ITTO Project PD 44/00 Rev. 3 (F)
The Implementation of a Community-based Transboundary Management Plan for the Betung Kerihun National Park, West Kalimantan, Indonesia, Phase II

Assessment of rafting activities for ecotourism development in Betung Kerihun National Park

WWF

ITTO

CONTENT

Assessment of Rafting Activities for Ecotourism Development in Betung Kerihun National Park

I. INTRODUCTION

a. Background

The development of Taman Nasional Betung Kerihun (TNBK) as a national park is aimed at conserving the biodiversity and the ecosystems of Borneo lowland and mountain forest. TNBK also functions as water catchments area that covers five sub-watersheds: *Sibau, Embaloh. Apalin*, and *Mendalam.*

However, the community considers that the existence of the park limits them from utilizing the natural resources, especially wood. This means that the establishment of TNBK as a national park needs to consider development of economic alternatives with the principles of sustainable natural resources utilization. The introduction of economic alternatives should not only accommodate to the natural potential but also consider the local culture and public responses.

Thus, surveys for natural resource potential in and around TNBK are essential, and also the socialization of the existence and the values of TNBK to the community. As one of economic alternatives for the local community, in addition to the community-based farming and fisheries, a community-based ecotourism is going to be established, i.e., rafting ecotourism. Rafting ecotourism is selected based on the surveys and analyses made during Phase-1 of the ITTO Project, because of the challenging rapids on the Kapuas and the beautiful scenery along the riverside; those attractions can certainly meet the requirements for rafting activity. The development of rafting ecotourism is also gaining momentum owing to the tendency of increased number of visiting rafting-lovers by year, while the destinations are limited. It is believed, therefore, that Kapuas Hulu District, especially the TNBK, will have a competitive edge compared to other places in Indonesia.

The idea for conducting a rafting training came from several travel agencies who realized the huge natural potential for ecotourism, particularly the well-known Kapuas-Mahakam route, which pass by the TNBK area and the upstream of Kapuas River. Thus, preparation process at community level to develop rafting program around their living area becomes an urgent case. It is hoped that human resource investments, by providing the skills to operate a rafting program could bring alternative incomes for the community in the future.

In general, there are three activities related to the development of rafting program. These are:

1) survey of rafting potential on Kapuas River,
2) rafting training for the community, Tourism Office, TNBK staff, WWF-Indonesia Betung Kerihun Project, and the Kapuas Hulu conserevation cadres, and
3) formulation of rules and regulations for the smoothness of the rafting operation.

Surveys of the rafting potential are performed together with Kapuas Hulu Tourism & Culture Office, TNBK, WWF-Indonesia Betung Kerihun Project, and also helped by The Scouting Team-Yogyakarta, a rafting operator in Yogyakarta. It is mostly focused on the community in the buffer zone areas of TNBK, in particular people at Bungan Jaya. In addition, the activity is a means of capacity building for the staff in TNBK Office, WWF-Indonesia, Kapuas Hulu Tourism & Culture Office, and

the conservation cadres already established in Kapuas Hulu. The last activity, i.e., the formulation of rules and regulations regarding the rafting operation, is the outcome of all activities done earlier.

b. Goals

The goals of the activity are:

1. To identify any rafting program potentials in and around the TNBK, especially on Kapuas River.
2. To train the community, staff in TNBK Office, Kapuas Hulu Tourism & Culture Office, WWF- Indonesia, and the conservation cadres in rafting.
3. To improve the community's skills at preparation and development of ecotourism, particularly rafting activity in and around the TNBK.
4. To develop knowledge and training in rescue-raft.
5. To formulate rules and regulations to keep order, safety, and comforts for tour operators as well as the tourists.

c. Expected Results

1. Data on rafting potential in the area of the Kapuas, including the typology, length, width, difficulty-grade of the rapids;
2. A documentary account of the rafting campaign in the area of the Kapuas;
3. Participants are aware of the rafting potential as an alternative to develop adventure ecotourism in Kapuas Hulu;
4. Participants have knowledge of rafting techniques and standards regarding the commodity of adventure ecotourism;
5. Participants have skills at *rescue- raft* technique ;
6. Rafting ecotourism map and site-plan formulation at TNBK;
7. Rules and regulations for tourists/rafters at the Kapuas.

II. IMPLEMENTATION

a. Activity

1. Surveys of rafting potential.
2. Rafting training for the community and staff in TNBK Office, Kapuas Hulu Tourism & Culture Office, and WWF-Indonesia.
3. Formulation of rules and regulations regarding the rafting operation.

b. Implementation Method

1. Survey: direct observation by measuring the lengtth and width of rapids, water debits, difficulty grades, and making sketches of rocks around rhe rapids.
2. Rafting training: theory-giving, joint simulations, and practices on the river.
3. Formulation of rules and regulations regarding the rafting operation: discussion on the follow-ups to the surveys and rafting trainings to correspond the field experiences.

c. Time & Place

1. The identification of rafting potential and the selection of local people having potential for the operation and management of rafting program; at Nanga Bungan, Kapuas River for 1-5 June, 2003.
2. Rafting traings for the staff in TNBK Office, WWF, Kapuas Hulu Tourism & Culture Office and the community; at Puttusibau and Nanga Bungan for 8-18 June, 2003.
3. Discussion on the formulation of rules and regulations regarding the rafting program; on 17 June, 2003.

d. Location

Rafting training is given in the following locations:

1. The upper reaches of the Kapuas and Nanga Buingan; as the sites for the investigation of rafting potential, trainings, and try out.
2. Putussibau; as the location for theory-giving, rule formation, and simulation.

e. Executor

There are several parties joining efforts in this activity, namely: TNBK Office, Kapuas Hulu Tourism & Culture Office, Scouting Team Jogjakarta. And the community.. It is facilitated by WWF Indonesia Betung Kerihun Project through ITTO Project - PD 44 Rev (3) "*The Implementation of Transboundary Management Plan for the BKNP, West Kalimantan, Indonesia, Phase II*".

f. Trainees

There were 30 participants in the rafting training:

1. TNBK Office Staff: 8 persons
2. Kapuas Hulu Tourism & Culture Office Staff: 3 persons
3. Community members: 15 persons, including Putussibau youths from the conservation cadres
4. WWF-Indonesia Staff: 5 persons

g. Instructor

The instructors are from the Scouting Team Yogyakarta, who provides the training free of charges, while the Project provides them with transportation and accommodations only.

h. Costs

The total costs for the training is IDR 29,530,630,= (details attached).

III. PHASES OF ACTIVITY

The activity of rafting training and identification consists of several phases, as follows:

1. Identification of rafting potential on the upper reaches of the Kapuas;
2. Socialization of rafting ecotourism to the community in Nanga Bungan Village;
3. Rafting basic training at community level;
4. Rafting training for staff in TNBK Office, WWF-Indonesia, and Putussibau Conservation cadres;

5. Try out (community, staff in WWF-Indonesia and TNBK Office. and Putussibau Conservation cadres);
6. Report making and rafting potential mapping, both rafting development planning and river map;
7. Formulation of rules and regulations for tourists.

Phases of the activity are as follows:

1. **Identification of rafting potential:**
   a. This activity is a cooperation between WWF-Indonesia and TNBK Office, Kapuas Hulu Tourism & Culture Office, and Scouting Tim Yogyakarta;
   b. Location : the upper reaches of the Kapuas;
   c. Date: 1-3 June, 2003;
   d. The activity includes surveys of rafting potential locations, documentation (photos, site maps), and report-making.

2. **Socialization of Rafting Ecotourism to Nanga Bungan Community:**
   a. Socialization; in Nanga Bungan Village, guided by staff in WWF-Indonesia, TNBK Office, and Kapuas Hulu Tourism & Culture Office;
   b. Location: a local house at Nanga Bungan; attended by local public figures and youths;
   c. Program: 1) Opening by local public figure; 2) Socialization of Kapuas Hulu Tourism Development Policy by Kapuas Hulu Tourism & Culture Office; 3) Socialization of ecotourism development, particularly on rafting program by the TNBK Office; and 4) Discussion.
   d. Facilitator: WWF-Indonesia Betung Kerihun Project;
   e. Date: 3 June, 2003.

3. **Rafting Training for the Community:**
   a. Participant: Nanga Bungan community, facilitated by WWF-Indonesia;
   b. Participant selection
   c. Location: Bungan River;
   d. Program: 1) participant selection; 2) class sessions, and 3) try out;
   e. Date: 4 -5 June, 2003.

4. **Rafting Training for Staff in TNBK Office, WWF-Indonesia, Kapuas Hulu Tourism & Culture Office; and Cadres of Putussibau Conservation:**
   a. Participant: Staff in TNBK Office, WWF-Indonesia, Kapuas Hulu Tourism & Culture Office; and cadres of Putussibau Conservation;
   b. Participant selection
   c. Date: 10-12 June, 2003;
   d. Opening ceremony at Aula Bappeda:
      - Speech by Project Leader WWF-Indonesia Betung Kerihun Project;
      - Speech by Head of TNBK Office
      - Speech by Head of Kapuas Hulu Planning Board;
      - Speech by Head of Tourism Provincial Office, and official opening;
   e. Class sessions, including theory giving and simulation in the rivers around Putussibau;
   f. Trainers: Scouting Tim Yogyakarta, and facilitated by WWF-Indonesia.

5. **Try out (Community, WWF-Indonesia, TNBK Office, Putussibau Conservation Cadres)**
   a. Participants: Staff in TNBK Office, Kapuas Hulu Tourism & Culture Office, WWF-Indonesia; and cadres of Putussibau Conservation and Nanga Bungan community.
   b. Date: 13-18 June, 2003, at Nanga Bungan Village, Kapuas River;
   c. Try out, simulation, and discussion by the community and participants from Putussibau (the TNBK Office, Kapuas Hulu Tourism & Culture Office, WWF-Indonesia, and cadres of Putussibau Conservation);
   d. Facilitator: WWF-Indonesia
   e. Rafting instructor: Scouting Team Jogjakarta.

6. **Report and Rafting Potential Maps (Rafting Development Planning Map and Rafting-River Map)**
   a. Report preparation; due 10 days after the activity completed;
   b. Development of Rafting plans and rafting-route maps; made by the Scouting Tim Yogyakarta and WWF, based on the identification.

7. **Formulation of rules and regulations:**
   a. Draft of rules and regulations for tourists;
   b. The draft serves as the guidelines for any parties related to the rafting activity.

Timetable of surveys and rafting traning (See details in Appendix 1)

IV. PERFORMANCE ANALYSIS

The rafting potential at TNBK area can highly encourage the tourism sector in Kapuas Hulu District. The activity holds particular attractions for those interested in rafting. Besides the challenging rapids, it offers interesting natural beauty in the surroundings. Unlike other places, such as those on Java and Sumatera, seasons are not barriers to do rafting on the upstream of the Kapuas. The potential will remain if the community preserves the flora and fauna around the rafting tracks in general, and at the TNBK area in particular.

Viewed from alternative income sources for the community and development of local tourism sector, rafting will make a significant contribution. However, this can be realized only when there are proper facilities and infrastructures available, especially transportation to and fro between Putussibau and the rafting locations. The promotion of Kapuas Hulu ecotourism by any relevant agencies is another matter to be concerned.

V. LESSON LEARNT

- Through this rafting activity, the community and the local government of Kapuas Hulu have recognized the enormous economic potential in their own area, which will be benefiting when it is managed properly and professionally
- It is not too difficult for the Kapuas Hulu community to be a rafting operator, since they are naturally familiar with their surroundings. In fact, they are able to shoot the rapids on the rivers there.
- In view of the enthusiasm in the community and the commitment of Kapuas Hulu's local government (The Tourism & Culture Office), the rafting

ecotourism will likely be a main resource of economic alternatives to the community and the local government, which in turn will support the conservation of TNBK. This is true when support from other parties, such as the government, investors, tour & travel agencies is available.

VI. CONCLUSION

- Kapuas Hulu District, especially TNBK area, has the potential for unique and interesting ecotourism. One of the potentials is rafting ecotourism.
- Some segments of rapids on the Kapuas have been identified; 25.73 km in length and very potential for a rafting track starting from Matahari Rapids to Batu Lintang Rapids. They have different difficulty-grades and natural attractions as well.
- During this stage, there were 30 people trained in rafting:
  - TNBK Office Staff: 8 persons
  - Kapuas Hulu Tourism & Culture Office Staff: 3 persons
  - Community members: 15 persons, including Putussibau the youths from the conservation cadres
  - WWF-Indonesia Staff: 5
- Rules and regulations have been formulated together with the community, Kapuas Hulu Tourism & Culture Office, and TNBK Office, and also Scouting Team Yogyakarta.
- Support from the Kapuas Hulu's local government, TNBK Office, tour & travel agencies, and other relevant institutions are surely needed. The community's ability to operate a rafting program will give them both economic and conservation benefits. Thus, the conservation activity can go alongside the community's economic interest.

Appendix 1

REPORT OF THE RAFTING POTENTIAL ON THE COURSE OF THE KAPUAS RIVER

By:
Scouting Tim Yogyakarta & WWF-Indonesia Betung Kerihun Project

I. Introduction

The selection of Betung Kerihun as a national park is meant to preserve the ecosystem and biodiversity spreading from the lowlands to the mountain forests. Besides, it serves as the water catchment area for the Kapuas River whose upper reaches begin in this area.

Some public opinion that the existence of the TNBK has limited local activity in utilizing the natural resources should not weaken the law enforcement, especially rules regarding the management of TNBK. Instead, it should become the main issue on how to integrate interests in TNBK conservation with its sustainable utilization for the welfare of the community. The most rational way to benefit from the national park potential is the environment service by developing ecotourism.

TNBK has remarkable potential and can be developed into various tour packages and attractions; and one of the ecotourism activities likely to be developed is rafting on the rivers existing at the TNBK.

In Indonesia, rafting ecotourism has commercially introduced and operated by rafting operators at some rivers, namely: Alas (Aceh), Ayung (Bali), Sa'adan (Toraja, South Sulawesi), Progo (Central Java), Citarik (West Java), etc. In the course of time rafting has now become adventure sports and family recreation, either for new experiences or simply as a challenging hobby. The existing rafting standard equipment and information on rafting technique and rescue equally spreading in various circles, have encouraged such condition.

Viewed from the existing natural resources and rivers, apart from the Kapuas in West Kalimantan, many other rivers still hold the potential to be developed into locations for rafting. As for the tour operators in West Kalimantan, it is a great opportunity, and also a challenge, to provide a special-interest tour package which, in turn, can be a prime sector in encouraging the economic activity and other relevant sectors. Besides, it will increase the local income and generate enthusiasm in the community to more actively participate in the development of all the existing potential, among others: challenging rapids (adventure), interesting landscape (nature), unique local customs (culture), and other attractions for both domestic and foreign tourists.

On the other hand, the human resources (rafters and tour guides) still need developing and polishing up through sustainable training. Supporting facilities and infrastructure, namely: transportation, accomodation, communication, rescue, and medical facilities, should also be seriously concerned. Although those facilities are not necessarily situated inside the area, they are at least accessible in order to grow tourists' comfort and security before they decide to have a trip in the area.

The development of a particular tour package should rely on creativity so that it will not bore the tourists, and be psycologically managed in age groups, from children to adults. This will work for the national and international promotion and marketing of the tourist attractions.

Regarding the ecotourism development, the TNBK owns the potential for a rafting operation on the upper reaches of the Kapuas. Almost all courses of rivers inside it have the possibilities although the tracks are relatively short and different in difficulty grades. Among the five sub-courses in the TNBK, the area at the upper reaches of the Kapuas is the most suitable for rafting ecotourism, because all the way from the Matahari to Nanga Balang Rapids there are numerous rapids on long tracks.

Therefore, the Scouting Team Yogyakarta and WWF-Indonesia Betung Kerihun Project cooperated with the the Kapuas Hulu Tourism & Culture Office and TNBK Office, tried to collect data on any potential locations for rafting ecotourism on the upper reaches of the Kapuas in Kapuas Hulu.

II. TOUR ROUTE

A. Putussibau-Dusun Nanga Bungan

The Kapuas River, geographically located in the Province of West Kalimantan, ends in Pontianak, the capital city. The course with many challenging rapids and potential to be developed into a location for ecotourism as well as adventure activity, is situated in its upper reaches in the east, where the TNBK is. All the way to Nanga Bungan Village, there are many big rivers emptying into the Kapuas, namely: *Sibau, Mendalam, Keriau, Lapung,* and *Bungan*, and other small ones. This lane is ideal for tourists who have plenty of time and adventurous spirit as well.

A long motor boat (6 – 8 m in length, with 15 – 40 HP engine) is required to get to the upper reaches of the Kapuas. From Putussibau, the capital of Kapuas Hulu, to Nanga Bungan Village bordered by the TNBK, it will take 6 – 10 hours by boat, depending on loads and water debit. Moreover, during the dry season, when the water is very shallow, there are parts on the upper reaches that cannot be travelled by boat, on which the boat needs towing.

The Putussibau–Nanga Bungan Route actually has an interesting historical fact. Between 1894 & 1900, three groups of the Anton Nieuwenhuis' expedition had passed this route before they travelled along Bungan River, across the Muller Mountains, and finally down to Mahakam River in East Kalimantan.

Between Putussibau and Nanga Enap, fields, bushes, young secondary forests, and also house yards cover the vast riverside. During the 40-minute trip. There will be seen a few houses whose yards are planted with various fruit trees, such as mango, *langsat*, durians, coconut, jackfruit, *terap*, banana, mangosteen, sugar-palm, and capok trees. At Merapi I Village, Kedamin Hulu, there lives the Taman Ethnic community. Around the living area, they typically grow sugar palm trees as the raw materials for *tuak*, traditional drinks made from the sugar palm sap. There is also a traditional house of the Dayaks, known as *rumah betang,* or the long house. The house is relatively old and often visited by the tourists as it is accessible from Putussibau, a 20-minute trip by 40-HP speeed boat.

From Suai Village to Nanga Bungan Village, the riverside is hilly and, on getting to the upper reaches, steeper. The existing vegetation is a combination of old secondary forests, bushes, and a few fields that by appearances look like natural forests. More rocky grounds and boulders spread on the river, and the water starts rippling here. The riverside community is a mixture of Taman, Kayan, Bukat, and Punan Hovongan ethnic groups. Furthermore, a wide variety of flora and fauna in their natural habitats can be seen along this route. There are also many illegal gold miner boats encountered between Nanga Erak and Nanga Balang.

Having passed the route mentioned above, it will be noticed the differnce in the colour of water, especially between the upper and the lower reaches of the Kapuas Koheng. When the river is low, the water is clear on the lower reaches, but muddy on the upper due to the gold mining activity there. During this time, the trip usually stops at Matalunai Village or Nanga Lapung Village, and will continue in the following day to Nanga Bungan. While, in wet season or when the water level is normal, practically there is no obstacle in the way, and the trip can be done faster.

Between Nanga Balang and Nanga Bungan, the boat will pass through relatively big rapids, ie Apin and Batu Lintang. Passenger safety and security standards should come first in rafting. Nanga Bungan is the last village at the uppermost reaches of The Kapuas, on which Kapuas Koheng River and Bungan River meet. The local people belong to Punan Hovongan ethnic group. They make their living as bird-nest gatherers, gold miners, aloe-wood gatherers, long-boatmen, hunters, fishermen, or farmers..

B. Nanga Bungan Village- Matahari Rapids

The Kapuas Koheng on the easternmost part of the TNBK, is the uppermost of the Kapuas River. Its development is oriented towards adventure tourism; rafting in particular. This part belongs to the Muller Mountains bordering on the Province of East Kalimantan.

The location is ideal for river exploration and rafting, of which has a 20-km track for rafting alone, ie the Lapan Rapids.. The Lapan Rapids (lapan/delapan means eight) have 8 groups of rapids close to one another. To reach the upper part, every boat needs towing through steep or big rocks. Especially during the dry season when the river is low, boat-towing is required in many more parts. Matahari Rapids are the uppermost and the biggest of all the series. Before getting to this particular part, other tens of small and medium-sized rapids should be conquered first. The best time for rafting is in wet season. However, it is well advised not to go rafting when the river is in flood during which is very risky. Then, the activity can be pursued whenever the water level is back to normal. The source of this river is a spring on Mount Cemaru. Moreover, there is a deposit of gold on this Kapuas Koheng trail. Besides the illegal logging, traditional gold mining has taken place in this upper part of the Matahari Rapids. More outsiders, in fact, come and mine in this area now using modern equipment; and therefore, threatening the hydrological balance (1.180 m asl).[1]

[1] Some of the data are derived from *Rencana Pengelolaan Taman Nasional Betung Kerihun,* WWF Indonesia – PHPA – ITTO, 1999.

III. RAPIDS DESCRIPTION

Concerning the rafting activity, field surveys have been performed to collect accurate information on the condition of Kapuas Koheng River. The information given in this report, however, cannot serve as the guidelines to be followed in all seasons, since the surveys were done during the dry season when the river was a little below normal. In wet season, it is likely more difficult to travel through this river; but then again, some rapids are even harder to pass through if the river is low.

Thus, no matter how accurate the measurements of some particula rapids are taken in a particular season, they may change in the next season.For example, a fallen tree across the river, a lanslide, or a shift in the position of rocks, etc, any of them may change an easy track all round. The surveys show that Matahari – Batu Lintang route (25.73 km) is the most suitable and potential for rafting activity. The route can be divided into 3 sub-routes, as follows:

- Matahari Rapids - The Lapan Rapids, 15.57 km.
- The Lapan Rapids – TNBK Base at Nanga Bungan, 11.53 km.
- TNBK Base - Batu Lintang Rapids, 5.65 km.

The following are the description of some rapids already investigated and sketched (sketches attached).

1. Matahari Rapids/Bon Maton Lo/Bonet

The rapids' grade, height intervals, length, and width are : 5, 4m, 40m, and 30 m respectively. There are many speed-ups in current with big waves and holes in rows. Both falling off the boat and an overturned boat are very dangerous due to the complicated track. Right maneuvers are required to pass through the existing rocky barricades. At the end of the rapids, there is a 3-m *drop*, almost the size of a boat, right in the middle of big rocks resembling a goal. Only experts with rescue skills can deal with these rapids. In addition, highly accurate scouting is very important.

2. Apit Mahang Rapids/Bon Apit Mahang

They are the uppermost rapids of the Lapan's series, and classified as grade 2 in difficulty; 10 m in length, and 15 m in width. It is easier to pass through these rapids during the dry season than during the wet as they are many standing waves formed by the rapids surface narrowing. Besides, the track slopes gently.

3. Delapan Atas Rapids/Bon Tesapan Lahapun

These rapid are 60 m long and 25 m wide, 2 m in heigth intervals, and classified as grade 2+. It is easy to travel along them because they are in a straight line; and no maneuver is needed. Reading the current can be done from the boat or just on entering the rapids (*read and run*).

4. Delapan Tengah Rapids/Bon Tesapan Batu

The measurements of the rapids are 40m by 15m, and 2m in height itervals. They belong to grade 3, since there is a *pillow* on the left of the main current building a 1.5 – m *hydraulic*. There is also a *stopper* right on the main current, a few meters away from the *hydraulic*. Owing to these characters, scouting is necessary before passing through them, and so is a quick maneuver to the left, especially when the river rises. In addition, as there is a risk of boat getting overturned or warp, rafting here requires an able *skipper*.

5. Pulas Rapids/Bon Pulas

Upon entering the rapids, there are the beginning of a tidal wave on the main current and also a hydraulic *pillow*. The rapids, 50m by 15m, have another 5 *pillows* forming *holes* in a row along the main current. It takes some maneuvers to shoot the rapids in between those *pillows*; in this case, *read and run* will do fine. The rapids, in addition, are classified as grade 2+, with 1.5-m height intervals.

6. Buntut Pulas Bawah Rapids/Bon Non Pulas

The rapids have a curved based; and the main current likely directs towards the left side. Here, scouting is essential, for exactly on the main current there are 2 *pillows* shaping hydraulic *holes* almost parallel to each other. It is better off avoiding those *pillows* and directing the boat to the right side of the main current. The rapids have the length of 25 m , the width of 20 m, 1.5 - m height intervals, and belong to grade 2+. At the end of the rapids, moreover, on the right side, there is another hydraulic *pillow*.

7. Bang Be Rapids/Bon Bang Be

Among the Lapan Rapids, Bang Be has the highest grade in difficulty, ie 3+.The main current is divided into two. In the middle to the left, there is a bog rock obstructing the way. While on the right side, a *hydraulic* with 1-m *drop* may hold the boat. The safest way is on the left-most side by riding on the big waves occuring on the left side of the big rock. A quick and accurate maneuver is certainly needed because within a close range, a *pillow* and a *stopper* may likely overturn the boat or even *wrap* it. In addition, the rapids are 30m long, 20m wide, and have 1.7 –m height intervals.

8. Manuhut Rapids/Bon Menuhut

The last of the Lapan Rapids, these are two groups of rapids joined to each other with similar specifications. To travel through them, *read and run* will be enough. This series is 50m long, 15m wide, and 0.5 m in height intervals. Since the main current keeps straight on from the beginning to the end, is is relatiively effortless to pass this track.

9. Herirap Tengah Rapids/Bon Apin

The rapids, 40m by 15m, belong to grade 2 and have 1.5 –m height intervals. There are 2 *standing* waves on both sides. The track is in a straight line and free from obstacles, and thus, relatively easy to pass through.

10.Batu Lintang Rapids/Bon Mohavat

Passing through these rapids needs a few maneuvers, not too risky however. There are several barriers, such as relatively big holes and strainers which can be avoided by the team's scouting. The rapids have medium-sized *standing waves*, they are grade 2+ in difficulty, 1.5m in height intervals, 40m in height as well as in width.

Appendix 2

TIMETABLE OF SURVEYS & RAFTING TRAININGS

Day	Time	Activity	Note
I	09.00-13.00	Trip to location	
	13.00-14.00	Break	
	14.00-17.00	Early survey	*Team*
	17.00-19.00	Break	
II	09.00-12.00	Continue the trip	*Team*
	12.00-13.00	Break	
	13.00-16.00	Reach the base (field preparation)	*Team*
	16.00-19.00	Informal meeting with the community	
	19.00-21.00	Rafting socialization to the community	*team & community*
III	09.00-12.00	Basic introduction of rafting & survey	*team & community*
	12.00-13.00	Break	
	13.00-16.00	Rafting & survey	*team & community*
IV	09.00-12.00	Profundity, rafting, & survey	*team & community*
	12.00-13.00	Break	
	13.00-16.00	Rafting & survey	*team & community*
V	09.00-17.00	Return to Putussibau	

Material for TNBK & WWF-Indonesia Staff

I	09.00 - 12.00	Opening - Reception speech (Project Leader of WWF-Indonesia Betung Kerihun Project) - Reception speech (Head of TNBK) - Reception speech (Kapuas Hulu Tourism & Culture Office), and official opening	
II	09.00 -12.00	Rafting introduction - History of rafting - Introduction & maintenance of equipment	
	12.00 -13.00	Break	
	13.00 - 15.00	Rafting material - River morphology - River characteristics - River mapping	
	15.00 - 15.30	Break	
	15.30 - 17.00	- Rowing technique - Commands - Maneuvering technique	
III	09.00 - 12.00	River safety - Self rescue - Rescue Team - Rescue Boat - First-aid kid & evaluation	
	12.00 -13.00	Break	
	13.00 -15.00	River safety	

		- Self rescue - Rescue Team - Rescue Boat - First-aid kit & evaluation	
	15.00-15.30	Break	
	15.30-17.00	Simulation	

Try Out (Community, *Staff in TNBK Office , WWF, Kapuas Hulu Tourism & Culture Office, and The Putussibau Conservation cadres)*

I	09.00 - 14.00	Trip to location	
	14.00 -15.00	Break	
	15.00 - 17.00	Field observation	
	17.00 - 19.00	Break, sunset prayer, lunch	
	19.00 - 21.00	Briefing & activity evaluation	
II	08.00 - 09.00	Warming up	
	09.00 - 12.00	Rafting I	
	12.00 - 13.00	Break	
	13.00 - 16.00	Rafting II	
	16.00 - 19.00	Break, sunset prayer, lunch	
	19.00 - 21.00	Briefing & evaluation	
III	08.00 - 09.00	Warming up	
	09.00 - 12.00	Rafting & rescue I	
	12.00 -13.00	Break	
	13.00 - 16.00	Rafting & rescue II	
	16.00 - 19.00	Break, sunset prayer, lunch	
	19.00 - 21.00	Briefing & evaluation	
IV	08.00 - 09.00	Warming up	
	09.00 - 12.00	Rafting & skipper technique I	
	12.00 - 13.00	Break	
	13.00 - 16.00	Rafting & skipper technique II	
	16.00 - 19.00	Break	
	19.00 - 21.00	Briefing & evaluation	*Raft-guiding material*
V	08.00 - 09.00	Warming up	
	09.00 - 12.00	River Guide I	
	12.00 - 13.00	Break	
	13.00 - 16.00	River Guide II	
	16.00 - 19.00	Break	
	19.00 - done	Evaluation & leave taking	
VI	10.00 - done	Return to Putussibau	

Appendix 3

Table of River Mapping

River : Kapuas Koheng
Date : 3 – 4 June 2003
Data collector : Scouting Team - Yogyakarta
(David Z, M. Marsono, M. Yamin)

Location : Dusun Nanga Bungan, Desa Bungan Jaya, Kecamatan Kedamin, Kapuas Hulu, West Kalimantan .
Weather : Sunny
Time : 9.30 – 16.30 WIB
TMA : Normal

No.	Station	Time (second)	Grade	Height Interval (m)	Length of Rapids (m)	Width of Rapids (m)	Rapid	Note
1	I-II	7	5	4	30	30	Matahari	The beginning of Kapuas River
2	II-III	15	2	0,5	15	10	Apit Mahang	Series of Lapan Rapids
3	III-IV	30	2+	1	60	25	Delapan Atas	- // -
4	IV-V	10	3	2	40	15	Delapan Tengah	- // -
5	V-VI	20	3	2,5	50	15	Pulas	- // -
6	VI-VII	15	2+	1,5	25	20	Buntut Pulas	- // -
7	VII-VIII	10	3+	1.5	30	20	Bang Be	- // -
8	VIII-IX	40	2	1	45	15	Menuhut	2 connected rapids (Lapan Rapids)
10	IX-X	20	2	1,5	40	35	Apin	Rapids under Bungan
11	X-XI	25	2+	1,5	40	40	Batu Lintang	- // -

Appendix 4

RULES & REGULATIONS FOR RAFTING

Based on the discussion during the sessions of rafting class-sessions and simulation, and also the surveys of the potential for rafting, some rules and regulations were finally been set. These are derived from several applications and instances directly experienced by the trainees, discussion interactions, simulations, and briefing sessions as well. There are some points which can serve as the ground rules for the establishment of safety and comforts during the rafting.

Based on the opinions and safety standard procedures conveyed during class-sessions, this agreement offers more new ideas. Safety procedures for rafters, therefore, become a priority. In addition, the rules and regulations regarding the management of the TNBK are the principles used in formulating those for rafters. They may fall into 2 categories – general and particular, in details:

GENERAL:

1. Honor and respect local customs
2. Not to disturb wildlife (flora & fauna) in TNBK area
3. Maintain the beauty and cleanliness along the river
4. Extinguish any trace of fire made
5. Only carry the neccessaries for comfort during the trip

PARTICULAR:

1. Before a trip, find information on rafting routes at authorized agencies (Kapuas Hulu Tourism & Culture Office, TNBK Office, or local community).
2. Before going rafting, be already aware of dangerous tracks, position of rapids, camp site, start, finish, and river current.
3. Carry and use rafting standard equipment according to safety standards, which are:
   - Self-rescue equipment: helmet, life jacket, and whistle
   - Team equipment: knife, rescue rope, rafting-track map, and first-aid kit
   - Boat-rescue equipment: karnmantel static rope, webbing, carabiner, ascendeur, pulley, prussik, boat repair kit, and survival kit.
4. Preferably use 2 boats
5. Recognize individual and team abilities, both physical and mental skills

Route and Distance of Rafting on Kapuas Koheng River

No	Route	Distance
1.	Matahari Rapids – Batu Lintang Rapids	25,73 km
2.	Matahari Rapids –TNBK Base	20,1 km
3.	Matahari Rapids –Lapan Rapids	15,57 km
4.	Lapan Rapids –Batu Lintang Rapids	11,53 km
5.	TNBK Base – Batu Lintang Rapids	5,24 km
6.	Lapan Rapids	1,37 km

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