



BASELINE SOCIO-ECONOMIC SURVEY FOR INDAWGYI WILDLIFE SANCTUARY,
MOHNYIN TOWNSHIP, KACHIN STATE

April - June 2014



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Yangon



1. INTRODUCTION

1.1 This report

This report presents the findings of socio-economic surveys of 32 villages/quarters in 10 village tracts bordering the Indawgyi Wildlife Sanctuary in Kachin state. Survey was conducted from April to June 2014.

1.2 Participants

The survey was undertaken by a mixed team comprising:

- U Nay Myo Tun (Ranger, Indawgyi Wildlife Sanctuary)
- U Ying Khaw, U Sai Kyaw Soe Thu, U Aung Aung Htet, U Zaw Win (FFI Myanmar)
- Daw Zar Chi Tun and Daw Ei Ei Tun (Short term Surveyors)

1.3 Objectives

The surveys had three main objectives:

1. Clarification of village boundaries and village resource use patterns
2. To help identify suitable livelihood and forest management interventions
3. Collation of socio-economic data to help advocate, plan and monitor development interventions, by the project partners or by third parties

1.4 General description of study area

Indawgyi area is located in Mohnyin township, Kachin state. Indawgyi lake, the biggest lake in Myanmar is located in the middle and surrounded by the villages, agriculture land and watershed forest. There are 10 village tracts located in the watershed of the Indawgyi area. Villages are indicated in Fig 1.

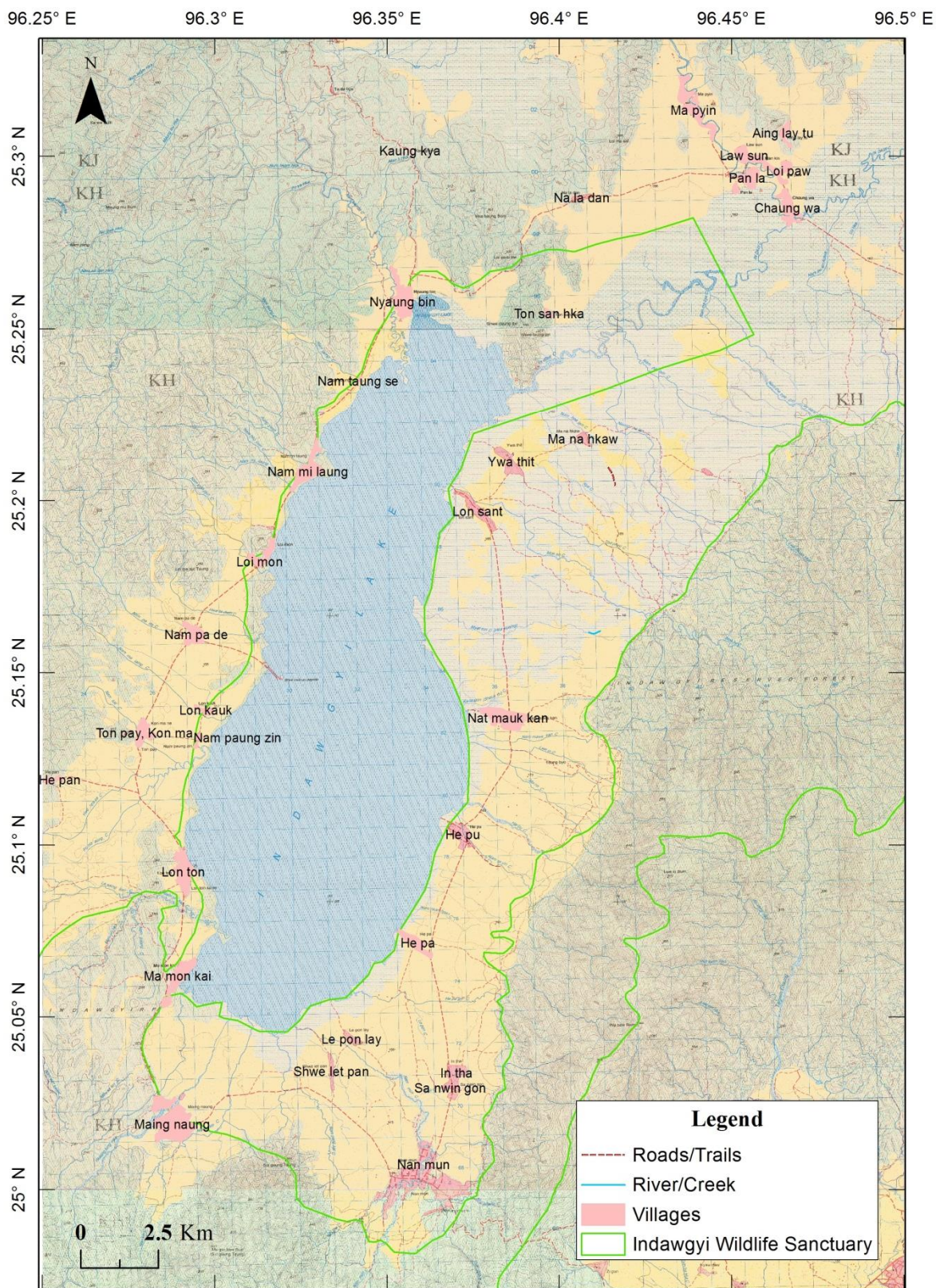


Fig 1. Map showing the location of villages in the Indawgyi area

1.5 Visit Organization

All the villages can be reached by motor cycle and survey team overnight at the some villages. Since survey team need to wait availability of the village leaders and villagers, they could not conduct the surveys continuously. Table 1 shows the name of the village tracts and villages.

Table 1. Survey villages and geographical locations, by village tract

Sr.	Village Tract Name	Village/Quarter Name	Survey Date
1	Nan Mom	Shan Kone Quarter	28.04.2014
2	Nan Mon	Sa Nwin Kone village	2.05.2014
3	Nan Mon	Kachinsu Quarter	7.5.2014
4	Nan Mon	Shwe Lat Pan village	8.5.2014
5	Nan Mon	Le Pon Lay village	9.5.2014
6	Nan Mon	Taik Kone Quarter	11.5.2014
7	Nan Mon	In Thar village	12.6.2014
8	Ma Mon Kaing	Ma Mon Kaing village	20.5.2014
9	Ma Mon Kaing	Maing Naung village	14.6.2014
10	Lonton	Hapan village	12.5.2014
11	Lonton	Kon Ma Na village	13.5.2014
12	Lonton	Nam Paung Zin village	14.5.2014
13	Lonton	Lon Kauk village	15.5.2014
14	Lonton	Lonton village	13.6.2014
15	Hepu	Hepu village	5.5.2014
16	Hepu	Nat Mauk Kan village	10.6.2014
17	Hepu	Hepar village	11.6.2014
18	Lone Sant	Ma Na Khaw village	29.4.2014
19	Lone Sant	Ywar Thit village	4.5.2014
20	Lone Sant	Lon Sant village	25.5.2014
21	Loi Mon	Loi Mon village	29.5.2014
22	Loi Mon	Nam Pa De village	3.6.2014
23	Loi Mon	Nant Mi Laung village	4.6.2014
24	Nyaung Bin	Nam Taung Se village	5.6.2014
25	Nyaung Bin	Nyaung Bin village	7.6.2014
26	Nyaung Bin	Ton San Hka village	17.6.2014
27	Chaung Wa	Chaung Wa village	18.6.2014
28	Pan La	Pan La village	19.6.2014
29	Pan La	Law Sun Man Kin village	20.6.2014
30	Pan La	Alng Lay tu village	20.6.2014
31	Ma Pyin	Na La Dan village	6.6.2014
32	Ma Pyin	Ma Pyin village	21.6.2014

2. METHODOLOGY

2.1 Participation Rapid Appraisal (PRA) Tools

Participatory rapid appraisal (PRA) techniques were used together with village questionnaires and household surveys to gather information on:

- (1) *Who*: Basic socio-economic data (e.g. population, number of households)
- (2) *What*: Intervention selection (with whom, how)
- (3) *When*: Seasonality of village livelihood activities
- (4) *Where*: Customary village boundaries/land use/forest cover
- (5) *How*: Project relevant forest management and institutions/processes

The PRA tools used included:

Village Questionnaire, Village History, Mapping (sketch and topographic), Wealth Ranking, Seasonal Calendar, VENN Diagram, Forest Product Use/Threats, Transect, Problems and Solutions, and Trend Lines (Forest Cover, Biodiversity).

Participation

We made sure every village meeting was participated by village leaders, elder persons and women together with other villagers. We did household interview at 5% of the total household. Table 2 presents the number of participants at each village meeting and number of interview household.

Table 2. Survey participant numbers, by village

Village tract	Village name	no. of hh	no. of participants	no. of hh interview
Nan Mom	Shan Kone Quarter	190	20	10
Nan Mom	Sa Nwin Kone	230	36	10
Nan Mom	Kachinsu Quarter	346	20	10
Nan Mom	Shwe Lat Pan	92	25	7
Nan Mom	Le Pon Lay	68	45	7
Nan Mom	Taik Kone Quarter	262	43	7
Nan Mom	In Thar	175	15	8
Ma Mon Kaing	Ma Mon Kaing	350	30	10
Ma Mon Kaing	Maing Naung	800	23	10
Lonton	Hapan	74	20	7
Lonton	Kon Ma Na	150	26	10
Lonton	Nam Paung Zin	30	14	3
Lonton	Lon Kauk	61	12	10
Lonton	Lonton	326	12	10
Hepu	Hepu	308	49	10
Hepu	Nat Mauk Kan	413	25	8
Hepu	Hepar	200	25	10
Lone Sant	Ma Na Khaw	70	16	8
Lone Sant	Ywar Thit	236	23	10
Lone Sant	Lon Sant	240	25	10
Loi Mon	Loi Mon	311	25	10
Loi Mon	Nam Pa De	177	39	10
Loi Mon	Nant Mi Laung	170	20	9
Nyaung Bin	Nam Taung Se	45	33	4

Village tract	Village name	no. of hh	no. of participants	no. of hh interview
Nyaung Bin	Nyaung Bin	529	24	10
Nyaung Bin	Ton San Hka	22	21	2
Chaung Wa	Chaung Wa	210	39	10
Pan La	Pan La	180	40	8
Pan La	Law Sun Man Kin	230	24	5
Pan La	Alng Lay tu	180	24	5
Ma Pyin	Na La Dan	85	30	8
Ma Pyin	Ma Pyin	518	23	9

3. RESULTS

Socio-Economic Information

Oldest villages are Nan paung sin (around 1700), Lone-kauk (1760), Lonton (1787) and Maing Naung (1797). Twelve villages are established before 1900.

The biggest village in the indawgyi region is Nan Mom village which includes 9 quarters and about 2000 households and PRA team surveyed only 3 quarters in that village. The smallest village is Ton San Hka village in Nyaung Bin village tract which has only 22 households.

Ethnically, the 19 villages are Shan and the 13 villages have both shan (majority) and Kachin (minority). All the shan people are Buddhist and kachin are Christian.

Table 3. Village population data

Sr	Name of village	Name of Village Tract	Household	Popluation			Total Children (<18)	female-head of HHs
				F	M	T		
1	Nan Mon Shan Kone	Nan Mon	190	633	317	950	576	39
2	Mana Hkaw	Lone San	70	220	180	400	200	3
3	Sanwan Kone	Nan Mon	230	307	324	631	682	31
4	Ywar Thit	Lone San	236					26
5	Hepu	Hepu	308	794	757	1551	875	12
6	Nan Mon Kachin Su	Nan Mon	346	509	440	949	1027	140
7	Shwe Lat Pan	Nan Mon	92	136	132	268	249	17
8	Lae Pon Lay	Nan Mon	68	125	127	252	163	12
9	Nan Mon Tike Kone	Nan Mon	262			0		47
10	He Pan	Lone-Tone	74	136	115	251	135	7
11	Kone Mana	Lone-Tone	150	250	200	450	600	16
12	Nant Phaung Sin	Lone-Tone	30	33	33	66	90	4
13	Lone-Kaung	Lone-Tone	61	93	85	178	197	17
14	Ma Moke Kaing	Ma Moke Kaing	350	1090	1019	2109	940	
15	Lone San	Lone San	240					32
16	Loi Mon	Loi Mon	311	400	402	802	904	33
17	Nanpade	Loi Mon	177	227	241	468	404	17
18	Nant Mee Laung	Loi Mon	170	337	280	617	470	38

Sr	Name of village	Name of Village Tract	Household	Population			Total Children (<18)	female-head of HHs
				F	M	T		
19	Nant Daung San	Nyaung Pin	45	54	61	115	82	3
20	Na La Tan	Ma Pyin	85	102	85	187	259	3
21	Nyaung Pin	Nyaung Pin	529	738	615	1353	1063	78
22	Nant Mauk Kan	Hepu	413	549	602	1151	1100	62
23	Hepa	Hepu	200	636	516	1152		42
24	Innthar	Nan Mon	175	621	587	1208		14
25	Lone-Tone	Lone-Tone	326	520	400	920	700	31
26	Mile Naung	Ma Moke Kaing	800	1474	1400	2874	3070	45
27	Tone San Kha	Nyaung Pin	22	33	23	56	49	1
28	Chaung Wa	Chaung Wa	210	870	710	1580		17
29	Pan Lar	Pan Lar	180	560	550	1110	495	34
30	Law Swin	Pan Lar	230	442	372	814	550	34
31	Ai Lay Thu	Pan Lar	180	305	303	608	447	35
32	Ma Pyin	Ma Pyin	518	1627	1482	3109		84

Health Care: There are 2 small hospitals (1 doctor and nurses each, 50 beds each) at Lonton and chaung Wa villages, and one midwife at each village tract. The nearest full equipped Mohnyin Hospital is 2 hours' drive from the Nan Mon, the southern end of the lake.

Education: There are 4 high schools, 11 secondary schools, 4 post primary schools and 40 primary schools. Teachers are appointed by the government education department.

Basic infrastructure: Recently upgraded motor road from Hopin to Chaung Wa via Nyaung Bin village along the western side of the lake which can be used year round. There is also new motor road under construction along the east side of the lake from Nan Mom to Chaung Wa village via Manakhaw village. Besides the motor roads, boats can be used through the lake from one village to another.

Currently no electricity from the grid, but each village has their own generator to provide the electricity within the village. Power will soon get from the government because cable are being fixing in the region.

CDMA mobile network is working since 2008.

Month	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March
Hunting												
Fishing												

Natural resources use

Villagers collected the following items from the nearest forest mainly for local use:

- Timber
- Firewood
- Bamboo
- Vegetable
- Rattan
- Thatch

The quantity of the collection is not the same. It is depending on the number of households in the village.

Forest situation

- Forest condition is good and natural resources are rich before 1980 (30 years ago).
- Below table shows the sample of forest situation changed in Indawgyi area

100							
75							
50							
25							
		1960	1970	1980	1990	2000	2010-14

Commodity flows

Since Indawgyi area is good for agriculture, they export paddy, peanut, vegetables and fish to the nearest towns; hopin and Parkant. Local traders buy the agriculture products and export to other areas. Vegetables are mostly sold by individuals at the nearest gold mines or in the markets. Fish is mostly export to jade mine, Parkant where they get more price.

Medicine, material, fuel, diesel, agriculture materials, construction materials and other daily use materials are imported from outside.

Village Worries

The top village worries (drawn from HH surveys and village meetings) were:

- Drug using (17 villages)
- Scarcity of drinking water (8 villages)

- Education (lacking of government school/teacher) (4 villages)
- Scarcity of forest product (timber, bamboo, firewood) (6 villages)
- Health care (4 villages)
- Pest problem for rice (2 villages)
- Number of fisherman increase (1 village)

Village boundaries

Village boundaries were sketched by focus group participants on blank paper, firstly by identifying major landmarks around the village (rivers, roads, ridges, peaks etc), then by hand drawing lines based on these. The main features were then identified on 1:50,000 topographic maps printed at least 100% on vinyl, after which the sketch maps were transferred by project staff onto the vinyl using permanent marker. At this point the focus group were repeatedly asked to confirm the topo map version was correct, and to clarify areas of confusion.

The results for all 32 villages/quarters are shown in figure 2.

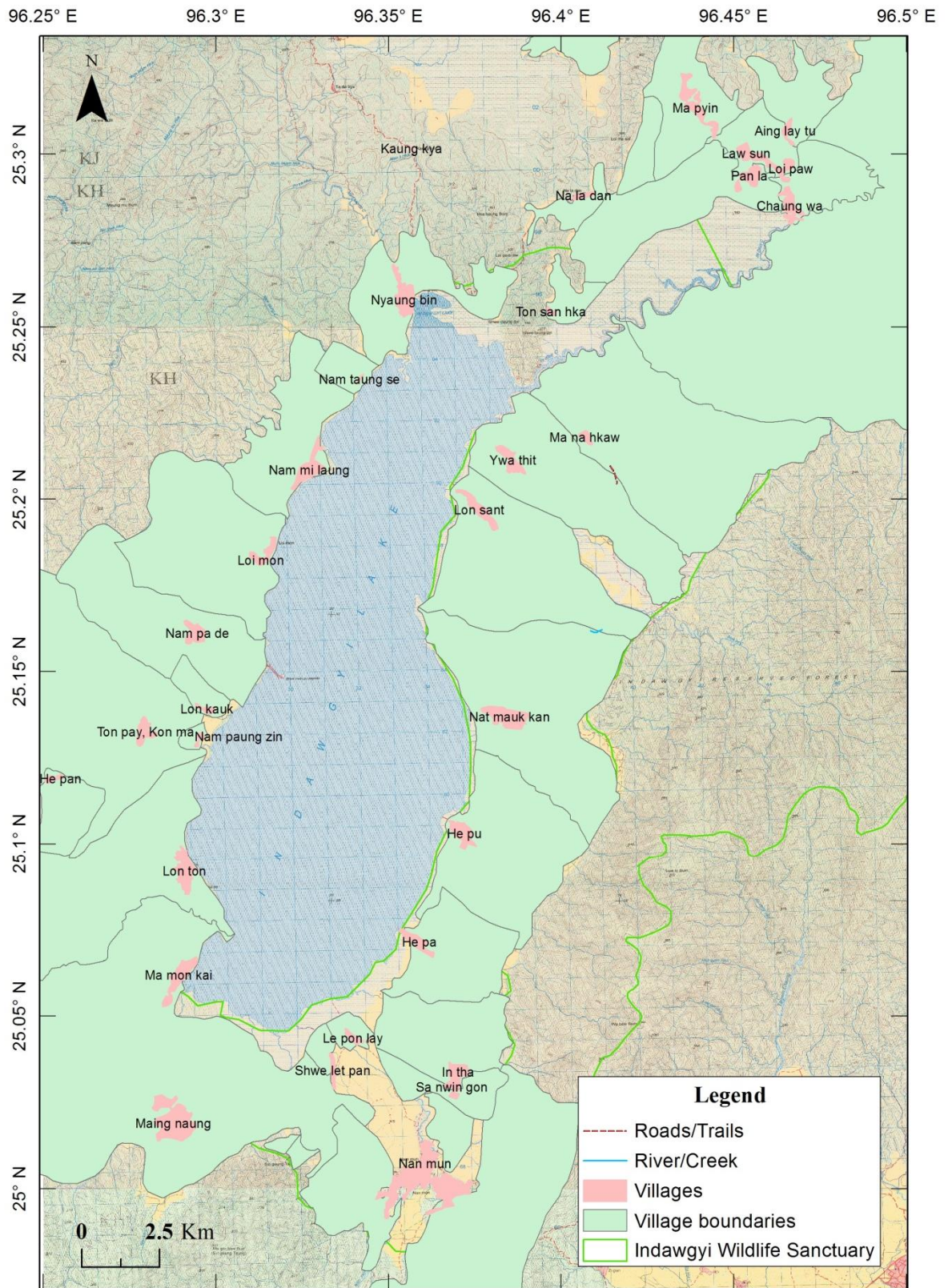


Figure 2. Draft village boundary map

Threats to natural forests

According to the survey at 32 villages/quarters, hunting posts a main threat to biodiversity and forest posts a main threat to the natural forests. Other threats include logging, firewood, encroachment and gold mining. Three villages did not claim there is threat to natural forest. The following table shows the list of the threats and the number of records.

Activity	Number
Logging	5
Firewood	5
Forest fire	8
Hunting	12
Encroachment	3
Gold mining	2
No threat	6

5. DISCUSSION

Main issues


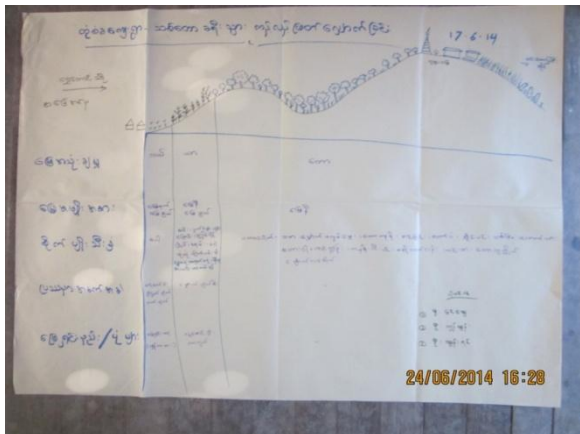
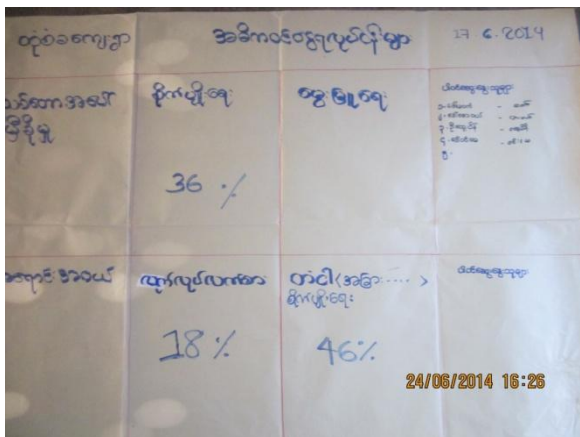
Surveys show there are several activities threats to the natural forest and biodiversity of the Indawgyi area.

- Due to the lack of the other resources, local communities collect timber and firewood from the natural forest.
- Although there is nobody who relies on hunting for living, there seem many opportunist hunters in Indawgyi area.
- Landless people cultivate the rice and vegetable on the hill side inside and outside wildlife sanctuary for subsistence.
- Forest fire is a main threat to the natural forest. However, there is no study and records of the forest fire in Indawgyi area.

Recommendations for the Indawgyi Conservation Programme

- Agriculture is main livelihood for the villagers and main products for this area. Therefore, should conduct agriculture assessment to initiate sustainable agriculture system in this area.
- Fishing is the second main livelihood activity and to get the correct number of fishermen need to confirm with fishery department and/or conduct fishermen number survey. Moreover, should conduct fishery assessment to initiate sustainable fishery in the lake.
- Local people rely on the watershed forest for Timber, firewood and NTFP. Establish plantation for timber and firewood. Study on the NTFP and suggest sustainable way of using NTFP. Find value added process to get more income from NTFP.
- To reduce the negative impact from hill agriculture. Develop agroforestry for the hill agriculture farmers.
- Since drug using is the most village worry, drug abuse control program should implement.
- Since forest fire posts a main threat to the natural forest, the forest fire control program should initiate in order to learn more about the impact of the forest fire, the area, the course of fires and implement fire control.

Appendix: The sample Village PRA results (Tonsanhka village)

<p>Resource map</p> 	<table border="1"> <tr> <th>Direction</th> <th colspan="2">Main Features</th> </tr> <tr> <td>East</td> <td colspan="2">Cultivation land</td> </tr> <tr> <td>West</td> <td colspan="2">hill, forest</td> </tr> <tr> <td>North</td> <td colspan="2">Cultivation land, hill</td> </tr> <tr> <td>South</td> <td colspan="2">Cultivation land, Indawgyi lake.</td> </tr> <tr> <td>Transportation</td> <td colspan="2">Car, Motorbike, boat, bullock cart, on foot</td> </tr> <tr> <td>Communication</td> <td colspan="2">Phone, by person</td> </tr> </table>		Direction	Main Features		East	Cultivation land		West	hill, forest		North	Cultivation land, hill		South	Cultivation land, Indawgyi lake.		Transportation	Car, Motorbike, boat, bullock cart, on foot		Communication	Phone, by person	
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Communication	Phone, by person																						
<p>Transect Walk</p> 	<table border="1"> <tr> <th>Land use</th> <th>Cultivation land</th> <th>forest</th> </tr> <tr> <td>Agriculture</td> <td>Paddy, vegetables, peanut</td> <td></td> </tr> <tr> <td>Problems</td> <td>Poor water resources</td> <td></td> </tr> </table>		Land use	Cultivation land	forest	Agriculture	Paddy, vegetables, peanut		Problems	Poor water resources													
Land use	Cultivation land	forest																					
Agriculture	Paddy, vegetables, peanut																						
Problems	Poor water resources																						
<p>Sources of income</p> 	<table border="1"> <tr> <th>Main Livelihood</th> <th>% of households</th> </tr> <tr> <td>Forest</td> <td></td> </tr> <tr> <td>Agriculture</td> <td>36%</td> </tr> <tr> <td>Livestock</td> <td></td> </tr> <tr> <td>Trading</td> <td></td> </tr> <tr> <td>Labour</td> <td>18%</td> </tr> <tr> <td>Others</td> <td>46%</td> </tr> </table>		Main Livelihood	% of households	Forest		Agriculture	36%	Livestock		Trading		Labour	18%	Others	46%							
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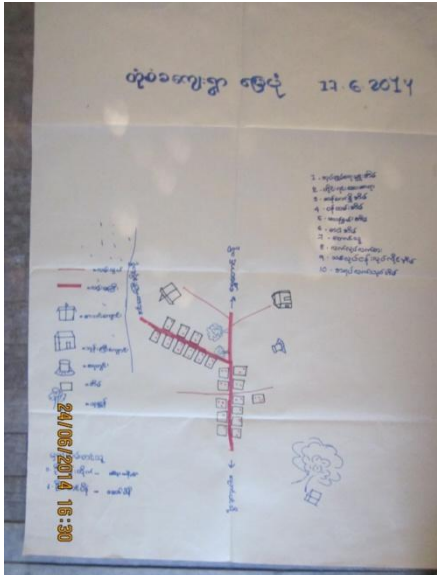
Venn diagram



There are ten organizations in the village.

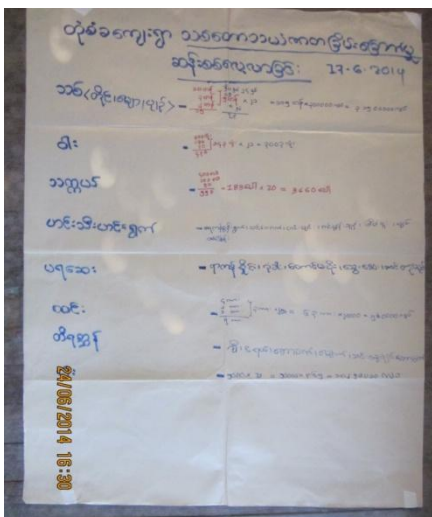
1. Village administer
2. NLD party
3. USDP party
4. Shan ni party
5. Women Committee
6. Youth Committee
7. Religion committee
8. Red cross committee
9. Education committee
10. Save the woman and children committee

Village map



Monastery	1
School	1
Football ground	1
Well	1
Cemetery	1
Bridge	1

Threat Assessments



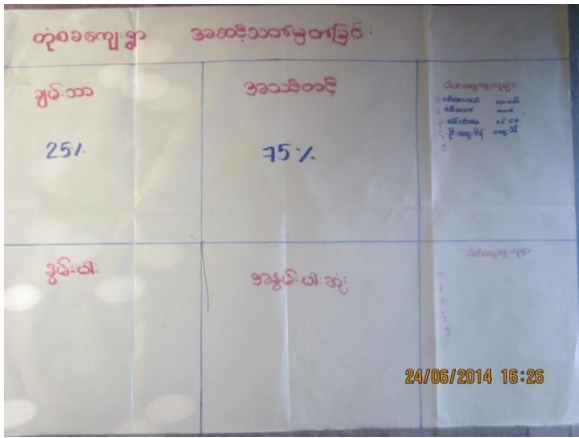
Timber= 105 tons
 Bamboo= 3003
 Firewood = 63cars
 Thatches =5660

Forest situation



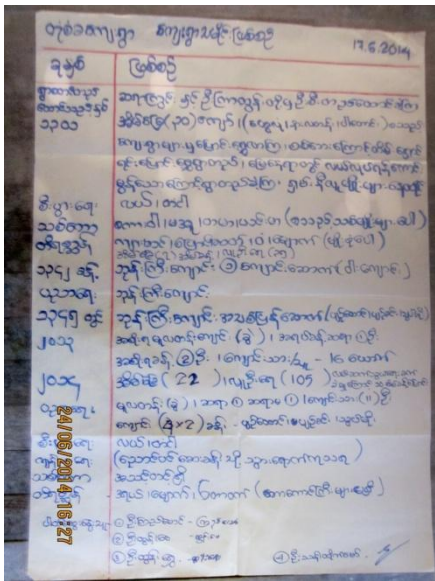
100						
75						
50						
25		1970	1980	1990	2000	2010-14

Wealth Ranking



Rich	25%
Medium	75%
Poor	
Poorest	

Village History



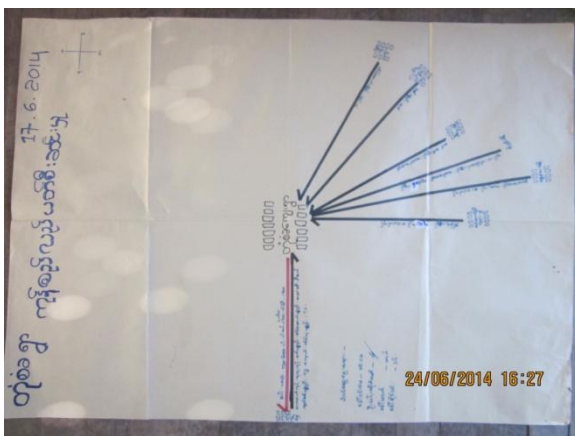
Year	History
1301	HH-30, forest-good, monastery-1, Agriculture-paddy, vegetable, fishery, wild animals- high.
2000-14	HH-22, population-105, Forest-low, Wild animals-low, Agriculture-paddy, vegetables, peanut, fishery, gold mine, Jade mine, trade, Education-BEPS.

Seasonal calendar



Month	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March
Work busy												
Grow farm												
Harvesting												
Festivals												
Gold and Jade mine												

Commodity flows



Medicine, material, fuel, diesel, agriculture materials, construction materials, other daily use materials,
Paddy, rice, peanut, meats, vegetables.