INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE	OPERATIONAL STRATEGIES FOR THE CONSERVATION OF TENGKAWANG GENETIC DIVERSITY AND FOR SUSTAINABLE LIVELIHOOD OF INDIGENOUS PEOPLE IN KALIMANTAN
SERIAL NUMBER	PD 586/10 Rev.1 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF INDONESIA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

Tengkawang seed is one of living sources of local people around the forest. Trees cutting and other harvesting activities lead to declining natural tengkawang population. Loss of individual trees in the wild population correspond to the deteriorating of genetic diversity. According to Redlist IUCN several species of tengkawang are categorized as critically endangered, endangered and vulnerable. Tengkawang are protected species of Indonesia as stated by Government regulation No. 7/1999. Ministerial decree No.692/Kpts-II/1998 also stated that tengkawang trees are prohibited to cut down because of rareness and are used by local communities. Considering the important value of tengkawang, genetic conservation of the already endangered tengkawang species for biodiversity conservation and sustainable livelihood of indigenous people are required.

The development objective of the project is to contribute to improvement of biodiversity conservation of dipterocarps especially tengkawang species and livelihood of indigenous people. The specific objective is to arrest depleting process of tengkawang genetic diversity. The expected outputs of the project are: (1) Measures for protection of tengkawang species improved, (2) Genetic conservation program of Tengkawang species improved and (3) Support of indigenous people for tengkawang genetic diversity conservation obtained.

EXECUTING AGENCY	DIPTEROCARPS RESEARCH CENTER, FORDA, MINISTRY OF FORESTRY
DURATION	36 MONTHS
APPROXIMATE STARTING DATE	TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE

Source	Contribution in US$	Local Currency Equivalent
ITTO	**414,104**	
Gov't of Indonesia	99,252	
TOTAL	**513,356**	

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List of Abbreviations and Acronyms

DIREC	Dipterocarps Research Center
FORDA	Forestry Research and Development Agency
MoF	Ministry of Forestry
NGO	Non Government Organization
SFM	Sustainable Forest Management

PART 1. PROJECT CONTEXT

1.1. Origin

Dipterocarp is the dominant trees in tropical rain forest that ecologically and economically are valuable. Important trees for local communities in the ecosystem of dipterocarp are large-seeded *Shorea* spp that produce illipe nut, locally known as tengkawang. Tengkawang are only a small subset (13 species) of the 267 described Bornean dipterocarps (Ashton 1982). Tengkawang species have ecological role to maintain ecosystem balance. Tengkawang seed is one of the famous non-wood forest products utilized and gathered by local people. 15,000 people are depend on tengkawang seed for their living. It is used as raw material for vegetable oil and the price are higher than regular cooking oil such as coconut or corn oils. Tengkawang seed also could be used as chocolate oil substitute, cosmetic raw material, and medicines.

Indonesian tengkawang are mostly inhabitant of Kalimantan but sparsely exist in Sumatera too. As consequences of unsustainable forest practices couple with high deforestation rate, formerly common tengkawang are now scarce. Based on DIREC research finding for the last several years from 13 species of tengkawang, 7 species are already very difficult to be found in their natural habitat and possibly headed to extinction. Redlist IUCN categorized several tengkawang species as critically endangered, endangered and vulnerable. Although tengkawang are protected species and prohibited to cut down as stated by Government regulation No. 7/1999 and Ministerial decree No.692/Kpts-II/1998, sustainability of genetic diversity of tengkawang is under threatened. Protected and vulnerable tengkawang species are: *S. macrophylla, S. palembanica, S. splendida, S. stenoptera, S. seminis, S. beccariana, S. mecistopteryx* and *S. pinanga.*

Impact of wood and seed harvesting and forest fragmentation lead to decline or even loss of genetic diversity on the species and population level, change on interpopulation structure, increase the probability of inbreeding, and genetic drift. Based on the 2009 DIREC finding revealed that 4 tengkawang species taken from several natural populations in Kalimantan showed low and moderate genetic diversity or less than other dipterocarp species such as *S. leprosula*, *S. superba* and *S. laevis*. These conditions lead to sustainability of genetic diversity turn into vulnerable, therefore strategic action to conserve genetic diversity of tengkawang species is urgently needed.

Dipterocarps conservation including tengkawang species have been carried out by several institutions. Gajah Mada University (UGM) through ITTO Project PD 16/96 Rev.4 (F); PD 106/01 (F) conserved *Shorea leprosula* and *Lophopetalum multinervium*. PD 41/00 Rev.1 (F, M) developed forest plantations model of dipterocarps , including some tengkawang species. FORDA has built ex situ conservation plot in West Java and Banten including 5 tengkawang species. However, parentage and genetic diversity of the population are unknown. Tengkawang conservation that has been carried out was only in species level and hasn't paid attention on genetic diversity. Lack of information on population origin and genetic diversity of tengkawang causes genetic drift due to in-breeding process that may lead to extinction. Genetic conservation endeavor is also offering utilization of genetic resources. For tengkawang species, genetic resources could be utilized to increase seed productivity and quality through tree improvement techniques. It is very useful to local communities due to raise their revenue.

Considering the important value of tengkawang, genetic conservation of the endangered tengkawang species for biodiversity conservation and sustainable livelihood of indigenous people are required. Genetic diversity conservation is a crucial part for population and species stability to keep species sustainable. Genetic conservation endeavor of endangered tengkawang species include strengthening policy to protect tengkawang species, genetic conservation program and sustainability harvesting of tengkawang seed.

1.2. Relevance

1.2.1. Conformity with ITTO's Objectives and Priorities

Compliance to ITTA 2006 Objectives

This project will disseminate government regulation which prohibit tengkawang species to be cut and conduct training for government officer to improve forest law enforcement. It complies to the objectives of the ITTA 2006 as defined in Article 1 (n) to strengthen the capacity of members to improve forest law enforcement and governance, and address illegal logging and related trade in tropical timber.

This project concern with tengkawang seed utilization and provide information on sustainable harvest level of tengkawang seed. Tengkawang seed as one of non timber forest product can give benefits to sustainable forest management. It can be utilized without cutting the trees. This project also will develop national strategy on tengkawang genetic conservation that involve related stakeholders. Thereby, it is relevant with ITTA 2006 objectives in Article 1 (m) to promote better understanding of the contribution of non-timber forest products to the sustainable management of tropical forests with the aim of enhancing the capacity of members to develop strategies to strengthen such contributions in the context of sustainable forest management, and cooperating with relevant institutions and processes to this end.

This project concern with tengkawang seed as livelihood of indigenous people. Training in capacity building will be conducted to increase indigenous people income in sustainable way. It is appropriate with ITTA 2006 objectives in Article 1 (r) to encourage 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 forests

Compliance to ITTO Action Plan 2008-20011

The proposed project complies with various aspects as raised in the ITTO Action Plan 2008-2011 particularly in the commission of reforestation and forest management :

This project will improve protection measures of tengkawang species through increasing forest law enforcement, giving better understanding on tengkawang tree identification and developing technical manuals for forest consession. This project also increasing capacity of indigenous people in tengkawang seed utilization to raise their income so that support on tengkawang conservation will be obtained. It is related to expected outcome 5 in the ITTO Action Plan 2008-2011 that is tropical forest resource better secured. The outcome related to the objectives (m) (n) (r), of Article 1 of the ITTA, 2006.

This proposed project also in line with action which mention in Expected outcome 6: Tropical forest resource sustainably managed. Information on sustainable harvest level of tengkawang seed will be provided as guidance on improving the sustainable yield of non-timber products. Assessment on social and economics aspect also conducted to increase benefits of sustainable forest management. The outcomes related to the to objectives (q) (r), of Article 1 of the ITTA, 2006.

Compliance to ITTO Guidelines 2009 on Biodiversity Conservation

The proposed project is highly relevant to ITTO/IUCN Guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests (ITTO Policy Development Series No.17, 2009). These guidelines are a complete revision and update of ITTO's original Biodiversity Guidelines published in 1993. They set out the specific

actions that policymakers, forest managers and other stakeholders should take to improve biodiversity conservation.

Objectives of this project are relevant to principles of the ITTO Guidelines (2009):

This project aim to improve protection measures of tengkawang species and develop national strategy on tengkawang genetic diversity conservation as guidance on biodiversity conservation at forest management level. It is based on social, economic and environmental aspects for setting and achieving biodiversity conservation and sustainable use goals. It is relevant with Principle 9: Biodiversity considerations at the forest management unit level.

This project will improve genetic conservation program of tengkawang species to maintain ecosystem function. Genetic diversity of tengkawang species is depleting so that genetic conservation endeavor is urgently needed. This project also manage tengkawang seed utilization through sustainable use to maintaining its yields. It complies to Principle 11: Maintaining functioning forest ecosystems

Relevance to other global issue

This proposal is also relevant to the United Nation Millenium Development Goals (UN MDGs), CBD Target (2010 Biodiversity Target and Global Strategy for Plant Conservation) and CITES. UN MDGs Goal 7 is "to ensure environmental sustainability by reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss". The 2010 Biodiversity Target is "to achieve a significant reduction of the current rate of biodiversity loss at the global, regional and national level by 2010". The ultimate and long-term objective of the Global Strategy for Plant Conservation is to halt the current and continuing loss of plant diversity.

1.2.2. Relevance to the submitting country's policies

The proposed project is relevant to the country priorities to conservation of biological diversity. Commitment to support the achievement of these agenda have been legally mandated by policy legislation in UU No.5/1990 concerning the Ecosystem and Biodiversity Conservation.

In December 2009, Ministry of Forestry issued Permenhut No. P.70/Menhut-II/2009 to establish 8 Forestry policy priorities in the National Development Programme, The priorities that relevance to the project are:Biodiversity conservation and empowerment of local communities around forest area.

This project is also relevant to FORDA Roadmap 2010 - 2025 (Forestry Ministerial Decree No.163/Menhut-II/2009) which sets 5 major themes to accommodate the dynamics and complexity of forestry challenges in the future in a more integrated way. Natural forest management and biodiversity conservation are parts that are set in the themes. This project is also supported by master plan research of DIREC. One of the priorities is dipterocarps conservation on ecosystem, species and genetic level. Tengkawang is one of the main priority of dipterocarps species.

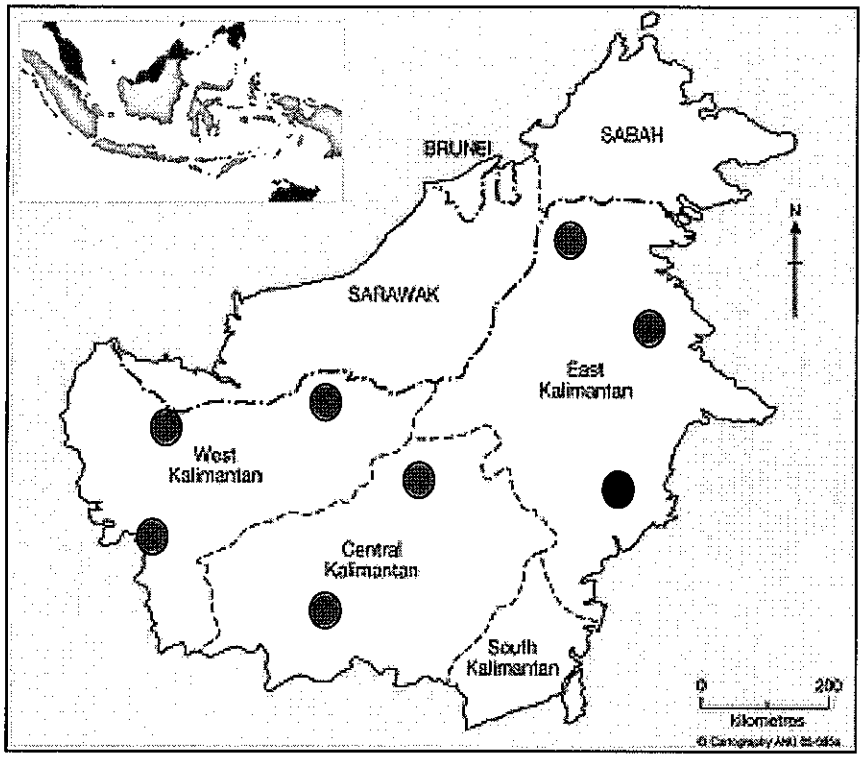
The legal commitments have been elaborated by National Board for Planning and Development (BAPPENAS) and Ministry of Forestry. BAPPENAS has issued strategic plan for the management of biological diversity, including all timber species in Indonesia "Indonesian Biodiversity and Strategic Action Plan (IBSAP) for the period of 2003-2020".

1.3. Target Area

1.3.1. Geographic location

Administrative operation of the project will be maintained in Samarinda, East Kalimantan. The targeted areas of project activities are West, East and Central Kalimantan provinces that encompass the highest diversity of tengkawang species compare to other locations in Indonesia. The main activities including exploration of tengkawang species and increasing the capacity of communities, local government and forest concession to protect and utilize tengkawang species in sustainable way. The project will delineate the areas that posse's high genetic diversity for in-situ conservation. Ex-situ conservation will be developed on representative areas that are secure from various disturbances such as illegal logging, encroachment, fires, and have good accessibility.

Figure 1. Target areas of project activity. The blue circles represent natural habitat of tengkawang species. The red circle is the candidate location for ex situ genetic conservation area.



1.3.2. Social, cultural, economic and environmental aspects

Tropical rain forest in Kalimantan is dominated by dipterocarps which are amount of 267 species including tengkawang species. The current forest area in Kalimantan are 30.449.800 ha. It can be more decreasing due to high deforestation rate that are 246.020 ha/year. Decreasing of forest area lead to declining natural tengkawang population. Loss of individual trees in the wild population of tengkawang species is corresponding to the loss of genetic diversity.

Social Cultural Aspect

Tengkawang is one of the important components of social and cultural life of indigenous people in Kalimantan. Many agroforestry systems that have been implemented by several ethnic groups from generation to generation to utilize tengkawang. Dayak Kenyah who live in Malinau,

East Kalimantan called it Taneg Olen. Dayak Tunjung and Benuaq (Barongtongkok, East Kalimantan) called it Lembo. Dayak Bidayuh (Sanggau, West Kalimantan) called it Tembawang. **Dayak community in Kalimantan have traditional wisdom for tengkawang species. They have areas where tengkawang trees are not allowed to be cut called pulau. Tengkawang seed is utilized by indigeneous people in their daily activities i.e. fuel for lamps and customary ceremonial purposes. Moreover, tengkawang seed is applied as icon of West Kalimantan province. It shows that tengkawang has essential role in social and cultural aspect of indigenous people in Kalimantan as part of their life. However, tengkawang seed utilization is still using traditional manner. Indigenous people have lack of capacity to increase added value of tengkawang seed so it needs to be improved. Local knowledge of indigenous people on tengkawang distribution in its natural habitat will be useful in project implementation related to collecting information on genetic vulnerability status of tengkawang species.** This project will provide benefits by establishing a policy strategy to conserve tengkawang species through genetic conservation. Thereby, it can provide wider opportunities to improve the welfare of local communities around the forest.

Economic Aspect

Tengkawang seed is one of the living sources of indigenous people in Kalimantan. According to Directorate General of Land Rehabilitation and Social Forestry (Dirjen RLPS), Ministry of Forestry, 15,000 people are depend on tengkawang seed for their living. Tengkawang seed can be collected more than 10,000 kg in harvest season. It has high economic value i.e U.S. $ 2300 to 2700 per tone. In great harvest season 50,000 tons of tengkawang seed can be exported. This project will provide an economic advantage by strengthening the capacity of local communities to gain added value of tengkawang species and information on economics of tengkawang seed relating to market mechanism that is in favor of indigenous people.

Environmental aspect

The project will be of benefit to the environment by conserving genetic diversity of tengkawang. Genetic diversity conservation is a crucial part for population and species stability to keep species sustainable. The species and population capacity to survive from the changing environmental condition rely on the existing genetic diversity. Genetic conservation endeavor is offering utilization of genetic resources. For tengkawang species genetic resources could be used to increase seed productivity and quality through tree improvement techniques.

1.4. Expected outcomes at project completion

At project completion, several outcomes below are expected to be achieved:

- Improving measures for protection of tengkawang species will produce a technical manuals and national conservation strategy for protection of tengkawang species that provide benefit to central and local government, private sector and local communities. Tengkawang species will be managed in sustainable way and genetic diversity loss of tengkawang will be reduced
- The establishment of in situ and ex situ genetic conservation plots of tengkawang species will be of benefit to conserve genetic diversity from various natural populations. It is important for sustainable livelihood of indigenous people. Therefore, genetic bank of tengkawang species will be established in manageable site to ensure the conservation on genetic diversity. Genetic bank of tengkawang also provide opportunities for use of genetic resource to increase seed productivity and its quality through improvement techniques that can be useful to local communities to raise their income
- Increasing indigenous people capacity that is conducted through application of appropriate technologies for harvesting tengkawang in sustainable way, processing and marketing of tengkawang seed products and establishing cooperate association model will improve their welfare and increase national economy from forestry sector.

PART 2. PROJECT RATIONALE AND OBJECTIVES

2.1. Rationale

2.1.1. Institutional Set Up

Dipterocarps Research Center (DIREC)
The main task of DIREC is conducted research and development on dipterocarps. One of the strategic programs to achieve its vision and mission is dipterocarps conservation, including tengkawang species. Tengkawang conservation has been noticed since long time ago. However national strategy on genetic diversity conservation of tengkawang species has not been developed yet.

Local Government
Local government has mission to optimalyzed social benefit of the forest, increasing benefit value of forest product and biodiversity conservation. It is expected to support sustainable forest management, provide benefit to improve local communities welfare. Local government has problems in monitoring and law enforcement of rules violations related to the protection of tengkawang species due to there is no standard operating procedure to protect tengkawang species.

Forest concessions
The genetic conservation of tengkawang initiative is closely linked to the promotion of Sustainable Forest Management. Forest consession has the duty of protect tengkawang species based on the regulation that has been issued by Minister of Forestry. However, cutting down tengkawang species is still happen, especially lesser known species of tengkawang, due to human resource constraints on tree identification.

The other institutions also involve in the project implementation such as National Institute of Science (LIPI), NGO, and University. However, coordination among institutions is still weak. Each institution conduct research and conservation action based on their own program so it has not been comprehensive yet. This project leads to strengthen coordination among insititution so that genetic conservation effort of tengkawang species can run effectively.

2.1.2. Stakeholders Analysis

Several meetings has been carried out to formulate this project proposal. First meeting was conducted in DIREC office that involved researcher from DIREC and CBTIR (Center for Biotechnology and Tree Improvement Research). This meeting disscused about species of Dipterocarps which is threatened to extinction. Tengkawang was chosen as priority species to be conserved because it is threarened to extinction and utilized by local communities. Further meeting was conducted in Mesra Hotel, Samarinda, East Kalimantan in February, 2010 that involved relevant stakeholders i.e. national government, local government, private sector, university and NGO. They support conservation effort of tengkawang species and give contribution to project proposal formulation. Consultation process with local communities also have been conducted during DIREC's field survey. It discussed about tengkawang utilization and the problem on marketing of tengkawang seed. Regarding the consultation, it is known that tengkawang population is declining from time to time so it gives impact to their livelihood sustainability.

Table 1. Summary of Stakeholders Analysis

Stakeholder Group	Characteristics	Problems, needs, interests	Potentials	Involvement in the project
Primary Stakeholders				
Local community	• Forest dependent • Derive income from	• Base for livelihoods threatened • Lack of	• Have access to the resource • Traditional knowledge	• Primary project beneficiaries • Get necessary information and

Stakeholder Group	Characteristics	Problems, needs, interests	Potentials	Involvement in the project
	tengkawang seed harvesting	knowledge and understand ding about added value of tengkawang and sustainable harvest level		capacity to manage tengkawang spescies
Local Government	• Locally based • Lack of law enforcement power problem	Lack of capacity	• Have authority In district/provincial level • Can mobilized people in the community • Are close to forest industry operators	• Involved in project implementation
National government	Supportive of biodiversity conservation	• Lack of coordination with local communities and local government • High pressure on natural forest	Having resources Having network	• Project implementing agency • Create proper policy and strategy in order to support genetic conservation of tengkawang species
Forest Consession	Implementing the management practice in the field	• Lack of communication • Lack of understanding about tengkawang species	Having acces to tengkawang species	• Project implementation partner
Secondary Stakeholders				
Forest Associations	Coordinate and facilitate all the association member interest (forestry concessions)	Lack of knowledge	Experienced working with private sectors	Partner as facilitator
DIREC	• Government agency • Actively involved in Dipterocarps research and development activities	Lack means to finance collaboration	• Delivering services or aid to primary stakeholders • Experienced working on research and development	• Project executing agency • Provide the main support for the project
Tertiary Stakeholders				
NGO's	Actively involved in local communities activities	Lack of technical knowledge	Experienced working with communities	• Project implementation partner • As facilitator

Stakeholder Group	Characteristics	Problems, needs, interests	Potentials	Involvement in the project
National Institute of Science (LIPI)	Actively involved in research activities and emphasize on the importance of data base	Lack of coordination with local communities and local government	Experienced working on research and development	• Project implementation partner • Involving in study analysis
Universities	Actively involved in research activities	Lack of networking	Experienced working on basic research and development	• Project implementation partner • Involving in study analysis

2.1.3. Problem Analysis

The existence of species diversity has been affected by some activities such as logging operation, deforestation, and forest degradation. Periodical monitoring needs to be carried out to reduce destructive impact and biodiversity loss. The monitoring should also include observation on genetic diversity. Establishing genetic resources area is necessary to ensure the existence of genetic material for conservation and future uses. This plant genetic resources conservation could be undertaken by in situ and ex situ conservation. Tengkawang seed is one of living sources of local people around the forest. Trees cutting and other harvesting activities lead to declining natural tengkawang population. Loss of individual trees in the wild population correspond to the deminishing of genetic diversity. Seed harvesting, as in tengkawang species bring even more severe impact to the regeneration and genetic diversity.

A key problem was initially defined as **genetic diversity of tengkawang in Kalimantan is depleting** and as a consequences genetic resource of tengkawang is threatened to extinction and source of livelihood for indigenous people unsustainable. Based on the consultation process to determine the opinions of and obtain input from representatives of the various stakeholders during the development of this project proposal, it is concluded that there are three main causes of the key problems as follows (see problem tree):

1) Weak protection of tengkawang species

Tengkawang trees are prohibited to cut down because of rare and are used by local communities. However, logging intensity of tengkawang in its natural habitat is still high. Weak protection of tengkawang species is caused by lack of capacity in tree species identification, weak law enforcement and technical manuals for protection of tengkawang species is unavailable.

2) Weak genetic conservation program of tengkawang species

Tengkawang conservation efforts has been carried out but it is still limited in some species and hasn't paid attention on genetic diversity. There are three causes of the main causes of weak genetic conservation program of tengkawang species, that are: lack of awareness on genetic conservation of tengkawang amongst decision maker, insufficient information on vulnerability status of genetic diversity of tengkawang species and lack of ex-situ and in-situ genetic conservation plots of tengkawang species. Exploration and research on genetic diversity of tengkawang in its natural habitat will be conducted to determine vulnerability status on tengkawang genetic diversity. The information will be disseminated to increase awareness on genetic conservation of tengkawang and formulate national strategy. In situ conservation is established by delineates certain areas that hold high genetic potential. While ex-situ conservation is established by delineates certain area to be planted by genetic materials (seeds and wildlings) taken from the wild population.

3) **Lack of support by indigenous people to conserve tengkawang genetic diversity**

There are four causes of the main causes of lack of support by indigenous people to conserve tengkawang genetic diversity, that are: **Benefits of Tengkawang species conservation are not well understood by indigenous people, low income from collection of tengkawang seed, market mechanism for tengkawang seed not in favor of indigenous people and**

sustainable harvest level of tengkawang seed unknown. Nowadays, many indigenous people have lack of awareness on tengkawang species conservation due to lack of knowledge regarding the benefits of tengkawang conservation. Tengkawang seed was collected without knowing its sustainable harvest level so that natural seedling of tengkawang species is decreasing. Therefore, intensive dialogue will be carried out to disseminate important benefits of tengkawang conservation. Activities undertaken to obtain support from indigenous people are also conducted by increasing capacity building and provide information on market mechanism in favor of indigenous people. Thereby, revenue of indigenous people who take advantage of tengkawang seed as source of livelihood will increase and tengkawang genetic diversity can be sustained.

Figure 2. Problem Tree

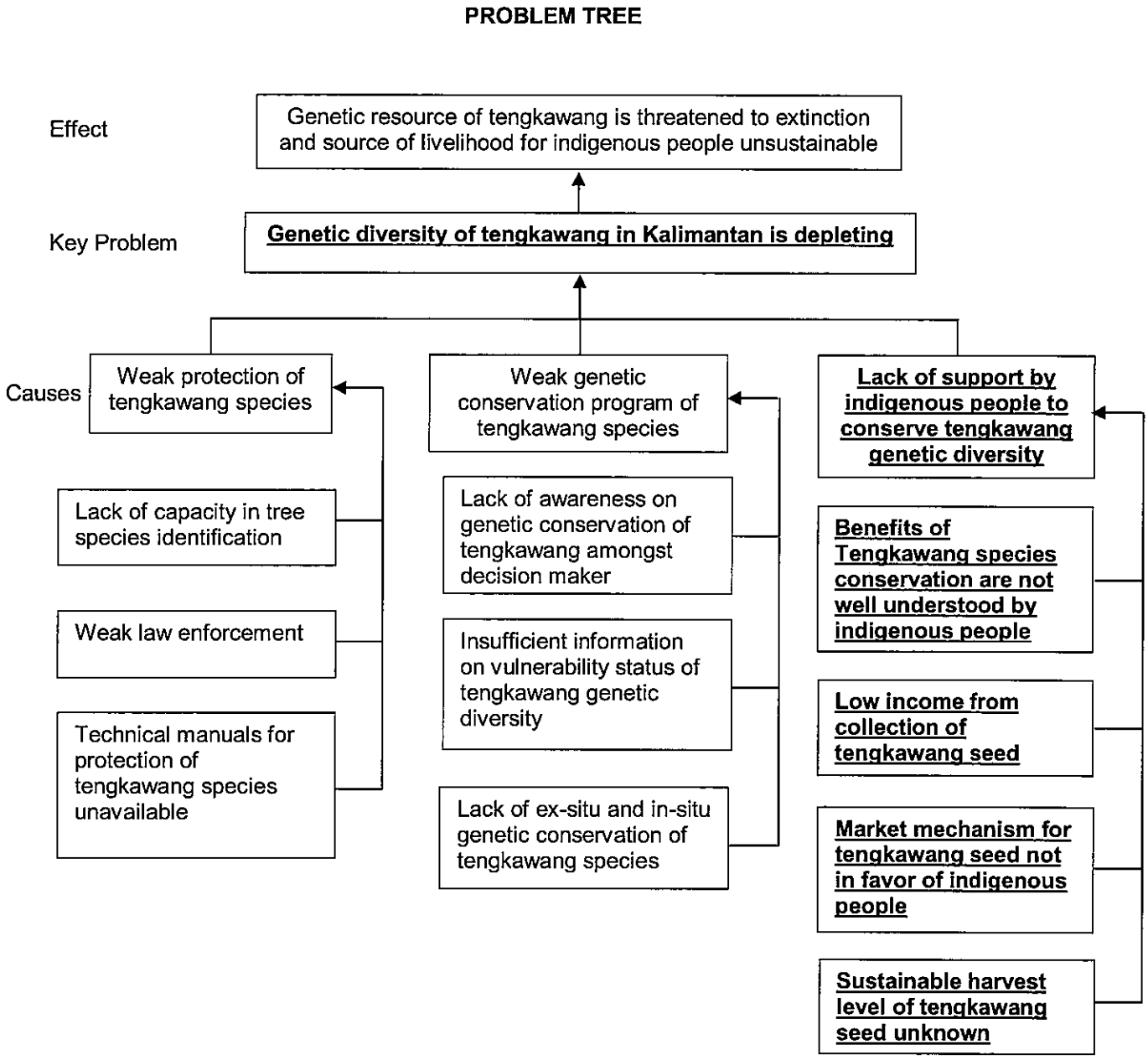
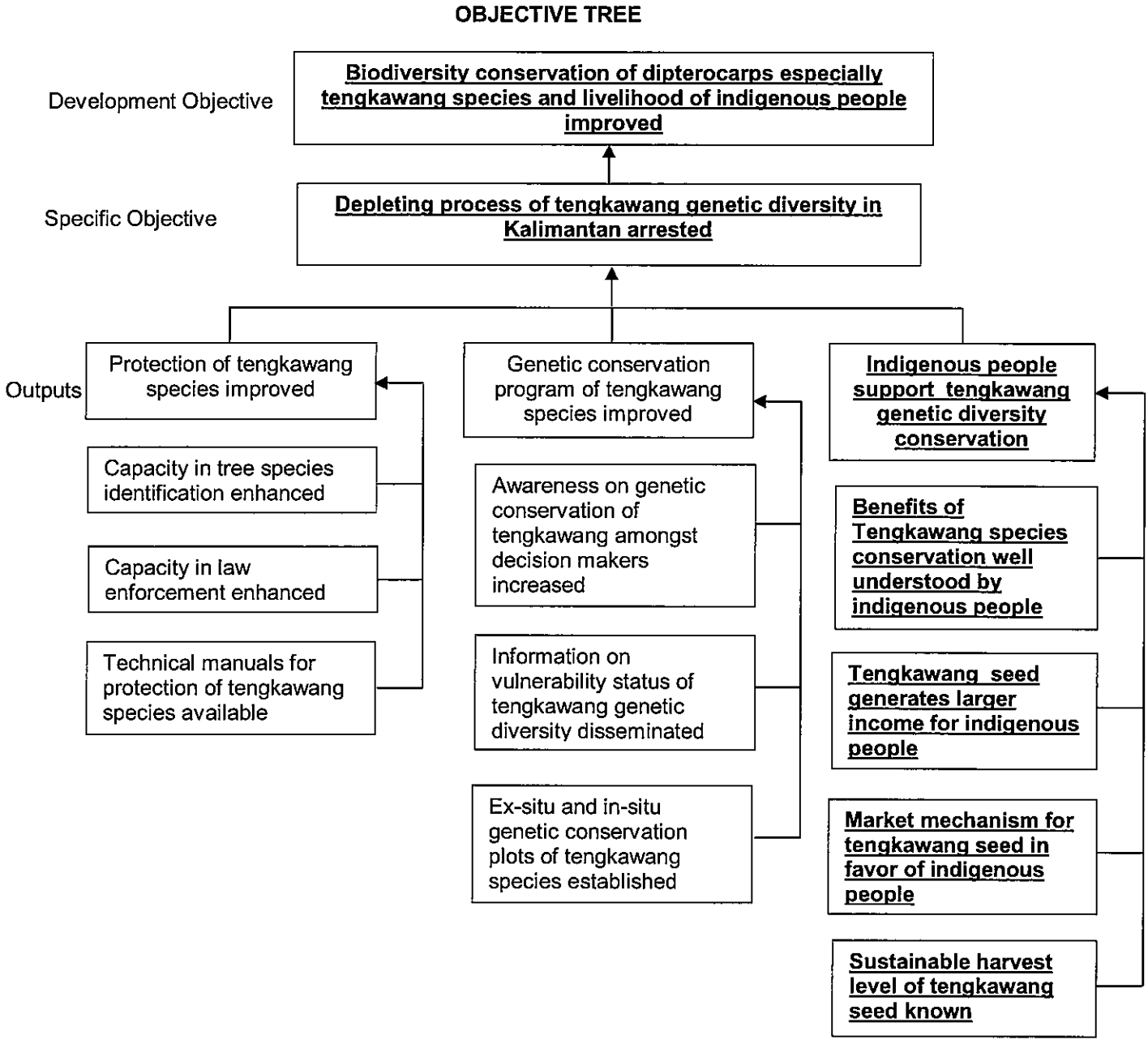


Figure 3. The Objective Tree of the Proposed Project



2.1.4. Logical Framework Matrix

Project Elements	*Indicators*	*Means of verification*	*Assumption*
Development Objective To contribute to improvement of biodiversity conservation of dipterocarps especially tengkawang species and livelihood of indigenous people	• 3 years after project completion, at least 8 tengkawang species remain exist in natural habitat • 3 years after project completion, average income of households originated from tengkawang seed increased by 10 % • 3 years after project completion, at least 3 village cooperatives use appropriate technologies in tengkawang seed processing	• DIREC periodical report on tengkawang exploration • Reports of local governments • Reports of local governments	• Government will to protect tengkawang species continues • Main local stakeholders supportive and cooperative • Planned outcomes of the project achieved

Project Elements	*Indicators*	*Means of verification*	*Assumption*
Specific Objective **To arrest depleting process of tengkawang genetic diversity**	• By end of the project, 200 Ha of tengkawang ex situ genetic conservation plots established in Samboja, tengkawang population surveys in 3 provinces completed and permanent plots established as required. • **By end of the project, at least 6 of in-situ genetic conservation permanent plots established in 3 provinces** • By end of the project, national strategy for tengkawang genetic conservation developed. • By end of the project, at least 100 households trained in appropriate technologies for harvesting and processing tengkawang seed products, 30 forest managers and supervisors trained in tree species identification. • **By end of project, at least 6 village cooperatives established**	• Field inspection, DIREC survey report • Field inspection, DIREC survey report • Document of national strategy • Training reports • DIREC report	• Land is available, genetic raw materials available • Main local stakeholders supportive • Indigenous people, forest managers and supervisors interested in the training • Planned outputs of the project achieved
Output 1. Measures for protection of tengkawang species improved	• By end of the project, 30 forest managers and supervisors trained in tree species identification, 30 government staff/ officers trained in law enforcement, technical manuals for protection of tengkawang developed and disseminated.	• Training reports	• Trainers and trainees available in time
Output 2. Genetic conservation program of tengkawang species improved	• By end of the project, 200 Ha of tengkawang ex situ genetic conservation plots established in Samboja, population surveys in 3 provinces completed and permanent plots established as	• Field inspection, DIREC survey report	• Land is available, genetic raw materials available

Project Elements	*Indicators*	*Means of verification*	*Assumption*
	required.		
	• By end of the project, at least 6 of in-situ genetic conservation permanent plots established in 3 provinces	• Field inspection, DIREC survey report	• Land and genetic raw materials available, main local stakeholders supportive
	• By end of the project, national strategy for tengkawang genetic conservation developed.	• Document of national strategy	• Commitment of government to protect tengkawang species
Output 3. **Support of indigenous people for tengkawang genetic diversity conservation obtained**	• **By end of first year, study on economics of tengkawang seed processing completed**	• **Market mechanism study report**	• **Competent consultant available**
	• **By end of the project, at least 100 households trained in appropriate technologies for processing tengkawang seed**	• **Training report**	• **Trainers and trainees available**
	• **By end of year 2, study on sustainable harvest level of tengkawang seed completed**	• **DIREC report**	• **Harvest season normal**
	• **By end of project, improved technologies are applied by at least 10 % of trained households**	• **Local government report**	• **Indigenous households supportive**
	• **By end of project, at least 6 village cooperatives established and operational**	• **DIREC report**	• **Indigenous households supportive**

2.2. Objectives

2.2.1. Development objective and impact indicators

To contribute to improvement of biodiversity conservation of dipterocarps especially tengkawang species and livelihood of indigenous people. Impact indicator that are expected to be achieved:

- **3 years after project completion, at least 8 tengkawang species remain exist in natural habitat**
- **3 years after project completion, average income of households originated from tengkawang seed increased by 10 %**
- **3 years after project completion, at least 3 village cooperatives use appropriate technologies in tengkawang seed processing**

2.2.2. Specific objective and outcome indicators

To arrest depleting process of tengkawang genetic diversity. By end of the project, several outcome indicators below are expected to be achieved:

- 200 Ha of tengkawang ex situ genetic conservation plots established in Samboja, tengkawang population surveys in 3 provinces completed and permanent plots established as required.
- At least 6 of in-situ conservation permanent plots established in 3 provinces
- By end of the project, national strategy for tengkawang genetic conservation developed.
- By end of the project, at least 100 households trained in appropriate technologies for harvesting and processing illipe nut products, 30 forest managers and supervisors trained in tree species identification
- By end of project, at least 6 village cooperatives established

PART 3. DESCRIPTION OF PROJECT INTERVENTIONS

3.1. Outputs and Activities

3.1.1. Outputs

Output 1.. Measures for protection of tengkawang species improved

- By end of the project, 30 forest managers and supervisors trained in tree species identification, 30 government staff/ officers trained in law enforcement, technical manuals for protection of tengkawang developed and disseminated.

Output 2. Genetic conservation program of tengkawang species improved

- By end of the project, 200 Ha of tengkawang ex situ genetic conservation established in Samboja, population surveys in 3 provinces completed and permanent plots established as required.
- By end of the project, at least 6 of in-situ conservation permanent plots established in 3 provinces
- By end of the project, national strategy for tengkawang genetic conservation developed

Output 3. **Support of indigenous people for tengkawang genetic diversity conservation obtained**

- **By end of first year, study on economics of tengkawang seed processing completed**
- **By end of the project, at least 100 households trained in appropriate technologies for processing tengkawang seed**
- **By end of year 2, study on sustainable harvest level of tengkawang seed completed**
- **By end of project, improved technologies are applied by at least 10 % of trained households**
- **By end of project, at least 6 village cooperatives model established**

3.1.2. Activities

Output 1. Measures for protection of tengkawang species improved

1.1. Conduct training on tree species identification
Training on tree species identification is conducted to avoid human error on tengkawang species identification by logging operator so that tengkawang species which is protected by law will not be harvested

1.2. Increase the capacity in law enforcement
Several regulation on tengkawang species protection will be disseminated through training for government staff and officer to increase the capacity in law enforcement.

1.3. Develop technical manuals for protection of tengkawang species
Technical manuals is developed to provide guidelines for forest consession in protection of tengkawang species

Output 2. Genetic conservation program of tengkawang species improved

2.1. Formulate national strategy for genetic conservation of tengkawang species
Conservation efforts on tengkawang species has been carried out by several institution. However, it's merely in ecosystem and species level. Decision maker have lack of awareness on genetic conservation of tengkawang though its genetic diversity is depleting. Therefore, a national strategy for genetic conservation of tengkawang species is needed to be formulated.

2.2. Continue collecting and disseminating information on status of genetic diversity of tengkawang species
Exploration and research on genetic diversity of tengkawang in its natural habitat will be conducted to determine vulnerability status on tengkawang genetic diversity. The information will be disseminated to increase awareness on genetic conservation of tengkawang and as reference to formulate national strategy.

2.3. Establish ex-situ and in-situ genetic conservation plots of tengkawang species
In situ conservation is established by delineates certain plots in natural habitat of tengkawang species that hold high genetic potential. While ex-situ conservation plots is established by delineates certain area to be planted by genetic materials (seeds and wildlings) taken from the wild population

2.4. National workshop on national strategy of tengkawang genetic conservation
National workshop will be conducted to formulate and disseminate national strategy of tengkawang genetic conservation.

Output 3. Support of indigenous people for tengkawang genetic diversity conservation obtained

3.1. Provide information on potential benefits of tengkawang conservation through intensive dialogue
Intensive dialogue will be carried out to increase the awareness of indigenous people on potential benefits of tengkawang species conservation for their life

3.2. Conduct study on sustainable harvest level of tengkawang seed
Study on sustainable harvest level will be used to regulate quantity of tengkawang seed that is allowed to be harvested by indigenous people in order to maintain sustainability of tengkawang species. Result study will be disseminated to indigenous people

3.3. Conduct study on economics of tengkawang seed processing
All this time, tengkawang seed trade which is using many channels caused low price in farmer level. Information on economics of tengkawang seed is needed to provide information on market mechanism in favor of indigenous people to raise their revenue

3.4. Training on appropriate technologies for processing of tengkawang seed
Quantity restriction of tengkawang seed harvesting must be done to conserve tengkawang species. Hence training on appropriate technologies for processing needs to be conducted to increase added value of tengkawang seed to gain more income of indigenous people. Prior assessment on local knowledge will be used as reference to determine appropriate technologies

3.5. Local workshops on the benefits of tengkawang seed utilization for sustainable livelihood of indigenous people
Local workshop will be carried out to disseminate the benefits of tengkawang seed utilization to indigenous people and local stakeholders

3.6. Establish village cooperatives
Village cooperatives will be established to train enterpreunership in tengkawang seed utilization using revolving funds for indigenous people to increase their income

3.2. Implementation approaches and methods

To achieve the objective the following approaches and methods are set :

Measures for protection of tengkawang species are improved by facilitating training on tree species identification in order to avoid logging fault on tengkawang species. Workshops on law enforcement to government staf/officer will be conducted to distribute existing rules and regulations. Technical manuals for protection of tengkawang species will be developed by providing information and guidelines on tengkawang species protection for forest consession.

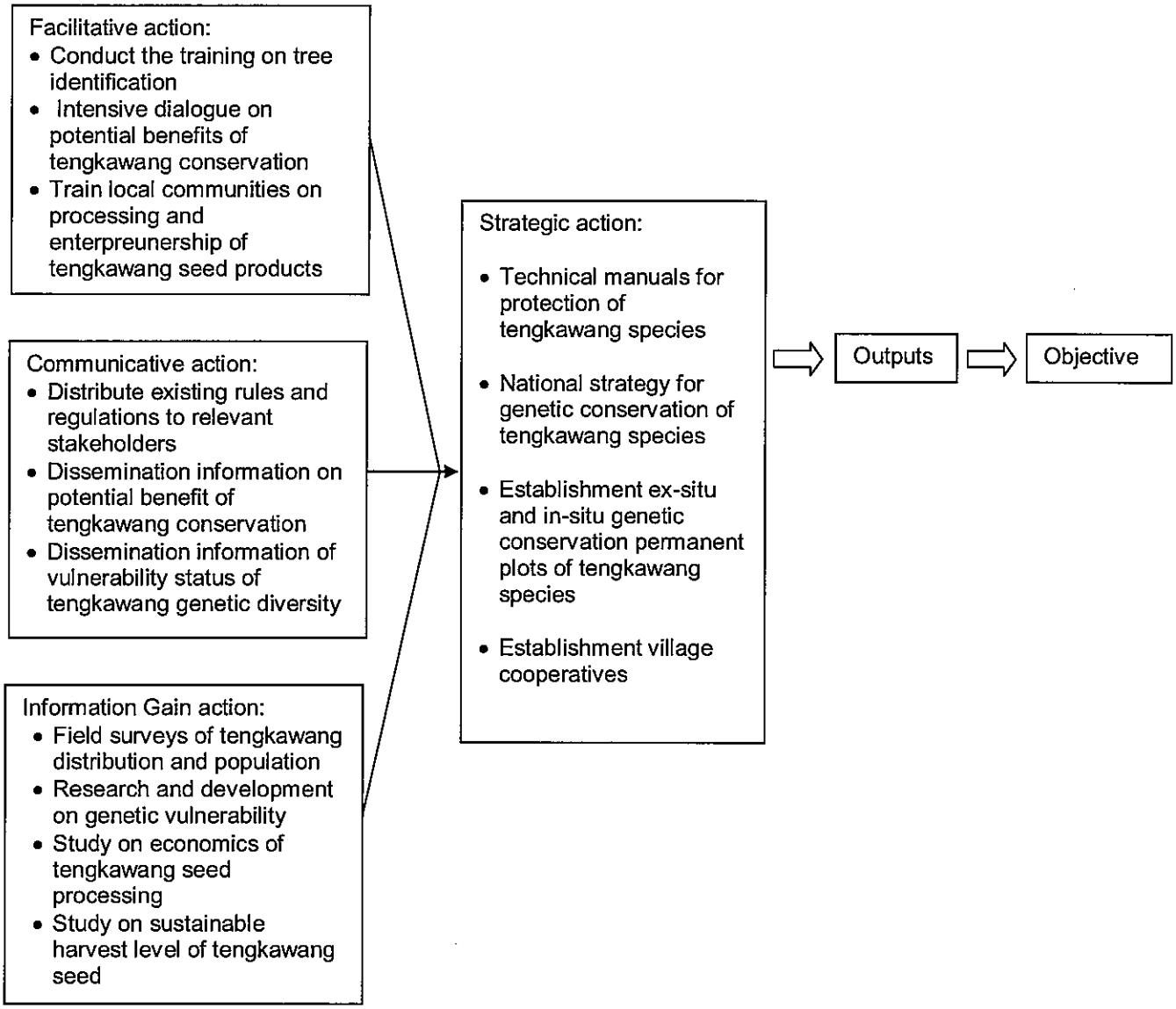
To improve genetic conservation program of tengkawang species will be done field surveys of tengkawang distribution and population, research and development on genetic vulnerability and dissemination of those information. Furthermore, it can be used as base line information to formulate national strategy for genetic conservation and also to establish in-situ and ex-situ genetic conservation plots of tengkawang species. In-situ genetic conservation permanent plots are important to sustain genetic diversity of tengkawang species in its natural habitat. While ex-situ genetic conservation plots will be useful to facilitate the utilization of genetic material in accessible site and as reserve area of tengkawang genetic diversity.

To obtain support of indigenous people for tengkawang genetic diversity conservation some activities relating to capacity building will be carried out. Training on appropriate technologies on processing of

tengkawang seed is required to increase added value of tengkawang species. They are also trained on enterpreunership skill for efficient tengkawang seed utilization by establishment of village cooperatives model. Study on economics of tengkawang seed will be conducted to provide information on market mechanism in favor of indigenous people. All of those activities aim to raise income of indigenous people who utilized tengkawang seed as their livelihood. Thereby, tengkawang genetic diversity program is expected to be supported by them due to sustainability of tengkawang species can ensure their livelihood in longer term.

Target species to be conserved are *S. macrophylla, S. palembanica, S. splendida, S. stenoptera, S. seminis, S. beccariana, S. mecistopteryx* and *S. pinanga.* Those species are already threatened to extinction. Three of eight species (*S. macrophylla, S. stenoptera* and *S. pinanga*) are utilized by indigenous people as their livelihood.

Figure 3. Implementation Approaches and Methods of the Project



3.3. Work Plan

Output / Activities	Responsible Party	Year											
		1st Year				2nd Year				3rd Year			
		I	II	III	IV	I	II	III	IV	I	II	III	IV
Output 1 . Measures for protection of tengkawang species improved	MoF, Consultant/national expert, communities group, Private sector												
1.1. Conduct training on tree species identification	MoF Consultant/national expert												
1.2. Increase the capacity in law enforcement	MoF Consultant/national expert												
1.3. Develop technical manuals for protection of tengkawang species	MoF Consultant/national expert												
Output 2. Tengkawang species conservation programme improved	MoF, Consultant/national expert, communities group, Private sector												
2.1. Formulate national strategy for genetic conservation of tengkawang species	MoF Consultant/national expert												
2.2. Continue collecting and disseminating information on status of genetic diversity of tengkawang species	MoF Consultant/national expert												
2.3. Establish ex-situ and in-situ genetic conservation plots of tengkawang species	MoF Consultant/national expert												
2.4. National workshop on national strategy of tengkawang genetic conservation	MoF Consultant/national expert												
Output 3. **Support of indigenous people for tengkawang genetic diversity conservation obtained**	MoF, Consultant/national expert, communities group												
3.1. **Provide information on potential benefits of tengkawang**	MoF Consultant/national expert												

Output / Activities	Responsible Party	Year											
		1st Year				2nd Year				3rd Year			
		I	II	III	IV	I	II	III	IV	I	II	III	IV
conservation through intensive dialogue													
3.2. **Conduct study on sustainable harvest level of tengkawang seed**	MoF Consultant/national expert												
3.3. **Conduct study on economics of tengkawang seed processing**	MoF Consultant/national expert												
3.4. **Training on appropriate technologies for processing of tengkawang seed**	MoF Consultant/national expert												
3.5. **Local workshops on the benefits of tengkawang seed utilization for sustainable livelihood of indigenous people**	MoF Consultant/national expert												
3.6. Establish village cooperative model	MoF Consultant/national expert												

3.4. Budget

3.4.1. Master Budget Schedule

In US Dollar

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost	Total Cost	ITTO			Executing Agency		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
Output 1.Measures for protection of tengkawang species improved														
Activity 1.1.Conduct training on tree species identification														
(Training for Forest Manager and Supervisor, 2 days, 30 persons)		61.1												
	Facilitator		2	-	-	person	500	1000	1000	-	-	-	-	-
	Resources person		2	-	-	person	250	500	500	-	-	-	-	-
	DSA		30	-	-	person-day	80	2400	2400	-	-	-	-	-
	Air ticket		30	-	-	person-trip	300	9000	9000	-	-	-	-	-
	- local transportation		30	-	-	person-trip	100	3000	2000	-	-	1000	-	-
	- Personal/Participant Training Kit		30	-	-	pax	15	450	450	-	-	-	-	-
	Sub Total							**17350**	**16350**	**-**	**-**	**1000**	**-**	**-**
Activity 1.2. Increase the capacity in law enforcement														
Training for Government staff and officer, 2 days, 30 persons		61.1												
	Facilitator		2	-	-	person	500	1000	1000	-	-	-	-	-
	Resources person		2	-	-	person	250	500	500	-	-	-	-	-
	DSA		30	-	-	person-day	80	2400	2400	-	-	-	-	-
	Air ticket		30	-	-	person-trip	300	9000	9000	-	-	-	-	-
	- local transportation		30	-	-	person-trip	100	3000	2000	-	-	1000	-	-
	- Personal/Participant Training Kit		30	-	-	pax	15	450	450	-	-	-	-	-
	Sub Total							**17350**	**16350**	**-**	**-**	**1000**	**-**	**-**
Activitiy 1.3. Develop technical manuals for protection of tengkawang species														
	Consultant/National Expert	13	-	2	-	person-month	2000	4000	-	4000	-	-	-	-
	2 times meeting, 15 participants per meeting	61.2	-	30	-	participant	20	600	-	600	-	-	-	-
	Sub Total						**-**	**4600**	**-**	**4600**	**-**	**-**	**-**	**-**
Output 2. Tengkawang species conservation programme improved														

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost	Total Cost	ITTO			Executing Agency		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
Activity 2.1. Formulate national strategy for genetic conservation of tengkawang species														
	Consultant/National Expert	13	-	-	2	person-month	2000	4000	-	-	4000	-	-	-
	2 times meeting, 15 participants per meeting	61.2	-	-	30	participant	20	600	-	-	600	-	-	-
	Sub Total							**4600**	**-**	**-**	**4600**	**-**	**-**	**-**
Activity 2.2. Continue collecting and disseminating information on status of genetic diversity of tengkawang species														
	Consultant/National Expert	13	2	-	-	person-month	2000	4000	4000	-	-	-	-	-
7 days duty travel, 2 persons, 3 times														
	DSA	31.1	14	28	-	person-day	100	4200	1400	2800	-	-	-	-
	Air ticket	33.1	6	6	-	person-trip	300	3600	1800	1800	-	-	-	-
	local transportation	33.2	10	10	-	person-trip	250	5000	1500	1500	-	1000	1000	-
	collected data	54.1	3	3	-	package	1000	6000	3000	3000	-	-	-	-
	document material	54.2	1	1	-	package	1000	2000	500	500	-	500	500	-
	3 x meetings: 15 participants per meeting	61.2	15	30	-	participant	40	1800	600	1200	-	-	-	-
	Sub Total							**26600**	**12800**	**10800**	**-**	**1500**	**1500**	**-**
Activity 2.3. Establish ex-situ and in-situ genetic conservation plots of tengkawang species														
	sub-contract	21	-	1	1	package	30000	70000	-	35000	35000	-	-	-
	Sub Total							**70000**	**-**	**35000**	**35000**	**-**	**-**	**-**
Activity 2.4. National workshop on national strategy of tengkawang genetic conservation														
one day workshop, 30 participants		61.3												
	Facilitator		-	-	1	person	500	500	-	-	500	-	-	-
	Resources person		-	-	2	person	250	500	-	-	500	-	-	-
	DSA		-	-	30	person-day	80	2400	-	-	2400	-	-	-
	Air ticket		-	-	10	person-trip	300	3000	-	-	3000	-	-	-
	- local transportation		-	-	40	person-trip	50	2000	-	-	-	-	-	2000
	- Personal/Participant Training Kit		-	-	30	pax	15	450	-	-	450	-	-	-
	Sub Total							**8850**	**-**	**-**	**6850**	**-**	**-**	**2000**
Output 3. Support of indigenous people for tengkawang genetic diversity obtained														
Activity 3.1. Provide information on potential benefits of tengkawang conservation through intensive dialogue														
Intensive dialogue for indigenous people (Sub contract)		22												

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost	Total Cost	ITTO			Executing Agency		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
	Facilitator		-	2	-	person	500	1000	-	1000	-	-	-	-
	Resources person		-	2	-	person	250	500	-	500	-	-	-	-
	DSA		-	100	-	person-day	30	3000	-	3000	-	-	-	-
	Air ticket		-	2	-	person-trip	300	600	-	600	-	-	-	-
	Local transportation		-	2	-	person trip	100	200	-	200	-	-	-	-
	Sub total							**5300**	-	**5300**	-	-	-	-
Activity 3.2. Study on Sustainable harvest level of tengkawang seed conducted														
	Consultant/National Expert	13	2	-	-	person-month	2000	4000	4000	-	-	-	-	-
7 days duty travel, 2 persons, 2 times														-
	DSA	31.1	28	-	-	person-day	80	2240	2240	-	-	-	-	-
	Air ticket	33.1	4	-	-	person-trip	300	1200	1200	-	-	-	-	-
	local transportation	33.2	28	-	-	person-trip	100	2800	400	-	-	2400	-	-
	3 x meetings: 10 participants per meeting	61.2	30	-	-	participant	30	900		-	-	900	-	-
	collected data	54.1	1	-	-	pax	500	500	500	-	-	-	-	-
	Document material	54.2	1	-	-	pax	500	500	500	-	-	-	-	-
	Sub Total							**12140**	**8840**	**-**	**-**	**3300**	**-**	**-**
Activity 3.3. Conduct study on economics of tengkawang seed processing														
	International Consultant	14	1	--	-	person-month	10000	10000	10000	-	-	-	-	-
7 days duty travel, 2 persons, 2 times														
	DSA	31.1	28	-	-	person-day	80	2240	2240	-	-	-	-	-
	Air ticket	33.1	4	-	-	person-trip	300	1200	1200	-	-	-	-	-
	local transportation	33.2	10	-	-	person-trip	100	1000	400	-	-	600	-	-
	3 x meetings: 10 participants per meeting	61.2	30	-	-	participant	30	900	900	-	-	-	-	-
	collected data	54.1	1	-	-	pax	500	500	-	-	-	500	-	-
	Document material	54.2	1	-	-	pax	500	500	-	-	-	500	-	-
	Sub Total							**16340**	**14740**	**-**	**-**	**1600**	**-**	**-**
Activity 3.4. Training on appropriate technologies for processing of tengkawang seed														
Training for 100 households (sub contract)		23												
	Facilitatior		-	2	-	person	500	1000	-	1000	-	-	-	-
	Resources person		-	2	-	person	250	500	-	500	-	-	-	-

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost	Total Cost	ITTO			Executing Agency		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
	DSA		-	100	-	person-day	30	3000	-	3000	-	-	-	-
	Air ticket		-	10	-	person-trip	300	3000	-	3000	-	-	-	-
	- local transportation		-	50	-	person-trip	200	10000	-	2000	-	-	8000	-
	- Document Material		-	1	-	pax	1000	1000	-	500	-	-	500	-
	- Personal/Participant Training Kit		-	100	-	pax	15	1500	-	1500	-	-	-	-
	Sub Total							**20000**	**-**	**11500**	**-**	**-**	**8500**	**-**
Activity 3.5. Local workshops on the benefits of tengkawang seed utilization for sustainable livelihood of indigenous people														
workshop, 50 participants		61.3												
	Facilitator		-	1	-	person	500	500	-	500	-	-	-	-
	Resources person		-	2	-	person	250	500	-	500	-	-	-	-
	DSA		-	50	-	person-day	40	2000	-	2000	-	-	-	-
	Air ticket		-	10	-	person-trip	300	3000	-	3000	-	-	-	-
	- local transportation		-	50	-	person-trip	100	5000	-	1000	-	-	4000	-
	- Personal/Participant Training Kit		-	50	-	pax	15	750	-	750	-	-	-	-
	Sub Total							**11750**	**-**	**7750**	**-**	**-**	**4000**	**-**
Activity 3.6. Establish village cooperative model														
2 village cooperative model in each province														
	Revolving funds	41.1	-	6	-	package	5000	30000	-	30000	-	-	-	-
	Sub Total							**30000**	**-**	**30000**	**-**	**-**	**-**	**-**
Non activity based expenses														
	Project Coordinator		12	12	12	person-month	2500	90000	24000	24000	24000	6000	6000	6000
	Secretary		12	12	12	person-month	500	18000	6000	6000	6000	-	-	-
	Finance and Administration		12	12	12	month	500	18000	6000	6000	6000	-	-	-
	Steering Committee Meeting (6 times)		2	2	2	unit	1500	9000	-	-	-	3000	3000	3000
	Project preparation/reproduction		1			package	3000	3000	-	-	-	3000	-	-
	Office Space	41.2	1	1	1	year	6000	18000	-	-	-	6000	6000	6000
	Notebook computer	44.1	4			unit	1200	4800	2400	-	-	2400	-	-

Outputs/ activities	Description	Budget Component	Quantity			Units	Unit Cost	Total Cost	ITTO			Executing Agency		
			1st Year	2nd Year	3rd Year				1st Year	2nd Year	3rd Year	1st Year	2nd Year	3rd Year
	Printer	44.1	2			unit	125	250	250	-	-	-	-	-
	Office supplies	54	12	12	12	month	500	18000	3000	3000	3000	3000	3000	3000
	Audit	62	1	1	1	year	2000	6000	2000	2000	2000	-	-	-
	Duty Travel (2 people, 5 days, 3 times/year)													
	DSA	31	30	30	30	person-day	80	7200	1200	1200	1200	1200	1200	1200
	Air ticket	33	6	6	6	person-trip	300	5400	900	900	900	900	900	900
	Local transportation	33	6	6	6	person-trip	100	1800	-	-	-	600	600	600
	Sub Total							**199450**	**45750**	**43100**	**43100**	**26100**	**20700**	**20700**
TOTAL								**442330**	**112830**	**148050**	**89550**	**34500**	**34700**	**22700**

3.4.2. Consolidated Budget by Component

In US Dollar

Category	Description	Total	1st year	2nd year	3rd year
10	Personnel				
11.1.	Project Coordinator	90000	30000	30000	30000
11.5	Secretary	18000	6000	6000	6000
11.6	Finance and Administration	18000	6000	6000	6000
13	National Expert/Consultant	16000	8000	4000	4000
14	International Expert/Consultant	10000	10000	-	-
	Sub-Total	**152000**	**60000**	**46000**	**46000**
20	Sub-Contracts				
21	Establishment conservation area	70000	-	35000	35000
22	Intensive dialogue	5300	-	5300	-
23	Training on appropriate technologies	20000	-	20000	-
	Sub-Total	**95300**	**-**	**60300**	**35000**
30	Duty Travel				
31.1	DSA	15880	8280	5200	2400
33.1.	Air ticket	11400	6000	3600	1800
33.2.	Local Transport	10600	6900	3100	600
	Sub-Total	**37880**	**21180**	**11900**	**4800**
40	Capital Items				
41.1	Revolving funds	30000	-	30000	-
41.2	Office space	18000	6000	6000	6000
44.1	Notebook computer	4800	4800	-	-
44.2	Printer	250	250	-	-
	Sub-Total	**53050**	**11050**	**36000**	**6000**
50	Consumable Items				
54	Office supplies	18000	6000	6000	6000
54.1	collected data	7000	4000	3000	-
54.2	material document	3000	2000	1000	-
	Sub-Total	**28000**	**12000**	**10000**	**6000**
60	Miscellaneous				
61.1	Training	32700	32700	-	-
61.2	Meeting	4800	2400	1800	600
61.3	Workshop	20600	-	11750	8850
62	Project Preparation/Reproduction	3000	3000	-	-
63	Steering Commettee Meeting	9000	3000	3000	3000
65	Annual Audit	6000	2000	2000	2000
	Sub-Total	**76100**	**43100**	**18550**	**14450**
70	National Management Cost	7352	-	-	-
	Total (10 - 70)	449682	-	-	-
80	Project Monitoring and Administration				
81	ITTO monitoring & review	18000	-	-	-
82	ITTO Ex Post Evaluation	15000	-	-	-
85	ITTO programme support (8%)	30674	-	-	-
100	**GRAND TOTAL**	**513356**	-	-	-

3.4.3. ITTO Budget by Component

In US Dollar

Category	Description	Total	1st year	2nd year	3rd year
10	Personnel				
11.1.	Project Coordinator	72000	24000	24000	24000
11.5	Secretary	18000	6000	6000	6000
11.6	Finance and Administration	18000	6000	6000	6000
13	National Expert/Consultant	16000	8000	4000	4000
14	International Expert/Consultant	10000	10000	-	-
	Sub-Total	**134000**	**54000**	**40000**	**40000**
20	Sub-Contracts				
21	Establishment conservation area	70000	-	35000	35000
22	Intensive dialogue	5300	-	5300	-
23	Training on appropriate technologies	11500	-	11500	-
	Sub-Total	**86800**	**-**	**51800**	**35000**
30	Duty Travel				
31.1	DSA	12280	7080	4000	1200
33.1.	Air ticket	8700	5100	2700	900
33.2.	Local Transport	3800	2300	1500	-
	Sub-Total	**24780**	**14480**	**8200**	**2100**
40	Capital Items				
41.1	Revolving funds	30000	-	30000	-
44.1	Notebook computer	2400	2400	-	-
44.2	Printer	250	250	-	-
	Sub-Total	**32650**	**2650**	**30000**	**-**
50	Consumable Items				
54	Office supplies	9000	3000	3000	3000
54.1	collected data	6500	3500	3000	-
54.2	material document	1500	1000	500	-
	Sub-Total	**17000**	**7500**	**6500**	**3000**
60	Miscellaneous				
61.1	Training	30700	30700	-	-
61.2	Meeting	3900	1500	1800	600
61.3	Workshop	14600	-	7750	6850
65	Annual Audit	6000	2000	2000	2000
	Sub-Total	**55200**	**34200**	**11550**	**9450**
70	National Management Cost				
	Total (10 - 70)	350430	112830	148050	89550
80	Project Monitoring and Administration				
81	ITTO monitoring & review	18000			
82	ITTO Ex Post Evaluation	15000			
85	ITTO programme support (8%)	**30674**			
100	**GRAND TOTAL**	**414104**			

3.4.4. Executing Agency Budget by Component

In US Dollar

Category	Description	Total	1st year	2nd year	3rd year
10	Personnel				
11.1.	Project Coordinator	18000	6000	6000	6000
11.5	Secretary	-	-	-	-
11.6	Finance and Administration	-	-	-	-
13	National Expert/Consultant	-	-	-	-
14	International Expert/Consultant	-	-	-	-
	Sub-Total	**18000**	**6000**	**6000**	**6000**
20	Sub-Contracts				
21	Establishment conservation area	-	-	-	-
22	Intensive dialogue	-	-	-	-
23	Training on appropriate technologies	8500	-	8500	-
	Sub-Total	**8500**	**-**	**8500**	**-**
30	Duty Travel				
31.1	DSA	3600	1200	1200	1200
33.1.	Air ticket	2700	900	900	900
33.2.	Local Transport	6800	4600	1600	600
	Sub-Total	**13100**	**6700**	**3700**	**2700**
40	Capital Items				
41	Office space	18000	6000	6000	6000
44.1	- Notebook computer	2400	2400	-	-
44.2	- Printer	-	-	-	-
	Sub-Total	**20400**	**8400**	**6000**	**6000**
50	Consumable Items				
54	Office supplies	9000	3000	3000	3000
54.1	collected data	500	500	-	-
54.2	material document	1500	1000	500	-
	Sub-Total	**11000**	**4500**	**3500**	**3000**
60	Miscellaneous				
61.1	Training	2000	2000	-	-
61.2	Meeting	900	900	-	-
61.3	Workshop	6000	-	4000	2000
62	Project Preparation/Reproduction	3000	3000	-	-
63	Steering Commettee Meeting	9000	3000	3000	3000
65	Annual Audit				
	Sub-Total	**20900**	**8900**	**7000**	**5000**
	Sub total all categories	**91900**	**34500**	**34700**	**22700**
70	National Management Cost	7352			
100	**GRAND TOTAL**	**99252**			

3.5 Assumptions, risks, sustainability

3.5.1 Assumptions and risks

The project should receive full commitment from national and local government, local community, private sector and other related stakeholders. The potential risk may emerge from the conflict of interest between key stakeholders who has authority in managing forest area. The conflict interest may result into the participation of keys stakeholders mainly among relevant government authority in all process of formulating policy and strategy. And also improving capacities of some stakeholders

To minimize the potential risk, several approaches will be taken :

1.	**Risk:**	Low commitment of relevant stakeholders
	Mitigation:	Improve dialogue and communication among stakeholders including relevant government, local community, and consession holder. They will be invited to join as a member in Project Steering Committee
2.	**Risk:**	Government will to protect tengkawang species is discontinuity
	Mitigation:	Support target group to improve commitment/ willingness in gaining understanding of genetic diversity conservation on tengkawang species to ensure the success of this project
3.	**Risk:**	Genetic raw materials is not available due to seed season changing
	Mitigation:	Use tengkawang wildlings to establish ex situ genetic conservation area

3.5.2 Sustainability

The Project is mainly using existing assets owned by the respective institutions and production unit. Additional facilities, if necessary (including hardware and software) or accessories will be procured using Project funds (capital items and consumable). The assets created by the Project will become the property of the Government of Indonesia (Ministry of Forestry)

Sustainability of the project is expected from the sustainability of budget, market system and policy. Maintaining sustainability of this project is by continuing support and facilitate effort to local communities and local institution. When the activity based project develop as source income, the surrounding community will implement best practice forest management in their own land willingly to enhance local economy and to conserve tengkawang species. Policy and strategy will be used as guidance and policy direction of effective measures on genetic diversity conservation of tengkawang species.

After project completion, in-situ genetic conservation plots will be used as research site and continued monitoring by DIREC. Local communities and government will be involved in monitoring and secure the area. While genetic conservation ex situ area that is established in Samboja will be continued maintain by DIREC. DIREC has competent human resources to look after the area. Genetic conservation ex situ area will be used as research site. It also can be used to promote genetic conservation of tengkawang species to public. Budget resource to finance the area maintenance will be taken from DIREC's annual budget.

PART 4. IMPLEMENTATION ARRANGEMENTS

4.1 Organization structure and stakeholder involvement mechanisms

4.1.1 Executing agency and partners

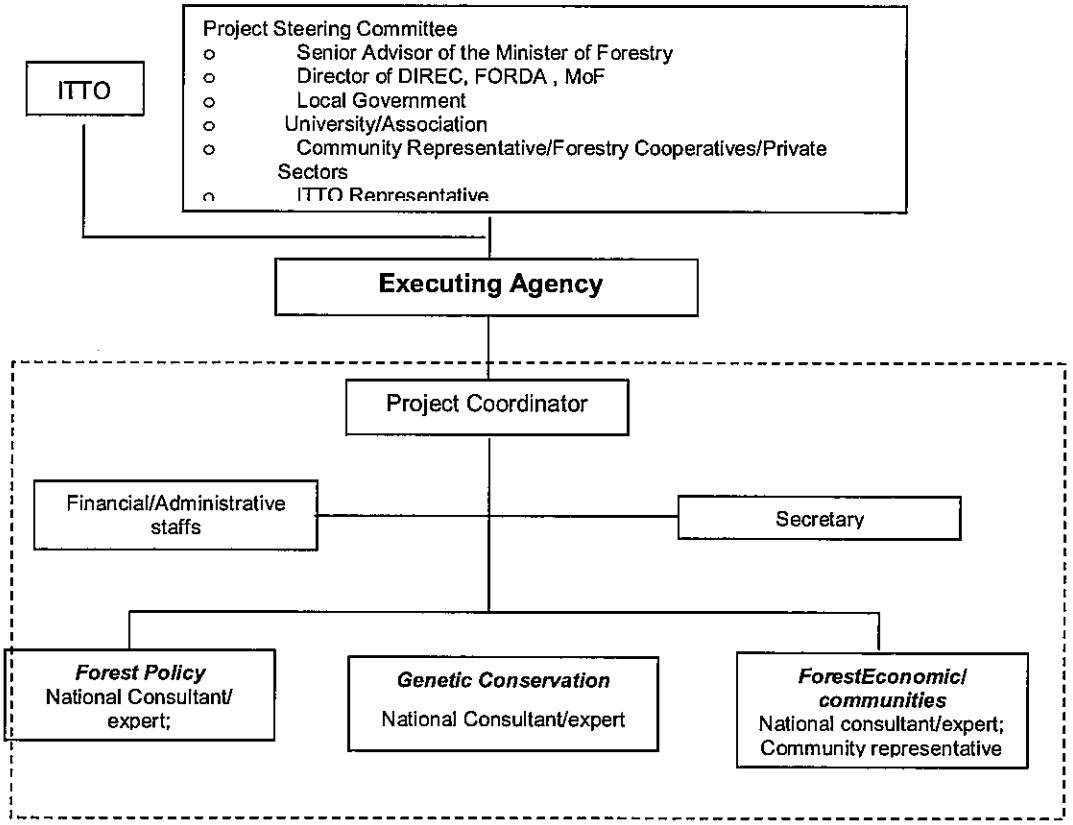
The Executing Agency of the project will be the Dipterocarps Research Center which will assume all the responsibility for its coordination and implementing of the activities. It will responsible for managing of the implementation of activities and the ITTO fund . The executing and implementing agency will be involved in the project since the preparation until completion of the project.

Executing agency will work together with Gajah Mada University, local NGO, district level forestry service, communities group, or other relevant institutions to implement some activities in field. Gajah Mada University will involve in designing of in-situ and ex situ genetic conservation permanent plots since they have experience in establishing forest plantation model and conservation of dipterocarps through ITTO project. The activities relating to intensive dialogue and training to increase capacity building of indigenous people will be implemented through sub-contracts to local NGO(s) for efficiency.

4.1.2 Project management team

Professional coordinator will assign for the project coordinator who will be in charge the overall project implementation. The project coordinator will report to the Implementing and Executing Agency as well as to ITTO in consultation with the Steering Committee. The project coordinator should be a qualified and acceptable senior forester who has the responsibility for the planning of the day to day activities and management of the project.

The management structure of the project is presented in the following diagram:
Figure 4. Organization structure of Project Management Unit



4.1.3 Project steering committee

The Project Steering Committee (PSC) consists of policy makers, academics, communities representatives appointed by The Minister of Forestry. The duty of PSC are (a) approve program and budgets of the various activities within the framework of the project approved by ITTO (b) conduct annual reviews and evaluation of the project implementation (c) Approve progress report before submission to ITTO and GOI. The PSC will be chaired by the Senior Advisor of The Minister of Foresty.

4.1.4 Stakeholder involvement mechanisms

Detail arrangement of key stakeholders in this project set out as follows:

a) The role of DIREC are :

- Maintain coordination among relevant parties in implementing project
- Objective and activities
- Coordinate and consulting with ITTO upon the project development
- Execution of the project activities in close cooperation with the Executing and
- relevant Agency
- Manage project fund based on project proposal and approval by ITTO and project agreement in accordance with ITTO guidelines and procedure as well as prevailed the government regulation
- Provision of counter budget of GOI to support the project activities together with EA include appoint personnel to work in the project
- Prepare and submitting project report to ITTO

b) The role of Center of International Cooperation MoF are :

- Facilitate executing agency and ITTO upon the project development
- Monitoring of the project activities/implementation
- Coordinate PSC meeting of the project

c) The role of other stakeholder(Forestry Cooperatives/Private sectors) includes:

a) Implementing technical aspects of forest utilization of NTFP in the field
b) Sharing information regarding implementation of the biodiversity conservation initiatives on SFM on the ground

(3) The role of local communities:

a) Participation in developing management plan
b) Involvement in training activities
c) Execution of entrepreneurship activities

4.2 Reporting, review, monitoring and evaluation

4.1. Project Progress Report.
The first project progress report will be given to ITTO 6 months after project start-up or at least 4 months before the date of the monitoring visitis (or Steering Committee meetings) and 2 months before every Council Sessions (in May and November).

4.2. Project Completion Report
This will be submitted within three months after Project Completion.

4.3. Project Technical Reports.

Project Technical Reports will be prepared for activities where technical results are expected, i.e. the achievements of the Project Outputs.

4.4. Monitoring and Review

A Steering Committee will be established, to be appointed by the Minister of Forestry upon proposal from the executing agency. The 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 Workplan.

Stakeholders have role to monitor the project through collaborative monitoring to improve the effectiveness of decision making and to accommodate their views. Collaborative monitoring will be conducted by developing a common framework comprising indicators, means of verification and assumptions for observing the effectiveness of the plans and unexpected outcomes.

Monitoring report will be distributed through various meeting, document dissemination and public consultation.

4.5.Evaluation

Evaluation will be conducted during the last quarter before completion of the Project. Evaluation process will also involve relevant stakeholders.

4.3 Dissemination and mainstreaming of project learning

4.3.1 Dissemination of project results

The results of the project will be disseminated through various strategy such as public consultation, workshop, meeting, internet, documents dissemination, and guided field visit of user groups., Public consultation, workshop and meeting will be conducted by inviting relevant stakeholders. Dissemination of project result through internet will be published for public that have interest in genetic conservation of tengkawang species and livelihood of indigenous people issues. Project result document will be distributed to national and local government institution, research agency, NGO and university.

4.3.2 Mainstreaming project learning

Project result are expected to be mainstreamed into local and national policies. Information relating to tengkawang seed utilization by indigenous people, market mecahanism and vulnerability status of tengkawang genetic diversity can be used as baseline information on policy making at the local and national level. The policies that needs to be addressed include improving ministerial degree regarding tengkawang protection, providing operational strategies complies to Indonesian Biodiversity Strategic Action Plan (IBSAP) and initiating regulation on tengkawang seed quota for trading. Those policies support to genetic conservation of tengkawang species endeavor and for sustaining source of livelihood for indigenous people.

ANNEX 1. PROFILE OF THE EXECUTING AGENCY

Dipterocarps Research Center (DIREC) is under Forestry Research and Development Agency (FORDA), located in Jalan AW Syahrani No. 68, Sempaja, Samarinda (East Kalimantan).

Based on Ministry of Forestry Decree, Republic of Indonesia No. P.37/Menhut-II/2006, DIREC is a technical organizing unit under FORDA and held responsible to FORDA which main duties are conducting research and development on forestry/ecosystem of dipterocarps.

The vision of DIREC is providing forestry scientific knowledge and technology to Sustainable Forest Management to increase social prosperity. Some of DIREC missions are to conduct research and development on all aspects related to the forest management and conservation including the conservation of plant genetic resources (in-situ and ex-situ). This mission is to contribute the Sustainable Forest Management through the provision of scientific information.

DIREC is supported with laboratory facilities, nurseries and research sites distributed in a wide range of ecological distribution in Kalimantan and other island. DIREC employs 100 staffs with more than 20 research scientist with PhDs, Master degree and Bachelors with high expertise and experience in related fields. DIREC receives annual budget up to Rp 12.000.000.000 (twelve billion rupiah) equivalent to US$ 1.200.000(one million and two hundred thousand dollar).

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

No	*Name*	*Professional education*	*Position in present organization*	*Experience relevant to the project*	*Task in the project*
1.	Agus Kholik	Master degree	Head of Forest Product Research Group, DIREC, FORDA	Project Leader for some activities on Incentive Program of Directorate General of Higher Education Ministry of National Education	Project Manager/National Expert for activity 2.2
2.	Nurul Silva Lestari	Bachelor Degree	Researcher Candidate, DIREC	Team member on several research activities	Project Secretary
3.	Suryanto	Master Degree	Researcher, DIREC	Research on modeling and policy analysis on forestry	National Expert for activity 1.3
4.	Tien Wahyuni	Master Degree	Researcher on Social Economic Forestry, DIREC	Collaborative research on social forestry	National Expert for activity 3.3

CURRICULA VITAE OF PERSONNEL PROVIDED BY THE EXECUTING AGENCY

Agus Kholik, S. Hut, M.Si.

Date and place of birth and nationality : Tegal, January 2nd 1977, Indonesian

Field and Institution of Graduation :

Faculty of Forestry, Gadjah Mada University, Indonesia, 1995-2000.

Field and institution of Post Graduation :

Post Graduate Programme, Faculty of Forestry
Bogor Agriculture University, Indonesia, 2006-2008.

Experiences:

- Project Leader for some activities on Incentive Program of Directorate General of Higher Education Ministry of National Education (2009)
- Team leader for research activity on genetic diversity of Dipterocarps (2009)
- Team leader for research activity on genetic diversity of Tengkawang species (2009)

Nurul Silva Lestari

Date and place of birth and nationality : Tanjung Karang, March 29th 1984, Indonesian

Field and Institution of Graduation :

Faculty of Forestry, Bogor Agricultural University, Indonesia, 2001-2006.

Experiences:

Team member for research activities on growth and yield of some dipterocarps species (2009)

Suryanto, S.Hut, MSi

Date and place of birth and nationality : Padang, August 31st 1973, Indonesian

Field and Institution of Graduation :

Faculty of Forestry, Bogor Agricultural University, Indonesia, 1992-1997.

Field and institution of Post Graduation :
Post Graduate Programme, Faculty of Forestry
Bogor Agricultural University, Indonesia, 2007-2010

Experiences:
- Research on Modelling and Policy Analysis on application of multisystem silviculture (2008-2009)
- Research on Social Forestry in forest degraded area (Techniques and policy development) (2004-2007)
- Research on standardization of customary law in order to prevent illegal logging (2003-2004)

Tien Wahyuni, S.Hut, MP

Date and place of birth and nationality : Balikpapan, June 6th 1969, Indonesian

Field and Institution of Graduation :

Faculty of Forestry, Mulawarman University, Indonesia, 1988-1993.

Field and institution of Post Graduation :
Post Graduate Programme, Faculty of Forestry
Mulawarman University, Indonesia, 1999-2002.

Experiences:
- Collaborative Action Research, at Center for Social Forestry, Mulawarman University, Samarinda (1998)
- International Workshop on The Balance Between Biodiversity Conservation and Sustainable Use of Tropical Rain Forest, The International MOFEC-Tropenbos Kalimantan Project and The Netherlands Organization for Scientific Research (1999)
- Training Programme on Leadership and Adaptive Management in Forest Environments, International Agriculture Centre Wageningen, The Netherlands (2002)
- Asia Pacific Regional Workshop on "Forests for Poverty Reduction: Can Community Forestry Make Money?", Beijing-China (2003)

ANNEX 3. TERMS OF REFERENCE OF KEY PERSONNEL AND CONSULTANTS AND SUB-CONTRACTS TO BE FUNDED BY ITTO

Project Coordinator

A Project Coordinator will be to lead and manage the whole operational activities for this project. The Project Coordinator will be officially appointed.

A Project Coordinator will be hired to lead and manage the whole operational activities for this project. The Project Coordinator will be officially appointed by Dipterocarps Research Center based on his/her qualification, time availability and the recommendation (approval) of Steering Committee.

Responsibilities: lead operational activities of project, work closely with parties and personnel involved in the project operational activities and responsible to DIREC through Steering Committee and prepare progress, and final technical reports under the direction of DIREC.

Project Secretary

A Project Secretary will be hired to assist project coordinator in the operational activities of the project, especially on the administrative and financial matters. The Project Secretary will be officially hired by Project Coordinator.

Responsibilities: Assist in all administrative and financial matters of the project and work closely with parties and personnel involved in the project operational activities.

National Expert for Activity 1.3.

The National consultant will be assigned to make technical manuals for protection of tengkawang species. The expert will be responsible (1) to study and analysis of information which is related to technical manuals and law enforcement of species protection based project and available for on going efforts and on a stage of preparation (2) to compile and map of the all data and involve in consultation process (3) to prepare a technical report within the period of assignment. The technical report and documentation must be presented in the project meeting.

Qualification: Hold at least Master degree and 3-5 years experience on forestry and institutional capacity based project. Good understanding in English both oral and written.

Duration: 2 months

Payment: Expert will carry out the activity within the time as allocated by the project. Rate of payment is US$ 2,000 per month

National Consultant for activity 2.1.

The national consultant will be assigned to formulate national strategy on genetic conservation of tengkawang species. The expert will be responsible (1) to study and compile of information which is related to genetic conservation of tengkawang (2) to arrange the national meeting to formulate national strategy of tengkawang conservation and arrange national consultation process (3) to prepare a technical report within the period of assignment. The technical report and documentation must be presented in the project meeting. The expert must be hold expertise and knowledge on genetic conservation and other relevant field, at least 3 years working in qualified relevant bodies.

Qualification: Hold at least Master degree and 3-5 years experience in forestry and institutional capacity. Good understanding in English both oral and written.

Duration: 2 months

Payment: Expert will carry out the activity within the time as allocated by the project. Rate of payment is US$ 2,000 per month

National Expert for activity 2.2.

The national consultant will be assigned to collect information on genetic vulnerability status of tengkawang species. The expert will be responsible(1) to study, compile and disseminate of information related to tengkawang and vulnerability genetic diversity status of tengkawang (3) to prepare a technical report within the period of assignment. The technical report and documentation must be presented in the project meeting.

Qualification: The expert must hold expertise and knowledge on identification of tengkawang species and genetic diversity, at least 3 years working in qualified relevant bodies. Hold at least Master degree and good understanding in English both oral and written.

Duration: 2 months

Payment: Expert will carry out the activity within the time as allocated by the project. Rate of payment is US$ 2,000 per month

National Consultant for activity 3.2.

The national consultant will be assigned to provide information on sustainable harvest level of tengkawang seed. The expert will be responsible (1) to study and compile of information related to sustainable harvest of tengkawang seed, (2) to prepare a technical report within the period of assignment. The technical report and documentation must be presented in the project meeting.

Qualification: The expert must hold expertise and knowledge on forestry and other relevant field , at least 3 years working in qualified relevant bodies. Hold at least Master degree and 3-5 years experience and good understanding in English both oral and written.

Duration: 2 months

Payment: Expert will carry out the activity within the time as allocated by the project. Rate of payment is US$ 2,000 per month

International Consultant for activity 3.3.

The international consultant will be assigned to provide information economics of tengkawang seed processing. The expert will be responsible (1) to study and compile of information which is related to economics of tengkawang seed protection (2) to provide information on market mechanism in favor of indigenous people (3) to prepare a technical report within the period of assignment. The technical report and documentation must be presented in the project meeting.

Qualification: The expert must hold expertise and knowledge on market intelegence, social economic forestry and other relevant field , at least 3 years working in qualified relevant bodies. Hold at least Master degree and Good understanding in English both oral and written. Sufficient knowledge in situation of Indonesia.

Duration: 1 month

Payment: Expert will carry out the activity within the time as allocated by the project. Rate of payment is US$ 10,000 per month

Sub Contractor for Activity 2.3.

The sub-contractor will be assigned to establish genetic conservation area in Samboja. The sub-contractor will be responsible (1) to collect genetic material (seed or seedling) of tengkawang species, (2) to prepare planting site, (3) to establish permanent plot in accordance with genetic conservation rules, (4) to prepare a technical report within the period of assignment.

Qualification: The sub-contractor must be hold expertise and knowledge on identification of tengkawang species, silviculture, genetic conservation and other relevant field , at least 3 years working in qualified relevant bodies.

Duration: 24 months

Payment: The sub-contarctor will carry out the activity within the time as allocated by the project. Rate of payment is US$ 70,000

Workshop organizer for Activity 2.4.

Workshop organizer will be assigned to carry out workshop on national strategy of tengkawang genetic conservation. The organizer will be responsible (1) to provide facilitator and resource persons, (2) to collect document related to genetic conservation of tengkawang species, (3) to organize workshop that involve relevant stakeholders, (4) to prepare a technical report within the period of assignment.

Qualification: Workshop organizer must have experience on conducting national workshop, at least 3 years working in qualified relevant bodies.

Duration: 1 month

Payment: The workshop organizer will carry out the activity within the time as allocated by the project. Rate of payment is US$ 8.850

Workshop organizer for Activity 3.5.

Workshop organizer will be assigned to carry out local workshops on the on the benefits of tengkawang seed utilization for sustainable livelihood of indigenous people. The organizer will be responsible for (1) to provide facilitator and resource persons, (2) to collect document related to benefits of tengkawang seed utilization, (3) to organize workshop that involve relevant stakeholders, (4) to prepare a technical report within the period of assignment.

Qualification: Workshop organizer must have experience on conducting national workshop, at least 3 years working in qualified relevant bodies.

Duration: 1 month

Payment: The workshop organizer will carry out the activity within the time as allocated by the project. Rate of payment is US$ 11,750

Sub Contactor for Activity 3.1.

Local NGO will be assigned to carry out intensive dialogue on potential benefits of tengkawang species conservation. They will responsible (1) to provide facilitator and resource persons, (2) to conduct intensive dialogue with indigenous people (3) to prepare a technical report within the period of assignment.

Qualification: Local NGO must have experience on community assistance, at least 3 years working in qualified relevant bodies.

Duration: 1 month

Payment: Local NGO will carry out the activity within the time as allocated by the project. Rate of payment is US$ 5.300

Sub Contractor for Activity 3.4.

Local NGO will be assigned to carry out training on appropriate technologies of tengkawang seed utilization for indigenous people. They will be responsible (1) to provide facilitator and resource persons, (2) to conduct assessment on local knowledge on tengkawang seed proceessing (3) to organize training that involve indigenous people who utilized tengkawang seed as their livelihood, (4) to provide assistance for local communities in project implementation (5) to prepare a technical report within the period of assignment

Qualification: Local NGO must have experience on capacity building of local communities, at least 3 years working in qualified relevant bodies.

Duration: 1 month

Payment: Local NGO will carry out the activity within the time as allocated by the project. Rate of payment is US$ 20.000

ANNEX 4. EXPERT PANEL RECOMMENDATIONS

A. Overall Assessment

The concern of the Expert Panel has been addressed as follows:

i) **The title has been somewhat adjusted to confirm to the intended objectives of the project; i.e. to sustain traditional source of income of indigenous people through conservation of tengkawang genetic diversity. In other words, livelihood of indigenous people from tengkawang seed will be sustained if, and only if, tengkawang genetic resource is sutained.**

ii) **Professionals of Gajah Mada University will be involved in project implementation taking adventage of their experience in implementing previous ITTO Projects concerning Dipterocarps Conservation, on *Shorea* spp. in particular.**

iii) **One output concerning indigenous people has been introduced wherein several activities will be implemented with heavy involvement of indigenous people, e.g. intensive dialogue, training on appropriate processing technologies, market study and intervention as well as establishment and management of village cooperatives.**

iv) **The problem analysis/problem tree has been refined to better address the livelihood aspect of the project and it has been used as the basis for identifying relevant outputs and activities of the project**

v) **A slight increase in ITTO budget, amounting to US$ 14,739, is inevitable due to increased number of activities devoted to livelihood of indigenous people.**

B. Specific Recommendations

No.	40th Expert Panel Recommendations	Revised	Page
1.	Explain how the project complies ITTO's objectives and priorities	See Part 1. Section 1.2.1 Conformity with ITTO's Objectives and Priorities	6
2.	Improve the social and cultural aspects of the proposal since the effective engagement of indigenous people in Kalimantan would be important to the project implementation	See Part 1. Section 1.3.2. Social, cultural, economic and environmental aspects	9
3.	Refine the key problem of the problem tree and the specific objective of the objective tree without mixing a means such as effective measures	- See Summary, paragraph 2 - See Part 2, Section 2.1.3. Problem Analysis. Figure 2. Problem tree. Figure 3. The Objective Tree of the proposed project - See Part 2. Section 2.1.4. Logical Framework Matrix - See part 2, section 2.2.2. Specific Objective and outcome indicators	- 12, 13, 14 -15 -17
3.	Improve the impact indicators to ensure longer-term effects of the project	- See Part 2. Section 2.1.4. Logical Framework Matrix - See part 2, Section 2.2.1. Development Objective and Impact Indicator	-15 - 17
4.	Improve the section on mainstreaming project learning by describing how project results will be mainstreamed into local or national policies and plans	See Part 4. Section 4.3.2. Mainstreaming Project Learning	34
5.	Correct the title of Section 2.2.2 with "Specific objective and outcome indicators	See Part 2. Section 2.2.2	17

No.	40th Expert Panel Recommendations	Revised	Page
6.	Strengthen the project activities relating to the capacity building of local communities in the utilization of Tengkawang seed to increase the livelihoods of concerned indigenous people	See Part 3. Section 3.1.2 Activities	19
7.	Increase the engagement of Gajah Mada University in the project implementation	See Part 4. Section 4.1.1. Executing Agency and Partners	32
8.	Make sub-contracts for some of the training activities to a qualified local NGO, where appropriate	See Annex 3	40
9.	Recalculate the ITTO Programme Support Costs at 8% of ITTO total project costs	See Part 3. Section 3.4.3. ITTO budget by Component *The budget increase by 5 % of previous budget. A slight increase in the project cost is unavoidable due to additional activities relating to community involvement	29
10.	Provide an annex that shows the recommendations of the 40th Expert Panel and the respective modifications in tabular form. Modifications should also be highlighted **(bold and underline)** in the text	See Annex 4. 40th Expert Panel Recommendations	42