

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

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| TITLE | MANAGEMENT OF SUNGAI MENYANG CONSERVATION AREA FOR ORANGUTAN PROTECTION AND UPLIFTING COMMUNITY LIVELIHOOD, SARAWAK, MALAYSIA |
| SERIAL NUMBER | PD 903/19 Rev.2 (F) |
| COMMITTEE | REFORESTATION AND FOREST MANAGEMENT |
| SUBMITTED BY | GOVERNMENT OF MALAYSIA |
| ORIGINAL LANGUAGE | ENGLISH |

SUMMARY

This project addresses a rather unusual problem of orangutan competing with humans for forest habitats and food the Sungai Menyeng Conservation Area (SMCA) in south-western Sarawak. The area covers about 14,000 ha and is occupied by a re-settled Iban community following construction of the Batang Ai Hydro Dam 33 years ago in 1985, with a population of about 500 living permanently in six longhouses. Adjacent to the SMCA is the Batang Ai National Park (24,000 ha) where over 300 orangutans are found. During the past two decades, the animal has come out of the national park to raid on fruit crops, causing much loss to Iban farmers. A recent survey indicated presence of 87 individuals inside SMCA.

While causing damage to crop the orangutan also attracts tourists to the area. This led to a joint study headed by Forest Department Sarawak in 2015 to find a solution that was neither detrimental to the farmers nor to the critically threatened primate species. Another problem concerns land claims by another group of Iban farmers who had left SMCA to resettle in rubber and oil palms schemes provided by government. Land disputes have resulted in many lands in SMCA being left idle.

The project's development objective is to enhance biodiversity conservation and rural economic transformation, and the specific objective is to improve community livelihood through sustainable use of forests and biological resources. These objectives will be achieved through three outputs. Output 1 will study to secure forest resource base for integrated management, Output 2 will initiate a process for effective ecosystem management and resource utilization, and Output 3 will encourage community participation in eco-tourism with improved facilities and training. Expected deliverables will be (a) forest resource base with well-defined and harmonized functions identified and secured, (b) orangutan raids on farm crops under control, (c) new activities for uplifting community livelihood initiated, (d) studies on carbon stocks in different forest types carried out and carbon trading schemes developed, (e) nature and culture eco-tourism facilities improved, and (f) stakeholders institutional arrangement for SMCA management established.

EXECUTING AGENCY FOREST DEPARTMENT SARAWAK

COLLABORATING AGENCY

DURATION 24 MONTHS

APPROXIMATE STARTING DATE TO BE DETERMINED

| BUDGET AND PROPOSED SOURCES OF FINANCE | Source | Contribution in US\$ | Local Currency Equivalent |
|--|-------------------|----------------------|---------------------------|
| | ITTO | 509,040 | |
| | Gov't of Malaysia | 587,075 | |
| | TOTAL | 1,096,115 | |

Project Brief

This proposed project challenges the Executing Agency to resolve a complex land use issue involving Bornean sub-species of orangutan *Pongo pygmaeus-pygmaeus* which is a totally protected in Sarawak. The primate has come out of the adjacent Batang Ai National Park (BANP) to raid on food crops of Iban farmers living in the SMCA (Map 1), where 87 individuals have been found. BANP is linked to Lanjak Entimau Wildlife Sanctuary (LEWS) on the Sarawak side and Betung Kerihun N.P. in West Kalimantan, Indonesia, forming the first Transboundary Biodiversity Conservation Area (TBCA) in the humid tropics in 1994. Estimated total orangutan population in BANP and LEWS is 1,700 individuals. Menyang River is a main tributary of the Batang Ai which discharges directly into Batang Ai Hydro Dam that supplies electricity to as far as Capital City of Kuching (Map.1)

In the SMCA, 500 Iban people live in six scattered longhouses, and are mostly subsistence farmers. They have a long cultural link with the orangutan, which they believe has taught their ancestors natural way of giving birth, and which they regard as part of their ancestral lifeline. While causing problems to farmers, the primate is also helping to earn income from tourists. Effective management of SMCA will meet conservation and livelihood needs, with a strategy that is not detrimental to the people and orangutan. Aside from the orangutan issue, the Iban settlers also find it very hard to make progress without outside help and capital and face the problem of complicated land disputes.

The project's development objective is to enhance biodiversity conservation and rural economic transformation, and the specific objective is to improve community livelihood through sustainable use of forests and biological resources. Deliverables will be made through three outputs. Output 1 will study to secure forest resource base for integrated management, Output 2 will initiate a process for effective ecosystem management and resource utilization, and Output 3 will encourage community participation in eco-tourism with improved facilities and training. Expected outcomes will be (a) forest resource base with well-defined and harmonized functions identified and secured, (b) orangutan raids on farm crops under control, (c) activities for uplifting community livelihood initiated, (d) studies on carbon stocks in different forest types carried out and carbon trading schemes developed, (e) nature and culture eco-tourism facilities improved, and (f) stakeholders institutional arrangement for SMCA management established and functional.

The overall strategy for effective SMCA management is to first secure forests and biodiversity on which the people and orangutan depend and provide new economic opportunities to improve land productivity and cash income. The project will be implemented through three outputs as mentioned in the Summary. Strategic action plans will encompass (i) zoning of forest habitats for orangutan and confining them there, possibly with planting of fruit trees, and where necessary, recommend a payment scheme to compensate farmers for their loss, with support from government and civil society, (ii) explore potential of low carbon trade for revenue and income growth, (iii) improve productivity of idle community lands with planting of valuable indigenous timber and non-timber species, and (iv) enhance community participation in niche tourism with improved basic infrastructure and training. The study on carbon assessment and developing carbon trading schemes is potentially feasible as local people are guarding the primary forest from logging and retaining old secondary forests for domestic use, and Sarawak government has recently announced intention to trade carbon as a new source of revenue and income.

To achieve the objectives, the project assumes (a) strong government/political commitment to the SMCA concept, (b) full cooperation from local Iban community, land owners and participants, (c) support from NGO and private sector, (d) effective institutional and human capacities, and good governance to deliver and sustain, and (e) strong and effective leadership for quick decision making at government and community levels. Expected main risks may arise if some of these requirements are not met.

FDS will lead the project as the Executing Agency and will work with relevant ministries and government-linked agencies, and be assisted by consultants, community participants, travel and tour agencies operating in the area, and civil society. The Iban community will be empowered to engage in all activities to advance knowledge and skills in resource surveys and sustainable utilization, conservation management and eco-tourism.

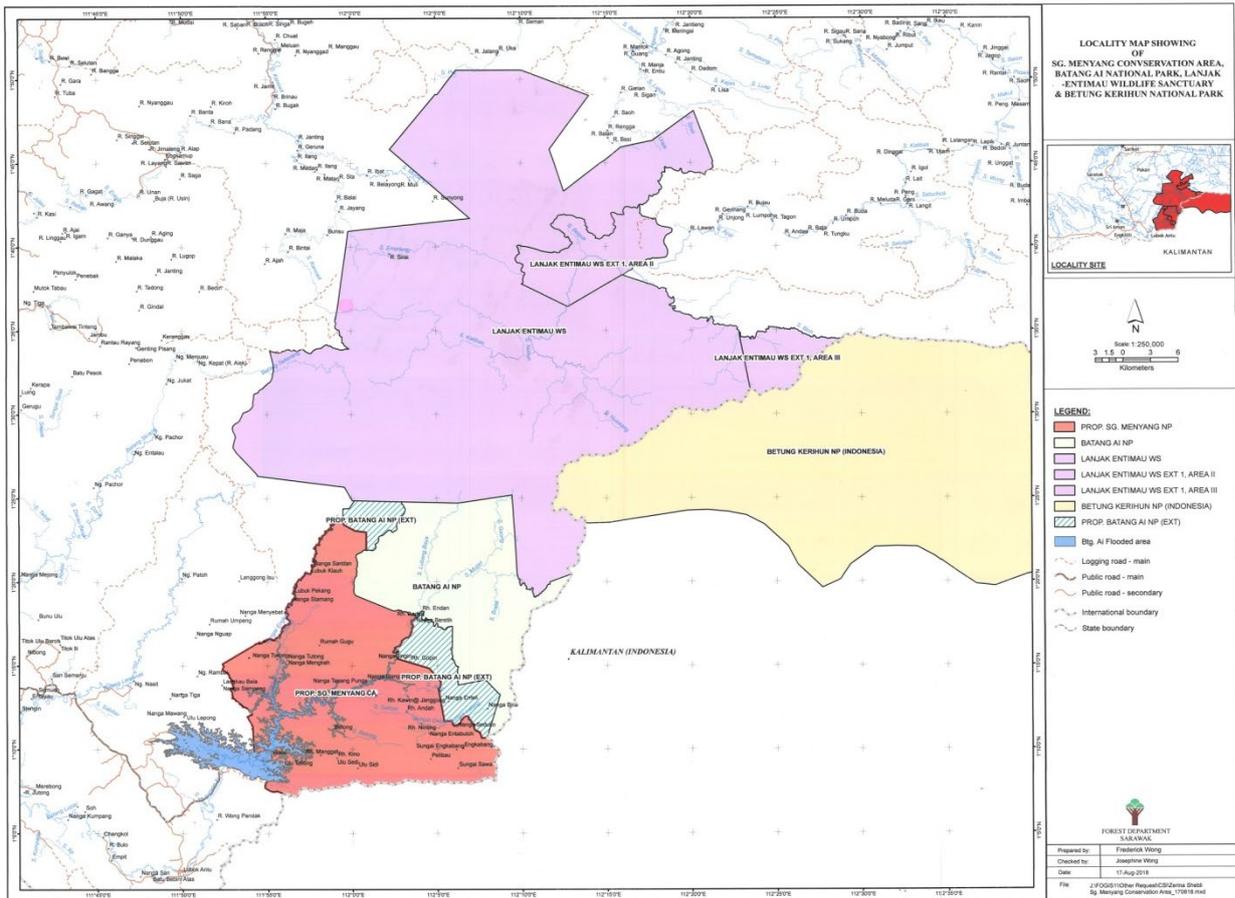
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List of Abbreviations and Acronyms

| | |
|-------------|---|
| BANP | : Batang Ai National Park |
| Batang, Btg | : Main river in Iban |
| BKNP | : Betung Kerihun National Park |
| CSR | : Corporate Social Responsibility |
| DoA | : Department of Agriculture |
| EA | : Executing Agency |
| FDS | : Forest Department Sarawak |
| FPIC | : Free prior informed consent |
| HoB | : Heart of Borneo |
| IMP | : Integrated Management Plan |
| ITTA | : International Tropical Timber Agreement |
| ITTO | : International Tropical Timber Organization |
| LEWS | : Lanjak Entimau Wildlife Sanctuary |
| MPI | : Ministry of Primary Industries |
| MUDeNR | : Ministry of Urban Development and Natural Resources |
| Nanga, Ng | : Confluence of river in Iban |
| NGO | : Non-Governmental Organization |
| NTFP | : Non-Timber Forest Products |
| PC | : Project Coordinator |
| PL | : Project Leader |
| PMU | : Project management unit |
| PSC | : Project Steering Committee |
| RTP | : Rural Transformation Programme |
| Sungai, Sg | : River in Iban and Malay |
| SFD | : Social Forestry Division of FDS |
| SMCA | : Sungai Menyang Conservation Area |
| TBCA | : Transboundary Biodiversity Conservation Area |
| TFU | : ITTO's Tropical Forest Update |
| TOR | : Terms of Reference |
| Ulu | : Head water of a river |
| WCS | : Wildlife Conservation Society (Malaysia Branch) |
| YPO | : Yearly Plan of Operation |



Map 1. Location of Sungai Menyang Conservation Area

PART 1. CONTEXT

1.1 Origin

In southern-western Borneo, the last remaining viable habitats for Bornean sub-species of orangutan *Pongo pygmaeus-pygmaeus* is located in the TBCA of BANP and LEWS on Sarawak side, and BKNP in West Kalimantan in Indonesia, totaling just over one million ha of predominantly primary rain forest. Unless this last remaining habitat is fully safeguarded, orangutan survival will be at risk from human-caused activities like logging, plantation development and hunting. Orangutan is totally protected and icon of Sarawak. The first study on the primate in BANP was carried out in 1993 (Meredith), followed by two more under ITTO projects in LEWS (Blouch in 1997, and Gurmaya & Silang in 2002), applying different survey methods and population density equations that yielded different results. **The following is a summary of the studies.**

In the BANP study, Meredith estimated a population of 360 individuals, compared to 285 by Gurmaya & Silang using all-nest calculation [ITTO project PD 16/99 Rev. 2 (F)]. In LEWS, Blouch (1997) estimated 1,024 individuals using medium density nest calculation which was comparable with 1,181 by Gurmaya & Silang (2002) using the same method. Blouch additionally identified over 50 species of wild fruit trees that were consumed by the primate. These findings indicate that populations in BANP and LEWS have remained quite stable.

In 2010 and financed by ITTO Project PD288/04 Rev. 2 (F) for the Development of Lanjak Entimau Wildlife Sanctuary as a Totally Protected Area, Phase IV, a ten-year Orangutan Strategic Action Plan for the TBCA was prepared. **Two follow up actions were (i) a joint survey of the primate in the Sg Menyang area by FDS, SFC and NGOs, and (ii) in 2018 a discussion to safeguard orangutan in the TBCA was organized by Indonesia under Project PD 617/11, Rev. 4 (F): Promoting Biodiversity Conservation in Betung Kerihun N.P. as the Transboundary Ecosystem between**

Indonesia and Sarawak, Phase III. Both sides agreed on further collaboration to exchange information on management and research.

This proposed project was conceived subsequent to reports that orangutan has come out of BANP to raid on farm crops in Sungai Menyang area, annually causing loss to farmers. Sungai Menyang is home to some 500 Iban people living in six longhouses. In 2013, a joint orangutan survey headed by FDS was carried out, and in 2015, the 'Ulu Sungai Menyang Orangutan Strategic Action Plan' (USMOSAP) was prepared, with the aims to (i) formulate a species and habitat conservation plan for the Ulu Menyang area, and enable this area to be managed and conserved for orangutan in perpetuity, (ii) provide a series of time-bound, locally relevant conservation interventions to benefit the local communities while not being detrimental to the orangutan, (iii) provide a framework which allows for the implementation to be monitored and reported on. The 'Ulu Ai Conservancy' was formed by several interested groups to advance conservation and give community a voice, but seemingly with little or no follow-up action.

Further investigations by FDS in 2016 and 2017 confirmed that the problem was indeed serious enough to require immediate intervention by government to find a solution to the problem. On 23 June 2016, FDS organized a dialogue in Kuching to discuss issues on community development and eco-tourism in the Batang Ai area, where SMCA is located and where Borneo Adventure (BA) Travel and Tour started operation in 1987. While promoting niche tourism with orangutan as icon, BA has contributed to conservation and community services, and has engaged longhouse communities and individuals as co-partners in tourism to share benefits. BA reported that community income from tourism in 2005-2015 totaled RM 4.3 million, with 1,000 to 1,200 tourists yearly, peaking at 1,500.

One issue raised by the diaspora community representatives was claiming ownership to lands in SMCA which they or their forefathers had occupied before, although it is believed that compensation had been paid by government during the hydro dam project 33 years ago. Other representatives requested FDS assistance for planting materials of rattan, agarwood (*Aquilaria*) and fruit trees. On 16-20 January 2017 a FDS-ITTO team visited several longhouses in SMCA to inform them of the functions of Social Forestry Division (SFD), and of FDS's intention to propose SMCA for conservation and community development.

A follow-up investigation by FDS in 2017 indicated that crop raids by orangutan had become more serious in the last five years, especially in Nanga Sumpa area, annually during fruiting seasons from November to February. Apart from feeding on the fruits, orangutan also inflicts damage by breaking tree branches. Macaques, wild boar and deer are other problematic pests reported. The survey team was also informed of frequent illegal hunting, fishing and gaharu collecting in and around the BANP, mostly by outsiders including foreigners from across the international border.

Integrated management of SMCA is proposed to resolve the problems, starting by securing the forest and biological resources, and sharing them with orangutan. Local Iban welcome the project proposal which they say is in line with RTP that was conceived by the late Chief Minister Tan Sri Haji Adenan Satem. However, they will not agree to SMCA being constituted as a totally protected area, like national park, which can deprive them of their traditional uses of the forests and lands which they regard as a part of their long cultural heritage.

1.2 Relevance

1.2.1 Conformity with ITTO's Objectives and Priorities

a. ITTA 2006

The proposed project addresses problems related to environmental protection, orangutan conservation, rural community livelihood and sustainable development, and is consistent with Article 1 of the International Tropical Timber Agreement 2006:

- Article 1 (c): Contributing to sustainable development and to poverty alleviation.

The project will introduce management strategies to that favour biodiversity conservation and sustainable development, by resolving conflicts between orangutan and people, and alleviating rural poverty with new economic opportunities to create employment and improve income.

- Article 1(n): Strengthening the capacity of members to improve forest law enforcement and governance and address illegal logging and related trade in tropical timber.

Strengthening law enforcement will ensure better safeguard to orangutan and other threatened wildlife and their habitats. It is important that local community's participatory role in enforcement is strengthened, and awareness created through eco-tourism, conservation projects, education, dialogues and training.

- Article 1 (r): Encouraging members to recognize the role of forest-dependent indigenous and local communities in achieving sustainable forest management and develop strategies to enhance the capacity of these communities to sustainably manage tropical timber producing forests.

Forest-dependent ethnic communities in Sarawak know the forest well and have been practicing sustainable utilization for many generations, by taking what they need and leaving the rest for the future. As in previous ITTO projects, this proposed project will engage local people in sustainable management as a key co-partner.

b. ITTO Strategic Action Plan 2013-2018

The proposed project conforms to:

- i) Strategic Priority 1: Promote good governance and enabling policy framework for strengthening SFM and related trade and enhancing SFM financing and investment.

Promoting good governance through stakeholder participation will be an essential element of the proposed project, focusing on conservation and sustainable resource management and utilization of non-timber forest products (NTFP), but no commercial logging or oil palm planting.

- ii) Strategic Priority 2: Increase the contribution of tropical forests to national and local economies.

It is intended to pursue this through promotion of NTFP, social forestry, enrichment planting, eco-tourism and carbon trade. Both government and people will stand to gain much from these new economic pursuits.

- iii) ITTO's Strategic Priority 3: Enhance the conservation and sustainable use of biodiversity in tropical timber producing forests.

Biodiversity conservation will focus on securing the only primary lowland forest in SMCA, and preserving several secondary forests aged between 20 and 80 years which are rich in medicinal and food plants and have been colonized by many forest-edge birds and small mammals.

- iv) Strategic Priority 4: Reduce tropical deforestation and forest degradation and enhance the provision of environmental services.

Environmental services can be enhanced by excluding the secondary forests from further shifting cultivation of paddy or oil palm planting. Enrichment planting and social forestry will be introduced to improve ecosystem resilience and value of under-used or idle lands.

c. ITTO/IUCN Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests

ITTO/IUCN guidelines define the principles and priority actions for conservation and sustainable use of biodiversity in tropical timber production forests. Principle 3 on 'political commitment, policies and laws' is relevant, as land use conflicts in the SMCA can only be resolved with political commitment and decision and effective law enforcement. Government can disallow logging and oil palm planting that lead to environmental degradation and loss of biodiversity and enact new policy and laws to constitute SMCA as a protected area.

d. Joint ITTO-CBD Collaborative Initiative for Tropical Forest Biodiversity

The following objectives of the Joint ITTO-CBD Initiative are relevant:

- Objective 2: 'Conservation and sustainable management'. This is consistent with the plan to manage forest lands for orangutan protection and sustainable development;
- Objective 3: 'Safeguarding forest biodiversity in logged-over forest and secondary forest through enrichment planting and intensified monitoring'. This will be achieved by securing the secondary forests and enriching them with economically valuable species. Idle community lands will also be considered;
- Objective 4: 'Improving welfare of local communities and awareness on nature conservation and sustainable development'. The proposed project aims to promote awareness in conservation and sustainable development through improved land use, orangutan conservation and eco-tourism to benefit local communities.

1.2.2 Relevance to Malaysia's Policies

The project proposal conforms to Malaysia' National Policy (revised 1993) to conserve and manage the nation's forest based on the principle of SFM, to protect environment as well as to conserve biodiversity and genetic resources, and to enhance research and education.

For Sarawak, the following policies and laws are relevant:

1) Statement of Forest Policy (1954)

This policy assures that forest resources must be managed in perpetuity for the benefits of the people of Sarawak, by maintaining a balance between protection and commercial use, as stated below.

- a) To preserve permanently for the benefit of the present and future inhabitants forest land sufficient.
 - i. for the assurance of the sound climatic and physical conditions of the country; the safeguarding of soil fertility, and of supplies of water for domestic and industrial use, irrigation and general agricultural purposes; and the prevention of damage by flooding and erosion to rivers and to agricultural land;
 - ii. for the supply in perpetuity and at moderate prices of all forms of forest produce that can be economically produced within the country, and that are required by the people for agricultural, domestic and industrial purposes under a fully developed national economy.

2) Current Land Use Policy

SMCA supports Sarawak's land use policy to promote conservation and sustainable land use. The policy targets total land area of 12.4 million ha for the following purposes:

- Five million ha as permanent forest estate (PFE) for timber production;
- One million ha for forest plantation development;
- One million ha for conservation of totally protected areas (TPA);
- Four million ha for agriculture, with 3 million ha for oil palm;
- Remaining 1.4 million ha for miscellaneous development.

3) Sarawak's Rural Transformation Programme (RTP)

This recent initiative is intended to uplift rural economy and livelihood and address income disparity between urban and rural populations. Prior to this, government has formed several lead agencies to undertake planning and development, such as Sarawak Corridor for Renewable Energy (SCORE) and Regional Corridor Development Authority (RECODA). In 2016, FDS created

the SFD (Social Forestry Division) to replicate the work of ITTO in conservation and sustainable development. This project will contribute to the RTP.

4) National Parks and Nature Reserves Ordinance (1998) and Wildlife Protection Ordinance (1998)

These two Ordinances were introduced in 1958 and revised in 1998, to provide for establishment of national parks, nature reserves and wildlife sanctuaries as Totally Protected Areas (TPA) and law enforcement. The SMCA is contiguous with BANP and will serve as a buffer zone and an extended area for biodiversity and orangutan protection.

5) Transboundary Biodiversity Conservation Area

The TBCA comprising LEWS, BKNP and BANP is vital in ensuring survival of the largest remaining population of *Pongo pygmaeus-pygmaeus* in southern-western Borneo. The SMCA will serve as an important extended habitat for the TBCA.

1.3 Target Area

1.3.1 Geographic location

SMCA (approximately 14,000 ha) is located in south-western Sarawak in Lubok Antu District in Kuching Division (see Map 1). From Kuching City, it takes about four hours by road to reach Lubok Antu Town, and another 25 minutes to Batang Ai hydro dam. From the dam, several longhouses can be reached in 45 to 60 minutes by wooden longboat powered by outboard engine crossing the hydro lake. Sungai Menyang is one of the many tributaries of Batang Ai which was not submerged and discharges directly into the lake. Surrounding vegetation consists of disturbed natural forest and secondary forest, and planted crops of rubber, pepper and hill rice. Department of Agriculture (DoA) has introduced cage-culture of Tilapia fish, but the lake is safe for certain water sports due to numerous submerged tree stumps. Topography is characterized by gentle to rugged and undulating terrain, rising to 800 m a.s.l. on narrow ridges with mixed dipterocarp forest. BANP (including proposed extension), LEWS and BKNP are located to the north-east.

1.3.2 Socio-cultural, economic and environmental aspects

a) Socio-cultural aspects

The Iban people have lived in Batang Ai and Lanjak Entimau regions for many generations. Within SMCA, six longhouses are scattered along main tributaries of Batang Ai including Sg. Menyang, with an estimated 500 permanent residents, while two other longhouses are located outside. They represent a re-settled community affected by construction of Batang Ai Hydro-dam in 1985. Each longhouse has 15 to 25 doors or families and is headed by a 'Tuai Rumah' or Headman, who plays multiple roles as community leader, advisor and judge to settle disputes. Gawai or Harvest Festival is celebrated on 1 June each year; other festivals include Gawai Kenyalang (hornbill) and Gawai Hantu (spirits). 'Miring' ceremony is performed with offer of food to appease the spirits and for good luck.

While practicing shifting agriculture, Iban farmers retain patches of forest, normally on steeper terrain, as a reserve for timber and NTFP for domestic use, and for hunting. These 'pulau galau' are regarded as native customary right reserves, but often without clearly defined boundaries and legal status. Besides shifting agriculture, hunting, fishing and gathering are still a part of their subsistence livelihood, with surplus sold for cash. The Iban people's cultural link with the orangutan prevents them from killing the animal, which attracts tourists to the area. Illegal hunting and fishing are often done by diaspora groups and their friends living in nearby towns and villages, who still claim ownerships to the lands, and by foreigners from Kalimantan.

b) Economic aspects

Since construction of the hydro dam in 1985, communities of Batang Ai have enjoyed better road access to the nearest town of Lubok Antu and beyond, but basic infrastructure in more remote longhouses has remained little changed. Although living near the hydro-dam, electricity supply is

not connected to their longhouses. Solar power was provided by government not very long ago, while some families have their own generators for back up. Travel by engine-powered long boats is expensive, as petrol price costs almost double at the dam site, same for prices of other essential goods.

Some farmers have started planting rubber and pepper normally on a small scale, in addition to fruits and vegetables. New and old shifting cultivation plots are located near settlements along Sungai Delok, Sungai Menyang Taih and Sungai Menyang Sedi. Shortage of labour is a problem as younger generations with basic education have left to seek employment in towns and overseas. Land disputes have led to many agricultural lands being left idle. Shifting cultivation of hill paddy normally produces sufficient rice to last a year, and to make rice wine or 'tuak'. Women make handcrafts of mats, baskets and bracelets for own use and for sale to visitors, but materials especially rattan are becoming scarce. Additional income is earned from participation in tourism-related activities like transport and home stays, but catering is limited to a few. BA Travel and Tour has reported annual visitor volume at between 1,000 and 1,200, peaking at 1,500, and community income from tourism totaling RM 4.3 million in 2005-2015. Cage culture of tilapia fish by several longhouse residents has been discontinued.

Due to high cost of essential goods and irregular cash income, the people want outside help to improve to repair longhouses and improve or maintain basic amenities like gravity-feed water supply and toilets, and planting materials. FDS has introduced planting of agarwood or gaharu to produce tea from the leaves, and distributed seedlings of fruit trees and rattan. Niche tourism can be boosted by safeguarding the orangutan and its habitats and improving management.

c) Environmental aspects

Outside of settlements and active farming lands, the area is largely covered by the following forest types:

- i) Secondary forests aged between 20 and 80 years, the latter quite rare in Sarawak. They are dominated by secondary light demanding trees, shrubs and herbs by species succession, and floristic composition changes with age and is also affected by soil fertility. These forests offer an excellent opportunity to study natural regeneration and recruitment over time. Older forests have become home to many common forest-edge birds and mammals (the latter including wild boar, monkeys and squirrels), and insects.
- ii) Mixed dipterocarp forest (MDF) on narrow ridges containing many trees of commercial value. Big trees occupy the ridges, while smaller ones are found on the slopes. This forest serves as an important gene bank for timber species and non-timber species for forest landscape restoration;
- iii) Riparian forest along rivers maintains a healthy environment for aquatic fauna, which feed on flowers and fruits of many trees. Several trees in the Dipterocarpaceae family (*Dipterocarpus* and *Shorea* spp.) are protected by law for erosion control. New alluvial deposits of sand and clay are loose and unstable, and thick deposits have caused many trees to be killed, i.e. *Bellucia pentamara* and *Neolamarckia cadamba*;
- iv) 'Pulau galau' or communal reserves comprising remnants of primary forest to supply materials and food for domestic consumption.

1.4 Expected Outcomes at Project Completion

The following outcomes and changes are expected after project completion:

- i. Biological resources studied and uses identified for conservation and sustainable development;
- ii. Habitats for orangutan established, with a buffer zone to prevent the animal from direct access to farm crops. Such a buffer can be an open shifting agriculture land. If necessary, a payment scheme to compensate farmers for their loss will be recommended to the government;

- iii. New opportunities for employment and income realized through social forestry and enrichment planting of valuable species, carbon trade and eco-tourism, for which skill training will be incorporated. Women will be engaged in management planning and decision making;
- iv. Eco-tourism enhanced with better amenities, more active local participation and better and safer services;
- v. SMCA secured and endorsed by government for integrated management with support and cooperation of local Iban community. Land use zoning completed to accommodate conservation, development and community needs.
- vi. An institutional framework and platform for communication, consultation and monitoring established and functional, to be led by FDS.

With its strategic location, diverse forest ecosystems and biodiversity, long and colourful Iban cultures and ancestral linkage with the orangutan, SMCA can be transformed into a model for conservation and socio-economic development of international renown, and a famous destination for niche tourism.

PART 2. PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

2.1.1 Institutional setup and organizational issues

In order to enhance the fundamental functions of SMCA's natural resources to serve community and conservation needs, a collective multi-disciplinary and scientific approach involving different stakeholders and partners from government and private sector is called for. The following stakeholders and partners are proposed in the institutional setup:

- i. Federal Ministry of Primary Industries (MPI) representing the Malaysian government as a producer member of the ITTO, and Sarawak Ministry of Urban Development and Natural Resources (MUDeNR) in charge of forests and all related matters in Sarawak. Besides political support and funding, these ministries also provide guidance and advice to the project as members of the Project Steering Committee (PSC);
- ii. FDS operates under the MUDeNR as the custodian of forests. As EA, it will lead the institutional setup to facilitate planning and make arrangement for implementation, contribute in kind, and secure additional funding under its social forestry programme. FDS will assign a project coordinator, a chief local counterpart, and a team of local experts and technical staff to the project. In consultation with ITTO, it will appoint a project leader and a team of local consultants. Director of Forests will act as the Chairman of the PSC;
- iii. Sarawak Forestry Corporation (SFC) dealing with operational matters including biodiversity conservation, TPA management and law enforcement. Will participate in planning, and in studies on flora and fauna and eco-tourism;
- iv. Kuching Resident Office and District Office in Lubok Antu, representing Sarawak government on matters relating to administration, socio-economic and cultural development and community welfare. They will also be involved as members of the PSC;
- v. Department of Agriculture (DoA) on agriculture and tagang fishery development, provide soil maps and planting materials and give training and advice to farmers;
- vi. Iban community living in six longhouses as project's main beneficiaries, and whose support and cooperation is crucial to the project's success. A local committee led by longhouse headmen will be formed to discuss important issues and resolve problems, coordinate planning and implementation. They will be represented in the PSC;
- vii. Borneo Adventure Travel and Tour (BATT) and WCS with genuine interest in conservation, having participated in studies on orangutan in the SMCA;

Organizational issues will concern planning and scheduling of activities in accordance with the work plan, to be spearheaded by the EA and PL. Consultants will be briefed on project background and location, nature of their respective activities and expected outputs. Preparation for field work will involve organizing land and river transport, assigning technical assistants and engaging local guides. Prior to this, PL and CLC (chief local counterpart) will conduct field reconnaissance and meet with community representatives to seek assistance and support.

2.1.2 Stakeholder analysis

Table 2.1 shows two categories of stakeholders and their involvement. The Iban community will play crucial role as co-partners and main beneficiaries, as success would depend on extent of their involvement, including sharing their forested lands and reserves with orangutan, if required.

Table 2.1: Summary of Stakeholder Analysis

| Stakeholder | Characteristics | Problems/needs/interest | Potential | Involvement in the project |
|---|---|---|--|--|
| Primary stakeholders | | | | |
| i. Local Iban community as direct beneficiaries, population 500 | Live in six longhouses and practice shifting agriculture, hunting, fishing, gathering forest produce, rich in customs and culture including linkage with orangutan, involved in eco-tourism | Lack skills, labour and capital, need outside help in sustainable livelihood development, resolving land conflicts orangutan raids on farm crops, and improving basic facilities | As project key co-partners, hardworking and enterprising, aware of conservation needs, rich in local knowledge, women are equally skillful | Project implementation and management, help in law enforcement, share local knowledge on resources and uses, PSC members |
| ii. Forest Department Sarawak (FDS) | Custodian of forests and project's EA, <u>co-finance project</u> | SFM and biodiversity conservation, securing SMCA will need political and community support, promote social forestry, lack skilled management and scientific expertise, weak law enforcement | <u>Planning and management, play key roles in R&D, secure SMCA and uplift rural livelihood through socio-forestry</u> | Project EA in overall planning, engaging consultants, project fund management, liaison with stakeholders, strengthen enforcement |
| iii. Sarawak Forestry Corporation (SFC) | Likely to take over national parks and wildlife in 2019; responsible for TPA management, R&D, eco-tourism, law enforcement | TPAs lack on-ground management presence, threatened by illegal encroachment, lack skilled management staff in field work to strengthen management and compliance | Strategic planning, R&D in biodiversity and eco-tourism, law enforcement, <u>contribute to study cost</u> | Orangutan study and conservation planning, eco-tourism development, curb illegal activities, training, member of PSC |
| Secondary stakeholders | | | | |
| i. Ministry of Primary Industries (MPI) | Federal ministry responsible for strategic planning and industrial development | Interest in forest management policies, conservation and industrial development in Sarawak | Policy and financial support, liaison with ITTO and donors on project funding | Advisory, funding, publicity, member of PSC |

| Stakeholder | Characteristics | Problems/needs/ interest | Potential | Involvement in the project |
|--|---|---|--|--|
| ii. Ministry of Urban Development and Natural Resources (MUDeNR) | including timber products, represents Malaysia in ITTO Responsible for policy, legislative and operational matters relating to forestry in Sarawak | Committed to achieving SFM and conservation objectives, improving productivity and value of forests | Political support to SMCA, secure funding, sustain TBCA and bi-lateral cooperation with Indonesia | Political, advisory, funding, realizing SMCA management objectives, PSC member |
| iii. Divisional Resident & District Offices | In charge of regional administrative and socio-economic affairs, planning, coordinating and executing government projects | Large administrative region with scattered population, poor access and amenities, weak in technical output, limited staff | Facilitate community development and RTP, help solve problems and disputes share local knowledge and experience | Advisory, administrative, familiar with ethnic laws and customs for problem solving, PSC members |
| iv. Borneo Adventure Tour and Travel (BATT) | Has operated in the area since 1987 promoting niche tourism and community development | Want community to benefit from eco-tourism, develop tourist facilities, operate tours with local partners, interested in conservation | Enhance local participation in tourism, improve facilities, training, <u>contribute to orangutan conservation and tourism studies</u> | Tourism-related development and promotion, contribute to infrastructure with planning and fund, PSC member |
| v. Wildlife Conservation Society (WCS) | NGO promoting conservation and research, self-funding | Biodiversity conservation, research and training, and orangutan survey in BANP and SMCA | Collaborative research <u>with funding input</u> , strategic planning, knowledge sharing | Joint study on orangutan and R&D, PSC member |
| vi. Department of Agriculture (DoA) | In charge of agriculture development, research, training and extension services | Rural development handicapped by scattered population, poor access, lack of facilities, limited manpower and fund | Assist in community planning and land use, inland fishery, tagang, on-farm training | Advisory, research on crop cultivation, tagang fishery, training, PSC member |

Note: Research and financial institutions for the project will be FDS, SFC, Ministries and local NGOs as the primary and secondary stakeholders respectively

2.1.3 Problem Analysis

Key problems confronting orangutan conservation and local Iban communities in SMCA were mentioned a joint government-civil society study in 2015, leading to preparation of the 'Ulu Sg. Menyang Orangutan Strategic Action Plans' (USMOSAP). The study found (i) lack of species and habitat conservation plans, (ii) lack of time-bound and locally relevant conservation interventions to benefit the local communities and orangutan, (iii) lack of framework which would allow for implementation to be monitored and reported on, and (iv) lack of a channel to give local communities a voice. Further investigations by FDS in 2016 and 2017 concluded that the problems required urgent intervention by government to find a solution. On orangutan raid on fruit crops, a study by FDS in 2017 found that the situation had worsened in the past five years, especially in Nanga Sumpa area where fruit trees are found in abundance. Affected farmers' early request to government for help and to seek compensation of US\$100 a year did not receive any response, while the people are still making every effort to help protect the animal.

The matter on land claim was brought up during a community dialogue organized by FDS on 23 June 2016. The claim was made by communities that had left to resettle in rubber and oil palm schemes at Lubok Antu town provided by government, although it was believed these land owners had already been compensated in cash. These lands have been left idle. Participants were also informed of local dependence on eco-tourism but supporting basic facilities and visitor services in longhouses were inadequate, and no proper training had been given. Benefits of eco-tourism also needed to be more equally shared among the longhouses.

In the SMCA, six longhouse communities and their farmlands are located in State land and are without legal tenure and land titles. State land is normally earmarked by government for socio-economic development. Securing the SMCA will thus require government consent by converting it into a special conservation area. USMOSAP had earlier recommended this but there had been no response.

If the above problems are not addressed, the expected risks could be (a) losing SMCA as a strategic extended biodiversity conservation area linking adjacent Batang Ai N.P., (b) environmental degradation especially if timber-rich primary forest is allowed to be licensed for logging, (c) local communities facing uncertainties of land ownership, (d) orangutan survival threatened, and (e) lost income from niche tourism specializing in Iban culture, adventure and nature.

Addressing the key problems should lead to the following expected outcomes:

- i. SMCA approved as a special biodiversity conservation area for integrated development;
- ii. SMCA's important forest ecosystems and land resources secured for biodiversity conservation and community livelihoods;
- iii. Local community land use problems resolved;
- iv. Improved productivity and value of idle lands with socio-forestry led by FDS;
- v. Improved incomes from niche tourism with upgraded facilities and training.

The Problem Tree (Figure 1) indicates the key problems and consequences if the SMCA is not secured, while the Objective Tree (Figure 2) suggests positive actions leading to the project's success.

Figure 1. Problem Tree

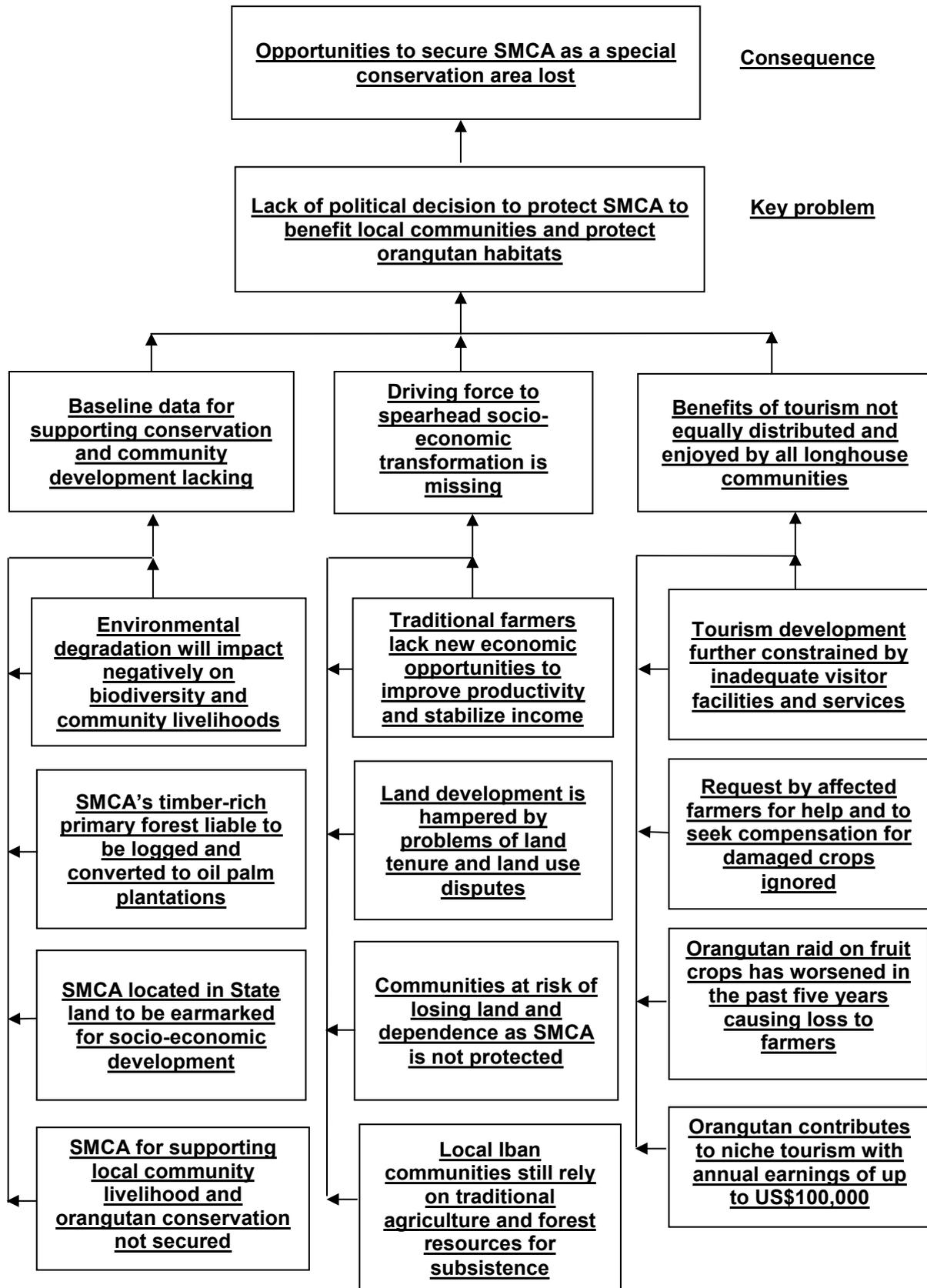
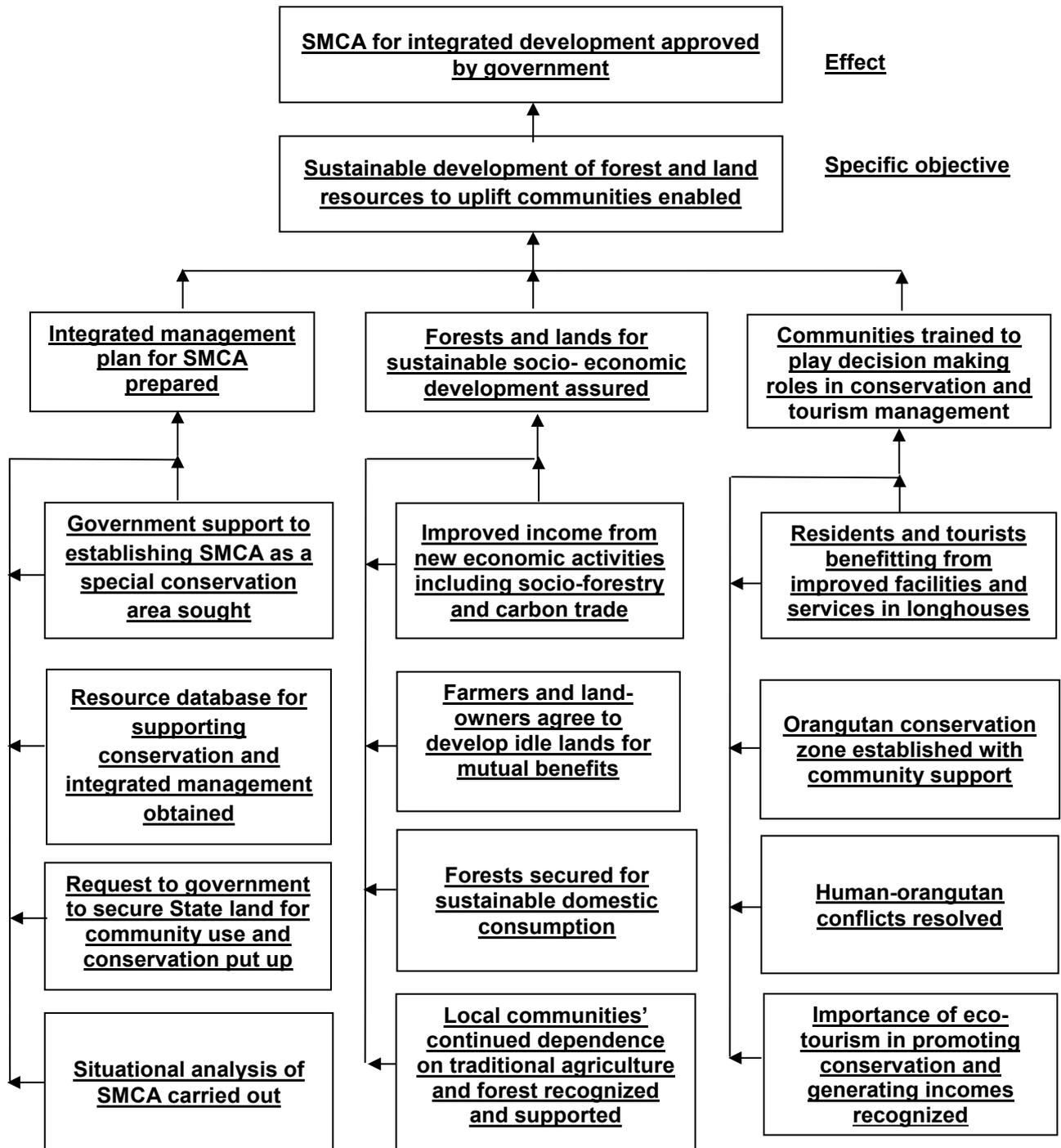


Figure 2. Objective Tree



2.1.4 Logical Framework Matrix

Table 2.2: The Logical Framework Matrix (LFM)

| Strategy Intervention | Measurable indicators | Means of verification | Key assumptions |
|--|---|---|---|
| <p><u>Development objective</u></p> <p>To enhance biodiversity conservation and rural socio-economic transformation</p> | <p>After project completion:</p> <ul style="list-style-type: none"> - <u>Four major forest types surveyed for potential on conservation and community use</u> - <u>Socio-economic analysis of six longhouses carried out</u> - <u>Integrated management plan for SMCA produced</u> | <ul style="list-style-type: none"> - <u>Consultant's reports on forests and values</u> - <u>Community meetings and dialogues, reports</u> - <u>Management plan published</u> | <ul style="list-style-type: none"> - Government support with funding - Institutional setup for SMCA supported by scientific and technical expertise - Cooperation from local Iban community to share resources - Active participation by landowners, farmers and other interested stakeholders |
| <p><u>Specific objective</u></p> <p>To uplift community livelihood through sustainable development of forest resources and land use</p> | <p>After project completion:</p> <ul style="list-style-type: none"> - <u>For each of six longhouses, one idle land up to 1 ha selected as agro-forestry model to improve productivity and stabilize income</u> - <u>Two skill training courses for 20 men and 10 women participants and farmers conducted</u> | <ul style="list-style-type: none"> - <u>Agro-forestry plots with planted crops</u> - <u>Improved income</u> - <u>List of participants trained</u> - <u>Consultants' reports</u> | <ul style="list-style-type: none"> - Active involvement of key stakeholders in government and civil society - Land use conflicts resolved - Interested local participants to work together - Support by other stakeholders (tour agencies and NGO) - Community headmen to lead and build trust |
| <p><u>Output 1</u></p> <p>To study and secure forest resource base for integrated management planning</p> | <p>After project completion:</p> <ul style="list-style-type: none"> - <u>Baseline studies in two primary forest sites and two secondary forest sites carried out</u> - <u>Ecosystem resources analyzed, strategic plans produced</u> - <u>Community involvement in management</u> | <ul style="list-style-type: none"> - <u>Consultant's reports</u> - <u>Three consultative meetings with communities</u> - <u>Local stakeholder development committee</u> | <ul style="list-style-type: none"> - Community support to study - Community willing to share local knowledge - Experienced ecologists and biologists to conduct study - Support from stakeholders with interest in conservation - Effective leadership |

| Strategy Intervention | Measurable indicators | Means of verification | Key assumptions |
|---|---|--|--|
| <p><u>Output 2</u></p> <p>To initiate process for effective ecosystem management and resource development</p> | <ul style="list-style-type: none"> - <u>Two orangutan conservation areas identified</u> - <u>One disturbed primary forest and one secondary forest land enrichment planted with timber and NTFP</u> - <u>One ha plot each in primary forest and old secondary forest assessed for above ground biomass for carbon stock</u> | <ul style="list-style-type: none"> - <u>Names and locations of conservation areas</u> - <u>Records of planting, local communities involved, reports</u> - <u>Consultant's report</u> | <ul style="list-style-type: none"> - Pro-active local communities and participants - Land use disputes resolved - Support from other key interested stakeholders - Intervention by FDS via SFD with additional financial input - Strong community leadership |
| <p><u>Output 3</u></p> <p>To enhance community participation in eco-tourism with improved facilities and training</p> | <ul style="list-style-type: none"> - <u>Eco-tourism potential for each of six longhouses prioritized</u> - <u>Gravity-feed water supply and toilet facilities for three longhouses upgraded</u> - <u>Two training courses on tourism products, services and guiding for 30 participants including 10 women organized</u> | <ul style="list-style-type: none"> - <u>Community meetings, a plan for each longhouse</u> - <u>Completed facilities, reports</u> - <u>Certificates for participants, reports</u> | <ul style="list-style-type: none"> - Support from tourism ministries and related agencies - Planned tourism facilities successfully carried out - Collaborative local communities and tour operators to sustain and make improvement - Stable orangutan population to attract tourists |

2.2 Objectives

2.2.1 Development Objective and Impact Indicators

The project's development objective to enhance biodiversity conservation and rural economic transformation is indeed relevant and necessary for the SMCA as an extended sanctuary and habitat for orangutan. This can happen only if the proposed SMCA is secured and excluded from destructive land development. Expected impact indicators to measure achievements after project completion are as follows:

- SMCA endorsed by Sarawak government for conservation and community development;
- Community land use disputes and threats on biodiversity and environment reduced;
- Conflicts between orangutan and farmers resolved;
- Forest land and community lands managed to improve productivity and value;
- Useful NTFP with economic potentials introduced for development by communities;
- Sustainable livelihood development models established and replicated;
- Residents and tourists benefitted from improved infrastructure and amenities;
- Improved quality of life leads to reduced dependence on forest.

2.2.2 Specific Objective and Outcome Indicators

The specific objective is to uplift community livelihood through sustainable development of forest resources and land use. Land value can be improved by planting of timber and NTFP especially rattan that are already in short supply, and better opportunities for eco-tourism and employment created with enhanced conservation efforts. Expected outcome indicators after project completion will be:

- Baseline data for ecosystems, flora and fauna collected, and potential resources for economic development identified;
- Forests for orangutan, community use and eco-tourism identified and zoned;
- New economic activities in social forestry and reforestation implemented;
- Development models for sustainable livelihood demonstrated with viable land use practices;
- Training and capacity building in conservation and resource development conducted;
- Socio-economic benefits of conservation demonstrated.

PART 3. DESCRIPTION OF PROJECT INTERVENTION

3.1 Outputs and Activities

3.1.1 Outputs

- Output 1** : Forest resource base for integrated development planning secured.
- Output 2** : Process for effective ecosystem management and resource development initiated.
- Output 3** : Community participation in eco-tourism enhanced with improved facilities and training.

3.1.2 Activities

Output 1

- Activity 1.1 : To conduct forest resource survey and compile baseline data on flora and fauna.
- Activity 1.2 : To **identify** non-timber forest products of economic potential for sustainable development.
- Activity 1.3 : To set up project management unit for planning, development and monitoring.

Output 2

- Activity 2.1 : To study impacts of orangutan raiding farm crops.
- Activity 2.2 : To initiate community-based activities for uplifting livelihood.
- Activity 2.3 : To conduct study on carbon stock and develop carbon trading schemes.

Output 3

- Activity 3.1 : To study potential for more community involvement in eco-tourism.
- Activity 3.2 : To improve basic facilities in longhouses and to promote eco-tourism.
- Activity 3.3 : To train community participants in tourism-related activities.

3.2 Implementation Approaches and Methods

The problems concerning SMCA are somewhat complex, firstly, due to competition for resources between people and orangutan, and secondly, the Iban communities themselves are apprehensive that they may not be able to make good progress due to lack of infrastructure, limited skilled manpower and capital, as well as land contest. This project proposes to address the problems with a multi-stakeholder approach that involves government, local communities and civil society. Top on the agenda is to secure forest resources for conservation and environmental services, and secondly, to provide new economic opportunities to improve land productivity and income for the people. The final outcome will be to formulate a development strategy that is neither detrimental to the orangutan nor the people, and to be implemented through multi-stakeholder consultation and free prior informed consent (FPIC).

The outputs and activities have been defined with the aim of harmonizing conservation with sustainable development to reach a win-win situation, to be executed in the following manners:

Output 1 recognizes the need to secure SMCA's forest resource base as fundamental to biodiversity conservation, environmental health and serving community needs, and generating revenue and income.

Activity 1.1 will conduct studies on forest ecosystems and biodiversity to build a data base for planning and development. The forests will be evaluated based on structure, species composition and biodiversity, and importance for conservation.

Activity 1.2 will select forest resources, e.g. NTFP, of economic potential for development under social forestry, enrichment planting and restoring degraded landscapes.

Activity 1.3 is necessary as a follow up to Activities 1 and 2, to set up a project management unit (PMU) to plan and ensure optimal utilization of resources.

Output 2 is designed to improve forest management and land use to meet conservation and community needs.

Activity 2.1 will address the problem of orangutan raiding on farm crops. Possible solutions are to create a buffer (e.g. shifting cultivation plot) to separate orangutan from fruit farms and confine them to their reserve with adequate food supply, supplemented by planting of fruit trees, if necessary. A payment scheme may be proposed to compensate farmers for their loss, should the need arise. Part of the payment may be sourced from tourism or low carbon trade.

Activity 2.2 is intended to uplift livelihood with new economic activities under social forestry and landscape reforestation using timber and NTFP, targeting under-utilized and idle lands. Women will be empowered to play key role in management, food and handicraft production to improve income.

Activity 2.3 is in line with recent government intention to promote low carbon trade as new source of revenue and income for the people. If SMCA's forests can be traded, local inhabitants will benefit from trading of secondary forest of different ages and provide incentives for conservation and landscape restoration. The study will include training on concept of carbon trade and methodology for above ground biomass (AGB) assessment, carbon trade schemes, and monitoring.

Output 3 recognizes that niche tourism in the SMCA rests on orangutan as an iconic tourist attraction, with close linkage to Iban culture. Emphasis will be improving basic amenities and services and encouraging local participation with training.

Activity 3.1 will begin with SWOT analysis to evaluate strengths, weaknesses, opportunities and threats on eco-tourism, and use the findings to make improvement. Stakeholder support is expected from ministry of tourism and related agencies, local tour operators and civil society.

Activity 3.2 recognizes the need for adequate basic facilities for longhouses and for home stay services, such as gravity-feed water supply, electricity (from solar or mini-hydro), toilets and bathrooms. Outdoor facilities will include forest trails and visitor information centres.

Activity 3.3 will conduct training to enhance knowledge and entrepreneurial skills in tourism-related activities for interested local participants. Local farmers will benefit if they can regularly supply vegetables, fruits and meats to visiting tourists. In this, women can play a big role.

3.3. Work Plan

Table 3.1: Work plan for the entire project duration

| Output/Activity | Responsible party | Year 1 | | | | Year 2 | | | |
|---|-------------------|--------|----|----|----|--------|----|----|----|
| | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Output 1 | | | | | | | | | |
| A 1.1: <u>To conduct forest resource survey and compile baseline data on flora and fauna</u> | EA, PL | | | | | | | | |
| A 1.2: <u>To identify non-timber forest products of economic potential for sustainable development</u> | EA, PL | | | | | | | | |
| A 1.3: To set up project management unit for development planning and monitoring | EA, PL, NGO, PS | | | | | | | | |
| Output 2 | | | | | | | | | |
| A 2.1: To study impacts of orangutan raiding farm crops | EA, PL, NGO | | | | | | | | |
| A 2.2: To initiate community-based activities for uplifting livelihood | EA, PL | | | | | | | | |
| A 2.3: To conduct study on carbon stock and develop carbon trading schemes | EA, PL | | | | | | | | |
| Output 3 | | | | | | | | | |
| A 3.1: To study potential for more community involvement in eco-tourism | EA, PL, PS | | | | | | | | |
| A 3.2: To improve basic facilities in longhouses and to promote eco-tourism | EA, PL, PS | | | | | | | | |
| A 3.3: To train community participants in tourism-related activities | EA, PL, PS, NGO | | | | | | | | |

Note: EA=Executing Agency, PM=Project Leader, PS=Private Sector, NGO=Non-Governmental Organizations

3.4 Budget
3.4.1 Master Budget Schedule

| <u>Outputs/ Activities</u> | <u>Description</u> | <u>Budget Comp.</u> | <u>Quantity</u> | | <u>Units</u> | <u>Unit cost US \$</u> | <u>Total Cost US \$</u> | <u>ITTO</u> | | <u>Exec Agency</u> |
|--------------------------------|--|-------------------------|------------------|------------------|-----------------------------|----------------------------|-----------------------------|----------------------|----------------------|------------------------|
| | | | <u>Yr 1</u> | <u>Yr 2</u> | | | | <u>Yr 1</u> | <u>Yr 2</u> | |
| | <u>Project Leader</u> | <u>11</u> | <u>12</u> | <u>12</u> | <u>Man month</u> | <u>4,500</u> | <u>108,000</u> | <u>54,000</u> | <u>54,000</u> | - |
| | 1 Accounting officer | <u>11</u> | 12 | 12 | Man month | 1,000 | 24,000 | 12,000 | 12,000 | - |
| | 1 Project officer | <u>11</u> | 12 | 12 | Man month | 1,000 | 24,000 | 12,000 | 12,000 | - |
| | 1 Administrative assistant | <u>12</u> | 12 | 12 | Man month | 1,000 | 24,000 | 12,000 | 12,000 | - |
| | <u>Employees' contribution to EPF (13% of salary)</u> | <u>13</u> | <u>12</u> | <u>12</u> | <u>Man month</u> | <u>1,950</u> | <u>23,400</u> | <u>11,700</u> | <u>11,700</u> | - |
| | Director of Forests | 1.1 | 12 | 12 | Man month | 3,500 | - | - | - | 84,000 |
| | Research Officer | 1.2 | 12 | 12 | Man month | 1,500 | - | - | - | 36,000 |
| | Contract Officer | 1.3 | 12 | 12 | Man month | 1,000 | - | - | - | 24,000 |
| | <u>Local Experts</u> | <u>1.4</u> | = | = | = | = | = | = | = | <u>10,000</u> |
| | <u>Air travel inside Malaysia</u> | <u>31</u> | <u>8</u> | <u>8</u> | <u>Trip</u> | = | <u>10,000</u> | <u>5,000</u> | <u>5,000</u> | = |
| | <u>Air travel outside Malaysia</u> | <u>32, 3.3</u> | <u>1</u> | <u>1</u> | <u>Trip</u> | = | <u>5,000</u> | <u>2,500</u> | <u>2,500</u> | <u>20,000</u> |
| | DSA Project staff | 33, 3.2 | 8 | 8 | Trip | - | 10,000 | 5,000 | 5,000 | 30,000 |
| | <u>Land & river travels to project site</u> | <u>3.1</u> | 10 | 10 | Trip | = | = | = | = | 20,000 |
| | PSC meeting | 61, 6.2 | 1 | 1 | Per year | 2,500 | 5,000 | 2,500 | 2,500 | 6,000 |
| | Management committee meeting | 6.1 | <u>1</u> | <u>1</u> | Per year | - | - | - | - | 6,000 |
| | Monitoring | 2.1 | 12 | 12 | Trip | - | - | - | - | 30,000 |
| | Social Forestry | <u>2.2</u> | 12 | 12 | Trip | - | - | - | - | 30,000 |
| | Reforestation | <u>2.3</u> | <u>12</u> | <u>12</u> | Trip | - | - | - | - | 40,000 |
| | EA/Sub-contracts (Infrastructure) | <u>2.4</u> | 1 | 1 | Unit | - | - | - | - | 60,000 |
| | <u>Nursery maintenance</u> | <u>5.2</u> | <u>12</u> | <u>12</u> | <u>Trip</u> | - | - | - | - | <u>10,000</u> |
| | Workshop | 6.3 | 1 | 1 | Unit | - | - | - | - | <u>7,500</u> |
| | Personal computers | 41, 4.2 | 2 | - | Unit | 1,250 | 2,500 | 2,500 | - | 3,000 |
| | Portable generators | 42, 4.3 | 2 | - | Unit | 1,000 | 1,000 | 1,000 | - | 2,000 |

| | | | | | | | | | | |
|--------------|--|-----------|----------|----------|------------------|--------------|---------------|---------------|--------------|--------|
| | AV equipment (camcorder) | 43 | 1 | - | Unit | 1,500 | 1,500 | 1,500 | - | - |
| | Cameras | 44, 4.5 | 2 | - | Unit | 1,000 | 2,000 | 2,000 | - | 3,000 |
| | Projector | 45 | 2 | - | 600 | 600 | 600 | 600 | - | - |
| | GPS | 46 | 2 | - | Unit | 500 | 1,000 | 1,000 | - | - |
| | Longboats & engines | 4.1 | 2 | - | - | - | - | - | - | 10,000 |
| | Camcorder | 4.4 | 2 | - | - | - | - | - | - | 2,000 |
| | Office supplies | 51, 5.1 | 1 | 1 | Set | 1,000 | 2,000 | 1,000 | 1,000 | 4,000 |
| | Camping equipment | 53, 4.6 | 1 | - | Unit | 1,000 | 1,000 | 1,000 | - | 2,000 |
| | Publish reports | 64 | - | 1 | Unit | 2,500 | 2,500 | - | 2,500 | - |
| | Financial audit | 6.4 | 1 | 1 | Per year | - | - | - | - | 5,000 |
| Output 1 | Forest resource base for integrated development planning secured | | | | | | | | | |
| Activity 1.1 | To conduct forest resource survey and compile baseline data on flora and fauna | | | | | | | | | |
| | Botanist | 14 | 6 | - | Man month | 3,000 | 18,000 | 18,000 | - | - |
| | Biologist | 14 | 6 | - | Man month | 3,000 | 18,000 | 18,000 | - | - |
| | 3 Technical assistants | 15 | 5 | - | Man month | 1,000 | 15,000 | 15,000 | - | - |
| | Logistics | 52, 5.3 | 5 | - | Per pax | 200 | 1,000 | 1,000 | - | 1,200 |
| Activity 1.2 | To identify non-timber forest products of economic potential for sustainable development | | | | | | | | | |
| | Botanist | 14 | 4 | - | Man Month | 3,000 | 12,000 | 12,000 | - | - |
| | 2 Technical assistants | 15 | 3 | - | Man Month | 1,000 | 6,000 | 6,000 | - | - |
| | Logistics | 52,5.3 | 5 | | Per pax | 200 | 1,000 | 1,000 | | 1,200 |
| Activity 1.3 | To set up project management unit for planning, development and monitoring | | | | | | | | | |
| Output 2 | Process for effective ecosystem management and resource development initiated | | | | | | | | | |
| Activity 2.1 | To study impacts of orangutan raiding farm crops | | | | | | | | | |
| | Biologist | 14 | 4 | - | Unit | 3,000 | 12,000 | 12,000 | - | - |
| | Technical Assistants | 15 | 3 | - | Man month | 1,000 | 3,000 | 3,000 | - | - |
| | Logistics | 52, 5.3 | 5 | - | Per pax | 200 | 1,00 | 1,000 | - | 1,200 |
| | Compensation for farmers | 6.5 | 1 | 1 | Per year | - | - | - | - | 60,000 |
| Activity 2.2 | To initiate community-based activities for uplifting livelihood | | | | | | | | | |
| | Dialogue session with local communities | 65 | 4 | 4 | Trip | 500 | 4,000 | 2,000 | 2,000 | - |

| | | | | | | | | | | |
|--------------|---|-----------|----------|----------|------------------|--------------|---------------|---------------|--------------|-------|
| | Local assistants | 15 | 6 | 6 | Man month | 350 | 4,200 | 2,100 | 2,100 | - |
| | Develop community-based activities | 62 | 1 | 1 | Unit | 5,000 | 10,000 | 5,000 | 5,000 | - |
| Activity 2.3 | To conduct study on carbon stock and develop carbon trading schemes | | | | | | | | | |
| | Forest Ecologist | 14 | 6 | - | Man month | 3,000 | 18,000 | 18,000 | - | - |
| | 2 Technical assistants | 15 | 4 | - | Man month | 1,000 | 8,000 | 8,000 | - | - |
| | Logistics | 52,5.3 | 4 | | Per pax | 200 | 800 | 800 | | 1,200 |
| Output 3 | Community participation in eco-tourism enhanced with improved facilities and training | | | | | | | | | |
| Activity 3.1 | To study potential for more community involvement in eco-tourism | | | | | | | | | |
| | Consultant | 14 | 4 | - | Man month | 3,000 | 12,000 | 12,000 | - | - |
| | Technical assistant | 15 | 3 | - | Man month | 1,000 | 3,000 | 3,000 | - | - |
| | Dialogue session with local communities | 66 | 3 | 3 | Trip | 500 | 3,000 | 1,500 | 1,500 | - |
| | Logistics | 52, 5.3 | 5 | - | Per pax | 200 | 1,000 | 1,000 | - | 1,200 |
| Activity 3.2 | To improve basic facilities in longhouses and to promote eco-tourism | | | | | | | | | |
| | Improve basic facilities | 63 | 1 | 1 | unit | 5,000 | 10,000 | 5,000 | 5,000 | - |
| | Promotional materials (videos and booklets) | 64 | - | 1 | unit | 5,000 | 5,000 | - | 5,000 | - |
| Activity 3.3 | To train community participants in tourism-related activities | | | | | | | | | |
| | Guide training | 66 | 15 | 15 | Per pax | 200 | 6,000 | 3,000 | 3,000 | - |

Note: EA= Executing Agency, PM=Project Manager, PC=Project Coordinator

3.4.2 Yearly Consolidated Budget

| Category | Description | Total | Year 1 | Year 2 |
|------------|--|-----------------------|-----------------------|-----------------------|
| 10 | <i>Personnel</i> | | | |
| 11 | <u>National experts (long-term)</u> | | | |
| | <u>11.1 Project Leader</u> | <u>108,000</u> | <u>54,000</u> | <u>54,000</u> |
| | 11.2 Accounting Officer | 24,000 | 12,000 | 12,000 |
| | 11.3 Project Officer | 24,000 | 12,000 | 12,000 |
| 1.1 | Director of Forests | 84,000 | 42,000 | 42,000 |
| 1.2 | Research Officer | 36,000 | 18,000 | 18,000 |
| 1.3 | Contract Officer | 24,000 | 12,000 | 12,000 |
| 12 | <u>Other personnel (long-term)</u> | | | |
| | 1 Administrative Assistant | 24,000 | 12,000 | 12,000 |
| 13 | <u>EPF contribution 13 % (National experts & other personnel)</u> | <u>23,400</u> | <u>11,700</u> | <u>11,700</u> |
| 14 | <u>National consultants</u> | | | |
| | <u>14.1 Forest resource survey</u> | <u>36,000</u> | <u>36,000</u> | - |
| | <u>14.2 NTFP of economic potential</u> | <u>12,000</u> | <u>12,000</u> | - |
| | <u>14.3 Impacts of orangutan</u> | <u>12,000</u> | <u>12,000</u> | - |
| | <u>14.4 Carbon stock study</u> | <u>18,000</u> | <u>18,000</u> | - |
| | <u>14.5 Community involvement in eco-tourism potential study</u> | <u>12,000</u> | <u>12,000</u> | - |
| 1.4 | Local Experts | 10,000 | 5,000 | 5,000 |
| 15 | <u>Technical & local assistants</u> | | | |
| | <u>15.1 Technical assistants</u> | <u>35,000</u> | <u>35,000</u> | - |
| | <u>15.2 Local assistants</u> | <u>4,200</u> | <u>2,100</u> | <u>2,100</u> |
| 19 | <u>Sub total</u> | <u>486,600</u> | <u>305,800</u> | <u>180,800</u> |
| 20 | <i>Sub-contracts</i> | | | |
| 2.1 | Monitoring | 30,000 | 15,000 | 15,000 |
| 2.2 | Social forestry | 30,000 | 15,000 | 15,000 |
| 2.3 | Reforestation | 40,000 | 20,000 | 20,000 |
| 2.4 | EA/Sub-contracts (Infrastructure) | 60,000 | 30,000 | 30,000 |
| 29 | <u>Sub total</u> | <u>160,000</u> | <u>80,000</u> | <u>80,000</u> |
| 30 | <i>Duty Travel</i> | | | |
| 31 | <u>Travel to project site</u> | <u>10,000</u> | <u>5,000</u> | <u>5,000</u> |
| 32 | <u>Travel outside Malaysia</u> | <u>5,000</u> | <u>2,500</u> | <u>2,500</u> |
| 33 | DSA for project staff | 10,000 | 5,000 | 5,000 |
| 3.1 | Land & river travels to project site | 20,000 | 10,000 | 10,000 |
| 3.2 | <u>DSA for 5 FDS project staff</u> | <u>30,000</u> | <u>15,000</u> | <u>15,000</u> |
| 3.3 | <u>Air travel outside Malaysia</u> | <u>20,000</u> | <u>10,000</u> | <u>10,000</u> |
| 39 | <u>Sub total</u> | <u>95,000</u> | <u>47,500</u> | <u>47,500</u> |
| 40 | <i>Capital Items</i> | | | |
| 41 | Computers (2 Laptops) | 2,500 | 2,500 | - |
| 42 | 1 Portable Generator | 1,000 | 1,000 | - |
| 43 | 1 AV (Camcorder) | 1,500 | 1,500 | - |
| 44 | 2 Cameras | 2,000 | 2,000 | - |
| 45 | 1 Projector | 600 | 600 | - |
| 46 | 2 GPS | 1,000 | 1,000 | - |

| | | | | |
|------------|--|------------------|----------------|----------------|
| 4.1 | Longboats & engines | 10,000 | 10,000 | - |
| 4.2 | Personal computers | 3,000 | 3,000 | - |
| 4.3 | Generators | 2,000 | 2,000 | - |
| 4.4 | Camcorder | 2,000 | 2,000 | - |
| 4.5 | Cameras | 3,000 | 3,000 | - |
| 4.6 | Survey equipment/tools | 2,000 | 2,000 | - |
| 49 | Sub total | 30,600 | 30,600 | 0 |
| 50 | <i>Consumables</i> | | | |
| 51 | Office supplies | 2000 | 1,000 | 1,000 |
| 52 | Logistics (Rental of boats) | 4,800 | 4,800 | - |
| 53 | Camping equipment | 1,000 | 1,000 | |
| 5.1 | Office supplies | 4,000 | 2,000 | 2,000 |
| 5.2 | Nursery maintenance | 10,000 | - | 10,000 |
| 5.3 | Logistics | 6,000 | 3,000 | 3,000 |
| 59 | Sub total | 27,800 | 11,800 | 16,000 |
| 60 | <i>Miscellaneous</i> | | | |
| 61 | PSC meetings | 5,000 | 2,500 | 2,500 |
| 62 | Develop community based activities | 10,000 | 5,000 | 5,000 |
| 63 | Improve basic facilities | 10,000 | 5,000 | 5,000 |
| 64 | Publication & promotional materials | 7,500 | - | 7,500 |
| 65 | Dialogues with local communities | 7,000 | 3,500 | 3,500 |
| 66 | Guide training | 6,000 | 3,000 | 3,000 |
| 6.1 | Management committee meeting | 6,000 | 3,000 | 3,000 |
| 6.2 | PSC meetings | 6,000 | 3,000 | 3,000 |
| 6.3 | Workshop | 7,500 | - | 7,500 |
| 6.4 | Financial audit | 5,000 | 2,500 | 2,500 |
| 6.5 | Compensation for farmers | 60,000 | 30,000 | 30,000 |
| 69 | Sub total | 130,000 | 57,500 | 72,500 |
| 70 | Total Project | 930,000 | 533,200 | 396,800 |
| 80 | National Management Cost | 76,575 | | |
| 90 | Project monitoring and administration | | | |
| 91 | ITTO Monitoring and Review | 20,000 | | |
| 92 | ITTO ex-post Evaluation | 15,000 | | |
| 93 | ITTO Programme support (12% of 70+91+92) | 54,540 | | |
| 100 | Total Project Monitoring & Administration | 89,540 | | |
| | GRAND TOTAL (70+80+100) | 1,096,115 | | |

3.4.3 ITTO Yearly Budget

| Category | Description | Total | Year 1 | Year 2 |
|-----------|--|-----------------------|-----------------------|-----------------------|
| 10 | <i>Personnel</i> | | | |
| 11 | <u>National experts (long-term)</u> | | | |
| | 11.1 Project Leader | <u>108,000</u> | <u>54,000</u> | <u>54,000</u> |
| | 11.2 Accounting Officer | 24,000 | 12,000 | 12,000 |
| | 11.3 Project Officer | 24,000 | 12,000 | 12,000 |
| 12 | <u>Other personnel (long-term)</u> | | | |
| | 1 Administrative Assistant | 24,000 | 12,000 | 12,000 |
| 13 | <u>EPF contribution 13 % (National experts & other personnel)</u> | <u>23,400</u> | <u>11,700</u> | <u>11,700</u> |
| 14 | <u>National consultants</u> | | | |
| | 14.1 Forest resource survey | <u>36,000</u> | <u>36,000</u> | |
| | 14.2 NTFP of economic potential | <u>12,000</u> | <u>12,000</u> | |
| | 14.3 Impacts of orangutan | <u>12,000</u> | <u>12,000</u> | |
| | 14.4 Carbon stock study | <u>18,000</u> | <u>18,000</u> | |
| | 14.5 Community involvement in eco-tourism potential study | <u>12,000</u> | <u>12,000</u> | |
| 15 | <u>Technical & local assistants</u> | | | |
| | 15.1 Technical assistants | <u>35,000</u> | <u>35,000</u> | |
| | 15.2 Local assistants | <u>4,200</u> | <u>2,100</u> | <u>2,100</u> |
| 19 | <u>Sub total</u> | <u>332,600</u> | <u>228,800</u> | <u>103,800</u> |
| 30 | <i>Duty Travel</i> | | | |
| 31 | <u>Travel to project site</u> | <u>10,000</u> | <u>5,000</u> | <u>5,000</u> |
| 32 | <u>Travel outside Malaysia</u> | <u>5,000</u> | <u>2,500</u> | <u>2,500</u> |
| 33 | DSA for project staff | 10,000 | 5,000 | 5,000 |
| 39 | <u>Sub total</u> | <u>25,000</u> | <u>12,500</u> | <u>12,500</u> |
| 40 | <i>Capital Items</i> | | | |
| 41 | Computers (2 Laptops) | 2,500 | 2,500 | - |
| 42 | 1 Portable Generator | 1,000 | 1,000 | - |
| 43 | 1 AV (Camcorder) | 1,500 | 1,500 | - |
| 44 | 2 Cameras | 2,000 | 2,000 | - |
| 45 | 1 Projector | 600 | 600 | - |
| 46 | 2 GPS | 1,000 | 1,000 | - |
| 49 | Sub total | 8,600 | 8,600 | - |
| 50 | <i>Consumables</i> | | | |
| 51 | Office supplies | 2000 | 1,000 | 1,000 |
| 52 | <u>Logistics (Rental of boats)</u> | <u>4,800</u> | <u>4,800</u> | - |
| 53 | Camping equipment | 1,000 | 1,000 | |
| 59 | <u>Sub total</u> | <u>7,800</u> | <u>6,800</u> | <u>1,000</u> |
| 60 | <i>Miscellaneous</i> | | | |
| 61 | PSC meetings | 5,000 | 2,500 | 2,500 |
| 62 | Develop community based activities | 10,000 | 5,000 | 5,000 |
| 63 | Improve basic facilities | 10,000 | 5,000 | 5,000 |
| 64 | <u>Publication & promotional materials</u> | <u>7,500</u> | | <u>7,500</u> |
| 65 | <u>Dialogues with local communities</u> | <u>7,000</u> | <u>3,500</u> | <u>3,500</u> |
| 66 | <u>Guide training</u> | <u>6,000</u> | <u>3,000</u> | <u>3,000</u> |

| | | | | |
|------------|--|----------------|----------------|----------------|
| 69 | Sub total | 45,500 | 19,000 | 26,500 |
| 70 | Total Project | 419,500 | 275,700 | 143,800 |
| 80 | National Management Cost | | - | |
| 90 | Project monitoring and administration | | | |
| 91 | ITTO Monitoring and Review | 20,000 | | |
| 92 | ITTO ex-post Evaluation | 15,000 | | |
| 93 | ITTO Programme support (12% of 70+91+92) | 54,540 | | |
| 100 | Total Project Monitoring & Administration | 89,540 | | |
| | GRAND TOTAL | 509,040 | | |

Note: Budget for Project leader (project manager) is to be paid by ITTO as in all past ITTO projects

3.4.4 Executing Agency Yearly Budget (GoM)

| Category | Description | Total | Year 1 | Year 2 |
|-----------|--------------------------------------|----------------|---------------|---------------|
| 1 | Personnel | | | |
| 1.1 | Director of Forests | 84,000 | 42,000 | 42,000 |
| 1.2 | Research Officer | 36,000 | 18,000 | 18,000 |
| 1.3 | Contract Officer | 24,000 | 12,000 | 12,000 |
| 1.4 | Local Experts | 10,000 | 5,000 | 5,000 |
| 19 | Sub total | 154,000 | 77,000 | 77,000 |
| 2 | Sub-contracts | | | |
| 2.1 | Monitoring | 30,000 | 15,000 | 15,000 |
| 2.2 | Social forestry | 30,000 | 15,000 | 15,000 |
| 2.3 | Reforestation | 40,000 | 20,000 | 20,000 |
| 2.4 | Infrastructure | 60,000 | 30,000 | 30,000 |
| 29 | Sub total | 160,000 | 80,000 | 80,000 |
| 3 | Duty Travel | | | |
| 3.1 | Land & river travels to project site | 20,000 | 10,000 | 10,000 |
| 3.2 | DSA for 5 FDS project staff | 30,000 | 15,000 | 15,000 |
| 3.3 | Air travel outside Malaysia | 20,000 | 10,000 | 10,000 |
| 39 | Sub total | 70,000 | 35,000 | 35,000 |
| 4 | Capital Items | | | |
| 4.1 | Longboats & engines | 10,000 | 10,000 | - |
| 4.2 | Personal computers | 3,000 | 3,000 | - |
| 4.3 | Generators | 2,000 | 2,000 | - |
| 4.4 | Camcorder | 2,000 | 2,000 | - |
| 4.5 | Cameras | 3,000 | 3,000 | - |
| 4.6 | Survey equipment/tools | 2,000 | 2,000 | - |
| 49 | Sub total | 22,000 | 22,000 | - |
| 5 | Consumables | | | |
| 5.1 | Office supplies | 4,000 | 2,000 | 2,000 |
| 5.2 | Nursery maintenance | 10,000 | - | 10,000 |
| 5.3 | Logistics | 6,000 | 3,000 | 3,000 |
| 59 | Sub total | 20,000 | 5,000 | 15,000 |

| | | | | |
|-----|---------------------------------------|----------------|----------------|----------------|
| 6 | Miscellaneous | | | |
| 6.1 | Management committee meeting | 6,000 | 3,000 | 3,000 |
| 6.2 | PSC meetings | 6,000 | 3,000 | 3,000 |
| 6.3 | Workshop | 7,500 | - | 7,500 |
| 6.4 | Financial audit | 5,000 | 2,500 | 2,500 |
| 6.5 | Compensation for farmers | 60,000 | 30,000 | 30,000 |
| 69 | Sub total | 84,500 | 38,500 | 46,000 |
| 70 | Total Project | 510,500 | 257,500 | 253,000 |
| 80 | National Management Cost (15%) | 76,575 | | |
| | GRAND TOTAL (70+80) | 587,075 | | |

3.5 Assumptions, Risks and Sustainability

3.5.1 Assumptions and Risks

The key assumptions to achieve project objectives and desired outputs are (i) government and political commitment and decision to endorse SMCA for integrated biodiversity conservation and sustainable economic development, (ii) full cooperation from local Iban community, land owners and farmers, and (iii) support and contribution by private sector (e.g. BATT) and NGO. Other potential risk factors are orangutan damage beyond control, government's reluctance to compensate affected farmers should the need arise, and damage to forests by commercial land use. Table 3.2 summarizes the key assumptions, potential risks and mitigating measures.

Table 3.2: Key Assumptions, Potential Risks and Mitigating Measures

| Key assumptions | Potential risks | Mitigating measures |
|---|--|---|
| Government authorities are fully committed to promoting SMCA for conservation and sustainable development | <ul style="list-style-type: none"> Project execution will continue ineffectively, outputs delayed or not fully delivered Development objective not achieved Community unable to receive outside help Forests and environment damaged Resources under-utilized | <ul style="list-style-type: none"> EA & PMU to convince policy makers on importance of SMCA Project to demonstrate vital need for co-existence between people and orangutan Strive for sustainable livelihood to reduce reliance on forests Continuing efforts on social forestry and eco-tourism Improve land value |
| Local community fully support conservation and sustainable development | <ul style="list-style-type: none"> Lack of planning to safeguard forests, orangutan survival threatened Continuing raid on fruit crops Eco-tourism affected Economic development opportunities for the people denied | <ul style="list-style-type: none"> Government intervention to create a win-win situation Enhance livelihood with community-based activities Restore useful forest resources to enhance trade in NTFP Landscape restoration |
| Local participants free from land contest dispute | <ul style="list-style-type: none"> Land contest will affect community relationships and dampen efforts to further socio-economic pursuit Farming lands remain unproductive or idle | <ul style="list-style-type: none"> Government to help resolve land dispute if necessary Negotiate through consultation to reach agreement with landowners, e.g. profit sharing Support sustainable land use |

| | | |
|---|---|---|
| Proactive community and participants will enhance project development to reap full benefits | <ul style="list-style-type: none"> • Over dependence on project and lack of initiative will deprive people of opportunity to learn and make progress • Community will continue to rely on outside help • Objectives of RTP will be hard to achieve | <ul style="list-style-type: none"> • Inform community of benefits of project through meetings and awareness • Build understanding and trust through communication • Build capacity of participants through skill training • Work only with interested and pro-active participants |
| Private sector and NGO support on conservation and eco-tourism development | <ul style="list-style-type: none"> • Conservation objective may be slow to achieve • Eco-tourism potential not fully tapped • Community loses opportunity to improve income | <ul style="list-style-type: none"> • Ensure full cooperation from non-government stakeholders • Participate in biodiversity survey, R&D, building basic facilities, capacity building and awareness education |

The recent joint effort to study and address orangutan issue in SMCA is a demonstration of genuine concern and support from government, local community, BATT and WCS. The proposed project will provide a platform for further cooperation and consultation.

3.5.2 Sustainability

Project sustainability will be dealt with in two phases, i.e. implementation phase and monitoring phase after completion, the latter will depend on continuing government support and funding, and cooperation of local beneficiaries and other interested stakeholders. Past ITTO projects have been sustained due mainly to continuing technical and financial inputs by EA. Eco-tourism development will benefit from inputs by BATT and other tour agencies to bring in tourists, provide training and guidance to local entrepreneurs. Ultimately, sustainability will depend on local community applying the knowledge and skills learned to improve productivity and income, with women empowered to play a more decisive role.

PART 4. IMPLEMENTATION ARRANGEMENT

4.1 Organization Structure and Stakeholder Involvement Mechanism

4.1.1 Executing agency and partners

FDS's long and cordial relationship with ITTO dates back to 1993 as the EA of all ITTO-supported projects in Sarawak. Many FDS staff that participated in past projects will continue to be involved. Profile of FDS is shown in Annex 1. As indicated in organizational chart in Annex 2, FDS will appoint a PC, PL, and CLC to assist in planning and management. Technical support staff will be experienced and competent in ecological, flora and fauna surveys, and in designing and building of basic infrastructure, and giving hands-on training. New research officers will work with consultants to learn and gain experience. Other co-partners are mentioned in the stakeholder analysis.

4.1.2 Project management team

The management team will be multi-disciplinary in nature and will consist of most of the stakeholders mentioned in Table 2.1. EA will be supported by the PL, CLC and Accounting Officer (AO). Planned project activities will be executed by appointed consultants with support from community participants, BATT and NGO, and several government-linked agencies.

The curricula vitae of professionals who are likely to be appointed by EA along with respective terms of reference are given in Annex 3; and TOR for PC, PL, CLC and AO in Annex 4.

4.1.3 Project steering committee (PSC)

This will be established by EA to oversee progress in project implementation as specified in the logical framework matrix and reviewing progress reports. It will also review any changes to project design and plan including extensions and approve work plan and associated budget. Membership of the PSC will consist of:

- A chairperson appointed by FDS
- Ministry of Primary Industries (MPI)
- Ministry of Urban Development and Natural Resources (MUDeNR)
- ITTO representative
- Donor representatives
- Sarawak Forestry Corporation
- Resident, Kuching Division
- District Officer, Lubok Antu District
- Regional Forest Officer, Kuching
- Community representatives
- BA Travel and Tour Company, and NGO

The PSC shall meet at least once a year. A special meeting may be called forth by EA at any time as need arises. The official language of the PSC will be English.

4.1.4 Stakeholder involvement mechanism

This is shown in the organizational structure in Annex 2. PSC will enable key stakeholders to be involved in project management and kept informed of its progress. Members will express their views, exchange information and give advice, and make important changes or decisions on project implementation. In project execution, stakeholder participation will depend on the types of outputs and activities and will be assigned by PL. SFD of FDS will be entrusted to take charge of social forestry activities.

4.2 Reporting, Review, Monitoring and Evaluation

Each appointed consultant will be required to carry out the study and produce field reports, progress reports, and a final technical report after completion of the study. In consultation with PL, consultant before the study will prepare a work plan indicating scope of work, methodology and survey techniques, and data to be collected and analyzed. PL will monitor and evaluate the work and performance of all consultants and provide guidance where necessary. PL will review and edit each final technical report for publication.

Certain activities that require follow-up observations and monitoring like orangutan movement, community development activities and forest restoration will be undertaken by appointed local experts and by SFD, in collaboration with community representatives who have been trained under respective activities.

The following reports will be produced in accordance with ITTO Manual on Standard Operating Procedures:

- i) Inception report. To be submitted by EA after signing of agreement between ITTO, GoM and EA. Apart from specifying project details and plans, the report will also include information on availability of space and facilities for an ITTO office, opening of a separate bank account for the project, and a list of proposed key project personnel.
- ii) Yearly Plan of Operation (YPO). To be submitted yearly prior to commencing operation, for endorsement by ITTO. YPO for first year shall be attached to the inception report, and the subsequent one to be submitted before the beginning of the planned year. ITTO will approve the YPO upon recommendation of PSC.

- iii) Progress report. To be prepared by each consultant and submitted to the EA. It will contain information on executed activities during the period covered by the report, showing achieved outputs and activities, and inputs applied.
- iv) Final Technical report. To be submitted by each consultant containing technical and scientific data and project results, conclusions and recommendations. Each report will be reviewed and edited by PL for publication and distribution.
- v) Financial report. Audited annual report will be prepared by a registered independent public accountant appointed by EA and endorsed by ITTO. The report will be submitted to ITTO within three months after the end of the current financial year.
- vi) Completion report. EA will submit this report within three months of project completion. The report will contain summaries of achieved outputs and activities, inputs and expenditures, and highlight the most critical differences between planned and realized project elements using the original project document as a reference, and lessons learned from project implementation.

4.3 Dissemination and Mainstreaming of Project Learning

4.3.1 Dissemination

Disseminating of project results will be through reporting, workshops, discussions and dialogues during implementation phase and after project completion. The following reports will be published and distributed:

- Final technical reports in soft and hard copies to ITTO and involved stakeholders, ministries, government departments and members of PSC;
- Brochures for awareness and tourism to involved stakeholders, local communities and schools, and tourist information centres;
- Short audio-visual depicting project results for publicity to ITTO, donors, PSC members, involved stakeholders and communities.
- Project completion report to ITTO, PSC members, ministries and government departments.

4.3.2 Mainstreaming

Project results with relevant information and lessons learned will be documented and put up in ITTO website for access to all ITTO members, donors and interested institutions. Articles for TFU will also be considered. In Sarawak, FDS, BATT and WCS websites will be available.

REFERENCES

Anon. (2012). *Sustainable Forest Management and Biodiversity Conservation in Sarawak, Malaysia – following ITTO Mission 1989/1990*. Forest Dept. Sarawak report

Anon. (2015). *Ulu Sungai Menyang Orangutan Strategic Action Plan (USMOSAP)*. Joint publication by Forest Department Sarawak, Sarawak Forestry Corporation, Wildlife Conservation Society Malaysia and Borneo Adventure.

Anon. (Jan. 2017). *Dialogue and Preliminary Forestry Survey at Menyang Ta'ih and Menyang Sedi in Proposed Sungai Menyang Conservation Area*. Field report by Chai P.P.K. and W. Cluny.

Blouch, R.A. (1997). Distribution and Abundance of Orangutan and other Primates in the

Lanjak Entimau Wildlife Sanctuary, Sarawak, Malaysia. *Tropical Biodiversity* 4(3): 250-274.

Chai, P.P.K. (2006). Medicinal Plants of Sarawak. Lee Ming Press, Kuching

Chai, P.P.K. (ed.) (2017). *Pulong Tau Buffer Zone – Ecosystems, Biodiversity and People*. Final technical report for PD 615/12 (Rev. 2 (F): Buffer Zone Management for Pulong Tau National Park with involvement of Local communities in Sarawak, Malaysia. ITTO report.

Cluny, W., Cedric, R. and Tagi, J. (2017). *Impact of Orangutan on Local Community Livelihood in the Proposed Sungai Menyang Conservation Area*. Field report

Gumal, M, Ng. S, S., Teh, L. Ngelai, M., Pandong, J. 2015. *Ulu Sungai Menyang Orangutan Strategic Action Plan.*, WCS-Malaysia Kuching.

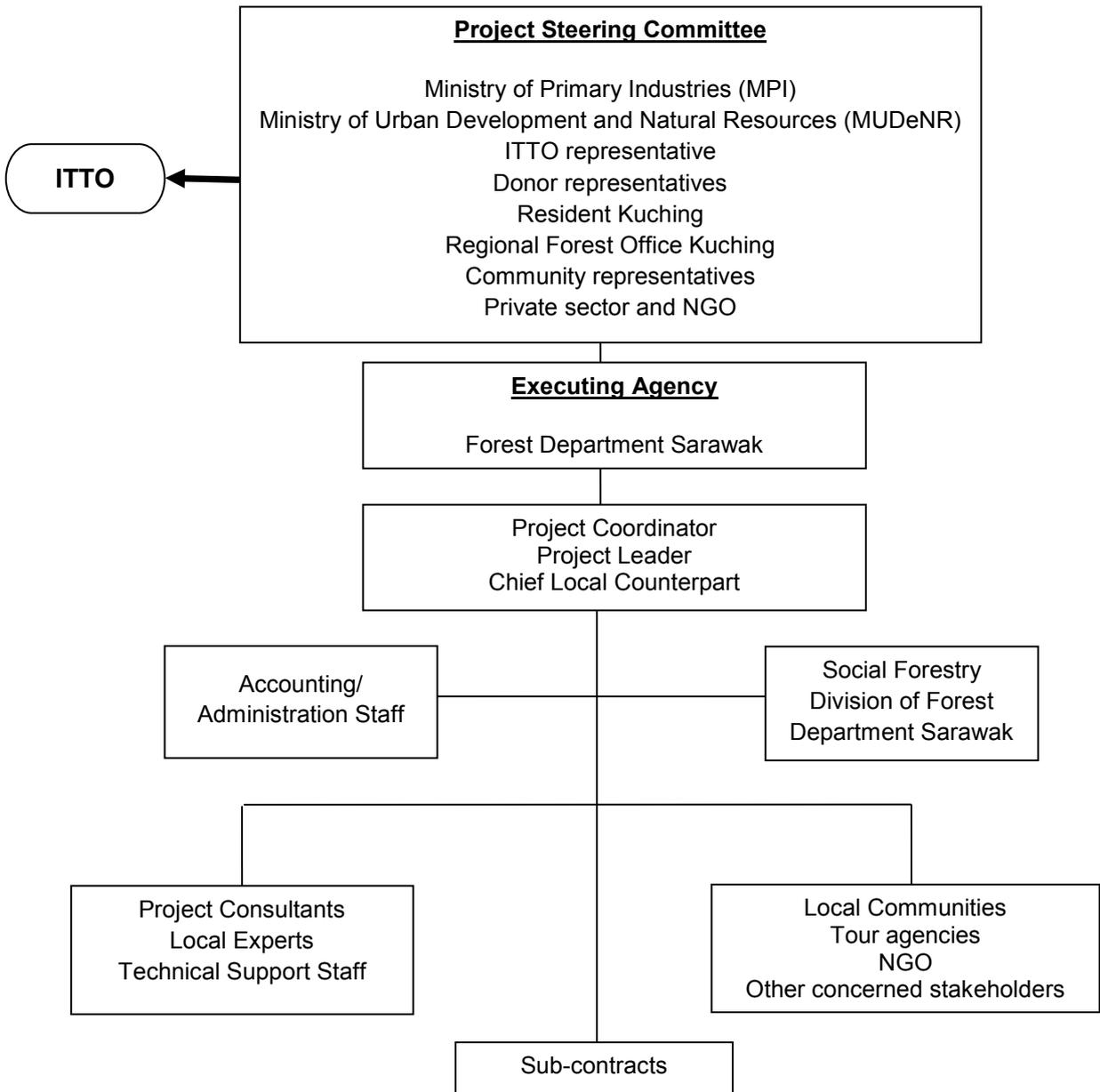
Gurmaya, K.J. & Silang, S. (2002). *Development of Lanjak Entimau Wildlife Sanctuary as a Totally Protected Area, Phase III. A Study of Habitat Conditions, Populations and Distribution of Orangutan in Lanjak Entimau Wildlife Sanctuary and Batang Ai National Park, Sarawak, Malaysia*. ITTO-SFD, Kuching

Meredith, M. 1993. *Draft Management Plan for Batang Ai National Park, 1993-1995*. Wildlife Conservation Society, Kuching.

ANNEX 1. PROFILE OF EXECUTING AGENCY

FDS will be the project's EA. It is headed by a Director of Forests with two deputies and operates under MUDeNR sharing the same office building belonging to Sarawak Timber and Industrial Development Corporation (STIDC) in Petra Jaya in Kuching. There are 12 divisional offices. The Department is tasked with the overall responsibility of safeguarding environment and biodiversity and ensuring sustainable utilization of forest resources covering a total of about 8 million of forested land area. Operational matters are carried out with the help of Sarawak Forestry Corporation (SFC) formed in 1993. The Department was established in 1919 and is celebrating its 100-year anniversary this year. FDS' association with ITTO started with the ITTO Mission to Sarawak in 1989/1990. The Mission's recommendations have led to some improvement in sustainable forest management and habitat and biodiversity conservation. It had been the EA of all past 15 ITTO projects since 1993.

ANNEX 2. PROJECT ORGANIZATIONAL STRUCTURE



ANNEX 3. TASKS AND RESPONSIBILITIES OF KEY PERSONNEL PROVIDED BY THE EXECUTING AGENCY

| No | Name | Professional education | Position in present organization | Experience relevant to the project | Involvement in the project |
|----|-----------------|------------------------------------|--|---|---|
| 1 | Hamden Mohammad | M. Environmental Sc. | Director of Forests | Forest management & conservation | Chairperson of PSC, Project Coordinator |
| 2 | Zarina Shebli | B. Sc, Forestry | Head, Social Forestry Division | Actively involved in ITTO project implementation since 2005 | Chief Local Counterpart, social forestry activities |
| 3 | Sarzali Sahamat | Malaysian Certificate of Education | Accounting Officer | Involved in ITTO projects since 2014 | Accounting, bookkeeping and office administration |
| 4 | Technical staff | Various | Forest Officers, Forest Rangers, Research Assistants | Many involved in past projects | Resource survey, community-based activities, training, monitoring |

ANNEX 4. OUTLINES OF THE TERMS OF REFERENCE OF KEY PERSONNEL, CONSULTANTS AND SUB-CONTRACTS TO BE PAID WITH ITTO FUND

| Position | Main task |
|---------------------------------|--|
| A. Project Key Personnel | |
| Project Coordinator (PC) | <ul style="list-style-type: none"> To lead FDS team in planning, implementation and monitoring, and give advice To select consultants and other experts for the project To ensure smooth planning and implementation To ensure proper spending of project funds To report to ITTO in accordance with the project agreement |
| Project Leader (PL) | <ul style="list-style-type: none"> To lead the project To manage ITTO project office, guide and supervise project consultants, research officers and support staff, liaise with local community and other stakeholders on project matters To organize meetings and dialogues <u>To report on project's progress in PSC meetings on behalf of EA</u> To edit consultants' final technical reports To publish final technical reports and completion report |
| Chief Local Counterpart (CLC) | <ul style="list-style-type: none"> To represent EA as officer-in-charge of project As chief local counterpart to PL To prepare annual budget To make assemble technical support staff with assigned duties To implement additional social forestry activities under SFD |
| Accounting Officer | <ul style="list-style-type: none"> To assist PL in financial management and office administration To be responsible for bookkeeping and preparing payments To organize annual financial auditing of ITTO budget To assist in purchase of office and field equipment |
| Research officers | <ul style="list-style-type: none"> To participate in studies on ecology, flora and fauna To assist in data compilation and analysis To assist in development of community-based activities To prepare preliminary reports |
| Local technical support staff | <ul style="list-style-type: none"> To assist in various aspects of project planning and implementation To participate in biodiversity survey |

| | |
|---|---|
| | <ul style="list-style-type: none"> • To prepare designs for basic infrastructure and undertake construction • To conduct training and monitoring and prepare reports |
| B. Consultants and Sub-contracts | |
| Consultants for Activity 1.1 | <ul style="list-style-type: none"> • To undertake studies on ecosystems, flora and fauna and develop baseline data for SMCA • To assess value and potential of ecosystems and biodiversity for conservation and development planning • To propose land use zoning for integrated management • To produce final technical reports |
| Consultants for Activity 1.2 | <ul style="list-style-type: none"> • To document ethnobotanical knowledge of forest species • To identify potential timber and non-timber species for research and social forestry • To propose strategies for preservation of traditional knowledge • To recommend <i>ex-situ</i> conservation • To make plans for maintenance and monitoring • To produce final technical reports |
| Consultant and SFD for Activity 1.3 | <ul style="list-style-type: none"> • To set up longhouse committees as platform for communication, consultation and information exchange, and for facilitating project implementation • To identify disturbed forests and degraded lands for enrichment planting to increase productivity and value • To undertake implementation of community-based activities • To produce final technical reports |
| Consultant for Activity 2.1 | <ul style="list-style-type: none"> • To identify farmers affected by orangutan raids and assess nature and extent of damage • To propose mitigating measures that are non-detrimental to farmers and orangutan • To select a suitable area as orangutan sanctuary and propose a plan for management and monitoring |
| Consultant and SFD for Activity 2.2 | <ul style="list-style-type: none"> • To identify useful resources for community use and development • To conduct site-species feasibility studies • To initiate community-based activities based on study findings • To establish nurseries and procure planting materials • To conduct on-farm training • To produce final reports |
| Consultants for Activity 2.3 | <ul style="list-style-type: none"> • To identify potential carbon sinks and inform local community of their purpose and benefits • To assess above ground biomass and estimate carbon stock • To recommend carbon offset schemes for low carbon trade • To give training on carbon assessment and trading schemes |
| Consultant for Activity 3.1 | <ul style="list-style-type: none"> • To conduct SWOT analysis on eco-tourism • To identify tourism products for development focusing on culture, adventure and nature • To prepare information and publicity materials for promotion and environmental awareness education • To prepare final reports |
| Consultant and SFD for Activity 3.2 | <ul style="list-style-type: none"> • To investigate need for better basic facilities in longhouses to improve quality of life and tourism services • To prepare plans and estimate materials required, and transport materials to site • To organize construction in collaboration with local participants • To train local participants in construction and maintenance |
| Consultant and BATT for Activity 3.3 | <ul style="list-style-type: none"> • To help local participants to develop skills in tourism-related business • To design training programmes to suit local needs • To encourage more local participation to benefit from tourism • To organize training on tourism products and operation |

ANNEX 5. ASSESSMENT BY THE FIFTY-FOURTH PANEL

| A) Overall Assessment | | | |
|--|---|--|--|
| <p>The Panel recognized the importance of the project for managing Sungai Menyang Conservation Area in Sarawak, Malaysia for orangutan protection and community livelihood improvement through sustainable use of forest and biological resources.</p> <p>However, the Panel noted that the project proposal contained a number of weaknesses in the sections and sub-sections dealing with: (1) large amount of total budget o the proposal with the period 24 month; (2) lack of information on the outcomes of previous ITTO project; (3) insufficient stakeholder analysis missing research and financial institutions; (4) weak problem analysis particularly inconsistency between key problem in Sub-section 2.1.3 (problem analysis) and key problem in figure 1 (problem tree); (5) weak presentation on the relation between problem tree and objective tree failing to follow ITTO manual for project formulation (effect on the problem of orangutan raiding on farm crop and orangutan protection is not described); (6) high cost for activities and outcomes of the project focusing on people's livelihood in particular large amount of budget for personnel requested from ITTO.</p> | | | |
| B) Specific Recommendations | | Page | Sections |
| 1 | Reconsider to increase the period of the proposal from 24 months to 36 months | The proposed 24 months is sufficient for Phase I of this study and therefore we accordingly reduced the large budget previously proposed | |
| 2 | Reduce the volume of summary in the cover page; | i | |
| 3 | Improve Project Brief by including development and specific objectives and expected outcomes of the project; | ii | |
| 4 | Correct page number of logical framework matrix and objectives in Table of Contents; | iii | |
| 5 | Provide a short summary of outcomes of previous ITTO project, PD288/04 Rev.2 (F), in Section 1.1 (origin); | 5 - 6 | 1.1 |
| 6 | Include research and financial institutions as tertiary stakeholders in Table 2.1 (Stakeholder analysis); | 12 - 13 | See footnote in Table 2.1 |
| 7 | Further improve the problem analysis by refining the key problem and identifying immediate causes and sub-causes of the refined key problem; provide a revised problem tree based on the refinements in accordance with ITTO manual for project formation; | 14 - 16 | 2.1.3 |
| 8 | Provide baseline for the monitoring and evaluation of the project's achievement in the column of measurable indicator in the logical framework matrix; | 17 - 18 | 2.1.4 |
| 9 | Refine the text of activities in table 3.1 (Work Plan) in consistent with the text of activities in Sub-section 3.1.2 (Activities); | 22 | Table 3.1 |
| 10 | Amend the ITTO budget in line with the above overall assessment and specific recommendations and also in the following way: a) Scale down the ITTO budget by transferring project manager costs (item 10.11) from ITTO contribution to the counterpart contribution; b) Scale down the costs for ITTO Monitoring and Review from US\$25,000 to US\$15,000; and the costs for ITTO ex-post evaluation from US\$20,000 to US\$10,000; c) Reconsider budget component 32 (travel outside Malaysia); | 23 - 29 | 3.4 (See footnote for item a) under ITTO Yearly Budget) |
| 11 | Provide Curricula vitae and terms of reference of Project Manager; | TOR given in Annex 4, but CV cannot be provided as candidate has not been identified | |
| 12 | Provide further information on the profile of executing agency in Annex 1. | 34 | Annex 1 |

ANNEX 6. ASSESSMENT BY THE FIFTY-FIFTH PANEL

| A) Overall Assessment | | | | |
|--|---|-------------|----------------|---|
| <p>The Panel recognized that the project aims to sustainably manage the Sungai Menyang Conservation Area of about 14,000 ha in south-western Sarawak, Malaysia for orangutan protection and community livelihood improvement through the conservation and sustainable use of forest and biological resources. The Panel acknowledged that the revised proposal has addressed all the specific recommendations of the Fifty-fourth Expert Panel. However, the Panel noted that there is still room for improvement in the Sections for the Work Plan and Budget. With regard to the budget, the Panel recommended that the contributions of the Executing Agency be increased to cover some of the costs allocated to Project Personnel such as Project Leader.</p> | | | | |
| B) Specific Recommendations | | Page | Section | Comment by EA |
| 1 | Improve Section 3.3 (Work Plan) by estimating a more realistic timeline for the implementation of Activities 1.3 and 3.3. For instance, Activity 1.3 would be established within the first quarter of project implementation while Activity 3.3 needs a longer-term schedule; | 22 | 3.3 | |
| 2 | Improve Section 3.4 (Budget) by presenting consultants related-budget items in Personnel (budget line 10) instead of Sub-contracts (budget line 20). For instance, forest botanists and biologists listed the Master Budget Table should be presented as national consultants under Personnel of the budget tables 3.4.2 (Yearly Consolidated Budget) - 3.4.4 (Executing Agency Yearly Budget); | | | |
| 3 | Consider reducing the ITTO's budget by transferring project leader's cost to EA's counterpart contribution, reconsidering budget component 32 (travel outside Malaysia). In addition, consider including part of the costs of project consultants in EA's contribution; | 23 - 30 | 3.4 | Budget for project leader has been reduced; Budget was prepared according to past practice with project leader paid by ITTO. It is too late to change EA budget at this stage as it has already been finalized. EA will take note of this in future project proposals. |
| 4 | Correctly calculate the ITTO Programme Support Costs (sub-item 83) to conform with the current standard rate of 12% of the total ITTO project costs (on budget items 10 to 82) and adjust the total ITTO budget accordingly. | | | |