



POPULAR
REPORT

HoB

2017

LEARNING GREEN ECONOMY AT GRASSROOT LEVEL

Cross Visit IKI Meliau-Empangau



27 Februari - 3 Maret 2017

BREWING DREAM IN HEART OF BORNEO

The heart of Borneo is a unique natural zone. This natural forest is a habitat of orangutans and stores large amount of carbon stock, while also a source of livelihood for traditional communities.

In 2007, the Government of Indonesia, Malaysia, and Brunei Darussalam took the initiative to create a trilateral conservation program named Heart of Borneo (HoB). The agreement was intended to protect the existence of forest cover, high biodiversity, and sustainable economic viability.

Nevertheless, unsustainable use of natural resources, fragmentation of landscape, and loss of livelihood of local communities and indigenous groups, remain a threat. Therefore, the area needs a concept of local, regional, and cross-border management, which can bring together the needs of conservation and development



The Project of “Green Economy in the Heart of Borneo” aims to integrate efforts to reduce greenhouse gas emissions, and promote biodiversity conservation, economic development and welfare of local communities. The project includes comprehensive plan for land use and green economy action plan for an area of 2,000,000 hectares in the corridor of the Heart of Borneo.



The landscape includes the Province of West Kalimantan, Indonesia, the State of Sarawak, Malaysia and Brunei Darussalam. Efforts were made to form collaboration with practitioners of business, society, and decision makers, in order to demonstrate the practice of green economy in fostering sustainable development.

This project would draw from experiences learned during those processes to create principles and guidelines for sustainable land use planning in trilateral conservation programs for larger area between Indonesia, Malaysia, and Brunei.

The project was designed in reference to the vision of green economy that had been implemented in the Heart of Borneo since 2007. To achieve this vision the program needs a solid concept on implementation of the green economy at ground level in the field, which includes two main components namely: land use planning; and action plan for the green economy itself.

This concept is very dependent on the collaboration of government agencies, private sector, local communities and indigenous peoples, who are expected to contribute to the discussion on the concept of green economy at international level. In the implementation that follows, the concept of green economy will be applied to provide clear direction to the efforts and actions in reduction of greenhouse gas emission, and promotion of sustainable economic growth and biodiversity conservation.

In 2012, at the sixth Trilateral meeting an initiative was brought forward to create a corridor of Heart of Borneo to support implementation of the Heart of Borneo Declaration into more specific area. This initiative attempts to uplift cross-border connectivity, combining Ingei River Conservation Forests in Brunei Darussalam with Gunung Mulu National Park in Sarawak (Malaysia) and Betung Kerihun National Park and Sentarum Lake National Park in Indonesia.

VISION OF A GREEN ECONOMY FOR THE HOB (TRILATERAL HOB DECLARATION, 2007) AND FOR THE HOB CORRIDOR (HOB CORRIDOR INITIATIVE, 2012)



In order to collect information on implementation of the green economy concept, several areas have been selected i.e. Kapuas Hulu District in West Kalimantan and Sri Aman Division and Kapit Division in the State of Sarawak, Malaysia, as a landscape for learning together. The locations are used as a place of learning how to implement good land use planning, in support of implementation of green economy for sustainable development.

From lesson gained from those selected sites, it is expected the project will create long-term results in all regions of the Heart of Borneo, particularly in climate change mitigation, adaptation and conservation of biodiversity. This project may indirectly contribute to reducing greenhouse gas emissions. The development of the palm oil sector and other land-based commodities in a sustainable manner will contribute to the decline in deforestation rates, reduction of fires on forest/land, and drying of peat area.

Harmonization between economic feasibility and maintenance of environmental carrying capacity will increase resilience to climate change not only for local communities and indigenous peoples, but also to the landscape. The information and knowledge gained from monitoring and research on this project will be very useful for designing the costs for effective adaptation activities.

The comparative study was a first step for WWF-Indonesia's West Kalimantan Program and WWF-Malaysia to accomplish a learning process on implementation of the green economy concept. Two sites had been selected in which green economy was implemented through their respective programs, namely eco-tourism and micro enterprise.

Through in-depth discussion with the main actors, the activities were expected to expand and improve understanding of each stakeholder regarding the concept and implementation of green economy.



The signing of a memorandum of understanding between West Kalimantan Program Manager, WWF-Indonesia with Head of Kapuas Hulu District, AM Nasir, marked the beginning of IKI program in Kapuas Hulu.

DETERMINING DIRECTION

This meeting (6th trilateral meeting) was intended not only to mark the beginning of the project “Green Economy in the Heart of Borneo”. More broadly, the meeting aimed to provide a discussion forum with stakeholders on the Heart of Borneo initiative as well as challenges and achievements over the years.

It was about providing space for discussion to stakeholders about how the green economy concept should be carried out with reference to the regulations in force in both countries, Indonesia and Malaysia.

It was about providing in-depth presentation on the implementation plan and activity of the project “Green Economy in the Heart of Borneo” during the time span between 2002 to 2016 at selected locations in the two countries, Indonesia and Malaysia.

It is about getting support from stakeholders in implementation of the project “Green Economy in the Heart of Borneo”; where the support and active participation of the public, the private sector, indigenous/local people and NGOs would determine successful implementation of this project.



WWF-Malaysia's representative gave a presentation on green economy concept in HoB area.

LANJAK-MELIAU TRIP



From Lanjak to the Meliau sub-village, Melemba Village, Sub-District of Batang Lupar reached by outboard motor.



Along the ancient lake of Sentarum with the background of Malay exotic island.

Eight speedboats powered by 40HP engines slowly left the dock at Lanjak on Tuesday, February 28, 2017 morning. Each speedboat was loaded with three to four passengers. There were 13 passengers coming from the neighboring country, Malaysia. They were indigenous peoples, members of Malaysian Government, and staff of WWF-Malaysia. The rest was a team of WWF-Indonesia West Kalimantan Program.

The previous day, February 27, 2017, the WWF-Malaysia team arrived at WWF office in Lanjak through Badau border. In the welcome meeting the host and guests got acquainted with each other in a family atmosphere. Also present Head of Batang Lupar Subdistrict, Rusdi Hartono.

The trip down the river and lake was not felt as a hard one, since they were presented with exotic scenery of the ancient Sentarum lake. This trip was heading toward a hamlet in DAS (River Catchment Area) of Leboyan River. The name is Meliau. Administratively, the small village is part of Melemba Village Administration, Subdistrict of Batang Lupar, Kapuas Hulu District, in West Kalimantan Province.

The participants of the “Cross-Visit” seemed to enjoy the scenery along the way, especially when they cruised on lake Sentarum. A clump of trees formed a small island in the middle of the lake.

Rocky ridges were shining like gold in the morning sun light. Similarly, the hills that confined Sentarum Lake, presented a unique natural exotica. The lake water coming from the surrounding hills and overflowing the rivers, made the area as the greatest flood plain in Asia.

Melemba Village consists of three hamlets namely Meliau, Manggin and Sungai Pelaik. The distance between one village to the other is quite far. The only transportation available is by river. The village is crossed by the Leboyan River and become a buffer zone of Sentarum lake. The size of Malemba Village according to the Medium Term Development Plan of the village reaches 26 186 hectares with a population of 335 peoples.



Fishing attractions using temilar demonstrated by members of Kaban Mayas, local tourism management group in Meliau.

Originally, the villagers are mostly fishermen. Later on they begin to utilize non-timber forest products, such as honey, rattan and pandan laut stems for making mat. Melemba village also has a very high potential for freshwater fisheries.

The river catchment area consists of peat forest ecosystem. Peat forest is a habitat for endangered species such as orangutans, gibbons or kelempiau, proboscis monkeys and hornbills.

Meliau Hamlet is a small village on the bank of Leboyan River. The village settlement consists only of one longhouse and a few individual houses, a church and a primary school. Inhabitants of the Meliau longhouse are members of the Iban ethnic kin group.

After traveling for two hours, the IKI Cross-Visit team arrived in Meliau Hamlet and greeted leisurely by local residents. There was no typical Iban welcome ceremony. The residents of Iban longhouse in Meliau were still in grief. One of their elders died. These conditions did not allow them to perform any customary festivity.

Nevertheless, the participants could still feel the warm hospitality of their host while enjoying typical snacks such as corn, sticky rice, and a variety of fruit. The organizer divided the participants in order to get comfort in the homestay lodge accommodation that had been prepared before hand.



Introducing Ibanese traditional cuisine in Meliau to all the guests.

Later on, Hermas Rintik Maring, the Environmental Services Coordinator of WWF-Indonesia West Kalimantan Program introduced the Tourism Management Group (*Kelompok Pengelola Pariwisata* or *KPP*) “Kaban Mayas” of Meliau. After the introduction, the guests were ushered to see the condition of facilities and infrastructure in Meliau Hamlet such as the wooden bridge, school, church, village office, village generator, reading house, public toilets, and water tank.

The participants also had the opportunity to see the condition of the homestay lodge facilities such as beds, toilets, and clean water. While inspecting the homestay lodge facilities, Hermas described that the source of clean water for the residents was brought down using a plastic pipeline from Bukit Peninjau.



Home stay facility managed by Kaban Mayas in Meliau.



Hermas Rintik Maring, Environmental Services Coordinator WWF-Indonesia Program Kalbar explaining about clean water supply for local people in Meliau to all participants.

MEREBUNG LAKE TRIP

Late afternoon, the journey continued to Merebung Lake. The lake area of 45.87 hectares is strictly protected under traditional law of the indigenous community. The landscape is beautiful like a piece of heaven that fall down to earth.

Meliau is known to have very tempting natural tourism area. Its location which is at the edge of Sentarum Lake becomes a magnet for tourists to visit.

Sweltering afternoon heat and thick clouds touching the hill ridges form a unique sight in the Meliau Hamlet. Both seasons, rainy and dry, may come in the same time.

Based on the Medium Term Development Plan document, Melemba village has 15 lakes: Balaiaaram Besar, Balaiaaram Kecil, Lukuk, Merebung, Merebung Kecil, Kasim, Sarang Burung Besar, Sarang Burung Kecil, Lintang, Meliau 1, Meliau 2, Merasau, Bejeli, Telatap, and Santak lakes.

Out of the 15 lakes two lakes, Telatap and Bejeli are classified as having temporary characteristics, and the other lakes have permanent characteristics.

To get to the lake, the only access is by motorized dugout. This is the main transportation in Meliau Hamlet. This small boat is quite unique. Equipped with seats made of planks without legs that can be put in and out easily. One boat can carry four peoples and the trip to the lake take about 30 minutes.

During the first 10 minutes, the motorized canoes were cruising along Leboyan River leaving the Meliau Hamlet behind. In a sunny day, the view from the water towards the hamlet is beautiful. The hurch and the settlements are connected to the school by a narrow wooden bridge. In the background we can see hills clad in green.

The canoes suddenly turned sideway, maneuvering between trees in the swamp forest. On entering the gap, the brown river water turned black, a common characteristic of water in the peat swamp forest. The trees are resistant to water. The vegetation belongs to a forest type called *Rampak Gelagah*.

The vegetation consists of small trees and shrubs as high as 5-8 meters, sometimes filled with water up to 11 months each year. The water level can reach 5.5 meters. The trees that are often found in this environment are: *Putat* (*Barringtonia acutangula*), *Kayu Tahun* (*Carallia bracteata*), *Melayak* (cf. *Croton ensifolius*), *Mentangis* (*Ixora mentangis*),

Gelagan (*Pternandra teysmanniana*), *Kebesi* (*Memecylon adule*), *masung* (*Syzygium claviflora*) and *Kerminit* (*Timonius salicifolius*).

A natural exotica that prevailed as the canoes entered the river and navigated between the trees gave a special feeling. The canoes drove slowly, proceeded with care to avoid the hanging tree tendrils. The motorists started driving their boats toward a place where orangutans had made their nests. The participants were amazed to see the nests abandoned by the owner: *Pongo pygmaeus pygmaeus*.

As they moved on the gap between those trees became narrower and narrower. The motorists had to shut the engines off, and lifted them into the canoes. This is the safest way to avoid the propeller getting caught in the tangled tree roots. The participants were increasingly enjoying the trip to Merebung Lake. They were alert with their cameras and ready to shoot at any object that appeared interesting to their eyes.



Using outboard motor, participants entering Lake Merebung which is one of the mainstay tourist destinations in Melemba village.



Floating house on Lake Merebung was built through the aid of the Fisheries Department Kapuas Hulu.

On the left and right sides of the river, the vegetation begins to differ. The vegetation in this area consists of small to medium sized trees as high as 8-15 meters and all are submerged under water for 4-8 months of the year. The water level can reach 3.5 meters. This area will become highly flammable in dry conditions.

The clapping sound of water caused by their paddles, disturbed birds around them. Every now and then the travellers heard the sound of birds in a distance. In some areas there were signs of forest fire. Fires usually occur in the dry season. The journey continued for another 20 minutes, before arriving at Merebung Lake.

The lake is painted with black-colored water and looks very beautiful. There are floating houses moored on its bank. Tourists usually enjoy swimming in the lake characterized by warm surface water and cold water down below the surface.



Enjoy the sensation of Merebung lake while swimming and taking pictures.

Some participants of the cross-visit decided to test the thrill of Merebung Lake and threw themselves into the water. Some were trying to practice catching fish with nets. While others just sat back, took pictures, and enjoying the landscape presented by the 45.87 hectares of the lake area.

Early in the evening, the participants left the floating house in Merebung Lake to return to Meliau Hamlet. More natural attractions were presented as if to wave farewell along the homeward trip. Similarly, the interaction with the residents and nature presented a nice repertoire for the visitors.

One of them was the fun of watching fishermen doing their job in the small rivers that connected the village to Merebung Lake. Various types of fishing gear were introduced including nets, fishing rods, bubu, and temilar. Bubu is a tube-shaped (round) fish traps for catching small fish. While temilar is a cube-shaped (four sided) fish trap for catching big fish. All of those will become attractions of lasting memories for the tourists.

SHARING KNOWLEDGE AT MELIAU LONGHOUSE

Dusk began to creep into darkness. The participants returned to their homestay lodge to shower and rest. The source of clean water in Meliau longhouse came from Bukit Peninjau. The pipeline system was run on a support from WWF-Indonesia West Kalimantan Program. The community now enjoyed clean water without having to go down to the river anymore.



Head of Kaban Mayas, Sodik Asmoro gave a presentation on ecotourism management in Meliau.

After dinner with the typical Meliau cooking consisted of various kinds of big fish, the participants were given the opportunity to become acquainted with occupants of Meliau longhouse.

The discussion session that followed was moderated by Jimmy Syahirsyah, Technical Support Manager of WWF-Indonesia West Kalimantan Program. The chairman of the Tourism Management Group (*KPP*) Kaban Mayas of Meliau, Sodik Asmoro became ambassador for the residents of Meliau in conveying a general description of the landscapes in their village.

Sodik did a good job in introducing ecotourism activities in Meliau to the visitors. He also explained the history of the *KPP* in Melemba village, including

those in Meliau and Sungai Pelaik. There were a number of other items presented by Sodik in the discussion that night.

Those were about the landscapes, biological diversity, culture, community activity, freshwater fish potential, ecotourism, tourism attractions, and other facilities. In addition, he also described the process of tourism development, impact of ecotourism program, government support, and ecotourism information.

In his presentation, Sodik explained that Meliau Hamlet is surrounded by rivers and lakes. Only a little part of it is dry land. That is why the Iban community developed different characteristics from other Iban groups. Here, the Iban are fishermen.



Welcoming dance is usually performed by the Iban community living in Meliau.

Similarly, the community has potential to develop biodiversity, culture, economy, and fisheries. According to him, all this potentials were used by the citizens in a sustainable manner. He also pointed out that every decision made by the people was always done with careful deliberation in reference to customary law of region.

It makes the community in Meliau Hamlet strongly adhered to the customary rules. For example, when they establish a protected areas, such as the Merebung Lake, the decision was made based on customary law that later was reinforced by the formal Village Regulation (Perdes) of Melemba Village.

Included in the deliberation was the customs governing the procedures for fishing in the lake. For example, the fishermen were not allowed to use bait such as crickets, cockroaches and frogs, because those were the highly favored food of Arwana (protected) fish.

According to him, the customary rules aims at guarding the ecosystem in the lake area. If seine is used the eyes should be larger or more than 4 inches. This means that the fish caught in the net should be around two to three kilograms in weight. While young fish will not get caught because their small size let them pass through.

For offenders, the indigenous sanctions are already waiting. The fine is simply too large to pay. But still other sanctions will be imposed i.e. that offender is not allowed to fish in the lake for three years. This sanction is the most feared by the fishermen.

The local inhabitants has already begun to tap on potential of fish for consumption using hygienic “internal control system” (ICS). Because of that the dried salted fish produced in Meliau is sold at higher prices and provides significant positive impact for local economy.



Visiting fish dryer facility which is one of ICS program assistance initiated by WWF-Indonesia in Meliau.

Women also are not spared from becoming target groups that Sodik aims at. Biodiversity found in the Meliau Hamlet gives the women opportunity to practice *pandan* weaving to make mats, purses, and ladies' handbags.

Those products are mostly sold as souvenirs for tourists who visit the longhouse. The skill in weaving is inherited from their *inai-inai* (mothers). Multifarious designs created through long Iban history has produced handicraft and works of art of high value.

In 2010 residents of Meliau made a commitment to develop their region into a nature tourism destination. It started out as a source of additional income for local inhabitants. In the same year they organized the *Kaban Mayas KPP*. And in 2012, they received financial support from the Central Government of Indonesia.

Presentation made by Sodik received positive response from participants of the IKI Cross-Visit team. Many questions were thrown to dig deeper into information on management of Meliau ecotourism.

Ng Koh Chang alias Alicia, Senior Officer (Community Engagement) of WWF-Malaysia inquired about the percentage of the result from ecotourism accrued by the citizens. Then Lim Chin Pang, a soil scientist from Envisar Sdn Bhd asked about economic benefits for local community. Lastly Samantha Liew, Senior Officer (Protected Areas) WWF-Malaysia asked whether there were young members of the community who returned to Meliau after the ecotourism program was initiated.

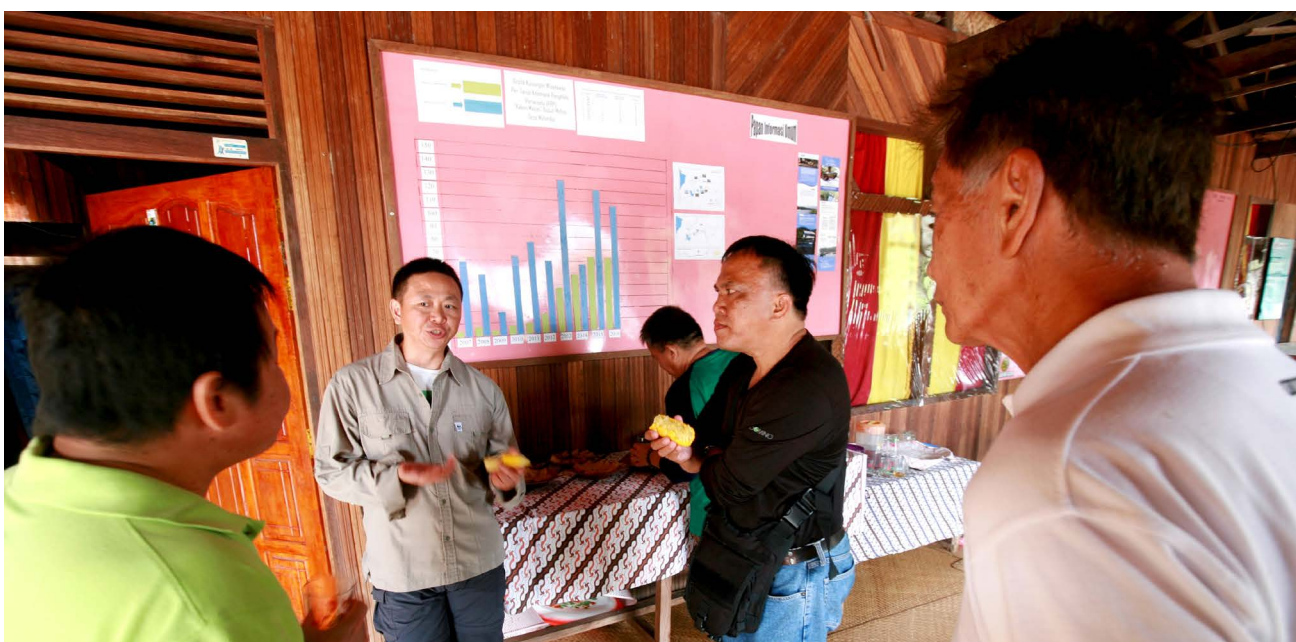
Sodik then responded to the three questions posted by the participants. He admitted that the result obtained from the ecotourism programs had not been properly recorded. However, the economic impacts to local community had been encouraging, although not quite significant yet.

For example, people had already reaped benefits from the canoe rental service, homestay lodge, and food consumption. The visitors would only pay the prices based on mutual agreement set out in advance.

Another impact of the ecotourism program was the support received from various parties, both government and NGOs. The support came in different forms, from development of physical infrastructures to enhancement of community capacity. One example was the clean water facility in Meliau Hamlet; thanks to support from WWF-Indonesia West Kalimantan Program.

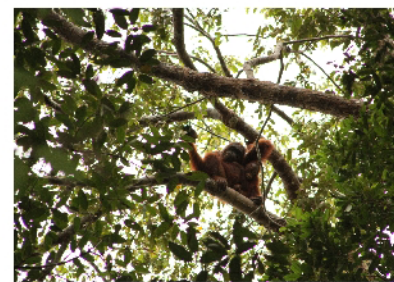
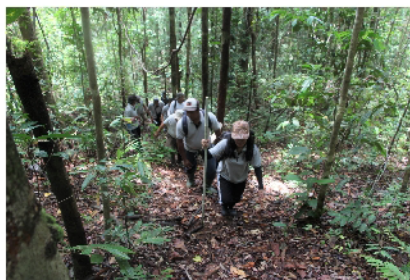
Hermas Rintik Maring intervened to strengthen the argument made by Sodik. According to him, the socio-economic impacts arising from ecotourism was a new toy for the community, in addition to dry rice cultivation and fishing. It also provided an impact toward improving the local economy. A change was happening from the previous attitude of taking from the environment to satisfy needs toward guarding the environment to maintain stable economic life for the population.

The discussions ended at 10:00 am and the participants were welcomed to rest or chat freely with the longhouse dwellers of Meliau Hamlet. The participants looked very relaxed when they talked with the local population. In fact, some of them cracked jokes as they do with members of their own family.



Discussions with Albertus Tjiu, WWF-Indonesia, West Kalimantan Program Manager about ecotourism management in Meliau.





1:75,000

0 1/4 1/2 3
Kilometers

Telatap
Nibung
Empégal
Berangan
Peninjau

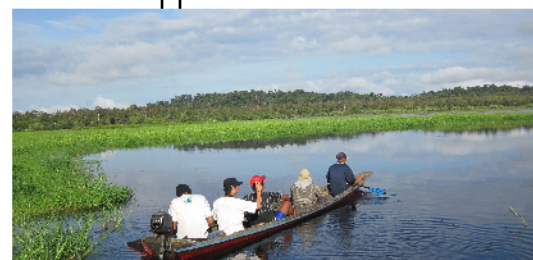
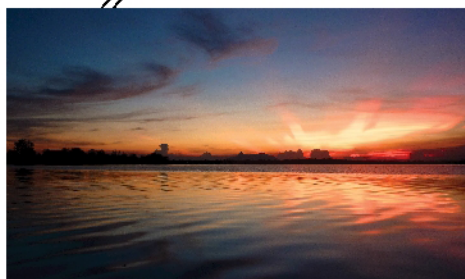
Belaia ram

D. Telatap

D. Merebung

D. Lukuk

D. Balaia ram



PETA DESTINASI EKOWISATA WKE

DESA MELEMBE KECAMATAN BATANG LUPAR



Legenda :



Bukit



Rumah Betang



Batas Desa



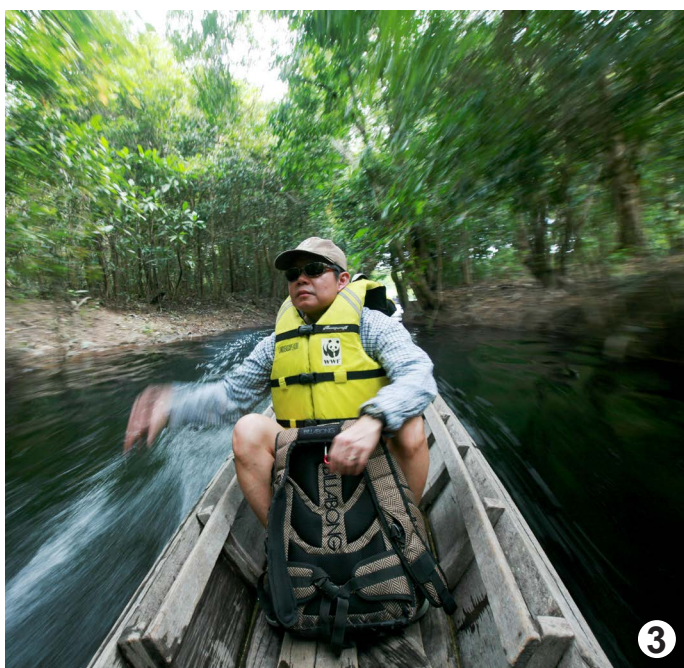
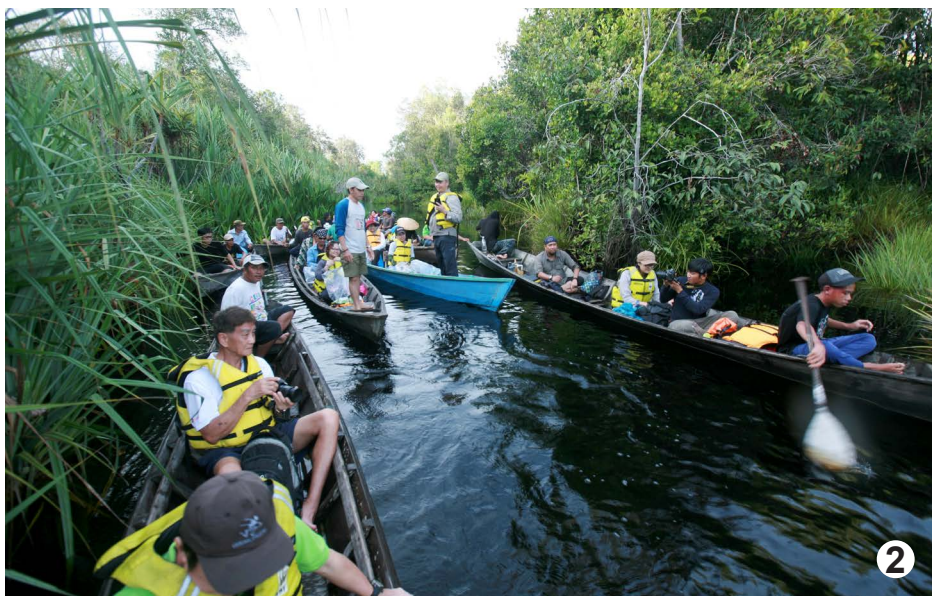
Trekking Ekowisata

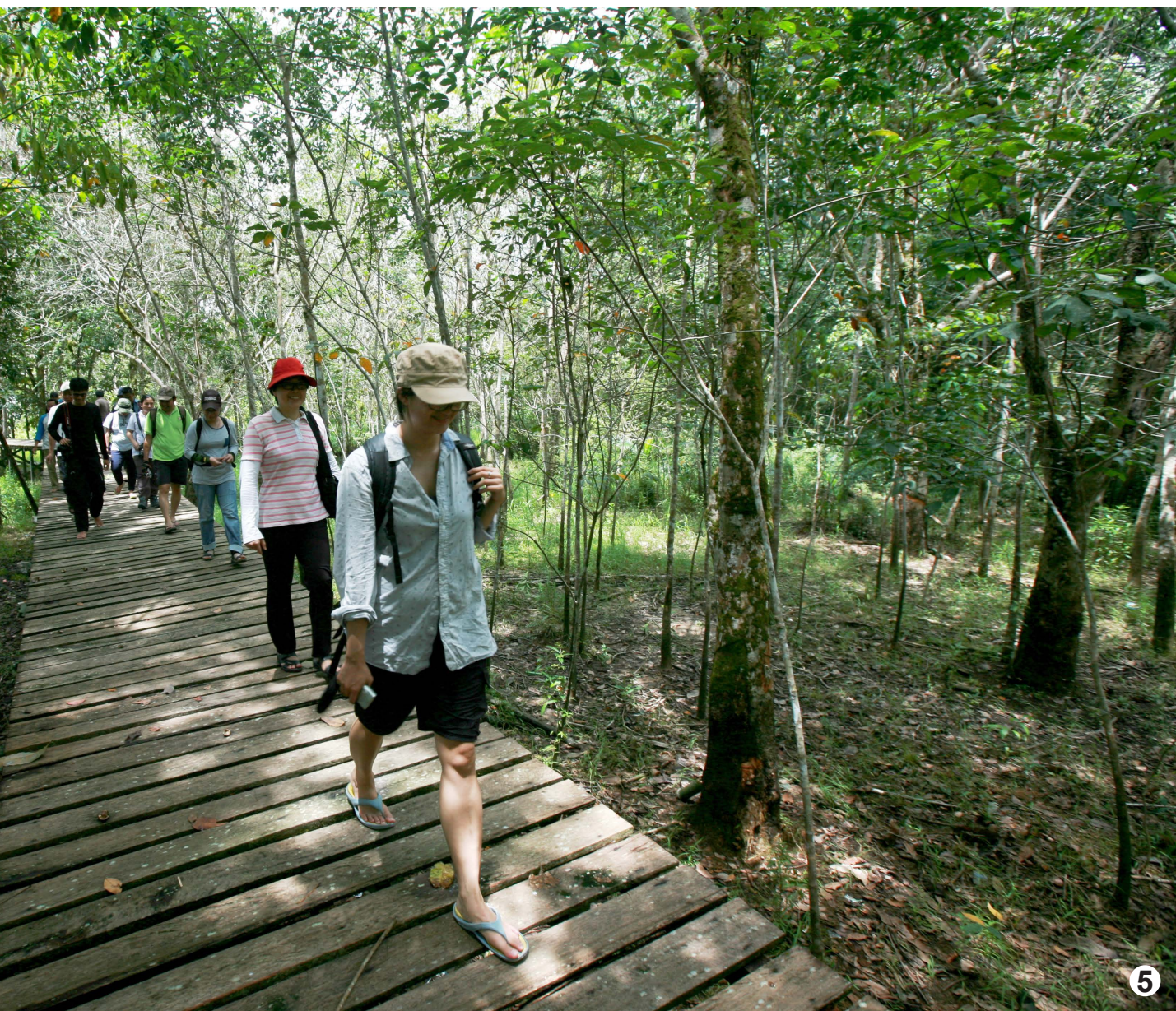


Sungai dan Danau



Wilayah Kelola Ekowisata





Caption

1. Participants from Malaysia arrived at the border crossing in Nanga Badau, Indonesia.
2. Using outboard motor, the participants enjoyed the trip home from Lake Merebung to Meliau longhouse.
3. Witness the natural attractions on the way to Lake Merebung.
4. Albertus Tjiu, introduce one orangutan dietary to the participants.
5. While enjoying the view of the rubber plantation owned by residents, the participants passed the bridge towards the primary school and village offices in Meliau.

MELIAU-EMPANGAU TRIP

The morning blanket was still wrapped around Meliau Hamlet when the participants of the IKI Cross-Visit were preparing to leave the small village towards Empangau Protected Lake, on Wednesday, March 1, 2017. The organizer was busy arranging speedboats that would be used in the trip to Empangau Village, Bunut Hilir Subdistrict, Kapuas Hulu District, in West Kalimantan Province.



Group picture in front of the Meliau longhouse before heading Empangau village.

Besides providing the water transportation and safety jacket, the organizer also prepared light snacks and drink as well as one radio communication device for every speedboat. This was done to increase comfort and safety during the trip.

The IKI Cross-Visit team left Meliau hamlet at 7.30 AM and cruised down Leboyan River and continued to penetrate Vega Lake. They passed by several villages before reaching the Kapuas River in the Subdistrict of Jongkong. Occasionally, the travellers shouted at each other over the radios. They just wanted to know where the other boats were.

Every now and then the participants took aim at objects found along the way of the three-hour journey. Their objects ranged from the types of trees and wildlife until activities of the inland residents that formed an integrated whole of the riverine culture. The journey to Empangau was so long. But the natural attractions presented in plain sight, was sufficient to entertain the traveller.



The outboard motor convoy heading Empangau village.

In Empangau Protected Lake, local residents were waiting. Included among others the Head of Bunut Hilir Subdistrict, Tabri, Village Head of Empangau, Joni Karyadi, Village Head of Empangau Hilir, Abdul Madjid, and Head of Empangau Protected Lake, Agus.

The residents prepared a number of distinctive culinary. Among them, Seladang (fish) sour and spicy soup and various types of tasty fish from the lake. All of the dishes presented in the menu were made using freshwater fish caught in local environment.



Release 10 super red arowana fish performed by the Head of Kapuas Hulu District, AM Nasir together with other parties and participants in Empangau protected lake.



Head of Kapuas Hulu district, AM Nasir showing a super red arowana fish prior to release.

In anticipation of the visit by IKI Cross-Visit team, the local fishing community inserted a sideline activity of restocking of super red arowana fish to the protected lake. The restocking of the fish with Latin name *Scleropages formosus* was attended by the Kapuas Hulu District Head, AM Nasir and representatives of a number of Kapuas Hulu Work Units (OPD).

The release of 10 world's most expensive freshwater fish was conducted simultaneously by the Head of Kapuas Hulu District, AM Nasir, Mrs. Nasir, representatives of WWF-Indonesia and WWF-Malaysia, and representative of the Malaysian Government.

After completion of the restocking ceremony, Mr. AM Nasir, Mrs. Nasir and their entourage held an amiable meeting with participants of the IKI Cross-Visit. He also reminded the importance of protecting habitat of Arowana, the pride of Kapuas Hulu. The release of arowana fish in its natural habitat could be one of the steps to attract tourists to visit Empangau. The gathering was concluded with a lunch together in a family atmosphere.



Malay traditional dance during a welcoming ceremony in the protected lake of Empangau.

There were interesting things behind the visit to Empangau Protected Lake. Hundreds of people stormed out of their houses and flocked to the lake. Young and old, men women welcomed the event with their own separate ways. Among others they staged a decorated boat trips and various dancing attractions played by teenagers of Empangau Village.

This friendly atmosphere was used by the participants to take pictures of themselves and the dancers who were dressed in traditional costumes, both Malay and Dayak. Jokes and laughter were thrown between the participants and dancers filling the air with happiness.

In the afternoon, the participants made a trip around Empangau Protective Lake using nine small boats powered by 15 HP engines. In addition to observing the boundary of the management zone, they also photographed variety of plants on the outskirts of the 103.55 hectares lake.

Every one of the boat motorists explained the history and rules pertaining to management of the protected lake. The participants seemed amazed by the determination of the Empangau citizens in protecting the lake from damage.



Welcoming ceremony accompanied by put up flower necklaces to participants from Malaysia.

After about 40 minutes cruising around the lake, the participants went back to the lodge while enjoying a dish of soggy fish crackers, typical snacks of Kapuas Hulu. On the same occasion, Agus, Chairman of the Empangau Protected Lake presented an overview about the management of the protected lake.

Agus explained that the lake was protected by the customary law, since amount of fish caught was continuously falling almost every year. Initiatives to protect this lake was conducted and marked by the formation of the management group. Furthermore, the zoning and restocking policy was implemented.

The participants seemed to enjoy Agus' explanation, as good as they enjoyed the typical dish of soggy crackers. About 15 minutes of discussion lightly with Agus, the participants dispersed. Some of them plunged into the lake, swam or just floated with the stream. The others chose to talk lightly with the fishing communities about the lake.



Participants enjoyed kerupuk basah (fishcake), one of the typical snacks of Malay community in Empangau.



Not just to look at, a participant jump at once plunged in Lake Protected Empangau.

LEARNING GOVERNANCE OF THE PROTECTED LAKE

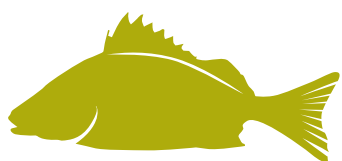
After dinner together, the Head of Empangau Village, Joni Karyadi was asked to present some materials related to management of Empangau Protected Lake. According to Joni, the Empangau Protected Lake is located in Empangau Village, Bunut Hilir Subdistrict, Kapuas Hulu District, in West Kalimantan Province. The village is inhabited by about 2,147 people. The livelihoods of citizens pivots between two fields, rubber cultivation and fishing.



Head of Empangau Village, Joni Karyadi gave a presentation on management of Empangau lake.

**THE AVERAGE
CATCH DURING
THE RAINY
SEASON**

15-20 KG



For the fishermen, the average catch per day ranges between 15-20 kg during the rainy season and increases up to hundreds of kilograms in the dry season. The catch is obtained from the riverine environment of Empangau Village, comprising Kapuas River, Penganyuh Lake, Empangau Lake and Aduk Lake. Of all these lakes, only Empangau Lake that has acquired a protected status.

The Empangau Protected Lake is located not far from Empangau Hulu Hamlet, about half an hour trip using a 2HP outboard engine. With an area of approximately 103.55 hectares and a depth of 3-21 meters, this region has provided substantial benefits to the environment as well as making the community self-sufficient in development.



Empangau Protected Lake has an area of approximately 103.55 hectares with the depth of 3-21 meters. This area proved to give great benefit to the economy of local people, village development, and the environment.

Furthermore Joni explained that from ecological standpoint the Empangau Protected Lake was classified as fresh water peat swamp ecosystem (*kerapa*) which is connected to a vast swamp forest ecosystem. The color of lake water is dark (blackish red brown), causing very low penetration of sunlight into the water.

This swamp ecosystem covers four districts along the Kapuas River and Sentarum Lake. The expanse of swamp forest forms a buffer belt against incoming tide from the Kapuas River and serves as reservoirs for the surrounding area. During the dry season, water level in Kapuas River is within safety limit. The relatively safe level of the water in the river has kept population of fresh water species relatively stable.

Various types of consumption fish such as toman, jelawat, baung, and others, as well ornamental fish like Arowana or siluk (*Scleropages formosus*) lives in Empangau Protected Lake.



Seasonal catches made by fishermen in the Empangau protected lake.

In the woods around the lake, lives several endangered species such as the orangutan (*Pongo pygmaeus pygmaeus*), proboscis monkey (*Nasalis larvatus*), and Tingang/hornbill (*Buceros sp.*). There are also colonies of bees (*Apis dorsata*) which are utilized by people around the lake for cultivation of honey. While among the flora, there are Putat plants (*Barringtonia acutangula*), tempurau (*Dipterocarpus sp.*), Purik (*Mitragyna speciosa*), raba (*Buchanania arborescens*), bungur (*Lagerstroemia speciosa*), and others.



Menyiluk (catch the fish arowana) conducted by fishermen in Empangau village every November to April each year.

Various fruits and seeds are products of the forest that provide natural food for fish and help keep the stock density in the waters at an estimated 1,634 fish per hectare.

In terms of economic values, the lush condition of the ecosystem makes Empangau Lake rich in natural resources to support community life. At the initiative of the community, Empangau Lake was declared and managed as a protected lake since 1989.

The issue of continuous reduction of fish catch was the background of the initiative. Arowana fish, one of the rare ornamental fish today, once was almost extinct from Empangau Lake. The policy of turning the lake into protected environment was considered appropriate and capable to restore the fish population level.

As a result, people did not only manage to preserve Arowana, but also maintain the economic population level of other fish i.e. *toman*, *jelawat*, *ringau*, *tengadak*, *baung*, and *entukan*.

In 2001, the Village Regulation on Empangau Protected Lake was passed by virtue of District Head Decree No. 6 Year 2001. This regulation further encouraged the community to manage the protected lake.

Now, people harvest 8-10 tons of consumption fish and 100-120 expensive arowana fishlings per year. Certain percentage of the fish harvest is kept as Original Village Income (*Penghasilan Asli Desa* or *PAD*) that can be used to finance village needs, such as education, health, death, wedding, religious house of worship, etc. Looking ahead, the Empangau Protected Lake is planned to become a tourist destination based on community management.

In term of institutional and management model, Joni explained that the community had formed a management group responsible for systematic management of Empangau Protected Lake. Every year, the management group held its annual meetings to reach consensus on various aspects of management of the lake.

Successful management of the Empangau Protected Lake starts with two things, firstly the key species that provides direct economic benefits to the community in a large scale, and secondly, safe keeping of institutions and social capital such as local wisdom in the form of rules based on local custom.

Historically, the community in Empangau Village has a long tradition of using local rules (customary law) and special arrangements (at village level). These rules include the use of fishery resources.

The rules are revised every year with the purpose of improving the management systems in reference to development and needs of the environment. Other considerations is about the institutions that support management of the protected lake which should be based on local culture and tradition.

The regulation on Empangau Protected Lake includes zonation and catchment protection, empowerment, sharing of harvest, and prohibitions and sanctions. In terms of zoning, the protected lake is divided into three sections.

First, the economic zone which can be utilized to meet every day needs of individual. Second, zone for limited use which is managed for common need of rural communities, not for individual purposes. Third, the protected zone, which can only be used at the time of harvest of arowana or Siluk. Fish for consumption should not be caught from this zone.

In addition to organizing the zone, the use of fishing gear and fishing methods are also regulated based on the status of the protected area. People who use fishing gears and fishing practices that will damage the environment will receive severe punishments.

Consistent enforcement of sanctions will ensure lasting applicability of those regulations. Fines even a lifetime ban on fishing in the lake area will be given to anyone who violated the rules. To simplify the procedure a guidebook is being drafted bearing the named "*Perturan Rukun Nelayan Desa Empangau*"

(Regulation of Fishermen Group of Empangau Village)".

In order to facilitate management flow and supervision, the community formed the Protected Lake Management Group. This group was instated on 17th April 2007 by the Marine and Fisheries Agency of West Kalimantan Province. In developing the program, the management receives direction and supports from the Village Government, Department of Fisheries, Department of Plantation and Forestry, Department of Tourism, as well as environmental organizations such as WWF Indonesia.

Functionally, the management plays important role in implementing the supervision system in the protected lake. They have the authority in the management and utilization of riverine resources and fisheries. In implementing the supervision, the management is assisted by the entire elements of the community, such as community leaders, religious leaders, traditional leaders, women's groups and youth.

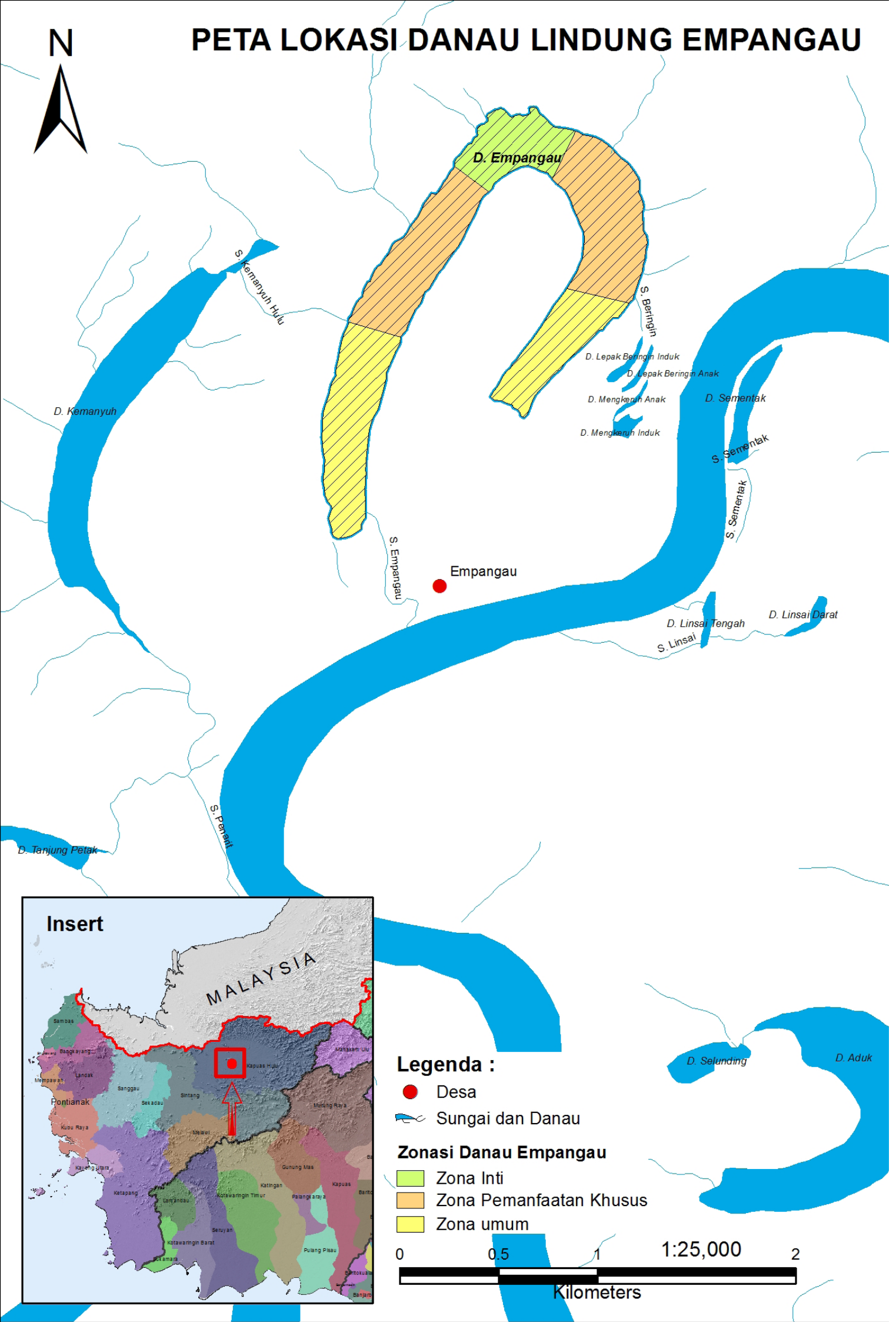
Thanks to the commitment and consistency of Empangau fishing communities, several awards have been given to the management of Empangau Protected Lake. Those awards come from District Head of Kapuas Hulu, Governor of West Kalimantan, Department of Marine and Fisheries of West Kalimantan, even from the Ministry of Maritime Affairs and Fisheries.



Zoning in Empangau Protected Lake for the management of sustainable natural resources.

N

PETA LOKASI DANAU LINDUNG EMPANGAU



ASKING WHILE LEARNING

Joni Karyadi presented his material for about 40 minutes in front of all participants of the IKI Cross-Visit and the fishing communities in Empangau.



Focus group discussion involving government representative, fishermen, and participants on protected lake management.

Regretfully, he failed to notice that the audience lose their focus and began chatting among themselves. Luckily, a number of participants remained interested and asked a few questions related to management model of ecotourism in Empangau Protected Lake. The participants saw enormous potential the protected lake had, but had not been well explored.

The efforts of the inhabitants which did not escape the attention of the participants of the IKI Cross-Visit were the Putri Balor salted fish displayed at the gate of the lodge. The salted fish had been managed using the mechanism of Internal Control System.

Thus, the freshwater fishery products are guaranteed to be free from chemical residues. The packaging had already met hygienic standards. The participants did

not waste the opportunity. They bought and took the fish home to Malaysia as souvenirs from Empangau.

In response to the question mentioned earlier, Joni admitted that there was no specific management arrangement for ecotourism. While the promotion was only done through news in the media and assistance from other parties, both the government and non-governmental organizations. Joni did not deny that the fishing community was worried; if the number of visits increased it would disturb the protected lake. Moreover, the human resource was not quite ready to manage the ecotourism services.

Another point discussed was the suggestion made by participants of the IKI Cross-Visit that in-depth study should be done to find out why Arowana could only live in Empangau Lake and surrounding waters.

Then the question was taken over by WWF Indonesia West Kalimantan Program Manager, Albertus Tjiu. According to him, there had been studies on fish consumption done by a number of academics in Palembang. Similarly, scientists from IPB Bogor had successfully managed cultivation of arowana fish species and sold live fish in large number. But the quality of Arowana fish produced in Bogor was not as good. The color was dull and light.

Triwati of the Fishery Department of Kapuas Hulu added that this region had the largest submerged area in Kalimantan waters. Her Department would not be able to manage such very large region alone.

However, information about local knowledge, traditional law, and local economy in relation to protection of the region would be very helpful in managing the region's waters. The ideal was that in the future, Empangau Lake would serve as a Fish Bank for Kapuas Hulu.

The formal discussion ended at 21:15 PM and continued with informal discussions to let the participants to focus more on learning and exploring other information that they might need. The informal discussions explored the management of the protected lake. How to manage the lake site and what kind of sanctions to be imposed in cases of infringement.

Triwati explained that the Community Supervisory Group (*Kelompok Masyarakat Pengawas or Pokmaswas*) of Empangau Protected Lake would oversee the practices related to those matters. If anyone was caught, he or she would be brought by the *Pokmaswas* to the village government. And the Village Head assisted by the traditional leaders would impose punishments based on local wisdom. The punishment is very heavy. In addition to monetary fine, violators can be driven out of the village.*



Salted fish Putri Balur, one of fishery products from Empangau Village using the Internal Control System (ICS).

MOVING TOWARD PONTIANAK

The learning process on ecotourism governance in the protected lake had been completed. The IKI Cross-Visit team left Empangau village on March 2, 2017 morning. They cruised along the Kapuas River for three hours using 40 HP speedboats to get to Putussibau, the capital of Kapuas Hulu District.



Shortly before leaving Pangsuma airport, Putussibau to Supadio airport, Pontianak.

A convoy of 10 speedboats formed a rare configuration following the meandering Kapuas River. The scenery along the riverbanks offered its own story. The exhausting trip was occasionally relieved when the boats passed by the fishermen who were fishing in the river.

Tim Cross-Visit team set foot in Putussibau, and took a break at the Office of WWF-Indonesia and had lunch together. This was where the participants would wait for the arrival of regular flights linking Pangsuma Airport Putussibau with Supadio Airport in Pontianak. The flight from Putussibau to Pontianak takes about one hour.

Although the itinerary was fairly tight, the participants were still in high spirits. In fact, as soon as they set foot in Pontianak, their next target was the gift shop located at Jalan Pattimura. They did not come just to look around; the participants also bought a variety of handicrafts typical of West Kalimantan to bring home to their country as a memento.

THE FINAL DISCUSSION

In the evening, the activities continued with a final after dinner discussion at the Grand Mahkota Hotel Pontianak. Some important notes during the field visits in Meliau and Empangau became hot topics.



Discussion and evaluation of the results of field visits involving participants from Malaysia and Indonesia.

Albertus Tjiu, West Kalimantan program manager admitted he received many feedbacks from Mr Lim Chin Pang, especially with regard to the impact of ecotourism in economic activity of the community. Including conducting research to see the changes in the economy after the ecotourism mentoring was implemented in Meliau Hamlet.

While Sheau Sia Lo, State Planning Unit (Principal Assistant Officer) expressed his admiration for the two areas in which WWF works, Meliau and Empangau. According to him, what was happening in the region was not just talking about conservation. But more than that, the running program had opened broader scope of the economy and livelihood of the people.

This was in tune with the views expressed by Marzuki bin Bujang, FDS (Forest Ranger) who said that WWF had given much help in changing people's mindset or perspective on conservation. This was proven by the absence of trash coming out of family activities along the river and protected lake.

Further along, Director of Envisar Sdn Bhd, Ting Mui Soon said that the green economy was no longer something that could only be read in newspaper, now it was real and running. It was obvious that WWF-Indonesia had been able to empower local communities. Encouraging youth to take control in leadership. Soon Ting Mui mentioned that young people here had shown encouraging character. This was demonstrated by the role of young leaders in the activities presented during the Cross-Visit.

Despite of being far away from the central government, they were able to present materials, spoke well in discussion, and capable in using multimedia tools as well as communicating with the outside world. According to him, this was very impressive. He was not sure such a thing could happen in Sarawak. People there emphasize direct benefit in working together and tend to be individualistic. It would be very important for him to make discussion about this so that this inspiring phenomenon could be replicated in their region.

“We also have adopted natural resource management initiatives originating from the community. For example, the *Tagang* system. But, the system only runs in certain areas such as in Sabah and part of Sarawak. Why it is so, because only some people are willing to do it. While others are more selfish” he explained.

He added that the situation was probably influenced by the previous condition such as at the time of logging. Where investors indulged society with money and convenience to get everything they wanted. For example, when there was no clean water they simply asked for pipelines and water tanks. No food, wanted this and that, everything was responded very easily.

However, this condition had changed when many forest logging permits were converted into oil palm plantations. The response to demand for compensation from the community was no longer speedy. This was so because new oil palm plantations would reach productive state after 7 to 10 years.

Therefore conflict between community and investors in Sarawak began to appear. In contrast, things happened differently in Meliau and Empangau. Young people could be empowered. They could implement and willing to sacrifice opportunity for a quick profit.

“We saw a lot of great challenges in the early stages of starting the project activities. But we think not to give up. We must learn and try to push, if necessary, change the perspective on how governments, consultants, NGOs can help carry out its role optimally” Ting Mui Soon said.

Samantha Liew, WWF-Malaysia Senior Officer (Protected Areas) strongly hoped that representatives of the government, society, and consultants, could learn from what they had seen in Meliau and Empangau. About how the community was transforming from the condition before the

intervention to the conditions they wanted. In Meliau and Empangau the basic capital in the form of strong rules supported by commitment from the community had already existed. “Something interesting to learned and apply in our region,” she explained.

Then, Samantha talked about the approach taken at this time. One example was the project in Kubaan Puak. The approach taken was to foster awareness, share knowledge, and discuss how to make programs run, understood, and accepted by the community. For her, understanding was something which was very important for creating governance at the community level before the mentoring process could begin.

Empangau, she added, had powerful rules that were obeyed by the people. She and her friends expected similar condition could occur in their region. Therefore, the important thing today is to build the mindset and decisive mentoring strategies; that was the first thing that must be done.

“This Cross-Visit gives a lot of ideas for me personally and the consultant team, about how to implement sustainable development in the IKI pilot area in our region,” concluded Samantha.

Putra Agung, Program Manager - Sustainable Palm Oil, expressed his gratitude to the Cross-Visit participants from Malaysia. In this occasion, Agung said that what was witnessed for more than three days in the field, interaction and discussion with local communities was a valuable form of learning for both parties, Indonesian and Malaysian.

What would be done on implementation of green economy projects forward at least there were examples that could be emulated such as what was seen together in Meliau and Empangau.

Hermayani Putera, Kalimantan Regional Leader of WWF-Indonesia, expressed his appreciation because all parties could learn together from the visits to Meliau and Empangau.

According to him, one of the points about the green economy was how the idea was turned into reality, from a global perspective to local context.

What was facilitated by WWF and local communities was one of the efforts to convince the government to adopt and accommodate local ideas and best practices in government policy. At the district level, several initiatives had been accepted through the policy.

For example, the Department of Tourism of Kapuas Hulu promoted Meliau and surrounding areas as one of the main tourist destinations.

Furthermore, continued Hermayani, how the lesson was shared with other parties such as in Meliau. In that area, WWF did not work alone. There were other NGOs such as FORINA and KOMPAKH as local operators. There were also Lanting Borneo and Canopy Indonesia. But they still used the same approach and methods which they chose to avoid confusion to the public.

Institutionally, he hoped West Kalimantan Provincial Government would allocate some activities that could become example and good indicator. How to adopt basic idea into activities such as in tourism. How to protect peat swamp forests, and allocate appropriate budget to prevent and tackle fire incidence in forest and land, as well as how to allocate source of funds for restoration.

Irwan Gunawan, Market Transformation - Deputy Director WWF-Indonesia expressed his impression of the feedback received from participants of the Cross-Visit. According to him, what we had observed this far, was all about mindset. How to develop the green economy to be more grounded. But so far, the green economy was only applicable in study papers and reports.

In respect of the Heart of Borneo, Indonesia and Malaysia had agreed on a common framework since four years ago. However, people tend to be more pragmatic. Because, when people depended on natural resources, the emerging forms of response was how to survive.

The economic situation of post-logging period between 1998 and 2005/2006 was quite harsh. This condition presented dramatic and real change for the people. Money was not everything. The residents learned a lot from situations like that. They got money so fast for 10 years cutting trees, but they became victims in the future. Even some of them were detained by law enforcement officials as illegal loggers.

Nevertheless, said Irwan, this condition could certainly change. The proses as bitter as this could become reference so that the people in Sarawak did not have to go through the same process when running the project.

This project could provide input to the governments of the two countries. Because, the facts prove that national borders had never been visible in the field. Moreover, at the moment the two areas lived side by side on the same natural resources.

That was the fundamental message of the project, why it was called cross-border and trans-national. This condition could become a springboard for further development. Communication and information exchange among community groups were expected to continue to be well maintained to give a greater impact.

The statement made by Irwan Gunawan was welcomed by Director of Envisar Sdn Bhd, Ting Mui Soon. According to him, it was very interesting because a lot of things in contrasts were found in the field. In contrast to what happened in West Kalimantan, in Sarawak the project was still working to identify groups of people who agreed to implement the processes adopted by the project.

In implementing IKI project, it is important to find the right partner. The project is highly dependent on the readiness of the community to accept the purpose of HoB.

The IKI Cross-Visit team concluded the learning process in Indonesia on March 3, 2017. The discussion was already finished. The end of activity was marked with a visit to Kadriyah Palace in Pontianak and the Equator Monument by boat. A number of important notes from the field enriched with discussions will become a provision in implementing the green economy projects.

English translation by Syamsuni Arman 27th March 2017.



Warm handshake as a brotherhood symbol from all participants in the Equator Monument Pontianak as a sign of end of all activities.

100%
RECYCLED

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Title: Learning Green Economy At Grassroot Level

Cover Photo: Participants boating around Empangau Lake while discussing the management of protected lake with a group of local fishermen



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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature

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