

2013
Maliau Basin
Wildlife And Resource
Survey
Management Report

Prepared by Darline Lim-Hasegawa
Date: Aug 1, 2013

1.0 Introduction

This report is intended to cover the activities conducted for the Wildlife And Resource Survey (thereafter Survey) which was carried out in Maliau Basin Conservation Area (MBCA) and its immediate surrounding area.

A summary of activities expenditure statement is appended in this report.

2.0 Activity Outputs

2.1 Meeting

The Survey was initially earmarked in May 2013. However, due to Malaysia's 13th General Election, with involvement of some government departments, coupled with the availability of participation from other agencies involving in Harvest Festival preparation and celebration and with the consideration on the availability of helicopter charter, the Survey was deferred to June. Several inter-agencies meeting were held including one Technical Working Group Meeting to discuss in detail the focus and methodology of the survey.

2.2 Wildlife Survey

The wildlife survey was conducted covering Maliau Basin Conservation Area and its surrounding periphery over a period of 14 days from June 10 to 23, 2013 (*c.f.* Appendix 1). The survey was carried out to obtain an estimate on the wildlife species diversity and richness in Maliau Basin and surrounding area. Information garnered from the exercise will be utilized in the development of a long-term research, conservation and management of wildlife within and around the Conservation Area. Additional information recorded during the survey includes the conditions of the landscape, accessibility and potentials of the area for eco tourism.

The survey was led by Sabah Wildlife Department and jointly organized with Yayasan Sabah. INIKEA and Yayasan Sabah provided financial support to the survey. Other participating organizations included Sabah Parks, Institute Development Studies (Sabah), Universiti Malaysia Sabah, WWF Malaysia, Danau Girang Field Centre, Sabah Environmental Trust and HUTAN-KOCP.

Over 130 people, operating in 12 areas, took part in the fieldwork. Eight teams were flown in by helicopter into the remote areas.

Apart from direct sightings and transects, 120 camera traps were deployed during the survey to photo-capture wildlife during the survey. Out of these cameras traps, 30 were left for three months within Buffer Zone 1 in 'Tembadau Valley' near to the Maliau Basin Security Gate to look into the distribution of Banteng.

Training to Yayasan Sabah ground staff involving in the survey on basic wildlife monitoring and camera trap set up was conducted by WWF Malaysia few days prior to the survey.

2.3 Forum

A one day *Forum on the Findings of 2013 Maliau Basin Wildlife and Resource Survey* was successfully held on July 8, 2013. Based on the findings, recommendations were made as the next step forward for implementation, conservation and management of wildlife in the area (*c.f.* Appendix 2 for summary report of the forum).

Reports from the survey have been compiled and publication of the survey findings will be realized in the form of monograph.

2.4 Media Coverage

A press member from Bernama was embedded as participant in one of the camps throughout the survey period.

Over a dozen of newspaper publication on the survey and forum were published in both national and local press.

3.0 Expenditure

The total amounts incurred for the survey as of July 23, 2013 is RM269,633.50, with a budget of RM35,000 for publication of the report has yet to be utilized.

INIKEA and Yayasan Sabah provided financial support to the survey. The expenditure statement incurred for the wildlife survey is attached in Appendix 3.

Appendix 1:

Programme:

June 10, 2013 (Monday)

- Participants arrival at Maliau Basin Studies Centre (MBSC)
- Registration of participants

June 11, 2013 (Tuesday)

- Participants divided into group
- Field equipment & essential food distribution to each survey group
- Briefing

June 12, 2013 (Wednesday)

- Transporting participants (including baggage, field equipments & essential food) by group to camp site (either by foot walk, land, boat or through helicopter transfers)
- Built up camping site by group members

June 13, 2013 (Thursday)

- heli transfers (continues for 3 camps)
- Set up camps or survey begins for some camps

June 14 – 22, 2012 (9 days)

- Wildlife survey

June 23, 2012 (Sunday)

- End of survey
- Transporting all participants from camp site to MBSC
- Debriefing of survey findings

July 24, 2012 (Monday)

- Depart MBSC

Appendix 2

Report on the Forum On The Findings Of 2013 Maliau Basin Wildlife Aand Resource Survey, July 8, 2013 at Magellan Sutera Harbour Resort

Findings

Camp 1 (Presenter : Fred Tuh)

- Abundance of Wildlife in General Data captured from a combined survey through general observation (including night time spotting), camera trappings and mist netting shows a total of 23 species of mammals, 5 species of amphibians, 52 species of birds and 6 species reptilian recorded during the survey. Elusive species such of Sun bear were found with 2 healthy calves was captured in camera traps.

- Vegetation and Tourism potential

The area is covered by secondary forest (old logged area), while undisturbed forest cover (types 1) was found close to the MBCA boundary. Active logging is not very far from buffer zone 1.

The area is suitable for jungle trekking (in logged / secondary forest) offering easy to challenging terrain. Similarly, it is also recommended as an area for general wildlife observation – indicating by occasionally visualization of animals during the day and night. Abundance of wildlife species within the area perhaps could be due to the many saltlicks found here. The river is also suitable for recreational activities such as on catch and release fishing (hook an lines method).

- Issues on Illegal Activities

Signs of illegal encroachment by Gaharu seekers, hunting and fishing are seen in the area.

Camp 2 (Presenter / Leader : Mr. Augustine Tuuga)

- Abundance of Wildlife in General

Indication of wildlife abundances is generally good. There were 18 species of mammals identified including important species that is Sun Bear, Banteng, Elephants and Clouded Leopard Cat. Many animals' wallows and saltlick was found in the area. A total of 72 species of birds and 5 reptiles were recorded in the area.

- Vegetation and Tourism Potential

Forest cover within Buffer zone 1 is still intact, albeit active logging in the adjacent locality.

Minus the distance and logistic requirement, nature tourism is a potential undertaking especially for animals sighting, bird watching and beautiful sceneries.

- **Issues on Illegal Activities**

There was evidence of hunting but not necessary rampant. However, there is a need to verify the boundary as there is indication of logging activities to be carried out in part of the area very soon considering clear evidence of logs being tagged approximately 300meters inside from the boundary of Buffer Zone 1.

Camp 3 (Presenter / Leader : Soffian Abu Bakar)

- **Abundance of Wildlife in General**

There is significant abundance of wildlife population and species diversity. Charismatic species such as of Elephants, Orang utan and Clouded Leopard are among the 20 mammals' species recorded. 11 species of mammals was captured by camera traps. It is also noted that there is a lot of wildlife prints in particular of footprints. They were 70 birds species (6 are endemic, and with 5 species of hornbills) recorded including Pheasant and Partridge caught on camera traps.

- **Vegetation and Tourism Potential**

This is a logged over areas with heavily degraded land patches which have difficulties in natural regeneration (lalang cover with wide canopy openings here and there).

On tourism, waterfalls could be the main attraction as there are many found within the area, as well as game tracking / sightings and bird watching.

- **Issues on Illegal Activities**

There was strong evidence of Gaharu seekers encroaching the area indicating by fresh carves made on several trees.

Camp 4 (Presenter / Leader : Dr. Maklarin Lakim)

- **Abundance of Wildlife in General**

The study area is located within a walking distance to Lake Limununsut, at the northern part of MBCA. There were 178 wildlife species identified comprises of 20 mammals species, 144 birds, 11 reptiles, 3 known insect species and 2 bats. Mist netting caught 22 species of birds from 41 individual including 2 species of bats.

- **Vegetation and Tourism Potential**

Vegetation are mostly of 2,3 and 4 types; in parallel to indication of being logged with some were heavily degraded, struggling under natural regeneration (forest restoration program is highly recommended).

Lake Linumunsut itself is a visits attraction due to its unique features. Other attraction is looking at the types of fishes found in the main river, as well as waterfall that is plentiful in the area. Accessibility (road) is a prerequisite for tourism development. The abundance of wildlife suitable for mammals and birds sightings. Topography such as cliff with wide open viewing is an attraction too. Land form and variety of land elevation are also suitable for activities such as paragliding and Clift climbing.

- Communication Points

72 calls has get through i.e. 'Yagi' (11 calls), 'SG2000' (34 calls), 'RIG' (37 calls). There is no hand-phone signal detected within the area.

- Issues on Illegal Activities

Rampant activities by Gaharu seekers (graffiti), hunting and fishing. There was a direct sighting of 4 individual on 2 kayaks at Sg. Namantoi.

- Recommendation

Frequent patrolling to be done. An outpost for rangers / patrolling station is highly recommended.

Camp 5 (Presenter: Dr. Yap Sau Wai)

- Abundance of Wildlife in General

The area is located at north-west of MBCA within a 10-15 minutes helicopter rides. Terrain is generllay undulating. Approx. Surveyed area is 8 km square. A total of 11 mammals species, 3 primates, 5 reptiles and 39 birds species are found here.

- Vegetation and Tourism Potential

Area is of primary and logged forest. Forest cover in unlogged area is inside the MBCA boundary while there was some heavily degraded areas due to past logging activities in the Buffer Zone 1 that need human interference to restore. It is believed that current logging activities are not far from the area indicated by occasional tractor sound heard.

Due to the distance as well as a disturbed forest, and no special features (e.g. no waterfall), this is not suitable for tourism activities.

- Issues on Illegal Activities

Rampant activities based on signs of Gaharu seekers (30 graffiti on trees, 1 abandoned camp found) fishing and hunting, whereas there are also empty shotgun cartridges were identified.

Camp 6 (Presenter / Leader: Sahron Koh)

- **Abundance of Wildlife in General**

The study area is located at the west of MBCA within a 1.5 hours drive in through logging road from the Sapulut asphalt road. The heart of survey area is crossing Buffer Zone 1 boundary. Logging is actively carried out all around outside of the buffer zone boundary (approx. 50% of study area). Logging activities and accessibility has in some way influence the result of the wildlife survey. However, it is still presumed that wildlife abundance is still good especially inside buffer zone 1. There are 29 mammals' species, 6 reptiles, 7 amphibian and 113 birds species are found here. Species of birds and individual are easily seen due to the fact that some trees are fruiting, notably of many pioneers' species such as *Macaranga* spp. On mammals, eventhough there is no camera traps captured of animals within the recent logged area outside buffer 1, there were many fresh footprints found especially of Bearded pig, Civet, Sambar and Barking deers.

- **Vegetation and Tourism Potential**

Approx. 50% of the assigned area under surveyed is undergoing active logging. Logged area of buffer zone 1 seem to show good natural regeneration, otherwise patches of heavily degraded spots (probably logs stumping area) shows ferns, lalang, climbing bamboos as the dominance vegetations i.e. open and breakage of forest canopy.

Except for adventure tourism (trekking), there is no special features to enable tourism development. This area is ideal for birds watching specially during fruiting season inside buffer the buffer zone.

- **Issues on Illegal Activities**

Rampant activities based on signs of Gaharu seekers (graffitis on trees, abandoned camps, and encountering of groups), indicates that this area is one of the important access to MBCA, due to ease of accessibility through the existing logging road. Hunting is another major issue, especially within the logging road system – it was noted that 9 out of 10 nights times, there were hunting using vehicle / spotlighting comes with sound of shots. Report made to the YS Regional Manager and Sabah Wildlife Department, Keningau, resulted in the arrest of a group of Gaharu collectors and hunters.

- **Recommendation**

Area is a hotspot for hunting and access point for Gaharu seekers. Patrolling, preferably to be carry out jointly with the relevant government agencies is highly recommended, as illegal activities on hunting and Gaharu individual were found to have brought with them firearms (shotguns).

Camp 7 (Presenter: Rosti Sandayan)

- **Abundance of Wildlife in General**

Abundance of wildlife is shown via various ways i.e. camera trapping, general survey (a lot of footprints signs) and birds netting. There are 76 species of mammals, 67 birds species identified throughout the survey work.

- **Vegetation and Tourism Potential**

Forest are disturbed / logged many years ago, with patches of heavily degraded areas.

There is no attractive features for tourism, except for adventure / hardcore trekkers.

- **Issues on Illegal Activities**

Illegal activities detection were of fresh sign of built camp and food leave behind - highly likely were of Gaharu collectors.

- **Recommendation**

To carry out frequent patrolling work, carry out forest rehabs work and establish radio communication based to this area.

Camp 8 (Presenter: Lailatun Eliyana Arrifin)

- **Abundance of Wildlife in General**

The area is located at the north-west of MBCA within a 10-15 minutes helicopter rides. Terrain is generally undulating. Approx. Surveyed area is 8 km square. A total of 11 mammals species, 3 primates, 5 reptiles and 39 birds species are found here.

- **Vegetation and Tourism Potential**

Vegetation types are mostly of types 3 and 4 categories. There is a need for man helps in the regeneration of degraded areas.

Due to difficult terrain, no special feature (cultural, biological. etc.) and limited water source, this area is not suitable for tourism development.

- **Issues on Illegal Activities**

There is Gaharu seekers signs within the area, albeit remoteness and strained water source.

Camp 9 (Presenter: Pius Pansang)

- **Abundance of Wildlife in General**

There are high diversity of wildlife species and population, indicated by various signs found in the area. On records are 38 birds species and 14 spp of mammals (with 2 unknown species - due to incomplete body coverage under camera trapping).

Considering time spent for the survey (landed late on 13 June), there is potentially more species occurrences within the area.

- **Vegetation and Tourism Potential**

As the area is inside MBCA, it is covered under undisturbed pristine forest, largely comprises of heath, montane and lowland dipterocarps forest, albeit findings of stumps of large trees that was purposely felled / logged many years ago.

Potentially good as a tourism destination with consideration on combined interests *i.e.* long distance trekking, waterfalls visitations (high number of falls within a 2 – 3 km square), among other attractions such on wildlife (spotting), huge / diversity of trees and vegetation, scenic views (from cliffs' tops) and favourable cooling temperatures.

- **Issues on Illegal Activities**

Indication of encroachment particularly by Gaharu seekers (and hunting).

- **Recommendation**

1. Patrolling work to be carry - out as frequently as possible.
2. Establish a Research Station / Ranger Security Outpost in the area.

Camp 10 (Presenter / Leader: Dr. Rahimatsah Amat)

- **General Abundance of Wildlife**

Good abundance of wildlife and they are easily seen *i.e.* signs such as footprints, claws, wallows and direct sighting. Total number of species recorded are 17 for mammals (with 1 unidentified), 59 confirmed birds species (4 unidentified species), with some listed under UN endangered, vulnerable and threaten species.

Area is covered with good pristine forest, representation by various species and sizes of trees.

Tourism is potentially good. Attractions are on waterfalls, clean and clear water and pools, Rafflesia flower, birding (e.g. Hornbill easily seen), sighting of animals and pristine primary forest and general nature photography.

- **Issues on Illegal Activities**

Of encroachment by Gaharu seekers (and hunting), indicated by old and fresh marks (esp graffiti on tree trunks).

- **Recommendation**

1. Repair / maintaining the Rafflesia camp shall be carry out (have been neglected for sometimes), also surrounding area of camp.

2. Frequent / regular patrolling, especially when the existing camp can be utilized for the purpose (as a ranger outpost). There are fresh and old signs of encroachment by Gaharu collectors.
3. Monitoring of Rafflesia plot (data on flowering patterns etc.) as a long term research endeavour.
4. Increase number of mist nets for future birds survey and with at least 1 birds expert per survey team.
5. Long term camera traps monitoring on main trails.

Camp 11 (Presenter / Leader: Mr. Alim Bium)

- **Abundance of Wildlife in General**

The camp was set up at an elevation of 850 ASL. At this height several records indicates abundances of wildlife thriving on high land which including Orang utan. Total mammals recorded are 27. Birds show a better variation on species. There are altogether 103 species recorded, with 8 endemic species found in the area. Dominant species are Helmeted Hornbills, Asian Paradise Fly Catchers, Borneo Spotted Fortail (new record listing for MBC) and Yellow-Bellied Bulbul. Allowing longer survey work, it is expected that more birds' species will be identified.

- **Vegetation and Tourism Potential**

Landscape are of pristine forest.

Potentially visited for keen trekkers to observe / enjoy pristine forest landscape, many beautiful waterfalls / natural 'swimming pools', birding and general wildlife sighting. A haven for nature photographing.

- **Issues on Illegal Activities**

Recent abandoned camp found within the area likely of Gaharu collector, while at the same times doing hunting.

Question (Q) and Answer (A)

Q : On the new record of bird species for MBCA – is it also found in other areas e.g. MBCA, ICCA (Dr. Rahimatsah).

A : There is yet any record for DVCA, ICCA and Tawau Hill's Park of the species (Alim Bium).

Camp 12 (Presenter / Leader: Penny Claire Gardner)

- **Abundance of Wildlife in General**

Notable mammals identified are of Banteng, Pangolin, Sun Bear, Hose's Langur, Red leaf and Probocsis mongkey as well as Elephants. There are 25 species in total recorded for mammals. Notable birds species are of 4 hornbills species (Pied's,

Black's, Helmeted's and White crowned's), Storm stork, and 2 kingfishers species (Rufous backed, stork-billed).

- **Vegetation and Tourism Potential**

The area is a mosaic of different forest structure, but largely of logged area (around Maliau Gate to Study Centre), and having good natural regeneration features to become pristine forest.

Bird watching, animals spotting and aqua activities in Maliau rivers could be the main attraction to lure visitation into the area.

- **Issues on Illegal Activities**

Serious encroachment, namely of fresh signs were rampant in this area. Illegal activities include fishing (fish and hook and nets were found), Gaharu collector (access point – new signs not far away from Maliau Gate) and hunting (old and new empty shotguns cartridges found at several spots).

PLENARY SESSION

Panel member : Mr. Augustine Tuuga (chairman)
 Dr. Waidi Sinun
 Dr. Rahimatsah
 Mr. Bernard Tai
 Dr. Maklarin Lakim

Overview / Introductory remark by Dr. Waidi Sinun

The MBCA workshop held in September 2012 is part of the activities to formulate the next MBCA Management Plan of 2014 -2023. This workshop aims to analyse the success of the previous management plan. There were reports particularly on Gaharu collectors' encroachment and hunting around and inside MBCA. Such illegal activities has been much earlier foresighted, thus these were being the reasons of the establishment of MBCA Buffer Zones (BZ). The initial planned was to allow logging in the BZ 1 and thereafter suggesting them as Total Protected Area (TPA), while BZ 2 will be sustainably maintained under Natural Forest Management Area (NFM). The previous management plan has been greatly and successfully implemented, for instant the achievement of converting Buffer Zone 1 as a full protected area (Class 1 Forest Reserve). This is a huge 'impact' to the success in the management of MBCA as far as the YS and the state government is concern.

Overview remark by Dr. Rahimatsah Amat.

In the last 10 years, there were many successes noted in the management of MBCA. There is a lot more work to be done; for example to clarified the management of the recent conversion to Class 1 of BZ 1 (for that matter management of the wildlife corridor

adjoining ICCA and MBCA) especially in term of ground monitoring work. Class I don't guarantee the security of the area from natural resources tapping such as for Gaharu, wildlife and fishing. The extend of security breach e.g. occurrence of encroachment near Maliau's Gate, perhaps warrant for investigation in case that this has something to do with inside job. There is also the need to enhance staff capacity building for them to be more able in monitoring work such as in patrolling work, preferably with multi-skill tasks among other. They might be a need to appoint a resource manager, delegated to carry out natural resource monitoring work. Human capital particularly in the field of enforcement is a must and shall have basic requirement to carry out the job e.g. member of Honorary Game Ranger.

Question by Chairman to Dr, Maklarin (Sabah Park):

Perhaps MBCA can learn from other protected area on certain aspect on MBCA management e.g. Sabah Park's Crocker Range management. Perhaps Dr. Maklarin could give us some insight on this; what are the approach adopted by Sabah Park to hinder encroachment as for an example.

Dr. Maklarin Lakim : For Sabah Parks e.g. Tawau Hills Park; there is no assignment for buffer zone; just a 'community active zone' (inside the core area) and not necessary will totally protect the park area. For Sipadan Island, there is the natural geographical 'buffer zone' comprises of vast open area of the ocean around it, so we are lucky that this has in a way help the island from frequent occurrences of illegal encroachment.

Question by Chairman to Bernard Tai (WWF Malaysia):

Perhaps we could look at WWF perspective on the roles of other agencies as far as collaborative work towards the success management of MBCA.

Bernard Tai : At the global level, environmentally, the situation is declining. There must be clear management plan beyond Maliau Basin such as in networking with other international organizations / agencies and not solely taken for granted that MBCA management is the sole responsibility of Yayasan Sabah. In short, there must be some kind of involvement from the regional to International agencies. It is interesting to see, for an example, tourist visitation to MBCA in the last 10 years and to relates this with how much 'conservation fee' has been paid for the management of MBCA. We must look at new technique / developmental plan for MBCA. In case of human capacity building for example, it is important that training attachment must be carry out with accredited agencies / organization. WWF in the many years has assisted in patrolling work in collaboration with various agencies to eliminate or to minimize threats to natural resources (wildlife, vegetations, etc.) and looking forward to continually work with these agencies who have the same interest in protecting nature.

Question / Comments by Mr. Hans Mollner:

Government should be aware of its roles/involvement since TPAs (Totally Protected Areas) in Sabah are getting larger. Its roles must not be neglected considering that in addition to the management of TPAs there is also the large scale work in forest rehabilitation such as in the INIKEA and INFAPRO Project. There must be a close collaborative work among agencies across the Country to address this situation.

Dr. Rahimatsah (responding to Hans comments) :

We should correctly determined the question whether there is an increase of encroachment in the MBCA, and basing that there is no monitoring done on a time to time basis. The increase of reporting does not necessary means that there is an increase in illegal activities encroachment.

Question / Comments (Sharon Koh) :

It is necessary to incorporate in the management plan a proper schedule on wildlife and resources survey rather than doing this on a one-off exercise. This is necessary to properly determine the status of resources over the time *i.e.* whether there is a decrease or increase of resources *e.g.* wildlife population and species diversity.

Dr. Waidi Sinun (in response to Sharon Koh suggestion):

The effectiveness as far as Buffer Zone (in protecting wildlife etc.) is concern have been long proven. MBCA core area is not basically significantly disturbed by poaching as these were confined within the buffer zone (compare to years ago). On the other way round, encroachment of Gaharu seems to be deviated into the buffer areas whereas in the last 10 years it was focused in the core area. However, encroachment into the core area is still occurring due to the fact that resources that they are looking for are not found in the buffer zones. It is our plan that schedule resource and wildlife survey will be incorporated in the new MBCA management plan for monitoring purposes and to collect data that help in prioritizing our management approach *i.e.* adaptation of strategies in order to tackle the relevant issues.

Question / Comments (Assoc. Proff. Dr. Henry Bernard):

Camera trapping used shows the present situation at the present time, thus very important to be utilized as a monitoring gadget since it is also difficult to do direct sighting (traditional method of surveying), and effectively shows evidence of wildlife. It can be use to relate abundance of wildlife (relative abundance data) and to mirror fluctuation of species abundance.

Plenary Session Closing Remark (Mr. Augustine Tuuga):

The MBCA Resource and Wildlife survey has achieved its objective in gathering status updates of MBCA. All the information will be incorporated in the formulation of MBCA Management Plan 2014 – 2023. He thanks all participant and organization that has made the survey successful and hope to see all participants in future survey.

Closing Remark (by Dr. Waidi Sinun):

Dr. Waidi thanks all the survey participants, especially IKEA and NEPcon who has funded the exercise, and to Sabah Wildlife Department who has been chairing the organizing committee meetings. Dr. Waidi furthered acknowledged the contribution by UMS, Sabah Parks, WWF and IDS for logistic contribution. He also hoped that IDS as an important think-tank for the state government will help to recommend the necessary enactment / rules to the government. Good weather and close collaboration from the various agencies has made the survey successful. Monitoring work will be carried out especially of the buffer zones areas and suggestion of the need to rehabilitate the degraded areas will be seriously look upon. Dr. Rahimatsah Amat, the consultant in the formulation of the MBCA management plan will incorporate all of these important issues.

Appendix 3:

2013 MB Wildlife & Resource Survey Summary Expenditure Statement

Item	Budget	Expenditure (RM)	Balance (RM)	Remarks
1. Food	25,000	28,718.70	-3,718.70	
2. Equipment	39,000	36,909.04	2,090.96	
3. Insurance	5,000	4,987.16	12.84	
4. First Aid Kit	3,000	1,278.00	1,722.00	
5. Fuel	10,000	1,178.00	8,822.00	
6. Helicopter*	210,000	164,230.00	45,770	
7. Forum on findings	25,000	21,116.20	2,884	
8. Publication of survey findings	35,000		35,000	
9. Miscellaneous	45,700	11,216.40	34,484	inflatable boat & AA lithium Battery
TOTAL	397,700	269,633.50	127,067	

Ikea Phase 3 funding (RM347,700)

* MBCA approved heli 2013 budget (RM50k)

Updated July 23, 2013

✓