

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT DOCUMENT

TITLE	THE IMPLEMENTATION OF A COMMUNITY-BASED TRANSBOUNDARY MANAGEMENT PLAN FOR THE BETUNG KERIHUN NATIONAL PARK, WEST KALIMANTAN, INDONESIA, PHASE II
SERIAL NUMBER	PD 44/00 Rev.3 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF INDONESIA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

This proposal is Phase II of the ITTO sponsored Project PD 26/93 Rev.1 (F) "Development of Bentuang Karimun Nature Reserve as a National Park, Phase I". The first major objective of this Phase II project is to establish the foundation for community-based conservation and development program that will maintain the long-term integrity of Betung Kerihun National Park (BKNP). The second major purpose is to develop an effective system for managing a trans-boundary national park with the Lanjak Entimau Wildlife Sanctuary (LEWS), Sarawak, Malaysia. Through a series of activities, it plans to develop a respected, well-managed, and well functioning national park where local communities and/or other stakeholders actively participate and receive fair benefits from the park establishment. These activities range from stakeholder consultations at village, district, province, national, and international levels to institutional capacity building, human resource development, park boundary consolidation, applied biological research, and community development. In this case, the international level of consultation will be carried out with the Sarawak Parks and governments. Through this process we hope to develop a community-based integrated conservation and development program over wide areas or eco-regions that transcend the jurisdictional boundaries between Sarawak and West Kalimantan.

EXECUTING AGENCY	PARK MANAGEMENT UNIT OF BETUNG KERIHUN NATIONAL PARK, WWF-INDONESIA
---------------------	---

COOPERATING GOVERNMENTS	---
----------------------------	-----

DURATION	36 MONTHS
----------	-----------

APPROXIMATE STARTING DATE	TO BE DETERMINED
------------------------------	------------------

BUDGET AND PROPOSED SOURCES OF FINANCE	Source	Contribution in US\$	Local Currency Equivalent
	ITTO	764,954	
	Gov't of Indonesia & WWF-Indonesia	149,391	
	TOTAL	914,345	

TABLE OF CONTENTS

PART I: CONTEXT	5
1. Origin	5
2. Sectoral Policies	5
3. Programs and Operational Activities	6
PART II: THE PROJECT	8
1. Project Objectives	8
1.1. Development Objective	8
1.2. Specific Objectives	8
2. Justification	8
2.1. Problem to be Addressed.....	8
2.2. Intended Situation after Project Completion	9
2.3. Project Strategy	9
2.4. Target Beneficiaries.....	10
2.5. Technical and Scientific Aspects	11
2.6. Economic Aspects.....	12
2.7. Environmental Aspects.....	13
2.8. Social Aspects.....	13
2.9. Risk	15
2.10. Project Sustainability Aspect	16
3. Outputs	17
3.1. Specific Objective 1	17
Output 1.1.	17
Output 1.2.	17
Output 1.3.	17
Output 1.4.	17
Output 1.5.	17
Output 1.6.	17
Output 1.7.	17
Output 1.8.	17
Output 1.9.	17
3.2. Specific Objective 2	18
Output 2.1.	18
Output 2.2.	18
4. Activities	18
4.1. Specific Objective 1	18
Output 1.1.	18

- Activities 1.1.1.	18
- Activities 1.1.2.	18
- Activities 1.1.3.	18
- Activities 1.1.4.	18
- Activities 1.1.5.	18
Output 1.2.	18
- Activities 1.2.1.	18
- Activities 1.2.2.	18
- Activities 1.2.3.	19
Output 1.3.	19
- Activities 1.3.1.	19
- Activities 1.3.2.	19
- Activities 1.3.3.	19
- Activities 1.3.4.	19
Output 1.4.	19
- Activities 1.4.1.	19
- Activities 1.4.2.	19
- Activities 1.4.3.	19
Output 1.5.	19
- Activities 1.5.1.	19
- Activities 1.5.2.	19
- Activities 1.5.3.	19
Output 1.6.	20
- Activities 1.6.1.	20
- Activities 1.6.2.	20
- Activities 1.6.3.	20
- Activities 1.6.4.	20
Output 1.7.	20
- Activities 1.7.1.	20
- Activities 1.7.2.	20
- Activities 1.7.3.	20
- Activities 1.7.4.	20
- Activities 1.7.5.	20
- Activities 1.7.6.	20
- Activities 1.7.7.	20
- Activities 1.7.8.	20
- Activities 1.7.9.	20
Output 1.8.	20
- Activities 1.8.1.	20
- Activities 1.8.2.	21
- Activities 1.8.3.	21
- Activities 1.8.4.	21
Output 1.9.	21
- Activities 1.9.1.	21
- Activities 1.9.2.	21
- Activities 1.9.3.	21
4.2. Specific Objective 2	21

Output 2.1.	21
- Activities 2.1.1.	21
- Activities 2.1.2.	21
- Activities 2.1.3.	21
- Activities 2.1.4.	22
Output 2.2.	22
- Activities 2.2.1.	22
- Activities 2.2.2.	22
- Activities 2.2.3.	22
- Activities 2.2.4.	22
5. Logical Framework Worksheets	23
6. Work Plan	28
7. Budget	34
7.1. Overall Project Budget by Activity	34
7.2. Yearly Project Budget by Source	41
7.3. Consolidated Total Yearly Project Budget	42
7.4. Separate Budget	43
PART III. OPERATIONAL ARRANGEMENTS	44
1. Management Structure	44
Project Organizational Chart	45
2. Monitoring, Reporting and Evaluation	46
2.1. Arrangement for Reporting	46
2.1. Arrangements for ITTO Monitoring and Review	46
2.2. Evaluation	46
2.3. Schedule	46
3. Future Operation and Maintenance	46
PART IV. TROPICAL TIMBER FRAMEWORK	47
1. Compliance with ITTO, 1994 Objectives	47
2. Compliance with ITTO Action Plan	48
<i>Bibliography</i>	49
ANNEXES	
A. Profile of the Executing Agency	52
B. Curricula Vitae of the Key Staff	56
C. Map of Betung Kerihun National Park	65
D. Summary of Amendments of PD 44/00 (F)	66
E. Recommendation of Expert Panel	67
F. Letter of Recommendation	68

PART I. CONTEXT

1. Origin

This proposal is Phase II of the ITTO Project 26/93 "Development of Bentuang Karimun Nature Reserve as a National Park, Phase I", implemented by WWF Indonesia and the Directorate General of Nature Protection and Conservation from 1995 to 1999. While Phase I emphasized the collection of baseline data and information needed for formulating the management plan of this Park, this Phase II proposal aims to implement this plan.

As a continuation of the cooperative program initiated in 1973 between the government of Indonesia and the government of Malaysia, the governments of Japan and Switzerland provided a grant through the International Tropical Timber Organization (ITTO) for establishing the trans-frontier Bentuang Karimun and Lanjak Entimau reserves. With both the Bentuang Karimun and Lanjak Entimau reserves have been recognized as areas of high conservation value, ITTO considered it very important in supporting the protection of these reserves. The ITTO assistance for the Lanjak Entimau Wildlife Sanctuary (LEWS) in Sarawak commenced in 1992, while the support for Bentuang Karimun Reserve in West Kalimantan came in August 1994. This was then followed by the signing of the Agreement between the Ministry of Forestry of the Republic of Indonesia and ITTO for the implementation of a project entitled "Development of Bentuang Karimun Nature Reserve as a National Park, Phase I".

The 600,000 ha Bentuang Karimun Nature Reserve was first established in 1982. This was then enlarged to 800,000 ha in 1992 and its status changed to National Park in 1995 based on a decree of the Ministry of Forestry (No.467/Kpts-II/1995). Following complains from the local community that the name of the two highest mountains in the area was wrongly spelled, the name of the park was changed from Bentuang Kerimun to Betung-Kerihun National Park in 1998.

Being one of the largest conservation areas in the Indonesian Borneo (after Kayan Mentarang National Park) that has rich biological resources and diversity, getting this Park well protected and well managed becomes very important. In combination with the neighboring Lanjak Entimau Wildlife Sanctuary, being the catchment area of one of the largest and longest rivers in the Bornean Island, the Betung Kerihun National Park becomes of great importance for the region.

2. Sectoral Policies

There are several Indonesian laws related to conservation and development in the forestry sectors that meet the mandate and objectives of ITTO. The new Forestry Law of 1999, which replaced the 1967 Basic Forestry Law, for example, stipulates that:

- The balance between the forest's conservation, protection and production roles should be optimized in order to sustain its environmental, cultural and economic uses;
- The ability of communities to develop capacity and resourcefulness in creating social and economic security as well as guaranteeing the equitable and sustainable distribution of benefits should be increased;
- All forestlands may be exploited except nature reserves as well as the 'core' and 'wilderness' zones of National Parks; and
- The community has important part to play in forest development and the government, which assisted interested parties must promote this responsibility.

While the laws are generally rather thin on the importance of and strategy towards biodiversity conservation, the Biodiversity and Ecosystem Conservation Law (1990) provides the legal basis for the enactment of National Parks and other protected areas as well as the possibility of sustainable use of living resources. This law also provides a concept of zoning within these conservation areas (core zone, use zone for recreation and tourism, wilderness zone and traditional management zone) and the buffer zone outside. A number of other laws that are also relevant to the management of the forest estate include those that encompass land rights, spatial planning, forest activities, and environmental impact. In addition, the Republic of Indonesia is signatory of several international commitments, including:

- Member of the ITTO and thus committed to ITTO's Year 2000 Objective and the Organization's Guidelines for Sustainable Forest Management;
- Committed to Agenda 21 adopted at the 1992 UN Conference on Environment and Development, where in its 1995 National Report it described the establishment of protected forest areas, national parks, timber estates, and a national strategy for tropical rainforest management. It also includes traditional and modern practices of sustainable use of biological diversity and an action plan for biological diversity management;
- Party to the Convention on Biological Diversity (CBD), which was ratified in 1994. By ratifying it, Indonesia accepted that there is a global community interest in biodiversity contained within its borders; and
- Party to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), the World Heritage Convention, and the ASEAN Heritage Convention.

3. Programs and Operational Activities

Based on the laws, regulations, and commitments mentioned above, Indonesia Development Programs are translated into programs in the *Twenty Five-Year and Five-Year Development Plans*. Indonesia's second *Twenty Five-Year Development Plan* (PJP II) cover the period of 1994/95 to 2018/19. Each of the *Twenty Five-Year Development Plans* (PJP) is divided into five *Five-Year Development Plans* (Repelita). Each *Repelita* specifies the development goals, priorities and policies following the broad directives of the five-year termed *State Policy Guidelines* (GBHN).

The *Conservation of Natural Resources and the Environment* in PJP II mentioned the industrial sector is to be the main engine of growth. This growth undoubtedly will affect the availability and utilization of natural resources and put further pressure on limited quantities of land, water, and other natural resources. One of the challenges in PJP II is to ensure the preservation of a balance between economic growth and the conservation of natural resources and

the environment. Maintaining a sustainable development process, therefore, becomes very important.

The Tropical Forestry Action Plan produced by Indonesia's Ministry of Forestry in 1991 is a policy document to guide forestry program and investment during Repelita V and VI (Five-Year Development Plans). The document considers forests and land use, forest ecosystem conservation, sustainable forest resource utilization, institutional development, and a description of the TFAP process. Some of the major themes include:

- Forest-based industries as an important source of foreign exchange;
- The nation's large and growing system of parks and reserves; and
- The roles of individuals and NGOs in conservation and sustainable use of resources.

Many of the policies and activities listed are relevant to the sustainability of forest resources and the slowing if not stopping the loss of biodiversity and therefore the ITTO program.

In addition, the Biodiversity Action Plan for Indonesia (1993), prepared under the responsibility of the National Development Planning Agency (Bappenas), provides a framework for biodiversity conservation during Repelita V and VI and for the 25 Year Development Plan (PJP II). It calls for greater collaboration between government agencies and local communities and NGOs to work together as partners in biodiversity conservation. In this connection, the strategy taken is to manage the conservation areas, including their biodiversity, through Integrated Conservation and Development Projects (ICDPs). This approach attempts to ensure the conservation of biological diversity by reconciling the management of protected areas with social and economic needs of local people. These projects range from small biosphere reserves to multiple-use areas within the boundary of the protected area. Phase I of the ITTO sponsored Management Plan of the Betung-Kerihun National Park in West Kalimantan is only one of the ITTO involvement in this line of activities.

PART II. THE PROJECT

1. Project Objectives

1.1. Development Objective

To develop a community-based integrated conservation and development program over wide areas or eco-regions that transcend jurisdictional boundaries between Sarawak (Malaysia) and West Kalimantan (Indonesia).

1.2. Specific Objectives

Because of the particular locations and importance of both BKNP and LEWS, the specific objectives of this proposal are:

- 1.2.1. To develop a respected, well managed and well functioning Betung Kerihun National Park, West Kalimantan, where local communities and/or other stakeholders actively participating and receiving fair benefits in the conservation and utilization of the park resources and biodiversity.
- 1.2.2. To develop a cooperative working system where stakeholders of two protected areas (BKNP and LEWS) could work together effectively in managing wide areas or eco-regions that transcend boundaries between the two protected areas in Sarawak and West Kalimantan.

2. Justification

2.1. Problem to be addressed

Increasingly, the Betung Kerihun National Park and many other protected and non-protected areas are becoming the ultimate destination for illegal collecting of timber and non-timber forest products. Big investors, who provide equipment or capital needed for harvesting and transporting logs or who have the necessary contacts needed for keeping their business going, often sponsor these activities. The situation is also made worst by the current economic crisis in Indonesia, particularly in rural areas where alternative sources of incomes are badly needed. Also, with the present poor level of law enforcement in Indonesia and the ease of moving forest products illegally across the trans-border region between relatively newly establish national park, the parks faces insurmountable problems that need to be sorted out systematically.

As described and discussed in the findings of Phase I of the ITTO sponsored Twenty-Five Year Management Plan of this Park: "Rencana Pengelolaan Taman Nasional Betung Kerihun, Kalimantan Barat, 2000-2024", the problems are not only lack of financial support, but also lack of:

- a. Clear and well-defined and marked boundary and management zones;
- b. Sufficient number and skilled human resources for managing and protecting a relatively large area;
- c. Sufficient scientific or biodiversity data and information for sustainable resource management;
- d. Policy and skills needed for sustainable utilization of the Park's resources (fish, swiftlet's nests, as well as ornamental, medicinal, or economic plants);
- e. Community or stakeholder awareness, concerns, participation, and partnership;
- f. Intensive dialog between Park management and stakeholders;
- g. Office, transportation, and communication infrastructure; as well as
- h. Law enforcement and management systems.

2.2. Intended Situation after Project Completion

By the completion of the project, the Park has:

- a. Well-defined area with clear, well marked, well known, and well respected boundaries particularly along settlement areas;
- b. Sufficient number of skilled, dedicated, and motivated staff;
- c. Good, working organization and management system;
- d. Basic infrastructure and equipment (office, transportation, and communication) that allow them work effectively;
- e. Good and well managed data-base and information system;
- f. Good knowledge of ecological processes, species distribution and their mobility;
- g. Good and close working relations with all stakeholders particularly local communities;
- h. Good public awareness program;
- i. Concerned, well-informed, supportive stakeholders/communities on conservation;
- j. Good and well running or functioning community development program and activities (agroforestry, rafting, ecotourism, micro-enterprise, etc.);
- k. Good law enforcement, with no poaching, encroachment/land right issues, illegal logging, illegal collection of other natural resources, trading of protected or unique wildlife, etc.;
- l. National and international funding secured for continues effective management of the Park;
- m. Sufficient information for developing cooperative management system of trans boundary protected areas available; and
- n. Good and effective cooperation between the Malaysian and Indonesian authorities in the planning and management of the wider Central Borneo Montane Forests Eco-region established.

2.3. Project Strategy

As already mentioned above, this proposal concerns with Phase II of the ITTO sponsored activities in the Betung Kerihun National Park. Much of the results of Phase I studies have been summarized in the three volumes of the Twenty-Five Year Management Plans of this Park: "Rencana Pengelolaan Taman Nasional Betung Kerihun, Kalimantan Barat, 2000-2024". In this management plan, nine high priority activities have been recommended. These include:

- (1) The establishment and consolidation of Park boundary;
- (2) The establishment of management zones;
- (3) The strengthening of institutional capacities;
- (4) The development of ecotourism;

- (5) The improvement of quality and quantity of Park's staff;
- (6) The improvement of Park protection and security;
- (7) The enhancement and development of research activities;
- (8) The increase participation of local communities; and
- (9) The increase cooperation and partnership among stakeholders, including those with partners in the Lanjak Entimau Wildlife Sanctuary.

The implementation of parts of this recommendation has been initiated during the interim period before this proposed Phase II activities. To share the results and recommendation of Phase I study with the local stakeholders a one-day workshop was held at Putussibau on February 1, 2000. During this workshop, the local stakeholders expressed their keen desire to participate in almost all aspects of the recommended activities. Priority activity no. (8) will now be part of all the other activities. The same will also be true for priority activity no. (6). When the community is already part of the planning, implementation and management system, the needs for better Park protection and security are no longer urgent or needed. Particularly when the skills of Park's staff in dealing with such issues are already improved. This and the ecotourism activities have also been carried out during the interim period.

During a tri-partite meeting among Directorate General of PKA, ITTO, and WWF in Jakarta on March 7, 2000 where the proposed implementation of the management plan were discussed, all of the listed activities above were basically agreed. While some received further elaboration to include, for example, the needs for cross-visits, training, and scholarship (activity no. 5), the need for infrastructure development, law and policy on trade of species, collaboration with partners/stakeholders (including those between BKNP and LEWS) were strongly emphasized. It was also discussed/agreed that the Phase II Project should be:

- (a) outcome oriented;
- (b) incremental development;
- (c) self sustaining or financing in the short or long term, direct or indirectly;
- (d) based on local potential, both resources, tradition, or culture;
- (e) strengthening the marketing skills of local communities; and
- (f) promoting decentralization where local government actively involved in project implementation.

In general, these are the elements of the strategy that are proposed for Phase II of the project.

2.4. Target Beneficiaries

- a. The general public, interested in sustaining a healthy environment and steady sustainable development through wise use of resources;
- b. The general public who live downstream the Kapuas River, who will have a sustained source of water coming from the Park;
- c. Local communities, with an interest in sustaining their livelihood, their customary rights, cultural identity and quality of their direct environment, as well as alternative income opportunities;
- d. The Park Management Body that is interested in increasing support for Park Management and in increasing its own capacity to implement and further develop the Park's management concepts;

- e. Provincial and district governments, with an interest in developing an optimal balance between the functions of the area's environment and natural resources in the context of regional development;
- f. The DG for Nature Conservation and Protection has an interest in developing concepts and capacity that enables it to manage protected areas effectively;
- g. The Ministry of Forestry and Estate Crops interested in developing mutually supportive concepts of nature conservation and sustainable utilization of forest resources;
- h. The international community has an interest in sustaining large ecosystems and rich biodiversity of global importance for the welfare of present and future human society;
- i. The students and academia has an interest in studying of nature conservation, biology, ecology, etc.; and
- j. The local NGOs which has a relevant program and issues in the park management, especially on community development and capacity building.

2.5. Technical and Scientific Aspect

As listed in the Bibliography, much information has been collected and published. For example, the List of Flora and Fauna of Bentuang Karimun National Park (98 pages) and ITTO Borneo Biodiversity Expedition 1997 (200 pages). If we go through this bibliography, we will notice that the results of technical and scientific studies in the area have been published widely informs of 3 Volume of Management Plan of Betung Kerihun National Park, Executive Summary of Management Plan, and proceeding of Workshop on Management Plan of Betung Kerihun National Park: Integrated Biodiversity Conservation and West Kalimantan Province Development. In terms of contents, these studies and reports indicated the area is very rich in biodiversity. About 1,216 plant species belonging to 418 genus and 110 family have been identified with some of them considered as new species or new records. With much of the forest in the area still intact, 8 vegetation or forest types were recognized, namely: Low Land Dipterocarp Forest, Alluvial Forest, Swamp Forest, Old Secondary Forest, Hill Dipterocarp Forest, Limestone Forest, Sub-Montane Forest, and Montane Forest.

In terms of fauna, more than 48 species of mammals were found in the Park. They include 18 species of bats (Chiroptera) and 17 species of rodent, 7 species primate such as Orangutan (*Pongo pygmaeus*), Kelampiau (*Hylobates muelleri*), Hout (*Presbytis frontata*), Kelasi (*P. rubicunda*), Beruk (*Macaca nemestrina*), Monkey (*M. fascicularis*), and Tarsius (*Tarsius bancanus*). About 301 species of bird belonging to 151 genus and 36 family, with 15 species are newcomer; 63 species protected species and 24 endemic to Borneo have also been recognized. With regards to herpetofauna (amphibian and reptilian), from the 1,500-collected, 103 species were identified where 51 were amphibious, 26 lizards, 2 crocodiles, 3 turtles and 21 snakes. Fish has been collected about 4,000 specimen that was taken from 123 station in 36 big and small rivers, and 112 species, 14 species endemic to Borneo, belonging to 41 genus and 12 families we known. Also more than 170 species of insect were identified. While further explorations will reveal more species, more biologists are needed. The expedition considered the need to train younger ecologist and botanist in field work and species identification, and to gain the necessary knowledge and experience for continuing this important work in the future. Joint expedition between Sarawak, Malaysia and Indonesia was considered ver useful in terms of sharing human resources.

The basis for effective protection and management of the huge conservation area is to identify and map the forest resources, as far as possible, into distinct vegetation zones or units in

relation to the topographical features, soils and altitudes. These maps can initially be prepared from aerial photographs and satellite images.

Practical recommendation for botanical work include:

- Codify forest type better in future for computer analysis; and
- Try to engage older, most experienced informants/assistants who know the names and uses of many of the plants, in order to obtain maximum information.

In anthropology aspect, Iban behavior, including their shifting cultivation practices has been attributed to a "warrior's" view of natural resources or "plunder to be taken" and to a "superior indifference toward agricultural proficiency". Thus the Iban have been called less "shifting cultivators than *manager de bois*". These image have emerged and been reinforced over the years. Iban methods of shifting hill-rice cultivation are primarily relevant to pioneer areas and not all such shifting cultivation has been exhaustive or damaging. Iban shifting cultivation in long-settled areas such as Saribas or Lemanak rivers (Second Division) is different but sustainable.

2.6. Economic Aspects

One of the majors complains from most parents in the area are their inability to provide their children with proper education. At Nanga Hovat, for example, with only on teacher available, children usually begin to drop out after the third grade. Although they actually have enough food to eat, few have enough money to send their children to other villages or Putussibau for better school or to have enough money to bring or support more teachers coming to their village to properly teach their children. Under this condition, most villagers are anxious to participate in the proposed project where they hope to obtain alternative sources of income as indicated in the proposal.

Therefore, project has a plan to develop small-scale industry to increase income of community around the Park, also their awareness, concern and appreciation toward the existence and conservation of the Park.

The economic and marketing plan will consider the Park's role in and contribution to the socioeconomic development of the communities near the Park, based on the park's zoning principles of sustainable utilization. The benefits for the communities must be real in short-term as well as long-term. Possible sources are eco-tourism, handicrafts industry, and employment in the Park, cultivation of specific crops, agricultural improvements, and management of non-timber forest product collecting. An understanding will have to be achieved, through extension, that the example set by many actors in natural resources exploitation, who merely maximize their profit through unsustainable methods, is inappropriate and would be detrimental to the sustainability of the Park's biodiversity and natural resources.

The economic and marketing plan has two main objectives. First, to give the Park a short and long-term meaningful economic significance from the point of view of the local stakeholder, which is deemed not only fair but also necessary for continuing effective monitoring and control of access to and utilization of the Park's natural resources. Second, to try to generate sufficient income and raise enough funds for the continuation of an effective management of the park.

The entire above products is very potential to be marketed to Malaysia through Nanga Badau-Distrik Lubok Antu boundary. The volume of trade and transaction between community in

the both boundary area is high and increase each year, especially after economic crisis 1997 that cause the high of rupiah exchange rate to ringgit Malaysia. This condition is supported with the planning to open cross-boundary post Nanga Badau-Lubok Antu District in 2001 by government of Indonesia and Malaysia. The main target is tourist who visit the Park, community within and around Putussibau (capital of Kapuas Hulu District) that their daily need supplied by other districts.

2.7. Environmental Aspects

Much of the Park area is located on a relatively rugged topography. A brief period of rain is already sufficient to raise the water level in the river a few meters higher. Putussibau, the capital city of the district that is located quite far away from the Park, is frequently flooded during the rainy season. In contrast, the river water at this city can be very low during the dry or extended dry period. The lost of forests in the Park would not only mean the lost of biodiversity but it could also causes serious water problem to those living downstream. Conserving the forest and at the same time working with the communities in rehabilitating the degraded lands outside the Park areas through agro-forestry activities (one of the activities proposed in this project) could reduce if not avoid this problem.

In addition, decreasing of water supply from upper course of river influence the population of fresh water in the lower course of Danau Sentarum National Park. The Park supply almost 70 % of fresh water fish need for community in and around West Kalimantan, including Malaysian people in Lubok Antu.

Traditional gold mining caused environmental damage and some of gold stone washed away because of inappropriate filtering method. Collecting gaharu was threatened by bankruptcy because of the diminishing of natural resource. While, efforts to cultivate and conserve it haven't done yet. Also collecting bird-nest haven't been followed by maintenance and enrichment efforts that is really needed.

Protected forest will conserve the population of swiftlet that is in some areas become livelihoods of community around the area. In the other side, number of swiftlet's nest harvesting without considering the sustainable of the population (species conservation) and production will destroy them. If it happens the community will be pushed to do some efforts that are more dangerous to the environment such as intensive illegal gold mining in upper course of Bungan and Kapuas River. The impact of illegal gold mining is the Kapuas River polluted by mercury that was used to purify gold. So, besides threatening the fish population around the area, also threaten the quality of community live, which their activities (take a bath, washing, etc.) depend on the water of Kapuas River. Therefore, Betung Kerihun National Park as a life supports function through its role in maintaining the hydrology.

2.8. Social Aspects

The native people around the Park belongs to 8 ethnic groups (Dayak Iban, Tamambaloh, Taman Sibau, Kantu, Kayan Mendalam, Bukat Mendalam, Bukat Metelunai and Punan Hovongan) which represent three of the four Dayak groups living in Kalimantan or Borneo. They

live in 12 separate major settlements (Village or Sub-Village) of which two of them located inside the Park (Nanga Bungan and Tanjung Lokang) and 6 quite close to the boundary (Sadap, Banua Martinus, Ulu Palin, Nanga Potan, and Nanga Ovat). While the density and growth rates of the population around the Park are far below the national means, the level of their education is generally low. Although their health looks relatively good, they practically live from a subsistence economy.

Except for the people in Nanga Bungan and Tanjung Lokang who live primarily from gold mining and collecting swiftlet bird's nests, most of the people in the area are still living from the traditional shifting agriculture and hunting. While the seemingly low population sizes of wildlife (primates, birds, fishes) may be due to the high hunting or fishing pressure (as sources of protein), with the relatively low human population, the impact of shifting agriculture is apparently low. Many people still have tall, mature forest stands as parts of the lands they are putting on fallow. The extensive degraded land areas, however, may be due to the clear cutting by the past logging concessionaires in the area.

Punan and Bukat people are ethnic groups who represent typology of Dayak community with hunting and collection non-timber product as their cultural background. The characteristic of both ethnic is individualistic, pragmatic and opportunist, because they have become accustomed to live in a group that is independent and high mobility to survive their live from non-timber product. Therefore to develop participation of the both ethnic group should concentrate on approach to small group network of one bloodline family (called *puhu*) and closed family (*hino pahari-hari*).

Iban and Kantu people are two ethnic groups who represent typology of Dayak community with hill and dry-land cultivation as their cultural background. The characteristics are egalitarian, open, and democratic based on two main moral values: team working (*gerempung penemu*) and supporting competitive between individual (*bepaket*). Dynamic and pragmatic of group and individual characteristics is the background of their fond of wandering about to get new experience while earning money from non-agriculture sector (*bejalai*). Therefore, strategy to develop their participation should give priority to open and democratic principle. Individual opinion, group or target community toward developing process of future BKNP program should be observed and assessed based on some of agreed objective standard.

Tamambaloh and Kayan people are two ethnic groups whom representative typology of Dayak community with dry land and wetland cultivation as their cultural background. Tight and stratified social layer still appear in their live i.e. traditional ceremony or in decision making process on traditional law and aspect of local community leadership level. In some aspect, religion, modern education and nation state have eroded the old power structure, so now the both characters almost resemble the character of Iban and Kantu groups. But, a few immigrant blood and noble group (*samagat/Tamambaloh*; *hipi/Kayan*) still influence in decision making process at local community level. It meaning strategy of participation development in Tamambaloh and Kayan group have to observe sharply the existence and influence network of noble family group who stay within or outside village.

Strategy of community participation should start from comprehensive of culture, community structure and livelihood type of each ethnic group characteristics. In other side, it is important to always develop participation in three levels. First, open and provide information and discuss some activities related to the existence and implementation process of BKNP Management Plan. Second, strengthen the commitment of target community and involve them in discussion,

research, or other fieldwork. Third, adopt the initiative of local community to ensure integrity and existence of BKNP in the future.

2.9. Risk

The current economic crisis and political change may accelerate the illegal utilization of the Park's resources, and therefore its valued biodiversity. Recent efforts by regional government and rural elite are an abuse of the new decentralization policy and these efforts may also disturb Park integrity. These phenomena have already signaled inside the park and in its latest development outside and adjacent to the Park, as revealed in various provincial and national newspapers. The Park's integrity and even its very survival may depend on a quick return of genuine law-enforcement, a rooting-out of major illegal harvesting within the Park, a halt to corruption, and the eradication of illegal syndicates preying on the nation's natural resources.

The constraints and problem solution which could be done are:

1. Illegal logging mostly occurred in Embaloh Watershed, in the protected forest, which is a border area of the Park. Based on the result of investigation in Nanga Badau, logs were smuggled through Nanga Badau-Lubuk Antu border.
2. Beside in Embaloh, Sibau and Mendalam Watershed also have the same experience. In Sibau Watershed, after passing Dusun Nanga Potan, logs along Edges River was cutting down illegally. Community from Nanga Potan reported that the activity of illegal logging had entered the Park boundary area. The illegal logging activity also occurred in upper course of Mentibat (close to the WWF research station), in Mendalam Watershed. But after straightening up, it was stopped. The cut logs still left in the area and now become a dispute between community who want to take the cut logs and other community group who against them.

Approach and create a dialog with Malaysia to decrease the illegal logging along the Indonesia-Malaysia boundary and do a joint operation in illegal logging should be done by Government of Indonesia, WWF, the police, military, and the other related stakeholders. Based on the result of investigation done by Teropong and WWF team on February 2000, it was indicated that the broker of illegal logging comes from Malaysia. In the meanwhile, other alternative activity to support community life should be provided for them who depend on the activity.

3. Illegal wildlife trade is not big, as illegal logging, but it need to be anticipated for better future management of the Park. Most wild animal that was detected traded periodically came from bird group i.e. Streated headed bulbul (*Pynonotus zeylanicus*), Pheasant (*Lophura* sp.), and Myna bird (*Gracula religiosa*). Also Kuau/Ruai (*Argusianus argus*), King Fisher (*Alcedinidae*), Sunbird (*Nectarinidae*), Pheasant white tail (*Lophura bulweri*), some species of parrot (*Eos cyanogenia*, *Lorius lori*, *Eeclactus humilis*), Yellow neck hangingparrot (*Loriculus pusillus*), Owel (*Ketupa ketupu*), Black horn bill (*Anthracoceros malayanus*), Rhinoceros horn bill (*Buceros rhinoceros*), Banded Pitta (*Pitta guajana*), Orangutans (*Pongo pygmaeus*) and Bornean gibbon (*Hylobates muelleri*) from primate have also ever been traded.

Problem solutions are: (1) push down the need of wildlife for pet in order to reduce market potential for wildlife trade. Wildlife seller will be going down slowly if there is no buyers; (2)

propagate information to broad community for not to buy and trade wildlife; and (3) socialize the wildlife regulation and law enforcement.

4. Detected area of illegal fish hunting is Sibau and Embaloh Watershed. Targetted species is consumption fish in high price such as Semah fish (*Tor tambra* and *Tor tambroides*) and Tengadak (*Barbodes collingwoodi*). The capture fish is packaged in a closed container and sent to Sarawak boundary. In Malaysia, the price becomes 3-4 times compared to the local price.

Consumption fish such as Semah dan Tengadak fish is a business opportunity for community around the Park. In a natural way, if it is harvested continually from nature will decrease the population and become endangered species. The way out is breeding, and local community can be trained to cultivate consumption fish.

5. Swiftlet's nest mostly found within the Park is also a commodity can be unhampered exploited. It has been started to be exploited since and of 1980 and its production decrease sharply because of unsustainable harvesting system.

Managing the harvesting cycle in a discipline way should be done. Also develop swiftlet breeding and cultivation with build swiftlet houses in order to increase its population.

6. Gold mining in upper course of Kapuas River also one of a serous problem that should be noticed related to the water quality of Kapuas River.

Other income sources that can be replace the activity should be find out. Community skill in plaiting, weaving and traditional carving is valuable asset that can be improved to be a commercial business.

Therefore, beside an approach on environmental awareness campaign to the community around the Park, alternative activities for the community potential damaging the Park is also necessary. Community based development of small-scale industry that focuses on non-timber forest product become an alternative to overcome the above illegal activities.

2.10. Project Sustainability Aspect

As indicated above, in addition to working with The Sarawak Government to reduce the demand for the non-timber forests product from the Indonesian side, working with the local community through a community-based conservation and development activities is considered to be an important alternative that could maintain the integrity of BKNP.

By developing an effective system for Trans-boundary National Park between LEWS and BKNP we are certain that the illegal flows of those resources could be pushed down. Furthermore, since these illegal flows of resources are often triggered by the economic-needs of local people around BKNP, to reduce if not stop those activities we need to provide these local communities with other sources of livelihood. As shown in "Part III. Operational Arrangement", the structure of the project is designed in such a way that the main project beneficiaries are the local communities who live near or along the park boundaries. By showing them how to conserve biodiversity in the adjacent park area and at the same time facilitate them how to sustainable benefited from the resources in the park, we are confident that these communities will sustain the idea we are introducing to them through this project.

3. Outputs

3.1. Specific Objective 1

To develop a respected, well managed, and well functioning National Park, West Kalimantan, where local communities and/or other stakeholders actively participating and receiving fair benefits in the conservation and utilization of the park resources and biodiversity.

- Output 1.1: National boundary and management zones near or around settlement areas in the Betung-Kerihun NP clearly defined, agreed, and well marked on the ground, as well as respected by local communities, Park Management, and relevant district government agencies.
- Output 1.2: Basic facilities and equipment for supporting the proper functions of the Park established or purchased.
- Output 1.3: Realistic management systems that have been discussed and agreed by local communities, Park Management, and relevant district government agencies established.
- Output 1.4: Relevant and well-qualified staff for managing the various functions of the Park hired or seconded to the Park and trained.
- Output 1.5: Well and appropriately designed database and information system for supporting the management of the park established.
- Output 1.6: Information needed for sustainable utilization of economic plant and animal species (through their cultivation or farming) collected and used as alternative sources of income.
- Output 1.7: Community-based ecotourism and rafting activities established at certain rivers and locations in the area.*
- Output 1.8: Community micro-enterprises as a way of sustainable utilization of plant and animal resources in and around the Park area are established.*
- Output 1.9: Awareness, concerns, and/or supports of the general public at village, district, provincial levels in conserving biological diversity and their sustainable utilization increased.*

3.2. Specific Objective 2

To develop a cooperative working system where stakeholders of two protected areas (BKNP and LEWS) could work together effectively in managing wide areas or eco-regions that transcend boundary between the two protected areas in Sarawak and West Kalimantan.

- Output 2.1: *Lessons learned in managing LEWS and Betung-Kerihun National Park (BKNP) freely shared and solution to common issues formulated.*
- Output 2.2: *Results and lessons learned in buffer zone development in LEWS and BKNP are discussed and formulated.*

4. Activities

4.1. Specific Objective 1

To develop a respected, well managed, and well functioning Betung Kerihun National Park, West Kalimantan, where local communities and/or other stakeholders actively participating and receiving fair benefits in the conservation and utilization of the park resources and biodiversity.

Output 1.1:

National boundary and management zones near or around settlement areas in the Betung Kerihun NP clearly defined, agreed and well marked on the ground, as well as respected by local communities, Park Management, and relevant district government agencies.

Activities:

- 1.1.1. Define park boundary and management zones near or around settlement areas through a series of village workshops and participatory mappings.
- 1.1.2. Discuss the proposed boundaries resulted from such workshops and mapping in a series of workshops at district level until agreement with villagers is reached.
- 1.1.3. Mark the agreed boundaries in the field with dead and/or living permanent markers
- 1.1.4. Map the agreed boundary and ratifying it by representatives of the village communities, Park Management, and District Government.
- 1.1.5. Inform the general public about the boundary of the park and its management zones and makes the park's map available to them.

Output 1.2:

Basic facilities and equipment for supporting the proper functions of the Park established or purchased.

Activities:

- 1.2.1. Establish committee for supervising the construction of some of the facilities recommended in Book III of the management Plan (1 unit of Park HQ Office, 2 units of long-houses in 2 locations to accommodate tourists (Tanjung Lokang and Nanga Potan), visitors, and Park's staff, 1 Research Station, 1 docking for boats at Park HQ).
- 1.2.2. Open the bidding for constructing the facilities, select winners of the bidding companies and facilitate these companies in implementing the construction of the facilities.

- 1.2.3. Purchase basic equipment that are needed to manage the park. (8 desk tops (2 of Park Unit, 6 of WWF), 1 set GIS (WWF), 2 digital camera (Unit and WWF), 2 TVs (1 of Park Unit, 1 of WWF), 2 in Focus Projectors (1 of Park Unit and 1 of WWF), 5 micro-hydros (for communities), 2 sets of All Band Radio Communication (Park Unit and WWF), 5 boats and outboard motors (for communities), 1 Toyota Kijang and 1 Four-Wheel Drive Jeep (WWF), 2 Motorbikes (WWF), 2 sets of GPS (1 of Park Unit, 1 of WWF).

Output 1.3:

Realistic management systems that have been discussed and agreed by local communities. Park Management, and relevant district government agencies established.

Activities:

- 1.3.1. Investigate traditional knowledge and practices that are related to the park management (resource use, trade, law/policy establishment and enforcement, etc.) and consider them in the drafting of the management systems.
- 1.3.2. Distribute this draft to all stakeholders, particularly villagers, park management, and relevant district government, and implement workshops in each of the five villages to discuss it among the villagers.
- 1.3.3. Invite representatives of the villagers, park management, and relevant district governments to workshops to discuss the draft, reach agreement, and ratify the agreed final management systems.
- 1.3.4. Develop organogram that meets the needs of this management systems.

Output 1.4:

Relevant and well-qualified staff for managing the various functions of the park hired, seconded to the Park and all Park staff trained.

Activities:

- 1.4.1 Establish job description for every position needed for managing the park.
- 1.4.2 Fill priority positions that are still empty and announce these openings to people in relevant local village, sub-district, district, province, and national levels. Under similar conditions, priority for hiring should be given following that order.
- 1.4.3 Once hired, provide them with relevant training, *scholarship (if necessary)*, equipment, and supervision

Output 1.5:

Well and appropriately designed data base and information system for supporting the management of the park established.

Activities:

- 1.5.1 Identify the types of data and information to be included in the system.
- 1.5.2 Hire consultant to design such system.
- 1.5.3 Hire and train staff to manage such system.

Output 1.6:

Information needed for sustainable utilization of economic plant and animal species (through their cultivation or farming) collected and used in the cultivation or farming of such species as alternative sources of income.

Activities:

- 1.6.1 Identify economic plant and animal species that are preferred or commonly used by the local community.
- 1.6.2 Investigate their socio-economic and market potential and select top ten of each plant and animal species for further investigation
- 1.6.3 Study the ecology, distribution, growth, phenology, and the regeneration pattern of the plant species as well as feeding, breeding and movement pattern/behavior, etc. of the animal species and based on these information select the top five of each group.
- 1.6.4 Train and facilitate local communities in the cultivation or farming such species

Output 1.7:

Community-based eco-tourism and rafting activities established at certain rivers and locations in the area.

Activities:

- 1.7.1 Based on the available information, identify potential sites and species for eco-tourism development in the area (currently being carried out as part of the 'bridging program')
- 1.7.2 Establish trails or routes to the sites and collect interesting social, biological, ecological, geological information along these trails or routes.
- 1.7.3 Compile these information into attractive and handy-to-carry booklet or leaflets so that it can be consulted and used as guide book when visiting the area.
- 1.7.4 Group the sites and species into attractive packages and investigate their socio-economic and market potential.
- 1.7.5 Distribute such booklets widely (travel agents, etc.) to attract potential visitors coming to the area.
- 1.7.6 Hire consultant for identifying potential rafting sites in the area and for selecting potential people/local villagers to manage and run the activities.
- 1.7.7 Hire consultant to train these potential villagers to learn and improve their rafting and other related skills in order to make the rafting customers happy and comfortable.
- 1.7.8 Hire consultant to establish rules and regulation that should be observed by the customers and the villagers.
- 1.7.9 Provide 2 units rafting equipment.

Output 1.8:

Community micro-enterprises as a way of sustainable utilization of plant and animal species established.

Activities:

- 1.8.1 Implement village workshop to explain the purpose of the micro-enterprise to local communities. Invite or persuade all members of the village community to participate in the establishment of the village micro-enterprise.

- 1.8.2 Develop the organization structure of the enterprise. Establish the organogram of the enterprise to show/visualize the relations of the various activities (agriculture, animal husbandry, eco-tourism, rafting etc.) and assign each member of the enterprise specific role or responsibility in the organization.
- 1.8.3 Assign and train staff. Rotate the role and responsibility of each member in the organization and train them before starting their new position.
- 1.8.4 Establish rules and regulations. Establish rules and regulations that should be observed and respected by each member of the enterprise. Included in these rules and regulation is an agreement that each member also responsible for the protection and conservation of biological diversity and the sustainable utilization of these resources.

Output 1.9:

Awareness, concerns, and supports of the general public at village, district, and provincial levels in conserving biological diversity and their sustainable utilization increased.

Activities:

- 1.9.1. Continuously collect data/information, take pictures of interesting or unique plant and animal species, and develop them into features or thematic articles, stories, or video-clips for use or release at specific occasion to mass media.
- 1.9.2. Promote seminar, lectures, and field visits among reporters on the biodiversity of the park as well to see, learn, and write articles or make video-clips on outstanding features of plants, animals, scenery, and other phenomena occurring in the park area.
- 1.9.3. Implement monitoring and evaluation, and invite reporters to participate, see, learn, and write articles or make video-clips on how local communities benefited from the local biological resources and how the project is working with the local communities and other stakeholders to increase or improve benefits and their sustainability.

4.2. Specific Objective 2

To developed o cooperative working system where stakeholders of two protected areas (BKNP and LEWS) could work together effectively in managing wide areas or eco-regions that transcend boundaries between the two protected areas in Sarawak and West Kalimantan.

Output 2.1:

Lessons learned in managing LEWS and Betung Kerihun National Park (BKNP) freely shared and solution to common management issues formulated.

Activities:

- 2.1.1 Implement workshop on management issues and effective management systems within LEWS or BKNP.
- 2.1.2 Implement remote sensing study to investigate problems or issues occurring in LEWS and BKNP.
- 2.1.3 Implement combined site-visits to LEWS and BKNP to observe and collect information on actual issues or problems on the ground.

- 2.1.4 Implement seminar and workshop to discuss the findings of the remote sensing and field studies to determine relevant topics that should be covered in developing effective trans-boundary management systems between LEWS and BKNP.

Output 2.2:

Results and lessons learned in buffer zone development in LEWS and BKNP are discussed and formulated.

Activities:

- 2.2.1 ***Implement joint surveys to investigate the biology, ecology of interesting, rare, endangered, and/or economic species for use in species conservation management or their utilization***
- 2.2.2 ***Implement seminar and workshop to share and discuss potential use of those species for buffer zone development.***
- 2.2.3 ***Based on the results and recommendation of the workshop, implement relevant measures to help local communities to domesticate or propagate those species.***
- 2.2.4 ***Implement workshop to formulate and share the lessons that we had learned.***

5. Logical Framework Worksheets

PROJECT ELEMENTS	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTION
DEVELOPMENT OBJECTIVE To develop a community-based integrated conservation and development program over wide areas or eco-regions that transcend jurisdictional boundaries between Sarawak (Malaysia) and West Kalimantan (Indonesia).	<i>(1) Good working relations between LEWS and BKNP;</i> <i>(2) No increase in encroachment and other illegal activities in the Park;</i> <i>(3) Local communities start receiving benefits from sustainable buffer zone activities.</i>	<i>(1) Joint meeting, proceedings, and photographs;</i> <i>(2) Photographs/ reports of stakeholders working together in the field;</i> <i>(3) Socio-economic, awareness, and ecological surveys at the beginning and at the end of the project.</i>	<i>Local government and MoF are maintaining their policies and commitments that are conducive for cooperation with Sarawak, Malaysia could be maintained.</i>
SPECIFIC OBJECTIVE 1. To develop a respected, well-managed, and well functioning Betung Kerihun National Park, West Kalimantan, where local communities and/or other stakeholders actively participating and receiving fair benefits in the conservation and utilization of the park resources and biodiversity.	<i>(1) BKNP has well defined area and zones. Also own office building, basic equipment, furniture, as well as data base and information system, management system, organization structure, rules and regulations, and well-motivated skilled local staff;</i> <i>(2) Local communities and stakeholders participated in the park's protection;</i> <i>(3) Local communities start receiving of extra income from ecotourism, sustainable agriculture, and other activities within and outside the Park boundary.</i>	<i>(1) Maps of the Park area together with its management zones;</i> <i>(2) List of equipment, furniture, photos of infrastructures, documents on rules and regulations;</i> <i>(3) TORs staff reports and photos of activities;</i> <i>(4) Socio-economic, awareness, and ecological surveys at the beginning and the end of the project.</i>	<i>Closely coordination and consultation involving all stakeholders could be regularly conducted during project implementation.</i>

OUTPUT 1.1. National boundary and management zones near or around settlement areas in the Betung Kerihun NP clearly defined, agreed, and well marked on the ground, as well as respected by local communities and approved by Park Management, and relevant district government agencies.	<i>By the end of the project, at least 30% of the Park boundaries along villages agreed, marked, socialized, and respected by local villagers and approved by relevant legal government agencies.</i>	Photos and maps of boundary markings are shown/available in official reports.	Village communities actively participated in determining and establishing the boundary markings.
OUTPUT 1.2. Basic facilities and equipment for supporting the proper functions of the Park established or purchased.	<i>Park office together with facilities and equipment are established or purchased and available for use in the activities at least one year after the project got started.</i>	All facilities and equipment are listed in the inventory lists of the park and pictures of major facilities available on files.	Materials and equipment available on market within the estimated budget.
OUTPUT 1.3. Realistic management systems that have been discussed and agreed by local communities, Park Management, and relevant district government agencies established.	<i>By the end of the second year, guideline for Park operational system developed, tested, and finalized.</i>	Job description for all position as well as rules and regulation related to park management available in writing.	No great influx of people from other areas is settling in the area.
OUTPUT 1.4. Relevant and well-qualified staff for managing the various functions of the Park hired, seconded to the Park and all Park staff trained.	<i>(1) By the end of the first year, well-qualified staff for Putussibau office is hired; (2) By the end of the project, at least 75% of them received relevant training; (3) By the end of the project, 3 to 5 scholarships are given to local staff for advanced degree in fields related to resource management.</i>	All key position are filled-in by well-qualified staff.	<i>The newly recruited park staff received civil servant status.</i>

OUTPUT 1.5. Well and appropriately designed data base and information system for supporting the management of the park established	<i>By the end of the project, the Park has developed relevant and functional data base system.</i>	<i>All available data are stored on disk and easily accessible.</i>	The data storage systems are well protected from virus and other abuse.
OUTPUT 1.6. Information needed for sustainable utilization of economic plant and animal species (through their cultivation or farming) collected and used in the cultivation or farming of such species as alternative sources of income.	<i>By the end of the project, at least 5 species of each local plant and animal species are used by local communities in ecotourism and buffer zone development around the villages.</i>	<i>(1) Crops or economically valuable animal species are grown or domesticated in people gardens or other habitats; (2) Booklets on wildlife available.</i>	<i>Pests do not seriously attack crops or domesticated economic resources.</i>
OUTPUT.1.7. <i>Community-based eco-tourism and rafting activities established at certain rivers and locations in the area.</i>	<i>(1) By the end of the project, an attractive ecotourism involving local community package is established; (2) At least 3 travel agents are actively brought tourists to the area; (3) At least 50 foreign and 100 domestic tourists are visiting the Park per year.</i>	<i>Foreign and domestic visitors are listed in guest-books located at a number of tourist locations in and around the Park area.</i>	No serious social, economic, and political conditions prohibit people from coming to the area.
OUTPUT 1.8. <i>Community micro-enterprises as a way of sustainable utilization of plant and animal resources in and around the Park area are established.</i>	<i>By the end of the project, small agricultural enterprise in each of the targeted village established and functioning.</i>	<i>Villagers and visitors can meet their basic needs locally.</i>	Same as above.

OUTPUT 1.9. <i>Awareness, concerns, and/or supports of the general public at village, district, and provincial levels in conserving biological diversity and their sustainable utilization increased.</i>	<i>(1) Awareness, understandings, and skills of local communities in biodiversity conservation and sustainable utilization of biological resources increased by 25%; (2) Appreciation on the importance of BKNP by communities in the downstream of Kapuas river increased by 25%; (3) Park disturbance (illegal logging, illegal hunting, etc.) decreased by 10%.</i>	<i>Reports of survey, field investigations, and other source of information at the beginning and at the end of the project.</i>	Same as above.
SPECIFIC OBJECTIVE 2. To develop a cooperative working system where stakeholders of two protected areas (BKNP and LEWS) could work together effectively in managing wide areas or eco-regions that transcend boundaries between the two protected areas in Sarawak and West Kalimantan.	<i>(1) Results and lessons learned in each protected area are exchanged and used for Park management and buffer zone development; (2) TOR of joint Task Force is established; (3) Plan of operation involving Sarawak authority established.</i>	<i>(1) Results and lessons learned are shared and discussed in joined workshop; (2) Report of joint cooperation and activities.</i>	<i>Commitment and supported by Sarawak and West Kalimantan authorities continuous.</i>
OUTPUT 2.1 Lessons learned in managing LEWS and Betung Kerihun Nat. Park (BKNP) freely shared and solution to common management issues formulated.	<i>(1) Managers and staff of LEWS and BKNP attended workshop, seminar, and carry site visit to seek solution to common issues related to Park management; (2) Various maps, documents, and information related to park management available on database.</i>	<i>(1) Reports of site visits, workshop, meeting, and seminars, and their distribution are available on database; (2) List of distribution of project papers and documents; (3) All those information, data, and map resulted by the project are used and quoted by others.</i>	Same as above.
OUTPUT 2.2 <i>Results and lessons learned in buffer zone development in LEWS and BKNP are discussed</i>	<i>Joint field surveys, expeditions, workshops, and/or seminars to identify economic species and</i>	Same as above.	Same as above.

<i>and formulated.</i>	<i>their ecology for buffer zone development are sponsored and carried out in the first and second year of the project.</i>		
------------------------	---	--	--

OUTPUTS/ACTIVITIES		RESPON- SIBLE PARTIES	Schedule of Workplan (Monthly)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			1	2	3	4	5	6	7	8	9	10	11	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Output 1.1:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</

OVERALL PROJECT BUDGET BY ACTIVITY

OUTPUT/ ACTIVITIES + Non-Activity Based Expenses	BUDGET COMPONENT							
	Project Personnel	Sub Contract	Duty Travel	Capital Items	Consumable Items	Miscella- neous	Quarter Year	Grand Total
	10	20	30	40	50	60	70	
Output 1.1:								
National boundary and management zones of the Betung-Kerihun NP agreed, marked, and respected by local communities. Park Management, and relevant government agencies clearly defined and established on the ground.								
Activities:								
1.1.1. Define park boundary and management zones through a series of village workshops and participatory mappings.	2 500		2 000	-	2 500	-		7 000
1.1.2. Discuss the proposed boundaries resulted from such workshops and mapping in a series of workshops at district level until agreement with villagers is reached.	-		3 500	-	7 500	-		11 000
1.1.3. Mark the agreed boundaries in the field with dead and/or living permanent markers	2 500		3 500	2 000	5 000	-		13 000
1.1.4. Map the agreed boundary and ratify it by representatives of the village communities, Park Management, and District Government	2 500		3 500	2 000	2 500	-		10 500
1.1.5. Socialize the boundary of the park and its management zones and make the park's map available to the general public.			5 000	-	2 500	-		7 500
Sub Total	7 500	-	17 500	4 000	20 000	-		49 000
Output 1.2:								
Basic facilities and equipment for supporting the proper functions of the Park established or purchased.								
Activities								
1.2.1. Establish committee for supervising the construction of facilities recommended in Book III of the management Plan (1 unit Park HQ Office, 2 units of long-houses to accommodate tourists, visitors, and Park's staff, 1 Research Station, 1 docking for boats).	2 500		2 000	35 000	2 500	-		42 000

1.2.2. Open the bidding for constructing the facilities, select winners of the bidding companies and facilitate these companies in implementing the construction of the facilities	3 500	-	-	-	-	-	-	3 500
1.2.3. Purchase basic equipment that are needed to manage the park 1 set GIS, 1 digital camera, 2 TV, 2 Infocus Projector, 5 micro-hydro, 2 set of All Band Radio Communication, 5 boats and outboard motors, 1 Four-Wheel Drive Jeep, 1 Toyota Kijang, 1 Motorbikes, 2 sets of GPS, 1 Fax Machine, 1 UPS, 1 Scanner, 1 Printer Collor, 3 Printer, 1 VCD Player, 1 Video Player, 1 Slide Player, 4 Laptop, 6 Desktop, 2 Screen, 1 Digital Handycam, 1 Tele Camera, 1 Tripot Camera.	-	-	-	-	-	90 600	3 000	93 600
Sub Total	6 000	-	2 000	-	125 600	5 500	-	139 100
Output 1.3:								
Realistic management systems that have been discussed and agreed by local communities, Park Management, and relevant district government agencies established.								
Activities:								
1.3.1. Investigate traditional knowledge and practices that are related to park management (resource use, trade, law/policy establishment and enforcement, etc.) and consider them in the drafting of the management systems.	3 500	10 000	5 000	-	-	3 000	-	21 500
1.3.2. Distribute this draft to all stakeholders, particularly villagers, Park Management, and relevant District Government, and give them ample time to discuss it within their group.	-	1 000	-	-	-	3 000	-	4 000
1.3.3. Invite representatives of the villagers, Park Management, and relevant District Governments to workshops to discuss the draft, reach agreement, and ratify the agreed management systems.	5 000	7 500	-	-	-	4 000	-	16 500
1.3.4. Develop organogram that meets the needs of this management systems	5 000	2 500	2 000	-	-	5 000	-	14 500
Sub Total	13 500	21 000	7 000	-	-	15 000	-	56 500

Output 1.4:										
Relevant and well-qualified staff for managing the various functions of the Park hired and trained.										
Activities:										
1.4.1 Establish job description for every position needed for managing the park.										
1.4.2 Openly announce priority positions that are ready to be filled to people in relevant local village, sub-district, district, province, and national levels. Under similar conditions, priority for hiring should be given following that order.										
1.4.3 Once hired, provide them with relevant training, <i>scholarship (if necessary)</i> , equipment, and supervision										
Sub Total										
Output 1.5:										
Well and appropriately designed data base and information system for supporting the management of the park established										
Activities:										
1.5.1 Identify the types of data and information to be included in the system.										
1.5.2 Hire consultant to design such system										
1.5.3 Hire and train staff to manage such system										
Sub Total										
Output 1.6:										
Information needed for sustainable utilization of economic plant and animal species (through their cultivation or farming) collected and used in the cultivation or farming of such species as alternative sources of income.										
Activities:										
1.6.1 Identify economic plant and animal species that are preferred or commonly used by the local community.										
1.6.2 Investigate their socio-economic and market potential and select top ten of each plant and animal species for further investigation										

1.6.3 Study the ecology, distribution, growth, phenology, and the regeneration pattern of the plant species as well as feeding, breeding and movement pattern/behavior, etc. of the animal species and based on these information select the top five of each group.	5 000			5 000	2 000	3 500	-			15 500
1.6.4 Train and facilitate local communities in the cultivation or farming such species	3 000			5 000	2 000	2 500	-			12 500
Sub Total	23 000	-		25 000	9 000	13 000	-			70 000
Output 1.7:										
Information on eco-tourism potentials currently collected in the Park used in designing the eco-tourism development in the area										
Activities:										
1.7.1 Based on the available information, identify potential sites and species for eco-tourism development in the area	3 000			5 000	2 000	2 500	-			12 500
1.7.2 Establish trails or routes to the sites and collect interesting social, biological, ecological, geological information along these trails or routes.	5 000			15 000	1 500	2 000	-			23 500
1.7.3 Compile these information into attractive and handy-to-carry booklet or leaflets so that it can be consulted and used as guide book when visiting the area.	5 000			-	1 000	3 000	-			9 000
1.7.4 Group the sites and species into attractive packages and investigate their socio-economic and market potential	5 000			5 000	1 500	3 000	-			14 500
1.7.5 Distribute such booklets widely (travel agents, etc.) to attract potential visitors coming to the area	-			-	-	2 000	-			2 000
1.7.6 Hire consultant for identifying potential rafting sites in the area and for selecting potential people/local villagers to manage and run the activities.	12 500			5 000	-	2 500	-			20 000
1.7.7 Hire consultant to train these potential villagers to learn and improve their rafting and other related skills in order to make the rafting customer happy and comfortable.	12 500			5 000	-	2 500	-			20 000
1.7.8 Hire consultant to establish rules and regulation that should be observed by the customers and the villagers	10 000			5 000	-	3 000	-			18 000
1.7.9 Provide 2 Unit Rafting Equipment	-	-		-	13 500	-	-			13 500
Sub Total	53 000	-		40 000	19 500	20 500	-			133 000

Output 1.8:										
Community micro-enterprises as a way of sustainably utilizing and getting the benefit of the Park's rivers, landscape, as well as the plant and animal resources established										
Activities:										
1.8.1 Explain the purpose of micro-enterprise. Invite or persuade all members of the village community to participate in the establishment of the village micro-enterprise.										
	2 500		5 000	1 000	3 000					11 500
1.8.2 Develop the organization structure of the enterprise. Establish the organogram of the enterprise to show/visualize the relations of the various activities (agriculture, animal husbandry, eco-tourism, rafting etc.) and assign each member of the enterprise specific role or responsibility in the organization										
			5 000	-	5 000					10 000
1.8.3 Assign and train staff. Rotate the role and responsibility of each member in the organization and train them before starting their new position										
	5 000		2 500	1 000	7 500					16 000
1.8.4 Establish rules and regulations. Establish rules and regulations that should be observed and respected by each member of the enterprise. Included in these rules and regulation is an agreement that each member also responsible for the protection and conservation of biological diversity and resources and their sustainable utilization										
	3 000				7 500					10 500
Sub Total	10 500	-	12 500	2 000	23 000	-				48 000
Output 1.9:										
Awareness, concerns, and supports of the general public at village, district, and provincial level in conserving biological diversity and their sustainable utilization increased.										
Activities:										
1.9.1 Collect data/information. Continuously collect information, take pictures of interesting or unique plant and animal species, and develop them into features or thematic articles, stories, or video-clips for use or release at specific occasion to mass-media.										
	3 000		5 000	2 500	5 000					15 500

1.9.2 Promote seminar and field visit. Invite reporters for lectures on the biodiversity of the park as well to see, learn, and write articles on make video-clips on outstanding features of plants, animals, scenery, and other phenomena occurring in the park area.	10 000		2 500	1 000	7 500	-		21 000
1.9.3 Implement monitoring and evaluation. Invite reporters to see, learn, and write articles or make video-clips on how local communities benefited from the local biological resources and how the project is working with the local communities and other stakeholders to increase or improve benefits and their sustainability.	5 000		2 500	-	5 000	-		12 500
Sub Total	18 000	-	10 000	3 500	17 500	-		49 000
Output 2.1:								
Lessons learned in managing LEWS and Betung-Kerihun Nat. Park (BKNP) freely shared and solution to common management issues formulated.								
Activities:								
2.1.1 Implement workshop on management issues and effective management systems within LEWS or BKNP.	5 000		1 000	1 000	7 500	-		14 500
2.1.2 Implement remote sensing study on potential issues occurring in LEWS and BKNP.	7 500		1 000	1 000	7 500	-		17 000
2.1.3 Implement combined site-visits to LEWS and BKNP to observe and collect information on actual issues or problems on the ground.	7 500		1 000	1 500	80 000	-		90 000
2.1.4 Implement seminar and workshop to discuss the findings of the remote sensing and field studies to determine relevant topics that should be covered in developing effective trans-boundary management systems between LEWS and BKNP.	7 500		1 000	1 500	7 500	-		17 500
Sub Total	27 500	-	4 000	5 000	102 500	-		139 000
Output 2.2:								
Results and lessons learned in buffer zone development in LEWS and BKNP are discussed and formulated.								

Activities:										
2.2.1 Implement joint surveys to investigate the biology, ecology of interesting, rare, endangered, and/or economic species for use in species conservation management or their utilization	7 500				1 000	-	4 000	-		12 500
2.2.2 Implement seminar and workshop to share and discuss potential use of those species for buffer zone development.	5 000				1 000	-	1 500	-		7 500
2.2.3 Based on the results and recommendation of the workshop, implement relevant measures to help local communities to domesticate or propagate those species.	5 000				1 000	-	5 000	-		11 000
2.2.4 Implement workshop to formulate and share the lessons that we had learned	5 000				1 000	-	4 000	-		10 000
Sub Total	22 500	-	-	-	4 000	-	14 500	-		41 000
NON ACTIVITIES BASED EXPENSES										
(1) Office Running Cost							22 450			22 450
(2) Auditing								22 500		22 500
Sub Total	-	-	-	-	-	-	22 450	22 500		44 950
Sub Total (ITTO)	194 000	-	-	-	148 500	182 600	264 950	22 500	-	812 550
Sub Total (WWF Indonesia & GOI)		-	-	-	-	23 920	-	-	-	23 920
TOTAL	194 000	-	-	-	148 500	206 520	264 950	22 500		836 470

YEARLY PROJECT BUDGET BY SOURCE - ITTO

Budget Components		Annual Disbursement			
		TOTAL	YEAR 1	YEAR 2	YEAR 3
10	Project Personnel	194 000	75 000	65 000	54 000
20	Sub Contract	-	-	-	-
30	Duty Travel	148 500	53 160	52 970	42 370
40	Capital Items	182 600	102 000	80 600	-
50	Consumable Items	132 475	46 250	46 250	39 975
60	Miscellaneous	22 500	7 500	7 500	7 500
Sub Total 1		680 075	283 910	252 320	143 845
80	ITTO Monitor, Evaluation, and Administration Cost				
	81 Monitoring and Review Costs (Effective estimation)	20 000			
	82 Evaluation & Exposure Costs (effective estimation)	25 000			
Sub Total 2		725 075			
Programme Support Cots (5.5% of Subtotal 2)		39 879			
90	Refund of pre-Project Costs	-			
ITTO TOTAL		764 954			

YEARLY PROJECT BUDGET BY SOURCE - E. AGENCY/ HOST GOVERNMENT (IN-KIND)

Budget Components		Annual Disbursement			
		TOTAL	YEAR 1	YEAR 2	YEAR 3
10	Project Personnel	-	-	-	-
20	Sub Contract	-	-	-	-
30	Duty Travel	-	-	-	-
40	Capital Items	23 920	7 974	7 973	7 973
50	Consumable Items	-	-	-	-
60	Miscellaneous	-	-	-	-
70	Executing Agency Management Costs (15 % of Total of Total of Overall project Budget by Activity)	125 470,50	50 188	43 915	31 368
EXECUTING AGENCY/ HOST GOVT. TOTAL		149 391	58 162	51 888	39 341

CONSOLIDATED TOTAL AND YEARLY PROJECT BUDGET

Budget Components

		Unit	Unit Cost	Total Unit	TOTAL	YEAR 1	YEAR 2	YEAR 3
10	Project personnel							
11	National Experts	MM	1 000	128	128 000	56 000	41 000	31 000
12	National Consultants	MM	1 000	35	35 000	10 000	15 000	10 000
13	Other Labour	MM	120	50	6 000	3 000	2 000	1 000
14	Fellowship and Training	Persons	500	50	25 000	6 000	7 000	12 000
15	International Experts				-	-	-	-
16	International Consultants				-	-	-	-
	Component Total				194 000	75 000	65 000	54 000
20	Sub-Contracts							
30	Duty Travel							
31	International Travel	Trip/ Person	2 500	12	30 000	10 000	10 000	10 000
32	Domestic Travel	Trip/ Person	300	191	57 300	21 000	20 700	15 600
33	Daily Subsistence Allowance	Day/ Person	50	748	37 390	13 160	13 430	10 800
34	Transport Costs	Day/ Person	10	2 381	23 810	9 000	8 840	5 970
	Component Total				148 500	53 160	52 970	42 370
40	Capital Premise							
41	Premise	Package	7 000	3	21 000	7 000	7 000	7 000
42	Land				-	-	-	-
43	Vehicles	Unit	detail		60 000	60 000	-	-
44	Office Equipment	Unit	detail		32 410	15 140	17 270	-
45	Field Equipment	Unit	detail		71 610	20 000	51 610	-
46	Operational Cost	MM	597	36	21 500	7 834	12 693	973
	Component Total				206 520	109 974	88 573	7 973
50	Consumable Items							
51	Regular Meeting	Package	1 764	18	31 750	10 000	11 250	10 500
52	Task Force Meeting	Package	6 250	6	37 500	12 500	12 500	12 500
53	Workshop	Package	2 375	8	19 000	8 750	7 500	2 750
54	Office Running Cost	MM	312	36	11 225	4 000	4 000	3 225
55	Field Supplies	MM	1 375	24	33 000	11 000	11 000	11 000
	Component Total				132 475	46 250	46 250	39 975
60	Miscellaneous							
62	Auditing	Package	7 500	3	22 500	7 500	7 500	7 500
	Component Total				22 500	7 500	7 500	7 500
70	Executing Agency Management Costs							
80	ITTO Monitoring, Evaluation and Administration							
81	Monitoring and Review Cost				20 000			
82	Evaluation & Exposure Cost				25 000			
83	Programme Support Costs				39 879			
	Component Total				84 879			
90	Refund of Pre-Project Cost				0			
100	GRAND TOTAL				914 345			

SEPARATE BUDGET
Budget Components

		Gol	ITTO	WWF	TOTAL	YEAR 1	YEAR 2	YEAR 3
10	Project personnel							
	11 National Experts		128 000		128 000	56 000	41 000	31 000
	12 National Consultants		35 000		35 000	10 000	15 000	10 000
	13 Other Labour		6 000		6 000	3 000	2 000	1 000
	14 Fellowship and Training		25 000		25 000	6 000	7 000	12 000
	15 International Experts		-		-	-	-	-
	16 International Consultants		-		-	-	-	-
	Component Total	-	194 000	-	194 000	75 000	65 000	54 000
20	Sub-Contracts							
30	Duty Travel							
	31 International Travel		30 000	-	30 000	10 000	10 000	10 000
	32 Domestic Travel		57 300	-	57 300	21 000	20 700	15 600
	33 Daily Subsistence Allowance		37 390	-	37 390	13 160	13 430	10 800
	34 Transport Costs		23 810	-	23 810	9 000	8 840	5 970
	Component Total	-	148 500	-	148 500	53 160	52 970	42 370
40	Capital Premise							
	41 Premise	0	21 000	-	21 000	7 000	7 000	7 000
	42 Land	0	-	-	-	-	-	-
	43 Vehicles	15 000	45 000	-	60 000	60 000	-	-
	44 Office Equipment	0	32 410	-	32 410	15 140	17 270	-
	45 Field Equipment	8 920	62 690	-	71 610	20 000	51 610	-
	46 Operational Cost		21 500	-	21 500	7 834	12 693	973
	Component Total	23 920	182 600	-	206 520	109 974	88 573	7 973
50	Consumable Items							
	51 Regular Meeting		63 500		31 750	10 000	11 250	10 500
	52 Task Force Meeting		75 000		37 500	12 500	12 500	12 500
	53 Workshop		38 000		19 000	8 750	7 500	2 750
	54 Office Running Cost		22 450		11 225	4 000	4 000	3 225
	55 Field Supplies		66 000		33 000	11 000	11 000	11 000
	Component Total	-	264 950	-	132 475	46 250	46 250	39 975
60	Miscellaneous							
	62 Auditing		22 500		22 500	7 500	7 500	7 500
	Component Total	-	22 500	-	22 500	7 500	7 500	7 500
70	Executing Agency Management Costs							
80	ITTO Monitoring, Evaluation and Administration							
	81 Monitoring and Review Cost		20 000		20 000			
	82 Evaluation & Exposure Cost		25 000		25 000			
	83 Programme Support Costs		39 879		39 879			
	Component Total	-	84 879	-	84 879			
90	Refund of Pre-Project Cost							
100	GRAND TOTAL	23 920	897 429	125 471	914 345	50 188	43 915	31 368