

**Micro Level Study on Socio-economic Situation of Sinlan Village,
Pyin Oo Lwin Township: A Geographic Perspectives**

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Abstract

Socio-economic situation means an individual's or a group's position within a hierarchical social structure. Socio-economic status depends on a combination of variables, including occupation, education, income, wealth, and place of residence. While sociologists often use socio-economic status as a means of predicting behavior, geographers used to focus on that position with the relations to or reference of a place or space or a region. Therefore, in this paper, the variables of the social and economic status of a small village will be examined at an individual level with the respects of location, physical phenomena, human resource, land use pattern and the environmental perception of the rural dwellers from Sinlan Village. This village is located about 1 km northwest of Pyin Oo Lwin town. It lies at an elevation of about 1,160 meters above sea level so that it receives temperate climate. As consequence, the main economy and living style of the village is quite different to that of the others. Random sampling method was used to define the number of households to be visited and interviewing and field observation methods are also applied to collect the necessary data by the teachers and PhD preliminary students from Geography Department, Mandalay University. The field survey was made in February, 2015.

Key Words: social, economic, physical bases, micro level, environmental perception

Introduction

There are many indicators or variables which can show the status of social life and economy of a community. Different scholars considered the relevant aspects of socio-economic condition of a particular society in a region or an area. Various factors influence or shape the socio-economy or socio-economic landscape of such community. Such various factors can be generally assumed as natural or physical factors like topography, drainage, climate, soil, social factors; like total population and growth, population density, population distribution, race and religion, educational status, health and fresh water facilities, sanitation, etc.; infrastructural factors like transportation, market, banking system, telecommunication facility, electricity, etc.; and economic factors like types of occupation, belongings, land ownership, etc. Hence, in this paper, the focus is emphasized on the present condition of social and economic aspects of the people who reside in Sinlan Village, Pyin Oo Lwin

Township. The study area is located at the junction of N latitude 22° 02' 0.91" and E longitude 96° 25' 32.08" [Map 1]. It is only about 1 km far from the Pyin Oo Lwin town proper. There were totally (294) households when it was surveyed. The village is close to the urban center and having well accessibility, good telecommunication network, and social amenities, (although it is designated as village and agriculture is the mainstay of the villagers) so that it was selected to study the socio-economy of the village dwellers. It is also interested to know the levels of socio-economic condition especially during this regime (transition period) of a typical Myanmar village. Although the village lies in the tropical latitude of Myanmar, its high altitude (more than 1,160 meter above sea level) causes it to experience temperate climate (i.e. less temperature and sufficient rainfall). Moreover, the village lies in the valley which is encircled by the high relief, so that the slope is gently climb up to every phase with the level land in the center of the village. This physical feature can lead to flourish in house gardening which is a type of subsistence agriculture or seasonal crop cultivation in the compound of each house. By growing different types of fruits, vegetables, flowers, the rural dwellers can earn for their habitat. The total village area (residence area + house gardening area) in 2015 is 1.97 km sq. (197.04 hectares). Apart from that at least 3 streamlets (small stream) which are perennial can supply throughout the year.

Historical Background

In the past (in the reign of Myanmar Kings), the study area was covered by dense forest. Therefore, lumbering was done and the logs were pulled by the elephants. The village is located on this route of elephants which carried logs. Based on that fact, the village is named as Sinlan (elephants' route) village. First and foremost, it was settled by Bamar (Myanmar) people and, then other ethnic groups like Shan, Kachin, Kayin, even Chin and Rakhine followed. After Bamar group, the second was Shan ones who started settling since 1985. After establishing Pyin Oo Lwin town as a hill resort and recreational area by the British Government, other non-nationalities like Gawrakha, Indian, Nepalese, Chinese have come to settle.

Methodology

Sinlan Village was visited by the scholars from the Department of Geography, University of Mandalay, as a part of field training course during February, 2015. To collect the necessary data, (213) households were visited and heads of the household were interviewed by dividing 10 groups [Map 2]. Open ended questions were raised by the interviewers based on the semi-structured type. It is no doubt that the questions concerned socio-economic conditions were already prepared, and as a consequence, the common questions could be grouped into economic conditions, population and social characters, environmental awareness levels, and about knowledge and information sources. Observational method was used by the scholars to see the physical landscape (e.g. topography, soil) wherever they moved. Out of (294) households, (213) households were visited. The percentage share to each character for each household will be discussed separately. For the convenient presentation, the interviewed households are categorized into 6-groups according to ethnicity as the different races live separately in respective group. Moreover, as the General Administrative Department said that major races in the village lived as a separate group, so that the study area could be divided into (6) ethnic groups such as Bamar, Shan, Kachin, Kayin, Lisu and Gawrakha as shown in [Map 3]. Such demarcation is made by the authorities of the village (president of village general administration department) and

one person from the respective ethnic groups is appointed to manage their groups. Even though these groups are named by the ethnicity, 100 percent of each group is not entirely occupied by such particular ethnicity. For example, in Kachin group, there is mixed of Bamar, Shan, Kayin etc. but in small amount. Hence, this study will examine in such major ethnic groups as Bamar, Kachin, Shan, Lisu, Kayin, Gawrakha and other minority (Chinese, Chin).

Considered Variables or Indicators of Socio-economic Status

- I. Population Characters
 - (a) Number of people in each Household
 - (b) Dependency Ratio
 - (c) Races and Religion
- II. Characteristics of Social Amenity
 - (a) Occupation Structure
 - (b) Education Status
 - (c) Health Care Facility
 - (d) Fresh Water/ Drinking Water Availability
 - (e) Sanitation Facility
 - (f) Energy used for Cooking
- III. Economic Characters
 - (a) Agriculture and Animal Husbandry
 - (b) Water Sources for Agriculture
 - (c) Cultivated Crops or Seasonal Crops
 - (d) Use of Chemical Inputs
 - (e) Size of Land Holdings
 - (f) Material Possession
 - (g) Housing Types
- IV. Environmental Awareness
- V. News, Knowledge and Information Availability
 - (a) Newspaper and Journals
 - (b) Radio, Television and Microwave Communication
 - (c) Internet Website

Discussion

The sector-wide discussions are described as follows according to their sub-groups:

(I) Population Characters

Under this group, three variables are considered, number of population, dependency ratio according to the age-group and race and religion according to the age groups in each house.

(a) Number of people in each Household

For the entire village, total number of people (family size) in each house varied from 1 to 11 members. But, there was only one household which was occupied by (11) members, 5 houses by 10 members, 8 and 12 houses by 9 and 8 members, respectively. Most of the houses (74.18 %) are divided by family size of less than or equal to 5 members. It was followed by that size of 6 members at (32) houses (17.84 %). The ethnic-wise family sizes in each house hold are shown in the following table.

Table (1) The ethnic-wise family sizes in each household in the study area

No.	Ethnicity	No. of Households	Family Member	
			(range between)	
1	Bamar	59	1	8
2	Shan	29	3	8
3	Kachin	33	1	7
4	Kayin	42	2	10
5	Lisu	27	1	9
6	Gawrakha	47	1	10
7	Others (Chin, Rakhine, Chinese)	57	1	11

Source: Field Survey conducted during February, 2015

(b) Dependency Ratio

Dependency ratio means that the number of person who rely on one working people. Usually, it is shown according to the age groups. The number of person who are younger than 15 years and those of more than 65 years (according to Immigration and National Registration Department, Myanmar) are considered as dependents, while the number of persons who having the age between 15 years and 64 years are assigned as workable force or independent. For the entire village, the dependency ratio for 93% of total visited households is ranged from 0.2 to 0.89 for one working person. It can be noted that the study area is economically or agriculturally productive as the dependency is less than 1 person to 1 working force. The following table shows the ethnic-wise dependency ratio in 2015.

Table (2) Ethnic-wise Dependency Ratio in 2015

No.	Ethnicity	No. of Households	No. of Population by Age Groups			Dependency Ratio
			< 18	18-65	> 65	
1	Bamar	59	72	178	38	61.80
2	Shan	29	41	61	6	77.05
3	Kachin	33	31	111	6	33.33
4	Kayin	42	46	97	24	72.16
5	Lisu	27	26	31	1	87.10

6	Gawrakha	47	36	76	7	56.58
7	Others (Chin, Rakhine, Chinese)	57				

Source: Field Survey conducted during February, 2015

(c) Race and Religion

In this village, there are more and varied ethnic groups than those of other Myanmar villages in Central Myanmar. The major ethnic groups which are found in Sinlan village are Bamar, Shan, Kachin, Kayin, Lisu and Gawrakha. The former 5 are Myanmar nationals while the latest one is foreign ethnicity. After annexation of British troop for the entire country, many numbers of Indian people were brought along with British government for the purpose of their civil administration. Therefore, since that time, some of the Indian people have settled down not only in Pyin Oo Lwin but also around its surrounding area. Till today, Gawrakha is found as one of the major ethnic groups like Bamar in the village, i.e. occupied by (59) and (47) households, respectively. It was followed by Shan (29 households), Lisu (27), Kachin (33), Kayin (42), and the rests are very less numbers of Rakkine, Naga, Chin, and Chinese. It is no doubt that the most dominant religion was Buddhist (72.30 %) while Christianity was (27.70 %). Very few people believed in their traditional spirits.

(II) Characteristics of Social Amenity

(a) Occupational Structure

It is sure that crop cultivation is the main occupation for all households in Sinlan Village and as a result, it could be counted that heads of 163 (144 and other ethnic groups) households were cultivators who own the plot. From the remaining, heads of 12 households were engaged in various odd jobs, 22 were in various government offices, heads of 27 household run their own and small businesses (like shoppers, basket making, brick making, vehicle repairing etc.) According to the ethnic groups, the occupation structure is shown in the table (3).

Table (3) The occupation structure with the ethnic groups of the study area

No.	Ethnicity	Types of Occupation according to the No. of Households				
		ers	Govt. and NGOs Employee	Own Business	Odd-jobs	Others
1	Bamar	57	9	3	6	0
2	Shan	17	1	2	0	0
3	Kachin	27	0	2	2	1
4	Kayin	13	7	13	4	0
5	Lisu	13	0	5	0	0
6	Gawrakha	17	5	2	0	0

7	Others(Chin, Rakhine,Chinese					
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Source: Field Survey conducted during February, 2015

(b) Education Status

Only government centralized education system is dominated in the education sector of Sinlan village. One high school is open for the students from primary level to high school level. It was run as a primary school in 1951 and it was upgraded as middle school in 1976 and as a high school in 2014. One football field is present where the students can play or do physical exercises. With the help of high technology, there is one audio room, one language lab, one painting room, one room for home sciences, 4 sets of computer application, one television set, 30 number of mobile phones and one room for cultural training (dancing, singing, playing music). Among total grown up population in 2015, 281 persons completed primary level, 227 people left out at middle school level, 119 had reached up to high school level of basic education and 92 were degree awardees, while only 5.49 % were illiterate. Moreover, there is a private bordering school, namely Bright Future, which is operated by a lady teacher and 15 students studied there. There is also a small training school for music which is run by the Kayin young generation who teach the music lessons to 3 or 4 armatures. The ethnic-wise education status in each household is shown in the following table (4).

Table (4) The ethnic-wise education status in each household of the Sinlan Village

No.	Ethnicity	Education Status of No. of People completed the level of:			
		Primary	Middle	High	Graduated
1	Bamar	59	55	38	18
2	Shan	32	23	10	17
3	Kachin	22	26	29	13
4	Kayin	66	38	39	30
5	Lisu	33	17	0	1
6	Gawrakha	69	68	3	13

Source: Field Survey conducted during February, 2015

(c) Health Care Facility

For the entire village, there is only one Health Care Center which serves minor health problems of the villagers. One mid-wife takes care for the health issue. As the village is very close to Pyin Oo Lwin and the transportation facility is also smooth, serious health problem used to be consulted in that town. According to the responses, very minor seasonal diseases like flu, cold, coughing is used to be affected to the dwellers. Moreover, some indigenous medicines are also widely used by the local people. About ¾ of all households used to rely on the Rural Health Centre and 80 numbers of households have used

both health center and indigenous medicines. But, ethnic group wise data for health care issue could not be collected.

(d) Consumption of Domestic Water and Drinking Water

There were at least 4 types of resource for domestic water and drinking water uses in Sinlan village. They are bore well, stream, dam and purified drinking water bottle. For domestic purpose, most of the people relied on bore wells which are dug by themselves in their compound. Even for drinking water, bore well water is purified, the interviewees said. According to the availability of the water sources, the local people used the water both for house affairs and drinking. Out of 213 visited houses, 88 household used wells, 59 used stream water, 43 used water from Sinlan Weir, only 92 families drink purified water bottle and 21 households consumed two sources of water (like well and stream or stream and dam or well and dam). Related data from 15 houses were not acquired. According to ethnic groups, the consumption of domestic water is shown in the following table.

Table (5) The consumption of domestic water in each household of the study area

No.	Ethnicity	Water Consumption by No. of Households		
		For Households from:		
1	Bamar	27	18	5
2	Shan	12	14	2
3	Kachin	18	9	2
4	Kayin	-	-	2
5	Lisu	9	5	12
6	Gawrakha	22	9	18
7	Others (Chin, ne,Chinese)	-	4	2

Source: Field Survey conducted during February, 2015

(e) Sanitation Facility

For this aspect, only types of latrine are considered and 3 different types of toilet are found as: flush fly-proof and pit. Throughout the village, most dwellers used fly-proof type. Out of (213) households, (149) houses were having fly-proof type of latrine, it accounted for (70 %). From the remaining, (35) houses (16.43 %) used flush-type, while only (24) families (11.27 %) used pit type. Five houses did not respond. It can be observed that very high percentage households have been aware for the health issue due to the use of flush type or fly-proof type latrine and due to the having of at least one latrine in each house. According to ethnic groups, the use of latrine is tabulated as shown in the following table (6).

Table (6) The ethnic-wise sanitation facility in each household of the Sinlan Village

No.	Ethnicity	Types of Latrine used by No. of Households		
		Flush	Fly-proof	Pit
1	Bamar	2	81	4
2	Shan	-	20	2
3	Kachin	19	11	3
4	Kayin	10	9	9
5	Lisu	2	16	2
6	Gawrakha	2	12	4
7	Others (Chin, Rakhine, Chinese)	-	-	-

Source: Field Survey conducted during February, 2015

(f) Energy used for Cooking

Three types of energy sources are used for cooking in the village; namely fuel wood, charcoal and electricity. It is fortunate that the availability of electricity by the government supply is at used least for rice cooker. Out of (213) houses, (61) have used two types of energy source both charcoal and electricity, whereas (15) houses used 3 sources of energy for kitchen. According to the types of energy source, (55) households utilized fuel wood, (49) used charcoal and (157) used electricity. For the energy sources of fuel wood and charcoal, they have exploited from nearby community. But, there should be taken the action of reforestation for such community forest cover. The following table shows that what types of energy used for cooking by ethnic groups.

Table (7) Types of energy used for cooking by ethnic groups in the study area

No.	Ethnicity	Energy used by No. of Households for Food			
		Fuel Wood	Charcoal	Electricity	Gas/ Solar
1	Bamar	14	5	58	2
2	Shan	1	4	20	-
3	Kachin	10	17	20	2
4	Kayin	14	14	32	-
5	Lisu	5	5	12	1
6	Gawrakha	11	4	15	1
7	Others (Chin, Rakhine, Chinese)	-	-	-	-

Source: Field Survey conducted during February, 2015

(III) Economic Characters

(a) Agriculture and Animal Husbandry

It is observed that almost all farmers grow many types of crops but seasonally especially vegetables, flowers and fruits. For example, strawberry can be harvested in summer and it used to be started growing in the month of the beginning of November. Direct rain drops can damage to the flowers of strawberry. During rainy season, cabbage, broccoli, Chinese King and Chinese cabbage are widely grown as they need water throughout their lives. On some plots ginger, gladiolus and maize are grown alternatively. The chrysanthemum (flower of short day plants) can be grown two times a year, during rainy season and summer season. Only one damson plantation could be noticed throughout the village. As the demand of such fruits, vegetable, flowers became higher and higher day after day, the farmer did not specified whether summer crops or monsoon crops or winter crops. By using different strains (mostly imported from abroad), the farmers started growing such types of crop year round with the help of chemical fertilizer, pesticides and herbicides. Therefore, it should be emphasized that how such chemical inputs are usually applied, and how many persons are having awareness on soil degradation or underground water pollution or air pollution.

Cattle are rearing only for the purpose of farming. Even a couple of ox can be found in very less number of households for ploughing. But, on the other hand, the power tiller or other agricultural machines are also used with very limited number for the entire village. Only (34) households raised oxen for farming. Poultry farming is also practised but for their family need only. Merely 4 households raised chicken in commercial scale, while (33) houses reared at subsistence level.

(b) Water Sources for Agriculture

For crop cultivation, there are three sources for water except rainfall. It is not doubtful that rain water is sufficient for the monsoon crops which grow during June to October. The water from Sinlan Weir, streams and bore wells is also used as supply water especially for summer and winter crops. As already mentioned earlier, as the crops are grown with rotation system the land is intensively used throughout the year. Therefore, supply water is needed. In the entire village, (116) households used stream water by pump sets and this is the highest percentage of the use of water for agriculture. It was followed by the use of weir water (42 households) and bore well water (38 households). The water from weir can be supplied to the nearby area and downslope plots. From the bore wells, the water has to be pumped up by using electric motor and it will be higher investment than that of two water sources. According to ethnic groups, the water use for cropping is shown in the table (8).

Table (8) Water sources for agriculture of ethnic groups in the study area

No.	Ethnicity	No. of Households used Water for Agriculture, Sources from:		
		Wells	Stream	Weir
1	Bamar	22	57	5
2	Shan	-	20	2
3	Kachin	5	20	1
4	Kayin	-	10	4
5	Lisu	7	6	12
6	Gawrakha	4	3	18

7	Others (Chin, Rakhine, Chinese)	-	-	-
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Source: Field Survey conducted during February, 2015

(c) Cultivated Crops or Seasonal Crops

In the village, major cultivated crops are various types of vegetables, fruits and flowers. Actually, such crops were grown as for their family needs in the earlier days, but it has been developed as semi-commercialized cultivation system since 1980s. It is mainly due to the market demand and price. Although the cultivated crops are perishable, the rural people have already understood that how to preserve the products to store longer period which can be sent to farther markets, even up to Yangon. Moreover, accessibility of transportation modes and the air-conditioned highway express buses also provide to carry to demanded markets within a shorter period than that of the past days. By doing so, the vegetables or fruits or flowers could be consumed freshly by people from remote areas. As fruit, strawberry is the most popular nowadays, and among many types of vegetable, mustard and Chinese King are most demanded. Flowers are used by Myanmar people for offering Lord Buddha and monks in many ceremonies, so that chrysanthemum and gladiolus are most famous in that village. The following table shows that what types of crops cultivated by ethnic groups.

Table (9) Cultivated Crops or Seasonal Crops of ethnic groups in the study area

No.	Ethnicity	Major Cultivated Crops by No. of Households				
		Strawberry	Flowers	Vegetables	Plantation	Others
1	Bamar	25	13	12	-	5
2	Shan	4	1	1	-	-
3	Kachin	8	5	7	-	4
4	Kayin	-	-	9	-	-
5	Lisu	-	3	7	3	1
6	Gawrakha	9	9	2	2	3
7	Others (Chin, Rakhine, Chinese)	-	-	-	-	-

Source: Field Survey conducted during February, 2015

(d) Use of Chemical Inputs

Under this heading, chemical fertilizer, pesticides and herbicides are included. But, herbicides are used by the farmers who grow paddy and the number such farmers were not more than 10 persons throughout the village. Due to the use of hybrid strains and different farming methods by most of the farmers in this village, chemical fertilizers and pesticides are essential respectively for high yield and timely matured the crops. But, the high price of such chemical inputs could not be afforded by all the farmers. Therefore, some used natural fertilizer such as cow dung and decayed organic materials. It can be noticed that the commercialized cultivators were specifically applied such chemical inputs. In the entire village (162) households and (135) households out of total (213) used fertilizers and pesticide respectively, but it could not be identified whether they used chemical or natural fertilizer.

The following table shows the number of households by ethnic groups who used the fertilizers and pesticides.

Table (10) The number of households by ethnic groups who used the chemical Inputs

No.	Ethnicity	No. of Households	Use of Fertilizer and Pesticides for Agriculture by No. of Households				
			Fertilizer Use			Pesticide Use	
			Natural	Chemical	No Use	Use	No Use
1	Bamar	59	10	15	-	61	6
2	Shan	29	19	19	1	19	1
3	Kachin	33	16	15	3	14	20
4	Kayin	42	11	4	-	4	4
5	Lisu	27	10	5	18	4	5
6	Gawrakha	47	19	19	6	18	3
7	Others (Chin, Rakhine, Chinese)	57					

Source: Field Survey conducted during February, 2015

(e) Size of Land Holdings

Out of (213) households, (134) households had cultivated land which are mostly ranged from 0.5 acres to 5 acres, while (79) households had no acre of land for cultivation. But, their livelihood is farmer and they have to hire the land from the others or they have to engage as agricultural laborers to the others' plots. If the sizes of land holdings area considered as the ranges of less than 1 acre, 1–2.99 acres, 3 – 4.99 acres and more than and equal to 5 acres, totally (42) households owned less than 1 acre of cultivated land, while (86) owned 1 to 2.99 acres of land, (6) owned 3 to 4.99 acres and very small number of households, (5) owned equal to or greater than 5 acres of land. According to the ethnic groups, the number of households who owned the different size of land is shown in the table (11).

Table(11) Size of land holdings with respect to ethnic groups in the study area

No.	Ethnicity	No. of Households owned Agricultural Lands in Acres of:			
		< 1	1-2.99	3-4.99	> 5
1	Bamar	18	31	1	2
2	Shan	4	10	-	1
3	Kachin	12	8	1	1
4	Kayin	2	2	-	-
5	Lisu	2	19	1	-
6	Gawrakha	4	16	3	1

7	Others (Chin, Rakhine, Chinese)	-	-	-	-
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Source: Field Survey conducted during February, 2015

(f) Material Possession

Under this topic, the materials which belong to individual household can be categorized into car, motor cycle, bicycle, hand power tiller, mobile phone, refrigerator, television and video sets, sewing machine and others. In the entire village, a motor cycle (two-wheels) belonged to each household (213) but in some houses, they owned more than 1, so that totally number of cycle was (278). It was followed by possession of mobile phone by (158) households, TV-video sets (131) households, car (22) households, hand power tiller and *htawlargyi* (a vehicle which is mostly used for carrying materials and agricultural products in rural areas) (20) households, refrigerator (24) households, bicycle (17), sewing and knitting machine (5) and other materials like bullock cart, heater (21), etc. According to the ethnic groups, the materials belonged to the number of household are shown in the following table.

Table (12) Material possessions of ethnic groups in the Sinlan Village

No.	Ethnicity	No. of Households which Belong according to the Materials						
		Car	Bicycle	Agricultural Machines	Mobile Phones	Refrigerator	TV & Video	Sewing & Knitting Machine
1	Bamar	2	6	8	44	15	51	1
2	Shan	5		1	DNA	2	15	-
3	Kachin	1		5	19	-	4	1
4	Kayin	2		4	37	7	31	3
5	Lisu	-		1	13	-	-	-
6	Gawrakha	2		1	35	-	30	-
7	Others (Chin, Rakhine, Chinese)			-	10	-	-	-

Source: Field Survey conducted during February, 2015 (DNA- Data Not Available)

(g) Housing Types

Housing types in Sinlan Village is divided into (4) groups; pucca house, semi-pucca house, wooden house and bamboo house with zinc roof. Housing type is a typical indicator which can show very clearly the prosperous level of the people. For example, a person who lives in pucca house, he or she can be easily identified as a rich person. A house built by bamboo is very traditional and it could be constructed by a relatively poor people, because the raw materials like pole, roof and wall can be extracted from nearby forest areas. In the study area, (74) households owned pucca houses, while (69) households owned semi-pucca houses, (45) households belonged to wooden houses, and (25) owned

bamboo ones. The ethnicity groups had possessed the following number of houses according to their respective housing types.

Table(13) Housing Types of ethnic groups in the Sinlan Village

No.	Ethnicity	No. of Households according to the Housing Types			
		Pucca	Semi-pucca	Wooden House	Bamboo House
1	Bamar	25	21	13	10
2	Shan	19	2	8	3
3	Kachin	9	7	4	7
4	Kayin	1	2	1	-
5	Lisu	5	16	7	-
6	Gawrakha	14	21	10	4
7	Others (Chin, Rakhine, Chinese)	1	-	2	1

Source: Field Survey conducted during February, 2015

IV. Environmental Awareness

For this purpose, disposing methods of wastes, use of chemical inputs, health issue and conserving ways of streams and forest are considered. Out of (213) households, (49) households dumped the waste at the particular sites, (164) households burnt on fire and (11) households buried in the ground. It can be assumed that most of the rural people (about two-thirds) could not have awareness level of air pollution which is caused by burning wastes. Regards with chemical inputs, there is still less of awareness level for soil degradation of ground water pollution and surface water pollution. But, it is accidently fortunate that the prices of such chemical inputs are rather high as they are imported from abroad (especially from China). As a consequence, many numbers of farmers could not use high amount of such chemicals. Almost (75%) of the households were having fly-proof latrine with sufficient water supply, so that the transmission of diseases could not be easily broken out in the study area. With the respect of water resources, the villagers were exploiting both surface and underground water especially for agriculture with very high rate. So also to the forest cover, they fell down the trees for their energy consumption without taking care of the environment nor next generation. The following table shows that what types of household-wise waste dumping by ethnic groups.

Table (14) Types of waste disposing of households of ethnic groups in the study area

No.	Ethnicity	Household-wise Waste Dumping		
		Incineration	Dump Site	Land Fill

1	Bamar	42	14	5
2	Shan	24	5	-
3	Kachin	30	10	3
4	Kayin	6	1	1
5	Lisu	17	13	2
6	Gawrakha	45	6	-
7	Others (Chin, Rakhine,Chinese)	-	-	-

Source: Field Survey conducted during February, 2015

V News, Knowledge and Information Availability

For acquiring news, for entertaining, for listening music, for enjoying films and movies, for sharing and receiving knowledge, information, etc., number of method or way are nowadays used by the local people. Regarding those purposes, the sources like newspaper and journal, radio and microwave communication systems and internet connection systems are considered.

The study area, Sinlan village, is not far from Pyin Oo Lwin town, but newspapers and journals could not be received within a day. Such sources used to be arrived there at next day after publishing. Therefore, news and information from these sources are not up-dated. As a result, only (62) households and (14) households relied on newspaper and periodical journal, respectively. Every household possessed at least one television set so that the news and information could be received through such media. Totally, (76) houses achieved information through television sets and other microwave communication channels. After distributing the mobile phone connection to the rural dwellers with very low price (i.e. about 1.5 US \$), about (80%) of the local people can use mobile phone with the internet access. Therefore, information flowed by internet was also used by (32) households. The table (15) shows the number of households by ethnic groups who used various information media.

Table (15) Number of households by ethnic groups who used news and information

No.	Ethnicity	No. of Households acquired News & Information			
		Radio, Microwave	Newspaper	Journal	Internet
1	Bamar	25	19	5	5
2	Shan	13	12	7	2
3	Kachin	11	8	-	1
4	Kayin	1	2	-	3
5	Lisu	11	6	-	11
6	Gawrakha	10	10	2	9

7	Others (Chin, Rakhine, Chinese)	5	5	-	1
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Source: Field Survey conducted during February, 2015

Conclusion

Actually, Sinlan village is resided by various numbers of ethnic groups. Among them, (6) major ethnic are distinguished and found in the group, but other minor ethnic people also resided there. For example, Chin, Wa, Lishaw are found but very less number compared to the other groups. It can be said that the land is shaped by residing of different races and their tradition. Apart from that, their way of living is also another character to depict as colorful picture. The entire village is located on the almost flat land. All residential areas are totally occupied the land which is like a bottom of depression. The eastern, western and northern portions are a bit higher than the southern one, where the railway passes through. As the total number of population in the entire village is quite small, every house could have been occupied at least a small space for home gardening, i.e. less than an acre. The other geographical phenomena also favoured for the intensive economy in the village. Therefore, the conclusion could be drawn based on the various social and economic activities which are operated by the local people. Moreover, it is found that there are a lot of advantages, disadvantages, potentialities and threats by the local people to the surrounding environment.

Mild climate, sufficient rainfall, available water resources, not much fertile but easily ploughable soil (land), nearness to the urban center, productive human resource, advantages of infrastructural and social amenities are the major strength for the village to be more developed in future.

By observing the housing types of the village, more than ½ of the households are constructed by bricks so that the social status of the villagers is moderately high.

The potentialities for the development of social unity in the village can be expected from the mutual understanding and harmonious stay among the different ethnic groups. As the economic potentialities, private businesses opportunities like packing the fruit or flower or transporting the local products can be extended or expanded from the village.

Only the residential area is level and flat to grow crops. As a result, the land is very limited for each household, i.e. mostly less than 2 acres and those plots are significantly found adjacent to their houses. Therefore, intensive subsistence of crop cultivation type is distinct throughout the village. And, crop rotation system is practiced according to the seasons. Such intensively use of land can cause the soil degradation in the future. Almost all farmers from this village used different types of chemical inputs and different methods of crop cultivation. Those lead to spoil not only the land but also those have high potential to impact on the consumers. Therefore, proper management and suitable education about the use of these chemical inputs must be guided to the farmers.

Twenty three households were landless who used to engage in someone's fields as a laborer or used to grow crops as tenant farmers. As the tradition or belief concern about animal rearing of the rural people is the major hindrance for the development of animal husbandry.

Regarding drinking water more than (41.31 %) used bore well water. So that, it is necessary to test the water quality from such bore wells.

The use of energy by the households showed is seemed over-exploitation pattern of natural resources for household energy both by directly or indirectly. It is the lack of awareness for such natural resources a threat for forest and water body.

About 50 % of the dwellers used stream water for crop cultivation, so that it is an advantage for the amount of water conservation.

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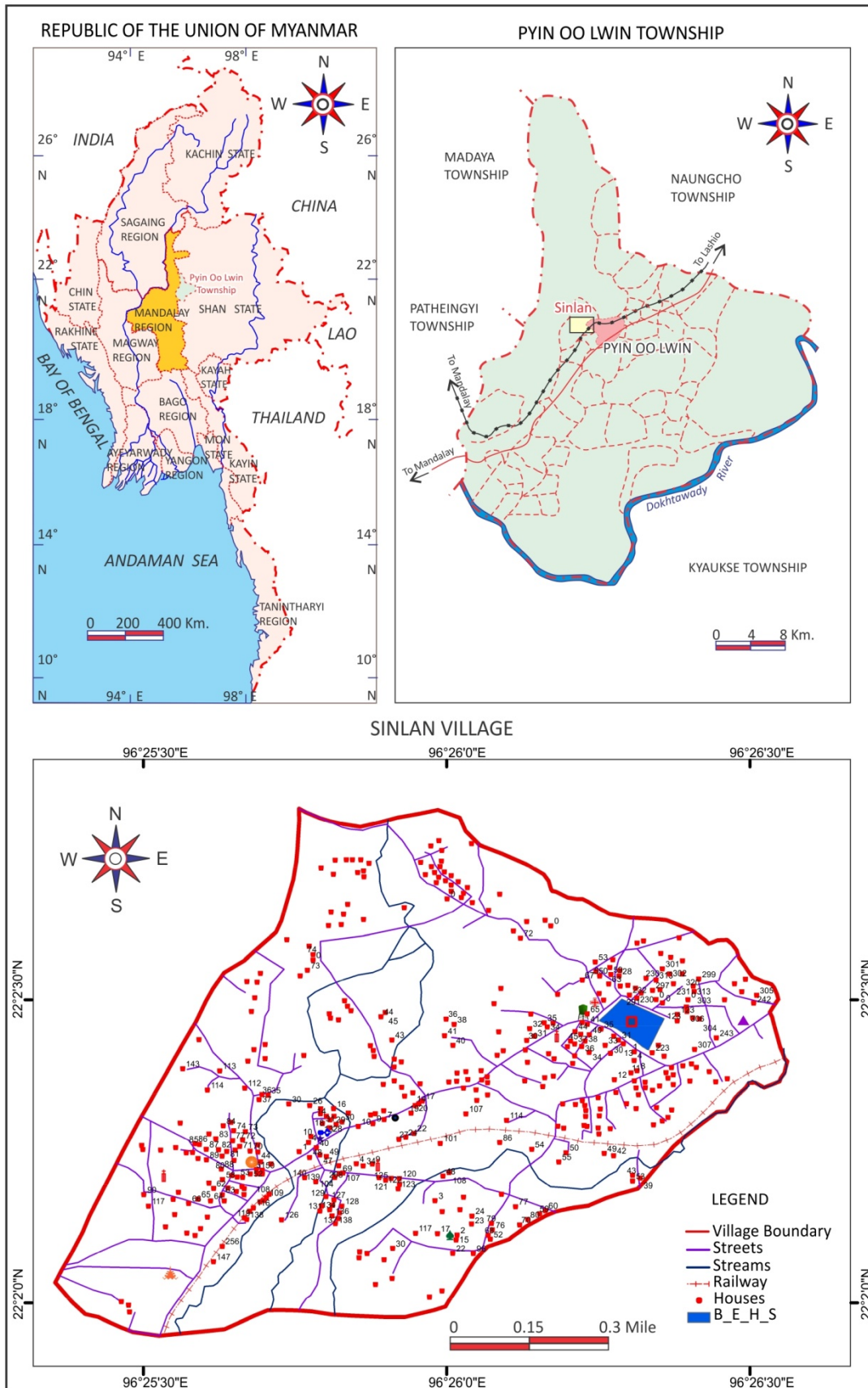
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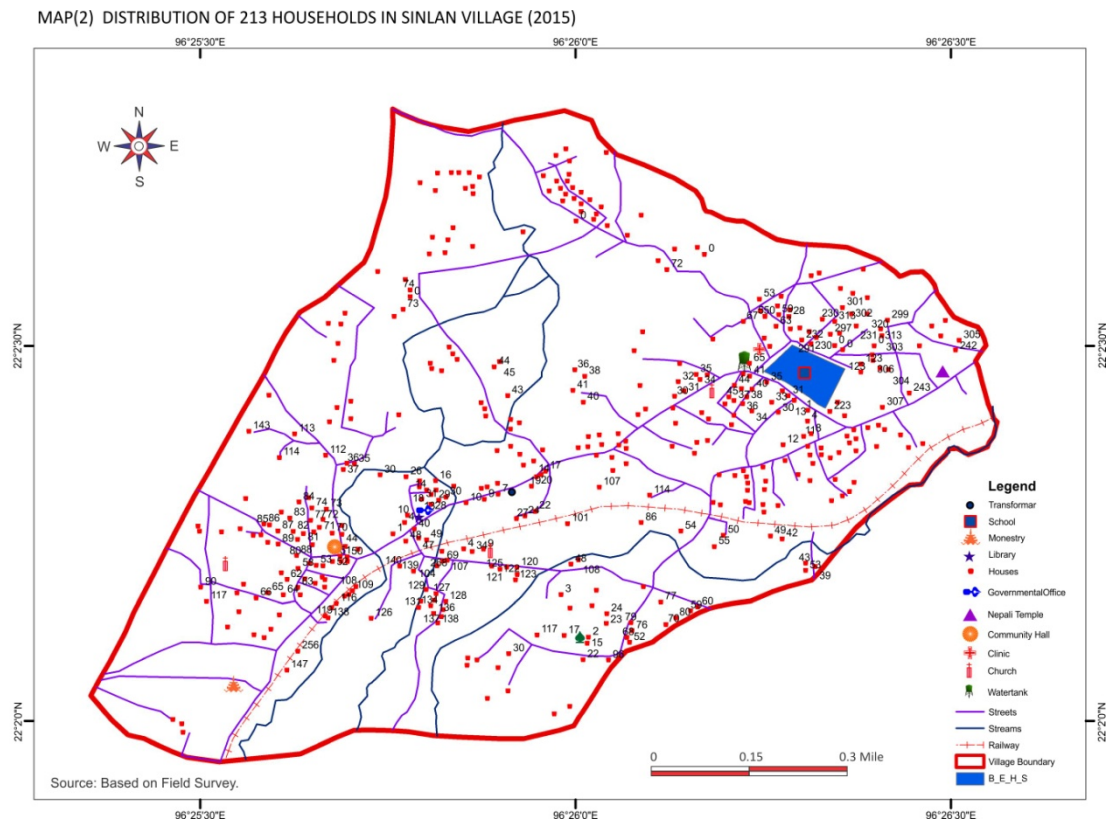
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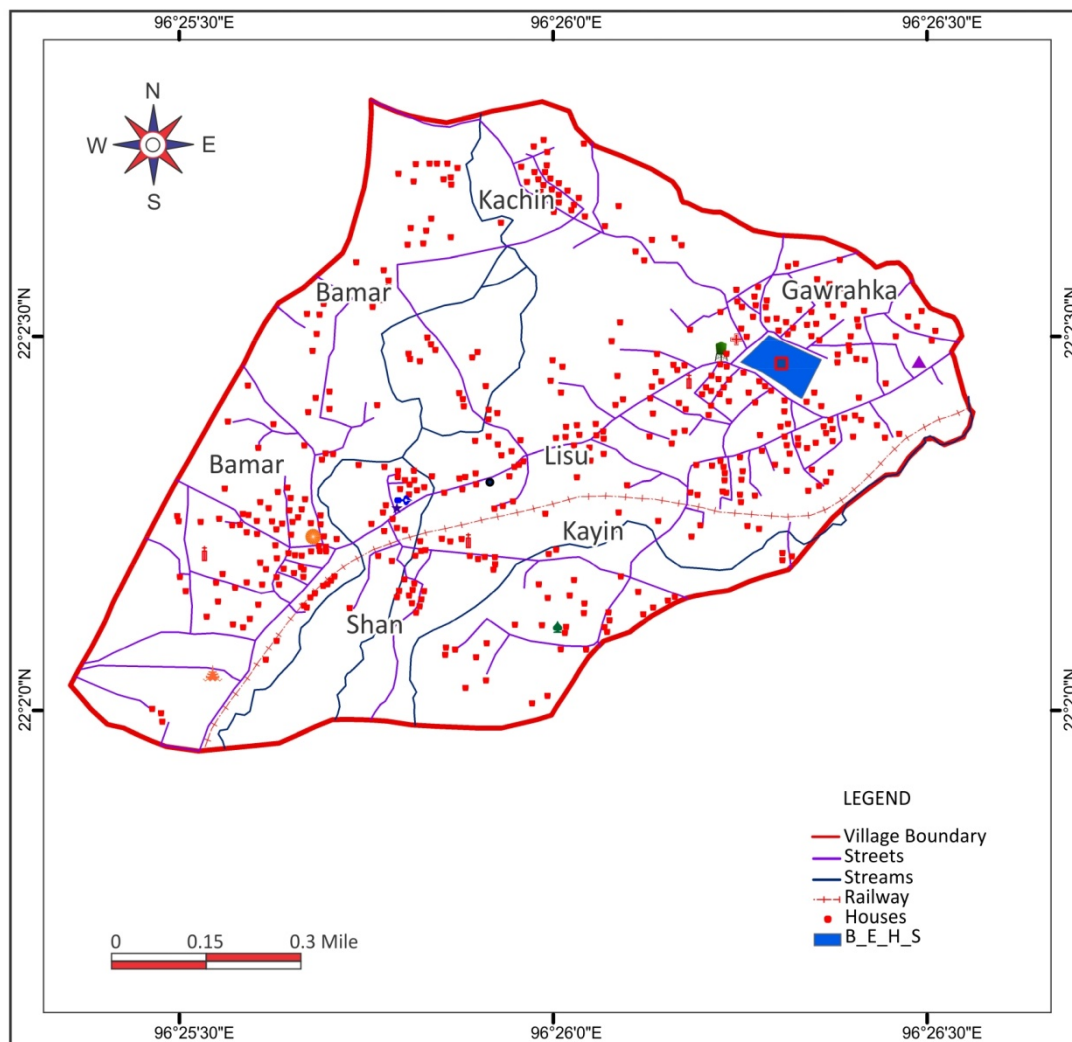
MAP (1) LOCATION OF SINLAN VILLAGE IN PYIN OO LWIN TOWNSHIP



Source: Based on UTM Map No. 2296_12 and Field Survey.



MAP (3) ETHNIC GROUPS IN SINLAN VILLAGE



Source: Based on Field Survey.