

ITTO PROJECT PD391/06 REV.2 (M)

“PROMOTING AND CREATING MARKET DEMAND FOR CERTIFIED TROPICAL WOOD AND VERIFIED LEGAL TROPICAL WOOD”

EVALUATION OF SOCIAL AND ENVIRONMENTAL RISKS ACCOMPANYING THE PROCUREMENT OF TIMBER FROM PAPUA NEW GUINEA

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FRIENDS OF THE EARTH JAPAN
GLOBAL ENVIRONMENTAL FORUM



 **FoE Japan**



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The Friends of the Earth Japan (FoE Japan) is a member of Friends of the Earth International. FoE Japan has been tackling problems such as global warming, deforestation, and development aid to the Third World in Tokyo, Japan since 1980.

The Global Environmental Forum is a non-profit organization located in Tokyo, Japan. Since its foundation in May 1990, the Global Environmental Forum has actively engaged in many research projects on deforestation, desertification, 3R (reduce, reuse, recycle) issues as well as corporate social responsibilities.

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Front and back covers: Forest of Papua New Guinea
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ACRONYMS

AAC	Annual Allowable Cut
CELCOR	Centre for Environmental Law and Community Rights
DEC	Department of Environment and Conservation
EFF	Eco-Forestry Forum
FAO	Food and Agriculture Organizations of the United Nations
FCA	Forest Clearance Authority
FCP	Forestry and Conservation Project
FCPRT	Forestry and Conservation Project Review Team
FMA	Forest Management Agreement
FOB	Free on Board
FORCERT	Forest Management and Production Certification Service Ltd
FPCD	Foundation for Peoples and Community Development
GPAL	Governance Promotion and Adjustment Loan
IFRT/IRT	Independent Forestry Review Team/Independent Review Team
ILG	Incorporated Land Group
IMF	International Monetary Fund
IRT	Independent Review Team
ITTO	International Tropical Timber Organization
JICA	Japan International Cooperation Agency
LFA	Local Forest Area
MRV	Measuring, Reporting and Verifying
NEC	National Executive Council
NFB	National Forest Board
NFCAP	National Forest Conservation Action Programme
NFI	National Forest Inventory
NFP	National Forest Policy
NFS	National Forest Service
PFMC	Provincial Forest Management Committee
PNG	Papua New Guinea
PNGFA	Papua New Guinea Forest Authority
PNGFIA	Papua New Guinea Forest Industries Association
REDD	Reducing Emission from Deforestation and Forest Degradation
REDD+	Reducing Emissions from Deforestation and Forest Degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
RT	Review Team
SABLs	Special purpose Agriculture and Business Leases
SGS	Société Generale de Surveillance
TA	Timber Authority

TLTV	Timber Legality and Traceability Verification
TP	Timber Permit
TR	Timber Right
TRP	Timber Right Purchase

EXECUTIVE SUMMARY

INTRODUCTION

Background and Objectives

The background to this study is concerns that have been raised over the years of the social and environmental impacts of timber operations in Papua New Guinea (PNG). The aims of this report are to examine social and environmental risks inherent in the procurement of timber from PNG and to review current initiatives and trends towards legal verification and sustainability certification in PNG from the perspective of whether these reduce the social and environmental risks of timber procurement.

Methodology

The report is based on the review of existing written materials and information gathered through interviews with key informants in PNG during the visits by the authors to PNG in 2009 and 2010.

FOREST MANAGEMENT FRAMEWORK IN PNG

History and Background of the Current Management System

The current forestry-related legislation and administrative system in PNG was established in the early 1990s reform of the legislation and the system inherited from colonial times. Criticisms of forestry practice had emerged in the 1980s highlighting a range of problems including forest degradation, illegal activities by logging companies and corruption. The reforms were aimed at establishing sustainable forestry and an equitable system of forest administration.

Laws Relating to Forestry

The legislative framework in PNG includes the following policy, laws and regulations:

- The National Forest Policy (NFP) which was promulgated in September 1991 and

established the objectives and strategies of forest management in PNG including adoption of the principle of “sustained yield”;

- The Forestry Act of 1991 which was promulgated in June 1992, to provide PNG’s new legal framework for forest management including the incorporation of the Papua New Guinea Forest Authority (PNGFA);
- The Logging Code of Practice (1996) which lays out the details of the practical operational methods.

Forest Management Administrations

The following are the major forestry-related administrative individuals/organizations in PNG.

- The Minister for Forestry: responsible for forest-related matters but does not have direct control over the routine forest administrations.
- The PNGFA: an independent administrative organization established in 1993 and responsible for overall administration of forest. It consists of:
 - (1) The National Forest Board (NFB), a decision-making body composed of eight members representing the Government Departments and other stakeholders;
 - (2) The National Forest Service (NFS), an executing body comprised of the Managing Director and six directorates.
- The Provincial Forest Management Committees (PFMC): consultative committees serving the provincial governments and customary landowners.
- The Department of Environment and Conservation (DEC): a Government

Department responsible for implementation of the Environment Act 2000.

Forest Development System

97% of PNG's land and 99% of its forests are communally owned. Forestry development projects begin with identifying the customary landowners of the project area and acquiring the development right. The forestry development system has changed over time in the way that rights can be acquired from landowners.

(1) Timber Rights Purchase: TRP (Colonial times - 1991)

The government acquired the right to log timbers on the land from the customary landowners, and then transferred the right to developers issuing Timber Permits (TP).

(2) The Local Forest Area: LFA (1971 - 1991)

The Forestry [Private Dealing] Act 1971 enabled landowners to directly sell logging rights on their land declared as "LFA" to developers.

(3) The Forest Management Agreement: FMA (1992 - the present)

Under the Forestry Act 1991 the PNGFA concludes a FMA to obtain the right from landowners to implement forest management. The PNGFA re-transfers the right to the developer who is successful with the tender and issues a TP.

(4) Timber Authority: TA

TAs are issued for small-scale selective logging operations for the domestic market.

(5) Forest Clearance Authority: FCA

FCAs are issued for large scale clear-cut operations for road development or forest conversions to agricultural lands.

Forest Development Approval Process under FMA

The approval process under the FMA is called the "34 steps", which includes the following key steps:

- Resource investigation (Forest Inventory)
- Explanations to landowners (Landowner awareness raising)
- Establishment of Incorporated Land Group (ILG), a legal body representing land owners
- Conclusion of the FMA between the PNGFA and the ILG
- Project guidelines development with the participation of landowners
- Opening for bidding (Call for Project Proposal to the candidate developers)
- Project Agreement signed
- Obtaining the approval for the Environmental Plan by the DEC
- Issuance of TPs

The Implementation and Monitoring System of Forestry-Related Laws

The PNGFA and the DEC are the primary institutions responsible for enforcement of the forestry-related laws and monitoring of the logging operations. The field inspectors of the PNGFA monitor the logging operation on the sites and verify whether the operation has been completed in compliance with approved logging plans and the operation standards. The DEC reviews and approves the Environmental Plans submitted by the developers prior to the issuance of TPs. The DEC is also responsible for the on-site environmental monitoring and supervision of the logging operations.

The Timber Export Monitoring System

This system was introduced in 1994 and requires exporters to receive inspection and certification by a third party with regard to the place of origin, species, volume and price of timber. The inspection is currently carried out by the Société Generale de Surveillance (SGS)¹.

¹ SGS is the world's leading inspection, verification, testing and certification company

RISK ASSESSMENT REGARDING THE POLITICAL SYSTEM AND GOVERNANCE

The weakness of the political system and governance presents a threat to social justice and order in PNG. Insufficient law enforcement results in illegal activities and causes a wide-range of threats to the environment and society. Moreover, if someone buys logs harvested in a situation of inadequate administrative control, their purchase may discourage other people's effort to tighten the control and consequently increase the threats to the society and the environment.

The Legal and Administrative Enforcement Systems

There is general agreement that the forestry related legislative system in PNG is sufficient; the Independent Review Team (IRT) states that PNG Government has all the necessary policies, laws, regulations and guidelines (2003/2004 Review Team 2004) and an ITTO Diagnostic Mission concluded that the main concern is the capacity of PNG Government to monitor and enforce its own laws (ITTO 2007).

The performance of both the PNGFA and the DEC is problematic:

- The PNGFA has 130 field inspectors but the number is insufficient to cover 11,366,000 ha of forests for which Timber Rights (TRs) have been issued (ITTO 2007). The PNGFA itself emphasizes that due to the lack of adequate funding, the agencies cannot adequately monitor and manage the activities of logging companies (PNGFA 2009).
- The DEC has no field officers available at

the logging sites. The Independent Review mentions that there is a consistent lack of the DEC's field monitoring and control in the forestry sector (2003/2004 Review Team 2004).

Issues Relating to the Permit Process

It appears that adequate processes are being taken with regard to the issuance and renewal of TPs issued by the administrative institutions. However, some of the critical steps such as adequate explanations to landowners and inventories assessment are not being fully implemented.

(1) Forest development approval process under the FMA

The findings of the IRT are:

- The quality of landowner-awareness work is being compromised, or sometimes even overlooked;
- The work being done in incorporating ILGs is uniformly poor (IFRT 2001);
- There has been insufficient forest inventory resulting in unreliable forest resource descriptions (IFRT 2001).

(2) Projects for which permits were issued under the former Forestry Act

The Forestry Act 1991 saved and deemed old TPs issued under the former Forestry Act to be valid until the original expiry dates. There were no provisions for the extension of old TPs upon expiry of the original term, but the IRT found that some projects operating with old TPs already had their TPs extended. The IRT therefore questions the legality of these processes (2003/2004 Review Team 2004). As old TPs often allow excessive annual cut, the extension matter had been a controversial issue till the amendment to the Forestry Act, which was published in 2005, finally allowed those old TPs to be extended within the validity of TRPs.

which operates a network of over 1,250 offices and laboratories around the world.

Fraud and Corruption

With regard to fraud, there has been no definite case reported. The Independent Review Team however reported many suspicious cases, proposing closer investigations.

In the submission to the Inquiry by an Australian Senate Committee made on behalf of the PNG Forest Industries Association (PNGFIA) in 2008, ITS Global, a consulting firm, noted the existence of corruption problems at both the national and provincial government levels. They also stated that up to 40 % of the PNG national budget might be stolen.

Conclusions

From the above observations, it can be concluded that the forestry administration in PNG continues to suffer from poor governance and is under-resourced, and thus a certain level of inherent risk must be acknowledged with timber procurement from PNG.

RISK ASSESSMENT IN THE AREA OF THE ENVIRONMENT AND ECOSYSTEMS

Biological Diversity and Ecosystem

Since scientific research on PNG's biodiversity is insufficient, the exact status of biodiversity in PNG is unknown. In fact the most recent literature, *Papua New Guinea's Fourth National Report to the Convention on Biological Diversity* submitted in 2010 states "Papua New Guinea is yet to develop a species or ecosystem database to determine conservation status and trends of species and ecosystems" (GoPNG 2010).

There is general agreement that the most significant threat posed to PNG's biodiversity value stems from the degradation of terrestrial habitats by the total or partial removal of natural forest cover (World Bank 2002).

Decrease and Degradation of Forest Resources

The area of intact forest cover was 33 million hectares in 1972. In 2002, according to a study by Shearman et al. (2008), this figure had decreased to 25.3 million hectares. The study found that of the 7.9 million hectares of the forest lost, 5 million hectares (or 15%) was lost through deforestation and the remainder through degradation.

Shearman et al. (2009) also estimated that 11% out of 15% of total forest decrease was from the conversion of forest land for subsistence agriculture, while forestry was responsible for 3%. However, they concluded that forestry was solely responsible for degradation, and thus that when forest decrease and degradation are combined, logging is the main cause of forest loss.

There are several answers as to how and why logging continues to be a cause of forest decrease and degradation even after the establishment of policies aiming at sustainable yield. First, it is notable that even now many large logging projects have been operated under the old TPs that permit excessive Annual Allowable Cuts (AAC). Second, even for the projects permitted under the Forestry Act, in many cases the AACs exceed the sustainable yield as they are based upon inadequate inventories assessment. The third and probably the most decisive cause is the inadequate operational method which destroys residual tree crops and damages soils and saplings.

Environmental Administration

There is a consistent lack of DEC field monitoring and control in the forestry sector, while breaches of the Logging Code of Practice were often overlooked by the PNGFA Inspection Supervisors (2003/2004 Review Team 2004). It is reported that the ecological effects of selective logging on PNG's rainforests

are neither quantified nor documented properly (Shearman et al. 2008). Lacking adequate monitoring on site and scientific data for the impact of logging operations on the environment, it is next to impossible for the government to lead the industry towards sustainable forestry in PNG.

Conclusions

It is certain that existing logging operations have negatively impacted the forests in PNG, undermining them as wildlife habitats and posing threats to biodiversity. The major cause of forest decrease and degradation is the inadequate operational methods damaging lower plant cover, the soil, and young trees which the PNGFA and the DEC have not been able to respond to.

RISK ASSESSMENT OF PEOPLE'S LIVES AND RIGHTS

It is essential to look into the impacts of large scale logging operations on the lives of local people so as to assess the social risks the logging involves.

Transfer of TRs and Forest Management Rights

Customary land ownership is guaranteed under the Constitution of PNG. Thus, forest development projects start with the government securing the timber rights from the customary landowners. As the property rights remain with the land-owning clans, they can stay in their homeland even after transferring the TRs. In exchange for the TRs the customary landowners receive financial compensation and other benefits.

The Problem of Consent from Landowners

The main concern is whether or not landowners have given their Free and Prior Informed Consent based on full understanding of the nature of the agreement in the process of the

Government's acquisition of TRs. The summary report of the first Independent Review states that "The quality of the land owner awareness work is being compromised, or sometimes even overlooked, and it cannot be said that landowners are making an informed decision or that their expectations are likely to be met" (IFRT 2001).

In many cases landowners do not understand the nature of the contracts that are signed in their name or their rights and obligations under those agreements (Forest Trends 2006). Given the lack of field officers in the NFS, it is most likely that there is no sufficient explanation given to landowners. The complexity of social conditions in PNG, such as communal land-ownership and the large number of local languages, also makes it difficult for the administration to secure understanding and consent.

Payment of Financial Compensation

The basic compensation is Timber Royalty, which is based on the timber volume scaled. The current royalty payment is K10.00/m³ (approximately US\$ 3) for all logs. The IRT found that the landowners received their royalty payments from the PNGFA without problems (2003/2004 Review Team 2004). According to the IRT, under the prevailing FOB (Free on Board) log price at the time of their review, landowners' secure about 10% of FOB revenue on average, compared to the Government's 30% and industry's 60% (ibid.).

Problems of benefit distribution exist within the clans. The royalties are collected from logging companies by the PNGFA who pays them to the clan agents or ILGs usually in one payment (2003/2004 Review Team 2004). This has caused many grievances for resource owners who claim that there is no transparency or accountability in how the money is distributed (Forest Trends 2006).

Provision of Additional Benefits

Additional benefits landowners receive include infrastructure development such as roads, bridges, schools and hospitals. Developers are required to provide them as part of their specified obligations under the contracts with the Government. The IRT, however, found that in many cases the required infrastructure had not been delivered, or was not up to the expected standard.

Impacts on Local Communities

Regarding the financial impacts of logging operations on local communities, the Independent Review states that benefits are too small to result in any long term improvements in socio-economic welfare and logging has little long term beneficial impact on landowners, although they bear the environmental costs (2003/2004 Review Team 2004).

Reports on Conflicts and Violence

Regarding the cases of conflicts and violence, the IRT reported some cases where police stationed at logging sites were perceived to act as company police, rather than ensuring the observance of PNG laws and the protection of PNG citizens (2003/2004 Review Team 2004). At five logging project sites, landowners and workers stated to the IRT that they have been hit or threatened by the police force because of making complaints against management conditions (ibid.).

Conclusions

Forest development projects have had certain negative impacts on the people's lives and rights in PNG, although they have also brought some benefits. There are thus some social risks with the procurement of the timbers from large scale logging operations in PNG where independent legality/sustainability verification has not been pursued.

RECENT CHANGES IN PNG'S FOREST MANAGEMENT

The examination based on the Independent Reviews revealed various problems surrounding the forestry in PNG and risks related to the governance, the environment and the society existing at the time of the Reviews. What has happened since then?

The Failure of the FCP and the Withdrawal of the World Bank

Two projects focused on governance reform were launched after 1999, as initiatives by the then Prime Minister Morauta and the World Bank:

- Governance Promotion and Adjustment Loan (GPAL) (2000–2001) – a loan of US\$ 90 million aimed at strengthening the overall administrative capabilities.
- The Forest Conservation Project (FCP) (2002–2005) – a project focused on forest-related issues including the strengthening of enforcing capacities of the NFS and the DEC.

After the present Prime Minister Sir Somare took over power from Sir Morauta in August 2002, conflict between the export driven economic policy of the new government and the World Bank became more severe. In June 2005, the FCP was cancelled after PNG government notified the World Bank that it did not want further Bank involvement in PNG's forest sector (World Bank 2006). The Independent Reviews were implemented in conjunction with this FCP project and preceding the GPAL project.

Recent Movements in the Government Sector

(1) Policies:

The PNGFA developed three new policies, i.e., Downstream Processing Policy,

Reforestation Policy and Eco-forestry Policy. These policies have potential to reduce the pressure of logging on natural forests although they seem to be not prioritized by the PNG government.

(2) Amendments of Laws:

Forestry (Amendment) Act 2007 - amendments on the sections related to large scale forest conversion for agriculture and road constructions (§ 90A/B/C) which has facilitated Agro-Forestry projects in conjunction with § 11 / § 102 of The Land Act (1996).

(3) The law enforcement capabilities:

With regard to monitoring and law enforcement there seems to be no significant improvement. The PNGFA states in its 2009 Report “Due to the lack of adequate funding, agencies cannot adequately monitor and manage the activities of logging companies and others involved in the forestry sector” (PNGFA 2009).

REDD

REDD (Reducing Emissions from Deforestation and Forest Degradation) was first introduced into the United Nations Framework Convention on Climate Change (UNFCCC) by PNG and Costa Rica at the 11th Convention of the Parties (COP) in 2005. The Government of PNG is giving priority to policy development on climate change, especially REDD+ (REDD plus the role of conservation, sustainable management of forests, and enhancement of carbon stocks). The PNGFA considers that REDD+ is the best option to lower the speed of deforestation and degradation in PNG (PNGFA 2009).

Decision 1/CP.16 adopted at the 16th COP on December 10, 2010, the so-called Cancun Agreement, established a basic framework for

REDD+ that requires developing countries to address forest governance issues and to establish robust MRV (Measuring, Reporting and Verification) systems. Responding to this development, UN-REDD and the Government of PNG launched a 3-year joint program from January 1, 2011, aiming to establish an operational MRV system, with a budget of US \$ 3.4 million. The PNGFA is deeply involved in this program (UN-REDD 2011), which provides an important opportunity for the PNGFA to reinforce its monitoring system.

Emerging Threats to the Forest

Large scale conversion of forest to agricultural lands or oil palm plantations has been increasing dramatically and is now a major threat to forest cover in PNG. This new type of forest conversion project is referred to as “agro-forestry” or the “SABL” (Special purpose Agriculture and Business Leases) and is based on lease-leaseback arrangements under the Land Act. This became permissible after the relevant amendments of the Forest Act were undertaken in 2007.

The UN-REDD Joint Program Document states that as of August 2010, applications for agricultural lease-leaseback arrangements amounted to a total of 2.7-2.9 million hectares (9-10 percent of existing forest cover), and that these have been submitted and approved by the Department of Lands and Physical Planning as agroforestry projects. Of this area, 0.8 million hectares have received a FCA from the PNGFA (UN-REDD 2011).

In addition to their detrimental impact on the forest and environment due to the vastness of the conversion area, the SABLs have been violating indigenous peoples’ property rights as a majority of these leases were obtained without the consent of customary land owners.

Under increasing pressure of the criticisms against the negative aspects of the SABLs, the Acting Prime Minister, Sam Abal, announced an immediate moratorium on the issuing of new SABLs and the launch of an official inquiry on May 5, 2011. The Commission of Inquiry (CI) will investigate whether the SABLs have been granted following all legal requirements and whether the leases are being used for the purposes intended in the legislation and all FCAs granted under the existing leases would be suspended until the CI process had been completed (Post-Courier Online, May 6, 2011). However as of June 9, 2011, the CI had still not formally convened (Ecological Internet, June 9, 2011).

The Legality Verification System and Forest Certification by the Private Sector

Third-party legality verification or certification systems can complement forest governance through the market mechanism subject to consumers' consciousness of environmental and social risk inherent to the forest products.

(1) FSC certification

In PNG, the share of total timber production that is certified is extremely low, and the Forest Stewardship Council (FSC) is the only forest certification scheme with a presence. The PNG government has not provided any active support to the promotion of forest certification while the industry had not shown any interest in certification with a few exceptions (Bun et al. 2007). Instead, the FSC has been promoted mainly by NGOs and individuals (ibid.). As of the end of 2010, only two groups of community based forestry operations supported by the NGOs, i.e. the FORCERT (Forest Management and Production Certification Service Ltd) and the FPCD (Foundation for Peoples and Community Development), had valid FSC certifications for forest management (FM) and chain of custody (CoC).

(2) SGS Timber Legality and Traceability Verification (TLTV)

In response to the strong demand from the Australian market for verification, the PNGFIA initiated a pilot project in 2008 to develop a timber legality and verification system. With financial support from the ITTO, the SGS established a national legality standard for PNG and launched the Timber Legality and Traceability Verification (TLTV) service in late 2008. It is reported that Saban Enterprise also provided funds to this project.

In October 2008, Saban Enterprise acquired the first TLTV certification. Since then a total of four certificates have been issued to three large scale logging operations.

The TLTV standard for verification consists of nine principles and 30 criteria. In principle, the certification is to verify compliance with existing legislation. The Standard does not disqualify projects operating under TPs permitting excessive AACs as they are legally authorized, despite being unsustainable.

As of the end of 2010, only one public summary for Saban Enterprises has been disclosed to the public. The public summary of the TLTV merely contains the overview of the evaluation, but fails to show detailed contents. In order to establish market credibility, it is necessary to increase transparency by disclosing more detailed public summaries, in a much timelier manner.

There have been new developments for large scale developers since 2010. Makapa logging concession run by Innovision, a subsidiary of state-owned Yayasan Sabah in Malaysia, decided to seek FSC certification. It is reported that Makapa received the preliminary assessment team from one of the certifiers of FSC, in February 2010. This project is jointly facilitated by the FPCD and Innovision, under the ITTO's partnership program between the private sector

and civil society groups towards sustainable forest management and forest certification.

An executive of the PNGFIA emphasized that in the last five years there has been a significant increase in interest amongst the forestry industry for the uptake of verification/certification. He, however, also stated that the industry is a long way from achieving FSC certification and that this first requires changes in law and policy in PNG.

It is a notable progress that some large scale logging companies started to move towards certified or legally verified operations. The spread of certification and legality verification system certainly has high potential to lessen the risk inherent to timber procurement from PNG.

CONCLUSIONS

Current forestry practice in PNG poses threats to the environment and local communities; hence, the procurement of PNG timber that is not independently verified as legal and preferably sustainable entails the risk of magnifying these threats to the environment and the society of PNG.

However, there has been a recent significant increase in the interest of elements of the private sector in having their operations verified as legal and/or sustainable. The TLTV system has made it possible for users to select less risky timbers, i.e. timber less likely to be associated with negative societal and environmental outcomes. Furthermore, the interest of some large scale logging operators in FSC certification has also increased, and there is at least one case where a local NGO is providing support to a larger operator to acquire FSC certification.

There however appears to be little progress in the government sector. As PNG has many of the social foundations required for governance

through multi-stakeholder participation, what is mostly needed is the clear political will to move forward. There is now an expectation that the REDD will provide the opportunity to establish adequate monitoring and robust forest governance.

The PNG Constitution states:

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

When PNG’s forestry sector achieves this goal, concerns over the risks of PNG timber procurement will be no longer necessary.

1. INTRODUCTION

1.1. BACKGROUND AND OBJECTIVES

An international environmental, NGO FoE Japan, and a Japanese environmental NGO, Global Environmental Forum, have jointly been implementing the “ITTO Project PD391/06 Rev.2 (M) Promoting and Creating Market Demand for Certified Tropical Wood and Verified Legal Tropical Wood” since 2007. This project initially focused on Indonesia and Malaysia, but through the implementation of this project, it was later decided that Papua New Guinea (PNG) should be added in order to cover a wider range of issues relating to the supply of tropical wood. This report assesses social and environmental risks of wood from PNG through a literature survey and interviews with key informants in PNG.

Forests that are logged by the forestry industry have diverse functions and values. Forests have commercial values for those engaged in the forestry industry. For those who depend on forests for their livelihood, forests provide essential resources for their everyday lives. Also, in a more general sense, forests provide many practical functions: habitats for a diversity of wildlife species, a massive carbon storage function, a water storage function (“green dam”), and an evapotranspiration function (“green pump”). In addition to such practical functions, forests may also have cultural and/or religious values for many.

Forest management should maintain such multifaceted values and functions of forests. Forest development based only on the commercial value of forests could be at the expense of other values and functions, creating threats to the global environment and human society. It is necessary to remember that this applies not only to producers but to consumers of wood products; consumers need to ensure that their consumption of wood products are not contributing to unsustainable forest development, and will not add to the already existing threats to the environment and human society. In today’s climate where human society is faced with such immediate environmental threats, the private sector must also realize that their existence, which relies on consumption, will be threatened if they operate without giving consideration to environmental issues.

From the perspective described above, this report reviews information on forest development in PNG and investigates the realities of forestry operations and the administration. The aims of the report are to examine social and environmental risks inherent in the procurement of timber from PNG and review current initiatives and trends towards legal verification and sustainability certification in PNG from the perspective of whether these mitigate the social and environmental risks of the timber procurement.

1.2 STRUCTURE OF THE REPORT

Chapter 2 of the report summarizes the framework of forest management in PNG by reviewing current legislative and administrative systems.

Chapter 3 examines the implementation of laws and regulations, as well as the enforcement capacity of administrative institutions, in order to clarify how the forest management systems discussed in

Chapter 2 function in practice. Chapter 3 also examines environmental and social risks of timber procurement that stem from PNG's political system and governance.

Chapters 4 and 5 give an overview of how actual forest development and forestry operations are carried out based on existing research materials. Chapter 4 examines the environmental risks of timber procurement that stem from the way forestry operations are conducted. Chapter 5 examines the social risks of forestry operations to local communities, and on people's lives and rights.

Lastly, Chapter 6 summarizes recent movements surrounding the forestry industry in PNG, in order to examine what efforts are being made to improve its performance, and to mitigate the social and environmental risks inherent in the industry.

1.3 METHODOLOGY

The report is based on the review of existing written materials such as published reports that identify and summarize problems in the relevant areas. Since most of these reports were published from 2000 to 2005, information on more recent developments was gathered through interviews with key informants in PNG during visits to PNG in 2009 and 2010 by the FoE Japan and the Global Environmental Forum

This report owes a great deal to the reports named generically "2000-2005 Independent Review" which were carried out between 2000 and 2005 by the Independent Review Teams (IRT) under the Terms of Reference between the World Bank and the Government of PNG. "2000-2005 Independent Review" consists of the following five sets of reports:

- Review of Forest Harvesting Project Being Developed Towards a Timber Permit or Timber Authority (2000-2001)
- Review of the Forest Revenue System (2001-2002)
- Independent Review of Disputed Timber Permits and Permit Extensions (2003)
- Towards Sustainable Timber Production -A Review of Existing Logging Projects (2003-2004)
- Compliance Audit (2004-2005)

2. FOREST MANAGEMENT FRAMEWORK IN PNG

Today, there is a serious need for environmental conservation, prevention of global warming and improvement of the welfare of human society in general. In such a social climate, the private sector may at times be expected to do more than merely follow the law. However, complying with domestic legislation is still a prerequisite for the private sector. From this point of view, this chapter outlines the legal framework of forest management in PNG and examines the risks inherent in the forestry operations.

2.1. HISTORY AND BACKGROUND OF THE CURRENT MANAGEMENT SYSTEM

Current forestry-related legislation and the administrative system in PNG were established in the early 1990s, when the legislation and administrative system that had existed since the colonial period was reformed.

As large scale forest development projects rapidly accelerated in the late 1980s, problems such as the degradation of forest resources, illegal activities by logging companies and corruption within PNG's administration proliferated, and criticisms of these problems heightened.

Responding to these criticisms, the then Prime Minister established the Commission of Inquiry into the forest industry headed by Judge Barnett in 1987. Based on the Commission's report and recommendations compiled after two years of investigations, the Government began to reform the forest administration framework with help from the World Bank.

In 1991, the National Forest Policy (NFP) was established, and in June of the following year a new Forestry Act was adopted by the Parliament and promulgated.

The administrative structure for forest management was also reorganized. The Papua New Guinea Forest Authority (PNGFA) was established in 1993 as an integral executing body responsible for the implementation of forest-related policies nationwide.

The NFP quotes the following sentence from PNG's Constitution in describing the basic principle of PNG's new forest management policy:

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

2.2. LAWS RELATING TO FORESTRY

The following are the current legal basis for the administration of forest-related matters in PNG:

1. National Forest Policy: NFP

The NFP was promulgated by the cabinet in September 1991. The NFP stipulates, amongst other matters, the following two points of forest management based on the principle of “sustainable yield”:

- Forest development must be carried out within the limit of the Annual Allowable Cut (AAC), which is calculated based upon the existing inventory of timber resources;
- The logging method must be selective logging, with exceptions.

With regard to customary land owners, the NFP encourages respect for their rights but states that the utilization of forest resources is to be controlled by the government. The NFP also provides the overall framework of relevant administrative organizations and development processes.

2. The Forestry Act of 1991

The Act was promulgated in June 1992 and was created as a result of the recommendations made in 1989 by the Barnett Inquiry. The Act provides for the foundation of PNG’s new legal framework for forest management. The major changes provided by this Act are as follows.

- The new, independent administrative organization that replaces the former Ministry of Forestry, the PNGFA, was removed from direct governance under the Minister for Forestry and was placed under the cabinet.
- Local administrative organizations responsible for forestry-related matters, which traditionally belonged to each province, were integrated and repositioned as branch offices of the central forestry administration. This is to create a more integrated approach to the administration of forestry-related matters.
- A new system for commercial forest development was launched in which the PNGFA signs the Forest Management Agreement (FMA) with customary landowners prior to the development of forests in order to acquire “forest management rights” from them. Under this system, the government then re-transfers the rights to developers following an open bidding. This system is called the FMA system.

3. The Logging Code of Practice

The Logging Code of Practice was submitted to the Parliament in 1996. It lays out the details of the practical operational methods to be followed at logging sites.

2.3. FOREST MANAGEMENT ADMINISTRATIONS

The following are major administrative organizations of the government that are involved in the implementation of forest-related policies.

1. The National Executive Council: NEC

The NEC is the equivalent of the cabinet meeting. It consists of cabinet members, headed by the Prime Minister, and it is the supreme decision-making body.

2. The Minister for Forestry

The Minister has a certain level of decision-making authority on occasions such as the selection of developers, but does not directly govern the administration of forestry-related matters.²

3. **The PNG Forest Authority: PNGFA**

The PNGFA is responsible for the overall administration of forest-related matters. It consists of two organizations: the National Forest Board (NFB), a supervising body with representatives from various sectors; and the National Forest Service (NFS) placed under the NFB.

➤ **The National Forest Board: NFB**

As the supreme decision-making body of the PNGFA, the NFB supervises the NFS, which is the executing body. It initially consisted of a total of 11 members: three representatives from relevant governmental departments, the Director of the NFS, four local representatives, one representative from an NGO, one representative from the Forestry Industry Association, and one other representative. It now consists of eight members. No representative from NGOs is included at present, since the NGO representative was removed following the amendment in 2005.

➤ **The National Forest Service: NFS**

The NFS implements the administration by the PNGFA. There are six directorates under the Managing Director and Director-General including Forest Policy and Planning, Project Allocation, Forest Development, and Field Services. There are five local branches under the Field Services Directory. The NFS is responsible for the following matters in the overall administration of forest-related issues:

- Planning (Research on resources, the establishment of a national forest plan, etc.)
- Acquisition of forest management rights
- Selection of developers and negotiations for agreements
- Control and supervision of timber exportation
- Implementation and control of forest-related legislation

4. **The Provincial Forest Management Committees: PFMC**

The PFMCs provide advice to the provincial governments and customary landowners as expert institutions on forest policies at the provincial level.

5. **The Department of Environment and Conservation: DEC**

The DEC's basic mission is to implement the Environment Act 2000. More detailed responsibilities of the DEC include:

- Regulation of the impact of development projects on the environment
- Execution of measures for the environmental protection

² According to a 2009 PNGFA report, "Under current arrangements, the Forest Minister does not have any direct control over the normal administration of the PNG Forest Authority and its National Forest Service. It is the National Forest Board that runs the affairs of the Forest Authority. In this way there is no direct political influence on decisions relating to the awarding of timber projects" (PNGFA 2009, P.22). The reason why the administration is structured this way is because the Minister of Forestry at the time was reported to have abused his political authority in the review reports during the 1980s.

- Water resources management

A representative from the DEC is on the board of the NFB. In issuing logging permits, the DEC assesses and approves environmental plans submitted by developers, which contain environmental measures to be taken in implementing developing projects. The DEC is also responsible for supervising the compliance by developers with their environmental plans.

6. Other Relevant Organizations

- **The PNG Forest Industries Association: PNGFIA**

The PNGFIA is an industry organization which describes itself as an incorporated association of companies involved in all levels of operation in the timber industry in PNG. Membership is voluntary. A representative from the Association is on the board of the NFB.

- **The Eco-Forestry Forum: EFF**

The EFF is a coalition of NGOs working on forest issues. The EFF was appointed to the NFB but was since removed following the amendment made to the Forestry Act in 2005. In addition to lobbying activities, the EFF has used the judicial process to challenge the authorization of forestry operations.

2.4. THE MANAGEMENT SYSTEM

The following description provides an overview of the forestry administration under the legislative system described above.

2.4.1 THE PERMIT PROCESS FOR LOGGING OPERATIONS

The permit process of logging operations in PNG is extremely complex. The biggest reason for this is because the system for land ownership in PNG is very different from other countries.

2.4.1.1 LAND OWNERSHIP

The predominant style of land ownership is customary common ownership by clans, i.e. a kinship group. 97% of PNG's land and 99% of the forests are owned this way. This presents an interesting comparison with Malaysia, which was also a colony of the UK, as forests in Malaysia are owned by the provinces. The property rights for customary ownership are considered to be guaranteed by PNG's Constitution.

However it is hard to deal with this ownership as it is communal ownership by clan members and governed by customary laws instead of statute laws. Also by nature titles are not registered and boundaries are often vague.

2.4.1.2 THE STYLE OF LOGGING APPROVAL

Forestry development projects begin with identifying the customary landowners of the development area and acquiring the right to log the timber on the area. The forestry development system has changed over time in the way that rights can be acquired from landowners.

1. Timber Rights Purchase: TRP

The TRP system was based on the Forestry Ordinance 1936-37 and continued to be applied until the implementation of the Forestry Act 1991. The TRP stands for Timber Rights Purchase, and was so named because under this system, the Timber Right (TR) was purchased by the government from the landowners. Under the TRP system, the Ministry of Forestry selected the development area and assessed the conditions of forest resources before negotiating with landowners and purchasing the TR. Subsequent to the purchase, the Ministry and developers negotiated and signed agreements so that the TR could be transferred from the Ministry to developers. Once the agreement was concluded, a Timber Permit (TP) was issued to developers. The purchase of the TR was monopolized by the government, and developers were not allowed to negotiate directly with landowners until 1971.

2. Local Forest Areas: LFA

The Forestry Act was amended in 1971, and the Forestry [Private Dealing] Act 1971 came into effect. This amendment allowed landowners to directly sell TRs to developers under certain conditions. This system was called the LFA system since landowners had to declare their forests as Local Forest Areas (LFA) in order to sell their land.

Unfortunately, the system was often openly abused by developers. Despite the obvious abuse, the government and Forestry Department officials had little administrative authority to intervene on behalf of the tribal landowners (PNGFA 2009).

3. Forest Management Agreements: FMA

Under the Forestry Act 1991 the PNGFA concludes an FMA in obtaining the forest management right from landowners. The TR is the right to harvest the stands on the land once, while the right under an FMA is the right to implement forest management on the land which includes not only harvesting but also re-planting and second harvesting. The term of the agreement under the FMA is 50 years. Under this system, the forest management right is re-transferred by the PNGFA to the developer decided by tender and the TP is issued to the developer.

4. Other Logging Approvals

• Timber Authority: TA

TAs are issued for selective logging operations for the domestic market of annual production less than 5,000 m³. A registered forest industry participant may submit the application accompanied by the written consent of the landowners to the project proposed. TA is issued by the Chairman of the Provincial Forest Committee subject to the endorsement by the Board of the PNGFA.

• Forest Clearance Authority: FCA

FCAs are issued for large scale clear-cut operations for road development or forest conversions to agricultural lands of which size of the area is larger than 50 hectares. Prior to

the application for FCA, the applicants are required to obtain approvals by the Departments responsible for the projects; the Department of Transportation for the road development projects, and the Department of Agriculture and Livestock for the agricultural projects.

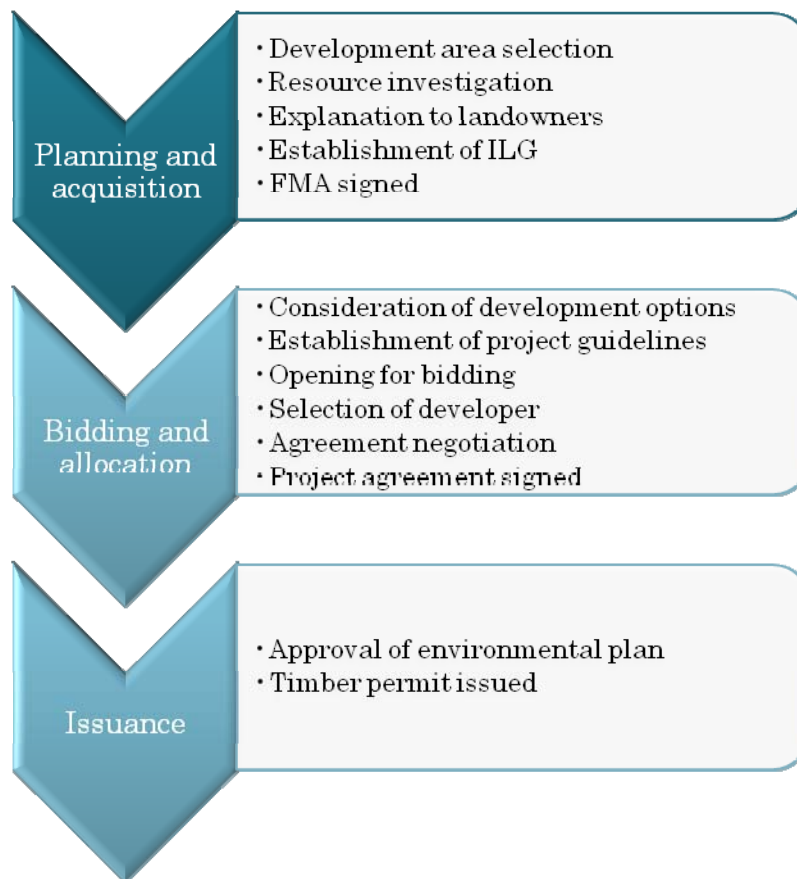
- **Timber License**

A Timber License is issued for forestry-related operations other than those listed in the TP held by developers or the TA discussed above. The effective term is up to one year.

2.4.1.3 FOREST DEVELOPMENT APPROVAL PROCESS UNDER FMA

The approval process under the FMA can be divided into two stages: the first stage is the government’s research on resources and development planning, and the second stage is called the “34 steps”, which processes individual cases. The major processes between the pre-development implementation stage and the issuance of the TP are shown in Figure 1 below.

Figure 1. Major processes between the pre-development implementation stages and the issuance of TPs



The following are the points to be noted under the above series of processes.

1. Explanations to landowners

This is the process that concerns “Free and Prior Informed Consent” from local residents who are the most common customary landowners. The objectives are:

- provide landowners with an information base to assist them in making decisions concerning the options for the use of their land and forest resources;
- present landowners with a general but realistic picture of the likely costs and benefits, impacts, and responsibilities associated with a forest development project and any possible alternatives; and
- establish channels of communication which will enable landowners to truly participate in a project formulation process and ensure that it is sensitive to their needs and concerns (ODI 2007b).

With regard to consents from landowners, the PFMC in the relevant province must first verify who they are before issuing a certificate, which will be enclosed with the FMA.

2. Establishment of Incorporated Land Groups (ILG)

A corporation, which is called an Incorporated Land Group (ILG), is established by a group of customary landowners in the development area. The objective of this process is to clarify the border of the land with landowners and register the land on the land registration book through the process of establishing the ILG.

3. Project guidelines

Project guidelines deal with the practical contents of the development, and serve as a basic condition for preparing a project proposal by the developer. The PFMC is responsible for establishing guidelines and Article 63 of the Forestry Act stipulates that the guidelines should be developed after discussions are held between the provincial government and landowners. This process is the only opportunity for landowners to participate in the development stage.

4. Obtaining the approval for the environmental plan

Developers are required to submit an environmental plan that contains environmental conservation measures during the implementation of their operations and to obtain the approval of the Minister of the Environment. After concluding the project agreement, the environmental plan that has been approved by the Minister must be enclosed in the application for the issuance of the TP.

2.4.1.4 PERMITS ISSUED UNDER THE FORMER FORESTRY ACT

Tps issued under the former legislation were not based on the sustained yield principle and there were cases where the AAC far exceeded the level of sustainable yield. However, Tps which were legally effective under the former Forestry Act at the time of the enforcement of new Forestry Act are deemed to be effective for the period specified in the original permits and considered as equivalent as the TP issued under the 1991 Act.

Regarding the extensions of those Tps, the 1991 Act initially did not have any provision for an extension of Tps once their original term had expired. The legality of the extensions was open to dispute, however, the amendment to the Act in 2005 allowed an extension of the term to the end of the TRP term.

2.4.2 THE IMPLEMENTATION AND MONITORING SYSTEM OF FORESTRY-RELATED LAWS

Major administrative and supervising institutions in forestry-related matters are the PNGFA and the DEC.

2.4.2.1 THE PLANNING, MONITORING AND MANAGEMENT PROCESSES OF THE PNGFA

Developers must prepare and submit: (1) five-year operation plan (the annual cut, logging road planning, etc. should be included in the midterm plan); (2) annual logging plan (the detailed plan for the overall operation for each year); and (3) logging plan per forestry unit (detailed operation plan including borders, strip roads, loading points, etc. per actual work area) for consideration and approval by the PNGFA (2003/2004 Review Team 2004).

With regard to the operation methods, the “Planning, Monitoring and Control Rules 1995” requires compliance with “24 Key Standards”³.

Monitoring is carried out by a field inspector of the PNGFA who verifies whether the operation has been completed as detailed in the annual logging plan and complying with the 24 Key Standards.

2.4.2.2 THE ENVIRONMENTAL MONITORING SYSTEM

Prior to the issuance of the TP, a developer has to submit three items to the DEC for its approval: (i) the environmental plan containing environmental measures in implementing the relevant project; (ii) the environmental monitoring plan and waste management plan; and (iii) a list of the personnel responsible for the environmental monitoring of the implementation of the above plans. On the administration side, a field inspector of the DEC is required to monitor the compliance with laws and regulations on site.

2.4.2.3 THE TIMBER EXPORT MONITORING SYSTEM

In 1994, the monitoring system for timber export was introduced. The major objective of the system was to collect tax levied on raw log exports. The system requires exporters to receive inspection and certification by a third party with regard to the place of origin, species, volume and price of timber that is being exported. The inspection is currently carried out by the Société Generale de Surveillance (SGS)⁴, which is a third party organization. This may be considered as an outsourcing operation by the administration. The major responsibilities of the SGS are as follows;

1. Attach a tag to the root end of all raw logs to be exported at the collection point on the logging site. The tag must contain detailed information on the logging area, species, etc.
2. During an inspection prior to vessel loading, verify the inspected volume, the information contained in the attached tag, and the price shown in the export permit.

³ It partially consists of the Logging Code of Practice mentioned in 2-2-3 above.

⁴ SGS is the world’s leading inspection, verification, testing and certification company which operates a network of over 1,250 offices and laboratories around the world.

3. Be present when logs are loaded onto the vessel, in order to confirm that the logs that have been inspected are actually being loaded.

Overseas Development Institute (ODI) evaluates this system as being useful to trace the CoC back to landing points (not logging sites), though the system does not provide a complete CoC (ODI 2007b) and was never intended for this purpose.

3. RISK ASSESSMENT REGARDING THE POLITICAL SYSTEM AND GOVERNANCE

The weakness of the political system and governance in general is a serious problem and presents a threat to social justice and may even invite the collapse of the social order. Weak governance also means that the enforcement of administrative regulations is weak, resulting in corruption and illegal activities, therefore inviting many problems and threats to the environment and the ecosystem. This chapter looks at the various problems surrounding the political system and governance in the area of forestry in PNG.

3.1. THE GENERAL POLITICAL SITUATION

PNG became independent of the United Nations trusteeship by Australia in September 1975. It is an independent country that is part of the British Commonwealth under the auspice of the Queen of England. PNG has the unicameral Parliament, which consists of 109 seats, with the members each serving five year terms.

Since its independence, there has been no majority party and many small parties have kept emerging. PNG had a series of unstable coalition governments, until 2002 when Sir Michael Somare, who was also the first Prime Minister of independent PNG, was elected for the third time as the Prime Minister. Since Somare returned to power, he has been re-elected in the election in 2007 and is still the Prime Minister as of November 2010. As a result, this government has been in power for an unusually long time. At the election in 2007, out of 109 seats, the National Alliance Party led by Somare secured 27 seats, whilst the Papua New Guinea Party, which is the largest opposition party led by the former Prime Minister Morauta, secured eight seats. The rest of the 20 smaller opposition parties secured one to six seats.⁵

Since its independence, the democratic system has become thoroughly rooted in PNG and a number of changes of the government have been carried out peacefully according to democratic principles. However, despite the fact that democracy has been accepted widely, bribery, intimidation, violence and other forms of corruption are common, according to a report by the International Monetary Fund (IMF 2007).

3.2. THE LEGAL SYSTEM

There is general agreement that the forestry related legislative system in PNG consist of policies, laws, regulations and guidelines is sufficient to ensure sustainable forest management.

The 2003/2004 Review Team states in the summary report of *Towards Sustainable Timber Production -A Review of Existing Logging Projects (2003-2004)* “A review of the current policies, laws, regulations and guidelines (and other mechanisms) indicated that PNG Government and its regulatory institutions have all the necessary policies, laws, regulations and guidelines required to ensure that

⁵ Source: <http://www.ip.alp.org.au/news/0807/pg23-01.php> (Australian Labor International Project's Observer Team. 2007. Report on the 2007 PNG National Election)

sustainable timber production can be achieved. The challenge is to commit to the policy and to use the available tools effectively.”

The ITTO’s 2007 report also reached a similar conclusion: “The laws governing the PNG forestry sector are regarded as generally excellent, though with far more steps and complexities than necessary”. It further states: “The mission concluded that the enacted laws and legislation and the written policies related to forestry in PNG are comprehensive and would help to achieve most aspects of Sustainable Forest Management; therefore conducive to achieving Objective 2000” .

On the other hand, the ODI report suggests “legislation must take account for a country’s administrative realities. An over-ambitious legal and policy framework is more likely to create distortions than improved performance – as already witnessed with the 1991 Forestry Act” (ODI 2007-b).

3.3. THE ENFORCEMENT SYSTEMS OF SUPERVISING ADMINISTRATIONS

While the Diagnostic Mission of the ITTO evaluates the legislative system positively, it expresses concerns over the capability of the administrations in monitoring and enforcing the system (ITTO 2007). The ITTO Mission repeatedly points out that the problems found in PNG do not originate from insufficient legislative systems, but the lack of capacities in monitoring and enforcing laws. The following paragraphs summarize the enforcement systems of the two administrations; the PNGFA and the DEC.

3.3.1. THE PNG FOREST AUTHORITY: PNGFA

The NFS, the executing body of the PNGFA, is at the center of the forestry administration. Especially with regard to on-ground activities, the NFS is the only organization that deploys full-time staff. However the lack of the human and monetary resources and the inadequate inventory data have been constraining their capability.

3.3.1.1. HUMAN RESOURCES AND BUDGET

The Field Services Division of the NFS is responsible for the execution and monitoring of the administrative matters. According to the ITTO Mission, the Division has the largest staff of 156 (with 130 field inspectors) out of a total of 464 PNGFA staff members as of May 2006 (ITTO 2007).

The 2003/2004 Review Team describes the cash flow problem being experienced by the PNGFA. The Authority’s total costs for 2003 were 36.5 million kina (approximately US\$12.5 million) against 24.4 million kina of actual receipt for 2003 (a shortfall of 2.3 million kina from the original budget 26.7 million kina) and expenditure in 2003 exceeded income by about 12.0 million kina. The effort to mitigate inevitable over-expenditure in the key area by the under-expenditure in other areas resulted in significant cutback of the expenditure of the Field Service Division. The 2003 Annual Report of the Field Services Division indicates that the Division’s expenditure for the year was only 1.2 million kina (approximately US\$0.4 million) against its budget for the year of 6.7 million kina. It

is evident that field monitoring and control activities were seriously constrained (2003/2004 Review Team 2004).

According to the ITTO, the area of forests for which TRs have been issued is 11,366,000 hectares. For this area, there are only 130 field inspectors allocated, which means that one inspector is responsible for as much as 85,000 hectares. This number is far from sufficient. Further, the allocated budget does not provide enough funds to purchase automobiles and other basic equipment necessary for fieldwork. The ITTO Diagnostic Mission found that in most cases, government field inspectors were dependent on the transport provided by logging companies (ITTO 2007).

3.3.1.2. ORGANIZATION OF BASIC INFORMATION

In forest development, acquiring information on resource volume is vital, without which it is impossible to achieve sustainable yield. The Forestry Act states that the National Forest Plan, which must be based on a certified National Forest Inventory (NFI), is a prerequisite for the allocation of forest rights. The forest inventory is the key information providing the basis for determining the AAC in view of sustainable yield. However, no formal National Forest Inventory has been furnished and the National Forest Plan established in 1996 adopted the Rapid Resource Appraisal which is an interim estimate of the forest resource stipulated in the National Forest Policy, as a certified National Forest Inventory (IFRT 2001.).

Although the Forest Inventory Mapping System was installed in the late 1990s as an NFI database, this map data at a scale of 1:100,000 is thought to be not suitable for use at the operational level, e.g. for making logging plans (Kelatwang et.al. 2002) and nowadays its inventory data are generally deemed as outdated and unreliable (PNGFA 2010).

Indeed, the ITTO Diagnostic Mission states; “All existing national and provincial level plans are not based on sound field forest inventory but are based on “guestimates” of the timber stand density which vary tremendously from region to region” (ITTO 2007). The ITTO report stresses the need for the inventories assessment and recording in PNG to be updated and recommends the revision of the inventories assessment.

The EFF argues that all logging in PNG is illegal because there is no forest plan or forest inventory as required by the Forestry Act. The Forest Timber Validation Act 2007 was an attempt by the PNGFA to have all FMAs/TAs legalized in the absence of a National Forest Plan and inventory.

3.3.1.3. ENFORCEMENT

According to the ITTO report, monitoring by project supervisors at the forest management unit level is “at best poorly carried out” and monitoring and enforcement is extremely inadequate. In the opinion of the ITTO, monitoring is becoming increasingly weak, with logging adversely impacting forest ecosystems and communities living in the forests (ITTO 2007).

According to the 2003/2004 Review Team, the capability of the Forestry Authority has been significantly reduced after the aid agencies such as the World Bank withdrew their support following

the termination of the National Forest Conservation Action Programme (NFCAP) in the late 1990s .

The 2003/2004 Review Team evaluates the conditions of monitoring and enforcement by the PNGFA as follows:

- The PNGFA audits compliance in order to assess the performance of the operator before a new plan is approved. However, the field work undertaken by the Review Team indicated that the compliance audit was not being undertaken diligently.
- The effort put into the monitoring during logging varied considerably. At the larger projects (e.g. Makapa and Wavoi Guavi) there was not a sufficient number of the PNGFA staff to undertake proper monitoring during logging.
- There were many examples of breaches of the 24 Key Standards that were unreported and not dealt with. Often breaches were being overlooked by the PNGFA Inspection Supervisors.
- In many cases the monitoring and control is compromised by unreliable or insufficient vehicles. In many cases, vehicles were not officially registered.
- In some cases the Project Supervisors were again dependent on the support of the logging company for housing, office space, communications and services.

The major causes of the inadequacy of monitoring and enforcement are inadequate budgets and the lack of resources such as staff and equipment (e.g. automobiles) as well. However, essentially this is the problem of the lack of political will and the consequential decline in morale. The Review Team points out that “Field based PNGFA monitoring officers have lost faith that their attempts to impose sanctions on non-complying logging companies will be backed up by senior management, who in turn take their cue from the current political leaders” (2003/2004 Review Team 2004).

3.3.2. DEPARTMENT OF ENVIRONMENT AND CONSERVATION

3.3.2.1. STAFF AND BUDGET

In relation to forest development, the Department of Environment and Conservation (DEC) makes the assessment and approval of: (i) an environmental plan; (ii) an environmental monitoring plan; and (iii) waste management plan. The DEC is also responsible for monitoring and supervising forestry operations in order to verify whether the above plans are adhered to on the actual logging sites.

According to the summary report of *A Review of Existing Logging Projects (2003-2004)*, the DEC consists of the following three departments: the Corporate Service Division (25 staff), the Environment Division (55 staff), and the Conservation Division (51 staff). The assessment and the supervision of the implementation of environmental plans is the responsibility of the Environmental Impact Assessment Branch (up to eight staff), which is part of the Environment Division. However, it does not appear that vacant positions at the Impact Assessment Branch are being filled, as there were only two staff at this section in 2003. Furthermore, the only office is located in the capital of PNG and there are no offices at the provincial level (2003/2004 Review Team 2004).

Since there are none of the DEC field officers available, field inspectors of the NFS are forced to implement the responsibilities of the DEC field officers (ITTO 2007).

The annual budget of the DEC for the 3-year period between 2002 and 2004 was 4 million Kina (approximately US\$ 1.4 million), which is significantly less than that of the PNGFA (2003/2004 Review Team 2004).

3.3.2.2. IMPLEMENTATION OF THE RESPONSIBILITIES

With regard to the DEC's implementation of its administrative responsibilities, the summary report of *-A Review of Existing Logging Projects (2003-2004)* states "There is a consistent lack of the DEC field monitoring and control in the forestry sector. The reason given was lack of operational budget." And it continues "This is of concern" because "Where there is no official response to non-compliance, the logging company is effectively given a signal that the non-compliance is of no concern".

3.4. ISSUES RELATING TO THE PERMIT PROCESS

This section attempts to examine issues relating to the execution of administrative authority in approving development, as well as the adequacy of permit processes.

3.4.1. CONDITIONS UNDER WHICH THE FMA SYSTEM IS APPLIED

The IRT audited the harvesting projects being developed pursuant to the Forestry Act of 1991, which concluded that due process has generally been observed but the quality of the work related to "some of the essential steps has been less than acceptable" (IFRT 2001).

The revealed problem areas common of many projects stated in the review are:

- The explanation work in the process of obtaining landowners' consent has been compromised or sometimes ignored thus landowners' decisions to conclude a FMA, a very long term contractual arrangement, cannot be deemed as decisions made with informed consents;
- The work of all concerned parties related to the process to incorporation and registration of ILG has been carried out uniformly in a poor manner. NFS tends to accept incorporations without adequate checking; The Registrar of Titles are not capable of examining the ILG registrations properly;
- There are cases that insufficient forest inventory resulted in unreliable forest resource estimations.

Observations and Recommendations, Review of Forest Harvesting Project Being Processed Towards a Timber Permit or Timber Authority (2000-2001) acknowledges the existence of political pressures applied on the permit process for harvesting, where a series of Forestry Ministers ordered speedy processing of new projects to the NFB or the Managing Director of NFS; or cabinet members gave orders to the Forestry Authority with regard to the increase of AAC or the allocation of a new project to preferred developers. The point here is whether political pressure for "fast tracking" new forestry

projects has resulted in “short cuts” being taken by the Forestry Authority. However, *Observations and Recommendations* states “The time lines for each project reveal no general evidence of this” (IFRT 2001).

3.4.2. PROJECTS FOR WHICH PERMITS WERE ISSUED UNDER THE FORMER FORESTRY ACT

The 2003/2004 Review Team considered 14 timber harvesting projects that were in operation at the time. The total area of these 14 projects was 3,170,000 hectares, approximately 10% of the total forest area in PNG. The total volume of exported logs was 1,320,000m³ (in 2004), over 65% of PNG’s total export volume. These numbers indicate that projects examined here are those of major developers in PNG. However, only two projects had TPs issued under FMAs, and the rest of the 12 projects operate with the TPs issued through TRPs or LFAs under the former Forestry Act (Forest Trends 2006).

In fact, in 1990, the Government of PNG decided to set a moratorium on issuing new TPs as a tentative measure prior to the promulgation of the Forestry Act of 1991. However, over 20 projects had TPs issued during this moratorium period at the very last minute before The Forestry Act 1991 came into effect in June 1992. Filer with Sekharan asserts that the Forestry Minister delayed the promulgation of the new Forestry Act (Filer with Sekharan 1998) while the ITTO Diagnostic Mission acknowledges that some observers interpreted the delay of the promulgation as an attempt to issue TPs under the old Forestry Act before the new Act becomes operative (ITTO 2007).

Despite these concerns, *-A Review of Existing Logging Projects (2003-2004)* states that the legal process for the abovementioned projects can be recognized as generally adequate.

3.4.2.1. EXTENSION OF EXPIRED TIMBER PERMITS

The problems inherent to TPs under the former Forestry Act are that the Sustainable Yield principle was not adopted for them and often excessive annual cut was allowed. Therefore extension of those old TPs had been a controversial issue.

Despite the concern, according to *A Review of Existing Logging Projects (2003-2004)*, four of the 14 projects that were audited already had TPs extended at the time of auditing and two of them had their Permits extended after the original Permits had already expired. The Review Team therefore questions the legality of these processes.

As mentioned in 2.4.1.4, Article 137(1) of the Forestry Act made TPs issued under the former Act effective until the end of the original term but did not provide for the extension of such Permits. Therefore the legality of extensions had long been in dispute, until the chief legal advisor to Government produced an opinion that the extensions are legal in 2004 (ibid.). Based on this view, the Forestry Act was amended in 2005, which retroactively allowed TPs issued under the former Act to be extended within the validity of TRPs.

Considering 40 years of the terms of TRP and the fact that more than 20 TPs under former Forestry Act were issued at the very last minute before the gazetting of The Forestry Act 1991 in June 1992, this amendment allows many unsustainable logging operations to last until around 2030 if timber resources have not been exhausted before then.

3.4.2.2. GEOGRAPHIC EXPANSION OF THE HARVESTING PROJECT AREA

Article 64 (3) and (4) of the Forestry Act allows developers that have a small harvesting area and therefore cannot achieve financial gain with Sustainable Yield Management to collaborate with developers of existing projects without having to bid for their projects. These smaller projects are treated as an expansion of existing projects that are carried out in areas adjoining them. This provision was added following the amendments to the Forestry Act in 2000. Prior to these amendments, in 1999, the Kamula Doso project was approved as an expansion of the existing Wawoi Guavi project. However, although the project area of Wawoi Guavi is approximately 500,000 hectares, the area of Kamula Doso, which was supposed to be the expansion of Wawoi Guavi, was approximately as much as 800,000 hectares. It was debated whether this could be treated as geographical expansion, and whether the approval in 1999 was still justified given the amendments made in 2000. With regard to this case, the national court ordered that a TP should be issued for Kamula Doso in 2006. However, the EFF appealed to the Supreme Court demanding the annulment of the order by the national court. According to the press releases issued by the EFF, the case has been sent back to the national court by the Supreme Court in October 2008, which dismissed its order issued in 2006 and ordered a review of the case. At present, the EFF has won the case. The EFF also disputed that an FMA was never conducted for Kamula Doso. The PNGFA agreed with a consent order to that effect (i.e. no FMA was issued) and the EFF was awarded court costs⁶.

3.5. THE ISSUE OF UNAUTHORIZED LOGGING

It appears that in PNG, unauthorized logging i.e. “illegal logging” in a narrow sense defined as the harvesting without permits prescribed by domestic legislation, and smuggling, is not at the level that causes serious concerns, although it may still exist. The report by the ITTO in 2007 supports this conclusion: “In fact, most government, private sector, NGO and landowners responded that ‘illegal’ logging on a commercial scale was not the major problem – unsustainable logging was certainly the primary issue within the narrow forestry context” (ITTO 2007).

3.6. THE ISSUE OF TRANSFER PRICING

Transfer pricing is where a parent company and its overseas subsidiary belonging to the same multinational group company trade with each other at the price set differently from trade with a third party in order to deliberately transfer the profit within the group company. In case of the timber export from PNG, the transfer pricing covers a wider range of activities, where logging companies and exporting companies declare false tree species, lower volume and lower unit price than the actual market in order to pay less export tax than is actually required. In this sense, the transfer pricing covers false declaration and underclaims. In any case, this means that the profit to

⁶ Based on an interview with the EFF officers, November, 2010.

be declared within PNG is transferred elsewhere, and this matter is not a mere taxation leakage but should be treated as diffuence of national asset.

In order to tackle this problem, as mentioned above the government introduced a log export monitoring system in 1994 that requires inspection and certification with regard to the place of origin, species, volume and price of timber to be exported. The ODI states “[Underreporting] on export volumes and species mix has effectively been dealt with through the SGS contract. The price endorsement mechanism, however, appears to lack institutional checks and balances in two ways” (ODI 2007c).

With regard to the price, it is difficult to verify whether the price declared for export adequately reflects the market price at the time of export, since many tree species are exported and the quality of timber varies significantly due to the fact that timber is a natural product. Review of the Forest Revenue System (2001-2002) found ‘some unexplained and substantial’ discrepancies between the FOB export prices declared in PNG and the CIF import prices in China, Japan and Korea” (ibid.). Therefore, there still is a possibility of ongoing underclaims.

The SGS monitoring appears be effective in so far as “the ITTO’s annual review of trade discrepancies found that the difference between log exports volumes to China recorded by PNG and log imports from PNG recorded by China was only 2%” (ibid.). The SGS office in PNG has stated that it has detected no major cases of attempted timber smuggling during its implementation of the export timber monitoring system.

3.7. FRAUD AND CORRUPTION

Forest Trends, which examined the series of reviews for the *Independent Review Report 2000-2005*, states that fraud and corruption are fundamental problems and are an underlying theme throughout the Review reports (Forest Trends 2006). However, the Reviews did not expose the specific evidences of corruption and did not contain any exploration into these issues. Still, the reviews uncovered many suspicious examples for which further investigations are needed (ibid.).

The following are two of the examples reported in the reviews:

1. **Kiunga Aiambak harvesting project**

Kiunga Aiambak was a harvesting project to build a road penetrating New Guinea. In issuing a TA, the landowners were not identified or their consent was not secured as is required by Article 90C(3) of the Forestry Act (ODI 2007b). It was also reported that the Managing Director of the NFS had illegally approved the logging for the road corridor for up to a width of 3km, where it should have been under 40m according to the legislation (FCPRT 2003 Kiunga Aiambak).

2. **Simbali project**

A TA had been issued for the logging operation for the development of a cocoa farm. Logging took place over an area of about 11,700 hectares, when the approval was for a 40 hectare cocoa development, and there was little evidence of growing any cocoa. The TA

had been issued even though this developer had committed fraud in the past (FCPRT 2003 Kiunga Aiambak).

In many cases, fraud and corruption are carried out behind closed doors and leave no evidence. It was probably impossible for the independent review team to prove such cases without the right for criminal investigations. This means that the absence of proved cases of fraud and corruption in the review reports does not mean that such activities do not exist. Rather, many of the examples of the variable conditions for TPs and Timber Authorities are a strong indication of government interference and its interlocking relationship with developers.

It is noteworthy that ITS Global, a consulting firm which has been working for Rimbunan Hijau, the largest group of logging companies in PNG and the PNGFIA, admitted existence of corruption problems at an official occasion. Hoisington introduced a paragraph in the submission to the Inquiry by Australian Senate Foreign Affairs, Defense and Trade Committee made by ITS Global on behalf of the PNGFIA in 2008 stating that “Corruption remains a major problem, at both the National and Provincial Government levels. Up to 40 per cent of the National budget may be stolen. Efforts by donors to improve governance have yet to lead to better socio-economic outcomes.”⁷

With regard to general fraud and corruption, PNG scored 2.1 (highest possible score is 10) in 2009 on the Corruption Perceptions Index (CPI) set by the Transparency International. PNG was ranked 154th out of the 180 countries evaluated. Compared to the result in 2008, where its CPI score was 2.0 and its ranking 151st, the result in 2009 was worse.

3.8. STAKEHOLDERS THAT COMPLEMENT THE GOVERNMENT AND ADMINISTRATIVE INSTITUTIONS

In the forestry sector of PNG both international aid agencies and civil society have been taking significant roles.

3.8.1. INTERNATIONAL AID AGENCIES

PNG, with its weak economic foundation, has long relied on the support from international aid agencies even in its efforts in organizing the country after its independence. The PNG Forest Authority, which was established in 1993, received considerable support from aid agencies to provide effective field services at the time of its establishment. The support included communications equipment, pre-fabricated houses, vehicles and other necessary equipment (2003/2004 Review Team 2004).

The major donors were the World Bank and AusAID⁸ (Australia was the former colonial ruler of PNG). These agencies not only provided funds but also took initiatives in leading administrative changes. They also had a leading role in the improvement of forestry administration from the late 1980s. In fact the reformation of the forest administration framework starting with the

⁷ Caroline Hoisington. *Rough trade How Australia's trade policies contribute to illegal logging in the Pacific Region*. 2010.

⁸ AusAID (Australian Agency for International Development) is the Australian Government agency responsible for managing Australia's overseas aid program. It is an Executive Agency within the Foreign Affairs and Trade portfolio and reports to the Minister for Foreign Affairs.

establishment of National Forest Policy in 1991 had been promoted under the NFCAP (1991-1995) funded by the World Bank. Moreover the PNGFA received considerable support from the program to create a capable field presence including the supply of the communications equipment, pre-fabricated houses, vehicles and other necessary equipment (2003/2004 Review Team 2004).

However, as the case of the World Bank withdrawal of loan in forestry sector in PNG has shown, the relationship among international aid agencies and the government can be sensitive.⁹

3.8.2. CIVIL SOCIETY

The ITTO describes civil society activities related to forestry as follows; “Papua New Guinea has all the right ingredients for effectively engaging civil society in the sustainable management of forest resources. An admirable number of local NGOs are very active in PNG, especially as related to monitoring logging operations, close scrutiny of trade in illegally-sourced timber and in working with landowners at the grassroots level” (ITTO 2007).

According to the ODI, civil society participated in the process to develop the National Forest Policy, which provides the foundation for PNG’s existing forestry management systems (ODI 2007a). Furthermore, civil society has been involved in forest administration to the extent that that the EFF sat on the NFB as an NGO representative until EFF was removed from the NFB in 2005. Civil society organizations have also been closely collaborating with international aid agencies, especially the World Bank. However, recent activities carried out by civil groups appear to focus on the role of a supervisor or a whistle-blower, and they have brought many administrative cases to the court and have even won in some cases. Furthermore, campaigns against illegal-logging carried out by international NGOs such as Greenpeace appear to further the conflict between NGOs and large scale logging companies. Nevertheless, their role is a vital element in ensuring the accountability and transparency of the forestry administration. But it is to be noted that NGO’s resources are limited and they cannot monitor all forestry operations in PNG.

3.9. CONCLUSIONS

This chapter looked at the legal and administrative systems for forestry. Although the literature reviewed for this research finds that these systems may in some ways be overly complex, there is general agreement that they are sufficient to ensure sustainable forest management.

The chapter attempted to identify where the problems lie in terms of implementing the legislation by examining the structure, human resources and budget of the relevant administrative institutions. It also examined the implementation of the monitoring and management responsibilities, which are at the center of law enforcement. The review revealed that the enforcement capabilities of the institutions examined are far from sufficient due to their limited budgets and resources.

The chapter then considered whether adequate processes are being taken with regard to the issuance and renewal of timber permits issued by the administrative institutions. Although it appears that the procedures themselves are generally adhered to, some of the critical steps such as adequate

⁹ Please refer to section 6.1 of this report for the World Bank case.

explanations to landowners and inventories assessment are not being fully implemented, and this has significant consequences.

It has been reported that political pressures existed when timber permits issued based on the former Forestry Act were extended whilst the legal provisions were still ambiguous about such extension, or that the Minister of Forestry encouraged speeding up the authorization processes.

With regard to fraud, there has been no definite case reported, however, the Independent Review Team reported many suspicious cases, proposing closer investigations.

Unauthorized logging, i.e. logging without the required permit, has not been widely reported. However, although the export log monitoring system conducted by the SGS has been effective in achieving its objectives and therefore the export volume is fairly well known, no effective measure has been found in order to verify whether the price set for the export declaration is adequate.

From the above observations, it can be concluded that the forestry administration in PNG still suffers from poor governance, and thus a certain level of inherent risk must be acknowledged with timber procurement from PNG.

International aid agencies, especially the World Bank, have played a guiding role in the development of the framework for PNG's forest management, as well as in the promotion of projects to strengthen the governance.

Both local and international NGOs are very active in PNG and playing an important role in ensuring the accountability and transparency of the forestry administration through their function as a watch dog.

4. RISK ASSESSMENT IN THE AREA OF THE ENVIRONMENT AND ECOSYSTEMS

4.1. GEOGRAPHICAL FEATURES¹⁰

- Location: North of Australia. Directly south of the equator.
- Land: Eastern half of the New Guinea Island and over 600 islands of various sizes, including New Britain Island
- Size: 462,243 km²
- Coastal line: 20,197 km
- Landscapes: Lying at the collision line of the Australian and Pacific plates. Diverse in terms of landscapes & ecosystems. Extensive area exceeds 3000 m in elevation. The highest mountain is Mt. Wilhelm of 4,508 m.
- Climate: Tropical monsoonal climate
- Rainfall: Generally exceeds 2,000 mm annually in most areas
- Biodiversity: The total number of species of plants and animals is not accurately known, but estimated to exceed 200,000 species
- Forest area: Approximately 28.2 million hectares



4.2. SUMMARY OF FOREST CONDITIONS

There has been no comprehensive field research on forest conditions, and the estimates vary amongst different institutions. The tables below provide an overview of forest conditions.

Table 1. Change of Total Forested Area

Year	Total Forested Area
1975	33 million ha (original forest cover assessed by Australian Govt.)
2000	31 million ha (estimated by FAO 2005)
2009	29 million ha (estimated by PNGFA 2009)

Table 2. Forest Type

Forest Type	Percentage
Rainforest	80%
Montane Forest	11%
Savanna and Woodland	5%
Moist Forest	4%

Source: ITTO 2005

¹⁰ Source: ITTO 2011. *Papua New Guinea's Fourth National Report to the Convention on Biological Diversity Status of Tropical Forest Management 2011*

Table 3. Categorization According to Usage

Usage	Percentage	Area
Productive Forest	30%	(1,000 million ha) ¹¹
Reserved Forest (Usage plan not determined)	34%	
Protected Forest	1%	(30 million ha) ¹²
Forest Suitable for Plantations (Logged forest, etc.)	15%	(approx. 500 million ha)
Others	20%	

Source: PNGFA 2009

4.3. BIOLOGICAL DIVERSITY

As much as 77% of the land is still covered by old-growth forests. The country has rich biodiversity and according to the current best scientific estimation 5 to 7% of the world's species exist in PNG (World Bank 2002), which include 20,000 plant species (1,500 species trees); 304 species of mammals; 733 species of birds; 298 species of reptiles; and 600 species of fish (ibid.).

There has not been sufficient scientific research on PNG's biodiversity and therefore the exact status of the biodiversity in PNG is unknown. In fact the most recent literature, *Papua New Guinea's Fourth National Report to the Convention on Biological Diversity* submitted in 2010 states "Papua New Guinea is yet to develop a species or ecosystem database to determine conservation status and trends of species and ecosystems" (GoPNG 2010).

Because most of the land is covered by old-growth forests, most ecosystems services in PNG directly or indirectly derive from forest ecosystems. There is general agreement that the most significant threat posed to PNG's biodiversity value stems from the degradation of terrestrial habitats by the total or partial removal of natural forest cover (World Bank 2002). The National Report lists Forest Conversion and Degradation due to logging and subsistence agriculture as one of main threats to biodiversity in PNG (GoPNG 2010).

4.4. DECREASE AND DEGRADATION OF FOREST RESOURCES

There has not been an official NFI implemented by the government. The figures announced by different institutions are not based upon actual field surveys. Research using remote sensing has revealed some overall picture of forest resources although it alone cannot provide accurate information about actual forest stock. Accurate inventory assessment combined with actual field surveys is still necessary.

4.4.1. MOST RECENT STUDIES ON FOREST DECREASE AND DEGRADATION

¹¹ Calculated by the author, based on the forest area reported in 1975.

¹² Ibid. However, the accurate size of the protected area is unknown.

In 2008, Shearman and others of the Remote Sensing Center of Papua New Guinea University (UPNG-RSC) estimated the forest resources of 2002 based on their analysis of satellite imagery (Landsat ETM+ and SPOT 4 and SPOT 5).

The results from the above procedure were compared with plant distribution data based on aerial photographs taken in 1972 by the Australian Army. From this comparison, quantitative analysis of forest area decrease and forest degradation was undertaken and the results were reported in “The State of the Forest of Papua New Guinea”, published in 2008. Table 1 shows the change in the volume of the forest resources in PNG as reported by UNPG-RSC.

Table 4. Forest Decrease and Degradation for the 30 years between 1972 and 2002

Transition of the area of old-growth forests	1972	2002	The decreased/degraded area between 1972 and 2002 (%)
	33,228,000ha	25,332,000ha	7,896,000 ha (23.8%)

Breakdown of the causes of the decrease and degradation	Decreased area (%)	4,967,000ha (14.9%)	Land conversion for agricultural purposes (10.8%) Fire (1.0%) Development for mines (0.2%) Logging (2.7%) Land conversion for plantations (0.3%)
	Degraded area (%)	2,929,000 ha (8.8%)	Logging (8.8%)
	Total (%)	7,896,000 ha (23.8%)	11.8%

Source: Created by the author based on the figures contained in *The State of the Forest of Papua New Guinea* (2008)

As shown above, according to Shearman et al. (2009) as much as 14.9% of the old-growth forests were lost in the 30 years between 1972 and 2002. The biggest cause of this forest loss (10.8% of the total forest area) was the conversion of forest land to gardens for subsistence agriculture. Where it concerns forestry, the land conversion for plantations was responsible for the conversion of 0.3% of the forest area, and logging for 2.7%. In addition to this, logging has degraded 8.8% of the total forest area (Shearman et al. 2009). Therefore, when the transitions in forest cover and degradation are combined, forestry activities have impacted 11.8% of the total forest area, making logging the biggest cause of forest decrease and degradation, exceeding the area of land converted for agricultural purposes.

The annual average decrease and degradation of old-growth forests for duration of 30 years between 1972 and 2002 calculated from the figures in Table 4 is 263,200 hectares or 0.79% per annum. However, the current annual rate of decrease is even higher. Shearman’s team calculated the decreased and degraded area using a model that estimates the converted area for agricultural purposes based on population increase, the decreased area due to logging based on the transition in the timber export volume, and the converted area for palm plantations based on the increased

export volume of palm oil. The team found that the rate of the forest decrease and degradation around the year 2002 is as high as 1.41% per year (Shearman et al. 2008).¹³

This suggests that the forests in PNG were being lost at an alarming rate in 2002, even though a comprehensive forest management system had been established following the new Forestry Act in 1991 which aimed to achieve sustainable forest management.

4.4.2 THE PRINCIPLE OF SUSTAINABLE YIELD MANAGEMENT AND ANNUAL ALLOWABLE CUT

The question is why does logging continue to be a cause of forest degradation despite the establishment of the Sustainable Yield Management principle? Most of the existing large scale projects possess old TPs issued under the former Forestry Act. These projects did not apply the principle of Sustainable Yield and their Annual Allowable Cut (AAC) is set at level that far exceeds the sustainable yield.

For the TPs issued under the new Forestry Act, the principle of Sustainable Yield Management is applied. However, the ODI points out that there are two problems with regard to the AAC, “first, it depends on an accurate inventory of the harvestable trees over a huge area, which has proven very difficult to achieve; and second, it depends on 35 years as being a sufficient time period for the forest to rebuild to a similar level of commercial tree volume” (ODI 2007a). *The Review of Forest Harvesting Project Being Developed Towards a Timber Permit or Timber Authority (2000-2001)*, which audited individual projects, reports many cases where the AAC is set too high based on incorrect resource volume assessments.

4.4.3. LOGGING METHOD

Another cause of deforestation and degradation is logging methods. The logging method in PNG is “selective logging” (a method that only logs the selected trees). However, the current operational method poses a significant threat not only to trees that are selected and logged but also to surrounding trees. Shearman et al. describe actual logging manners in details: “Typical logging operations in PNG involve selection and felling of trees on the basis of species and diameter (legally >50cm diameter at breast height (DBH)/above buttress), cutting the bole into a suitable length and dragging the raw logs to logging trucks and barge transport. The logging operation itself causes substantial destruction to the forest due to the road development and collateral damage from tree felling. A study detailing the effects of a typical logging operation found 40% of the forest tree volume was killed and that only a small proportion of this volume was extracted as logs. When a tree is felled an area of surrounding vegetation is damaged up to the height of the tree and the width of its canopy. Each logged tree is dragged by the bulldozer along a snig track of cleared vegetation up to 4m wide, to a cleared log dump accessible to trucks. Snig tracks extend up to a few hundred meters away from a log dump and road. Roads that can be used by logging trucks require a graded bulldozed track with 5-6m width roadway; typically a swathe of 10-30m width is damaged when

¹³ According to the FAO, the annual average rate of the decrease in forest cover in PNG is 0.5%; Shearman’s team argues that the FAO figure is too small. Among other methodological problems behind the FAO figure, the team points out that the FAO simply applies the rate of decrease based on the research between 1975 and 1995 and that critical element such as the change in economic conditions or frequent fires are ignored.

obstructing trees are felled or bulldozed into surrounding forest. Depending on the terrain and timber volume there are 1-2km of road per km² of logged forest. A further 5% of large trees (relative to the volume of logs exported) are typically used to build bridges and ramps for the logging operation” (Shearman et al. 2008).

Furthermore, Shearman’s team also points out that the secondary impact includes frequent fire due to opening of the canopy and the damage caused by the invasion of weeds, etc.

The PNGFA asserts that the lack of the timber industry’s compliance with the forestry laws, regulations and prescribed procedure is the main key issue undermining sustainable forest management in PNG. Such logging practices destroying residual tree crops and damaging soils and saplings through large disturbance are some factors that will affect sustainability (PNGFA 2009).

The above discussion suggests that incorrect and improper assessment of forest stocks and weak enforcement of forest regulations are the major reasons why logging continues to be a cause of forest degradation.

4.4.4. ENVIRONMENTAL POLLUTION, ETC.

The reviews of individual projects carried out by The 2003/2004 Review Team as part of A Review of Existing Logging Projects, found destruction of waterways following the logging operation and pollution of the source of drinking water due to fuel leakage in some of the projects.

Country Profile on Environment - Papua New Guinea, which was compiled by JICA (Japan International Cooperation Agency) states that the major cause of water pollution includes mining and forestry operations. It continues, however, that there has been no research on the effect of the water pollution caused by such operations on the environment and human body (JICA 2002). This indicates that PNG has not been able to understand the general causes of its environmental pollution, and this applies to forestry-related pollution.

4.5. ENVIRONMENTAL ADMINISTRATION RELATED TO THE FOREST

As considered in more detail in 3.3.1. and 3.3.2 above, “There is a consistent lack of the DEC field monitoring and control in the forestry sector”. Breaches of the 24 Key Standards of Logging Code of Practice, a minimum set of standards to reduce the adverse impact of logging on the environment, were often being overlooked by the PNGFA Inspection Supervisors (2003/2004 Review Team. 2004).

Furthermore, Shearman et al. (2008) state “The ecological effects of selective logging on PNG’s rainforests community are largely unquantified and poorly documented. There have been no in-depth, long-term studies of the state of forest before and after logging to assess whether the biota will recover to its prior composition”.

Lacking the adequate monitoring and the inspection on site and the scientific data of the impact of logging operations on the environment, it is next to impossible for the government to lead the industry to realize sustainable forestry in PNG.

4.6. CONCLUSIONS

The major environmental risk originating from logging operations in PNG is forest decrease and degradation which undermine the terrestrial habitats of wild life and pose significant threat to the eco-system. The rate of the decrease is as high as 0.8%, and the area being lost annually was 260,000 hectares between 1972 and 2002. The major causes of forest decrease and degradation are the conversion of forest for subsistence agriculture and logging operations.

A major cause of forest decrease and degradation is the excessive amount of logging in authorized projects derived from the setting of the AAC calculated without applying the principle of Sustainable Yield or based upon inadequate inventories assessment.

The other major cause of forest decrease and degradation is from inadequate operational methods, which damages lower plant cover, the soil, and trees other than those felled for timber. Destructive operations have been overlooked as the monitoring and control of logging sites by the government agencies are quite insufficient.

The above observations lead to the conclusion that, in general, large scale logging operations in PNG continue to have a harmful effect on the forest and environment; therefore, at present the procurement of PNG timber entails certain level of environmental risks.

5. RISK ASSESSMENT OF PEOPLE'S LIVES AND RIGHTS

This chapter examines the impacts of large scale logging operations on the lives of local people. In particular, the chapter attempts to identify whether people's rights have been violated during the timber rights acquisition process and during the conduct of logging operations.

5.1. TRANSFER OF TIMBER RIGHTS AND FOREST MANAGEMENT RIGHTS

Forest development projects start with the government securing the timber rights from the customary landowners. Under the former Forestry Act, this transfer was carried out through the TRP, while it is conducted through the FMA process under the new Forestry Act of 1991. The term of a TRP is 40 years, while the term for a FMA is 50 years. In both cases, customary landowners receive financial compensation such as royalties for the timber produced, as well as the additional benefit of infrastructure, such as the construction of roads and bridges, in return for timber rights for the contracted land.

As land ownership by customary resource owners is acknowledged and property rights remain with the landowners even after the transfer of development rights, customary resource owners can stay in their homes and continue to use forest resources for their livelihood under certain conditions. This is where PNG differs from other countries, in that there appears to be few cases where customary resource owners are shut out from their forests and become displaced having lost their livelihood base.

5.2. THE PROBLEM OF CONSENT FROM LANDOWNERS

The main concern is whether landowners have given their Free and Prior Informed Consent based on full understanding of the nature of the Agreement in the process of the Government's acquisition of timber rights.

The summary report of the first Independent Review, *Observations and Recommendations* states that "The quality of the land owner awareness work is being compromised, or sometimes even overlooked, and it cannot be said that landowners are making an informed decision or that their expectations are likely to be met. (IFRT 2001)"

The 2003/2004 Review Team refers to the landowners' receptivity and states "Landowners do not have the skills or information to make informed decisions regarding the 50 year transfer of their forest management rights to the PNG Forest Authority" (2003/2004 Review Team 2004). The ODI focuses on the lack of field officers in NFS and insufficient time frame for acquisition process and states that in some cases the NFS officers are required to complete the mission in the short span of three weeks, which includes traveling to the development site, which sometimes cover more than 100,000 hectares, identifying landowners, providing explanations to them and securing their consent for the conclusion of the FMA (ODI 2007b).

It is clear that the fundamental problem here is the lack of sufficient explanation to landowners by the government agencies. However, the complexity of social conditions in PNG also presents a significant problem. First of all, the fact that the rights to land and trees are communally owned by local communities makes the conditions surrounding these rights complex. Such complexity makes it difficult for the administration to secure understanding and consent from all members of the community. Furthermore, as the Forest Trends (2006) points out, the inordinate variety of local languages in PNG and significant disparities in the level of education and literacy rates have prevented effective communication in obtaining free, prior, informed consent. Regardless of these difficulties, those responsible for acquiring customary rights to secure consent are required to carry out this work (Forest Trends 2006).

Past attempts to involve landowners in large scale logging timber operations such as the concept of Forest Development Corporation virtually failed (ODI 2007a) and under the current FMA system landowners' participation is restricted. Forestry Act § 63 requires the Provincial Forestry Management Committee to consult with landowners in course of drafting the project guideline; however, once the project developer is selected and the TP is issued, there is no institutional process to reflect landowners' will in the project management.

5.3. PAYMENT OF FINANCIAL COMPENSATION

The basic compensation is Timber Royalty, which is based on the timber volume scaled. The current royalty payment is Kina 10.00/m³ (approximately US\$ 3) for all logs. The royalties are collected from logging companies by the PNGFA who pays them to the appropriate clan agents or ILG. In the cases reviewed by the 2003/2004 Review Team, the landowners received their royalty payments from the PNGFA without problems (2003/2004 Review Team 2004).

In addition, for projects approved under the old Forestry Act, a log export premium is paid to landowners. Log export premiums are paid by the logging company directly to the representative landowners, which is usually in the form of the payment to the landowners company (*ibid.*).

According to the 2003/2004 Review Team, under the prevailing FOB log price at the time of review, landowners' secure about 10% of FOB revenue on average, compared to the Government's 30% and industry's 60%. The industry's share is not the profit but the gross sales amount, which is required to cover all costs plus reasonable profits (*ibid.*).

Problems exist in the area of the distribution within the clans. These financial compensations are sometimes made only to the representative landowners in one payment, or to the ILG, which is established when the FMA is concluded, as mentioned earlier. This has caused many grievances for resource owners who claim there is no transparency or accountability in how the money is distributed (Forest Trends 2006).

Another problem is the continuity of the payment. Since the logging is not carried out based on the sustainable yield, the incomes to landowners may only last for a few years before the logging company completes its operation in a particular forest area (*ibid.*).

5.4. PROVISION OF ADDITIONAL BENEFITS

Additional benefits landowners receive include infrastructure development such as the construction of roads and bridges, the establishment of schools and hospitals, etc. within the development area. These benefits provision are specified in the conditions of the TP as the obligation of developers.

With respect to these additional benefits, from its observation of the 14 projects examined in *A Review of Existing Logging Projects (2003-2004)*, Forest Trends concludes that only two projects (Open Bay and Walnut) have implemented their obligations fully. As for the rest of the projects, two of them are considered to 'have cleared the obligation' and ten of them are considered problematic. The cases that are seen as the most problematic are those where despite the promise of the development of permanent roads and bridges, the only roads that were built were the ones used for the logging operation. These roads are not repaired and become unusable once the operation is over. With regard to the development of schools and hospitals, failures to implement or to meet the required development standard or delayed implementation have been observed. Table 5 shows the status of the fulfillment of the obligations for individual projects.

The problems described above are a matter of contractual default. They also infringe on the rights of local residents, since it means that the full amount of compensation for the transfer of the right to use forests for timber are not being paid.

There have been few measures taken by the government in terms of basic infrastructure. There are criticisms against the government in this regard; although developers may continue to develop roads, the long-term maintenance of basic infrastructure must be the government's responsibility.

Table 5. Status of Individual Projects covered by the Review of Current Logging Projects

	Operator (Origin)	Size (ha)	Forestry Act to be applied	Agreement	Original Permit	Extended to	Due Timber Permit Process	Sustainable Yield Principle	Payment	Infrastructure obligation (Undelivered Facilities)	Environment		Labor issue	Conflict & Violence	
											Plan as of 2004	Compliance with Harvest Code			
											[1]	[2]			[7]
Makapa	Innovision (M)	301,500	Old(1971)	TRP(1991-2031)	1992-2002	2013	Yes	No	Yes	○	Expired in 2002	○ Reasonably well thou some X	-		
Vanimo	WTK (M)	292,000	Old(1971)	TRP(1967-2007)	1991-2011	not yet	Yes	No	Yes	×	Valid	×	Lack of compliance	T/S&H/D/W/L	Police issue
Vailala Block2/3	RH (M)	202,300	Old(1971)	FMA(1995-2045)	1992-2002	2012	No	No	Yes	×	Expired in 2002	×	Damage to watercourses	-	Police issue
Ania Kapiura	SBLC (Unknown)	188,000	Old(1971)	TRP(1969-2009)	1989-2014	not yet	Yes	No	Yes	○	Valid	○	Good effort but some X	T/S&H/Di	
Wawoi Guavi	RH (M)	488,300	Old(1971)	TRP(1989-2021)	1992-2002	2012	Yes	No	Yes	×	Expired in 2002	×	Lack of compliance	T/S&H/D/W/L	Police issue
Turama	RH (M)	1,250,000	New(1991)	FMA(1995-2045)	1995-2030	not yet	No	No	Yes	×	Valid	×	Causing excessive damage	T/S&H/A/W	Police issue
Open Bay	Open Bay T.(J+PG)	15,600	Old(1971)	TRP(1967-2007)	?-2002	2004	No	No	Yes	◎	Valid	◎	Strict compliance with Code	S&H	
Vailala Block 1	RH (M)	113,400	Old(1971)	TRP(1989-2029)	1991-2003	2009	No	No	Yes	×	Valid	×	Causing excessive damage	-	
Iva Inika	Kerawara (M)	13,400	Old(1971)	TRP(1972-2012)	1988-1998	2003	Yes	No	Yes	×	Expired in 1998	△	Fair effort but some failures	-	Police issue
Kapuluk	Samling (M)	165,600	Old(1971)	TRP(1971-2011)	1989-2009	not yet	Yes	No	Yes	×	Valid	×	Harvesting generally destructive	-	
Manus West	RH (M)	32,500	Old(1971)	TRP(1988-2028)	1988-2003	in process	Yes	No	Yes	×	Expired in 2003	△	Fair effort but some failures	-	
Seraji	Deegold (M)	47,000	Old(to be New)	TRP(1988-2008)	1995-2004	unknown	No	No	Yes	○	Never approved	×	Operation not appropriate	-	
Buhem Mongi	Willis Kent (M)	88,500	New(1991)	FMA(1998-2046)	1997-2032	not yet	No	No	Yes	×	Valid	△	Fair effort but some failures	-	
Wanut	PNG FP (M+PG)	37,400	Old(1971)	TRP(1992-2007)	1992-2002	2007	Yes	No	Yes	◎	Expired in 2002	◎	Generally satisfactory manner	None(VG)	
Notes	Origin M: Malaysia J: Japan PNG: Papua New Guinea										Facilities Rd : Road Br : Bridgw Tw: Township H: Hospital Sch: School W: Water supply SW : Sawmill		Labor Issues: T: Lack of Training S&H: No regard to Safety/Health A: Accomodations problem D: Excessive salary deductions W: No wage increase L: No leave Di: Discrimination		

Sources:

- [1] Forest trends 2006 Table B pp. 10-11 Profile of logging operations analyzed in the Review of Current Projects
- [2] Review Team 2003-2004. Review of Current Logging Projects. Finalised Individual Project Review Report No. 1- 14
- [3] Forest trends 2006 Table 7 p. 31 Summary of Legal Compliance in the Largest Current Logging Projects
- [4] Forest trends 2006 Table 2 p. 16 Project Compliance with Forestry Act 1991
- [5] Forest trends 2006 Table 10 p. 46 Financial Obligations and Payment
- [6] Forest trends 2006 Table 11 p. 49 Performance on infrastructure obligations
- [7] Forest trends 2006 Table 5 p. 26 Status of Environmental Plans
- [8] Forest trends 2006 Table 4 p. 25 Labor Practices
- [9] Review Team 2004. Review of Current Logging Projects. Report to the Independent Review Committee into the Operations of the RPNGC

5.5. IMPACTS ON LOCAL COMMUNITIES

5.5.1. FINANCIAL IMPACTS

Observations and Recommendations in A Review of Existing Logging Projects (2003-2004) describes the financial impacts of logging operations on local communities as below:

- Benefits to landowners from logging generally last less than five years, and are too small to result in any long term improvements in socio-economic welfare (2003/2004 Review Team 2004).
- Logging was found to have little long term beneficial impact on landowners, although they bear the environmental costs. Personal income is directed to immediate consumption, and community income tends to be squandered by so-called land owner companies who purport to represent the landowners. Whilst new large scale sustainable logging projects may offer the opportunity for landowners to receive a sustainable income, the level of income under current arrangements is generally too small to impact significantly on rural living standards (ibid.).
- Relatively few opportunities are being created for PNG workers to acquire professional level training as a result of logging projects (ibid.).
- The value of infrastructure provided by the logging companies is diminished due to the lack of public investment (ibid.).

The above observations mean that the benefits from logging operations never stay in the communities as a communal asset of basic infrastructure, whether in the form of a cash deposit, improvement of the standard of living, or through development of occupational capabilities.

5.5.2. OTHER IMPACTS

As part of “A Review of Existing Logging Project (2003-2004)”, a research team from The Department for Community Development visited four logging project sites with the review team. The research team focused on examining the impacts of development projects on women and children. The results of this research are summarized in the report by the Forest Trends, and the following problems have been identified (Forest Trends 2006):

- Rivers have been polluted due to fuel leakage from vessels carrying timber, subsequently depriving the community of fisheries resources, which were a vital source of food. Similarly, medicinal plants became unavailable due to logging operations;
- Foreign workers working at logging sites marrying local women and returning to their countries leaving the women and children behind after the termination of the contract. In other cases, the increase of children born outside of the marriage and single mothers;
- Children: Children living at logging camps with no opportunities for education. Children suffering from malnutrition;
- Women: Compensation paid by developers not distributed to women.

In reality, there are significant disparities amongst the four projects studied under this research. For instance, one of the projects, Open Bay, was a Japanese joint venture project, and no problem was reported with regard to this project. It is therefore not appropriate to generalize the problems relating to women and children, however, the above examples should be noted.

5.6. REPORTS ON CONFLICTS AND VIOLENCE

With regard to the cases of conflicts and violence, *A Review of Existing Logging Projects (2003-2004)* points out the law and order issues as one of the matters of landowners' voiced concerns and mentions "In some instances the police stationed at logging project sites are perceived to act as company police, rather than ensuring the observance of PNG laws and the protection of PNG citizens."

These incidents are found in five logging project sites and summarized in separate individual reports. The five projects were: Iva Inika (operated by a Malaysian company Kerawara), Turama (operated by a Malaysian company Rimbunan Hijau), Vailala Block 2/3 (operated by Rimbunan Hijau), Vanimo (operated by a Malaysian company WTK) and Wawoi Guavi (operated by Rimbunan Hijau). For all cases, landowners and workers made an appeal to the review team claiming that they have been hit or threatened by the police force brought in by developers since they made a complaint with regard to the management conditions of the developers.

For Wawoi Guavi, which was considered to be the most serious of all cases, a separate report (confidential) has been created. The report summarizes the situation surrounding the involvement of the police force as follows (RT 2004 Wawoi Guavi).

- The police force harassed the communities; they forced landowners and residents to walk around naked or to climb up on trees, threatening them with guns.
- Guns were smuggled in using the vessels that carry timber. They were unloaded and carried to a secret place during the curfew ordered by the police force. The vessels that were used for carrying these guns carried marijuana out of the country. Also, a light aircraft of Rimbunan Hijau unloaded what is thought to be contraband at the furthest end of the runway. This took place on more than one occasion.
- The police force declared a virtual martial law, closing the entrance gate to the project site. The police also played the role of judiciary and collected fines from local residents.
- There were many foreign workers without work permits, and they went into hiding during an inspection by the Labor Bureau (RT 2004 Wawoi Guavi).

The findings of studies into human rights abuses associated with logging operations have been contested. For example, ITS Global, a consultant hired by the PNGFA which is the industry organization for large scale developers claimed that the "Independent Reviews" were not officially verified or endorsed by the Government and therefore lacked credibility. ITS Global has positioned these reports as personal documents (ITS Global 2009).¹⁴

¹⁴ The neutrality of ITS Global has itself been challenged in an open letter by a group of scientists who feel that ITS Global should be viewed as a lobby group representing the interests of industry rather than as a think tank. (see <http://www.redd-monitor.org/2010/10/27/who-the-hell-does-alan-oxley-think-he-is/>).

With regard to the reports on the human rights infringement, they are based on interviews, which make it impossible to determine whether all of the reported incidents are true. However, it is problematic that the government ignored the reported incidents and there has been no detailed investigations carried out by the judiciary.

5.7. CONCLUSIONS

- Customary landownership by indigenous people is guaranteed by the Constitution. Compensation for the transfer of timber rights is paid as Timber Royalty. Rights on the land other than the timber right remain untransferred. In this sense, the minimum right of indigenous peoples seems to be protected.
- However, in the process of acquisition of the forest management rights from indigenous people, it appears that the rights have been secured by the government without sufficient explanation of the contents of the agreement and the full understanding and consent by the landowners. In particular, there is a lack of understanding with regard to the transfer of forest management rights, where the right is given for a term that is as long as 50 years, for all types of usage of the relevant land.
- It is estimated that landowners have been receiving about 10% of FOB value of exported logs. Royalty is collected by the PNGFA from developers, but as it is a lump-sum payment to the representative of landowners or the landowner company, individual members of the clan have complaints with regard to the distribution method within the clan.
- Additional benefits may include roads, bridges, schools and hospitals, which developers are required to provide according to their contractual obligations. However, the implementation of these obligations is insufficient in most of the projects discussed in the literature reviewed for this report.
- Benefits to landowners from logging generally last less than five years, and are too small to result in any long term improvements in socio-economic conditions.
- In some of the logging sites, there have been reports of police intervention and the suppression on workers and indigenous people. The government ignored the reported incidents and there has been no detailed investigations carried out by the judiciary although it is necessary to clarify the situation and provide measures to tackle this problem.
- Consideration of the above findings leads to the conclusion that the forest development projects have had certain negative impacts on people's lives and rights, although they may have brought some benefits. Social risks are thus inherent in the procurement of timber from large scale logging operations in PNG that are not independently certified.

6. RECENT CHANGES IN PNG'S FOREST MANAGEMENT

The examination made in the preceding chapters, mainly based on the Independent Reviews, revealed various problems related to forestry in PNG existing at the time of the Reviews. What has taken place since? This chapter describes the movement after the independent reviews and examines whether the environmental and social risks of logging have decreased.

6.1. THE FAILURE OF FORESTRY AND CONSERVATION PROJECTS AND THE WITHDRAWAL OF THE WORLD BANK

The biggest cause of the problems in PNG's forestry sector is the lack of capacity for law enforcement and management capabilities. In order to tackle this issue of governance, the following two projects were started after 1999, upon the initiatives by then Prime Minister Morauta and the World Bank.

1. Governance Promotion and Adjustment Loan: GPAL (2000 – 2001)

This is a loan of US\$ 90 million aimed at strengthening the overall capabilities of administrative enforcement and management. With relation to the forestry, an attempt was made to improve forest management by strengthening the framework of the relevant systems, which resulted in the amendment of the Forestry Act in 2000. The Prime Minister suspended the issuance of new TPs and implemented its first independent review; *The Review of Forest Harvesting Project Being Developed Towards a Timber Permit or Timber Authority (2000-2001)*.

2. The Forest Conservation Project: FCP (2002–2005)

This project focuses on forest-related issues and its objectives included the reinforcement of enforcing capacities of the NFS, the DEC and the facilitation of landowners' participation in forest management and conservation.

The FCP was implemented from June 2002. A general election was held in the same year and the present Prime Minister Sir Somare took over from Sir Morauta in August 2002. Since the government change, conflict between the World Bank and the government became severe with regard to the FCP as the new government adopted an export driven economic policy and focused on the export of timber.

Eventually, the World Bank decided to stop the FCP in August 2003. Meanwhile, the PNG government communicated the cancellation of the loan contract to the World Bank in June 2005. According to the World Bank the government clearly indicated to the Bank that it did not want further Bank involvement in PNG's forest sector (World Bank 2006).

A series of subsequent inspections by the independent review team which is referred as the Independent Review in this article were implemented in conjunction with the FCP project and preceding the GPAL project.

Following this event, there appears to be no forest-related project funded by the World Bank. If it has withdrawn its support completely, the effect is thought to be considerable given that the World Bank had long been monitoring forestry policy in PNG, using its loan to the country to exert pressure.

6.2. RECENT MOVEMENT IN GOVERNMENT SECTOR

A PNGFA country report submitted to the FAO (Food and Agriculture Organizations of the United Nations) in 2009 reviews the most recent change in the forestry sector and analyzes the probable scenario for the coming ten years. This section draws on the PNGFA report and other sources to discuss whether there has been any improvement in the Government sector.

6.2.1. POLICIES AND LAWS

1. Decreasing Resources

Table 6 shows the area for which forest management rights are secured by the Government. Newly acquired area has rapidly decreased since 2000 as the area available for commercially viable logging operations has been diminishing. On the other hand the number of logging operations decreased from over 40 to about 25 because of the exhausted timber resources as a result of unsustainable operations. Furthermore timber concessions are gradually decreasing as their terms expire and most concessions currently operating will expire by early 2050 (PNGFA 2009).

Table 6. Area acquired for development

<u>Period</u>	<u>Area (ha)</u>
1940s	1,519
1950s	78,625
1960s	1,551,521
1970s	905,921
1980s	2,063,654
1990s	5,841,952
After 2000	751,231

(Source: PNGFA 2009)

2. The PNGFA's effort to shift the nation's forestry policies

The PNGFA developed 3 new policies i.e. Processing Policy, Reforestation Policy and Eco-forestry Policy. These policies are to facilitate the shift from forestry dominated by large scale logging projects to the smaller-scale forestry that brings more benefits to local communities and the environment (PNGFA 2009).

These policies have potential to reduce the pressure of logging on natural forests. However, although the PNGFA claims that these policies have already been developed and are waiting for cabinet approval and the budget allocation, they had been developed by 2005 at the latest and left ignored for nearly five years. This indicates that these policies are not prioritized by the PNG government.

3. Amendments of Laws

➤ Forestry (Amendment) Act 2007

The sections relating to large scale conversions of forest to agriculture or other land use and large scale conversions of forest to road (§ 90A/B/C) were amended. The amendments enabled the project development company to harvest the forest under a Forest Clearance Authority (formerly harvesting contractors are decided by tenders). Also, the PNGFA's jurisdiction in the evaluation procedure is narrowed and such procedures as public hearings are transferred to the department responsible for the projects. In conjunction with § 11 / § 102 of The Land Act (1996), these amendments have been facilitating Agro-Forestry projects as outlined in Section 6.3 below.

➤ Environment (Amendment) Bill 2010

On May 28 2010, the parliament in PNG passed the Environment Bill Amendment 2010. Newly added Section 69A gives the Director of Environment virtually sole discretion to authorize “associated acts” which is also newly defined by the amendment as “acts or works relating or associated with” the activity already permitted by the Minister. Section 69A also provides that this authorization on associated acts “is deemed to be a permit granted under this Act and applied notwithstanding non-compliance with any procedural or other requirements”. Moreover the last clause 69A(3) mentions “The Director’s decision to grant an authorization is final and **may not be challenged or reviewed in any court or tribunal.**”

The Centre for Environmental Law and Community Rights (CELCOR) appealed the case as unconstitutional to the Supreme Court on behalf of landowners. The Supreme Court took up the appeal and the case will be held in mid 2011 (CELCOR 2011).

This startling amendment arouses suspicion that attempts to loosen the legislative framework of PNG are being made.

6.2.2. THE LAW ENFORCEMENT CAPABILITIES

With regard to the monitoring and law enforcement, there seems to be no significant improvement, as the PNGFA states in its 2009 Report, “Due to the lack of adequate funding, agencies cannot adequately monitor and manage the activities of logging companies and others involved in the forestry sector.” (PNGFA 2009)

6.2.3. REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION

PNG has been playing a leading role in the negotiations on Reducing Emissions from Deforestation and Forest Degradation plus Conservation, Sustainable Forest Management and Carbon Stocks Enhancement (REDD+) under the UNFCCC (United Nations Framework Convention on Climate Change). REDD+ was first introduced into the COP by governments of PNG and Costa Rica at COP-11 in 2005. At present, the Government of PNG is giving priority to the policies relating to climate change, especially REDD+ and the issue of deforestation. The PNGFA considers that REDD+ is the best option to lower the speed of deforestation and degradation in PNG (PNGFA 2009).

Decision 1/CP.16 (the “Cancun Agreements”) adopted at the UNFCCC COP 16 on 10 December 2010, established a framework for the REDD that requires developing countries to address forest governance issues and establish robust MRV (Measuring, Reporting and Verification) systems. The reinforcement of forest governance and national forest monitoring system are preconditions for implementing REDD+. The World Bank’s Forest Carbon Partnership Facility, the UN-REDD program, bilateral donors and others are assisting developing countries to prepare for a global REDD+ mechanism.

The UN-REDD and the Government of PNG launched a 3-year joint program starting 01 January 2011 to establish an operational MRV system with a budget of US \$ 3.4 million. The PNGFA is deeply involved as the institute responsible for the management of the Satellite Land Monitoring System and the operation of the National Forest Carbon Inventory (UN-REDD 2011). The joint program provides an important opportunity for the PNGFA to reinforce their monitoring system and strengthen forest governance utilizing those funds.

6.3. EMERGING THREATS TO THE FOREST

Large scale conversion of forest to agricultural lands or oil palm plantations has been increasing dramatically and is now a major threat to forest cover in PNG. While in the past, conversion of forestlands to agricultural lands was the biggest cause of deforestation, it was driven by conversion for subsistence agriculture by local community people, whereas the new threat is from large enterprises.

The new type of forest conversion projects are referred as “agro-forestry projects” or “SABL” and are based on lease-leaseback arrangements under the Land Act, which became permissible after the relevant amendments of the Forest Act were undertaken in 2007.

According to the information gathered through interviews with key informants in PNG during authors’ visits in November 2010, the outlines of this arrangement are:

1. The Department of Agriculture acts as the middleman between the developers and landowners as developers cannot directly deal with the landowners.
2. The customary landowners form a company and lease the land to the government and then the government lease the land to the developer for agricultural development. The duration of the lease is up to 99 years.
3. Forest Conversion Authorities are given to the developer by the Forestry Authority to allow the forest to be cleared for agriculture. The developer is allowed to export the timber harvested.

The CELCOR indicated that 2.3 million hectares was under lease-leaseback arrangement at the end of 2009 and the figure had risen to 4.3 million hectares by October 7 2010, i.e. the area has almost doubled in a year. This means that almost 15% of the remaining forest area has been allocated for the conversion projects. Meanwhile, the afore-mentioned UN-REDD Joint Program Document states “As of August 2010, applications amounting to a total of 2.7-2.9 million hectares (9-10 percent) of potential forest area have been submitted under these agricultural leases also known as

‘agroforestry’ projects approved by DLPP(Department of Lands and Physical Planning). Of this area, 0.8 million hectares have received a FCA by the PNGFA. This area is therefore approved for clear felling for conversion into agricultural land” (UN-REDD 2011). Although the two figures differ widely, either figure is enormous enough and indicate a serious threat to the forest in PNG.

Furthermore, CELCOR is concerned that indigenous peoples’ property rights have been violated or a majority of these leases were obtained without the consent of customary land owners. CELCOR submitted an Urgent Request regarding the SABL issue and the amendment of Environment Act to the Office of United Nations High Commissioner for Human Rights on January 31, 2011.

SABLs are officially awarded by the government authority, however, the National Research Institute (NRI), a leading think-tank in PNG, concluded that the procedures up to the award of leases were not consistent with the law and there were problems with the identification of landowners and the acquisition of landowners’ consent on use of land for SABLs (NRI 2011).

Even the motive of the projects is questioned. The ITTO states that “Some proposed ‘oil-palm projects’, however, are designed mainly for log extraction, with investors with no expertise in oil palm applying for and obtaining permission to clear forest and subsequently making large profits from timber sales (ITTO 2011).”

Under increasing pressure of criticism against SABLs, the Acting Prime Minister, Sam Abal who assumed responsibility in early April, 2011 after the temporary leave of Prime Minister Sir Michael Somare for health reasons, announced an immediate moratorium on the issuing of new SABL leases and the launch of an official inquiry on May 5, 2011. He added that the Commission of Inquiry (CI) would investigate whether SABLs had been granted following all legal requirements and whether the leases had been used for the purposes intended in the legislation and all Forest Clearance Authorities granted under the existing leases would be suspended until the CI process had been completed (Post-Courier Online, May 6, 2011). This announcement caused a fierce controversy. NGOs and landowners support the launch of the Commission while those who support SABLs are reported to be opposing the review. As of the beginning of June 2011, the CI had still not formally convened (Ecological Internet, June 9, 2011).

These are positive measures, though it is difficult to foresee what the outcome will be. To reduce the social and environmental risks of timber procurement, the highest priority should be given to the prevention of destructive forest conversion and fraudulent alienation of the customary lands.

6.4. VOLUNTARY LEGALITY VERIFICATION AND SUSTAINABILITY CERTIFICATION

If consumers are conscious of environmental and social risk inherent to the forest products and select products with lower risks, or exclude products with high environmental risks such as illegal products, they can contribute to facilitating sustainable forest management in the producer country.

When consumers are making a product purchase decision, a third-party certification for the management of forests from which the products come from, or verification of the legality of the

production process, can be a good guide for their choice. In this sense, third-party legality verification systems or certification systems can provide a powerful tool in realizing sustainable forest management through the market mechanism.

Based on the above point of view, the following paragraphs will discuss the situation surrounding the legality verification system and forest certification system in PNG.

6.4.1. FSC CERTIFICATION

In PNG, the share of total timber production that is certified is extremely low, and the Forest Stewardship Council (FSC) is the only forest certification scheme with a presence.

The PNG government has not provided any active support to the promotion of forest certification while the industry had not shown any interest in certification with a few exceptions. Instead, in PNG, the FSC has been promoted mainly by the committed individuals and NGOs engaged in community-based forestry operations (Bun et al 2007). The PNG FSC National Working Group has successfully developed the PNG national standard for the FSC, which was approved by the FSC in 2008.¹⁵

Two large logging companies studied the feasibility of FSC certification and even dispatched their personnel to the training events conducted by the SGS in 1996 and 1997. However, as of December 2010, no large scale logging company has obtained FSC certification in PNG.

The only community groups that have obtained FSC certifications for forest management and CoC are those supported by two NGOs: FORCERT and FPCD. Both groups implement Eco-Forestry on a community level. In view of global commodity trade Eco-Forestry is not an option to substitute the large scale commercial operations due to the supply limitation.

Open Bay Timber, a Japanese company that mainly logs plantation trees, has been certified for FSC Controlled Wood. An executive of the Japanese holding company of Open Bay Timber hinted at their intention to apply for FSC forest management certification for its operation in plantation¹⁶.

The PNGFIA emphasized that in the last five years there has been a significant increase in interest amongst the forestry industry for the uptake of verification/ certification. They, however, also stated that the industry is a long way from achieving FSC certification and that this first requires changes in law and policy.

6.4.2. SGS TIMBER LEGALITY AND TRACEABILITY VERIFICATION - AN INDUSTRY'S EFFORT

In response to the raised consciousness of legality in the market, the SGS began a service called Timber Legality and Traceability Verification (TLTV) in Malaysia, which aims to verify the legality

¹⁵ The standard was originally approved on December 8, 2008, with conditions. A final approval following close out of these conditions was delivered by the FSC Director General on May 26, 2010.

¹⁶ Open Bay Timber obtained FSC Forest Management Certification for 11,770 ha plantation in East New Britain Province in September 2011.

and supply chain of timber. The TLTV was approved as Category B¹⁷ of the UK system of CPET (Central Point of Expertise on Timber)¹⁸ in June 2008.

The PNGFIA explained that in response to the strong demand from the Australian market for verification, the PNGFIA initiated a pilot project beginning in 2008 to develop a TLTV system and requested the ITTO to financially support the project.¹⁹ It is reported that Saban Enterprise also provided funds to this project. With the support of the industry and the ITTO, the SGS established a national legality standard for PNG, modifying their generic TLTV standard and began the service in late 2008.

The TLTV system consists of two components: the Legality of Production (LP) for logging operations and the CoC components for sawmills. The LP component can be verified into two stages: a kind of preliminary version, VLO (Verification of Legal Origin) and the full version, VLC (Verification of Legal Compliance).

In October 2008, Saban Enterprises obtained a TLTV VLC verification. This is the first verification issued in PNG. Since then another VLC was issued for PNG Forest Products Ltd. in February 2010. In addition, Stettin Bay Lumber Company obtained VLO and Saban Enterprises acquired a CoC certificate for their sawmills.

In granting the certification, a week-long auditing is carried out on a project site, and annual auditing is a condition for the continued certified status. In principle, the certification is to verify compliance with existing legislation. Although it has evaluation criteria and indicators related to the sustainability of forest management in their standard, the TLTV assesses the compliance with the laws and regulations related to those criteria. Thus theoretically the TLTV does not guarantee the sustainability of the management as the operation complying with an “unsustainable regulation” is not sustainable.

Table 7 compares the principles of the TLTV and the FSC standards, and Table 8 lists the principles and criteria of the TLTV related to the sustainability which shows that in terms of criteria, those relating to sustainable forest management are mostly encompassed.

Among the four cases of the TLTV verification valid at the end of 2010, only one public summary for Saban has been disclosed to the public. The public summary of the TLTV contains the overview of the evaluation, but lacks details of contents. In order to establish market credibility, it is necessary to increase transparency by disclosing more detailed public summaries, in a timelier manner.

¹⁷ To guarantee the legality and sustainability by other means than forest certification.

¹⁸ Central Point of Expertise on Timber (CPET) is an institution established in 2005 as part of the UK's timber procurement policy. Its management is consigned to Pro Forest, as a public project. It verifies the legality and sustainability of timber.

¹⁹ Based on the information acquired in the interview held in November 2010

Table 7. Comparison of FSC Principles and SGS TLTV Standards

FSC PRINCIPLES		SGS TLTV STANDARD	
1	Compliance with laws and FSC Principles Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.	1	The company is authorized to conduct business in accordance with company laws and other legal requirements of the country where it operates.
2	Tenure and use rights and responsibilities Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.	2	The company has the necessary approvals or authorizations to conduct the relevant forestry related activities at the locations under verifications
3	Indigenous peoples' rights The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.	3	The company respects its social obligations towards local communities, workers, and contractors.
4	Community relations and worker's rights Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.	4	The company complies with its environmental obligations imposed by laws, regulations and other relevant national and international environmental requirements.
5	Benefits from the forest Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.	5	The company adheres to regulations of forest declarations and taxes.
6	Environmental impact Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.	6	The company complies with forest harvesting regulations.
7	Management plan A management plan – appropriate to the scale and intensity of the operations – shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.	7	The company complies with processing, transport and trade regulations.
8	Monitoring and assessment Monitoring shall be conducted – appropriate to the scale and intensity of forest management – to assess the condition of the forest, yields of forest products, CoC, management activities and their social and environmental impacts.	8	The company maintains the necessary registers.
9	Maintenance of high conservation value forests³ Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.	9	The company has management and CoC monitoring systems in place which ensure adequate control and traceability of its productions.
10	Plantations Plantations shall be planned and managed in accordance with Principles and Criteria 1 – 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forests.		

Table 8. TLTV Principles/Criteria related to the sustainability of forest management

PRINCIPLE 5.		THE COMPANY COMPLIES WITH FOREST HARVESTING REGULATIONS
	Criterion 5.1	The Company has clearly identified authorized harvesting areas and positioned its planned forest activities in accordance with approved plans or regulations (accurate positioning and mapping of designated area as per approved plan)
	Criterion 5.2	The Company's operations and activities are geographically implemented in accordance with approved plans (accurate mapping of forest management activity/pre-harvest planning documents/geographically accurate implementation in the field)
	Criterion 5.3	Felling strictly complies with species and trees as authorized, restricted or imposed by applicable international conventions, national or local regulations, and the management plan (authorized species/minimum diameter, etc)
	Criterion 5.4	The Company marks and records trees, stumps, and logs in accordance with relevant regulations (pre-harvest identification/ post-harvest stump identification/ post-harvest log identification)
	Criterion 5.5	The Company can prove that the quantity or volume of harvest is compliant with the authorized amounts
	Criterion 5.6	Proof of the abandonment of trucks consistent with the regulations (compliance of downgrading of logs as waste with regulations)
PRINCIPLE 6.		THE COMPANY COMPLIES WITH ITS ENVIRONMENTAL OBLIGATIONS AS IMPOSED BY LAWS, REGULATIONS AND OTHER RELEVANT NATIONAL AND INTERNATIONAL ENVIRONMENTAL REQUIREMENTS
	Criterion 6.1	The Company respects areas where logging is prohibited or restricted
	Criterion 6.2	The Company preserves biodiversity (protection of endangered species under CITES/biodiversity protection as per national legislation)
	Criterion 6.3	The Company minimizes negative environmental impacts (compliance with the regulations regarding air /soil /water /chemicals /noise /energy /waste /safety risks to people and the environment)
	Criterion 6.4	The Company takes adequate measures to prevent any unauthorized activities by third parties within or around the forest areas under its control (adequate measures to prevent unauthorized activities by third parties within areas under its control)
PRINCIPLE 7.		THE COMPANY RESPECTS ITS SOCIAL OBLIGATIONS TOWARDS LOCAL COMMUNITIES, WORKERS, AND CONTRACTORS
	Criterion 7.1	The company respects the rights of local communities (fulfillment of terms and conditions of TP/contract with the government/agreements with local communities)
	Criterion 7.2	The Company respects the rights of workers as derived from relevant national or international regulations (written agreements /adequate working conditions /nonexistence of child labor /forced labor /harassment /unfair loan)
	Criterion 7.3	The Company only uses legally constituted contractors or subcontractors in its operations and protects the rights of its contractors' or subcontractors' workers

Note: Shown in brackets in the lower column of Criterion are some key-words picked up from the SGS Indicators.

6.4.3. NGO'S EFFORT FOR FSC CERTIFICATION OF LARGE-SCALE LOGGING OPERATION

There have been new developments for large scale developers since 2010. Makapa logging concession, one of the largest logging operations, decided to seek FSC certification. According to Sunday Chronicle PNG²⁰, a news website in PNG, Makapa took its first step and received the preliminary assessment team of Scientific Certification Systems, one of the certifiers of FSC, in February 2010. Makapa, which has a project area of 3,000 hectares, is run by Innovision, a subsidiary of state-owned Yayasan Sabah in Malaysia.

This project is facilitated jointly by FPCD and Innovision, under the partnership program between the private sector and civil groups towards sustainable forest management and forest certification which is funded by the ITTO.

The article stated that it was needed to upscale the forest certification achieved in community forestry to large scale logging operations. It is expected that Makapa's movement will facilitate the move of the industry towards certification. .

6.4.4. RAW LOG EXPORT FROM PNG

The third-party verification and certification systems cannot proliferate without needs from consumers of wood products. From this point of view, the following paragraphs examine the destinations of raw logs from PNG. Table 9 shows a comparison of the destinations of raw logs from PNG between 1996 and 2004, based on the ITTO's annual evaluation data list.

Table 9. Raw Log Export from PNG

Destination	1996		2004	
	Volume (m ³)	(%)	Volume (m ³)	(%)
China	57,000	2.1%	1,287,767	64.0%
Japan	1,695,000	63.4%	342,063	17.0%
South Korea	498,000	18.6%	160,971	8.0%
Taiwan	33,000	1.2%	40,243	2.0%
Others	392,000	14.7%	181,092	9.0%
Total	2,675,000	100.0%	2,012,136	100.0%

Source: ITTO's annual evaluation data list²¹

In 1996, Japan was the biggest importer. Export to Japan has since decreased and in 2004, China became the biggest importer. There is no data available on the exports from PNG after 2004, however, according to the 2007 annual evaluation data list based on the import volume of importing countries for individual country of origin, China's import exceeded 230,000m³, accounting for approximately 86% of all export from PNG. This indicates that the future of the verification and certification systems in PNG is largely dependent on market movement in China. Considering the fact that majority of logs imported to China is processed in China and re-exported all over the world, it is probable that the demand from the buyers of Chinese products for the CoC certification impels Chinese processors to seek the verification/certification on logs.

²⁰ URL: <http://sundaychronicle.blogspot.com/2010/02/makapa-timber-area-seeks-forest.html>

²¹ http://www.itto.int/annual_review/

6.4.5. CONCLUSIONS

It is a notable progress that some large scale logging companies started to move towards certified or legally verified operations. FSC certification is most desirable while the TLTV is mostly satisfactory as a system although more timely and detailed summaries are needed so as to establish market confidence. These systems have high potential to lessen the risks inherent to timber procurement from PNG.

7. CONCLUSIONS

Having examined issues surrounding forestry in PNG, it is apparent that the forestry practice has high risk of threatening the environment and local communities. Therefore under the existing situation it is appropriate to conclude that the procurement of timber from PNG, in general, entails the risk to increase the threat on the environment and the society of PNG

However, there are signs of progress through voluntary standards development and uptake. The TLTV legality verification system provides timber buyers with some confidence on legal compliance issues. Some large scale forestry operations are now taking greater interest in FSC certification, which is another positive development. It should be noted once the system is introduced on the supply side, user support will determine whether the system can successfully take firm hold in the market.

In contrast, there appears little progress in the government sector, yet government initiative is imperative to reinforce forest governance and lessen the over-all threat of forestry operations. PNG has many of the social foundations required for governance through multi-stakeholder participation, such as a long-standing democracy, the commended legal system and active civil groups and the social ethos that accepts them. What is needed now is the clear political will to move forward. There are now high expectations that the REDD will provide the opportunity to start the reform towards sustainable forestry.

The Constitution of PNG states:

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

When PNG’s forestry sector achieves this goal, concerns over the risks of timber procurement from PNG will be no longer necessary.

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