INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO)

REDUCING DEFORESTATION AND FOREST DEGRADATION AND ENHANCING ENVIRONMENTAL SERVICES IN TROPICAL FORESTS (REDDES)

PROJECT DOCUMENT

TITLE	PROMOTING LOCAL COMMUNITY INITIATIVE ON THE REHABILITATION OF MANGROVE ECOSYSTEM WITH DEMONSTRATION ACTIVITIES IN BINTAN ISLAND TO REDUCE FURTHER DEFORESTATION AND FOREST DEGRADATION
SERIAL NUMBER	RED-PD 064/11 Rev.2 (F)
SUBMITTED BY	GOVERNMENT OF INDONESIA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

This project aims to contribute to the improvement of mangrove ecosystem quality in Indonesia by using demonstration Area in Bintan Island through local community participation. Its specific objective is to rehabilitate the degraded ecosystems in Bintan Island to promote their sustainable management**.**

The expected outputs of the project are: (1) Draft Policy Legislation on Mangrove Forest Management formulated; (2) Improved capacity of communities to rehabilitate the degraded mangrove forest area.

It is expected that after project is completed, national strategies on mangrove forest management will be institutionalized and adopted by various levels as action program in improving mangrove ecosystem by local communities and thus promote reducing emission from deforestation and degradation. The successful implementation of the project will generate awareness among local people and stakeholders to participate in managing mangrove forest in a sustainable way. Local government, communities and private sector will get incentives from the ongoing effort in implementing conservation and forest management in reducing emission from deforestation and degradation.

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EXECUTING AGENCY	DIRECTORATE GENERAL OF WATERSHED MANAGEMENT AND SOCIAL FORESTRY DEVELOPMENT, MINISTRY OF FORESTRY		
COOPERATING GOVERNMENTS	-		
DURATION	24 MONTHS		
APPROXIMATE STARTING DATE	TO BE DETERMINED		
BUDGET AND PROPOSED SOURCES OF FINANCE	Source	Contribution in US$	Local Currency Equivalent
	ITTO	**504,317**	
	Gov't of Indonesia	51,570	
	TOTAL	**555,887**	

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PROJECT BRIEF

Indonesia is an archipelago consisting of ± 17.500 islands with a shoreline of around 95.181 km, making Indonesia to possess very extensive shore area, a land area lying next to the sea with a high complexity of problems. In its management, shoreline area outside forest is managed by multi stakeholders, among others the Ministry of Forestry, Ministry of Maritime and Fisheries, Ministry of Public Works, Ministry of Internal Affairs, District/City Government, and others.

Shoreline area consists of mangrove ecosystem, coral reef ecosystem, seagrass and shoreline forest vegetation. The Ministry of Forestry regards shoreline area as part of a downstream watershed area, and commensurate with its habitat is dominated by mangrove forest and shoreline vegetation/forest. Mangrove is a forest type growing naturally in the ebb and tide area.

As an archipelago with 28 large islands and 92 outermost small islands, Indonesia has a sufficiently large area of mangrove forest spread in 257 Districts/City and in 32 Provinces. Based on result of inventory and identification conducted in year 2006 by the Directorate General of Land Rehabilitation and Social Forestry, the Ministry of Forestry, mangrove forests in Indonesia covers an area of more than 7,7 million hectares spread in the islands of Sumatera : 4.174.041 ha, Java: 338.243 ha, Bali, West Nusa Tenggara and East Nusa Tenggara: 61.214 ha, Sulawesi : 201.266 ha, Kalimantan : 1.373.300 ha, the Moluccas and Papua: 1.610.343 ha.

Mangrove as an ecosystem has various functions already familiar for a long time, among others: 1). Physical function. The typical root system of mangrove is able to control shore abrasion, the pounding of the sea waves/tsunami, absorb and mitigate polutants from water bodies and the air, trap sedimentation, and control the intrusion of sea water inland, mangrove also reduce high velocity wind speed; 2). Biological function. Mangrove is a habitat for various species of flora and fauna, a place of breeding, nurturing and food niche for many aquatic biotas; 3). Economic function. Mangrove wood is used to produce charcoal, construction wood and other purposes, non wood forest produce and environmental services such as clean water, ecotourism and others; 4). Ecological function. Have the role of carbon sink, absorbing carbon from the air and enhance the world carbon reserve.

However, mangrove area is continually decreasing every year as a result of the lack of attention on its aspects of sustainable management and utilization to such an extend that out of the total area of mangrove in Indonesia which is recorded to be $\pm$ 7,7 million ha, 3,250 million ha (41,9%) is recorded to suffer serious damage, 2,13 million ha (27,4 %) is damaged and only 2,38 million ha (30,7 %) is in good condition.

Most, about 70%, of the mangrove ecosystem damage occurred in outside forest area which is caused among others by conflicts in tenurial rights, conversion of mangrove land into fish ponds and other land uses, as well as conflicts in rights and posession of mangrove wood and its derivatives. The increasingly stronger economic demand on mangrove exceeds its carrying capacity, most often ignoring its ecological function.

Through funding proposal to ITTO, the project has the aim of promoting the rehabilitation activities to reduce degraded mangrove ecosystem and improve critical land quality along the shoreline by having sample activities at Bintan island, Riau Islands Province. The short term aim of the project is to control mangrove forest exploitation activities by communities through pilot activities in the area.

Expected output are 1c) Draft policies legislation on mangrove forest Management formulated; and 2)capacity of communities to rehabilitate the degraded mangrove area at Bintan Island improved.

The project beneficiaries will be the communities, Government sectors, and private sectors. Longterm impact of project are among others: a). CO2 emissions reduced, 2) Reduced poverty and improved livelihoods; and 3). Avoided vulnerability to disasters.

The project activities will be finalizing the draft of national Strategy on Mangrove Management through improving coordination meeting among stakeholders, review on the existing regulation,

carry out training to improve capacity of the local government in planning and monev of mangrove forest management; giving extension and facilitation to the communities on appriate knowledge and technology on marove forest management and product processing.

The proposed project cost is estimated at US $ 555,887. A significant amount of fund is expected to come from main donor (ITTO), estimated about US$ 504,317 (90 %) which will be needed for twenty four months. Other contribution will come from the Executing Agency – Directorate General of Watershed Management and Social Forestry Development – US $ 51,570 or 10 % of project cost.

LIST of ABBREVIATIONS and ACRONYMS

BAPPENAS	: National Development Planning Agency (*Badan Perencanaan Pembangunan Nasional)*
CBFP	: Community Based Forest Plantation
DPD-FU	: Directorate of Planning Development for Forest Utilization
DNPI	: Indonesian National Council on Climate change (*Dewan Nasional Perubahan Iklim)*
FGD	: Focus Group Discussion
FMU	: Forest Management Unit (*KPH-Kesatuan Pemangkuan Hutan*)
GHG	: Green House Gas
HPH	: *Hak Pengusahaan Huta*n (Forest Concession)
HTI	: *Hutan Tanaman Industri* (Industrial Forest Plantation)
HTR	: *Hutan Tanaman Rakyat* (Community Plantation Forest)
HKM	: *Hutan Kemasyarakatan* (Community Forest)
Hutan adat	: Customary Forest (*Departemen Kehutanan*)
IFCA	: Indonesian Forest Climate Alliance
ITTA	: The International Tropical Timber Agreement
MoF	: Ministry of Forestry
MoE	: Minstry of Environment
NTFP	: Non Timber Forest Product
PMU	: Project Managament Unit
REDD	: Reducing Emission from Deforestation and Forest Degradation
SFM	: Sustainable Forest Management
UNFF	: United Nation Forum on Forest
UPT	: *Unit Pelaksana Tugas* (Technical Implementation Unit)
VCM	: Voluntary Carbon Market

Map of project Area


BINTAN
ISLAND
TOURISM MAP
www.indonesia-tourism.com
N
Sumpat Bay
Berakit
Sialang
Pengudang
Pengudang Lama
Segiling
Pasir Panjang Beach
Teluk Sebong
Dalam Bay
Teluk Dalam
Trikora Four Beach
Recreational Area
Sungai Kecil
Sebong Pereh
Tanjung Rambutan
Anculai
Sekuning
Jauh Bintan
Lome
Malang Rapat
Trikora One Beach
Lancang Kuning
Bukit Senyum
Ekang Laut
Ekang Ancukai
Kapur
Bintan Buaya
Tanjung Ubai
Riau Strait
Pelita Baru
Penaga
Simpang Busung
Busung
Cikolek
Teluk Bakau
Bintan Bay
Tembeling
Mansur
Bukit Indah
Kawal
Teluk Saseh
Pengujian
Tuapaya
Gesik
Genting
Sebauk
Bebek
Medung
Senggarang
Buang
Istana Raja Ali Grand Mosque
TANJUNG PINANG
KIJANG AIRPORT
Galang Batang
Sidojadi
Kampung Lama
Sungai Lekop
Batuputih
Seberang
Sebalan
Barek Motor
Kelong
Terumbu Taong
Kijang
Batu Licin
Rempang Island
Kuang Strait
Sungai Enam
Ceno
Selat Limau
Belakang Sidi
Galang Island
Telang Strait
Numbing
Sendara Strait
Galang Baru Island
Hotel-Resort-Villa
Ferry Port
Resto-Cafe
Industrial Estate
Housing Estate
Golf Course
0
5
10
15
20
25

PART 1 PROJECT CONTEXT

1.1 Origin

Combating climate change is one of the main priority of the Government of Indonesia in forestry sector and the environment. The Government has put the target that by 2020 it would be able to reduce emissions by 26%. It is well known that deforestation and forest degradation – including in community forests – caused by improper forest management are the main contribution to the emissions. Illegal land conversion and clear felling contributes to the release of CO2 to the atmosphere.

Capacity building for community forests through adoption of the principles of community based forest management (CBFM) is essential to the success of Reduced Emissions from Deforestation and forest Degradation (REDD). Forest-dependent communities and indigenous people must have access to the necessary knowledge and skills in order to implement CBFM and thus fulfill their role within REDD implementation. It provides a sound framework through which REDD can provide financial and livelihood benefits to forest-dependent communities and indigenous people by acknowledging their essential long term role in sustainable management of forest ecosystems.

Shoreline area and mangrove ecosystem are the targets of natural resource exploitation activities and environmental pollution as a result of development demand which has a tendency to focus on economical aspects. More profit and economic benefit that could be gained, the heavier the destructive weight is burdened on the environment. These environmental impacts could be identified by the presence of shoreline area degradation and the diminishing area mangrove ecosystem.

At the present time conversion of mangrove ecosystem has occurred to become agriculture land, fisheries, and human settlements spread over almost all of Indonesia.
The damage on shoreline areas will have influence on ruining the socal economic condition of the communities living within the area or in its environs. The degradation of mangrove ecology will impact on the lowering of fish catch and the reduction of income of small fishermen in the said shoreline area. Uncontrolled exploitation and degradation of mangrove area will result in ecosystem change of the shoreline area such as destruction of coral reefs, lowering of fish biodiversity, reduction of mangrove forest area, shore abrasion, intrusion of sea water and extinction of rare flora and fauna.

From the total mangrove area in Indonesia of around 7,7 million ha, it is recorded that about 3,250 million ha (41,9%) has experienced heavy damage, 2,13 million ha (27,4 %) are in a damaged condition and only 2,38 million ha (30,7 %) is still intact.

Excessive felling of mangrove forest not only reduces water infiltration area, increases abrasion and natural disasters such as erosion and floods but also causes the loss of circulation hub and production of carbon dioxide (CO2) and oxygen (O2) gasses needed by human beings for the perpetuity of their lives. Mangrove has an important role in absorbing free carbon. Photosyntesis changes inorganic carbon (C02) into organic carbon in vegetation. In most ecosystems, this vegetable material will rot and releases back its carbon into the atmosphere in the form of CO2. But mangrove forests contain largely of organic materials which do not rot. Because of it, mangrove forest functions more as a carbon absorber rather than a carbon source.

According to CIFOR's Research, mangrove forest could store 800-1.200 ton carbon per hectare and release emissions smaller than emissions from terresterial forest. That is why mangrove forest very important in maintaining the micro climate. Evapotranspiration of mangrove forest is able to maintain humidity and precipitation of the area, as such it keeps the microclimate in balance. Mangrove ecosystem is also able to prevent the development of acidic sulphate soil due to the prevention of the oxidation of pyrite layers and prevent its development in its natural condition.

The damage to the mangrove forest will affect the lowering of welfare and quality of life of communities living in the shoreline and disturb the environmental function of mangrove forest in the location. Therefore, damaged mangrove – within as well as outside forest – must be rehabilitated to return the function of the mangrove ecosystem and at the same time utilize

mangrove commensurate with its carrying capacity and function so that mangrove could protect the existence and productivity of shoreline ecosystem and provide meaningful social economic and ecological benefit to communities living in the shoreline and its environs.

Through the project proposed by ITTO funding, activities of mangrove wood utilization from mangrove area by the communities will be controlled. Through facilitations and assistance in mangrove area management by using various schemes such as Village Forest, Community Forest, People Forest and others, it is assumed that positive results will be reached which are: mangrove tree cutting will be better planned in order that sustainability of mangrove forest functions in aspects of economy, ecology, social and cultural could be guaranteed. With schemes of Community Forest or Village Forest, government has a clearcut tool in its development and control. Promoting of *community's forest scheme in the* conservation and protected area will have more significant impact on the environmental improvement as they will not be allowed to harvest timber but rely only on non timber forest produce and/or benefits from environmental services

The Indonesian Draft Revised National REDD+Strategy (24 September 2010) indicates plantation establishment by communities as one of the instruments to be used. Within this Strategy, the Forestry Sector Development Reformation Program includes activity: "Improvement of reforestation in the deforested areas that is transparent, accountable and participative, particularly inside the forest areas through HTR, Village Forests, Community Forest Programs and other programs".

Such project in Indonesia has tried to improve the livelihood of local communities living inside and in the surrounding forest areas as well as to estimate carbon emission and finding emission reduction effort in several type of forests. Mangrove forest is one of the target area.

At the moment there are two on-going ITTO projects financed in 2009 related with REDDES thematic; ITTO Project PD 519/08 Rev.1 (F) "Tropical Forest Conservation for REDD and Enhancing Carbon stock in Meru Betiri National Park" funded by 7&I has two specific objectives, which are (1) to improve the livelihoods of local communities living inside and in the surrounding area of Meru Betiri National Park (MBNP) through participation in avoiding deforestation, degradation and biodiversity loss and (2) to develop a credible, measurable, reportable and verifiable (MRV) system for monitoring emission reductions from deforestation and forest degradation and enhancement of forest carbon stocks in MBNP. The results of this project such as comprehensive baseline data and estimation of emission reduction and carbon enhancement and system for monitoring emission reduction in conservation forest will be used as source of information and as reference in developing a national strategy to maintain and increase forest carbon stock through sfm implementation.

Another on going project is RED-PD 007/09 Rev. 2 (F) Enhancing Forest Carbon Stock to Reduce Emission from Deforestation and Degradation through Sustainable Forest Management (SFM) Initiatives in Indonesia.

Result of ITTO Project PD 519/08 Rev. 1 (F) especially output 1 will be adopted by this project. Mode of community participation in avoiding deforestation, forest degradation and biodiversity loss will be replicated and modified so as to adjust with the conditional of communities in Bintan Island.

1.2 Relevance

1.2.1. Conformity with ITTO's objectives and priorities

(1) Compliance with ITTA 2006 Objectives article 1

The project is confirming the objectives of ITTA, 2006 to promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and to promote the sustainable management of tropical timber producing forests by:

a. Contributing to sustainable development and to poverty alleviation;

b. Enhancing the capacity of members to implement strategies for achieving exports of tropical timber and timber products from sustainably managed sources;
c. Encouraging members to support and develop tropical timber reforestation, as well as rehabilitation and restoration of degraded forest land, with due regard for the interests of local communities dependent on forest resources;
d. Encouraging members to develop national policies aimed at sustainable utilization and conservation of timber producing forests, and maintaining ecological balance, in the context of the tropical timber trade;
e. Strengthening the capacity of members to improve forest law enforcement and governance, and address illegal logging and related trade in tropical timber;
f. Promoting better understanding of the contribution of non-timber forest products and environmental services 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;
g. Encouraging members to recognize the role of forest-dependent indigenous and local communities in achieving sustainable forest management and develop strategies to enhance the capacity of these communities to sustainably manage tropical timber producing forests;
h. Identifying and addressing relevant new and emerging issues.

(2) Compliance with ITTO Action Plan 2008-2011

The proposed project complies with various aspects as raised in the ITTO Action Plan 2008-2011 inter alia in the comission of Forest Industry:

Expected outcome 1: *Increased production and further processing of tropical timber and other forest products from sustainably managed and legally harvested sources.*

F. Undertake studies on and support the establishment of small-scale or community-based forest enterprises.
- *The Project will Initiate projects on small-scale or community-based enterprises, including analyses of the social, policy and legal frameworks, market oportunities and barriers, and developmental aspects.*
- *Develop and implement comprehensive longterm strategies to support community-based forest enterprises*

G. Identify opportunities for the development of schemes for environmental services that complement tropical timber production
- *The Project should Formulate and implement strategies and pilot projects that test potential schemes for services such as forest-based carbon,hydrological functions, biodiversity conservation, and ecotourism.*

Expected outcome 2: *Increased efficiency in harvesting, processing and utilization of tropical timber from sustainably managed and legally harvested sources*

D. Promote the development of marketing,production, commercial and community-level skills in forest industry.
- *The project Enhance skills and effectiveness through, for example, sector-wide training needs analyses and exchange visits*

In the Comissions of Economic information and market intelligence

Expected outcome 3: *Improved data and knowledge, projections and competiveness on trade in timber and timber products in international markets.The ITTO actions inter alia :*

I. Regularly assess and report on markets for forest environmental services, including carbon markets, as they relate to tropical timberproducing forests

- *The project will try to Provide up-to-date information on markets for environmental services, including carbon market*

In the comission of reforestation and forest management :
Expected outcome 5: Tropical forest resource better secured
The outcome related to the objectives (c), of Article 1 of the ITTA, 2006.
(b) Undertake studies and analyses of the latest climate change predictions and report on the implications of these for the resource base at the national level using formats and systems that facilitate synthesis
(d) Develop pilot and full-scale activities that test carbon sink and carbon sequestration measures and capture new and additional financial resources to support this

And this proposed project also in line with actions which are mentioned in :
E . Assess opportunities for, and promote the development of, non-timber forest products and forest environmental services that can improve the economic attractiveness of maintaining the tropical timber resource base under SFM.
- *Identify opportunities for and implement activities to capitalise on non-timber forest products and environmental services that further the security of the tropical timber* resource base, taking into account the needs of forest-dwelling indigenous and local communities

(3) Compliance with ITTO Thematic Programme ; Reducing Deforestation and Forest Degradation and enhancing environmental services in Tropical Forest (REDDES)

The project coherent with programme strategy
- Enabling condition and capacity building for reducing deforestation and forest degradation and enhancing environmental services in tropical forests; activities in this project is aimed at establishing policy legal and institution framework and governance structures related to the reduction of emissions from deforestation and degradation, and enhancement of other environmental services.
- Capacity building among government agencies, civil society organizations, forest community-based organizations, indigenous groups, the private sector and other relevant stakeholders for activities such :
  a). Awarennes raising among decision makers and the public;
  b). Training covering (i). Sustainable management, restoration of degraded secondary forests and rehabilitation of degraded forest lands; (ii). Forest resource assessment and inventories;; (iii) development manuals or guidelines on best practices related to measurement, assessment, repporting and verification of forest resources and their environmental services; (iv) guides and technical documentation for the planning and implementation of projects and projects and programmes for reducing deforestation and forest degradation and enhancing environmental services from tropical forests especially mangrove forests.

Several activities in the project will support and conform with REDDES program Strategy of training activities. Such training activities in projet will cover point (ii) Forest resource assessment and inventories. In project there is activity to provide data base on mangrove forest damage at Bintan island and inventory of carbon potential.
The project is also willing to develop manual or guidelines on implementation of enhancing community participation in mangrove rehabilitation and management at Bintan island.

Output or expected result of project “Improved capacity of communities to rehabiltate the degraded mangrove forest area” will support and conform with REDDES TP’s outcome which is Reduced deforestation and forest degradation with deliverables are Increase in the area of restored/rehabilitated degraded forest in the Programme impact areas (Area of tropical forests under SFM; area of restored and rehabilitated tropical forests and forest lands). Means of verification is the Project reports and statistical data of Ministry of Forestry.

(4) Compliance with ITTO Mangrove Workplan 2002-2006

Eventhough the ITTO Mangrove Plan 2002-2006 has no its newly version, the proposed-project still have contributed in substance to the development of the Work Plan itself. Furthermore, the project activities comply with all six selected areas of activities of the Plan, as follows:

Area 1: "Conservation and sustainable management":
Area 2: "Mangrove information and awareness":
Area 3: "Socioeconomic aspects":
Area 4: "Mangrove ecosystem functions and health":
Area 5: "Cooperation and capacity building":
Area 6 "Policies and legislation":

This project will use the result of Indonesia-JICA Bali Mangrove Project through accomodating the recomendation of species identification for mangrove rehabilitation.

1.2.2 Relevance to the submitting country's policies

Ministry of Forestry has set up up eight priotity policies namely : (1) Improving the stability of Permanent Forest Area; (2) Forest rehabilitation and development of Watershed Areas; (3) Forest Protection and Forest Fire Controlling; (4) Biodiversity Conservation; (5) Forestry sector revitalization and industry restructuring; (6) Local communities empowerment; (7) Climate Change mitigation and adaptation from forestry sector; and (8) Enhancement of Forestry Institutioh. The eight priority policies have been translated into long, medium and short term plannning. National long term planning (RPJN) and the national 5 year plan are the guidance for the forestry sector plannning. Furthermore, at the moment the Indonesian Ministry of Forestry cq. the Directorate of Land Forest Rehabilitation and Social Forestry is developing the "*Rencana Kehutanan Tingkat Nasional Tahun 2010-2029*" (the National Forestry Sector Planning Year 2010-2029). In this new initiated plan, the issues of forest rehabilitation; biodiversity conservation including local communities' empowerment as well as climate change mitigation are clearly stated and focused.

There are several regulations released relating to carbon emission reduction, voluntary carbon market,, and rules of establishing demonstration activities for reducing carbon emissions. Those regulations such Ministrerial decree no. P. 36; P. 68 P. 30 and some others, are intended to respond to the high interest from both international partners and national stakeholders to participate in REDDES activities. The aim of mangrove utilization through several demonstration activities is to test and develop methodologies, technology and institution of SFM that endeavor to contol deforestation and forest degradation as well as to enhance the carbon stock through the mangrove plantation activities.

1.3 Target area

1.3.1 Geographic location

Target project location is Bintan island, in the Riau Islands Province. The Mangrove area in Bintan island is a typical island mangrove group. At the shore the mangrove ecosystem is thinly spread along the length of the shore. The dominant group are the typical river mangrove, river estuary or inland bays at river estuaries.

Mangrove is spread in the area within the municipality of Tanjungpinang city, and the District of Bintan, where it is found in areas of Kawal, Malangrapat, Brakit, Pemedang, Lobam and Busung as well as in the Lagoi Tourist Resort. The present condition of mangrove ecosystem is heavily damaged and land use change for other purposes still happens, especially in mangrove area.

The project activities will focus in areas of Kawal and Malangrapat, along the shoreline of Trikora Beach (the location are highlighted with green arrow in the map of Bintan Island). The area is located in latitude and longitude N000.413020 - E104.454545 and 40 km away from Tanjung Pinang, the capital city of Riau Islands. The Bintan island itself is located around 50 miles of Southern Singapore.

1.3.2 Social, cultural, economic and environmental aspects

Social Cultural Aspects

Community based mangrove ecosystem management is proposed to preserve important values of ecology, economy and social culture, to increase community income and support sustainable development. Regional government has the authority and obligation to manage mangrove ecosystem in accordance with condition of local wisdom.

One mangrove forest area rehabilitation model has been built using the silvofisheries pattern (*wanamina*) and mangrove regeneration planting in several provinces. From year 1999 to 2009 *wanamina* model development has covered an area of 3.355 ha spread in 293 units.

Communities and population of Bintan island are used to felling mangrove tree species, locally known as *bakau* (*Rhizophora apiculata* and *Rhizophora mucronata)* utilized as raw material to produce high quality charcoal with a caloric value of 7.300 calory per gram, to be sold in local as well as export markets. Riau Province is well known as the main producer of *bakau* charcoal in Indonesia. The production of mangrove charcoal has become a major way of making a living for communities in the Bintan Island which has been traditionally done. Unfortunately, unplanned mangrove exploitation by utilizing even the small brances and the root of trees is a waste of resource, causing the lowering of the quality of charcoal and hence the lowering of its price and the high supply.

Local communities at Bintan island doing exploitation of mangrove are already aware of the threat of mangrove forest disappearance but there is still lack of knowledge on appropriate technology of harvesting and processing mangrove forest and its products. There is need to enhance their understanding on the existence, status, function and benefit of mangrove ecosystem as well as the need to increase the role of local communities in the sustainable management of the mangrove ecosystem.

Economic Aspect

Riau Province is the main exporter of wood pulp to Taiwan and Japan. *Api-api* (*Avicennia* spp.), *tancang* (*Bruguiera* spp.), and *capot* (*Camptostemon* spp.) are mangrove specieses most used for the production of wood pulp. Mangrove wood species and *nibung* (*Oncosperma,* spp.) are commonly used as support posts for houses built in shores. Furthermore, with progress in technology, more mangrove wood is used as raw material for wood pulp for paper and artificial planks.

Main economical activities in the Province of Riau Islands are mining and in land trading within the islands as well as tourism activities which giving the biggest contribution to the local government income.

Mangrove area in Bintan island has also the potential as a tourism object. The Lagoi Mangrove Tourism Area at Bintan island began to develop and has become known by tourists. Because the location is adjacent to Singapore, the Lagoi Mangrove Tourism Area has a high potential to be visited by tourists from neighbouring as well other foreign countries.

The other area that is famous for its tourism activities especially for local or domestic is Trikora beach, located in the Eastern part of Bintan Island. In this beach mangrove is thinly spread along the shore. Beside as object of tourism, mangrove forest can also be made as a location for extension, training and education on environment.

Bintan island has 10 hotels (non-star) and 7 star-hotel, with the number of tourist visits are from 261,724 persons in 2005 to 282,137 persons in 2010. From several hotels in Bintan, they have special Mangrove Discovery Tour for one and a half hour in the noon or only one hour in the night. The location of Mangrove forest is in Sungai Sebong Lagoon which has 12 different species of mangrove and the most complete in Indonesia. The role of resorts located along shore line fortunately suppport and promoting ecotourism activities in Bintan island. There are around 5,000 persons working in those resort areas in Bintan.

Environmental aspect

The mangrove ecosystem at Bintan District has an area of 23.934,70 ha of which 1.253,70 ha is in good condition; 3.024,36 ha slightly damaged; and 19.656,64 ha heavily damaged. Recent condition of the mangrove ecosystem has not been observed because no inventory is done as yet (data source: Diractorate General of RLPS-MoF).

At Riau, about six islands are already submerged because of sea water abrasion. The six islands are Nipah, Barkih, Raya, Jenir, Muntai dan Sinabo. These islands are submerged because of massive exploitation of mangrove forest at the Riau Province.

The production of *bakau* charcoal is the main livelihood of communities in Bintan island and has been done for generations. Unplanned mangrove utilization until small diameter trees and roots is a waste of resource, causing a lowering of quality and price of *bakau* charcoal and a high supply of the commodity in the market.

Therefore there is a need to develop models in conservation and culture of environmentally friendly and community based mangrove ecosystem management. Also, development of mangrove ecosystem utilization based on science and technology and/or traditional community wisdom will be tested in the Bintan island mangrove ecosystem through the proposed project submitted to ITTO.

1.4 Expected outcomes at project completion

Expected outcome at project completion:

- Indonesia will have a national strategy for sustainable mangrove management as an important tool to improve the quality of mangrove ecosystem. Those approved national strategic will shows commitment from all related stakeholders. At the time sustainable mangrove management could be achieved it is expected the mangrove areas could absorb more CO2 and will enhance the carbon stock at mangrove forest. The strategy will be institutionalized and adopted by various government levels to be the program and action in managing the mangrove forest as an option to reduce emission from deforestation and degradation.

- The interpretation of the strategy to become a programme action will make it possible to calculate economic value on carbon stock of mangrove forest areas. It will also help to create alternative and sustainable livelihood for many forest dependent low income families who currently survive on uncontrolled harvesting of the mangrove forest.

Expected long term effect of the project intervention:

- Mangrove Forest in Bintan island controlled and managed in sustainable way. Improved management through SFM principles will improve the quality of mangrove ecosystem. As a result the mangrove areas could absorb more carbon emission.

- Increased forest carbon stock through Sustainable Mangrove management efforts. Forest dependent communities could utilize the mangrove forest to produce charcoal that could be exported. The communities' welfare improved through employment opportunity, exporting of charcoal products and incentives from Sustained Mangrove Management initiatives to reduce emission from deforestation and degradation; as well as by increased national economy from the development of environmental services.

- Bintan island be rescued from vulnerably disasters because it has still a large potential of mangrove forest and can be used as an example of mangrove management in areas with small islands.

From the view of various beneficiaries, expected outcome to each of them inter alia :

1) **Communities** ; The capacity of local communities improved in manage the mangrove forest area. Consequently, this project would support to reduce poverty through economic improvement for local communities. If the intiatives developed grows favourably then the incentives mechanism supporting forest based climate change to reduce emission from deforestation and forest degradation will be beneficial for local communities in improving income source by planting mangrove trees. In the long term, the continuous supply of wood would benefit local charcoal industry in a sustainable way, creating jobs and improve welfare. Local income generation from charcoal industry of mangrove trees will encourage them to plant more variety of mangroves species in their surroundings. By improving capacities of the communities to implement the best practice of harvesting mangrove trees, local communities will undertake activities which are geared towards the sustainable use of the mangrove resources and improve awareness as well as their technical skills.

2) **Ministry of Forestry**; will have the guidelines for strategy and policy of mangrove forest management. The strategy could be a basis for policies regulations on climate change mitigation to reduce emission from and by mangrove forest. The information from the project could be used by policy makers in formulating program and action at various levels on sustainable mangrove harvesting in enhancing forest based carbon stock, carbon sequestration, and carbon storage in green products in order to reduce CO2 greenhouse gas (GHG).

   As Indicate in The Indonesian Draft Revised National REDD+Strategy (24 September 2010), plantation establishment by communities recommended as one of the instruments to be used. Therefore, the project activities that will improve the capability of human resource in rehabilitating mangrove areas through reforestation in the deforested areas is in line with REDD+ activities in Indonesia. By involving communities and public participation in rehabilitating degraded mangrove forest in Bintan island, it will suppport one of National Strategy on REDD+

3) **Local Government**; Improved capacity of local government in planning and monitoring as well as evaluation, could help to formulate an appropriate policy on the management of mangrove forest both for improving its ecosystem as well as for climate change mitigation to reduce emission from the controlled mangrove exploitation.

4. **Private sector, forest owner, forest association**; the achievement of project goals through improving private sector involvement in sustainable mangrove management as initiatives in enhancing forest based carbon stock, carbon sequestration, and carbon storage in green products in order to reduce CO2 GHG. They will have the opportunity to get incentive from the best practice of sustainable mangrove management effort.

PART 2 PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

2.1.1 Institutional set-up and organizational issues

Conservation of mangrove ecosystem must be controlled through implementing the strategy of mangrove ecosystem management with the principle of "*no net loss"*. Mangrove ecosystem management should be implemented as an integral part of watershed (DAS) management as a whole. Therefore, mangrove ecosystem management need political commitment and strong support from the Central Government, Regional Government and related stakeholders.

Coordination and cooperation among institutions – vertical as well as horizontal – and with other stakeholders is very important to guarentee the implementation of mangrove eco-system management policies. However, there is lack of coordination and resulting lack of consensus as well as lack of commitment from related sectors outside of forestry. At present, mangrove

management is under control of the Ministry of Forestry only. Draft of National Strategy on Mangrove management which have one of its strategy to set up a coordination among the various stakeholders, does not have in-line operational control of interventions. Moreover, no management structure exists to coordinate mangrove management on the ground. There is ineffective system for the collection and dissemination of information on mangrove rehabilitation. There has been no attempt to prioritize the use of human and financial resources. Regional development interventions and forestry development programs are uncoordinated. The absence of this harmonized strategy hinders the development of a sustainable mangrove forest. By improving the coordination among stakholders especially from other sectors, will generate similar perception on the importance of mangrove ecosystem. Furthermore, Draft National Strategy of mangrove management should be approved by all related stakeholders to shows their commitment to maintain the mangrove forest ecosystem.

Management of mangrove ecosystem will be done through pattern of partnership by trying to get support from international communities, as part of the effort to realize commitment to global environment. Development of research, science and technology and information system are needed to strengthen the sustainable mangrove ecosystem management. Here lies the important role of experts, research scientists and academia.

Related to the issue of climate change and carbon emission, Ministry of Forestry has forged cooperation with various partner institutions having initiatives and working to cope with problems of climate change, among others as elaborated as follows:

Indonesian National Council on Climate Change

In July 2008, an influential climate change council has been established by the Indonesian President to speed up efforts to combat global warming. The council will coordinate and monitor the implementation of the action plans to fight climate change and manage climate funds (incl. from REDD mechanism) to help Indonesia reduce greenhouse gas emissions. The council comprises six working groups of governmental officials to deal with issues of adaptation, mitigation, technology transfer, finance, **forestry** and post-Kyoto. The roles and responsibilities of the forestry working group will play an important role in establishing a favourable policy and regulatory framework for the Program.

REDD Commission

The proposed REDD comission formulated to supervise, monitor and evaluate REDD related activities is likely to be established in the near future. A ministerial decree (Permenhut) No 30 year 2009 regarding implementation of REDD activities in Indonesia was presented about this commission. The REDD comission will be the clearing house for all REDD activities. It will review and recommend or reject REDD proposals; guide overall REDD implementation; preparing readiness REDD certificates; communicate with the national registry; and keep the reserve of REDD credits. Proposals will be submitted to the REDD comission, which consist of a technical team within the Ministry of Forestry to evaluate the proposal and make recommendations to the Minister for approval or rejection. The REDD comission will supervise the monitoring and reporting of emission reductions and the issuance of certificates.

National Climate Change Working Group.

Since 2008, this working group was established based on Ministerial Decree SK.13/Menhut-II/2009 coordinated by Minsitry of Forestry. This working group has to provide inputs to the Minister of Forestry on the policies, strategies, programe and activities on climate change as well as manage data and information on Climate change in the Ministry through meetings at different level and electronic communication to gather inputs from stakeholders. But this working group still need financial and data/information support.

Role of those partner organizations mentioned above will be involved in the dialogues, seminar or focus group discussion on formulated draft of National Strategy on Mangrove Management, together with other stakeholders.

2.1.2 Stakeholder analysis

The formulation of this project proposal was done by a multi-stakeholder process. It involved parties with different interest, access, and authority over a forest area:

- National Government as the holder of authority over forest area (Ministry of Forestry with their UPTs)
- District governments with their Forestry Offices (*Dinas Kehutanan*) which were empowered during the decentralisation process
- Local communities whose livelihoods depend on forests. They suffer most from forest destruction
- Private sector, such as industrial forest plantation-HTI,, and possibly non-forest concession holder (oil palm plantation companies, board of tourism),
- NGO, civil society and academia, who take interest in the issue of forest conservation and community development
- Representative of Resort's owner and management surrounding the Bintan Beach area

Project initiator and formulator have carried out several focused discussions involving related stakeholders to analyse characteristic, interest, potentials and future involvement for successful project implementation. Table 1 shows the result of the analysis.

Tabel 1. Stakeholder Analysis

Stakeholder Group	Characteristics	Problems, needs, interests	Potentials	Involvement in the project
Primary Stakeholders				
				•
Community/forest owner	Higly dependent on natural forest . They live within & around the forest	• Lack of source of income • Lack of knowledge and skills and understanding about REDDES	• They are close to the resource/ access • They are practicing implementing SFM in the field • They have traditional knowledge and wisdom	• Primary project beneficiaries • Communities will be directly involved in the implementation of the project activities to achieve particularly output 2 and output 3. Attention will be given to participate in activities of training, public awareness improvement/ consultation and focus group discussion. • Local communities will get necessary information and capacity provided by the project as well as adequate economic incentives to manage forest sustainably
Private sectors (including Resort owners in Bintan)	Doing investment for the environmental services; nature tourism	Lack of technical knowledge on mangrove ecosystem.	Providing investment for tourism and recreation activities.	• Participated in dialogues and focus discussion as key actor in environmental services management at mangrove s area • Partner in implementing project activities and sharing data and information.
Secondary Stakeholders				
Local Government	- Locally based - They have resources - They have law enforcement problem	Limited coordination Lack of capacity	- Have authority at district/provincial level - Can mobilize people in the community - They have	• Involved in project activities mainly in facilitating dialogue and discussion at provincial and district level , • Working together with

Relevant National Department/Agency • Ministry of Environment /Climate Change Council • Ministry of Home Affairs • National Planning Agency (Bappenas) • Ministry of Foreign Affairs • Ministry of Finance, Economy and Trade	Coordinate and monitor climate change related activities in the sector Control, supervision and administration of local government Develop and supervise National Planning Strategy including CC Authority in foreign politics including Indonesian negotiator/delegation in international convention on CC Regulator/policy making related to economic and trade matters (REDD payment mechanism, payment distribution, carbon trade)	Limited understanding on the role of conservation and forest management in reducing carbon emission from tropical forest Limited capacities on promoting SFM as important option in REDD in national and international context	Having resources and network to facilitate in promoting SFM as important option in REDD International Focal point Having function in facilitating and coordinating with other sectors	• Involved in policy discussion and dialogue • Involved actively in project activities such as assessment and study analysis • Will disseminate the project result at national and regional level • Bappenas will distribute strategy and Action Programme to all sectors within Indonesia • Networking with the international partner to invite investors funding climate change mitigation activities. • Promote the target of CO2 reduction, • Maintain communication with international society
• Directorate of Social forestry in the Ministry of Forestry	Responsible to prepare guideline for communities managing mangrove area.	Lack of coordination with other sektors	Could provide regulations on communities development	Promoting schemes of Community forestry management at all type of forests.
Directorate of Land Rehabilitation,	Preparing the regulations and policies of mangrove forest management	Lack of coordination, Need capacity improvement in providing data & info on mangrove forest areas	Have good networking with the communities working in the mangrove forest.	Provide information on regulations and policies on mangrove forest management. Finalising draft of Natonal Strategy of Mangrove Management.
Forest Associations	Coordinate and facilitate all association member interest (forestry concessions)	Lack of coordination with government agencies	Experience working with private sectors	Partner as facilitator in field activities and study analysis
Directorate of Environmental services Management and Nature Tourism Development	Responsible for the management and development of standard, criteria for environmental services development,	Lack of coordination	Involved actively with the communities in manage and develop mangrove forest for environmental services and ecotourism.	Being a partner of communities and the private sectors who will develop the ecotourism areas, and carbon stock maintenance.

Tertiary Stakeholders				
NGO's	Actively involved in facilitation activites.	Lack of capital and funds	Experience working with communities	• Project implementation partner/sub contract • As facilitator/ in improving awareness activities on sustainable mangrove management and REDD mainly for communities as a target group

Universities	Locally based Actively in mangrove and REDD research activities Have education and research mission including on REDD	Lack of networking	Experience working on basic research and development	• Project implementation partner • Involved in developing assessment activities study analysis • As trainers and facilitator in project activities

During the formulation draft of National Strategy on Mangrove Management, all stakeholders were invited and involved. There were several times meeting and discussions carried out, Unfortunately, the participants attended those series of meeting, discussions were not the decision makers or the authorized person who in charge to make regulations and change policies. That was why the formulated draft are not having approval and consensus yet up to now.

In this proposed project, those stakeholders mentioned above will always be invited and involved in such activities either in the discussions, seminars, as well as in training activities. At least every related informations will be dissemminated to them.

2.1.3 Problem analysis

Shoreline area and mangrove ecosystem become the target for natural resources exploitation and environmental pollution as a result of development demands which is inclined to emphasize on economic factors. The more economic benefit and profit that will be gained, the more burden the environment must bear on the damage caused by pressure. These environmental impacts can be identified by observing degradations on shoreline area and the reduction of mangrove ecosystem area.

Mangroves in Indonesia covers an area of ± 7,7 million ha; among which 3,250 million ha or 41,9% is heavily damaged, 2,13 million ha or 27,4 % is damaged and only 2,38 million ha or 30,7 % is in good condition.

Most (70%) of mangrove ecosystem damage occurs outside forest areas are caused by among others: conflict in land tenurial rights e.g among the communities, and other sectors outside forestry, conversion of mangrove area into fishponds, and uncontrolled felling of mangrove for charcoal production. The increasing demand on the economic function of mangrove which tend to override the carrying capacity and most often ignore the ecological function of mangrove ecosystem itself.

The similar case is affecting condition of mangrove area located at the Bintan Island, Province of Riau Islands that will become the pilot activity of the project. Based on the mangrove forest survey done in 2007, mangrove ecosystem in the district of Bintan is recorded to cover an area of 23.934,70 ha out of which 1.253,70 ha is in good condition; 3.024,36 ha slightly damaged; and 19.656,64 ha heavily damaged. No inventory is being done on the latest condition of mangrove ecosystem (source of data: Directorate General of RLPS, MoF) especially after the development of several Resort Areas along the shore of Bintan which was giving contribution to the destruction of mangrove ecosystems.

The production of *bakau* charcoal is the main livelihood of communities in Bintan island and has been done for generations. Unplanned mangrove utilization until small diameter trees and roots is a waste of resource, causing a lowering of quality and price of *bakau* charcoal and a high supply of the commodity in the market.

All of uncontrolled harvesting of mangrove forest is mostly caused by inappropriate policies legislation on mangrove management. This inappropriate policies for example, unplanned conversion of mangrove ecosystem to agricultural land, fisheries and human settlement as well as opening and development of resort areas happened almost at allover of Indonesia since the land use change was not comply to the National Spatial Planning under the National policies.

Excessive unplanned felling and harvesting of mangrove forest by communities are continuously occurred caused by the appropriate scheme of community forest mangamant such as village forest, community forest, or community plantation forests are not properly promoted by the local government.

Those inappropriate policies legislation continuously applied since the absence of national Strategic Plan on mangrove forest management which shows lack of commitment of several stakeholders. The document of National Strategic Plan had been formulated, however, was not having consensus yet by several stakeholders outside of forestry sector.There was lack of coordination among stakeholders that will result weak commitment between them to respect the best practices of mangrove forest management. As mentioned before, mangrove ecosystem management should be done as an integral part of watershed (DAS), therefore, mangrove ecosystem management need political commitment and strong support from the Central, Regional Government and related stakeholders.

Another cause affecting inappropriate policies is lack of awareness on policy failures and best practices of mangrove forest management. Absence to review the existing regulation related to mangrove issues is one factor to be resolved. Many rules and regulations have been enacted about the management of mangrove area, and it has never been evaluated whether they are still relevant or not. Rules are superimposed between one and another, some are contradictory with

other regulations or among sectors. Therefore, existing rules and regulations need to be evaluated and reviewed in order to attain an increase of benefit and function of mangrove ecosystem as a life support system.

Limited involvement of local communities in the rehabilitation of degraded mangrove ecosystem is caused by inadequate capacity of the communities and lack of financial supports. Communities have not reached similar understanding on the existence, status, function and benefit of mangrove ecosystem. Uncontrolled mangrove exploitations were unavoided. The rate of degradation of mangrove ecosystem increases and its quality is decreased.

People and community groups in general has not yet understand a model for conservation and culture of mangrove ecosystem management which is environmentally friendly and community based.

Lack of capacity is caused by lack of trained persons in doing mangrove rehabilitation and restoration. The absence of training activity for communities is caused by weak capacity of local government in planning and doing monitoring and evaluation of mangrove forest management. They were in poor capacity to provide these services caused by lack of financial supports.

Lack of extensions and facilitation program as well as assistance for communities causes lack of knowledge of the communities to involve in the rehabilitation of mangrove forest. They are on the opinion that mangrove area have existed since time immemorial are owned by their acestors and for them to utilize its wood and its derivative products according to their sishes without any control from anyone.

The damage on shoreline areas will have influence on ruining the socal economic condition of the communities living within the area or in its environs. The degradation of mangrove ecology will impact on the lowering of fish catch and the reduction of income of small fishermen in the said shoreline area. Uncontrolled exploitation and degradation of mangrove area will result in ecosystem change of the shoreline area such as destruction of coral reefs, lowering of fish biodiversity, reduction of mangrove forest area, shore abrasion, intrusion of sea water and extinction of rare flora and fauna. Besides this ecological impact, the economic income will decrease since lost of export opportunities from mangrove products

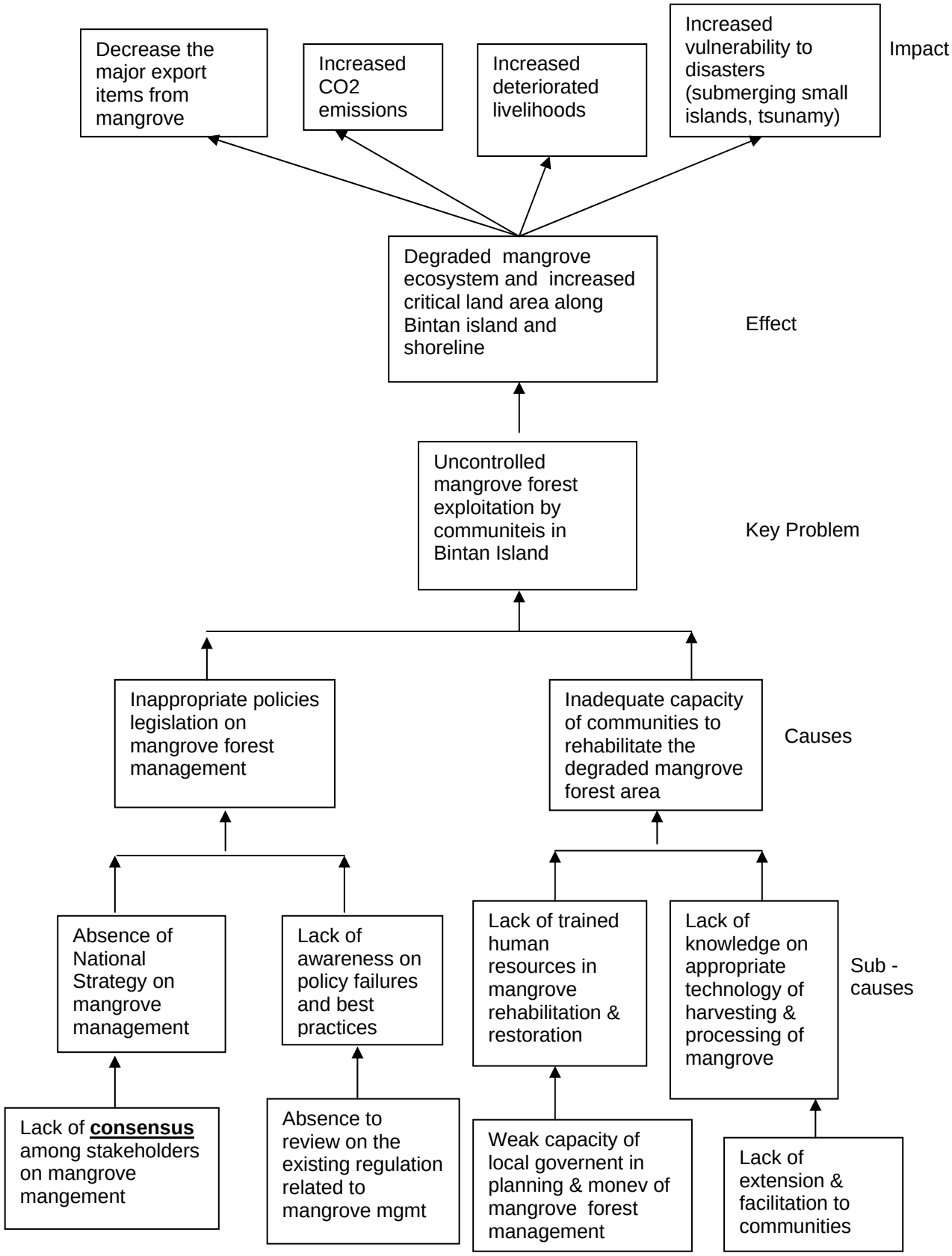
Excessive utilization of mangrove forest not only causing the reduction of water infiltration areas, abrasion, natural disasters such as erosion and flood but also the loss of the hub for circulation and formation of carbon dioxide (CO2) and oxygen (O2) gasses needed by human being for the perpetuity of their life. Mangrove has a very important role in absorbing free carbon. The process of photosynthesis changes inorganic carbon (C02) into organic carbon is the form of vegetative materials. In most of the ecosystems, these materials decompose and release back the carbon into the atmosphere as carbon dioxide (C02). However, mangrove forests retain most of the undecomposed organic material. Because of it, mangrove forest functions more as a carbon absorber rather than as carbon source.

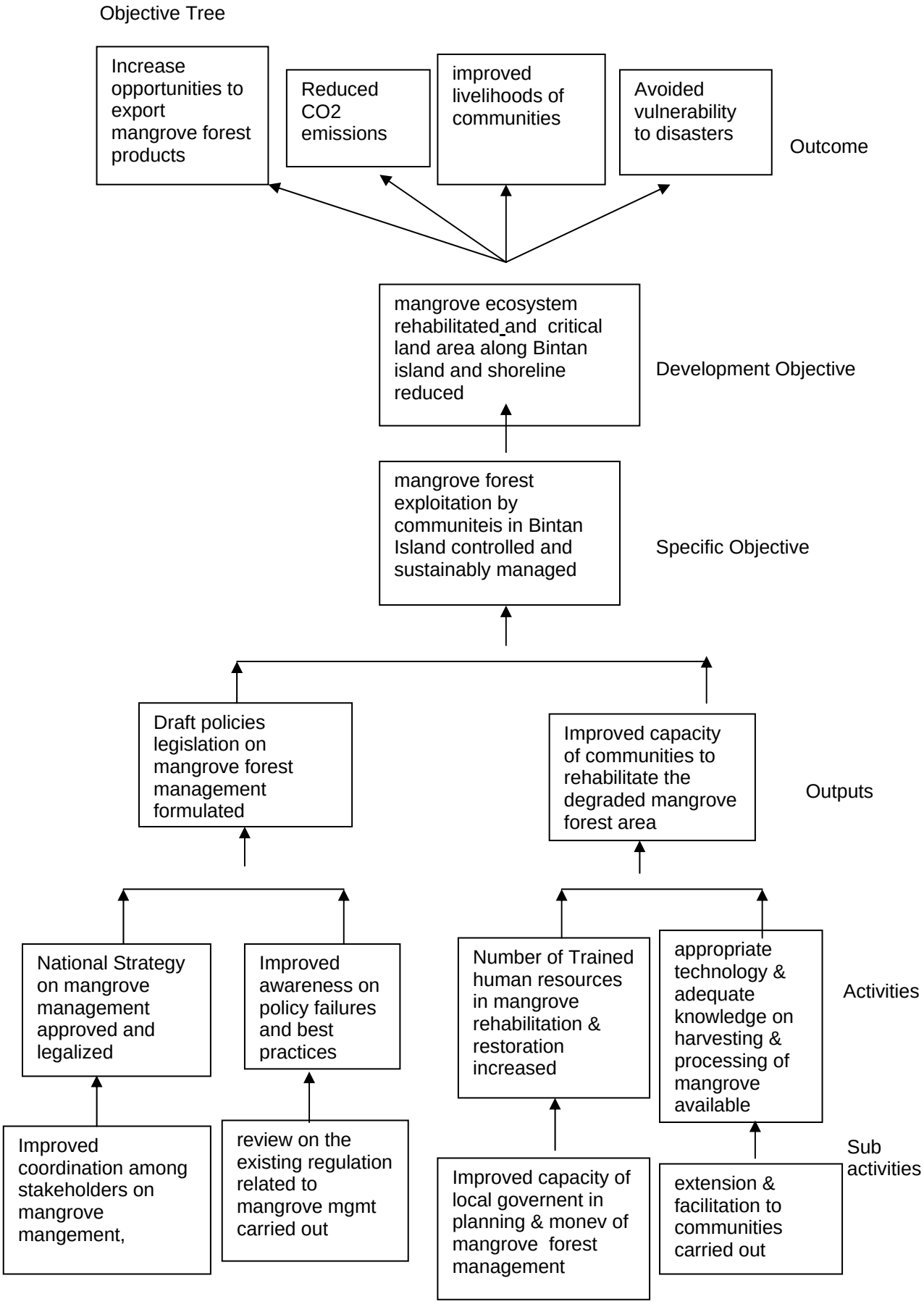
It is also true in maintaining microclimate. The evapotranspiration of mangrove forest is capable of maintaining humidity and precipitation of the area, which maintain the balance of the microclimate. Mangrove ecosystem is also able to prevent the development of acidic sulphate soil due to the prevention of the oxidation of pyrite layers and prevent its development in its natural condition.

In complete format, explanation of problems in the management of mangrove area is shown in the problem tree in the next page.

For this reason, through the proposal of this project, there is the need for quality enhancement of human resource, formulation and development of models in mangrove ecosystem management, determination of facilitation and assistance program for communities, increasing skill in mangrove management as an alternative way of acquiring income, implementation of trials in science and technology of fish and mangrove forest culture which is environmentally friendly, employ studies and valuation of economic values of carbon in mangrove forest/area.

Problem Tree




Objective Tree
Increase opportunities to export mangrove forest products
Reduced CO2 emissions
improved livelihoods of communities
Avoided vulnerability to disasters
Outcome
mangrove ecosystem rehabilitated and critical land area along Bintan island and shoreline reduced
Development Objective
mangrove forest exploitation by communiteis in Bintan Island controlled and sustainably managed
Specific Objective
Draft policies legislation on mangrove forest management formulated
Improved capacity of communities to rehabilitate the degraded mangrove forest area
Outputs
National Strategy on mangrove management approved and legalized
Improved awareness on policy failures and best practices
Number of Trained human resources in mangrove rehabilitation & restoration increased
appropriate technology & adequate knowledge on harvesting & processing of mangrove available
Activities
Improved coordination among stakeholders on mangrove mangement,
review on the existing regulation related to mangrove mgmt carried out
Improved capacity of local governent in planning & monev of mangrove forest management
extension & facilitation to communities carried out
Sub activities

1.4 Logical framework matrix

Strategy intervention	*Measurable Indicators*	*Means of verification*	*Key Assumptions*
Development Objective Promoting the rehabilitation activities to reduce degraded mangrove ecosystem and reduce critical land along the shoreline of Bintan island	**Long impact indicators** - At the end of project time, communities' livelihoods improved - After project completion, vulnerability to disasters avoided - Several years laters after mangrove areas at Bintan rehabilitated, CO2 emissions reduced around 10 %	Annual Report of the Directorate General Forestry Statistics of the Directorate General	Draft of National Strategy on Mangrove Ecosystem could be legalized/enacted as a mutually agreed document on Mangrove Management Planning. Baseline of CO2 emissions measured and calculated at the begining of project
Specific objectives Mangrove exploitation by communities at Bintan island controlled and the mangrove forest rehabilitated.	**Outcome Indicators:** Draft policies legislation on mangrove forest management formulated Capacity of communities to rehabilitate the degraded mangrove forest area improved through trainings the community members.	Statistical Report Meeting Report	Regional Regulations commensurate with the agreed national strategy.
Output 1. Draft policies legislation on mangrove forest management formulated	**Output Indicator:** Review on the existing regulation related to mangrove management carried out Improved awareness on policy failures and best practices Compilation of Draft National Strategy through participative process among stakeholders National Strategy on mangrove	Consultant reports Meeting reports Draft document National Strategy on Mangrove Ecosystem Management	Agreement of other related sectors to commit and agree on actions of release of mangrove area under the jurisdiction of Regional Planning Board (*Bappeda*) and MoF.

Strategy intervention	*Measurable Indicators*	*Means of verification*	*Key Assumptions*
	management approved and legalized		
Output 2. Improved capacity of communities to rehabilitate the degraded mangrove forest area .	**Output Indicator:** Number of Trained human resources in mangrove rehabilitation & restoration increased appropriate technology & adequate knowledge on harvesting & processing of mangrove available Improved capacity of local government in planning & monev of mangrove forest management extension & facilitation to communities carried out	Training report, List of training attendance Consultant's report, Project report Consultant report Project report, List of attendance communities at extension	Government support the rehabilitation budget Government support with regulation concerning management of mangrove forest by communities. Capacity development may create targeted changes Availibility of facilitators and extension persons could be ensured.

2.2 Objectives

2.2.1 Development objective and impact indicators

Promoting the rehabilitation activities to reduce degraded mangrove ecosystem and improve critical land along the shoreline of Bintan island

Long Impact Indicator:

- At the end of project time, communities' livelihoods improved
- After project completion, vulnerability to disasters avoided
- Several years laters after mangrove areas at Bintan rehabilitated, CO2 emissions reduced around 10 %

2.2.2 Specific objective and outcome indicators

Mangrove exploitation by communities at Bintan island controlled and the mangrove forest rehabilitated.

Outcome Indicators:

- Draft policies legislation on mangrove forest management formulated
- Capacity of communities to rehabilitate the degraded mangrove forest area improved through series of training activities.

PART 3 DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and activities

3.1.1 Outputs

Specific Objective :

To control exploitation activities in mangrove forest area at Bintan island by communities

Output 1.

Draft policies legislation on mangrove forest management formulated

Activities 1.1.a : Provide database on mangrove forest management through inventory of mangrove forest damage at Bintan island and inventory of carbon potential and carbon emissions in the said mangrove area.

b. : Collect data and info on socio, economic of communities surrounding the mangrove forest areas in Bintan island.

Activities 1.2. : Review and evaluate existing regulations and policies on mangrove management.

Activities 1.3. : Coordinate and integrate program amongst related stakeholders in the mangrove ecosystem management through meetings, FGD and seminar.

Activities 1.4. : Review draft National Strategy through participative process

Output 2.

Improved capacity of communities to rehabilitate the degraded mangrove forest area

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Activities 2.1. : Formulate guideline on implementation of enhancing community participation in mangrove management at Bintan island

Activities 2.2. : carry out community empowerment activities by giving extension, guidance and advise/facilitation on mangrove ecosystem management through activities in rehabilitation, utilization and preservation of mangrove.

2.2.1. Create models in mangrove ecosystem management that is environmentally friendly and community based:

a. Organize training in mangrove management for production of wood charcoal and *nipah*.
b. Organize training in mangrove management for fish culture;

c. Organize training in mangrove management for ecotourism and carbon absorption utilization.

2.2.2. Build up pilot plot for seed orchard through participation of community.
2.2.3. Improve human resource quality at government and community through training in mangrove conservation and rehabilitation.
2.2.4. Preparing center for information services on mangrove rehabilitation.

Activities 2.3. : Facilitate and assist the mangrove forest management business permit process by communities.
a. Review needed requirement
b. Facilitate institution formation by communities
c. Facilitate planning document compilation
d. Assist HKm or village forestry permit application process by community and facilitate access to financial institutions.
e. Workshop on information socialization to community groups.

3.2 Implementation approaches and methods

To control activities in mangrove utilization at Bintan island is not an easy thing to do. Coordination among sectors becomes an important matter because similar perception among sector about the importance of defending mangrove area is needed.

In order that control the utilization of mangrove area is agreed upon by all stakeholders is through making a Strategic Plan of Mangrove Ecosystem Area Management which will involve the participation of all related sectors. Coordination and integration of program among related stakeholders in mangrove ecosystem management is needed. Beforehand, complete data and information must be made available on the potential of mangrove forest, physical field condition, social economic condition of communities and potential carbon emission that could be absorbed if mangrove planting activities were to be made. For this purpose inventory activities on mangrove area at Bintan island would be done.

Afterwards after data and information are analyzed, Minister of Forestry will discuss it with all related sectors such as Minister of Interior, Minister of Agriculture, Minister of Mining and Energy Resources, Regional Governments at Provincial and District levels, Regional Board of Planning and community groups as well as with Resort owners/managers. The discussion is meant to determine an accurate strategic planning on mangrove management, commensurate with the carrying capacity of the area and social economic capacity of the population. Existing rules and regulations on mangrove forest management need to be reviewed to prevent overlaps and controversy.

Method used are through meetings, focus group discussions (FGD) and workshops. The Workshops will be conducted 4 (four) times which is 3 (three) times small workshops will be carried out in smaller group (about 15 participants) in the provinces representing 3 region (east, west and central.) (Activities 1.3). Then the final big workshop (with 50 participants) will be carried out in a big city like Jakarta, to discuss the final draft of National Strategy for Mangrove Management in a wider participants (activity 1.4).

The above mentioned workshops are supposed to Coordinate and integrate program amongst related stakeholders in the mangrove ecosystem management in the province level. The participants for this smaller workshop will be reppresentative of stakeholders in the regions (local government from different sectors outside of forestry, provincial government, reppresentative of communities). Then result of each workshops will be discussed with a wider participants both from provincial as well as from central government from different sectors (mining sectors, agricultural sectors, ministry of public works, and national development Planning Board.
The expected outputs are getting concensus and approval from other related sectors on integrated program of mangrove management in the form of National Strategy of Mangrove Ecosystem management.

To attain the realization of community role and participation in mangrove area management in Bintan island, a guideline for enhancing community involvement in mangrove management in Bintan island must first be made. Further, activities in community empowerment through extension, guidance, assistance and facilitation on mangrove ecosystem management as well as activities in rehabilitation, utilization and preservation of mangrove forest would be done.

Approach strategy to attract community participation are through model development of environmentally friendly and community based mangrove ecosystem management. Training actitivies will be done in mangrove management for various purposes such training for wood charcoal production, *nipah*, mangrove management for fish culture, and training of mangrove management for nature tourism activities and also as carbon absorber.

Other approaches are through making of demonstration plots for seed orchards based on community participation; quality improvement of government and community human resource through training in mangrove conservation and rehabilitation; and the creation of mangrove rehabilitation information center.

To overcome business insecurity, facilitation and assistance in the process of business permit application for mangrove forest management by communities will be provided. The steps are among others: review needed qualification, facilitate institution building by communities and facilitate compilation of planning document.

Finally, an important matter that will be done is to assist in the process of fundraising. The method is through facilitation of access to financial institutions. Important information collected during the facilitation and assistance process will be disseminated through workshops on information socialization to community groups. Resorts owners/managers will be invited to participate in mangrove conservation and rehabilitation by giving donation e.g U$ 1 per night levy on each guests (this proposed fund raising will be discussed carefully to avoid missunderstanding with local government that have imposed such tax to Resort/hotels.

3.3. WORKPLAN

Outputs/ activities	Description	Responsibility	Year 1												Year 2											
Output 1	**Draft National Strategy on Mangrove Management is compiled**		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Activity 1.1.a	Provide database on mangrove forest management through inventory of mangrove forest damage at Bintan island	PMU																								
	Inventory of mangrove blocks, measure mangrove potential and forest carbon potential	PMU, group of inventory worker																								
	Compilation and discussion on data analysis	PMU, EA																								
1.1.b.	Collect info on socio economic of communities surround forest areas	PMU																								
Activity 1.2.	Review and evaluate existing regulations and policies on mangrove management	PMU, EA																								
	Collect information and analyze existing policy and regulations on mangrove management.	Policy expert																								
	Discussion and meetings	PMU, Consultant																								
Activity 1.3.	Coordinate and integrate program amongst related stakeholders in the mangrove ecosystem management through meetings, FGD and workshops	PMU, EA																								
	Meetings with relevant stakeholders	Idem																								
	Facilitating the Drafting process of National Strategy for Mangrove Management	Idem																								

Activity 1.4.	Compile draft National Strategy through participative process	PMU, EA																										
	Discussions on draft 0, draft 1 until final draft	PMU, EA																										
	Workshops in four regions (Sumatra, Java, Kalimantan and East Indonesia)	PMU, Consultant																										
Output 2	**Role and participation of community in mangrove area management at Bintan island is established**																											
Activity 2.1	Compile guideline on implementation of enhancing community participation in mangrove management at Bintan island																											
	Hiring social consultant																											
	Meetings, 4 x 10 participants																											
Activity 2.2.	To do community empowerment activities through extension, guidance and advise/facilitation on mangrove ecosystem management through activities in rehabilitation, utilization and preservation of mangrove.	PMU, consultant																										
sub activity 2.2.1	Create models in mangrove ecosystem management that is environmentally friendly and community based	PMU, consultant																										
a.	Create models in mangrove ecosystem management that is environmentally friendly and community based	PMU																										
b.	Training on mangrove management model for wood charcoal production, 20 persons x 10 days	Consultant																										
c.	Training on mangrove management model for fish culture, 20 persons x 10 days	idem																										
d.	Training on mangrove management model for nature tourism activities, 20 persons x 10 days	idem																										

sub activity 2.2.2	Build up pilot plot for seed orchard through participation of community																												
sub activity 2.2.3	Training in mangrove conservation and rehabilitation for local government staff and community 10 persons x 5 days	idem																											
sub activity 2.2.4	Develop center for information services on mangrove rehabilitation	PMU, EA																											
a.	Compilation and collection of needed information material	PMU, EA																											
b.	To build up infrastructure for information dissemination	PMU, EA																											
c.	Training for local government and forestry personnel and updating of information.	consultant																											
d.	Create web design for web-info	consultant, PMU																											
Activity 2.3.	Facilitate and assist mangrove forest management business permit process by communities																												
a.	Hiring institution expert consultant	PMU																											
b.	Review needed requirement	consultant																											
c.	Facilitate institution formation by communities	idem																											
d.	Facilitate planning document compilation	idem																											
e.	Assist HKm or village forestry permit application process by community and facilitate access to financial institutions	idem																											
f.	Workshop on information socialization to community groups	PMU																											

3.4 Budget
3.4.1 Master budget schedule

Outputs/ activities	Description	Budget Component	Quantity		Units	Unit Cost US$	Total Cost	ITTO		Executing Agency	
			1st year	2nd year				1st year	2nd year	1st year	2nd year
Output 1 .	**Draft National Strategy on Mangrove Management is compiled**										
Activities 1.1.a	Provide database on mangrove forest management through inventory of mangrove forest damage at Bintan island										
	Inventory of mangrove blocks, measure mangrove potential and forest carbon potential - *Inventory equipment* - *Preparation meeting* - *Lo*cal transportation - Labour salary		**2300**		**ha**	**26,1**	60.000	60.000	-		
1.1 **b.**	Collect info on socio economic *Compilation data and info of 2 distric*ts *and discussion on data analysis*		1		pax	1.000	1.000	1.000	-		
	meeting package 15 person, 2 times		30		person	80	2.400	2.400	-		
	material meeting		2		pax	500	1.000	1.000	-		
	sub total						**64.400**	**64.400**	-	**-**	-
Activity 1.2	Review and evaluate existing regulations and policies on mangrove management										
	collect info dan analyze policies and regulations on mangrove management		1		pax	1.000	1.000	1.000	-		
	discussion and meetings package		30		pax	80	2.400	2.400	-		
	material meeeting		2		pax	500	1.000		-		

								1.000			
	sub total						**4.400**	**4.400**	**-**	**-**	
Output 1.3.	Coordinate and integrate program amongst related stakeholders in the mangrove ecosystem management through meetings, FGD and workshops										
	meetings with relevant stakeholder										
	15 persons, 3 times										
	ticket		30	15	person	400	18.000	12.000	6.000		
	dsa		30	15	person	90	4.050	2.700	1.350		
	local transportation		2	1	pax	600	1.800	1.200	600		
	meeting package		2	1	pax	500	1.500	1.000	500		
	facilitating the drafting process of national strategy for mangrove management										
	National consultant		1		person	2.000	2.000	2.000	-		
	ticket		2		person	500	1.000	1.000	-		
	dsa		7		days	90	630	630	-		
	local transportation		1		pac	1.000	1.000	1.000	-		
	meeting package		2		pax	400	800	800	-		
	sub total						**30.780**	**22.330**	**8.450**	-	-
Output 1.4.	Compile draft National Strategy through participative process						-	-			
	Discussions on draft 0, draft 1 until final draft						-	-			
	National consultant		1		person	2.000	2.000	2.000	-		
	ticket		2		person	500	1.000	1.000	-		
	local transportation		1		pax	500	500	500	-		

	dsa		14		days	90	1.260	1.260	-		
	- workshop di provincial/regions (50 participants, one day)						-	-	-		
	- Daily subsistence allowance		50		participant	90	4.500	4.500	-		
	- Ticket		15		participant	500	7.500	7.500	-		
	- local Transportation		35		participant	35	1.225	1.225	-		
	- Resource Person		1	-		250	250	250	-		
	- seminar kit		50		pax	20	1.000	1.000	-		
	subtotal						19.235	19.235	-	-	-
	Total output 1						**118.815**	**110.365**	**8.450**	-	-
Output 2	**Role and participation of community in mangrove area management at Bintan island is performed.**						-	-			
Activity 2.1	Compile guideline on implementation of enhancing community participation in mangrove management at Bintan island						-	-			
	hiring social consultant for guideline compilation		1		person - month	2.000	2.000	2.000	-		
	dsa		14		days	90	1.260	1.260	-		
	ticket		2		person	500	1.000	1.000	-		
	locat transportation		1		pax	1.000	1.000	1.000	-		
							-	-	-		
	meetings package(4 times x 15 participants)		1		pax	2.000	2.000	2.000	-		
	sub total						**7.260**	**7.260**	**-**	**-**	-

Activity 2.2.	Community empowerment activity through extension, guidance and advise/facilitation on mangrove ecosystem management through rehabilitation, utilization and preservation of mangrove.						-	-			
Sub Activity 2.2.1	Create models in mangrove ecosystem management that is environmentally friendly and community based						-	-			
	select mangrove and economic consultant and make workplan		-	2	person - month	2.000	4.000	-	4.000		
	dsa		-	14	days	90	1.260	-	1.260		
	ticket		-	2	person	500	1.000	-	1.000		
	local transportation		-	1	pax	1.000	1.000	-	1.000		
	meetings package		-	1	pax	1.000	1.000	-	1.000		
	training on mangrove management model for wood charcoal production, 20 persons x 10 days						-	-	-		
	dsa			200	days	90	18.000	-	18.000		
	ticket			20	persons	500	10.000	-	10.000		
	local transportation			25	persons	100	2.500	-	2.500		
	training material			1	pax	3.000	3.000	-	3.000		
	training on mangrove management model for fish culture, 20 persons x 10 days						-	-	-		
	dsa			200	days	90	18.000	-	18.000		
	ticket			20	persons	500	10.000	-	10.000		
	local transportation			25	persons	100	2.500	-	2.500		
	training material			1	pax	3.000	3.000	-	3.000		
	training on mangrove management model for nature tourism activities, 20 persons x 10 days						-	-	-		
	dsa			200	days	90	18.000	-	18.000		
	ticket			20	persons	500	10.000	-	10.000		
	local transportation			25	persons	100	2.500	-	2.500		

	Training material			1	pax	3.000	3.000	-	3.000		
	sub total						**108.760**	**-**	**108.760**	-	-
sub activities 2.2.2.	Build up pilot plot for seed orchard through participation of community			1	Sub contract	10.000	10.000	-	10.000		
	sub total						**10.000**	**-**	**10.000**	**-**	**-**
sub activities 2.2.3.	Training in mangrove conservation and rehabilitation for local government staff and community 10 persons x 5 days						-	-	-		
	dsa			50	days	90	4.500	-	4.500		
	ticket			10	persons	500	5.000	-	5.000		
	local transportation			15	persons	100	1.500	-	1.500		
	training material			1	pax	2.000	2.000	-	2.000		
	sub total						**13.000**	**-**	**13.000**	**-**	**-**
							-	-	-		
sub activities 2.2.4.	Develop center for information services on mangrove rehabilitation						-	-	-		
	compilation and collection of needed information material			1	pax	5.000	5.000	-	5.000		
	to build up infrastructure for information dissemination			1	Sub contract	15.000	15.000	-	15.000		
	training for local government and forestry personnel and updating of information			1	pax	10.000	10.000	-	10.000		
	create web design for web-info			1	Sub contract	10.000	10.000	-	10.000		
	sub total						**40.000**	**-**	**40.000**	**-**	**-**
output 2.3.	*Facilitate and assist mangrove forest management business permit process by communities*						-	-	-		
	hiring institution expert consultant			1	person - month	2.000	2.000	-	2.000		
	meeting package			1	pax	2.500	2.500	-	2.500		
	workshop on information socialization to community groups						-	-	-		

	- Daily subsistence allowance			50	Person	90	4.500	-	4.500		
	- Ticket			15	Person	500	7.500	-	7.500		
	- local Transportation			35	Person	35	1.225	-	1.225		
	- Resource Person			11	Person	250	2.750	-	2.750		
	- seminar kit			50	Pax	20	1.000	-	1.000		
	sub total						**21.475**	**-**	**21.475**	**-**	**-**
	Total Activity 2						**193.235**	**7.260**	**193.235**	**-**	**-**
	Total activities 1 dan 2						**312.050**	**117.625**	**201.685**	**-**	**-**
	establish the coordination of the project and increase operational capacity of the executing agency										
	Duty Travel		2	2	year	5.000	20.000			10.000	10.000
	Notebook		3		unit	1.500	3.000	1.500		1.500	-
	Personal computer		3		unit	1.000	3.000	2.000		1.000	-
	Printer		2	0	unit	250	500	250		250	-
	Office expenses in main city		1	1	year	10.000	20.000			10.000	10.000
	Office supplies		1	1	year	12.000	29.000	12.000	12.000	2.500	2.500
	Project preparation/reproduction		1		pax	5.000	5.000	5.000			
	Steering Committee Meeting (3 times)		1	2	year	1.500	4.500	1.500	3.000		
	Annual Audit		1	1	year	2.000	4.000	2.000	2.000	-	-
	Project Coordinator		24	24	month	2.500	60.000	30.000	30.000		
	Secretary		24	24	month	500	12.000	6.000	6.000		
	Adminstration Staff		24	24	month	600	14.400	7.200	7.200		
	sub total						175.400	67.450	60.200	25.250	22.500
	total project						487.450	185.075	261.885	25.250	22.500

3.4.2. ITTO YEARLY BUDGET TABLE

in US Dollar

Category	Description	Total	1st year	2nd year
10	Personnel			
11	Project Coordinator	60.000	30.000	30.000
12	Secretary	12.000	6.000	6.000
13	Administration Staff	14.400	7.200	7.200
14	National consutant	12.000	6.000	6.000
	Resource person	3.000	250	2.750
	Sub-Total	101.400	48.250	50.750
20	Sub-Contracts			
21	a. sub-contract web design	10.000	-	10.000
	b. sub contract pilot project	10.000	-	10.000
	c. sub contract information dissemination infrastructure	15.000		15.000
	d. sub-contract inventory mangrove area	60.000	60.000	
		-		
	Sub-Total	95.000	60.000	**35.000**
30	Duty Travel			
31	Daily subsistence allowance	75.960	10.350	65.610
32	Transportation			
32,1	- International travel	-	-	-
32,2	- Domestik Travel	72.000	22.500	49.500
32,3	- Local transportation	16.750	4.925	11.825
	Sub-Total	164.710	37.775	126.935
40	Capital Items			
41	Notebook Computer	1.500	1.500	
	Personal computer	2.000	2.000	
42	Printer	250	250	
	Sub-Total	3.750	3.750	**-**
50	Consumable Items			
51	Office Supplies	39.000	15.000	**24.000**
52	Utilities	-	-	**-**
	Sub-Total	39.000	15.000	**24.000**
60	Miscellaneous			
61	Meeting package	22.600	8.600	**14.000**
62	Data collection	7.000	2.000	**5.000**
63	Preparation	5.000	5.000	
64	PSC meeting	4.500	1.500	**3.000**
65	Audit	4.000	2.000	**2.000**

	Sub-total	43.100	19.100	**24.000**
70	National Management Cost	(see executing agency budget)		
	Total (10 - 70)	446.960	185.075	**261.885**
80	Project Monitoring and Administration			
81	ITTO monitoring & review	20.000		
85	ITTO programme support (8% of 1-82)	37.357		
100	GRAND TOTAL	**504.317**		

3.4.3. Consolidated Budget

in US Dollar

Category	Description	Total	1st year	2nd year
10	**Personnel**			
11	Project Coordinator	60.000	30.000	30.000
12	Secretary	12.000	6.000	6.000
13	Administration Staff	12.000	6.000	6.000
14	National consultant	12.000	6.000	6.000
	Resource person	3.000	250	2.750
	Sub-Total	**101.400**	**49.450**	**51.950**
20	**Sub-Contracts**			
21	a. sub-contract web design	10.000	-	10.000
	b. sub contract pilot project	10.000	-	10.000
	c. sub contract information dissemination infrastructure	15.000	-	15.000
	d. sub-contract inventory mangrove area	60.000	60.000	
	Sub-Total	**95.000**	**60.000**	**35.000**
30	**Duty Travel**			
31	Daily subsistence allowance	75.960	10.350	65.610
32	Transportation			
32,1	- International travel	-	-	-
32,2	- Domestic Travel	72.000	22.500	49.500
32,3	- Local transportation	16.750	4.925	11.825
	Duty Travel	20.000	10.000	10.000
	Sub-Total	**184.710**	**47.775**	**136.935**
40	**Capital Items**			
41	Notebook Computer	3.000	3.000	
	Personal computer	3.000	3.000	
42	Printer	500	500	
	Main city office expenses	20.000	10.000	10.000
	Sub-Total	**26.500**	**16.500**	**10.000**
50	**Consumable Items**			
51	Office Supplies	44.000	17.500	26.500
52	Utilities	-	-	-
	Sub-Total	**44.000**	**17.500**	**26.500**
60	**Miscellaneous**			
61	Meeting package	22.600	8.600	14.000
62	Data collection	7.000	2.000	5.000

63	Preparation	5.000	5.000	
64	PSC meeting	4.500	1.500	3.000
65	Audit	4.000	2.000	2.000
	Sub-Total	**43.100**	**19.100**	**24.000**
70	**National Management Cost**	3.820		
	Total (10 - 70)	**498.530**	**210.325**	**284.385**
80	**Project Monitoring and Administration**			
81	ITTO monitoring & review	20.000		
85	ITTO programme support (8% of 1-82)	37.357		
100	**GRAND TOTAL**	**555.887**		

3.4.4. Executing Agency Yearly Budget Table

in US Dollar

Category	Description	Total	1st year	2nd year
30	**Duty Travel**			
33	Duty Travel	20.000	10.000	10.000
	Sub-Total	**20.000**	**10.000**	**10.000**
40	**Capital Items**			
41	Notebook Computer	1.500	1.500	
42	Personal Computer	1.000	1.000	
43	Printer	250	250	
45	Office Expenses in main city	20.000	10.000	10.000
	Sub-Total	**22.750**	**12.750**	**10.000**
50	**Consumable Items**			
51	Office supplies	5.000	2.500	2.500
53	Miscl. Consumable	-	-	-
	Sub-Total	**5.000**	**2.500**	**2.500**
60	**Miscellaneous**			
62	Financial Audit	-	-	-
	Sub-Total	**-**	**-**	**-**
	SUB TOTAL ALL CATEGORIES	**47.750**	**25.250**	**22.500**
70	**MANAGEMENT COST (8%)**	**3.820**		
100	**GRAND TOTAL**	**51.570**		

3.5 Assumptions, risks, sustainability
3.5.1 Assumptions and risks

The project deals mostly with decision makers and institutional strengthening which should receive full commitment from related stakeholders from both national and provincial/district levels. The key assumptions are: all relevant stakeholders committed to support Sustainable Mangrove Forest Management as important option in reducing deforestation and degradation, and particullarly stakeholders at district level, are willing to cooperate. Ongoing forest administration reform is implemented as planned. National Strategy and regional policy approved and support the Sustainable Mangrove Forest Management as an important framework for forest based climate change mitigation and cosistent.

The implementation of REDD activities will involve parties with different interests, access and authority over forest areas. The involvement of government is of a varied and hierarchical nature, depending on the status and type of forest area. The potential risk in the process of formulating policy and strategy may emerge from the conflict of interest between key stakeholders who has authority in managing forest area. The source of conflict may result from:

a. Different level of authority. The governmental authority over a forest area varies according to the forest function. In a conservation area, central government has full control, in this case Ministry of Forestry through their Technical Implementation Unit (UPT). In a protected area, the authority remains with the central government, but the district government is involved in the management. While in a production forest, the full authority resides with the central government. The role of district government is limited to providing recommendation on the utilization and management of the forest. Provincial government merely assumes the role of control and supervision, since the start of regional autonomy era. For non forest land, the district government under the Ministry of Home Affairs has the responsibility. Local communities living in and surrounding the forest also can be classified into two main categories. First indigenous people who have been living for generations in the forest. Second, migrant who either came voluntarily to the area or in the context of the Governments transmigration program. Both groups should thus get different treatment and support from the government and other relevant parties due to their different adaptability towards changes and dynamics.
b. Changes in political leadership at various level
c. Limited environmental awareness and capacity of administrations and other stakeholders

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

1.	Risk:	The different level of role and authority
	Mitigation:	• Improve dialogue and communication between key target groups mainly local government authorities, local community, related government sectors and private sector regarding share of decision making authority and revenue they can expect from REDD and equity of benefit • Building synergy among many institutions and organizations (national and sub national) working on REDD and the fact that REDD is only one among a number of mitigation measures, the communication and dialogue will be carried out with other land based sectors especially with Agency of Development Plannning (BAPPENAS) who is repsonsible in coordinating all sector development planning in order to achieve national development objectives. • Strengthen working with National Council on Climate Change to establish high level coordination on climate change issues especially on the cross sectoral issues.

2.	Risk:	Changes in political leadership at various level (National, Province and District level)
	Mitigation:	Support Indonesian policy makers at various level to improve commitment/ willingness to reduce emission from deforestation and degradadation through Sustainable Mangrove Forest Management application to ensure the success of this project
3.	Risk:	Limited environmental awareness and capacity of administration and other stakeholders
	Mitigation:	• Communication at national and sub national level (province and district) will be carried out in various forms such as workshops, awarenes raising, training and focus group discusssions • Improving capacities in order to make common understanding that Sustainable Mangrove Forest Management is an important option in reducing emission from deforestation and degradation.

3.5.2 Sustainability

To ensure the sustainability of the strategy initiated by this project, several approach will be taken :

- Ministry of Forestry will monitor and ensure that strategy is institutionalized and adopted by various levels at national and sub national level (province and district)
- Maintain dissemination of the national strategy to provincial and district level to be adopted in their strategic plans.
- Maintain that SFM will be an integral part of any policy approach to forest-based climate change mitigation and ensure that climate change mitigation is integrated into national SFM strategies
- Ensure that key stakeholders such as forest dependent communities, private sectors etc are involved in implementation of the strategy (programme and action) and accomodate their needs in the policy framework related to reducing emission from deforestation and degradation
- Improved data and information on REDD and SFM based projects on the grounds to be well collected and mapped. By collecting all data on SFM initiatives as a importanf option in maintaining and increasing forest carbon stock could be monitored, quantified and verified. Executing Agency also will continue to maintain active communication and coordination with relevant stakeholders in implementation of this strategy
- Executing Agency will maintain management and utilization of project property and purchased equipments.
- Executing Agency will provide regular budget both in provincial level and district level for paying operational monitoring cost of communities initiative

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 Directorate of Community Forestry at the Directorate General Watershed Management and Community Forestry, MoF which will assume overall responsibility for coordination and implementation of activities. It will be responsible for managing the implementation of the activities and the ITTO fund. The relevance partner institutions such National council on climate change, and National climate change working group will be involved in the project together with executing and implementing agency (from preparation until completion of the project) in order to get similar info on progress of emission reduction and emission absorption from mangrove plantation. The relevance partners such from NGO, research agency and universities will always involved in developing the carbon accounting system from community forest areas. The relevance partners will also be invited in the Steering Comittee meeting.

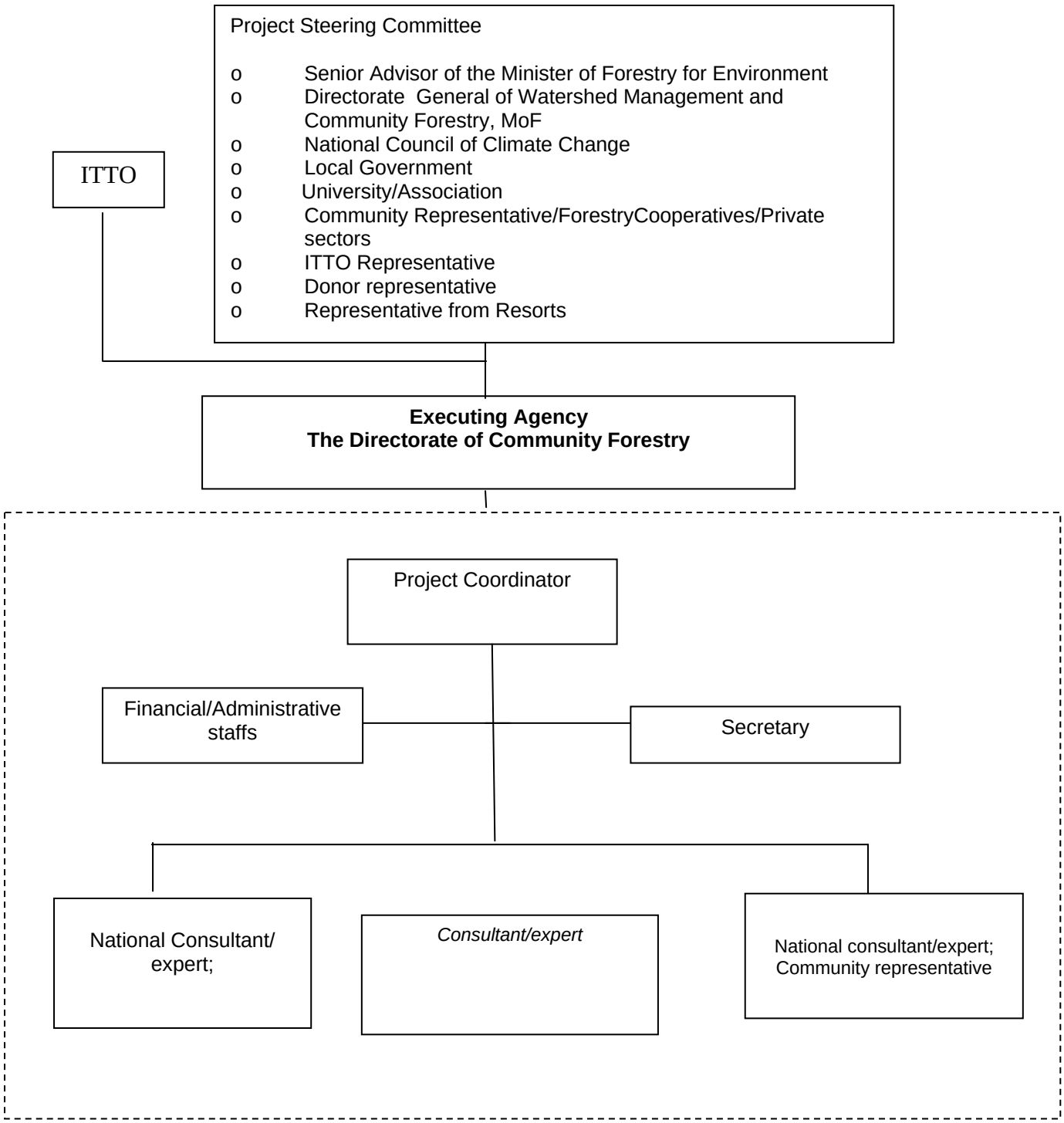
The Implementing Agency will work together with forestry service at district level, community groups, local NGO, university or other relevant institutions to implement some activities in the field. If necessary, the other activities will be implemented through sub-contracts with local NGOs and consultancies for efficiency.

4.1.2 Project management team

Professional coordinator will be assigned for the project coordinator who will be the overall in charge of 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 project activities and project management.

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

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, ITTO Reppresentative and Donors Reppresentative plus representative of Resorts. The duties 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 Director General of Watershed Management and Social Forestry, MoF. PSC will meet at least once a year and preferably at 6 months interval.

4.1.4 Stakeholder involvement mechanisms

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

The role of **Directorate of Community Forestry**

- Maintain coordination among relevant parties in implementing project objective and activities
- Coordinate and consult with ITTO upon project development
- Execution of project activities in close cooperation with Executing and relevant Agency
- Manage project fund based on project proposal and approval by ITTO and project agreement in accordance with ITTO guidelines and procedures as well as prevailing government regulations
- Provision of counter budget of GOI to support project activities together with EA included appointment of personnel to work in the project
- Prepare and submit project report to ITTO

a) The role of Center of International Cooperation MoF are :
   - Facilitate executing agency and ITTO upon project development
   - Monitor project activities/implementation
   - Coordinate PSC meeting of the project

b) The role of other stakeholders(ForestryCooperatives/Private sectors) includes:
   - Implementing technical aspects of forest utilization of NTPF in the field
   - Sharing information regarding implementation of forest based climate change initiatives including REDD and other initiatives based on SFM on the ground

(3) The role of local communities :
   - Participate in the process of developing strategy
   - Involvement in training activities
   - Involvement in program and activities related to SFM initiative in order to
   - reduce emission from deforestation and degradation

4.2 Reporting, review, monitoring and evaluation

4.2.1. Project Progress Report.
The first project progress report will be given to ITTO 6 months after project start-up or will be submitted in March and September and regular reporting will be carried out through the On Line Monitoring System (OLMS);
.

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

4.2.3. Project Technical Reports.

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

4.2.4. Monitoring, Review and Steering Committee's Visits.

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.

4.2.5. Evaluation

Evaluation will be conducted within one quarter of completion of the Project.

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 means such as public consultation, workshop, internet, documents dissemination, and field visit.

4.3.2 Mainstreaming project learning

This project will provide a lesson learned on forest carbon policies that explore any mechanism on reducing emission including REDD+, voluntary carbon market. Lesson learned from formulation of national policies will be useful for mainstreaming international policies. Draft of National Strategy on Mangrove Management should conform to the National Strategy on REDD+ .

Strategy for Reducing Emissions from Deforestation and forest Degradation plus what is formulated in the Document of National Strategy REDD+ include strengthening FMU, strengthening conservation, and strengthening Sustainable Forest Management as well as increased and protection/maintenance of stock carbon (sink), quality improvement through management of protected areas, increased reforestation efforts in deforested areas, implementation of forest restoration on forest protected, conservation area, improvement efforts on peat land restoration; rehabilitate the deforested and degraded peat land through rehabilitation of hydrologi; improvement efforts on rehabilitation of mangrove forests

So, it is clear that project outputs will feed into REDD+ activities in Indonesia.

ANNEX 1 PROFILES OF THE EXECUTING AGENCY

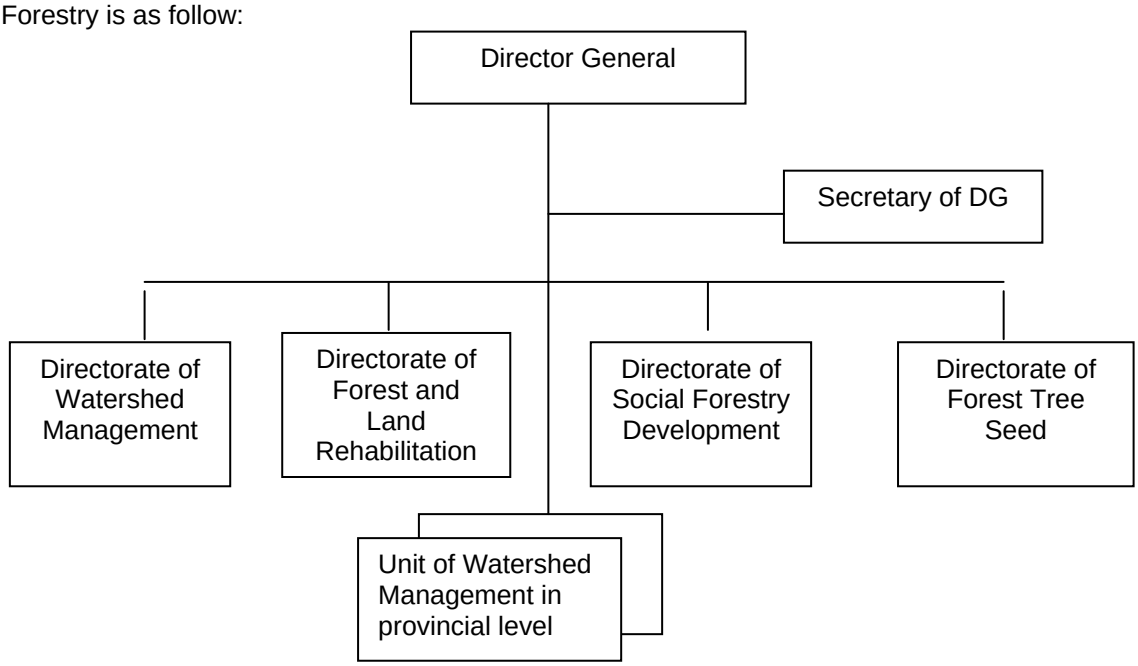
The Directorate General Land Rehabilitation and Social Forestry, Ministry of Forestry of the Republic of Indonesia now is changed become the Directorate General of Watershed Management and Social Forestry.

A. Profile of the Executing Agency

The Executing Agency of the project is the Directorate of Social Forestry Development under the Directorate General of Watershed Management and Social Forestry, the Ministry of Forestry. This institution holds main functions as follows:

a) Preparing the formulation of policy in the Ministry in the field of watershed management and social forestry
b) Formulating standards, norms, guidance, criteria and procedures related to the fields of watershed management, rehabilitation of forest and land, social forestry and seedlings of forest plants.
c) Providing technical guidance and evaluation on the implementation of the policy, standards,
d) Norms, guidance, criteria, and procedure related to the fields of watershed management, rehabilitation on forest and land, social forestry and seedlings of forest plants.

The organization structure of the Directorate General of Watershed Management and Social Forestry is as follow:



DG Watershed management and social forestry development has local supporting offices known as Technical Implementation Unit/TIU that consist of 36 centrers of Watershed Management, 6 Centers of Forest Tree Seed , 1 Center of Natural Silk production Development (*Balai Persuteraan Alam*) , and 2 Centers of Mangrove Management.

INFRASTRUCTURE

Regarding the infrastructure, the Directorate of Watershed Management and Social Forestry Development has 45 unit offices in some places all over Indonesia. The center and unit offices are already connected to a 2 Mbps bandwidth of Internet connection and all staff has each personal computer. And also supported by GIS and GPS devices, libraries, mini laboratory for natural silk and seed production, several site model for land rehabilitation and social forestry activities, etc.

BUDGET

Within the last three years, the budget of the Directorate of Social Forestry Development is as follows:

Activities	2008 (USD)	2009 (USD)	2010 (USD)
Operational and Maintenance Cost	286,619	292,425	276,222
Publication	158,388	159,589	87,687
Planning Programs	1,169,368	1,301,831	1,058,431
Training Programs	142,811	104,692	64,976
TOTAL	**1,757,186**	**1,858,536**	**1,487,316**

Note: USD 1 = IDR 10,500

PERSONNEL

The personnel within the DG of Watershed Management and Social Forestry Development is described as the following:

With Postgraduate Degrees	68
With Graduate Degrees	95
Middle-level Technicians	114
Administrative Personnel	12
TOTAL PERSONNEL	**49**

In supporting the capacity of its staff, the Directorate of Social Forestry in collaboration with the Secretariat of the Directorate General for Watershed Management and Social Forestry Development conducted several training dealing with the Community forestry programme, social forestry as well as sustainable management of plantation forest; such training inter alia for forest planing, harvesting technics, and enterpreneurships.

ANNEX 2 TERMS OF REFERENCE OF MAIN PERSONNEL FUNDED BY ITTO

I. Terms of Reference for Project Coordinator

Position: Project coordinator; one project coordinator will be hired to run the project and to coordinate operational activities.

Duration: 24 months

Responsibility: Project coordinator will be responsible for coordinating and supervising all activities and ensuring that the overall objectives are achieved under the coordination of the steering committee and in close cooperation with the executing agency. He or she will work closely with all parties and personnel involved in the project, and be responsible for the day to day management of the project. He or she will integrate all activities of project management and be responsible of funds applied to the project and for the preparation of all project reports.

Qualification, experience and payment: holder of at least bachelor degree in forestry/ relevant field . Good understanding in English both oral and written. He or she must have good understanding of the overall project objectives, output to be achieved and activities to be carried out of the project. He or she must have sufficient experience in working on Mangrove Management, Community Development, Climate Change or REDD and have high communication and linguistical ability. Rate of payment 2,500 USD per month. The Project coordinator will be required to travel to the field. He or she will receive Daily Subsistence Allowance during duty travels.
Candidate for Project coordinator : Ms. REKTARINI
She is now working in the Directorate of Social Forestry, having experience in Mangrove Management

II. Position: Secretary

The Secretary is a full timer staff of the Project; Qualification and Experience: having background in secretarial works at least 2-3 years, fluently in speak and writing English, familiar with ITTO project documentation and reporting system.
Capability in project documentation and photograph as well as other audio visual recording is essential and added Value.

Under the supervision of the Project Coordinator, Secretary has to perform the following tasks:

- To assist the Project Coordinator in the preparation of yearly plans of operation and in any project reporting;
- To assist in the procurement of project inputs in accordance with ITTO's guidelines, rules and procedures;
- To arrange meetings with project partners; Facilitating Project Steering Committee meeting
- To help soliciting qualified consultants needed by the Project;
- To assist in making the necessary arrangements for duty travel of Consultants, project staff and partners as needed;
- To represent the Project in various meetings as requested by the Project Coordinator;
- To manage all files of the Project in an orderly manner and ensure availability of office inputs and facilities at all time; and
- To assist in field monitoring of project operations as necessary
- Put and upload the project information including from the preparation and its up-dated progress in the ITTO on-line monitoring system.

Inputs:

- 24 MM of full time service with monthly honorarium of US$ 500 which is to be paid for with ITTO funds.
- Candidat for Secretary : p.m

III. Position: Finance Administration/Treasurer

Qualification and Experience : The candidate should have background in financial works at least 5 years; Able to speak and write in English. Familiar with the ITTO auditing system.

Under the supervision of the Project Coordinator, The Finance Admin will undertake following tasks:

- To open a bank account at a reputable bank in close consultation with the Project Coordinator;
- To prepare the necessary documents for disbursement of funds;
- To prepare periodic financial report in accordance with relevant ITTO Guidelines and in compliance with relevant GOI's rules and regulations;
- To assist in the selection of independent financial auditor to conduct yearly and final financial audits in accordance with ITTO's rules and procedures;
- To manage a petty cash to support the day to day operations of the Project;
- To assist in making payments for project inputs including honoraria, office facilities and utilities, travel expenditures etc. with the expressed prior approval of the Project Coordinator; and
- To ensure an orderly conduct of book keeping of project account to facilitate effective financial auditing by selected independent auditor.

Inputs:

- 24 MM of full time service with monthly honorarium of US$ 600 which is to be paid in the ITTO funds.

Annex 3 Recommendations of previous ITTO reviews and resulting modifications

Part			Reviewer Comments	Revised and modifications
			Project Brief Check for typographical errors - Table of contents has no page numbers	Typographical errors have been revised, Table of Contents has been put page numbers
			List of Abbreviations and Acronyms	
			Map of Project Area The exact location of the project needs to be highlighted on the map	Map or Project area have been added on page 6 and the exact location have been highlighted on page 6
1.			PROJECT CONTEXT	
1.	1.		**Origin** The project's origin is well stated. In fact, two of the projects funded by ITTO also were quoted, Because the two projects are currently running, only results from the project PD 519/08 Rev.1 (F) will be used in developing the national strategy to maintain and increase carbon stock. Little is said about the connection of the other project to the proposed project. Info should be included on superior carbon absorption of mangroves compared to terrestrial forests	Additional explanation have been put to explain the connection of ITTO PD 519/08 Rev.1 (F) with the proposed project. This project will use result of ITTO PD 519/08 Rev. 1 especially output 1, will be adopted or replicated concerning mode/method of community participation in avoiding deforestation, forest degradation and biodiversity loss. See page 8. Info on carbon absorption of mangroves is presenting in page 7: "According to CIFOR Research, mangrove forest could store 800 – 1.200 ton carbon per ha and release emissions smaller than emissions from terrestrial forest
1.	2.		Relevance	
1.	2.	1.	***Conformity with ITTO's objectives and priorities*** Good, but will further improve if a reference to ITTO mangrove work (mangrove work plan, mangrove atlas, many mangrove projects, etc) was included	This project will use result of Indonesia-JICA Bali Mangrove Project through accommodating the recommendation of species identification for mangrove rehabilitation*. The explanation is on page 11*
			Conformity with TP deliverables and association of results with the Monitoring Protocol incl. Means of Verification Good reference to the ITTO mangrove workplan, but no association of results with the Monitoring Protocol incl. Means of Verification. A detailed paragraph on the association of the project's results with the REDDES Monitoring Protocol, including means of verification, is needed.	Additional explanation put in page 10 concerning how results of this project will conform to REDDES Monitoring protocol
1.	2.	2.	Relevance to the submitting Country's policies	
1.	3.		Target area	
1.	3.	1.	***Geographic location*** The exact location of the area/townships where activities will take place must be stated in the proposal (e.g., latitude and longitude, distance from the main city/town). What is the length of shoreline the proposed project is intended to cover?	Explanation on the exact location is put in page 11. Name of the location is Kawal and Malangrapt along the shoreline of TRikora Beach. Located in N000.413020 – E104.454545
1.	3.	2.	***Social, cultural, economic and environmental aspects*** Include role of resorts in mangrove clearance, employment and possible participation in mangrove ecotourism activities. Some figures in relation to export, income pattern, number of tourist visits, etc., should be provided to clarify the current situation	Additional information concerning socio, economic condition and situation of the resort along the shore line of Bintan is put on page 12.

1.	4.		**Expected outcomes at project completion** Important to include info on whether this project's outputs will be linked to other REDD+ activities in Indonesia to generate carbon credits	Additional info to explain how this project could support National Strategy on REDD+ could been seen on page 14.
2.			PROJECT RATIONALE AND OBJECTIVES	
2.	1.		Rationale	
2.	1.	1.	***Institutional set up and organizational Issues*** Not clear how the listed organizations will contribute to the project or be integrated in its management structure, please clarify	The listed organization have been involved in the preparation draft of National Strategy on Mangrove management. Explanation of this info could be seen in page 15.
2.	1.	2.	***Stakeholder analysis*** Excellent, comprehensive stakeholder analysis undertaken and full participation in project formulation evident, but please include details - dates of the various discussions held and attendance of stakeholders. Please also provide some indication of how stakeholders are going to be brought together	Additional information explaining how stakeholders involvement in the project could be seen on page18
2.	1.	3.	***Problem analysis*** Good but should include role of resort development in mangrove destruction	Several information on problem analysis have been added to explain and accommodate the recommendation from reviewer
			Problem tree As above, is problem only communities or has resort development also contributed to loss? A few suggested items include (i) the phrase "lack of approval among stakeholders on mangrove management" should be changed to "lack of consensus among stakeholders on mangrove management," (ii) lack of financial support should be included as one of the sub-causes, and (iii) what about considering decreases in the major export items such as pulp and others for Bintan Island as another ultimate impact?	Recommendation from reviewer have been accommodated, see page 19, 20, 21 and page 22
2.	1.	4.	***Logical framework matrix*** Good but indicator "CO2 emissions reduced" assumes baseline emissions known, is this the case? If not, then there the risk of not being able to calculate the reduction must be stated	Baseline of CO2 emissions should be measured and calculated at the beginning of project and long impact indicators mention that several years later after mangrove areas rehabilitated, CO2 emissions reduced around 10 %. See page 23**.**
2.	2.		**Objectives**	
2.	2.	1.	***Development objective and impact indicators*** Clear and concise, see above note re CO2 emissions indicator. Some indications of reduction in terms of percentage should be highlighted. The general statement that CO2 emission is reduced is not a good indicator. As already mentioned above, baseline data must be collected first (or has this already been done) otherwise no comparison will be possible at the end of the project.	See page 25.
2,	2,	2,	***Specific objective and outcome***	

			indicators The community members trained to rehabilitate the degraded mangrove should also be highlighted	See page 25
3.			**DESCRIPTION OF PROJECT INTERVENTIONS**	
3.	1.		**Outputs and activities**	
3.	1.	1.	***Outputs***	
3.	1.	2.	***Activities*** Baseline data on the socioeconomic conditions of the affected stakeholders in Bintan Island must also be collected. The livelihoods of the key stakeholders, especially the communities, or before and after the project should be compared If such data are already collected, it should be highlighted	Activities collecting baseline data on socio economic conditions of the communities surround the mangrove forest have been added as activities 1.1.b to achieve output 1. See page 25
3.	2.		**Implementation approaches and methods** good but engagement with resorts should be included, they can also potentially help with fundraising (eg $1 per night levy on each guest for mangrove conservation)	Recommendation from reviewer have been put in page 27
3.	3.		**Work plan** Solid workplan, but the new activity suggested above should be incorporated (if needed)	Additional activities have already accommodated in the work plan page 28.
3.	4.		**Budget**	
3.	4.	1.	***Master Budget Schedule*** All budgets are consistent with each other and with proposed activities, main issue if that Indonesian contribution should cover some amount for paying project staff and any on-going community costs to ensure sustainability post-project; also Monitoring should be increased to $20,000 to allow for up to 5 trips (start-up and bi-annual thereafter)	Counter-Budget from Govt.of Indonesia have been prepared in the form of in kind and cash money. The budget put under category duty travel in order more flexible to used. Duty travel could be used for monitoring, evaluation or facilitating the project activities. There is an adjusting budget for activity 1.1.b. The original budget for *Compilation and discussion on data analysis (after inventory activities) will be used too for collect info on socio economic of communities surround mangrove forest area (to get info for base line data concerning socio economic condition). See page 31 master budget.* Monitoring budget for ITTO post have been added to US 20.000. Consequently total budget from ITTO increased to be US $ 504.317. (page 38 & P.40)
3.	4.	2.	***Consolidated Budget by Component*** see above + Several items need further explanation, for example, the cost of subcontracting the inventory on mangrove.The extent of the area to be inventoried, the number of participants to be involved in the planned meetings, etc., must be documented. The cost of the meeting package usually corresponds to the number of participants	Cost of sub contract on the inventory of mangrove is calculated as package. Actually it consist of budget/cost for : - Inventory equipment - Preparation meeting - Local transportation - Labor salary Area to be inventoried is 2.300 ha and unit cost/ha is US$ 26.1. See master budget page 31
3.	4.	3.	***ITTO Budget by Component*** same as above	*Idem, have been adjusted*
3.	4.	4.	*Executing Agency Budget by Component* see above	*idem*
3.	5.		**Assumptions, risks and**	

			sustainability	
3.	5.	1.	***Assumptions and risks*** Identify risk of not being able to quantify carbon impacts due to lack of baseline data (or refer where baseline data will be provided from)	This matter has been clarified on page 23 at logframe matrix.
3.	5.	2.	***Sustainability*** Good but see comments on budget, more funding from Indonesia will help ensure sustainability and full commitment from all stakeholders also after the end of the project	Recommendation noted, Counter budget from GOI will be prepared in the form in kind and cash money. (as explained in part 3.4, section 3.4.1). Additional clarification could be seen on page 43.
4.			**IMPLEMENTATION ARRANGEMENTS**	
4.	1.		**Organization structure and stakeholder involvement mechanisms**	
4.	1.	1.	***Executing Agency and Partners*** more information on partners should be provided, many potential ones listed earlier but not clear which ones will actually be involved, very important to have clear link with other REDD+ initiatives in Indonesia, especially ITTO funded	Additional explanation have been put in page 44 concerning partners that will be involved during the project implementation
4.	1.	2.	***Project Management Team*** need to refer to Annex 3 TOR for coordinator (and rename Annex 3 as Annex 2 or insert Annex 2 which is currently missing	Annex 3 have been rename as Annex 2 concerning TOR for project Team. Annex 3 will the matrix of recommendation from reviewer.
4.	1.	3.	***Project Steering Committee*** include representative from resorts? Not sure if we need donor reps in TP projects but it is ok to leave in… Say that PSC will meet at least once a year and preferably at 6 months intervals	Representative from Resorts have been added as member of Steering Committee Recommendation to add info concerning the PSC meeting have been noted and added on page 46.
4.	1.	4.	*Stakeholder involvement mechanisms*	
4.	2.		**Reporting, review, monitoring and evaluation** say progress reports will be submitted in March and September and regular reporting will be carried out through the OLMS; say evaluation "may" be carried out within one quarter of completion	Recommendation noted and have been added on page 46
4.	3.		**Dissemination and mainstreaming project learning**	
4.	3.	1.	***Dissemination of project results*** Will Bahasa outputs be translated (english)? Nothing in budget for this	The report will be made on bilingual, bahasa Indonesia and English version without special budget for translation. The expert and Project Team will make the report in two languages.
4.	3.	2.	***Mainstreaming project learning*** It is very important to elaborate on how project outputs will feed into other REDD activities of Indonesia. One output of the project is to come out with a draft of Policy Legislation on Mangrove Forest Management - some explanation is needed as to how such a draft may be accepted by the government and how the draft will be adopted in other parts of Indonesia	Elaboration to explain how project output will feed into other REDD activities in Indonesia is shown on page 47.
ANNEX 1			**Profiles of the Executing and Collaborating Agencies**	
ANNEX 2			**Tasks and responsibilities of key experts provided by the executing**	

			agency There is no indication as to who is the project coordinator, i.e., is it the EA? Or an individual to be funded by ITTO? It will be helpful if the project coordinator is identified before the project starts. Otherwise state why this isn't required, renumber other annex if not required.	Project coordinator have been proposed, her name is presented on page 50 Annex 2. Her CV is attached as additional attachment**.** The Candidate is from the EA.
ANNEX 3			**ToRs of personnel, consultants and sub-contracts funded by ITTO**	
ANNEX 4			**Recommendations of previous ITTO reviews and resulting modifications**	
Additional comments from reviewer: In particular further clarification is needed on the budget of US$150.000 for domestic travel and DSA (50% each). It is assumed that this is for the 4 national workshops in different locations to approve the draft national strategy on mangroves, however, the proposal fails to provide details no this (the workshops are only briefly referred to in the workplan). As this budget line is quite substantial, it would strengthen the proposal if you could provide more details and clarification on those workshops, what those workshops are supposed to do, who will attend (including the number of participants) and expected workshop outputs.				Additional explanation and further clarifi cation have been put on page 27, 29, 32.

CURRICULUM VITAE
REKTARINI

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PERSONAL DATA

Gender	: Female
Place, date of Birth	: Semarang, November 17th, 1958

EDUCATIONAL BACKGROUND

June 1983	: Bachelor of Animal Husbandry Faculty of Animal Husbandry, University of Diponegoro,
September 1999	: Master of Science of Resource management University of Edinburgh, Scotland

TRAINING/COURSE

1986	: Integrated Watershed management
1987	: Geo Information System
April – May 1995	: Economic of Resource and Environment Management, University of New England, Armidale, Australia
2002	: Forest management, Korea
26-28 Sep 2005	: First Step of Writing Workshop on Community Based Forest management Mapping (Min of Forestry and The Ford Foundation)
Oct 2007	: Bamboo and Rattan Development for Developing Countries, China

WORKING EXPERIENCES

April 1984 – Oct 1985	: Dept of Agraria
Job responsibilities	: Staf of Directorate of Land Use
Nov 1985 - Des1989	: Directorate of Soil Conservation, Ministry of Forestry
Job responsibilities	: Staf of Land Patterning Sub Directorate
Jan 1990- Des 1991	: Solo Sub Centre of Land Rehabilitation and Soil Conservation
Job responsibilities	: Counterpart for Monitoring and Evaluation Expert in The Upper Solo Rehabilitation and Protection Project, Funded by World Bank
Jan 1992- Oct 1993	: Staf of Directorate of Programe Development, Directorate General of Reforestation and Land rehabilitation
Job responsibilities	: Counterpart for Geo Information System Expert in The National Masterplan For Forest Plantation Project, Funded by World Bank
1993-1997	: Project Implementation Unit for Sulawesi Mangrove Rehabilitation Project, Funded by Asian Development bank
Job responsibilities	: Assist in the overall process (development, inception and implementation activities of the project)
2000-2001	: Staf of Cooperation Section, Secretariat of Directorate General of Land rehabilitation and Social Forestry
May 2001- July 2005	: The Head of Cooperation Section, Secretariat of Directorate General of Land rehabilitation and Social Forestry
July 2005- Sept 2007	: The head of Social Forestry Institution Identification, Directorate General of Land rehabilitation and Social Forestry
Sep 2007- March2011	: The head of Social Forestry Business Institution Partnership Section , Directorate General of Land rehabilitation and Social Forestry
April 2011 to date	: The head of Preparation on Village Forest Development. Directorate General of Land rehabilitation and Social Forestry