

**INTERNATIONAL TROPICAL TIMBER ORGANIZATION  
ITTO  
PROJECT DOCUMENT**

TITLE:	<b>National Training Program to Promote the Adoption of Reduced Impact Logging (RIL) in Papua New Guinea</b>
SERIAL NUMBER	<b>PD 551/09 REV. 1 ( I ).</b>
COMMITTEE	<b>Forest Industry</b>
SUBMITTED BY	<b>Government of Papua New Guinea</b>
ORIGINAL	<b>English</b>

**SUMMARY**

The main goal of this project is to promote and facilitate the adoption of reduced impact logging (RIL) strategies among the medium to large scale forest operations in Papua New Guinea (PNG). This goal is given further definition by the statement of the specific objective:

***“Develop the capacity to understand, implement, and regulate the adoption of RIL practices at the concession and the government level.”***

The project will seek to achieve these objectives by establishing a comprehensive training program which will be developed and implemented in three collaborating forest concessions. The project will also provide refresher training for all field staff of the PNG Forest Authority, Field Services Directorate to strengthen their monitoring and reporting capabilities.

Practical technical procedures manuals and booklets will be developed and published. A brochure will be prepared at the outset to publicize the project.

The project activities will be implemented by the Timber and Forestry Training College in coordination with the Tropical Forest Foundation. The PNG Forest Authority will provide overall project coordination.

**EXECUTING AGENCY**

Papua New Guinea Forest Authority

**DURATION**

Two Years

**APPROXIMATE STARTING DATE**

Upon approval and financing

**PROPOSED BUDGET AND OTHER FUNDING SOURCES**

<b>Source</b>	<b>Contribution in US\$</b>
<b>ITTO</b>	<b>534,927</b>
PNG Forest Authority	43,165
TFTC	32,985
Tropical Forest Foundation	48,000
Forest Industry	83,260
<b>TOTAL</b>	<b>742,337</b>

**PROJECT PROPOSAL FOR A NATIONAL TRAINING PROGRAM  
TO PROMOTE THE ADOPTION OF REDUCED IMPACT LOGGING (RIL)  
IN PAPUA NEW GUINEA**

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## PROJECT BRIEF

Medium to large scale forest harvesting operations make up the bulk of PNG's annual log harvests. Lack of training in RIL and shortcomings in regulatory oversight, is undermining national efforts to achieve sustainable forest management on the majority of the national forest areas.

### Development Objective

*"Strengthen PNG's capability to bring its medium to large scale forest management units in line with principles of sustainable forest management."*

Forests and forestry activities play a major role in PNG's culture and in its socio-economic and industrial development. The PNG national forest policy recognizes the cultural significance and fundamental ownership of the nation's forest as belonging to its people. National forest policy, however, also provides a mechanism for industrial utilization of the nation's forests with informed consent and involvement of the traditional owners of the forest land.

It is the PNGFA's mandate to oversee the development of the nation's forests. The goal is to develop principles and practices of proper forest harvesting and to develop minimum standards for logging practices in production forests, achieving a dynamic balance of ecological, economical and socio-cultural benefits. This should provide the standard of what is involved in planning and implementing logging activities in natural forests and the rationale why certain operations should be undertaken.

In 1996, the Government of Papua New Guinea introduced the "Logging Code of Practice" in an effort to stimulate improvements in logging practices in the country's logging concessions as well as to provide a coherent framework for practical oversight on the part of the Papua New Guinea Forest Authority(PNGFA). This "Logging Code of Practice" was revised in 2000 and is the basis for the guidance and regulation of forest management practices. However, PNG lacks trained and qualified human resources both in the private and public sectors, consequently the standards established by the Code are often not adopted.

Recognizing the shortcomings in human resources, the PNGFA initiated a process in August 2005 which sought the support of the ITTO to fund a National RIL training project for the purpose of strengthening the capacity to adopt a holistic set of management practices which would ensure that the forests of PNG, particularly those areas on which medium to large scale forest concessions operate, can achieve sustainable forest management. RIL was seen as a larger framework within which to redefine the "Logging Code of Practice" and to seek outside assistance for capacity building.

This process involved a number of fact finding missions and the involvement of an international expert on RIL and lead ultimately to the formulation of this project proposal as an output of an ITTO Pre-Project.

### Specific Objective

*"Develop the capacity to understand, implement, and regulate the adoption of RIL practices at the concession and the government level."*

In recognition of the magnitude of the task, the project proposal has been structured around six, well defined project outputs which seek to promote both a broad-based understanding of RIL as well as provide clear and specific technical guidance in the form of 'user friendly' procedures manuals and guidebooks for forest practitioners.

The main beneficiaries of the project will be the staff and management of the medium to large scale forest concessions along with the field staff of the PNGFA Field Services Directorate.

A major focus of the project will be to assist three collaborating concessions to adopt all aspects of an RIL management regime. The project will provide field training for all aspects of RIL from basic data collection, operator training, planning, operational activities, post harvesting considerations, and management considerations for adoption of a RIL management regime.

Training will be conducted in the context of working concessions and will adopt a phased approach where training is provided as concession management and staff integrate the lessons learned from the preceding training input. This field training will also involve staff of the PNGFA Field Services Directorate.

Results of the training will be disseminated in articles which will appear in the Forest Industry Association and PNGFA newsletters and will also be presented as lessons learned in an end of project workshop.

Recognizing the need to strengthen the regulatory aspect of concession management in PNG, the stakeholder consultation process used to define the scope of this project, adopted the concept of a one week training course for all PNGFA field staff of the Field Services Directorate. This training will focus on the monitoring and reporting functions of the field staff and will include an overview of RIL.

Since many of the field staff have never undergone such formal training, this program should significantly strengthen the capacity of the Field Services Directorate to provide competent oversight of the forest concession companies.

The executing agency for this project will be the PNGFA. A Project Co-ordinating Unit (PCU) will be formed headed by a Project Co-ordinator (PC). Actual training activities will be carried out by the Tropical Forest Foundation (TFF), an international NGO known for its' RIL expertise, and by the Timber and Forestry Training College (TFTC). The purpose of this partnership is to build up specific expertise for RIL training extension services in the country and to strengthen existing training institutions.

Overall coordination and reporting of the project will be provided through the PCU which will be the chief 'point of contact' for the ITTO. General project guidance will be provided by a multi-stakeholder steering committee. Specific training activities will be carried out by the TFF and the TFTC. The PCU will also be responsible for the organizing of an end-of-project workshop on RIL and sustainable Forest Management.

## **ACRONYMS AND ABBREVIATIONS**

<b>FIA</b>	Forest Industry Association
<b>MOU</b>	Memorandum of understanding
<b>NGO</b>	Non-Governmental organization
<b>PC</b>	Project coordinator
<b>PCU</b>	Project coordinating unit
<b>PNG</b>	Papua New Guinea
<b>PNGFA</b>	Papua New Guinea Forest Authority
<b>RIL</b>	Reduced impact logging
<b>TFF</b>	Tropical Forest Foundation
<b>TFTC</b>	Timber and Forestry Training College

**PROJECT PROPOSAL FOR A  
NATIONAL TRAINING PROGRAM TO PROMOTE THE ADOPTION OF  
REDUCED IMPACT LOGGING (RIL) IN PAPUA NEW GUINEA**

**PART 1: PROJECT CONTEXT**

**1.1 Origin of the Project Concept**

**1.1.1 Background**

Human resource development in timber harvesting has been an important issue in conferences and workshops during the past decade. A 1999 conference on "Tropical Forest Harvesting: New Technologies Examined" organized by the Forest Research Institute Malaysia (FRIM) and the Asian Strategy and Leadership Institute (ASLI) in November 1999 devoted three chapters of its proceedings to documenting experiences in logging training at the professional, technical and worker level.

In February 2001, over 160 forestry practitioners attended an international workshop on "Application of Reduced Impact Logging" in Kuching, Sarawak. One day of the three-day workshop was devoted to exchanging information on practical issues related to moving from conventional logging practices to reduced impact logging, including technical aspects, equipment, organizational changes, appropriate training techniques and recent advances in training to support RIL implementation. The workshop's recommended the following steps, to implement RIL in the forests of the region:

- promoting awareness of RIL among decision makers and managers in both forestry companies and forestry regulatory agencies; and
- conducting training-of-trainers courses aimed at ensuring a corps of people to staff national RIL training programmes in the main timber producing countries of the region – Malaysia, Indonesia, .

Although the need for change has been accepted widely, putting the Code into practice is constrained by a number of factors. Perhaps the most critical factor is the lack of skilled and properly trained forest industry and forest agency personnel.

In 1996 the Government of Papua New Guinea introduced the 'Logging Code of Practice' in an effort to stimulate improved logging practices in the country's logging concessions as well as to provide a coherent framework for practical oversight on the part of the Papua New Guinea Forest Authority (PNGFA). In 2000, the 'Logging Code of Practice' was revised and published jointly by the PNGFA and the Department of Environment and Conservation.

**1.1.2 History of the Project**

This Project is an initiative of the Papua New Guinea Forest Authority (PNGFA). The PNGFA clearly understands that there is a need to improve the forest practices of medium to large scale commercial forest operations in Papua New Guinea as well as to improve its own capacity to provide effective oversight for commercial forest operations in the country. Manpower capacity building in RIL is seen as a major prerequisite for improving forest management practices.

In August, 2005, the PNGFA invited a visit by the Regional Director (SE Asia & Pacific) of the Tropical Forest Foundation to PNG in order to assist in the development of a strategy to formulate a national training program for RIL. This led to the development of a Pre-Project proposal intended to fund the fact-finding activities and preparation of a "National Training Program to Promote the Adoption of Reduced Impact Logging (RIL) in Papua New Guinea".

In late July 2009, a fact-finding consultancy consisting of the Regional Director of TFF and PNGFA staff, visited a number of forest concessions and training institutions in order to assess the potential scope and implementation requirements of a national RIL training program and in order to develop a concept for a full funding proposal to be submitted to the ITTO. This Project Document, is the direct output of the Pre-Project, and constitutes a funding request submission titled, **National Training Program to Promote the Adoption of Reduced Impact Logging (RIL) in Papua New Guinea.**

The Pre-Project field visits to working forest operations have provided an excellent reality check against the prescribed practices as detailed in the PNG Logging Code of Practices and related regulations.

Discussions with officials of the PNG University of Technology, senior members of the Timber & Forestry Training College and various government and industry representatives provided a strong basis for developing a consensus based project proposal.

The Pre-Project workshop provided an opportunity for a lively discussion and helpful suggestions to guide final project document formulation. The workshop provided a consensus opinion that:

- A training program in RIL should build on existing capabilities and include wherever possible, existing training institutions.
- A training program in RIL should take into account the progress that has been achieved by past training initiatives.
- A training program in RIL should address the issue of awareness raising as well as strengthening technical skills.
- A training program in RIL should build on the regulatory framework, particularly the PNG Code of Logging Practices.
- Formulation of a training program in RIL should be guided by the consideration that the proposed outputs and activities be relevant to the needs, realistic within the existing capabilities, and sustainable beyond the life of the project.

This synthesis of consensus opinion developed during the Pre-Project, has been the guiding principle under which this full Project proposal has been developed.

#### **1.1.2 Lessons Learned from Pre-Project**

**The Pre-Project strategy of identifying the training needs and training capacities, was implemented through a thorough stakeholder driven process. It is felt that this process has resulted in the design of a Project Proposal for an initial, two year national RIL training program that:**

- **addresses the most urgent training needs,**
- **involved all relevant stakeholders,**
- **identified all training resources and capabilities, and,**
- **developed a realistic project concept in line with the stated development objective.**

**Although this process may have taken a little longer to implement than was originally anticipated, it has resulted in a broad-based consensus for a national RIL training program as described in the Project Proposal Document which has already been submitted to the ITTO for technical review.**

### **1.2 Relevance**

As a project grounded in the promotion of sustainable forest management, this project fits firmly into the second of the two ITTA, 2006 objectives, namely: "To promote the sustainable management of tropical timber-producing forests." Indirectly, the project also, "promotes the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests" by strengthening the enabling conditions for sustainability and the compliance with legality standards.

#### **1.2.1 Conformity with ITTO Objectives and Priorities**

With reference to Article 1 of the ITTA, 2006, this project has direct relevance to the achievement of the following ITTA objectives:

- Promoting and supporting research and development with a view to improving forest management and efficiency of wood utilization and the competitiveness of woods products relative to other materials, as well as increasing the capacity to conserve and enhance other forest values in timber producing tropical forests.
- Encouraging members to develop national policies aimed at sustainable utilization and conservation of timber producing forests, and maintaining ecological balance, in the context of the tropical timber trade.
- Strengthening the capacity of members to improve forest law enforcement and governance, and address illegal logging and related trade in tropical timber.

- Encouraging information sharing for better understanding of voluntary mechanisms such as, *inter alia* certification, to promote sustainable management of tropical forests, and assisting members with their efforts in this area.
- Promoting access to, and transfer of, technologies and technical cooperation to implement then objectives of this Agreement, including on concessional and preferential terms and conditions as mutually agreed.
- Encouraging members to recognize the role of forest-dependent indigenous and local communities in achieving sustainable forest management and develop strategies to enhance the capacity of these communities to sustainably manage tropical timber producing forests.
- Identifying and addressing relevant new and emerging issues.

### **1.2.2 Relevance to the Submitting Country's policies**

Papua New Guinea has a land mass area of 46 million hectares. Of these 14.4 million hectare is productive forests . Though the land is owned by the indigenous people, its forests resources is managed by the state under the 1991 Forestry Act which entails clear policy and regulatory mechanisms to achieve sustainable forests management.

Experience has shown that logging companies are not complying with established standards and procedures basically due to political influences, thus weakening the institutional capacity to monitor and implement corrective actions. The proper management of these remaining areas with high value timber species will provide many advantages, especially regarding rural income and employment generation, land and soil conservation. Previous trials under the IRDCP and EFP program has shown that developing of projects with direct participation of land owners has a lot of effect on the environment and also the economical sustainability of the projects. This project will serve as a model for further landowner group and other private sector development throughout Papua New Guinea.

### **1.3 Target Audience**

This project is intended primarily to strengthen the technical capabilities and performance of medium to large scale forest concessions. The project will draw on the technical skills and training capabilities which have been developed under previous, community orientated projects.

The target audience of the project in the private sector, therefore, will be the management, technical staff and forest workers of the forest concessions.

Additionally, the project will upgrade the technical and monitoring skills of the field staff of the Field Services Directorate of the PNGFA. This will be achieved through intensive training workshops which will involve all field staff across the country.

Finally, the project will also strengthen the capacity of existing training institutions, specifically the TFTC.

#### **1.3.1 Geographic Location**

The project will not be confined to any one geographic locations although the provinces which have largest forest resources are likely to receive priority attention. Three demonstration concessions will be selected to be the focus of developing an RIL model. This concessions will be chosen as much for their representativeness as well as for the willingness of the top management to engage in project activities.

#### **1.3.2 Social, Cultural, Economic and Environmental Aspects**

##### Economic Aspects

The proposed Project's aim is to demonstrate and train implementation of RIL at strategic PNG forestry operations and promote them as models for the rest of the forestry sector. Focusing on both the financial and longer term economic benefits of implementing RIL, will enhance the acceptance of RIL practices for the medium to large scale operations.

RIL economic aspects include:

- RIL provides the opportunity for enhanced productivity, hence cost savings in the logging operations and ensures enhanced economic benefits from the forest over the longer term.

- RIL is a keystone of sustainable forest management, ensuring continuous flow of economic (as well as social and environmental) benefits from forest resources.
- RIL results in more diverse natural forest eco-systems, enhancing sustained harvest of NTFP.
- RIL assists in sustaining forest productivity and stabilizing downstream forest products industries.
- Adoption of RIL will contribute to the reduction in illegal logging activities by ensuring adherence to sustainable forest management practices.

#### Environmental Aspects

RIL contributes to the achievement of sustainable forest management, through enhancing the environmental protection benefits of production forests.

RIL minimizes soil and forest stand disturbance through planning of skid trails, better operational control, and through the establishing of clear environmental standards.

RIL minimizes erosion and deterioration of forest hydrology by deactivation of skid trails and by emphasizing the need to protect the integrity of forest streams.

RIL helps to protect biodiversity in both forest and stream ecosystems by ensuring that both are left in an improved condition after logging.

RIL contributes to the reduction of fire hazard in logged areas by encouraging more careful extraction and better utilization.

RIL practices contribute to the conservation of biomass and, therefore, improve the carbon retention capacity of the residual forest.

RIL training aims to achieve these objectives by: avoiding excessive disturbance to soils, water courses and adjacent riparian reserves, refraining from logging on steep slopes; practicing directional felling, avoiding excessive damage to residual forest during road construction, felling, and log skidding.

#### Social and Cultural Aspects

The implementation of Reduced Impact Logging (RIL), which includes safe working practices, will have a positive effect on the occupational health and safety of forestry workers. RIL can incorporate payment systems, which consider quantity, quality and difficulties in level of work conditions and therefore result in more equitable remuneration of forest harvesting workers. RIL seeks to improve the competence of forest workers, making their skills more valuable and reducing the risk of injury.

RIL takes into account the concerns of local communities in terms of their use of the forest and their reliance on forest streams and rivers as a source of fish and water for domestic use. By reducing the impact on the forest and its hydrology, RIL contributes to the reduction in potential conflict between logging companies and local communities.

RIL includes explicit recognition of cultural values and seeks to incorporate these values into the planning and operational stages of forest management activities.

#### **1.4 Expected Outcomes at Project Completion**

Considering that the medium to large scale forest operations in PNG control virtually all commercial output of logs and timber and, considering that technical personnel in these operations have received very little or no formal training, it is unrealistic to expect a wholesale reformation of the industry within the time period of a project such as this. However, it is expected that significant progress will have been made by the end of the project in terms of developing training material, improving the understanding for RIL adoption, and strengthening the human capacity to achieve the improvements that RIL can deliver.

Information extolling the benefits of RIL will be developed and made widely available. Technical reference material and procedures manuals will be available to all forest operations. Industry and government wide participation in an end-of-project workshop will disseminate the lessons learned and technical material developed by the project.



Existing forestry training institutes will be able to deliver an expanded curriculum aimed at spreading RIL technical skills.

Field training and demonstration in all aspects of RIL data collection, planning, operations, and post harvesting evaluation, will have been carried out in three collaborating concessions which will serve as models for improved practices achievable through adoption of an RIL management strategy.

Field staff of the Field Services Directorate will be empowered through involvement in RIL training and demonstrations, to more effectively perform their monitoring functions in their assigned forest concessions. All Field Services Directorate field staff will receive training in monitoring compliance with the standards set out in the code of logging practices.

These improvements will enhance the achievement of more sustainable forest operations in general and will set the stage for major improvement in practices across the forest sector.

## **PART 2: PROJECT RATIONALE AND OBJECTIVES**

### **Rationale**

#### **2.1.1 Institutional Set-up and Organizational Issues**

Forests and forestry activities play a major role in PNG's culture and in its socio-economic and industrial development. The PNG national forest policy recognizes the cultural significance and fundamental ownership of the nation's forest as belonging to its people. National forest policy, however, also provides a mechanism for industrial utilization of the nation's forests with informed consent and involvement of the traditional owners of the forest land.

The forestry sectors contribution to gross domestic product is over 9 percent<sup>1</sup> which places it on par with mining in the National economy.

It is the PNGFA's mandate to oversee the development of the nation's forests. The goal is to develop principles and practices of proper forest harvesting and to develop minimum standards for logging practices in production forests, achieving a dynamic balance of ecological, economical and socio-cultural benefits. This should provide the standard of what is involved in planning and implementing logging activities in natural forests and the rationale why certain operations should be undertaken. The outcome of this project is aimed at producing a practical and user friendly guideline, developed within the framework of the PNG's "Logging Code of Practice" and waste assessment procedures.

The project will also provide a basis for the PNG Forest Authority to develop institutional expertise as a basis for further research, extension, and training in proper forests management practices and, the development of RIL practices with emphasis on full compliance with legal requirements.

This initiative is in general recognition to ensure the retention of a viable, residual stand for the successive cutting cycles. As an International Tropical Timber Organization (ITTO) member, PNGFA policies are in line with ITTO's "Year 2000 Objective" of achieving sustainable forest management.

#### **2.1.2 Stakeholder Analysis**

Medium and large-scale forest companies will benefit from participating in the proposed project in a number of ways. Their management and staff will benefit from the proposed training by improving their technical skills. The training will improve their understanding and sensitivity towards environmental and social aspects related to forest harvesting operations. At the company level, adoption of RIL should result in improved economic and environmental performance, thus providing direct financial stimulus while at the same time, leaving the forest in a better condition.

The operational field staff of the Field Services Directorate will benefit by gaining a better understanding of forest operations and will receive updated training in monitoring and reporting through participation in the training program. The PNGFA will benefit through the implementation of the project, specifically through the refresher training of all field staff of the Field Services Division in monitoring the implementation of RIL as set out in the Logging Code of Practice.

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<sup>1</sup> Based on 2005 data.

Local communities, who are the traditional land owners of the forest resource, are expected to benefit through development of technical skills and better employment opportunities. Improvements in the performance of the forest operators through the adoption of RIL, should lead to reduced environmental impact, more sustainable forest conditions, and better harmony between forest communities and forest companies, thus ultimately leading to a more equitable and sustainable sharing of the forest resource.

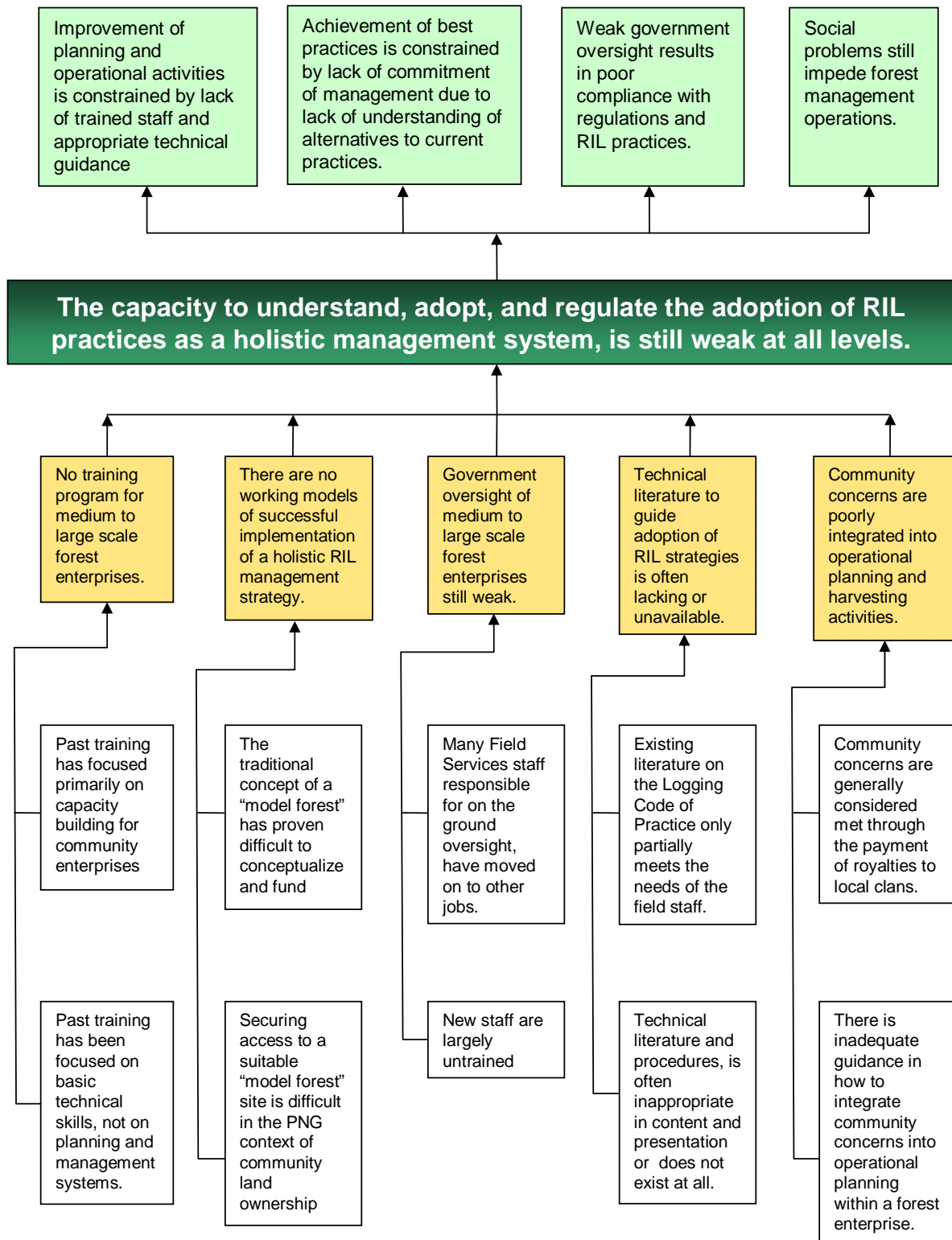
**Table 1: Stakeholder Analysis**

Stakeholder Group	Characteristics	Problems, needs, interests	Potentials	Involvement in the project
<b>Primary Stakeholders</b>				
Indigenous People	Owners of the land and its resources	Primary source of revenue and life style.	Direct employment	Primary recipients of timber royalties
Forest Concession Companies	Medium to large scale concession companies	Interested in a stable business environment; need trained workers and staff	Have the resources to facilitate achievement of project goals	Main actors in demonstration of RIL; intimate involvement
PNG Forest Authority	Government organization which has the responsibility to administer the forest resource	Deficiencies in human resources needed to carry out its responsibilities.	Legally empowered to enforce regulations and standards	Executing agency for project implementation
<b>Secondary Stakeholders</b>				
Forest Industry Association (FIA)	Association representing the collective interests of the forest concession companies	Interested in creating the enabling environment for a sustainable industry and access to markets	Collaboration with project highly desirable	Can facilitate information dissemination and identify willing participants
Education and training institutions (TFTC)	Have a mandate for forestry and technical training	Lack funds to exercise mandate to fullest potential	Have experienced trainers on staff	Will play lead role in implementing training activities.
Training NGO's(TFF)	Have education and SFM promotion mission	Lack funds to implement mission	Experienced in providing training in RIL and SFM	Will play a lead role in implementing field training,etc.
<b>Tertiary Stakeholders</b>				
PNG Univ. of Technology	Institute of higher education; faculty of forestry	Needs context for research activities	RIL training sites/projects could be the entry point for research.	Indirect through creation of research opportunity

\* **Note:** As of 2009, there are 128 forest concessions in PNG, a large number of concessions are controlled by relatively few large industrial "groups".

2.1.3 Problem Analysis

Figure 1 : Problem Tree



Problem\_Analysis.ppt

## 2.1.4 Logical Framework Matrix

**Table 2: The Logical Framework Matrix.**

Strategy of Intervention	Measurable Indicators	Means of Verification	Key Assumptions
<p><u>Development objective:</u> Strengthen PNG's capability to bring its medium to large scale forest management units in line with principles of sustainable forest management.</p>	<p><u>Impact Indicators:</u> The emergence of forest management units which clearly demonstrate a higher commitment to sustainable forest management.</p>	<p><u>Verification:</u> The emergence of voluntary participation in independent certification schemes for forest management, legality, and chain-of-custody.</p>	<p><u>Sustainability assumptions</u> The continued significance of the forestry sector in the national development policy is assumed.</p>
<p><u>Specific objective:</u> Develop the capacity to understand, implement, and regulate the adoption of RIL practices at the concession and the government level.</p>	<p><u>Outcome Indicators:</u> Widespread understanding of the RIL management strategy is achieved.</p> <p>Broad based strengthening of capacity to adopt, train, and regulate RIL technical requirements</p>	<p><u>Verification:</u> Verification of widespread understanding of the technical aspects of RIL will be measurable through interviews and is expected to be demonstrated through an end of project workshop.</p>	<p><u>Development hypothesis, linking specific objective to development objective.</u> Industry wide adoption of RIL management strategies is a fundamental prerequisite to the achievement of sustainable forest management at a national level.</p>
<p><u>Outputs:</u></p> <ul style="list-style-type: none"> <li>Literature publicizing the project published</li> <li>Technical procedures manuals and booklets published</li> <li>Training for all aspects of an RIL management system delivered in three working concessions</li> <li>Capacity and curriculum of TFTC strengthened and expanded</li> <li>All field staff of the Field Services Directorate receive training in monitoring and enforcement</li> <li>End of project workshop held</li> </ul>	<p><u>Output Indicators:</u></p> <ul style="list-style-type: none"> <li>Articles appear in newsletters, website, etc.</li> <li>Technical guidelines and manuals are available to all PNGFA and forest concession staff in two languages</li> <li>Field training for fallers and machine operators delivered to three concessions; approx. 60 forest workers trained.</li> <li>Comprehensive field demonstrations and training exercises held in three concessions; approx. 100 staff/workers participate.</li> <li>All +/-80 field staff of the Field Services Directorate receive training</li> </ul>	<p><u>Verifiers:</u> Publications are available and widely distributed.</p> <p>Training curriculum, procedures manuals, etc. are published and available.</p> <p>Attendance lists of participants in training activities.</p> <p>Documentation of RIL demonstration and training activities available.</p> <p>Noticeable improvements in field practices in participating concessions.</p>	<p><u>Implementation assumptions linking outputs to the specific objective:</u></p> <ul style="list-style-type: none"> <li>Key stakeholder consensus has been achieved in the formulation of this project. Continued commitment of the PNGFA is essential to the ultimate success.</li> <li>The FIA will continue to endorse and support the goals, objectives and activities of this project.</li> <li>Close cooperation between national and international experts is a prerequisite for success.</li> </ul>

## 2.2 Objectives

### 2.2.1 Development Objective and Impact Indicators

Development Objective:

*"Strengthen PNG's capability to bring its medium to large scale forest management units in line with principles of sustainable forest management."*

- By the end of the project, PNG will have working examples of full RIL implementation as models for the remaining forest concession industry.

- By the end of the project, the oversight capacity of the PNGFA will have been significantly strengthened through training in monitoring and reporting for all of its field services staff.

### 2.2.2 Specific Objective and Outcome Indicators

#### Specific objective:

*“Develop the capacity to understand, implement, and regulate the adoption of RIL practices at the concession and the government level.”*

- **Understanding** will be achieved at the general level through public release of a brochure on the project and through articles in newsletters and on websites.
- Technical **understanding** of RIL will be achieved through the publication of technical procedures manuals and field handbooks aimed at guiding forest technicians and workers in the performance of their tasks related to the goals of an RIL management system
- **Understanding** at a management level will be developed through intensive demonstration and training on three collaborating concessions. The lessons learned will be promulgated at an end of project workshop.
- **Implementation** of RIL will be centred around three working concessions. Multiple training inputs to these demonstration sites will cover all aspects of training from forest workers (fallers, tractor operators) to data collection and planning, operational activities, and post harvesting evaluation. Training will be provided by TFTC and the TFF for specific inputs.
- **Implementation** of RIL will be further enhanced by strengthening and expanding the curriculum of the TFTC and by developing in-country NGO expertise to carry on with training and promotion activities.
- **Regulatory** functions of the PNGFA, Field Services Directorate, will be significantly strengthened by providing a one week training session in monitoring and reporting for all field staff.

## PART 3: DESCRIPTION OF PROJECT INTERVENTIONS

### 3.2 Outputs and Activities

Six major outputs have been identified and have been described in general terms under section 2.2.2.

#### 3.1.1 Outputs

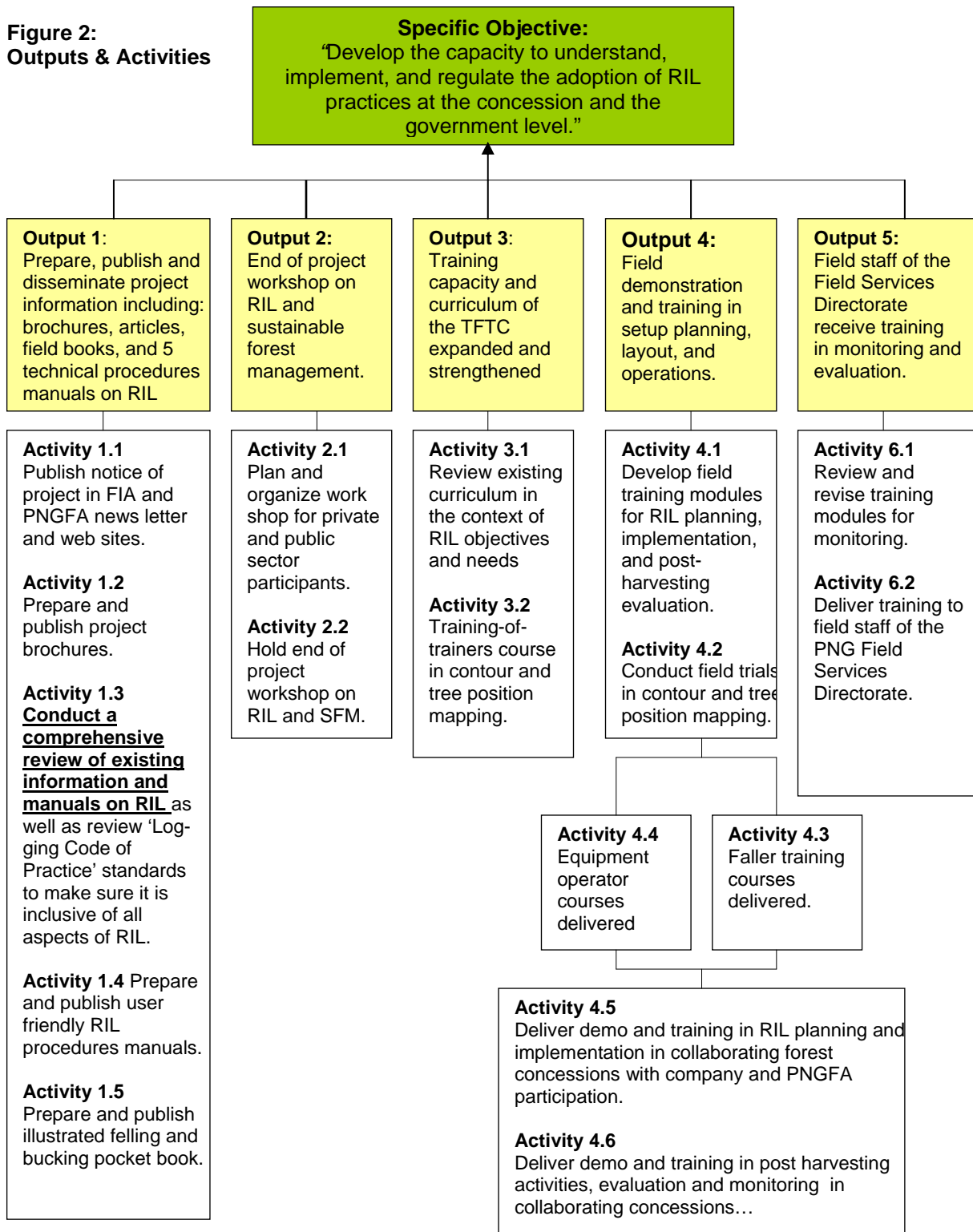
**Table 3: Outputs and their indicators**

Output	Indicators
<b>Output 1:</b> Information and technical manuals on RIL prepared, published and disseminated.	<ul style="list-style-type: none"> <li>• A project brochure is published and disseminated in two languages (400 copies each)</li> <li>• Articles on the project activities has been published in the PNGFA and FIA newsletters and websites.</li> <li>• Five technical procedures manuals have been prepared and published in two languages (400 copies each)</li> <li>• A ‘Falling &amp; Bucking’ pocket book is published in two languages (400 copies each)</li> </ul>
<b>Output 2:</b> End of project workshop on RIL and sustainable forest management.	<ul style="list-style-type: none"> <li>• An end of project workshop featuring ‘lessons learned’ from the RIL training project is held in Port Moresby for an estimated 50 participants.</li> </ul>
<b>Output 3:</b> Training capacity and curriculum of the TFTC expanded and strengthened	<ul style="list-style-type: none"> <li>• Existing curriculum related to RIL has been reviewed, revised, and updated.</li> <li>• A ‘training-of-trainers’ course on contour and tree position mapping has been carried out for 15 participants.</li> </ul>
<b>Output 4:</b> Field demonstration and training in setup planning, layout, and operations.	<ul style="list-style-type: none"> <li>• Three collaborating concession have received intensive field training in all aspects of RIL planning and implementation. This will involve all concession staff from camp manager down to forest workers. It will also involve participants from the Field Services Directorate</li> </ul>
<b>Output 5:</b> Field staff of the Field Services Directorate receive training in monitoring and evaluation.	<ul style="list-style-type: none"> <li>• .All (+/-80) field staff of the Field Services Directorate will have receive training in monitoring and reporting.</li> </ul>

### 3.1.2 Activities

Activities have been used as the basis for formulating the budget and are identified under each output as follows:

**Figure 2:  
Outputs & Activities**



### 3.2 Implementation Approaches and Methods

The concept of RIL should not be seen as another layer of technical requirements that will be added on to the existing guidelines as spelled out in the PNG Logging Code of Practice. It is the intention of this project to strengthen the existing Logging Code of Practice within a holistic definition of RIL. Project efforts to strengthen PNG's implementation of the Logging Code of Practice within the framework of a RIL management system, will focus on developing working models for the private sector through an comprehensive training program as well as strengthening the oversight capacity of the field staff of the PNGFA Field Services Directorate. This will be accomplished through a partnered training and capacity building approach drawing on the expertise of an internationally recognized NGO as well as the existing capacity of a national training facility.

Details of the proposed implementation arrangements for this project are provided in Part 4.

Reduced-Impact Logging (RIL) consists of technologies and practices that are designed to minimize environmental impacts associated with industrial timber harvesting operations. There is no single, globally applicable definition of what constitutes RIL because many of the specific procedures, environmental standards, and types of logging equipment vary with local conditions.

In the PNG situation, a RIL operation should normally include the following:

- Pre-harvest inventory and mapping of individual crop trees.
- Preparation of accurate, operational scale contour maps.
- Pre-harvest planning of roads, skid trails, and landings to provide access to the harvest area and to the individual trees scheduled for harvest while minimizing soil disturbance and protecting streams and waterways with properly engineered crossings.
- The development of written environmental and operational standards to guide planning and operational activities and the integration of these standards into the company structure.
- The use of controlled felling and bucking techniques including directional felling
- The development of written felling and bucking standards to minimize logging waste and to maximize volume and value recovery.
- Construction of roads and landings so that they adhere to engineering and environmental design guidelines while minimizing soil disturbance, risk of erosion, and damage to residual vegetation.
- Marking skid trail locations on the ground so the skidder operators can find them easily.
- Opening skid trails prior to felling. Minimize soil disturbance during the construction and utilization of skid trails through the application of simple guidelines and adequate supervision
- Winching logs to planned skid trails and ensuring that skidding machines remain on the planned skid trails at all times.
- On sloping topography, deactivation of skid trails after the operation has been completed (e.g., by cross-ditching) to minimize erosion.
- Conducting post-harvest assessments to provide feedback to the timber concession holder and the logging crews, and to evaluate the degree to which RIL guidelines were applied successfully.

For these practices to be applied in a cost-effective and environmentally sound manner, the following prerequisites are essential:

- The concession holder and logging operator must be able to provide legal documentation showing that they are legally entitled to harvest the timber within the operational area and that the operation is being conducted in adherence to all applicable laws and regulations.

- A detailed set of operational and environmental standards must exist to which the logging operation will conform, and the managerial, planning, and logging crews must all be thoroughly familiar with these standards.
- The planning and logging crews must be trained in their respective functions, and they must understand not only what is to be done and how to do it, but also why it is important.
- Crews must be provided with proper safety equipment and must be trained in its use and maintenance.
- Knowledgeable, well-trained supervisors must be present in the field to oversee the work, to maintain prescribed standards for the operation, and to ensure that the schedule of activities is followed.
- Where lodging in a field camp is required, the camp must adhere to sanitary and dietary standards applicable to the jurisdiction in which it is located.
- Logging equipment must be suited to the operating conditions and must be maintained in good working condition.
- Planning and operational activities must be thoroughly integrated in order to ensure that the plans are properly implemented. This may require adjustments to the company's structural and procedural arrangements.
- A management and control system must be in place that will provide timely operating information to the concession holder, the logging manager, and external auditors. Such a system includes detailed job descriptions, staffing information, equipment inventories, standard operating procedures, and similar information.

### 3.2.1 Stakeholder Involvement

**The table below describes how key stakeholders participated in the pre-project and in the formulation of the project concept as reflected in the Project Document. The table also provides an indication of anticipated participation of each stakeholder in the project implementation. This is further elaborated in the Project Document.**

<u>Stakeholder</u>	<u>Consultation and Information Collection Process</u>	<u>Anticipated Participation in Project Implementation</u>
<u>National Forest Service</u>  <u>PNG University of Technology</u>  <u>Timber &amp; Forestry Training College (TFTC)</u>  <u>Cloudy Bay Sustainable Forestry Ltd</u>	<p><u>The first field visit was to Lae involved meetings with the Manager of the Momase Area Office (National Forest Service), as well as discussions with senior members of the main forestry training institutes in PNG to gauge their capacity and willingness to participate in the proposed RIL training project.</u></p> <p><u>A field visit was made to their logging operation in Central Province. This is a medium scale operation which commenced logging approximately two years ago.</u></p>	<p><u>The TFTC will be a major implementer of the RIL training project. The project will strengthen and expand the capacity of the TFTC to deliver RIL related training courses both on campus and as an extension service.</u></p> <p><u>The PNG University of Technology will be afforded opportunities to collaborate in the RL training project by sponsoring student research into RIL practices.</u></p> <p><u>This forest concession is considered a likely participant in the RIL training project and has indicated a willingness to be a training and demonstration site.</u></p>



<u>Forest Industry Association (FIA)</u>	<u>Discussions were held with members of the FIA in Port Moresby. The purpose of the discussions was to brief the Association on the intent of the RIL training proposal and to seek input from the Association which represents the forest concession holders in PNG.</u>	<u>The FIA is expected to be a crucial actor in the RIL training project by publicising the project and by assisting in seeking out concessions willing to collaborate as training and/or demonstration sites.</u>
<u>Wawoi Guavi Timber Company Ltd.</u>	<u>A field visit was made to their logging operation in Western Province. This is one of the oldest, large scale logging operations in PNG and includes a sawmill and plywood factory. The field visit focused on all aspects of forest planning and operations and provided useful insight into some of the challenges facing the forest concession industry.</u>	<u>This major, large scale concession, is considered a possible candidate in hosting RIL training and demonstrations exercises under the RIL training project.</u>
<u>PNG Forest Authority</u>	<p><u>During the days leading up to the Project Formulation Workshop at the PNGFA headquarters in Port Moresby, various meetings were held with representatives of the forestry sector and the PNGFA.</u></p> <p><u>The purpose of the workshop was to present the concept of the RIL training proposal in light of recent field visits, discussions, and review of the regulatory framework in PNG.</u></p> <p><u>The workshop provided an opportunity for a lively discussion and helpful suggestions, and led to a consensus opinion with regards to the implementation strategy for the full-project.</u></p>	<p><u>The PNG Forest Authority will be both an active participant in the implementation of the project and a major recipient of the training being delivered under the project.</u></p> <p><u>It is expected that all field staff of the Field Services Division will receive training during the project.</u></p>
<u>National Forest Service</u> <u>PNG University of Technology</u> <u>Timber &amp; Forestry Training College</u> <u>Forest Industry Association</u> <u>Cloudy Bay Sustainable Forestry Ltd</u>	<p><u>The draft Project Document was presented to a review committee convened in Port Moresby during March 2009. Detailed discussions lead to refinements in the project concept, activities and responsibilities, and provided a strong basis for developing a consensus based project proposal.</u></p> <p><u>A meeting was also held with the Forest Industry Association and the management of the Cloudy Bay forest operations to brief them on the current status in project formulation and to discuss future involvement in the project implementation phase.</u></p>	
<u>The Tropical Forest Foundation</u>	<u>The Regional Director of the Tropical Forest Foundation was contracted under the Pre-Project to lead the fact finding mission and to take responsibility for the preparation of a final project proposal. This was achieved through a multi-stakeholder, consultative process.</u>	<u>TFF will be a major implementing agency under the project. TFF will draw on its 10+ years of RIL training experience with large scale forest concessions in neighbouring Indonesia. TFF will also develop a series of practical "how to..." manuals on RIL implementation based on the model developed in Indonesia.</u>

### 3.3 Work Plan

**Table 4: Project Implementation Work Plan**

Outputs & Activities	Resp. Pary	Year 1												Year 2											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<b>Output 1:</b> Information on RIL prepared, published and disseminated.																									
A1.1 Publish notice of project in FIA and PNGFA newsletter and web.	TFF																								
A1.2 Publish project brochures	TFF																								
A1.3 Conduct review of info on RIL and Logging Code of Practice																									
A1.4 Prepare and publish RIL technical procedures manuals																									
A1.5 Prepare and publish a felling and bucking pocket book																									
<b>Output 2:</b> End of project workshop on RIL and SFM																									
A2.1 Plan and organize workshop for private and public participants	PCU																								
A2.2 Hold end of project workshop on RIL and SFM	PCU																								
<b>Output 3:</b> Training curriculum of the TFTC expanded and strengthened																									
A3.1 Review existing curriculum in the context of RIL ...	TFTC																								
A3.2 Training-of-trainers course in contour and tree position mapping	TFTC/ TFF																								
<b>Output 4:</b> Field demonstration and training in setup planning, layout and operations (according to RIL standards)																									
A4.1 Develop field training modules ....	TFF																								
A4.2 Conduct field trials in contour and tree position mapping	TFF																								
A4.3 Faller training courses delivered	TFTC																								
A4.4 Machine operator courses delivered	TFTC																								
A4.5 Deliver field training and demonstrations .... planning and ....	TFF																								
A4.6 Field training in post harvesting activities, evaluation ....	TFF																								
<b>Output 5:</b> Field staff of the Field Services Directorate receive training...																									
A5.1 Review and revise training modules for monitoring ...	TFTC																								
A5.2 Deliver training to field staff of the PNG Field Services Directorate	TFTC																								

Responsible Party: TFF, TFTC, PCU

### 3.4 Budget

The budget tables in this proposal were developed on the basis of activities and the organizations which will carry out these activities. In developing a master budget, it was, therefore, considered more helpful (for eventual project implementation and budget allocation) to develop three detailed working budgets covering the three agencies which will receive ITTO funding.

#### 3.4.1 Master Budget Schedule

The basic assumptions for preparation of this project budget are included in the following proposal components:

- Project activities: PART 3 – DESCRIPTION OF PROJECT INTERVENTIONS, Item 3.1.2 – Activities, and
- PART 4: IMPLEMENTATION ARRANGEMENTS, section 4.1

As described in PART 4, the project will be implemented by 3 agencies, each of which will receive a portion of the ITTO funding. Distribution of ITTO funds between these three units is summarized in the following table.

**Table 5 Summary of ITTO Budget by Implementing Agency**

<b>Project Implementing Agency</b>	<b>Budgeted ITTO Funding</b>
1) Project Co-ordination Unit (PCU)	US\$ 50,915
2) Timber & Forestry Training College (TFTC)	US\$ 85,900
3) Tropical Forest Foundation (TFF)	US\$244,630
<b>Total ITTO project funding</b> (excluding pre-project advance)	<b>US\$381,445</b>

The major beneficiaries of the project's training and demonstration activities—the Forest Industry Association (FIA) and its member forest concession companies, the TFTC, the PNGFA, and the TFF — are expected to contribute significant “in-kind” funding in the form of: office space, training sites, equipment, staff, transport and lodging for staff participating in project-sponsored awareness building, training, and demonstration activities.

The following paragraphs and working tables contain brief descriptions of the roles of the three units and their respective project budgets, including funding sources—ie. ITTO and “in-kind” funding. These tables are intended as background information and will guide budget allocation and disbursement during project implementation.

#### **The Project Co-ordination Unit(PCU)**

The Project Co-ordinator, as the name implies, will be the liaison between the ITTO, the Project Steering Committee and the implementing agencies (TFF and TFTC). The Project Coordination Unit will be located within the PNGFA and will ensure smooth collaboration between the institutionalized TFTC lead training activities and the TFF lead RIL demonstrations and field training activities.

In addition to its coordinating role, the PCU will be responsible for preparing and submitting all reports to ITTO, administration related to the overall project, receipt and disbursement of funds, organization of the end of project workshop, oversight of TFTC and TFF's activities, etc. The budget for the position of Project Co-ordinator is based on a part-time (50%) activity. Secretarial support services will be 100% project funded.

In-kind contributions will be generated through the PNGFA in the form of office space and related in-kind support.

**Table 76: Budget Work Table for the PCU**

Cost Element	Description	ITTO (PCU)	In-Kind Funds	In-Kind Funding Source
<b>PCU Non-activity based costs</b>				
Project Coordinator	Half-time position for two years	14,905	14,905	P
Secretary	Full time position for two years	14,100	0	-
Capital Items	Computer and printer purchase	2,280	0	-
Office consumables	Stationary, etc.	1,850	0	-
Vehicle rental	Allowance for vehicle rental for field trips; PNGFA vehicle available for Port Moresby needs.	1,580	3,000	P
Communication	telephone, fax, e-mail	2,525	0	-
Office space	Provided by PNGFA	0	12,630	P
Local air fare	4 trips @ 1,500K for visits to field training activities	2,105	0	-
<b>Activity 2.1 and 2.2 End of project workshop</b>		0		
Workshop venue	Venue rental for 1 day workshop	1,090	0	-
Workshop logistics	Lunch/coffee break for 50	420	0	-
Airfare	Budget allowance for limited travel support to attend workshop; majority of participants pay their own way	5,260	40,000	F
Accommodation	Assume most people able to pay their own accommodation; allow for limited subsidy	2,500	5,000	F
DSA allowance	All participants at 86K/day	1,510	0	-
Information packet	Bag, papers, CD of proceedings, etc. 45K each x 50	790	0	-
<b>Total-Project Coordination Unit</b>		<b>50,915</b>	<b>75,535</b>	

(I=ITTO, T=TFF, C=TFTC, P=PNGFA, F=FIA and forest concessions )

Note: Exchange rate use 1\$=2.85Kina

### **Timber & Forestry Training College (TFTC)**

The TFTC will provide training in monitoring and reporting to all field staff officers in the PNGFA Field Services Directorate. The training will be conducted on the Lae campus, Bumbu. This will involve 4 training sessions and an estimated 80 trainees.

In addition, TFTC will deliver training for fallers and machine operators in support of the three major RIL demonstration and training sites.

TFTC will also receive a Training-of-Trainers module in contour and tree position mapping to be delivered by TFF at it's facilities in Lae. This will enable TFTC to add this module to it's available training services.

ToT for contour and tree position mapping will be held in Lae. Instructor will be TFF with participants from the University of Technology, Faculty of Forestry (2), TFTC (3), forest companies (10). Training session will last 5 days (not including travel). Funding will allow for ground transport and accommodation at Lae. Participants will pay their own way to Lae.

**Table 7: Budget Work Table for the TFTC**

Cost Element	Description	ITTO (TFTC)	In-Kind Funds	In-Kind Funding Source
<b>Activity 5.1 and 5.2 Review, revise, deliver training to field staff of the Field Services Division and Project Allocations staff</b>				
Air travel to Lae/return	Detailed estimates prepared based on current field postings of all field staff	40,370	0	-
Accommodation + meals	600K/week x 80 participants (current rate; subsidized); I-K value is the same again	16,840	16,840	C
DSA allowance	86k/day x 5days x 80 participants	12,070	0	-
Ground transport	Lae airport-return: 40K/ trip x 80	1,120	0	-
Venue rental	5,000/week session x 4	0	7,020	C
Training materials	50k/person x 80	1,400	0	-
Instructors(prepare + inst)	8 weeks x 3 instructors x 500/week (this covers 2.4.1 as well)	0	4,210	C
<b>Activity 4.3 Faller training</b>		0	0	
Instructor	12 days x 3 x 300K (all inclusive)	3,790	0	-
Local air fare	3 x 1,500K	1,580	0	-
<b>Activity 4.4 Machine operator training</b>		0	0	-
Instructor	12 days x 3 x 300K (all inclusive)	3,790	0	-
Local air fare	3 x 1,500K	1,580	0	-
<b>Activity 3.2 Training-of-Trainers course in contour &amp; tree position mapping (instructor from TFF)</b>		0	0	
Accommodation & meals at Lae	15 participants @600K/week; I-K value the same again	3,160	3,160	C
Ground transport	Vehicle to suitable field site \$100 x 2	200	0	-
Local air fare	10 participants x 1,500K	0	5,260	F
Venue/classroom	1 week at 5,000K	0	1,755	C
<b>Total – Timber &amp; Forestry Training College</b>		<b>85,900</b>	<b>38,245</b>	

(I=ITTO, T=TFF, C=TFTC, P=PNGFA, F=FIA and forest concessions )

Note: Exchange rate use 1\$=2.85Kina

### **The Tropical Forest Foundation (TFF)**

The TFF will develop, publicize, and deliver a field training program in RIL consisting of three contour and tree position mapping trials and three full RIL demonstration and trainings followed by a post harvesting evaluation training on all three sites. These activities will be delivered to three working forest concessions and will involve not only the concession staff but also PNGFA staff and observers from the TFTC. These demonstrations will provide an opportunity to field test training modules and will also provide an opportunity to initiate research activities in collaboration with the University of Technology, Faculty of Forestry.

TFF will recruit a full time staff position based in Port Moresby to coordinate activities with the PCU, PNGFA, TFTC and private sector companies. The in-country TFF staff will prepare for field training activities. The Jakarta based Regional Director of the TFF will lead all training activities.

TFF will also prepare a series of 5 RIL procedures manuals and a falling and bucking pocket book as well as project brochures.

TFF will help facilitate and implement training modules for the Field Services Division staff including the delivery of a training-of-trainers course for contour and tree position mapping at the Lae campus of the TFTC.

**Table 8: Budget Work Table for the TFF**

Cost Element	Function	ITTO (TFF)	In Kind Funds	In Kind Funding Source
<b>Activities 1.1 and 1.2 Prepare and publish articles and brochure</b>				
International RIL Expert	Prepare all articles & brochure	3,000	0	-
Computer Graphics Exp't	Material to 'print-ready' stage	1,700	0	-
Publishing brochure	400 x 2 x \$1.75 + miscellaneous	1,550	0	-
<b>Activities 1.3, 1.4 &amp; 1.5 Review code; prepare and publish 5 procedures manuals; F&amp;B pocket book</b>				
International RIL Expert	Initial visit; review code, recruit staff	6,000	0	-
International RIL Expert	Prepare 5 manuals and a F&B booklet; administration and backstopping	21,000	16,000	T
Computer Graphics Exp't	Manuals and F&B booklet to a print ready stage	11,800	0	-
Regional air fare	2 visits to PNG @\$1,700 each	3,400	0	-
Local air fare	2 local round trip air fares @ \$500 ea.	1,000	0	-
Translation cost	\$200/manual x 6 manuals & booklet	1,200	0	-
Publishing Manuals	400 copies each x 2 x 5 x \$4/copy	16,000	0	-
Publishing F&B booklet	800 copies x \$4 each	3,200	0	-
<b>Activity 3.2 Training of trainers course for TFTC</b>				
International RIL Expert	Material preparation and lead trainer at Lae	6,000	0	-
Local air fare	Round trip	500	0	-
<b>Activities 4.1, 4.2, 4.5, &amp; 4.6– develop modules; deliver 3 trainings in contour and tree position mapping, RIL demo and training, post harvesting evaluation.</b>				
International RIL Expert	Preparation of training materials; 3 contour mapping training sessions; 3 RIL planning and operational demos and training; 3 post harvesting trainings	60,000	25,000	T
Camp training facility	Training venues: 9 sessions x \$3000	0	27,000	F
Heavy equipment	Logging machines, chainsaws, etc for RIL demonstrations (3 x 5 days x \$400/day)	0	6,000	F
		0	0	
National Asst. RIL Trainer	Full time position for 2 years (all inclusive)	48,000	0	-
Regional air fare	Five round trips JKT-Port Moresby at \$1,700/trip	8,500	0	-
Local air fare	Assume 10 x 2 local trips at \$500	10,000	0	-
Hotel accommodation	120 days @ \$135	16,200	0	-
Vehicle hire	4 months @\$1,500	6,000	0	-
Computer/printer	Laptop, printer and software	2,280	0	-
Communication	Telephone, fax, internet	4,800	0	-
Office rental	To be supplied by PNGFA; pro-rated regional office and support facilities	0	12,630	P
			7,000	T
Office miscellaneous	Stationery, misc. equipment and supplies	3,600	0	-
<b>Activity 2.2 End of project workshop</b>				
International RIL Expert	Preparation of papers, project reporting, etc.	6,000	0	-
Regional air fare	Round trip JKT-Port Moresby	1,700	0	-
Hotel accommodation	Nine days	1,200	0	-
<b>Total – Tropical Forest Foundation</b>		<b>244,630</b>	<b>93,630</b>	

(I=ITTO, T=TFF, C=TFTC, P=PNGFA, F=FIA and forest concessions )

Note: Assume exchange rate of 1\$=IndRp.10,000

### 3.4.2 Consolidated Budget by Activity and Funding Source

A consolidated budget has been developed from organization and activity specific working budgets presented in section 3.4.1. This budget has been organized to show the cost of the various activities according to the budget components.

**Table 9: Project Budget by Activity and Funding Source** (Excludes ITTO project monitoring, program support, pre-project costs, etc. which are included in Table 10)

Outputs/Activities	ITTO(I) BUDGET COMPONENTS							Grand Total
	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumables	60. Misc. Items	70. Mgmt. Cost	
<b>Output 1:</b> Information on RIL prepared, published and disseminated.								
A1.1 Publish notice of project and articles on RIL in FIA and PNGFA newsletter and website.			2,000(I)					
A1.2 Prepare and publish project brochure.	4,700(I)	1,550(I)						
A1.3 Review of existing information ...on RIL and Code of Logging Practice	6,000(I)		2,000(I)					
A1.4 Write/prepare/publish procedures manuals	16,000(T)	44,400(I)	3,400(I)	2,380(I) 7,000(T)	8,400(I)			
A1.5 Write/prepare/publish felling pocket book		8,800(I)	1,000(I)					
<b>Subtotal Output 1</b>	<b>10,700(I) 16,000(T)</b>	<b>54,750(I)</b>	<b>8,400(I)</b>	<b>2,380(I) 7,000(T)</b>	<b>8,400(I)</b>			<b>107,630</b>
<b>Output 2:</b> End of project workshop on RIL and sustainable forest management.								
A2.1 Plan and organize workshop on RIL and SFM.				1,090(I)				
A2.2 Hold end of project workshop.	6,000(I)		15,170(I) 45,000(F)		790(I)			
<b>Subtotal Output 2</b>	<b>6,000(I)</b>		<b>15,170(I) 45,000(F)</b>	<b>1,090(I)</b>	<b>790(I)</b>			<b>68,050</b>
<b>Output 3:</b> Training curriculum of the TFTC expanded.								
A3.1 Review existing curriculum in the context of RIL project objectives and needs	2,000(I)							
A3.2 Training of trainers course in contour and tree position mapping.	16,000(I)		2,400(I) 5,260(F)	1,755(C)	3,160(I)	3,160(C)		
<b>Subtotal Output 3</b>	<b>18,000(I)</b>		<b>2,400(I) 5,260(F)</b>	<b>1,755(C)</b>	<b>3,160(I)</b>	<b>3,160(C)</b>		<b>33,735</b>

Outputs/Activities	ITTO(I) BUDGET COMPONENTS							
	10. Project Personnel	20. Sub-Contracts	30. Duty Travel	40. Capital Items	50. Consumables	60. Misc. Items	70. Mgmt. Cost	Grand Total
<b>Output 4:</b> Field demonstration and training in setup planning, layout, and operations.								
A4.1 Develop training modules for RIL planning, implementation and post-harvesting evaluation.	25,000(T)			3,160(P)				
A4.2 Conduct field trials in contour and tree position mapping	32,000(I)		10,660(I)	11,000(F) 3,160(P)				
A4.3 Faller training courses delivered	3,790(I)		1,580(I)					
A4.4 Equipment operator courses delivered	3,790(I)		1,580(I)					
A4.5 Deliver demonstrations and field training in RIL planning and implementation in collaborating forest concessions with company and Department participation.	32,000(I)		10,660(I)	11,000(F) 3,160(P)				
A4.6 Field training in post harvesting activities, evaluation, and monitoring for concession staff.	32,000(I)		10,680(I)	11,000(F) 3,150(P)				
<b>Subtotal Output 4</b>	<b>103,550(I)</b>		<b>35,480(I)</b>	<b>12,630(P)</b> <b>33,000(F)</b>				<b>209,690</b>
<b>Output 5</b> Field staff of the Field Services Dir. receive training in monitoring and evaluation.								
A5.1 Review and revise training modules for monitoring.	4,210(C)							
A5.2 Deliver training to field staff of the PNGFA Field Services Division.			41,490(I)	7,020(C)	30,310(I) 16,840(C)			
<b>Subtotal Output 5</b>	<b>4,210(C)</b>		<b>41,490(I)</b>	<b>7,020(C)</b>	<b>30,310(I)</b> <b>16,840(C)</b>			<b>99,870</b>
<b>TOTAL ACTIVITY BASED COSTS</b>	<b>142,460(I)</b> <b>41,000(T)</b> <b>4,210(C)</b>	<b>54,750(I)</b>	<b>102,940(I)</b> <b>50,260(F)</b>	<b>3,470(I)</b> <b>7,000(T)</b> <b>8,775(C)</b> <b>12,630(P)</b> <b>33,000(F)</b>	<b>42,660(I)</b> <b>16,840(C)</b>	<b>3,160(C)</b>	<b>0</b>	<b>518,975</b>



Outputs/Activities	ITTO(I) BUDGET COMPONENTS							
	10. Project Personnel	20. Sub- Contracts	30. Duty Travel	40. Capital Items	50. Consum- ables	60. Misc. Items	70. Mgmt. Cost	Grand Total
<b>Non-Activity Based Costs</b>								
Project Coordinating Unit (PCU) staff	29,005(I) 14,905(C)							
Communications					2,525(I)			
Vehicle rental			1,580(I) 3,000(P)					
Local air fare			2,105(I)					
Office rental				12,630(P)				
Capital purchases				2,280(I)				
Office miscellaneous			1,850(I)					
<b>TOTAL NON-ACTIVITY BASED COSTS</b>	<b>29,005(I) 14,905(C)</b>		<b>5,535(I) 3,000(P)</b>	<b>2,280(I) 12,630(P)</b>	<b>2,525(I)</b>			<b>69,880</b>
<b>TOTAL PROJECT COSTS</b>	<b>200,085(I) 41,000(T) 19,115(C)</b>	<b>21,950(I)</b>	<b>108,475(I) 50,260(F) 3,000(P)</b>	<b>5,750(I) 7,000(T) 8,775(C) 25,260(P) 33,000(F)</b>	<b>45,185(I) 16,840(C)</b>	<b>3,160(C)</b>	<b>0</b>	<b>588,855</b>

NOTE 2: (I=ITTO, T=TFF, C=TFTC, P=PNGFA, F=FIA and forest concessions)

### 3.4.3 Yearly ITTO Budget by Component

Table 10: Consolidated ITTO Budget

No.	Budget Item (Project inputs)	Information/Assumptions	ITTO Total	Year 1	Year 2
<b>10</b>	<b>Project Personnel</b>				
11	National Trainers	Full time TFF staff; trainers from TFTC	55,580		
12	Office Staff	Secretary for the PCU – full time	14,100		
14	Project Coordinator	Half time position	14,905		
15	International RIL Training Expert	Lead role of field training and demonstrations; overall coordination	81,000		
16	Computer Graphics Exp.	Research for preparation of manuals	1,700		
<b>19</b>	<b>Component Total</b>		<b>167,285</b>	<b>80,000</b>	<b>87,285</b>
<b>20</b>	<b>Sub-Contracts</b>				
21	Writing	5 manuals; felling handbook; brochure	21,000		
22	Layout	Layout & graphics to print-ready stage	11,800		
23	Translation	All literature to be published	1,200		
24	Printing costs	5 RIL manuals; brochure; F&B booklet	20,750		
29	<b>Component Total</b>		<b>54,750</b>	<b>4,750</b>	<b>50,000</b>
<b>30</b>	<b>Duty Travel &amp; Transport Cost</b>				
31	DSA, hotel, & food	(see individual organization budgets)	23,580		
32	International travel costs	Jakarta-Port Moresby: 8 round trips	13,600		
33	In-country air fare	Training in Lae; field training and demonstrations; workshop; supervision	62,395		
34	<b>Miscellaneous travel</b>	Vehicle hire and other ground transport	8,900		
<b>39</b>	<b>Component Total</b>		<b>108,475</b>	<b>52,000</b>	<b>56,475</b>
<b>40</b>	<b>Capital Cost Items</b>				
41	Office/venue rental		1,090		
42	Field Training Camp		0		
43	Office equipment	Computer, printer, software purchase	4,660		
44	Logging Equipment		0		
45	On-campus training facility		0		
<b>49</b>	<b>Component Total</b>		<b>5,750</b>	<b>5,750</b>	<b>0</b>
<b>50</b>	<b>Consumable Items</b>				
51	Office supplies	Stationery and supplies	35,670		
52	Communications costs	Telephone, fax, e-mail	7,325		
53	Training: accommodation, meals, materials	Handouts and other training materials	2,190		
<b>59</b>	<b>Component Total</b>		<b>45,185</b>	<b>23,474</b>	<b>21,711</b>
<b>60</b>	<b>Miscellaneous</b>				
61	Misc. accommodation		0		
<b>69</b>	<b>Component Total</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>70</b>	<b>Implementing Agency Management Costs</b>	Miscellaneous administration cost credited to the TFF	0		
<b>79</b>	<b>Component Total</b>		<b>0</b>		
<b>PROJECT SUB-TOTAL #1 - Direct Project Funds</b>			<b>381,445</b>	<b>182,750</b>	<b>198,695</b>
<b>80</b>	<b>ITTO Project Monitoring &amp; Administration</b>				
81	ITTO monitoring and review		20,000		
83	ITTO final evaluation		15,000		
<b>PROJECT SUB-TOTAL #2 - Project Total</b>			<b>408,445</b>		
83	ITTO Project Support Cost (8% of Subtotal 2)		32,676		
84	Repayment of Pre-project Expenses		58,806		
<b>100</b>	<b>PROJECT GRAND TOTAL</b>		<b>534,927</b>		

### 3.4.4 Executing Agency Budgets by Component

There are three ITTO funded agencies which will be involved in the implementation of this project (see Part 4: IMPLEMENTATION ARRANGEMENTS). A working budget for each agency has been prepared in Section 3.4.1.

The following three tables present the ITTO funding allocation to each implementing agency according to budget component.

**Table 11: Project Coordinating Unit (PCU) Budget Allocation by Component**

No.	Budget Item (Project inputs)	Information/Description	ITTO Total	Year 1	Year 2
<b>10</b>	<b>Project Personnel</b>				
12	Office Staff	Secretary for the PCU – full time	14,100	7,050	7,050
14	Project Coordinator	Half time position	14,905	7,452	7,453
<b>19</b>	<b>Component Total</b>		<b>29,005</b>	<b>14,502</b>	<b>14,503</b>
<b>30</b>	<b>Duty Travel &amp; Transport Cost</b>				
31	DSA, hotel, & food	Workshop costs	4,010	4,010	0
33	In-country air fare	Visits to field training sites	7,365	1,050	6,315
34	<b>Miscellaneous travel</b>	Vehicle hire and other ground transport	1,580	790	790
<b>39</b>	<b>Component Total</b>		<b>12,955</b>	<b>5,850</b>	<b>7,105</b>
<b>40</b>	<b>Capital Cost Items</b>				
41	Venue rental	End of project workshop	1,090	0	1,090
43	Office equipment	Computer, printer, software purchase	2,280	2,280	0
<b>49</b>	<b>Component Total</b>		<b>3,370</b>	<b>2,280</b>	<b>1,090</b>
<b>50</b>	<b>Consumable Items</b>				
51	Office supplies	Stationery and supplies	1,850	925	925
52	Communications costs	Telephone, fax, e-mail	2,525	1,262	1,263
53	Training: accom, meals, materials	Handouts and other training materials (for workshop)	1,210	0	1,210
<b>59</b>	<b>Component Total</b>		<b>5,585</b>	<b>2,187</b>	<b>3,398</b>
<b>Total PCU Budget Allocation</b>			<b>50,915</b>	<b>24,819</b>	<b>26,096</b>

**Table 12: Timber & Forestry Training College Budget Allocation by Component**

No.	Budget Item (Project inputs)	Information/Assumptions	ITTO Total	Year 1	Year 2
<b>10</b>	<b>Project Personnel</b>				
11	National Trainers	Trainers from TFTC	7,580	3,790	3,790
<b>19</b>	<b>Component Total</b>		<b>7,580</b>	<b>3,790</b>	<b>3,790</b>
<b>30</b>	<b>Duty Travel &amp; Transport Cost</b>				
31	DSA, hotel, & food	(see individual organization budgets)	32,070	16,035	16,035
33	In-country air fare	Training in Lae; field training	43,530	21,765	21,765
34	<b>Miscellaneous travel</b>	Ground transport	1,320	660	660
<b>39</b>	<b>Component Total</b>		<b>76,920</b>	<b>38,460</b>	<b>38,460</b>
<b>50</b>	<b>Consumable Items</b>				
53	Training:	Course materials	1,400	700	700
<b>59</b>	<b>Component Total</b>		<b>1,400</b>	<b>700</b>	<b>700</b>
<b>Total TFTC Budget Allocation</b>			<b>85,900</b>	<b>42,950</b>	<b>42,950</b>

**Table 13: Tropical Forest Foundation Budget Allocation by Component**

No.	Budget Item (Project inputs)	Information/Assumptions	ITTO Total	Year 1	Year 2
<b>10</b>	<b>Project Personnel</b>				
11	National Trainer	Full time TFF staff	48,000	24,000	24,000
15	International RIL Training Expert	Preparation of publication material and lead role of field training and demonstrations	81,000	40,500	40,500
16	Computer Graphics Exp.	Preparation of publications	1,700	850	850
<b>19</b>	<b>Component Total</b>		<b>130,700</b>	<b>65,350</b>	<b>65,350</b>
<b>20</b>	<b>Sub-Contracts</b>				
21	Writing	5 manuals; felling handbook; brochure	21,000	5,000	16,000
22	Layout	Layout & graphics to print-ready stage	11,800	3,000	8,800
23	Translation	All literature to be published	1,200	0	1,200
24	Printing costs	5 RIL manuals; brochure; F&B booklet	20,750	5,000	15,750
<b>29</b>	<b>Component Total</b>		<b>54,750</b>	<b>13,000</b>	<b>41,750</b>
<b>30</b>	<b>Duty Travel &amp; Transport Cost</b>				
31	DSA, hotel, & food	(see individual organization budgets)	17,400	8,700	8,700
32	International travel costs	Jakarta-Port Moresby: 8 round trips	13,600	6,800	6,800
33	In-country air fare	Training in Lae; field training and demonstrations; workshop; supervision	11,500	5,750	5,750
34	Miscellaneous travel	Vehicle hire and other ground transport	6,000	3,000	3,000
<b>39</b>	<b>Component Total</b>		<b>48,500</b>	<b>24,250</b>	<b>24,250</b>
<b>40</b>	<b>Capital Cost Items</b>				
43	Office equipment	Computer, printer, software purchase	2,280	2,280	2,280
<b>49</b>	<b>Component Total</b>		<b>2,280</b>	<b>2,280</b>	<b>2,280</b>
<b>50</b>	<b>Consumable Items</b>				
51	Office supplies	Stationery and supplies	3,600	1,800	1,800
52	Communications costs	Telephone, fax, e-mail	4,800	2,400	2,400
<b>59</b>	<b>Component Total</b>		<b>8,400</b>	<b>4,200</b>	<b>4,200</b>
<b>PROJECT TFF Budget Allocation</b>			<b>244,630</b>	<b>123,455</b>	<b>121,175</b>

### 3.5 Assumptions, Risks, and Sustainability

#### 3.5.1 Assumptions and Risk

Success in achieving the project's development objective will depend on the strong commitment of the PNGFA, particularly the Field Services Directorate.

Equally important will be the full support of the influential Forest Industry Association. Failure of the Forest Industry Association to endorse the goals, objectives, and activities of this project will make successful implementation unlikely.

Project success will also depend on continued close cooperation between national and international experts in forestry training. The project implementation arrangements are based on close cooperation between the Timber and Forestry Training College and the University of Technology in Lae, and the Tropical Forestry Foundation (TFF), an International RIL Training NGO with regional offices in Jakarta, Indonesia.

The Pre-project fact finding mission and the follow-up debriefing workshop sought and received positive encouragement for the project from all of these potential actors. Complete consensus on the structure of the project and specific activities of the participating agencies was reached during a two day meeting of an ad hoc review committee in March 2009.

### **3.5.2 Sustainability**

Social sustainability is critical in the PNG context since under PNG constitutional law, all forests belong to the indigenous people of the country. This project will integrate social considerations into development planning and operational activities, both at the demonstration level and in procedures manuals that will be prepared under the project.

The TFTC is a well established technical training institute and is expected to continue offering its curriculum to candidates from the forest concession and industry sectors, the PNGFA, and the general public.

The PNGFA, Field Services Directorate is expected to benefit from the training materials and RIL procedures manuals and will be in a position to continue offering training as an extension service to the forest concession industry. The Forest Industry Association is expected to play an important role in encouraging participation in this service.

TFF will explore the technical and financial feasibility of offering an ongoing RIL training program in PNG similar to what has been successfully installed in Indonesia.

Long-term sustainability will be achieved through user fees, paid by forestry companies and FMU managers, who will continue to sponsor participation of their staff in training courses at TFTC and other private and NGO supported training services, such as the Tropical Forest Foundation (TFF).

Continued demand (and ability to pay) for training services by private sector forestry companies and FMU managers will be generated through RIL-related savings in forest management costs, as well as through improved market-linking opportunities for their products due to enhanced potential for legality, CoC, and forest certification.

## PART 4: IMPLEMENTATION ARRANGEMENTS

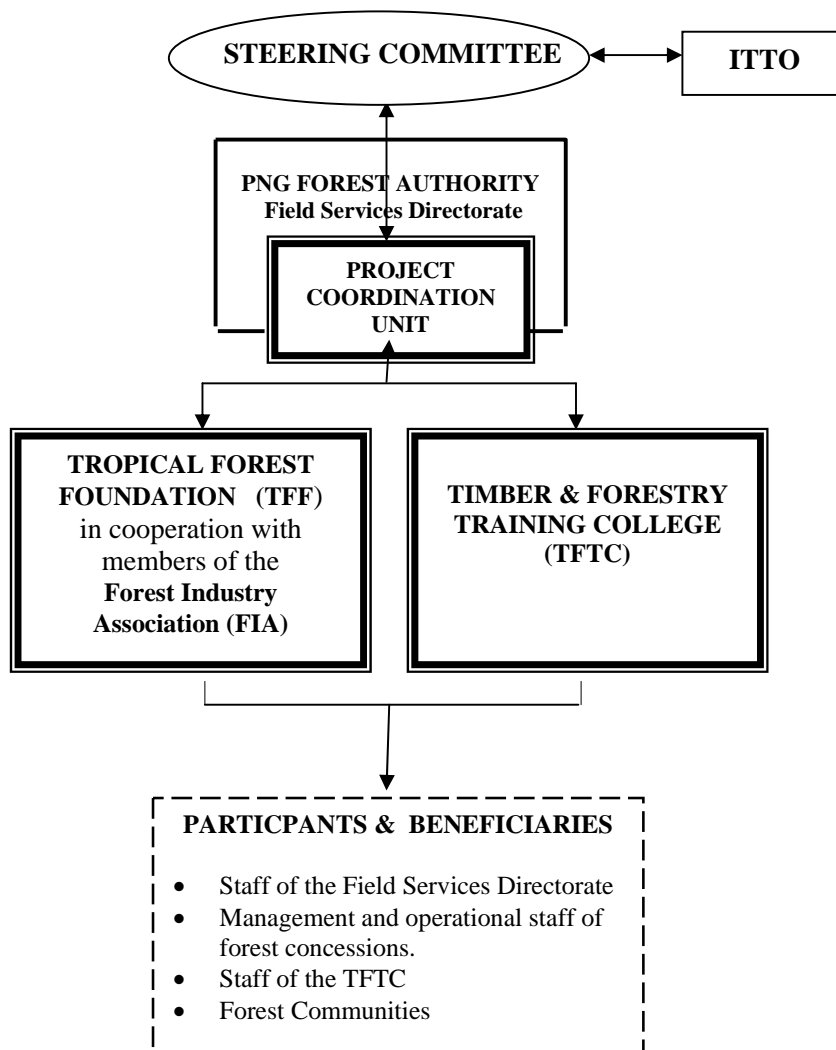
### 4.1 Organization Structure and Stakeholder Involvement Mechanisms

Operational arrangements for the implementation of this project will involve a partnership between the PNGFA Field Services Directorate, the Timber & Forestry Training College (TFTC), and the Tropical Forest Foundation (TFF), an international NGO recognized for its experience in RIL training. The Field Services Division of the PNGFA will be responsible for overall project administration and coordination activities and will create the position of Project Coordinator to carry out this function.

In recognition of the National scope of this training and the specific objective of “building National capacity to implement RIL”, it has been agreed that a Project Coordinating Unit(PCU) will be formed within the PNGFA, Field Services Division. The PCU will consist of a Project Coordinator (half time) and a fully time secretarial assistant.

Implementation details regarding the structure of the project organization, the disbursement mechanism, and the implementation aspects, will be agreed upon in a project Memorandum of Understanding (MOU) to be signed by all parties concerned with the implementation of this project.

**FIGURE 3: Project Organisational Structure**



#### 4.1.1 Executing Agency and Partners

The project implementing agencies will each be responsible for different aspects of training and awareness building activities as follows:

The TFF will:

- Provide technical assistance to TFTC on curriculum development and technical “back-stopping” for TFTC training courses,
- Undertake RIL awareness building and practical operational field training and demonstrations at the forest concessions of participating forest management units,
- Stage RIL demonstrations in collaboration with willing forest concession holders,
- Produce RIL training materials, guidelines, technical procedures manuals, standard operating procedures, etc.,
- Deliver a training-of-trainers course in contour and tree position mapping to TFTC and forest concession company participants,
- Produce a project brochure and publicity material to be published in the PNGFA and FIA newsletters and websites.

The TFTC will:

- Provide training to forest workers such as fallers and tractor operators on coordination with the three proposed RIL demonstration and training sites.
- Develop new courses in forest inventory, mapping, and planning.
- Provide training courses in monitoring of logging practices to regional field staff of the field services division.

#### 4.1.2 Project Management Team

Under this arrangement, the Project Coordinator will be nominated jointly by the PNGFA, the TFTC and TFF. The PCU will be responsible for:

- Maintaining liaison with ITTO and the Project Steering Committee (see Organizational Structure, Figure 2)
- Coordinate all activities involving a collaboration of the PNGFA, TFTC, and TFF
- Receiving all funds from ITTO and disbursing them to TFTC and TFF according to the breakdown of expenditures as detailed in the working tables on pages 18-20 and according to a schedule of disbursements to be specified in the joint MOU.
- Compiling and submitting to ITTO, the expenditure reports to be prepared by TFTC and TFF in the implementation of their various activities.
- Compiling all project reports and documents in English and Motu.
- Organize a project review workshop towards the end of the project.

The PCU will have an office in the PNGFA which will be shared by a full time TFF country representative.

The execution of operational activities identified clearly as those belonging to each of the implementing agencies will be the responsibility of those agency notwithstanding the fact that many of the activities are interdependent and will, therefore, require coordination and good communication. In large part, the PC will carry out these coordinating functions.

#### **4.1.3 Project Steering Committee**

A Project Steering Committee (PSC) will provide general guidance to the implementation of the project and may consist of representatives from the relevant divisions of the PNGFA, the TFTC, TFF, ITTO, the Forest Industry Association (FIA), the University of Technology and the ITTO

The appointment of a Project Steering Committee will be a priority activity along with the signing of a project MOU at the time of project initiation.

#### **4.1.4 Stakeholder Involvement Mechanism**

Formulation of this project has been a consultative process involving all participating organizations as well as a wide range of persons drawn from the various Directorates of the PNGFA, educational institutions as well as representatives from the private sector forest concession industry.

Since many of the training activities identified under this project have a strong stakeholder involvement, it is expected that this collaborative approach will continue to guide project implementation.

#### **4.2 Reporting, Review, Monitoring and Evaluation**

Within the first 2 (two) months of project implementation, the head of the Project Coordination Unit will prepare an inception report for the first meeting of the project steering committee. The report will be accompanied by a detail proposed work plan for the first 12 months of the project.

Project progress reports will be produced every 6 months by the Project Coordination Unit, based on reports submitted by TFF and by TFTC. The Project Coordination Unit will consolidate the reports and submit the Project Progress Report to the ITTO Secretariat in accordance with the "ITTO Manual for Project Monitoring, Review, and Evaluation".

A mid-term evaluation of the project will be conducted by an international audit team at the discretion of the ITTO, which will include recommendations for the elaboration of the working plan for the second year of the project. The result of the evaluation will be included in the project progress reports.

The final project completion report will be transmitted to ITTO by the Project Coordination Unit not later than 3 (three) months after project completion.

The Government of Papua New Guinea may also carry out monitoring missions in accordance with its own rules and procedures.

Apart from the Steering Committee evaluation, the project is expected to be evaluated by the ITTO. The evaluation by ITTO will be based on the submitted progress reports. ITTO recommendations are expected to ensure that the project is implemented in accordance with the work plan and to improve the effectiveness of the subsequent implementation activities. Whenever possible, this evaluation could be held at the same time as the Steering Committee meetings.



### **4.3 Dissemination and Mainstreaming of Project Learning**

#### **4.3.1 Dissemination of Project Results**

The project design relies heavily on dissemination of information and lessons learned to ensure widespread understanding and to stimulate adoption of RIL.

Existing website and newsletter facilities of the PNGFA and the FIA will be utilized to disseminate information on the project at initiation and during the course of project implementation. In addition, a project brochure will be published within the first few months of the project to inform potential beneficiaries of the project.

The project will generate a series of technical booklets which will be available to all training participants and to all forest concession companies as well as members of the PNGFA. These manuals will form the informational backbone of the project.

A major workshop is planned at the end of the project. This workshop will be used to inform stakeholders of the project outputs and activities as well as providing a venue for "lessons learned" and an opportunity for a consultative process on moving beyond the project into a wider implementation phase.

#### **4.3.2 Mainstreaming Project Learning**

Much of the outreach activities built into project design have already been addressed in the previous section.

This is essentially, a pilot project in that it intends to focus training activities in three collaborating concessions while at the same time also updating the training for the PNGFA staff who have responsibility for monitoring and reporting activities. As a pilot project, the end of project workshop along with the final project meetings and reports, will serve as the launching point for identifying what needs to be done to move the RIL and sustainable forest management agenda into the mainstream of concession management in PNG.

It is expected that formulating a RIL training program within the context of the existing Logging Code of Practice will stimulate adjustments to existing implementation regulations and requirements and will provide the momentum to continue with a broad based training and capacity building for the medium to large scale forest enterprises which account for the bulk of PNG's timber production.

## **ANNEX A      PROFILES OF THE EXECUTING AND COLLABORATING AGENCIES**

The Forestry Act of 1991 (as amended) places the responsibility of the management of PNG's forest resources under the Ministry of Forests through the Forest Authority (PNGFA) governed by a National Forest Board comprising of major stakeholders.

The forest resources of Papua New Guinea are owned by the customary tribal landowners. Current forest legislation provides for commercial extraction from the forests under two arrangements:

1. Large forest concession areas acquired by the State through PNGFA under Forest Management Agreement (FMA) arrangement.
2. Small-scale forest operations covering less than 1,000 hectares are developed under Timber Authority(TA) arrangements. Annual harvest quotas are less than 5,000 cubic meters. Other timber types of timber authority entail large-scale forest clearance for agriculture and road construction purposes. Such TAs processes are often very lengthy.

An organization chart of the PNGFA is included in Figure 4. Forestry projects are coordinated and allocated at the Forest Policy and Forest Allocations Directorate levels while implementation activities are carried out by the Field Services Directorate.

The proposed project for a national training program to promote the adoption of Reduced Impact Logging, will be implemented under the direction of the Forest Policy Directorate with the involvement of appropriate personnel from the Forest Planning, Resource Allocation, and Field Services Directorates.

PNG has received funding in the past to implement an European Union (EU) funded project. The focus of this project, referred to as the "Eco-Forestry Program", has been on small-scale, community based forest operations and has developed a capacity for basic training of simple technical skills at the community level. Lessons learned and capacities developed from this project, will be utilized in the implementation of the proposed national RIL training project as described in this document.

### **Project Coordination Unit (PCU)**

The head of the PCU will be the Project Coordinator to be appointed by the PNGFA as a half time position intended to provide overall project implementation coordination.

The Project Coordinator will be a PNGFA staff officer appointed 50% of the time to the overall coordination of this project. He will be assisted by full time secretarial assistant

An organization chart of the PNGFA is included in Figure 4. Forestry projects are coordinated at the Forest Policy Directorate level while most implementation activities are carried out in collaboration with the Field Services Division.

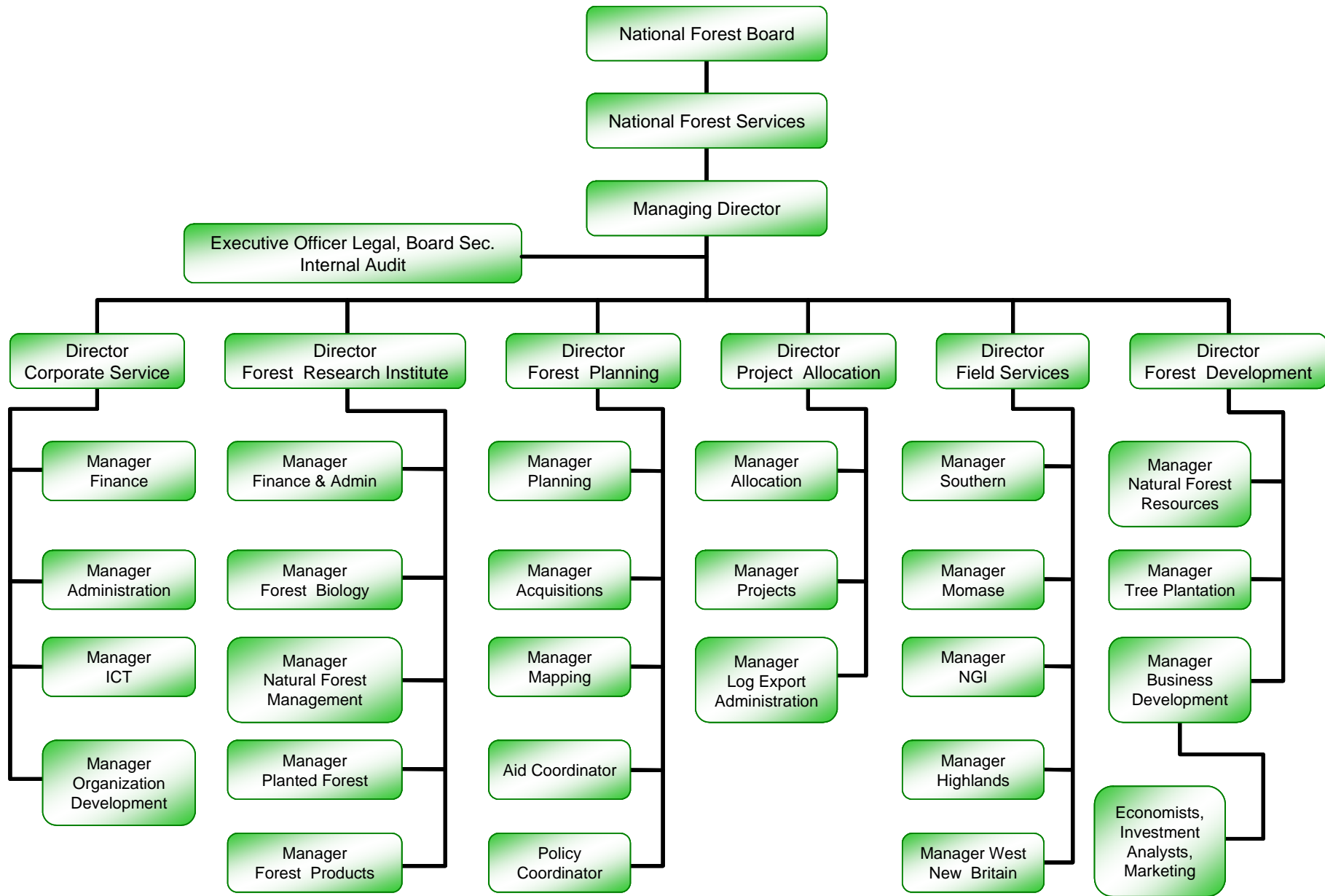
### **Timber & Forestry Training College (TFTC)**

TFTC is a technical college attached to the PNG University of Technology located in Lae, Morobe Province. It is a department of the university and the Principal reports directly to the Vice Chancellor. The college has a total of 18 academic staff and some 38 technical and administrative support staff.

While the college specializes in sawmilling and woodworking courses, it has in recent years also offered various chain saw operators and fallers courses for workers from the forest concessions.

The college also maintains a small forest production unit which serves primarily as a log supply unit for its sawmilling and woodworking training facility.

Figure 4: Organization Chart of the PNGFA



### **Tropical Forest Foundation (TFF)**

TFF is a non-government organization promoting sustainable forest management throughout the tropics. TFF achieves its goals by supporting and promoting reduced impact logging (RIL) strategies in recognition of the crucial role RIL has in the achievement of sustainable forest management and forest certification. TFF's Board of Directors includes representatives from international forest industry, governments, science, academia, and conservation agencies. Each member has an interest in seeing tropical forests renewed and sustained. TFF's activities include collecting and disseminating information, conducting training programs, carrying out RIL research and demonstration, and developing guidelines, training materials, and technical procedures manuals in support of RIL. TFF has Regional field programs based in Brazil, Indonesia, Guyana, and Gabon.

Collaboration with the PNGFA will be handled by the TFF-Indonesia Regional office which is managed by a Regional Director. In Indonesia, TFF has implemented a two year ITTO funded project for RIL training in partnership with a national forestry training institute. Under this funding arrangement, TFF was able to develop and publish substantial training and resource material for an RIL training program.

If approved, the proposed two-year ITTO project for RIL training in PNG will recruit a full time RIL trainer in PNG who will work together with the PCU and the TFTC as well as the TFF-Indonesia Regional Director on specific training assignments.

### **Forest Industry Association (FIA)**

FIA is a non-profit organization established to represent the PNG forest concession industry. The Association's vision and mission is to represent the interests of its members and to participate in the improvement of the PNG peoples welfare, particularly those living in or near the forest. It seeks to achieve these objectives through the development and encouragement of professionalism within its membership according to the principles of sustainable forest management.

The Association represents most of the working forest concessions in PNG. Its membership consists of some 128 concessions with a combined operational jurisdiction over 9.4 million hectares of natural production forest. The Association's headquarters is in Port Moresby. The Executive Director and operational staff are guided by a Board of Directors.

Under the proposed project, the relationship between FIA, PNGFA, and the TFF will promote RIL and project information dissemination to FIA members result in the publication of articles on RIL in the Association newsletter.

### **The Papua New Guinea University of Technology (Forestry Department)**

The PNG University of Technology, Forestry Department offers both a three year diploma course and a four year bachelor of science degree in forestry. It has recently expanded its offering to include post-graduate studies in forestry.

The proposed RIL training project offers the opportunity for degree students to participate in RIL training demonstrations and to work with project staff on RIL research projects in a working forest concession environment.

## ANNEX B TERMS OF REFERENCE OF PERSONNEL FUNDED BY ITTO

### Terms of Reference for Key Project Staff (existing & proposed)

#### 1. Project Coordinator (to be seconded from PNGFA)

A Project Coordinator will be seconded from the PNGFA on a part time basis, to head up the Project Coordination Unit and to administer the project. Fifty percent of the Project Coordinator's salary will be met by project funds from the ITTO.

The Project Coordinator will be selected from suitable candidates within Papua New Guinea in keeping with the organizational arrangements of the PNGFA.

#### Qualifications

The Project Coordinator will have a minimum of five years experience of project management with a strong emphasis on forestry-related projects. He / she will be educated to degree level with at least five years experience in tropical countries, preferably in the Asia-Pacific region.

The Project Coordinator will be intimately familiar with the structure and functions of the PNGFA.

#### Duties/Responsibilities

To liaise with ITTO and the project steering committee; to co-ordinate overall project activities of the TFTC and TFF; to be responsible for receiving and disbursing project funds; to be responsible for all technical and financial reporting, and, to organize an end of project workshop.

#### Contract Duration & Remuneration

**The Project Coordinator will be seconded from the PNGFA on a half time basis for the full two years of the project period. Salary level sought through ITTO funding will be commensurate with appropriate civil service rates and will cover half of the PCs salary.**

#### 2. Secretarial Assistant, PCU (to be recruited)

A full time secretarial assistant will be recruited to assist the Project Coordinator in carrying out the responsibilities of the PCU.

#### Qualifications

The secretarial assistant will have a minimum of three years experience and be computer literate in MSWord, Excel and PowerPoint.

The Project Coordinator will be intimately familiar with the structure and functions of the PNGFA.

#### Duties/Responsibilities

Assist the Project Coordinator in all communication and reporting matters related to disbursement of ITTO funds, communications with project steering committee, TFTC, TFF and the forest concession industry. To assist in organizing an end of project workshop.

#### Contract Duration & Remuneration

**This is a full time position for the two year duration of the project. Remuneration is in line with appropriate civil service position in PNG.**

#### 3. International RIL Training Expert: ( Regional Director - Tropical Forest Foundation)

The Tropical Forest Foundation will second its SE Asia-Pacific Director to provide overall coordination of TFF's input into this project and to take the lead in the delivery of on-site RIL demonstration and training activities. He will also run the training-of-trainers course and will be responsible for the development of all project literature.

**Name:** Arthur W. Klassen

**Birth Date:** October 1, 1946

**Nationality:** Canadian – (born in Germany)

**Education:** 1968, Diploma in Forest Technology  
British Columbia Institute of Technology, Burnaby, B.C.

1976, B.Sc.F., University of British Columbia  
Vancouver, B.C.

**Key Qualifications:** Forest Engineering, Forest Operations Management, Development Planning, Forest Management, Operational Research, Forest Policy Implementation

**Countries Worked:** Canada (B.C.), Indonesia, Bhutan, Guyana, Iran, Tanzania

**Relevant Work Undertaken In The Past 10 Years:**

Effective January 1, 2000, Mr. Klassen assumed the full-time position of Regional Director of the Tropical Forest Foundation based in Jakarta, Indonesia. During the past 9+ years, Mr. Klassen has been developing a program in RIL training, demonstration, and information. This program has included the implementation of specific project activities as follows:

- USAID initiated project to promote forest-market linkages with legality, RIL adoption, and chain-of-custody issues. This has grown into a major project activity within Indonesia.
- EVD (Dutch) funded project to promote the FSC certification of two forest concessions in Indonesia. Activities involved market connections, training, workshops, and technical advice. Certification support activities are ongoing and expanding.
- A two year ITTO funded project to Facilitate and Promote Adoption of Reduced Impact Logging in Indonesia and the Asia Pacific Region in collaboration with the Indonesian Centre for Forestry Education and Training. . As one of the outputs of this project, Mr. Klassen was responsible for producing a series of five technical procedures manuals defining implementation details of RIL within the Indonesian context.
- Following completion of this ITTO project, TFF has expanded the RIL training facility to the point where now more than 24 Indonesian forest concessions are engaged with TFF in RIL and forest-market related activities together with over 15 major forest industries.
- Implementation of an ITTO pilot project on timber tracking.
- Develop and implement RIL training activities as an extension service at the national level under various funding arrangements including the Australian Government (DAFF), USAID, The Nature Conservancy (TNC), CIFOR, etc.

During his work in Indonesia and the SE Asia-Pacific Region, Mr. Klassen has prepared and delivered numerous papers on RIL, forest utilization, sustainable forest management, and related topics at a broad range of international venues.

Mr. Klassen has over 35 years experience working with forest industries, consulting companies, and international forestry projects. Almost three quarters of this time has been spent working on international assignments in Indonesia, Bhutan, Guyana and Iran.

**Duties/Responsibilities**

**Mr. Klassen will play a lead role in the implementation of this project and will be responsible for all activities and outputs which are identified under the role of the Tropical Forest Foundation.**

**Mr. Klassen will be the chief trainer for the RIL training and demonstration activities and will liaison closely with the Project Coordinator, the PNGFA, and the TFFC.**

#### **Contract Duration & Remuneration**

**Mr. Klassen will provide backstopping throughout the two year duration of the project and will provide specific inputs as identified in the Project Document. Remuneration is based on standard TFF charge-out fees payable to TFF upon completion of project activities as identified in the Project Document.**

#### **4. Assistant National RIL Trainer (to be recruited by TFF)**

TFF will engage a National RIL Trainer for the two year duration of this project.

#### **Qualifications**

Should have a degree in forestry plus at least 5 years of field experience in forest management, forest engineering, silviculture, forest inventory, or forest production activities. Experience with RIL projects is highly desirable. Experience in community forestry projects or NGOs working with communities is also desirable. Basic computer literacy is required.

#### **Duties**

The Assistant National RIL Trainer will be based in Port Moresby and will collaborate with the Project Coordinator and other project partners in developing and delivering activities in support of the project activities where TFF has a lead role.

The Assistant National RIL Trainer will report to the TFF Regional Director (International RIL Training Expert)

The Assistant National RIL Trainer will be required to set up training and demonstration venues and to assist the TFF Director in carrying out field training, establishing RIL demonstration activities and assisting with RIL extension activities. This position will require extensive travel and work in a forest environment.

#### **Duties/Responsibilities**

**The Assistant National RIL Trainer will be hired for the duration of the project on a full-time basis. He will be based in Port Moresby and will be responsible for establishing linkages with the forest concession industry through the FIA. He will also liaise on a regular basis with the PC and all other members and partners of the Project as required.**

**The Assistant National RIL Trainer will ultimately be required to perform a national coordinating role for an RIL training program.**

#### **Contract Duration & Remuneration**

**Remuneration for the Assistant National RIL Trainer will be based on current civil service rates for a similar position. ITTO funding is sought for this position for the full two years of the project although it is anticipated that this will be a continuing position beyond the completion of the ITTO funded project.**

#### **4. Computer Graphics and Publications Expert (TFF Regional Staff)**

The Tropical Forest Foundation-SE Asia Pacific Region, will second its Computer Graphics and Publications Expert to take the lead role in preparing all materials to the print ready stage. This will include a project brochure, RIL technical procedures manuals, and a pocket book on felling and bucking best practices.

He will be expected to visit PNG to collect information, photographs, graphics and to gain a good understanding of the operating environment within the PNG forest concession industry. Much of the final preparation of the publications will be carried out at the TFF Regional office.

**Name:** Mario Ekaroza Wurjanta

**Birth Date:** January 6, 1965

**Nationality:** Indonesian

**Education:** 1988, B.Sc. in Computer Science, Gunadarma University, Depok, Jakarta, Indonesia.

**Key Qualifications:** Computer graphics, layouts & presentations, computer systems management, website design and web based applications.

**Countries Worked:** Indonesia

**Relevant Work Undertaken In The Past 10 Years:**

Mr. Ekarosa joined the TFF in January 2003 based in Jakarta, Indonesia. During the past 6+ years, Mr. Ekarosa has been in charge of:

- Preparing all TFF newsletters for publication.
- Presentation and printing of a series of RIL technical booklets in both English and Bahasa Indonesian.
- Preparation and publication of all flyers, posters, brochures and publicity materials.
- Development and maintenance of the TFF website.

Prior to joining TFF, Mr. Ekarosa for five years with the Berau Forest Management Project as 'Computer and Socio-Economic Database Specialist'

Mr. Ekarosa has over 20 years experience in computer applications, most of it orientated towards to the forestry sector.

**Duties/Responsibilities**

**Mr. Ekarosa will be involved for the full two years of the project and will deliver on all publication outputs and activities as identified in the project document. He will be responsible for bringing draft copies of the documents (brochures, articles, RIL manuals, etc.) to a "print-ready" state.**

**Contract Duration & Remuneration**

**Mr. Ekarosa will provide specific inputs throughout the two year duration of the project as identified in the Project Document. Remuneration is based on standard TFF charge-out fees payable to TFF upon completion of project activities as identified in the Project Document.**



## ANNEX C      RESPONSE TO TECHNICAL REVIEW PANEL COMMENTS

### PD 551/09 (I)                      National Training Program to Promote the Adoption of Reduced Impact Logging (RIL) in Papua New Guinea (PNG)

#### Assessment by the Thirty-eighth Panel

#### A)      Overall Assessment

The Panel acknowledged that the project dealt with reduced impact logging (RIL), which was an important aspect of forest industry in the framework of sustainable management of tropical natural forests in Papua New Guinea in particular, where the selective logging was the most common forestry practice throughout the country, and therefore this project was believed necessary to improve the performance of the forest sector in the achievement of the SFM.

The Panel understands that project's outputs have to be reformatted in order to make them more coherent with the causes of the key problem, and felt that the proposal could be enhanced through turning strategies and methods more effective. The Panel also observed that the proposal is seriously over-budgeted in light of its outlined activities.

#### B)      Specific Recommendations

The proposal should be revised taking into account the overall assessment **and** the following:

1. Describe briefly the lessons learned from the implementation of PPD 125/06 Rev. 2 (I);

*The Pre-Project strategy of identifying the training needs and training capacities, was implemented though a thorough stakeholder driven process. It is felt that this process has resulted in the design of a Project Proposal for an initial, two year national RIL training program that:*

- *addresses the most urgent training needs,*
- *involved all relevant stakeholders,*
- *identified all training resources and capabilities, and,*
- *developed a realistic project concept in line with the stated development objective.*

*Although this process may have taken a little longer to implement than was originally anticipated, it has resulted in a broad-based consensus for a national RIL training program as described in the Project Proposal Document which has already been submitted to the ITTO for technical review.*

2. Identify the participating forest concessions and describe their size, harvesting scale, and their logging systems. Present as well the geographical information (including maps) of the participating concessions and the demonstration sites.

*During the field data collection stage of the pre-project, two working forest concessions were visited, namely:*

- *Cloudy Bay Sustainable Forestry Ltd., in Central Province: This is a very new concession with very progressive management and is likely to be interested in future collaboration under an RIL training project.*
- *Wawoi Guavi Timber Company Ltd., in Western Province: This is one of the countries largest and oldest timber concessions. The intention of this concession with regards to providing a RIL demonstration site is not known.*

*The Pre-Project did not attempt to, nor was it mandated to identify specific concessions which would be the trial training and demonstration sites for the implementation of a RIL training project.*

*Given the time lag normally associated with the approval and funding process of ITTO projects, it would be unrealistic to expect concession companies to commit to being nominated as training/demonstration sites so far in advance and without adequate socialization of the intended training activities.*

*Instead, the Pre-Project team consulted with the Forest Industry Association which represents the forest concessions in PNG, and sought their broad-based support and involvement in the formulation of the project concept.*

*The project document allows for the socialization and recruitment of collaborating concessions. Based on discussions with industry and Department of Forests representatives, it is reasonable to assume that willing concessions will be found to facilitate implementation of the project.*

*It is also worth noting that a similar situation existed in Indonesia when the ITTO funded a similar RIL training project PD110/01 Rev.4(I). No concessions names were specified in the project document, however, at the implementation stage, no difficulties were encountered in recruiting willing collaborating concessions.*

3. Describe the involvement of the stakeholders in the project implementation and incorporate it in Sub-Part 3.2 (Implementation Approach and Methods);

*Section 3.2.1, Stakeholder Involvement, has been inserted in the project document. This section summarizes in a simple matrix, how the various stakeholders were involved in the project formulation process and how they will be involved in the Project implementation process.*

4. Rewrite the Outputs corresponding to the causes in the problem tree, and make them simpler, more concrete and reduce the number of them by merging or pruning unnecessary Outputs for achieving the Specific Objective for Outputs 1, 2, 4, 5 and 6;

*See response under comment number 6 (below). Outputs 1 and 2 have been combined, however, it is strongly felt that Outputs 4, 5, and 6 are very distinct from each other and, therefore, present the most efficient and simplest implementation strategy to ensure that the root causes identified in the problem tree (Figure 1) are adequately address within the scope of the proposed project.*

5. Include an activity of comprehensive review on existing information and manuals on RIL, including the outputs of past ITTO projects in particular, to prepare and publish RIL procedure a manual;

*An appropriate Activity 2.1 has been inserted in Figure 2, Outputs and Activities in response to this recommendation. (Note additional reorganization changes as per comment 6 below)*

*It should be noted that the PNG Logging Code of Practice has already been reviewed during the Pre-Project phase. It should also be noted that the author of this Project Document was closely involved in the formulation of the CIFOR guidelines for RIL published in 1998. He was also a co-organizer of the “International Conference on the Application of Reduced Impact Logging to Advance Sustainable Forest Management” held in Kuching, Malaysia in February/March 2001. In addition, he was also the author of the 5 RIL manuals published in Indonesia under ITTO Project PD 110/01 Rev.4(I).*

*Comment number 5 (above) is probably most relevant in the context of the 5 RIL procedures manuals published under the ITTO project in Indonesia. These manuals relate strictly to the Indonesian situation and are strongly grounded in the Indonesian regulatory framework. Clearly the regulations and performance requirements in PNG are dramatically different than in Indonesia. The existence of the PNG Logging Code of Practice has no counterpart in the Indonesian administrative system. When measured against RIL outcome requirements, the PNG Logging Code of Practice still shows significant gaps which prevent the successful adoption of an RIL management system. These facts make the development of a separate set of technical RIL manuals for PNG both relevant and urgently required.*

6. Redefine project Outputs in order to make them simpler and more concrete. Reduce the number of Outputs proposed by merging and eliminating those that seem unnecessary. For instance, Outputs 1 and 2 can be merged, as well as 4, 5 and 6;

*Outputs 1 and 2 have been merged as per recommendation. However, Outputs 4, 5, and 6 have been kept as they were originally proposed since merging them would make them more complex and less easy to define and verify.*

*It should be noted that the original Outputs 4, 5, and 6 have very distinct purposes and audiences, namely:*

*Output 4 is intended to expand and strengthen the training capacity of the TFTC. The related activities are crucial for this output to succeed. The output itself, is of strategic significance in terms of future expansion of the training role on the TFTC in a national RIL training capacity.*

*Output 5 is directed at the management and staff of three collaborating forest concessions. The output involves both training and demonstration of the entire set of RIL activities. This output is vital to the establishment of a*

*national RIL training activity since the three demonstration modules will also serve the purpose of providing a learning venue for the development of training techniques that are relevant to the PNG operational and administrative context. The results of these training/demonstrations will be formalized in the set of 5 technical procedures manuals and the lessons learned will be disseminated in the end of project workshop.*

***Output 6** is directed at the staff of the Field Services Directorate. It was noted during the project formulation stage that such training has not been carried out for many years and that many of the staff who are responsible for providing on-the-ground regulatory oversight, have in fact, never received formal training on how to conduct monitoring, evaluation, and reporting on the activities of forest concessions. This Output is absolutely essential if a national RIL training program is to be successfully developed and implemented.*

*In the opinion of the authors of this project document, it would be a serious mistake to merge these outputs since they are so distinct from each other and, in the context of developing a national RIL training program, so crucial to the success of such a program.*

*The reformulation of the outputs has required changes throughout the document too numerous to highlight.*

7. Reduce the budget according to the changes for the recommendations 5. and 6. above, including by omitting the cost of an international consultant for the manual production, and present it in accordance with the third edition of the ITTO Manual. All budget provisions from different organizations must be presented;

*It is acknowledged that budget line items related to the activities of the 'International Consultant' may have lead to some misinterpretation. In actual fact, the role of the 'International Consultant' is primarily as trainer for the RIL demonstration activities. For the sake of clarity, the cost estimates for the production of the RIL Procedures Manuals have been repositioned under the Subcontract heading where they should probably have been in the first place.*

*The cost of preparing and publishing of these manuals is already being heavily subsidized by TFF in the budget tables (Table 8). Similarly, printing costs are based on a frugal estimate based on actual experience which is already a few years out of date (ie. too low). Any cost overruns for this output will be born by TFF.*

*It is strongly felt (based on past experience) that budget allocations for Output 1 are very conservative. Any reductions of the related budget line items would seriously undermine the ability of the Project to deliver on this Output, particularly in consideration of the fact that TFF is already proposing to contribute significant in-kind and actual value to this Output.*

*Major readjustments have been made throughout the project document to reflect the repositioning of the relevant budget line items.*

*On re-examination of the project document, all information provided appears to be in line with the guidelines of the third edition of the ITTO manual. A question addressed to Tetra Yanuariadi regarding the specific reference to the third edition of the ITTO manual, received a response which did not shed any additional light on this comment (reference e-mail from Tetra Yanuariadi dated September 18, 2009).*

8. Correct the amount of the reimbursement of the Pre-Project cost to US\$ 58,806 and the ITTO Monitoring and Review Costs to US\$ 10,000 per year;

*The Pre-Project cost has been adjusted to \$58,806 and the ITTO Monitoring and Review Cost has been changed to \$20,000 for the 2 year period of the proposed project. These adjustments have been made in Table 10 and on the cover page of the document.*

9. Include the duration of the contract, total remuneration, products for which the post is directly responsible in the TORs; and

*Appropriate additions have been made to each identified project position as identified in Annex B.*

10. Include an Annex that shows the overall assessment and specific recommendations of the 38<sup>th</sup> Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (**bold and underline**) in the text.

*The Technical Review Panel comments and the relevant responses, have been attached to the completed project document as Annex C.*

*Major text revisions been entered into the document in bold and underlined text except for numerous changes in Output and Activity numbering and in the resulting adjustments to budget entries.*

C) Conclusion

Category 2: The Panel concluded that the proposal requires essential modifications and will be returned to the proponent. The Panel will need to assess the revised project proposal before it can commend it to the Committee.