



Merang REDD Pilot Project (MRPP)

Summary of Results and Achievements

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The Merang peat swamp forest area in South Sumatra is a promising location for a REDD pilot project due to the relatively intact forest cover and the large below-ground carbon storage in the peat soil.

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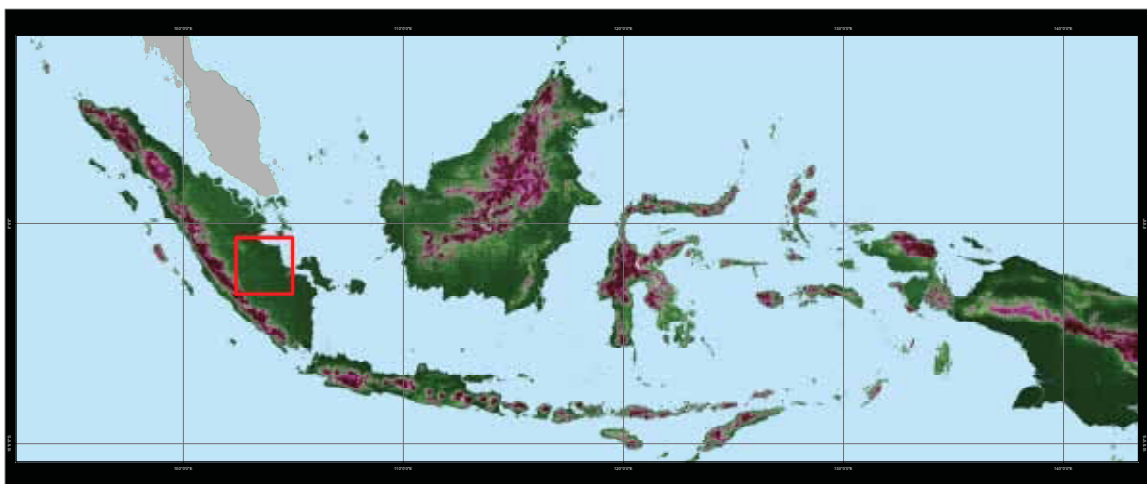
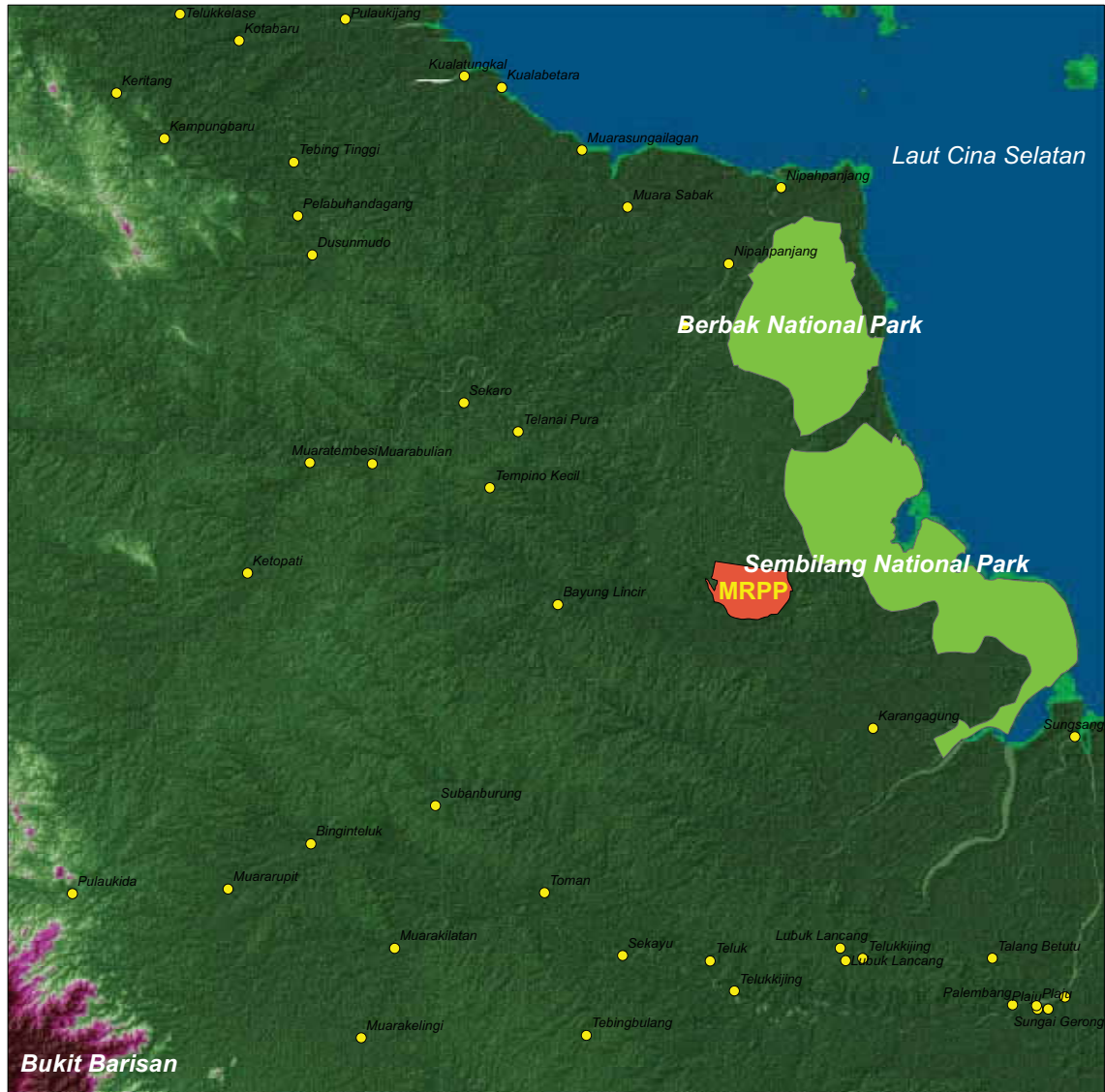
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Abbreviations

AWP	Annual Work Plan
BAPPEDA	<i>Badan Perencanaan Pembangunan Daerah</i> (Regional Development Planning Board)
BAPPEDALDA	<i>Badan Pengendalian Dampak Lingkungan Daerah</i>
BMG	<i>Badan Meteorologi dan Geofisika</i>
BMU	German Federal Ministry of Environment, Nature Conservation and Nuclear Safety
BPK	<i>Bina Produksi Kehutanan</i> (Directorate General for Forest Production Management)
CBFiM	Community-based Fire Management
CD	Community Development
CFR	Community Forest Ranger
CSR	Corporate Social Responsibility
DBH	Diameter at breast height
Dephut	<i>Departemen Kehutanan R.I</i> (Ministry of Forestry)
DfID	Department for International Development
DPKH	<i>Direktorat Penanggulangan Kebakaran Hutan</i>
EC	European Commission
EIA	Environmental Impact Assessment
ENSO	El Nino Southern Oscillation
EU	European Union
EUR	Euro
FFEWS	Forest Fire Early Warning System
FMU	Forest Management Unit
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoI	Government of Indonesia
HET	Household Economic Training
HRG	<i>Hutan Rawa Gambut</i> (Peat Swamp Forest)
ICVKM	Information, Communication, Visibility and Knowledge Management
IDR	Indonesian Rupiah
IGA	Income Generating Activity
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
JICA	Japan International Co-operation Agency

KPHP	<i>Kesatuan Pengelolaan Hutan Produksi</i> (Forest Management Unit)
KMPH	<i>Kelompok Masyarakat Peduli Hutan</i>
LoF	Logged-over Forest
MoF	Ministry of Forestry
MoU	Memorandum of Understanding
MPSF	Merang Peat Swamp Forest
MPTS	Multi Purpose Tree Species
MRPP	Merang REDD Pilot Project
MRV	Measurement, Reporting and Verification
MUBA	Musi Banyuasin District
NGO	Non Government Organisation
NTFS	Non Timber Forest Product
PEMDA	<i>Pemerintah Daerah</i>
PES	Payment for Environmental Services
PIN	Project Information Note
Polhut	<i>Polisi Hutan</i>
PPM	Project Planning Matrix
PSC	Project Steering Committee
PSF	Peat Swamp Forest
PT	<i>Perseroan Terbatas</i> (Limited Company)
REDD	Reduction of Emissions from Deforestation and Forest Degradation
REL	Reduction Emission Level
RS	Remote Sensing
SNRM	Sustainable Natural Resource Management
STE	Short-Term Expert
TA	Technical Assistance
SSFFMP	South Sumatra Forest Fire Management Project
WI	Wetland International
UMP	<i>Universitas Muhammadiyah Palembang</i>
UNEP	United Nations Environment Programme



Section 1

General Overview

1.1 Introduction

Due to the relatively intact forest cover and large below-ground carbon storage in the peat soil, the Merang Peat Swamp Forest area in South Sumatra is a promising location for a REDD pilot project. In close proximity to the protected areas of Sembilang National Park in South Sumatra province, and Berbak National Park in Jambi province, the Merang project area encompasses one of the last contiguous peat forest areas of Southern Sumatra. A classic frontier forest, it is now jeopardized by illegal logging and expanding plantations, mostly oil palm or pulp and paper. Without conservation measures, this last peat land forest of Southern Sumatra will soon be lost and with it one of the last refuges for many threatened animal species, such as the critically endangered Sumatran Tiger.



Commissioned by the German Federal Ministry of Environment, Nature Conservation and Nuclear Safety (BMU), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, in cooperation with the District-, and Provincial Forestry agencies and the Ministry of Forestry, is implementing a project called: *“Biodiversitätsschutz durch Vorbereitungsmaßnahmen für Vermiedene Entwaldung (REDD) im Torfwaldgebiet Merang”* (Biodiversity Conservation through Preparatory Measures for Avoided Deforestation - REDD). Titled the **“Merang REDD Pilot Project (MRPP)”**, it is part of the German federal government’s Climate Initiative and financed as a grant scheme (1.445.250 Euro), for the project period from 2008 to 2011.

The project contributes to national biodiversity conservation targets and has a strong community development component. It is part of the REDD readiness activities of the Indonesian government.

In October 2009 a second component was approved and financed by the BMU for applying and implementing knowledge management at MRPP, and to support an increased exchange of experiences between stakeholders at local and national level. A budget of 651.000 Euro was made available until the end of 2011.

Benefiting from various studies and other work carried out in the same area under the EU-funded South Sumatra Forest Fire Management Project (SSFFMP) from 2003 to 2007, geo-monitoring systems have been set up. Carbon stored in the forests (above- and below-ground) has been inventoried. The methodologies developed by the project have now become the basis of the national regulation for carbon inventories in production forests (P.3/VI-Set/2010).

In close cooperation with local authorities, communities and the private sector, the project focused on strategies and institution building for peat forest management along with conservation.

1.2 Development Context

Deforestation and forest degradation are some of the main contributors to climate change. Most of the deforestation and degradation is happening in some of the largest tropical forest areas in the developing world, particularly Brazil, Indonesia and the Congo. It is estimated that in Indonesia alone, around 2 million hectares of forest were lost annually in the 1990s, and from early 2000 until now it is likely that more than a million hectares have been lost. A large part of the 120 million hectares or so of forest in Indonesia are degraded¹.

The new laws that have been passed since 1999 regarding the forestry and environmental sector have not yet made any significant impact on how forestry and the environment is managed and protected. Even where laws are detailed and instructions have been given, problems remain in effective implementation and enforcement. Because of the very slow improvement and lack of implementation, many donors left the forestry sector or did not renewed their former projects and programmes. This trend continued until the issues of climate change and REDD came to the forefront after the 2007 COP meeting in Bali.

After 2007, a real international rush started to set up projects directed at climate change and REDD. More than 20 REDD Projects and a number of climate change programmes from various governments and donors were listed in Indonesia in 2010.

¹ These are estimates and exact statistics should be treated cautiously as it is not always possible to verify the source(s).

Starting in 2008 with a head start from the former SSFFMP and through good contacts with local institutions, MRPP has advanced considerably and finalized a number of results and products - details of which are given in the following chapters.



To achieve these results it was decided to work with national and decentralized government, support the development of new structures at provincial and district level through a multi-stakeholder approach, and to reduce the dependence on government structures. Most major stakeholders in the forest sector were freely addressed, including the private sector and non-governmental institutions. Experience from the climate change sector and REDD projects shows that within short project cycles, action taken by the international community and governments is generally too slow to have a major impact during implementation. For example, most of the COP's after the Bali meeting have failed to make any significant progress.

1.3 Expected results of MRPP I and II

Although the project time period was limited to a little over three years, aims and targets were set high as the experienced team was able to start work immediately with the basic infrastructure already in place.

Major aims to be achieved were:

- Climate change and REDD are socialised to all major stakeholders, with priority at provincial, district and village level.
- Institutional structures are established for managing the Merang peat forest area in a sustainable way.
- Carbon accounting and monitoring are implemented according to international and national standards.

- Forest fires and illegal activities are reduced by involving local communities and establishing Forest Ranger Groups.
- A wide-ranging and extensive Community Development Programme is implemented to reduce poverty and dependence on the remaining forest.
- Capacity development for stakeholders on all levels creates greater awareness on climate change and REDD issues, and allows stakeholders to participate in the processes. Hence first capacities and competences are increased.
- Possibilities for rehabilitation of degraded areas are identified, selected and finally tested and implemented at various areas in Merang, including the production of seedlings.
- Experiences, developed products, and lessons learned are shared with audiences and stakeholders on the local, national, regional and international level.

1.4 Methodology and Approach

The overall goal is to achieve the sustainable management of natural resources in Indonesia, in particular for peat swamp forests.

The Log frame planning approach was taken for the formulation of the goals, results and activities. Planning was done with all relevant stakeholders in a participative and transparent process. Implementation of activities involved the government sector, the private sector, civil society and local communities.

Throughout implementation an exchange of ideas, experiences, lessons learned and an intensive dialogue with partners and institutions took place and has given MRPP an excellent reputation in Indonesia.

Overall goal:

Contribute to sustainable natural resource management, biodiversity protection and rehabilitation of degraded peat lands in South Sumatra.

Project purposes of MRPP I and II:

Support the protection and rehabilitation of the last natural peat swamp forest in South Sumatra and its biodiversity through a KPHP management system and preparation for REDD mechanism.

Lessons learnt and experiences of the MRPP are available to relevant national and international stakeholders.

Networking between other donor initiatives to reduce deforestation and degradation of peat forests is enhanced.

Note: Results and Activities and relevant Budgets are in the Annex



1.5 Plan of Results and Activities Implemented

In order to achieve the aims of the project, a number of results and outputs must be delivered. For each single result the Annual Work Plans included the activity, sub-activities, indicators, means of verification, responsibility, assumptions and remarks. Human and financial resources were estimated and summarized for all results and activities. As mentioned above, the logical framework planning method was used throughout and a vertical logic was applied.

Whenever possible the project developed **Specific, Measurable, Achievable, Relevant and Time-bound** indicators (SMART) as a guide for monitoring and evaluation.

MRPP I and II worked to achieve the following results:

Result 1:

A management structure (KPHP) is developed and set up for the Merang peat lands area, and rehabilitation of selected areas is implemented.

Result 2:

Peat lands, forest carbon, biodiversity and rehabilitation areas are identified, measured and monitored.

Result 3:

Integrated fire management and illegal activity reduction measures are applied through community participation and sustainable natural resource management.

Result 4:

REDD preparation steps are supported, including preparation for carbon trading.

Result 5:

A communication strategy is developed with relevant target groups and decision makers on national and international level.

Website with developed products is available and used for informing specific audiences and decision makers.

Knowledge management is applied within MRPP and through disseminating important products and messages.

For result 5 a specific, detailed 'Information, Communication, Visibility and Knowledge Management' (ICVKM) methodology was developed.

1.6 Project Location and Land Cover

1.6.1 Location

The Merang peat dome forest in the Bayung Lencir sub district of Musi Banyuasin District (MUBA), South Sumatera Province, is located between the Medak and Kephayang rivers. The Merang peat dome forest covers approximately 150,000 hectares and is part of a larger peat swamp area that is linked to Sembilang National Park in the east, Muaro Jambi peat swamp forest in the north (adjacent to Jambi Province) and Berbak National Park in the northwest.

The project site covers approximately 24,000 ha within the Merang peat swamp forest area. The area selected for the project was recommended by the Regent of Musi Banyuasin District and is a former production forest. On September 2009, the Regent issued two decrees (No. 23 and 24) approving the Merang REDD Pilot Project (MRPP) and establishing a Forest Management Unit (FMU) that included the project area. On the 7 December 2009, the Ministry of Forestry approved the Lalan FMU as a model FMU for managing 265,953 ha of various forest concessions and conservation areas with decree Sk.789/Menhut-II/2009. The MRPP was allocated a 24,000 ha plot within the area of the Lalan FMU.



There are no villages or communities inside the project area, however several villages are located along the major rivers surrounding the area. Camps inside the area are usually set-up by illegal loggers and trespassers.

The villages of Muara Merang and Kepayang are the most adjacent to the Merang Kepayang peat swamp forest (Muara Merang is approximately 225 km from the provincial capital of Palembang). Rivers provide the main access to villages although some private companies (oil and oil palm plantations) have built a few small road networks.

There were many reasons to choose South Sumatra province, but in particular because of the large peat swamp areas with peat-domes that serve as huge carbon sinks, the availability of a block of peat-swamp forest for REDD demonstration activities (in the MUBA District) where the team already had experience and collected data, and - last but not least - stakeholders with an interest to jointly implement such a project.

1.6.2 Landcover

Vegetation and land cover mapping for the MRPP area was conducted using remote sensing data. Available spectral signatures were used with knowledge of vegetation types in the field to define land cover classes. Degradation levels of peat swamp forest were differentiated since they store different values of carbon stocks. 9 land cover classes were used for image classification in the MPSF; 2 classes of logged-over peat swamp forest (dense and medium); 2 vegetation classes of secondary forest (mahang and gelam forest); 1 re-growth class and 4 deforestation classes (shrubs, grasslands, open/burnt land, and recently logged forest).

These land cover classes were used for stratification of carbon stock assessment. Stratification is needed for improving accuracy during biomass sampling. For the purpose of stratification we simply further divided the classes into 8 sub-classes. Gelam forest was merged into the same class as Mahang forest due to the relatively small area it has in the MPSF.

Based on interpretation of Landsat images from 2008, more than 38% of the MRPP area is covered by natural logged-over peat swamp forest. Other forest classes, including forest re-growth and secondary forest dominated by Mahang, contribute to 19% of the area. More than 41% of the project area

Table 1. Land cover types classified from Landsat imagery, 2008

No	Classes	Size (ha)	%
1	Logged over peat swamp forest - dense canopy	3054	13
2	Logged over peat swamp forest - medium canopy	5950	25.3
3	Forest re-growth	4393	18.7
4	Mahang and gelam-dominated forest	139	0.6
5	Shrubs	1308	5.6
6	Grasslands	1305	5.6
7	Open lands	3534	15
8	Recently logged/burnt forest	3802	16.2

is deforested due to the logging and peat fires of 2004 and 2006. These areas need human intervention for rehabilitation, mainly through enrichment planting and canal blocking.



1.7 Project Phases and TA Team Phasing In

Project implementation was internally divided into a number of phases, which were:

1. Start up phase - 3 months
2. Analysis, design and implementation phase - 30 months
3. Handing over and dissemination phase - 6 months

The local TA Team started in October 2008. The international team leader started in December 2009 with MRPP II. Most of the team members were directly recruited from SSFFMP and with this, continuation and past experiences were immediately secured.

Throughout AWP I-III the team assisted the Indonesian stakeholders to make contributions towards project results and project purpose.

AWP III implementation had a reduced TA team towards the end of 2011, in line with planning and available budgets, and the need to hand over the inventory and developed products.

1.8 Planning and Implementation According to Annual Work Plans AWP 1 to AWP 3

Using a chronological approach to look at the AWP's we can identify a clear focus and priority setting for each.

The first AWP I period focussed on the setting up the infrastructure and the implementation team, as well as participative project socialisation and planning. An analysis of stakeholders and problems was initiated and baselines were established. By the end of 2009, infrastructure and the capacity of the stakeholders and the team had progressed well.

The second AWP II continued with analysis, but clearly set the priority on activity implementation to work towards achieving the results 1-5. Major requirements for REDD were addressed and carbon accounting and monitoring received substantial attention.

AWP III continued with an increased number of stakeholders and enlarged activity implementation that included capacity development at institutions, increasing awareness with society and village communities, and widening community development activities in the three villages. Again, requirements for REDD were addressed and carbon accounting and monitoring progressed further.

AWP III, the final AWP for the year 2011 had a clear exit strategy and approach with planned and implemented activities:

- Consolidation of measures and modules developed.
- Finalization of started activities.
- Filling identified gaps not yet closed.
- Handing over and transfer remaining tasks.
- Closing and exiting from MRPP.

With a focus on these exit strategy components, MRPP has achieved a high degree of sustainability. After 37 months of project implementation MRPP has achieved considerable results and outputs. This was only possible through the good will, co-operation and co-ordination between all stakeholders.

The project management and staff are confident that by the end of 2011, MRPP will have had a considerable positive impact on creating awareness on climate change and REDD, and will have contributed to the Indonesian REDD process in a substantial way. First capacities and competences at village, district, province and some on national level have been developed and provide a solid basis for Indonesian partners to continue.





Setting a camera trap to monitor wildlife in the project area in cooperation with the Zoological Society of London. The footprints of wild boar (*Sus scrofa*), Mouse deer (*Tragulus javanicus*) and Barking deer (*Muntiacus muntjak*) have been seen on surveys, as well as fresh tiger's (*Panthera tigris sumatrae*) tracks.

Section 2

Main Results and Achievements to Date

A brief overview of achievements to date is listed below; more detailed descriptions are arranged according to project components:

- Listed as one of the first REDD Demonstration Activity Projects in Indonesia.
- All project components implemented in the field (not just theory and plans).
- Established and supported the Forest Management Unit / KPHP Merang.
- Carbon accounting and monitoring included in the national standard.
- Community development and alternative income modules in 3 villages.
- 15 competent village groups formed and micro credit availability secured through revolving funds.
- Comparative studies made with key persons and decision makers at all levels of government.
- Compilation of data and survey results (villages, peat, biomass, carbon, scenarios, awareness, etc.).
- Close to 3000 participants in capacity development through MRPP training, seminars, workshops and focus groups.
- Website and numerous reports, books and information products produced, presented and distributed to audiences.
- Active participation in local, national, and international conferences and constant dialogue and information exchange with a large number of relevant stakeholders.
- The project has contributed to an increase in the knowledge, skills and science of climate change and REDD+.



2.1 Results and Achievements per Component

MRPP I and II had clear priorities and assigned implementation components. For each priority component one Technical Assistance Specialist was assigned. The national and international team leaders carried out the overall management with support from the FORCLIME Programme on the national level. The TA and respective components are listed at the front cover page. Detailed results and achievements per component are given below.

2.2 Component 1: Climate Change, Biodiversity and FMU

After the COP 13 in Bali, when climate change and REDD gained some momentum on the international scene the MRPP proposal was initiated in 2008. Most participants attending the Bali Conference might have had a basic understanding what is meant by climate change and REDD, but the average citizen of the world and the poor farmers in and around forests would have no clue what it is about.

Hence MRPP had from the start to create awareness on these issues and gain support for future measures from the communities, government organisations, NGOs and the private sector. This was pioneering work in South Sumatra and Indonesia at large. Now towards the end of 2011 we can say that many citizens, government employees, civil society and the private sector have a basic idea what climate change, biodiversity and REDD is.

A second major question was what needs to be protected and what structures are required for it. Here for sure biodiversity of the peat swamp forest and the forest as such received highest priority. For the structures the concept of decentralized forest management units (FMU / KPH) was best suited and needed to be promoted. This process of setting up FMUs and providing clear legality and regulations is on-going and needs further support. MRPP therefore made substantial contributions to set up the KPHP Lalan Mangsang Mendis with a total area of more than 260.000 hectares.



Activities for all sub components of climate change, biodiversity, and forest management units have been conducted over a three year journey at MRPP and substantial progress was made in the field and with stakeholders. The groundwork for significant reduction of carbon emissions from deforestation and forest degradation has been made.



Major aims, specific activities and achieved results within the sub-components are listed below:

Climate change aims, activities and results:

- To socialize climate change, REDD, and carbon trading to selected audiences and the public at large.
- To participate in dialogues on climate change and REDD with the stakeholders.
- To promote community and stakeholder participation to mitigate illegal activities (fire prevention, illegal logging, encroachment, poaching).
- To integrate results of climate change agreements into MRPP and disseminate accordingly to stakeholders.
- To initiate and continue capacity development of stakeholders in these sectors.
- To set up and support a Climate Change Coordination Team of South Sumatra (CCCTSS) to be ready for climate change and REDD+ .
- To establish and consolidate networks and coordination with key stakeholders on all levels.

These aims were translated into activities that have been implemented and conducted in the field of climate change to achieve the desired results. Table 1 highlights important measures conducted. It also presents the many stakeholders involved and addressed, such as government institutions, the public at exhibitions and for specific and selected participants.

The local and national media played an important part to disseminate and raise awareness on climate change and REDD.

Table 2. List of Climate Change Activities Conducted and Participated

No	Name of Activity	Number of Participants			Date of Implementation
		F	M	Total	
1	Half-Day Seminar on BioChar, MRPP, Palembang	8	21	29	19 Feb. 2010
2	Socialization meeting on MoF Policy and Climate Change at Palembang	N/A	N/A	N/A	25 Feb. 2010
3	One Day Seminar on REDD and VCM, MRPP and Provincial Governor, Palembang	17	109	126	29 April 2010
4	Workshop peran IUPHHK dalam perubahan iklim GTZ Forclime	3	25	28	3-4 June 2010
5	Environment Day, Sekayu	35	67	102	9-10 June 2010
6	Stakeholder REDD + Update Gatherings	12	22	34	27 Aug. 2010
7	Workshop on Mitigation & Adaptation to Climate Change & Potential Research in South Sumatra, collaboration w/Unsri	23	47	70	03 Nov. 2010
8	Workshop on Mitigation, Adaptation & Provincial Government Policy to climate change collaboration w/DPRD	21	34	55	19 Nov. 2010
9	Coordination meeting with CC Taskforce	10	4	14	19 Nov. 2010
10	Workshop on Mitigation, Adaptation & Provincial Government Policy to climate change collaboration in Muba	13	51	64	23 Feb. 2011
11	Regular Meeting of National Satgas REDD+	20	50	70	4 March 2011
12	Seminar 2 nd Public Consultation "Climate Risk and Adaptation Assessments (CRAA) in South Sumatra Province" at Horison Hotel	15	35	50	15 March 2011
13	Press Conference of World Forestry Day 2011, at Bumbu Desa Palembang	32	8	40	21 March 2011
14	World Forestry Day, Atrium PTC	1000	2000	3000	27 March 2011
15	Focus Discussion Group on Payment Mechanism of REDD+, organized by UN REDD Programme Indonesia in cooperation with Center for Policy and Climate Change Policy of FORDA, MoF, Ciloto Bogor	0	25	25	29 March 2011
16	Lokakarya REDD+, Informasi Persiapan REDD+ dan konsultasi Pembentukan Lembaga REDD+ Sub Nasional Sumsel, Swarna Dwipa Palembang collaboration w/Pemprov, BLH, Bappeda	21	81	102	14 April 11
17	National seminar on climate change and food security, Pasca Sarjana Unsri Palembang	162	114	276	24-25 May 2011
18	International Workshop "Social Forestry and Its Role in Climate Change Mitigation and Adaptation" Santosa Villas and Resort, Jalan Raya Senggigi Km. 11, Lombok	10	30	40	6-10 June 2011
19	WS MRPP & Muba Government on CC and REDD+ Funding, Meeting room Bappeda Muba	16	19	35	27 July 2011
20	WS Update on REDD development and sustainability in Sumsel, Novotel Palembang	6	38	44	19 August 2011





Some of the major outcomes of these climate change activities and measures are:

- There is now an increased awareness with all stakeholders including communities about climate change and REDD.
- Forest surrounding communities have started to reduce illegal activities in the MRPP area due to alternative income possibilities.
- Government institutions and stakeholders have increased capacity and competence to address climate change and REDD.
- Networking and advanced collaboration with local and selected international universities and other institutions in the REDD sector and Climate Change has been enhanced at provincial, national and international level.
- The Climate Change Coordination Team of South Sumatra (CCCTSS) is established and has taken on responsibilities.

Biodiversity, aims, activities and results:

- To collect and analyse biodiversity documents and reports, in particular from Merang or other peat swamps in Indonesia or South East Asia.
- To assess biodiversity parameters and habitat quality.
- To identify, measure and monitor biodiversity.
- To recommend rehabilitation measures for enrichment.
- To document the results of studies and to disseminate them.

Again the table below gives an overview of important interventions by MRPP regarding biodiversity issues and targeted stakeholders.

Table 3. List of Biodiversity Activities Conducted and Participated

No	Name of Activity	Number of Participants			Date of Implementation
		F	M	Total	
1	Biodiversit and climate change workshop Gottingen University + DAAD	10	20	30	11-15 March 2009
2	Pelatihan Pendidikan Lingkungan KMPH	3	27	30	8-10 June 2009
3	CI Workshop in Novotel Bogor	10	19	29	27-28 June 2011
4	Pelatihan Inventarisasi Karbon dan Pengenalan Jenis Pohon	0	18	18	7-10 October 2009
5	Carbon Inventory on the job training ZSL + Berbak NP	1	6	7	1-6 October 2010
6	OSIRIS Training for REDD analysis Conservation International	5	15	20	13-14 Oct. 2009
7	ZSL Berbark Workshop, Jambi	15	29	44	19 January 2010
8	Half-Day Seminar on Forest Carbon Survey Methodology (MRV Workshop), GTZ and BPK MoF, Jakarta	N/A	N/A	N/A	25 March 2010
9	Biodiversity Day, Palembang	135	351	486	22 May 2010
10	Biodiversity Day, collaborated with Forclime Workshop	39	105	144	23 May 2010
11	Conservation GIS Workshop in cooperation with SCGIS Indonesia	40	3	43	23-26 Nov. 2010
12	Workshop on Tropical Wetland Ecosystem of Indonesia, Sanur Beach Hotel Bali	20	40	60	11-15 April 2011
13	One year web Foto Biodiversitas Indonesia and Launching electronic magazine of Biodiversitas Indonesia in Taman Kyai Langgeng, Magelang	11	27	38	22 May 2011
14	Symposium "Issues in Global Species Conservation Efforts" IPB	N/A	N/A	N/A	4-5 July 2011
15	Asian Wetland Symposium 2011, Magellan Resort, Sabah, Malaysian Borneo	100	200	300	18-21 July 2011

The outcomes of these specific biodiversity activities and measures are:

- Data and information was collected and analysed for setting up studies and surveys to complement data and information.
- A number of biodiversity sectors were further measured, monitored and documented.
- Reports and books are available and have been published to a very high standard. Distribution has started and will be enhanced and increased to stakeholders during the final workshop in October 2011.
- Books on Birds, Fish and Tree species in Merang are available.
- Local species have been identified, seedlings produced and used in rehabilitation areas.

Forest management unit, aims, activities and results:

- To identify possibilities for future management of the Merang Peat Swamp Forest.
- To support the establishment of a Forest Management Unit with local and national stakeholders.
- Assist first implementation steps on how to develop a management structure (KPHP).
- To engage in capacity and competence building measures for future KPHP personnel.
- To lobby for KPHP at national and local level so that it will advance further and obtain funds from the government.
- To carry out joint activities for the establishment of initial activities and to reduce illegal activities in the field

The FMU concept is not new and has been a target for the Forestry Ministry for many years. However, the process is very slow and it is not on the priority list. For implementation of REDD and decentralisation the KPHP concept would have a number of positive impacts, but would need some better and clearer regulations, in particular when taking on business opportunities (like Carbon Trading). MRPP was therefore very much dependent on how far the national KPHP legislation process allowed decisions to be made on the set up and management.

Table 4. List of Forest Management Unit Activities Conducted and Participated

No	Name of Activity	Number of Participants			Date of Implementation
		F	M	Total	
1	Workshop on Village Mapping and Baseline, MRPP and Eris Akhyar, Palembang	3	17	20	8 January 2009
2	One Day Workshop on Landuse and Social Economic Survey, MRPP and Eris Akhyar, Palembang	5	17	22	19 February 2009
3	Workshop on Public Consultation for REDD Regulation, MoF, Jakarta	N/A	N/A	N/A	25 March 2009
4	Workshop on Public Consultation for R-Plan, FORDA MoF and Dishut Prov. Sumsel, Palembang	N/A	N/A	N/A	6 April 2009
5	Workshop on KPH establishment speed up conducted by MoF at Palembang	N/A	N/A	N/A	7 May 2009
6	Workshop on Public Consultation of KPHP Lalan, MRPP and Dishut Muba, Sekayu	10	50	60	18 May 2009
7	Comparative Studi on Peat Swamp Forest Management and Rehabilitation, MRPP, Central and South Kalimantan	1	11	12	24-30 July 2009
8	Workshop on Finalization of KPHP Model, Dirjen Baplan MoF, Jakarta	N/A	N/A	N/A	1 August 2009
9	AKECOP Workshop on REDD in ASEAN, IPB and Korea, Bogor	N/A	N/A	N/A	14-15 Oct. 2009
10	Workshop on Tackling Illegal Logging Activity, MRPP, Sekayu	10	50	60	3-5 Nov. 2009

Table continued on next page

Table 4. List of Forest Management Unit Activities Conducted and Participated *(continued)*

No	Name of Activity	Number of Participants			Date of Implementation
		F	M	Total	
11	Workshop on Conflict Mapping in Forestry Sector, BP2HP, Palembang	N/A	N/A	N/A	23 Nov. 2009
12	Workshop on Land Tenure, WALHI, Palembang	N/A	N/A	N/A	16 Nov. 2009
13	Workshop on Public Consultation of KPHP, Dirjen Baplan MoF, Jakarta	N/A	N/A	N/A	4 Dec. 2009
14	Workshop on Training Need Assessment of KPH, GTZ and Pusdiklat Bogor, Sekayu	3	30	33	16-17 Dec. 2009
15	Workshop on Training Need Assessment of KPH, GTZ and Pusdiklat Bogor, Sekayu	3	30	33	16-17 Dec. 2009
16	ICOPE Conference, Nusa Dua Bali	55	447	227	23-25 Feb. 2010
17	Half-Day Seminar on Forest Carbon Survey Methodology (MRV Workshop), GTZ and BPK MoF, Jakarta	11	70	81	25 March 2010
18	Workshop on Local Community and REDD Issues, WARSI, Jambi	N/A	N/A	N/A	8 April 2010
19	Seminar on social forestry concept and experiences, UNSRI, Palembang	N/A	N/A	N/A	13 April 2010
20	Workshop on Public Consultation of Grassroot Capacity Need Assessment, GTZ and RECOFTC, Palembang	N/A	N/A	N/A	15 April 2010
21	Comparative Studi on KPH, MRPP, East Java and Bali	2	6	8	17-22 May 2010
22	Workshop on UPTD KPH Lessons Learned, GTZ and Dirjen Baplan, Jakarta	N/A	N/A	N/A	31 May-1 June 2010
23	TNC/WE Workshop on community participation, Jakarta	N/A	N/A	N/A	8-10 June 2010
24	KPH Training at Pusdiklat Bogor	25	0	25	22 Nov. 2010
25	Seminar on Expanding Access to Community Forest Management, WBH-Anugrah Hotel	5	47	52	1 May 2011
26	Coordination Meeting about KPHP at Forclime and MoF	0	12	12	9-10 May 2011
27	KPH coordination meeting at national level, Bogor	11	65	76	30 May-1 June'11
28	Coordination Meeting for Master Plan KPHP Drafting	0	7	7	8 July 2011
29	The International Conference on Forest Land Tenure, Governance and Enterprise, Experiences and Opportunities for Asia in a Changing Context, Lombok	100	150	250	11-15 July 2011
30	Facilitation on Socialitation RKHD & RTHD Documents of Hutan Desa Merang	5	16	21	16-18 August 2011

Results achieved with the interventions for the KPHP:

- Established the KPHP Model Lalan Mendis signed by the Minister of Forestry in 2009.
- Designed UPTD KPHP Model Lalan by Musi Banyuasin Regent in 2010.
- Increased capacity and competency of human resources in UPTD KPHP Model Lalan through education and training participation for

the prospective Head of KPHP, learning through various training, workshops and study tours, and activities during field surveys.

- Established commitment from Government of Musi Banyuasin District and provincial government
- Elaborated and supported the development of a basic collaborative management plan in accordance with the KPHP concept, together with stakeholders.
- Facilitated a Master Plan of Forest Management Unit (KPHP) Lalan-Mangsang-Mendis document as a blue print for long term KPHP management.
- Joint activities / operations implemented to reduce illegal activities with a number of stakeholders.

MRPP first had to focus on the facilitation to set up a FMU and to prepare for the management. With many legal hurdles to take, this process was time consuming and slow. The challenge now is to further strengthen the management and the legal basis for future REDD+ involvement. Peat Swamp Forests are governed by a multitude of laws and regulations and prone to different interpretation. Often good data on forest cover, size and depth of peat is not available. MRPP has managed to survey and study the Merang Block in much detail and all necessary data for future REDD is on hand.

In 2011 MRPP continued to assist communities and NGOs to finalize the process in obtaining village forest licences within the KPHP boundaries. By end of 2011 it is hoped that at least 2 licences are given by the Ministry of Forestry. The challenge for the future is proper management of the village forests. Guidance and support are needed.

2.3 Component 2: Forest Monitoring, Carbon Accounting and Fire Management

Component 2 involves technical aspects related to forest measurement and carbon accounting. However, the component has 3 major parts: (1) Forest monitoring and assessment of forest biodiversity, peat swamp characteristics, and threats to the peat swamp forest from illegal activities and forest fires. (2) Carbon accounting for developing baseline emission and reference emission level, through Tier 3 accuracy of emission factors and activity data. (3) Fire management systems that actively involve local communities.

Forest Monitoring

Forest monitoring is one of the most important aspects for a sustainable forest management program. Actual information on existing forest areas is useful for managing timber stock as well as for carbon stock assessment. Forest monitoring should be conducted regularly to assess not only forest

coverage, but also other parameters associated with forest ecosystems, such as soil characteristics, plant and wildlife diversity and threats to the ecosystem. It employs both remote sensing technology and field surveys.

Remote sensing technologies are very useful to capture vast areas of forest and land, for forest and vegetation mapping and also fire and hotspot monitoring. Moreover, it is possible to assess historical forest conditions using remote sensing, which are useful for assessing deforestation rates, and thus historical emissions. A terrestrial survey allows us to collect more detailed and comprehensive information about forest attributes. A combination of these two methodologies will give accurate and comprehensive forest information.

We conducted vegetation and land cover mapping for the MRPP project area using remote sensing data. We applied and used the integration of local knowledge on vegetation types in the field and available spectral signatures of remote sensing data to define land cover classes. Moreover, we also differentiated degradation levels of peat swamp forest, since they store different value of carbon stocks. This means, that we were able to identify more classes than those required by the national standard for a land cover classification system. There are 8 land cover classes used for image classification in the MPSF: 3 classes of secondary forests (dense logged-over forest, medium logged over forest, and secondary forest dominated by *Macaranga*); 2 classes from differentiation of forest re-growth and shrubs, and 3 deforestation classes (grasslands, open/burnt land and recently logged). These 8 land cover classes are useful for stratification of carbon stock assessment.

Some factors have been identified as the causes of deforestation and degradation in the MPSF area, namely: logging (legal logging in the past and illegal logging at present) and peat fires. The legal logging conducted by timber concessions in the past merely resulted in forest degradation since they cut only large trees. At the end of 1999, many timber concessions stopped their selective logging operations in the MPSF and this led to unmanaged forest areas without sufficient protection. This was utilized and exploited by illegal loggers.



The illegal logging, conducted by communities with support by a patronage system from rich businessmen, targets most of the commercial trees species with smaller diameters. Other non-commercial trees are also harvested and used to support the wood extraction process, either for making skidding tracks or for floating the timber in the canals and rivers. This has led to excessive damage to the remaining forest stands.

Monitoring of illegal logging activities was conducted using field surveys as well as remote sensing. In 2009, a survey of illegal logging activities was conducted in cooperation with the University of Muhammadiyah, Palembang (UMP). The survey revealed that loggers operate in small groups of 3-5 persons. Each group can extract around 70 – 100 m³ timber per month. It was estimated that up to 75 illegal logging groups are operating near Merang and Kepahiang Rivers. Loggers annually extract around 57,000 m³ of timber from the area.

Local communities have been involved in the direct monitoring of illegal logging on a regular basis. Canals and rivers are the only access for illegal timber extraction so it is very effective to monitor the illegal logging traffic from major rivers posts. Two Community Forest Ranger's (CFR) field stations are situated in the river mouth of the Merang and Kepahiang rivers, where all rafts of illegal logs and timbers have to pass. The field station in the Merang River is very suitable for regular monitoring as it is located in the village where the CFR crews live.

Biodiversity monitoring

The MPSF is an important peat swamp ecosystem for biodiversity conservation as it provides habitat and migration corridors for many threatened species. Wetland International (WI) and the South Sumatra Forest Fire Management Project (SSFFMP) have conducted earlier biodiversity surveys in the MPSF. These provided an important baseline for biodiversity in the area. Most surveys have focused on birds and large mammals, though some reptiles were recorded, particularly those specific to peat swamp forest such as the False Gharial (*Tomistoma schlegelii*). A total of 156 bird species were recorded in the MPSF, including 25 near threatened species, 2 vulnerable species and 2 endangered bird species. The last four species (Lesser Adjutant Stork, Wallace's Hawk Eagle, White-winged Duck and Storm's Stork) are a priority for monitoring.



Lesser Adjutant Stork (*Leptoptilos javanicus*)



White-bellied Woodpecker (*Dryocopus javanicus*)

Hornbills are also an important key species for peat swamp forest ecosystems and are relatively easily observed due to their size and calls. The surveys conducted by WI and SSFFMP assessed large mammals and most of the large mammals recorded in the 2003 survey were confirmed and found again in the 2008 survey.

In 2009, MRPP conducted a multi-purpose inventory, focusing on biomass measurement in 45 plots, distributed randomly throughout the project area. The inventory leader recorded any indication of wildlife, either through direct observation or indirect evidence such as calls, tracks, faeces, and other signs. GPS points were recorded for each observation. Some remarkable observations were made during the survey, including footprints of the Sumatran Tiger (*Panthera tigris*), Tapir (*Tapirus indicus*) and Sun Bear (*Helarctos malayanus*).

Two teams who worked separately (one team in Buring river and the other in Kepahyang river) spotted fresh tiger tracks 6 times along a transect. This indicates that at least 2 individual tigers are using the project area and this is substantiated by the relatively good quality of remaining forest and available food - Wild Boar (*Sus scrofa*), Sambar Deer (*Cervus unicolor*), Barking Deer (*Muntiacus muntjak*) and Mouse Deers (*Tragulus napu* and *Tragulus javanicus*) are all present. Another large carnivore that was recorded in the project area was the Sunda Clouded Leopard (*Neofelis diardi*).

Many project field activities can be done in parallel with wildlife surveillance. One such observation was made in July 2009 during a survey for biomass allometric development near a timber company on the Buring river. A company worker who often went hunting in the forest at night, using an air rifle, brought home two dead Greater Mouse Deer (*Tragulus napu*) and the next day a Lesser Mouse Deer (*Tragulus javanicus*). These species had not been recorded by previous surveys. Footprints belonging to at least 3 individual tigers were also observed on the riverbank during the same survey.



Gibbon (*Hylobates agilis*), Banded Langur (*Presbytis melalophos*), Silvered Langur (*Presbytis cristata*), Pig-tailed Macaque (*Macaca nemestrina*), and Long-tailed Macaque (*Macaca fascicularis*) were recorded during a carbon inventory and other field surveys. The Long-tailed Macaque is still common and the most frequent mammal to be seen in the Merang river area. A

specific survey to assess the gibbon population in the project area will be conducted soon. The Pig-tailed Macaque and Banded Langur need to be monitored regularly, since they are susceptible to forest degradation and deforestation.



Long-tailed Macaque (*Macaca fascicularis*)

Wetland International conducted the most comprehensive mammal survey in 2003. They used direct observation and secondary information from trusted sources and recorded 20 mammals in the MPSE. During regular field surveys, 3 more species have been found in the area: namely: the Lesser Mouse Deer (*Tragulus javanicus*); Sunda Clouded Leopard (*Neofelis diardi*) and Giand Red Flying Squirrel (*Petaurista petaurista*).

Based on results from the field inventory, Rengas burung (*Melanorrhoea walicchii*) is the plant species with the highest Importance Value Index (IVI) in the project area, followed by Punak (*Tetramerista glabra*) and Ramin (*Gonystylus bancanus*). Although Rengas burung is a commercial species, it is not a favourite of illegal loggers due to its toxic sap that can severely irritate the skin. Previously, natural peat swamp forests in the project area were dominated by dipterocarp species. Among others publications on biodiversity, the team members of MRPP produced and published a book on tree species in the Merang peat swamp forest.



Local allometric biomass equations

Some allometric equations have been developed to accommodate carbon measurement in tropical countries. However, it is more appropriate to estimate tree biomass based on a local allometric equation developed from similar forest types. The nearest forest type to the MPSF that has been studied for allometric equations is a lowland secondary forest in Jambi. However most of the study site is located on mineral soil, hence it will differ to forest on peat land.

MRPP implemented a study for the development of biomass equations in the peat swamp forest at Merang, to get a higher level of precision and accuracy in carbon calculations. In cooperation with the adjacent timber plantation, we used harvesting to develop 2 allometric equations, one for tree species from natural forests and one for pioneer tree species.

For the peat swamp forest equation we used data from 54 dominant trees with a maximum diameter at breast height (DBH) of 102 cm. For the pioneer tree equation we used 22 trees with a maximum DBH of 35 cm.

Forest carbon Inventory

The REDD+ mechanism, requires an internationally accepted carbon monitoring system. The higher the precision level of carbon measurement, the more convenient it would be for validation and verification as well as for carbon trading negotiations. Therefore, a carbon measurement system with accepted accuracy and precision is required at project level.

In MRPP we developed and implemented the Tier 3 carbon accounting methodology. This methodology has been documented and published for further dissemination.

In 2010, we conducted a forest carbon inventory using stratified random sampling technique in the project area. We adopted and modified a forest stand assessment tool, (applied for timber concession), for timber and carbon stock assessment. Aiming at 10% allowable error, we distributed 45 measurement plots randomly into 8 strata. The result was used to estimate total carbon stock and baseline emission in the project area. This was done by integrating activity data derived from image classification and the emission factor from field measurement (previously we had interpreted Landsat imagery for the forest carbon inventory).

A book on methodology for carbon stock estimation was published based on project experiences. The book is useful for practitioners from government, NGOs and the private sector who are working on REDD projects. Additionally we also published tailored software for forest carbon accounting to accompany the book. This allows users to enter data from a field inventory and calculate the average biomass and carbon stock in their respective project areas.

Community-Based Fire Management

From the beginning of the project we have encouraged community involvement for all field activities. Meetings were frequently conducted in villages to raise awareness on climate change and REDD, and on the aims of the project. Activities were jointly planned in order to get commitment and to work together. Based on the many meetings with villagers we established Community Forest Ranger Groups (CFR) in each village. MRPP and partners provided basic training for environmental education, forest inventory, rehabilitation, and for fire suppression.

In cooperation with Satu Hijau (a local NGO), the District Forest Service and the Manggala Agni Fire Brigade, fire prevention and suppression training was conducted for the CFRs. Annual refresher training was also provided by the project to ensure that the CFRs maintain and improve their skills in fire prevention and suppression.



Forest fire patrols are conducted regularly by the CFRs during the dry seasons. These patrols are used for disseminating information and leaflets on fire dangers and fire alertness to communities and even illegal loggers. A Fire Danger Rating System was established at the MRPP Merang Camp to provide important information on the fire danger levels. The status is assessed and updated daily by the Merang Field Office Manager. This information is sent to each CFR Post of Kommand (Posko). Whenever the fire status reaches the danger level, the Merang Field Office Manager will employ CFR crews for fire patrols and fire suppression.

MRPP provided some basic equipment for patrolling and fire suppression. Future entities involved in the Merang Peat Swamp management will have to maintain and upgrade the equipment, tools and the required skills for the CFRs on a frequent basis.

A detailed fire management plan for Merang Peat Swamp Forest has been developed with contributions from local stakeholders. This is a major guideline for fire management activities conducted in the field. District government, FMU Lalan, CFR and relevant private sectors can use this fire management plan as reference or as basis for further collaboration.

2.4 Component 3: Nursery and Rehabilitation

Critical land in the project area has been prioritized for rehabilitation activities. Based on conditions in the field, approximately 8,931 ha (37%) of the recommended 24,092 ha area (Decree Musi Banyuasin Regent No. 522/2235/Kehut/2008) comes under this category. Damage is generally due to forest exploitation activities, especially illegal logging and the opening of canals to transport the timber.

The role of nursery and rehabilitation is to support sustainable natural resource management and biodiversity protection through the rehabilitation of land that has been degraded or deforested.

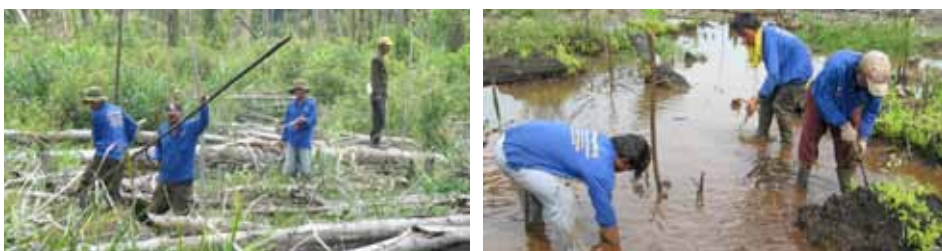
Local communities are involved in the forest rehabilitation activities in the Merang-Kepayang area as part of the community-based rehabilitation strategy. Starting with seedlings, communities are involved in all stages of implementation from planting, plant maintenance, monitoring to protection.

Aspects of community-based forest rehabilitation:

- Land Use: status of the legality of the area; systems and patterns of land ownership.
- Socio-Economic: the involvement and active participation of communities; social and economic benefits for community management (KPHP/Production Forest Management Unit, management plans and zoning areas).
- Peat swamp forest (the causes of damage, intervention models and the suitability of plants to the land types).

Based on the above, through cooperation and collaboration schemes on PSF rehabilitation with local communities (Community Forest Ranger/ CFR, in 2 villages) and the Forestry Agency of MUBA District, the intervention needed for MRPP area, is:

- Degraded PSF primary forest: canal blocking, area monitoring and protection, enrichment planting and natural regeneration.
- Secondary PSF: canal blocking, community-based area management, natural regeneration, enrichment planting, reforestation and area monitoring and protection.
- Degraded PSF land: hydrological restoration through canal blocking, reforestation, area monitoring and protection.



Surveys of vegetation and areas of degraded land have been implemented in the project area in order to gather information on important local species. The survey results for the project site are as follows:

Table 5. Merang-Kepayang Peat Swamp Forest - Type of Damage

Type of Damage	Level of Damage
Degraded primary peat swamp forest: Peat swamp forest that has been disrupted by logging and fires (among others) but the conditions and original peat swamp forest vegetation composition are still there, with vegetation density of more than 400 trees / ha	Minor damage, with the following characteristics: • Damage to local species composition and the hydrology of peat swamp forest by fire, logging and canals • No flooding • Damage to the aspects of hydrology and forest composition and structure of a logged-over forests from logging and opening of canals, some flooding alongside rivers in the rainy season
Secondary peat swamp forest: Peat swamp forest that has been turned into a forest with the dominant type of secondary vegetation such as Gelam and tembesu, mainly caused by fire. Density of small trees and tree vegetation ranges from 300 – 400 trees / ha	Moderate damage, with the following characteristics: • Damage to the peat condition (peat is shallow and burns) and the species composition of plants into secondary forest • Due to repetitive fires • No flooding
Degraded peat swamp forest: Peat swamp forest cover has been turned into open areas. Shrub and forest cover below 10%, with the density of small trees and vegetation under 300 trees / ha	Moderate damage, with the following characteristics: • Damage to the peat (top layer), hydrology and forest cover leading to non-forested or open areas. • As a result of repeated fires and the opening of canals. • No flooding



Table 6. Recommendation Indigenous Species for Rehabilitation (MRPP area)

Peat Swamp Forest Condition	Description	Examples of Appropriate Species
Primary peat swamp forests are degraded by fire and logging (original forest cover or a mixture of peat swamp forest with an average level of cover close to 50%).	Indigenous type of peat swamp forest. Species is shade resistant (Toleran). Intended to increase biodiversity, particularly important and protected species.	Enriched with essential plant species and protected to increase the species diversity, such as: Dipterocarpaceae species: Meranti (<i>Shorea</i> sp.), Tenam/Mersawa (<i>Anisopthera marginata</i>), Resak (<i>Vatica rassak</i>). MPTS (Multi Purpose Tree Species): Balam (<i>Palaquium burckii</i>), Durian burung (<i>Durio carinatus</i>), Gaharu (<i>Aquilaria malaccensis</i>), Ketiau (<i>Ganua motleyana</i>) Other Species: Dara-dara (<i>Knema</i> spp.), Keranji (<i>Dialium indum</i>), Mengris/Kempas (<i>Kompassia malaccensis</i>), Medang (<i>Litsea</i> spp.), Punak (<i>Tetramerista glabra</i>), Ramin (<i>Gonytylus bancanus</i>), etc.
Secondary forest (Forest cover with secondary plant species, such as Gelam, Tembesu, etc).	Peat conditions have changed. Pioneer vegetation types. Timber and non timber.	Secondary forest conditions with species of Gelam (<i>Meulaleuca cajuputi</i>) and Tembesu (<i>Fabrarea fragrans</i>): Forest management types of Gelam and Tembesu to ensure sustainability for the benefit of local communities. If the peat is still in good condition, for enrichment with plant types such as in the box above, while for the open areas use those in box below.
Degraded peatlands from fire (Non-forested land in the form of shrubs or tree cover below 10%).	Indigenous peat swamp forests. Resistant to sunlight (intolerant). Pioneer peat swamp forest. Selection of appropriate rehabilitation programs, collaboration with community empowerment programs. Peat swamp forest that has an important value / protected. Vegetation that can provide added value, such as MPTS and NTFP.	MPTS : Jelutung (<i>Dyera lowii</i>), Pulau (<i>Alstonia pneumatiphora</i>), Mahang (<i>Macaranga triloba</i>). Wood : Belangiran (<i>Shorea belangeran</i>), Gelam tikus (<i>Eugenia spicata</i>).

A village nursery was built to provide seedlings for the rehabilitation program in Merang HRG-Kepayang. In addition, this nursery provides revenue to CFR members. Seeds from local species (indigenous tree species) are used. Two additional nurseries, namely Petaling CFR village Kepayang and CFR Tembesu - Merang Muara village, each have a 50,000-seedling capacity.

The nursery uses the knowledge and skills of community members in terms of seedling production for local species, including the production of grafting rubber seedlings (*Hevea brasiliensis*). There are examples of approximately 20 successful local produced species that can be used for seedlings, such as: Kayu Arang (*Diospyros siamang*); Punak (*Tetramerista glabra*); Medang (*Litsea* spp); Pabuh Kijang (*Santiria griffithii*); Kayu Kelat (*Eugenia glauca*); Cempedak air (*Artocarpus maingayi*); Keranji (*Dialium indum*); Dara-dara (*Knema* spp); Balam (*Palaquium burckii*); Geronggang (*Cratoxylon arborencens*), Meranti (*Shorea* sp); Labu-labu (*Endospermum malaccensis*); Uya-uya (*Gironniera nervosa*); Keluai; Belambang Lanang etc.

Blocking canals as a model of intervention to be used as preparation for rehabilitation of degraded peat lands has been carried out on the Tembesu Daro river and around the Kepayang river.

Implementation of critical land cultivation has been done with a total of 43 ha, as follows:

- Planting an area of 2 ha with Jelutung species (*Dyera lowii*) and Medang (*Litsea* sp) at the end of 2009 and in May 2010.
- Planting an area of 26 ha with local species at two sites in December 2010 and January 2011.
- Planting an area of 3 ha with a mixture of plant species including Jelutung (*Dyera lowii*) and Meranti (*Shorea blangeran*) in the village Mangsang, as part of a rehabilitation research collaboration with the BPK – Palembang.
- Planting an area of 12 ha with local species in July 2011.

Plant maintenance carried out at locations includes slash line, cleaning planting holes (disk model), replanting, fertilization and plant monitoring.

Monitoring of plants on the 26 ha site was made to determine plant life and land suitability. A team from UMP conducted the monitoring in May 2011 and July 2011. Ten local plants species were studied and the results showed that on peat soil that was flooded during the rainy season the smallest growth was with Punggung kijang (*Santiria griffithii*) at 48.78% and the largest growth with Dara-dara (*Knema* spp) at 89.87%. For sites where the peat is dry and there is still some land cover, the smallest growth was found with Makai at 40.70% and the largest was Keranji (*Dialium indum*) at 88.82%.

Recommendations from the results of the monitoring include plants such as: Punak (*Tetramelistras glabra*); Medang (*Litsea* spp); Dara-dara (*Knema* spp); Cempedak Air (*Artocarpus maingayi*); Kelat (*Eugenia glauca*) Punggung kijang (*Santiria griffithii*); Balam (*Palaquium burckii*); Uya-Uya (*Gironniera nervosa*) and Keranji (*Dialium indum*) that will all survive in the early days when there is little shade planting.

Cooperation with governmental institutions, university and NGOs is vital to support successful rehabilitation and the nursery. Institutions involved in supporting the transfer of knowledge and training members of the CFR include the MUBA Forest Service, the Provincial Forestry department, BP DAS – Musi, BPK Palembang, BPTH Palembang, BSBTP Palembang UMP, Kemasda NGO and WBH.

Increased knowledge and developing skills through training has been implemented for members of the CFR with a total of 360 participants that started in October 2009. Details of the training are shown below (Table 7).

Table 7. Nursery and Forest Rehabilitation Training

No	Name of Activity	Number of Participants			Date of Implementation
		F	M	Total	
1	Nursery Development Training for CFR Tembesu (Merang Village) and CFR Petaling (Kepayang Village)		28	28	2-5 October 2009
2	Development and Management of Village Nursery Training (CFR Tembesu and CFR Petaling)		32	32	22-25 October 2009
3	Development and Management of Village Nursery Training (CFR Tembesu and CFR Petaling)		21	21	17-19 Nov. & 22-23 Dec 2009
4	Training for Plantation Trial Peat Swamp Forest Tree Species in MRPP Area with CFR	9	42	51	29-30 December 2009
5	Observation and Planting Maintenance Training		25	25	2-25 February 2010
6	Canal Blocking Training with CFR Tembesu and KMPH Petaling		40	20	17-18 March 2010
7	Canal Blocking Training with CFR Petaling		9	9	April 12-16, 2010
8	Training in Plantation Peat Swamp Forest Tree Species with CFR Tembesu and CFR Petaling in MRPP Area		33	33	5-8 May 2010
9	Plantation Training for CFR Sumber Urip - Mangsang		16	16	13-14 November 2010
10	Plantation Training for CFR Petaling, Tembesu & Medang Kuning		41	11	19-20 November 2010
11	Cultivation Technique of jelutung species; Nursery Management; Pre-Planting and Plant Maintenance with CFR	6	26	32	16-17 February 2011
12	Training on Clone Rubber Orchard Establishment	4	28	32	
	T o t a l	19	341	360	

There are several funding opportunities for rehabilitation and management of village nurseries for a REDD program in the Merang-Kepayang peat swamp forests, as well as for good forest management schemes through KPHP and forest management by communities and the private sector. These are, among others:

- Greenhouse gas emission mitigation funded by central government.
- Forest management for village forests in the villages of Muara Merang and Kepayang, including forest rehabilitation with local seedlings supported by the village nursery.
- Opportunities of cooperation with the private sector through CSR funds (Ex: PT Sinar Mas-RHM; Pertamina; Mining, etc.).
- Rehabilitation program from KPHP Lalan and Forset Service MUBA.
- Seedling supply for rehabilitation program DAS MUSI (BPDAS MUSI).
- The need for a rubber cultivation program in surrounding communities (rubber seedling sales will give business opportunities to the village nursery).
- Management of Merang-Kepayang area in the carbon trading mechanism through REDD.
- The mechanism for sharing the results of carbon trading schemes post-2012 REDD for the rehabilitation of the Merang-Kepayang peat swamp forest (production of seeds and planting).



2.5 Component 4: Community Development

The adverse impacts of climate change are, among others, disturbances in hydrological cycles bringing changes in rainfall patterns and rising sea levels due to the melting of the ice caps. Excessive floods as well as droughts are likely. A decrease in agriculture and fish production from the changing weather patterns is to be expected. Negative impacts and changes to biological diversity will occur and affect the balance of flora and fauna.

Indonesia is still mainly an agricultural country; hence awareness on the causes of climate change and its impacts needs to be increased substantially. Ways and means to reduce the negative impacts will have to be found.

The MRPP Community Development (CD) component is assigned to promote and enhance active participation by village communities to reduce the underlying causes of deforestation and degradation to forests in the project area.

Targets and activities of the CD components consist of:

1. Facilitate the establishment of the Community Forest Rangers (CFRs) or Kelompok Masyarakat Peduli Hutan (KMPH); recruited from local village communities.
2. Enhance KMPH members capacity and support institutional strengthening
3. Introduce alternatives for income generating activities (IGA), and facilitate the establishment of groups' savings and loan schemes to function as embryo for village micro finance service units.
4. Promote and encourage active participation of local communities in forest protection and rehabilitation to enter into the REDD+ compensation mechanism.

To conduct the implementation of these activities, MRPP has had close collaboration with related competent stakeholders, among others with NGOs of Yayasan Kemasda and Satu Hijau; Government agencies such as BPTP, Dinas Kehutanan, Dinas Pertanian dan Peternakan, BPSB Perkebunan, Balai Penyuluh Pertanian, Perikanan dan Kehutanan, and many other relevant agencies at province, district and sub-district levels.



From October 2008 until September 2011, MRPP established and regularly facilitated fourteen KMPHs. Two of these KMPHs are core groups and were assigned as village forest fire crews, while the other twelve are extension groups. All of the KMPH members were recruited from local community members of the Merang and Kepayang villages and their sub-villages.

Table 8. List of CFR/KMPHs established

No	Name	Group members			Chair person	Remarks
		Male	Female	Total		
1	KMPH "Tembesu" – Dsn Bina Desa	17	–	17	Guntur	Core / Village Fire Crew
2	KMPH "Petaling" – Ds Kepayang	12	–	12	Robert Nainggolan	Core / Village Fire Crew
3	KMPH "Medang Kuning" – Dsn Bina Desa	17	–	17	Nanang	Extension group
4	KMPH "Pulai Gading" – Ds Kepayang	12	1	13	Kosilan	Extension group
5	KMPH "Durian Payo" – Ds Kepayang	11	–	11	Syahroni	Extension group
6	KMPH "Merante Jaya" – Dsn Bakung	8	6	14	Hasis Handopo	Extension group
7	KMPH "Jelutung Indah" – Dsn Bakung	16	5	21	Hasan Basri	Extension group
8	KMPH "Merawan" – Dsn Buring	19	1	20	Tatang	Extension group
9	KMPH "Wanita mandiri" – Dsn Hijrah Mukti, Mangsang	–	15	15	Sidiriah Laui	Women's group
10	KMPH "Bunga Anggrek" – Dsn Bakung, Muara Merang	–	20	20	Fitrianah	Women's group
11	KMPH "Jati Merah" – Dsn Bina Desa	–1	20	21	Pariyanto	Women's group
12	KMPH "Mawar Putih" – Ds Kepayang	--	20	20	Aminah	Women's group
13	KMPH "Urip Mulyo" – KTGR, Dsn II Mangsang	21	7	28	Susyanto	Extension group
14	KMPH "Sumber Urip" – Dsn Hijrah Mukti	24	–	24	Sali	Extension group
TOTAL		158	95	253		

In regard to the capacity development, various workshops and training have been conducted while MRPP specialists and recruited experts did continuous on-the-job training and coaching. Examples of specific interventions are given in Table 9.



Table 9. CD Trainings and Workshops conducted

Name of Activity	Number of Participants			Type of Activity		Date of Implementation
	Male	Female	Total	Basic	Specific	
Workshop on Gender role awareness for village decision makers at Merang village	21	9	30		x	2 February 2009
Workshop on Gender role awareness for village decision makers at Kepayang village	7	23	30		x	4 February 2009
Training on Management and Group Dynamic for CFR "Tembesu" of Bina Desa SubVillage	0	13	13	x		19-21 March 2009
Training on Management and Group Dynamic for CFR "Hutan Lestari" of Kepayang village	5	26	31	x		28-30 April 2009
Training on Technique and Management of Poultry Business as Income Generating Activities for CFRs at Bina Desa Subvillage	0	15	15	x		19 August 2009
Training on Technique and Management of Poultry Business as Income Generating Activities for CFRs at Kepayang village	1	14	15	x		20-21 August 2009
Training on Management and Group Dynamic for CFR "Jelutung" and "Meranti Jaya" of Merang village	11	21	32	x		22-24 December 2009
Refresher Training for Forestry Investigator (PPNS) personnel from District and Province Forestry Service at Palembang	0	24	24		x	9-10 March 2010
Refresher Training for Forestry Police (PolHut) personnel from District and Province Forestry Service at Palembang	0	24	24		x	10-11 March 2010
Training on Management and Group Dynamic for CFR "Tembesu" and "Medang Kuning" of Bina Desa SubVillage	0	32	32	x		12-14 March 2010
Training on Households Economy Management for 2 CFRs at Bakung, Merang Village	14	12	26	x		8-10 April 2010
Training on Households Economy Management for 2 CFRs at Kepayang Village	8	22	30	x		5-7 May 2010
Training on Management and Group Dynamic for CFR "Merawan" of Buring SubVillage	2	19	21	x		27-29 May 2010
Training on Agri Bisnis for Community Forest Rangers	5	22	27	x		19-20 Aug & 24-25 Sept 2010
Training on Bookkeeping for CFRs' Savings and Loan Managers	12	12	24		x	4-5 March 2011
Training on Veterinary for CFRs at MRPP Field Office	2	18	20		x	12 April 2011
Training on Hybrid Rubber Clone seedling production for CFRs	4	33	37		x	3-4 May 2011
Workshop on CFRs Facilitation Handing Over from MRPP to District Government Extension Agency	18	42	60		x	30 June 2011
Workshop on Gender roles and functions for women groups of Muara Merang and Kepayang	28	-	28		x	16 September 2011
Socialisation Meeting on Fire Prevention and Mitigation for Muara Merang Village community	25	15	40		x	17 September 2011
Sub Total	163	404	567			

Alternative income generation activities varied considerably according to requests by the groups. Field activities and modules introduced and supported included poultry production, animal husbandry (cattle, goat rearing), and the establishment of home and agribusinesses such as village shops, the production of snacks, etc.

One of the examples is the poultry rearing conducted by Pak Effendy, “Pulai Gading” CFR member of Kepayang village. He could manage a rotation of 4 rearing's per year, each consisting of 1 box of 100 baby chickens (IDR 750.000 per box), with a rearing period of 38 days. Sold chickens weighed between 1.8 - 1.7 Kg/head. During the rearing period the chickens consumed 4 bags of pellet of 50 kg each (IDR 310,000/bag). When using recommended chicken medicines around 85% of the small chickens survived and could be sold after rearing.

Table 10. Example of Cost Benefit Analyses of Pak Effendi's Chicken Rearing for 1 year (4 rotations).

Expenditure and Revenue	IDR
A. Expenditure (Cost)	
- DOC (4 x 750.000,-)	3.000.000
- Pellet (4 x 4 X 310.000,-)	4.960.000
- Medicines (4 X 50.000,-)	200.000
- Cage reduction	125.000
Total	8.285.000
B. Revenue	
- Selling (1, 75 x 85 x 4)= 595 Kg	
@ 27.000/kg = (595 x Rp 27.000)	16.065.000
Total	16.065.000
C. Benefit	7.780.000
FCR	1,14
R/C	1.94

Food/Cost ratio indicates the efficiency of chicken food provided. Based on the above analyses, the R/C of 1.94 shows that the chicken rearing business is a promising alternative for additional income generation at household level.

When MRPP started, villages surrounding the Merang Peat Swamp area were mostly poor and had very low incomes. Access to micro financial services did not exist as no banks were close. To provide access to microcredit through savings and loan cooperatives was a principal challenge for MRPP. However there is no doubt that without access to capital it would not be possible to support economic development at the village level.

To substantially increase household and village incomes, MRPP introduced local subsidies to establish saving and loan schemes that could be managed by the groups. This required an increase in the management capacity and competence of the groups. NGOs and MRPP did this on a continuous basis until the end of the project.

Table 11. List of CFRs' alternative income generating activities, supported by MRPP. Local subsidy disbursed for seed capital strengthening for CFR's savings and loan schemes 2009 - 2010.

No	Recipient CFR	Village/Sub-village	Activities	Seed Capital Local Subsidy IDR	Date of disbursement	Remarks
AWP I: 2009						
1	Merante Jaya	Bakung	Goat, Micro Credit	30.000.000	March 2010	Mixed group
2	Jelutung Indah	Bakung	Micro Credit	30.000.000	March 2010	Mixed group
3	Pulai Gading	Kepayang	Micro Credit	30.000.000	March 2010	Mixed group
4	Durian Payo	Kepayang	Micro Credit	30.000.000	March 2010	Mixed group
Total from AWP I: 2009				120.000.000		
AWP II: 2010						
5	Merawan	Buring	Rubber Micro Credit	28.700.000	Sept. 2010	Mixed group
6	Medang Kuning	Bina Desa	Gardening tools, Horticulture, Cattle	28.380.000	Sept. 2010	Mixed group
7	Urip Mulyo	KTGR, Ds II Mangsang	Cattle, Micro Credit, Chicken	16.497.000	Sept. 2010	Mixed group
8	Sumber Urip	Hijrah Mukti	Cattle, Micro Credit, Chicken	16.000.000	Sept. 2010	Mixed group
Sub Total				89.577.000		
9	Wanita mandiri	Hijrah Mukti, Mangsang	Chicken, Micro Credit	10.000.000	Nov. 2010	Women's group
10	Bunga Anggrek	Bakung, Muara Merang	Home Industry Micro Credit	26.000.000	Nov. 2010	Women's group
11	Jati Merah	Bina Desa	Rubber, goat Micro Credit	26.000.000	Nov. 2010	Women's group
12	Mawar Putih	Kepayang	Micro Credit	26.000.000	Nov. 2010	Women's group
13	Petaling	Kepayang	Rubber, Chicken Micro Credit	15.000.000	Nov. 2010	Mixed group
14	Tembesu	Bina Desa	Chicken, Goat	20.000.000	Nov. 2010	Mixed group
Sub Total				123.000.000		
Total from AWP II: 2010				212.577.000		

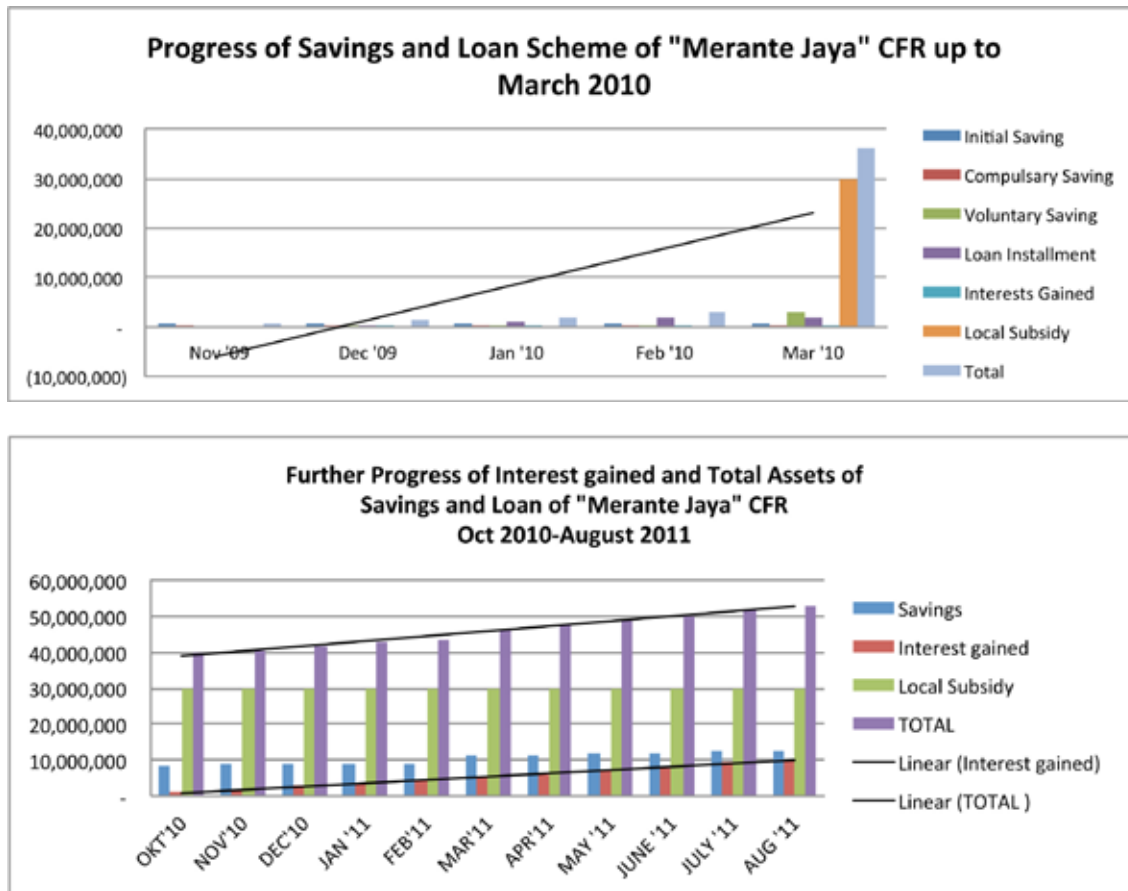




The disbursement process for local subsidies was:

1. Local Subsidy (LS) allocated in the project's Annual Work Plan (AWP)
2. The LS budget availability informed to the community forest rangers (CFR) group during monthly/regular facilitation by project and NGO
3. Facilitated by NGO, CFR provided and submitted the proposal on strengthening of seed capital of the group's saving and loans scheme (revolving fund) to the project for local subsidy support. The group proposal consists of:
 - a. CFR profile
 - b. Activities being planned
 - c. Financial/subsidy support needed (summarized from individual group member's proposal)
4. Agreement of Collaboration established and signed between CFR and MRPP represented by Community Development Specialist, witnessed by Village Head and NGO facilitator. The agreement particularly focused on promotion of active participation of group members for the protection and rehabilitation of the Merang Kepayang Peat Swamp Forest, and the provision of a Local Subsidy for revolving funds to support the income generating activities of the group members. The agreement stipulated obligations and rights of parties.
5. Brief contract for Local Subsidies signed between GIZ represented by Principal Advisor and the CFR, witnessed by NGO facilitator.
6. Disbursement of the Local Subsidy from project to the CFR as end beneficiary, facilitated and witnessed by NGO facilitator.
7. Facilitation, monitoring and reporting of implementation and progress of the use of the local subsidy as revolving fund, conducted by project and NGO facilitator on a regular basis. NGO facilitator contracted by GIZ.
8. The local subsidy money plus interest gained as revolving fund was disbursed to the CFR. It is intended to strengthen the seed capital of the micro credit/savings and loan scheme of the group. The local subsidy money will not have to be paid back to the project/GIZ. With regular facilitation and coaching by the NGO, it is expected that the revolving fund grows significantly and more members can obtain credits. Strengthening the village economy should help to reduce degradation and deforestation in the area.

A good example for such a revolving fund is from the “Merante Jaya” CFR of Muara Merang village. Monitoring yielded these results:



The proper set up and the management of such revolving funds / saving and loan schemes was only possible to work in collaboration with a local NGO, Yayasan Kemasda. The NGO - supported by MRPP - provided regular and continuous facilitation for groups and their institutional strengthening on a regular basis. If possible, future parties managing the Merang Peat Swamp Forest should continue such facilitation.

To instil a sense of care for the environment, active participation of the CFRs members in many environmental protection activities was encouraged. CFRs were also contracted for a number of protection activities such as illegal logging monitoring, fire patrols and initial fire suppression during dry seasons. Further to this all aspects of rehabilitation - starting from nursery development to planting and maintenance - was carried out by our village partners. All studies and surveys conducted involved CFR.

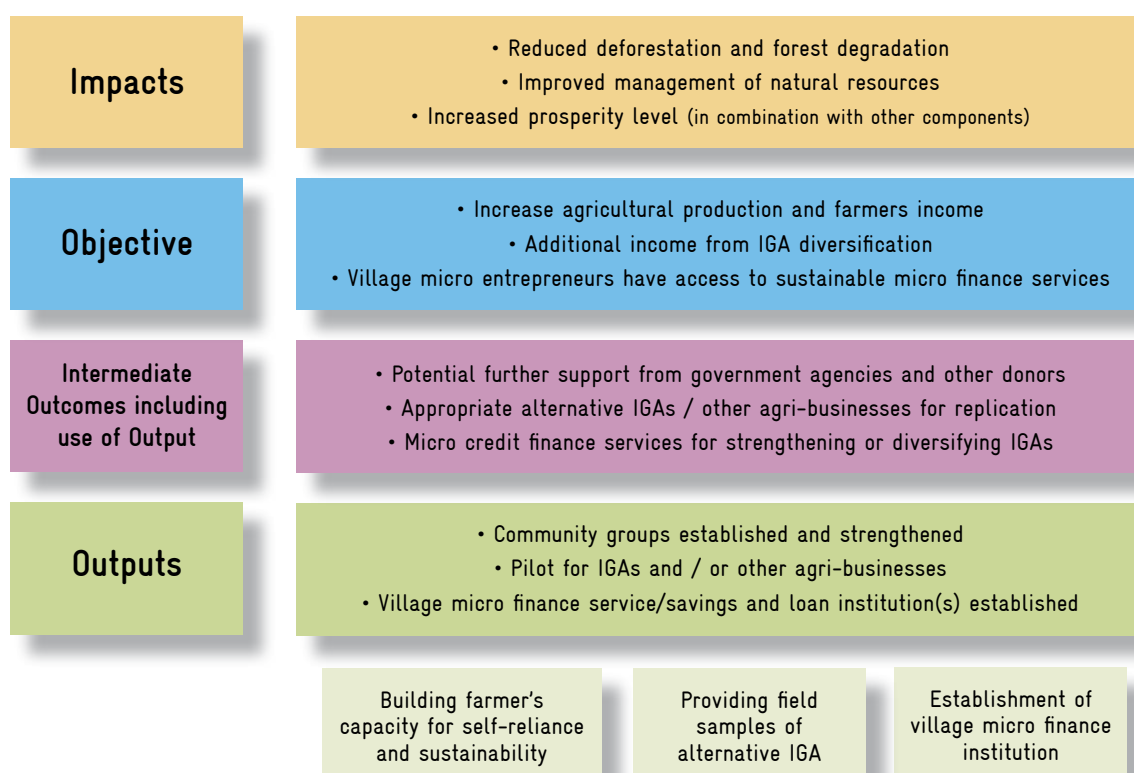
A brief overview of community development results and achievements is listed below:

- 14 community groups (community forest rangers - CFR) established and strengthened.
- Pilots for alternative income generating activities introduced and supported.

- Community group's micro finance service/savings and loan scheme as embryo of future village micro-finance institution established and supported.
- Farmer groups' institution as well as its members' capacity enhanced through regular facilitation, training and workshops for self-reliance and sustainability.
- Pre-condition of groups' capacity and networking for potential further support from government and/other donors established.
- Appropriate management and technology of alternative IGAs delivered for further replication.
- Groups' sustainable micro finance services are available for further diversification of IGAs or to increase agricultural production and farmers income in general.
- For sustainability and further facilitation of the CFR groups, all of the 14 CFR groups have been officially registered and handed over to the local agricultural extension office (the Balai Penyuluhan Pertanian, Perikanan dan Kehutanan - BP3K) of Bayung Lencir sub district. The BP3K is the relevant and a competent government agency with responsibilities for further facilitation of the farmer groups in the area.

To sum up, the result chain below displays the links and interactions necessary to achieve the desired impacts. It reflects the approaches used and the interventions applied by MRPP for the community development component.

Results Chain of the Merang REDD Pilot Project Community Development component.



2.6 Component 5: Information, Communication and Knowledge Management

The major aims of MRPP II and component 5 were:

- Lessons learnt and experiences of the MRPP are available to relevant national and international stakeholders
- Networking between other donor initiatives to reduce deforestation and degradation of peat

ICVKM activities could only start fully in January 2010, with funds from MRPP II and new recruited staff. Before this date other specialists and staff had to fulfil this function in addition to their own assigned tasks.

The year 2010 marked significant achievements for MRPP II. First, the ICVKM concept was developed and activities to put it into practice were designed with input from the stakeholders at a planning workshop for the AWP II. The implementation of these activities yielded the following results:

- Information, Communication, Visibility and Knowledge Management activities have made the GIZ MRPP a worldwide brand. It is described as one of the leading projects among REDD + forest carbon projects.
- Since the Technical Agreement between Ministry of Forestry and GIZ MRPP was signed on 26 July 2010, the project legally became a Indonesia REDD Demonstration Activity.
- Given the DA status, MRPP has been an active member at numerous meetings, gatherings, national exhibitions and conferences addressing national and international experts. This helped rise the awareness of the project and increased interaction with local, national and international stakeholders.
- Locally, the project supported the establishment and consolidation of a number of forums like the Coordination and Technical Team of Climate Change of South Sumatra, the Multi-stakeholder Forum CSR of Musi Banyuasin and the BPDAS Musi Forum.
- MRPP had also entered into many strategic collaborations with other locally active national and international organizations such as Zoological Society of London (active in Jambi) and PT. REKI (active in Jambi and South Sumatra) by signing a Memorandum of Understanding for a closer working relationship and a better exchange of data, information and experiences.
- Nationally, MRPP is well known for its advanced implementation of field activities and carbon measurement methods, (that have been adopted by the Ministry of Forestry as a model for carbon measurement in Indonesia).
- MRPP is actively engaged with all major Forestry and REDD institutions such as Pustanling, DKN, Satgas REDD, Bappenas and UN-REDD Indonesia.

- Internationally, through its website and exchanges at international and national conferences and workshops, MRPP has made contacts with many researchers, university students, media representatives and other projects from all over the world.
- Media coverage is extensive, MRPP has not only been featured at national and provincial level but also on DWTV German, Danish TV and Al-Jazeera TV. Besides that, many national and international printing media have featured MRPP.



- For information and documentation, as well as for the participation at many events all types of printed and digital media have been produced and disseminated, among them: reports, leaflets, books, discs, campaign accessories, stickers, pins, hats, bags, notice boards at strategic locations, etc.
- An internal specific library contains a vast amount of literature on relevant subjects and many study reports and documents collected from sources in Indonesia and outside. More basic village libraries were started in two villages with a focus on agriculture and forestry.
- Networking was enhanced and coordination between stakeholders strengthened. Decision makers in South Sumatra, Indonesia and the region were facilitated to establish contacts and to participate in important climate change issues.
- The intensive collaboration with all the stakeholders was instrumental for increasing the awareness and the understanding of climate change, REDD and MRPP.
- The MRPP Project Information Note (PIN) was developed. It is a prerequisite and very useful document for past and future investors and donor contacts.

In 2011, MRPP achieved and consolidated more significant achievements on its ICVKM activities through leveraging its 2010 success.

- To further deepen collaboration with all stakeholders additional ICVKM products were produced and introduced to audiences. Awareness on climate change and REDD was expanded through workshops and seminars.
- Knowledge transfer on gained experiences from the field continued with many stakeholders. This went hand in hand with capacity development on the local and national levels.
- All MRPP components worked in a coordinated way with most of the national and local institutions and civil society to share and enhance competence and capacity. Some examples include the carbon measurement component that worked closely with Pustanling and Forda of MoF in drafting the Indonesian Standard of Carbon Measurement Methods. The forest management unit and CD unit worked closely with local NGOs, Wahana Bumi Hijau, KEMASDA and Satu Hijau in capacity building for communities and village forest development.
- MRPP has developed capacity and competence of all stakeholders at village, district, province and national level since the start of the project in late 2008, until October 2011. Close to 3000 participants attended training, workshops, seminars, focus groups and meetings. Additionally, thousands of people had the chance to get information at exhibitions and conferences. MRPP produced a separate booklet on capacity development measures implemented during the project phase.
- By publishing regular educational newspaper features on climate change and REDD+ over a period of six months in the largest provincial and MUBA district newspaper, it is estimated that at least 20,000 readers were reached with each article.
- The MRPP Project Information Note (PIN) was frequently updated and requested by many more organizations, brokers and investors for getting more information and knowledge on the MRPP REDD Demonstration Activity.
- The UNEP Risoe Centre on Energy, Climate and Sustainable Development (URC) that supports the United Nations Environment Programme (UNEP) was one international organization interested in MRPP lessons learnt. UNEP and the URC, in collaboration with the UN-REDD program, are jointly carrying out research on “Translating lessons learnt from financing of small and middle sized forest projects into national REDD+ strategy development and implementation”. From several projects assessed, MRPP was chosen for its achievements.
- As in 2010 MRPP was actively engaged and participated in various national and international exhibitions, conferences, workshop and seminars as a participant, an exhibitor and as a resource organization. These ICVKM activities substantially upgraded the MRPP networks

and linkages and enhanced its image and reputation on a national and international basis.

- In this International Year of Forestry, MRPP in March 2011 celebrated the event together with schools, NGOs, government institutions and the private sector. The venue was one of the major shopping malls in Palembang with thousands having the opportunity to get information, to discuss with partners and to enjoy the various displays and performances. Among the prizes and gifts were seedlings of local tree species.



- MRPP followed a strategy to contact and to stay in dialogue with potential investors and brokers for future carbon trading and, from the start, to involve our local partners from the district and provincial government. The project facilitated representatives from government institutions to attend specific international and national conferences and to meet brokers and investors. Brokers and Investors were also asked to present their point of view and their plans at a number of events in Palembang to a larger audience. A few highlights are listed below:
 - o Facilitate provincial Government meeting with Eco Securities - (Country Director) and Global Eco Rescue - (CEO), January 21, 2010.
 - o Facilitated provincial Government meeting with Gasprom International, Infinite Earth, for discussing a sub-national approach.
 - o MRPP approached Indonesian institutions, donors and investors to continue DA REDD+ Readiness after MRPP is finalized.
 - o GIZ Forclime and MRPP signed MoU with PT. Global Alam Lestari and PT. Agrinergy Indonesia.
 - o Agrinergy and PT Global were facilitated to meet district officials and to present their future plans for carbon trading.

Given the importance of MRPP for the future of the last natural peat swamp forest in South Sumatera, and the REDD development process in Indonesia, it is seen as of the utmost importance by all involved parties to work together in searching for alternative funds to further develop and continue with climate change and REDD activities in Merang.

At the time of writing there are a number of parties that might be - in one way or another - inclined to support future activities as soon as a legal basis for such support is available and transparent. It is most likely that in 2012 another German financed project could start in South Sumatra to deepen the understanding of the unique biodiversity in the Merang Peat Swamp Forest with a second component to be based in Kalimantan.

2.7 Crosscutting Issues, Capacity Development, Gender, and Civil Society

Capacity Development

To increase the awareness, capacity and competence of partners and stakeholders was a major part of MRPP and its components. The list of these measures (in the annex) provides ample evidence on how the human resources were enhanced. The ways and means to do this varied from discussions in workshops, dialogue in seminars, participation and active involvement and went from theory to practice. Hence a multitude of approaches was a significant contributor to assist our partners and stakeholders to gain skills and knowledge. As climate change and REDD are relatively new topics, MRPP could only lay the foundation and start with building the future human resources required for the tasks ahead. This dynamic needs to be continued by government and donors and maintained for the future.

Civil society engagement / NGO participation

MRPP engaged civil society groups from the start of the project and continued to build on the cooperation and good results achieved from by the SSFFMP. Hence NGO participation and cooperation in project activities together with related agencies and stakeholders at district and province level (mainly in the areas of capacity building, network extension, guiding and coaching community groups) has reached a significant level. The experience gained by MRPP and NGOs has not only generated benefits for them, but has also provided other donors and agencies with reliable partners for implementation of other projects. Some local NGO proposals that have been submitted to related agencies at district and province level were positively reviewed, and received financial support from local government at district and province level in South Sumatra. Others were even more successful and have obtained financial support from international donor agencies, for example small project facility funds for environmental

and natural resource management and for community development and empowerment from UNDP and other donor agencies.

Among the major activities that NGOs are involved with is awareness creation, community development, fire management, village forest development and environmental monitoring.



Gender as cross cutting issue

With a wealth of experience from gender integration, former SSFFMP staff and partners of MRPP continued to pay attention to gender issues and roles and, as much as possible, to guarantee equal access and support to all our stakeholders.

The basis for understanding of gender issues and roles was developed by SSFFMP. A number of partners have an understanding of gender issues and followed MRPPs' approach to continue with specific support for disadvantaged women in a number of project locations. Some women groups were formed for handling revolving funds to provide micro credits for their members.

One of the biggest achievements is most likely the significantly increased awareness on gender issues at all stakeholder institutions, with government institutions and the public at large.



2.8 Summary and Conclusions

MRPP has done much ground-breaking work for climate change adaptation and mitigation, and for the REDD process in Indonesia. Among key success factors have been the participative multi-stakeholder approach, transparent implementation, and a constant learning-by-doing process. Of advantage was a good head start in 2008 with an experienced team and a long-standing relationship with government institutions, communities, the civil society and the private sector.

From a management point of view it was essential to break down the big issues into manageable components to achieve results and impact. Hence the MRPP components of climate change, FMU development and biodiversity, community development, nursery and rehabilitation, carbon accounting and monitoring and last but not least, a broad programme of information, communication, visibility and knowledge management. The detailed results of these components are in the main body of the report.

Of utmost importance was to not only develop basic theories, but to apply them in the field with all the stakeholders, and to learn from the experiences. Flexibility and the commitment to act together to implement activities were based on constant dialogue and an open door policy.

A type of a 4C concept was promoted (Caring government, Caring communities, Caring civil society and Caring private sector) throughout the project, focussed towards sustainable natural resource management and protection of the environment, in particular the biodiversity of the Merang Peat Swamp Forest.

Even more could have been achieved if international and national dialogue and actions had progressed with a clear vision, and with a mission to protect the environment for the future. Even now there is still much disagreement on the reasons for climate change and how to share the burden. In the meantime the weather patterns are changing and natural disasters are increasing. We all hope that the COP 17 meeting in Durban, South Africa will finally provide a framework for REDD to be included in Carbon Trading schemes around the world.

For MRPP stakeholders and the general public, awareness of climate change and REDD issues increased substantially and the many events and training opportunities supported and provided by MRPP significantly enhanced capacity and competence. Thousands of participants were reached through the high quality information material and documents that were produced to disseminate important data, information and messages.

Further to this, Climate Change and REDD science was brought forward through research and its proper documentation. Books and reports on biodiversity and carbon accounting and monitoring were published to the highest standard possible. In many fields MRPP was the first project to show excellent results.

Climate Change and REDD - practically unheard of until the COP 13 meeting in Bali - are now household names with many stakeholders and decision makers in South Sumatra and in the MUBA district. The challenge for the future is to continue, to expand, and to scale-up the results and achievements of MRPP.



Acknowledgements

Partners, supporting staff and the project team thank all relevant stakeholders for their help and support with MRPP. We also thank Indonesia and the German parties for their trust in us with such a big and complex challenge as to develop and implement activities to mitigate climate change, and to work towards sustainable natural resource management and the protection of the unique Merang Peat Swamp biodiversity.

May Indonesia and its population look forward to a bright future and enjoy the beauty of its natural habitat.

Section 3

Additional Information and Annexes

3.1 Available Products and Documents

List of Major Products Published by MRPP

No.	TITLE	Type of product	Date of publication	Author
1	Merang REDD Pilot Project (MRPP) Saving the last peatland forest of Southern Sumatra: Profil Proyek	Booklet	2010	MRPP - Karl-Heinz Steinmann <i>et.al</i>
2	Documentary TV film on MRPP: Indonesia Environmental Protection in Sumatera	Film/DVD	2010	MRPP - DWTV Germany
3	Merang REDD Pilot Project (MRPP) - Rehabilitation, Conservation, and Protection of the Merang Peat Swamp Forest	Booklet	2011	MRPP - M Rayan
4	Merang REDD Pilot Project (MRPP) - Persemaian dan Rehabilitasi Hutan, Rehabilitasi Hutan Rawa Gambut Berbasis Masyarakat pada Areal MRPP	Booklet	2011	MRPP - Baba S Barkah and Asep Ramdhani
5	Forest Monitoring & Carbon Accounting Merang REDD Pilot Project (MRPP) - Measuring and Monitoring Carbon Stock in the Merang Peat Swamp Forest	Booklet	2011	MRPP - Solichin <i>et.al</i>
6	Merang REDD Pilot Project (MRPP) - Pemberdayaan Masyarakat: Partisipasi Masyarakat pada Kegiatan Rehabilitasi, Konservasi dan Perlindungan Hutan Rawa Gambut Merang (Indonesian version)	Booklet	2011	MRPP - Djoko Setijono
7	Merang REDD Pilot Project (MRPP) Community Development, Participation in the Rehabilitation, Conservation and Protection of the Merang Peat Swamp Forest (English version)	Booklet	2011	MRPP - Djoko Setijono
8	Burung-Burung di Hutan Rawa Gambut Merang-Kepayang dan sekitarnya	Book	2011	MRPP - M Iqbal <i>et. al</i>
9	Ikan-Ikan di Hutan Rawa Gambut Merang-Kepayang dan Sekitarnya	Book	2011	MRPP - M Iqbal <i>et. al</i>
10	Teknik Pendugaan Cadangan Karbon Hutan	Book	2011	MRPP - Solichin <i>et.al</i>
11	Pohon-Pohon di Hutan Rawa Gambut Merang Kepayang	Book	2011	MRPP - Solichin <i>et.al</i>
12	Forest Carbon Accounting Software	CD	2011	MRPP - Solichin <i>et.al</i>

List of MRPP Result Reports

No.	Report #	Title	Author	Keywords
1	01.STE.FINAL	Laporan dan Modul : Lokakarya Penyadaran Peran Gender bagi Pengambil Keputusan Tingkat Desa	Yayasan Kemasda	Gender
2	02.STE.FINAL	Hutan Rawa Gambut Merang Kepayang	Aidil Fitri	Survey, LUP
3	03.STE.FINAL	Survey Sosial Ekonomi Masyarakat Desa Muara Merang dan Kepayang Kab. Musi Banyuasin, Prov. Sumatera Selatan	Konsorsium PSDAB Sumsel	Survey NGO
4	04.STE.FINAL	Laporan dan Modul : Pelatihan Manajemen Organisasi dan Dinamika Kelompok bagi MPH Hutan Tembesu	Yayasan Kemasda	MPH, Training Dinamika
5	05.STE.FINAL	Survey Aktifitas Illegal pada Areal MRPP di Kawasan Hutan Produksi Lalan, Kab. MUBA	Tim Jurusan Kehutanan, UMP	Illegal Logging
6	09.STE.FINAL	Laporan Kegiatan Pendampingan Kelompok Secara Reguler oleh NGO bagi Kelompok MPH di Dusun Bina Desa (Desa Muara Merang), Desa Kepayang Kec. Bayung Lencir Muba.	Yayasan Kemasda	MPH, Pendampingan Reguler (June 2009)
7	10.STE.FINAL	Laporan Pertemuan dan Pelatihan; Survey Lapangan di Merang Serta Training dan Workshop di Bappeda Kab. MUBA	Orbita-LAPAN	GIS
8	12.TA.FINAL	Laporan Kegiatan: Survey Vegetasi dan Kerusakan Hutan Rawa Gambut Areal MRPP	Baba S Barkah	Nursery
9	13.STE.FINAL	Laporan Kegiatan : Pelatihan Dasar untuk Kelompok Masyarakat Peduli Hutan Dusun Bina Desa (Desa Merang) dan Kepayang	Yayasan Satu Hijau	MPH, Pelatihan Dasar
10	14.STE.FINAL	Laporan Pendampingan Reguler oleh NGO di kelompok Masyarakat Peduli Hutan (MPH) Dusun Bina Desa Muara Merang dan Desa Kepayang Kecamatan Bayung Lencir Kab. MUBA	Yayasan Kemasda	MPH, Pendampingan Reguler (Agustus 2009)
11	15.STE.FINAL	Laporan : Pelatihan Manajemen Organisasi dan Dinamika Kelompok bagi MPH Hutan Lestari, Desa Kepayang Kec.Bayung Lencir Muba Tgl 28-30 April 2009	Yayasan Kemasda	MPH, Pelatihan Manajemen
12	17.STE.FINAL	Laporan : Pelatihan Regu Pemadaman Kebakaran Hutan dan Lahan bagi Kelompok Masyarakat Peduli Hutan Bina Desa Ds.Muara Merang dan Desa Kepayang	Yayasan Satu Hijau	
13	18.TA.FINAL	Panduan : Pelaksanaan Rehabilitasi Hutan Rawa Gambut Berbasis Masyarakat di Areal MRPP Kab. MUBA	Baba S Barkah	SOP No.01 PSF Rehabilitation rev.0
14	19.TA.FINAL	Panduan : Pembangunan dan Pengelolaan Persemaian Desa Program Rehabilitasi Hutan Rawa Gambut Berbasis Masyarakat di Areal MRPP Kab. Muba	Baba S Barkah	SOP No.02 PSF Rehabilitation rev.0
15	20.TA.FINAL	Panduan : Penyekatan Parit/Kanal dan Pengelolaannya Bersama Masyarakat di Areal Hutan Rawa Gambut MRPP Kab. Muba	Baba S Barkah & M.Sidiq	SOP No.03 PSF Rehabilitation rev.0
16	21.STE.FINAL	Laporan Kegiatan Pendampingan Kelompok Secara Reguler oleh NGO bagi Kelompok MPH di Dusun Bina Desa (Desa Muara Merang) dan Desa Kepayang Kec.Bayung Lencir Kab.Muba	Yayasan Kemasda	MPH, Pendampingan Reguler (September 2009)

List of MRPP Result Reports (continued)

No.	Report #	Title	Author	Keywords
17	22.STE.FINAL	Laporan Kegiatan Assesment bagi Kelompok-Kelompok yang Melaksanakan Usaha Simpan Pinjam (Mikro Kredit) di Desa Muara Medak, Desa Mangsang dan Desa Bayat Ilir II Kec.Bayung Lencir Kab. MubaHutan Rawa Gambut Merang Kepayang	Yayasan Kemasda	Assesment Mikro Kredit
18	24.STE.FINAL	Laporan Pendampingan Reguler oleh NGO di kelompok Masyarakat Peduli Hutan (MPH) Dusun Bina Desa Muara Merang dan Desa Kepayang Kecamatan Bayung Lencir Kab. MUBA	Yayasan Kemasda	MPH, Pendampingan Reguler (Oct. 2009) Illegal Logging
19	25.TA.FINAL	Identifikasi Kanal di Bagian Hulu Sungai Kepayang, Tembesu Daro dan Buring di Wilayah KPHP Lalan	M. Sidiq	Laporan Survey GIS
20	26.TA.FINAL	Prosiding Workshop: Konsultasi Publik Pembentukan Kesatuan Pengelolaan Hutan Produksi (KPHP) Lalan Kab. Muba	M. Sidiq	
21	28.TA.FINAL	Prosiding Workshop: Penanganan Aktifitas Ilegal di Kawasan Hutan Produksi Merang dan Kepayang KPHP Lalan Kab. MUBA	M. Sidiq	Prosiding, Ilegal Activity
22	30.STE.FINAL	Lap. Keg : Pelatihan Pengembangan Usaha Budidaya Ternak Ayam Potong dan Ayam Buras bagi Anggota KMPH Desa Muara Merang dan Desa Kepayang	Y.Suci Pramudyati/BPTP	Poultry
23	31.STE.FINAL	Petunjuk Teknis : Beternak Ayam Ras Petelur	Y.Suci Pramudyati & Agung Prabowo/BPTP	Poultry
24	32.STE.FINAL	Petunjuk Teknis : Beternak Ayam Buras	Y.Suci Pramudyati (BPTP)	Poultry
25	33.STE.FINAL	Laporan Lokakarya Desa: Tantangan dan Peluang Penggunaan Lahan Berkelanjutan dalam Pengembangan Ekonomi Lokal Desa Muara Merang dan Kepayang	Eris Achyar	LUP
26	35.STE.FINAL	Petunjuk Teknis : Beternak Ayam Broiler	Y. Suci Pramudyati, Jauhari Effendy	Poultry
27	36.STE.FINAL	Pelatihan Manajemen Organisasi & Dinamika Kelompok bagi KMPH Jelutung dan KMPH Merante Jaya	Silahudin, Nurnajati, Wardah, Herwan Johan	Community Development
28	37.TA.FINAL	Laporan Pelaksanaan Pelatihan Pembangunan dan Pengelolaan Persemaian Desa	Baba S Barkah	Nursery
29	38.TA.FINAL	Pelatihan Penyekatan Parit/Kanal di Hutan Rawa Gambut Areal MRPP	Baba S Barkah	Nursery
30	39.STE.FINAL	Dukungan Teknis Pengembangan Alternative Peningkatan Pendapatan Kelompok Masyarakat Peduli Hutan (KMPH) pada Desa-Desa di Kelompok Hutan Rawa Gambut Merang Kepayang dan sekitarnya	Rudy Soehendi, Budi Raharjo, Suci Pramudyati	Community Development
31	40.STE.FINAL	Modul Pelatihan Manajemen Ekonomi Rumah Tangga	Nurnajati	Community Development
32	41.STE.FINAL	Laporan Akhir: Pelatihan Manajemen Organisasi dan Dinamika Kelompok bagi KMPH Tembesu dan KMPH Medang Kuning di Dusun Bakung, Desa Muara Merang	Kemasda	Community Development

List of MRPP Result Reports (continued)

No.	Report #	Title	Author	Keywords
33	42.STE.FINAL	Laporan Pelatihan Manajemen Ekonomi Rumah Tangga (ERT) bagi KMPH Durian Payo dan KMPH Pulau Gading Desa Kepayang	Kemasda	Community Development
34	43.STE.FINAL	Laporan Pelatihan Manajemen Ekonomi Rumah Tangga (ERT) bagi KMPH Jelutung Indah dan KMPH Merante Jaya Desa Muara Merang	Yayasan Kemasda	Community Development
35	44.STE.FINAL	Laporan Kegiatan: Pelatihan Penyegaran PPNS Kehutanan dalam Upaya Penegakan Hukum Kasus Illegal Logging	Satu Hijau	
36	45.STE.FINAL	Laporan Kegiatan: Pelatihan Penyegaran Polisi Hutan dalam Upaya Penegakan Hukum Kasus Illegal Logging	Satu Hijau	
37	46.STE.FINAL	Laporan Pelatihan Manajemen Organisasi dan Dinamika Kelompok Bagi KMPH Merawan, Ds Buring Desa Muara Merang	Yayasan Kemasda	Community Development
38	47.STE.FINAL	Laporan Pendampingan Penyaluran Dana Local Subsidy Pengembangan Usaha Simpan Pinjam/ Lemabaga Keuangan Mikro pada 4 Kelompok Masyarakat Peduli Hutan Jan-Mar 2010	Yayasan Kemasda	Community Developmen
39	48.TA.FINAL	Lap. Studi Banding KPH, Pemantapan Struktur Organisasi dan Kewenangan UPTD KPHP Model Lalan Kab. Muba	M. Sidiq	
40	49.TA.FINAL	Lap Status Program Rehabilitasi Hutan Rawa Gambut Berbasis Masyarakat MRPP di Wilayah KPHP Lalan Mangsang Mendis Kab Muba	Baba S Barkah	Rehabilitation
41	50.STE.FINAL	Petunjuk Teknis: Budidaya Jamur Tiram yang Ramah Lingkungan (Materi Pelatihan Agribisnis bagi KMPH)	Susilawati dan Budi Raharjo	Community Development
42	51.STE.FINAL	Petunjuk Teknis: Budidaya Ternak Kambing (Materi Pelatihan Agribisnis bagi KMPH)	Agung Prabowo	Community Development
43	52.STE.FINAL	Petunjuk Teknis : Pembibitan Tanaman Karet (Materi Pelatihan Agribisnis bagi KMPH)	Ahmad Subendi dan Budi Raharjo	Community Development
44	53.STE.FINAL	Petunjuk Teknis: Produk Olahan Kedelai (Materi Pelatihan Agribisnis bagi KMPH)	Erliana Ginting	Community Development
45	54.STE.FINAL	Petunjuk Teknis: Budidaya Cabe Merah Ramah Lingkungan	Susilawati dan Budi Raharjo	Community Development
46	55.STE.FINAL	Petunjuk Teknis: Pengenalan Varietas Unggul dan Teknik Budidaya Ibu Kayu	Titik Sundari	Community Development
47	56.STE.FINAL	Laporan Pelaksanaan Pelatihan Pengembangan Usaha Agribisnis bagi Anggota KMPH MRP	Budi Raharjo	Community Development
48	57.STE.FINAL	Dukungan Teknis Pengembangan Alternative Peningkatan Pendapatan Kelompok Masyarakat Peduli Hutan (KMPH) pada Desa-Desa di Kelompok Hutan Rawa Gambut Merang Kepayang dan sekitarnya, Tahun 2010	Rudy Soehendi, Budi Raharjo	Community Development
49	58.TA.FINAL	Laporan Implementasi Penanaman Tahap I : Rahabilitasi Lahan Bersama Masyarakat di Areal MRPP	Asep Ramdani	Nursery
50	59.STE.FINAL	Laporan Pendampingan Reguler Masyarakat Peduli Hutan, Maret 2011	Yayasan Kemasda	Community Development

List of MRPP Result Reports (continued)

No.	Report #	Title	Author	Keywords
51	60.STE.FINAL	Laporan Pelatihan Pembukuan Keuangan bagi KMPH di dusun Bakung, Muara Merang	Yayasan Kemasda	Community Development
52	61.STE.FINAL	Ringkasan Laporan Pencapaian Hasil Kegiatan, Pembangunan KPHP Lalan, Promisi REDD dan Perdagangan Karbon	M. Sidiq	FMU
53	62.STE.FINAL	Evaluasi Pertumbuhan Beberapa Jenis Tanaman Pada Berbagai Tapak di Hutan Rawa Gambut Merang-Kapayang KPHP Lalan	Asep Ramdani	Rehabilitation
54	63.STE.FINAL	Pelatihan Budidaya Karet Okulasi dari Klon Terpilih untuk KMPH Desa Muara Merang dan Desa Kepayang, MUBA	BPTP	Community Development
55	64.STE.FINAL	Pendampingan Reguler Kelompok Masyarakat Peduli Hutan Desa Muara Merang, MUBA	Yayasan Kemasda	Community Development
56	65.STE.FINAL	Laporan Pelaksanaan Pelatihan Budidaya dan Kesehatan Ternak Bagi Anggota KMPH MRPP	BPTP	Community Development

3.2 List of Community Development conducted by MRPP

No	Name of Activity	Number of Participants		Total	Type of Activity		Date of Implementation
		F	M		Basic	Specific	
1	Conducted by CD Component						
1.1	Workshop on Gender Role Awareness for Village Decision Makers at Merang Village	21	9	30		x	2 February 2009
1.2	Workshop on Gender Role Awareness for Village Decision Makers at Kepayang Village	7	23	30		x	4 February 2009
1.3	Training on Management and Group Dynamic for CFR "Tembesu" of Bina Desa Sub Village	0	13	13	x		19-21 March 2009
1.4	Training on Management and Group Dynamic for CFR "Hutan Lestari" of Kepayang Village	5	26	31	x		28-30 April 2009
1.5	Training on Technique and Management of Poultry Business as Income Generating Activities for CFRs at Bina Desa Sub-Village	0	15	15	x		19 August 2009
1.6	Training on Technique and Management of Poultry Business as Income Generating Activities for CFRs at Kepayang Village	1	14	15	x		20-21 August 2009
1.7	Training on Management and Group Dynamic for CFR Jelutung and Meranti Jaya of Merang Village	11	21	32	x		22-24 Dec 2009
1.8	Refresher Training for Forestry Investigator (PPNS) Personnel from District and Province Forestry Service at Palembang	0	24	24		x	9-10 March 2010
1.9	Refresher Training for Forestry Police (Pol-Hut) Personnel from District and Province Forestry Service at Palembang	0	24	24		x	10-11 March 2010
1.10	Training on Management and Group Dynamic for CFR "Tembesu" and "Medang Kuning" of Bina Desa SubVillage	0	32	32	x		12-14 March 2010
1.11	Training on Households Economy Management for 2 CFRs at Bakung, Merang Village	14	12	26	x		8-10 April 2010
1.12	Training on Households Economy Management for 2 CFRs at Kepayang Village	8	22	30	x		5-7 May 2010
1.13	Training on Management and Group Dynamic for CFR Merawan of Buring SubVillage	2	19	21	x		27-29 May 2010
1.14	Training on Agri Bisnis for Community Forest Rangers	5	22	27	x		19-20 Aug & 24-25 Sept 2010
1.15	Training on Bookkeeping for CFRs' Savings and Loan Managers	10	20	30		x	4-5 March 2011
1.16	Training on Veterinary for CFRs at MRPP Field Office	2	18	20		x	12 April 2011
1.17	Training on Hybrid Rubber Clone Orchard Establishment for CFRs at MRPP Field Office and Sri Mulyo Village	4	33	37		x	3-4 May 2011
1.18	Workshop on CFRs Facilitation Handing Over from MRPP to District Government Extension Agency	18	42	60		x	30 June 2011
1.19	Workshop on Gender Roles and Functions for Women Groups of Muara Merang and Kepayang Villages	28	-	28		x	16 Sept 2011
1.20	Socialisation Meeting on Fire Prevention and Mitigation for Muara Merang Village Community	25	15	40		x	17 Sept 2011
Sub Total		161	404	565			

No	Name of Activity	Number of Participants		Total	Type of Activity		Date of Implementation
		F	M		Basic	Specific	
2	Conducted by CC and FMU Component						
2.1	MRPP AWP I Planning Workshop, Sekayu	19	36	55			5-6 Nov 2008
2.2	Workshop on Village Mapping and Baseline, MRPP and Eris Akhyar, Palembang	3	17	20			8 January 2009
2.3	One Day Workshop on Landuse and Social Economic Survey, MRPP and Eris Akhyar, Palembang	5	17	22			19 February 2009
2.4	Workshop on Public Consultation of KPHP Lalan, MRPP and Dishut Muba, Sekayu	10	50	60		x	18 May 2009
2.5	Comparative Study on Peat Swamp Forest Management and Rehabilitation, MRPP, Central and South Kalimantan	1	11	12		x	24-30 July 2009
2.6	Workshop on Tackling Illegal Logging Activity, MRPP, Sekayu	25	35	60			3-5 Nov 2009
2.7	Workshop on Training Need Assessment of KPH, GTZ and Pusdiklat Bogor, Sekayu	3	30	33		x	16-17 Dec 2009
2.8	MRPP AWP II Workshop at Horison Hotel	19	36	55			11 February 2010
2.9	Half-Day Seminar on Forest Carbon Survey Methodology (MRV Workshop), GTZ and BPK MoF, Jakarta	11	70	81			25 March 2010
2.10	Comparative Study on KPH, MRPP, East Java and Bali	2	6	8		x	17-22 May 2010
2.11	Coordination Meeting for Master Plan KPHP Drafting	0	7	7		x	8 July 2011
2.12	Facilitation on Socialization RKHD & RTHD Documents of Hutan Desa Merang	5	16	21		x	16-18 August 2011
2.13	Facilitation on Survey of Muara Medak Village Forest Candidate	1	15	16		x	12-14 Sept 2011
2.14	Workshop on REL, MRPP & Pokja REDD South Sumatra			30		x	10 Oct 2011
	Sub Total	104	346	480			
3	Conducted by Nursery Specialist						
3.1	Pelatihan ke-1 Pembangunan Persemaian Desa KMPH Petaling dan Tembesu		28	28		x	2-5 Oktober 2009
3.2	Pelatihan ke-2 Pembangunan dan Pengelolaan Persemaian Desa KMPH Petaling dan Tembesu		32	32		x	22-25 Oktober 2009
3.3	Pelatihan ke-3 Pembangunan dan Pengelolaan Persemaian Desa KMPH Petaling dan Tembesu		21	21		x	17-19 Nop dan 22-23 Des 2009
3.4	Pelatihan dan Uji Coba Penanaman Jenis Tanaman Hutan Rawa Gambut di Areal MRPP bersama KMPH	9	42	51		x	29-30 Des 2009
3.5	Pelatihan Pemantauan dan Pemeliharaan Tanaman		25	25		x	22-25 Februari 2010
3.6	Pelatihan Pembangunan Blocking Kanal KMPH Tembesu dan Petaling		40	40		x	17-18 Maret 2010
3.7	Pelatihan Pembangunan Blocking Kanal KMPH Petaling		9	9		x	12-16 April 2010
3.8	Pelatihan Penanaman Jenis Tanaman Hutan Rawa Gambut di Areal MRPP bersama KMPH Tembesu dan Kelompok Medang Kuning		33	33		x	5-8 Mei 2010
3.9	Training Plantation for KMPH Sumber Urip - Mangsang		16	16		x	13-14 Nov 2010
3.10	Training Plantation for KMPH Petaling, Tembesu & Medang Kuning		41	41		x	19-20 Nov 2010
3.11	Training of Technique Cultivation of Jelutung Species, Management Nursery, Pre Planting and Plant Maintenance with CFR (Community Forest Ranger) for 7 KMPH	6	26	32		x	16-17 Feb 2011
3.12	Training on Clon Rubber Orchard Establishment, Dusun Bakung and Srimulyo Village	4	28	32		x	3-4 May 2011
	Sub Total	19	341	360			
4	Conducted by ICVKM Specialist						
4.1	Half-Day Seminar on BioChar, MRPP, Palembang	8	21	29		x	19 Feb 2010
4.2	One Day Seminar on REDD and VCM, MRPP and Provincial Governor, Palembang	17	109	126		x	29 Apr 2010
4.3	Biodiversity Day, Palembang	135	351	486		x	22 Mei 2010
4.4	Stakeholder REDD + Update Gatherings	12	22	34		x	27 Aug 2010
4.5	Muba Expo 2010	25	77	102	x		28 Sept -02 Oct 2010
4.6	Workshop on Mitigation & Adaptation to Climate Change & Potential Research in South Sumatra, Collaboration with Unsi	23	47	70		x	03 Nov 2010
4.7	Workshop on Mitigation, Adaptation & Provincial Government Policy to Climate Change Collaboration with DPRD	21	34	55		x	19 Nov 2010
4.8	Pre AWP 3 WS at Bappeda, Sekayu	5	10	15		x	18 Jan 2011
4.9	AWP 3 WS at Horison Hotel, Palembang	11	52	63		x	27 Jan 2011
4.10	Workshop on Mitigation, Adaptation & Provincial Government Policy to Climate Change Collaboration with Bappeda in Muba	13	51	64		x	23 Feb 2011
4.11	Press Conference of World Forestry Day 2011, at Bumbu Desa Palembang	32	8	40		x	21 March 2011
4.12	World Forestry Day, Atrium PTC						27 March 2011
4.13	Lokakarya REDD+, Informasi Persiapan REDD+ dan Konsultasi Pembentukan Lembaga REDD+ Sub Nasional Sumsel, Swarna Dwipa Palembang Collaboration with Pemprov, BLH, Bappeda	21	81	102		x	14 Apr 2011
4.14	WS MRPP & Muba Government on CC and REDD+ Funding, Meeting Room Bappeda Muba	16	19	35		x	27 July 2011
4.15	WS Update on REDD Development and Sustainability in Sumsel, Novotel Palembang	6	38	44		x	19 August 2011
4.16	MRPP Final Workshop, Novotel Palembang			150		x	20 October 2011
	Sub Total	345	920	1265			
5	Conducted by F & C Specialist						
5.1	Training GPS for Polhut and GIS Center	8	19	27		x	5-8 Januari 2008
5.2	Pelatihan Pendidikan Lingkungan KMPH	3	27	30		x	8 - 10 Juni 2009
5.3	Pelatihan Dasar Pengendalian Kebakaran bagi KMPH		30	30		x	23 - 25 Juni 2009
5.4	Pelatihan Inventarisasi Karbon dan Pengenalan Jenis Pohon		18	18		x	7-10 Oktober 2009
5.5	Pelatihan Pencegahan Kebakaran Hutan bagi KMPH		30	30		x	19 - 21 Mei 2010
5.6	Seminar Pengukuran Karbon BPK MoF	10	40	50		x	23 Maret 2010
5.7	Workshop Pengendalian Kebakaran Hutan dan Lahan	7	40	47		x	15 Juli 2010
5.8	Study Comparative on GIS at Aceh	1	4	5		x	8-13 Nov 2010
5.9	Conservation GIS Workshop in Cooperation with SCGIS Indonesia	40	3	43		x	23-26 Nov 2010
5.10	Carbon Accounting Standardization Meeting	4	1	5		x	24-27 Feb 2011
5.11	Training Forest Carbon Accounting, Dishut Palembang	5	30	35		x	1 June 2011
5.12	In House Training and Fasilitasi Pembentukan GIS Centre pada Bappeda Prov Sumsel		23	23		x	6-9 June 2011
5.13	Training Forest Carbon Accounting, MRPP & Dishut Palembang	5	35	40		x	11-13 Sep 2011
5.14	Training on Satellite Image Processing, MRPP & Bappeda & Lapan	5	25	30		x	15 Sept 2011
	Sub Total	88	325	413			
	GRAND TOTAL	717	2336	3053			

3.2 Project Logframe with Indicators

Intervention Logic	Objective Verifiable Indicators	Source/Mean of Verification	Assumptions
Overall Objective			
Contribute to sustainable natural resource management, biodiversity protection and rehabilitation of degraded peat lands in South Sumatra	- Capacity for sustainable peat lands management and restoration increased - Selected areas of degraded peat lands are restored / reforested - Biodiversity is protected and enhanced (e.g. through enrichment planting)	- Capacity development results - Maps of reforested peat lands - Documents and reports on types of species planted - Biodiversity surveys and results	National, provincial and district institutions cooperate well.
Project Purpose			
Support the protection and rehabilitation of the last natural peat swamp forest in South Sumatra and it's biodiversity through a KPHP management system and preparation for REDD mechanism Lessons learnt and experiences of the MRPP are available to relevant national and international stakeholders Networking between other donor initiatives to reduce deforestation and degradation of peat forests is enhanced	- Existing biodiversity is protected - Illegal activities related to biodiversity losses are reduced - Basic REDD requirements are available - Selected areas are rehabilitated	- Management concept introduced - Biodiversity data bank and description of changes over time - Description of measures introduced to curb illegal activities - Documents on REDD requirements finalized	Government at different levels are support to law enforcement for illegal activities

Results	Objective Verifiable Indicators	Source/Mean of Verification
Result 1: Management structure (KPHP) is developed and set up for the Merang peat lands area, rehabilitation of selected areas is implemented	• A management structure (KPHP) for the Merang peat lands area is established • All relevant stakeholders participate • At least one appropriate, innovative and sustainable approach for rehabilitation is developed and implemented	• Approaches overview documents • Basic concept of management structure • Documents report
1.1. Establish collaborative management plan in accordance with KPHP concept 1.2. Establish Management Unit of REDD Musi Banyuasin District 1.3. Implement rehabilitation with local species (enrichment planting)	• Collaborative management plan between local people with relevant stakeholders (Pemda, local village and private sectors has established. • Impact monitoring system has been developed • At least 2 selected villages have a local regulation on natural resources management • At least 4 villages have midterm planning and implemented • At least village 2 farmers groups have supported rehabilitation with local species	• Document reports • Format monitoring system • Local regulation documents • Midterm planning report and selected activity has supported • List of farmers group • Annual work plan of farmers group
Result 2: Peat lands, forest carbon, biodiversity and rehabilitation area are identified, measured and monitored	• Maps of the selected peat lands and their status are developed • Forest carbon stock calculated and updated • Rehabilitation area identified, classified, and monitored • Biodiversity surveyed and regularly monitored and described	• Maps of peat lands and rehabilitation area • Survey reports • Monitoring reports • Carbon stock calculation
2.1. Conduct measurement and monitoring of biomass and forest carbon. 2.2. Analysis on starting condition of project area for further carbon monitoring 2.3. Assessment on biodiversity parameters and habitat quality	• Information on peat extent, depth and volume are updated • Forest growth and biomass are measured through terrestrial survey and permanent sample plots • Existing forest cover from project start is interpreted and carbon stock is calculated • Biodiversity parameter of peat swamp forest are compiled from previous studies and survey • Peat swamp forest biodiversity is monitored and analyzed	• Maps of peat extent, dept and volume • Survey reports • Permanent sample plots • Land cover and carbon stock maps

Results	Objective Verifiable Indicators	Source/Mean of Verification
Result 3: Integrated fire management and illegal activity reduction measures are applied through community participation and sustainable natural resource management	• Elements for a concept of Sustainable Natural Resources Management are established • Active community participation started and increased • Integrated fire management applied and started with communities and relevant stakeholders (e.g. MPH concept) • Number and types of illegal activities reduced	• Illegal activity reduction and Fire management concept document • List of community participation (quantitative and qualitative) • Data of illegal activities • Monitoring reports
3.1. Improve awareness aims to promote community participation to mitigate illegal activities/fire prevention in project area 3.2. Establish community based fire management 3.3. Illegal activities mitigation scheme with involvement of local population established 3.4. Develop alternative income generating activities to reduce/avoid illegal practices (eg. Illegal logging, fire)	• Community awareness and participation on conservation and protection of Merang peat forest increased • Local people awareness and preparedness on anticipating fire danger is increased • Local community actively participates in fire prevention and illegal activity mitigation • Alternative income generating activities promoted instead of illegal logging/ illegal practices	• Reports of campaigns conducted and awareness materials distributed • Basic operation manual of village fire danger rating system • Reports of fire and illegal activities mitigation conducted • Reports of income generating activities conducted
Result 4: REDD preparation steps are supported including for carbon trading	• REDD preparation steps and documents according to international and national requirements are ready until middle of 2011 • Networking with national and international REDD bodies established and enhanced • Estimates on merchantable carbon for trading are available according to national and international requirements and best practice	• Carbon trading and management concept documents • Activity reports
4.1. Develop capacity on promotion for carbon trading and forest carbon management competency 4.2. Promotion of protection and carbon trading concept in close cooperation with national agencies (MoF, MoEnv)	• Samples of irrigation and drainage system (e.g. blocking canals) established and guidelines for maintenance of the drainage infrastructure developed and tested. • Project Design Document for Merang REDD pilot project developed.	• Sample of blocking canal. • The Water Management System in peat swamp guideline. • Project Design Document of Merang REDD Pilot Project.

Results	Objective Verifiable Indicators	Source/Mean of Verification
	- Partnerships with national institutions on knowledge transfer of REDD built and carbon trading concept promoted. - Knowledge transfer of REDD and forest carbon mechanism delivered. - Potential investors identified, either non market-based (in early process) or market-based (in advanced process) determined and offered.	- Promotion materials. - List of profitable buyers. - Report documents.
Result 5: ICVKM 5.1. A communication strategy is developed with relevant target groups and decision makers on national and international level 5.2. Website with developed products is available and used for informing specific audiences and decision makers 5.3. Knowledge management is applied within MRPP and in disseminating important products and messages	- Awareness on CC and REDD is enhanced with selected audiences - Networking and coordination is enhanced with stakeholders and in particular with MoF - Website is operating and accessible - Project experiences are documented and disseminated - Specific info products for stakeholders are developed	- Basic communication concept and strategy document - MoU's for cooperation with priority partners - List of Climate Change/ REDD training/workshop/ dialogue attended/ initiated - Website is designed and available - Library, list of reports and publications published/collected - List of Exhibitions, Booklets, leaflets



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