

ANNUAL REPORT 2015

NORTHERN GUNUNG RARA SUSTAINABLE FOREST MANAGEMENT (NGR SFM) PROJECT

INTRODUCTION:

Since June 2012, Northern Gunung Rara Sustainable Forest Management Project (NGR SFM) has started to be implemented and obtain certification Forest Stewardship Council (FSC) in 2015. However, there is still much to be done particularly to close the gap arising from the result of the main assessment. Our quest continues for the upcoming audit surveillance in 2016 to close the gap.

The total area of Northern Gunung Rara Sustainable Forest Management Project (NGR SFM) did not experience much changes from the previous year covering **61,330 Ha**. The area consists of:

- Mount Magdalena Forest Reserve - Class I (55,555 Ha). Mount Magdalena FR was first gazetted as Protection FR - Class I on 14th November 2012 vide GN 7/2012 with an area of 48,890 Ha.
- Then later additional gazetted area of Mount Magdalena FR Extension Protection Forest - Class I on July 16th 2013, vide GN 1/2013 covering an area of 6,665 Ha.
- Gunung Rara Forest Wildlife Corridor FR (part of) - Class II (5,387 Ha). Gunung Rara FR was first gazetted on 15th March 1963.
- And two (2) other smaller Virgin Jungle Reserves (VJR) Class VI, that are Batu Timbang VJR (261 Ha) and Imbok VJR (127 Ha). Batu Timbang VJR and Imbok VJR were gazetted on 14.03.1984 vide GN 4/1984.

The Project Area (**61,330 Ha**), which is located in the east coast of Sabah, is also part of the larger **261,264 Ha** of the *United Nations Development Program-Global Environment Facility* (UNDP-GEF) Project on “*Biodiversity Conservation in Multiple-Use Forest Landscapes in Sabah*”; and also within the *Heart of Borneo* (HoB) initiative. Although the Project Area has been logged in the past, it remains an important watershed for the Kuamut River and key habitat for endangered Orangutans, Bornean clouded leopards, Sumatran rhinos, and pygmy elephants. It is also found to be a crucial wildlife corridor of global significance linking the world-renowned Danum Valley FR, Imbak Canyon FR and the Maliau Basin FR, which are both Protection Forest Reserves.

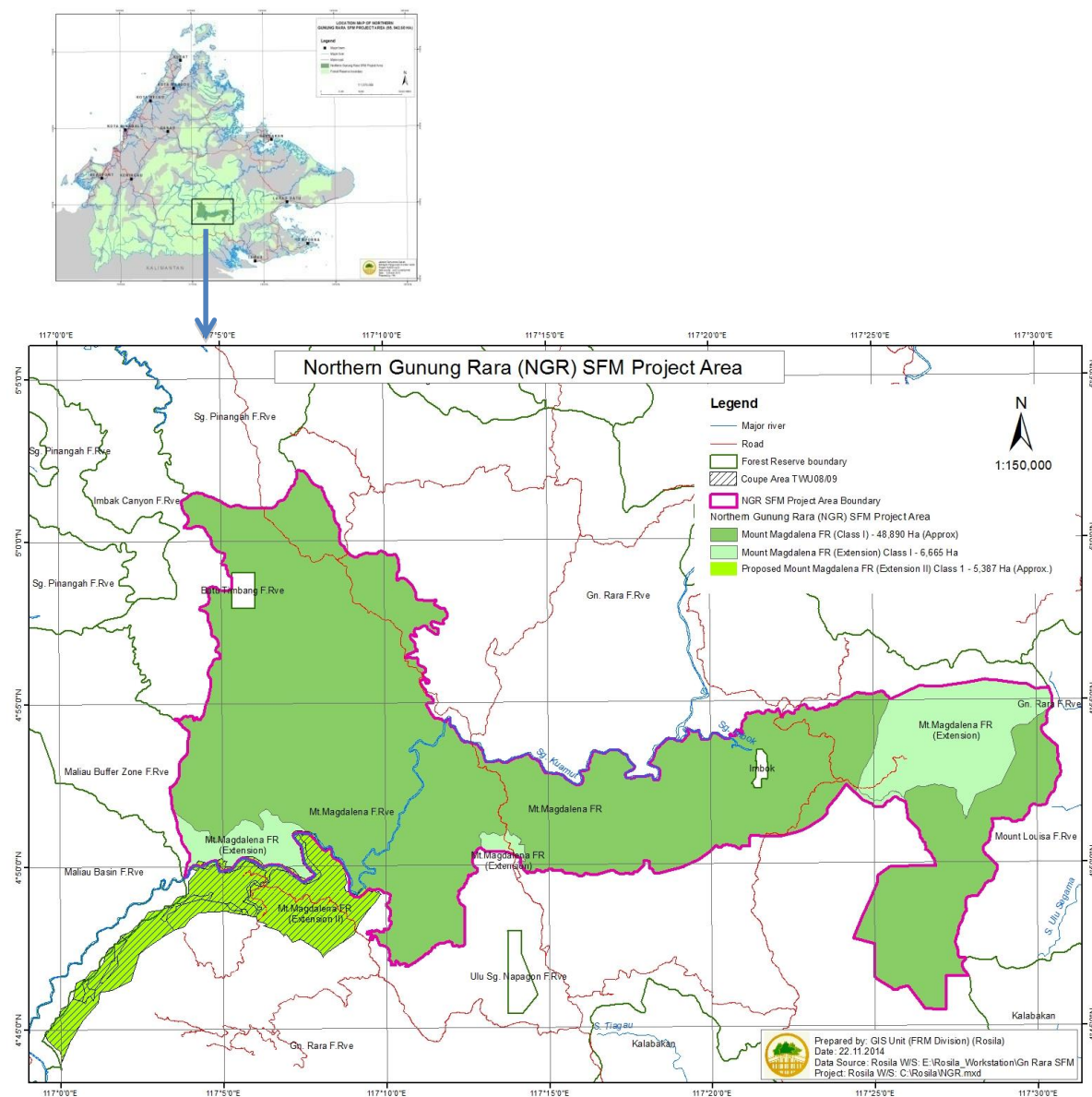


Figure 1: Location of the Project Area

ACTIVITIES, PROJECT COMPONENTS & ACHIEVEMENTS TO DATE:

The Forest Management Plan (FMP) for Northern Gunung Rara SFM Project was approved by the Director of Forestry on 24th April 2013. This project activity is implemented according to the 10 years FMP (2013 - 2022). Annual Work Plan (AWP) for this project is prepared every year and activities were done with specific target. The achievements for activities and works done in the Project Area must be in compliance with the target set for that specific year. Compliance Report is to be submitted every year-end. The components for this Project are as follows:

Forest Rehabilitation

Two main activities under this component are Silviculture Tending Operation and Forest Restoration Program (Re-Planting), which are on-going throughout the FMP period.

Silviculture Tending Operation

The true purpose for conducting silviculture tending works in this area is to improve the forest stand. Silvicultural treatments carried out in the project area that are a logged-over forest is expected to improve the forest stands. And thus, improving the overall quality of this forest and can promote better forest biodiversity as well as ecological and environmental benefits. Silvicultural treatments are carried out to liberate standing trees (regardless of species) and to release the young regeneration of trees by removing and eradicating competing climbers and climbing bamboo that endanger the survival of the regeneration group.

Achievements

On the 2nd half of the year 2012, a total of 1000 Ha of silviculture tending works was done by SFD appointed contractor Fresh Mumus Enterprise. Then in 2013, another 2000 Ha of silviculture tending works were completed by the same contractor. In the year 2014, the contractor appointed to carry out silviculture tending operation is EW Construction. EW Construction conduct silviculture tending operation for a period of 5 years (2014 - 2018) with a target of 2000 Ha per year.

This adds up to a total of **8,059 hectares** of forest area treated from 2012 to 2015 by both of the contractors. Particulars of the total treated area is as follows Table 1.

Table 1. Particulars of the total treated area

YEAR	BLOCK (HA)	ESTIMATED AREA TO BE TREATED	AREA TREATED
2012	K (1,000)	1,000 Ha	Done 1,000 Ha
2013	G (1,000)	1,000 Ha	Done 1,000 Ha
	L (1,000)	1,000 Ha	Done 1,000 Ha
2014	M (873)	873 Ha	Done 873 Ha
	N (1,009)	1,009 Ha	Done 1,009 Ha
	J (part of 1247)	118 Ha	Done 280 Ha
2015	F (994)	994 Ha	Done 994 Ha
	E (849)	849 Ha	Done 849 Ha
	D (part of 1054)	157 Ha	Done 1,054 Ha
2016	D (part of 1054)	897 Ha	Schedule for 2016
	C (1138)	1138 Ha	Schedule for 2016
2017	J (part of 1247)	1129 Ha	Schedule for 2017
	I (954)	954 Ha	Schedule for 2017
2018	A (1200)	1200 Ha	Schedule for 2018
	B (804)	804 Ha	Schedule for 2018
<u>TOTAL AREA</u>		<u>13,122 Ha</u>	<u>8,059 Ha</u>

Silviculture area at Block D, measuring 1,054 HA were divided into two phase and schedule to be completed in the year 2015 and 2016. It is expected that, 157 Ha to be treated in the year 2015, while 897 Ha to be treated in the year 2016. However, the overall immensity of Block D treated area measuring 1054 Ha were completed in the year 2015.

A total of 5,162 Ha (39.34%) treated area were completed from the year 2012- 2014. In the year 2015, 2,897 Ha (22.08%) of treated areas were completed. So far, from the year 2012 until 2015 the immensity of the treated areas is 8,059 Ha (61.42%).



Figure 2a



Figure 2b

Figure 2. Picture of Silviculture Treatment

Forest Restoration Program

In the year 2015, SFD had appointed Syarikat Indah Jaya as the contractor of the 5.0 Ha restoration area, quotation approval offer letter JPHTN/KA 300-5/1/22(6), within a period of 4 weeks starting 2nd November 2015 to 23rd November 2015. The target area for restoration work as well as maintenance and fertilization is the open area. The contractor had completed their works including first maintenance and a 50gm fertilization work. Border demarcation for the planting block as well as the restoration signboard had been prepared



Figure 3a



Figure 3b

Figure 3. Picture of Restoration Program

Forest & Wildlife Protection (Enforcement, Monitoring & Control)

Routine aerial surveillance and patrolling were done more often so that no illegal encroachment and poaching activities left unseen. In the year 2015, three (3) times of aerial surveillance was done, covering the project area as well as areas within Kalabakan Forestry District.

There are several activities of anti-poaching strategy / operations, namely OPS BURU, which was carried out to 2015. These activities include patrolling and gate enforcements where Forestry uniform staffs were stationed at several particular gates, conducting spot-checks on vehicles suspected to be poachers and carrying hunted wild animals. In addition, other protection activities involves placing a security gate on roads, which were a ‘hotspot’ for illegal poaching, placing several warning signs at strategic areas.

Wildlife Survey/ Monitoring

Up until the year 2015, Wildlife monitoring and survey works has been carried out to emphase and obtaining a general overview of the wildlife biodiversity and abundance within Northern Gunung Rara Project area. It is used to justify one of the objectives of this project, that is to be the link between Maliau Basin, Imbak Canyon and Danum Valley as wildlife corridor. Four methodologies used for wildlife survey that is through camera-traps placed in strategic locations, through survey by car recce walk/ transect line and gibbon calls.



Figure 4. Sun Bear (Picture of wildlife survey)



Figure 5. Bearded Pig (Picture of wildlife survey)



Figure 6. Sambar (Picture of wildlife survey)

Table 2. Camera traps data assessments/Results (Period: January 2015 - December 2015)

Species /	IMBOK 1	IMBOK 2	IMBOK 3	IMBOK 4	NGR 2	NGR 7	NGR 8	NGR 10	NGR 13	NGR 14	NGR 16	Total	%
Bearded pig	10	6	30	56	0	71	2	8	52	11	4	250	50.6
Sambar deer	2	0	14	30	0	2	1	5	10	1	0	65	13.2
Bornean-red muntjac	0	13	0	0	0	0	3	26	0	0	0	42	8.5
Pig-tailed macaque	9	4	2	0	0	0	7	1	0	7	0	30	6.1
Bornean-Pygmy elephant	0	0	0	0	4	0	8	0	0	0	16	28	5.7
Thick-spined porcupine	5	0	0	4	0	0	0	3	4	0	0	16	3.2
Bornean-yellow muntjac	13	0	0	1	0	0	0	0	0	0	0	14	2.8
Crested fireback	2	0	0	6	0	5	1	0	0	0	0	14	2.8
Greater-mouse deer	0	0	0	0	1	3	0	5	2	0	0	11	2.2
Common porcupine	0	0	0	0	0	0	0	0	8	0	0	8	1.6
Malay civet	2	0	0	3	0	0	0	0	0	0	0	5	1.0
Yellow-throated marten	0	0	0	1	0	0	1	0	0	0	0	2	0.4
Clouded leopard	0	0	0	2	0	0	0	0	0	0	0	2	0.4
Tambadau or Banteng	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Short-tailed mongoose	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Emerald dove	1	0	0	0	0	0	0	0	0	0	0	1	0.2
Sun bear	0	0	1	0	0	0	0	0	0	0	0	1	0.2
Long-tailed macaque	0	0	0	0	1	0	0	0	0	0	0	1	0.2
Leopard cat	0	0	0	0	0	0	0	0	1	0	0	1	0.2
Great-argus	0	0	0	0	0	0	0	1	0	0	0	1	0.2
												494	100.0

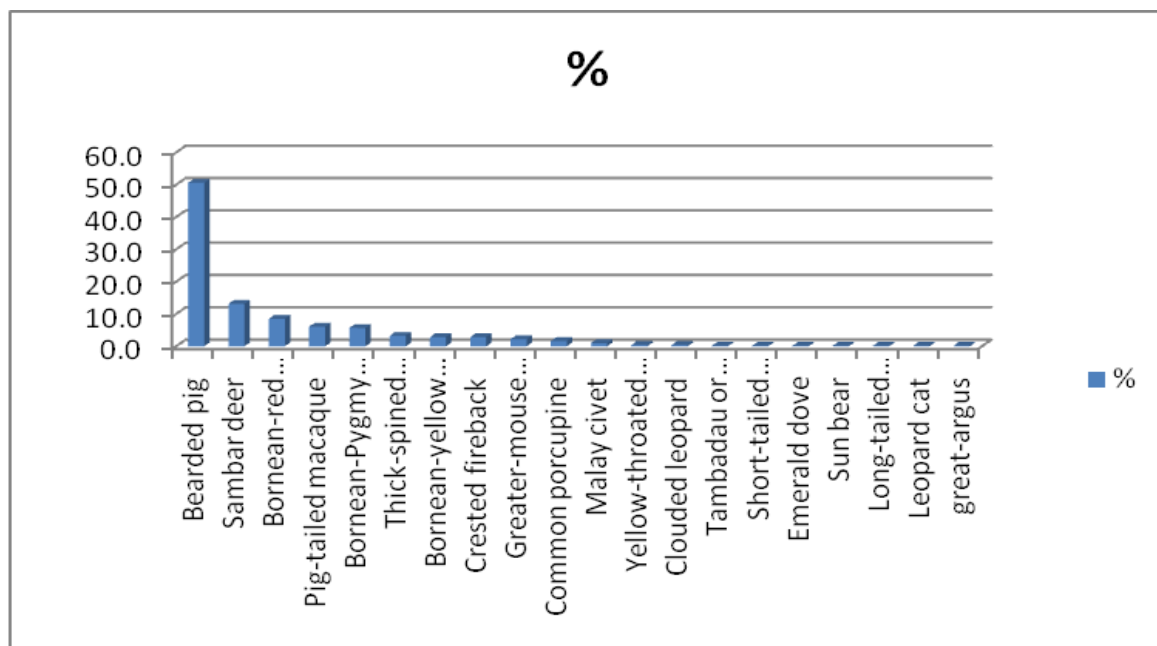


Figure 7. Graph of Camera traps data assessments/Results (Period: January 2015 - December 2015)

Data analysis from our camera traps recorded that the *Sambar Deer* and *Bearded Pig* are two of the highest presence detected from our camera traps. From all of the wildlife presence detected and recorded, four Totally Protected species were present which is the *Sun Bear*, *Clouded Leopard*, *Borneon Pygmy Elephant* and *Banteng / Tembadau*. We have 10 camera traps in total, being placed and installed in specific locations.

Recce Walk/ Transect line

This is a method where our wildlife survey team needs to recce monitoring by 6 permanent transect lines. Identification criteria include mud rubbing, footprints, sound, direct sightings, and scratching marks.

Summary of the analysis from our survey data are as follows:

(a) Wildlife index (Index= N (Number of wildlife detected)

Distance survey

(b) Wildlife index (Index= N (Number of wildlife detected X 100)

Total detection of all species

Table 3. Wildlife Index percentages recorded through “Recce Walk” research method in the year 2015

List of NGR wildlife species			Quarter 1 (Jan-March2015)	Quarter 2 (Apr-June2015)	Quarter 3 (July-Sept2015)	Quarter 4 (Oct-Dec2015)	sub total	Total transect distance survey for year 2015 (KM)	Index =N/Distance	Index (%) =N/total detection of all species
No	Species	Saintific name								
1	Sambar Deer	<i>Cervus Unicolor</i>	4	4	13	9	30	24	1.25	21.1
2	Bornean Elephant	<i>Elephas Maximus</i>	1	3	11	2	17	24	0.71	12.0
3	Bearded Pig	<i>Sus Barbatus</i>	18	5	19	11	53	24	2.21	37.3
4	Bornean Red Muntjac	<i>Muntiacus muntjac</i>	3	3	3	4	13	24	0.54	9.2
5	Greater Mouse-deer	<i>Tragulus napu</i>	2	2	6	2	12	24	0.50	8.5
6	Crested fire back		1	1	1	0	3	24	0.13	2.1
7	Pangolin	<i>Manis Javanica</i>	1	1	2	2	6	24	0.25	4.2
8	Lesser_mouse deer	<i>Tragulus javanicus</i>	0	1	0	0	1	24	0.04	0.7
9	Common porcupine	<i>Hystrix brachyura</i>	0	1	0	0	1	24	0.04	0.7
10	Great Argus	<i>Argusianus argus</i>	0	0	1	0	1	24	0.04	0.7
11	Common Palm Civet	<i>Paradoxurus hermaphroditus</i>	0	0	0	1	1	24	0.04	0.7
12	Leopard Cat	<i>Felis bengalensis</i>	0	0	0	2	2	24	0.08	1.4
13	Smooth Otter	<i>Lutra perspicillata</i>	0	0	0	1	1	24	0.04	0.7
14	Malay civet	<i>Viverra zangalunga</i>	0	0	0	1	1	24	0.04	0.7
			30	21	56	35	142	24	5.92	100.0

* The highest wildlife index percentage were recorded on Quarter 3 (July 2015 – September 2015). The active wildlife species recorded on quarter 3 is Bearded pig (*Sus Barbatus*), Sambar deer (*Cervus unicolor*) and Bornean Elephant (*Elephas Maximus*). The Table. 3 above and Figure 8 as stated below explained about the wildlife index percentage recorded from January 2015 until December 2015.

- Recce walk by line transect (Wildlife index output)

Wildlife index (Index=N (Number of wildlife detected)
Distance survey (24km)

Total distance survey for year 2015: 24km.

- Wildlife index
Index=N (Number of wildlife detected X 100)
total detection of all species

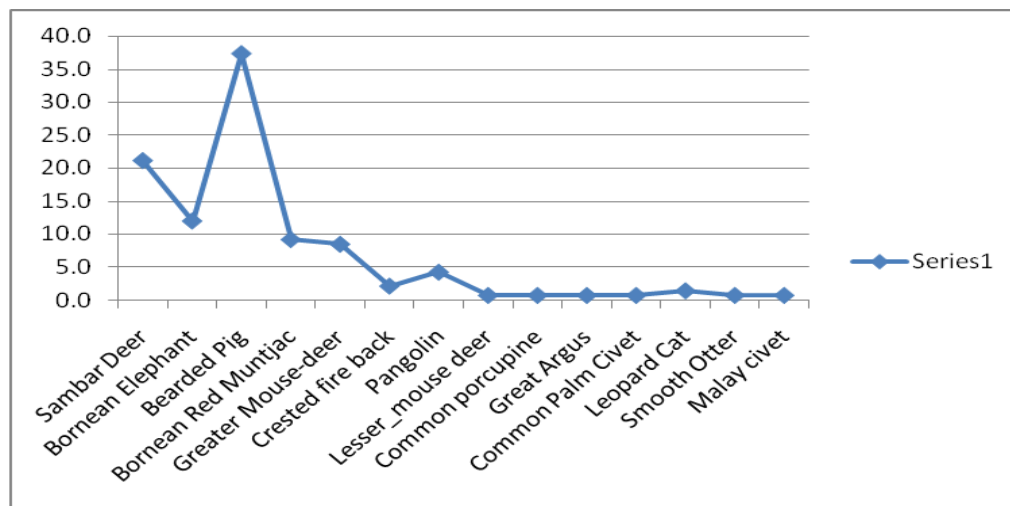


Figure 8. Chart of Wildlife Index percentages recorded through “Recce Walk” in the year 2015

Night Survey by Car.

- Survey by car Methods

Another wildlife research method conducted within the NGR area is survey by car methods. This method was conducted to identify the active wildlife during night time. Before starting the survey, suitable access road as the main road for the night survey need to be identify first. The survey distance has been assigned as far as 12 km for each main road. As for this method, surveys were conducted 3 times for each quarter and starting at 8 pm until finished.

Five (5) routes or main roads were identified within the NGR area are suitable for wildlife survey by car. Each main road will be conducted through night survey as far as 12 km starting at 8 pm until finished. The overall night survey distance for the whole year of 2015 is approximately 120 km. The below table shows the wildlife data index recorded through night survey method.

(a) Wildlife index (Index=N (Number of wildlife detected X 100)
Distance survey

(b) Wildlife index (Index=N (Number of wildlife detected X 100)
Total detection of all species

Table 4. Wildlife Index percentages recorded through “night survey by car methods” in the year 2015

List of NGR wildlife species			Quarter 1 (Jan-march2015)	Quarter 2 (Apr-june2015)	Quarter 3 (July-Sept2015)	Quarter 4 (Oct-Dec2015)	sub total	Total distance Night survey for year 2015 (KM)	Index =N/Distance	Index (%) =N/total detection of all species
No	Species	Saintific name								
1	Common-Palm Civet	<i>Paradoxurus hermaphroditus</i>	3	1	0	1	5	120	4.17	10.2
2	Thomas flying squirrel	<i>Aeromys thomasi</i>	2	1	1	0	4	120	3.33	8.2
3	Slow loris	<i>Nycticebus coucang</i>	1	0	0	0	1	120	0.83	2.0
4	Masked-palm civet	<i>Paguma larvata</i>	0	0	1	1	2	120	1.67	4.1
5	Bear cat	<i>Arctictis binturong</i>	0	1	0		1	120	0.83	2.0
6	Common porcupine	<i>Hystrix brachyura</i>	0	0	0	3	3	120	2.50	6.1
7	Leopard cat	<i>Felis bengalensis</i>	0	0	0	1	1	120	0.83	2.0
8	Bearded Pig	<i>sus barbatus</i>	0	0	0	15	15	120	12.50	30.6
9	Lesser Mousedeer	<i>Tragulus javanicus</i>	0	0	0	1	1	120	0.83	2.0
10	Malay Civet	<i>Vevera tangalunga</i>	0	0	0	2	2	120	1.67	4.1
11	Sambar Deer	<i>cervus unicolor</i>	0	0	0	1	1	120	0.83	2.0
12	Bornean Elephant	<i>Elephas maximus</i>	0	0	0	9	9	120	7.50	18.4
13	Red Giant Flying Squirrel	<i>Petaurista petaurista</i>	0	0	0	4	4	120	3.33	8.2
		Sub Total	6	3	2	38	49	120	40.83	100.0

- Summary

Based on the data acquired, 13 wildlife species recorded within NGR where 4 of the species is the target species for NGR area. The four (4) wildlife species consists of **Sambar deer, Bornean Elephant, Bearded pig, Binturong or Bear cat.**

The recorded wildlife species that have the highest percentage Index is bearded pig with approximately 30.6%, which is the highest recorded species in quarter 4.

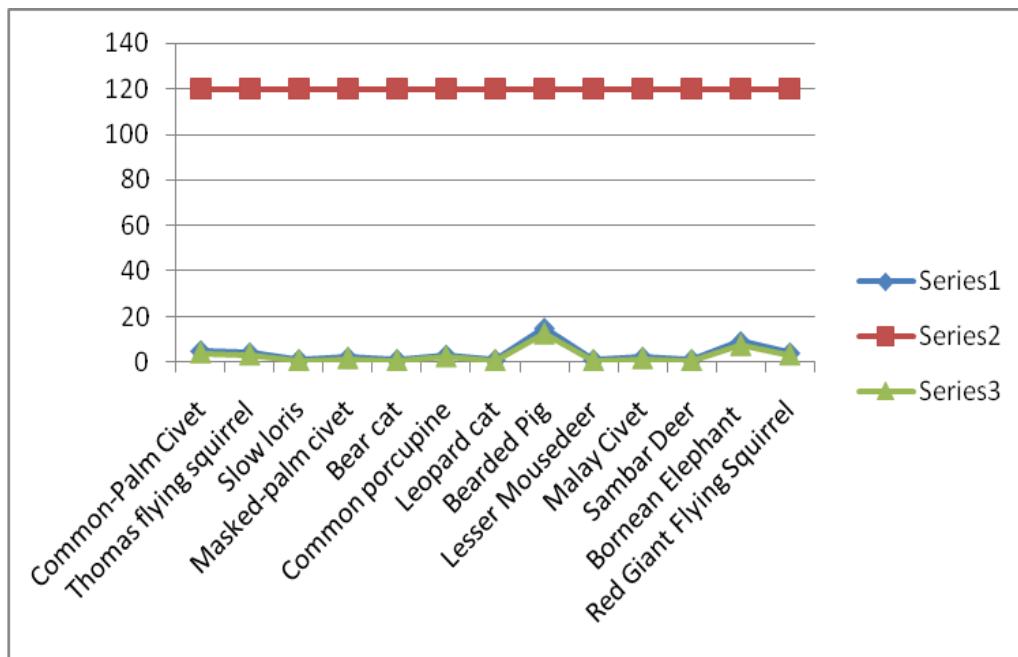


Figure 9. Chart of wildlife index record through Survey by car
 Wildlife index (Index= $N \frac{(\text{Number of wildlife detected} \times 100)}{\text{Survey distance}}$)

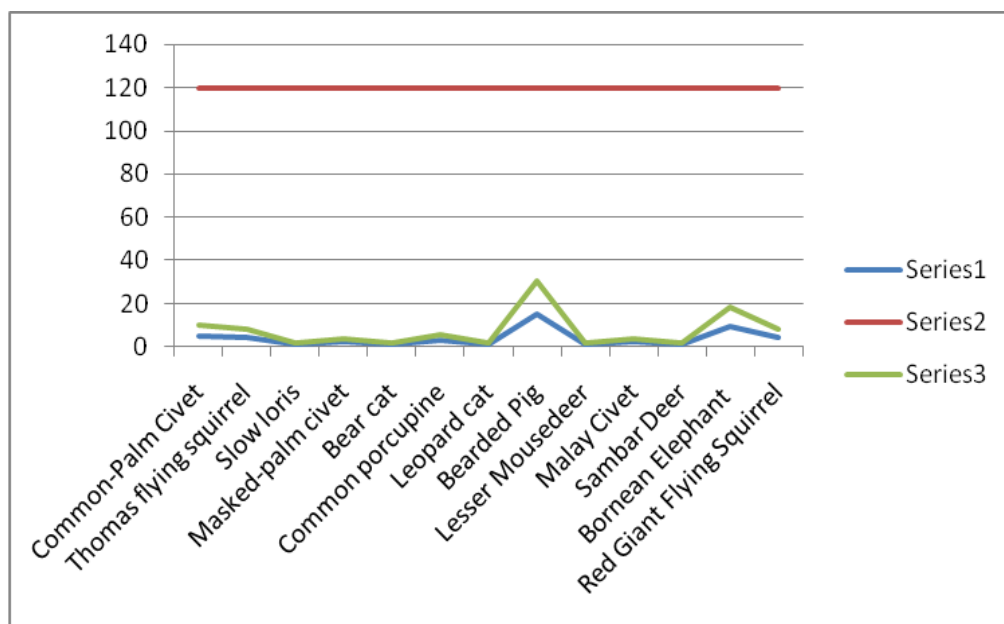


Figure 10. Chart of Wildlife Index= $N \frac{(\text{Number of wildlife detected} \times 100)}{\text{Total detection of all species}}$

Bornean Gibbon Calls Survey

Table 5. Total groups of Bornean Gibbon detected in NGR for year 2015.

Survey Period	Study site number	Gps Locations	Area survey	Total Groups of Bornean Gibbon detected in year 2015
Quarter 1 (Jan-March 2015)	1	N: 04 59 24.5 E: 117° 08 13.7	Northern Gunung Rara FR. Silviculture area	2
	2	N: 05 00 51.7. E: 117° 06 29.5	Northern Gunung Rara FR. Silviculture area	3
Quarter 2 (Apr-June 2015)	3	N: 04 57 21.2. E: 117° 07 09.3	Northern Gunung Rara Batu Timbang Class 1 FR.	2
	4	N: 05 00 51.7. E: 117° 06 29.5	Northern Gunung Rara FR. Silviculture area near to Tongod FR Boundary.	3
Quarter 3 (July-Sept2015)	5	N:05°00'23.1''E:117°06'51.3''	Northern Gunung Rara Mt. Magdalena FR Class 1.	2
	6	N:04°57'55.9''E:117°09'29.0''	Northern Gunung Rara Mt. Magdalena FR Class 1	3
Quarter 4 (Oct-Dec2015)	7	N:04°59'29.4''E:117°07'49.4''	Northern Gunung Rara Mt. Magdalena FR Class 1	4
	8	N:04°57'59.9''E:117°09'29.6''	Northern Gunung Rara Mt. Magdalena FR Class 1.	4
	9	N: 04°52'29.8''E: 117°24'02.5''	Northern Gunung Rara FR./FMU 23/Sanctuary Orang-Utan	3
	10	N: 04°52'39.9''E: 117°24'35.0''	Northern Gunung Rara FR./FMU 23/Sanctuary Orang-Utan	5
	11	N: 04°53'05.9''E: 117°23'38.6''	Northern Gunung Rara FR./FMU 23	3
Sum				34

- Summary

According to the acquired data it shows that VJR Imbok area have recorded the most groups of Borneon Gibbon. There are 34 groups of Borneon Gibbon were recorded at 11 observation location which is known as suitable for Gibbon observation area. These observations were made throughout 2015.

NGR Bird survey

The bird survey was conducted by our wildlife survey team lead by RA Jabanus Miun. The Survey was conducted in Northern Gunung-Rara SFM Project during June 2015 – Sept 2015. The survey method is using Mist netting, set up randomly within the project area.



Figure 11a



Figure 11b



Figure 11c

Figure 11. Activity of NGR Bird survey during the year 2015 (Figure 11a; Figure 11b; and Figure 11c)

LIST OF BIRDS SPECIES IN NGR (Compiled)

SURVEY METHODS : 1. Mist netting. 2. Random survey (direct sighting)

Date : June 2015-September 2015.

Surveyor (s) : Jabanus Miun, Asman Jumil and Suhezron Salim.

Table 6. List of Birds recorded in NGR Mount Magdelina.

No.	BIRDS SPECIES	Saintific Name	Endemic Species.	IUCN REDLISTST ATUS
1	Yellow-billed prinia	<i>prinia flaviventris</i>		LC
2	Spotted dove	<i>streptopelia chinensis</i>		LC
3	Emerald dove	<i>chalcophaps indica</i>		LC
4	Yellow-crowned barbet	<i>megalaima henricii</i>		NT
5	Red-throated barbet	<i>megalaima mystacophanos</i>		NT
6	Dusky munia	<i>lonchura fuscans</i>	√	LC
7	House swallow	<i>Hirundo tahitica</i>		LC
8	Puff-backed bulbul	<i>pycnonotus eutilotus</i>		NT
9	Black-headed bulbul	<i>pycnonotus atriceps</i>		LC
10	Red-eyed bulbul	<i>pycnonotus brunneus</i>		LC
11	Hill myna	<i>gracula religiosa</i>		LC
12	Blue-eared barbet	<i>megalaima australis</i>		LC
13	White crowned-shama	<i>copsychus stricklandii</i>		NIL
14	Oriental magpie robin	<i>copsychus saularis</i>		LC
15	Helmeted hornbill	<i>rhinoplax vigil</i>		CE
16	Gold-whiskered barbet	<i>megalaima chrysopogon</i>		LC
17	Bold-striped tit babbler	<i>macronous bornensis</i>		LC
18	Greater coucal	<i>centropus sinensis</i>		LC
19	Greater-racket tailed drongo	<i>dicrurus paradiseus</i>		LC
20	Black-and yellow broadbill	<i>Eurylaimus ochromalus</i>		NT

No.	BIRDS SPECIES	Saintific Name	Endemic Species.	IUCN REDLISTST ATUS
21	Eurasian-tree sparrow	<i>passer montanus</i>		LC
22	Chestnut-brested malkoha	<i>zanclostomus curvirostris</i>		NIL
23	Brown-wood owl	<i>strix leptogrammica</i>		LC
24	White-brested waterhen	<i>amaurornis phoenicurus</i>		LC
25	Pied fantail	<i>rhypidura javanica</i>		LC
26	Chestnut-winged babbler	<i>stachyris erythroptera</i>		LC
27	Sooty-capped babbler	<i>malacopteron affine</i>		NT
28	Black-throated babbler	<i>stachyris nigricollis</i>		NT
29	Brown fulvetta	<i>alcippe brunneicauda</i>		NT
30	Chestnut-backed scimitar babbler	<i>pormatorhinus montanus</i>		NIL
31	Blue-headed pitta	<i>pitta baudii</i>	√	VUL
32	White-crowned hornbill	<i>berenicornus comatus</i>		NT
33	Spectacled bulbul	<i>pycnonotus erythrophthalmos</i>		LC
34	Chestnut-rumped babbler	<i>stachyris maculata</i>		NT
35	Asian-paradise flycatcher	<i>terpsiphone paradisi</i>		LC
36	Black hornbill	<i>anthracoceros malayanus</i>		NT
37	Ruby-cheeked sunbird	<i>chalcoparia singalensis</i>		NIL
38	Olive-backed sunbird	<i>cinnyris jugularis</i>		NIL
39	Black-capped babbler	<i>pellorneum capistratum</i>		LC
40	Oriental-pied hornbill	<i>anthracoceros albirostris</i>		LC
41	Buff-rumped woodpecker	<i>meiglyptes tristis</i>		E
42	Streaked bulbul	<i>ixos malacensis</i>		NT
43	Plaintive cuckoo	<i>cocomantis merulinus</i>		LC
44	Velvet-fronted nuthatch	<i>sitta frontalis</i>		LC

No.	BIRDS SPECIES	Saintific Name	Endemic Species.	IUCN REDLISTST ATUS
45	yellow-bellied bulbul	<i>alophoixus phaeocephalus</i>		LC
46	Moustached-hawk cuckoo	<i>hierococcyx vagans</i>		NT
47	Rufous-tailed tailorbird	<i>orthotomus sericeus</i>		LC
48	Long-tailed parakeet	<i>psittacula longicauda</i>		NT
49	Bushy-crested hornbill	<i>anorrhinus galeritus</i>		LC
50	Cream-vented bulbul	<i>pycnonotus simplex</i>		LC
51	Chestnut-bellied malkoha	<i>rhopodytes sumatranus</i>		NT
52	Large-tailed nightjar	<i>caprimulgus macrurus</i>		LC
53	Raffles Malkoha	<i>rhinortha chlorophaues</i>		NIL
54	Great argus	<i>argusianus argus</i>		NT
55	Rhinoceros hornbill	<i>buceros rhinoceros</i>		NT
56	Little spiderhunter	<i>arachnothera longirostra</i>		LC
57	Black-naped monarch	<i>hypothymis azurea</i>		LC
58	Blue-crowned hanging parrot	<i>loriculus galgulus</i>		LC
59	Black eagle	<i>ictinaetus malayensis</i>		LC
60	Lesser coucal	<i>centropus bengalensis</i>		LC
61	Ashy tailorbird	<i>orthotomus ruficeps</i>		LC
62	Yellow-rumped flowerpeacker	<i>prionochilus xanthopygius</i>	√	LC
63	Crested-serpent eagle	<i>spilornis cheela</i>		LC
64	Lesser-green leafbird	<i>chloropsis cyanopogon</i>		NT
65	Blue-throated be-eater	<i>merops viridis</i>		LC
66	Red-bearded bee-eater	<i>nyctyornis amictus</i>		LC
67	Storm-stork	<i>ciconia stormi</i>		E
68	Oriental darter	<i>anhinga melanogaster</i>		NT
69	Rufous-crowned babbler	<i>malacopteron magnum</i>		NT

No.	BIRDS SPECIES	Saintific Name	Endemic Species.	IUCN REDLISTST ATUS
70	Whiskered treeswift	<i>hemiprocne comata</i>		LC
71	Plain sunbird	<i>Anthreptes simplex</i>		LC
72	Asian fairy-bluebird	<i>irena puella</i>		LC
73	Green emperial-pigeon	<i>ducula aenea</i>		LC
74	Little green-pigeon	<i>treron olax</i>		LC
75	Crimson sunbird	<i>aethopyga siparaja</i>		LC
76	Yellow-brested flowerpeacker	<i>prionochilus maculatus</i>		LC
77	Scarlet-rumped trogon	<i>harpactes duvaucelli</i>		NT
78	Black-and-crimson pitta	<i>pitta ussheri</i>	√	NT
79	Grey-cheeked bulbul	<i>alophoixus bres</i>		LC
80	Rufous-backed kingfisher	<i>ceyx rufidorsa</i>		NIL
81	Bornean bristlehead	<i>pityriasis gymnocephala</i>	√	NT
82	White-crowned forktail	<i>enicurus leschenaulti</i>		LC
83	Brown-throated sunbird	<i>antherptes malacensis</i>		LC
84	Dark-throated oriole	<i>oriolus xanthonotus</i>		NT
85	White-chested babbler	<i>trichastoma rostratum</i>		NT
86	Black-winged flycatcher shrike	<i>hemipus hirundinaceus</i>		LC
87	Blue-eared kingfisher	<i>alcedo meninting</i>		LC
88	Wallace's hawk-eagle	<i>nisaetus nanus</i>		VUL
89	Short-tailed babbler	<i>malacocincla malaccensis</i>		NT
90	Bornean-black magpie	<i>platysmurus aterrimus</i>	√	NIL
91	Red-billed malkoha	<i>zanclostomus javanicus</i>		LC

Table. 6 References for (IUCN REDLIST);

NIL: Has not yet been assessed for the IUCN REDLIST.

LC: Least Concern.

NT: Near Threatened.

E: Endangered.

CE: Critically Endangered.

VUL: Vulnerable.

Endemic Species;

6 endemic Borneo species have been identified within the NGR area which consist of:

1. Dusky munia,
2. Bornean-black magpie,
3. Bornean bristlehead,
4. Black-and-crimson pitta,
5. Yellow-rumped flowerpeacker
6. Blue-headed pitta.

Critically Endangered Species;

1. Helmeted hornbill.

Endangered Species;

1. Buff-rumped woodpecker
2. Storm stork.

Boundary Re-Brushing

Approximately, 10,000 meter of existing boundary re-brushing were completed in the year 2015. Re-brushing work were done by the appointed contractor that is Syarikat Sani & Farah Contractor through quotation approved number JP/SN/KLBKN/SEMPADAN/07/2015. The location of re-brushing work is the boundary between NGR Project Area with Serijaya /ITP (known as the ITP-NFM boundary) and boundary between Kalabakan forest areas with Tongod forest area.

Infrastructure Development

Northern Gn Rara's Field Outpost (Office & Quarters)

Another commitment of this project's mitigating measures to combat poachers from entering into the project area particularly from Tamui/Kinabatangan-Bangan-Hutan Simpan Kuamut-Hutan Simpan Gn. Rara area is used new field outpost/ checking station located at VJR Imbok area. This checking station is fully equipped with bedrooms, work area, kitchens, toilets and bathrooms, a guard post with gate, water supply from the nearest river, and full solar powered energy providing electricity.



Figure 12a



Figure 12b



Figure 12c



Figure 12d

Figure 12. Infrastructure Development of the Northern Gn Rara's Field Outpost

Logistics

Logistics is one of the most important components for much needed in activities of this project. Some activities that require logistics are patrol, surveys, routine monitoring of silviculture works and the restoration program. There are point-to-point radio calls and walkie-talkie provided us with ease of communication during field works. Currently, two 4WD vehicles were provided for this purpose specifically for NGR SFM Project. Two other vehicles from Kalabakan Forestry District to accommodate insufficient transportation vehicles support us. We also ensure that these vehicles are well maintained.

Road Maintenance

In the year 2015, a total of 20,000 meters of road access to and within the NGR SFM area were maintained including planting blocks and silviculture blocks to ensure the continuity in monitoring works.

Administration and Field Works Management

Office utensils, equipment, digital cameras, computer, printers and photocopiers were bought so that NGR staffs can work efficiently at site office. We also provide Personal Protective Equipment (PPE) to our field staffs i.e. safety helmets, safety shoes, safety jackets, fire extinguisher etc. Other than that, site office and checking station can now be utilized at full, thus ensuring the fluency of reporting within NGR SFM Project.

Capacity Building and Training

Trainings for staffs as well as for contractors is a requirement needed in the process of getting this project certified for FSC Certification. In continuation from last year's series of training, here is a list of trainings attended by NGR SFM Staffs during 2015:

- i. Wildlife Monitoring Course
- ii. Introduction Course to High Conservation Value Forest
- iii. Camera trap and introduction to Smart Patrolling Course
- iv. Forest Fire Fighting Course
- v. Establishment of Permanent Sampling Plots (PSP) Training
- vi. Introduction to FSC & FMP
- vii. Training on investigation of Accidents
- viii. Safety and Health Officer Training Course
- x. Silviculture Training

Certification

In the year 2015, NGR team continues to maintain and improving all related task and as a preparation to close the remaining gaps right before the upcoming surveillance audit which will be held in the year 2016. The gap that arises from the results of the assessment consists of 6 minor and 4 observations.

Visitors to the Project Area

Visitor to the Project Area has been carried out by several organizations, including: visit by the Safety & Health Officers of SFD on the 11th February 2015; visit by the FRC Expedition Team of SFD from 11th 1 16th March 2015; and visit by Deputy Director (Development), Mr. Fidelis Edwin Bajau and officiating the newly established Forest Checking Station Btu. Timbang on the 21st April 2015.



Figure 13. Visit by the Safety & Health Officers of SFD



Figure 14. Visit by the Safety & Health Officers of SFD



Figure 15. Visit by the FRC Expedition Team, SFD



Figure 16. Visit by the FRC Expedition Team, SFD



Figure 17. Visit by the FRC Expedition Team, SFD



Figure 18.

(Visit by Deputy Director (Development), Mr. Fidelis Edwin Bajau and officiating the newly established Forest Checking Station Bt. Timbang on the 21st April 2015)



Figure 19.