INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT DOCUMENT

TITLE:	ENHANCING FOREST LAW ENFORCEMENT IN PAPUA NEW GUINEA
SERIAL NUMBER:	PD 449/07 **Rev.2** (M,I)
COMMITTEE:	ECONOMIC INFORMATION AND MARKET INTELLIGENCE
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SUMMARY:

PNG is committed to achieving sustainable management of its forest resources. Over the years, PNGFA has developed and implemented forest laws and policies to assist in attaining the objectives of sustainable forest management (SFM). However, weak forest law enforcement, including the lack of effective monitoring of forestry operations due to inadequate local capacity, is undermining the efforts of the PNGFA to achieve SFM to meet the requirements of some of its key markets. This problem has been highlighted consistently in recent years in reports by several international and local environmental non-governmental organisations (ENGOs). A cost-effective forest law enforcement regime, complemented by enhanced capacity building for monitoring forestry activities, is now required to assure PNG's markets of the legality of the sources of its timbers, as well as ensure the on-going effective implementation of PNG's forest laws, regulations and policies to support its sustainable forest management strategies.

The project aims to enhance forest law enforcement and adequately support Papua New Guinea's SFM activities by:

- developing and implementing a cost-effective timber products tracking and chain of custody verification system, appropriate to the needs of the forestry sector in PNG;
- establishing a database on forest law enforcement, to assist in better monitoring forestry operations to detect illegal activities;
- enhancing the monitoring of forestry laws, policies and regulations to address illegal activities;
- developing and implementing standards including industry code of conduct for legal forestry activities consistent with the principles and guidelines of Forestry, Law Enforcement, Governance and Trade (FLEGT); and
- enhancing capacity building for forest law enforcement among the key stakeholders.

Using external (international) and domestic (national) expertise, the major outputs from the project will be:

- a cost-effective timber products tracking and chain of custody verification system;
- a database for monitoring illegal forestry activities;
- standards for legality and industry code of conduct; and
- stakeholder training in forest law enforcement based on FLEG principles and guidelines.

EXECUTING AGENCY: PAPUA NEW GUINEA FOREST AUTHORITY

DURATION: 24 MONTHS

BUDGET AND POSSIBLE SOURCE OF FINANCE:

Source	Contribution in US $	Contribution In-Kind (US$)
ITTO:	473,040	
Govt. of PNG:	30,000	192,000
PNG Industry:	20,000	24,000
TOTAL	**739,040**	

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PART I: CONTEXT

1. Origin

The Project arises from the need for PNG to further enhance its forest law enforcement to better enable it to address occurences of illegal activities, so as to continually achieve the objectives of SFM. Globally, there is recognition that forest law enforcement is an important adjunct to the achievement of the obectives of sustainable forest management (SFM). This is manifested by:

- the ITTO's identification of forest law enforcement as a priority policy issue; and
- the forest law enforcement, governance and trade (FLEGT) initiatives by the governments of the major markets sourcing tropical timber products such as the European Union (EU), Japan, the United States etc.

In recent years, several international agencies (Greenpeace, the Environmental Investigation Agency, Seneca Creek Associates, LLC & Wood Resources International, Forest Trends etc.) in various reports have consistently identified weak forest law enforcement in PNG as contributing to the lack of rapid progress in continually achieving SFM in the country's forestry sector.

As a result of these reports and also PNG's commitment to achieving SFM in its forestry sector, the Government organized a Regional Workshop on Forest Law Enforcement in October 2006. The Workshop was partly funded by the ITTO under Council **DECISION 6(XXXI)**. The objectives of the Workshop, which also involved stakeholders from Fiji, Vanuatu and the Solomon Islands, were to:

- quantify the extent of the law and order problem in the forest industries of ITTO producer member countries in the South Pacific Region;
- understand its causes; and
- propose cost-effective strategies and measures for addressing the problem.

The Workshop identified weak forest law enforcement in PNG as one of the major priorities to be addressed, in order to assist the efforts of the PNG Government and the PNGFA in successfully and effectively achieving the objectives of sustainable forest management (SFM).

2. Sectoral Policies Relevant to this Project

The main sectoral policies in PNG relevant to the project are the following:

- The Forestry Act and Regulation of 1991;
- The National Forest Policy;
- The National Forest Plan;
- Logging Code of Practice; and
- National Forests and Conservation Action Plan (NFCAP)

In the 1980s, persistent reports about malpractices in PNG's forest industry resulted in the Barnett Forest Industry Inquiry of 1989, and the World Bank Review of 1990. Following these inquiries, the PNG Government developed a new Forestry Act in 1991. It also developed a new forestry policy to address the shortcomings of the previous Forest Policy, which was developed in 1979.

The National Forest Policy was approved in 1990. The two main objectives of the policy are:

- management and protection of the nation's forest resources as a renewable natural asset; and
- utilisation of the nation's forest resources to achieve economic growth, employment creation, greater Papua New Guinean participation in the forest products industry, and increased viable domestic processing.

The National Forest Plan was approved by the National Forest Board on 8 May 1996 and subsequently ratified by Parliament in July 1996. All Forestry Projects are developed under this Plan.

The PNG Logging Code of Practice was finalised in February 1996, and became mandatory in July 1997.

As part of the implementation of the recommendations of the Barnett Inquiry, the PNG Government created the Papua New Guinea Forest Authority (PNGFA). The PNGFA is therefore the mandated authority with the responsibility for implementing the Forestry Act 1991 and the Forest Policy 1991.

PNGFA is responsible for monitoring and ensuring compliance with the rules and regulations, including contracts between the State, landowners and investors. It also promotes and develops policies relating to the industry. Since 1993 all new forestry operations have a harvesting cycle of 35 years.

The major challenges that the PNGFA faces in implementing these policy objectives to address illegality and assist in achieving the objectives of SFM, are inadequate funding and lack of competent manpower. Successful implementation of this project will assist in addressing this challenge.

The objectives of the Government's Sustainable Forest Management (SFM) strategy implemented through the PNGFA are:

- implementation of the National Forest Plan and the National Forest Development Programme as defined under the Forestry Act;
- maintaining sustained yield management of the country's commercial forest resources through acquisition of timber and management rights under Forest Management Agreements and management of the Permanent Forest Estate;
- effectively controlling and monitoring harvesting and export operations to ensure compliance with the Forestry Act and associated Government policies, guidelines and procedures;
- promoting resource owner participation in the management and utilisation of their forest resources;
- providing advice to the Government and potential investors on forest resource utilisation options;
- undertaking research programmes and data collection aimed at improving the knowledge base for sustainable forest management and reforestation;
- promoting a fair and equitable forest revenue system that provides for fair returns to landowners, industry and government and a self funding mechanism for the Forest Authority, which will ensure efficient operations;
- promoting and facilitating forest plantation development;
- promoting through extension, public understanding of the multiple value of trees and forests for income generation and livelihood; and
- investing in sound organizational development so as to maximize the Forest Authority's resource utilisation to meet the above corporate objectives.

To respond to international initiatives on sustainable forest development and to arrest deforestation, a National Forests and Conservation Action Plan (NFCAP) was prepared in 1988-1989. The NFCAP identified six major programme areas and priorities for action as follows:

- resource assessment with rapid resource appraisal and re-inventory of resources;
- implementation of a new resource management structure, including a National Forestry Board, Standing Committees, four National Forestry Boards, a new Forest Service and a new financial framework;
- maximizing returns from logging with a comprehensive review of royalties, export taxes, and other revenues from log exports, and by inviting marketing firms to raise their level of activity;
- industrial development prospects with a review of the log export ban and the conducting of feasibility studies for sawmill/board plants, wood chipping and pulp mills;
- conservation and land-use including a World Heritage proposal, a national conservation strategy, rehabilitation of the existing national parks, an improved ecological and monitoring programme, training of local people, support to NGO activities, and a feasibility study for the establishment of a land-use research council; and
- institutional and human resource development.

Together, these laws, policies and strategies provide the national framework for managing the nation's forest resources to achieve the socio-economic and sustainable development objectives of the Government. The provisions and requirements of the Forestry Act 1991 and various policies and strategies are implemented through several operational manuals and guidelines administered by the PNGFA.

PNG is a signatory to several international agreements and conventions, including:

- The International Tropical Timber Agreement;
- The Convention on Biodiversity Conservation; and
- The Framework Convention on Climate Change.

PNG is also actively involved in several international initiatives dealing with forest and forestry, including participating in the deliberations in the various sessions of IPF/IFF, CITES and other international initiatives on forests and forestry.

Several donors have also been providing support to the forestry sector development in the country including: the Japanese Government (JICA), ITTO, the New Zealand Government, Australia (AusAid), bilateral NGOs from the USA (Mc. Arthur Foundation), the World Bank, UNDP, GEF, and FAO.

3. Programmes and Operational Activities Relevant to the Project

The main programme and operational activity in PNG relevant to this project is the Government's log inspection system.

As part of the implementation of the recommendations of the Barnett Inquiry, the PNG Government contracted Société Generale de Surveillance (SGS) in May 1994 to provide an independent, arms length inspection of all log exports from PNG, to ensure that logs exported are sold at the prevailing market prices. SGS' inspection was also to ensure that export shipments were correctly declared with respect to log volume and species.

Since 1994, the PNGFA and the SGS have developed and implemented an inspection system for all round logs exported from PNG. The log inspection system currently in place in PNG involves the following:

- provision of log tags to be affixed to the end of each log by producers at the time of scaling at the log landing as prescribed by the PNGFA;
- pre-shipment log inspections to check species identification and log scaling; and
- monitoring of ship loading to verify the species and volumes actually loaded.

While effective in reducing log smuggling and transfer pricing, it is insufficient to meet the full market requirements for demonstrating sustainable forest management and verifying illegal activities. SGS' inspection activities in PNG only cover logs already assembled at the log landing and ready for shipment i.e the so-called "beach to the ship" operations and not in-forestry activities or "forest to the beach" operations. Neither do they cover processed wood products such as sawn timber or veneer. While the unique numbering system of the bar codes used can enable logs to be tracked to the original stump, this is not currently being done. This is due partly to the lack of a centralised database for capturing and analysing all the necessary information on the flow of logs and processed timber, to enable discrepancies to be checked and verified.

Gaps in the existing system which will be addressed through the proposed project include the following:

- effective compliance with forestry policies and regulations;
- involvement and consultations with key stakeholders including NGOs, land owners, law enforcement agencies and the industry;
- verification of permits for harvesting operations; and
- data captureto enable integration of log inspection data with processed timber data to give a complete picture of product flows.

Thus, the project will build on the existing SGS activities, and develop an enhanced forest law enforcement regime including a chain of custody verification system to address the current gaps. The new system will also include the monitoring of forestry operations, which has been the main reason for international ENGOs' persistent criticisms against the industry in PNG.

PART II: THE PROJECT

1. Project Objectives

1.1 Development Objective

The Project's Development Objective is "**to increase the contribution of the forest sector to PNG's national economy through enhanced market access and higher foreign exchange remittances, as well as further improve the sector's sustainable forest management practices by enhancing forest law enforcement and governance."**

1.2 Specific Objective

The Project's Specific Objective is "**to improve the detection and prevention of illegal logging and export of wood products from PNG."**

2. Justification

2.1 Problems to be addressed

The problem to be addressed is the current weak forest law enforcement regime in PNG, which is undermining the efforts of the PNGFA to effectively achieve the objectives of SFM to meet the requirements of its key markets. The problem to be addressed is further explained diagramatically in the Problem Tree at Annex D.

PNG is a major exporter of tropical timber products. In 2002, the country exported 1.85 million cubic meters of logs valued at US$99.75 million (K367.0 million in local currency) mainly to China, Japan and South Korea. The country also exported wood chips, high-grade sawn timber, plywood, veneer and furniture components.

Weak forest law enforcement is hampering the ability of the PNGFA to make rapid progress towards achieving the objectives of SFM. In recent years, several international and local environmental non-governmental organisations (ENGOs) have consistently identified the weak forest law enforcement regime in PNG's forest industry sector, as one of the main factors undermining the rapid and succesful achievement of SFM. These reports are beginning to impact adversely on market access for PNG's forest products, particularly in the European Union countries, Australia and North America, and therefore the country's ability to generate export revenue in support of its SFM initiatives.

Following an Australian Government report early 2006 which indicated that PNG contributes an estimated 9% annually to illegally sourced timbers entering the Australian market, the Government has announced that it would implement procurement policies which could limit the export of timber products from PNG to Australia. It is estimated that the Australian Government's proposed action would cost PNG 20 million Kina (USD7 million) annually in wood products exports or nearly 6% of its log exports.

Unless the issue of weak forest law enforcement and its impacts on SFM in PNG's forestry sector is addressed urgently, it will continue to have profound adverse impact on the country's revenue generating capacity. Not only will this limit the ability of the Government and the industry to implement sustainable forest management initiatives, but it will also reduce the Government's ability to implement activities that support the country's socio-economic development and reduce poverty. Groups likely to be adversely affected by the continual reduction in export revenue from the forestry sector are land owners and forest-dependent communities.

Within the ITTO, the issue of forest law enforcement has been identified as a major priority as evidenced by Council Decisions: **6(XXXI): FOREST LAW ENFORCEMENT IN THE CONTEXT OF SUSTAINABLE TIMBER PRODUCTION AND TRADE** and **2(XXXIX)** on the **ITTO BIENNIAL WORK PROGRAMME FOR THE YEARS 2006-2007.**

Some of the impacts of weak forest law enforcement in producer countries include:

- loss of government revenue;
- ecological degradation; and

- greater income inequality.

The project development process involved extensive in-country consultation with the key stakeholders or the target beneficiary groups i.e. government, the industry, the traditional landowners, concessinnaires and the local environmental ENGOs. These consultations culminated in a multi-stakeholder regional workshop on forest law enforcement in October 2006, which was attended by representatives of the target beneficiaries and who provided valuable input into the project formulation through the workshop recommendations. The project therefore has the approval and support of the various stakeholders. It also incorporates the views and ideas expressed by their representatives at the regional workshop. Target beneficiary groups have given their commitment to be involved in the project as well as meet their respective obligations as described in Table 1 below, to ensure its successful execution

2.2 Intended situation after Project completion

At the conclusion of the project, it is expected that the following will be achieved:

- an enhanced monitoring regime for illegal forestry activities involving a cost-effective forestry operations monitoring regime, and products tracking including a chain of custody verification system appropriate to the needs of the forestry sector in PNG, will have been developed, field-tested and implemented, in collaboration with the key stakeholders: the government, PNGFA, the industry, land owners, civil society etc.;
- a database on forest law enforcement will have been established to assist in better monitoring and reporting on the flow of timber products, to address illegal activities;
- legality standards including industry code of conduct for legal forestry activities, based on FLEGT principles and guidelines will have been developed and implemented; and
- local capacity for forest law enforcement to support of the achievement of SFM will have been significantly enhanced through training and improved logistical support.

Annex E provides a diagrammatic illustration of the intended situation after project completion.

2.3 Project Strategy

In developing the Project Strategy, a comprehensive review of the available literature including the FAO/ITTO Best Practice for Improving Law Compliance in the Forest Sector, was undertaken. In addition, the experiences of producer countries such as Guyana, Ghana and the Cameroon which have implemented product tracking systems were reviewed. Execution of this project will draw on the experiences of these countries, as well as other ITTO producer countries such as Indonesia, Costa Rica, Honduras, Ecuador, Bolivia, Peninsular Malaysia and Brazil, which have attempted to address the issue of forest law enforcement.

The Project strategy will involve a number of steps as described below. Firstly, the existing enforcement mechanisms for forest laws and policies will be reviewed, to provide the basis for developing and implementing a monitoring and product tracking system that can better support the continuous and rapid achievement of SFM in PNG. The review will involve the key stakeholders (Government, the PNGFA, the industry, civil society, land owners and forest-dependent communities).

Secondly, a cost-effective product tracking and a chain of custody verification system, incorporating the monitoring of field operations, and appropriate to the needs of the PNG industry will be developed and field-tested for implementation, taking into consideration the systems currently available on the market. This will draw on the operational experience of SGS in PNG.

Thirdly, a database to capture information on product flows will be established. Currently, some concessionaires and SGS capture some of this information individually such as species type, log lengths and sizes and coupes description etc. The database will enable all this information to be centralized in an electronic format, and continually updated, so that it can be interrogated and analyzed to verify claims of illegality when they arise. SGS PNG has recommended strongly that such a database should be created as it will be invaluable in assisting to address claims of illegality when they arise or allegations are made. In addition, it will be an important adjunct to the chain of custody verification system to be developed as part of the project.

Fourthly, to ensure a common understanding of activities that constitute illegality in the forestry sector, a standard or definition for legality based on the FLEGT guidelines and principles will be developed, as has

been done in Indonesia. The legality standard will be complemented by an industry code of conduct. The development of the standard and the code of conduct will involve the key stakeholders to ensure its acceptability.

Fifthly, logistics for field monitoring of forestry operations will be enhanced. PNGFA staff, civil society organizations, land owners and forest-dependent communities will be trained in the monitoring and reporting of illegal forestry activities. Incentives will be provided to make it rewarding for individuals to report illegal activities, as well as assist in the successful prosecution and conviction of offenders.

Finally, training, based on the principles and guidelines of FLEGT, will be provided to the police, the Justice Department and PNGFA staff as well as other stakeholders involved in forest law enforcement.

2.4 Target beneficiaries

The main beneficiaries of the project are: traditional land owners, the industry, civil society and the government. Table 1 summaries the inputs and actions of the key stakeholders in the project.

Traditional forest owners

PNG has a benefit-sharing arrangements with traditional landowners. In 2005, the Government distributed over 60 million Kina (USD21 million) to land owners. Land owners will benefit from the project through increased revenues from enhanced market access for PNG's products. Current negative campaings in overseas market are reducing export revenue from timber products, and therefore, the amount that can be distributed to land owners and communities under the benefit-sharing arrangements.

The industry

By being able to demonstrate the legality of the sources of timber products as well as adherence to SFM practices, the industry will benefit from the project through unimpeded access to key markets which are currently being threatened through negative publicity overseas. It will also assist the industry to develop new markets for its products.

Civil society (ENGOs)

Civil society plays an important role in ensuring that PNG's forest resources are managed sustainably. In addition, they ensure the PNGFA is accountable for its stewardship of the nation's forest resources. Through the project, the capacity of civil society organizations will be boosted through training, to enable them to work collaboratively with the PNGFA and other law enforcement agencies, to effectively monitor forestry activities to address illegality and achieve the objectives of SFM.

The Government

The Government will benefit through enhancing its capacity to implement systems and mechanisms in support of sustainable forest management initiatives. The Government will also benefit from increased revenue from enhanced market access, by being able to demonstrate credibly that the country's timber products are being harvested, processed and exported in line with PNG forestry laws, policies and regulations. Increased revenue will enable the government to deliver socio-economic programs (education, health, infrastructure etc.) for its citizens, particularly forest-dependent communities, and thereby continually reduce poverty in the country.

Table 1: Stakeholder input and action matrix

	Policy/advocacy	Funding	Implementation Activities	Access	Monitoring
PNGFA	Development and implementation of policy and strategies that promote SFM and enhanced forest law enforcement. Implementation and monitoring of the enhanced forest law enforcement framework	Contributes human and financial resources to support the development and implementation of enhanced forest law enforcement framework	Participates in all aspects of the development, implementation and monitoring of the enhanced forest law enforcement framework	Facilitates contact with other stakeholders	Chairing the Project Steering Committee (PSC)
Industry	Provides input into government policies and strstegies to support a sustainable, profitable and an internationally competitive industry	Contributes funding to the development and implemntation of the enhanced forest law enforcement framework	Adopts the enhanced forest law enforcement framework	Facilitates access to its members and other industry stakeholders	Participates in the PSC and monitors the compliance of its members to industry commitments and obligations under the enhanced forest law enforcement framework
SGS-PNG	Advises the government and the PNGFA on cost-effective systems to demonstrate SFM and legality		Contributes operational and technical expertise and input to the development and implementation of the enhaced chain of custody	Assists with access to technical information and technologies on the market to assist in selecting the most cost effective systems for PNG	Participates in the PSC and contributes to monitoring the new system
Land owners	Works with the government and the PNGFA on policies and strategies for the sustainable use of the nation's forest resources for the benefit of forest dependent communities.		Contributes to the development and implementation of the new system	Allows access to their concessions for field-testing of the new system	Participates in the PSC and contributes to the monitoring of the new system.

	Policy/advocacy	Funding	Implementation Activities	Access	Monitoring
Local ENGOs/ Civil Society	Provides input and advice to the government and the PNGFA on policies and strategies to achieve SFM and demonstrate legality to the market place	Sources funding to support some of its advocacy and Stewardship activities	Contributes to the development and implementation of the new system	Participates in the field testing of the new system	Participates in the PSC and contributes to the monitoring of the new system
Law enfor-cement agencies	Advises on Strategies to monitor and report on illegal activities	Funds some of its own law enforcement activities	Participates in the training on detecting illegal forestry activities	Allows access to some of its facilities for training purposes	Participates in the monitoring of the new system
Concess-ionaires	Provides input to the government and PNGFA industry development policies and strategies	Contributes funding to the project	Provide input to the development of the new system	Allows field testing of the new system on their concessions	Participates in the PSC and undertake to meet their commitments and obligations under the new system
PSC	Provides overall strategic direction for the execution of the project	Ensures Adequate funding is available for the execution of the project	Ensures key project milestones are achieved on time and within budget	Facilitates access to key stskeholders	Ensures effective co-ordination and successful execution of the project

2.5 Technical and scientific aspects

An effective forest law enforcement regime involves understanding the root causes of illegal activities and implementing systems/mechanisms for addressing them. Some of the factors that contribute to illegal activities in the forest sector include:

- flawed policy and legal framework;
- minimal enforcement capacity;
- insufficient data and information about the forest resource and illegal operations;
- corruption; and
- high demand for cheap timber.

The approach suggested for the project is based on the recommendations of the FAO/ITTO “Best practices for improving law compliance in the forest sector” which recommends the following:

- strategies to improve forest law compliance must be based on an assessment of the underlying causes of illegal acts and the identification of the leverage points to combat corruption;
- forest law compliance strategies must be holistic and include a wide range of policy, legal institutional and technical options in order to discourage illegal activities and encourage/facilitate legal behaviour;
- effective involvement of key stakeholders so as to ensure transparency, reduce the potential for corruption and enable effective scrutiny of implementation so as to minimize the influence of privileged groups;
- reviewing and streamlining forest policy and legislation to make them simple and unambiguous to follow;

- increasing the operational capacity of the forest administration to enable it to effectively detect and suppress forest crimes;
- promoting inter-agency linkages at the national and local levels;
- establishing partnerships with appropriate NGOs, civil society or private sector operators to support enforcement and/or monitoring;
- encouraging the development and use of independent forest certification and voluntary corporate codes of conduct;
- improving the capture of accurate, quality and up-to-date information essential for forest crime prevention, detection, monitoring, reporting, investigation and eventually suppression; and
- raising awareness about the impacts of illegal forestry activities so as to gain wide acceptance and support for law enforcement within the country at large.

The literature emphasizes a cost-effective system, which is appropriate to the needs of the country concerned while at the same time achieving the following:

- being able to track timber from its source to the point of export;
- allowing the legality of the sources of timber products to be established;
- flexibility to take account of varying conditions in different countries' forest sectors and overall governance environments;
- being practical and useable by both the forest industry and the government; and
- allowing independent monitoring or audit arrangements to attest to transparency and credibility.

The following reviews the technologies currently available on the market.

Timber Flow Control, Log Tracking Systems and Technology
Timber Flow Control System

Timber Flow Control systems are designed to:

- establish the actual origin and destination of timber product flows, and thereby detect illegal production and trade;
- check species, dimensions and quality of timber products for compliance with relevant regulations;
- reconcile timber volumes produced against harvesting plans and processing or export quotas;
- verify company data to ensure effective and fair collection of duties, taxes and fees, and improve the management of foreign exchange; and
- provide documented and verified "chain-of-custody" enabling eco-labelled timber to be traced back to certified sources, or to prove e.g. Convention on International Trade in Endangered Species (CITES) compliance.

A Timber Flow Control system combines advanced tracking technology and targeted field intervention in a modular programme to identify and possibly track all the country's flows of forest products, whether produced locally, imported for local use or in transit, and destined for domestic or for international markets.

In many countries, forest products may include logs, bundles of primary or secondary processed wood products, such as sawn wood, plywood, veneer or mouldings, non-timber forest products and even pulpwood or firewood if required. The tracking function may apply to the products individually, their containers or transport vehicles, or more simply on the documents that permit the transport of forest products within the country.

Bar-coding of logs and timber products can also be used to ensure their unique identification, and to allow inspection and tallying to be carried out reliably and cost-effectively using hand-held computers and barcode readers. The bar-coded tags also provide a reliable numbering system for company declarations of log production and transport, and for companies' internal stock control systems.

A Timber Flow Control system can be used for the following applications:

Domestic Flow Monitoring
This is designed to track domestic logs and wood products from source to final destination within the country, more securely and efficiently than a conventional 'paper-based' system. Bar-coded tags are allocated to legitimate producers according to the volume of timber they are authorized to harvest. Programme officers use hand-held computers with scanners to record the results of log/timber inspections. State-of-the-art communication devices transfer data to the central database for processing and immediate analysis.

Export Monitoring
The objective is to inspect and monitor all log and timber products exports from a country and determine the amount of tax payable by exporters.

All relevant shipping and commercial documentation is checked and the declared market value is validated. The process also includes tallying the contents of each shipment, and physical checks on the logs/ wood products such as species identification, measurement and grading. Vessel cargo details are reported independently to the government. Information is stored and analyzed in a database from which reports are generated for the relevant authorities.

Import and Transit Monitoring
This is designed for documentary checks on imported or transiting shipments, backed up by tallies and physical checks on the products themselves. Similar in concept to Export Monitoring, this programme is particularly useful in countries where logging is banned or restricted, or where domestic production tends to be diluted by foreign imports.

The focus is on distinguishing legitimate from illegitimate imports or goods in transit, and tracking them from the port or border through to processing mills or re-export.

Detailed analysis of legislative and regulatory requirements is a pre-requisite for the successful design and implementation of these services in any country, as there are no off-the-shelf log/timber tracking systems that can be readily implemented. The details of the system deployed will depend on the local physical, economic and administrative environment and the current regulations and in force for the control of the forest sector.

Log Tracking Systems
Log tracking systems are designed to gather, store and report information about the flow of timber products. Timber products (whether logs or processed wood) are measured and tagged as soon as they are produced. Data about each product, including tag number, measurements, species, origin, production date, operator, etc. are declared by the producer to the authorities. The system is designed to facilitate rapid and accurate data collection and reduces the need for multiple data entry and copying, reducing the likelihood of transcription errors.

These systems trace logs or processed wood products at the points of origin, processing and destination, as well as at other critical control points along the route such as road checkpoints and stockpiles. As the bar-code number uniquely identifies the product, product tallies may be declared or inspected simply as a list of bar-coded tag numbers. In this way a picture is built up of all product flows and the related activities of a country's forest sector, while unexpected or suspicious results can be pinpointed and investigated.

Inspection and re-measurement of around 10-30% of the products is generally sufficient to provide a reliable estimate of the accuracy of the original declaration. This can be done at any critical control point in the chain, with consequent savings of time and resources. Producers with a history of poor declarations can be targeted for extra checks. Data from these inspections are then added into the database.

The use of a log tracking system can significantly reduce the number of compulsory log checks in the forest, and the need for routine paperwork. Each load of logs or timber need only undergo a single detailed inspection, performed anywhere in the chain on a random basis. This allows more efficient use of staff and resources.

Analyses within the database indicate whether the producer's declarations are accurate and consistently reliable. Action may then be taken against those who make false declarations. Likewise the illegal forging or re-use of bar-coded tags can be identified in the database.

Log tracking may be extended to labelling standing trees and cut stumps in the forest, thus facilitating pre-harvest inventories and post-harvest checks of logging operations. Similar systems can also be used to track individual bundles of processed wood products, from the mill to destination.

Monitoring of the timber as it passes through the mill can be achieved by querying the database. This makes it possible to relate a batch of e.g. sawn wood products back to the log (or group of logs) from which they were cut, and to analyze processing yields, after reconciling input and output data over short time periods or work orders.

Log Tracking Technology

The technology used in both the Log Tracking and the Timber Flow Control systems can be entirely information and communication technology-based (ICT) or a combination of ICT and paper-based systems. ICT-based systems make use of robust information technology hardware, which can be used in the forest or in log yards. Use of this technology enables products to be tracked more securely than by a document-based system. However, these systems may not be suitable for countries where the level of technology useage is low in the forestry sector. In addition, it has been found that the reliability of hand-held scanners and other ICT-based systems can be affected by conditions that prevail both in the forest and in the mill such as weather, dust etc.

Elements of technology used

Bar-coded tags

Bar-coded tags are made of highly durable material. The bar-code contains a number that is unique and is in encrypted so that is readable only with a configured scanner. Misuse of tags can be detected in the course of routine periodic reporting and inspection.

To prevent forgery, tags have a number of intrinsic security features. Any misuse, re-use or forgery of tags is usually evident in the field, but is also detected when the database is queried to show the history of all transactions associated with a tag number.

Tags may be pre-printed to identify the concession or operator to which they have been assigned. More sophisticated labelling methods are also available, such as 2-D barcodes or memory chips that carry detailed information about the product to which they are attached, or radio tags that are detected by a receiver as they pass a checkpoint.

Hand-held computers and scanners

Palm-top portable computers are used to collect data in the forest, on log and timber yards and at checkpoints. Particular attention is paid to requirements in terms of the machine's functionality and ability to withstand difficult environmental conditions.

The units are usually programmed individually for each application, according to the specific type of data to be collected and the level of validation required at the time of data entry. Scanners for reading the bar-coded tags may either be incorporated into the computer unit itself or attached separately. Other options include built-in GPS receivers, phones, printers or data transmitters.

Data transmission systems

Once saved onto the hand-held computer, data is transmitted to a central database. Transmission is completed via modem, email or the Internet using telephone lines or satellite communications or by diskette, memory card or direct data transfer from a cradle.

Database systems

Once loaded into the database, data may be queried and analysed to obtain a range of reports that summarises the data over any required region and/or timespan, report the activities of particular operators and meet a range of management information needs.

Meeting the specific requirements of PNG

Based on the existing level of ICT-based technologies in the PNG industry, the log tracking system deveoped by the French research agency, CIRAD-Forêt, which combines a paper-based documentation system and crossed-checked at the various stages in the industry value chain, may be more appropriate and cost-effective. A detailed evaluation of the available systems and technologies will be undertaken during the project's execution.

Development of the new system

The new system, when developed, will apply to all forestry operations in PNG. However, during the development phase of the system, a concession or Forest Management Agreement (FMA) area will be selected for its development and testing. The selection of the concession or FMA area will be in consultation with the key stakeholders, and will take the following into consideration:

- representativeness of the concession or FMA area;
- easy accessibility; and
- cost-effectiveness.

2.6 Economic aspects

The FAO/ITTO "Best practices for improving law compliance in the forest sector (2005)" lists the adverse economic impacts of illegal forestry activities as including:

- distortion of the international timber trade thus hampering the achievement of sustainable forest management as good forest stewardship is more costly than illegal operations;
- decreased government revenues; and
- increased income inequity.

In addition, weak forest law enforcement reduces the market value of forest products, reduces the comparative profitability of sustainably produced timber products and gives competitive advantage to illegal operators. As well, illegal activities reduce the capacity of governments to provide services to forest-dependent communities.

Figures from the PNG Forest Industries Association (PNGFIA) indicate that in 2004, PNG earned an estimated $USD119 million from log exports. The total revenue from the export of processed timber products for 2004 was $30 million. In total, income from the sector constitutes nearly 30% of the country's revenue.

PNG's processed timber products were exported mainly to Australia, New Zealand, Japan and the European Union countries where ENGOs are mounting persistent campaigns to boycott timber products originating from PNG. The majority of log exports were to China and other South-east Asian markets. In these markets, PNG logs are used in the manufacture of products such as veneers, plywood, furniture and furniture parts etc., which are exported to North American markets where similar campaigns are being staged to boycott PNG products.

Based on these figures, it is clear that unless PNG can successfully address the issue of weak forest law enforcement to meet the legality and sustainability requirements of these markets, the country will lose substantial foreign exchange income, which will have a major impact on the ability of the government to meet its socio-economic development goals for its people.

Assisting PNG through this project to enhance its forest law enforcement in support of SFM will therefore provide significant economic benefits for the country and its people.

2.7 Environmental aspects

It is widely documented that weak forest law enforcement encourages unsustainable practices which result in adverse ecological impacts such as:

- increased deforestation;
- the destruction of watershed protection;
- increased emission of atmospheric carbon dioxide; and
- destruction of biodiversity.

The project will achieve positive environmental outcomes for PNG and contribute to improved sustainable forest management outcomes, which will have beneficial environmental outcomes for the country including stakeholders such as land owners and forest-dependent communities.

Enhancing forest law enforcement in PNG, including improved monitoring of forestry operations, will achieve the following environmental outcomes:

- aspects of forestry operations requiring further attention to assist in continuously achieving SFM will be identified and corrective action(s) implemented;
- PNGFA will be better able to support concessionaires in implementing forestry practices that minimize ecological damage; and
- PNGFA will be in a better position to implement adaptive management based on information obtained from field monitoring.

Achieving continuous improvement in SFM will have the following beneficial environmental outcomes:

- increased productivity of PNG's forest resource, so that the country is able to provide the raw materials needs of the industry on a sustainable basis; and
- minimizing ecological damage such as loss of biodiversity, soil erosion and water siltation.

2.8 Social aspects

In PNG, land is owned by the communities. Commercial forestry operations can only occur once the Government has successfully negotiated timber harvesting rights with the landowners, including benefit sharing. Persistent reports of illegality in PNG have negative impacts on landowners and other forest-dependent communities in a number of ways. Firstly, illegal activities, if they occur, can lead to environmental degradation and resource depletion, which can have adverse impacts of these communities in terms of reduced income generation and employment. Secondly, reduced market access internationally to PNG's timber products will limit the ability of the Government to generate adequate income for national socio-economic development, which will also adversely impact of these communities. In addition, land owners will lose substantial income from the benefit sharing arrangements with the Government.

The timber industry is also a major provider of infrastructure such as roads, hospitals, schools and health facilities in remote communities. Adverse publicity which impacts on the ability of the concessionaires to operate profitably could lead to the companies closing their operations. If this ocurred, the landowners and the forest-dpendent communities will lose from lack of adequate infrastructure to support socio-economic development.

In addition to the above, other social benefits from successful execution of the project include the following:

- empowering land owners and forest-dependent communities in the sustainable management of their forests, and thereby securing their commitment to their protection;
- improved relationship between landowners, forest-dependent communities and concessionaires;
- increasing revenue flows to assist in poverty reduction; and
- enhancing job creation opportunities for them, particularly in the monitoring of forestry activities to reduce illegal activities.

Achieving SFM in PNG will also secure the future of the forest products industry in the country and provide a number of social benefits including the following:

- PNG's forest resource will be able to continously provide food, medicine and other forest products to land owners and forest dependent communities;
- the Government will be able to enhance its revenue generation to enable it to provide social services (education, health, infrastructure etc.) to forest dependent communities;
- the industry will continue as a source of employment for PNG citizens including forest dependent communities.

2.9 Risks

Some of the potential risks to the project are:

- the possibility for stakeholders who consider that the resultant reforms will impact adversely on the benefits and privileges they are enjoying from the *status quo,* to actively undermine its successful execution and implementation; and
- the possibility to introduce reforms including new technology, which could be inappropriate for PNG's industry, or too costly to be implemented and adopted by the industry.

Regarding the first risk, the key stakeholders have been consulted in the formulation and design of the project, and they have indicated their agreement to participate in it. In addition, the execution of the project will be done in close collaboration with these key stakeholders. A multi-stakeholder project steering committee involving representatives of the major stakeholders will the established, to drive the project to ensure that their needs and requirements are met, including taking into account any concerns they may have.

In developing the project, the available technological solutions available for addressing illegal activities such as timber flow control and product tracking have been reviewed. During the project's implementation, further reviews will be undertaken in collaboration with the major stakeholders, to ensure that technological solutions recommended are appropriate to the needs of the industry in PNG, as well as cost-effective to implement and adopted by the industry. This approach will minimize the risk of introducing inappropriate technologies or systems for the country and the industry.

3. Outputs

The main project outputs are:

- a cost-effective timber products tracking and chain of custody verification system for the forestry sector in PNG;
- a database for capturing and storing information on log flows for subsequent analysis to determine discrepancies in PNGFA data and information held by companies;
- standards for legality and industry code of conduct; and
- training of stakeholders in support of forest law enforcement in PNG.

3.1 Specific Objective: **To improve the detection and prevention of illegal logging and export of wood products from PNG.**

Output 1: A cost effective timber products tracking system appropriate to the needs and requirements of PNG developed and field-tested for implementation in collaboration with key stakeholders by September 2009.

Output 2: A database to capture and store timber products flow information is developed and tested for implementation.

Output 3: A legality standard based on FLEGT guidelines and principles, and industry code of conduct developed for implementation in PNG in collaboration with key stakeholders.

Output 4: Training module for enhancing the skills and expertise of key stakeholders in the monitoring of forestry activities to detect illegal practices is developed and implemented.

4. Activities

Output 1: A cost effective timber products tracking system appropriate to the needs and requirements of PNG is developed and field-tested for implementation in collaboration with key stakeholders by September 2009.

Activity 1.1: Engagement of relevant consultants

Activity 1.2: Review timber products tracking systems and technologies available on the market

Activity 1.3: Development of timber products tracking and chain of custody verification system

Activity 1.4: Field testing of system

Activity 1.5: Implementation of system and training

Output 2: A database to capture and store timber products flow information developed and tested for implementation.

Activity 2.1: Appointment of ICT specialist/consultant

Activity 2.2: Development of specifications for the database

Activity 2.3: Consultations with stakeholders on the design of the database

Activity 2.4: Development of the database

Activity 2.5: Testing of the database

Activity 2.6: Commissioning of the database and training of staff

Output 3: A legality standard based on FLEGT guidelines and principles and industry code of conduct, developed for implementation in PNG in collaboration with key stakeholders.

Activity 3.1: Stakeholder consultations and workshops on the development of a legality standard and industry code of conduct

Activity 3.2: Preparation of report and recommendations on stakeholder consultations and workshops

Activity 3.3: Review of report and recommendations with the government and stakeholders

Activity 3.4: Preparation of legality standard and industry code of conduct

Activity 3.5: Circulation of standard and industry code of conduct for comment and input

Activity 3.6: Field testing of standard and code of conduct

Activity 3.7: Implementation of standard and code of conduct and training.

Output 4: Training module for enhancing the skills and expertise of key stakeholders in the monitoring of forestry activities to detect illegal practices is developed and implemented.

Activity 4.1: Appointment of a training consultant

Activity 4.2: Consultations with stakeholders on the design of the content of the training manual

Activity 4.3: Preparation of the training manual

Activity 4.4: Review of the manual by stakeholders

Activity 4.5: Implementation of training programme

Activity 4.6: Implementation of two weeks training for stakeholders

5. Logical Framework Worksheets

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
DEVELOPMENT OBJECTIVE **To increase the contribution of the forest sector to PNG's national economy through enhanced market access and higher foreign exchange remittances, as well as further improve the sector's sustainable forest management practices by enhancing forest law enforcement and governance."**	**Forest law enforcement in PNG aimed at detecting illegal logging and illegal export of wood products from the country significantly improved to address the concerns of the country's key markets.** Positive publicity for PNG's industry internationally Lifting of boycotts of PNG's timber products in markets such as the United Kingdom.	Implementation of a timber products tracking and chain of custody verification system by September 2009 Project Reports Monitoring Reports	The project is successfully executed with the total support and commitment of all stakeholders. Systems to be implemented through the project including PNG's forest laws, policies and regulations are continually reviewed and monitored to ensure they are achieving their intended objectives.
SPECIFIC OBJECTIVE **To improve the detection and prevention of illegal logging and export of wood products from PNG.**	**A chain of custody verification system, complemented by enhanced training and monitoring, aimed at detecting illegal logging and illegal export of wood products from the country developed for implementation by September 2009**	Existence of timber products tracking and chain of custody verification system in the forestry sector in PNG Project Reports Monitoring Reports	Stakeholders agree to co-operate and participate in the execution of the project, and implementation of the new regime.
OUTPUT 1. A cost effective timber products tracking and a chain of custody verification system appropriate to the needs and requirements of PNG developed and field-tested for implementation in collaboration with key stakeholders.	Timber products tracking and chain of custody verification system developed and implemented by September 2009.	Implementation of a timber products tracking and chain of custody verification system by September 2009 Project Reports Monitoring Reports	No relevant Assumption.
OUTPUT 2. A database to capture and store timber products flow information developed and tested for implementation.	Database to capture and store timber products flow information developed and implemented.	Project Reports Ex-post evaluation of the project.	No relevant Assumption.

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
OUTPUT 3. A legality standard based on FLEGT guidelines and principles, and industry code of conduct developed for implementation in PNG in collaboration with key stakeholders.	A legality standard based on FLEGT guidelines and principles, and industry code of conduct developed for implementation in PNG in collaboration with key stakeholders by September 2009	Project Reports Ex-post evaluation of the project	No relevant Assumption
OUTPUT 4. A training module for enhancing the skills and expertise of key stakeholders in the monitoring of forestry activities to detect illegal practices developed and implemented.	Training implemented.	Number of training sessions and stakeholders trained. Training material used.	No relevant Assumption.

6. Work Plan

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Output 1: A cost effective timber products tracking and chain of custody verification system appropriate to the needs and requirements of PNG developed and field-tested for implementation in collaboration with key stakeholders																			
Activities																			
Activity 1.1:Engagement of international and national consultants	EA																		
Activity 1.2:Review of available timber products tracking and chain of custody verification systems and technologies	EA and Consultants																		
Activity 1.3: timber products tracking and chain of custody verification system	EA and Consultants																		
Activity 1.4:Field testing of system	EA and Consultants																		
Activity 1.5:Implementation of system including training	EA and Consultants																		

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY																		
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<u>Output 2:</u> A database to capture and store log flow information developed and tested for implementation.																			
Activities																			
Activity 2.1: Appointment of ICT specialist/consultant	EA																		
Activity 2.2: Development of specifications for the database	EA and Consultants																		
Activity 2.3: Consultations with stakeholders on the design of the database	EA and Consultants																		
Activity 2.4: Development of the database	EA and Consultants																		
Activity 2.5: Testing of the database	EA and Consultants																		
Activity 2.6: Commissioning of the database and training of staff	EA and Consultants																		

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY																		
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<u>Output 3:</u> A legality standard based on FLEGT principles and industry code of conduct developed for implementation in PNG in collaboration with key stakeholders.																			
Activities																			
Activity 3.1:Stakeholder consultations and workshops on the development of a legality standard and industry code of conduct	EA																		
Activity 3.2:Preparation of report and recommendations on stakeholder consultations and workshops	EA and Consultants																		
Activity 3.3:Review of report and recommendations with the government and stakeholders	EA and Consultants																		
Activity 3.4:Preparation of legality standard and industry code of conduct	EA and Consultants																		
Activity 3.5: Circulation of standard and industry code of conduct for comment and input	EA and Consultants																		
Activity 3.6: Field testing of standard and code of conduct	EA and Consultants																		
Activity 3.7:Implementation and training	EA and Consultants																		

OUTPUTS/ACTIVITIES	RESPONSIBLE PARTY																		
		7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<u>Output 4:</u> A training module for enhancing the skills and expertise of key stakeholders in the monitoring of forestry activities to detect illegal practices developed and implemented.																			
Activities																			
Activity 4.1: Appointment of a training consultant	EA																		
Activity 4.2: Consultations with stakeholders on the design of the content of the training manual	EA and Consultants																		
Activity 4.3: Preparation of the training manual	EA and Consultants																		
Activity 4.4: Review of the manual by stakeholders	EA and Consultants																		
Activity 4.5: Finalization of the training manual	EA and Consultants																		
Activity 4.6: Implementation of two weeks training for stakeholders	EA and Consultants																		

7. Budget

7.1 Detailed Activity Budget

DETAILED ACTIVITY BUDGET						
Outputs and Activities	**Inputs**		**Unit**	**Quarter**	**Budget Compo-nent**	**Total**
	Units and Quality	**No.**	**Costs**	**Year**		**Amount**
Output 1: A cost effective timber products tracking and chain of custody verification system appropriate to the needs and requirements of PNG developed and field-tested for implementation in collaboration with key stakeholders				Y1-Y2		
Activity 1.1:Engagement of international and national consultants	Project Personnel: 3 National Experts @ $1,000 per month for one month	3	1,000	Q1-Y1	11	3,000 (E)
Activity 1.2: Review of available timber products tracking systems and technologies	Project Personnel: 3 National Experts @ $1,000 per month for 2 months	3	2,000	Q1-Y1	11	6,000 (E)
	1 National consultant for 2 months @$2,000per month	1	2,000		12	2,000 (I)
	Duty travel (domestic)		1,000		33	1,000 (E)
Activity 1.3:Development of log tracking system including chain of custody verification system	Project Personnel: 3 National Experts @ $1000 per month for 8 months	3	8,000	Q1-Q3 Y1	11	24,000 (E)
	1 International consultant for 2 months @$10,000	1	20,000		16	20,000 (I)
	2 Return economy class tickets for the international consultants @ $2,000 per consultant	2	2,000		32	4,000 (I)
	DSA @ $5,000 per month for 2 months	2	10,000		31	10,000 (I)
	I National consultant for 6 months @ $2,000 per month	1	12,000		12	12,000(I)
	Duty travel (domestic)		2,000		33	2,000 (E)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	No.	Costs	Year		Amount
Activity 1.4:Field testing of system	Project Personnel: 3 National Experts @ $1000 for 2 months	3	2,000	Q4-Y1 to Q1 Y2	11	6,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	1 National consultant for 2 months @ $2,000 per month	1	4,000		12	4,000 (I)
	DSA for 2 months for National consultant @ $2,000	1	4,000		31	4,000 (I)
	Duty travel		2,000		33	2,000 (I)
Activity 1.5:Implementation of the system including training of PNGFA auditors in the use of the system	Project Personnel: 3 National Experts @ $1000 per month for 4 months	3	4,000	Q4-Y1	11	12,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	I National Consultant for 2 months @ $2,000 per month	1	4,000		12	4,000 (I)
	Duty travel		4,000		33	4,000 (E)
SUBTOTAL						**150,000**
Output 2: A database to capture and store log flow information developed and tested for implementation				Q2-Y1toQ4-Y2		
Activity 2.1:Appointment of ICT specialist	Project Personnel: 3 National Experts @ $1000	3	1,000	Q3-Y1	11	3,000 (E)
Activity 2.2: Development of specifications for the database	Project Personnel: 3 National Experts @ $1000	3	1,000	Q3-Q4 Y1	11	3,000 (E)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	No.	Costs	Year		Amount
Activity 2.3: Consultations with stakeholders on the design of the database	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q4-Y1	11	3,000 (E)
	1 National consultant for one month @ $2,000	1	2,000		12	2,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	Duty travel (Domestic)		2,000		33	2,000 (I)
Activity 2.4: Development of the database	Project Personnel: 3 National Experts @ $1000 for 2 months	3	2,000	Q1-Q2-Y2	11	6,000 (E)
	1 International consultant for 2 months @$10,000	1	20,000		16	20,000 (I)
	DSA for 2 months @ $5,000	1	10,000		31	10,000 (I)
	I National consultant for 3 months @ $2,000	1	6,000		12	6,000 (I)
	Duty travel (Domestic)		4,000		33	4,000 (I)
	4 new computers @$1,000	4	1,000		44	4,000 (I)
	Software including 4 licenses	4	500		44	2,000 (I)
	Cabling and installation		2,000		44	2,000 (I)
Activity 2.5: Testing of the database	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q3-Y2	11	3,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	1 National Consultant for 1 month @ $2,000 per month	1	2,000		12	2,000 (I)
	Duty travel (Domestic)		2,000		33	2,000 (I)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	No.	Costs	Year		Amount
Activity 2.6: Commissioning of the database including training of PNGFA staff in its use	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q3-Q4-Y2	11	3,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000 per month	1	5,000		31	5,000 (I)
	1 National consultant for 2 months @ $2,000 per month	1	4,000		12	4,000 (I)
	Duty travel (Domestic)		4,000		33	4,000 (I)
SUBTOTAL						**120,000**
Output 3:A legality standard based on FLEGT principles and industry code of conduct developed for implementation in PNG in collaboration with key stakeholders				Q3-Y1 to Y2		
Activity 3.1: Stakeholder consultations and workshops on the development of a legality standard and industry code of conduct	6 one day Workshops for up to 50 people per workshop @ $2,500 per workshop	6	2,500	Q2 and Q3-Y1	17	15,000 (I)
	Project Personnel: 3 National Experts @ $1000	3	1,000		11	3,000 (E)
	Duty travel (domestic)		6,000		33	6,000 (I)
Activity 3.2: Preparation of report and recommendations on stakeholder consultations and workshops	Project Personnel: 3 National Experts @ $1000 per mont for 2 months	3	2,000	Q3-Y1	11	6,000 (E)
Activity 3.3: Review of report and recommendations with the government and industry	Project Personnel: 3 National Experts @ $1000	3	1,000	Q4-Y1 to Q1-Y2	11	3,000 (E)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	**No.**	**Costs**	**Year**		**Amount**
Activity 3.4: Preparation of legality standard and industry code of conduct	Project Personnel: 3 National Experts @ $1000	3	1,000	Q1 and Q2-Y2	11	3,000 (E)
	1 National consultant for one month @$2,000	1	2,000		12	2,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	Duty travel (Domestic)		4,000		33	4,000 (I)
Activity 3.5: Field testing of standard and code of conduct	Project Personnel: 3 National Experts @ $1000	3	1,000	Q2-Y2	11	3,000 (E)
	1 National consultant for one month @$2,000	1	2,000		12	2,000 (I)
	DSA for one month @ $2,000	1	2,000		31	2,000 (I)
	Duty travel (Domestic)		2,000		33	2,000 (I)
Activity 3.6: Implementation of standard and code of conduct and training	Project Personnel: 3 National Experts @ $1000	3	1,000	Q3-Q4-Y2	11	3,000 (E)
	1 National consultant for one month @$2,000	1	2,000		12	2,000 (I)
	DSA for one month @ $2,000	1	2,000		31	2,000 (I)
	Duty travel (Domestic)		3,000		33	3,000 (E)
SUBTOTAL						**66,000**
Output 4: A training manual for enhancing the skills and expertise of key stakeholders in the monitoring of forestry activities to detect illegal practices developed				Q2-Y1toY2		
Activity 4.1: Appointment of a training consultant	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q2-Y1	11	3,000 (E)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	No.	Costs	Year		Amount
Activity 4.2: Consultations with stakeholders on the design of the content of the training manual	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q3-Y2	11	3,000 (E)
	1 National consultant for one month @$2,000	1	2,000		12	2,000 (I)
	DSA for one month @ $2,000	1	2,000		31	2,000 (I)
	Duty travel (Domestic)		4,000		33	4,000 (I)
Activity 4.3: Preparation of the training manual	Project Personnel: 3 National Experts @ $1000 for 2 months	3	2,000	Q3 and Q4 Y1 to Q-1-Y2	11	6,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	I National consultant for 3 months @ $2,000	1	6,000		12	6,000 (I)
	Duty travel (Domestic)		4,000		33	4,000 (I)
Activity 4.4: Review of the manual by stakeholders	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q2-Q3-Y2	11	3,000 (E)
	Duty travel (Domestic)		2,000		33	2,000 (I)
Activity 4.5: Finalization of the training manual	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q2-Y2	11	3,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	1 National consultant for 2 months @ $2,000	1	4,000		12	4,000 (I)
	Duty travel (Domestic)		2,000		33	2,000 (I)

Outputs and Activities	Inputs		Unit	Quarter	Budget Compo-nent	Total
	Units and Quality	No.	Costs	Year		Amount
Activity 4.6: Implementation of four weeks training for stakeholders	Project Personnel: 3 National Experts @ $1000 for one month	3	1,000	Q4-Y2	11	3,000 (E)
	1 International consultant for one month @$10,000	1	10,000		16	10,000 (I)
	DSA for one month @ $5,000	1	5,000		31	5,000 (I)
	1 National consultant for 2 months @ $2,000 per month	1	4,000		12	4,000 (I)
	Duty travel (Domestic)		2,000		33	2,000 (I)
SUBTOTAL						**98,000**
Project Management	1 international expert @$60,000 per year for 2 years	1	120,000	Y1-Y2		**120,000 (I)**
TOTAL						**554,000**

7.2 Consolidated Total Project Budget

		TOTAL	ITTO	PNGFA	INDUSTRY
10.	**Project Personnel**				
	11. National Experts	114,000	0.00	92,000	22,000
	12. National Consultants	58,000	58,000	0.00	0.00
	13. Other Labour (Project Manager @ $60,000 per year for 2 years)	120,000	90,000	30,000	0.00
	16. International Consultants	110,000	110,000	0.00	0.00
	17. 6 one day Workshops	15,000	15,000	0.00	0.00
	19. **Component Total**	**417,000**	**273,000**	**122,000**	**22,000**
30.	**Duty Travel**				
	31. Daily Subsistence Allowance	**75,000**	**75,000**	**0.00**	**0.00**
	32. International Travel (2 return economy airfares @$2,000 for international experts and consultants)	4,000	4,000	0.00	0.00
	33. Transport Costs (Domestic)	**50,000**	**40,000**		**10,000**
	39. **Component Total**	**129,000**	**119,000**	**0.00**	**10,000**
40.	**Capital Items**				
	44. Capital Equipment (computers and software)	8,000	8,000	0.00	0.00
	49. **Component Total**	**8,000**	**8,000**	**0.00**	**0.00**
50.	**Consumable Items**				
	53. Fuel and Utilities	11,000	0.00	7,000	4,000
	54. Office Supplies	5,000	0.00	5,000	0.00
	59. **Component Total**	**16,000**	**0.00**	**12,000**	**4,000**
60.	**Miscellaneous**				
	61. Sundry	10,000	5,000	0.00	5,000
	62. Auditing	6,000	3,000	0.00	3,000
	63. Contingencies @ 2%	12,000*	12,000	0.00	0.00
	69. **Component Total**	**28,000**	**20,000**	**0.00**	**8,000**
70.	**Executing Agency Management Cost @ 15%**	88,000*	0.00	88,000	0.00
	79. **Component Total**	**88,000***	**0.00**	**88,000**	**0.00**
	SUBTOTAL	**686,000**	**420,000**	**222,000**	**44,000**
80.	**ITTO Monitoring, Evaluation and Administration**				
	81. Monitoring and Review Costs	8,000			
	82. Evaluation Costs	10,000			
	83. Programme Support Costs (@ 8%)	**35,040**			
	89. **Component Total**	**53,040**			
100.	**GRAND TOTAL**	**739,040**			

7.3 Consolidated Total and Yearly Project Budget

		TOTAL	YEAR 1	YEAR 2
10.	**Project Personnel**			
	11. National Experts	114,000	57,000	57,000
	12. National Consultant	58,000	29,000	29,000
	13. Other Labour (Project Manager @ $60,000 per year for 2 years)	120,000	60,000	60,000
	16. International Consultants	110,000	55,000	55,000
	17. 6 one day Workshops	15,000	15,000	0.00
	19. **Component Total**	**417,000**	**216,000**	**201,000**
30.	**Duty Travel**			
	31. **Daily Subsistence Allowance**	**75,000**	**37,500**	**37,500**
	32. International Travel	4,000	2,000	2,000
	33. Transport Costs (Domestic)	**50,000**	**25,000**	**25,000**
	39. **Component Total**	**129,000**	**64,500**	**64,500**
40.	**Capital Items**			
	44. Capital Equipment (computers and software)	8,000		8,000
	49. **Component Total**	**8,000**		**8,000**
50.	**Consumable Items**			
	53. Fuel and Utilities	11,000	5,500	5,500
	54. Office Supplies	5,000	2,500	2,500
	59. **Component Total**	**16,000**	**8,000**	**8,000**
60.	**Miscellaneous**			
	61. Sundry	10,000	5,000	5,000
	62. Auditing	6,000	2,000	4,000
	63. Contingencies @ 2%	12,000*	6,000	6,000
	69. **Component Total**	**28,000**	**13,000**	**15,000**
70.	**Executing Agency Management Cost @ 15%**	88,000*	**44,000**	**44,000**
	79. **Component Total**	**88,000**	**44,000**	**44,000**
	SUBTOTAL	**686,000**	**345,500**	**340,500**
80.	**ITTO Monitoring, Evaluation and Administration**			
	81. Monitoring and Review Costs	8,000		
	82. Evaluation Costs	10,000		
	83. Programme Support Costs (@ 8%)	**35,040**		
	89. **Component Total**	**53,040**		
100.	**GRAND TOTAL**	**739,040**		

7.4 Overall Project Budget by Activity

	BUDGET COMPONENTS							
OUTPUTS / ACTIVITIES + Non-Activity Based Expenses	**10. Project Personnel**	**20. Sub-Contracts**	**30. Duty Travel**	**40. Capital Items**	**50. Consum-able Items**	**60. Miscella-neous**	**Quarter Year**	**GRAND TOTAL**
OUTPUT 1: Timber products tracking and chain of custody verification system								
Activity 1.1:Engagement of international and national consultants	(E)3,000						Q1-Y1	3,000
Activity 1.2:Review of available timber products tracking systems and technologies	(E+I)8,000		(E)1,000				Q1-Y1	9,000
Activity 1.3:Development of timber products tracking and chain of custody verification system	(E+I)56,000		(E+I)16,000				Q1-Q3-Y1	72,000
Activity 1.4:Field testing of system	(**E+I)20,000**		(I)11,000				Q4-Y1 to Q1-Y2	**31,000**
Activity 1.5:Implementation and training	(E+I)26,000		**(E+I)9,000**				Q4-Y1	**35,000**
subtotal 1	**113,000(E+I)**		**(E+I)37,000**				**Y1-Y2**	**150,000**

	BUDGET COMPONENTS							
OUTPUTS / ACTIVITIES + Non-Activity Based Expenses	**10. Project Personnel**	**20. Sub-Contracts**	**30. Duty Travel**	**40. Capital Items**	**50. Consum-able Items**	**60. Miscella-neous**	**Quarter Year**	**GRAND TOTAL**
OUTPUT 2: Database								
Activity 2.1:Development of specifications for the database	(E)3,000	0.00		0.00			Q3-Y1	3,000
Activity 2.2:Appointment of ICT specialist/consultant	(E)3,000	0.00		0.00			Q3-Q4-Y1	3,000
Activity 2.3:Consultations with stakeholders on the design of the database	(E+I)5,000		(I)7,000	0.00			Q4-Y1	12,000
Activity 2.4:Development of the database	(E+I)32,000		(I)14,000	(I)8,000			Q1-Q2-Y2	54,000
Activity 2.5:Testing of the database	(E+I)15,000		(I)7,000	0.00			Q3-Y2	22,000
Activity 2.6:Commissioning of the database and training of PNGFA staff	(E+I)17,000		(I)9,000	0.00			Q3-Q4-Y2	26,000
subtotal 2	**75,000(E+I)**		**37,000(I)**	**8,000(I)**				**120,000**

	BUDGET COMPONENTS							
OUTPUTS / ACTIVITIES + Non-Activity Based Expenses	**10. Project Personnel**	**20. Sub-Contracts**	**30. Duty Travel**	**40. Capital Items**	**50. Consum-able Items**	**60. Miscella-neous**	**Quarter Year**	**GRAND TOTAL**
OUTPUT 3: Legality standard and industry code of conduct developed								
Activity 3.1:Stakeholder consultations and workshops on the development of a legality standard and industry code of conduct	**(E+I)18,000**		(I)6,000				Q2-Q3 Y1	24,000
Activity 3.2:Preparation of report and recommendations on stakeholder consultations and workshops	(E)6,000						Q3 -Y1	6,000
Activity 3.3:Review of report and recommendations with the government and industry	(E)3,000						Q4-Y1	3,000
Activity 3.4:Preparation of legality standard and industry code of conduct	(E+I)5,000		(I)9,000				Q1 and Q2-Y2	14,000
Activity 3.5:Circulation of standard and industry code of conduct for comment and input	(E+I)5,000		(I)4,000				Q2-Y2	9,000
Activity 3.6:Field testing of standard and code of conduct and implementation	(E+I)5,000		(**E+**I)5,000				Q3-Q4-Y2	10,000
subtotal 3	**42,000(E+I)**		**24,000(E+I)**					**66,000**

	BUDGET COMPONENTS							
OUTPUTS / ACTIVITIES + Non-Activity Based Expenses	**10. Project Personnel**	**20. Sub-Contracts**	**30. Duty Travel**	**40. Capital Items**	**50. Consum-able Items**	**60. Miscella-neous**	**Quarter Year**	**GRAND TOTAL**
OUTPUT 4: Training module on detecting and enforcing illegal activities developed and implemented								
Activity 4.1:Appointment of a training consultant	3,000 (E)			0.00			Q2-Y1	3,000
Activity 4.2:Consultations with stakeholders on the design of the content of the training module	5,000 (E+I)		(I)6,000	0.00			Q3-Q4-Y1	11,000
Activity 4.3:Preparation of the training module and manual	22,000(E+I)		(I)9,000	0.00			Q3 andQ4-Y1 to Y2	31,000
Activity 4.4:Review of the manual by stakeholders	3,000(E)		(I)2,000	0.00			Q2-Y2	5,000
Activity 4.5:Finalisation of the training module and manual	17,000(E+I)		(I)7,000	0.00			Q2-Q3-Y2	24,000
Activity 4.6:Implementation of two weeks training for stakeholders	**17,000** (E+I)		(I)7,000	0.00			Q4-Y2	24,000
subtotal 4	**67,000(E+I)**		**31,000(I)**				**Q3-Y1 to Y2**	**98,000**
NON-ACTIVITY BASED EXPENSES								
(1) Fuel and Utilities					11,000(E)		Y1 and Y2	
(2) Office supplies					5,000(E)		Y1 and Y2	
(3) Auditing						6,000(E+I)	Y1 and Y2	
(4).Sundry						10,000(I+E)	Y1 and Y2	
(5) Contingencies @2%						12,000(I)	Y1 and Y2	
subtotal 6					**16,000**	**28,000**		**44,000**
Subtotal (ITTO)	**273,000**		**119,000**	**8,000**	**0.00**	**20,000**		**420,000**
ITTO's Monitoring, Evaluation and Administration	**53,040**							**53,040**
Subtotal (E. Agency)	**144,000**		**10,000**		**16,000**	**8,000**		**178,000**
E Agency's Management Costs @15%	**88,000**							**88,000**
TOTAL	**558,040**		**129,000**	**8,000**	**16,000**	**28,000**		**739,040**

(I) – contribution of the ITTO, (E) – contribution of the Executing Agency / Host Government

7.5 Yearly Project Budgets by Source

YEARLY PROJECT BUDGET BY SOURCE – ITTO

Annual Disbursements / Budget Components	Total	2008	2009
10. Project personnel	**273,000**	136,500	136,500
30. Duty travel	**119,000**	59,500	59,500
40. Capital items	**8,000**		8,000
50. Consumable items	**0.00**	0.00	0.00
60. Miscellaneous	**20,000**	10,000	10,000
Subtotal 1	**420,000**	206,000	214,000
80. ITTO Monitor., Evaluat. and Administ. Costs			
81. Monitoring and Review Costs	**8,000**		
82. Evaluation Costs	**10,000**		
Subtotal 2	**438,000**		
83. Programme Support Costs (8%)	**35,040**		
ITTO TOTAL	**473,040**		

YEARLY PROJECT BUDGET BY SOURCE – E. AGENCY/HOST GOVERNMENT

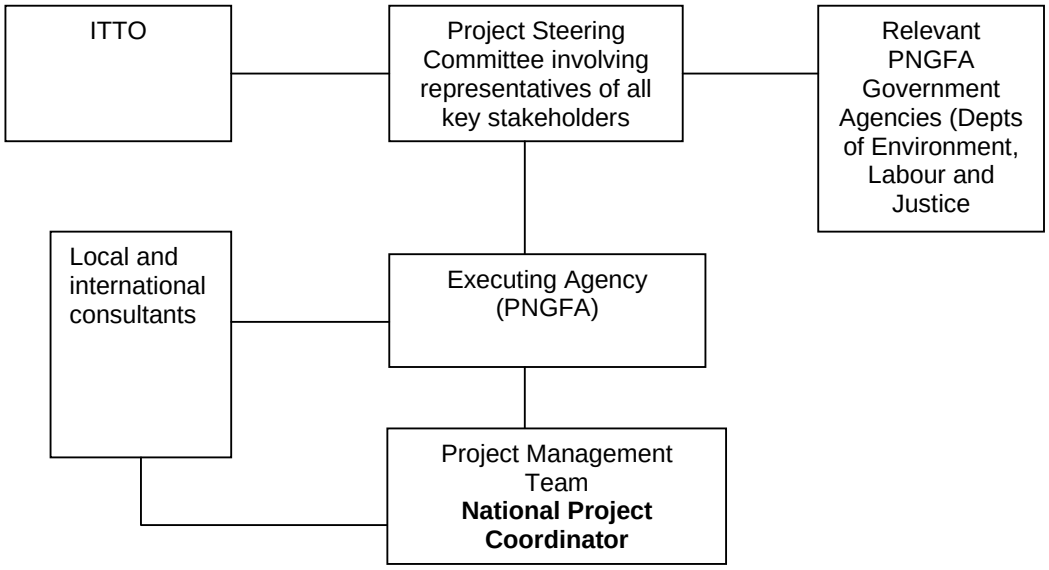
Annual Disbursements / Budget Components	Total	2008	2009
10. Project personnel	**144,000**	72,000	72,000
30. Duty travel	**10,000**	5,000	5,000
40. Capital items	**0.00**	0.00	0.00
50. Consumable items	**16,000**	8,000	8,000
60. Miscellaneous	**8,000**	4,000	4,000
70. Executing Agency Management Costs (15% of Total of *Overall Project Budget by Activity*)	**88,000**	44,000	44,000
EXECUTING AGENCY/HOST GOVT. TOTAL	**266,000**	133,000	133,000

PART III. OPERATIONAL ARRANGEMENTS

1. Management Structure

The implementing agency, the Papua New Guinea Forest Authority (PNGFA), will manage the project and provide progress reports to the ITTO. The PNGFA will also select the national and international experts and consultants for the project, as well as be the liaison between the consultants, the PNG wood products industry and major stakeholders. Figure 3 illustrates the management structure for the Project.

Figure 3: Management Structure for the Project



2. Project Monitoring, Reporting and Evaluation

2.1. Arrangements for Reporting

(a) The international consultants and the national experts involved in the project will prepare and submit six monthly progress reports to the ITTO and the PNGFA, based on the work plan. The first Report shall be submitted not later than 6 months after Project start-up.

(b) A Project Completion Report will be submitted to the ITTO three months after the Project.

2.2. Monitoring, Reporting and Evaluation

The project will be subject to periodic monitoring by representatives of the ITTO at least every six months during the life of the project. Monitoring and evaluation by the ITTO could coincide with the submission of progress reports. Allowance has been made in the project budget to enable this to occur. The dates of evaluation visits will be agreed between the ITTO and the Project management team, and its Terms of Reference will be formulated jointly by the monitoring mission and the Project staff, for approval by the ITTC.

Suggested Monitoring, Reporting and Evaluation Schedule	
Description	**Dates**
1. First disbursement request	1. September 2007
2. First Project Progress Report	2. March 2008 (2 months before Council Session)
3. First Monitoring Mission	3. September 2008
4. First Technical Report	4. January 2009
5. Second Project Progress Report	5. March 2009 (2 months before Council Session)
6. Project Completion Report	6. September 2009

3. Future Operation and Maintenance

To ensure that the Project delivers maximum benefit to PNG, it is intended that periodic reviews will be conducted of the adequacy and effectiveness of the implemented forest law enforcement regime. Such reviews will involve all major stakeholders and corrective action will be taken if the reviews indicate any inadequacies.

4. Sustainability of the project after completion

Maintaining the timber products tracking and chain of custody verification system
When fully operational, the system will be implemented on a cost recovery basis, based on a per cubic metre charge to timber producers. The income generated will be set aside and used to fund the on-going operational cost of the scheme.

The database for monitoring illegal forestry activities
Currently some of this data and information is provided in a paper format. The electronic system to be created through the project will be maintained and funded from some of the income to be generated from the timber products tracking and chain of custody verification system.

Standards for legality and industry code of conduct
Implementation of the code of conduct will be on a self-monitoring basis by the peak industry body, the PNGFIA. However, adherence to the code will be monitored jointly by the PNGFA and the other non-industry stakeholders. The PNGFIA will be required to provide yearly reports on the implementation of the code, including any major breaches, and the corrective action(s) taken to address them.

Training of stakeholders in forest law enforcement, including monitoring forestry operations
Annual workshops will be held to discuss and exchange operational experience. The workshops will be funded from income from the tracking system. Additional training required will be identified and provided.

PART IV. THE TROPICAL TIMBER FRAMEWORK

1. Compliance with ITTA 1994 Objectives

Improving forest law enforcement is a major policy priority for the ITTO as it impacts on market access for producer member countries. This is demonstrated by Council Decisions: **6(XXXI): FOREST LAW ENFORCEMENT IN THE CONTEXT OF SUSTAINABLE TIMBER PRODUCTION AND TRADE** and **2(XXXIX)** on the **ITTO BIENNIAL WORK PROGRAMME FOR THE YEARS 2006-**2007 and the number of studies the ITTO has commissioned on the subject. PNG is concerned to ensure that it secures improved market access for its wood products to generate much needed revenue for sustainable forest management activities and socio-economic development. In this context, the project's objective is consistent with articles (h) and (k) of the International Tropical Timber Agreement (ITTA, 1994), which are aimed at improving market intelligence and the marketing and distribution of tropical timber exports from sustainably managed sources respectively.

The ITTO's Economic Information and Market Intelligence Committee's mandate is to improve the flow of tropical timber from producers and consumers. The Committee also works to ensure better market transparency and improved market intelligence for expanding and diversifying the international trade in timber. The project's objective is fully consistent with, and supportive of, the goals of the Committee's Action Plan which are:

- improving transparency of the international timber market;
- improving marketing and distribution of tropical timber exports from sustainably managed sources; and
- improving market access for tropical timber exports from sustainably sources.

The project is also consistent with the objectives of Goal 2 of the ITTO Yokohama Action Plan 2002-2006, which aims to promote tropical timber from sustainably managed forests, and encourage member countries to identify trade barriers, shortcomings in forest law enforcement, and other factors that may affect the access and marketability of tropical timber, and propose resources to overcome them. Successful completion of the project will assist PNG its wood products industry to address the concerns of its key overseas market in relation to forest law enforcement.

2. Compliance with ITTO Action Plan

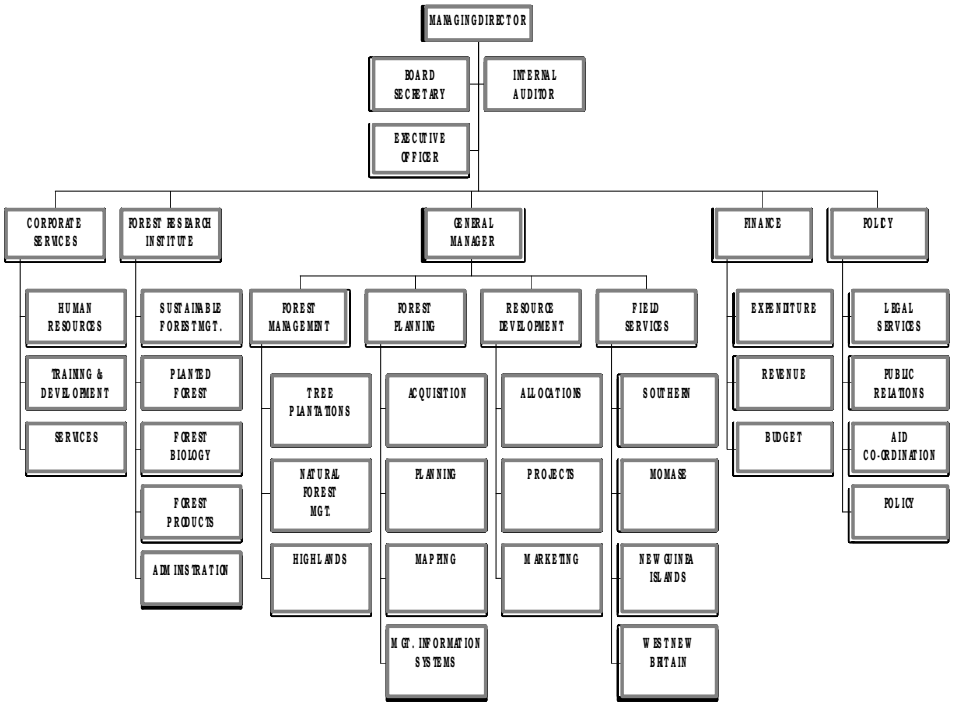
The project is consistent with the objectives of Goal 2 of the ITTO Yokohama Action Plan 2002-2006. The project will significantly advance the objectives of Goal 2 of the ITTO Yokohama Action Plan by assisting PNG to enhance its market access for their timber product by improving its capacity for effective forest law enforcement. All tropical timber producers face market access difficulties and the project outputs would have practical application for other producer member countries committed to addressing forest law enforcement and thereby increasing market access for their products.

ANNEXES

Figure 4:

ANNEX A.

OVERVIEW OF THE PNGFA - NFS
ORGANISATIONAL RESTRUCTURE - 2000



NOTE: The MFMA Project would directly interact with the following elements:

- Training and Development Unit
- Forest Research Institute
- Forest Management Division
- Forest Planning Division
- Resource Development Division
- Field Services Division

With assistance/co-ordination as necessary from Finance and Policy Division.

The number and adequacy of trained professional and technical personnel on strength from the Executing Lead agency – Papua New Guinea Forest Authority at all levels to perform and support the management, implementation, research and extension functions of this project either directly or indirectly includes but not limited to: (see Table 2 below).

Table 2: Personnel Involved in Forest Management

Category of Personnel	Number of Personnel (Staff on Strength)	
	Government (PNG Forest Authority)	Non-Government[1]
Core Functions		
Management –all Divisions (All University Degrees/Masters)	42	Not available
Project (Logging operations) Monitoring (All Diploma holders)	17	Not available
Plantations (all Diploma holders)	230	Not available
Forest Planning & Inventory(Diploma holders)	8	Not available
Forest Research (All University degrees/Masters)	32	Not available
Support Functions		Not available
Management (University Degrees & Higher Diplomas)	12	Not available
Administrative Services (college certificates)	122	Not available
Finance (Degrees, diplomas & college certificates)	28	Not available
Vacancies	40	Not available
Total	491	

3.1 The Expertise of the Executing Agency

The PNG Forest Authority has been established under Section 5 of the Forestry Act 1993 and its powers and functions are also defined under this Act. The over-arching objective is to facilitate the management, conservation and wise use of the forest resources of PNG in a sustainable manner. The organizational structure of the Executing Agency is provided in **Figure 4 above.**

3.2 The Infrastructure of the Executing Agency

3.3 Budget: K26 million or US$ 8.9 million

3.4 Personnel: 451 staff comprising of technical and professional staff. There are 40 vacancies for further recruitments in some key programmes.

[1] Cannot be able to be provided for Non-government organisations as there are many of such organisations and are short-lived in many instances.

ANNEX B - CURRICULA VITAE OF THE KEY STAFF

1. Senior Legal Officer

Name	:	Caroline Jaruga
DOB	:	March, 1960
Nationality	:	Papua New Guinea
Qualifications	:	
Work Experience	:	

2. Silviculturalist

Name	:	Mr. Forova Oavika
DOB	:	
Nationality	:	Papua New Guinean
Qualification	:	Diploma in Forestry
Employer	:	PNG Forests Authority (20 years)
Work Experience	:	Research work with PNG Forest Research Institute (FRI).

3. Senior Training Officer

Name	:	Geno Kini
DOB	:	
Nationality	:	Papua New Guinea
Qualification	:	
Employer	:	PNG Forest Authority
Work Experience	:	

4. Senior Planner

Name	:	Gewa Gamoga
DOB	:	
Nationality	:	Papua New Guinean
Qualification	:	BSc.Forestry Dip. in Forestry
Employer	:	PNG Forest Authority
Current Position	:	Officer Projects Logging (S/R)
Work Experience	:	

5. Forester

Name	:	Mr. Anda Akivi
DOB	:	1964
Nationality	:	Papua New Guinean
Qualification	:	Diploma in Forestry
Employer	:	PNG Forest Authority (20 years)
Current Position	:	Field Coordinator, PNG Eco-Forestry
Work Experience	:	Responsibilities: (in the last 3 years)

As the Field Coordinator of the EU funded Eco-Forestry Programme, Mr. Akivi's specific responsibilities related to the development of the model community based Sustainable Forest management (SFM) Units as an alternative to conventional development of natural forests and in line with FSC standards of SFM.

Mr. Akivi brings with him 20 years experience in a wide range of forestry and forest administration activities including his most recent involvement with the major Eco-Forestry Programme as Field Coordinator.

The funding of this program ceases in December 2006. The National Forest Board has approved the PNG Eco-Forestry Policy and id before the National Executive Council (NEC) for approval. Once approved, it will continue to monitor and promote the community based SFM concept and further develop the RIL concept which is a step up from Community Based SFM concept.

ANNEX C:- TERMS OF REFERENCE
Log Tracking and Chain of Custody Verification System

i. Meet stakeholders and review options for legal verification scheme and market acceptance

ii. Review current forest law enforcement policies, laws and regulations for adequacy and suitability for legal verification and recommend suitable adjustments

iii. Review technological capacity of the sector to support a legal verification system and advise on what additional capacity is required

iv. Develop guidelines and checklist for legal verification in line with GFTN, FLEGT and other internationally recognized Legal Verification Schemes.

v. Develop an auditing procedure and protocol for use and implementation of the system

vii. Develop a system for auditing, processing, monitoring, evaluation, issuance of certificates and appeal for the Legal Verification System

vii. Field test and review legal verification system in a small, medium and large concession

viii. Train at least 10 auditors to be able to independently audit companies and make recommendations

ix. Prepare final report and recommendations for follow up.

Terms of Reference
Training module for enhanced forest law enforcement

i. Meet stakeholders and review their training needs and requiremets

ii. Review current training programs for adequacy and suitability and recommend suitable adjustments

iii. Develop a training manual to enhance the skills of stakeholders in the monitoring of forestry activities including the identification and reporting of illegal forestry activities as well as enforcement of laws, policies and regulations.

iv. Develop an auditing procedure and protocol for use and implementation of the system

vi. Train stakeholders in the monitoring of forestry activities including the identification and reporting of illegal forestry activities as well as enforcement of laws, policies and regulations.

vii. Prepare final report and recommendations for follow up.

Terms of Reference
Development of database to capture and store information on forest law enforcement

i. Meet stakeholders and review options and discuss the design of the database

ii. Review available database systems within the PNGFA and their capacity to be improved/upgraded to accommodate the new information gathering requirements fand recommend suitable adjustments

iii. Review the technological capacity of the PNGFA to support and maintain the database and advise on what additional capacity is required

iv. Develop a suitable database for the PNGFA

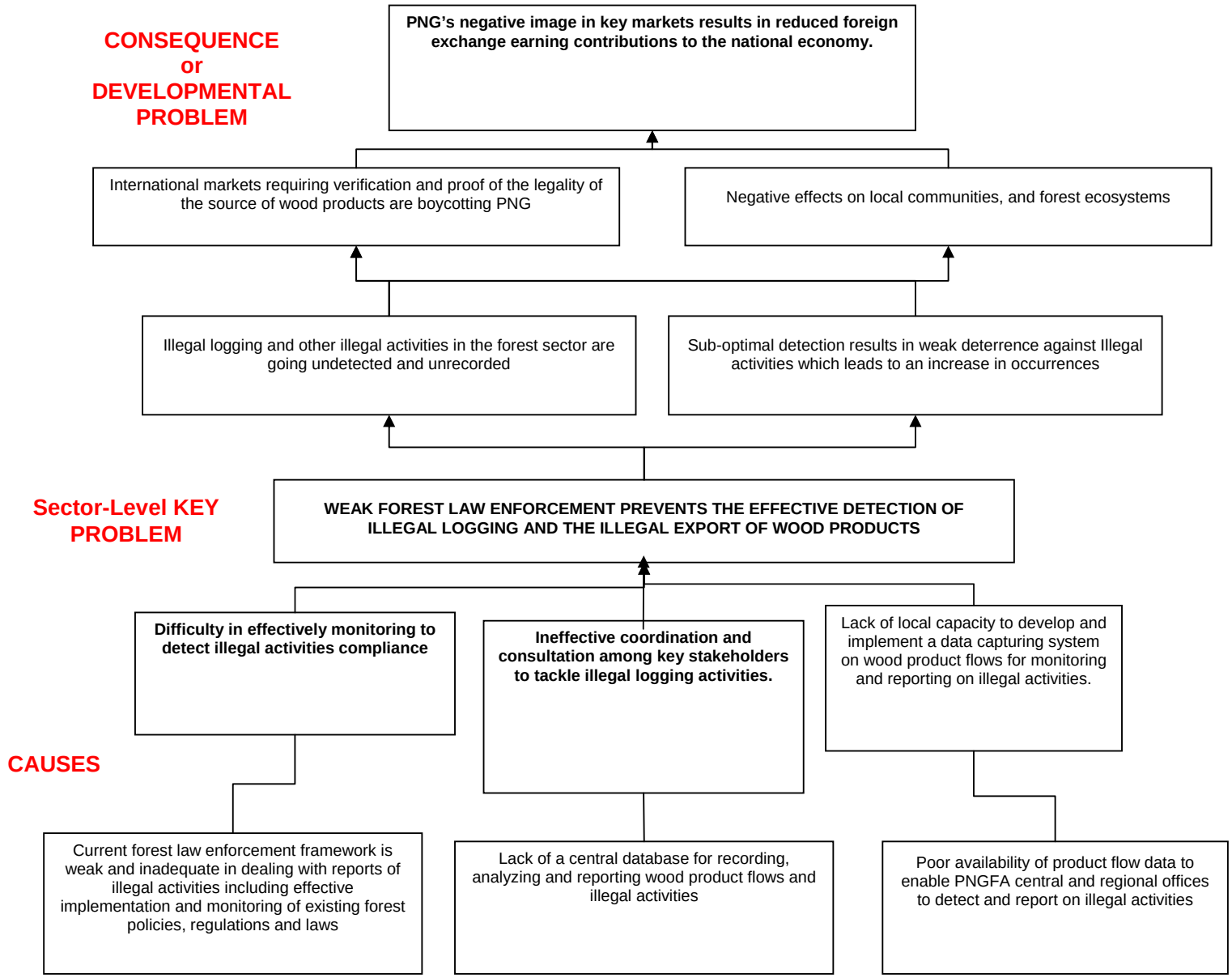
v. Field test and commission the database

vi. Develop guidelines/operating manual for the database

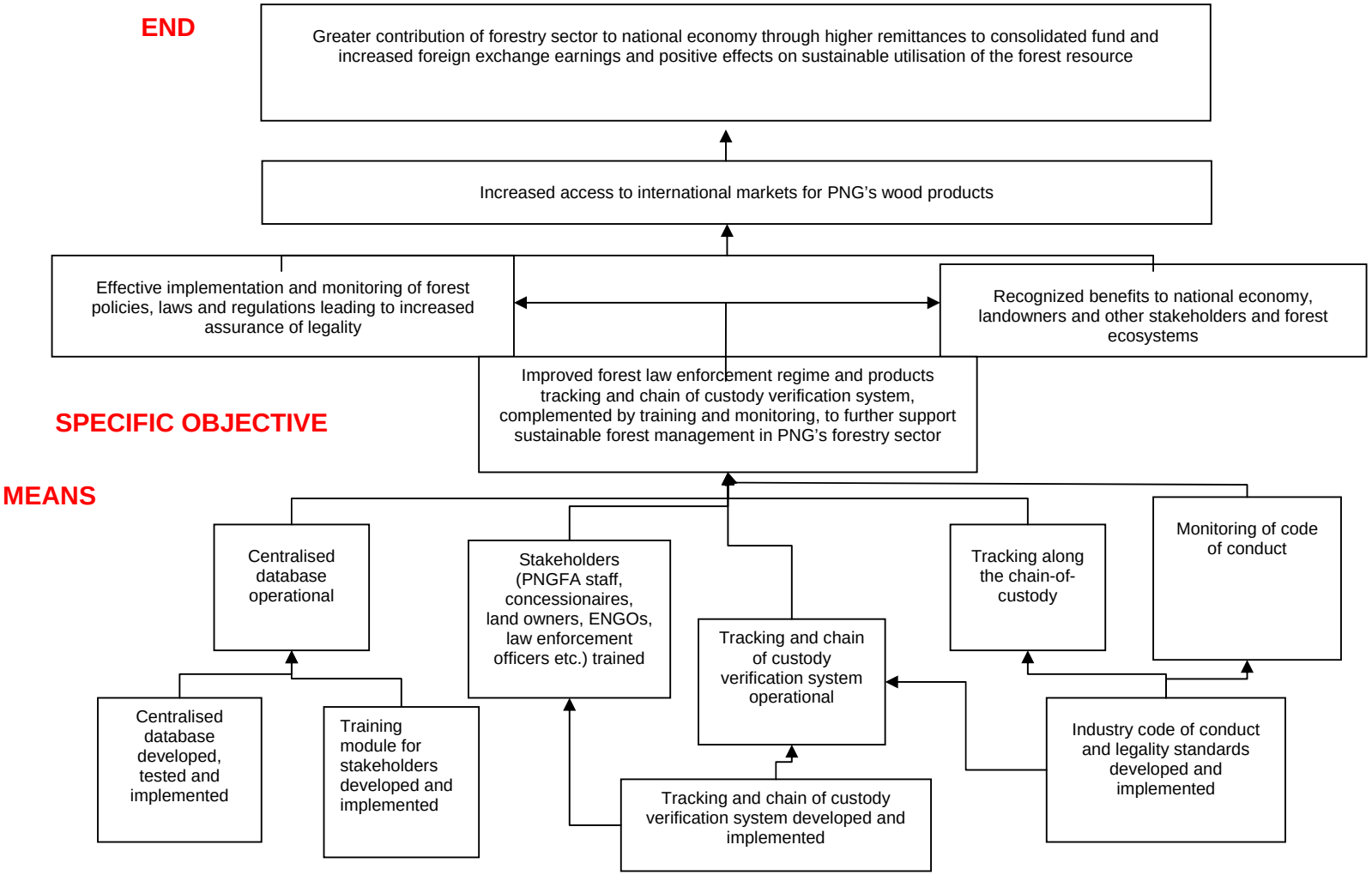
vii. Train at least 10 PNGFA staff in the use of the database

viii. Prepare final report and recommendations for follow up.

ANNEX D:-Problem Tree


CONSEQUENCE or DEVELOPMENTAL PROBLEM
PNG's negative image in key markets results in reduced foreign exchange earning contributions to the national economy.
International markets requiring verification and proof of the legality of the source of wood products are boycotting PNG
Negative effects on local communities, and forest ecosystems
Illegal logging and other illegal activities in the forest sector are going undetected and unrecorded
Sub-optimal detection results in weak deterrence against Illegal activities which leads to an increase in occurrences
Sector-Level KEY PROBLEM
WEAK FOREST LAW ENFORCEMENT PREVENTS THE EFFECTIVE DETECTION OF ILLEGAL LOGGING AND THE ILLEGAL EXPORT OF WOOD PRODUCTS
Difficulty in effectively monitoring to detect illegal activities compliance
Ineffective coordination and consultation among key stakeholders to tackle illegal logging activities.
Lack of local capacity to develop and implement a data capturing system on wood product flows for monitoring and reporting on illegal activities.
CAUSES
Current forest law enforcement framework is weak and inadequate in dealing with reports of illegal activities including effective implementation and monitoring of existing forest policies, regulations and laws
Lack of a central database for recording, analyzing and reporting wood product flows and illegal activities
Poor availability of product flow data to enable PNGFA central and regional offices to detect and report on illegal activities

ANNEX E- Objectives Tree


END
Greater contribution of forestry sector to national economy through higher remittances to consolidated fund and increased foreign exchange earnings and positive effects on sustainable utilisation of the forest resource
Increased access to international markets for PNG's wood products
Effective implementation and monitoring of forest policies, laws and regulations leading to increased assurance of legality
Recognized benefits to national economy, landowners and other stakeholders and forest ecosystems
SPECIFIC OBJECTIVE
Improved forest law enforcement regime and products tracking and chain of custody verification system, complemented by training and monitoring, to further support sustainable forest management in PNG's forestry sector
MEANS
Centralised database operational
Stakeholders (PNGFA staff, concessionaires, land owners, ENGOs, law enforcement officers etc.) trained
Tracking and chain of custody verification system operational
Tracking along the chain-of-custody
Monitoring of code of conduct
Centralised database developed, tested and implemented
Training module for stakeholders developed and implemented
Tracking and chain of custody verification system developed and implemented
Industry code of conduct and legality standards developed and implemented

ANNEX F: TABLE SHOWING HOW EXPERT PANEL COMMENTS HAVE BEEN ADDRESSED

Recommendation	How it has been addressed	Page Number
Delete specific reference to European Union countries, Australia and North America in the summary	Reference to European Union countries, Australia and North America in the summary deleted.	Summary Page
Review the scope of the proposal and the specific objective	Developmental Objective and Specific Objective revised	4
Improve problem analysis in depth, through providing important causes clearly, and reproduce the problem tree accordingly	Problem tree revised in line with Developmental Objective and Specific Objective	Annex D, Page 43