INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE:	CAPACITY BUILDING ON REDUCED IMPACT LOGGING (RIL) IN DRY INLAND FOREST IN THE PERMANENT FOREST OF PENINSULAR MALAYSIA.
SERIAL NUMBER:	PD 722/13 **Rev.1** (I)
COMMITTEE:	FOREST INDUSTRY
SUBMITTED BY:	GOVERNMENT OF MALAYSIA
ORIGINAL LANGUAGE:	ENGLISH

SUMMARY:

Systematic approach of managing forest resources, also known as Sustainable Forest Management (SFM), has evolved throughout the years to fulfil environmental and conservation needs, as well as, achieve optimum economic production. This practice was carried out systematically where damaged to the stand was minimised and controlled during timber harvesting, taking into consideration other aspects such as environment and biological diversity.

Over the years, Reduced Impact Logging (RIL) as a key component of SFM has gained much of attentions especially when it takes into consideration aspects such as environment and biological diversity in its intensive planning and carefully controlled timber harvesting operations to minimise environmental impact on forest stands and soil. This has not only believed to enhance the productivity of the residual stand and to shorten the cutting cycle but also believed to reduce forest degradation in terms of total carbon stocks.

While considerable progress has been made towards some aspects of RIL, attitudes and implementation on the ground have changed little in many areas. Moreover, awareness about RIL and understanding of its concepts and components remain weak. There are concerns that the implementations of RIL are not being met so far and thus affecting the productivity of the residual stands and biological diversity. This was believed to be due to the lack of trained and skilled personal on the ground as well as lack of RIL training (RIL training manuals and modules, and RIL training curriculum), RIL training centre and RIL demonstration site (field training station). Therefore, it is very crucial that formal knowledge and skills on RIL and its implementation on the ground be inculcated among trainers and forest workers.

IMPLEMENTING AGENCY: FORESTRY DEPARTMENT OF PENINSULAR MALAYSIA

DURATION: 12 MONTHS

BUDGET AND PROPOSED SOURCES OF FINANCING:

SOURCE	CONTRIBUTION IN US$
ITTO	226,041
Govt. of Malaysia	278,267
TOTAL	**504,308**

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Project Brief

Reduced Impact Logging (RIL) is an essential element of Sustainable Forest Management (SFM) which involves intensive planning and carefully controlled timber harvesting operations not only to reduce damage on forest stands and soil but also to minimise impacts on biological diversity. Over the years, RIL has gained lots of attentions because it enhanced the productivity of the residual stand as well as shortens the cutting cycle. However, despite the facts that considerable progress has been made towards some aspects of RIL, the understanding of its concept and implementation on the ground needs to be improved. There are concerns that the principles and practices of RIL has not being fully met as much of the issues were raised in the surveillance report for all Forest Management Unit (FMU) for non-compliances to Malaysia Criteria and Indicators (MC&I) (2002) in 2010 and 2011 due to insufficient skills and knowledge. It was suggested that forest operators involved on the ground especially state forestry department staff and private sectors need to be trained and given proper skills on RIL.

Therefore, the objective of this project is to strengthen human resource development via capacity building programme to produce adequate number of qualified skilled personnel for both state forestry department staff and private sector from all over Peninsular Malaysia. This project will focus on training of personnel and will concentrate on activities like training of forest workers and organising seminar. It will involve courses that related directly to RIL and the training will be conducted mainly at Terengganu Forestry Training Centre (TFTC) in Kuala Berang, Terengganu. At the end of the project about 470 personnel are targeted to be trained including 110 as qualified trainers and 360 forest workers both from the forestry department and private sectors. There are also about 750 participants who will be benefited from awareness arising programmes conducted through various seminars on forestry related issues during the course of the project.

The stakeholders will involve directly in this project as personnel involved will be their workers and the main stakeholders such as local government as well as state forestry department will like to know how this project will affect the state's income in the future. Upon the completion of the project, it is envisaged that there will be competent and skilled forest workers who fully understand the principles and practices of RIL towards achieving SFM. This group of trainers trained during the course of the project will be able to train more personnel on RIL related practices in the future with financial assistance from various stakeholders especially those involved directly in forest operations.

The project will be conducted over a period of 12 months and at the estimated cost of approximately **USD 504,308.00**. From this amount about **USD 226,041.00** will be from ITTO funding and about **USD 278,267.38** is from the Government of Malaysia. Approximately **USD 25,080.16** from the funding agency is allocated for personnel and about **USD 55,230.00** is allocated to capital. It should be noted that large portions of the cost will be for the rental of machineries to be used during training as it is cheaper to rent the heavy machineries as compared to acquiring it permanently.

LIST OF ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
FDPM	Forestry Department Peninsular Malaysia
FMU	Forest Management Unit
FTD	Forestry Training Division
GHG	Greenhouse House Gas
GoM	Government of Malaysia
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organisation
MNRE	Ministry of Natural Resources and Environment
MUS	Malayan Uniform System
NGO	Non-Governmental Organisation
NSC	National Steering Committee
PFE	Permanent Forest Estates
PRF	Permanent Reserved Forests
RIL	Reduced Impact Logging
SFD	State Forestry Department
SFM	Sustainable Forest Management
SMS	Selective Management System
TFTC	Terengganu Forestry Training Centre

PART 1. PROJECT CONTEXT

1.1 Origin

Malaysia has been managing its Permanent Reserved Forests (PRFs) as a renewable resources under Selective Management System (SMS) since 1978. This system is based on a 30-year cutting cycle and has evolved in many aspects to minimise forest degradation and to prevent depletion of forest resources. Despite the facts that considerable progress has been made towards some aspects of forest management in this country, there are concerns that their implementation on the ground has to be further improved with regards to forest operations such as timber felling, handling of heavy logging machineries, forest road construction, and long cable extracting system. This was based on reports from the surveillance visits to all Forest Management Unit (FMU) for their compliances to Malaysia Criteria and Indicators (MC&I) (2002) for 2010 and 2011 which revealed that some aspects of non-compliances still prevailed during forest harvesting operation where poor construction of cross drain and silt traps, improper chamber, excessive earthworks and poor maintenance of drainage still occurred. Other issues that were highlighted included some basic aspects of forest development that were not properly conducted. In most cases the reading does not match the actual observation on the ground where identification of tree species, diameter at breast height (DBH) and tree number were not accurately and consistently recorded during pre-felling and post-felling inventory record form. The main reasons are mainly due to the facts that forest workers are not competent and insufficient knowledge on the basic concept and implementation of RIL.

Recognising the importance of forest resources especially timber to the nation's economic and social development, the government has taken various steps to further improve the operational practices especially in forest harvesting. It was noted that the effectiveness of RIL implementation on the ground requires skilled logging machineries operators as well as skilled and knowledgeable personnel. It is anticipated that skilled personnel trained under this project will be able to train more skilled workers in the future.

Under the Tenth Malaysia Plan (2011-2015) the FDPM had prepared various training programmes related to forestry including RIL for department personnel including private sectors throughout Peninsular Malaysia. The implementation of these programmes as well as other forestry related courses will be carried out in Forestry Training Division, Kepong (FTDK) while courses related to forest operation will conducted in TFTC, Kuala Berang, Terengganu. These training programmes are to be conducted by well-trained FDPM training lecturers/instructors and senior officers in related fields. However, these training programmes are not fully implemented so far due to insufficient fund to run the whole courses as well as lack of trained lecturers and instructors to cater for over 470 personnel involved in forest harvesting operation on the ground. In order to achieve the overall objectives of RIL, all training programmes needs to be fully conducted through hands-on practices theoretically and practically to meet the requirements of SFM.

Thus, it is expected that with the execution of this project more skilled, trained and knowledgeable forest workers are able to implement RIL effectively to fully materialised SFM.

1.2 Relevance

1.2.1 Conformity with ITTO's objectives and priorities

(1) Compliance with ITTA 2006 Objectives article 1

The project conforms to the objectives contained in Article 1 of ITTA 2006 through reformulation of policy and economic framework in managing forest resource particularly objectives of:

(d) Enhancing the capacity of members to implement strategies for achieving exports of tropical timber and timber products from sustainably managed sources;

(2) Compliance with ITTO Strategic Plan 2013-2018

The proposed project complies with various aspects as raised in the ITTO Strategic Plan 2013-2018 particularly to:

Strategic Plan 2. Increase the contribution of tropical forests to national and local economies including through international trade.

Expected Outcomes
- Increased contribution of the forest sector to the national and/or local economies of tropical countries.
- Improved livelihoods and employment of local and indigenous communities.
- Improved access to international markets for small and medium sized enterprises and community enterprises.
- Increase in diversity and quantity of efficiently produced value-added products from sustainably managed forests.
- Increased competitiveness and market access for tropical timber.
- Increased consistency and compatibility among systems to provide assurance of legality and sustainability for tropical timber.
- Increased contribution of NTFPs.
- Value of exports of tropical forest products.

Strategic Plan 4. Reduce tropical deforestation and forest degradation and enhance provision of environmental services

Expected Outcomes
- Increase in the capacity of members to address climate change adaptation and mitigation through SFM.
- Financial support for SFM is increased by payments for the environmental services of tropical forests.
- Increase in area of forest under SFM and use of ITTO guidelines and C&I.
- Increase in income generation based on forest related environmental services and other forest outputs.

Strategic Plan 6. Build and develop human resource capacity to implement SFM and increase trade in forest goods and services from sustainably managed forests.

Expected Outcomes
- Public institutions, communities and commercial entities have adequate forest management, planning, policy and business skills needed to implement SFM and engage in international trade.
- Increase in the awareness of the contribution of SFM to economies.
- Local communities are informed and able to participate in SFM policy development and related activities.
- Increase in exchange of experiences, knowledge innovations in SFM, and promotion of trade and timber processing among members.
- Better collaboration between private sector and civil society.

(3) Compliance with ITTO Policy Development Series No. 15 (Criteria and Indicator for the Sustainable Management of Tropical Forest)

The project was also is coherent with ITTO Policy Development Series No. 15 (November 2005) "ITTO Guidelines for the Criteria and Indicator for the Sustainable Management of Tropical Forest" which is intended, among others, to:

Criterion 6: Soil and water protection.
Criteria 6.4, i.e. addresses procedures for forest engineering, including:

(a) drainage requirements;
(b) conservation of buffer strips along streams and rivers;
(c) protection of soils from compaction by harvesting machinery; and
(d) protection of soil from erosion during harvesting operations

Criterion No. 7: Economic, social and cultural aspects.

Criteria 7.7, i.e., addresses training, capacity-building and manpower development programmes for forest workers for sustainable forest management.

(4) Supporting ITTO Thematic Programme; Reducing Deforestation and Forest Degradation and enhancing environmental services in Tropical Forests (REDDES)

This project supports the ITTO Thematic programme objective under the following:

- Minimisation of forest degradation during forest operation.
- Maintain and enhance climate change mitigation and other environmental services of tropical forests.
- Contribute to the economic sustainability.
- Raising awareness among decision makers and the public.

The project also supports the thematic programme scope under the following:

- Climate change mitigation and adaptation through avoidance of excessive emissions of CO2 from forest degradation.
- Conservation of biodiversity.
- Improvement of soil and water quality.
- Sustainable forest production.

The implementation of training programmes as well as effective practical training under this project is relevant and will significantly support the achievement of the above ITTO and ITTA priorities and objectives. Relatively, improved relevant skills and knowledge of forest workers will be consequently translated into RIL practices in minimising logging damages and carbon emissions to the environment. The RIL practices also significantly maintained forest structure, biodiversity conservation, reduce soil erosion and improve water quality.

1.2.2 Relevance to the submitting of country's policies

Sustainable management and conservation of Malaysia's forests have been given higher priority by the Government. Efforts are being made to ensure that the flora and fauna are conserved for future generations. Such efforts are reflected by the fact that Malaysia played a leading role at the Earth Summit in Rio de Janeiro in 1992 of the U.N. Commission on Sustainable Development.

Malaysia has also ratified the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. In this regards, Malaysia has adopted its own policy such as follows:

i. National Forest Policy 1978
ii. National Policy on Biological Diversity 1998
iii. National Policy on Environment 2002
iv. National Policy on Climate Change 2009

The forestry sector in Malaysia assumes an important role in providing environmental protection, particularly those related to climate change, and a major economic role in generating incomes through timber utilisation in the country.

At present, Malaysia's forest management practice has been able to conserve biological resources and carbon stocks by avoiding the deforestation cycle. Based on FDPM Annual Report 2011, approximately 84.68% (4.92 mil ha) of the total forested area (5.81 mil ha) in Peninsular Malaysia Malaysia's is Permanent Reserved Forest (PRF) and proposed PRF. This PRF were categorised into three main forest types namely:

i. Inland Forest (4.59 mil ha)
ii. Peat Swamp Forest (0.24 mil ha)
iii. Mangrove Forest (0.09 mil ha)

A strong institutional framework in Malaysia has been long established between the State Governments and the Federal Government. In this regard the National Forestry Council (NFC) was established in December 1971 to provide a vital forum for the formulation of forestry policies which

are coordinated and consistent with the national goals of SFM. Subsequently, a National Forestry Policy was promulgated and approved by the NFC in 1977 in line with the country's aspirations pave the way for greater uniformity in the implementation of strategies for the achievement of forest conservation, management and development in the country. The policy represents an important legislation, which is unequivocal in maintaining that forest management must fulfil environmental and conservational needs besides meeting rational economic production goals.

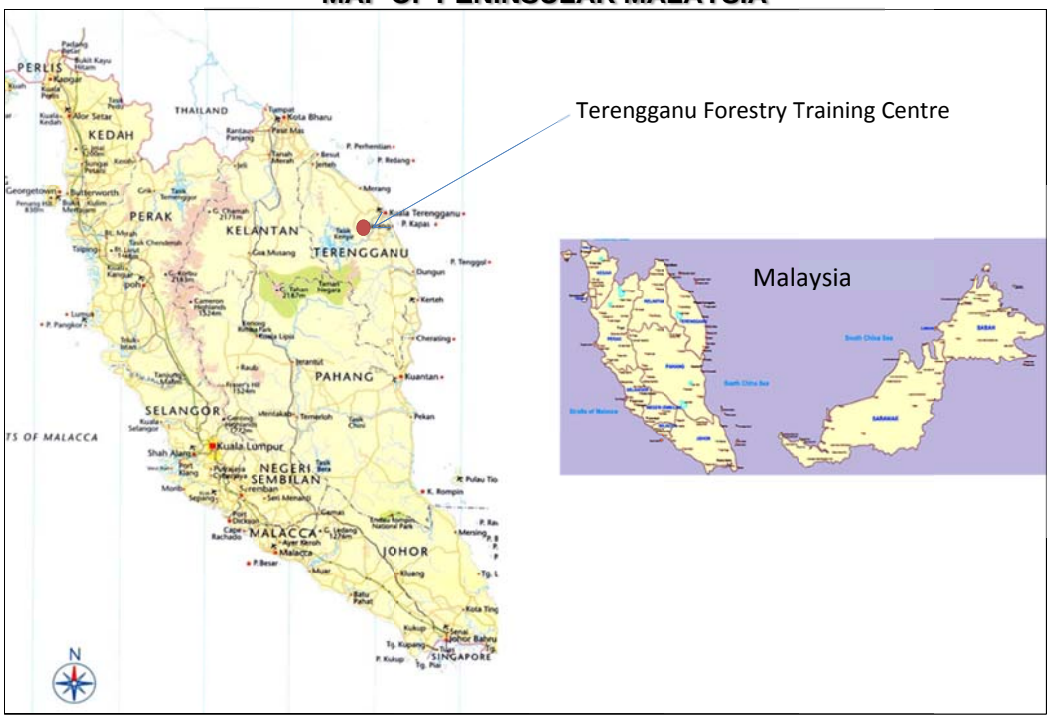
To further strengthen the country's capacity to implement sustainable forestry practices, a National Forestry Act was subsequently formulated and passed by Parliament of Malaysia in October 1984. The current implementation of these legislations contributes to forest planning, management and development, safeguarding and protecting of forest resources from encroachment and illegal forest harvesting activities towards achieving the objectives of SFM in the country.

Eventually, forest management will be judged not only on the basis of the forest capacity to produce output and effective implementation, but more towards on how the forests are managed to achieve the ever so delicate balance among its various functions by highly skilled and trained professionals.

1.3 Target Area

1.3.1 Geographic location

MAP OF PENINSULAR MALAYSIA



LOCATION MAP OF TERENGGANU FORESTRY TRAINING CENTRE, KUALA BERANG, TERENGGANU

The implementation of activities under the project will be in Peninsular Malaysia, Malaysia. Terengganu Forestry Training Centre in Kuala Berang Terengganu will be selected as one of the focal areas for implementation of activities.

1.3.2 Social, cultural and environmental aspects

~~The project will be conducted mainly at Terengganu Forestry Training Centre in Kuala Berang, Terengganu as it has conducive and adequate infrastructure and facilities to conduct hands-on training on reduced impact logging. However, participants for the training programme will be from the eight state forestry departments and private sectors all over Peninsular Malaysia especially those involved directly in forest operations.~~

Social and cultural aspects

Hulu Terengganu District where TFTC is located has the population size of approximately 70,000 people or a density of 19 persons per km^2 almost equally distributed between males and females. By religion, 98% of population is Muslim. Around 70 percent of the people work in the agriculture sector such as palm oil and rubber plantation. Tasik Kenyir (Kenyir lake), the largest artificial lake in Malaysia is a major tourist attraction to the area.

Environmental Aspects
Current land use pattern in Hulu Terengganu is palm oil plantation (30%), rubber plantation (20%), rice field (5%), permanent reserved forest (30%) and other uses (20%). The topography of the area is flat, undulating and hilly with the average annual rainfall of 239 mm with a maximum rainfall amount of 757 mm and a minimum of 50.7 mm. The yearly temperature was about the same for the years during the period and averaged 27°C with a uniform comparative humidity average at 79%.

Forestry-related economic activities were long regarded as the traditional activities in Hulu Terengganu beside agriculture. Still actively carried out at permanent forest reserved in the area, it has evolved from traditional forestry practices into more mechanised and well-planned operation based on RIL method where damage to the residual stands was minimise and impacts to the environment were reduced

1.4 Expected outcomes at project completion

Upon completion of the project, it is expected that the project will address integral aspects of forest management, biodiversity conservation and climate mitigation efforts in Peninsular Malaysia. Although efforts are being taken by the forestry departments in improving the implementation of best forest management practice in the field, there is still a need to address forest degradation by enhancing skills and knowledge on basic RIL practices in order to improve conditions of residual stand, maintain forest structure and maintain forest biodiversity. With enhanced knowledge and skills, the forest workers will be able to implement proper forest harvesting technique and generate more income from the forest. Reduction in damage to the forest stand is expected to improve the environment but also the biodiversity in that area.

The proposed project is also expected to have positive impacts on forest dependent communities as less damage, improved biodiversity and better forest biodiversity will contribute to the overall sustainability of the forest will enhance their continued use of the forest for socio-economic activities.

PART 2. PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

2.1.1 Institutional set-up and organisational issues

Malaysia regards its natural forest resources as an important and valuable resource that contributes significantly towards the country's economy and environmental well-being. The forests are very rich in flora and fauna species. It has been the aspiration of the Malaysian Government to ensure at least 50% of its land area under forests and tree cover in accordance with our commitment made at the Earth Summit in Rio de Janeiro, Brazil, in 1992. Under the Malaysian Constitution, forestry comes under the jurisdiction of the respective State Governments. As such, each State is empowered to enact laws on forestry and to formulate forestry policy independently. The executive authority of the Federal Government only extends to the provision of advice and technical assistance to the States, training, the conduct of research, and in the maintenance of experimental and demonstration stations. In order to facilitate the adoption of a coordinated and common approach to forestry, as well as reconcile cross-sectoral policies that interface with the forestry sector, the National Land Council was established to enable the Federal and the State Governments to discuss and resolve common problems and issues relating to forestry policy, administration and management, as well as to enhance cooperation between the Federal and State Governments, so as to ensure a coordinated approach in the implementation of policies and programmes related to forestry.

In 2004, a key milestone was reached in forest management in the country when the Ministry of Natural Resources and Environment (MNRE) was established following the new cabinet set-up by the government among others to coordinate with respective states government on matters regarding forestry, minerals, wildlife, Marine Park, irrigation and drainage and land mapping. The FDPM is under the MNRE and has its headquarters in Kuala Lumpur with 11 State Forestry Departments and 33 District Forest Offices located throughout Peninsular Malaysia. The FDPM's headquarters is responsible for formulating policies and providing advice and technical assistance to the State Forestry Departments in forest management and development, forestry sector planning and related industries, forest operational studies, training, human resource development, and maintenance of experimental and demonstration plots.

Generally, every aspects of training for all department staff throughout Peninsular Malaysia were conducted centrally by FTD in Kepong and TFTC in Kuala Berang Terengganu. In this regards, the major issues faced in these two training centre are mainly financial constraints and inadequate number of expertise.

2.1.2 Stakeholder analysis

The formulation of this project proposal was conducted through various meetings and work-camp such as follows:

a.	Work-camp 1:	12 – 14 February 2012 in Kuantan, Pahang
b.	Work-camp 2:	12 – 14 March 2012 in Penang
c.	Meeting 1:	12-14 May 2012 in Kuantan, Pahang
d.	Work-camp 3:	21 May 2012 in Kepong, Selangor.
e.	Meeting 2:	16-18 October 2012 in Sungai Menyala, Negeri Sembilan.

These meetings discussed on the potential of ITTO projects in Malaysia focusing on achieving SFM through capacity building with the main focus on RIL.

The work-camps took note comments and suggestions from the participants comprising officers from various divisions in FDPM Headquarters and consultation with state forestry departments as well as with private sectors. The work-camp comprehensively discussed on the requirements and implementation of training programmes, target groups, outputs and activities to achieve the specific objectives.

Logging contractors that have given their intention to participate in the project implementation are Kumpulan Pengurusan Kayu-Kayan Terengganu, Yayasan Pahang and Kumpulan Pengurusan Kayu-Kayan Perak.

Some of key areas highlighted by participants include:

- Most of the yearly programme/course especially those related to RIL planned by FDPM are not conducted due to insufficient fund.

- There is also inadequate number of trained and knowledgeable personnel to implement RIL on the ground. Forest workers (private sectors) lack of skill in handling heavy harvesting machineries and reluctant to undergone training as they feel they know already what needs to be known about felling trees.

- Many forest workers (department staff) especially those involved directly in logging operation still lack of knowledge and do not have any formal training on RIL either due to lack of training opportunities provided by the forestry department or their self-ignorance on RIL, thus incompetent to monitor RIL practices on the ground.

- Knowledgeable and trained forest workers not only able to implement RIL effectively on the ground but also be able to produce and enhance economic contribution from logging operation.

- The needs to use heavy machineries such as *Log fisher* in implementing RIL in this country. It was noted that initial cost is higher at the initial stage of operation especially in transportation of machines to logging sites and preparing for the logging trail. However, in the long run it is very beneficial especially when taking into consideration the minimum environmental impact it has on the forest stand as well as on biodiversity conservation in the area.

Details of stakeholder analysis are shown in Table 1.

Table 1: Stakeholder Analysis

Stakeholder group	**Characteristics**	**Problems, needs, interests**	**Potentials**	**Involvement in the project**
Primary stakeholders				
State forestry department	Responsible for the administration and involve directly in regulation of forest harvesting in the states.	Inadequate skilled personnel to implement and monitor forest harvesting operation	To increase revenue collection to the state government, reduce forest degradation and conserve biological diversity	Primary beneficiaries and directly involve in implementing and monitoring of RIL on the ground
Forestry Department Peninsular Malaysia	Custodian of forests in Peninsular Malaysia. Responsible in advising state forestry department in research and training.	Insufficient finance and capacity to carry out training on RIL	To enhance capacity to improve and enforce reduced impact logging operation through training	Primary beneficiaries and directly involve in carry out training on RIL as well as monitoring RIL implementation on the ground

Private timber concessionaires	Private sectors involved in management of production forest	Lack of capacity, skills and knowledge in implementing good forest harvesting practices	To increase skills of man power and adopt improved management practices	Primary beneficiaries and directly involve in implementating RIL on the ground
Forestry Training Division, Kepong	Provides training on RIL for forestry department staff as well as for public and private sectors	Inadequate qualified trainers to conduct courses related to RIL	To enhance capacity and improve skill on reduced impact logging	Primary beneficiaries and directly involve in carrying out regular training on RIL
Secondary stakeholders				
Local governments (i.e. district offices, state government)	Local authority over resource management	Impact on socio-economic returns	Increase socio-economic returns and quality of life	Implementation of results at the local level
Logging operators	Sub-contracted by the forestry departments	Lack of capacity and skills in enhancing forest management practices	To build capacity of human practices	Primary beneficiaries and directly involve in implementating RIL on the ground
Tertiary stakeholders				
Local NGOs	NGOs involved directly in championing climate change issues.	Lack means to finance awareness programmes	To implement awareness programmes to forest managers and communities	Collaboration in undertaking relevant activities such as public awareness programmes on RIL

2.1.3 Problem Analysis

In Malaysia, systematic approach of managing forest resources through Sustainable Forest Management (SFM) has been practiced over the years mainly to achieve optimum economic production and to fulfil environmental and conservation needs. This practice was carried out systematically where damaged to the stand was minimised and controlled during timber harvesting, taking into consideration other aspects such as environment and biological diversity.

~~Generally, implementation of good harvest practices by licensee and contractors on the ground follows the key forestry guidelines to minimise the environmental impacts of harvesting. However, the requirements of the "Forest Road Specification 2010" was not consistently implemented throughout all of the FMU in Peninsular Malaysia, where in some areas the drainage requirements is inadequate to effectively control erosion. Another example of poorly controlled operation is the buffer zone in the licensed area where the buffer zone was clearly demarcated on the map and similarly on~~

~~the field. There were also evidences of violations where trees were felled into buffer zone. The occurrences are serious and occur on regular basis.~~

~~This evidence were highlighted in the Forest Management Certification Report during Surveillance Visits to eight FMU in 2010 and 2011 which also revealed that much of the data collected from pre-f inventory does not match actual conditions on the ground. Observation and measurement also revealed inaccuracies and inconsistencies in tree species identification, tree number and diameter at breast height (dbh) measurement. The reports also pointed out that training for department's staff were properly planned and were conducted annually. However, observation and discussion on the field found that there was no proper training planned and conducted for contractors.~~

~~A key problem here is the lack of training either on the implementation parts of RIL which eventually leads to the improper practices of RIL on the ground. In this regards, efficient forest harvesting operation and its activities needs to be strengthened at the forest management level and higher level of understanding as well as higher degree of awareness on environmental subject will reduce forest degradation, mitigate forest biodiversity loss and minimised economic loss.~~

The global market today required certified timber as a condition of access to public and private markets. This can be seen in Europe regulations on procurement policies for timber which specify certification as a condition for the purchase. Traders and retail groups on the other hand favour certified timber to meet increasing consumers demand. Retail chains are reported to change their purchasing policies by increasing their annual supplies of certified timber. In relation to this as well as to provide the greatest good for the greatest number of people in the long run, the government of Malaysia has produced Malaysian Criteria and Indicators (MC&I) that periodically assess both in-house and externally by independent third party assessors. The document incorporated ecological, social, biological and environmental contributions of forest in an integrated and holistic manner in forest management practices. The forestry department has also come up with "Forest Road Specification 2010" that outlined various aspects of road planning and construction that has become an important part of MC&I. At the ground level, compliance is often translated into reduced impact logging (RIL).

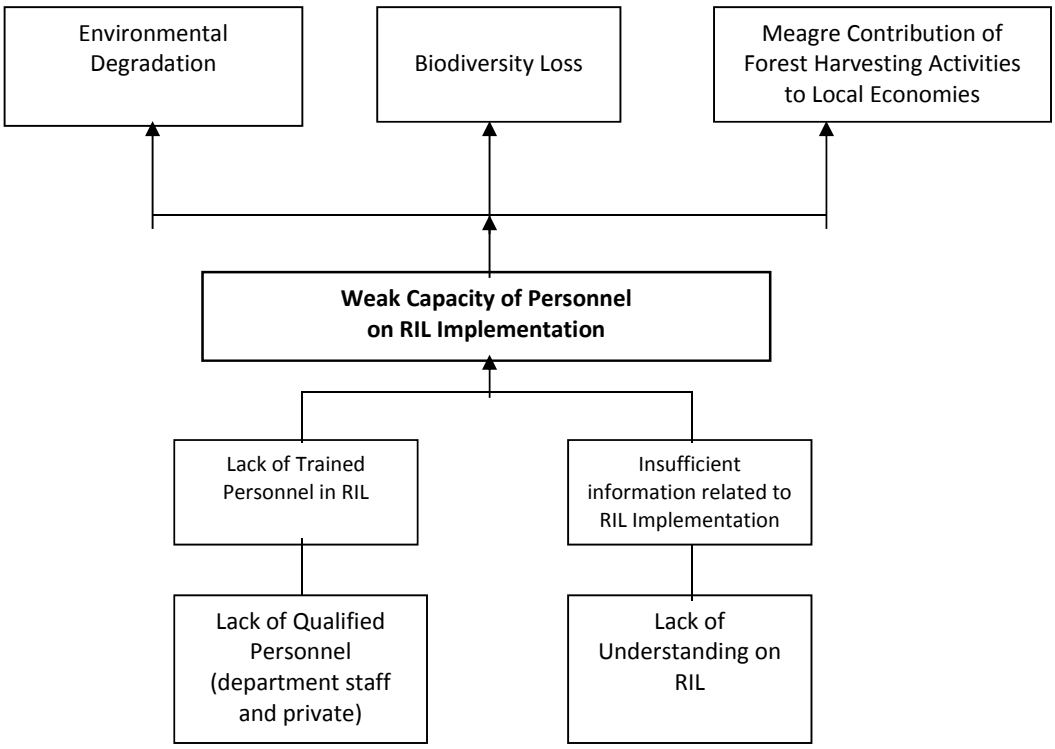
A key problem here is insufficient training and lack of understanding on the fundamental aspects of RIL which eventually leads to the improper implementation of RIL on the ground eventhough the reports pointed out that training for department's staff were properly planned and were conducted annually, although much of the training does not related to RIL. This evidence were highlighted in the Forest Management Certification Report during Surveillance Visits to eight FMU in 2010 and 2011 which revealed that, among others, the feeder road with improper camber, no side drains and improper bridge construction to facilitate stream crossing. While forest roads cannot generally afford the detail, finesse and cost applied to public road engineering, they must at least achieve the fundamental requirements for a successful road pavement. In the long term this is poor economics that stops or delays productions, reduces travel speed, damages trucks, excessive road surface run-off and ultimately resulted in environmental degradation such as major soil and water hazards.

The report also pointed out that much of the data collected from pre-f inventory does not match actual conditions on the ground. Observation and measurement also revealed inaccuracies and inconsistencies in tree species identification, tree number and diameter at breast height (dbh) measurement. This will ultimately result in reduced revenue collection from timber.

Feedbacks from the ground pointed that there was no proper training on RIL conducted for contractors and no sufficient information were provided. In relation to this, sufficient training on RIL has to be planned and qualified trainers on various aspects of RIL have to be trained. In addition, basic information on RIL has to be documented and disseminated to logging operators as well as to the public. RIL concept and operation and its technique needs to be strengthened and well communicate not only to forest workers on the ground but also to middle and top management level to ensure that a more holistic approach will be taken in future decision making process involving forest operation.

The problem tree as indicated below was developed based on consultation with stakeholders. Details of problem components are shown in **Figure 1**.

Figure 1: Problem Tree



2.2 Objectives

2.2.1 Development objective and impact indicators

Development objective

~~By implementing this project it is expected that by the year 2014, SFM practices will be implemented efficiently and successfully where environmental degradation and forest biodiversity loss is mitigated and local economy is improved. It is also anticipated about 110 trainers and 360 forest workers from all over Peninsular Malaysia will be trained on various disciplines of Reduced Impact Logging (RIL) practices. Overall there will be 11 courses conducted for thrainers and 12 courses conducted for forest workers and each of the courses will involve 10 participants for trainers and 30 participants for forest workers.~~

To improve the efficient implementation of RIL at permanent reserved forest in Peninsular Malaysia.

Impact indicators:

i. Training modules on RIL produced by the project are widely used in Peninsular Malaysia.

ii. Local economy is improved.

iii. Environmental degradation and forest biodiversity loss is mitigated.

2.2.2 Specific objective and outcome indicators

~~The specific objectives of this programme are to produce skilled and knowledgeable personnel (trainers) who can plan and carry out comprehensive and effective hands-on training on RIL and also to produce adequate trained forest workers who can practice and effectively implement RIL on the ground. On the other hand, adequate numbers of department personnel that are knowledgeable and competent that can monitor forest operation on the ground. The workers trained during the programme also will be able to implement RIL effectively as well as having higher level of awareness on forest biodiversity and forestry related issues. During the course of this programme it is envisage that sufficient amount of reading materials and reference on RIL will be produced and disseminated to relevant stakeholders. This will be carried out in collaboration with relevant stakeholders through seminar and workshop on RIL as well as outreach programme.~~

Specific objective

To strengthen the capacity of personnel on RIL implementation at permanent reserved forest in Peninsular Malaysia.

The outcome indicators will be:

i. **Training programme on RIL for trainers and forest workers will be completed**

ii. **At least 11 courses for trainers and 12 courses for forest workers will be conducted**

iii. **At least 110 trainers and 360 forest workers from all over Peninsular Malaysia that will be trained on various disciplines of RIL practices.**

iv. **Seminar/workshop to increase public awareness in environment related issues will be organized**

v. **Series of information, outreach and stakeholders consultation on RIL to bring all players to the same level of information will be organised.**

The development objectives, specific objectives and measurable indicators are shown in Table 2.

Figure 2: Objective Tree

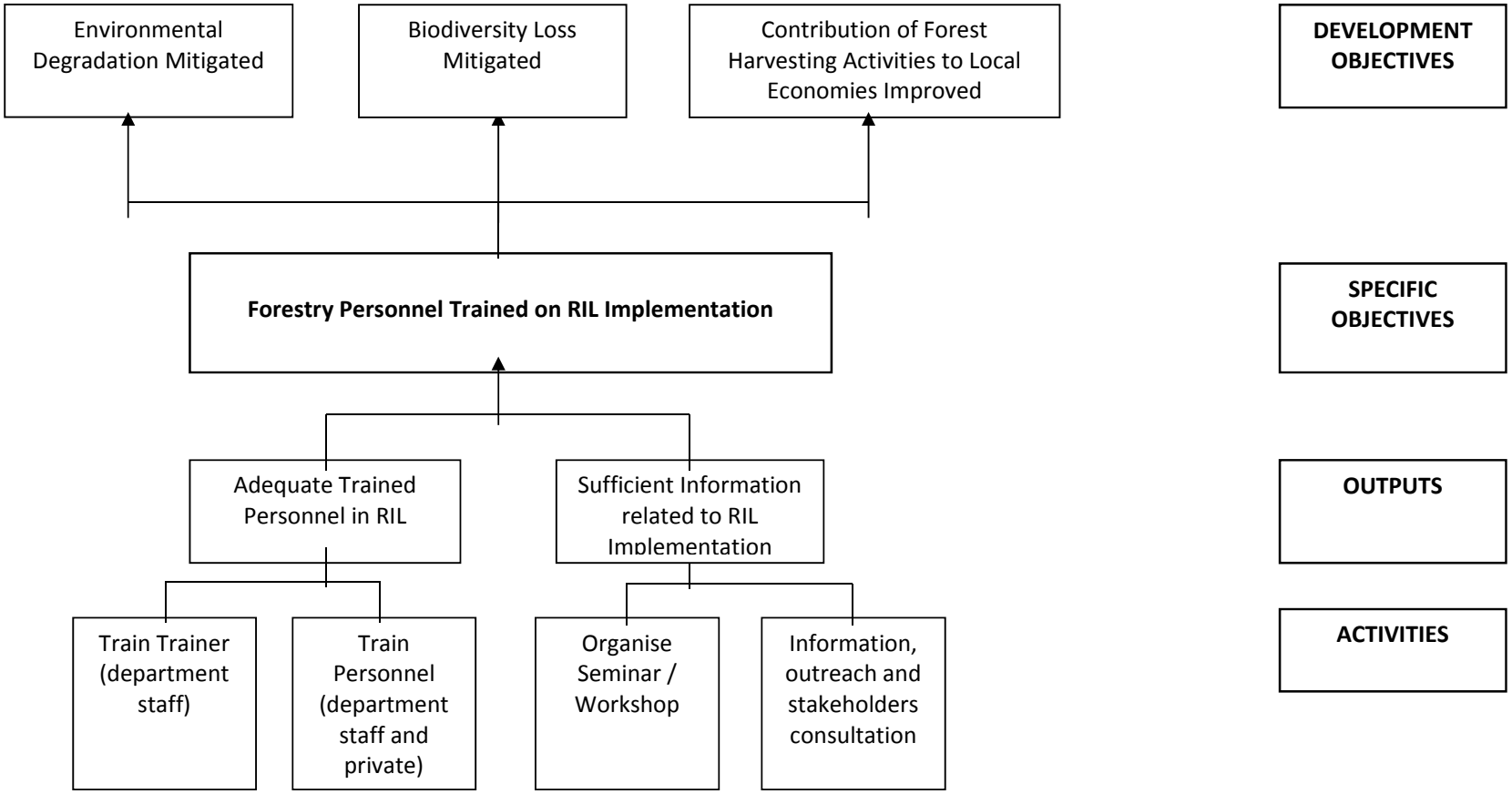


Table 2: Logical framework matrix

Program elements	Measurable Indicators	Means of verification	Assumptions
Development objective To achieve Sustainable Forest Management (SFM) practices through Reduced Impact Logging (RIL) in Peninsular Malaysia	i. Forest degradation after harvesting is reduced; ii. Buffer zones are minimally disturbed; and iii. Forest regeneration improved.	i. Internal audit conducted by FDPM and ii. Independent audit under MTCS.	Acceptance and recognition by stakeholder Full implementation of RIL at all FMU
Specific objective **To strengthen the capacity building of personnel for RIL implementation in Peninsular Malaysia**	470 personnel will be trained/skilled personnel	Certificates Training log book	Sufficient number of trained/skilled personnel
Output 1 Adequate Trained Personnel	By the end of 2014, approximately 470 Forest workers trained (110 trainers and 360 forest workers)	Training log book (department staff) Certificates	Forest workers (forestry department staff) are effectively involved in training courses Forest workers (private sectors) are effectively implement RIL on the ground
Output 2 Sufficient Information related to RIL implementation	Increased awareness among forest workers and public at large by end of the project (750 participants) through seminar on environment related issues	Training report Proceedings of the seminar/ workshop Stakeholders consultation report	Forest workers (forestry department staff) are knowledgeable on RIL Forest workers (private sectors) are knowledgeable on the implementation of RIL on the ground

PART 3. DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

3.1.1 Output

There is only one expected output at the completion of this project.

Output 1: Adequate trained personnel on RIL implementation

3.1.2 Activities

To achieve the output, the following activities will be implemented:

Output 1: Adequate trained personnel on RIL implementation

Activity 1.1: To undertake courses to train 110 personnel as trainers on 11 subject related to RIL.

Activity 1.2: To undertake courses to train 360 forest workers (forestry department staff and private sectors) on 11 subject related to RIL including one courses on international forestry related issues.

To achieve the output, the following activities will be implemented:

Output 2: Sufficient information related to RIL implementation

Activity 1.3: To organise seminar/workshop for 750 participants to increase public awareness in environment related issues.

Activity 1.4: To undertake series of information, outreach and stakeholders consultation to bring all players to the same level of information.

3.2 Implementation approaches and methods

The project will be executed by TFTC in Kuala Berang, Terengganu under the supervision of FTD in Kepong, Selangor and FDPM HQ in Kuala Lumpur. It will involve particpants from all over Peninsular Malaysia especially from the eight state forestry department and private sectors that involve directly in forest operation. Initially, about 110 participants will be trained as trainers on 11 courses on RIL. Each courses will involved only 10 participants as it will emphasises more on “training-of-trainers” approach. Then 360 participants will be trained on 12 courses related to RIL with each courses will involve 30 participants.

~~Existing collaboration and corporation between forestry department with other technical agencies and private sectors produced substantial inputs towards achievement of the objectives of this project. The implementation of this project demonstrates its ability with the support of stakeholders such as the federal and state governments and logging operators.~~

The forestry department will work collaboratively with other technical agencies and private sectors directly or indirectly to conduct trainings towards achievement of the objectives of this project.

Hands-on training will be conducted periodically in active license that belongs to stakeholders.

Participatory approach will be used in undertaking outreach and stakeholders consultation with interested groups to raise awareness, change perceptions, analyse problems, and identify socioeconomic priorities.

A participatory seminar/workshop will be organised in collaboration with stakeholders to

increase public awareness on environment-related issues.

3.3 Work Plan

The framework of this project proposal will take one (1) year of implementation once the project is approved. The work plan of the entire duration is as indicated in **Table 3.**

3.3 Work Plan

Output/ Activities	Responsible Party	Year 1			
		Q1	Q2	Q3	Q4
1. Train Personnel					
1.1Collect, collate and update materials for use in preparation of training modules	FTD				
1.2Prepare Training modules	FTD/TFTC				
1.3Prepare and acquire training aids and materials	FTD/TFTC				
1.4 Conduct courses /training	TFTC				
1.5 Prepare training report	FTD/TFTC				
1.6Steering Committee Meeting	FDPM				
2. Organise Seminar					
2.1 Conferences/Seminar/Workshop/Talks	FDPM/FTD/TFTC				
2.2 Information, outreach and stakeholder consultation	TFTC				
2.3 Annual Audit	FDPM				
2.4 Project Monitoring and Administration	FDPM				

3.4 Master Budget Table

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost (USD)	Total Cost (USD)	ITTO (USD)			Executing Agency (USD)		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
Output	**Adequate Trained Personnel in RIL Implementation**													
Activity 1	**Train Personnel**													
Activity 1.1	**Collect, collate and update materials for use in the preparation of training modules**													
a.	Specialist	12	3			Person	2,000	6,000	6,000					
b.	Information sheet	12	1,000			sheet	1,000	1,000	1,000					
Activity 1.2	**Prepare Training Modules**													
a.	Specialist	12	3			Person	2,000	6,000	6,000					
b.	Information sheet	2	1,000			sheet	1,000	1,000	1,000					
Activity 1.3	**Prepare and Acquire Training Aids and Materials**													
a.	Field Training Materials *(PPE)*	44.2	242			set	150	36,300	36,300					
b.	Forestry Equipment	64												
	Rental for crawler tractor/ bulldozer		4			Unit	7,000	28,000	28,000					
	Rental for wheeled loader		4			Unit	7,000	28,000	28,000					
	Rental for log fisher		2			set	7,000	14,000	14,000					
	Rental for Excavator		2			unit	2,000	4,000	4,000					
	Rental for Grader		2			unit	2,000	4,000	4,000					
	Rental for Compacter		2			unit	2,000	4,000	4,000					
	*(*Price quoted inclusive of petrol, oil, lubricants, maintenance and operator for each equipment)*													
	Chainsaw		5			set	400	2,000	2,000					
	Walkie-talkie		5			set	170	850	850					
	Clinometer		6			unit	300	1,800	1,800					
	Theodolite		3			unit	4,000	12,000	12,000					

	Leveling staff		3			unit	600	1,800	1,800					
	Measuring Tape		3			unit	120	360	360					
	Spade		6			unit	10	60	60					
	Hoe		6			unit	10	60	60					
c.	Forestry Engineering Materials	55												
	Culvert		5			set	70	350	350					
	Timber for Bridge construction		1			log	1,920	1,920	1,920					
	Sands (lorry)		1			tonne	90	90	90					
	Crusher run		1			tonne	85	85	85					
d.	Raw materials	51												
	Fuel		200			litre	0.6	120	120					
e.	Office supplies	54												
	Video Camera (Canon Legria HF R38)		2			set	800	1,600	1,600					
	Stationaries		11			L/S	360	3,960	3,960					
Activity 1.4	**Conduct Courses/Training**													
a.	Resource Person allowances *(5 days x 14 hours)*	11	22			Person-hour	40	880	880					
b.	Accomodation	31.3												
	(5-day x 1 resource person)		22			Person-day	83.33	1,833.26				1,833.26		
	(5-day x 10 participants)		2882			Person-day	66.66	192,114.12				192,114.12		
c.	Meals (10 *pax x 5 days*)	31.1	220			Person	13.3	2,926	2,926					
d.	Local Transport costs (Participants: 2 way x 10	33	220			Person	196	43,120				43,120		
e.	Group Insurance	63	220			Person-course	5	1,100	1,100					
Activity 1.5	**Training Report Preparation**													
a.	Specialist	12	3			Person	2,000	6,000	6,000					
b.	Information sheet	12	1,000			sheet	1,000	1,000	1,000					
Activity 1.6	**Steering Committee Meeting**													
	(*transport and organisation*)	61	1	1		L/S	1,000	2,000	2,000					
	Total 1							**410,328.38**	**173,261**			**237,067.38**		

Activity 2	**Organise Seminar**													
a.	Resources Person	11												
	(USD 66.67 per x 8 hour x 6 days x 1 session x 1 year		1	1		Person-hour	1,600.08	3,200.16	3,200.16					
b.	Meals *(USD 3.33 x 100 pax x 6 days x 1 session x 1 year)*	31.1	200	200		Person	9.99	3,996	3,996		0			
c.	Local Transport costs *(Participants: 2 way x 200 pax)*	33	200			Person	196	39,200				39,200		
d.	Miscellaneous *(contigencies, sundry, audit cost) (1% of the total cost)*	60					L/S	1,365	1,365					
e.	Audit	62	1	1		Person	2,000	2,000				2,000		
f.	ITTO Monitoring and Review	81	1	1		Number	20,000.00	20,000.00	20,000.00					
g.	ITTO Program Support (12%)	80	1	1		Person	L/S	24,219	24,219					
	Total 2							93,980.16	52,780.16			**41,200.00**		
	Grand Total							**504,308.54**	**226,041.16**			**278,267.38**		

3.4.1 Consolidated Budget by Component

Budget Components		Input	Unit Costs	TOTAL	YEAR 1
10	**Personnel**				
	11 Resource Person		40	4,080.1	4,080.1
	12 Specialist		2,000	18,000	18,000
	12 Information Sheet		1,000	3,000	3,000
	19. Component Total			**25,080.10**	**25,080.10**
30	**Travel**				
	31.1 Meals		33.3	6,922	6,922
	31.3 Accomodation		83.33	1,833.26	1,833.26
			66.66	192,114.12	192,114.12
	33 Local Transport		196	82,320	82,320
	39. Component Total			**283,189.38**	**283,189.38**
40	**Capital Items**				
	44.2 Field Training materials		150	36,300	36,300
	64 Forestry Equipment				
	a. Chainsaw		400	2,000	2,000
	b. Walkie talkie		170	850	850
	c. Clinometer		300	1,800	1,800
	d. Theodolite		4,000	12,000	12,000
	e. Leveling staff		600	1,800	1,800
	f. Measuring Tape		120	360	360
	g. Hoe		10	60	60
	h. Spade		10	60	60
	49. Component Total			**55,230**	**55,230**
50	**Consumable items**				
	51. Raw Materials				
	Fuel		0.6	120	120
	54. Office Supplies				
	a. Video camera		800	1,600	1,600
	b. Stationary		360	3.960	3,960
	55. Forestry Engineering Materials				
	Culvert		70	350	350
	Timber for Bridge		1920	1,920	1,920
	Crusher run		85	85	85
	Sand		90	90	90
	59. Component Total			**8,125**	**8,125**
60	**Miscellaneous**				
	60. Miscellaneous (sundry)		LUM SUMP	1,365	1,365
	61 Steering Committee Meeting		2,000	2,000	2,000
	62 Audit		2,000	2,000	2,000
	63. Contingencies (Group Insurance)		5	1,100	1,100
	64 Forestry Equipment				
	a. Rental for Crawler Tractor/Buldozer		7,000	28,000	28,000
	b. Rental for Wheeled Loader		7,000	28,000	28,000
	c. Rental for Log Fisher		7,000	14,000	14,000
	d. Rental for Excavator		2,000	4,000	4,000
	e. Rental for Grader		2,000	4,000	4,000
	f. Rental for Compacter		2,000	4,000	4,000
	69. Component Total			**88,465**	**88,465**

80	**Project Monitoring and Administration**				
	80. ITTO Monitoring and Review		20,000.00	20,000.00	20,000.00
	81 ITTO Programme Support Cost (12% of ITTO Budget 10-80)		24,219.00	24,219.00	24,219.00
	89. Component Total			**44,219.00**	**44,219.00**
100	**GRAND TOTAL**			**504,308.54**	**508,308.54**

3.4.2 ITTO Budget by Component

Annual Disbursements Budget Components		**Total**	**YEAR 1**
10	Personnel	25,080.16	25,080.16
30	Travel	6,922.00	6,922.00
40	Capital Items	55,230.00	55,230.00
50	Consumable Items	8,125.00	8,125.00
60	Miscellaneous	86,465.00	86,465.00
80	Project Monitoring and Administration		
	ITTO Monitoring and Review	20,000.00	20,000.00
	ITTO Programme Support Cost	24,219.00	24,219.00
ITTO TOTAL		**226,041.16**	**226,041.16**

3.4.3 Executing Agency Budget by Component

Annual Disbursements Budget Components		**Total**	**YEAR 1**
10	Personnel		
30	Travel	276,267.38	276,267.38
40	Capital Items		
50	Consumable Items		
60	Miscellaneous		
80	Project Monitoring and Administration	2,000.00	2,000.00
Executing Agency TOTAL		**278,267.38**	**278,267.38**

3.5 Assumptions, risks, sustainability

3.5.1 Assumptions and risks

Risk and mitigation measures are summarised below.

Risks	Mitigation measures
Stakeholders do not give full cooperation	Dialogue to explain project activities and benefits to related stakeholders such as state authorities, other government agencies and logging operators.
Logging operators reluctance to participate	Negotiation and consultation with logging companies on RIL implementation.
Lack of public awareness on environment and forestry related issues	Seminar and workshop to disseminate information on environment and forestry related topics

- Continued and well-planned training will be carried out for workers of different level which involved directly on forest harvesting operation.

3.5.2 Sustainability

The continuous commitment of the FDPM through FTD and collaboration partnerships with related stakeholders such as the state governments and logging operators will be crucial to the success and sustainability of this project.

~~At the moment, the state government has pledged their commitment towards maintaining the environment through full implementation of RIL through annual allocation under Forest Development Fund (***Kumpulan Wang Pembangunan Hutan-KWPH)*** where forest development activities will be carried out continuously every year. Among activities conducted using this fund is training on Forest Road Construction and other basic forestry course.~~

At the moment, the state government has pledged their commitment towards maintaining environmental stability and forest biodiversity with full implementation of RIL in forest harvesting activities at the permanent reserved forest. Substantial amount of fund will be provided annually for training on RIL under Forest Development Fund (*Kumpulan Wang Pembangunan Hutan-KWPH).*

FDPM will continue to request for financial support from Ministry of Plantation Industry and Commodity for levi money to fund the course as well as from other sources either locally or internationally.

Institutional and Technical Sustainability

The project builds upon relevant initiatives and strengths that already exist within the FDPM especially FTD. FTD through TFTC has the capacity and strength to carry out courses in forestry related field especially those concerning directional felling, handling of heavy logging machineries, forest road construction, long cable extraction system, nursery establishment and planting stock procurement and awareness programmes on international forestry related issues. In addition, there are other courses that are able to support the capacity building on RIL related courses under the proposed project.

Social sustainability

The project will be implemented through active participation from logging operators to ensure their commitment and support for the project. Relevant stakeholders will be continuously consulted and engaged through various dialogue and discussions.

Economic Sustainability

The project is focused on human resource development in order to sustain economic growth and job opportunities to the local community. Well managed forest through RIL practices will enable sustainable supply of timber to local wood industries throughout the country.

PART 4. IMPLEMENTATION ARRANGEMENTS

4.1 Organisation structure and stakeholder involvement mechanisms

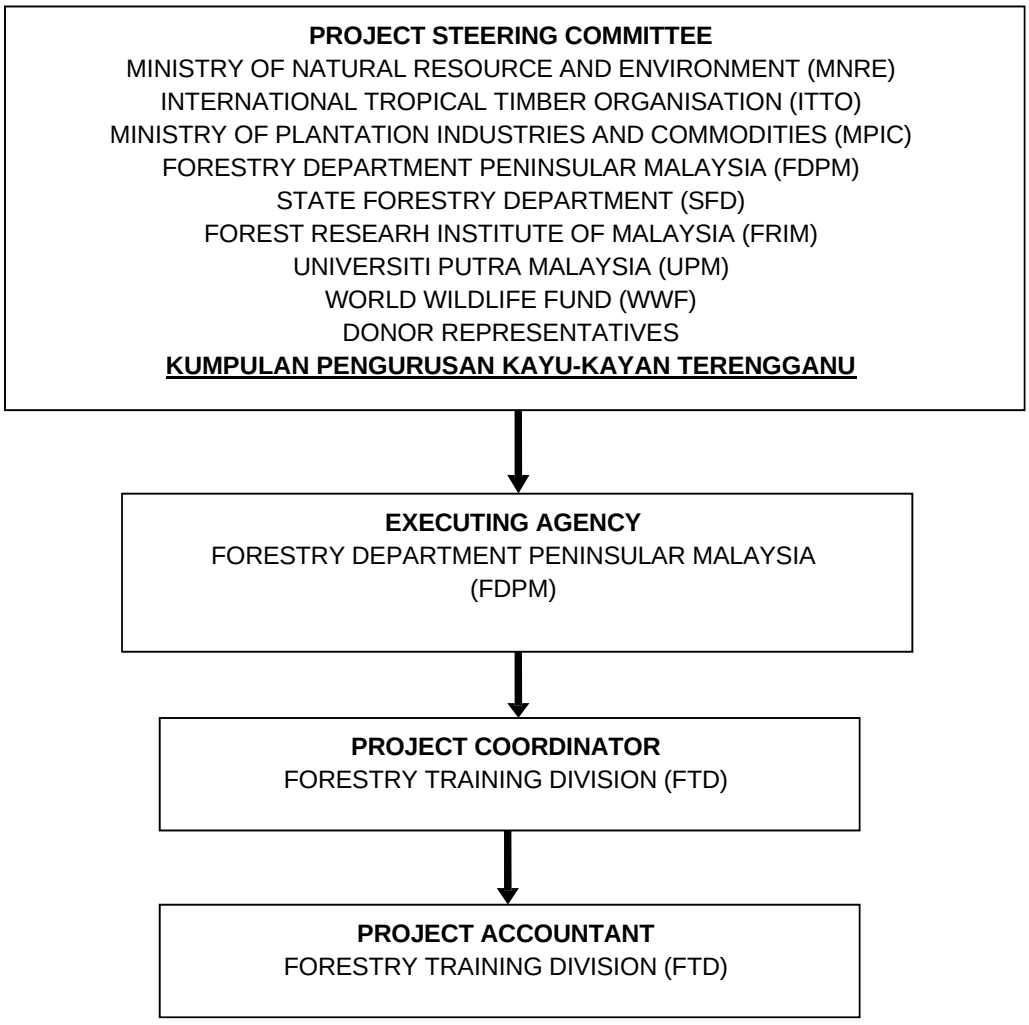
4.1.1. Executing agency and partners

The executing agency of the project will be FDPM which will responsible to coordinate and implement the project activities and also managing the ITTO fund. The executing and implementing agency will be involved in the project from the preparation until completion of the project.

Executing agency will work together with MNRE and logging operators to implement the project activities.

The management structure of the project is presented in the following diagram:

FIGURE 3: PROJECT IMPLEMENTATION ARRANGEMENT



4.1.2. Project steering committee

The Project Steering Committee (PSC) will be established to oversee project implementation, approved expenditures within the budget, review the activities that have been carried out, review and propose changes in budget activities.

The members of the PSC include the following:

- Ministry of Natural Resources and Environment (MNRE)
- International Tropical Timber Organization (ITTO)
- Ministry of Plantation Industries and Commodities (MPIC)
- Forestry Department Peninsular Malaysia (FDPM)
- State Forestry Department (SFD)
- Forest Research Institute of Malaysia (FRIM)
- Universiti Putra Malaysia (UPM)
- World Wildlife Fund (WWF)
- **Donor Representatives**
- **Kumpulan Pengurusan Kayu-Kayan Terengganu**

4.1.3. Stakeholder involvement mechanisms

Responsibilities and roles assigned to key stakeholders in this project are as follows:

a) The Ministry of Natural Resources and Environment, Malaysia

- Chair for the Project Steering Committee.
- Facilitate FDPM in executing the project.
- Coordinate meeting at least once a year.

b) Forestry Department of Peninsular Malaysia

- Implement the project within 2 years.
- Organise and coordinate trainings.
- Managing the project fund.
- Produce interim and final report (financial and project).

c) State Forestry Department and Stakeholders

- Involved and participate in RIL trainings.
- Site identification for training and seminar purposes.

4.2 Reporting, review, monitoring and evaluation

a) Project Progress Report.

The first project progress report will be submitted to ITTO six (6) months after the project start-up or at least four (4) months before the date of the monitoring visits (or Steering Committee meetings) and two (2) months before every Council Sessions (in May and November).

b) Project Completion Report

This will be submitted within six (6) months after Project Completion.

c) Monitoring, Review and Visits by ITTO.

The Project Steering Committee meeting will be held annually or as necessary. ITTO monitoring visits, if considered still necessary, will be arranged after the achievement of the respective outputs according to the work plan.

d) Evaluation

Evaluation will be conducted during the last quarter before completion of the project.

4.3 Dissemination and mainstreaming of project learning

4.3.1. Dissemination of project results

~~Results from the project will be presented and reported by the executing agency through project steering committees and consultation with key stakeholders. Following that, the information will be disseminated through seminars and reports.~~

Results from the project will be presented and reported by the executing agency through project steering committees and consultation with key stakeholders. Following that, the information will be disseminated through seminars, conference reports, articles, internet, books, guided visits, etc.

4.3.2. Mainstreaming project learning

Experiences of implementing the project will serve as future reference in developing potential schemes of similar human resource capacity building, revised and improved programme on RIL will be useful in forest management practices towards achievement of SFM.

ANNEX 1. PROFILES OF THE EXECUTING AND COLLABORATING AGENCIES

The Forestry Department Peninsular Malaysia (FDPM) is under the Ministry of Natural Resources and Environment and responsible for the management, planning, protection and development of the Permanent Reserved Forest in accordance with the National Forestry Policy and National Forestry Act. It is currently headed by Director-General Dato' Prof. Dr. Hj. Abd. Rahman bin Abd. Rahim and assisted by two Deputy Director Generals of Forestry. The Deputy Director-General of Forestry (Policy and Planning) is responsible for forest planning and economics, forest resource management, silviculture and forest biological conservation, forest eco-park and state forest park development, international forestry affairs as well as forest plantation and protection. The Deputy Director-General of Forestry (Operations and Technical) is responsible for administration and finance, forest engineering, technical and wood industry, forest enforcement, forestry training and human resource development as well as information technology systems development.

FDPM consists of thirteen divisions, eleven state forestry department and thirty three districts forest offices located throughout Peninsular Malaysia. Forest development division is responsible for planning, implementing and monitoring of forest management and development activities, including biodiversity conservation, ecotourism development and forest rehabilitation and implementation of the State Forest Management Plan. The State Forestry Department is responsible for the administration and regulation of forest harvesting, forest revenue collection and development of the state forest resources. The Department also plans and coordinates the development of wood-based industries. The State Forestry Department is divided into Forest Operations and Forest Development Divisions and supported by District Forest Offices.

District Forest Office is responsible for administration, controlling forest harvesting, forest revenue collection and forest law enforcement. The office is also responsible for implementing forest management and development activities including the management of forest eco-park and state forest park.

ANNEX 2. TASKS AND RESPONSIBILITIES OF KEY EXPERTS PROVIDED BY THE EXECUTING AGENCY

No	Name	Professional Education	Position in present organization	Experience relevant to the project	Task in the project
1	Dato' Prof. Dr. Hj. Abd. Rahman bin Abd. Rahim	PhD	Director General of Forestry	Head of Forestry Division	**Project Leader** **Task and Responsibilities:-** **- oversee the overall operation and all aspects of the project implementation.** **- Works directly with project coordinator; Direct contact point with ITTO;** **- Chairs PSC meetings;** - **Liaises with heads of departments and key stakeholders on project implementation.**
2	Dato' Nik Mohd Shah bin Nik Mustafa	Master of Science	Deputy Director-General of Forestry (Policy and Planning)	Head of the Forest Policy and Planning Division	**Assistant Project Leader** **Task and Responsibilities:-** **- assisting project leader in overseeing the overall operation and all aspects of the project implementation.** - **works directly with project coordinator;** - **liaises with heads of departments and key stakeholders on project implementation.**
3	Borhanudin bin Hj Arshad	Master in Philosophy	Director of Training Division	Director of various state department division and units	**Project Coordinator** **Task and Responsibilities:-** - **Controls project fund and expenditure;** - **Prepares and makes presentations on project's progress;** - **Organizes project management team;** - **Formulates work plans for consultants;** - **Coordinates preparation of official documents and cabinet papers for submission to government;**

4	Grippin anak Akeng	Master of Science	Principal of Terengganu Forestry Training Centre		**Assistant Project Coordinator** - **Organizes PSC and other meetings and field visits by PSC members;** - **Edits all technical reports for publication.** - **Assisting assistant project coordinator in preparing official documents and cabinet papers for submission to government;**

ANNEX 3. TASKS AND RESPONSIBILITIES OF PERSONNEL FUNDED BY ITTO

No	Name	Professional Education	Position in present organization	Experience relevant to the project	Task in the project
1	Gan Boon Keong	Bachelor in Science Forestry	Consultant	20 years of professional experience in applying SFM or RIL related methodologies in planning and consulting work	Specialist (National Expert) for Output 1 Activity 1.1, 1.2 and 1.5 Task and Responsibilities:- - collects relevant training materials; - Revise existing modules with support from FDPM, FTD and TFTC during the initial stage of the project - Prepare training modules for the project. Resource Person for Output 1. Activity 1.4 - To conduct classroom lecture and practical training. - To develop training time schedule.
2	Solehan bin Soarani	Diploma in Forestry	Senior Assistant Officer, Selangor State Forestry Department, FDPM		Resource Person for Output 1. Activity 1.4 - To assist specialist in performing his tasks. - To identify suitable area for site visits.
3	Khairuddin bin Perdan	Bachelor in Science Forestry	District Forest Officer, Kedah State Forestry Department, FDPM		Resource Person for Output 1. Activity 1.4 - To assist specialist in performing his tasks. - To identify suitable area for site visits.

4	**Rajihan bin Rahim**	**Bachelor in Science Forestry**	**District Forest Officer, Johor State Forestry Department, FDPM**		**Resource Person for Output 1. Activity 1.4** - **To assist specialist in performing his tasks.** - **To identify suitable area for site visits.**
5	**Hizamri Mohd Yassin**	**Philosophy of Doctorate**	**Deputy State Forestry Director, Perak State Forestry Department, FDPM**	**-Vast experience on**	**Resource Person for Output 1. Activity 2** - **arrange for meetings and discussions with stakeholders;** - **work closely with FDPM, FTD and TFTC in preparing documents for seminar/workshop within the duration of the project.**

ANNEX 4. RECOMMENDATIONS OF ITTO EXPERT PANEL

1.	In Section 1.3.2 Social, cultural and environmental aspects, **add more information** to clarify separately the status of social, cultural and environmental aspects of the project's location;	Please refer to sub-section 1.3.2
2.	In Section 2.1.2 Stakeholder analysis elaborate the benefits form the projects' results received by private sector. **Identify logging operators** that have given their indications to participate in the project implementation;	Please refer to sub-section 2.1.2
3.	In Section 2.1.3 Problem Analysis, improve the problem analysis to **precisely depict the main problem encountered. Include the discussion on forest certification and supply of raw materials**. Hence, the **Problem Tree needs to be revised accordingly**;	Please refer to sub-section 2.1.3
4.	In Section 2.2.1 Development objective and impact indicators, **rephrase the Development objective into a concise and clear sentence;**	Please refer to sub-section 2.2.1
5.	In Section 2.2.2 Specific objective and outcome indicators, **rephrase the Specific objective into a concise and clear sentence, in accordance with the ITTO Manual for project formulation. Revise the outcome indicators into SMART (Specific, Measurable, Appropriate, Realistic, and Time-bound);**	Please refer to sub-section 2.2.2
6.	In Section 3.1 Outputs and activities and in the Table 2: Logical framework matrix, revise the section and the table in agreement with the changes in point 3 above. Include an activity to share the produced training modules and guidelines into wider audiences (for instance by uploading the modules in the official website of the Executing Agency). Remove Activities 1.6, 2.3, and 2.4;	Please revised accordingly
7.	In Section 3.2 Implementation approaches and methods, elaborate the relationship/cooperation among stakeholders in the project implementation;	Please refer to sub-section 3.2
8.	In Table 3: Work Plan, specify the responsible parties instead of a single entity. Remove ITTO from the Responsibility Party;	Please refer to Table 3
9.	In Section 3.5.2 Sustainability, improve the elaboration on sustainability into clearer exit strategies, particularly in regards to financial and institutional aspects;	Please refer to sub-section 3.5.2
10.	In Section 4.1.1 Executing agency and partners, include the representative of logging operators as a member of the steering committee;	Please refer to sub-section 4.1.1
11.	In Section 4.3.1 Dissemination of project results, expand the channels for disseminating the project's results at national, regional and international levels;	Please refer to sub-section 4.3.1

12.	In Annex 2 Task and Responsibilities of Key Experts Provided by the Executing Agency, provide TOR for every task and responsibility, and also explain who the trainers and training facilities are; and	This has been included in Annex 2 and Annex 3
13.	Include an Annex that shows the overall assessment and specific recommendations of the 46th Expert Panel and respective modifications in tabular form. Modifications should also be highlighted (bold and underline) in the text.	This has been included in Annex 4