policy strategies on relocation, sea-bed mining and downstream processing.

Also, with the first MTDP in place, the establishment of Economic Corridors will provide linkages and direct revenues into areas with potential for sustainable and long term development. Currently, there are 9 mines in operation and they include Tolukuma, Ok Tedi, Porgera, Kainantu, Simberi, Ramu Nickel, Lihir, Mt. Sinivt and Hidden Valley. Ramu Nickel and Hidden Valley will commence production within this period and will contribute as well in terms of benefits to the country. This sector will depend on the transport sector which is critical for the development of the mineral industry as it minimizes major costs in the transportation of equipments to project sites. The environment sector will also have a significant impact on the mineral sector.

### ***Building on MTDP 2011-2015***

The subsequent MTDPs will use the policy mechanisms set up in the first MTDP to strengthen the capacity of state institutions to administer and enforce regulations in the industry. In addition, there will be compliance with national environment policies and other relevant policies to develop a sustainable mining industry. Regulatory procedures for further exploration will be more simplified and will contribute to the reduction of costs and thereby attracting more investors to the country. The degree of exploration activities will determine future production. Reviewed environmental policies will promote an environment that is conducive and which will encourage and facilitate active participation of all stakeholders and most importantly, it will protect the environment from damages caused by the industry such as the discharge of tailings. Also, revenues earned from the industry will be directed and managed through the concept of Economic Corridor areas to increase and sustain development.

### ***Challenges in implementation***

Some major challenges to the implementation in this sector would be governance, world market prices of the minerals, using the revenue earned from the LNG to improve other sectors that would have an impact on the mineral sector and governance. The world prices of minerals would affect the level of exploration and whether operations in existing mines would continue. This was seen in the late 1980s to the early 1990s when the price of gold dropped and companies pulled out of the mining industry in PNG because they were not making any money at all. Also, good governance is a major challenge in ensuring that all the revenue earned will be used to improve infrastructures so that all other sectors such as agriculture and manufacturing can also be key earning sector in the country.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Double mineral exports, while minimizing the adverse impact on the environment.	The value of mineral exports		K9.2 billion in 2007	Unable to predict	Unable to predict	Unable to predict	At least K18 billion
	Exploration expenditure		K213 million in 2008	K218 million	K200 million	K180 million	Sufficient exploration to reach production target.
	Exploration licenses		241 current exploration licenses in 2009	250 exploration licenses	370 exploration licenses	400 exploration licenses	Ongoing high level of exploration activity
	Number of mine sites		9 in operation, 4 under development, 11 at advanced stage of exploration	12 in operation and 4 under development and 10 at advanced stage of operation	15 in operation, 5 under development and 8 at advanced stage of operation	18 in operation, 2 at under development and 5 at advanced stage of operation	Around 20 in operation
	Government revenues from minerals projects		K2.2 billion in 2007	Unable to predict	Unable to predict	Unable to predict	At least K3 billion a year
	Sustainable deep sea mining in PNG waters		n/a	1 project in operation	2 projects in operation	3 projects in operation	A number of projects to have commenced
Lead government department	Mineral resource authority and Department of mineral policy and geohazards management						

No.	Sector Strategy
1	Strengthen institutional capacity to administer and enforce regulations.
2	Provide regulatory and policy framework that is both simple but effective to keep industry compliance costs to a minimum, to protect the environment and to ensure landowners and all stakeholders benefit.
3	Facilitate further exploration by simplifying and speeding up regulatory procedures
4	Promote an integrated approach to mine development rather than an enclave approach with the use of economic corridor zones to direct revenues.
5	Develop and review appropriate mechanisms to address landowner's participation and industry issue.
6	Pursue strategies under manufacturing and small and medium enterprises that encourage downstream processing industries for smelting of minerals on shore to add value to PNG's natural resources as well as supplying gold bullion needs of the country.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
DMPGH and MRA capacity to be improved.	1.1	More staff recruited and trained.	Continuous training of staff to meet high class standards.	More continuous up-to-date training which include overseas training.	Continuous and up-to-date training.	Poor governance.
	1.2	Technical equipment purchased and installed	State of the Art Equipment purchased and installed.	Up-to-date equipment purchased and installed.	Up-to-date equipment purchased and installed.	
Regulatory and policy frameworks provided	2.1	All regulatory and policy frameworks reviewed.	Frameworks in place and used by all stakeholders in the industry.	Review of frameworks.	Review of frameworks.	Poor governance.
High level of exploration	3.1	Regulatory procedures	Increase in exploration.	Ongoing exploration	Ongoing exploration	Poor governance

		simplified.						
Landowner's participation addressed	4.1	Landowners issues addressed in various Acts and frameworks.	Continuous involvement of landowner participation.	Continuous involvement of landowner participation.	Continuous involvement of landowner participation.	Continuous involvement of landowner participation.		Poor governance
Use of Economic Corridors to direct revenues from mining	5.1	Economic Corridors set up and working closely with the mining industry.	Revenues earned from minerals used in the Economic corridors to bring development.	Development increase and sustained.	Increase in development and sustained.	Increase in development and sustained.		Poor governance
Downstream processing working	6.1	Policy Framework developed.	Downstream processing to start.	Policy reviewed.	Policy reviewed.	Policy reviewed.		Poor governance
Government obligations well managed	1.3	MOAs & SSG obligations met effectively						
<b>Responsibility</b>	Department of Mineral Policy and Geo-Hazards Management							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							Govt
	1.3	33	37	62	70	70	272	Govt
	2.1							Govt
	3.1							
	4.1							
	5.1							
	6.1							
<b>Total</b>		43.6	<b>47.5</b>	<b>72.5</b>	<b>80.5</b>	<b>80.5</b>	324.5	<b>Govt/Donor</b>



## 4.6 Non-Agricultural Informal Sector

**Goal:** The goal of sector is to promote the non-agricultural informal sector (Urban informal Sector) to secure a livelihood for indigenous entrepreneurs and to encourage progression into the formal sector, thus alleviating illicit activities that demean moral values and create disharmony in the major cities and townships.

### *Introduction*

PNG's economy is predominantly agricultural with this sector contributing immensely through export revenue, generating of income and employment opportunities and sustaining rural livelihoods through subsistence farming. However, rapidly increasing population has led to a growing number of Papua New Guineans who are becoming landless and are faced with fewer opportunities to earn income and sustain livelihoods in this sector. The Non-Agricultural informal sector provides the opportunity for people to venture into other informal means of earning income and therefore promotes development of informal micro-enterprises. The informal micro-enterprise business concept is a step towards progression from an informal business to a commercially viable formal business.

### *MTDP 2011-2015*

The first MTDP introduces the strategies for development of non-agricultural informal sector as a measure against the rise in social ills such as crime and prostitution where lack of accessibility to agricultural land has limited opportunities for employment and wealth creation and overall improvement in the quality of life for Papua New Guineans.

The key strategies of the Government are to facilitate entrepreneurial micro-enterprise activities and improve the level of participation to ensure that the informal sector is an effective livelihood security for the landless while at the same time providing the basis for the development of a vibrant private sector. Hence within the periods 2011–2015, the first MTDP directs responsible agencies set the legislative and policy framework for the industry to flourish and enhance capacity of the indigenous population engaged in this industry. Specifically, to develop appropriate training programs for facilitating development of the informal sector and cottage industries as well as develop and improve on existing policies such as the *Informal Sector Policy* administered by the DfCD and the *Small and Medium Enterprises Policy* implemented by SBDC to facilitate and foster growth of the sector by identifying specific targets and measurable indicators to monitor implementation progress of the informal industry.

### *Building on MTDP 2011-2015*

Through the strategies identified by the Government for Non-Agricultural Informal Sector (NAIS), subsequent MTDPs will build on improving capacity and developing specific credit line with agencies such as the National Development Bank (NDB) to promote growth of micro-enterprises; establish information and public assistance programs in the various locations across PNG. The subsequent MTDPs will ensure these programs and other incentives are further rolled out paving ways for progression from an informal business to a commercially viable formal SME.

### *Challenges in implementation*

The inconsistency in funding and ineffective implementing mechanisms compounding with other issues such as no proper data to delineate the trend deter the progress and improvement in this sector.

Lack of awareness and campaign, and marketing also plays a major role in the underdevelopment of this sector.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Promotion of the non-agricultural informal sector to secure a livelihood for indigenous entrepreneurs and to encourage progression into the formal sector.	Number of urban/rural people engaged in informal sector						
	Number of people with access to financial credit						
	Number of graduates from Informal Sector Training programs						
	Number of market facilities						
Lead government department	Department of Community Development						

No.	Sector Strategy
1	Develop credit line with the National Development Bank /SBDC
2	Develop appropriate training programs for facilitating development of the informal sector and cottage industries
3	Establishment of information & Public Assistance programs across PNG
4	Development of Policy to facilitate & foster growth of the sector
5	Establish at least one well resourced market for informal sector in every district.

DSP 2030 deliverables	No.	2011	2012	2013	2014	2015	2011-2015	Risks and Assumptions
Number of credit facilities established across the 23 provinces	1.1							
Number of Training programs held in 23 provinces	2.1							
District markets	5.1	20	20				40	
Responsibility	Department of Community Development							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1	22	22	2	2	2	50	GoPNG

## **4.7 Small and Medium Enterprises**

**Goal:** Develop and promote small and medium enterprises

### ***Introduction***

Growth based solely on mineral and petroleum resources is not sustainable in the long term; therefore there needs to be a strong focus on developing other sectors of the economy through the private sector and small and medium enterprises (SME) in particular. SMEs are vital if PNG is to realize sustainable development. SMEs generate benefits at many levels: economic, social and political. The importance of SMEs lies in the creation of jobs, wealth and sustainable livelihoods in reducing poverty and promoting self-reliance.

The development of SMEs in PNG has not been robust due to policy and institutional issues as well as environmental and structural impediments. In promoting SMEs, the Government has to create an enabling environment and improve support services. Currently, the number of SMEs in PNG is just 16,500; mostly comprising tucker shops (48%) with none of the SMEs are involved in overseas operations.

### ***MTDP 2011-2015***

The first MTDP 2011-2015 sets the policy and legislative framework to establish an enabling environment for SMEs to prosper. It will focus on reviewing of existing SBDC Act 1990, SME Policy 1998 and trade policies and improving the policies to facilitate an export driven focus and SME promotion. In addition to developing robust SME policies/plans and establishing the legislative framework to guide growth of SMEs, the MTDP 2011-2015 also aims to build capacity through existing training programs such as “Know About Business” (KAB), “Start, Improve your Business” (SIYB), SIC and “Women in Textile Training” Based on baseline data of 16,500 SMEs, the MTDP 2011-2015 has a set target of achieving 18,150 SMEs by 2015 and reaching 99,000 people employed in SMEs from the current 82,500 with 3 SMEs operating overseas by 2015.

The Small Business Development Corporation (SBDC) is the Government’s support agency under the coordination of the Department of Commerce and Industry (DCI) in promoting SME development.

### ***Building on MTDP 2011-2015***

Subsequent MTDPs will focus on achieving the targets set for 2015 and onwards with the sector strategies identified in the Development Strategic Plan 2010-2030 (DSP) to promote SME development. Following MTDPs will play a vital role in improving support services for SMEs drawing from the deliverables outlined in the first MTDP 2011-2015. Under the existing business development programs of SBDC, successive MTDPs will continue to improve SMEs access to Credit Finance, with the expansion of microfinance facilities across the provinces. There will be increased marketing and promotion of SMEs towards a competitive industry that is able to participate in a globally challenging environment.

Subsequent MTDPs in achieving SME development will enable creation of jobs, wealth and sustainable livelihoods in reducing poverty and promoting self-reliance, thus ultimately achieving the overarching goal of the DSP which is “a quality of life for all Papua New Guineans”.

### ***Challenges in implementation***

There are constraints that impinge on development and growth of SMEs. These are identified as:

- Lack of human resource capacity and development
- Lack of information dissemination and knowledge of business opportunities
- Lack of access to markets and financial credit
- Lack of financial and appropriate technological resources
- Lack of adequate infrastructure
- Policy incoherence
- Complexity of administrative procedures

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Develop and promote small and medium enterprises	Number of SMEs	WB Messer Hamid Alive and Max Aitker presentation on SME risk share facilitator project	16,500	18,150	21,780	28,314	Four fold increase at least
	Employment in SMEs	As above	82,500	99,000	118,800	142,560	Four fold increase at least
	PNG SMEs with overseas operations		Nil	3	5	10	A significant number
Lead government department	Department of Commerce and Industry (DCI), Small Business Development Corporation (SBDC)						

No.	Sector Strategy
1	Expand microfinance banking services
2	Reduce bureaucratic red tape to simplify processes in establishing and maintaining a business
3	Establish SME training institute that modernizes businesses and develops skills for a successful SME
4	Facilitate transfer, adaptation, and development of relevant technologies through research and promote partnerships with foreign businesses
5	Encourage the development of designated facilities for SMEs to sell and market their products to the public and tourists
6	Develop plans and Policies to encourage SMEs to focus on export markets

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Microfinance Banks established in 23 provinces	1.1	4 Facilitate and assist indigenous SME to establish micro bank	10 Facilitate and assist indigenous SME to establish micro bank	20 Facilitate and assist indigenous SME to establish micro bank	23 Facilitate and assist indigenous SME to establish micro bank	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> <li>Land and resources available</li> </ul>
Number of skilled personnel employed in Microfinance Bank	1.2	48	60	80	96	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> <li>Skilled Labour and resources available</li> </ul>
Low cost user-friendly mechanism policy developed to assist in establishing and maintaining a business	2.1	Partner with IPA, Labour Industrial and Immigration and customers to reduce time involved to promote both domestic SME & FDI	Partner with IPA, Labour Industrial and Immigration and customers to reduce time involved to promote both domestic SME & FDI	Partner with IPA, Labour Industrial and Immigration and customers to reduce time involved to promote both domestic SME & FDI	Partner with IPA, Labour Industrial and Immigration and customers to reduce time involved to promote both domestic SME & FDI	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> <li>Skilled Labour and resources available</li> </ul>
Number of SME Training Centers established	3.1	2	5	7	10	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> </ul>
Number of SME specialized Trainers engaged in training	3.2	5	10	15	20	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> </ul>
Number of graduates from SME training	3.3	500	1500	3000	5000	<ul style="list-style-type: none"> <li>Government/Political Support</li> <li>Sufficient funding available</li> </ul>

Number of certified trainers in 23 provinces	3.4		180	200	300	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Master trainers per Region	3.5		6 certified International Master Trainers	8 certified International Master Trainers	10 certified International Master Trainers	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Coordinating body developed to coordinate research centres in the field of SME	4.1	4	4	4	4	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Number of international expositions or trade fairs conducted to promote foreign investment	4.2	1 Co-host with IPA	2 Co-host with IPA	2 Co-host with IPA	3 Co-host with IPA	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Number of SME market/trade centres established to facilitate production and marketing and encourage local participation	5.1	1	3	4	4	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Number of Advertisements through local media and internet on SME	5.2	10	20	20	10	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
Review existing SME policy and improve on existing policy to facilitate export driven focus	6.1	Amendment of SBDC Act 1990 and simultaneously review SME Policy of 1998	Improve existing trade policy and other related policy to facilitate export driven Policy	Review other related policy on SME sub sector and develop conducive policies for SME promotions	2	<ul style="list-style-type: none"> <li>• Government/Political Support</li> <li>• Sufficient funding available</li> </ul>		
<b>Responsibility</b>	Department of Commerce and Industry and Small Business Development Corporation							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							GoPNG/donors
	1.2							GoPNG/donors
<b>Total</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	

## **4.8 Manufacturing Sector**

**Goal:** A competitive manufacturing sector through the development of higher value chains and appropriate technologies to manufacturing that will lead to the generation of higher income and employment.

### ***Introduction***

The Manufacturing sector will be a primary player in shifting the economy from primary industries into a higher value-added downstream processing industry. The dominant manufactured exports commodities are palm oil, copra oil, processed timber and refined petroleum, while processed tuna continues to emerge as another growing export industry. Transformation of the large agriculture and resource base exports into processed products will be the major focus in this sector to generate higher incomes and employment creation for Papua New Guineans.

### ***MTDP 2011-2015***

The key strategy for this sector is to encourage and increase exports in the manufacturing sector to facilitate growth and diversification. Central to this is building the capacity of appropriate infrastructure and technologies supported by adequate skills and knowledge of the players in the industry. Transforming the sector from current light manufacturing industries into higher value production can be achieved by articulating proper backward and forward linkages and adapting appropriate technologies. The first five years will ensure that appropriate infrastructure and a low cost regulatory environment, focusing on the economic corridors.

### ***Building on MTDP 2011-2015***

The government will ensure a conducive business environment, enabling the growth of manufacturing industries in PNG. Joint ventures between local and foreign investors will also be encouraged as a means of combining local knowledge with forging capacity so that the business partnerships will be more successful and local capacity will be enhanced.

### ***Challenges in implementation***

Lack of funding is a key concern for the agency responsible to carrying out the research, policy and act, and creates methodology and consultation for the sector. Lack of entrepreneur skills and social problems due to cross cutting issues such as HIV/AIDS will reduce potential human resource to create joint venture businesses with foreign investors.

Climate change remains a key challenge in this sector. The El Nino predicted to be in 2012 will change the breeding cycle of tuna. This will create less production of processed tuna domestically. Other causes of El Nino such as bush fire, shortage of water will have significant implication to the manufacture of sugar, oil palm and other minor commodities. Global prices of some concerned manufactured commodities will remain a major factor that contributes to poor growth of inflows for the sector.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
A competitive manufacturing sector through the development of higher value chains and appropriate technologies to manufacturing that will lead to the generation of higher income and employment.	Value of manufacturing production	DCI	Value of Manufacturing production K4billion in 2009		25%		Value of Manufacturing production K12billion in 2009 prices
	Value of manufacturing exports	DCI	K1.4 billion kina (2009)				Triple the 2009 value of manufacturing exports to K5billion
	Manufacturing – Foreign Equity	DCI	382 million kina (2007)				Triple the current investment
	Employment in Manufacturing	DCI	38,000 (2009)				Triple the current employment to around 114,000
Lead government department	Department of Commerce and Industry (DCI), Industrial Centre Development Corporation (ICDC)						
No.	DCI Strategy						
1	Promote export orientation in manufacturing industries						
2	PNG to be one of the regions and World Tuna Capital and leader in related marine based products						
3	Attract foreign investment in PNG manufacturing, particularly through joint ventures						
4	Remove inefficiencies in regulation & otherwise ensure low costs for business in PNG						
5	Facilitate the expansion of a strong industrial base through an integrated manufacturing industry						

DSP deliverables	No.	2011-2015	2016-2020	2021-2025	2026-2030	Risks and Assumptions
Treble the real value of exports	1	<ul style="list-style-type: none"> <li>Initiate PNG exporter incentive award, awarded to a 100% PNG owned manufacturing business that exports over 50% of the value of its output. Cannot receive award more than once.</li> <li>Implement CODEX food safety and fair trade standards to support export growth of PNG processed foods.</li> <li>Facilitate organic certification of PNG crops used in PNG manufacturing to increase export demand for processed foods.</li> </ul>	<p>trade investment missions to key destinations for PNG exports</p> <p>Commission research into how products can be best marketed</p>	-	-	
PNG to be one of the regions and World Tuna Capital and leader in related marine based products	2	<ul style="list-style-type: none"> <li>Construction and installation of physical infrastructure.(phase 1)</li> <li>Phase two of the project to be completed, ready for operation</li> </ul>	PIMZ in full operation and further provide and facilitate for more investment in downstream processing of our marine resource.	-	-	<p>Social problems due to cross-cutting issues (HIV/AIDS, etc),</p> <p>High red tape restrictions</p>

Encourage joint ventures between foreign business and local business, to develop expertise of PNG businesses	3	Provide incentives for new foreign manufacturing businesses to form joint venture with PNG business	-	-	-	Assume land registration impediments will be resolved by 2015.			
Provide low cost environment for business to operate	4	Coordinate Government actions to increase the ease of doing business in PNG by ensuring enforcement of contracts, improving land administration, simplifying procedures for obtaining permits. Survey manufacturing businesses to identify key regulatory impediments or costs. Use results to prioritise further Government action.	-	-	-				
Facilitate the expansion of a strong industrial base through an integrated manufacturing industry	5	Road and other transport networks, particularly in Economic Corridors will connecting primary inputs to factories and to markets, including to export infrastructure.	-	-	-				
<b>Responsibility</b>	Department of Commerce and Industry (DCI), Industrial Centre Development Corporation (ICDC)								
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>	
	1	1.1	1.1	1.0	1.0	1.0	5.2	GoPNG	
	2	Costed under fisheries sector							GoPNG/Donor
	3	0.1	0.1	0.2	0.2	0.2	0.8	GoPNG	
	4	0.8	0.8	0.8	0.8	0.8	4.0	GoPNG	
	5	Costed under transport sector							GoPNG
<b>TOTAL</b>		2.0	2.0	2.0	2.0	2.0	10		



## 4.9 Tourism Sector

**Goal:** Increase the overall economic value of tourism to the nation by doubling the number of tourists on holiday in PNG every five years and maximizing the sustainable growth for the social and environmental benefits of Papua New Guineans.

### *Introduction*

The tourism industry is one of the fastest growing industries worldwide, and has played a major role in increasing the wealth of nations. Importantly, tourism is a sector that represents a major opportunity for developing nations like PNG to increase their economic base, expand foreign exchange earnings and also enhance standards of living for their people through the sector which is more labor intensive and provide wide opportunities in the tourism value chain.

### *MTDP 2011-2015*

Even though, number of foreign visitors to PNG rose to 125,000 in 2009 which recorded more than twice the arrival in the early part of the decade; however, tourism development in PNG has failed to keep pace with the rest of the world and the region. PNG share of the (South Pacific) regional market is very small at only 5% of total arrivals, and less than 2% of the holiday market compared to its neighboring islands; thus, indicates that PNG tourism still remains very small by international standards.

The first MTDP 2011 – 2015 is to initiate a process of transforming PNG Tourism into a growing and sustainable industry by 2030 which will create an enabling environment through the formulation of key strategies, such as human resource development, institutions and industry partnership, transport & infrastructure and most importantly marketing the destination. Expansion of these opportunities within these market segments will be a critical component of the development of the sector; the extent to which products can be delivered cost effectively and within a safe and secure environment, will ultimately be key drivers in the highly competitive international market place.

The first phase of the MTDP will be a stepping stone to drive and maximize the industry with new strategies in place where there is no doubt, this nation has a significant potential to maximize the industry and therefore, to deliver the range of likely benefits for the people of PNG. Priority will be given to increasing the number of tourists visitors rising from 125,000 (2009) to a commanding tally of 350,000, the total Tourism receipt or expenditure to PNG to increase from K1.7 billion (2009) to an improve estimation of K5 billion and also an increase in the total number of employment both skilled & semi-skilled from 13,500 jobs (2009) to an increase of 120,000 jobs.

For the Tourism Goal to be fully captured and achieved there is a need for involvement and commitment to the *goal* by Papua New Guineans. The overall goal will mean little if it does not result in benefits which flow to all sectors of the economy. The current Government is committed to achieving growth in the sector and working with all the stakeholders to achieve this goal.

The further development of Tourism industry offers potential to deliver or achieve the ultimate goal and vision of the PNGDSP. As one of the main economic activities capable of contributing to the realizing of these subsequent MTDPs includes;

- Providing significant employment throughout PNG,
- Developing income generation opportunities, leading to a reduction in poverty level and reduction in law and order problems,
- Development of Rural economies reduce urban migration,
- Providing a sustainable alternative which contributes to the management and preservation of our country's natural resources,
- Reinforcement of the country's unique culture and handicrafts, which are tourism assets in their own rights,
- Supporting the development of linked economic activities such as agriculture and fishing and other services which support tourism,

- Provide a major source of direct and indirect tax revenue for the government to support the delivery of social services which support tourism.

Tourism is labor intensive, provides jobs at relatively unskilled levels for men and women and the multiplicity of potential backwards and forward linkages creates spinoff employment and income in other sector. PNG as renowned for its dualistic economic background and with the abundant natural beauty and diversity of cultural heritage; these attributes can be collaborated and Tourism Goal will be a tremendous objective to align in order to achieve the ultimate vision and goal of the PNGDSP.

### ***Building on MTDP 2011-2015***

Subsequent MTDPs will focus on the transformation of the initiated trend set by the first MTDP for Tourism sector into a more expansion and sustainable industry over the next 30 years.

For instance, marketing the destination whereby tourism demand is increase by raising market awareness of PNG as a destination and increasing products information and distributions. Development of tourism products through more investment in new and existing products, which will meet market needs, by increasing the sector competitiveness and industry standards and profitability. Cost effective transport /tour packages with upgraded and maintenance of infrastructure and transport will improve the competitiveness and standards of such facilities, to increase market demand and improve visitor satisfaction levels.

The MTDP will importantly strengthen the capacity of human integral development through facilitating of training and quality education programs, which will meet the industry needs, improve skills level and create awareness of the benefits of tourism. Furthermore, develop an institutional structures and capacity within the public and private sector to facilitate and encourage capacity building at the national and provincial level.

### ***Challenges in implementation***

The first and foremost challenge is the dealing of law and order problems, energy and land issues within the societies of this nation, which really affects the image of PNG internationally.

Transport and accommodation on the other hand, represent the core infrastructure needs of tourists. This in most cases, such facilities still needs significant upgrading to match international standards; e.g. the major tourist destination airports in the country, roads and water transport are in desperate need of maintenance.

An additional concern is how the benefits of tourism will reach the poor. How we can be able to formulate a specific strategy that will facilitate local market chains so that sectors like agriculture, fishing and artifacts link to the tourism sector in a more flexible way.

DSP sector goal	Indicator	Source	Baseline (2009)	2015 target	2020 target	2025 target	2030 DSP target
Increase the overall economic value of tourism to the nation by doubling the number of tourists on holiday in PNG every five years and maximizing the sustainable tourism growth for the social and environmental benefit of Papua New Guineans.	Number of Foreign Visitors	Arrival Cards (Immigration)	125,000	213,666	254,768	287,897	350,000
	Total Tourism Receipt	Visitor Survey (sampling method)	K1.7 billion	K2.6 billion	K3.2 billion	K3.9 billion	K5.0 billion
	Number of Employment	TPA Research & Survey	13,500 jobs (Skilled, Semi Skilled)	18,600	45,000	67,000	120,000
Lead government department	PNG Tourism Promotion Authority						

No.	Sector Strategy
1	MARKETING THE DESTINATION: Increase the tourism demand by raising market awareness of PNG as a destination and increasing product information and distribution.
2	PRODUCT DEVELOPMENT & INVESTMENT: Encourage investment in new and existing tourism products, which meet market needs, by increasing sector competitiveness and industry standards and profitability
3	TRANSPORT & INFRASTRUTURE: Improve competitiveness and standards of transport and infrastructure, to increase market demand and improve visitor satisfaction levels.
4	HUMAN RESOURCE DEVELOPMENT: Facilitate training and quality education programs, which meet industry needs, improve skills level and create awareness of the benefits of tourism.
5	INSTITUTIONS & INDUSTRY PARTNERSHIP: Develop institutional structures and capacity within the public and private sector to facilitate tourism development at a national and provincial level.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
<b>MARKETING THE DESTINATION:</b> Increase the tourism demand by raising market awareness of PNG as a destination and increasing product information and distribution.	1	<ul style="list-style-type: none"> <li>Develop expanded annual market research program based on key data requirements;</li> <li>Review and amend arrivals/departure card data.</li> <li>Review PNGTPA website site and develop and implement internet marketing strategy including niche database development</li> <li>Review current product information and update site</li> <li>Design project for technical assistance to build internet marketing capacity in the Provinces</li> </ul>	<ul style="list-style-type: none"> <li>Appoint external marketing auditor to review effectiveness of PNGTPA marketing activities including overseas representatives</li> <li>Review PNGTPA Act to reflect new functionality and proposed structure</li> <li>Draft revised legislation for parliamentary approval to review functions of PNGTPA</li> <li>Restructure PNGTPA and establish new separate marketing and policy and planning bodies</li> </ul>	<ul style="list-style-type: none"> <li>Prepare and sign MOUs with relevant regional and international partners and undertake cost effective joint promotions.</li> <li>Leverage global/regional memberships with South Pacific. Travel, PATA and WTO.</li> </ul>	<ul style="list-style-type: none"> <li>Establish a special and sporting events unit</li> <li>Establish a special events working Group and prepare marketing strategy and incorporate into annual marketing program</li> </ul>	Increase the tourism demand by raising market awareness of PNG as a destination and increasing product information and distribution.
<b>PRODUCT DEVELOPMENT &amp; INVESTMENT:</b> Encourage investment in new and existing tourism products, which meet market needs, by increasing sector competitiveness and	2	<ul style="list-style-type: none"> <li>Revise existing regulations in relation to specified taxation relating to tourism investment incentives</li> <li>Review and revise appropriate legislation and regulations in relation to cruise ship passengers</li> <li>Review and revise appropriate legislation and regulations in relation to pre-approved visa exemption list</li> </ul>	<ul style="list-style-type: none"> <li>Consult with provinces &amp; develop TORs for Provincial Tourism Plans</li> <li>Design TOR and engage consultant to design guidelines based on key niche products</li> </ul>	<ul style="list-style-type: none"> <li>Develop criteria for tourism projects funding and publicise results to Provinces and Associations.</li> <li>Establish Tourism Conservation committee</li> </ul>	<ul style="list-style-type: none"> <li>Establish review procedure to identify relevant land cases for tourism projects</li> <li>Establish priority cases and timeframe for resolving land</li> </ul>	Encourage investment in new and existing tourism products, which meet market needs, by increasing sector competitiveness and industry

industry standards and profitability		<ul style="list-style-type: none"> <li>Design community project components</li> <li>Design standards system, pilot test and develop legislation/regulation for accommodation sector</li> <li>Undertake Provincial training and awareness program</li> </ul>		<ul style="list-style-type: none"> <li>Hold annual forum on Tourism and Conservation</li> </ul>	<ul style="list-style-type: none"> <li>cases for tourism projects</li> <li>Identify key sites for tourism projects</li> </ul>	standards and profitability		
<b>TRANSPORT &amp; INFRASTRUCTURE:</b> Improve competitiveness and standards of transport and infrastructure, to increase market demand and improve visitor satisfaction levels.	3	<ul style="list-style-type: none"> <li>Integrate marketing and product marketing support with new market opportunities created by new air services within PNGTPA marketing plan and activities</li> <li>Implement Cruise Ship Strategy targeting potential new operators and implement targeted marketing program</li> <li>Define cruise ship operators and introduce regulations to remove charges</li> <li>Coordinate annual infrastructure maintenance plans with priorities identified in Provincial Tourism Plans.</li> <li>Review existing infrastructure and develop and implement upgrading program</li> </ul>	<ul style="list-style-type: none"> <li>Enforce the requirement for roll out of the new mobile network to be undertaken by operators</li> <li>Provincial Authorities to develop maintenance program based on Provincial Tourism Plans</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that existing tourism vehicle roadworthy regulations are enforced commencing with tour operator vehicles</li> <li>Conduct regular safety checks on tour operator vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Review Code Share arrangement between Air Nuigini and QANTAS to a competitive benefits test</li> </ul>	Improve competitiveness and standards of transport and infrastructure, to increase market demand and improve visitor satisfaction levels.		
<b>HUMAN RESOURCE DEVELOPMENT:</b> Facilitate training and quality education programs, which meet industry needs, improve skills level and create awareness of the benefits of tourism.	4	<ul style="list-style-type: none"> <li>Implement Tourism Training Needs Analysis &amp; HRD Plan</li> <li>Establish Industry Advisory Committee (see below)</li> <li>Review existing TVET course content</li> <li>Review existing material and conduct train the trainer program for Provincial tourism officers</li> </ul>	<ul style="list-style-type: none"> <li>Produce development program for exiting technical institutions for facility upgrade and capacity building</li> <li>Review outcomes of TNA and existing course content</li> <li>Develop short technical courses</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate competency based training principles into all technical training</li> </ul>	<ul style="list-style-type: none"> <li>Contract web design company to develop site and publicise</li> </ul>	Facilitate training and quality education programs, which meet industry needs, improve skills level and create awareness of the benefits of tourism.		
<b>INSTITUTIONS &amp; INDUSTRY PARTNERSHIP:</b> Develop institutional structures and capacity within the public and private sector to facilitate tourism development at a national and provincial level.	5	<ul style="list-style-type: none"> <li>Revise the functions of the PNGTPA</li> <li>Review PNGTPA Act and draft new legislation</li> <li>Establish a Tourism Policy Secretariat.</li> <li>Develop business plans for all registered tourism industry associations and fund key initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Design and implement a capacity building program in tourism development and marketing at a central and provincial agency level</li> <li>Liaise with operators and create networks</li> <li>Develop standard constitutions for Provincial Associations</li> </ul>	<ul style="list-style-type: none"> <li>Establish a national Hotels Association</li> </ul>	<ul style="list-style-type: none"> <li>Establish a Tourism Police Concept</li> </ul>	Develop institutional structures and capacity within the public and private sector to facilitate tourism development at a national and provincial level.		
Responsibility								
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2030	Funding option(s)
	2							GoPNG
<b>Total</b>		2	2	2	2	20	28	

## **Part 5: Cross cutting sectors**

### **5.1 Population**

**Goal:** Achieve a population growth rate that is sustainable for society, the economy and the environment.

#### ***Introduction***

In the last three decades, PNG'S population growth rate was higher than the economic growth rate, and this had serious resource implications for demographic investment (in health, education and employment creation amongst others). Although fertility has been declining, it remains high by international standard resulting in a very broad-based age and sex structure with 40% of the population under the age of 15. This means that there is a very young population that clearly has a potential to further grow. This young population is reflected by a median age of 19 years and the mean age at marriage at 23 years for males and 20 years for females. The years by age will increase over time as the population ages (increased life expectancy) as a result of gradually decreasing fertility.

Mortality is also decreasing but at a higher level. This has had a significant contribution to PNG's low life expectancy between the years 55 and 60 on average. The recent high maternal mortality ratio of 733 per 100,000 live births refers to mortality in 1994. Most of these deaths are pregnancy-related causes including unsupervised births and access to reproductive services, high rates of illiteracy particularly in the remote areas of PNG and lack of knowledge on contraceptives.

The increasing population also places increasing pressure on PNG's environment with its rich natural resources including forestry and fisheries. In other parts of the country, particularly smaller islands, population growth is placing increasing pressure on the environment, calling for better environmental management.

Education for girls and boys as well as adults will provide economic opportunities to prosper. Agriculture has the potential to grow in rural areas while employment generation for the informal sector and small and medium enterprises is important for the urban sector.

#### ***MTDP 2011-2015***

In order to achieve the DSP goal for population, the sector will depend entirely on the achievements of other key sectors that are implementing initiatives and programmes over the next five years. The lead agencies in the sectors of Health, Education and Community Development, in collaboration with other agencies and partners, will implement programmes that address fertility and mortality issues whilst initiatives or programmes in urban development and the economic corridors will attempt to address rural-urban migration and labour force participation.

Addressing issues that affect population growth and the quality of all citizens' lives is a reflection of PNG's commitment to achieve MDGs 4, 5 and 6. The broad sector strategies are related to the respective sector strategies of Health, Education and Community Development which guide implementation of the sector initiatives or programmes that aim to attain the following deliverables, namely:

- Health: 100% health facilities with adequate medical supplies and equipment, upgrading of training institutions, increased family planning coverage
- Education: quality, primary and secondary curriculum, implemented and monitored and quality teacher education and training
- Community Development: adult literacy and entrepreneur skills development training and capacity enhancement program
- Economic Development: skills training for economic opportunities and investment in rural development and opportunities within the economic corridors

Moreover, given the focus of implementation over the next five years on capacity building, the respective sectors, will depend entirely on the key enablers, in particular infrastructure, transport, land and education

to support interventions. The promotion of partnerships with the private sector, churches and non-governmental organizations in this case is fundamental.

### ***Building on MTDP 2011-2015***

The future plans will continue to build and enhance skills and capacity, rehabilitate and maintain old infrastructure while at the same time construct new infrastructure and build capacity. Interventions by the key enablers over the next five years will pave the way to successful implementation to achieve the desired deliverables that will contribute to the achievement of the ultimate goal. The outcome of the sector achievement in 2030 will be reduced infant, child and maternal mortality, lower fertility for women and teenage girls resulting in smaller family size, and controlled or limited movement of people from the rural to urban centres.

These outcomes would be results of improved road networks and connectivity, established and well equipped health and education facilities at all levels of government and communities, and a healthy and educated population who can make wise and responsible decisions in their livelihoods and are able to self-sustain and participate in economic activities made possible through the establishment of economic corridors, and urban growth centres in the provinces and districts.

### ***Challenges in implementation***

Investing in the key enablers over the next five years is crucial as this will accelerate progress across all other sectors in the future plans. However to further support effective implementation, sectoral liaison, coordination and collaboration must continue to take place. Furthermore, issues on data limitations must also be addressed to ensure effective implementation and monitoring of the plans.

DSP sector goal	Indicator	Source	Baseline	2015 target	2030 DSP target
Achieve a population growth rate that is sustainable for society, the economy and the environment.	Population size	Census/DHS	5.2 million (2000)	7.3 million	9.8 million
	Population growth rate	Census/DHS	2.3% (2000)	2.2%	2.0%
	Total Fertility Rate	Census/DHS	4.4 children per woman (2006)	4.0 children per woman	3.4 children per woman
	Infant Mortality Rate	Census/DHS	57 deaths per 1000 live births (2006)	44 deaths per 1000 live births	17 deaths per 1000 live births
	Median Age	Census	19 years (2000)	21 years	25 years
	Mean Age at Marriage	Census	Male: 23 years Female: 20 years	Male: 23 years Female: 20 years	Male: 27 years Female: 25 years
	Urban population	Census	13% (2000)	16%	Contained at 20%
	Dependency Ratio	Census	0.73	0.69	0.61
	Net migration	Census	Not at the national level	Not at the national level	Not at the national level
Lead government department	Department of National Planning & Monitoring/Department of Health/Department of Education/Department for Community Development				

No.	Sector Strategy
1	Enhancement of skills and capacity
2	Strengthen and expand Family Planning and Reproductive Health Services
3	Increase awareness to specific target populations at all levels on Population issues, Family Planning and Reproductive Health
4	Improve and increase economic opportunities and conditions in the rural and the economic corridor areas
5	Integrate population issues and personal development into formal and informal education curriculum

## 5.2 Youth

**Goal:** A vibrant and productive youth population that has career opportunities, skills, good education, moral values and respect.

### *Introduction*

PNG Population has a youthful structure with 40 per cent aged between 0-14, 20 per cent aged between 15-24, and 16 per cent aged between 25-34. While approximately 36 percent between the total populations are young people between the ages of 15 and 34, 76 percent of the populations are 34 years or younger (NSO, 2002). Between 1990 and 2000, the population grew at the rate of 3.1 % per year. The 2011 national censuses will establish an upward trend in this population bracket. The recently revised National Youth Policy recognizes that there are young people who are over 25 but still identified as “young people” and they maintain active involvement in community youth activities. It must be recognized that the needs and issues of youth can vary considerably between the ages of 12-25 and between different life circumstances and locality.

Young people are mobile, hence there is an increasing trend of rural to urban youths migration for reasons including: education and employment opportunities, an attraction to a different way of life, to remove themselves from the restrictions of their villages and from family obligations, abuse and violence, to access services, sports and recreation and for pleasure. There are also young people who have been born in urban areas and raised in the city. They do not necessarily go to their family’s home villages or speak their parent’s native languages but speak PNG Tok Pisin and English. Youths also migrate from urban and rural areas to places where economic development is occurring, around logging camps, mines, oil fields, plantations and other major economic activities. Migration to different villages, towns and cities offers more employment and education opportunities. These increased mobility can impact on the spread of STIs, including HIV.

Urban settlements have increased, and overcrowding and lack of services create vulnerability to communicable diseases (*GoPNG 1998*). In settlement areas, large numbers of unemployed youth, without land or jobs, are part of gangs that contribute to law and order problems through break and entering, hold ups, shop lifting or any activity to earn a living.

Poverty and unemployment are critical and stressful issues for youth population in PNG, and there is a lack of educational and employment opportunities and government funds to meet young people’s overall needs. Young people find that there is a lack of accessible micro-finance schemes or small grants to assist them to get involved in sustainable income generation activities.

It is serious as far as the government vision is concern for PNG to be a happy, fair, wealthy and smart country by 2050, the youth issues are a real threat and challenge for the country. Youth population is the future of PNG and the highlights above reflects of the seriousness of identifying youth issues and ensuring that they are effectively addressed because the youth issue is cross cutting and cuts across all sectors of the economy. The impacts of youths will have an adverse effect on the economy as we are currently experiencing in the areas of law and order, education, urban development, land etc...

The PNG Development Strategic Plan (PNGDSP 2010-2030) talks about nurturing young people so that they become agents of change in their societies. The nurturing will start from the families where parents take serious role in caring and responsibly upbringing their own off-springs. Strategies for education, employment generation, crime control and population, HIV/Aids are all critical for improving the lives of young people today and in the future. Additionally, areas of sporting and recreation, counseling programs through partnership with churches and NGOs are way forward in creating social and spiritual opportunities for young people to identify their potential and their usefulness for positive living and advancement in life.

Thus, in the medium term of the government’s long term planning towards achieving its aspirating of creating an environment where all people will live a happy, united and fair through smart innovation and sustainability is to start good by know the root causes of these indifference. Youth issues are seen has one of root factors of growth impediments and needs serious focus for a good start. The concern of raising a generation of people who must begin to realize their purpose of live by taking ownership of the developments of the country and becoming equal partners in development is very crucial for development planning and economic success.



In the first Medium Term Development Plan (MTDP 2011-2015) very specific enabling areas for development have been identified as possible deliverables for sectors involved in youth issues to work in collaboration to address and strategically develop the youth population in PNG

### ***MTDP 2011-2015***

The focus of MTDP 2011-2015 is to build capacity in the enabling sectors by laying the foundation for sound economic growth as a precondition for effective development. In regard to youth, investment in education, particularly in the promotion of polytechnic programs is of paramount importance. Polytechnic programs will equip young people with the technical and entrepreneurial skills they require to effectively participate in the developing and vibrant PNG economy. Investment in sports and recreation, employment generation, culture and community programs through strong partnership with churches, NGOs and community based organizations are also viewed to be effective mechanisms to transform the mindsets of our youth population and to develop them to become vibrant and productive.

The government will also focus on recapitalizing youth centres to provide an avenue for youth activities to be coordinated from. Developing programs to nurture and develop youths to become agents of change through increased formal education and polytechnic skilled based trainings and the creation of employment through sectoral interventions will be the focus of MTDP 2011-2015. Moreover, the social and spiritual aspect of developing personal lives will also be given emphasis for discipline and good character.

### ***Building on MTDP 2011-2015***

Investing in the enablers in the first MTDP is critical to ensure development progression. The latter MTDPs will build upon progress in MTDP 2011-2015 and will continue to invest in polytechnic training. Effective investment in this area will bring about changes in the behavior and attitude of the youth population whilst also contributing to significant economic gains in the form of employment, increased entrepreneurship, law and order, productivity and reliability of an educated healthy population.

The later MTDPs will continue to work on the progress of building stronger human development through youth skills training and personal development programs. Capacity building through the creation of training centers and facilities will act as a launch pad for increased youth training in the future, contributing to the 2030 target.

### ***Challenges in implementation***

To see positive change in youth development effective prioritization and sequencing of expenditure must take place. Setting the right foundation in MTDP 2011-2015 through sound investment in the key enablers is one way in which this can be done. Moreover, only by enhancing employment opportunities will our youth be able to be a truly productive and vibrant part of society.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
To have a vibrant and productive youth population that has career opportunities, skills, good education, moral values and respect.	Education for Youths		Half a Million youths have never attended any formal education (rural areas)	25% (200,000) youths into formal education			Secondary Education for all Youths including education through polytechnic.
	Career for Youths		80,000 youths leave school annually.	40% get employed			All youths leaving formal education to have jobs.
	Youths Morals, Crime and Drugs		80% of crime is committed by youths.	15% reduction in crime			Youths committing crime will fall by 55% and drugs and alcohol will be controlled
	Teenage Pregnancies		13% of teenage girls have unwanted pregnancies.	8%	7%	6%	Less than 5%
Lead government department	Department of Community Development / Department of Education / Law and Justice Sector						

No.	Sector Strategy
1	Increase programs to nurture and develop youths to become effective and agents of change.
2	Increase youth enrolment in formal education and polytechnic trainings.
3	Increase opportunities for youth engagement in formal employment.
4	Enhance social and spiritual opportunities of youths.

DSP 2030 Deliverable	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Nurturing and personal development	1.1					Negative Peer & social Influences.		
Formal education & polytechnic training	2.1					Limited spaces and administrative bottlenecks.		
Youths employment	3.1					Limited job opportunities.		
Social, sports and Spiritual Developments	4.1					Lack of government support		
Responsibility	Department of Education / Department of Community Development/Law & Justice Sector							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
<b>Total</b>		2	2	2	2	2	10	Churches, GoPNG



## 5.3 Gender

**Goal:** All citizens irrespective of gender will have equal opportunity to participate in and benefit from development of the country

### *Introduction*

Gender refers to the socially determined roles and socially learned behavior of both men and women in any given society. It refers to scripts people are socialized into and reflects the dimensions of power relations and status, roles and positions, access to and control over resources and divisions of labor. Gender relations are undergoing considerable transformation with the advent of formal education, employment and the monetary economy. Women are assuming greater economic responsibility as a matter of necessity in most cases, to supplement household incomes.

Tension and conflict seem to pervade gender relations and are often manifested in physical violence, most significantly between spouses. The high incidence of rapes and other forms of sexual violence also stems from gender relations and how women are valued in society. Sexual suspicion and jealousies cloud gender relations and significantly impede women's ability to participate fully in economic development. Professional associations are constrained and women's advancement in the formal sector of employment and politics is restricted by sexual antagonism. Gender disparities are also manifested in the poor health of mothers and high rate of maternal mortality are often due to preventable causes as well as the high incidence of sexual and domestic violence directed at women. Efforts to achieve gender equity require recognition of the role of men as leaders, husbands, and fathers is of utmost importance in improving the situation of women. Young boys and men need positive role models to provide guidance and direction to meet the challenges of a society in transition.

Gender mainstreaming and gender responding planning and budgeting are critical to support many of the initiatives undertaken by the sector agencies as well as those specific agencies and community based organisations directly dealing with women and the communities.

### *MTDP 2011-2015*

Gender differentials in education, labour force participation, health morbidity and mortality still exist in PNG.

The Government acknowledges that gender based violence is widespread and it is an impediment to effective progression towards achievement of the PNGDSP and Vision 2050. Gender based violence has clear links with other factors such as poverty, HIV/AIDS, land and property rights, race/ethnicity, age and sexual orientation. As such initiatives over the next five years will continue to acknowledge and support protective shelters for women and children survivors of abuse cases, shelters established and managed by churches and CSO as implementing partners of the Government. Moreover, to deal with victims of gender based violence, specialized training is essential for police, welfare/CID officers, courts and health officials.

### *Building on MTDP 2011-2015*

To fully realise the PNGDSP 2010-2030 goal, gender mainstreaming and specific programs for women in urban and rural areas will continue to be a focus of the government across all MTDPs. Moreover, once the enabling environment has been set and resources are more readily available new and innovative programmes raising awareness on the roles of women and men in development and promoting equal access to resources, information, opportunities and other services that support gender equality may receive increased attention.

### *Challenges in implementation*

Gender inequality is a severe threat for future development in PNG, and PNG's gender culture in particular, places women in a disadvantaged position. This applies in particular to gender based violence (rape and spousal abuse) which is common in PNG. As such, for effective implementation of gender-based interventions under MTDP 2011-2015 PNG's gender culture must be continued to be unpacked and interventions must be sensitive to PNG ways.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
All citizens irrespective of gender will have equal opportunity to participate in and benefit from development of the country	Gender Development Index	Census/D HS	0.54	By 2015, the GDI will increase to 0.60	By 2020, the GDI will increase to 0.65	By 2025, the GDI will increase to 0.70	By 2030, the GDI will increase to 0.75
	Gender Empowerment Index	DPM /Labour	0.15	By 2015, the GEI will increase by 10% to 0.25	By 2020, the GEI will increase by 20% to 0.35	By 2025, GEI will increase by 30% to 0.45	By 2030, GEI will increase by 45% to 0.60
	Gender Parity Ratio of students in primary, secondary and tertiary education	NDOE OHE	0.45	Eliminate gender disparity at the primary and lower level by .....0.60, and at the upper-secondary level and above by .....0.60	Eliminate gender disparity at the primary and lower level by ...0.70., and at the upper-secondary level and above by 0.70	Eliminate gender disparity at the primary and lower level by ....0.80., and at the upper-secondary level and above by 0.80	Eliminate gender disparity at the primary and lower level by ....0.90., and at the upper-secondary level and above 0.90
	Gender Parity Ratio of literate 15-24 year old persons	Census/N DOE	0.91	Reduce Gender Parity Ratio of literate 15-24 year old persons to 0.80	Reduce Gender Parity Ratio of literate 15-24 year old persons to 0.70	Reduce Gender Parity Ratio of literate 15-24 year old persons to 0.60	Reduce Gender Parity Ratio of literate 15-24 year old persons to 0.50
	Gender Parity Ratio of literate adults (age 15 and over)	Census/N DOE	0.80	Reduce Gender Parity Ratio of literate adults (age 15 and over to 0.70	Reduce Gender Parity Ratio of literate adults (age 15 and over to 0.60	Reduce Gender Parity Ratio of literate adults (age 15 and over to 0.50	Reduce Gender Parity Ratio of literate adults (age 15 and over to 0.40
	Proportion (%) of persons age 10 and over in wage employment that are women	Census/DL &IR	29%	Increase the Proportion(%) of persons age 10 &over in wage employment that are women to 0.30	Increase the Proportion(%) of persons age 10 &over in wage employment that are women to 0.34	Increase the Proportion(%) of persons age 10 &over in wage employment that are women to 0.37	Increase the Proportion(%) of persons age 10 &over in wage employment that are women to 0.45
	Proportion (%) of persons age 10 and over with money income from any source that are women	Census	12%	Increase the Proportion (%) of persons age 10 and over with money income from any source that are women by 0.20	Increase the Proportion (%) of persons age 10 and over with money income from any source that are women by 0.25	Increase the Proportion (%) of persons age 10 and over with money income from any source that are women by 0.30	Increase the Proportion (%) of persons age 10 and over with money income from any source that are women by 0.40
	Proportion (%) of seats held by women in national parliament		0.9%	Increase the Proportion (%)of seats held by women in national parliament by 0.15	Increase the Proportion (%)of seats held by women in national parliament 0.20	Increase the Proportion (%)of seats held by women in national parliament 0.25	Increase the Proportion (%)of seats held by women in national parliament0.33
	Number of reported cases of domestic violence per 100, 000 population in a given year	Crime Statistics, Police	0.80	Reduce the Number of reported cases of domestic violence per 100, 000 population in a given year 0.70	Reduce the Number of reported cases of domestic violence per 100, 000 population in a given year .60	Reduce the Number of reported cases of domestic violence per 100, 000 population in a given year 0.50	Zero tolerance for violence against women
Lead government department	Department of Family & Community Development and Department of National Planning & Monitoring						

No.	Sector Strategy
1	Increase universal access in education for all males and females
2	Increase the rate of functional literacy among girls and women
3	Increase women's access to economic opportunities and awareness of their economic rights
4	Enhancement of sustainable access of women to capital, market, information, technology and technical assistance
5	Gender mainstreaming in the bureaucracy, legislation and judiciary
6	To ensure equal access to and full participation in power structure and decision-making
7	Take integrated measures to prevent and eliminate violence against women and children by strengthening legislation on family welfare, child and women protection

DSP 2030 deliverables/ interventions	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Secure funds to trial a number of schools on literacy modules and packages and provincial literacy programs	2.1	10 – 15% of schools are able to integrate literacy programs	20-25% of schools are able to integrate literacy programs	30-35% of schools are able to integrate literacy programs	40-45% of schools are able to integrate literacy programs	Secure funds
Develop and implement/ roll out a number of adult literacy programs conducted at all CLDC focal points	2.2	50 -100 adult literacy trainings conducted in 16 CLDC focal points	100 -200 adult literacy trainings conducted in 32 CLDC focal points	200-300 adult literacy trainings conducted in 48 CLDC focal points	300 -400 adult literacy trainings conducted in 64 CLDC focal points	Implement programs
Implement the entrepreneur skills development training and capacity enhancement programs in all districts	3.1/ 3.2	50-100 entrepreneur skills development training conducted in 10 districts 100-300 women entrepreneurs are identified and supported.	150-200 entrepreneur skills development training conducted in 20 districts 300-500 women entrepreneurs are identified and supported.	250-300 entrepreneur skills development training conducted in 30 districts 500-700 women entrepreneurs are identified and supported.	350-400 entrepreneur skills development training conducted in 40 districts 700-1000 women entrepreneurs are identified and supported.	Implement programs
Develop # of women's political awareness program before election	4.1	10,000 – 15,000 IEC materials on women's political participation are printed and disseminated	8,000 – 10,000 IEC materials on women's political participation are printed and disseminated	5,000 – 7,000 IEC materials on women's political participation are printed and disseminated	2,000 – 5,000 IEC materials on women's political participation are printed and disseminated	Secure funds
Conduct number of gender sensitization programs in the bureaucracy, legislation and judiciary	4.1	20 – 30% of public servants are gender sensitised.	30 – 40% of public servants are gender sensitised.	40 – 50% of public servants are gender sensitised.	50 – 70% of public servants are gender sensitised.	Implement programs and secure funds
Produce and disseminate number of gender sensitization communication awareness materials	4.1	10,000- 15,000 IEC materials on ender sensitization produced and disseminated.	8,000- 10,000 IEC materials on ender sensitization produced and disseminated.	5,000- 7,000 IEC materials on ender sensitization produced and disseminated.	2,000- 5,000 IEC materials on ender sensitization produced and disseminated.	Secure Funds
Protective shelters established for women and children survivors of abuse cases.	5.1	2-4 safe houses established	4-6 safe houses established	6-8 safe houses established	8-10 safe houses established	Secure funds
Police, welfare/CD officers and health officials trained to respond to Gender Based violence	5.1	200-300 concerned officers trained to respond to GBV	300-500 concerned officers trained to respond to GBV	500-700 concerned officers trained to respond to GBV	700-1000 concerned officers trained to respond to GBV	Secure funds
Responsibility	Department for Community Development, Office for Development of Women, and Department of Education,					

Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	2.1							GoPNG/donors
	2.2							GoPNG/donors
	3.1/3. 2							GoPNG/donors
	4.1							GoPNG/donors
	5.1							GoPNG/donors
<b>Total</b>		<b>9</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>49</b>	

## **5.4 HIV/AIDS**

**Goal:** A healthy population free from sexually transmissible infections and HIV/AIDS threats.

### ***Introduction***

By the end of 2007, an estimated 5,995 people had died of AIDS related illnesses and 3,730 children had been orphaned. The 2007 Estimation report on the HIV epidemic in PNG estimated that the national HIV prevalence among adults was 1.61%. At the end of 2008 there were an estimated 76,665 people living with HIV in PNG. and rising. 40% of all reported cases of HIV infections are accounted for by male and 60% for females. The median age for those diagnosed with HIV was 27 years for females and 33 for males. Seven provinces connected by the highlands highway accounted for approximately 94% of all new cases confirmed in 2008

Currently there is no biological surveillance in place for monitoring the epidemic among populations like sex workers, and men who have sex with men, higher risk groups like workers in economic enclaves. Furthermore, there is still a lack of quality epidemiological data to guide the planning of the national response

The dynamics of HIV transmission in PNG are influenced is heightened by early sexual debut, often in situations of coercion and abuse; multiple and concurrent sexual partnerships, including polygamy, extramarital sexual partnerships and inter-generational sex; the exchange of sex for cash, goods, and services; low and inconsistent condom use; high levels of sexual violence and rape; mobility; and the use of penile inserts and modifications.

The total number of STI, which are known cofactors in HIV transmission, cases reported increased from 21,213 in 2000 to 30,535 in 2008, representing a growth of 44%.

### ***MTDP 2011-2015***

Under MTDP 2011-2015, interventions will focus on systems strengthening, in particular the establishment of a well functioning monitoring, surveillance and evaluation system, effective coordination of all stakeholders, prevention, counseling, testing, treatment, care and support.

Effective coordination of efforts to fight HIV/AIDS under MTDP 2011-2015 will take place under the leadership of the National HIV/AIDS Council. In particular NACS will work towards strengthening collaboration and coordination within and across government, NGOs, CBOs, and donors in both the delivery of services and in the development and use of the monitoring, surveillance and evaluation system.

Alongside effective coordination, equipping HIV/AIDS and health centres with sufficient supplies for the treatment, care and support of those infected with HIV/AIDS will be a focus for the coming years, increasing efforts as financing allows. Prevention efforts under MTDP 2011-2015 will include the provision of information and education within high schools, youth programs, national events and across government departments/agencies.

### ***Building on MTDP 2011-2015***

The subsequent MTDPs will build on MTDP 2011-2015 and will upscale services, awareness, education and training activities. In particular in the latter MTDPs the monitoring, surveillance and evaluation system will be rolled out to an expanding number of provinces, strengthening our knowledge on the HIV/AIDS situation across PNG. System strengthening will be ongoing to ensure new challenges are dealt with adequately.

Interventions in the HIV/AIDS sector will be more effectively up-scaled in the latter MTDPs through prior investment in MTDP 2011-2015 in the enabling environment, in particular, infrastructure, transport and utilities.

### ***Challenges in implementation***

The key challenges in effective implementation are a paucity of good monitoring data, cultural and traditional barriers and institutional and organizational capacity of implementing agencies. Moreover, access to health centres and poor existing infrastructure in the rural areas remain key issues to overcome in the coming years.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Healthy population free from sexually transmissible infections and HIV/AIDS threats.	Prevalence rate(%) of HIV/AIDS by sex	NHIS	Est.0.96 in 2008	Below 0.9	.50 %	.30 %	Below 0.1 %
	Orphan children due to AIDS	NHIS	Est.5995 in 2008	4000	3000	2000	Reverse the rise in orphans
	% of HIV –positive Pregnant women on ART ( PPTCT)	UNGASS	3.48% in 2008	20% coverage	50% coverage	80% coverage	100% coverage
	Degree of Stigma and Discrimination as identified by PHA's Stigma Index						
Lead Government Department/Collaborating Agency	NACS and NDOH						

No.	Sector Strategy
1	A policy framework with PNG ways: Prevention, reduce the transmission of HIV and STIs in PNG
2	A policy framework with PNG ways: Counselling, Testing, Treatment, Care and Support
3	Systems strengthening: coordination, data collection and analysis

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Implement education and awareness programs	1.1	30% of High Schools Coverage	60% of High Schools Coverage	80% of High Schools Coverage	100% of High Schools Coverage	Cultural & traditional barriers Funding allocation
Increase access to quality STI/HIV PEP services	1.1	30% access through all health facilities	60% access through all health facilities	80% access through all health facilities	100% access through all health facilities	Funding allocation. Cultural & traditional barriers
Adequate supply of HIV related commodities to ANC	1.1	30% of coverage to all ANCs	60% of coverage to all ANCs	70% of coverage to all ANCs	100% of coverage to all ANCs	Access to ANC. Cultural & traditional barriers
Implement National Guidelines for standard precautions in health care settings.	1.1	30% Coverage in all health care settings	60% Coverage in all health care settings	80% Coverage in all health care settings	100% Coverage in all health care settings	Funding allocation Cultural & traditional barriers
Support Centres to assist PHAs	1.1	30% coverage to all centres with PHAs	60% coverage to all centres with PHAs	80% coverage to all centres with PHAs	100% coverage to all centres with PHAs	Access Cultural & traditional barriers
Establish youths programs to raise greater awareness	1.1	30% coverage to all centres with PHAs	60% coverage to all centres with PHAs	80% coverage to all centres with PHAs	100% coverage to all centres with PHAs	Funding allocation. Cultural & traditional barriers
All Government Agencies have in place workplace policies.	1.1	30% coverage of workplace policies in the public sector	60% coverage of workplace policies in the public sector	80% coverage of workplace policies in the public sector	100% coverage of workplace policies in the public sector	Funding allocation. Cultural & traditional barriers
Implement awareness of HIV/AIDS activities during the National & Local Social/Cultural/Sporting/Professional Events	1.1	30% coverage in all & national events	60% coverage in all & national events	80% coverage in all & national events	100% coverage in all & national events	Funding allocation. Cultural & traditional barriers
Increase access to quality HCT	2.1	30% access coverage in HCT	60% access coverage in HCT	80% access coverage in HCT	100% access coverage in HCT	Funding allocation. Cultural & traditional barriers
Develop a effective quality assurance system for HCT/ART program	2.2	Quality Assurance System Established for HCT/ART	Quality Assurance System Established for HCT/ART	Quality Assurance System Established for HCT/ART	Quality Assurance System Established for HCT/ART	Funding allocation. Cultural & traditional barriers

Expand ART and STI treatment services to all districts.	2.3	30% service coverage throughout 89 districts	60% service coverage throughout 89 districts	80% service coverage throughout 89 districts	100% service coverage throughout 89 districts	Funding allocation. Cultural & traditional barriers		
Establish district HBC support mechanism to facilitate and support HBC units.	2.4	30% coverage support services in 89 districts	60% coverage support services in 89 districts	80% coverage support services in 89 districts	100% coverage support services in 89 districts	Funding allocation. Cultural & traditional barriers		
Establish a National Standard and guideline to govern HBC	2.5	National Standard Guideline for HBC completed & operating	National Standard Guideline for HBC coverage in 7 Provinces	National Standard Guideline for HBC coverage in 14 Provinces	National Standard Guideline for HBC coverage in 22 provinces	Funding allocation Cultural & traditional barriers		
Establish National HIV/AIDS monitoring and evaluation system and database.	3.1	National M & E System in full operation	National M & E System operational in 7 provinces	National M & E System operational in 14 provinces	National M & E System operational in 22 provinces	Funding allocation. Cultural & traditional barriers		
Establish a HIV/AIDS research, information and statistics centre.	3.2	National HIV/AIDS Research, Information and Statistics Centre established	National HIV/AIDS Research, Information and Statistic Centres established in 7 Provinces	National HIV/AIDS Research, Information and Statistic Centres established in 14 Provinces	National HIV/AIDS Research, Information and Statistic Centres established in 22 Provinces	Funding allocation. Cultural & traditional barriers		
Strengthen organisational and human capacities of NACS, DACS, PACS	3.3	30% coverage on organisation and institutional strengthening for NACS,PACS,DACS	60% coverage on organisation and institutional strengthening for NACS,PACS,DACS	80% coverage on organisation and institutional strengthening for NACS,PACS,DACS	100% coverage on organisation and institutional strengthening for NACS,PACS,DACS	Funding allocation. Cultural & traditional barriers		
<b>Responsibility</b>	NACS							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2030</b>	<b>Funding option(s)</b>
	1							
	2							
	3							
<b>Total</b>		<b>67</b>	<b>70</b>	<b>65</b>	<b>60</b>	<b>60</b>	<b>322</b>	<b>Donor/GoPNG</b>

## **5.5 Vulnerability and disadvantaged groups**

**GOAL: Vulnerable and disadvantaged people will have the support that they require from the Government, service providers and the general public for meeting their right to a minimum standard of living.**

### ***Introduction***

The vulnerable and disadvantaged group of any population is a special group of society that needs special attention as they belong to the communities and have rights that allow them to fully participate in society without discrimination. Members of this group unfortunately may have become disabled and disadvantaged due to unforeseen circumstances and incidences like accidents or health-related abnormalities at birth or have become victims due to outcomes of socio-economic hardships and challenges including violence, abuse, exploitation and neglect brought upon them by families and other selfish and disrespectful members of society. The latter may have been due to a changing society as a result of development in the country.

People who generally face such hardships include people with disability, widows, children (orphaned, adopted and fostered children), settlers, refugees, landless and homeless people, and the elderly including those suffering from acute poverty. In the last three decades, this particular group of the population did not stand out and as such there was not much attention, and this was because of the strong traditional support systems and a small population. However, with a population growing at the rate of around 2.7%, the ever increasing HIV/AIDS epidemic, and “poverty opportunity” due to isolation and lack of access to markets and basic health and education, lack of employment opportunities especially for the youth, marginalization of women and poor housing, etc, the vulnerable and disadvantaged group will continue to increase.

### ***MTDP 2011-2015***

Supporting the vulnerable groups of society is ethical and as such efforts over the next five years will be focused on developing a sustainable social care and protection system which draws upon collaborative efforts-within communities, with donors, across government - and one which builds upon cultural norms and social safety nets, such as the ‘wantok system’. A collaborative approach is important and will be strengthened right down to the community level.

Moreover, during the same period, empowerment of vulnerable groups will be enhanced through proactive education and awareness programs. This will be further supported through associated supporting legislation and the provision of rehabilitation, assistive devices and self-help mechanisms. The key enablers over the next five years will also provide the appropriate environment for much of the support programs, initiatives and mechanisms for the group.

### ***Building on MTDP 2011-2015***

Future plans will build on the enabling environment created in the first five years of implementation and will expand services provided to vulnerable and disadvantaged groups. The kind of services provided will differ accordingly as per each type of disability and the type of vulnerable group. Through a range of interventions vulnerable and disadvantaged people will have the support they require to meet their rights to a minimum standard of living.

### ***Challenges in implementation***

Implementation of effective and appropriate interventions to support the vulnerable and disadvantaged sections of society is difficult without accurate and appropriate data. Moreover for effective implementation the strengthening and building of alliance between the government and the non government sector who are often the service providers to the vulnerable is extremely important.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Vulnerable and disadvantaged people will have the support that they require from the Government, service providers and the general public for meeting their right to a minimum standard of living	Recorded Disabled Persons	Census /DHS	0.9% of Population				Integrated into the community with better access to services
	Number of Legislations protecting Vulnerable		1	1Legislation for Disability	2 Legislation Disability Elderly Persons	3 legislations Disability, Elderly persons, Children	
	% of the population aware of people with disabilities and their needs	Census /DHS	No data	20% of the population would have been made aware of the needs of disable people and their existence	40% of the population would have been made aware of the needs of disable people and their existence	60% of the population would have been made aware of the needs of disable people and their existence	100% of the population aware of the needs of disabled people and their existence
	% of Number and types of service providers for vulnerable		No data	10	15	20	30 % increase in the number of types and number of service providers
Lead government department Collaborating Agency	Department of Community Development Provincial Divisions for community Development, Department of Health, Department of Education, Service organisation						

No.	Sector Strategy
1	Development of a social care and protection system
2	Education and awareness
3	Policy and legislation formulation
4	Improve infrastructure
5	Strengthened partnerships with community based organizations and donors

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Develop and increase awareness programs and materials on all vulnerable groups including children and disabled at all levels of the service systems and society.	2.1	Integrate into education curriculum				
Strengthen legal instruments for the disabled and vulnerable	3.1	Enact and review legislation to protect the rights.				
Develop and maintain appropriate rehabilitation, care and protection programs for all sectors of the vulnerable population.	4.1	Rehabilitation, care and protection services for vulnerable people				
Strengthened support for development of self help organisations (SHOs) for vulnerable groups and improved and maintained workplace safety policies and guidelines	4.2	Workplace safety policies and guidelines developed.				
Improve infrastructures and utilities to cater for vulnerable	4.3	Develop vulnerable and disable friendly infrastructure in public places				
Partnerships strengthened with donors and community based	5					

organizations that specialize in catering for vulnerable and disadvantaged groups								
<b>Responsibility</b>	Department of Family and Community Development							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	<b>1.1</b>							GoPNG/donors
	<b>2.1</b>							GoPNG/donors
	<b>2.2</b>							GoPNG/donors
	<b>3.1</b>							GoPNG/donors
	<b>4.1</b>							GoPNG/donors
	<b>4.2</b>							GoPNG/donors
	<b>4.3</b>							GoPNG/donors
<b>Total</b>		<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>17.5</b>	

## **5.6 Environment**

**Goal: Promote a sustainable environment**

### ***Introduction***

Conservation of the environment is a fundamental pillar of the constitution and is captured under the 5<sup>th</sup> pillar of the Vision 2050 in Environment Sustainability and Climate Change. In addition, the DSP 2010-2030 gives emphasis on environmental sustainability and further articulates the Nations 20 year plan to reach the Millennium Development Goals and targets.

Although, environment is enshrined in the constitution, with over 45 various regulations, acts and policies guiding environment issues, compliance, enforcement and adherence to standards remain a key challenge. Unsustainable logging operations, direct disposal of tailings, mangrove depletion and unsustainable fishing practice continue to be pressing environmental concerns.

Recently, economic development initiatives, in particular the economic corridors to address poverty pose new challenges on environmental sustainability, as such the formulation of Environmental Sustainable Economic Growth policy is essential to ensure appropriate levels of impact assessment is conducted.

### ***MTDP 2011-2015***

In order to promote a sustainable environment MTDP 2011-2015 will focus on interventions to minimize pollution, reduce deforestation and improve waste management, thereby resulting in a cleaner, more inhabitable environment for all. This will be done by firstly monitoring and minimizing runoffs from all industrial processors and improving waste disposal methods. Importance will also be emphasised on the strengthening and utilization of customary practices in preserving the natural environment, encouraging its conservation through sustainable development in ensuring the benefits for present and future generations. Furthermore, with the challenge of limited and outdated environmental data, a national database for environmental accounting will be established to strengthen environment protection activities. This will progress is made towards improve all MDG 7 indicators, which serves as a way of measuring progress and achievements in the Environment sector.

Addressing Environmental issues and achieving the goal of promoting a sustainable environment will need the support and stability of key enablers within society and the country as a whole. Building and rehabilitating infrastructure, for instance sewerage systems and hydrological stations will be achieved if land is secured and law & order issues that impede development processes are reduced. In addition, education at all levels is needed to create awareness on environmental issues and to build capacity in areas that will contribute to achieving environmental sustainability.

### ***Building on MTDP 2011-2015***

The first environment MTDP (2011-2015) will focus on capacity building and improving legislative frameworks within the sector. Achieving this through the first 5 year implementation of the DSP will build a strong foundation on which the other three MTDPs can build upon. Establishing the capacity and legislative framework within the environment sector will ensure that deliverables are appropriately administered and implemented. Furthermore, priority activities such as the expansion of water and sanitation programs to rural areas will take place during the last three stages of the PNGDSP (MTDPs 2016-2030) due to greater direct government expenditures and improved capacity and legislative frameworks in place. With good establishments in human and administrative capacity, such as for environment protection, and improved legislative framework within the environment sector by 2015, the environment indicators will improve over the thirty year period therefore achieving the target stated within the PNGDSP.

### ***Challenges in implementation***

The main challenge faced in this sector is the unavailability of data in some areas and the available but outdated data in other areas. The need for NEC decision on Environment Protection Authority is still pending and remains a challenge to execute to ensure a strong environment protection regime.

DSP Sector Goal:	Indicator	Source	2010 Baseline	2015 Target	2020 Target	2025 Target	2030 DSP Target
Promote a sustainable environment	% of land area covered by primary forests	DEC PNGFA	59%	59%			Effective monitoring systems in place for monitoring the changes in primary forest cover
	Primary forest depletion rate (%) per year due to; commercial agriculture, logging, mining, & urban town planning.	DEC PNGFA	2.6%	2.4%			Prevention in the felling of virgin forests. Logs to be provided by plantations and managed forests.
	(%) of land area protected to maintain & improve biological diversity	DEC	3.83%	4%			Improve conservation of terrestrial biodiversity for future generation
	% of marine area protected to maintain & improve biological diversity	DEC	0.00047%	0.047%			Improve conservation of marine protected areas for future generation
	% of land area rehabilitated to ensure biodiversity (mines). Number of MCRP (Mine Closure and Rehabilitation Plans) implemented	DEC	6550ha	No change expected			Improve conservation of biodiversity for future generation
	Proportion (%) of licensed permitted water usage to measure proportion of total water resources used	DEC	37.5%	38%			Improved catchment based water use permit operating efficiently
	Proportion of (%) of rural and urban households with sustainable access to safe water source	NSO – DHS/ PNG Water Board	16%	20%			Increased number of households having access to safe water
	Proportion (%) of rural and urban households using improved sanitation facility	NSO-DHS	5.8%	8%			Improve to 20% number of households with improved sanitation facility
	Proportion(%) of investigated pollution complaints	DEC	10%	50%			Improved management of investigated waste discharge and pollution complaints
	Agricultural exports as (%) of all exports	QEB/DAL	18.98%	19%			Fifefold increase in agricultural production
	Value of agricultural exports as a (%) of total GDP	QEB/DAL	25%	26%			High yield crops producing a return of more than 100%
	Proportion (%) of land used for commercial extractive purposes	MRA/DPE	Less than 5%	8%			Increase land use within the formal administration system to over 20% of PNG's landmass
	Proportion (%) of tuna stocks within safe biological limits	National Fisheries Authority (NFA)					Increasing license fees to reduce incentive to overfish and sustain tuna stock

No	Sector Strategy
1	Institutional Capacity Strengthening for Environmental Sustainability Management
2	Environmental Protection and Standards
3	Institutionalize Implementation and Management of the Global Environment Conventions to meet PNG's commitments
4	Creation of Systems of Protected Areas Management at all levels and Forest and Biodiversity Conservation
5	Land and Water Resource Management
6	Environmental Data and Information Management for Planning and Dissemination

DSP 2030 Deliverables	No	2011-2015	2016-2020	2020-2025	2025-2030	Risks and assumptions
Develop and implement the ESEG Policy	1.1	Implement and build capacity to implement the ESEG Policy in partnership with all stakeholders.				DEC is able to effectively coordinate the implementation of the ESEG Policy CSOs, CBOs, NGOs and the Private partnership
Develop Environment and Natural Resource development plan for economic corridors	1.2	Impact Assessment Conducted & Sustainable development approach taken to minimize long term environmental damages				Environmental damages are minimized Economic development impeded
Comprehensive range of natural resource management guidelines that addresses drivers of deforestation	1.3	Provide training, develop and implement code of conduct for Oil Palm. Establish baseline data and pilot projects for other drivers of deforestation incl; mining, infrastructure etc.				Adequate funding available Trained officers retained Guidelines and baseline database for natural resource management established
Waste Management Policies/Guidelines for mining and petroleum projects operations and closure	1.4	Review mining Policy(oil and gas) on the guidelines for operations and closure				Adequate funding available Waste management policies and guidelines reviewed
Enhance management of land degraded by commercial extractive purposes	1.5	Development, manage and screen for land degradation and rehabilitation guidelines				Reduction in the rate of land degradation by commercial activities
Enhance the Coastal zone conservation management plan	1.6	Manage the coastal zone conservation management plan				Adequate funding available
Review of the Environmental Act 2000 and new legislation to create EPA	1.7	Ensure compliance and protection of the Environment				Endorsement from DJAG and other relevant authorities. Parliaments pass the new legislation. Adequate funds available
Ensure better comprehensive waste management practices are employed	2.1	Improve registry of pollution complaints in legal and Regulatory branches of DEC/EPA Increased attempts to address or investigate all pollution complaints Establish pollution taxes and transferable pollution permits				Reduction in the number of pollution related complaints
Streamlining EPA monitoring and compliance. Capacity building	2.2	Provide training on monitoring and compliance procedures of the development projects Resource the EPA to effectively carry out monitoring and compliance of development projects				Trained and experienced officers are retained Monitoring and compliance mechanism improved
Standards and code of practices for projects category 1 and 2	2.3	Review and implement the code of practices for commercial activities in all sectors (agro forestry, mining etc...)				Adequate funding available Code of practice for commercial activities are not adhered to by the responsible parties
Streamlining permits procedures and processes	2.4	Review the current permit procedures and processes Implement reviewed permit procedures and processes Provide training on permits procedures and processes				Might take a long time for the review Adequate funding available Trained officers are adequately resourced
Implementing Multilateral Environmental Agreements (MEAs) like the UNCCD,	3.1	Coordinate the implementation of the MEAs obligations				NEC approves signed MEAs to be ratified



UNCBD & UNFCCC		Establish effective monitoring systems to keep track of progress of implementation			DEC effectively coordinates the implementation and monitoring of the ratified MEAs
National Capacity Self Assessment (NCSA) of the global environmental conventions	3.2	Launch the NCSA report Implement the recommendations to build institutional and individual capacities for effective implementation of the MEAs			NCSA recommendations addresses the capacity issues in implementing the Rio conventions
Endangered Species and habitats conservation and management Plan for Marine and Terrestrial Protected Areas	4.1	Development and implementation of National Criteria for Protected Area System (for both marine and terrestrial) in PNG which will leads to the development of a Protected Area Policy. Implement the plan and Guidelines for Protected areas Undertake landscape and coastal bio-regional planning Review Protected Areas legislation Provide for new types of protected areas including REED+ forests and refuges for climate change Develop biodiversity conservation initiatives with private sector, NGOs and Customary landowners. <u>Establish a national endangered species inventory</u>			Availability of adequately trained officers and funding
Develop Terrestrial Protected Area Policy	4.2	Implement Terrestrial Protected Area Policy Work through the Public Private Partnership to promote conservation of Terrestrial Protected areas			Adequate funding and manpower available Private sector aware and willing to engage in PPP
Develop Marine Protected Area Policy	4.3	Implement Marine Protected Area Policy Develop management strategies for coastal and marine resource management			Adequate funding and manpower available
Strengthened customary practices for enhancing and preserving the environment and awareness or education for landowners on the importance of conserving the environment	4.4	Make CSOs and private sectors and NGOs CBOs are aware of government partnership			CSOs and private sectors are aware of govt-PPP relationships
REED + and Payment for Ecosystems Services (PES)	4.5	Awareness on the essence of conservation and sustainable development to the landowners			Landowners' support obtained
Increase water catchment and water and sanitation programs	5.1	Rehabilitate water and sanitation/sewerage systems. Provide tanks and back-up water supply for vital government services like clinics, schools, police.			Adequate funding is available
Well maintained inventory of all licensed national water usage maintained	5.2	Improve and maintain effective registration of water related environmental permits <u>Improve catchment based water permitting system</u>			Adequate funding available Improved and effective water permitting system in place
Develop Sustainable Land Management Policy	5.3	Implement Sustainable Land Management Policy			Adequate funding and manpower available
Develop Water Resource Management Policy	5.6	Implement Water Resource Management Policy			Adequate funding and manpower available
Land zoning systems to increase agricultural production	5.7	Adequate land allocation for agricultural purposes Environment and Natural Resource development plan for economic corridors			Agricultural production increased Adequate funding available
Minimisation of land degraded by	5.8	Development of land degradation and rehabilitation guidelines			Land degradation and rehabilitation guidelines developed and effectively

commercial extractive purposes		Screen and manage developments in environmentally sensitive areas					implemented Landowner's support	
Effective information database of primary forest	6.1	Establish GIS database and regular update and sharing Ground truthing						
Build information database for Natural Resources and environment management	6.2	Establish Environmental Database and information system Engage external GIS expert to complete systems set up and data upgrading Provide training for internal staff on environmental database and information management					Adequate funds available  Internal officers are adequately trained and retained	
Establish a database for environmental risk and hazard accounting	6.3	Build capacity in environmental scientific understanding of hazards. Do national stock-take of environmental hazards				Improve disaster management systems	Adequate funding is available	
<b>Responsibility</b>	<b>Department of Environment and Conservation and other key implementing agencies responsible for environmental issues</b>							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option (s)</b>
	1							User payers Fees
	2							ESEG Policy/Donor Agencies
	3							GEF Funding/Climate change fund
	4							GEF funding/Bilateral Funding
	5							GEF funding/EU/IWRM/Bilateral funding
	6							AusAID funding/Other bilateral funding
<b>Total</b>		<b>13</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>81</b>	

## 5.7 Climate Change

**Goal:** Adapt to the domestic impacts of climate change and contribute to global efforts to abate greenhouse gas emission

### *Introduction*

Papua New Guinea has taken a global lead in seeking to combat climate change, particularly by proposing measures to activate the carbon abatement opportunity offered by preserving tropical forests. Deforestation and forest degradation are major contributors to greenhouse gas emissions, through large scale logging and the conversion of forests into agricultural use. These activities continue because the value of forests as carbon sinks and a source of livelihood have not been fully recognised by market mechanisms. PNG together with other rainforest nations, are currently working to create a mechanism for Reducing Emissions from Deforestation and Degradation, enhancing carbon stocks and managing forests sustainably in developing countries (REDD+). The Copenhagen Accord of December 2009 recognised the fundamental role of REDD+ in climate change mitigation and makes substantial funding available for the first time, starting with a commitment of USD 3.5 billion globally for the period 2010-12. In total, funding of USD 30 billion was committed for the 3 year period to support the implementation of mitigation and adaptation actions in developing countries in line with their national development strategies.

Even with global action on mitigation, climate change has already begun and has exacerbated some hazards locally, such as coastal and inland flooding. There are now gradual shifts in malaria prevalence and agricultural yields. The office of climate change and development is tasked to investigate ways in protecting our people and economy from these risks. The national Climate-Compatible Development Strategy prioritises actions related to Climate change mitigation, adaptation, low-carbon growth and REDD+.

The Copenhagen Accord recognizes that mitigation and adaptation to climate change are inseparable from economic development. Papua New Guinea welcomes this and is now taking steps to ensure climate-compatible development for its entire people.

### *MTDP 2011-2015*

Climate change is a complex frontier issue and PNG's response must be grounded by strong research and clear empowering legislative and regulative instruments to guide all stakeholders in a coordinated, holistic and integrated manner.

During the first MTDP PNG will continue to engage effectively in global climate change negotiations and will ensure synergy in the climate change response amongst all stakeholders, including government agencies, private organisations, churches and local communities. Moreover, during the first MTDP interventions will be focused on enforcing minimum technology and maintenance standards, particularly within the economic and infrastructure sectors particularly forestry, agriculture and energy industries. The first MTDP will at the same time address the adverse impacts on our local communities through community based adaptation programs, guided by available financial resources.

### *Building on MTDP 2011-2015*

Subsequent MTDPs will leverage the coordination mechanism and synergies established during MTDP 2011-2015, ensuring that all stakeholders respond to climate change in an appropriate and measured fashion.

REDD-Plus and Adaptation readiness will continue with assistance from the climate change fund.

### *Challenges in implementation*

Effective coordination is needed to ensure the desired results are met in regard to climate change. Coordination is not only required across sectors but amongst stakeholders.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Adapt to the domestic impacts of climate change and contribute to global efforts to abate greenhouse gas emission	Number of Meteorological stations	NWS	14	20	45	70	89+
	Tide Monitoring Stations	NWS	2	5	12	18	20
	Net Carbon Emission from Energy Sector	OCCD	0%	Reduce by 5%	Reduce by 10%	Reduced by 20%	Increase investment in clean energy
	Multi-temporal remote sensed satellite image coverage	OCCD/DEC	1 database system				20 database systems
Lead government department	Office of Climate Change and Development						

No.	Sector Strategy
1	REDD-plus
2	Mitigation
3	Adaptation
4	Climate Resilience

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks Assumptions
Engage in global climate change negotiations	1.1	REDD-plus mechanism established. Adaptation funds accessed.				
Develop REDD-plus projects	1.2	7 REDD-plus pilot projects	12 REDD-plus project	12 REDD -plus project	12 REDD-plus project	
Develop CDM projects	1.3	2 CDM pilot projects	5 CDM projects	5 CDM projects	5 CDM projects	
Develop Renewable Energy Policy	1.4	Renewable energy policy and 5 EF projects				
Enforce minimum technology and maintenance for vehicles and other greenhouse gas emissions.	2.1	Equip compliance and monitoring facilities				
Develop an innovative emission reduction tax incentive and permit system	2.2	Establish policies and legislations	Establish International Carbon market exchange centre			
Establish community-based mangrove planting to prevent against coastal flooding and erosion	3.1	10,000 seedlings/yr	25,000 seedlings/yr	40,000 seedlings/yr	50,000 seedlings/yr	
Setup a Landslides Hazards Mapping system	3.2	1 Stand alone database system			Integrated into core planning systems	
Establish a Coastal and Flood Warning Systems	3.3	2 tide ctrs, 20met statn			20 tide ctrs, 89+ met	
Ensure reallocation and resettlement of affected communities.	3.4	Identify resettlement exercises areas				

Ensure Climate Resilience Agriculture Production	4.1	Seed distribution centres						
Establish a national climate change research network	4.2	1 Climate change research centre						
Ensure climate proofing of key infrastructure	4.3	Climate proofing areas						
Establish climate micro-financing schemes	4.4	Accessibility to 20% rural population	Accessibility to 60% rural population	Accessibility to 90% rural population				
Ensure Public-Private, Church-State, CSO Partnership on Climate Change	4.6							
<b>Responsibility</b>	<b>Office of Climate Change and Development</b>							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							
	1.2							
	2.1							
	2.2							
	3.1							
	3.2							
	3.3							
	3.4							
	4.1							
	4.2							
	4.3							
	4.4							
	<b>TOTAL</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>50</b>	<b>Donor/GoPNG</b>

## **5.8 Natural Disaster Management**

**Goal:** Manage the risk of natural disasters

### ***Introduction***

Tropical cyclones, inland and coastal flooding, landslides and mudslides, volcanoes and El Nino have impacted the PNG economy on numerous occasions. Malaria remains a major health problem in Papua New Guinea, with 700 deaths and about one million infected in 2007. With the change in climate patterns and increase in temperatures, the number of cases, particularly in the highlands, is expected to increase.

Volcanic and seismic activity may occur at any time. Sea-level rise is now occurring coupled with frequency sea surges affecting numerous island communities. The risk of Tsunamis related to earthquakes also remains current.

El Nino drought preparedness continues to be a major program to improve food security and ensure that the 64 drought vulnerable district develop drought coping strategies.

### ***MTDP 2011 – 2015***

The first MTDP will focus on improving existing early warning systems and enhancing community preparedness through public awareness and education programmes. A policy and legal framework for the rapid deployment of defence forces will be developed. Moreover, efforts by implementing agencies will be focused on ensuring increased cooperation and coordination between disaster management and response units, in particular civil-military cooperation.

Efforts will cut across all forms of hazards so as to minimize the overall social and economic impact and training of disaster management agencies will help strengthen PNG's response to all natural disasters.

### ***Building on MTDP 2011-2015***

Subsequent MTDPs will build on the first MTDP, taking advantage of investment during MTDP 2011-2015 in the key enablers, in particular utilities, education, transport and infrastructure.

### ***Challenges in implementation***

A coordinated approach to natural disaster management is vital. Without effective collaboration and dialogue between relevant agencies, disaster risk reduction will be diminished.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Manage the risk of natural disasters	PNG lacks appropriate DRM policies/ legislation and response capacities	National Disaster Centre and Studies by different stakeholders	Disaster related losses are on the rise	Appropriate legislation and policies for DRM are established	Better prepared communities resulting from quality awareness and education programmes	Effective and efficient disaster response system established in the country	DRM mainstreamed across different sectors and development planning takes into consideration DRM issues
Lead government department	National Disaster Centre, Department of Provincial and Local Level Government						

No.	Sector Strategy
1	Development and dissemination of appropriate DRM policies and legislations
2	Enhancement of early warning systems and disaster response capacities at all levels
3	Enhanced disaster preparedness at all levels through DRM education, awareness and training

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Promulgation and dissemination of new DRM Legislation and DRM protocols	1	Appropriate DRM Legislation and policies put in place / partnership developed with all stakeholders	Assist provinces in develop own legislation and apply DRM protocols	Effective DRM systems and procedures established at all level	Continue capacity building of the Provinces on DRM policy and legislation issues.	Appropriate policies and legislation must be in place		
Hazard early warning strengthened and disaster response capacity optimized	2	Strengthening of the early warning system and response and preparedness capacities, assist provinces in disaster management planning,	Establishment of Rapid Response Force and regional stock piling system, enhancement of the communication network, continue assisting provinces to enhance their preparedness and response planning	Continue strengthening communication network and early warning systems and capacity building of the Provincial DM offices and capacities	Strengthening of provincial DRM offices completed. High risk provinces establish Emergency Operation centers, procedures and systems,	Timely budget allocation and partnership established with key sectors		
Informed and prepared communities through awareness and education program	3.1	Community Based DRM programs / production of awareness materials/ trainings and workshops	Disaster awareness programs in high risk and capacity building of provincial authorities through trainings.	Various training modules pertaining to DRM developed and provincial authorities trained in those modules	Key officials at provincial level trained in key aspects of DRM to effectively manage disaster risks.	Appropriate monitoring measure in place to gauge the effectiveness of the awareness and education campaign		
Establish and rehabilitate fire station and key locations	3.2	14 stations rehabilitated. Computer Aided Dispatch system installed	Gerehu Fire Station, Madang Fire Station, Kokopo Fire Station.	Alotau Fire Station, Wewak Fire Station, Goroka Fire Station,	Popondetta Fire Station, Kavieng Fire Station and Kimbe Fire Station	Mt.Hagen Fire Station and		
Training provided to disaster agencies	4							
Responsibility	National Disaster Centre, DPLGA							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1							GoPNG, Donor Agencies
	2							GoPNG, Donor Agencies
	3.							GoPNG, Donor Agencies
	3.2							GoPNG, Donor Agencies
	4							

	<b>Total</b>	35	17	13	13	14	92	
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## **5.9 Governance and public sector management**

**Goal: Attain high standards of public sector management in all levels and institutions of Government**

### ***Introduction***

Governance is a broad theme, covering all facets of the Government systems and processes, Codes of Ethics and work place conduct is no exception. The government encourages good governance through Public Sector Reforms, Financial Management Reforms and Private Public Partnership (PPP). One aspect of good governance in the public machinery is to improve and strengthen the public sector management.

In order to achieve the goals set by the PNGDSP, the highest standards of public sector performance and management at all levels of government must be met and practically improve on the current status of our position in the World Governance Indicators. Collectively, all departments and agencies who execute Government policies, plans and legislations and mechanisms in place must work together for improvement so that Papua New Guinea can be a prosperous nation by 2030.

### ***MTDP 2011 – 2015***

From the PNGDSP, Medium Term Development Plan (MTDP) provides us with workable, practical and feasible plans to address the issue of poor governance and achieve better governance in institutions, departments and agencies through which the Government conduct its businesses. A reformation within the Public Sector has to be adequately backed by political and bureaucrat arms of the Government. Thus by 2030, public sector management must attain high standards of public sector performance and management in all tiers and institutions of Government.

Under MTDP 2011-2015, the government will focus on public sector reform and increasing human resource capacity. Moreover, interventions will take place to improve budgeting and financial management and monitoring and evaluation mechanisms. Public servants will be trained through Public sector training package as a competency based training to enhance the work performance. The training on the Integrated Financial Management System (IFMS) will be provided to relevant personnel with all government sector agencies and trickle down to the provincial and district level. This will improve Public Financial Management for proper accounting and budgeting.

To ensure effective monitoring and tracking of funds, audit units and committees and district Treasury offices will be established in all the provinces and districts. These will be supported by regional offices of the Department of Planning and Monitoring.

### ***Building on MTDP 2011-2015***

Building on investment in the enablers under MTDP 2011-2015 increased numbers of monitoring bodies in the provinces and districts will be established, coupled by an increase in the number of public servants trained in IFMS and through PSWDP will enable strengthening and enforcing mechanisms of accountability and transparency in service delivery. The way forward to see the light of good governance practices is through practical monitoring and reviews of plans and legislations abided by codes of ethics and of work place conduct.

### ***Challenges in implementation***

In order to adequately train public servants an appropriate number of qualified trainers and training institutions must be available. To effectively establish audit units and committees in the provinces and districts, it is important to redress the structures and systems for alignment for proper channel of reporting and communication.

Law and Order problems have been the major impediment to effectively implement the District treasury roll-out program to most districts. As such investment in the enablers under MTDP 2011-2015 is critical.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Attain high standards of public sector performance and management in all levels and institutions of Government	Rule of Law	WBI	Bottom 21% in the world	30%	35%	40%	Top 50% in the world
	Regulatory quality	WBI	Bottom 30% in the world	35%	40%	45%	Top 50% in the world
	Public service effectiveness	WBI	Bottom 25% in the world	30%	35%	40%	Top 50% in the world
	Control of corruption	WBI	Bottom 9% in the world	15%	25%	35%	Top 50% in the world
	PEFA indicators scoring A or B		34% in 2006	40%	50%	75%	100%
Lead government departments	Department of Personnel Management, Department of Finance						

No	Sector Strategy
1	Improve and strengthen public sector reform in the institutional structures and human resource capacity
2	Improve and strengthen budgeting and financial management for effective service delivery
3	Improve and strengthen procurement and service delivery mechanism
4	Strengthen electoral process and systems
5	Strengthen partnership with the private sector and community based stakeholders for development
6	Strengthen and enforce accountability and transparency initiatives

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks & Assumptions		
Trained Public Servants through PNG public sector training package	1.1	20 % of the total public servants	30 %	50 %	70%	Availability of qualified lecturers, MOU with training institutions		
Devolution	1.2	40%	60%	80%	100%	Centralization of powers		
Institutional Capacity Building and Training	1.3	20%	40%	80%	100%	Capacity Building Programs given to officers on merits		
Financial Management Improvement Program (FMIP) at all levels of government	2.1	50%	30%	10%	5%	Slow roll-out of IFMS to the Provinces		
Established audit units and committees in 20 provinces	2.2	10 units in 4 regions	10 units in 4 regions	0	0	Lack of capacity and membership		
Responsibility	1.1 DPM, 1.2 DPM, 1.3 DPM, 1.4 DNPM, 2.1 DoF, 2.2 DoF							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1.1							GoPNG
	1.2							GoPNG
	1.3							GoPNG
	2.1							GoPNG
<b>Total</b>	<b>100</b>	<b>28</b>	<b>28</b>	<b>25</b>	<b>25</b>	<b>206</b>		GoPNG

## 5.10 National statistics systems

**Goal:** Provide a high quality national statistical service for development planning, policy formulation, decision making and research through the production of accurate, comprehensive and timely statistics of an international standard.

### *Introduction*

Statistics is vital for socio-economic analysis, policy formulation and population planning. However, PNG like most developing countries has experienced common data problems like out-of-date data, unavailable, unmeasurable and unrealistic poor quality data. The contributing factors to the on-going data issues since the last two decades include lack of bureaucratic leadership and support for up-to-date quality data. This is reflective by the lack of financial support to the national statistical agency for capacity building and to periodically collect data and conduct particularly economic surveys when due. The difficult geography of the country has also been a key impediment affecting coverage that has become very expensive exercise over the years. In order to progressively monitor the progress of the PNGDSP and MDGs, all agencies have to take a collaborative approach to addressing the data problems and issues across all sectors.

### *MTDP 2011-2015*

Over the next five years, a number of interventions will be implemented to improve the national statistics systems. This includes investment in capacity building in particular the recruitment of specialised and technical personnel to enhance the capacity within the national statistics agency and through training needs analysis for existing officers.

However, without establishing strategic partnerships to foster the right capacity the DSP goal for national statistics will not be achieved. As such, over the next five years the current National Statistical Services Act 1980 will be reviewed and amended for effective, efficient and timely performance.

Thus, decentralising statistical collection at the provincial level will be high on the agenda. This will not only improve the capacity at the sub-national level but will improve data collection and compilation at the district, local level government and ward levels as well. The planning and coordination of survey and census operations and the management and accountability of financial resources at the provincial level will relieve the mammoth task usually taken on by the national statistics agency in the last three decades if decentralised. To affect this, five (5) pilot Provincial Statistical Offices (PSO) will be established over the next five years while the rest of all the PSOs will be established and fully equipped under the future plans.

Prominently, the establishment of a National Statistical Coordinating Board as a concept to have a whole of government approach to addressing data requirements and issues is highly recommended. This Board will be established and fully functional over the next five years in implementing the National Statistical Development Strategy.

### *Building on MTDP 2011-2015*

Future plans for statistical development will build on the achievements of the sector attained over the next five years when provincial statistical collection is decentralized. Hence, by 2020, the national census as well as the Household, Income and Expenditure Survey (HIES) will be executed by the PSOs with total control over the coordination and collection of statistical information. The national statistical agency will oversee and provide the overall guidance in the process for consistency, standards and quality of data. By then, periodic social and economic data will be collected at all levels of government on an annual basis or as and when required and furthermore, for monitoring, reporting as well as decision making and policy formulation.

### *Challenges in implementation*

Potential challenges in implementation include the geographical conditions in PNG as well as the communication of data from the remotest parts of PNG to their provincial head quarters in terms of reporting data. Making national data available to the required population may not be possible due to the first challenge highlighted or the limitations in communication technology (e.g. Internet access) for public access to on-line data. Also, establishing fully equipped PSOs in all 23 provinces will be a huge exercise that will be a challenge in terms of funding.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Provide a high quality national statistical service for development planning, policy formulation, decision making and research through the production of accurate, comprehensive and timely statistics of an international standard	On-line access to official statistics	NSO	Public access to official statistics in PNG is poor with limited internet access to data				All official statistics to be free and on-line
	Census collections	NSO	The national census is conducted every 10 years, and while data collection is reasonable, processing and dissemination is weak				High quality census collections every 5 years
	Social indicators	NSO	Statistics for social indicators including health, education and crime are weak and irregular, yet crucial for understanding and monitoring social progress				Regular and high quality social survey collections
	Labour market data	NSO	Labour market data, including for the informal sector is among the most important of statistical collections yet regular official surveying is nonexistent				Regular collection of wage and employment data
	Economic data	NSO	The collection of official economic data is very weak, including basic data such as GDP and inflation. Rural economic data is virtually nonexistent				Regular collection of all mainstream economic data series
Lead government department	National Statistical Office						
Collaborative dept/ agency	Department of Information & Communication, DAL, Department of Labour & Employment,						

No.	Sector Strategy
1	Improve availability of national statistics
2	Increase capacity of official statistics agency ( <i>with competent and experienced staff</i> )
3	Conduct relevant censuses and surveys to collect required data
4	Establish effective coordination between official statistics agency and agencies that use the statistics

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Number of Provincial Statistical Offices (PSOs) with all PNG statistics made available	1.1	5	10	23	23	Land and resources are made available for provincial offices
Number of Econometrics graduates working in the official statics agency	2.1	5				Absence of incentives
Number of Statistics graduates working in the official statics agency	2.2					Absence of incentives
Number of Demography graduates working in the official statics agency	2.3					Absence of incentives
Number of partnerships with international agencies	2.4	2				Enthusiasm from official statistics agency
Specialised data analysis, training for the official statics agency & PSO staff	2.5	10				Training Needs Analysis has to be in place
Number of statisticians per PSO	2.6	1	10	23	23	Absence of incentives
National Census	3.1	Conduct Census 2010 in 2011	Produce findings of Census 2010 in 2013 and prepare for Census 2020 in 2017	Conduct Census 2020 in 2020	Produce findings of Census 2020 in 2023 Prepare for Census 2030 in 2027	Ensure early preparation and quality control

Demographic & Health Survey (DHS)	3.2 (a)	Disseminate and utilise DHS 2006 findings	Conduct DHS in 2016 and produce Report in 2017	Prepare to conduct DHS 2026 through all 23 PSOs	Conduct DHS in 2026 and produce Report in 2027	Advance preparation		
	3.2 (b)	Prepare to conduct DHS 2016	Disseminate and utilise DHS 2016 findings		Disseminate and utilise DHS 2026 findings	Localise data analysis, dissemination and utilisation in official statistics agency		
Household Income & Expenditure Survey (HIES)	3.3 (a)	Produce HIES 2010 Report	Conduct HIES in 2015	Conduct HIES 2020 through all 23 PSOs	Conduct HIES 2025 through all 23 PSOs	Advance preparation		
	3.3 (b)	Disseminate and utilise HIES 2010 findings	Produce HIES 2015 Report and disseminate and utilise findings	Produce HIES 2020 Report and disseminate and utilise findings	Produce HIES 2025 Report and disseminate and utilise findings	Localise data analysis, dissemination and utilisation in official statistics agency		
Agriculture Survey with Dept of Agriculture	3.4 (a)	Prepare for the AS 2012	Prepare for the AS 2018	Prepare for the AS 2023	Prepare for the AS 2028	Resources and collaboration requirements are met		
	3.4 (b)	Conduct AS in 2012	Conduct AS in 2018	Conduct AS in 2023	Conduct AS in 2023	Advance preparation		
	3.4 (c)	Produce AS 2013 Report and disseminate and utilise AS 2013 findings	Produce AS 2018 Report and disseminate and utilise AS 2018 findings	Produce AS 2023 Report and disseminate and utilise findings through all 23 PSOs	Produce AS 2028 Report and disseminate and utilise findings through all 23 PSOs	Localise data analysis, dissemination and utilisation in official statistics agency		
Review of the Statistical Services Act 1980	4.1	Reviewed and revised	Implementation of the revised Act					
Establishment of a National Statistical Coordinating Board	4.2	Body to effect the NSDS						
Partnerships signed between official statistics agency and agencies that use the statistics	4.3	0						
<b>Responsibility</b>	NSO in collaboration with all other agencies involved in respective data collected							
<b>Estimated inputs (K million)</b>	<b>No.</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>	<b>Funding option(s)</b>
	1.1							GoPNG/donors
	2.1							GoPNG/donors
	2.2							GoPNG/donors
	2.3							GoPNG/donors
	2.4							GoPNG/donors
	2.5							GoPNG/donors
	2.6							GoPNG/donors
	3.1							GoPNG/donors
	3.2							GoPNG/donors
	3.3							GoPNG/donors
	3.4	Agriculture survey will be funded through Dept of Agriculture & undertaken in 2012						GoPNG/donors
	4.1							GoPNG/donors
	4.2							GoPNG/donors
<b>Total</b>	<b>79.9</b>	<b>52.9</b>	<b>14.8</b>	<b>76.7</b>	<b>26.3</b>	<b>250.6</b>	GoPNG/donors	

## 5.11 Foreign Policy

**Goal:** Strong and pragmatic foreign relations that are in the interests of PNG and the Region

### *Introduction*

Foreign Policy is deemed to be a synthetic projection of all other national policies. Thus, as PNG's economy and productive capacities grow, the country also needs to enhance its international standing in a way which furthers the national interests.

### *MTDP 2011-2015*

This shall be achieved through expanding PNG's diplomatic presence and trade projection, and the re-invigoration of its Bilateral and Multilateral diplomatic relations with countries of the Oceania Region, enhancing its role as recognized leader among the Pacific Islands countries. On the Bilateral front, within the Pacific Basin, PNG needs to establish diplomatic relations with Latin American countries, based on South-South Cooperation, BIT and FTA Agreements; and needs to deepen its projection in the Asia – Pacific Region. On the Multilateral front, PNG will boldly advocate for the democratization and reform of international organizations, giving priority to consolidating its leadership within the United Nations and boldly promoting the harmonized delivery of its agencies through the One UN Process.

Within the next five years, focus will be on the following objectives:

- **Provide Strong Leadership among South Pacific Island Countries**  
Enhance its consistently strong bilateral and multilateral diplomatic relations with seven countries in the Oceania Region, adopting initiatives that highlight its regional leadership.
- **Deepen its projection in the Asia – Pacific Region**  
Further its relations in the Asia – Pacific by facilitating institutional frameworks for trade, investment and bilateral cooperation.
- **Engage new Partnership with emerging economies, with special focus on Latin America**  
Recognizing the diverse elements of commonality and developmental challenges shared by both PNG and the Latin American countries, PNG will further its international projection in a more balanced, diversified and beneficial way by establishing diplomatic relations with Latin American countries. Initially, a Diplomatic Mission with competence over all South America will be established, based on which agreements on South – South Cooperation, BIT and FTA will be pursued.
- **Gain greater presence and visibility in the Multilateral forums**  
PNG will assure through its diplomatic action that the interests and views of the South Pacific Island countries are properly voiced in the Multilateral forums, and that adequate level of assistance is provided to address the needs of its peoples. PNG will become more involved in the discussion and decision-making regarding the reform of the United Nations system, and will continue to support proactively the One UN process as an international pioneer.
- **Improve its trade negotiation capacities and enter into new BITs and FTAs**  
The expansion of PNG's economy and productive capacities demands a greater integration into the international economy and the global markets. Thus, the country will pursue to enhance its trade negotiation and management capacities, and will proactively seek the adoption of new BITs and FTAs with relevant countries.

### *Building on MTDP 2011-2015*

Under subsequent MTDPs, the National Government will continue to build strong and pragmatic foreign relations and expand its international presence, both bilaterally and multilaterally.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target	
Strong & pragmatic foreign relations that are in the interests of PNG and the region	Strong & Pragmatic relations	DFAT	7 countries/ regions	7 countries	10 countries	10 countries	15 countries	
Lead government department	Department of Foreign Affairs & Trade							
DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Increase flows of Foreign Direct Investment and international trade		300% increase in FDI; 50% in international trade	200% additional increase in FDI; 50% in international trade	200% additional increase in FDI; 50% in international trade	200% additional increase in FDI; 50% in international trade	<b>R:</b> Political, economic or security instability may hamper growth  <b>A:</b> Political, economic and security stability and improvements will take place		
Engage new partnership with emerging economies in the Asia-Pacific and Latin America	2	Mission competent for all South America established; enhanced bilateral relationship with the 7 SPI countries	5 new missions in SEA and in Latin America are established	5 new missions in SEA and Latin America are established	5 new missions in SEA and Latin America are established	<b>R:</b> PNG's institutional capacities to maximize benefits of new relations may be absent  <b>A:</b> PNG's DFAT will enhance its capacities to manage enhanced international projection		
Greater multilateral presence	3	Continue exerting global pioneer role in furthering the One UN Process, including the investment of public funds within the One UN Fund and the facilitation of the building of the UN House; actively participate in international deliberations to build better global governance & reform the UN	Continue exerting global leadership in furthering the UN harmonization and reform process; PNG will chair or be elected for important UN bodies	Continue exerting global leadership in furthering the UN harmonization and reform process; PNG will chair or be elected for important UN bodies	Continue exerting global leadership in furthering the UN harmonization and reform process; PNG will chair or be elected for important UN bodies	<b>R:</b> PNG's institutional capacities to maximize benefits of greater multilateral role may be absent  <b>A:</b> PNG's DFAT will enhance its capacities to manage enhanced international projection		
Improve its trade negotiation capacities and enter into new BITs and FTAs	4	20 governmental officers become highly-skilled to lead trade and investment negotiations; 3 BITs and FTAs with South American countries are adopted	20 additional governmental officers become highly-skilled to lead trade and investment negotiations; 5 additional BITs and FTAs with SEA and South American countries are adopted	20 additional governmental officers become highly-skilled to lead trade and investment negotiations; 5 additional BITs and FTAs with SEA and South American countries are adopted	20 additional governmental officers become highly-skilled to lead trade and investment negotiations; 5 additional BITs and FTAs with SEA and South American countries are adopted			
Responsibility	Department of Foreign Affairs & Trade, Department of Commerce, Department of National Planning & Monitoring							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2030	Funding option(s)

## **5.12 Immigration**

**Goal:**        **The best systems that benefit PNG in the area of skills and entrepreneurial expertise, while upholding safety measures against illegal immigration**

### ***Introduction***

The immigration of large numbers of people is a significant and positive force for the economic, social and cultural development of PNG.

PNG is currently experiencing increased immigration activities as a result not only of economic and employment needs within region, but also due to demographic situation, political instability as well as economic and social inequalities.

Furthermore, PNG economic prospects and demographic trends make migration a necessity and a key factor of future development. For this reason, clear and effective policies, legislation, organizational structures and funding is required for the social integration of the immigrant population, as well as for the protection of Papua New Guinean migrants overseas, in cooperation with countries of origin and destination on the management of migratory movements. This framework will also provide for the protection of refugees.

Furthermore, PNG economic prospects and demographic trends make migration a necessity and a key factor of future development. For this reason, clear and effective policies, legislation, organizational structures and funding is required for the social integration of the immigrant population, the protection of refugees and of Papua New Guinean migrants overseas, in cooperation with countries of origin and destination on the management of migratory movements.

Immigration is now been given priority by establishing a separate office from Department of Foreign Affairs and Trade. Infrastructure-building and capacity development at all international sea and land border posts needs to be further strengthened to standardize country-wide border control measures.

### ***MTDP 2011-2015***

Migration policies should facilitate national development processes rather than hamper them while ensuring adequate protection of migrants and refugees. Migratory flows, both outbound and inbound, are a fact in the global environment and can enhance PNG's connection with the rest of the international community. If properly facilitated, they can generate diverse positive externalities, including the dissemination of knowledge and wealth within PNG. To prevent negative externalities, PNG needs to enhance the capacities of its PNG Immigration & Citizenship Services (PNGICS) and other concerned Agencies, and align its migratory and other relevant legislation and procedures with the current international laws, standards and principles.

The first MTDP will improve the recording of inbound and outbound migratory flows data. Based on the collection and analysis of data, it will strengthen migration policies to promote national security, secure investor confidence, and address human capital development in the context of labor mobility. Moreover, during MTDP 2011-2015 innovative technology, including e-passports, will be investigated and scoped in their potential to strengthen immigration services within PNG.

### ***Building on MTDP 2011-2015***

Following international trends and the increase of migratory pressures, both from inbound and outbound sources, as a natural consequence of PNG's growth and greater integration into the global arena, migratory policies will require continuous revision through a whole-of-government approach to align them to national developmental needs, and greater recognition of the Office of Immigration and oversight over its performance will be required. Reciprocal Visa-exemption agreements with specific countries and for specific activities e.g., (foreign aid workers) will be adopted.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
The best systems that benefit PNG in the area of skills & entrepreneurial expertise, while upholding safety measures against illegal immigration	Congested timeframe of approximately 4 weeks for processing of applications	PNGICS	Current existing facilities and arrangements	Reduction in timeframe from 4 weeks to 2 weeks	Reduction of timeframe from 2 weeks to 1 week	Reduction of timeframe from 1 week to 4 days	Reduction of timeframe from 4 days to 1 day
	Reception & Processing Centers (RPCs)	PNGICS	Current existing processing facilities	Reduction of timeframe to less than 2 weeks	Reduction of timeframe to less than 1 week	Reduction of timeframe to less than 5 days	Reduction of timeframe to less than 2 days
	Immigration Facilities & Services at Overseas Missions, Consulates & Trade centers	PNGICS	Current existing Immigration service facilities in overseas missions	Reduced timeframe from 1 week to 4 days	Reduced timeframe from 4 days to 2 days	Reduced timeframe from 2 days to 1 day	Reduced timeframe from 1 day to same day service
	IT Infrastructures to E-Passport and On-line applications	PNGICS	Current existing IT facilities in the PNGICS	Reduced timeframe for E-processing from 1 week to 4 days	Reduced timeframe for E-processing from 4 days to 2 days	Reduced timeframe for E-processing from 2 days to 1 day	Reduced timeframe for E-processing from 1day to same day
Lead government department	PNG Immigration & Citizenship Services (PNGICS)						

No.	Sector Strategy
1	Effective immigration services to all people
2	Reduce illegal immigrants
3	Improved Ports & customs services
4	Improved E-Passport & On-Line application systems

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Accommodation and Office infrastructures built in selected locations	1	Establishment of accommodation and office infrastructures in 4 strategic locations	Establish 8 Provincial immigration offices and infrastructures	Fully established Immigration services in both Regional & Provincial centers	A vibrant and fully fledged Immigration system in place to process all immigrants coming into PNG	Acquisition of Land
Proper and fully kitted Reception & Processing Centers in identified locations	2	Establishment of 6 Reception & Processing Centers in 6 strategic locations	Establishment of Boarder Posts fully staffed with qualified officers at most strategic locations	Partnership Agreements signed with relevant agencies such as Police, IRC, BDA, etc	Fully established and functional reception & processing centers	Immigrants might not cooperate with the authorities
Immigration Facilities & Services at Overseas Missions, Consulates & Trade centers	3	Establishment of 4 Immigration Service facilities in 4 strategic locations around the globe	Recruitment & Placement of appropriately skilled personnel in the 4 global locations	Options to include other locations depending on demand and location for economic benefits of PNG	Fully established and functional immigration services in the selected locations	Distance and Languages could be barriers to successful implementation
IT Infrastructures to E-Passport and On-line applications	4	Establishment of 2 main IT facilities for processing E-Passports and On-line applications	Recruitment & Placement of appropriately skilled personnel	Options to introduce the services to other parts of the country and abroad	Fully established and functional IT systems in place	ICT policy could have an implication on its establishments
Responsibility	Department of Immigration, Police, Defence & PNG Ports					

Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1							GoPNG/donors
	2							GoPNG/donors
	3							GoPNG/donors
	4							GoPNG/donors
	<b>Total</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>44</b>	

## 5.13 Foreign Aid

**Goal:** **Advanced stage of Foreign Aid Management and attaining independence from foreign aid**

### **Introduction**

PNG still depends on foreign aid in areas such as transport and energy, telecommunication, health and education, food security, and good governance, but overall foreign value in real terms has been declining over the last decade. As prescribed in the DSP, external aid can be viewed from two specific angles: resources for development programmes such as health, education and transport; and technical expertise and skills which include advisors, and training to deliver services, and execute investment development.

It is believed that the proportion of technical assistance to overall aid across partners varies but the total percentage is estimated to be above 50 percent which is considered to be too large. For PNG to be less dependent on foreign aid, it will need to reduce the skills gap drastically in the first five years, and simultaneously transfer the resources expended on technical assistance to programmes. However considering the likely tight fiscal forecast in the next 5 years during the construction phase of the first LNG project, there may be a need to increase, if not sustain, current levels of foreign aid in terms of resource, and to commence serious efforts in the reduction in technical assistance in less priority areas and to redirect technical assistance to priority areas that are demand driven.

Over the next five years levels of technical assistance as a percentage of total foreign aid will decrease. In addition to that the first MDTP intends to significantly address aid effectiveness constraints and to begin establishing an enabling environment for PNG to graduate to a donor partners within the Pacific Region. Having all donor partners' country assistance programme (CAS) aligned to supporting the realisation of the DSP in coordinated and joint manner towards supporting the Economic Corridor Economic Development strategy.

### **MTDP 2011 -2015**

By 2015, expected targets are that : (a) less than 50 % of overall technical assistance as a proportion of total aid in real terms; (b) total value of technical assistance in priority area increased with a consequent reduction in less priority areas, and a greater utilization of technical assistance from developing countries; (c) increased number of scholarships and quality graduate in professions identified in the skills gap analysis and consistent with the national human resource requirements; (d) a national and sectoral dialogue system establish and operationalised for development partners and GoPNG central and line agencies to meet the principles of the Paris Declaration, the Accra Agenda for Action, and the PNG Commitments to Aid Effectiveness; (e) a single Joint Assistance Strategy (JAS PNG) is adopted to complement the 2016-2020 MTDP, in substitution of the individual CAS by DPs and as an expression of a mature level of aid alignment to national development strategies; (f) a significant and measurable reduction in aid fragmentation is achieved, and distribution of labor among DPs is agreed with the Government; (g) new modalities of aid and technical support are adopted, including the contracting by the Government of DPs to produce specific developmental outcomes and the adoption of co-financing schemes; (h) South-South Cooperation agreements are negotiated, subscribed, and substantially implemented, with proper M&E procedures to guarantee its value-for-money impact.

In order to achieve these, the MTDP 2011 -2015 will focus on firstly taking drastic measures to:

- a) undertake a comprehensive assessment of the skills gap and to establish through partnership with donor partners training and scholarship programs to reduce this skills gap;
- b) simultaneously undertake a sectoral analysis of technical assistance requirements and to redirect technical assistance away for less priority areas to priority areas capacity building;
- c) establish an advisory procurement and management system that is accountable to GoPNG systems;
- d) reform and rehabilitate the tertiary and technical institutions to internationally competitive standards that will produce internationally competitive graduates;
- e) in partnership with sectoral agencies, develop and establish delivery mechanism and process that are strengthen and uses national systems;
- f) develop and establish a harmonization system and process that promotes joint programmes and investments that are consistent with the DSP sequencing.

As a signatory to the Millennium Development Declaration, the Paris Declaration, the Accra Agenda for Action, the goals and targets prescribed in the DSP, and further refined in to clear five year plans shall guide PNGs foreign policy towards graduation from foreign aid once the country achieves the 50<sup>th</sup> position in the international Human Development Index.

### ***Challenges in implementation***

The desire to progress from a donor recipient to a donor partner is a daunting task challenged by the political, social and economic developments and business dynamics in the Pacific and Asian regions, and by global dynamics. Of immediate challenge will be the relationship challenges with key bilateral and multilateral partners whose country assistance programmes are at varying tenures and focus. To align all assistance programmes to the DSP and its five MTDPs over the 20 year period in itself a challenge.

Secondly and perhaps more important is the challenge to ensure that aid all aid leading up to a graduation from a recipient to a donor are effective and that PNG will have established an environment conducive to PNG becoming a significant player as a development partner in the Pacific in Partnership with Australia and New Zealand.

Thirdly, developing an aid delivery process that uses PNG system is far more challenging amidst poor perceptions of accountability and transparency, good governance, and security and social justice. Until the Government system is transparent, accountable, and is able absorb and manage aid, development partners will still use their financial management, procurement and reporting systems.

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Advanced stage of foreign aid management and attaining independence from foreign aid	TA provided by donors	DNPM	More than 70% of aid	Less than 30% of aid	Less than 5% of aid	Less than 5% of aid	Less than 3% of aid to be scant capacity development TA
Lead government department	Department of National Planning & Monitoring						

No.	Sector Strategy
1	Develop a comprehensive system of Management for Development Results (MfDR) to assess the quality of aid, and particularly of its technical assistance components to assure its quality, value-for-money, and capacity development impacts
2	Progressively eliminate all TA that bears little capacity development impacts
3	Achieve significant levels of national ownership, leadership and alignment over aid programs
4	Enhance the national institutional framework for aid management, including staffing, legislation and policies; and maintain fully operative and updated the DAD PNG, and based on it submit annual aid reports to Parliament
5	Monitor the joint implementation of the Paris Declaration, the AAA and the PNG Commitment on Aid Effectiveness
6	Enhance the dialogue and joint action with DPs, assuring the effective operation and support of the Technical Working Group on Aid Effectiveness

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
	1	Negotiate and implement the MfDR, and report to Parliament on outputs	MfDR fully implemented and regular report to Parliament	MfDR fully implemented and regular report to Parliament	MfDR fully implemented and regular report to Parliament	<b>R:</b> Consensus is not reached with DPs <b>A:</b> Commitment for consensus exists
	2	Elimination of TA of scant capacity development impacts	Less than 30% of total aid	Less than 5% of total aid	Less than 5% of total aid	<b>R:</b> Change resistance by some DPs <b>A:</b> Commitment for change exists
	3	35% of all aid programs are aligned to PNGDSP and MTDP, according to a jointly-agreed assessment framework; national aid policy sets parameters for alignment	65% of all aid programs are aligned to PNGDSP and MTDP, according to a jointly-agreed assessment framework; adopt a Joint Assistance Strategy (JAS)	75% of all aid programs are aligned to PNGDSP and MTDP, according to a jointly-agreed assessment framework; mid-term JAS review	85% of all aid programs are aligned to PNGDSP and MTDP, according to a jointly-agreed assessment framework; Comprehensive JAS review and re-elaboration	<b>R:</b> Alignment resistance by some DPs <b>A:</b> Alignment commitment exists
	4	Effective aid management legislation and policies adopted; DAD PNG fully operational; aid analysis performed by the DNPM; annual aid report	Legislation and policies adopted; DAD PNG fully operational; annual aid	Legislation and policies fully implemented; DAD PNG fully operational; annual aid reports produced by the DNPM	Legislation and policies fully implemented; DAD PNG fully operational; annual aid reports produced by the DNPM and	<b>R:</b> Lack of institutional capacities or commitment hampers progress <b>A:</b> Institutional capacities and commitment do exist

		submitted to Parliament	reports produced by the DNPM and delivered to Parliament	and delivered to Parliament	delivered to Parliament	
	5	Monitor the joint implementation of the Paris Declaration, the AAA and the PNG Commitment on Aid Effectiveness	75% of implementation achieved	85% of implementation achieved	95% of implementation achieved	<p><b>R:</b> Policy or methodological disagreements with DPs exist</p> <p>A: Policy and methodological consensus with DPs exists</p>
	6	TWG-AE operates and delivers	TWG-AE meets regularly and provides effective platform for PD, AAA & PNGC-AE implementation	TWG-AE meets regularly and provides effective platform for PD, AAA & PNGC-AE implementation	TWG-AE meets regularly and provides effective platform for PD, AAA & PNGC-AE implementation	<p><b>R:</b> Lack of sustained commitment to keep the TWG-AE operative</p> <p><b>A:</b> Sustained commitment to keep the TWG-AE operative exists</p>
<b>Responsibility</b>	Department of National Planning & Monitoring, Treasury & Finance					

## **5.14 Defence and Security**

**Goal:** A defence force that safeguards PNG's sovereignty and its security, including by contributing to the task of nation building and to disaster relief.

### ***Introduction***

The PNGDF through its constitutional roles and functions to defend PNG and its sovereignty; assist in the fulfillment of PNG's international obligation; provide assistance in the restoration of public order and security; available for humanitarian assistance and disaster response and to contribute to national development tasks provides the "fencing" around PNG against foreign invasions at all fronts. With proper "materials and equipment" provided will enable the PNGDF achieve its PNGDSP sector goal and the Vision 2050 Pillar on security and international relations.

### ***MTDP 2011-2015***

Increase in the regular force manpower strength from 2,000 to 4,000 and training capacity by 2015 will enable the PNGDF to effectively execute its mandated roles of border surveillance and patrols and sovereignty protection inclusive of the economy. The regular force will be supported by a reserve force of 4,000 manpower strength by 2015.

PNG has 3.1 million square kilometers of waters and seven maritime borders to monitor. A lack of surveillance capacity has contributed to an increase in illegal cross border activities such as drugs, gun and human smuggling and trafficking, money laundering, illegal fishing and poaching and sea piracy. As a result, PNG loses millions of kina each day depending on the type of activities involved. For instance, it is common knowledge in the fishing industry that fresh fish is exchanged at sea. It is estimated this costs PNG around K3 million a day or K1 billion a year. Having a proper surveillance system in place within the first five years will help protect our rich fisheries and marine resources and of course monitor other national interests such as the Oil and LNG pipelines and seabed mining activities. Increase in and having an effective intelligence capacity in place which will cover forward operating bases (FOBs) will ensure timely reporting and response to illegal cross-border activities and therefore sovereignty protection.

Increasing PNG's land capacity will contribute to the effective land border patrols between PNG and Indonesia to minimise illegal cross-border activities. Greater land capacity will also contribute to nation building tasks and to participation in international obligations (IOs).

Upgrading PNG's strategic air capacity will ensure a quick response to complement maritime operational requirements at sea, land border operations, disaster relief operations and other government call outs to meet its objectives of defence and security.

To effectively patrol PNG's maritime borders in the first five years, there is a need to upgrade and increase the marine capacity. The various vessel types indicated serve different purposes. Acquisition of the IPVs (Inshore Patrol Vessel)() in the first five years will boost the surveillance and patrol operations from 6NM to 200NM and the 7 maritime borders whilst the assault boats are for the forward operating bases (FOBs) and LCH for movement purposes.

Infrastructures cover all forms of infrastructures (office, residence, training, health, utilities, etc) to enable the PNGDF to perform its roles and functions better to achieve its sector goal. Communication is an integral part of Defence operations. Ensuring communication is effective by 2015 ensures the PNGDF successfully delivers on its core functions.

PNGDF's participation in international obligations will put PNG on the global decision-making arena and contribute to world peace as a member of the United Nations and therefore safeguard Papua New Guinea's sovereignty and security.

Security cooperation between defence and law enforcing agencies will see a reduction in law and order issues through better cooperation and joint operations by 2015.

### ***Building on MTDP 2011-2015***

With capacity building in the first five years much of the critical Defence infrastructures and strategic equipment/capability base would have been addressed through its rehabilitation program. This will bring Defence through to the middle of the 2<sup>nd</sup> MTDP at least and then pick up momentum as the economy also picks up momentum therefore enabling financing of new construction of required infrastructures, new acquisition of critical strategic platforms as well as increasing in manpower strength and capacity building in the ensuing MTDPs enabling the Defence organisation realize its sector goal in the defence and protection of the sovereignty and economy of PNG effectively and participate in international obligations (IOs). Participation in IOs will provide the platform for PNG to influence trade brokering/negotiations for PNG. Note that the developed countries with vibrant economies have reasonably big, highly-trained, strong, well-equipped and highly utilized military.

Having the required resources in place the PNGDF will now increase in sovereignty protection through regular periodic border surveillance and patrols will contribute tremendously to achieving the 55% reduction in law and order because the influx in illicit cross-border activities has contributed to the increase in law and order vows currently faced by PNG. The influx in illegal migrants now taking up PNG citizens' jobs and their business opportunities contributes to the increase in PNG's unemployment rate causing less revenue flow to the government and lack of service delivery to the people through tax evasion by the foreigners. The PNGDF's engagement in nation building tasks through their civic action program guarantees military presence in the rural and poverty corridor areas and in so doing contribute significantly to reducing the law and order indicator as their presence will restore law and order to these areas.

### ***Challenges in implementation***

The main challenge to the implementation phase of the sector will be adequate funding availability to meet all the expenditure requirements of PNGDF to fully realize its potential in achieving its sector goal. Good management of funds will also be a major challenge for Defence thus calling for certain stringent measures to be in place to avoid future repetition of financial blunders.



DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
A defence force that safeguards PNG's sovereignty and its security, including by contributing to the task of nation building and disaster relief	Number of PNGDF personnel	PNGDF/DOD	2000 (1:3,300)	1:1,825	1:1,350	1:1,112	10000 manpower strength (1:1,000)
	Increase Maritime Surveillance and Border Patrols	PNGDF/DOD	Only PNG/Aust and PNG/RI sea and land borders manned (1/4 borders manned) at random	Quarterly surveillance and patrols of all borders and continental shelves	Monthly surveillance and patrols of all borders and continental shelves	Fortnightly surveillance and patrols of all borders and continental shelves	All 8 borders both land and sea are effectively monitored on weekly basis
	Number and types of Air, Land and Maritime equipment/capabilities	PNGDF/DOD	Current capabilities for the three (3) elements	Rehabilitate and upgrade all existing air, land and maritime capabilities and acquire critical capabilities/equipment	Acquire new different types of air, land and maritime capabilities/equipment as required	Increase acquisition of air, land and maritime capabilities as required	More effective air, land and sea capabilities in place to respond to government call outs
	Participation in International Obligations	PNGDF/DOD	Previous & current international commitments & engagements such as Vanuatu and RAMSI	Signing of MOU/MOA with UNPKM. Engagements in UNMOs & RAMSI  IO Committee in place	UNPKMs, Regional, MSG, Bilateral, Requesting Organisations	UNPKMs, Regional, MSG Bilateral, Requesting Organisations	Effective collaboration & participation in international obligations
	Increase use of PNGDF Civic Action Program for National Building Tasks	PNGDF/DOD	Past and ongoing PNGDF civic action projects	Procure and mobilise equipment to build capacity and engage in civic action programs	Commit PNGDF by the Government for all major construction projects in the country	At least ¾ of all major construction projects are fully completed	All major construction projects are fully completed
	Government funding toward PNGDF	PNGDF/DOD	Nil	2% of GDP	3% of GDP	4% of GDP	5% of GDP
Lead government	Department of Defence and PNGDF						

No.	Sector Strategy
1	Enhance defence and security by increasing maritime surveillance capacity and activities;
2	Rehabilitate existing facilities and building infrastructures, human resource capacity and equipping of the Force;
3	Equip and use the military for international obligations (UNPKMs efforts, etc) and disaster relief operations both within and abroad;
4	Increase use of military for nation building tasks.

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions
Surveillance capacity	1.1	1xSurveillance capability in place	Review and expand to include coast watches	Review and expand to include coast watches	Establish an effective surveillance	Acquire and install equipment by 2012. Have Arrangements in place for coast watches.
Maritime capacity (ships/equipments)	1.2	Rehabilitate existing 6 x maritime capabilities and equipment at; 2xLCH; 4xPatrol Boats; EOD Equipment; SBT Equipment; <u>New critical purchase</u> 1xIPV; 1xLCH; 8xAssault Boats;	Increase maritime capabilities and equipment at ; 3xIPVs ; 2xOPVs ; 1xLCH ; 4xAssault Boats ; 2xHover crafts ;	Increase maritime capabilities and equipment at; 2xOPVs; 4xAssault Boats ; 2x Work Boats; 1xLSH (Larger vessel) or Multi-Purpose Vessel (MPV);	1x LPA (Larger Vessel);	Funding is made available  This is on 'at least' basis
Air capacity (equipment/machineries)	1.3	Rehabilitate & upgrade 6x existing platforms of; 2x CASA CN235; 2x Arava 201 ; 1 x UH-IH;  <u>New critical purchase</u> 2xRotary Wings; 1xSTOL Craft;	Increase air force strategic capabilities at; 4xSTOL Crafts ; 2xStrategic Air Lifts; 4xRotary Wings; 4xCombat Rotary Wings (marinised)	Increase strategic air capabilities at; 1x Strategic Air Lift - Persuader; 1xStrategic Air Lift; 4xCombat Helicopters (marinised); 4x Trainers ; 1xVIP Jet;	Acquisition of ; 2x Strategic Air lifts; 1xVIP Jet;	Funding is made available to acquire critical strategic air capabilities.  Enter into G to G arrangements for procurement purposes to tap into discounts available.
Intelligence Requirements	1.4	1x Restricted IT Network for Intelligence Branch;	Upgrade and acquire where critical	Upgrade and acquire where critical	Upgrade and acquire where critical	Have a compatible Intelligence network in place

		1x Intelligence Communication System; 5xVehicles for Intelligence Branch & Field Officers; 2xBoats for DSLOs (Buka &Daru);				
Forward Operating Bases (FOBs)	1.5	Upgrade existing facilities in Kiunga & Vanimo and construct new ones in Daru & Weam	Build one in Alotau , Torauto and Kiunga	Build one in New Ireland and Manus	Have at least 8 well-equipped FOBs	Bougainville peace agreement to be reviewed
Communications Infrastructure/equipment	1.6	Rehabilitate existing VSAT facilities at; 2xVSAT Based stations; 10x Unit Communication Centres; <u>New Purchase</u> 12x (4x4)-VSAT Mobile Vehicle Based; 40xVSAT Mobile Stns; 150x Long range tactical HF radio set; 150x Short range tactical VHF Radio set; 3xRadio mounted vehicles;	Upgrade existing equipment and acquire critical equipment	Upgrade and acquire critical equipment	Upgrade and acquire critical equipments	Have an effective communication capability in place  Funding is made available

Infrastructure requirement	2.1	Rehabilitate and upgrade existing infrastructures (office, training, residence, health, etc) including 10xbarracks roads, 10xsewerage and 10xwater supply systems; relocation of 50xMarried Quarters, 1xComms and 1xHQ in Tarangau Naval Base; construction of 1x40-men Officers Quarters for Air Transport Wing (ATW), relocation of Joint Force HQ (JFHQ).	Expand, upgrade and build new Land, Air and Maritime residential, office and training facilities requirements to accommodate 2000 manpower increase.	Expand, upgrade and build new Land, Air and Maritime residential, office and training facilities requirements to accommodate 2000 manpower increase.	Expand, upgrade and build Land, Air and Maritime residential, office and training facilities requirements to accommodate 2,000 manpower increases; build 1x new Air Base (NZB).	Funding is made available  Land is made available and registered as defence state land  Building plans have to be by registered reputable draftsman and certified
Human Resource Capacity Building	2.2	2000xBasic Recruit Training; 175xOfficer Cadet Training; 30xPilot Training; 30xLoadmasters; 4xAir Traffic Officers; 5xCustoms Officers; 4xEngineers; 40x Aircraft Technicians; 10XTechnical Trade Training (NATTB); 20XTechnical Trade Training (PNGDF TTU);	2000xBasic Recruit Training; 175x Officer Cadet Training; 10xPilot Training; 10xLoadmasters; 2xEngineers; 4xAir Traffic Officers; 5x Customs Officers; 20x Technical Trade Training (PNGDF TTU); 10x Professional Management Training; Surveillance Training;	2000xBasic Recruit Training; 175x Officer Cadet Training; 10xPilot Training; 10x Loadmasters; 2xEngineers, 4xAir Traffic Officers; 5xCustoms/Immigration Officers; 20x Technical Trade Training (PNGDF TTU); 10x Professional Management	2000xBasic Recruit Training; 175x Officer Cadet Training; 10xPilot Training; 10xLoadmasters; 2xEngineers; 4xAir Traffic Officers; 5xCustoms/Immigration Officers; 10x Technical Trade Training (NATTB); 20x Technical Trade Training	Funding is made available  Defence training facilities are in place  Air force pilots to be trained overseas in the first five years

		10X Professional Management Training; Surveillance Training; Force Exercises;	Force Exercises;	Training; Surveillance Training; Force Exercises;	(PNGDF TTU); 10x Professional Management Training; Surveillance Training; Force Exercises;	
Equipping of the Force - Land Element (equipment/weapons/machineries)	2.3	Acquisition of land equipments at; 200 vehicles, 4,500 Small Arms; 4,500 Field Equipments; 20,000 DPU Uniforms; All weapon types; 200 Tentage all sizes; 2,500,000 Ammunition all types; 1x Squadron Combat Engineering machinery; 1x troop Armoured vehicles	Increase acquisition of land equipments at; 200 vehicles; 6,500 small arms; 6.500 Field Equipments; 30,000 DPU Uniforms; 100,000 CRP; All weapon types; 300 Tentage all sizes; 3,500,000 Ammunition all type; 1x Squadron Combat engineering machinery; 1x Squadron Armoured vehicles;	Increase acquisition of land equipments at; 300 vehicles, 8,500 small arms; 8.500 Field Equipments; 40,000 DPU Uniforms; 200,000 CRP; All weapon types; 300 Tentage all sizes; 4,500,000 Ammunition all type; 1x Squadron Combat Engineering machinery; 1x Squadron Armoured vehicles;	Increase acquisition at; 400 vehicles; 10,500 small arms; 11,000 Field Equipments; 60,000 DPU Uniforms; 300,000 CRP; All weapon types; 400 Tentage all sizes; 5,000,000 Ammunition all type; 1x Squadron Combat Engineering Equipment; 1x Squadron Armoured vehicles;	Force equipment, weapons and machineries at NATO/UN standards
Force available for Call Out	3.1	1x company	5x Companies	8x Companies	1x Battalion	International Obligations (IO) Bill passed as an Act of Parliament in May 2010. Other legal & policy instruments enabling call outs are in place
Recruiting and Training of Reservists	3.2	Recruit and train 1,000 reservists	Recruit and train 3,000 reservists	Recruit and train 3,000 reservists	Recruit and train 3,000 reservists	Reserve Force Bill passed as an Act of Parliament by 2011 and recruiting begins

Regional Engineering Bases (REBs)		4.1	2x fully complete and equipped (HREB & IREB)	1x fully complete and well equipped (NREB)	1x fully complete and well equipped (SREB)	At least 4 fully complete	Land is registered as defence state land. Funding is made available	
Responsibility	<i>DOD &amp; PNGDF</i>							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2011-2015	Funding option(s)
	1.1	1.0	25.0	1.0	1.0	1.0		GoPNG
	1.2	6.6	4.5	5.0	2.0	90.0		GoPNG
	1.3	66.0	47.0	60.0	50.0	5.0		GoPNG
	1.4	1.1	1.0	4.7	1.0	0.0		GoPNG
	1.5	9.2	9.2	9.2	9.2	7.2		GoPNG
	1.6	5.8	4.8	4.9	5.0	0.0		GoPNG
	2.1	39.0	42.1	44.9	42.2	25.2		GoPNG
	2.2	5.6	6.1	6.6	6.1	6.3		GoPNG
	2.3	27.6	17.6	21.1	21.1	21.1		GoPNG
	3.1	5.0	5.0	5.0	5.0	5.0		GoPNG
	3.2	5.6	5.3	5.3	5.3	5.3		GoPNG
	4.1	4.5	4.5	5.0	17.0	14.0		GoPNG
<b>Total</b>		<b>177.0</b>	<b>172.1</b>	<b>168.0</b>	<b>163.9</b>	<b>180.1</b>	<b>861.1</b>	

## 5.15 Sports

**Goal:** To harness the power of Sport for Personal development, Community development, and National development.

### *Introduction*

Sports is a worthy conduit for advocacy in nation building, healthy lifestyle living, prevention of crimes, and career opportunities. In PNG sports is part and partial of the society. The annual PNG games nation building and character development. Combines with the international sporting meets such as the Mini-South Pacific games, the South Pacific Games, and the Olympics, the para-olympics, the nation converges in support our athletes. Sports can also provide career opportunities such as in Soccer, Australian Rules and Rugby League.

Sport-oriented development programmes have been recognized by the United Nations Inter-agency Task Force on Sport for Development and Peace as a viable and practical tool to enhance an individual's spiritual, emotional and physical health and provide alternative to harmful actions, promote social inclusion and enhance conflict prevention and peace building processes, and provide economic development and employment. In that context the task force advocates that sport and physical activity be incorporated in the development policies of countries, and country programmes of International Development Agencies, with particular emphasis on the MDGs and the needs of young people.

The DSP and the MDTP shall promote the development of sports at the community, amateur and the elite level by supporting the development of sporting facilities for national and international sporting events.

Sport is a tool for:

- **Personal development:** Being involved in sport promotes an individual's development of health, fitness, discipline, respect, leadership and confidence.
- **Community development:** Community based sporting activities help to improve the quality of community life.
- **National development:** PNG's participation in international and major national sporting events promotes national unity, national identity and national pride.

### ***MTDP 2011 -2015***

Within the next five years, focus will given on the following areas:

- Strong Organizational Capacity Development
- Private Sector Engagement
- Grass Roots Participation and Provincial & District Engagement
- Sporting Excellence
- Education & Training
- Sport For Development
- Facilities

DSP sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Personal development, community development and national development through sports.	Incidence of life style illnesses						Keep the incidence of life style and coronary disease low.
	Number of internationally accepted sporting facilities	PNG SF	Only one sporting stadium in reasonable standard	One sporting stadiums meeting international standards	Minimum two regional stadiums meeting minimum international requirements	Four regional sporting stadiums meeting minimum international requirements	Number of internationally accepted sporting facilities
Lead government department	Papua New Guinea Sports Foundation						
No.	Sector Strategy						
1	Support provincial authorities in promoting the PNG games, community sports and the Pacific Games in 2015						
2	Construction of sporting facilities for the Pacific games and international events such as rugby league, rugby union, soccer, cricket, netball and volleyball.						
3	Support promotion and awareness through enhanced sports education and training program for children, youth and adults to minimize of unhealthy lifestyle diseases through sports at schools and community levels						
4	Support and promotion of disabled sports and disabled sports athletes.						

DSP 2030 deliverables	No.	2011-15	2015-2020	2020-2025	2025-2030	Risks and Assumptions		
Sporting facilities that meet minimum international standards for all sporting codes for the PNG games, and in preparation for the Pacific Games and all international events hosted in PNG	1.1	<ul style="list-style-type: none"> <li>Construction of 2015 Pacific Games Facilities</li> <li>3 main stadium complexes refurbished</li> </ul>						
A fully established national pikinini, community and disable sports development program	2.1	Sports Capacity Development program						
Enhanced Sports Education and Training programs for adults, youth and children	3.1	Sports for development program to promote the value of regular exercise and a healthy lifestyle						
Sporting facilities that meet minimum international standards for all sporting codes for the PNG games, and in preparation for the Pacific Games and all international events hosted in PNG	1.1	<ul style="list-style-type: none"> <li>Construction of 2015 Pacific Games Facilities</li> <li>3 main stadium complexes refurbished</li> </ul>						
Responsibility	PNG Sports Foundations							
Estimated inputs (K million)	No.	2011	2012	2013	2014	2015	2030	Funding option(s)
	1.1							GoPNG/private sector/donors
	1.2							User pays/donors
	2.1							GoPNG/donors
	3.1							GoPNG/donors
<b>Total</b>	<b>4</b>	<b>12</b>	<b>66</b>	<b>6</b>	<b>6</b>	<b>94</b>		



## **Part 6: Modes of implementation, collaboration and logical flow of sectoral plans**

### **6.1 Economic corridors**

Economic corridors are proposed to alleviate poverty. Corridors of poverty will be transferred into economic corridors. Without the corridor system people in poverty will not be integrated into the mainstream economy.

An economic corridor is a region in which the Government provides a well planned zoning system, a comprehensive and effective network of transport and utilities, quality education and health services. Within this region, businesses are able to operate at low cost and under well designed incentives, thereby encouraging foreign and domestic private sector investments. By concentrating the construction of essential infrastructure within certain regions the economic corridor approach takes advantage of the substantial economies of scale and scope associated with large service sector infrastructure. This reduces the cost to state owned enterprises and other providers of essential infrastructure, while raising their returns. Building on this infrastructure, effective sequential and spatial planning will help to expand economic activities like agriculture, tourism and manufacturing.

#### ***MTDP 2011-2015***

The Government has identified ten regions of PNG to be categorized as economic corridors. Within the next five years, efforts will be focused on developing four economic corridors. These are:

- Petroleum Resource Area Economic Corridor (PRAEC): Southern Highlands, parts of Enga, Gulf and Central Provinces. The PRAEC was approved by Cabinet in May 2009.
- Central Corridor (Central, Milne Bay, Oro and Morobe)
- South Coast Corridor (East New Britain and West New Britain)
- Momase Corridor (Madang, East Sepik, and West Sepik Provinces)

Development of these corridors will be coordinated by the Economic Corridor Implementation Authorities. Legislation will set out the powers, functions and responsibilities of an ECIA in mobilizing, planning and managing development in the economic corridor. Until the ECIA's are well-established as a separate entity, they will operate under the Department of Planning and Monitoring.

Over the next five years, implementation of the economic corridors and establishment of the ECIA's will be through a phased approach. During the first phase, policy, legislation, ECIA governance and reporting mechanisms will be in place to support a fully functional ECIA. The first ECIA will be the PRAEC ECIA. The second phase will produce targeted sectoral studies with geographical overlay. An integrated development strategy and plan will be developed during phase three alongside a proposal of specific projects and programs to be implemented within the corridor, in line with government priorities identified in MTDP 2011-2015 and PNGDSP. Phase four will focus on the implementation and monitoring of the selected projects and programs. ECIA's will work closely with provincial, district and town authorities to harmonise development initiatives, coordinating efforts in order to bring about greater results in the corridors. Economic corridor authorities will only initiate flagship projects of national interest in their various corridors, specifically in economic infrastructure (transportation, energy, telecommunication), social infrastructure (health, education and research and development), and projects for economic pursuit (agriculture, fisheries, forestry, downstream processing, and small-medium enterprise development). Corridor authorities will not implement development initiatives at provincial and local levels, rather leaving this to the provincial and lower level authorities.

## **6.2 Partnership and collaboration**

Implementation of the sector strategies over the next five years requires a collaborative effort among all major stakeholders. This includes the whole of government, the private sector, development partners, churches, civil society and community based organisations. Over the next five years, development efforts of donor agencies, churches, civil society and community based organizations should be aligned with the Government in order to achieve tangible results.

### **6.2.1 Whole of Government Collaboration**

**Goal:** **A unified and dynamic public sector that effectively delivers on government goals with all central government agencies working in collaboration.**

It is the aspiration of the Government for a “whole of Government” approach to address efficiency and effectiveness of the public sector to deliver the desired goals and targets of the MTDP 2011-2015. Strengthening and enhancing the capacity of the Central Agencies to effectively coordinate the line agencies and the provincial administrations to implement the Governments Development policies and plans is the key strategy to realizing this goal.

Within the next five years, a “whole of Government” approach will be fostered through a review of key legislations, such as the 1995 Organic Law on Provincial & Local Level Governments, and relevant regulations that guide agencies to ensure there is a clear demarcation of responsibilities between all government agencies and provincial administrations. In addition, resourcing and enforcing the coordination functions of central agencies to ensure that public institutions comply with directives and work towards achieving the development agenda of the Government will be important over the coming years.

Other strategies to achieve whole of Government collaboration which will be drawn upon include public servant networking and cooperation, imparting knowledge and information through reliable communication mechanisms such as the internet and e-government resources - essentially the opportunity to learn from best practices within other agencies and to foster global search for ideas, expertise to solve local problems.

### **6.2.2 The Private Sector**

**Goal:** **Partnership between the Government and the private sector to provide services and public infrastructure.**

Within the next five years great strides will be taken to cement and enhance the relationship between the government and the private sector to provide services and public infrastructure. This includes implementation of the Private Sector Growth Strategy and the Public Private Partnership (PPP) Policy.

PPPs are a method to procure and deliver infrastructure and services through cooperation between a public institution and one or more private enterprises. PPPs are most frequently used for major infrastructure projects and as such will form a cornerstone of investments in effective service delivery. Over the next five years the government will establish the PPP centre, an entity which will have the capacity to support line agencies and state owned enterprises in developing robust and credible PPP proposals. Moreover the procurement and development of select infrastructure and services will take place under PPP arrangements.

Many private sector entities engage voluntarily in development activities. Telecommunications companies for example donate substantial resources towards education. As another key example, PNG Sustainable Development exists to enhance development in Western Province and throughout PNG. The pro-development activities of private entities are laudable, but they would be more effective if well coordinated, including with Government activities. A high degree of coordination through the MTDP will greatly enhance PNG's development outcomes during the MTDP period.

### **6.2.3 Development partners**

**Goal:** **Strong and decisive leadership in driving the aid program forward to achieve sustainable economic growth.**

Currently, PNG receives overseas development assistance from five bilateral donors Australia (AusAID), Japan (JICA/JBIC), New Zealand (NZAID), People's Republic of China, and People's Republic of Korea –a number of multilateral donors, including the European Union, World Bank and Asian Development Bank and a number of agencies of the United Nations (UNDP, UNICEF, UNFPA, UNHCR, FAO, WHO, GEF, UNIFEM and UNHABITAT). Funding and technical support is also channeled through both international and local NGOs, private foundations and sector-specific vertical programs.

In an effort to make aid more effective and to move towards a more sustainable broad-based economy with improved service delivery, the Government and all development partners' signed the PNG Commitment on Aid Effectiveness in 2008. This commits to the implementation of the international principles of ownership, alignment, harmonization, managing for results and mutual accountability, as set out in the Paris Declaration on aid effectiveness. It is through this agreement that PNG and the Development partners have committed to work in the spirit of partnership and mutual accountability and build on the ongoing efforts and experiences of PNG.

Over the next five years and in line with this commitment the government will strengthen monitoring and reporting on the PNG commitment on Aid Effectiveness. Moreover, the government will continue to focus on reducing technical assistance as a proportion of foreign aid, whilst continuing to welcome initiatives of development partners to fund investments and essential services. Crucially, the government will direct development partners to support government priorities, as set out in the MTDP and PNGDSP. Moreover, over the next five years support from Development Partners will be documented in the PNG Development Assistance Database (PNG DAD), strengthening our commitment to the aid effectiveness agenda.

#### **6.2.4 Churches**

**Goal:        Effective health, education and community service delivery through a close and sustainable partnership with PNG's churches.**

Churches have contributed to the development of PNG for over 100 years and continue to play an important role in nation building by fostering spiritual, social and economic growth. The Government has recognised the efforts of churches in partnering with the Government to provide basic social services such as health and education under difficult circumstances in many parts of the country especially in the rural areas where the majority of the populations live, but where government services are either inadequate or lacking.

Over the next five years the Government will continue to support PNG's churches through the *Church-State partnership*. At least K60 million will be directed by the Government through PNG's churches to help deliver health and education services. Within the period 2011-2015, it is the Government's commitment to ensure that a close working relation is maintained with PNG's churches through establishing joint coordination meetings, establishing independent monitoring mechanisms to assess performances and continuing to maintain and strengthen development partnerships.

#### **6.2.5 Civil Societies and Community Based Organisations**

**Goal:        Civil societies and community based organisations will complement the Government in service delivery.**

Civil Society Organisations (CSOs) and Community Based Organisations (CBOs) provide basic services to communities, addressing a host of development issues. The Government recognises the work that these organizations do to support the citizens of PNG, and has therefore developed a partnership framework. Over the next five years this partnership framework will be implemented, strengthening the relationship between government and CSOs to effectively implement development plans and policies of the Government. In particular, the Government will direct around K60million through the CSO-State partnership to help deliver basic health and education services to improve the lives of the people of Papua New Guinea.

Over the coming years greater monitoring by the agency responsible for planning and development will take place, to ensure effectiveness. Furthermore, the effectiveness of the CSOs will be enhanced by improving the coordinated flow of information among CSOs and stakeholders including Government and development partners and through the promotion of public forums.

### 6.3 Alignment of sectoral, provincial and district plans to MTDP

The National Executive Council (NEC) endorsed the PNGDSP in 2010 and directed DNPM to coordinate all sectoral and provincial plans in line with the DSP through the four five year MTDPs. As stipulated under the Organic Law on Provincial and Local Level Government, (Section 33A) all Provincial and Districts are to have five year development plans aligned to national policy.

As stated in the preceding chapters, the MTDP 2011-2015 is an action plan detailing what sectors agencies are to implement in line with the policy direction and enabling programs and strategies stated in the PNGDSP.

Therefore, it will be the responsibilities of the Implementing Agencies (IA) and Provincial Governments to clearly articulate their strategies, policies and plans in line with the priorities set out in the medium term (MTDP) and long term (DSP). The Department (DNPM), through its regional offices, will provide leadership in coordinating and guiding the identification of development priorities, formulation of sector, provincial and district plans, administration of budget appropriations under the Public Investment Program and the overall supervision of monitoring and assessment of development programs and projects.

#### **Alignment Strategies by sector IAs, Provincial Governments and Local Level Governments**

At the National Government level, the DSP is translated through the MTDP - a five year action plan. This plan will guide all sector agencies in their respective sector plans and strategies to achieve the desired goals and deliverables of each sector within the first five year period.

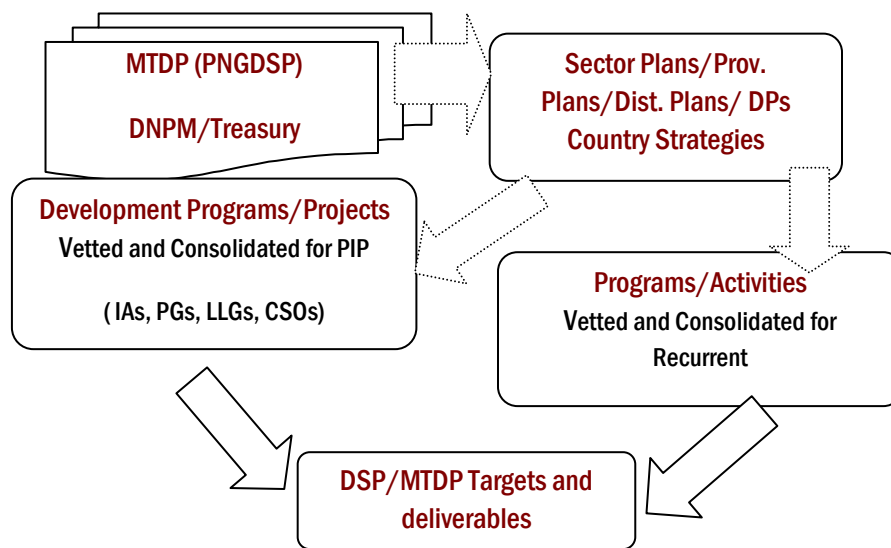
Development partners (DP) are expected to align their country development programs and strategies accommodating the National Governments endorsed strategy the PNGDSP. DPs are urged to support development programs and projects in line with the priorities and goals set out in the MTDP.

CSOs and other non-state actors' programs and submissions will be supported through the development budget by the National Government, provincial governments, LLGs and donors according to the MTDP.

The provincial and local level governments will also implement the MTDP through programs and projects which will be prioritized according to their local environment and their order of priorities. Support through the Development Budget will be sequenced to maximize output for core and key enabling outputs.

The MTDP also calls for all sectors IAs, PGs, LLGs and DPs, as core players, to effectively coordinate the translation, understanding and implementation of relevant prioritized programs and strategies. This means that the achievement of the sector goals, provincial visions and districts' aspirations will only come about when resources from both the recurrent and development budgets are properly managed.

The alignment of various plans to the MTDP-DSP can be one thing but the mobilization of resources and appropriation to each sectors and provinces and the coordinated implementation by all players will be critical.



## **Part 7: Resourcing the MTDP 2011-2015**

### **7.1 Policy settings**

The medium term resource framework is the resource envelope of the Medium Term Development Plan (MTDP). It is determined by the Medium Term Fiscal Strategy (MTFS) and the related Medium Term Debt Strategy (MTDS) which were revised to ensure they are consistent with economic realities and to accommodate development investment decisions by Government. This framework provides for medium term debt financing during the initial PNGDSP period, while ensuring the Government Budget is balanced over the long term. In this regard, a key factor is that Government revenues from the LNG project will commence around the beginning of the second MTDP.

The focus of the medium terms fiscal policy framework is to maintain fiscal discipline, maintain low levels of debt and reduce high risk foreign debt. This focus remains a sound fiscal strategy. However the way in which this is pursued needs to account for changing financial and economic conditions. As discussed in part 2, the 2006 policy of using 30 per cent of windfall revenues to reduce debt is no longer appropriate now that PNG debt levels are sustainable. Such a narrow policy is only appropriate when debt levels are high.

The public finance and investment strategy outlined in the PNGDSP is a more prudent approach to managing windfall revenues, encompassing the need to maintain low debt levels while also ensuring revenues contribute to development when debt levels are low. The Government will continue to support fiscal discipline, but through the public finance and investment strategy.

The Medium Term Debt Strategy also has been revised to ensure it is consistent with economic realities and to accommodate development investment decisions by Government. For instance, in the PNGDSP the sequencing principles entail undertaking huge investments in the 'enablers', such as in the transport network and in law and justice, which can be financed through State borrowing by leveraging future revenues from the minerals sector. The PNGDSP also emphasizes policy measures that will generate large net revenue gains, for example the introduction of competition in ICT, freeing up private and foreign investment in critical infrastructure, and ensuring that land administration is functioning. These measures will generate economic activity and tax revenues that will support a greater capacity to borrow.

Therefore, rather than waiting for the second MTDP to invest in key infrastructure, the medium term resource framework allows for borrowing during the first MTDP 2011-2015 against the income expected in later years, and thereby investing now in critical infrastructure to develop PNG's economic potential. Infrastructure investment will in turn lead to faster growth in Government revenues, financing the repayment of debt and ongoing high levels of infrastructure investment in future MTDPs.

### **7.2 Financing MTDP 2011-2015**

The National Government's medium term resource envelope over the period of the first MTDP will approximate K65 billion (table 7.1). This constitutes funds from National Government tax revenues, support from donors, debt financing and support from other development stakeholders in PNG including for example, the private sector who may contribute through the tax credit scheme.

The National Government's financial resources will be allocated between the Development Budget and the Recurrent Budget. Preliminary estimates indicate that National Government development expenditure over the first MTDP period will approximate K36 billion. The recurrent budget expenditure may approach K29 billion over this same period. Importantly, recurrent expenditure will grow over time as the extent of Government services expand under the Development Budget. For example, the construction and rehabilitation of community health posts will result in additional recurrent expenditure on routine

maintenance and operating costs. Hence there is a need for close coordination between development and recurrent expenditures.

In this context, it is noted that there are outstanding issues that need to be resolved in order to finalise the allocation between Recurrent and Development Budgets. In particular, routine maintenance of national roads and DSG grants are funded through the Development Budget even though they are recurrent by nature. Transfer of these responsibilities to the Recurrent Budget would increase the share of funds allocated to the Recurrent Budget. This transfer is still to be finalised.

**Table 7.1 Resourcing the first MTDP**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>
	K million	K million	K million	K million	K million	K million
<b>Medium Term Resource Envelope</b>	8,892	12,003	13,612	14,701	16,026	65,234
<b>Development Budget</b>	4,501	6,899	7,647	8,233	9,062	36,341
GoPNG	3,188	3,516	3,691	4,611	6,311	21,317
Donors	1,154	1,142	1,141	1,140	1,140	5,718
Other stakeholders*	0	800	1,200	1,400	1,600	5,000
Financing Requirement	159	1,441	1,615	1,081	11	4,307
<b>Recurrent Budget</b>	4,391	5,104	5,965	6,469	6,964	28,893
GoPNG	4,391	5,104	5,965	6,469	6,964	28,893

\* Other stakeholders in the development of PNG include Provincial and Local Level Governments, Churches, NGOs, CBOs, the private sector and PNG Sustainable Development.

Government revenue is forecast to be around K51.9 billion in the first MTDP period of 2011-2015 (see figure 7.2 and figure 2.2 in part 2). However, this is a shortfall against MTDP expenditure requirements which means that other sources will be required to fully finance the first MTDP.

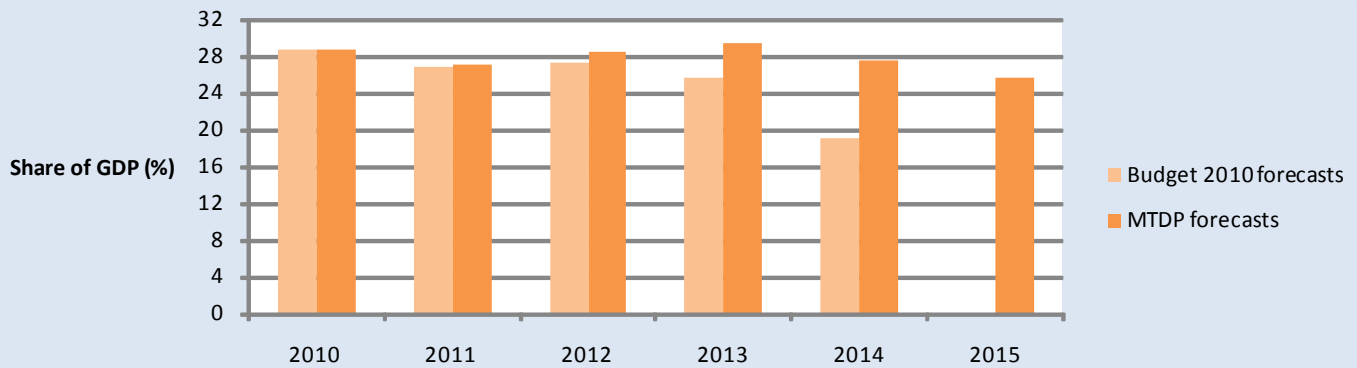
It is anticipated that donor grants directed through the national budget will approximate K6 billion over the five year period from 2011 to 2015. To the extent these funds are coordinated with the MTDP and focused on the key enablers of higher education, primary and secondary education, law and order, land administration, transport infrastructure and other critical infrastructure such as power, water and sanitation, the returns to aid assistance will be substantial.

The Government will also look to other stakeholders in PNG's development to work towards the vision of a prosperous, united nation. It is anticipated that at such stakeholders could contribute to the value of K5 billion over the MTDP period, if several key stakeholders unite with the National Government behind the MTDP. Provincial and Local Level Governments will be key partners for the nation's development. Likewise, churches, civil societies and community based organizations will continue to be key players in complementing the Government in service delivery. Importantly, the Government's Public private partnerships policy provides the framework for securing the contribution of the private sector, as does the Government's tax credit scheme. Other enterprises such as PNG Sustainable Development may also choose to coordinate development efforts. By combining and focusing the resources of all these development stakeholders, PNG will more easily accelerate development under the first MTDP.

To the extent there remains a finance shortfall, it will be necessary to rely on debt to fund the MTDP. For the first MTDP, it is anticipated that around K4 billion will be borrowed. This level of borrowing will ensure that the PNG Government will remain in low debt. Figure 7.1 shows that despite the additional borrowing, public debt as a share of GDP will fall further to reach just 26 per cent of GDP by 2015. This is because growth in GDP is forecast to outpace growth in public debt.

## 7.1 Forecast public debt, 2010-2015

Public debt as a share of GDP



Source: MTDP Forecasts are based on PNGGEM modelling forecasts for GDP and the criteria that an additional K4 billion will be borrowed compared with the level in the 2010 Budget

In the context of considering financing options, it is important to look at the longer term projections in tax revenues. In particular, because of the focus of the first MTDP on developing the nation's productive capacity, the growth in tax revenues will continue to accelerate under subsequent MTDPs. In addition, revenues from the PNG LNG project will increase substantially during the second MTDP period. For these reasons, it is expected that tax revenues will increase substantially from K52 billion in the first MTDP to around K84 billion in the second MTDP. With the successful implementation of the PNGDSP, tax revenues will continue to expand to 2030, supporting a rapidly expanding medium term resource envelope. For this reason PNG is able to borrow now, invest wisely and repay the loans under subsequent MTDPs.

Table 7.2 details the sectoral allocation of Development Budget expenditure under the first MTDP. It can be seen that there is a strong emphasis on infrastructure. This is necessary to achieve the ultimate aim of the MTDP of providing jobs, income and higher living standard for all Papua New Guineans. The way to achieve that is through providing access to markets and essential services (investment in Infrastructure); training up Papua New Guineans with the skills they need to prosper (investment in the Social Sector); and thirdly, to provide a safe and secure society to live and do business (investment in Law & Justice). Private expenditure in the economic sector will then grow rapidly as Papua New Guineans are provided with training, services and access to key markets. This in turn will generate the tax revenues to support ongoing expansion in the nation's productive capacity.

Not all Government commitments can be allocated according to sector. DSG funds for example, are paid directly to District level Governments, to be spent according to their priorities. These types of commitments are represented in table 7.2 under "Other Government Commitments".

Under the MTDP, donor support will be directed toward programs that will generate high returns in terms of development. In particular, donor funding on Technical Assistance in bureaucratic positions will be redirected towards the provision of expert training assistance in PNG's universities and technical institutes.

The MTDP will also reorient debt funding towards transport infrastructure that is critical for attracting investment and supporting businesses. Furthermore, the investment of loan funds will be focused in the Economic Corridors and in the cities of PNG to ensure they realise the benefits of economies of scale and scope.

**Table 7.2 Expenditure by sector under the Development Budget**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2011-2015</b>
	K million	K million	K million	K million	K million	K million
<b>Economic Sector</b>	532	521	316	503	570	2,441
GoPNG	401	400	271	458	525	2,054
Donors	57	47	46	45	45	239
Other stakeholders*	0	0	0	0	0	0
Financing Gap	74	74	0	0	0	148
<b>Social Sector</b>	674	956	802	1,035	1,230	4,696
GoPNG	31	9	194	327	522	1,083
Donors	508	508	508	508	508	2,538
Other stakeholders*	50	100	100	200	200	650
Financing Gap	85	339	0	0	0	424
<b>Infrastructure Sector</b>	1,825	4,123	5,558	5,439	5,983	22,927
GoPNG	1,534	2,421	2,750	3,241	4,851	14,797
Donors	241	346	396	426	468	1,877
Other stakeholders*	50	600	650	600	650	2,550
Financing Gap	0	756	1,762	1,172	13	3,703
<b>Cross cutting and Law &amp; Justice</b>	683	578	581	666	682	3,189
GoPNG	612	507	510	595	612	2,837
Donors	70	70	70	70	70	352
Other stakeholders*	0	0	0	0	0	0
Financing Gap	0	0	0	0	0	0
<b>Administration</b>	279	171	121	91	49	711
GoPNG	0	0	0	0	0	0
Donors	279	171	121	91	49	711
Other stakeholders*	0	0	0	0	0	0
Financing Gap	0	0	0	0	0	0
<b>Other Government Commitments</b>	255	255	55	55	55	673
GoPNG	255	255	55	55	55	673

### **7.3 Legislative reform for resourcing the MTDP 2011-2015**

Legislative reform will be required to facilitate the medium term resource envelope of the MTDP, 2011-2015. In particular, the medium term debt strategy must take into account the prudence of borrowing to invest now in lieu of future income streams from the PNG LNG project.

Further, the medium term fiscal strategy must put emphasis on expenditure on the key enablers, at least during the first MTDP. This will require legislation that ensures the budget is directed according to the MTDP,



subject to any changes in the policy priorities of the Government. Legislation is also required to define the role of Department of National Planning in coordinating planning efforts.

#### **7.4 The range of the resource envelope**

In part 2 it was explained that volatile and unpredictable revenues are an unavoidable reality for PNG. The government revenue forecasts outlined in figure 2.2 of part 2 represent the best estimates for the MTDP period. They incorporate a range of assumptions including official Australian Government commodity price forecasts, expected production profiles in mining and petroleum based on existing operations and new operations anticipated to commence production during the period, and assumptions relating to implementing the MTDP.

However, there are significant risks for these revenue forecasts. As outlined in part 2, forecasting government revenue is very difficult, primarily due to the unpredictability of world prices for the key export commodities of copper, gold and oil. This is because profits and hence tax payments for the mining and petroleum industry are highly sensitive to prices.

In view of this, two additional scenarios are modeled using PNGGEM: (1) an optimistic scenario; and (2) a pessimistic scenario. These scenarios make respectively optimistic and pessimistic assumptions with regard to commodity prices, mining and petroleum production, and MTDP implementation. Table 7.3 summarises the main assumptions that differentiate the scenarios. For the key commodity price assumptions, the optimistic scenario assumes gold and copper prices are 25 per cent above best estimates and oil prices are in line with the optimistic price scenario forecast by the US Government. Conversely, the pessimistic scenario assumes gold and copper prices are 25 per cent below best estimate and oil prices are in accordance with the US Government's pessimistic price forecasts.

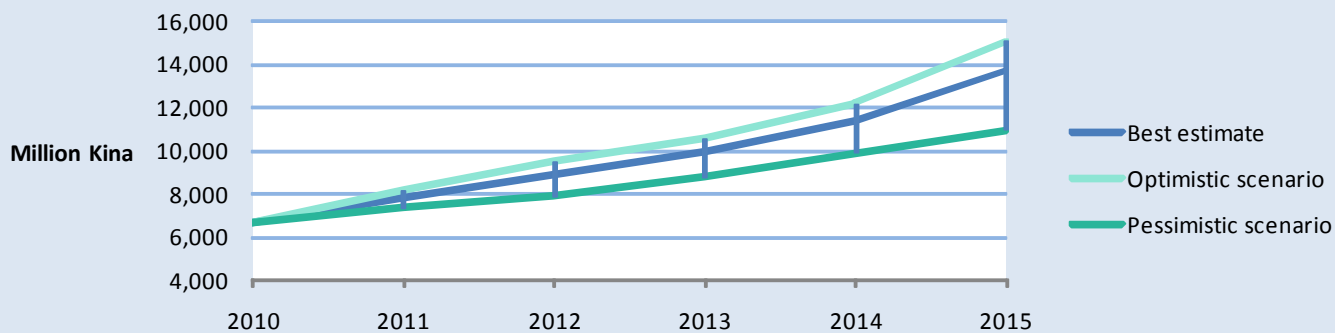
Government revenue forecasts for the optimistic and pessimistic scenarios are provided in figure 7.2 and are compared with the best estimate scenario. These scenarios reveal that over the MTDP period of 2011-2015, Government revenue is expected to be between K44.9 billion and K55.5 billion with K51.9 billion representing the best estimate (see figure 7.2). The range for forecast growth in GDP is outlined in figure 7.3.

**Table 7.2 – Main assumptions under the “best estimate”, “optimistic”, and “pessimistic” scenarios**

	2011	2012	2013	2014	2015
<b><i>Best estimate scenario</i></b>					
Oil US\$ a barrel	\$76	\$84	\$92	\$100	\$105
Gold US\$ an ounce	\$1010	\$873	\$885	\$933	\$975
Copper US\$ a tonne	\$7025	\$7779	\$7434	\$7021	\$6588
Mining production	In accordance with best estimates calculated by the Department of Mining				
LNG production	Assumed to begin in 2015				
Borrowing	K4 billion between 2012-2015				
<b><i>Optimistic scenario</i></b>					
Oil US\$ a barrel	\$88	\$106	\$124	\$146	\$162
Gold US\$ an ounce	\$1162	\$1091	\$1106	\$1166	\$1219
Copper US\$ a tonne	\$8079	\$9724	\$9293	\$8776	\$8235
Mining production	Same as best estimate scenario				
LNG production	Same as best estimate scenario				
Infrastructure	Public funded MTDP infrastructure and infrastructure maintenance is increased by 25 per cent				
Borrowing	K2 billion between 2012-2015				
<b><i>Pessimistic scenario</i></b>					
Oil US\$ a barrel	\$60	\$58	\$58	\$58	\$57
Gold US\$ an ounce	\$859	\$655	\$664	\$700	\$731
Copper US\$ a tonne	\$5971	\$5834	\$5576	\$5266	\$4941
Mining production	Assume that Bougainville does not reopen and Frieda does not commence				
LNG production	Assumed to begin in 2016 – after the MTDP				
Infrastructure	Only half the public funded MTDP infrastructure and infrastructure maintenance is completed				
Borrowing	K6 billion between 2012-2015				

## 7.2 The range for the forecast resource envelope, 2011-2015

Forecast Government revenue under 3 scenarios

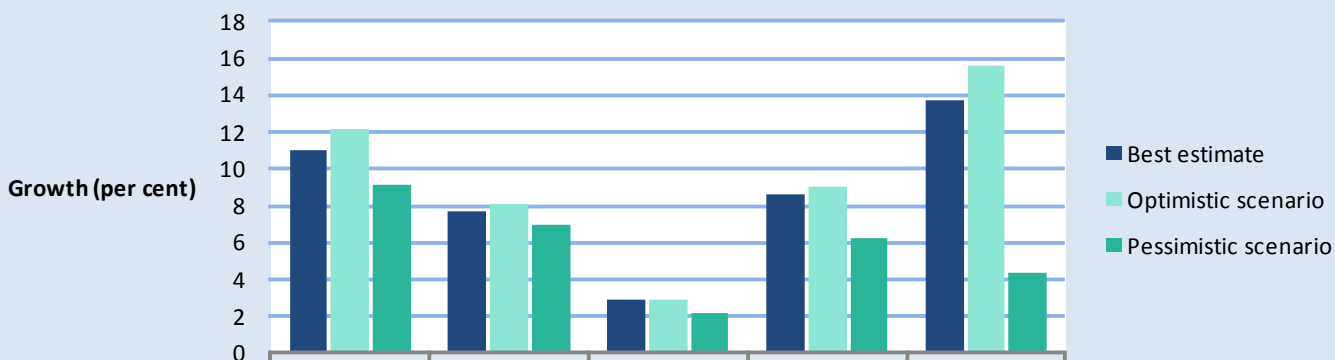


	2011	2012	2013	2014	2015	2011-2015
Best estimate	7858	8901	9943	11418	13741	51861
Optimistic scenario	8197	9490	10558	12176	15052	55474
Pessimistic scenario	7359	7924	8795	9891	10967	44935

Source: PNGGEM modelling forecasts

## 7.3 Forecast GDP growth under 3 scenarios, 2011-2015

per cent growth



Source: PNGGEM modelling forecasts

## 7.5 Strategies for dealing with uncertainty in Government revenues

As outlined in the public finance and investment strategy in the PNGDSP, a stabilization fund is needed to smooth the fiscal and macroeconomic implications of volatile and unpredictable revenues. This will be achieved by converting volatile revenues into a stable stream of finance for expenditure. However, the public finance and investment strategy will be developed during the MTDP period with implementation targeted for the commencement of the LNG Project.

During the MTDP period there will therefore be no mechanisms in place for coping with volatile revenue streams. As outlined in the previous section and in figure 7.3, Government revenue over the years 2011-2015 could fall anywhere between K44.9 billion and K55.5 billion. Compared with the best estimate of K51.9 billion, revenue could therefore fall short by K7.0 billion or there could be an unexpected windfall of up to K3.6 billion.

As explained in part 2, this uncertainty in revenues will be dealt with by combining 2 strategies: (1) expenditure adjustment through front loading or back loading; and (2) debt adjustment.

Within the Development Budget there will be a number of projects identified for providing a buffer in expenditure. In the event that revenues fall below best estimate forecasts, expenditure on these projects will be backloaded in the sense that funding will be reduced and implementation of the projects will be slowed down. Conversely, if revenues exceed best estimates, then the projects may be front loaded to accelerate their implementation. Major new construction projects will be the most significant items identified for this purpose. A crucial benefit of this approach is that the core services provided by Government will retain stable with predictable funding regardless of revenue outcomes.

It is important for macroeconomic stability that expenditure adjustments should not be the only mechanism for dealing with revenue volatility. This is why there will also be an allowance for debt adjustment. The MTDP allows for borrowing of K4 billion as outlined in section 7.2. However, if revenues fall to the level of the pessimistic scenario, then the shortfall will be partially absorbed by increasing borrowing to K6 billion. If revenues are at the high end, then borrowing levels can be reduced to just K2 billion.

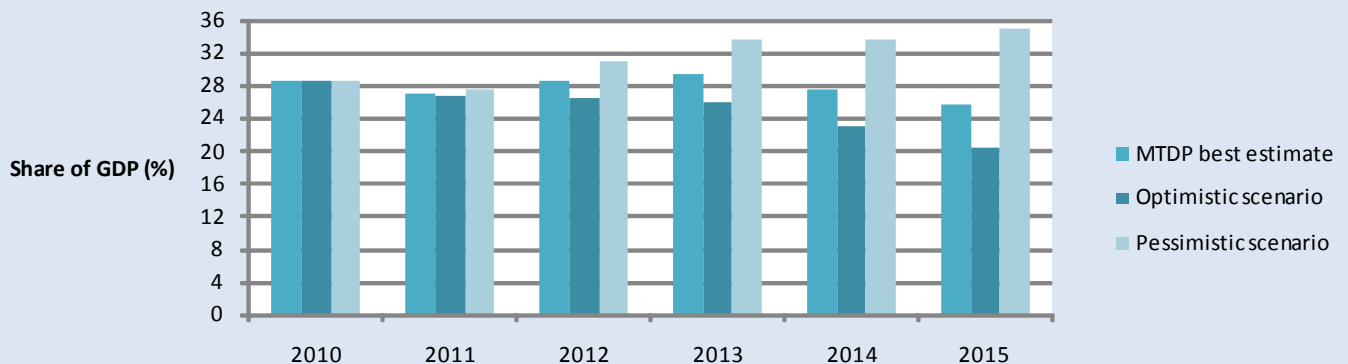
The key benefits of this dual strategy approach compared with the alternative of allowing expenditure to fully adjust in line with revenue changes are:

- increased stability in government expenditure;
- increased stability in the balance of payments and the foreign exchange market;
- eliminates the need to rush through supplementary budgets to deal with revenue windfalls;
- eliminates the need for appropriations through trust accounts; and
- provides greater certainty in the medium term expenditure envelope, and so allowing expenditure planning to shift to a more reliable medium term focus.

There are numerous lessons around the globe of the critical importance of taking a conservative approach to public debt and ensuring public debt levels remain low. Even advanced nations of Europe have experienced the economic trauma and loss of sovereignty associated with building up excessive public debt. Although concessional loans represent a cheap source of finance, it is important to keep them contained at a relatively low level to ensure prudence and the maintenance of sovereignty. PNG has learnt from the past and has learnt from international experience that over-reliance on concessional loans can lead to policy being driven from abroad.

With these considerations in mind, the increased borrowing planned under the pessimistic scenario will see public debt contained at just 35 per cent of GDP (see figure 7.4). This is marginally above current levels and is low by international standards and sustainable. In the event that the optimistic scenario eventuates, public debt will fall to just 20 per cent of GDP.

#### 7.4 Public debt under 3 scenarios, 2011-2015 per cent of GDP



Source: PNGGEM modelling forecasts

# Part 8: Monitoring and Evaluation of MTDP

## 8.1 Parameters of monitoring and evaluation

Monitoring is the regular collection of information to assess progress in the implementation of work-plans, projects or programs implemented over the next five years. Evaluation is defined as the periodic collection of information to assess progress in changing the practices and well being of target populations. Over the next five years these two functions will capture the various moments in the life of the project or program as resources get transformed into outputs, outcomes and impacts.

DSP Sector goal	Indicator	Source	Baseline	2015 target	2020 target	2025 target	2030 DSP target
Develop an efficient health system which can deliver an internationally acceptable standard of care	Infant mortality rate	Census/DHS	57 per 1000 live births	45 per 1000 live births	30 per 1000 live births	25 per 1000 live births	Below 17 per 1000 live births
	Under 5 mortality rate	Census/DHS	57 per 1000 live births	50 per 1000 live births	40 per 1000 live births	30 per 1000 live births	Below 20 per 1000 live births
	Maternal mortality rate	DHS	33 per 100,000 live births	500 per 100,000 live births	400 per 100,000 live births	300 per 100,000 live births	Below 100 per 100,000 live births
	Life expectancy	Census	57 years	60 years	65 years	68 years	70 years

No.	Sector Strategy
1	Improve service delivery
2	Strengthen partnership and coordination with stakeholders
3	Strengthen health systems
4	Reduce the burden of communicable diseases
5	Promote healthier lifestyles
6	Improve our preparedness for disease outbreaks and emerging health threats

DSP 2030 deliverables	No.	2011-2015 target	2016-2020 target	2021-2025 target	2026-2030 DSP target	Risks and Assumptions
4 specialised regional hospitals	1.1	1 built in Morobe	2 in Morobe and Southern	1	1	Land is secured Access roads are built and maintained
7500 new community health posts built and fully operational	1.2	500 in the 4 regions	3000 in the 4 regions	3000	1500	Land is secured Access roads are built and maintained Trained personnel present
95% of births attended by trained health personnel	1.3	60% across the 4 regions	80% across the 4 regions	80%	95%	Access roads are built and maintained Appropriate number of health personnel available
100% of pregnant women attending antenatal clinics	3.1	65% across the 4 regions	75% across the 4 regions	75%	100%	Access roads are built and maintained Appropriate number of trained health personnel available
100% of facilities with adequate medicine supplies	3.1	60% across the 4 regions	80% across the 4 regions	80%	100%	Access roads are built and maintained

Department of Health and Department of Planning	No.	2011	2012	2013	2014	2015	2030	Funding options
Estimated inputs	1.1	3	4	0	0	0	30	GoPNG/donors
	1.2	4	5	3	2	3	100	GoPNG/donors
	1.3	4	2	3	3	3	80	GoPNG

Monitoring and evaluation will primarily take place at the following levels:

**From inputs to outputs:** have funds been spent on the desired deliverables? (Box 4 to Box 3)

**From outputs to outcomes:** are we achieving our desired developmental results? (Box 3 to Box 1)

The framework developed for each sector will be used as a reference for monitoring and evaluation activities, detailing clear targets, indicators and deliverables that are specific, measurable and time-bound.

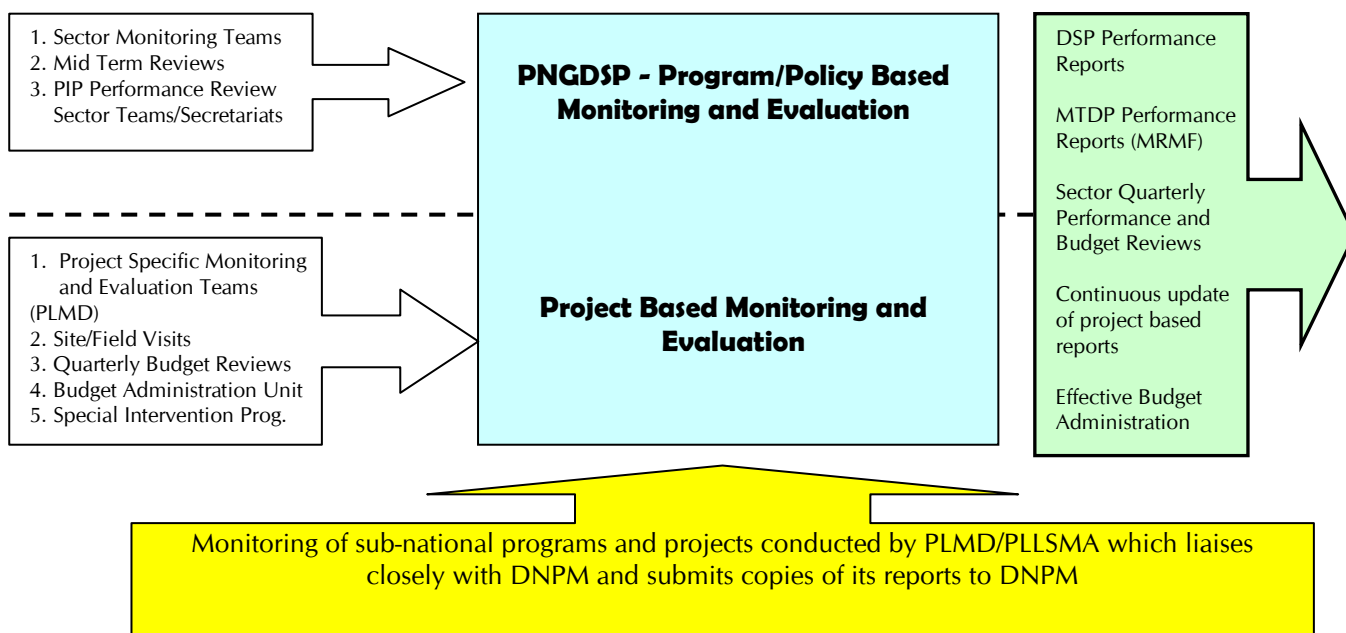
## 8.2 The Department of National Planning and Monitoring's Responsibility

The overall responsibility for monitoring and evaluation rests with the Department of Planning and Monitoring (DNPM) which reports directly to CACC and the NEC. All Departments, Agencies, Provincial and Local Level Governments, NGOs, CBOs and other stakeholders will work within this current framework.

Within the Department, monitoring and evaluation is a collaborative activity amongst its functional branches and sectors meaning that each of DNPM's divisions will be responsible for different aspects of M&E that falls within the ambit of their core responsibility. In fulfilling the Department's role and responsibilities towards the MTDP, DNPM through various technical divisions will be responsible for:

- Ensuring that all funding submissions are in the established format and contain all the necessary information to form a judgment as to the feasibility of funding proposals submitted for GoPNG Public Investment Program in line with the MTDP.
- Physical and financial monitoring of MTDP 2011-2015 implementation
- Collecting and collation of quarterly reports from implementing agencies
- Physically monitoring and verifying national projects and programs implemented on sites/location in PNG
- Disseminating lessons learnt from its monitoring function on completed programs and projects to guide further improvements in future project designs and implementation.

**Figure 1 Proposed M&E Implementation Strategy.**



### **8.3 Monitoring and evaluation within the Department of National Planning and Monitoring**

To strengthen the monitoring capacity, the Department of National Planning and Monitoring has established regional offices in Kokopo for the New Guinea Islands Region, Kundiawa for the Highlands Region, Madang for the Momase Region and Port Moresby for the Southern Region, with the view to effectively monitor project inputs and outputs. The Provincial Liaison and Monitoring Division (PLMD) will be the ‘eyes and ears on the ground’ to ensure that monies for sectoral programs and projects under the Public Investment Program, including grant and loan funded programs are used for their intended purpose.

Officers from the PLMD will carry-out regular monitoring visits and will solicit support from other line agencies, Provincial and District Administration planning offices to augment monitoring efforts. Monitoring visits will range from 7 to 10 days per month. Officers will not only focus on the quantity of project deliverables but the quality as well, ensuring that interventions are meeting target standards.

Monitoring of the relationship between outputs and outcomes will be a collaborative approach across the department, including sectoral teams, PLMD and Policy wing. Inputs from the sectoral agencies, key stakeholders and local level government will constitute an integral part of this activity.

Evaluation of expenditure will be a joint exercise between PLMD, Sectoral Teams and Policy wing, as a sequential chain of expected impacts, outcome and outputs is required to develop an evaluation report. Periodic impact assessments, with various stakeholders, and post completion review of specific projects and programs will be carried out to identify a traceable “result chain” from inputs through to impacts of these projects and programs.

The table below gives the focus areas of M&E during and after implementation of MTDP 2011-2015.

**Table 1: Areas for Monitoring and Evaluation**

<b>Financial Monitoring</b>	<b>Physical Monitoring</b>
Annual Cash Flow	Annual Work Plans
Warrants Management	Site Visits and Inspections
Expenditure Reports	Project/Program Steering Committees
Ad hoc Reports from IAs	Quarterly Reports from IAs
<b>Financial Monitoring</b>	<b>Physical Evaluation</b>
PBS/TMS Expenditure Reports	Project/Program Mid-Term Reviews and Evaluation Missions and Visits
Donors Historical Financing and Expenditure Reports	Historical Performance Reports, Impact Assessments and <i>Ex Post</i> Evaluations
<b>Results-Based M&amp;E</b>	
MTDP PMF	
Sector Investment Plans and Sector Annual Reports	
PIP Performance Reports	
MTDP MRMF	

The results of the monitoring and evaluation activities will be published annually, over the next five years, in the form of a MTDP Results Monitoring Framework (MRMF). This publication will report on the trends resulting from the government’s annual development budget expenditure and will plot the progress towards reaching the higher order DSP objectives.

## Annex 1 - Regional and provincial targets (work in progress)

### Regional and provincial targets for health

National targets in the provision of aid posts, physicians and nurses are carefully distributed across regions of PNG and across provinces within regions using a mathematical approach. This method targets equalisation in service provision across regions and provinces using formulas that take account of population and land area. For example, the 2030 target for the Southern region is for 117 aid posts per 100,000 people which is more than the national target of 76 and more than the target of 47 for the Highlands region. But the posts are distributed more sparsely in Southern region with 1156 posts per 100,000 km<sup>2</sup> compared with 1623 for PNG and 2745 for the densely populated Highlands region. The high targets with respect to population and low targets with respect to land area reflect the low density of population in Southern region.

**Table 1H - Aid post targets**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Posts per 100,000</i>	<i>Posts per 100,000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	71	94	182	335	475	136	1585
Gulf	57	75	146	270	383	188	1110
Milne Bay	115	127	174	255	330	82	2297
NCD	54	54	54	53	52	11	21863
Oro	58	75	139	250	352	139	1549
Western	105	140	274	506	719	247	732
<b>Southern</b>	<b>460</b>	<b>565</b>	<b>968</b>	<b>1668</b>	<b>2311</b>	<b>117</b>	<b>1156</b>
Eastern Highlands	138	150	196	275	349	42	3125
Enga	72	85	133	217	295	53	2520
Simbu	51	59	92	148	199	40	3260
Southern Highlands	173	197	287	445	590	57	2305
Western Highlands	90	103	152	237	314	38	3457
<b>Highlands</b>	<b>524</b>	<b>593</b>	<b>860</b>	<b>1322</b>	<b>1747</b>	<b>47</b>	<b>2745</b>
East Sepik	97	129	251	464	660	101	1519
Madang	180	201	283	425	555	80	1922
Morobe	165	197	318	528	722	70	2141
Sandaun	113	131	200	320	430	122	1201
<b>Momase</b>	<b>555</b>	<b>658</b>	<b>1052</b>	<b>1738</b>	<b>2367</b>	<b>87</b>	<b>1669</b>
Bougainville	122	127	147	182	214	64	2283
East New Britain	82	95	144	230	309	74	2021
Manus	57	57	55	52	49	59	2441
New Ireland	39	47	77	130	179	80	1874
West New Britain	95	108	158	244	324	92	1589
<b>Islands</b>	<b>395</b>	<b>434</b>	<b>582</b>	<b>839</b>	<b>1075</b>	<b>76</b>	<b>1899</b>
<b>PNG</b>	<b>1934</b>	<b>2249</b>	<b>3462</b>	<b>5567</b>	<b>7500</b>	<b>76</b>	<b>1623</b>



The MTDP targets of 2015, 2020 and 2025 for health services are calculated in a way to ensure that progress toward the 2030 targets is equal across regions and provinces. Under this approach, provinces that are under-represented in health service provision in 2010 will have a greater increase in resources made available to reach the equalisation targets of 2030 compared with the well represented provinces. For example, the 176 nurses in East Sepik province is an under-representation and by 2030 this will rise to 1715. Milne bay Province has a much lower 2030 target of 857 nurses for parity in nursing services with East Sepik, but is currently better represented with 181 nurses. As a result, by 2015, East Sepik will receive 73 additional nurses compared with 32 additional nurses for Milne Bay.

**Table 2H – Physicians**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 100,000 people</i>	<i>Per 100,000 km<sup>2</sup></i>
	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2030</b>	<b>2030</b>
Central	0	3	36	114	311	89	1035
Gulf	4	7	33	94	250	123	725
Milne Bay	13	15	37	87	215	54	1501
NCD	5	5	8	16	34	7	14284
Oro	6	8	32	88	230	91	1012
Western	7	12	61	177	470	161	478
<b>Southern</b>	<b>35</b>	<b>51</b>	<b>208</b>	<b>577</b>	<b>1510</b>	<b>76</b>	<b>755</b>
Eastern Highlands	16	18	41	94	228	28	2042
Enga	10	12	31	77	193	34	1646
Simbu	7	8	21	52	130	26	2130
Southern Highlands	12	16	56	149	385	37	1506
Western Highlands	35	37	55	98	205	25	2259
<b>Highlands</b>	<b>80</b>	<b>92</b>	<b>204</b>	<b>470</b>	<b>1141</b>	<b>30</b>	<b>1793</b>
East Sepik	17	21	66	169	431	66	992
Madang	23	27	63	148	363	52	1256
Morobe	56	61	105	209	472	46	1399
Sandaun	4	7	37	106	281	80	785
<b>Momase</b>	<b>100</b>	<b>116</b>	<b>270</b>	<b>632</b>	<b>1546</b>	<b>57</b>	<b>1090</b>
Bougainville	8	9	23	57	140	42	1492
East New Britain	31	33	51	94	202	48	1320
Manus	2	2	6	13	32	39	1595
New Ireland	7	8	20	47	117	52	1224
West New Britain	12	14	35	85	212	60	1038
<b>Islands</b>	<b>60</b>	<b>67</b>	<b>135</b>	<b>296</b>	<b>702</b>	<b>50</b>	<b>1240</b>
<b>PNG</b>	<b>275</b>	<b>325</b>	<b>817</b>	<b>1975</b>	<b>4900</b>	<b>50</b>	<b>1060</b>

**Table 3H – Nurses**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 100,000 people</i>	<i>Per 100,000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	48	104	320	694	1236	354	4120
Gulf	87	130	295	581	995	490	2886
Milne Bay	181	213	336	549	857	214	5973
NCD	54	58	73	99	136	28	56844
Oro	83	122	274	536	916	362	4028
Western	157	238	549	1088	1870	642	1904
<b>Southern</b>	<b>610</b>	<b>865</b>	<b>1845</b>	<b>3547</b>	<b>6010</b>	<b>304</b>	<b>3005</b>
Eastern Highlands	70	110	261	525	907	110	8125
Enga	104	135	256	464	767	137	6551
Simbu	111	130	204	332	518	105	8476
Southern Highlands	259	319	551	952	1533	148	5993
Western Highlands	233	261	367	551	818	98	8988
<b>Highlands</b>	<b>777</b>	<b>955</b>	<b>1638</b>	<b>2825</b>	<b>4542</b>	<b>121</b>	<b>7136</b>
East Sepik	176	249	528	1013	1715	263	3949
Madang	196	255	481	875	1444	208	4998
Morobe	310	384	668	1162	1877	183	5568
Sandaun	83	132	320	646	1119	317	3123
<b>Momase</b>	<b>765</b>	<b>1019</b>	<b>1998</b>	<b>3696</b>	<b>6154</b>	<b>226</b>	<b>4339</b>
Bougainville	130	150	228	362	557	167	5936
East New Britain	244	270	372	548	802	192	5254
Manus	53	56	70	93	127	154	6348
New Ireland	109	126	191	303	466	207	4872
West New Britain	153	186	311	528	842	240	4130
<b>Islands</b>	<b>689</b>	<b>788</b>	<b>1171</b>	<b>1834</b>	<b>2794</b>	<b>198</b>	<b>4936</b>
<b>PNG</b>	<b>2841</b>	<b>3628</b>	<b>6652</b>	<b>11901</b>	<b>19500</b>	<b>198</b>	<b>4220</b>

Equalisation in health services across provinces and regions should provide equalisation in the standard of health as measured by health indicators. However, given the current degree of disparity it is realistic to expect that health indicators might head toward parity, but not quite reach parity by 2030. With this principle in mind, targets for progress in the under 5 mortality rate are calculated where the disparity for each region is reduced by 50 per cent and similarly the disparity for each province is reduced by 50 per cent. For example, the Gulf province had an under 5 mortality rate of 133 in 2006 which is approximately 100 per cent above the rate of 67 for the Southern region. This disparity is reduced to 50 per cent in 2030 where the target of 28 is 25 per cent higher than the target of 19 for the Southern region.

The under 5 mortality rate is chosen as the key indicator because:

- it focuses on the most valuable yet vulnerable of the PNG population;

- it is a commonly referred to and measured indicator; and
- it is a sufficiently broad indicator to be a proxy for the general state of health of the population.

<b>Table 4H – Under 5 mortality rate</b>						
	<i>MTDP targets</i>					
	2006	2015	2020	2025	2030	
Central	52	39	32	24	17	
Gulf	133	97	74	51	28	
Milne Bay	81	60	47	34	21	
NCD	22	18	16	15	13	
Oro	67	50	40	29	19	
Western	77	57	45	33	20	
<b>Southern</b>	<b>67</b>	<b>50</b>	<b>40</b>	<b>29</b>	<b>19</b>	
Eastern Highlands	61	46	36	27	18	
Enga	81	60	47	34	21	
Simbu	61	46	36	27	18	
Southern Highlands	70	52	41	30	19	
Western Highlands	52	40	32	24	17	
<b>Highlands</b>	<b>64</b>	<b>48</b>	<b>38</b>	<b>28</b>	<b>19</b>	
East Sepik	96	71	55	39	23	
Madang	94	69	54	38	23	
Morobe	98	72	56	40	23	
Sandaun	136	99	75	51	27	
<b>Momase</b>	<b>101</b>	<b>75</b>	<b>58</b>	<b>41</b>	<b>24</b>	
Bougainville	62	46	37	28	18	
East New Britain	61	46	37	27	18	
Manus	49	37	30	23	16	
New Ireland	57	43	35	26	18	
West New Britain	62	46	37	28	18	
<b>Islands</b>	<b>60</b>	<b>45</b>	<b>36</b>	<b>27</b>	<b>18</b>	
<b>PNG</b>	<b>75</b>	<b>56</b>	<b>44</b>	<b>32</b>	<b>20</b>	

### **Regional and provincial targets for education**

By 2030, parity across regions and provinces will be ensured since the national target of 100 per cent net enrolment rate implies a 100 per cent net enrolment rate in each of the regions and provinces. However, there is currently an uneven performance across regions and provinces which means that more rapid progress will be required in those places where the current net enrolment rates are lowest. The mathematical method adopted is to adjust upwards or downwards the rate of progress so that all provinces and regions achieve 100 per cent net enrolment at about the same time.

For example, the net enrolment rate for PNG is expected to increase from the current level of 58 per cent to 75 per cent in 2015 – a rise of 17 percentage points. But for Oro province, a 25 percentage point rise in the net

enrolment rate will be required in recognition of the much lower starting point of a net enrolment rate of just 38 per cent.

<b>Table 1E – Net enrolment rate</b>					
	<i>Estimate</i>	<i>MTDP targets</i>			
	2010	2015	2020	2025	2030
Central	58%	75%	91%	96%	100%
Gulf	42%	65%	88%	94%	100%
Milne Bay	69%	81%	93%	97%	100%
NCD	66%	80%	93%	96%	100%
Oro	38%	63%	87%	93%	100%
Western	61%	76%	92%	96%	100%
<b>Southern</b>	<b>58%</b>	<b>75%</b>	<b>91%</b>	<b>96%</b>	<b>100%</b>
Eastern Highlands	51%	70%	90%	95%	100%
Enga	60%	76%	91%	96%	100%
Simbu	40%	64%	87%	94%	100%
Southern Highlands	55%	73%	90%	95%	100%
Western Highlands	51%	70%	89%	95%	100%
<b>Highlands</b>	<b>50%</b>	<b>69%</b>	<b>89%</b>	<b>95%</b>	<b>100%</b>
East Sepik	51%	70%	89%	95%	100%
Madang	45%	67%	88%	94%	100%
Morobe	50%	70%	89%	95%	100%
Sandaun	40%	63%	87%	94%	100%
<b>Momase</b>	<b>47%</b>	<b>68%</b>	<b>89%</b>	<b>94%</b>	<b>100%</b>
Bougainville	68%	81%	93%	97%	100%
East New Britain	67%	80%	93%	96%	100%
Manus	66%	79%	93%	96%	100%
New Ireland	62%	77%	92%	96%	100%
West New Britain	67%	80%	93%	96%	100%
<b>Islands</b>	<b>66%</b>	<b>80%</b>	<b>93%</b>	<b>96%</b>	<b>100%</b>
<b>PNG</b>	<b>53%</b>	<b>72%</b>	<b>90%</b>	<b>95%</b>	<b>100%</b>

Teacher numbers for each province and region are calculated by applying the enrolment rate targets of table 1E to projections for the school age population. An assumption is applied that average teacher-student ratios will be the same across regions and provinces – which is consistent with the goal of equality in the provision of education services across regions and provinces. This approach will see provinces with the lowest education outcomes receive a more rapid increase in teachers.

**Table 2E – Teachers**

	<i>Estimate</i>	<i>MTDP targets</i>			
	2010	2015	2020	2025	2030
Central	808	1152	1494	1726	1996
Gulf	354	609	877	1035	1220
Milne Bay	1076	1407	1719	1961	2240
NCD	1049	1400	1736	1986	2276
Oro	397	721	1063	1260	1490
Western	735	1027	1316	1516	1748
<b><i>Southern</i></b>	<b>4419</b>	<b>6315</b>	<b>8205</b>	<b>9485</b>	<b>10972</b>
Eastern Highlands	1507	2333	3180	3713	4334
Enga	964	1473	1993	2323	2708
Simbu	959	1347	1731	1996	2304
Southern Highlands	1453	2573	3756	4443	5246
Western Highlands	1577	2314	3058	3547	4116
<b><i>Highlands</i></b>	<b>6460</b>	<b>10041</b>	<b>13718</b>	<b>16021</b>	<b>18707</b>
East Sepik	1356	2090	2841	3315	3868
Madang	1290	2125	2994	3518	4130
Morobe	1938	3003	4097	4783	5583
Sandaun	578	1026	1498	1772	2093
<b><i>Momase</i></b>	<b>5161</b>	<b>8244</b>	<b>11431</b>	<b>13389</b>	<b>15675</b>
Bougainville	934	1228	1508	1721	1968
East New Britain	1102	1468	1819	2080	2384
Manus	215	287	357	408	468
New Ireland	571	786	996	1145	1318
West New Britain	950	1265	1568	1793	2055
<b><i>Islands</i></b>	<b>3772</b>	<b>5034</b>	<b>6246</b>	<b>7148</b>	<b>8192</b>
<b><i>PNG</i></b>	<b>19812</b>	<b>29635</b>	<b>39600</b>	<b>46043</b>	<b>53545</b>

The target number of schools in each region and province is calculated using a mathematical approach for equity that takes account of land area as well as student numbers. A greater weighting is given to student numbers, but this approach does allow for an upward adjustment of school numbers in less densely populated areas. By doing this, children in less densely populated areas will be closer to their school, and schools will tend to be smaller. For example, in Western Province the target for 2030 is for small average school sizes of 146 compared with 496 for NCD and the average for Southern Region of 189. By taking account of land area and reducing average school sizes, there will be 4.4 schools per 1000 km<sup>2</sup> for Western Province instead of 3.4 if land area were not taken account of.

The MTDP target number of schools for 2015, 2020 and 2025 are calculated so that the rate of progress toward the 2030 targets is equal across regions and provinces. This approach means that provinces that are under-represented in schools in 2010 will have a greater increase in school numbers compared with provinces already with good representation of schools. Enga Province, for example, is under represented with just 60

schools, but this will increase by 103 to reach 163 schools by 2015. New Ireland Province begins the MTDP period with healthier school numbers, so a much smaller rise in numbers of 27 will be targeted to reach 156 schools in 2015.

**Table 3E – Schools**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 1000 children</i>	<i>Schools per 1000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	150	242	334	380	431	164	14.6
Gulf	110	167	225	254	285	155	8.2
Milne Bay	186	270	356	398	445	182	30.9
NCD	54	90	127	145	165	498	685.6
Oro	114	184	255	290	329	164	14.4
Western	202	277	353	390	432	146	4.4
<b>Southern</b>	<b>816</b>	<b>1230</b>	<b>1651</b>	<b>1857</b>	<b>2087</b>	<b>189</b>	<b>10.4</b>
Eastern Highlands	246	352	459	512	570	274	51.1
Enga	60	163	267	318	375	260	32.1
Simbu	146	198	250	275	304	273	49.7
Southern Highlands	230	395	562	644	735	257	28.7
Western Highlands	191	302	415	471	532	278	58.5
<b>Highlands</b>	<b>873</b>	<b>1409</b>	<b>1953</b>	<b>2220</b>	<b>2517</b>	<b>268</b>	<b>39.5</b>
East Sepik	230	373	518	589	668	208	15.4
Madang	180	343	509	590	680	219	23.6
Morobe	311	505	701	797	905	222	26.8
Sandaun	202	258	316	344	375	201	10.5
<b>Momase</b>	<b>923</b>	<b>1479</b>	<b>2043</b>	<b>2320</b>	<b>2628</b>	<b>215</b>	<b>18.5</b>
Bougainville	216	244	272	286	302	235	32.1
East New Britain	161	231	303	338	377	228	24.7
Manus	85	80	76	73	71	238	35.4
New Ireland	129	156	183	196	211	225	22.1
West New Britain	182	233	285	311	339	218	16.6
<b>Islands</b>	<b>773</b>	<b>945</b>	<b>1119</b>	<b>1205</b>	<b>1300</b>	<b>227</b>	<b>23.0</b>
<b>PNG</b>	<b>3385</b>	<b>5063</b>	<b>6766</b>	<b>7602</b>	<b>8532</b>	<b>226</b>	<b>18.5</b>

### **Regional and provincial targets for law and order**

The key regional and provincial targets in the MTDP for government services to tackle law and order include police, police stations, village courts and magisterial staff. The target for each of these is determined using a mathematical approach to equalise service delivery across regions and provinces by 2030. The main factor in determining the targets is population but land area also has some influence. This ensures a balanced approach which provides for people in sparsely populated areas to be able to access law and order services. The greater emphasis on population explains why, for example, in table 1L there is much greater variation in the 2030 target for police per 100,000 km<sup>2</sup> than in police per 100,000 people.

**Table 1L – Police**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 1000 people</i>	<i>Per 1000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	308	445	645	803	1094	3.1	36.5
Gulf	140	234	371	479	678	3.3	19.7
Milne Bay	224	382	613	796	1132	2.8	78.9
NCD	280	332	407	467	577	1.2	2402.3
Oro	224	324	469	583	795	3.1	35.0
Western	252	388	585	742	1030	3.5	10.5
<b>Southern</b>	<b>1430</b>	<b>2105</b>	<b>3091</b>	<b>3869</b>	<b>5305</b>	<b>2.7</b>	<b>26.5</b>
Eastern Highlands	252	522	917	1228	1803	2.2	161.6
Enga	280	455	710	911	1283	2.3	109.6
Simbu	224	372	587	757	1071	2.2	175.2
Southern Highlands	308	675	1210	1633	2412	2.3	94.3
Western Highlands	365	613	975	1261	1789	2.1	196.7
<b>Highlands</b>	<b>1430</b>	<b>2636</b>	<b>4400</b>	<b>5791</b>	<b>8358</b>	<b>2.2</b>	<b>131.3</b>
East Sepik	280	528	890	1175	1702	2.6	39.2
Madang	308	556	917	1202	1727	2.5	59.8
Morobe	701	1012	1467	1826	2488	2.4	73.8
Sandaun	252	375	554	696	957	2.7	26.7
<b>Momase</b>	<b>1542</b>	<b>2471</b>	<b>3827</b>	<b>4898</b>	<b>6873</b>	<b>2.5</b>	<b>48.5</b>
Bougainville	28	161	356	509	792	2.4	84.4
East New Britain	224	363	567	727	1023	2.4	67.0
Manus	28	57	99	132	193	2.3	96.5
New Ireland	168	236	336	414	559	2.5	58.4
West New Britain	308	411	561	679	897	2.6	44.0
<b>Islands</b>	<b>757</b>	<b>1228</b>	<b>1917</b>	<b>2461</b>	<b>3464</b>	<b>2.5</b>	<b>61.2</b>
<b>PNG</b>	<b>5160</b>	<b>8440</b>	<b>13235</b>	<b>17019</b>	<b>24000</b>	<b>2.4</b>	<b>51.9</b>

The interim 2015, 2020 and 2025 MTDP targets for each of the four law and order service indicators are calculated so that progress is proportional to the national level. This means that those regions and provinces for which the greatest rate of increase in law and order services is required by 2030 will also have the greatest rate of increase in each of the MTDP periods. The number of police stations in Madang, for example, will rise more rapidly than most other provinces from 11 in 2010 to 62 by 2030 – in recognition of the current under-representation of police resources. By 2015 there will be 9 additional stations. This compares with the better represented West New Britain which will have 4 additional stations in 2015 to the 11 stations that are there currently.

**Table 2L – Police stations**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 100,000</i>	<i>Per 100,000</i>
	2010	2015	2030	2030	2030	2030	km <sup>2</sup> 2030
Central	11	16	23	29	39	11.2	130.0
Gulf	5	8	13	17	24	11.9	70.2
Milne Bay	8	14	22	28	40	10.1	281.4
NCD	10	12	15	17	21	4.3	8566.3
Oro	8	12	17	21	28	11.2	124.7
Western	9	14	21	26	37	12.6	37.4
<b>Southern</b>	<b>51</b>	<b>75</b>	<b>110</b>	<b>138</b>	<b>189</b>	<b>9.6</b>	<b>94.6</b>
Eastern Highlands	9	19	33	44	64	7.8	576.2
Enga	10	16	25	32	46	8.2	390.8
Simbu	8	13	21	27	38	7.7	624.8
Southern Highlands	11	24	43	58	86	8.3	336.2
Western Highlands	13	22	35	45	64	7.6	701.3
<b>Highlands</b>	<b>51</b>	<b>94</b>	<b>157</b>	<b>207</b>	<b>298</b>	<b>7.9</b>	<b>468.2</b>
East Sepik	10	19	32	42	61	9.3	139.7
Madang	11	20	33	43	62	8.9	213.2
Morobe	25	36	52	65	89	8.7	263.2
Sandaun	9	13	20	25	34	9.7	95.2
<b>Momase</b>	<b>55</b>	<b>88</b>	<b>136</b>	<b>175</b>	<b>245</b>	<b>9.0</b>	<b>172.8</b>
Bougainville	1	6	13	18	28	8.5	301.1
East New Britain	8	13	20	26	36	8.7	238.9
Manus	1	2	4	5	7	8.4	344.1
New Ireland	6	8	12	15	20	8.9	208.4
West New Britain	11	15	20	24	32	9.1	156.9
<b>Islands</b>	<b>27</b>	<b>44</b>	<b>68</b>	<b>88</b>	<b>124</b>	<b>8.8</b>	<b>218.2</b>
<b>PNG</b>	<b>184</b>	<b>301</b>	<b>472</b>	<b>607</b>	<b>856</b>	<b>8.7</b>	<b>185.2</b>



**Table 3L – Magistrates**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 100,000 people</i>	<i>Per 100,000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	3	6	11	14	21	5.9	69.2
Gulf	1	3	6	9	13	6.3	37.4
Milne Bay	1	5	10	14	21	5.4	149.9
NCD	1	3	6	7	11	2.3	4562.5
Oro	1	4	7	10	15	6.0	66.4
Western	1	4	9	13	20	6.7	19.9
<b><i>Southern</i></b>	<b>9</b>	<b>25</b>	<b>48</b>	<b>67</b>	<b>101</b>	<b>5.1</b>	<b>50.4</b>
Eastern Highlands	5	10	18	24	34	4.2	306.9
Enga	13	15	18	20	24	4.3	208.2
Simbu	9	11	14	16	20	4.1	332.8
Southern Highlands	15	20	28	34	46	4.4	179.1
Western Highlands	8	13	19	24	34	4.1	373.5
<b><i>Highlands</i></b>	<b>50</b>	<b>69</b>	<b>97</b>	<b>118</b>	<b>159</b>	<b>4.2</b>	<b>249.4</b>
East Sepik	8	13	19	23	32	5.0	74.4
Madang	5	10	17	22	33	4.7	113.6
Morobe	3	11	22	31	47	4.6	140.2
Sandaun	3	6	10	13	18	5.1	50.7
<b><i>Momase</i></b>	<b>20</b>	<b>39</b>	<b>67</b>	<b>89</b>	<b>131</b>	<b>4.8</b>	<b>92.0</b>
Bougainville	10	11	12	13	15	4.5	160.3
East New Britain	3	6	10	13	19	4.6	127.2
Manus	4	4	4	4	4	4.4	183.3
New Ireland	1	3	5	7	11	4.7	111.0
West New Britain	2	5	8	11	17	4.9	83.6
<b><i>Islands</i></b>	<b>19</b>	<b>27</b>	<b>39</b>	<b>49</b>	<b>66</b>	<b>4.7</b>	<b>116.2</b>
<b><i>PNG</i></b>	<b>98</b>	<b>160</b>	<b>251</b>	<b>323</b>	<b>456</b>	<b>4.6</b>	<b>98.6</b>

**Table 4L – Village Courts**

	<i>Estimate</i>	<i>MTDP targets</i>				<i>Per 1000 children</i>	<i>Schools per 1000 km<sup>2</sup></i>
	2010	2015	2020	2025	2030	2030	2030
Central	41	78	132	174	252	72	841
Gulf	14	39	75	104	157	77	454
Milne Bay	14	57	120	170	261	65	1820
NCD	18	38	67	90	133	28	55423
Oro	14	43	87	121	183	73	807
Western	10	50	108	153	238	82	242
<b>Southern</b>	<b>111</b>	<b>305</b>	<b>588</b>	<b>811</b>	<b>1224</b>	<b>62</b>	<b>612</b>
Eastern Highlands	64	125	215	286	416	51	3728
Enga	157	181	217	244	296	53	2529
Simbu	107	131	167	195	247	50	4043
Southern Highlands	180	246	341	417	557	54	2175
Western Highlands	98	153	233	296	413	49	4538
<b>Highlands</b>	<b>606</b>	<b>836</b>	<b>1173</b>	<b>1438</b>	<b>1928</b>	<b>51</b>	<b>3029</b>
East Sepik	103	153	227	285	393	60	904
Madang	56	116	203	272	399	57	1380
Morobe	39	132	268	376	574	56	1703
Sandaun	41	72	118	154	221	63	616
<b>Momase</b>	<b>239</b>	<b>473</b>	<b>816</b>	<b>1087</b>	<b>1586</b>	<b>58</b>	<b>1118</b>
Bougainville	116	128	145	158	183	55	1948
East New Britain	41	75	125	164	236	56	1545
Manus	44	44	44	44	45	54	2227
New Ireland	11	31	61	85	129	57	1348
West New Britain	23	55	102	139	207	59	1015
<b>Islands</b>	<b>235</b>	<b>333</b>	<b>477</b>	<b>590</b>	<b>799</b>	<b>57</b>	<b>1412</b>
<b>PNG</b>	<b>1190</b>	<b>1947</b>	<b>3054</b>	<b>3927</b>	<b>5537</b>	<b>56</b>	<b>1198</b>