



Asia-Pacific Network for Sustainable Forest  
Management and Rehabilitation

## Community-Based Sustainable Forest Management of Sungai Medihit Watershed, Sarawak, Malaysia

SARAWAK FOREST DEPARTMENT, MALAYSIA

November, 2013

Project Title	Community Based Sustainable Forest Management of Sungai Medihit Watershed, Sarawak, MALAYSIA		
Supervisory Agency	ITTO (International Tropical Timber Organization)		
Executing Agency	Sarawak Forest Department		
Expected Project Duration	01/11/2014 – 30/10/2016 (24 months)		
Total Budget US\$ 666,710	APFNet Grant US\$460,000	ITTO contribution US\$ 73,710	Counterpart contributions US\$ 133,000

### Project Summary

The remote and isolated 35,400ha Sungai Medihit Watershed in UluLimbang Division, Sarawak, MALAYSIA is home to two ethnic communities, Kelabit and Penan, who subsist in a state of poverty on shifting agriculture and resources collected from the increasingly disturbed surrounding forests. The Kelabits were the first inhabitants of the Sungai Medihit catchment.

The Kelabits and Penans have been living along one another for many years. Both communities are *subsistence farmers* and practice shifting agriculture. Large scale wet paddy farming is unsuitable in the area due to lack of flatlands. To improve forest management and livelihood of the local communities, the local community proposed a project of Community Based Sustainable Forest Management of Sungai Medihit Watershed, Sarawak, which consists of two components, i.e. “sustainable Watershed Forestry Management (WSM)” and “Community Sustainable Development (CSD)”. The WSM component includes: (1) Baseline survey on forest resources, biodiversity, traditional culture and social economic; (2) Develop two forest management plans at the community level; (3) Carry out demonstration activities on sustainable forest management; (4) Constructs community-based forest management platform and mechanism. The CSD component will be combined by community Alternative livelihoods project and village level infrastructure construction to improve the sustainability of local communities and forest management. The community Alternative livelihood projects are: 1) demonstrating the small livestock raising project to ease the threat of hunting to wildlife; 2) demonstrating the household vegetable cropping to tackle the shortage supply of the vegetables; 3) demonstrating the innovative cultivation approaches to generate the economic benefit flow for the community.

*The goal of the Project is to promote the sustainable forest management in Sungai Medihit watershed area by building the capacity of the community, demonstrating innovative operational model and establishing new governance mechanism on community development. Specifically the project will promote the sustainable forest management by rational planning, technique innovation and mechanism design; enhance the capacity of the community on forest management and livelihood development to contribute sustainable development of local communities; and better the living conditions by renovating the community service infrastructure.*

*The benefits of the project will flow as stakeholders continue their initiatives and use the Stakeholder Forum and process developed by the Project to continue to meet to synergize over new initiatives for innovative resource conservation and management. Sarawak State Government departments and agencies will benefit by gaining a model process for stakeholder consultations for strategy development and model strategies that can be applied in other areas in Sarawak.*

Project Proponent: **SARAWAK FOREST DEPARTMENT**

Contact: **SARAWAK FOREST DEPARTMENT**  
Tingkat14, WismaSumberAlam  
Jalan Stadium, 93660 Kuching

Organization/entity: **STATE GOVERNMENT AGENCY**  
Authority Agency: **SARAWAK FOREST DEPARTMENT**  
Telephone: 6082-319 201 / 6082-319 190  
Email: [sapuan@sarawak.gov.my](mailto:sapuan@sarawak.gov.my)  
Fax: 6082-319 237

---

Prepared and submitted by

Reviewed and Nominated by

.....  
**HAJAH LALTI FAHTEH**  
Assistant Director  
International Affairs Division  
Sarawak Forest Department

.....  
**Haji SAPUAN AHMAD**  
Deputy Director  
  
Sarawak Forest Department  
(Focal Point Signature)

Dated: 30 August 2013

Dated: 30 August 2013

# Contents

1 Background and Rationale.....	1
2 Goal and Objectives.....	2
2.1 Goal.....	2
2.2 Specific Objectives.....	3
3 Methodology and Approaches.....	3
4 Outputs and Activities.....	4
5 Project management.....	7
5.1 Time arrangement.....	7
5.2 Project management.....	8
5.3 Monitoring and Reporting.....	10
5.4 Publicity and Dissemination.....	11
5.5 Equipment Procurement.....	11
6 Financial Management.....	11
7 Risk Management.....	11

## Abbreviations and Acronyms

APFNet: Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

BM: Bahasa Malaysia

CSDP: Community Sustainable Development Project

DQSB: Dukut Quarry Sdn Bhd

EA: Executing Agency

HCVF: High Conservation Value Forest

IA: Implementing Agency

ITTO: International Tropical Timber Organization

Kpg: Kampung (village)

MPH: Multi-Purpose House

NTFP: Non-timber Forest Product

NGO: Non-governmental organization

PC: Project Coordinator

PCon: Project Consultant

PM: Project Manager

PMR: Penilaian Menengah Rendah

SFD : Sarawak Forest Department

Sg: Sungai (river)

SPM: Sijil Pelajaran Malaysia (Malaysian Certificate of Education)

VC: Village Committee

WSMP: Watershed Sustainable Management Project

## 1 Background and Rationale

The Sungai Medihit Watershed (approx. 35,400 ha) is located in UluLimbang in northern-Sarawak, MALAYSIA. Sungai Medihit (approx. 48 km) flows north-northwest from its source to its confluence with Sungai Limbang at Long Napir in the north as indicated in ANNEX A of the Project Site Map.

There are two local indigenous communities, Kelabit and Penan, occupy the catchment. The Kelabit village is at Long Napir while the Penan village is at Kampung Bahagia. The Kelabits were the first inhabitants of Sungai Medihit catchment. A study of the community's past and current use of forestlands and oral histories revealed that the Kelabits have been living in Sungai Medihit Watershed for more than 100 years. Evidence of occupation of the catchment is remnants of old settlements and farmlands found in various places. Lands were cleared for hill paddy and tapioca (木薯) cultivation much earlier than 1958 records. Clearing of forestlands and burning for shifting agriculture are still in practice today.

These two indigenous communities have been living side by side for many years and they support one another. Both communities are subsistence farmers and practice shifting cultivation. Large scale wet paddy cultivation is unsuitable in the area due to limited flatlands. Most of the area is hilly and mountainous. In addition, they depend on resources collected and/or hunted from nearby forest which is continually affected by logging operations. The low paddy yields and depletion of forest resources trap both communities in relative poverty at barely subsistence level.

Nowadays, these two communities are facing a lot of problems (See Figure 1). The key problem is that the catchment and its resources are neither sustainably managed nor used to their best advantage. Stakeholders are not equipped with information on catchment resources and how they might profit from them, or with guidelines to help them manage the catchment sustainably. They lack skills to sustain catchment resources for profit (local communities through CDPs and license holders through resource restoration or achievement of goals towards Forest Management Certification [FMC]). Finally, stakeholders fail to share what information they have to synergize on how best to handle the catchment and its resources.

The effects of the problem are that local communities are unable to implement cash-generating projects, the catchment's timber resource base is eroded while innovative ways to restore it are not developed, tested or implemented and the catchment environment is damaged. Society is affected in that the local communities remain poor without a secure livelihood while the resource base and environment continue to be degraded. Also, the catchment's ability to provide environmental services for society at large is compromised.

The beneficiaries' needs are a direct consequence of the Key Problem: the catchment and its resources are neither sustainably managed nor used to their best advantage in that although resources are present in the catchment, stakeholders are not aware of some and not able to care for and profit from others (e.g. temuda land, plant and riverine resources) due to lack of information, guidelines and skills. The key problem will be eradicated through the collection, dissemination and explanation of information to enable local communities to know where, and with what resources, they can operate cash-generating CDPs, obviating their need to deplete local resources through a subsistence existence; through formulation of guidelines to permit local communities and license holders alike to sustainably manage the catchment; through the development of skills in local communities and license holders so that they can each sustain and restore catchment resources for profit and the catchment's well-being; and through development of a tradition, process and forum for stakeholders to synergize on catchment management and use.

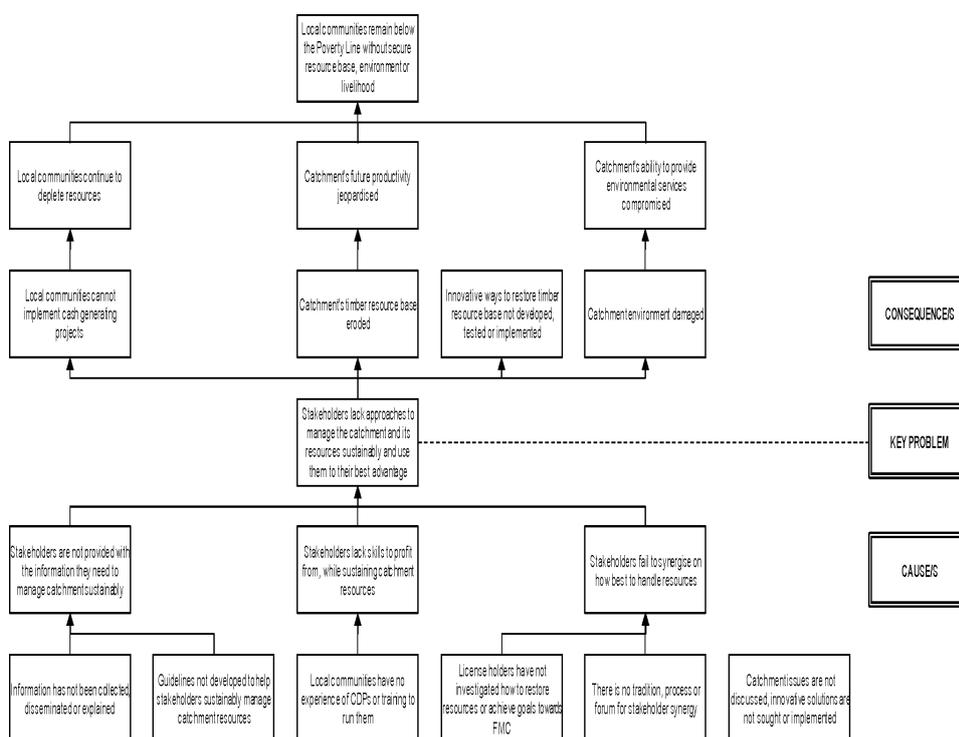


Figure 1 key problem in project sites

## 2 Goal and Objectives

### 2.1 Goal

The goal is to promote the sustainable forest management in Sungai Medihit watershed area by building the capacity of the community, demonstrating innovative operational model and establishing new governance mechanism on community development.

## 2.2 Specific Objectives

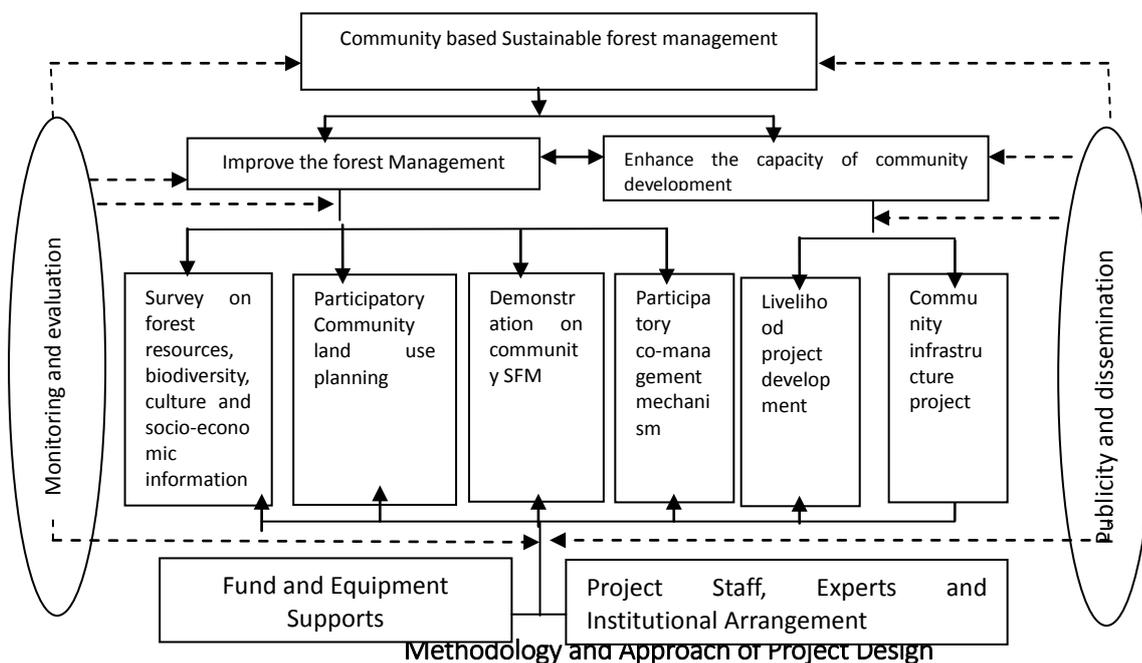
The specific objectives of the project include:

- To improve sustainable forest management through setting rational forest management plans, applying innovative forest management techniques and establishing effective forest management mechanism;
- To enhance the capacity of communities on sustainable forest management and livelihood development;
- To better the living conditions by renovating the community service infrastructure.

## 3 Methodology and Approaches

The project involves direct participation of local communities from Long Napir and Kamping Bahagia. The strategy would be to maximize local people participation and involvement, which can benefit the local people financially and enhance their economic returns in the village. The local people can provide sufficient manpower and skilled workers to complete the work. The social fabric of these communities is based on community spirit and efforts of shouldering burdens and workload and sharing of benefits. This spirit will be further strengthened.

The project design is based on the actual need of the local community on the forest management and development and in line with the priorities of APFNet listed in the strategic plan 2011-2015. In addition, the project should be designed in step with the Malaysia's National Forest Policy. The chart below shows the methodology and approaches used in process of the project development. The Project Logical Framework is summarized in ANNEX A.



## 4 Outputs and Activities

### **Output 1** Community forest management improved

#### **Activity 1.1** Baseline survey on resources and socio-economic development

With the guidance of the project experts and the assistance of the project staff, community baseline survey team will be set up and trained to carry out the survey, mainly including forest resources, biodiversity, traditional culture, socio-economic development.

Implementing body: inventory specialists with involvement of local communities

Targeted Area: Kelabit and Penan community

Activity 1.1.1 Information collection and documents review. The current situation of the two communities will be assessed based on the information collected in terms of natural resources, socio-economic status.

Activity 1.1.2 Field investigation. Conduct field investigation through interviews with heads and villagers of the two communities to gather first-hand information.

Activity 1.1.3 Report writing. On the basis of findings of the Activity 1.1.1 and Activity 1.1.2, the baseline survey report of the project sites will be formulated.

#### **Activity 1.2** Community forest management planning

Framework of community forest management planning includes community current situation assessment, opportunity and challenge analysis, objective of the community forest management, as well as the strategies, actions and measures to achieve the objective.

Implementing body: community with technical assistance from planning expert and project staff

Targeted area: Kelabit and Penan communities

Activity 1.2.1 Convene village meetings. With the technical supports of experts, the village heads and villagers are informed of the project information and participate in the discussion of project activities.

Activity 1.2.2 Conduct natural resource mapping with participatory approaches. With the technical supports of experts, all community members participate in natural resources mapping.

Activity 1.2.3 Identify priorities and strategies for development of forest resource. Based on the analysis of threats and requirements regarding forest resource development, Set priorities and strategies.

Activity 1.2.4 Develop community forest resource management plans. Experts provide necessary assistance to community members to develop community forest resource management plans, which include current status, problems and needs analysis,

management objectives, strategic planning, designed activities or actions as well as safeguard measures.

**Activity 1.3** Demonstrate the sustainable community forest management practices

The field activities of sustainable community forest management practices will be implemented in the two communities, including traditional forest management model combined with advanced silviculture activities, agroforestry system, high ecologic value forest identification and protection, high commercial value tree species planting, collection and processing of NTFPs, training on silviculture treatment as planting, grafting, tendering and low-impact logging.

Implementing body: community with supports from specialists

Targeted area: Kelabit and Penan community

Activity 1.3.1 Summarize traditional models for protection and sustainable use of forest resources within communities through interview with stakeholders of the local community and the field survey.

Activity 1.3.2: Establish sustainable forest management demonstration sites. With the technical supports of experts, trainings and demonstrations of advanced techniques on silviculture, management, protection and harvesting will be conducted, to increase the productivities of the forest and to mitigate environmental impacts.

Activity 1.3.3 Identify and protect the high value ecological forest with the guidance and supports of the experts.

Activity 1.3.4 Introduce and demonstrate suitable high value tree species with the technical supports of experts to increase the income of the local farmers from plantation.

Activity 1.3.5 Demonstrate the sustainable harvesting and processing mode of NTFPs. One household from each community will be selected for demonstrating the sustainable harvesting, processing and utilizing of NTFPs (such as rattan, mushroom and etc.).

**Activity 1.4** Establish the participatory community forest management mechanism

The co-management committee will be formed in the two communities and establish the coordinating mechanism on forest management. The committee meetings will be held regularly 1-2 times a year to get all stakeholders together to discuss the issues and propose the actions taken by community. The committee consists of representatives from forest authorities, forest enterprises, local community and other stakeholders who have activities in the watershed area.

Implementing body: all stakeholders with supports from co-management specialists

Targeted area: Kelabit and Penan community, Limbang Division, Sarawak

Activity 1.4.1 Sign co-management agreement and hold co-management meetings.

The agreement will clarify the responsibilities and rights of each stakeholder. Facilitated by the Project, all stakeholders will get together to discuss the issues on community forest resource management and establish the communication and consultation platform for the co-management.

Activity 1.4.2 Conduct co-management activities. Co-management activities such as collaborative employment, cooperative training, co-management of forest resources and other activities will be implemented, to functionalize the forest resources co-management mechanism in the watershed.

**Output 2:** Capacity of the community on development enhanced

**Activity 2.1** Alternative livelihood activities

The following livelihood projects will be demonstrated in the two selected communities. 1) fish raising for 2 households; 2) livestock or poultry raising for 2 households; 3) vegetable cropping for 2 households; 4) developing home-stay business for 2 households

Implementing body: selected households with supports from livelihood project development specialists

Targeted area: Kelabit and Penan community

Activity 2.1.1 Fish-raising demonstration. Select 2 households in each community to pilot fish-raising skills and increase their income.

Activity 2.1.2 Livestock or poultry-raising demonstration. Select another 2 households in each community to demonstrate the skills on livestock or poultry-raising to increase income of local farmers and to meet local demand for meat.

Activity 2.1.3 Vegetable cropping. Select another 2 households in local communities to pilot vegetable cropping for income increase and vegetable demand of local farmers.

Activity 2.1.4 Homestay providing for Eco-tourism. Select 2 households in each community will be selected to provide home-stay services for the tourists, taking advantage of rich natural tourism resources.

**Activity 2.2** Infrastructure improvement contributing to SFM

**Activity 2.2.1** Gravelling 7 km of Road from Camp Kilo O to Long Napir

This activity is under the responsibility of Project Manager and VC in close collaboration with the relevant government and other agencies. The ecological construction methodology and the energy saving technology will be applied in the construction.

Implementing process: road design → materials purchase → labors mobilization → constructing → operating and maintenance.

Implementing body: the local community committee and Project Management Team

Targeted Area: Kelabit and Penan communities at Long Napir

#### **Activity 2.2.2** Build the multi-functional meeting hall for the community

The multi-functional meeting room will be used for project management office, village meeting room, village training center and other village gathering activities. Green building concept and energy saving architecture will be introduced in the process of the construction.

Implementing approach: design → constructing → operating regulation → maintenance

Implementing body: local community with assistance of project management team

Target Area: Penan and Kelabit

#### **Activity 2.2.3** Build the guesthouse for community school

The purposes of building the guesthouse is to provide accommodation for the parents whose kids are lodging here for study. Green building concept and energy saving architecture will be introduced in the process of the construction. While building the guesthouse, the management system also needs to be developed regarding to the maintenance and operation of this guesthouse.

Implementing approach: internal consultation meeting → identifying the construction plan → preparing the construction materials → constructing → establishing the management system → operating and maintaining

Implementing body: local community, project management staff,

Targeted area: Long Napir Primary School

#### **Activity 2.2.4** Alternative Energy Facilities Demonstration

Promote the sustainable management of watersheds and decrease the consumption of the forest resources by increasing the efficiency of the natural resources utilization through introducing and installing the solar energy facilities for the 10 selected demonstration households in the two communities.

Implementing approach: compiling the active work plan → selecting the demonstration households → purchasing facilities such as solarpanel for installation → facilities installation → Keep track of energy saving

Implementing body: local communities, project staff

Targeted area: Long Napir and Kampung Bahagia

## **5 Project management**

### **5.1 Time arrangement**

The project will last for two years from July 2014 to June 2016. Main activities in the 1<sup>st</sup> project year will focus on baseline survey, community forest management planning,

facilitating the establishment of the co-management mechanism, developing the livelihood projects, design of the community micro-infrastructure project. In the second year the project will focus on demonstration, infrastructure construction, livelihood implementation, monitoring and evaluation of the project.

## 5.2 Project management

The Sarawak forest department is the Executing Agency. The project steering committee, consisting of representatives from local forest authority, Limgang forest office, and other stakeholders, will be established to provide the directives and supervision to the project in implementing the activities. A project team will be formed with the assistance of project manager appointed by Sarawak forest department.

### 5.2.1 Supervisory Agency

International Tropical Timber Organization (ITTO)

ITTO is an intergovernmental organization promoting the conservation and sustainable management, use and trade of tropical forest resources. Its 59 members represent about 80% of the world's tropical forests and 90% of the global tropical timber trade.

### 5.2.2 Project Steering Committee

The Project Steering Committee (PSC) will be a key management body. It is the highest decision-making committee for the effective and successful implementation of all the community development projects and watershed management studies. The duties of the PSC are:

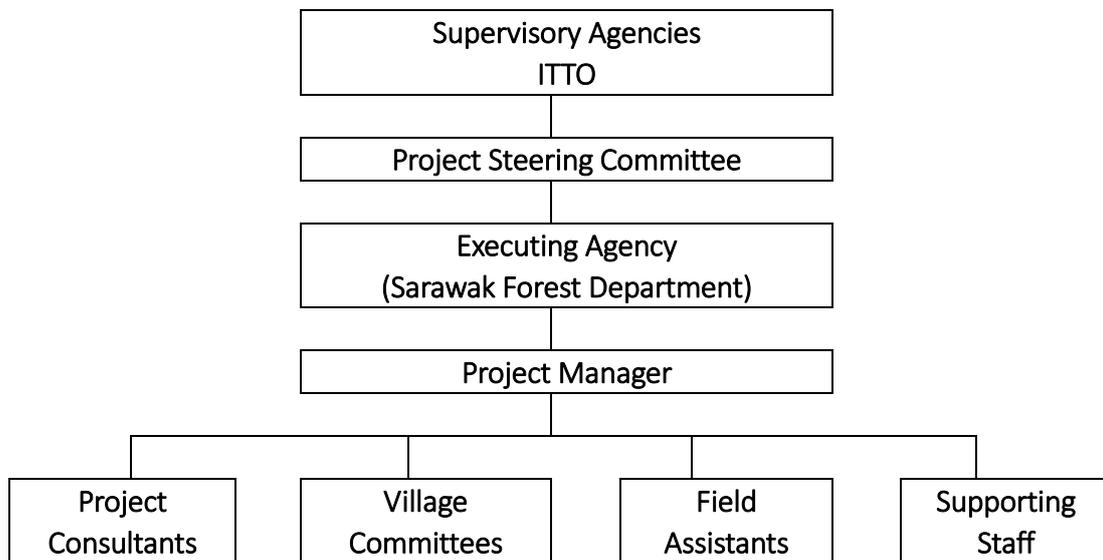
- To oversee Project implementation;
- To approve expenditure within approved budget;
- To review and evaluate activities that have been carried out;
- To consider changes in budget and activities, and
- To monitor and evaluate the Projects' overall strategic management

It is important that the Projects' implementation proceed in a timely and efficient manner in accordance with Project Logical Framework and Work Plan.

The Project Steering Committee members will include representatives from the following agencies:

- Sarawak Forest Department (Chair)
- Resident's Office, Limbang
- Other Relevant Organizations and Institutions
- Project Manager
- Project Consultants
- Project Advisor

The PSC meeting will be convened by the Project Coordinator at least once a year to guide the implementation of the Projects.



**Figure 3 Project Organization Chart**

### 5.2.3 Executing Agency

The Sarawak Forest Department designed as The Executing Agency. The Executing Agency's key obligations to successfully implement the Project are to nominate the Project Coordinator and other Management Team members, provide office facilities for the Project Management Team, establish a Project Steering Committee and appoint the PSC chairperson.

The Sarawak Forest Department (SFD) shall carry out the Projects under the supervision and guidance of APFNet (Asia-Pacific Network for Sustainable Forest Management and Rehabilitation) and ITTO (International Tropical Timber Organization). SFD will execute the Projects in accordance with the Project document and Project Agreement. The Executing Agency will implement the Projects in accordance with the rules and procedures of APFNet and monitors all activities of the Projects.

SFD will ensure that all records are available to the Project Manager to enable him to arrange for an audit of the Projects. The Project Manager shall be the overall personnel responsible for monitoring and evaluation of activities on the ground. Completion of Projects within approved budgets and in a timely manner is the responsibility of the Project Manager.

### 5.2.4 Project management team

During the implementation of the Projects, various people may be involved based on their work experience and expertise. The following Project personnel and their roles

will provide technical assistance who will contribute to the successful implementation and completion of the Projects. As members of project management team, project coordinator and project manager will play key roles in the project implementation. The qualifications and responsibilities are listed in ANNEX G.

#### 5.2.5 Technical Assistance

During the implementation international experts and local specialists will be recruited for the project to provide their expertise on community development, co-management, forest management, silviculture, planning, etc. Technique input will be at least 100 person.days. The qualifications and responsibilities of project experts are listed in ANNEX G.

#### 5.2.6 Village Committee

The VC, the executing partner at ground level, mobilizes the local communities to participate in Projects implementation. The VC serves as Project contractor and employment of local workers during Projects' implementation and forestry work and collaborates together with Project Manager, Project Consultants and Field Assistants in Projects implementation.

There will be capacity building activities to be organized by PM for the VC and other selected villagers to ensure smooth Projects implementation both during the development stage and operation stage. It is noted that both the Project Manager and Project Consultants have prior experience in managing and implementing community development Projects of similar nature especially under the umbrella of ITTO.

#### 5.2.7 Other stakeholders

Local enterprises, NGOs and forest technique providers could be evolved in some project activities as project partners.

### **5.3 Monitoring and Reporting**

The project proposal, the project overall plan and the annual plan should reviewed by the project steering committee and should not be implemented until they get approved by APFNet and ITTO.

Quantity indicators will be developed to monitor the project activities. Based on the monitoring results the annual progress report will be prepared and submitted to APFNet and ITTO for review together with annual work plan and budget once these report and plan reviewed by PSC. The progress report and the annual work plan will be prepared by the project management office with the assistance of the technical partners. The project steering committee will oversee and supervise the overall implementation of the project. Furthermore, the project implementation agency could strengthen the communication with APFNet and ITTO through project newsletters and report timely the project progress, expenditures, the achievements as well as the risks which potentially undermine the project implementation.

When the project completed, the project implementation agency shall submit the

project completion report, financial statement and the list of the assets to APFNet and ITTO once the reports get reviewed by the steering committee.

#### **5.4 Publicity and Dissemination**

The project achievements and experiences will be documented and disseminated through various activities as meetings, workshops, as well as newspapers, medias and network.

#### **5.5 Equipment Procurement**

Any purchase related to the project activities shall follow the local regulations and the project requirements. The purchase includes the materials for the village infrastructure and the necessary equipment as one jeep, camera and instruments for the filed activities.

### **6 Financial Management**

The total budget is US\$ 666,710, in which APFNet grants US\$460,000, ITTO funds US\$73,710. The rest of the contributions which come from the Sarawak Forest Department in the form of “in-kind” contributions are shown in Annexes C and D respectively.

Sarawak Forest Department, the implementing agency, shall open an exclusive bank account for the project. During the Project’s Implementation, in-cash and in-kind contributions of the counterpart will be reported in the Projects’ financial statements. The Project Manager will ensure all kinds of expenses including payment of all administrative and supporting staff be made in accordance with the Project Agreement and locally established procedures.

The Implementing Agency will put into operation all activities in accordance with the Project Agreement. Annual audited financial statements will be submitted to APFNet each year. Audited financial statements will be done by an independent external auditor. The external auditor will audit all completed work and its expenses. The audit report will be forwarded with auditor’s comments, general information and financial statements. In this way, there will be a strong internal control of funds. Irregular transactions and activities will not occur. In view of this, the Projects will be financially and efficiently managed in addition to being very transparent in the handling of Projects’ funds.

### **7 Risk Management**

Potential risks and counter-measures are identified as follows:

Policy risk. The entire project design follows the relevant development and resource conservation policy of country, state and local levels to avoid the policy conflict.

Culture conflict risk. New technique input and mechanism input respects the local peoples’ traditional and culture. Bottom up or community-based work mechanism

would be a good way to avoid the culture conflict.

The risk of project cost change. The cost control mechanism shall be established, If the cost exceed the budget, negotiation and settlement procedure will be started, whether narrow the scale of activities or seek for the other alternative funding sources could be choices.

The risk of project staff inconsistency. In the project duration the project staff such as project manager and the project coordinators will keep unchanged to ensure the communication smoothly and the work sustainable.

The risk of benefit distribution. The project benefit will be shared by these whole two communities. The project fund will be exclusive used in the project activities and the disadvantage groups also have opportunity to take part in the project and benefit from it.

The risk from the other project implementation. During the project period, the other project such as the hydropower station construction will offset the effect of our project should be control to avoid the potential risk. The pre-study on the potential project will be done in this watershed by talking to the relevant government department or reviewing the government documents such as the strategy plan.

The risk of the technique introduction. Technique input is very important in this project, but the risk and the impact of the new technique introduction will be analyzed. The domestic experts input and community-based acceptance willingness survey will be carried out for mitigating this risk.

The risk from the implementation and budget management. The project running cost and budget monitor mechanism will be developed to avoid the exchange rate risk and budget-shortage risk.

## ANNEX A Project Logical Framework

Items	Intervention Logic	Objectively verifiable indicators of achievement	Sources of information and means of verification	Assumptions and Risks
<b>Goal</b>	To promote the sustainable forest management in Sungai Medihit watershed area by building the capacity of the community, demonstrating innovative operational model and establishing new governance mechanism on community development.	<ol style="list-style-type: none"> <li>1. Forest management in the watershed area is well improved</li> <li>2. Village amenities improved</li> </ol>	<ol style="list-style-type: none"> <li>1. Project completion report</li> <li>2. Project evaluation reports</li> <li>3. Project monitoring reports</li> </ol>	<ol style="list-style-type: none"> <li>1. The local forest policy for the watershed is stable and consistency;</li> <li>2. Supports are available from relevant agencies</li> <li>3. Cooperation from local residents</li> </ol>
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To improve the sustainable forest management by rational planning, technique innovation and mechanism design;</li> <li>2. To enhance the capacity of the community on forest management and livelihood development to contribute sustainable development of local communities;</li> <li>3. To better living conditions by renovating the community service infrastructure</li> </ol>	<ol style="list-style-type: none"> <li>1. Forests in the watershed are well managed</li> <li>2. The capacity of the community on forest management and livelihood development is enhanced.</li> <li>3. The living conditions of the communities are improved.</li> </ol>	<ol style="list-style-type: none"> <li>1. Quality of the forests in the watershed</li> <li>2. Income increase of the selected households</li> <li>3. Survey of facilities available</li> </ol>	<ol style="list-style-type: none"> <li>1. Village committee mobilizes local residents in forest management and community development activities</li> <li>2. High quality workmanship</li> </ol>
<b>Output 1</b>	Community forest management improved			

<b>Activity 1.1</b>	Baseline survey on resources and socio-economic development	The resources and the general socio-economic information in the two communities are available for use	Survey reports of the two communities	Field work progress as planned. Fine weather
<b>Activity 1.2</b>	Community forest management planning	Participatory approaches and tools are introduced for forest management planning.	Forest management plans for the two communities	Field work is uninterrupted as planned. Fine weather
<b>Activity 1.3</b>	Demonstrate the sustainable community forest management practices	New silviculture treatments integrated traditional knowledge are developed and demonstrated in the two community	1. Demonstration schemes for the two community; 2. Activity reports;	1. Fine weather 2. Local households actively involved; 3. Technical training providers are available in time; 4. Seedlings and other materials for demonstration are ready as planned.
<b>Activity 1.4</b>	establish the participatory community forest management mechanism	Community governance is enhanced.	1. Co-management agreement for the communities 2. Activity completion report	1. Stakeholders are committed to their work 2. Very successful meeting
<b>Output 2</b>	Capacity of the community on development enhanced			
<b>Activity 2.1</b>	Alternative livelihood activities	The selected households get benefit from the livelihood demonstration activities	1. Activity plans 2. Completion reports 3. Income increase of the selected households	1. Fine weather 2. Local households is willing to get helps and actively involved; 3. Technical training providers are available in time; 4. Materials for demonstration are ready as planned.
<b>Activity 2.2</b>	Infrastructure projects			

	contributing to SFM			
<b>Activity 2.2.1</b>	Gravelling 7 km of Road from Penan to Long Napir	Transportation condition between the two communities improved	<ol style="list-style-type: none"> <li>1. Photographs of the completed road</li> <li>2. Regulations for maintaining</li> </ol>	<ol style="list-style-type: none"> <li>1. Fine weather</li> <li>2. Construction materials available in Limbang</li> <li>3. Skilled labour and workman available</li> </ol>
<b>Activity 2.2.2</b>	Build the multi-functional meeting room for the community	Venues provided for the village meetings, training courses and other gathering	<ol style="list-style-type: none"> <li>1. Photographs of the completed meeting room</li> <li>2. Regulations for operating and maintaining</li> <li>3. Records of uses</li> <li>4. Materials and equipment purchased</li> </ol>	<ol style="list-style-type: none"> <li>1. Fine weather</li> <li>2. Construction materials available in Limbang</li> <li>3. Skilled labour and workman available</li> </ol>
<b>Activity 2.2.3</b>	Build the guesthouse for community school	Accommodation provided for the parents of the pupils	<ol style="list-style-type: none"> <li>1. Photographs of the completed guesthouse</li> <li>2. Regulations for operating and maintaining</li> <li>3. Records of accommodation</li> <li>4. Materials purchased</li> </ol>	<ol style="list-style-type: none"> <li>1. Fine weather</li> <li>2. Skilled labour and workman available</li> <li>3. Construction materials available in Limbang</li> </ol>
<b>Activity 2.2.4</b>	Alternative Energy Facilities Demonstration	Solar energy facilities demonstrated	<ol style="list-style-type: none"> <li>1. Photographs of the completed solar energy facilities</li> <li>2. Energy consumption reports</li> <li>3. Daily expense decrease of the selected households</li> </ol>	<ol style="list-style-type: none"> <li>1. Good cooperation of the selected households</li> <li>2. Qualified workers for installing the facilities</li> <li>3. Good quality solar energy equipment available at local</li> </ol>

### ANNEX B Overall Work Plan

Activities	Responsible Party	Project Year 1												Project Year 2											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<b>Ouput 1 : Community forest management improved</b>																									
Activity 1.1Baseline survey on resources and socio-economic development																									
Activity 1.1.1 Information collection and document review	EA, CE																								
Activity 1.1.2Field investigation	EA, CE, VC																								
Activity 1.1.3Report writing	EA, CE																								
Activity 1.2 Community forest management planning																									
Activity 1.2.1Convene village meetings	EA, VC																								
Activity 1.2.2 Conduct natural resource mapping	EA, CE, VC																								
Activity 1.2.3 Identify priorities and strategies for development of forest resource	EA, CE																								
Activity 1.2.4 Develop community forest resource management plans	EA, CE																								
Activity 1.3 Demonstrate the sustainable community forest management practices																									
Activity 1.3.1 Summarize traditional models for protection and sustainable use of forest resources	EA, CE, VC																								
Activity 1.3.2 Establish sustainable forest management demonstration sites.	EA, CE, VC																								
Activity 1.3.3 Identify the high protection value forest and protect the identified forest	EA, CE																								
Activity 1.3.4 Introduce and demonstrate suitable high protection value forest species	EA, CE																								
Activity 1.3.5Demonstrate sustainable harvesting and processing of NTFPs	EA, CE																								
Activity 1.4 Establish the participatory community forest management mechanism																									



### ANNEX C: PROJECT BUDGET BY ACTIVITY

Activities	Project Year 1(05/2015-04/2016)			Project Year 2 (05/2016-04/2017)			Total (USD)
	APFNet	ITTO	Counterpart contribution	APFNet	ITTO	Counterpart contribution	
<b>Ouput 1 Community Forest Management Improved</b>							
<b>Activity 1.1 Baseline Survey on Resources and Socio-Economic Development</b>							
Activity 1.1.1 Information Collection and Document Review	4,500	0	1,500	0	0	1,500	7,500
Activity 1.1.2 Field Investigation	9,500	0	3,500	0	0	3,500	16,500
Activity 1.1.3 Report Writing	4,500	0	3,000	0	0	3,000	10,500
<b>Total Cost for Activity 1.1</b>	<b>18,500</b>	<b>0</b>	<b>8,000</b>	<b>0</b>	<b>0</b>	<b>8,000</b>	<b>34,500</b>
<b>Activity 1.2 Community Forest Management Planning</b>							
Activity 1.2.1 Convening of Village-level Participatory Meetings	8,000	0	1,000	0	0	1,000	10,000
Activity 1.2.2 Conduct Natural Resource mapping	8,000	0	3,500	0	0	3,000	14,500
Activity 1.2.3 Identify Priorities and Strategies for Development of Forest Resource	4,500	0	2,500	0	0	2,500	9,500
Activity 1.2.4 Develop Community Forest Resource Management Plans	5,400	0	2,000	0	0	2,000	9,400
<b>Total Cost for Activity 1.2</b>	<b>25,900</b>	<b>0</b>	<b>9,000</b>	<b>0</b>	<b>0</b>	<b>8,500</b>	<b>43,400</b>
<b>Activity 1.3 Demonstrate Sustainable Community Forest Management Practices</b>							
Activity 1.3.1 Summarize Traditional Modes for Protection and Sustainable Use of Forest Resources	5,000	0	3,500	5,200	0	1,500	15,200
Activity 1.3.2 Establish Sustainable Forest Management Demonstration Sites.	12,000	0	3,000	5,000	0	3,000	23,000
Activity 1.3.3 Identify the High Protection Value Forest and Protect the Identified Forest	7,200	0	4,000	0	0	3,500	14,700

**ANNEX C : PROJECT BUDGET BY ACTIVITY (cont'd)**

Activities	Project Year 1(05/2015-04/2016)			Project Year 2 (05/2016-04/2017)			Total (USD)
	APFNet	ITTO	Counterpart contribution	APFNet	ITTO	Counterpart contribution	
Activity 1.3.4 Introduce and Demonstrate Suitable High Protection Value Forest Species	10,000	0	1,500	5,200	0	1,500	18,200
Activity 1.3.5 Demonstrate Sustainable Collection and Processing of NTFPs.	7,000	0	2,500	4,900	0	2,500	16,900
<b>Total Cost for Activity 1.3</b>	<b>41,200</b>	<b>0</b>	<b>14,500</b>	<b>20,300</b>	<b>0</b>	<b>12,000</b>	<b>88,000</b>
<b>Activity 1.4 Establish the Participatory Community Forest Management Mechanism</b>							
Activity 1.4.1 Sign Co-Management Agreement and Convene Co-Management Meetings	8,000	0	2,500	4,500	0	2,500	17,500
Activity 1.4.2 Conduct Co-Management Activities	11,000	0	2,000	5,500	0	2,000	20,500
<b>Total Cost for Activity 1.4</b>	<b>19,000</b>	<b>0</b>	<b>4,500</b>	<b>10,000</b>	<b>0</b>	<b>4,000</b>	<b>38,000</b>
<b>Subtotal Cost for Activity (1.1-1.4)</b>	<b>104,600</b>	<b>0</b>	<b>36,000</b>	<b>30,300</b>	<b>0</b>	<b>33,000</b>	<b>203,900</b>
<b>Output 2 Capacity of the Community on Development Enhanced</b>							
<b>Activity 2.1 Alternative Livelihood Activities</b>							
Activity 2.1.1 Pilot Fish-Raising Demonstration	18,000	0	3,500	5,000	0	3,500	30,000
Activity 2.1.2 Pilot Livestock or Poultry-Raising	20,000	0	4,500	5,000	0	4,000	33,500
Activity 2.1.3 Pilot Vegetable Planting	20,000	0	2,000	5,000	0	2,000	29,000
Activity 2.1.4 Pilot Home Stay for Ecp-Tourism	25,000	0	4,500	5,000	0	4,000	38,500
<b>Total Cost for Activity 2.1</b>	<b>83,000</b>	<b>0</b>	<b>14,500</b>	<b>20,000</b>	<b>0</b>	<b>13,500</b>	<b>131,000</b>

**ANNEX C : PROJECT BUDGET BY ACTIVITY (cont'd)**

Activities	Project Year 1(05/2015-04/2016)			Project Year 2 (05/2016-04/2017)			Total (USD)
	APFNet	ITTO	Counterpart contribution	APFNet	ITTO	Counterpart contribution	
<b>Activity 2.2 Infrastructure projects contributing to SFM</b>							
Activity 2.2.1 Gravelling 7 KM of road to LN and road construction to old LN settlement of more than 1 KM	48,000	0	3,500	7,800	0	3,500	62,800
Activity 2.2.2 Build the Multi-Functional Meeting Room for the Community	15,000	0	5,500	5,000	0	5,500	31,000
Activity 2.2.3 Build the Guesthouse for Community School	15,000	0	5,000	5,000	0	5,000	30,000
Activity 2.2.4 Alternative Energy Facilities Demonstration	15,500	0	4,000	5,000	0	4,000	28,500
<b>Total Cost for Activity 2.2</b>	<b>93,500</b>	<b>0</b>	<b>18,000</b>	<b>22,800</b>	<b>0</b>	<b>18,000</b>	<b>152,300</b>
<b>Subtotal Cost for Activity (2.1-2.2)</b>	<b>176,500</b>	<b>0</b>	<b>32,500</b>	<b>42,800</b>	<b>0</b>	<b>31,500</b>	<b>283,300</b>
<b>Total cost for Activity (1.1-2.2)</b>	<b>281,100</b>	<b>0</b>	<b>68,500</b>	<b>73,100</b>	<b>0</b>	<b>64,500</b>	<b>487,200</b>
<b>Non-Activity Costs</b>							
Procurement of Vehicle	22,800	0	0	22,800	0	0	45,600
Independent Auditing	2,500	0	0	2,500	0	0	5,000
<b>Supervisory Agency</b>							
Monitoring, Evaluation & Administration	27,600	0	0	27,600	0	0	55,200
Pre-Project PPD 135/07 Rev.1(F)		36,855	0	0	36,855	0	73,710
<b>GRAND TOTAL</b>	<b>334,000</b>	<b>36,855</b>	<b>68,500</b>	<b>126,000</b>	<b>36,855</b>	<b>64,500</b>	<b>666,710</b>

It is hereby acknowledged ITTO has kindly expended its own funding in the amount of USD73,710 (United States dollars seventy three thousand and seven hundred and ten only) for the implementation of Pre-Project PPD135/07 Rev.1(F) : Community-Based Forest Management of Sungai Medihit Watershed. The ITTO Pre-Project was implemented over a period of 6 months, starting in December, 2008 was the basis for the design and development of APFNet Project [Serial No: APFNet/2013/PP/05].

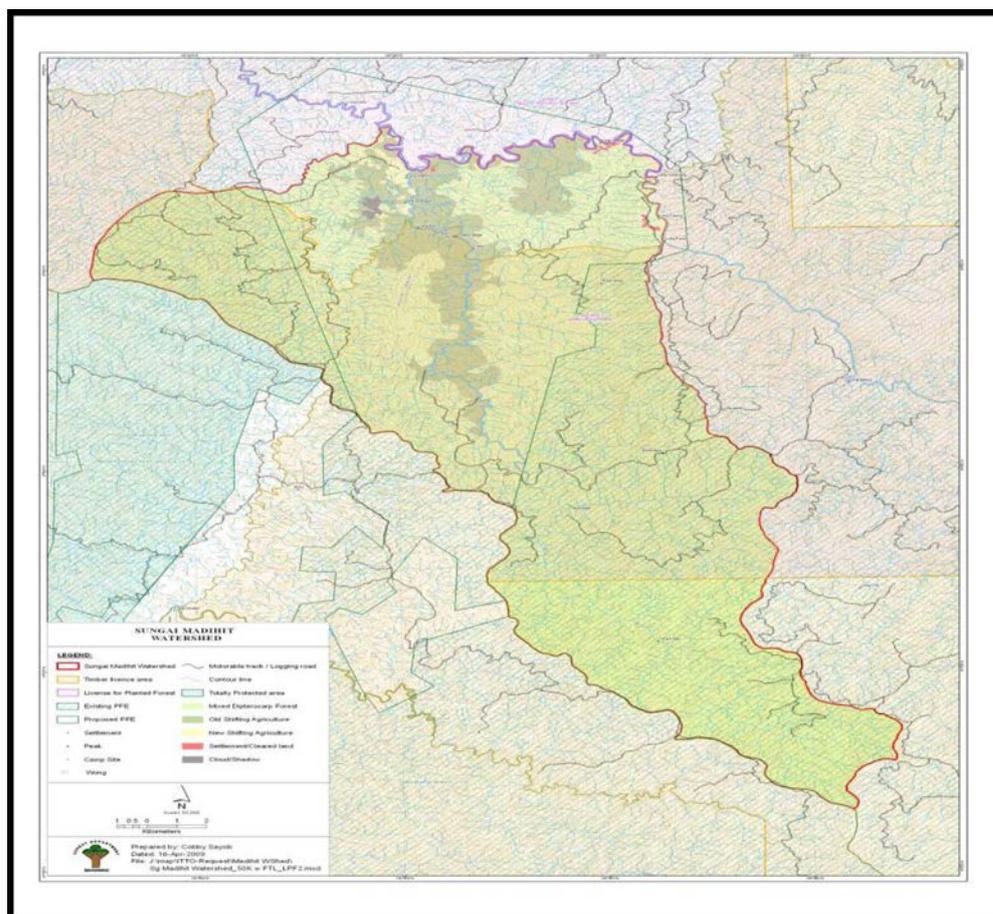
**ANNEX D : PROJECT BUDGET BY CATEGORY**

No,	Cost category	Rate / Unit	No. of Unit	Planned Budget			TOTAL (USD)
				APFnet Grant	ITTO	Counterpart Contribution	
1	<b>Project Staff Cost</b> (Salary and Regular Allowance for Project Staff and Management Personnel)						
	(a) Project Coordinator	\$800 /month	24	0	0	19,200	19,200
	(b) Project Manager	\$2,000/ month	24	24,000	0	24,000	48,000
	(c) Admin. Secretary	\$600 /month	24	4,400	0	10,000	14,400
	(d) Three Field Assistants	\$900 /month	24	10,000	0	11,600	21,600
	<b>Sub-total [(a) – (d)]</b>			<b>38,400</b>		<b>64,800</b>	<b>103,200</b>
2	<b>Consultants Cost</b> (Local and International Consultants’ fees)						
	(a) International Consultants	\$500/person.day	30	15,000	0	0	15,000
	(b) Local Consultants	\$200/person.day	175	35,000	0	0	35,000
	<b>Sub-total [(a) – (b)]</b>			<b>50,000</b>	<b>0</b>	<b>0</b>	<b>50,000</b>
3	<b>Travel and Related Cost</b> (Air fare, Local travel, per-diem and etc, including Project Personnel, Consultants, Guests and Participants for Project events )	\$1,900/person.time	45	35,000	0	10,500	45,500
4	<b>Meeting and Training Costs</b> (Venue, Facility, Hospitality, Speakers/experts’ fees, Participants Accommodation, Meeting materials, etc)	\$5,000/time	10	40,000	0	5,000	45,000
5	<b>Field Activities Cost</b> (Labor Cost for Local Community planting, etc)	\$6,240/time	20	124,800	0	20,700	145,500
6	<b>Publication &amp; Dissemination Cost</b> (Formulation, Editing, Publishing of Articles, Reports, Books and Information Products and	\$7,000/time	5	35,000	0	7,000	42,000

	Organization of Outreach Activities, Media activities)						
7	<b>Office Operation Cost</b> ( Project Administrative Management Fee and Administrative Staff Cost, Lease/rental of office premises, office and facility maintenance, etc)	\$1,550/month	20	31,000	0	25,000	56,000
	<b>Sub-total [3-7]</b>			<b>265,800</b>	<b>0</b>	<b>68,200</b>	<b>334,000</b>
8	<b>Procurement</b> (Purchase of Vehicles, Equipment, Devices, etc)	\$45,600/lump	1	45,600	0	0	45,600
9	<b>Independent Auditing</b>	\$2,500/Year	2	5,000	0	0	5,000
10	<b>ITTO Monitoring, Evaluation and Administration</b>	\$55,200/Lump	1	55,200	0	0	55,200
11	<b>ITTO Pre-Project PPD135/07 Rev.1(F)</b>	\$12,285/month	6	0	73,710	0	73,710
	<b>Sub-total [ 8-11 ]</b>			<b>105,800</b>	<b>73,710</b>	<b>0</b>	<b>179,510</b>
	<b>GRAND TOTAL</b>			<b>460,000</b>	<b>73,710</b>	<b>133,000</b>	<b>666,710</b>

It is hereby acknowledged ITTO has kindly expended its own funding in the amount of USD73,710 (United States dollars seventy three thousand and seven hundred and ten only) for the implementation of Pre-Project PPD135/07 Rev.1(F) : Community-Based Forest Management of Sungai Medihit Watershed. The ITTO Pre-Project was implemented over a period of 6 months, starting in December, 2008 was the basis for the design and development of APFNet Project [Serial No: APFNet/2013/PP/05].

## Annex E Project sites map and general information



Catchment Features	
Elevation range	140 - 1430m
Terrain	Figure 1: Map of Ulu Limbang showing the Sg. Medihit watershed in many places
Soils	Shallow
Forest cover	Logged forest, old secondary forest, some abandoned rubber, a small reserve for local communities to source timber for domestic needs and some virgin forest in the extreme south
Plant resources	Plants for food (many depleted), medicines, firewood, cordage, construction and handicrafts
Animal resources	Six Protected Animals and five Totally Protected Animals under the Wild Life Protection Ordinance 1998

### Social Aspects

Two communities, Kelabit and Penan, occupy the catchment. The Project beneficiaries will be the resident populations of both communities (with women and men in approximately equal numbers).

Community, religion, language	Settlement	Demo-graphics	Activities
Kelabit Christian, speak Kelabit, good Malay and English and some Penan	Long Napir latest of many former settlements in the catchment during the last 200 years	35 families, out-migration* 75%, residents 213	Subsistence agriculture, hunting and fishing for protein and cash, gathering forest produce
Penan Christian, speak Penan and Kelabit, some speak good Malay and some English	Kpg Bahagia estab. 1972 when Penans began to settle after a nomadic existence for c. 100 years in the area	24 families, out-migration* 40% residents 144	As above but rely more heavily on collected resources, including the staple wild sago

\* % of total population who leave for temporary jobs in timber camps or more permanent work in towns (able-bodied males)

Both settlements have a gravity feed water supply, often interrupted, and churches. Only Long Napir has electricity, in the evenings and on Sundays from a generator. A kindergarten and primary school serve both communities. There is a public library with internet facilities and a satellite phone, currently out of order. There is no clinic or shop. Each community has a Village Development and Security Committee (JKKK) which coordinates community activities, and a village headman, a key individual. There are women's associations, known as *Kaum Ibu*.

#### Cultural Aspects

Both Kelabit and Penan communities have a strong sense of community and cultures that rely heavily on cooperation between individuals, families and communities. There is a high level of trust between the two communities. Members of both communities have a resilience and ability for hard work. The Kelabits operate a land tenure system with rules ascertained according to a customary legal system. They are shifting cultivators and recognise and farm formerly farmed areas. Map data from 1960 and 1963 show the area of 'secondary jungle or hill paddy' along the lower reaches of Sg Medihit stretched c.15 km upriver. No local community member has titled land. Some Penan families, though settled, are nomadic during fruit and wild boar seasons.

#### Economic Aspects

All households of both communities are below the State Poverty Line (RM 830 in 2006) with an estimated average family income of RM 380 for the Kelabits and RM 160 for the Penans.

Families are heavily dependent on assistance from children working in towns. Farmers farm to subsist, sell game and fish at irregular intervals and have no opportunity to earn a fixed income.

Transport is expensive (RM 60 per person or RM 400 per vehicle per return trip) so produce is seldom taken to towns for sale and only fish has been found to have an assured market.

#### Environmental Aspects

Timber extraction has resulted in (1) the area becoming more accessible to hunters from towns, causing increased hunting pressure; (2) changes to the habitat mosaic altering species distribution patterns; (3) destruction of plants that provide food for wildlife, resulting in lowered food availability particularly for selective animals, influencing the wildlife diversity; and (4) deposition of unconsolidated sediments into the rivers which has resulted in a drastic decrease in the number and size of fish important as a food source to the local communities.

An Environment Impact Assessment (EIA) for the proposed Project will not be necessary as, on balance, the catchment's environment is likely to improve on implementation of eco-friendly pilot CDPs in place of some of the current activities that lead to soil erosion and erosion of genetic resources.

## ANNEX F Rationale of community infrastructure construction

### (a) Gravelling 7 km of Road to Long Napir

Construction of logging roads *precedes* all other forest operations. They are planned and constructed to gain *maximum* access to a forest area. Most of the main timber roads are *all-weather roads*. However, approximately the *last 7 km* to Long Napir is not graveled and very often impassable during heavy rain. This section of the road is very slippery and *dangerous* during bad weather. At a recent meeting in Long Napir, an urgent request was made for this section of the road to be graveled so that people can travel *safely* to Limbang bringing down whatever little goods they have to the market.

The upgrading of 7 km (part) main road before arriving at Long Napir is important from safety point of view. When the road surface is graveled, vehicles and motor cycles can travel anytime even during bad weather. It is important that APFNet considers providing gravels on this section of the road.

### (b) A Resthouse for the Penans

This is a house to be built within the compound of the Long Napir School (Plate P2). The proposed basic building will enable Penans coming from UluLimbang and other areas in the forest to stay when they send their children to school. This Project is important to promote attendance of the school by Penan children. The Penan parents can stay on a temporary basis in the building to care for their children so that they will adjust to their new surroundings to focus on their studies. The proposed resthouse plays an important role in the early education of Penan children. The resthouse will have bedrooms, dining hall, kitchen and washrooms.

The Penan children need to be provided with necessary facilities to encourage them to attend school. Since the Penans settled at KampungBahagia in early 1972 (40 years ago), none of them has yet to obtain full PMR (Lower Certificate of Education). The main reason, is high dropouts. Indeed, the resthouse is a very important premises to promote and encourage early education among Penan children. It is recommended that APFNet builds this resthouse within the compound of SK Long Napir.

### (c) Multi-Purpose House

This is a house to be constructed at Long Napir to accommodate visitors from surrounding villages during Easter Irau Convention, Christmas and New Year celebrations including other gatherings (i.e. School Committee meetings) that may be organized in the village. Dialogues and discussions on village matters including Project's implementation, will be held in the multi-purpose house. Government officials on official visits to the village will meet the Kelabit and Penan communities in this house. It will be equipped with bedrooms, conference rooms, dining hall, washroom and

kitchen. The premises must be maintained and kept clean at all times by the communities.

The multi-purpose house is important to the people of Long Napir. It is a house where the local communities gather for discussions, meetings and dialogues on village matters. Government officials on a visit to the village will meet the local people at the multi-purpose house. Therefore, construction of this multi-purpose house is important and necessary to the people of Long Napir and KampungBahagia.

## **ANNEX G The qualifications and responsibilities of project personnel**

### **1. Project Coordinator**

#### (i) Qualifications

Director of Forests or Senior Director of Forests.

Degree Holder in Forestry

Background in Forestry

10 years of experience in Project coordination

#### (ii) Tasks and responsibilities

Communicates with APFNet and ITTO on all matters of community development projects and watershed management studies

Chairs the Project Steering Committee meetings

Liaises with the Project Manager on all matters relating to Projects' supervision and implementation

### **2. Project Manager**

#### (i) Qualifications

Degree Holder in Forest Engineering

Background in Forestry and Forest Engineering

10 years of experience in Project management

#### (ii) Tasks and responsibilities (over the Project period of 24 months)

Takes overall responsibility for Project implementation including its day-to-day management

Ensures Project outputs are achieved

Supervises all Project personnel, their activities and outputs

Liaises with the Project Coordinator on all matters relating to Projects' implementation

Chairs on site meetings and/or Village Committee meetings

Ensures that Projects are supervised and implemented according to the Project Work Plan and schedule

### **3. Project Consultants**

(i) Qualifications

Degree Holders in Forestry

Background in Forestry

10 years of experience in forestry work

(ii) Tasks and responsibilities

Attends Project Steering Committee meetings

Liaises with Project Manager on reports that may be required by APFNet and ITTO from time to time

Publishes Mid-Term Review Report as may be necessary

Publishes the Project Completion Report at the end of the Project

### **4. Supporting Staff (Admin. Secretary)**

(i) Qualifications

SPM Holder

Background in computer word processing

25 years of experience in office administration work

(ii) Tasks and responsibilities

Assists the Project Manager in typing works especially reports and communicative notes relating to Project implementation.

### **5. Field Assistants**

(i) Qualifications

SPM Holder

Able to write reports in simple English or Bahasa Malaysia

Possesses relevant work experience

(ii) Tasks and responsibilities

Assists the Project Manager in work supervision

Enforces workers health and safety at the work site

Ensures workers maintain high quality workmanship

Assists the Project Manager to ensure the Projects implementation are not delayed and materials used are of high quality

Assist Project Consultants in their field work