Final Report
January 2018

Environmental and Social Management for Thaton Combined Cycle Gas Turbine (CCGT) Power Plant

Socio Economic Survey - Kyar Ban, Than Ban, Inn Shey and Nyaung Wyne Villages

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3				

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Table of Contents

Disclaimer 3

Table of Contents I

List of Figures V

List of Tables XI

Abbreviations and Acronyms XIII

1. Executive Summary 1-1

1.1 Executive Summary 1-1

2. Introduction 2-1

2.1 Authorization 2-1

2.1.1 Electric Power Generation Enterprise (EPGE), Myanmar 2-1

2.2 Task 2: EHS Due Diligence Audit at Thaton Power Plant, including social survey 2-1

2.2.1 First sub-task: Due Diligence Audit at the Thaton Power Plant 2-1

2.2.2 Second sub-task: Socio-Economic Surveys 2-2

3. Lexicon for Easy Understanding 3-1

4. First Socio-Economic Survey 4-1

4.1 Education 4-1

4.2 Water Supply, Sanitation and Hygiene 4-1

4.3 Health 4-2

4.4 Ethnicity and Culture 4-3

4.5 Livelihood 4-4

4.6 Household’s Access to Electricity, Tariff and Willingness to Pay 4-5

4.7 Community Involvement in the Thaton PP 4-6

5. Full Socio-Economic Survey 5-1

5.1 Objectives 5-1

5.2 Survey Methodology 5-2

5.3 Findings from the Data collected by Questionnaires - Part I - General socio-economic situations of Households 5-3

5.3.1 Population Characteristics 5-3

5.3.2 Education 5-15

5.3.3 Health Situation 5-21

5.3.4 Water Supply 5-25
5.3.5 Sanitation and Hygiene 5-31
5.3.6 Environment 5-35
5.3.7 Employment 5-37
5.3.8 Gender Aspects 5-40
5.3.9 Household Assets 5-42
5.3.10 Productive Assets 5-47
5.3.11 Household Income, Expenditure and Debt 5-54
5.3.12 Food Security 5-63
5.3.13 Electricity Supply and Usage 5-67
5.3.13.2 Utilisation of Electricity 5-70
5.3.14 Village/Community organisations 5-85
5.4 Findings from the Data collected by Questionnaires - Part II - Ethnic Households 5-89
5.4.1 Identities of Ethnic Households 5-89
5.4.2 Population of Ethnic Households 5-91
5.4.3 Diversity of Religion 5-92
5.4.4 Different Languages 5-93
5.4.5 Cultural Diversity 5-94
5.4.6 Ethnic Relationships as Perceived by Ethnic Households 5-95
5.4.7 Inter marriage between different ethinicities 5-102
5.4.8 Problems encountered by Ethnic Minorities 5-102
5.4.9 Accessibility of Ethnic Households to Health Services 5-107
5.4.10 Accessibility of Ethnic Households to Drinking Water Sources 5-110
5.4.11 Education Situation 5-112
5.4.12 Employment of Ethnic Population 5-118
5.4.13 Household Debt Situation for Ethnic Groups 5-122
5.4.14 Accessibility of Ethnic Households to Electricity 5-126
5.5 Findings from Key Informant Interviews 5-133
5.5.1 Matrix of Viewpoints taken by different Ethnic Groups on Some Ethnic Issues 5-134
5.5.2 A Matrix of Viewpoints taken by some Stakeholders on Some Social, Economic and Environmental Issues 5-140

6. Comparison with Historical Data 6-1

6.1 Changes in the number of Households and Population 6-2
6.1.1 Male and Female Population 6-2

6.2 Changes in the Ethnic Population 6-3
6.3 Changes in the Rate of Electricity Connection 6-4

7. Risk Analysis 7-1

8. Conclusion 8-1

8.1 Conclusion of the Social Survey 8-1
8.1.1 General Socio-Economic Situation 8-1
8.1.2 Social Impact of the Power Plant on Village Communities 8-2
8.1.3 Benefits from the Power Plant Project 8-2
8.1.4 Development Opportunities 8-3
8.1.5 Risk of Investment for the New Power Plant 8-3
8.1.6 People 8-4

9. References 9-1

10. Annexes 10-1

10.1 Annex 1: Full Texts of Key Informant Interviews 10-1
Social Issues 10-1
10.1.1 Event No.1: Interview with Village Administrator of Du Yin Seik Village Tract 10-1
10.1.2 Event No.2: Interview with A Member of Village Electrification Committee 10-3
10.1.3 Event No.3: Interview with Kayin Ethnic Leader of Kayin Su, Kyar Ban Village 10-5
10.1.4 Event No.4: Interview with a Leader of Kayin Literature & Culture Group, Kayin Su village 10-6
10.1.5 Event No.5: Interview with Pa-oh Ethnic Leader of Pa-oh Su, Kyar Ban Village 10-8
10.1.6 Event No.6: Interview with a Village Activist in Pa-oh Su, Kyar Ban Village 10-9
10.1.7 Event No.7: Interview with District Medical Officer, Thaton District Hospital 10-10
10.1.8 Event No.8: Interview with a Health Assistant, Thaton District Hospital 10-11
10.1.9 Event No.9: Interview with a Teaching Staff, State High School, Kyar Ban Village 10-13
10.1.10 Event No.10: Interview with a Management Staff of Thaton Tyre Plant 10-15
10.1.11 Event No.11: Interview with Township Engineer, Electricity Supply Enterprise, Thaton Township 10-17

10.1.12 Event No.12: Interview with Deputy Staff Officer, Department of Rural Development, the Thaton Township 10-17
Environmental and Public Health Issues 10-18
10.1.13 Event No. 1: Interview with DOA, Thaton 10-18
10.1.14 Event No. 2: Interview with the District Health Department, Thaton 10-18
10.1.15 Event No. 3: Interview with the Township General Administrative Department, Thaton 10-19
10.1.16 Event No. 4: Interview with the Rural Health Center, Kyar Ban Village 10-19
10.1.17 Event No.5 Interview with Village Tract Administrator, Du Yin Seik Village Tract 10-20
10.1.18 Event No. 6 Interview with Village Electrification Committee, Kyar Ban Village 10-20
10.1.19 Event No (7) Interviews with the Paoh Youth and Karen Youth Organizations, Kyar Ban 10-21
10.1.20 Event No.8 Interviews with Villagers at the Administrative Office, Kyar Ban 10-22
10.2 Annex 2: Photographic Documentation 10-24
10.2.1 Full socio-economic survey (August and September 2016) 10-24
10.3 Annex 3: Questionnaires used in the Socio-Economic Study 10-28
10.3.1 Household Survey Socio-Economic Survey Questionnaires - English 10-28
10.3.2 Household Survey Socio-Economic Survey Questionnaires - Burmese 10-40

List of Figures

Figure 5-1:	Male-Female Population in the surveyed villages (Sept. 2016)	5-4
Figure 5-2:	Male and Female Ratio in Total Population of all surveyed villages (Sept. 2016)	5-4
Figure 5-3:	Population by Age Groups in the surveyed villages (Sept. 2016)	5-5
Figure 5-4:	Population by Age Groups in the surveyed villages (Sept. 2016)	5-5
Figure 5-5:	Male - Female Population Ratio in the surveyed villages (Sept. 2016)	5-6
Figure 5-6:	Male - Female Student Percentage in the surveyed villages (Sept. 2016)	5-7
Figure 5-7:	Average number of Students in Every 10 households in the surveyed villages (Sept. 2016)	5-8
Figure 5-8:	Migrant Worker Population in the surveyed villages (Sept. 2016)	5-9
Figure 5-9:	Average Migrant Workers per 10 Households in the surveyed villages (Sept. 2016)	5-9
Figure 5-10:	Persentage of Old Aged and Disabled Population in the surveyed villages (Sept. 2016)	5-10
Figure 5-11:	Percentage of Man - or Woman- headed Households in the surveyed villages (Sept. 2016)	5-11
Figure 5-12:	Overall Ratio of Man - or Woman- headed Households in the surveyed villages (Sept. 2016)	5-12
Figure 5-13:	Family members Living with Head of Households in the surveyed villages (Sept. 2016)	5-12
Figure 5-14:	Education levels of Household members in the individual villages (Sept. 2016)	5-16
Figure 5-15:	Overall Education levels of Household members in the surveyed villages (Sept. 2016)	5-16
Figure 5-16:	Overall Education levels of Male population in the surveyed villages (Sept. 2016)	5-17
Figure 5-17:	Overall Education levels of Female population in the surveyed villages (Sept. 2016)	5-17
Figure 5-18:	Children of school going age, school children and out-of-school children in the surveyed villages (Sept. 2016)	5-18
Figure 5-19:	Overall Percentage of School children & out-of-school children in the surveyed villages (Sept. 2016)	5-18
Figure 5-20:	Overall Percentage of Household Achieving different education levels in the survey villages (Sept. 2016)	5-19
Figure 5-21:	Percentage of Household with different Distance from schools in the surveyed villages (Sept. 2016)	5-20
Figure 5-22:	Five most common diseases in the surveyed villages (Sept. 2016)	5-21
Figure 5-23:	Easy Access to Health Facilities in the survey villages (Sept. 2016)	5-22
Figure 5-24:	Indicative Healthare priorities of Households in the survey villages (Sept. 2016)	5-23
Figure 5-25:	Indicative Healthare of Households in the surveyed villages (Sept. 2016)	5-24
Figure 5-26:	Sources of Drinking Water in the surveyed villages (Sept. 2016)	5-25
Figure 5-27	Sources of Water for Domestic Use in the surveyed villages (Sept. 2016)	5-26
Figure 5-28	Overall Percentage of Male & Female Water Carrier for Households in the surveyed villages (Sept. 2016)	5-26

Figure 5-29:	Percentage of Households Encountering Water shortge during the year in the surveyed villages (Sept. 2016)	5-27
Figure 5-30:	Extent of Water Shorttage in the surveyed villages (Sept. 2016)	5-27
Figure 5-31:	Coping with Water Shortage in the surveyed villages (Sept. 2016)	5-28
Figure 5-32:	Types of Diseases inflicted from Poluted Water in the surveyed villages (Sept. 2016)	5-29
Figure 5-33:	Changes in Taste of Drinking Water in the surveyed villages (Sept. 2016)	5-29
Figure 5-34:	Incidences of Diseases from Use of Unclean Water in the surveyed villages (Sept. 2016)	5-30
Figure 5-35:	Overall Situation of Hand Washing habits in the surveyed villages (Sept. 2016)	5-31
Figure 5-36:	Overall Percentages of Households Having Toilet in the surveyed villages (Sept. 2016)	5-32
Figure 5-37:	Percentages of Households using different Toilets in the surveyed villages (Sept. 2016)	5-32
Figure 5-38:	Cleaning Habits after using Toilet - overall situation in the surveyed villages (Sept. 2016)	5-33
Figure 5-39:	Years of Toilet use - overall situation in the surveyed villages (Sept. 2016)	5-33
Figure 5-40:	Percentage of household using different disposal of toilet waste in the surveyed villages (Sept. 2016)	5-34
Figure 5-41:	Households'solid waste disposal practices in the surveyed villages (Sept. 2016)	5-34
Figure 5-42:	Food hygiene practices - overall situation in the surveyed villages(Sept. 2016)	5-35
Figure 5-43:	Environmental Degradation Situation - as perceived by villagers in the surveyed villages (Sept. 2016)	5-36
Figure 5-44:	Environmental Pollution - as perceived by villagers in the surveyed villages (Sept. 2016)	5-36
Figure 5-45:	Effect of Climate Change - as perceived by villagers in the surveyed villages (Sept. 2016)	5-37
Figure 5-46:	Average Number of Workers (over 18) per household in the surveyed villages (Sept. 2016)	5-38
Figure 5-47:	Average Number of Workers (under 18) per household in the surveyed villages (Sept. 2016)	5-38
Figure 5-48:	Overall Percentage of Males in different employent in the surveyed villages (Sept. 2016)	5-39
Figure 5-49:	Overall Percentage of Females in different employents in the surveyed villages (Sept. 2016)	5-39
Figure 5-50:	Overall Sitation - Division of labour between Male & Female (female performing households as 1) in the surveyed villages (Sept. 2016)	5-40
Figure 5-51:	Overall Situation - Right & Responsibility between male and female (Female speific household as 1) in the surveyed villages (Sept. 2016)	5-41
Figure 5-52:	Overall Situation - Decision makers (between male and female) in the households in the surveyed villages (Sept. 2016) (number of households	5-42
Figure 5-53:	House Owernship situations in the surveyed villages (Sept. 2016)	5-43

Figure 5-54: Ownership Situations of house compound (premises) in the surveyed villages (Sept. 2016) 5-43
Figure 5-55: Overall Situation - legal title of house compound land in the surveyed villages (Sept. 2016) 5-44
Figure 5-56: Size of Houses in the surveyed villages (Sept. 2016) 5-45
Figure 5-57: Area of House compound land in the surveyed villages (Sept. 2016) 5-45
Figure 5-58: Overall Situation - types of houses in the surveyed villages (Sept. 2016 5-46
Figure 5-59: House Structure - numbers of storeys in the surveyed villages (Sept. 2016) 5-46
Figure 5-60: Possesion of other household property numbers of each type o fasset per 10 households in the surveyed villages (Sept. 2016) 5-47
Figure 5-61: Shop owernship in the surveyed villages (Sept. 2016) 5-48
Figure 5-62: Overall situation -percentage of small industries in the surveyed villages (Sept. 2016) 5-49
Figure 5-63: Ownership of Productive Land in the surveyed villages (Sept. 2016) 5-50
Figure 5-64: Overall situation - Owernship of Productive Land in the surveyed villages (Sept. 2016) 5-50
Figure 5-65: Overall situation - types of productive land owned by households in the surveyed villages (Sept. 2016) 5-51
Figure 5-66: Overall situation - sizes of productive lands owned by households in the surveyed villages (Sept. 2016) 5-52
Figure 5-67: Ownership of other productive assets in the surveyed villages (Sept. 2016) 5-53
Figure 5-68: Overall situation - ownership of other productive assets - percentages of “have“ or “have not“ households in the surveyed villages (Sept. 2016) 5-53
Figure 5-69: Situation of household main income sources in the surveyed villages (Sept. 2016) 5-54
Figure 5-70: Percentages of subsidiary income sources in the surveyed villages (Sept. 2016) 5-55
Figure 5-71: Households Using Other Land Use Options (i.e Collecting of Forest Products) in the surveyed villages (Sept. 2016) 5-56
Figure 5-72: Expenditure levels of households in the surveyed villages (monthly average during previous 12 months) (Sept. 2016) 5-58
Figure 5-73: Income levels of households in the surveyed villages (monthly average during previous 12 months) (Sept. 2016) 5-59
Figure 5-74: Overall Situation - levels of household expenditure in the surveyed villages (Sept. 2016) 5-60
Figure 5-75: Extent of Income’s coverage over expenditure in the surveyed villages (Sept. 2016) 5-61
Figure 5-76: Household debt situation in the surveyed villages (Sept. 2016) 5-62
Figure 5-77: Household coping with debt strategies in the surveyed villages (Sept. 2016) 5-63
Figure 5-78: Overall situation - household monthly rice consumption in the surveyed villages (Sept. 2016) 5-64
Figure 5-79: Rice market for households - overall situation in the surveyed villages (Sept. 2016) 5-65
Figure 5-80: Rice shortage months - overall situation in the surveyed villages (Sept. 2016) 5-65

Figure 5-81:	Reasons for rice shortage - overall situation in the surveyed villages (Sept. 2016)	5-66
Figure 5-82:	Household coping strategies for rice shortage situation - overall situation in the surveyed villages (Sept. 2016)	5-67
Figure 5-83:	Household connection to electric power line in the surveyed villages (Sept. 2016)	5-68
Figure 5-84:	Overall situation of household connection to electric power line in the surveyed villages (Sept. 2016)	5-68
Figure 5-85:	Overall Situation in the Utilization of electricity by households in the surveyed villages (Sept 2016)	5-70
Figure 5-86:	Electricity Utilization situations in the surveyed villages (Sept. 2016)	5-70
Figure 5-87:	Reasons for not using electricity in individual households in the surveyed villages (Sept. 2016)	5-72
Figure 5-88:	Overall Situation on household use of alternative energy sources (candle & firewood) in the surveyed villages (Sept. 2016)	5-72
Figure 5-89:	Household Consumption of electricity in the surveyed villages (Sept. 2016)	5-73
Figure 5-90:	Household opinion about the electricity bills collection methods in the surveyed villages (Sept. 2016)	5-74
Figure 5-91:	Priority levels expressed by household on benefits of electricity supply services in the surveyed villages (Sept. 2016)	5-74
Figure 5-92:	Dislike levels expressed by households on the faults and problems of electricity supply service in the surveyed villages (Sept. 2016)	5-75
Figure 5-93:	Community long term perspective views of impact of power supply programme in the surveyed villages (Sept. 2016)	5-76
Figure 5-94:	Relationship of Household Income and Connection to Electricity in all surveyed Villages (Sept. 2016)	5-78
Figure 5-95:	Relationship between Household Income and Connection to Electricity in Pa-oh Su Village (Sept. 2016)	5-79
Figure 5-96:	Relationship between Household Income and Connection to Electricity in Kayin Su Village (Sept. 2016)	5-79
Figure 5-97:	Relationship between Household Income and Connection to Electricity in Thone Ein Su Village (Sept. 2016)	5-80
Figure 5-98:	Relationship between Household Income and Connection to Electricity in Than Ban Village (Sept. 2016)	5-80
Figure 5-99:	Relationship between Household Income and Connection to Electricity in Inn Shey Village (Sept 2016)	5-81
Figure 5-100:	Relationship between Household Income and Connection to Electricity in Nyaung Wyne Village (Sept. 2016)	5-81
Figure 5-101:	Community Organizations in the surveyed villages (Sept. 2016)	5-85
Figure 5-102:	Percentage of Ethnic Households in each of the surveyed villages (Sept. 2016)	5-90
Figure 5-103:	Overall percentage of Ethnic Households in the surveyed villages (Sept. 2016)	5-90
Figure 5-104:	Percentage of Population of Ethnic Households in Individual Survey Villages (Sept 2016)	5-91
Figure 5-105:	Overall Percentage of Population of Ethnic Households in All Survey Villages (Sept 2016)	5-91
Figure 5-106:	Religion Diversity (percentage of Households) in the surveyed villages (Sept. 2016)	5-92

Figure 5-107: Religion Diversity (percentage of total Households) in the surveyed villages (Sept. 2016) 5-92
Figure 5-108: Language Diversity (percentage of total Households) in the surveyed villages (Sept. 2016) 5-93
Figure 5-109: Language Diversity (percentage of total Households) in the surveyed villages (Sept. 2016) 5-93
Figure 5-110: Cultural Diversity (percentage of total Households) in the surveyed villages (Sept. 2016) 5-94
Figure 5-111: Cultural Diversity (Overall Percentage of Practictioning Households) in the surveyed villages (Sept. 2016) 5-95
Figure 5-112: Overall Perception of Ethnic Relationships as Evidenced by Ethnic Households in All Surveyed Villages (Sept. 2016) 5-96
Figure 5-113: Ethnic Relationship as Perceived by Ethnic Households in Individual Villages (Sept. 2016) 5-97
Figure 5-114: Ethnic Relationships as perceived by Ethnic Households in Paoh Su village (Sept. 2016) 5-98
Figure 5-115: Ethnic Relationships as perceived by Ethnic Households in Kayin Su village (Sept. 2016) 5-98
Figure 5-116: Ethnic Relationships as perceived by Ethnic Households in Thone Ein Su village (Sept. 2016) 5-99
Figure 5-117: Ethnic Relationship as perceived by Ethnic Households in Than Ban village (Sept. 2016) 5-100
Figure 5-118: Ethnic Relationships as perceived by Ethnic Households in Inn Shey village (Sept. 2016) 5-100
Figure 5-119: Ethnic Relationship as perceived by Ethnic Households in Nyaung Wyne village 5-101
Figure 5-120: Households with Inter-marriages between Ethnic Groups in the surveyed villages (Sept. 2016) 5-102
Figure 5-121: Problems for Ethnic Minorities in individual surveyed villages (Sept. 2016) 5-103
Figure 5-122: Problems for Ethnic Minorities in All Surveyed Villages (Sept. 2016) 5-103
Figure 5-123: Problems for Ethnic Households by Ethnic Group (Overall Situation for All Survey Villages) (Sept. 2016) 5-104
Figure 5-124: Problems for Ethnic Households in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016) 5-105
Figure 5-125: Problems for Ethnic Households in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016) 5-106
Figure 5-126: Problems for Ethnic Households in Inn Shey Village (left) and Nyaung Wyne Village (right) (Sept. 2016) 5-106
Figure 5-127: Accessibility of Ethnic Households to Health Services (Overall Situation) in All Survey Villages (Sept. 2016) 5-107
Figure 5-128: Accessibility of Ethnic Households to Health Services in Paoh Su Village (left) and Kayin Su Village (right) (Sept. 2016) 5-108
Figure 5-129: Accessibility of Ethnic Households to Health Services in Thone Ein Su Village (left) and in Than Ban Village (Sept. 2016) 5-108
Figure 5-130: Accessibility of Ethnic Households to Health Services in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016) 5-109
Figure 5-131: Accessibility of Ethnic Households to Drinking Water Sources (Overall Situation for All Survey Villages - Sept. 2016) 5-110

Figure 5-132: Accessibility of Ethnic Households to Drinking Water in Paoh Su Village (left) and Kayin Su Village (right) (Sept. 2016) 5-111
Figure 5-133: Accessibility of Ethnic Households to Drinking Water in hone Ein Su Village (left) and Than Ban Village (right) (Sept. 2016) 5-111
Figure 5-134: Accessibility of Ethnic Households to Drinking Water in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept 2016) 5-112
Figure 5-135: Ethnic Composition in Education Attainment Levels in All Survey Villages (Sept 2016) 5-113
Figure 5-136: Ethnic Composition in Education Levels Attainment in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016) 5-117
Figure 5-137: Ethnic Composition in Education Levels Attainment in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept 2016) 5-117
Figure 5-138: Ethnic Composition in Education Levels Attainment in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016) 5-118
Figure 5-139: Average Number of People Employed Per Ethnic Household - Overall Situation for All Surveyed Villages (Sept. 2016) 5-119
Figure 5-140: Average Number of People Employed per Ethnic Household in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016) 5-120
Figure 5-141: Average Number of People Employed per Ethnic Household in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016) 5-120
Figure 5-142: Average Number of People Employed per Ethnic Household in Inn Shey Village and in Nyaung Wyne Village (Sept. 2016) 5-121
Figure 5-143: Debt Situation of Ethnic Households - Overall Situation for All Survey Villages (Sept 2016) 5-123
Figure 5-144: Debt Situation of Ethnic Households in Paoh Su Village (left) and in Kayin Su Village (right) (Sept 2016) 5-124
Figure 5-145: Debt Situation of Ethnic Households in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016) 5-124
Figure 5-146: Debt Situation of Ethnic Households in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016) 5-125
Figure 5-147: Status of Connection vs Non connection to electricity among Households of Different Ethnic Groups in All Survey Villages (Sept. 2016) 5-126
Figure 5-148: Status of Connection vs Non connection to Electricity among Kayin Ethnic Households in Individual Survey Villages (Sept 2016) 5-127
Figure 5-149: Status of Connection vs Non connection to Electricity among Bamar Ethnic Households in Individual Survey Villages (Sept 2016) 5-128
Figure 5-150: Status of Connection vs Non connection to Electricity among Paoh Ethnic Households in Individual Survey Villages (Sept. 2016) 5-128
Figure 5-151: Status of Connection vs Non connection to Electricity among Mon Ethnic Households in Individual Survey Villages (Sept. 2016) 5-129
Figure 5-152: Status of Connection vs Non connection to Electricity among Yakhine Ethnic Households in Individual Survey Villages (Sept. 2016) 5-130
Figure 5-153: Status of Connection vs Non connection to electricity among households of Different Ethnic Groups in All survey Villages (Sept. 2016) (Total number of households in all survey villages =100) 5-131
Figure 5-154: Status of Non-Connected vs Connected Households in All Survey Villages (Sept 2016) 5-132

Figure 6-1: Changes in Ethnic Population during the time lapse between the two surveys 6-3
Figure 6-2: Changes in HHC & HHN in Survey Villages During the Time Lapse between THE Two Surveys 6-4
Figure 10-1: Explanation on survey questionnaire to the volunteer village youth (6-9-2016) 10-24
Figure 10-2: Explanation on survey questionnaire to the volunteer village youth (6-9-2016) (2) 10-24
Figure 10-3: Water source is enough for household use, Kyar Ban village 10-24
Figure 10-4: Eugenia plantation, Kyar Ban village 10-24
Figure 10-5: Latrines of septic tank system at the corner of the compound, Kyar Ban village 10-24
Figure 10-6: Fly-proof latrine at the back of the house, blue color structure, Kyar Ban village 10-24
Figure 10-7: Survey visit at Karin- youth leader, Kyar Ban village (7-9-2016) 10-25
Figure 10-8: Discussion at a coffee shop, Kyar Ban village (7-9-2016) 10-25
Figure 10-9: Group discussion with villagers from Than Ban village (8-9-2016) 10-25
Figure 10-10: Kyar Ban State High School 10-25
Figure 10-11: Rural Health Center in Kyar Ban 10-25
Figure 10-12: Preparing Betel leaves for the market in Than Ban Village 10-25
Figure 10-13: Raising goats for additional income in Kayin Su 10-25
Figure 10-14: A traditional Kayin House with animist worship-shed in Kayin Su 10-25
Figure 10-15: A sub-power line connected to the house of a relative 10-26
Figure 10-16: Overhead lines 10-26
Figure 10-17: A sub-power line connected to the house of a relative 10-26
Figure 10-18: View of Thaton Power Plant from Than Ban 10-26
Figure 10-19: Rubber sheet after processing 10-26
Figure 10-20: A fruit shop on the main motor road 10-26
Figure 10-21: A Saw Mill Pa-oh Su 10-26
Figure 10-22: A general store in Kayin Su 10-26
Figure 10-23: A Mobile Phone seller in Pa-oh Su 10-27

List of Tables

Table 5-1: Number of HH covered by the full socio-economic survey 5-1
Table 5-2: Number of Households and Population in the surveyed villages (Sept. 2016) 5-3
Table 5-3: Male and Female Population in the surveyed villages (Sept. 2016) 5-4
Table 5-4: Male & Female Schoolchildren in the surveyed villages (Sept. 2016) 5-7
Table 5-5: Number of Migrant Workers in the surveyed villages (Sept. 2016) 5-8
Table 5-6: Elderly and Disabled Population in the surveyed villages (Sept. 2016) 5-10
Table 5-7: Average Number of Visit to Doctor during the previous 12 months in the surveyed villages (Sept. 2016) 5-24
Table 5-8: Score Sheet for Comparing Severity of Problems encountered by Ethnic Groups (Sept. 2016) 5-105
Table 5-9: Percentage of Ethnic Population at Different Education Attainment levels and Relative Arbitrary Merit Indexes 5-116

Table 5-10: Education Attainment of Ethnic Households in Individual Survey Villages 5-118
Table 6-1: Changes in the number of households and population during the time lapse between the two surveys 6-2
Table 6-2: Changes of the % of Male and Female population during the time lapse between the two surveys 6-2

Abbreviations and Acronyms

CBO	Community-based Organizations
CCGT	Combined Cycle Gas Turbine
CSO	Civil Society Organizations
DD	Due Diligence
DDA	Department of Development
DMO	District Medical Officer
EHS	Environment, Health and Safety
ESE	Electricity Supply Enterprise
GAD	General Administration Department
HA	Health Assistant
HH	Household(s)
HHC	Households with connection (to electric supply)
HHN	Households with no connection (to electric supply)
IDA	International Development Association
KII	Key Informant Interview
KIP	Key Informant Persons
MMK	Myanmar Kyat (currency)
NEP	National Electrification Plan
PP	Power Plant
PVC	Polyvinyl chloride
RHC	Rural Health Center
TB	Tuberculosis
USD	United States Dollar
VA	Village Administrator (presently Village Tract Administrator)
VEC	Village Electrification Committee

1. Executive Summary

1.1 Executive Summary

This report presents the current socio-economic situation of the village communities surrounding the Thaton Gas Turbine Plant, namely Kyar Ban (incl. Pa-oh Su, Kayin Su and Thone Ein Su), Than Ban, Inn Shey and Nyaung Wyne. The survey itself aims to understand the socio-economic setting of the village communities and the impact of the power plant on the existing conditions.

A first general socio-economic survey of the surroundings of the Thaton Power Plant was undertaken in July 2016, aiming at the identification of social risks appearing from the existing plant ("**first socio-economic survey**"). In September 2016, a new visit to the power plant area was undertaken to clarify open issues from the first visit and undertake the full survey ("**full socio-economic survey**").

The main results are shown in this report for the general population and separately for the different ethnic groups. They are summarized below.

Population characteristics
The number of households in the villages is 841 and the population is 4,399. The average family size is 5.2 per household. This comes close to the average in most rural areas in Myanmar. There is a balanced ratio of male and female population. The 18-60 age-group constitutes the majority of the population, which could be regarded as a healthy sign, as it means that all the villages have ample workforce. On average, each household has one schoolchild. Migrant workers account for 10% of the population in every village except Pa-oh Su and Nyaung Wyne. The overall percentage of elderly and disabled people is 1%. 83% of the households are male-headed households. 59% of the households have sons or daughters and grandchildren living with the head of household and their spouses.

Ethnicity and Religion
Kayin ethnic households constitute 62% of the households, followed by Bamar and Pa-oh. Among the different religions, Buddhist households make up over 90%; 80% of these follow Buddhist traditional cultural practices (observing the Sabbath, etc.). Kayin is spoken by 56% of the households. Intermarriage between different ethnic persons had taken place in between 10 and 29% of all households. The most common problems encountered by ethnic minorities are:

1. Lack of employment 38%
2. Diminishing income 31%
3. Lack of skills training 29%
4. Loss of land 26%

Education
The general educational level of the households is low. 34% of the population has only primary education. Males and females share similar percentages at each educational level. 29% of the population are school-age children.

Health
The most common diseases are influenza, malaria, pneumonia, diarrhoea and dysentery. The communities have easy access to hospitals, doctors and rural health centres. Village communities know about and observe sound healthcare practices. “Consulting doctor” and “Going to rural health centre” are regarded as priorities by the community.

Water supply
The households depend on hand-dug wells (private and public) for their water supply. Water shortages exist but in most cases only for a one-month period. Households cope with water shortage problems by using less than usual. There are no reports of the taste and colour of drinking water changing. Only a small percentage of the households had experienced water-borne diseases.

Sanitation and Hygiene
83% of the households have toilets and 50 to 90% in individual villages use fly-proof latrines. There is no solid waste collection service provided by the Township Development Committee. Most households burn the waste, and some throw it into a pit. 90% of the households observe food hygiene practices and there were no reported cases of food poisoning.

Environment
A good percentage of the households in individual villages have a basic perception of environmental degradation, environmental pollution and the effects of climate change.

Employment
1.2 to 1.6 male members and 0.4 to 1.7 female members per household are employed. The largest section is employed as field casual workers. The second largest group are cross-border migrant workers. A small percentage of the workforce is hawkers or mobile vendors.

Gender aspects
Male household members are more involved in field work (paddy/ rubber plantation) with a male to female ratio of 2.4:1. Male members are less involved in activities such as domestic chores, backyard gardening, tending cattle, etc. More male members take responsibility in earning income and more female members are responsible for managing expenses. More male members have rights to skills training and to higher saleries. Generally male members are the decision-makers in the households.

Household Assets
Almost all the households own their houses. 20-30% of households had no legal title on the land they live. Most houses in the villages are smaller than1,000 sq.ft, 55% of the households have wooden houses and 87% have one-storey houses.

Productive Assets
Less than 10% of the households in most of the villages own retail shops. Only 12% of the households are engaged in small industry. 53% have land for productive use. Of these, 59% own plantation land, 16% farmland and 25% other lands (garden land, etc). 66% of the land-owning households has less than 1 acre, 24% 1 to 10 acres and 7% more than 50 acres.

Household Income, Expenditures and Debt
Most of the households in individual villages rely on income from casual labour. Other subsidiary income sources include animal breeding and collecting forest products (firewood, bamboo shoots, etc).

63 to 87% of the households had monthly incomes of 100,000 to 300,000 MMK (equiv. to around 82.8 and 248.3 USD). Similarly, 60 to 80% has adequate income to cover expenditures and is able to do savings. Others had barely enough income to cover expenditures and had to borrow. Most households borrow money from relatives to cope with debt situations.

Food Security
66% of the households consumes 1-2 baskets (1.5 baskets of rice = 50 kilos) of rice monthly. Rice is normally bought from shops in the village. 97% have a one-month rice shortage period. Households choose to borrow rice from relatives as a typical option.

Electricity Supply and Usage
In total, 58% are not connected to electricity. 24.6% use electricity for lighting. The second most common use was cell phone recharging. The most common reason for non-connection was that households can not pay the fees for network construction. Alternative energy sources were firewood for cooking and candles for lighting. The households' electricity consumption ranged from 3,000-5,000 MMK and 5,000-10,000 MMK (around 2.5, 4.1 and 8.3 USD) per month.

Households' "likes" about electricity supply were (1) easy for cooking and (2) lighting at night. "Dislikes" are (1) system failures, (2) low voltage problems. Community long-term views on the electricity supply were positive. For example, 69% think that its impact on employment opportunities and local interest is positive. 83% consideres the current tariff rate as reasonable. Most communities think the current rate is fine but they do not wish to pay more for better services.

Communication and information-sharing between the power plant management and the village communities are generally conducted

through the Village Electrification Committee (VEC). 44% of the respondents said that they received information from village representatives who attended meetings with the VEC.

Village/Community organisations
Four types of organisation were prevalent in the villages, including youth organisations, social welfare organisations, religious activity groups and ethnic literature and cultural groups. Households generally participate in social welfare groups as members.

Key Informant Interviews
Interviews were conducted with key informants who could provide expert views on their respective sectors. The interviews attempted to cover ethnic issues, village administration, education, health, electricity supply, environmental issues, public health, and others. The findings from the Key Informant Interviews were used to supplement, reinforce or counterbalance the information collected in the household survey.

Land Use
No exact figures on land use were collected during the survey. In general, agricultural land is used for paddy fields and rubber plantation. Forest land on the hill was also used for collecting bamboo shoots, mushroom, firewood and other non-timber forest products. Low land around lake areas and river beds were used for growing vegetables after the monsoon. Backyard gardens were also used for growing betel leave plants and vegetables.

Migration
Trans-boundary labor migration had long been a household strategy for local people in coping with difficult economic situations at home and in search of better livelihood opportunities. On average, every household had at least one to two members at some time working as migrant labors. Negative impact on migrant workers included unsafe environment, loss of contact with family members and vulnerable to human trafficking and HIV/AIDS. However, better pays and stable job enable people to provide substantial support to their households.

Community-based Organizations
Except for the Village Electrification Committee, nearly all existing community organizations had objectives not specifically concerned with the power plant. They were generally involved in maintaining religious traditional practices, promoting cultural activities, undertaking social welfare and charity activities. Most community organizations limited their area of operation within the villages and had been traditionally maintained for years if not decades.

Interaction between the power plant and local communities

Village communities in the neighborhood of the power plant had attempted to tap the electricity from the plant for their use through establishing a Self-Help Village Electrification System. However the system did not achieve equitable participation of the households in the system and universal benefit to all households. Survey data identified "affordability" as the reason for households failing to get connected to electricity. The Village Electrification Committee had gradually brought down the contribution required for getting connected to electricity. Still there Is a substantial percentage of household without connected to electricity. The VEC had dwelled on the idea of having an international agency to provide grant through a project and that the grant should supplement the existing community fund. The committee could then continue to connect cable lines to all remaining households and also extend to further villages. Part of the survey showed that 64% of total households in all survey villages thought it was correct for government to provide electricity free of charge in rural areas.

Advocacy for equitable participation by all ethnic groups in the local development programme was frequently articulated by village activists. Their expectation included "more employment, more skill training opportunities, rights to livelihood, etc".

Among Po-ah young people, there were talks about introducing a system of allocating proportional slots of employment for different ethnic groups. They also thought that bringing outsiders in the development projects often created problems which tarnished the image of local population. Outsiders could not care much about local interest and did not understand local custom.

According to key informants during the interviews, noise emission from the power plant was audible (particularly at night) in the two nearest villages (Than Ban and Kyar Ban-Paoh Su). Noise measurement conducted by NorConsult survey (2013) found that noise levels generated by the existing power plant operation are from 54.8 dB in the centre of the Kyar Ban village (human ear can tolerate on an average 45 to 60 dB without much discomfort).

A concern for road safety arose from the heavy traffic on the Yangon-Bago-Myawaddy Highway. The road started five years ago and as the villages are built along the road side, local residents were being exposed to traffic accidents, dust and noise.

Despite the views of village communities regarding the consequences of fire and explosion, air pollution and health hazards, the relatively clean energy guaranteed by gas fire power generation technology and a track record of zero major incidents over years of operation provided a strong argument to contradict the views of communities.

The survey showed that the Village Electrification Committee was the essential communication link between the power plant management and the village communities. The committee maintained a close relationship with the plant management, acting very much like an agent of the plant management. 44% of the respondents said that they received information from village representatives who attended the meetings with the VEC. Another 46% said that the committee came to their villages to discuss the matters at village meetings.

There was not much social interaction between people of the communities and the power plant. No villagers from surrounding villages work in the plant. Most workers and staff came from Thaton town and other staff lived in housing quarters separate from surrounding villages. No mutual participation in social events (such as weddings, religious events, etc) between two societies.

Brief on Socio-Economic Situations of the Surveyed Villages

Kyar Ban village

It is the largest among the surveyed villages with a total of 405 households and a population of 2,144. Kayin households make up about half of the village total with significant percentages of Pa-oh, Bamar and Mon households. Main livelihood is farming and rubber plantation. It has a government high school which is providing education to children of villages in Du Yin Seik village tract and also some other neighboring village tracts. It also has a village health center staffed by one health assistant and 2 nurses. It is accessible by Yangon- Hpaan main motor road. Kyar Ban village is divided at about the middle by the motor road into two main sections; Kayin and Paoh populations are concentrated in different sections, i.e, Paoh Su and Kayin Su sections. A third section is located nearer Paoh Su and is inhabited by a mix of Bamar, Mon and Kayin households.

Paoh Su Community of Kyar Ban Village

39% of village households are Paoh. Male and female populations are about equal. 56% of population is in 18-60 age group. The percentage of population having atteined primary education level is the largest (39%). Common diseases are malaria, dysentry and diahorrea. 96% of households have their own hand-dug wells. 64.4% of households have fly proof latrines. 37% of household have 1 month food shoatrtage in a year. Employment rate is 1.2 male and 1.1 female per household. 45% of workforce is emplyed in casual labour and 8.3% in migrant workers . Main income of 85.6 % of households is in casual labour wages. 68.8% of households is connected to electricity.

Kayin Su community of Kyar Ban Village

90.5% of village households are Kayin. There is equal percentage of male and female population. 55% of population is in 18-60 age group. The largest percentage (30%) of population have primary education level. Common diseases are influenza, pnuemonia and hypertension. 55% of households have their own hand-dug wells and 44% use public wells.

91% of households have fly proof latrines. 0.7% of households have 1 month food shortage in a year. Employment rate is 1.5 male and 1.0 female per household. 16.9% of village workforce is employed in field casual labour and 55.7% in mirgant workers. 43.9% of households have casula labour wages as their main income. 37.8% of houshold were connected to electricity.

Thone Ein Su community of Kyar Ban Village

36.4% and 34.5% of village household are Bamar and Mon resepctively. Male and female populations are about equal. 68.8% % of of population is in 18-60 age group. The largest percentage of population (31.3%) have primary education level. Common diseases are pnuemonia, influenza and diarrhoea. 91% of households have their own hand-dug wells. 87.3% of households have fly proof latrines. No household has food shortage in a year. Employment rate is 1.5 male and 1.7 female per household. 60% of village workforce is employed in field casual labour and 2.5% in mirgant workers. 63.6% of households have casula labour wages as their main income. 78.2% of houshold were connected to electricity.

Than Ban village

It is located nearest to power plant and is likely to be affected by the construction and operation of the power plant. It has a total of 151 households and a population of 852. Majority of population is Kayin. Main livelihood is farming, betel leave gardening and rubber plantation. It has a government primary school. It is accessible by the Kyar Ban-Wiyaw inter-district linking motor road.

85.4% of village households are Kayin. There is about equal percentage of male and female population. 59.2% of population is in 18-60 age group. 50.3% of population have primary education level. Common diseases are influenza, diahhroea and pnuemonia. Full percentage of households have their own hand-dug wells. 49.7% of households have fly proof latrines. 82.8% of households have 1 month food shortage in a year. Employment rate is 1.6 male and 1.3 female per household. 70.8% of village workforce is employed in field casual labour and 11.0% in mirgant workers. 79.5% of households have casula labour wages as their main income. Only 17.9 % of houshold were connected to electricity.

NyaungWyne village

It is located on the Yangon-Hpa-an main motor road to the south of the power plant and closer to ThatonTyre Plant than to the power plant.It has a total of 109 households and a population of 508. Bamar households occupy half of the village total. Main livelihood of population is farm laborers and rubber plantation workers. 63.3% and 28.4% of village household are Bamar and Kayin resepctively. Male and female populations are about equal. 56.9% of population is in 18-60 age group. The percentages of population having middle school and primary education level are the largest (37% and 30.5% respectively). Common diseases are influenza, pnuemonia and hypertension. 59.6% of households have their own hand-dug wellsnd 38.5% used public wells . 80.7% of households have fly proof latrines. Only 0.9% of household has

1-month food shortage in a year. Employment rate is 1.3 male and 1.4 female per household. 77% of village workforce is employed in field casual labour and 1.8% in mirgant workers. 85.3% of households have casual labour wages as their main income. 37.6% of houshold were connected to electricity.

Inn Shy village

It is the furthest of the (4) villages from the power plant and is accessible by Kyar Ban Wiyaw Inter-district linking road. It has a total of 176 households and population is 895. Majority of population is Kayin and main livelihood is farming, fishing and gardening. It has a government primary school. 95.5% of village households are Kayin. There is about equal percentage of male and female population. 52.1% of population is in 18-60 age group. 37.2% of population have *read and write* education level and 23.1% have primary education level. Common diseases are malaria, hypertension and epilepsy. 62.5% of households have their own hand-dug wells. 63.6% of households have fly proof latrines. 9.1% of households have 1 month food shortage in a year. Employment rate is 1.3 male and 0.6 female per household. 54.2% of village workforce is employed in field casual labour and 26.2% in migrant workers. 69.9% of households have casual labour wages as their main income. 26.1 % of houshold were connected to electricity.

2. Introduction

2.1 Authorization

2.1.1 Electric Power Generation Enterprise (EPGE), Myanmar

as ***Client***

appointed the cooperation of

FICHTNER GmbH and Co KG, Germany

as ***Consultant,*** and which subcontracted

Myanmar International Consultants Co. Ltd. (MMIC)

to perform the consulting services for the Project

Environmental and Social Management for Thaton Combined Cycle Gas Turbine (CCGT) Power Plant

The Lump Sum Contract, funded by a credit from the International Development Association (IDA), entered into force on the 24th of June 2016 after signing by both parties.

The activities performed/planned under the contract can be grouped into 5 main tasks (please refer to the Inception Report for details). The present report, the Socio-Economic Survey Report, is elaborated under the scope of **Task 2**.

2.2 Task 2: EHS Due Diligence Audit at Thaton Power Plant, including social survey

As depicted in the Inception Report, Task 2 is composed of two sub-tasks. The present report provides the results of the second sub-task. The status of the first sub-task is provided briefly below. The respective deliverables are subject of separate reports.

2.2.1 First sub-task: Due Diligence Audit at the Thaton Power Plant

The Consultant undertakes an EHS Due Diligence (DD) Audit of the Thaton Power Plant aiming at the identification of existing environmental, social, and health & safety risks of the existing plant.

Status: The EHS DD Audit has been undertaken in July and in September 2016. The draft and the final reports have been prepared and delivered to the Client.

2.2.2 Second sub-task: Socio-Economic Surveys

As part of its assignment, Fichtner's social experts complemented the socio-economic survey available in the Environmental and Social Assessment (ESA) undertaken for the power plant by Norconsult in 2013 with new findings and results. A first general socio-economic survey of the Thaton Power Plant was undertaken in July 2016, aiming at the identification of social risks of the existing plant ("**first socio-economic survey**"). In September 2016, a new visit to the power plant area was undertaken to clarify open issues from the first visit and undertake the full survey ("**full socio-economic survey**").

The surveys collected socio-economic data related to demography, education, health, water supply and sanitation, basic infrastructure, livelihood, ethnic groups, community groups, vulnerable groups, administrative structure, wealth ranking of households, etc. Young local villagers had been recruited and trained to play important roles (e.g. as numerators) in the survey teams.

The surveys included interviews with the residents of the 4 villages living in the vicinity of the power plant: Kyar Ban, Than Ban, Inn Shey and Nyaung Wyne.

The results of the first socio-economic survey (July 2016) are described in **Section 4**. The results of the full survey (September 2016) are describedin **Section 5**.

3. Lexicon for Easy Understanding

Civil Administration Structure in Myanmar
Basic administrative unit is “Village” (in rural area) or a ward (in urban area). A ward is an urban residential area demarcated by borders. Villages are clustered into Village Tracts. A Village Administrator is responsible for a village tract, and a Ward Administrator, for a ward.

There is no formally appointed administrator at village level. Instead, the administration is undertaken by the head of hundred households. Next level in the administration structure is “Township”, which is formed by village tracts (including villages) and urban wards. A certain number of townships forms a “District” and a number of Districts forms a “State” or “Region”. One level above is Nation. Any amendment of village boundary or village name needs to be approved by the National Parliament.

Village administrator
is an elected person whereas administrators at township level or above are officers of General Administration Department (GAD). Although the village administrator is an elected person, he/she gets salary and allowances for office expenditure from GAD. Village Administrator position is created by Village/Ward Administration Law. The procedures for electing village administrators are defined in the law.

There are also work committee formations which are not supported by the law. They are formed for achieving certain purposes. Examples are the Village Electrification Committee, the Village Young People Group, the Women Dhamma Reciting Group, etc.

Village Committees
There are three formal village committees in every village. The committees have been created by a President’s Order in former government (2010-2015) and they are the Village Development Support Committee, the Village Land Administration Committee, and the Village Management Committee. The last one is the main committee and it has overruling power over the other committees.

Kayin is one of the major ethnic tribes in Myanmar. Hpa-an is the chief town of Kayin State. The expression “Kayin” denotes things related to Kayine and the ethnic tribes, Kayin culture and literature, Kayin language, Kayin traditions, Kayin food, etc.

Mon is also one of the major ethnic tribes in Myanmar.

Pa-oh together with the previous two is also one of the major ethnic tribes in Myanamr. The Pa-oh in Thaton area are said to be of the same origin as their cousins in the Southern Shan State (particularly in Taunggyi and Pinlaung townships). The Pa-oh have a self administrative

region in Southern Shan State (Pinlaung, Ho-pong and Si Saing townships).

Weight measurements in Myanmar: the metric system is still not widely used. Viss and tical are traditional weight measurement units. 1 viss has 100 tical. 1 viss is equal to 3.6 British pounds or 3.6/2.2 = 1.63 kg. Pounds and tons are also commonly used as weight measures. Kilograms are used sometimes such as luggage weight at airports.

Money: the national currency is the Myanmar Kyat (MMK). Lakh is commonly used, which means hundred thousand MMK.

Electrical Bills are calculated by units. One unit is one kilowatt hour.

The National Electrification Plan was prepared by the Ministry of Electrical Power in 2014 as a 50 year Master Plan for electrification of the whole nation. Electricity supply coverage of the whole nation is set for 2030.

4. First Socio-Economic Survey

This section presents the findings of the first site visit undertaken by the Social Specialists from FICHTNER between 19.07 and 22.07.2016. The information provided in this Section is based on interviews, discussions and observations with local people from four villages in the vicinity of the power plant. The villages are **Kyar Ban, Than Ban, Nyaung Wyne and Inn Shey**, located in and under the administration of the Du Yin Seik village tract, which shares its border with the Kayin State and the Hpa-an township. All of the four villages are situated within one kilometer radius of the Thaton power plant. There are altogether 7 villages within the village tract. Other 3 villages are Ka Zaing, Naung Kyan and Su Inn.

4.1 Education

A state high school (administratively under Mon state Government and the Ministry of Education/ Department of Primary Education) is located in Kyar Ban village. It provides classes from primary to high school levels.

School children from all 7 villages within Du Yin Seik village tract and a few villages in Hpa-an Township are coming to this school. Altogether there are about 1,500 school children. The ratio of boys and girls is about 45:55. There are also two primary schools, one in Than Ban and the other in Inn Shey village.

There is no school in Nyaung Wyne village. Village elders and village development supporting committee has attempted and succeeded in obtaining land for construction of a primary school. They have also applied for a budget fund from Mon State Government and are collecting money among villagers to supplement the budget.

There is a private teacher in Nyaung Wyne village providing tuition classes for school children for the same and other villages. She has an assistant and they are teaching various subjects from primary to high school levels. The number of school children ranges from 40 to 70. It is reported that there are drop outs among the children of school-going age in all 4 villages. Exact statistics are not available.

4.2 Water Supply, Sanitation and Hygiene

Village people rely on hand-dug wells as water supply sources. Most of the wells are owned by private households who constructed them many years ago. On average there is one well for every 4 to 5 households.

The Department of Rural Development has also provided hand-dug wells for poor villages (such as Nyaung Wyne village) as part of their rural development program. Water table is low in these villages and the average depth of the wells is 30 feet. People do not use pulleys and buckets to fetch water. They use submerging pumps instead.

Many households use PVC pipes to channel water to the kitchen, bathroom, etc. Some households provide water to their neighbors through pipelines. Usually they pump water at night and early morning when the voltage is high. People also come to fetch water at public wells. Women do most of the water carrying.

Households store water in plastic containers with capacity for one-day consumption and containers are cleaned every day before replenishing with fresh water. A few hand-dug wells (particularly in those for public use) are well maintained with concrete rings lining the inner walls to prevent erosion and also underground seepage and a neat concrete floor around the well with outlets to drain out the waste water.

There is also chlorination of wells with the help of the rural health center. Many private wells are not well protected. Without water quality analysis, there is no evidence that the water is polluted, although village elders admit that it could be contaminated by underground seepage. It was alleged that there were few cases of diarrhea from consuming the water.

There are also tube wells in these villages because hand-dug wells tend to dry up in the dry season. Kyar Ban village has 5 and other villages have 2-3 tube wells. People had donated tube wells to public buildings (monastery and schools), so that the facilities could be used by all villagers. Some private households provide water to neighbors from their tube wells for free.

Almost all households in the villages use fly proof latrines and water is provided for cleaning after use. It is observed that structures over the latrine pits vary in designs and construction materials. Some are very neat concrete house but others are covered with bamboo mattress or tree leaves.

4.3 Health

Some health information sources reported of common cold, dizziness and high blood pressure. There are also reports of tuberculosis cases. There have been no serious communal diseases such as HIV/AIDS. There were cases of HIV positive people who returned from working in neighboring countries.

There were reports of malaria cases some years ago in Inn Shey village where shady tress and damp ground were providing breeding ground for mosquitoes. At present, there are cases of dengue fever among children and young people.

There is one village health center (clinic) run by the Department of Health. It is staffed with one health assistant, one nurse and one midwife. The health assistant or medical officer in charge of the clinics is usually a graduate from nursing college. The nurse and the midwife have also gone through the medical/nursing training.

4.4 Ethnicity and Culture

The majority of the populations in these villages are Kayin, Bamar and Pa-oh. Although geographically and administratively Thaton Township belongs to the Mon State, the Mon presence in the township is receding. Mon national political party activists admitted that Mon political influence was not so strong in Thaton Township.

Kayin – There is a large Kayin ethnic population in these villages. Geographically closeness to Kayin State may be one of the reasons. Kayin is a major ethnic tribe in Myanmar and they have their own spoken and written language. There are different dialects though. For example, there are Sakaw, Po (Eastern), Po (Western), etc., which are used by slightly different Kayin tribes in different Kayin-concentrated regions. Kayin population in Thaton Township is using Po (eastern) language, the same as the Kayin from Hpa-an. Different language users cannot communicate between them by using their own languages. They use a common language, like in most cases in Myanmar.

All Kayin people in these villages are Buddhists. Many Kayin households also observe animist practices. They keep a separate house for worshiping guardian spirits. They offer food (chicken or pork) to beg for blessing and protection from evil and bad luck. They conduct rituals twice a year (at the beginning and end of Lent Period) when they sleep in the ritual house.

Pa-oh – Pa-oh ethnic group also occupies a fairly high percentage of population in these villages. They are told to be of the same origin as the Pa-oh from Southern Shan State. Pa-oh people believe that they are one of earliest races to settle down in Thaton areas. Some historical records put the dates as early as around 1000 B.C

Pa-oh is a fairly big ethnic group in Myanmar (particularly in Taunggyi and Pinlaung townships in Southern Shan State). They have their own language (written and spoken). The Pa-oh national political party has its base in Thaton Township.

The Pa-oh ethnic population in those villages consists of indigenous people who had settled down for many generations. Since then they chose to settle deep into the woods far away from the main road because it was not safe at the time when there were armed conflicts between armed ethnic groups and government military forces (likely to be caught in the fighting or recruited as porters for the armies). As time passed by, some enterprising households ventured to move out to the main road because business is good along the road. At present, the main road is lined with well-off households, but the village center remained to be inhabited by indigenous households.

Inter-marriage between different ethnic tribes is not forbidden here. In fact the Consultant interviewed a household with a Kayin husband and a Pa-oh wife.

Christian community – There was a tiny Christian community near Kyar Ban village. They lived in close neighborhood on a raised ground and their place is named Christian Height.

4.5 Livelihood

A large portion of the population in these villages (particularly in Nyaung Wyne and Than Ban) earns their living by casual labour. During the dry season (about 6 months long) men work in rubber plantations to level ground or de-weeding, and women cut and collect rubber sap. In the raining season they work in paddy fields.

Some households own small plots of rubber plantations (usually 4 to 5 and 20 acres). As exceptional cases, some rich people have many acres of rubber plantations and paddy fields (up to 100 acres). A casual labour usually earns daily wages of 4,000 to 5,000 Kyats (around 3 Euros). Women are usually paid less than men.

In Nyaung Wyne village, young people were complaining about the lack of job opportunities and poor wages. Many young people (boys and girls) need to go into the forest to look for bamboo shoots and other forest produces in the raining season, and collect firewood in the dry season. Few young people in the village have sufficient school education.

Another form of living in these villages is planting and marketing of betel leaves. A number of households grow betel plants in their backyard gardens for own consumption and selling the surplus. They earn roughly 2,000 Kyats (ca. 1.4 Euros) daily from the collecting.

There is also betel leave plantation on commercial scale in Than Ban village. The Consultant met a woman betel leave grower (widow). She owns 1.5 acres of land and raised 3,000 betel plants. She harvested betel leaves from 700 plants every 2 weeks and it yielded 100 visss (1 viss = 3.6 pound = 1.63 kg). The price per viss ranged from 600 to 2,000 kyats depending on the market demands. She employed 6 to 7 girls to roll betel leaves into bundles to be collected by wholesalers.

However, it is asserted by village elders and authorities that the main source of income for most of the households in these villages is remittance from family members who have crossed the border to work as migrant workers in neighbouring countries. Almost every household has one or two family members who are working in neighbouring countries as migrant workers where they get paid better.

It is also observed that people in these villages raise chicken and goats on small scale. But the level of animal breeding seems to be low, compared to villages in different parts of the country. A few households also keep pigs and cattle. Pasture lands are disappearing and people need to drive their animals to the fields for fodders. People in Inn Shey and Than Ban also catch fish in the flooded lakes near the villages.

Very few households in the observed villages grow vegetables in their back yards. It is known that people do not grow vegetables in rainy seasons, but instead on large scale in river beds during the dry season. The team observed some backyard gardens with string beans, egg plants and betel leaves. People prefer to grow betel leaves in backyard gardens because it gives better profit.

4.6 Household's Access to Electricity, Tariff and Willingness to Pay

Electrical power supply is distributed to these villages from the Thaton gas turbine power plant through a 6.6 kV line. It is said that the power plant can generate sufficient power supply for all these villages. Village households need to pay for the cable line connection inside the village and also for the cost of the transformers. The village electrification committee had succeeded in mobilizing funds, on self help basis, to pay the upfront cost of the installation. Every household needed to contribute with a sum in order to get connected to a cable line. The contribution started from 1 million Kyats per household (ca. 695 Euro), and gradually reduced to 700,000, to 500,000 and finally to 300,000 Kyats (ca. 209 Euro).

Currently, many households cannot afford to pay the contribution and are therefore not connected to the supply line. It is estimated that about 40 % of total households have still no access to electricity. Therefore the problem is not in the supply side but in people's financial resources. Some households do not expect to get connection as they are poor and cannot afford the payment. Some are prepared to get connected once they receive remittance from their family members working in the neighboring countries.

The current electricity tariff is 50 kyat per kWh (kilo watt hour) (ca. 3 Euro cents). Most people think it is reasonable and fair to pay for what they use. But some people think that the government should provide electricity to villages free of charge. This thought is probably influenced by experiences in Thailand, where allegedly households do not have to pay for electricity, as long as their monthly consumption does not exceed a specific limit (energy saving measure).

It is reported that there are some problems regarding the electric supply in these villages such as line faults because of bad weather. People in some villages also complained about low voltage during day time. The village committee reported that some households are using electricity for illegal use such as welding, which makes the supply unstable.

The National Electricity Plan (NEP) sets the target to cover all households in the country by 2030. Some Regional Government has electrification programmes which state that the government will provide all costs for electrification of villages within 1 mile distance from the national grid. The villages within 2 to 3 miles distance from the national grid can apply for a connection to the distribution line, but the villagers need to pay for the cost of installation in the villages themselves. Other villages out of 4 to 5 miles

distance from the grid need to rely on other sources of energy like solar, small hydro power, gasifier and diesel engines.

4.7 Community Involvement in the Thaton PP

No villagers from the surrounding villages are working in the Thaton Power Plant. Most workers and staff come from Thaton town and others come from other townships Transportation (ferry service) between Thaton and the plant is provided for the staff living in town.

There is no mutual participation in social events (such as weddings, religious events, etc) between the plant staff and community members from surrounding villages. Village people from surrounding villages have little exposure to the presence and operation of the power plant and they can not think of any impact (good or bad) which could come from the power plant. However, some knowledgeable village people (e.g the Village Administrator (VA) of Kyar Ban village which was interviewd by the Consultant) have nurtured the idea of employment creation for young people who have passed high school examination. As an example, the VA knows a few village youths who have learned house-wiring skills from training, and noted that it would be good if the plant could provide them with jobs.

5. Full Socio-Economic Survey

The full socio-economic survey covered four villages located within a 1.5 kilometer radius of the Thaton Power Plant, including **Kyar Ban, Than Ban, Inn Shey and Nyaung Wyne**.

The power distribution line from the Thaton Power plant is connected to all four villages. Kyar Ban, the largest village, which is divided into three communities by the motor road, the terrain and the concentration of different ethnic groups, was accordingly divided into 3 survey areas: Pa-oh Su (Pa-oh concentrated community), Kayin Su (Kayin concentrated community) and Thone Ein Su (mixed ethnic community). The household socio-economic survey was conducted in September 2016 and covered **841 households** (**Error! Reference source not found.**).

	Village Name	Number of Households	
1	Kyar Ban:		405
1A	Kayin Su	202	
1B	Pa-oh Su	148	
1C	Thone Ein Su	55	
2	Than Ban		151
3	Nyaung Wyne		109
4	Inn Shey		176
Total			**841**

Table 5-1: Number of HH covered by the full socio-economic survey

5.1 Objectives

This survey presents the current socio-economic situation of the village communities surrounding the Thaton Gas Turbine Power Plant. More specifically, the survey was undertaken with the aim of finding answers to the following questions:

- What is the general socio-economic situation of the villages at present?
- Does the power plant have any positive or negative social impact on households in the surrounding communities (in terms of health, education, environment, personal safety, ethnicity, culture, assets, incomes, employments, access to electricity, etc)?
- Do communities surrounding the power plant have basic social and economic capabilities to benefit from the power plant?
- Are there possibilities to trigger development in other sectors as an additional effect through the construction of the new power plant and development of the energy sector?
- Are there any social risks regarding the safety and security of investment programmes?
- What is the level of community participation in information-sharing, consultation and the decision-making process in the Thaton power plant?

5.2 Survey Methodology

Questionnaires and Household Interviews
A detailed questionnaire (see Annex 3 to this report) was used to collect information on the socio-economic situation of individual households. It contains 16 topics covering population, ethnicity, education, health, water supply, hygiene and sanitation, gender aspects, food security, residential and productive assets of households, household sources of income, household incomes, expenditures and debt situation and, finally, the energy sector. Most of the questions are supply types and required a tick in the right box. Some of the questions required interviewees to rearrange the list of answers in order of priority or preference.

Village youths were recruited as interviewers and numerators for the household survey. They conducted interviews with household members, noted the answers in the questionnaire sheets, counted the results, and reproduced them in a summarized table to facilitate data entry. Altogether 13 interviewers from 4 villages were employed. There were 4 experienced development facilitators recruited from other townships who were assigned as supervisors to help interviewers/numerators clarify questions, check the entries, and ensure the records were combined systematically.

To avoid overlapping or missing households, a household register form was developed and numerators were asked to make an initial list of every household in the form, and later verify it on the ground. The supervisors transferred the answers from paper to computer. Simple electronic spreadsheets were used for that. The findings are presented in two separate sections in the report.

Key Informant Interviews
Key informant interviews were conducted to collect in-depth information on specific sectors from experienced local experts. The information was used to supplement, reinforce or counter balance the information collected from the household survey. Key informants interviewed included medical officers, health assistants, school headmistresses, township engineers of the Electricity Supply Enterprise, village youth-group leaders, ethnic group leaders, young activists, village administrators, Village Electrification Committee chairpersons, etc.

The findings of the interviews with the key informants are presented in Section 5.5 of this report. The summary of findings is presented in matrix format. The findings on social issues are presented in the matrix 5.5.1. Those regarding environmental and public health issues are presented in matris 5.5.2. The full text of the interviews is captured in the Annex 1.

5.3 Findings from the Data collected by Questionnaires - Part I - General socio-economic situations of Households

5.3.1 Population Characteristics

5.3.1.1 Households and Population

Village numerators were asked to prepare a draft list of households (HH) for their own villages. Each household was given a code number. This was supported by maps of the village (hand drawn by numerators) showing the location of the households. The numerators then checked the list while going around the households to collect the data with the questionnaires. The actual number after adjusting for non-existing or additional households was recorded in the form. Population figures were collected by asking the household directly and noting down the answers.

Altogether **841 households and 4,399** people were recorded in the survey villages. The average population per household is 5.2. The average inhabitation rate of households is close to the average (ranging from 4 to 5) for rural areas of the country. The following table shows the number of households and people in each survey village.

Village Name	Households	Population	Average population per household
Pa-oh Su (Kyar Ban)	202	986	4.9
Kayin Su (Kyar Ban)	148	891	6.0
Thone Ein Su (Kyar Ban)	55	267	4.9
Than Ban	151	852	5.6
Inn Shey	176	895	5.1
Nyaung Wyne	109	508	4.7
Total	**841**	**4399**	**5.2**

Table 5-2: Number of Households and Population in the surveyed villages (Sept. 2016)

Pa-oh Su has the largest area and Thone Ein Su the smallest. The population per household comes into a narrow range between the survey villages.

5.3.1.2 Male and Female Population

There is a balanced ratio of male and female population, although the female population is sligthly higher (Table 5-3,
Figure 5-1 and Figure 5-2). This also conforms with the national population patterns, where the male/female balance always tilts towards the female side.

Village Name	Male	Female	Total	Male %	Female %
Pa-oh Su (Kyar Ban)	456	530	986	46.2	53.8
Kayin Su (Kyar Ban)	412	479	891	46.2	53.8
Thone Ein Su (Kyar Ban)	115	152	267	43.1	56.9
Than Ban	424	428	852	49.8	50.2
Inn Shey	432	463	895	48.3	51.7
Nyaung Wyne	244	264	508	48.0	
Total	2,083	2,316	4,399	47.4	52.6

Table 5-3: Male and Female Population in the surveyed villages (Sept. 2016)

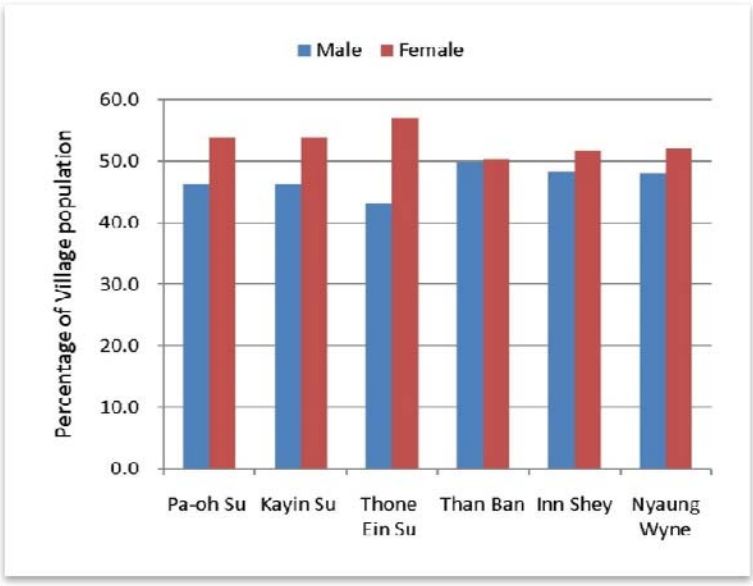

Figure 5-1: Male-Female Population in the surveyed villages (Sept. 2016)

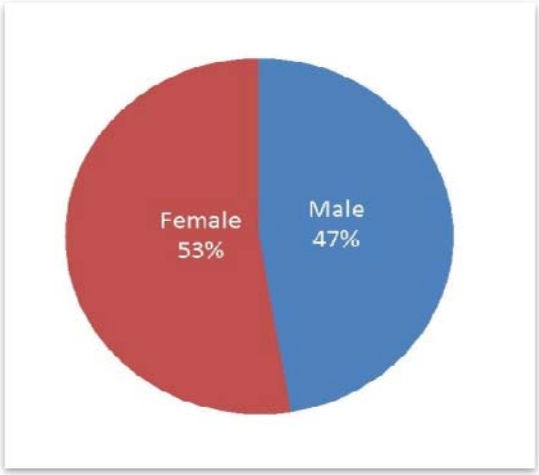

Figure 5-2: Male and Female Ratio in Total Population of all surveyed villages (Sept. 2016)

5.3.1.3 Population by Age Group

The population in every village is divided into 4 age groups: infants (up to 5), young (5-18), mature (18-60), and elderly (above 60). Each household interviewee was asked about their household members according to age group.

The distribution of the population by age group is expressed as a percentage of the total village population. This is considered to be more useful for understanding and comparing the size of each age group. In addition, male and female segregation is also brought into the population-by-age group data for better analysis and interpretation.

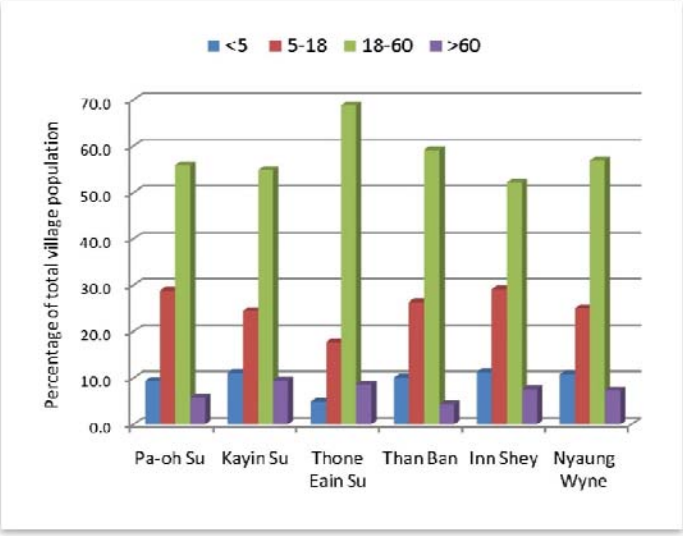

Figure 5-3: Population by Age Groups in the surveyed villages (Sept. 2016)

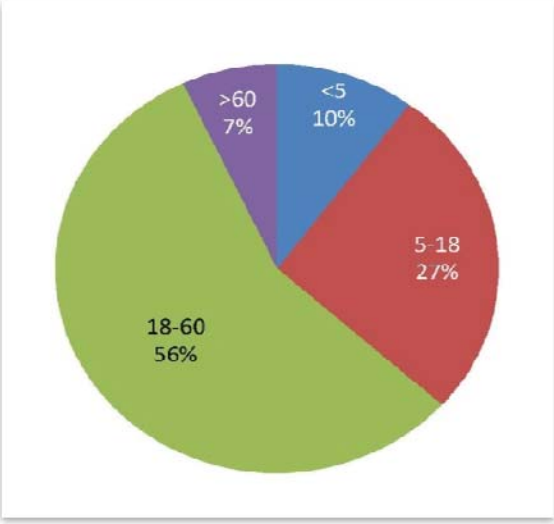

Figure 5-4: Population by Age Groups in the surveyed villages (Sept. 2016)

The graphics show that the 18-60 age group is the majority in every village, which is a healthy sign as it means that all the villages have ample workforce. The situation was further strengthened by the 5-18 age group, which provides reserve workforces to fill the gap when older people retire.

Gender segregation of the different age groups is presented in the above charts. The male and female population is projected as a percentage of the total village population

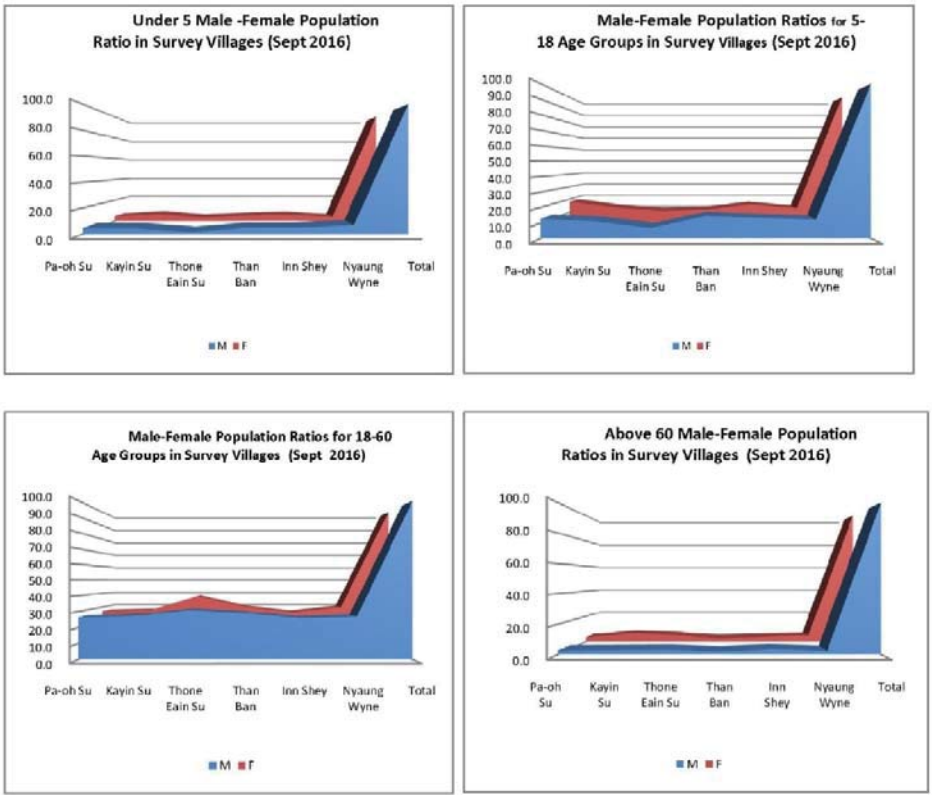

Figure 5-5: Male - Female Population Ratio in the surveyed villages (Sept. 2016)

Low male and female populations are observed in “infant” and “elderly” groups (ranging from 2 to 7%), while in the other two groups they are much higher (10 to 18% in the 5-18 group and 25 to 38% in the 18-60 group). As the male and female populations in the mature or employable age group (18-60) are the largest, development programmes focusing on upgrading vocational skills or creating employment opportunities could be beneficial to the majority of the population. This is supported by the community leaders who expressed that creating employment opportunities for young village people is top priority for the communities.

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5.3.1.4 Population of Village Schoolchildren

The number of male and female schoolchildren in each household was recorded and is presented in the table below. This indicates the average school enrolment level of the village.

Village Name	Male	Female	Total	Total HH	School children per HH
Pa-oh Su (Kyar Ban)	90	118	208	202	1.02
Kayin Su (Kyar Ban)	58	101	159	148	1.07
Thone Ein Su (Kyar Ban)	12	19	31	55	0.56
Than Ban	99	77	176	151	1.16
Inn Shey	79	99	178	176	1.01
Nyaung Wyne	41	49	90	109	0.82
Total	**379**	**463**	**842**	**841**	**1.00**

Table 5-4: Male & Female Schoolchildren in the surveyed villages (Sept. 2016)

Generally, there are slightly more female than male schoolchildren in every village (except Than Ban). It can also be observed that with the exception of Thone Ein Su and Nyaung Wyne, on average every household has one school child. In Thone Ein Su, only 2 households have one school child. The results can be seen in the charts below.

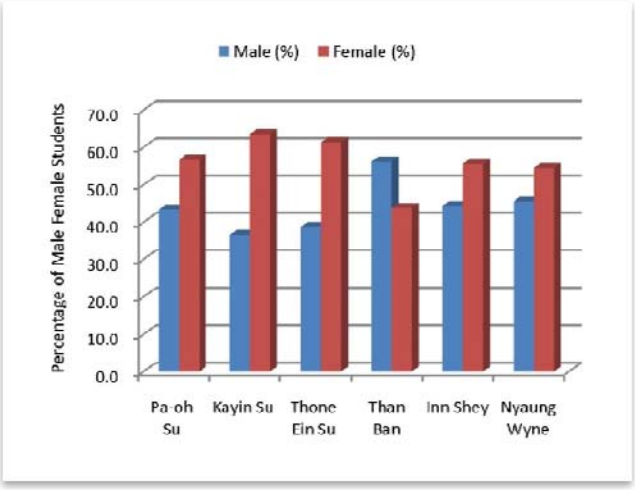


Figure 5-6: Male - Female Student Percentage in the surveyed villages (Sept. 2016)

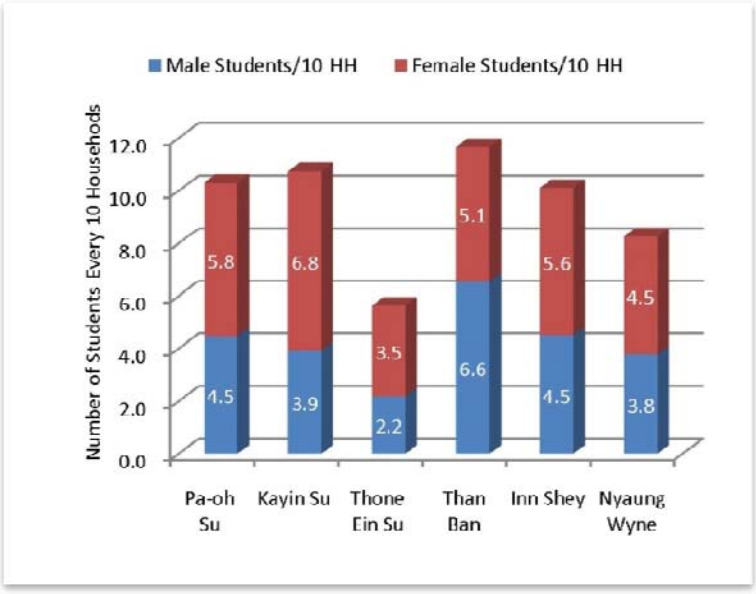


Figure 5-7: Average number of Students in Every 10 households in the surveyed villages (Sept. 2016)

Given that there are no schools in Thone Ein Su and Nyaung Wyne, while other villages have their own village schools, it could perhaps be deducted that this lack of schools is one of the factors for lower school enrolment.

5.3.1.5 Population of Migrant Workers

The number of migrant workers (male and female) was collected directly from household interviews. The number of migrant workers is compared to the population and households in each village to find the level of migration.

Village Name	Male	Female	Total	Total Population	Total HH
Pa-oh Su (Kyar Ban)	35	23	58	986	202
Kayin Su (Kyar Ban)	43	41	84	891	148
Thone Ein Su (Kyar Ban)	12	12	24	267	55
Than Ban	47	28	75	852	151
Inn Shey	69	46	115	895	176
Nyaung Wyne	9	6	15	508	109
Total	**215**	**156**	**371**	**4,399**	**841**

Table 5-5: Number of Migrant Workers in the surveyed villages (Sept. 2016)

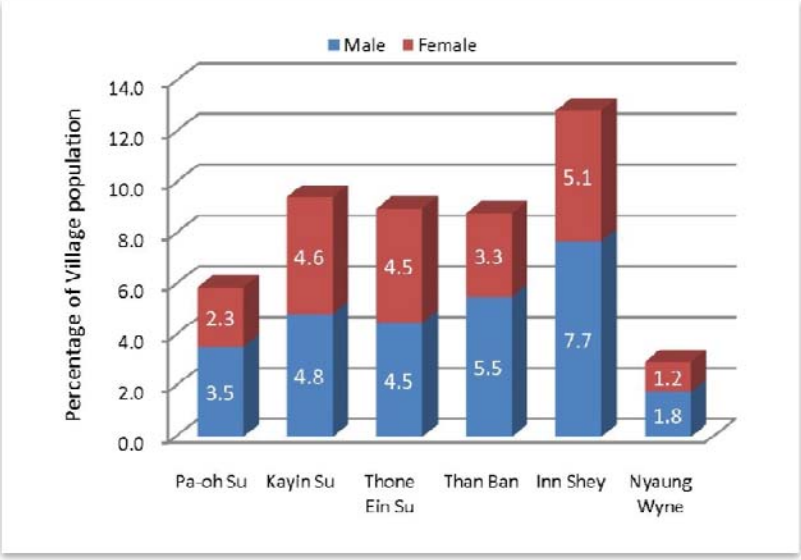


Figure 5-8: Migrant Worker Population in the surveyed villages (Sept. 2016)

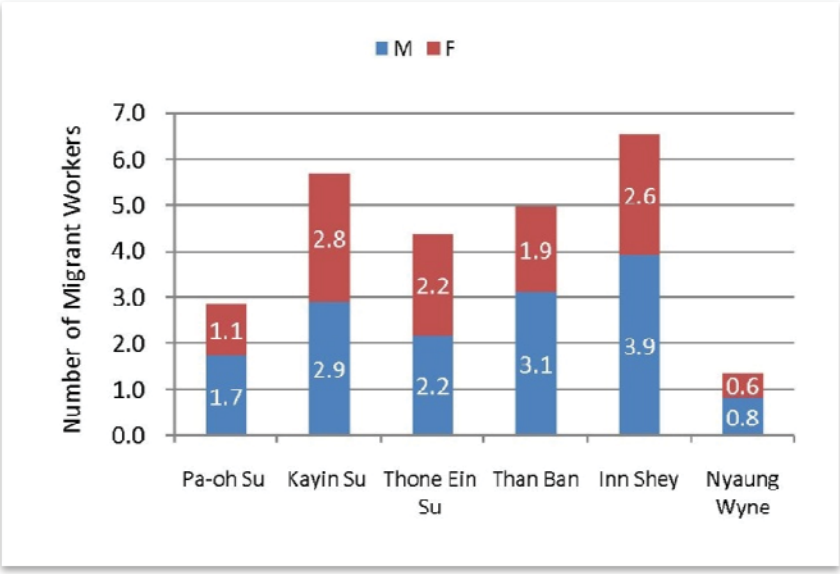


Figure 5-9: Average Migrant Workers per 10 Households in the surveyed villages (Sept. 2016)

Except in Pa-oh Su and Nyaung Wyne villages, migrant workers constitute a considerable percentage, more precisely around 10%, of the village population. In terms of the actual number of migrant workers, every two households have one migrant worker in Kayin Su, Thone Ein Su, Than Ban and Inn Shey. Inn Shey has the largest percentage of migrant workers.

Actually, if the number of people who have worked as migrant workers at some time or other were put together, the number of migrant workers and

their ratio to the village population could be higher. The reason was that many migrant workers had come back to their villages after they had save some money, During casual conversation with young or middle-aged people, almost all of them said they had been migration workers at some time.

Note: Migrant worker in this context means a person who has crossed the border to work in one of the neighbouring countries and sends money back home.

5.3.1.6 Elderly and Disabled Population

The elderly and disabled population was determined in household interviews as a percentage of the population of each village.

Village Name	Male	Female	Total	Total Population	Male %	Female %
Pa-oh Su (Kyar Ban)	10	8	18	986	1.01	0.81
Kayin Su (Kyar Ban)	14	15	29	891	1.57	1.68
Thone Ein Su (Kyar Ban)	2	3	5	267	0.75	1.12
Than Ban	5	6	11	852	0.59	0.70
Inn Shey	7	3	10	895	0.78	0.34
Nyaung Wyne	3	7	10	508	0.59	1.38
Total	**41**	**42**	**83**	**4,399**	**0.93**	**0.95**

Table 5-6: Elderly and Disabled Population in the surveyed villages (Sept. 2016)

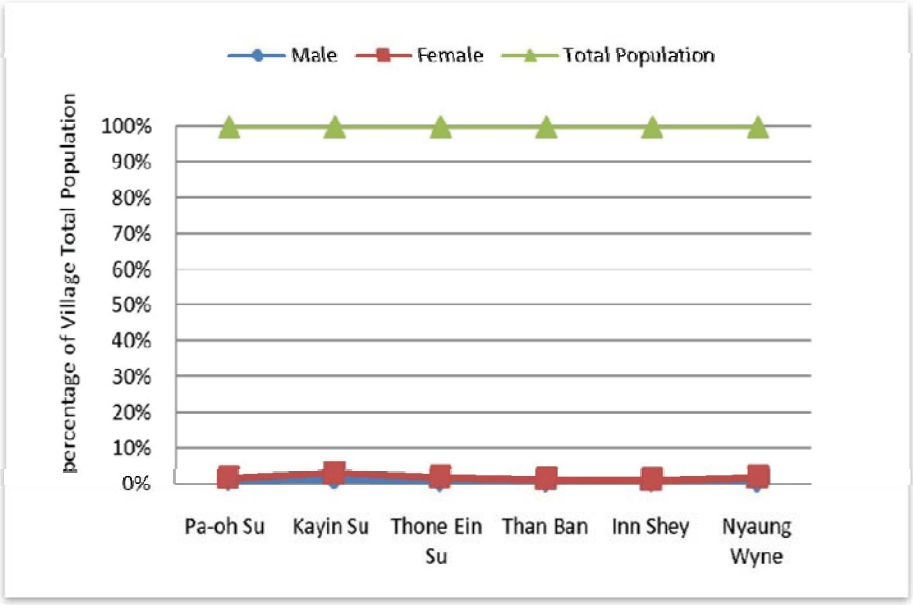


Figure 5-10: Persentage of Old Aged and Disabled Population in the surveyed villages (Sept. 2016)

Elderly and disabled persons are a very small percentage of the population. The elderly and disabled population was slightly higher in Kayin Su and Thone Ein Su as compared to the other villages.

5.3.1.7 Family Members who live together in Households

Family Members data was collected by interviewing households directly. The head of household and/or spouse were anchored as the pivotal point of the family with their siblings at the same level. On the upper level were parents and grandparents, on the lower level sons and daughters, their family members, if any, and grandchildren. The intention was to determine the general pattern of family composition.

- **Man-headed or Woman-headed Households**

The graph below shows the proportion of man and woman-headed households in each village.

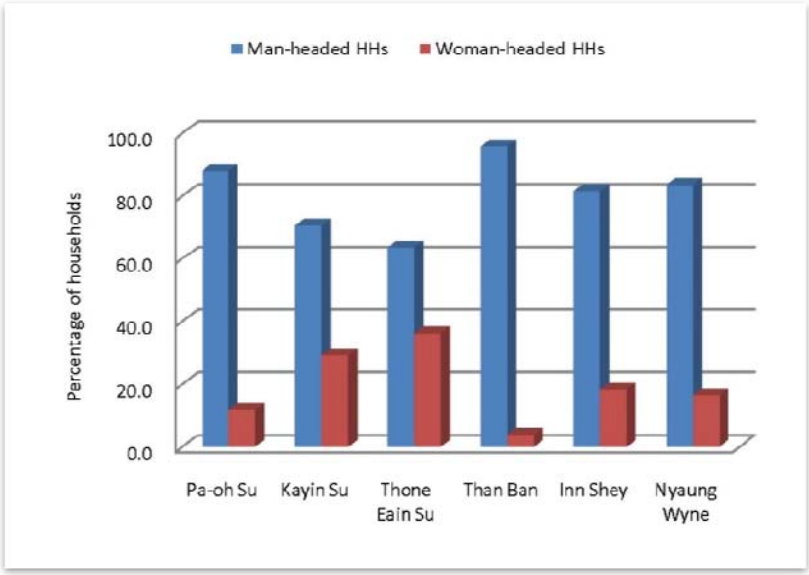


Figure 5-11: Percentage of Man - or Woman- headed Households in the surveyed villages (Sept. 2016)

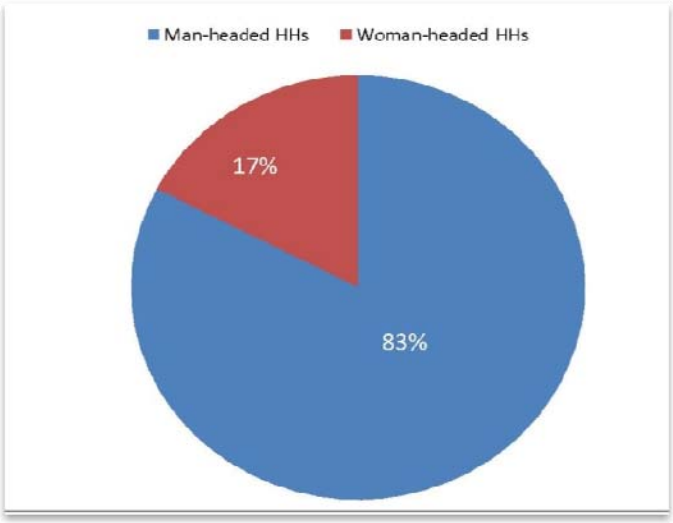


Figure 5-12: Overall Ratio of Man - or Woman- headed Households in the surveyed villages (Sept. 2016)

On the whole, the overall percentage of man-headed households is far larger than woman-headed ones (83% against 17%). Similar proportions between male-headed (above 80%) and female-headed households (below 20%) were observed in Pa-oh Su, Than Ban, Inn Shey and Nyaung Wyne. The other two villages have a more significant ratio of female-headed households; Thone Eain Su (about 35%) and Kayin Su (about 30%).

- **Family Members Living with Head of Household**

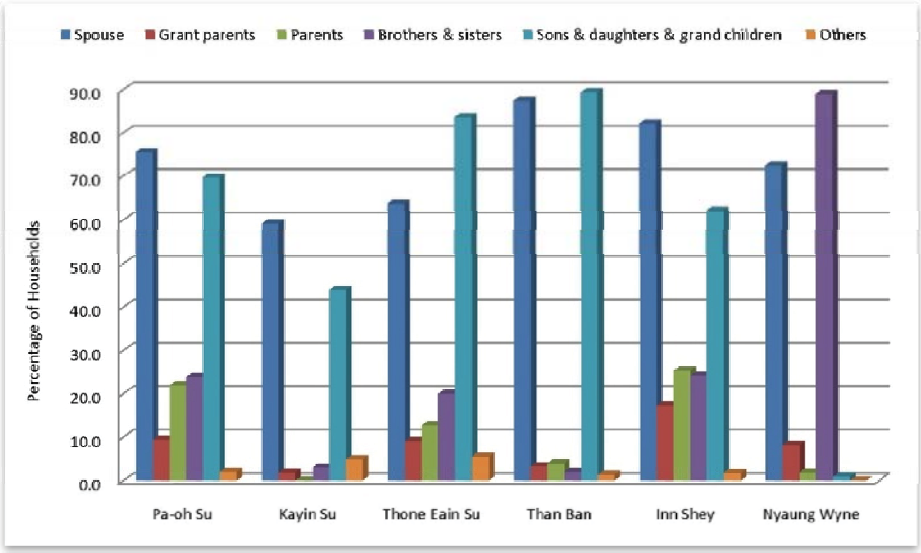


Figure 5-13: Family members Living with Head of Households in the surveyed villages (Sept. 2016)

Heads of Household and their spouses generally live together. For example, in Pa-oh Su, Than Ban and Inn Shey more than 75% of the household heads

and their spouses live together. The remaining households could be widows, widowers or divorcees or migrant workers. Most households have sons or daughters and grandchildren living together with the head of the household while others have brothers or sisters living with the head of the household. Nyaung Wyne is an exceptional case, as there is a large percentage of households where household heads are living with their siblings while very few households have grandparents, parents, sons and daughters and other relatives living together.

5.3.1.8 Migration

The practices of trans-boundary labor migration has been a strategy for local people in coping with difficult economic situations at home and in search of better livelihood opportunities. According to the survey, households practicing labor migration had reached such a level where, on average, every household had at least one to two members at some time working as migrant labors. The respondents to the survey had no notion of distinguishing between legal and illegal migration practices. A common practice in labor migration was that people secured employment through the contact of relatives or friends already employed in business, of business owners who they had worked for previously, or through employment agencies or *pwe sar* (individual employment brokers).

It was known from the discussion with villagers that the target population for labor migration included among other:

- Young people who were losing interest in low-paid local employment
- Young people who found physical hardship combined with low incomes in family businesses
- Young people who have no jobs but wanted to earn money to support their families
- Farm labors who found their incomes from farm work lower compared to similar work elsewhere
- Landless people who lacked investment capbility to pursue their own businesses
- Small farmers who found farming business yielding diminishing returns
- People who were unemployed and were testifying their households encountering economic hardship and accumulating debts.

Negative impacts inflicted by cross-border labor migration were collected from conversations with village households. For example:

- Young people are attracted by opportunities to earn money and become disinterested to continue their school education;
- Psychologically, family members are separated and suffering from

loneliness; particularly among elder people and young children who were left behind;
- Unsafe environment for migrant labors, loss of contact with family;
- Vulnerability of the migrants to human trafficking and HIV/AIDS.

However, with stability of employment, migrant labor could contribute to families or communities positively. Present examples are:

- Remittance from migrant labors was found to be supporting families on a visible scale.
- Young people worked as migrant workers for years to save money and came back to invest in own businesses such as tricycle transportation, paddy traders, etc

There are also cases of in-country migration i.e., people from different places in the country that came to settle down in the villages surrounding the power plant. Most notably were employees from the tyre plant. Due to the specific skills required in the tyre production process, the plant recruited many employees from different parts of the country. The employees worked up to their retiring age, and then choose to settle down in the surrounding villages, bringing their family members later. A case was known where a son of an employee of the tyre plant came to live with his father, married a local girl and become rubber plant owner. There were also talks about people who went to other townships to seek employment. For example, some girls went to Yangon to work as domestic helps in households.

5.3.1.9 Equitable Treatment of Ethnic Groups

There were discussions on the need to achieve equitable treatment in the self help electrification approach, and preferential local recruitment for unskilled labor in the construction of the new facilities. For immediate remedies, the grievance redress mechanism proposed for the project shall be applied (see Public Consultation Report, Fichtner, October 2017).

The discussions on equitable treatment also implied underlying issues relating to ethnicity. The issues are very important and they should not be discussed in isolation with any particular ethnic group for a certain locality. The approach for redressing of ethnic issues should be in line with the ethnicity policies and programmes adopted at regional or national levels. There are Ministries of Ethnical Affairs at both levels.

It will be interesting to know how many ethnic peoples are conscious of a common identity as Myanmar or citizens of the Union of Myanmar. Elderly people in ethnic groups are definitely conscious of their own ethnic identity. Young people in rural areas especially when they live in a close ethnic community and without personal exposure to outside world, were very

conscious of their ethnic identity and naturally harbored a strong ethnic sentiment and tended to look at things and events from the perspective of a minority ethnic group.

It is debatable whether it is good for the nation that ethnic people maintain their own ethnic identity or adopt a shared identity as Myanmar nationals. Young people who have been exposed to town life and to the contact with other members of majority ethnic group (particularly Bamar) might have transcended their ethnic identity onto a Union one. A common belief was that while maintaining ethnical identity, literature, language, culture and traditions, a national identity of Myanmar citizens should be adopted among all nationals in the interest of national solidarity and peaceful co-existence. In other words, while maintaining own ethnic identity, all ethnic groups should recognize each other as union citizens and guide their own actions accordingly. This is perhaps referred to as “Unity in Diversity”. Leaders of ethnic groups in the survey villages commented that they did not want a development that benefits only a particular ethnic group but one that would benefit all ethnic groups in the village community.

5.3.2 Education

This section shows the educational level of household members including children, the existing community educational infrastructure and accessibility of children to schooling.

5.3.2.1 Educational level

Household members were asked about the level of education they had achieved. Children under 5 and the portion of the population which was not accessible and whose educational levels were not clearly known were not included in the survey. Accordingly, the percentage of each educational level was set against the effective population available at the time.

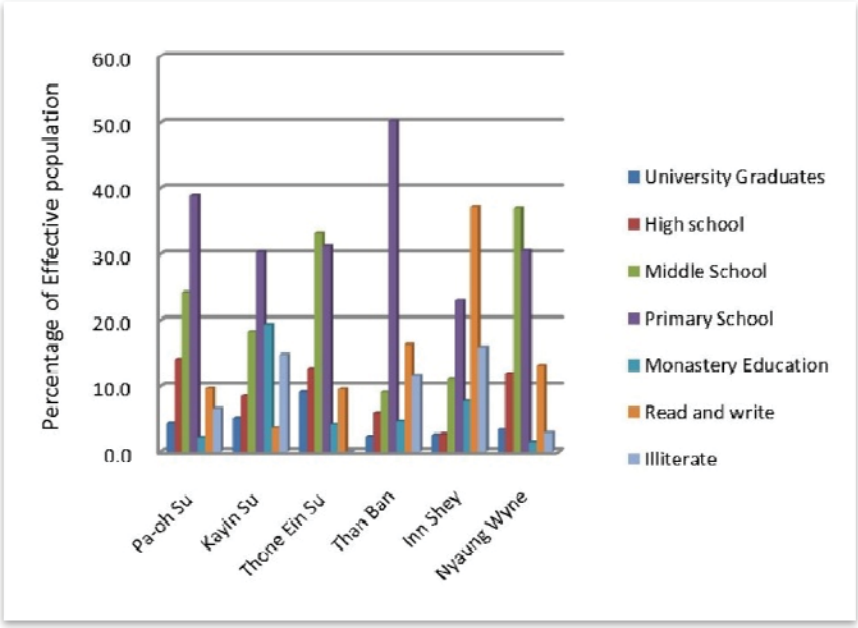


Figure 5-14: Education levels of Household members in the individual villages (Sept. 2016)

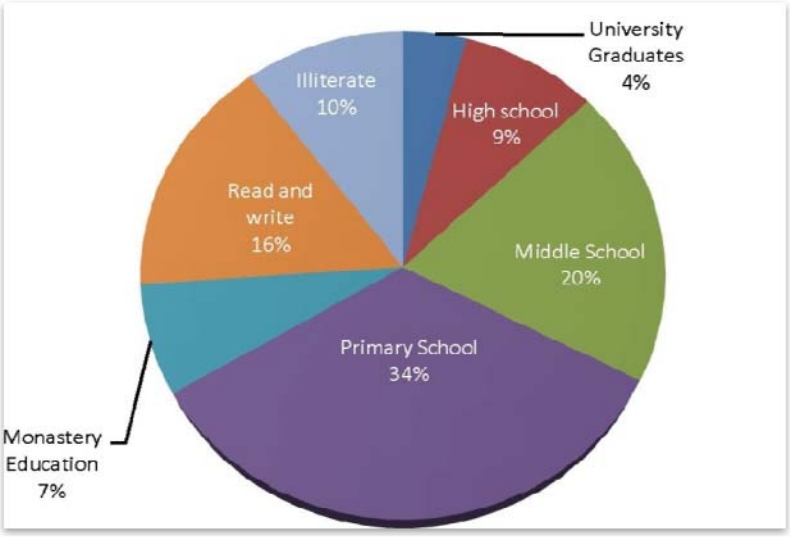


Figure 5-15: Overall Education levels of Household members in the surveyed villages (Sept. 2016)

Each village had every educational level ranging from illiterate to university graduate, although the mix of different educational levels differed from village to village. However, the overall picture in the villages showed that people with primary school education were the largest proportion of the population (34%) followed by the middle school education group (20%), the people who could read and write (16%), the illiterate group (10%), people with high school education (9%) and so on. University graduates made up 4% of the population.

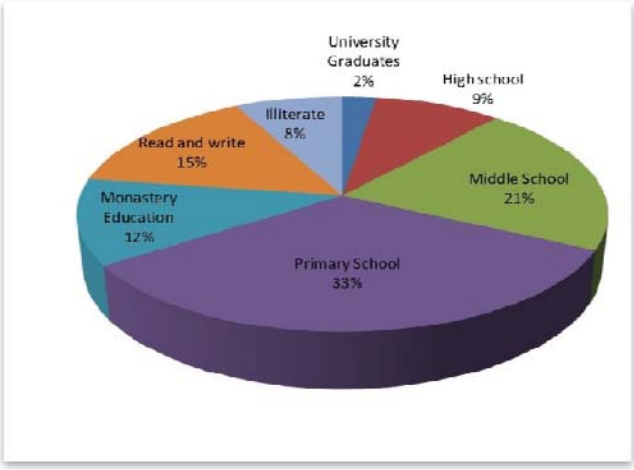


Figure 5-16: Overall Education levels of Male population in the surveyed villages (Sept. 2016)

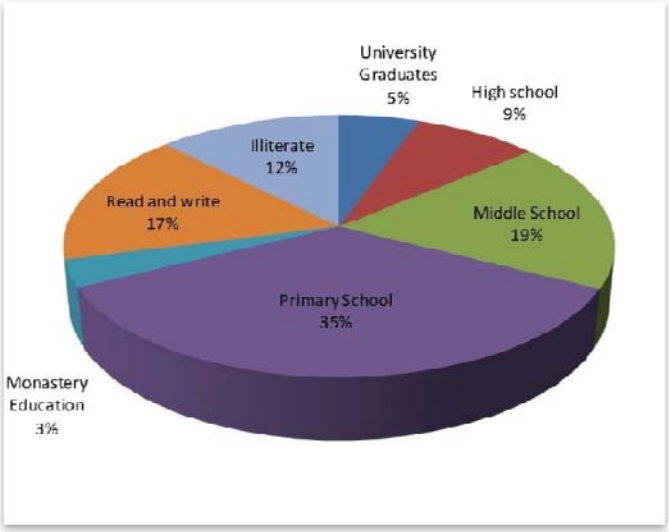


Figure 5-17: Overall Education levels of Female population in the surveyed villages (Sept. 2016)

The two charts above show the percentages of the male and female population in terms of their educational level. Male and female percentages were very similar for each educational level except perhaps for university graduates (male 2%, female 5%), monastery educational level (male 12%, female 3%), and illiterate level (male 8%, female 12%).

5.3.2.2 Out-of-school Children

"Children of school going age" is defined as the part of the population between 5 and 16 who should be attending school at primary or middle or high school levels, but who leave school before they complete their schooling at individual levels.

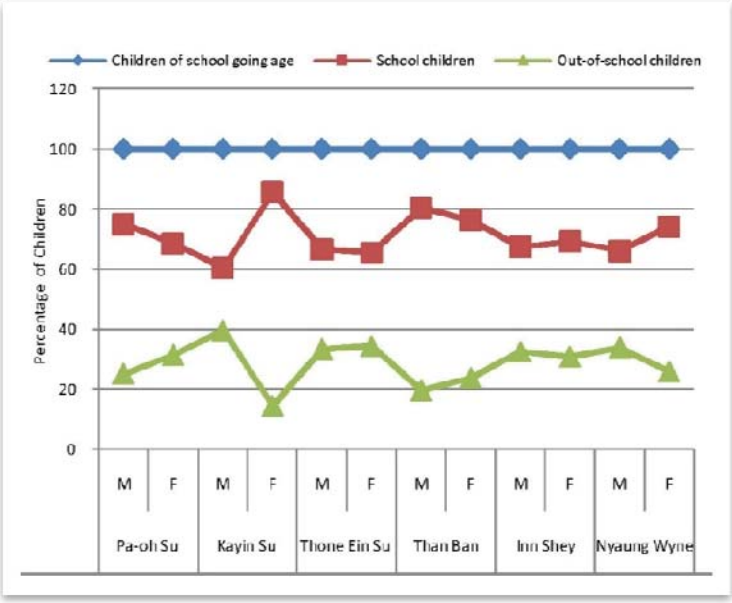


Figure 5-18: Children of school going age, school children and out-of-school children in the surveyed villages (Sept. 2016)

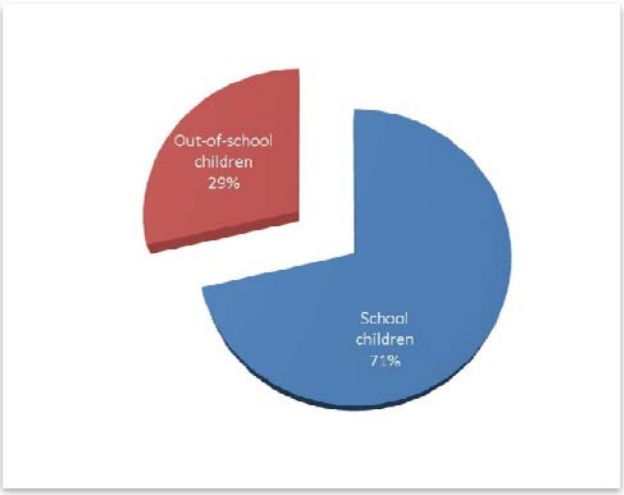


Figure 5-19: Overall Percentage of School children & out-of-school children in the surveyed villages (Sept. 2016)

Generally, the percentage of out of school children was between 20 and 40% for both male and female children. An extreme case was found in Kayin Su where the male children had the highest out-of-school percentage (40%), while the female children had the lowest percentage (14%). The figure shows that about 29% of the school-age children were out of school.

5.3.2.3 Level and Location of Schools

School levels are classified as University, Technical school, High School, Middle School, Primary schools and others. Households were asked about the highest level of schooling they had achieved with the highest level receiving one point. The highest achiever could be school children who have currently attending the respective grade, or the parents or uncles or aunts and even grand parents, who had passes the same highest grades in their youth. The counting was not repeated even if more than one household member had achieved the same level of schooling. The intention was to find the educational level the households were able to achieve.

The distance from household to school is measured in kilometers. The answers were different if children in one household went to different schools, e.g. one to primary school in the village, another to high school in a nearby larger village, the third to high school or university in town.

Figure 5-20 below shows that in all, 44% of the households have achieved a high school educational level. This was followed by primary school level (34%), middle school level and university educational level (8%).

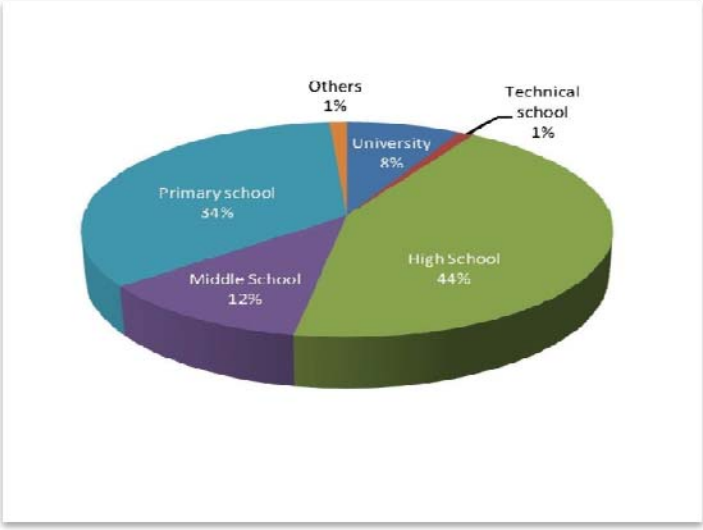


Figure 5-20: Overall Percentage of Household Achieving different education levels in the survey villages (Sept. 2016)

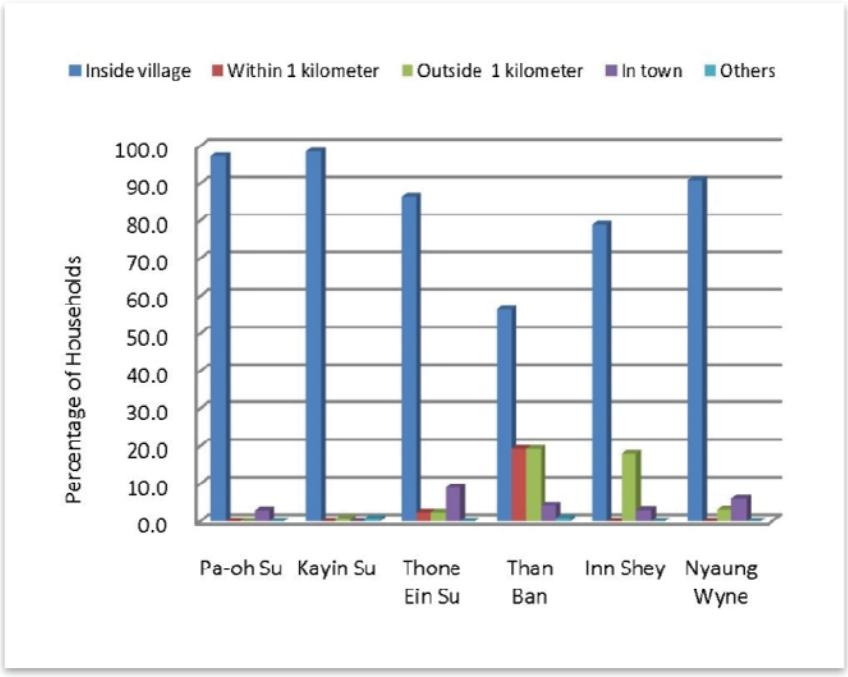


Figure 5-21: Percentage of Household with different Distance from schools in the surveyed villages (Sept. 2016)

Children from Pa-oh Su and Kayin Su attended the school located inside their village boundary (Kyar Ban Government High School). The school has classes up to high school level and very few children from these two villages attend school outside the village. Than Ban and Inn Shey have primary schools inside the village. Nyaung Wyne has no primary school but there is a middle school in nearby tyre plant which village children can go to. Middle and high schoolchildren from Than Ban and Inn Shey attended Kyar Ban High School. A small percentage of the schoolchildren attended school in town.

5.3.3 Health Situation

The section shows the most common diseases in the villages, health care practices of the village communities and the level of accessibility to health care services.

5.3.3.1 Incidence of Common Diseases

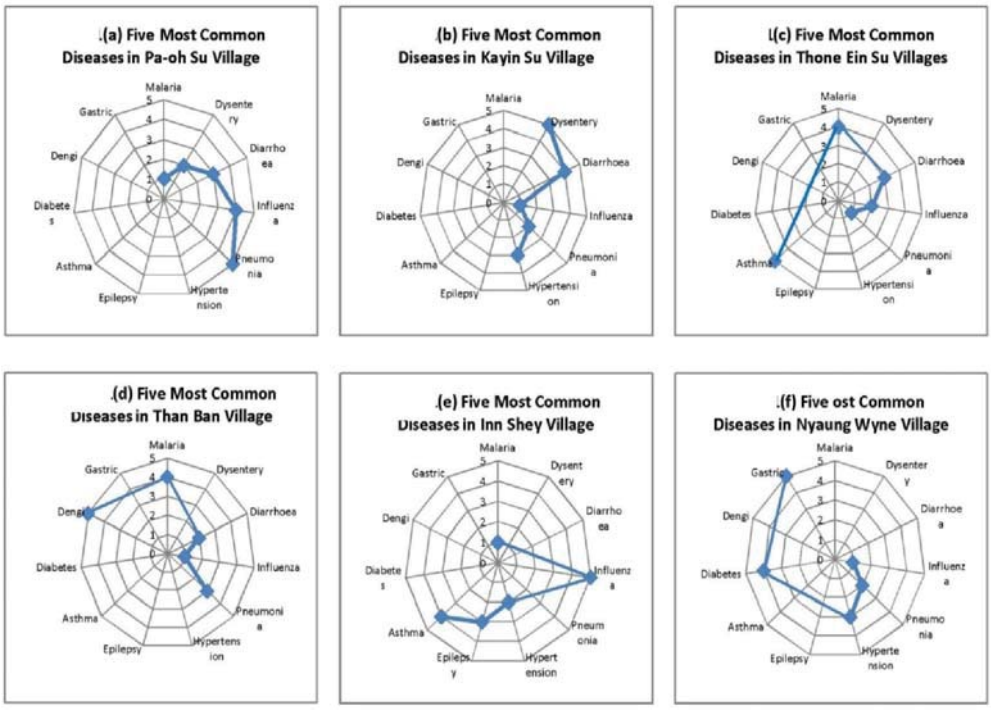


Figure 5-22: Five most common diseases in the surveyed villages (Sept. 2016)

About 20 common diseases are listed and finalized after pre-testing with a group of people from all the survey villages. The list was included in the questionnaires and households were asked to identify from the list the five most common diseases in their villages. Diseases were given ratings from 1 to 5; 1 for the disease mentioned most, 2 for the second, and so on. Spider web diagrams were used to show the most common disease on the inner-most circle (Level1) and less common ones on the rings away from the center. The figures above show the following salient points

- *Influenza* is the most common disease, listed in every village (although with different levels of incidence). It was most common (Level1) in Kayin Su, Than Ban and Nyaung Wyne (Figures (b), (d), and (f)).

- *Pneumonia* came second, appearing in all the villages except Inn Shey (Figure (e)). It was most common (Level1) in Thone Ein Su (Figure (c)).

- *Malaria* and *Diarrhoea* were next, each affecting four villages. Malaria was the most common in Pa-oh Su and Inn Shey (Figures (a) and (e)). Diarrhoea was the second most common in Pa-oh Su and Than Ban (Figures (a) and (d)).

5.3.3.2 Easy Access to Health facilities

Health facilities include hospitals, doctor's clinics, Rural Health Centres, traditional healers and own medication. Households were asked to tick "easy accessible" or "not accessible" for each type of facility.

Almost all the households in Pa-oh Su, Thone Ein Su and Nyaung Wyne had easy access to hospitals, doctors, rural health centres and own medication. The other three villages (Kayin Su, Than Ban and Inn Shey) had more variation in the level of accessibility to health facilities. In particular, 60% of the households in Inn Shey had easy access to traditional healers. Treatment with their own medication was common among the households in all villages.

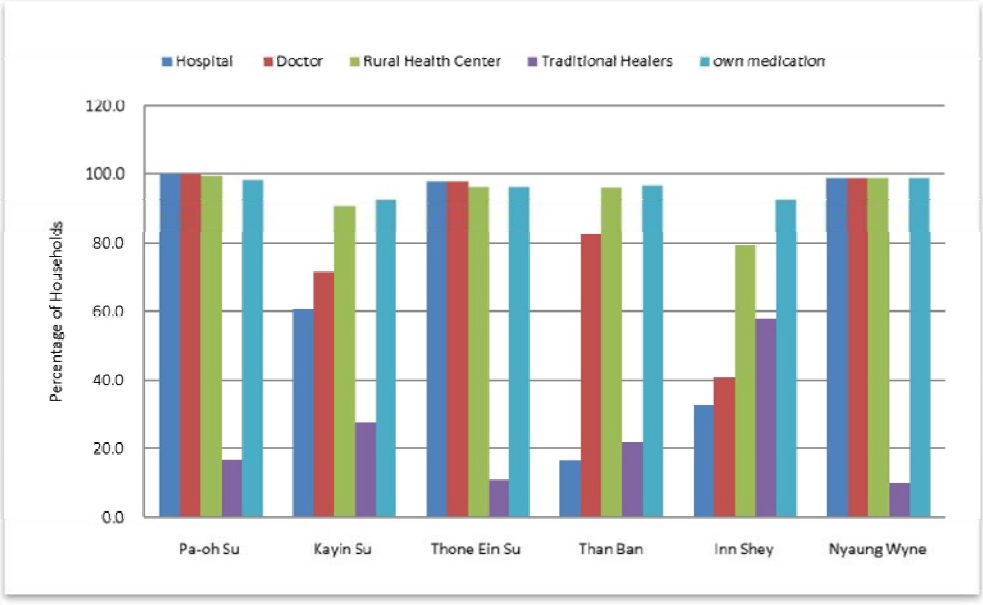


Figure 5-23: Easy Access to Health Facilities in the survey villages (Sept. 2016)

5.3.3.3 Community's Knowledge and Accessibility to Healthcare Services

Generally, households knew about the health services (doctors, rural health centres, etc) available in their locality. Rural health centres were also located within the accessible distance of the villages.

5.3.3.4 Households' Priority for Healthcare Practices

Healthcare practices includ visiting a doctor, a Rural Health Centre, a traditional healer and taking their own medication. Each household was asked to prioritise (1 for first priority, 2 for second etc) its different practices.

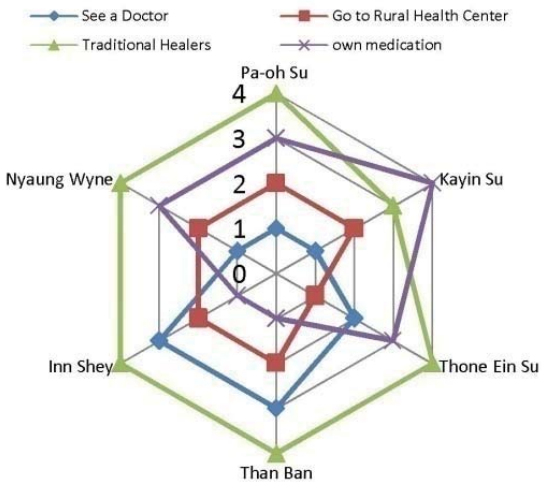


Figure 5-24: Indicative Healthare priorities of Households in the survey villages (Sept. 2016)

In Fig 5-36, "Seeing a Doctor" was the first health practice priority for Pa-oh Su, Kayin Su and Nyaung Wyne while Thone Ein Su rated it second and Than Ban and Inn Shey give it even lower priority. "Going to a Rural Health Centre" was uniformly recognized as second priority (Level 2 circle) by all the villages except Thone Ein Su (which rated it as first). Than Ban and Inn Shey rated "Using own medication" as their first priority. The traditional Healer was rated last by all the villages except Kayin Su which rated it second last.

Households were asked whether they had ever visited a doctor or rural health centre as these were assumed as two standard healthcare services.

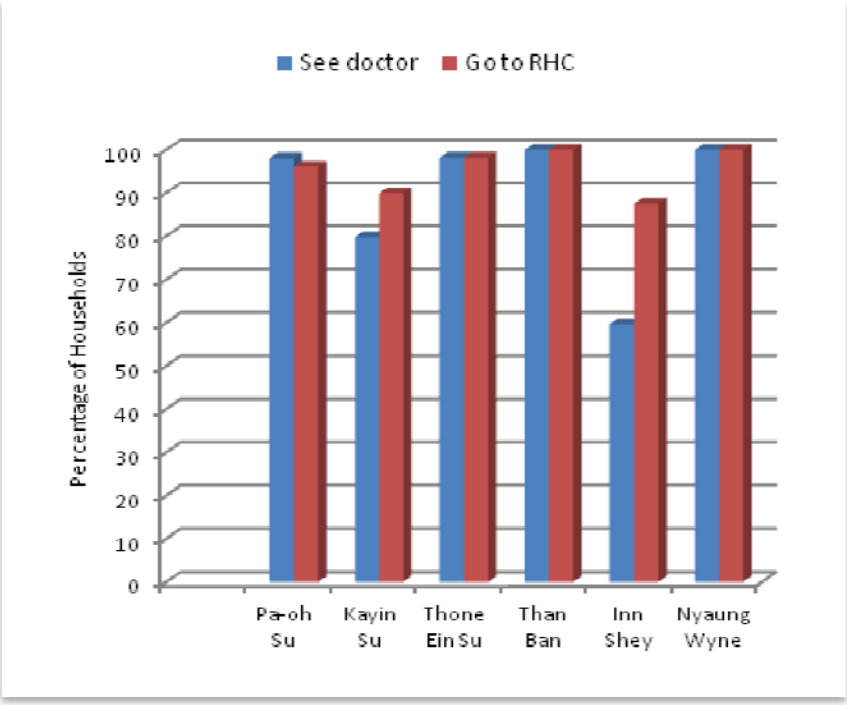


Figure 5-25: Indicative Healthare of Households in the surveyed villages (Sept. 2016)

Many households (40%) in Inn Shey had never visited a doctor. It rated visitng a doctor at low priority in Figure 5-36. The percentage of *non-doctor-seeing households* was not so high in Kayin Su (20%). The percentage of households visiting these two healthcare services was high in the other 4 villages.

5.3.3.5 Households' Actual Healthcare practices

As an indication of regular healthcare practices, households were asked how many times they had visited a doctor for treatment in the previous 12 months. The following table shows the results.

Village Name	Number of Households	Total times visiting the doctor	Average number of visit to doctor by households
Pa-oh Su (Kyar Ban)	202	870	4.3
Kayin Su (Kyar Ban)	148	64	0.4
Thone Ein Su (Kyar Ban)	55	328	6.0
Than Ban	151	1528	10.1
Inn Shey	176	549	3.1
Nyaung Wyne	109	966	8.9

Table 5-7: Average Number of Visit to Doctor during the previous 12 months in the surveyed villages (Sept. 2016)

In actual practices, households in Than Ban and Nyaun Wyne had visited a doctor more frequently. It was told that Than Ban had some chronic health cases who visited doctor frequently. Households in Kayin Su visited a doctor the least frequently.

5.3.4 Water Supply

This section analyses the water sources available for village households, the extent of water shortages, the quality of drinking water and water pollution levels.

5.3.4.1 Water Supply Sources for Drinking Water and Water for Domestic Use

A number of water sources were listed which households were asked to identify. Water sources both for drinking and domestic use (cooking, washing, cleaning, etc) were included.

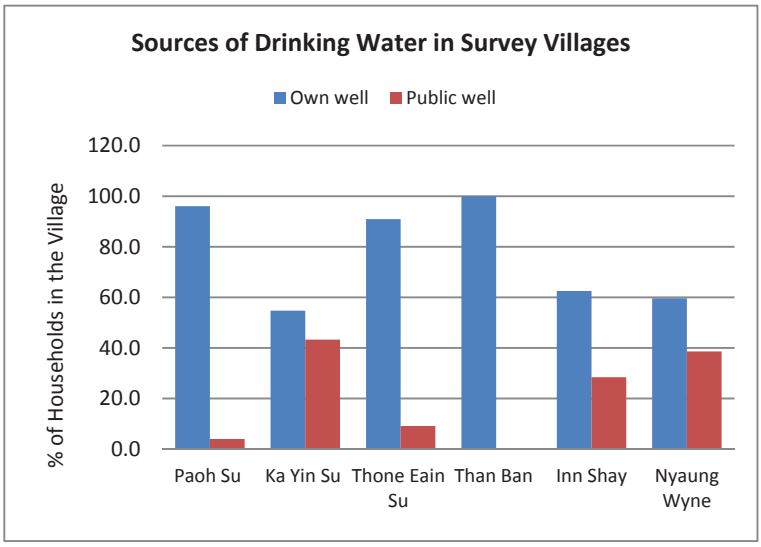


Figure 5-26: Sources of Drinking Water in the surveyed villages (Sept. 2016)

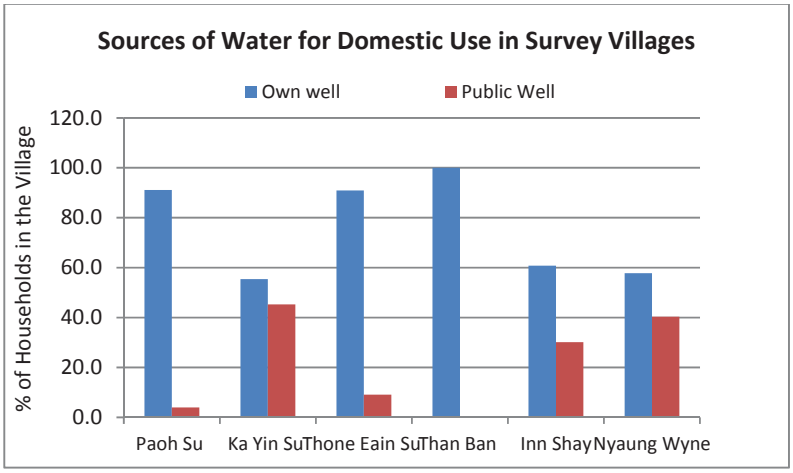


Figure 5-27 Sources of Water for Domestic Use in the surveyed villages (Sept. 2016)

Although the list included water sources such as river, pond, dam, tap water, water seller, and bottled water, only two sources (own hand-dug well and public hand-dug wells) were most common. Almost all households had their own hand-dug wells for drinking and domestic use in Pa-oh Su, Thone Ein Su and Than Ban. Similarly, there were about equal number of own wells and public wells for drinking and domestic use in each of other villages.

Households were also asked who normally carried the water for the household. Male household members carried water for the households more often than female members.

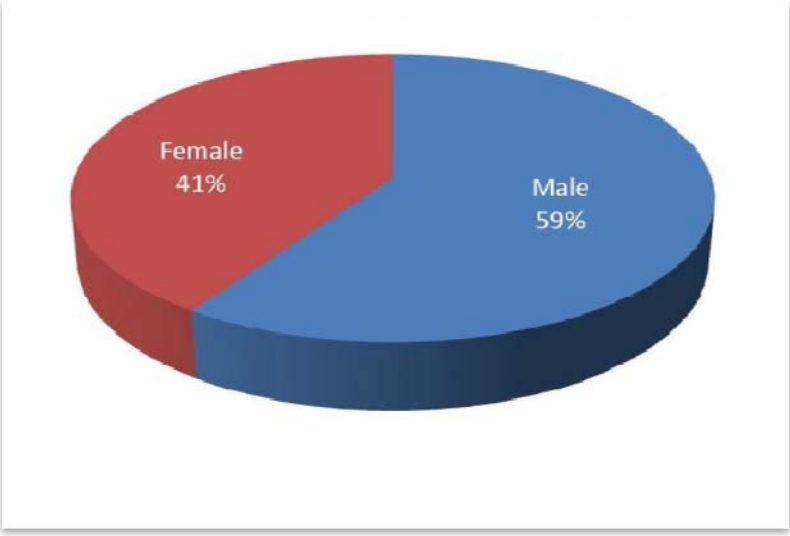


Figure 5-28 Overall Percentage of Male & Female Water Carrier for Households in the surveyed villages (Sept. 2016)

5.3.4.2 Water Shortage Situation

Households were asked to recall water shortages during the year and the extent of the water shortage in terms of months in the year.

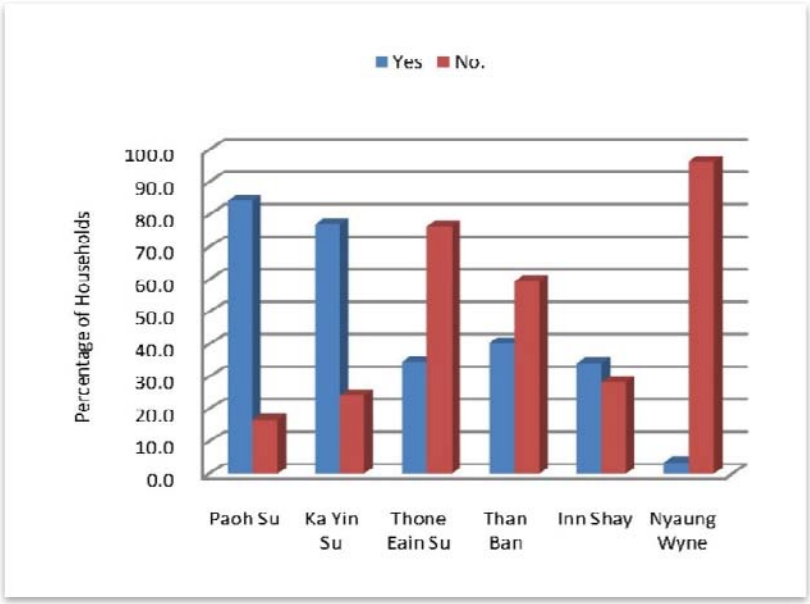


Figure 5-29: Percentage of Households Encountering Water shortge during the year in the surveyed villages (Sept. 2016)

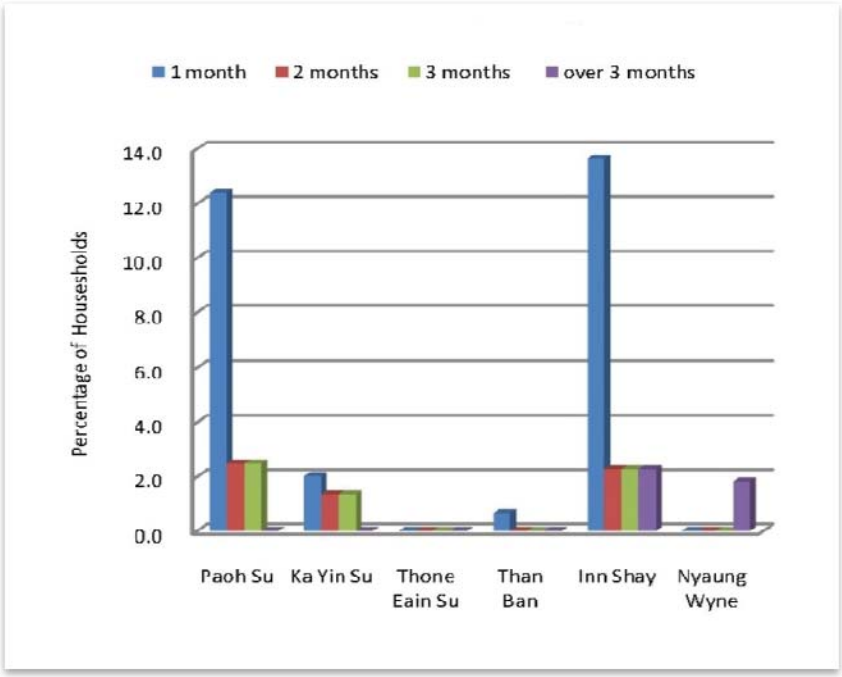


Figure 5-30: Extent of Water Shorttage in the surveyed villages (Sept. 2016)

Water shortages were experienced by 75% to 85% of the households in Pa-oh Su and Kayin Su and less in the other four villages. Nyaung Wyne had the lowest number of households (3%) with water shortage problems.

As to the length of the water shortage, only a few households had more than a 3 month water shortage (Inn Shey 3%, Nyaung Wyne 1.8%). A notable point was that 12% to 14% of the households in Pa-oh Su and Inn Shey had a one month water shortage.

5.3.4.3 Household Coping with Water Shortage Problem

Households were asked to identify their methods of coping with water shortage problems. Households in all the villages use less water than usual to cope with water shortage problems.

This seems to be logical as the water shortage period usually lasted only for one month and it would not be very difficult for households to discipline the use of water to overcome the shortage period.

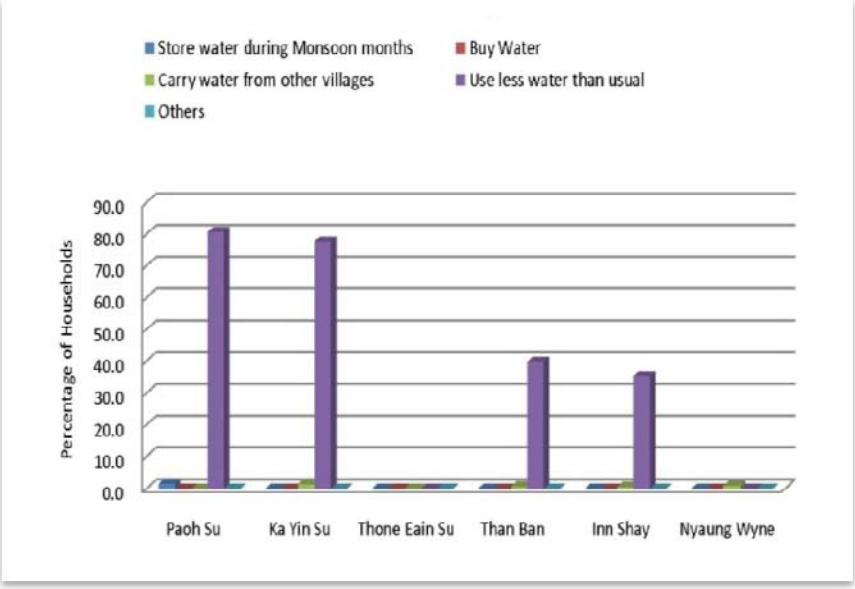


Figure 5-31: Coping with Water Shortage in the surveyed villages (Sept. 2016)

5.3.4.4 Water Quality and Water-borne Diseases

The taste of the drinking water in the villages was said to be fresh, with very little saline content. In the questionnaire, households were asked to recall if they had noticed a change in the taste and colour of their drinking water and also if they could identify incidences of using unclean water.

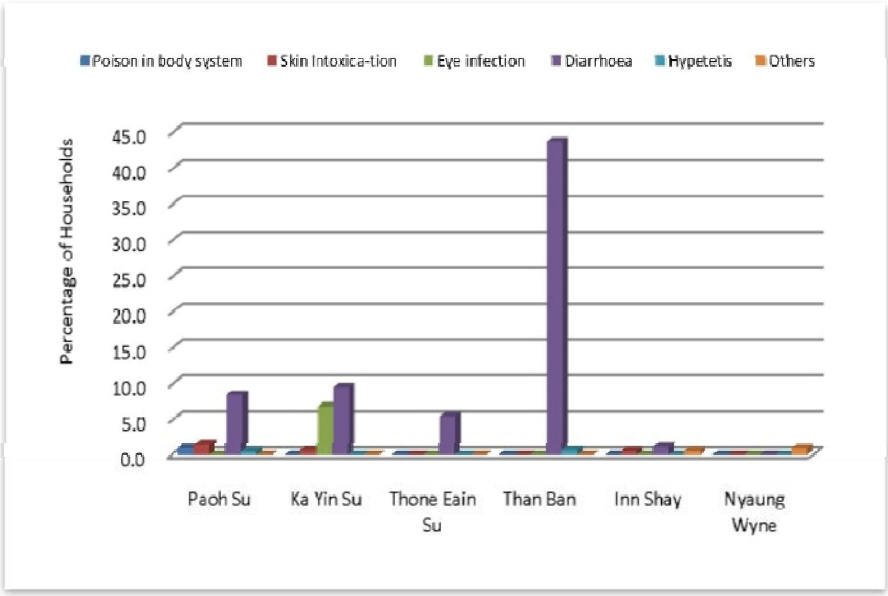


Figure 5-32: Types of Diseases inflicted from Poluted Water in the surveyed villages (Sept. 2016)

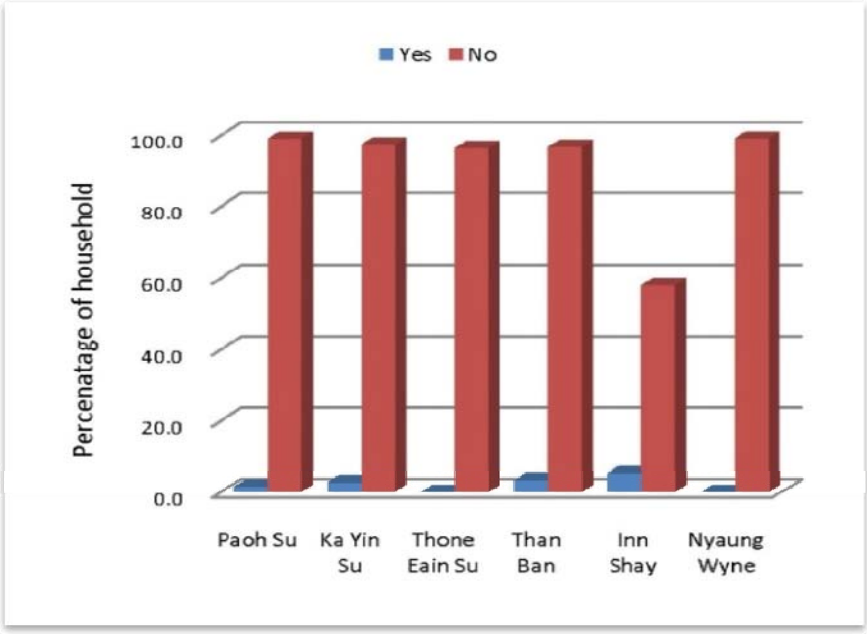


Figure 5-33: Changes in Taste of Drinking Water in the surveyed villages (Sept. 2016)

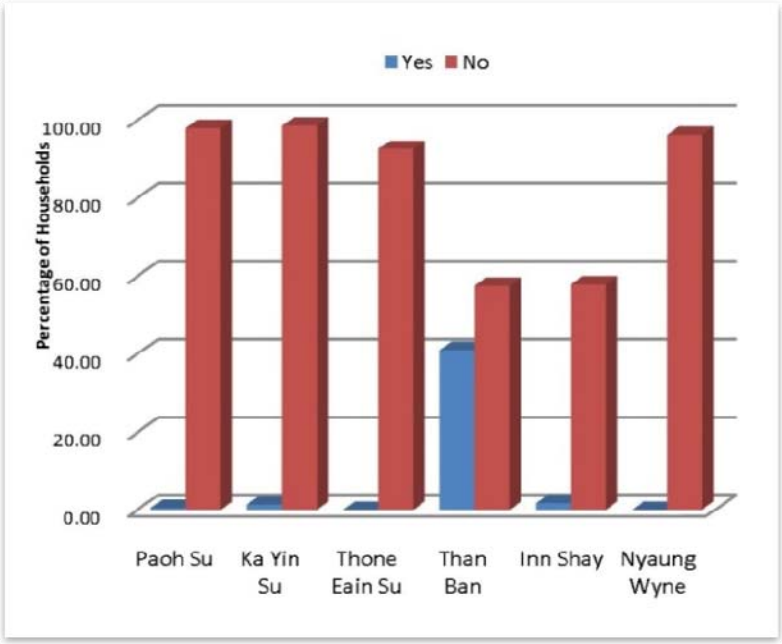


Figure 5-34: Incidences of Diseases from Use of Unclean Water in the surveyed villages (Sept. 2016)

Very few households reported a change of taste in their drinking water. Similar, very few households could recall the incidence of diseases caused by using unclean water. However, Than Ban was an exception. It had a record of 40% of households having diahorrea in some year.

5.3.4.5 Water-borne Diseases

Households were asked to identify the diseases which occurred in their villages. Very few households had water-borne diseases except Than Ban with 40% of the diarrhoea cases reported occurring there. About 5 to 10% of the diarrhoea cases were in Pa-oh Su, Kayin Su and Thone Ein Su and about 7% of all eye infections in Kayin Su.

5.3.5 Sanitation and Hygiene

This section shows the sanitation and hygiene situation of the households in terms of personal hygiene awareness and practices, use of toilet, disposal of solid waste and food hygiene practices.

5.3.5.1 Hand-washing Awareness and Practices

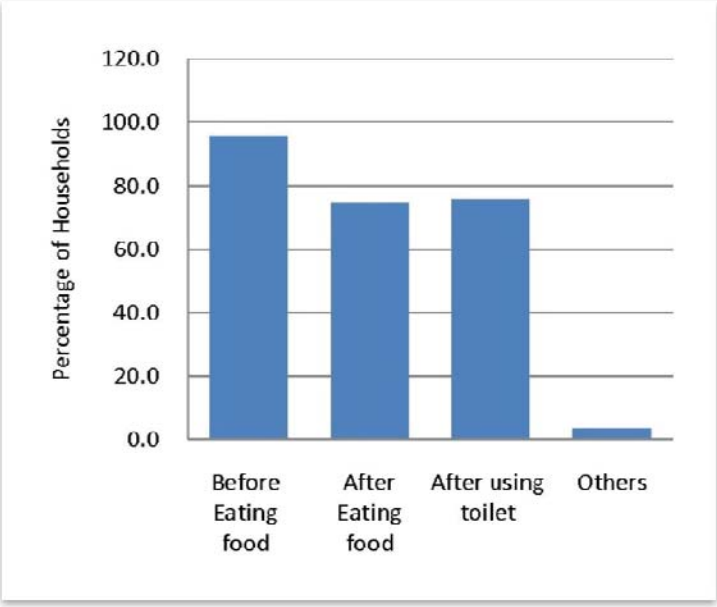


Figure 5-35: Overall Situation of Hand Washing habits in the surveyed villages (Sept. 2016)

Households were asked if they were aware of the importance of hand washing and if they actually observed the practice. The questionnaire (section 6.1 a) showed that 93% were aware of the importance of hand washing. More than 90% said that they washed their hands before eating and less than 80% also washed their hands after eating food and using the toilet.

5.3.5.2 Use of the Toilet and Disposal of Toilet Waste

Households were asked if they had toilets in their households and about the types of toilet they were using.

83% had toilets with most households using fly proof latrine (50% to 90%) and about 33% and 12% using their neighbour's toilet. Very few households used other types of toilet such as direct pit or defecated in the bush.

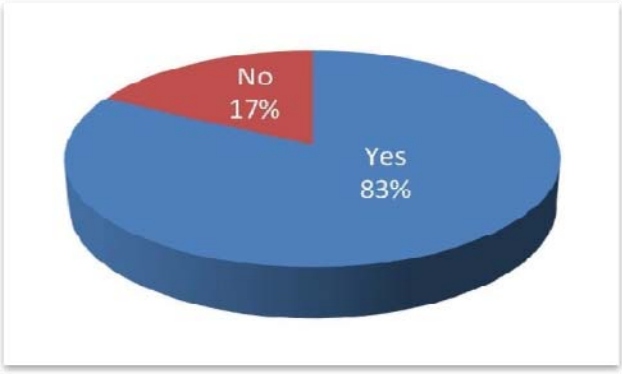


Figure 5-36: Overall Percentages of Households Having Toilet in the surveyed villages (Sept. 2016)

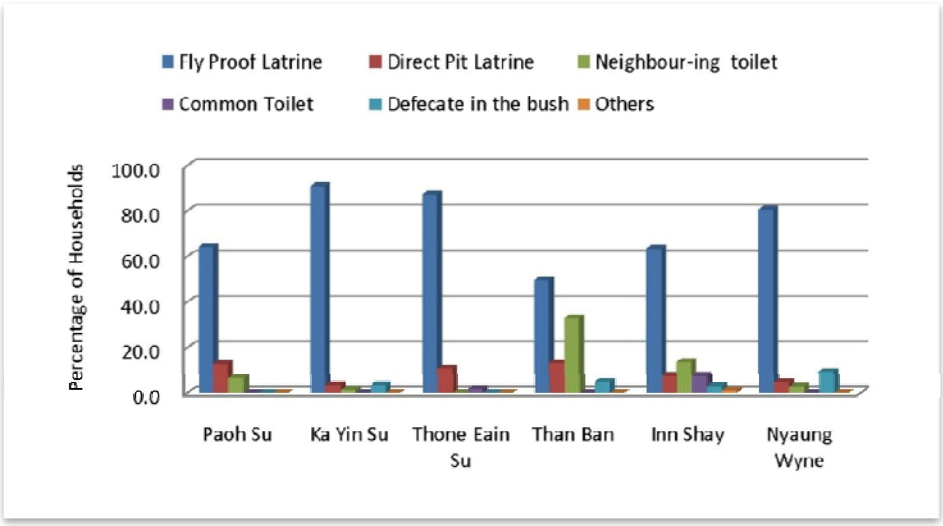


Figure 5-37: Percentages of Households using different Toilets in the surveyed villages (Sept. 2016)

Households were also asked about their cleaning habits after toilet use and also to recall how long they had been using the toilet.

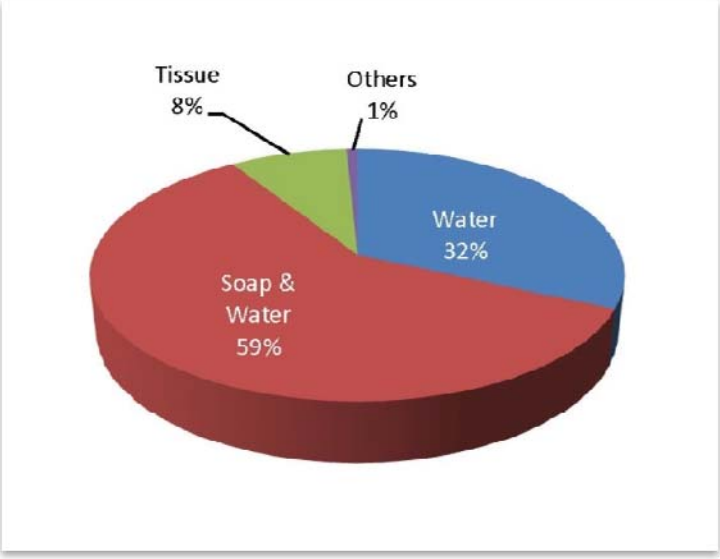


Figure 5-38: Cleaning Habits after using Toilet - overall situation in the surveyed villages (Sept. 2016)

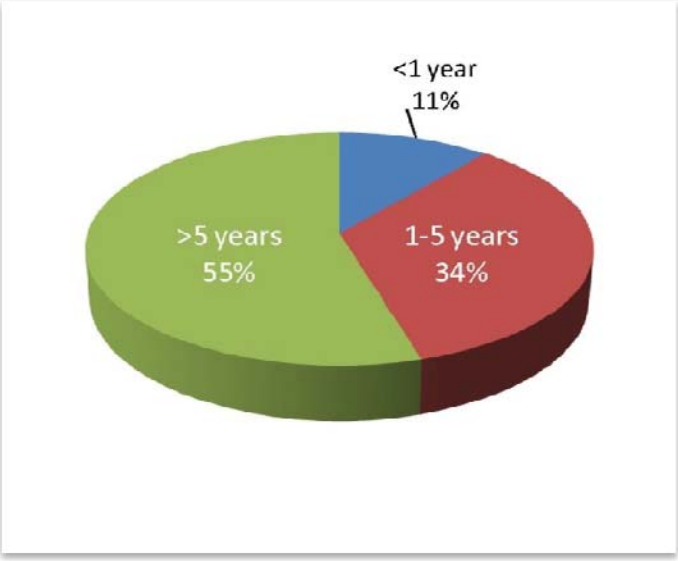


Figure 5-39: Years of Toilet use - overall situation in the surveyed villages (Sept. 2016)

The figures showed that the two largest groups used soap and water (59%) and water (32%) respectively. A few households (8%) used tissue paper. In terms of "years of toilet use", 55% had used the toilet for more than 5 years and 34 % 1 to 5 years. 11% had used it for less than one year. Regarding the disposal of the toilet waste, households were asked how they normally disposed of their toilet waste. The majority of the households (75% to 98%) in individual villages normally bury their toilet waste in a pit.

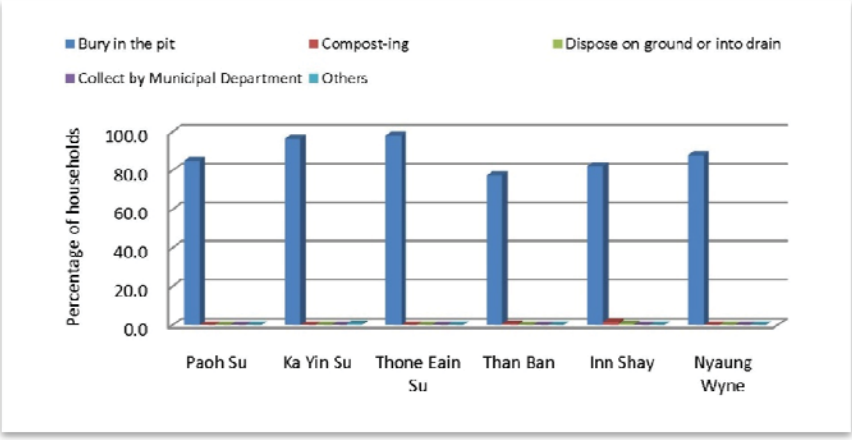


Figure 5-40: Percentage of household using different disposal of toilet waste in the surveyed villages (Sept. 2016)

5.3.5.3 Solid Waste Disposal

Households were asked how they dispose of solid waste. The results show that most of the households dispose of solid waste by burning it while some throw it into a pit. In Inn Shey disposal of solid waste by throwing it in a pit is higher (23.1 %) than in the other villages.

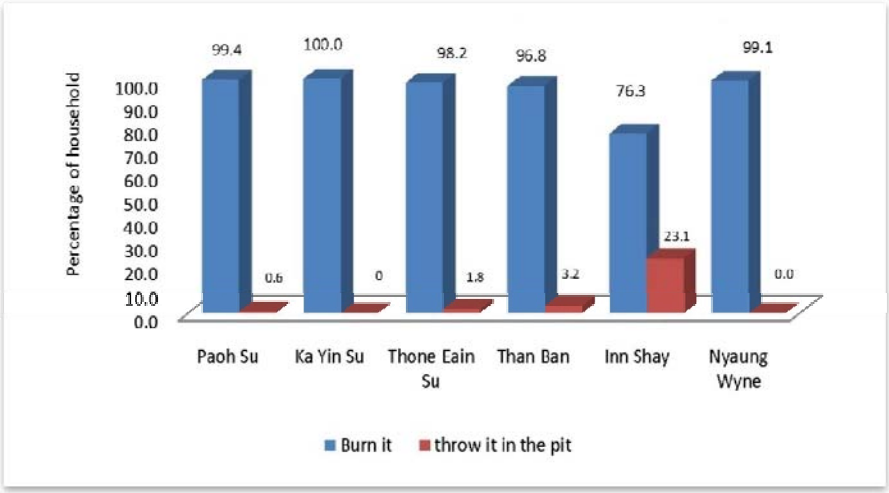


Figure 5-41: Households'solid waste disposal practices in the surveyed villages (Sept. 2016)

Solid Waste Collection Services and Sewage Systems

There is no solid waste collection service provided by the township or rural development services. Nor is there a public sewage system in the villages.

5.3.5.4 Food Hygiene Practices

Households were asked to tick their standard food hygiene practices. They were also asked whether they knew of cases of food poisoning.

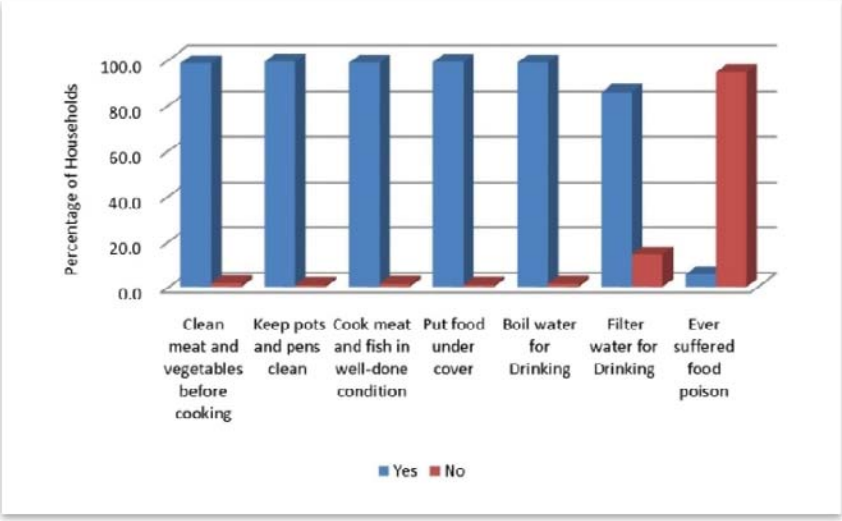


Figure 5-42: Food hygiene practices - overall situation in the surveyed villages(Sept. 2016)

Over 90% observed standard food hygiene. One exception was that filtering water for drinking was not practised by many households. Food poisoning seemed to be rarely experienced by the communities. Only 5.4% of the households said they had experienced food poisoning.

5.3.6 Environment

This section shows the households' perception of environmental degradation, environmental pollution and climate change.

5.3.6.1 Environmental Degradation

The households had to identify environmental degradation phenomena, 60% to 90% actually perceived various forms of environment degradation.

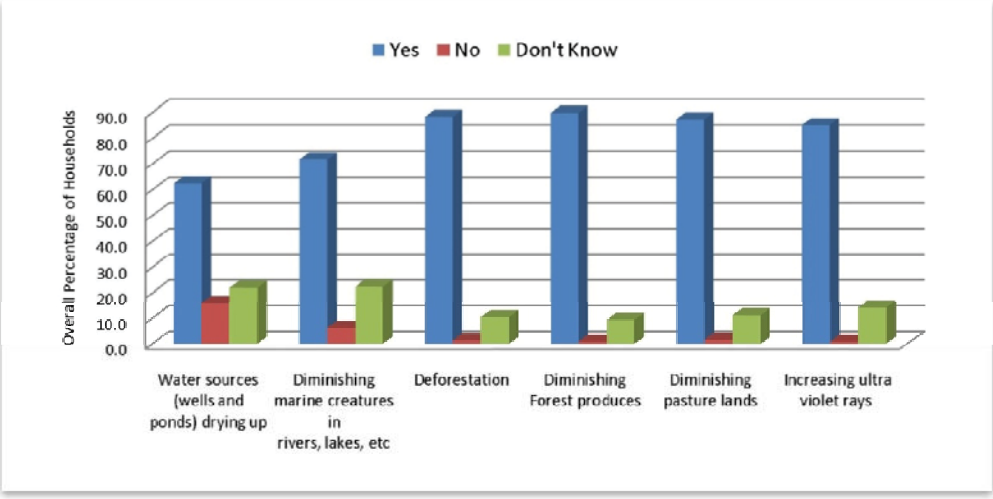


Figure 5-43: Environmental Degradation Situation - as perceived by villagers in the surveyed villages (Sept. 2016)

5.3.6.2 Environmental Pollution

The households were also asked to identify a number of environmental pollution forms and if they could perceive these issues in their environment.

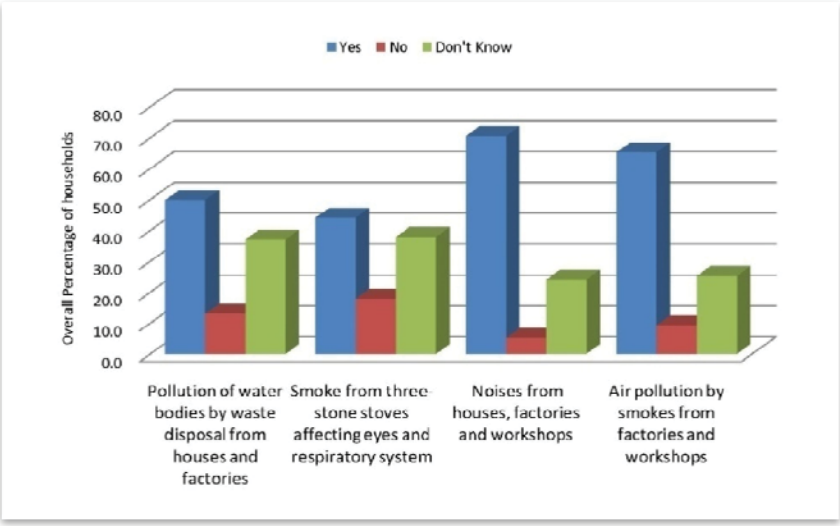


Figure 5-44: Environmental Pollution - as perceived by villagers in the surveyed villages (Sept. 2016)

According to the results, the communities have a better perception of two features of environment pollution:
Noise from houses, factories and workshops (70%);
Air pollution caused by smoke from factories and workshops (65%).

Many households are also aware of two other environment pollution forms (49% for pollution of water bodies and 45% for firewood kitchen smoke).

5.3.6.3 Effects of Climate Change

A number of effects caused by climate change were listed and households were asked how they perceived these.

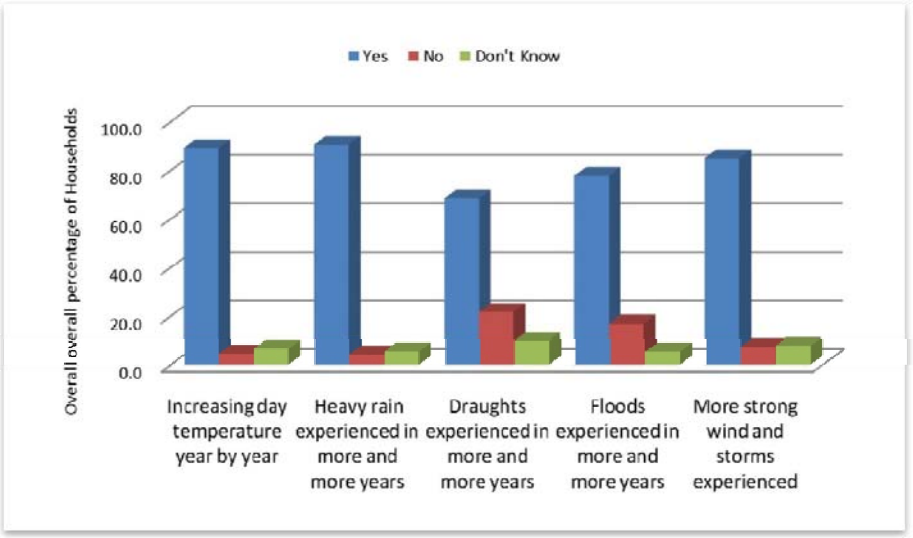


Figure 5-45: Effect of Climate Change - as perceived by villagers in the surveyed villages (Sept. 2016)

Communities generally had a good perception of the effects of climate change (70% to 90%).

5.3.7 Employment

This section shows the employed population and the average number of household members employed. Also included in the survey were the types of employment or business with which household members were earning income or making a living.

5.3.7.1 Size of Workforce in Households

Households were asked about household members who were gainfully employed. The household workforce was divided into two groups; mature workers (over 18) and early youth workers (under 18).

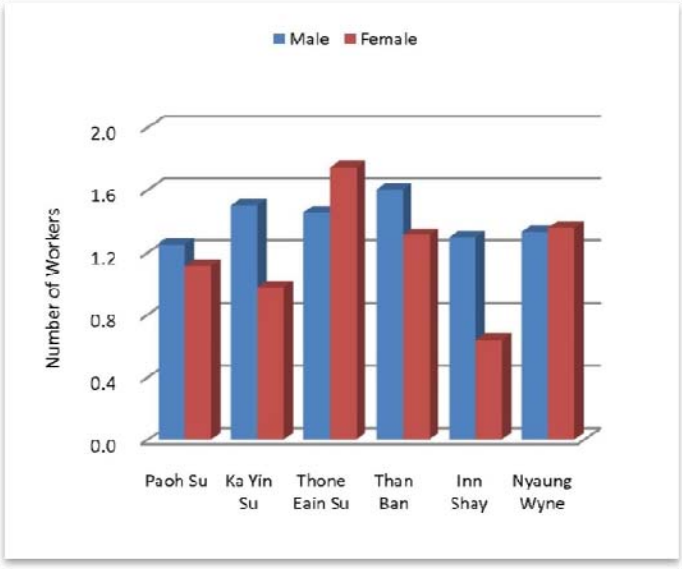


Figure 5-46: Average Number of Workers (over 18) per household in the surveyed villages (Sept. 2016)

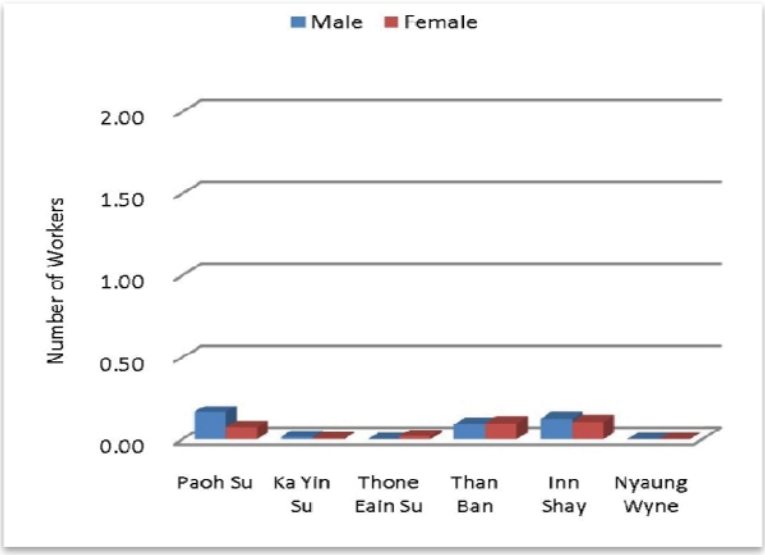


Figure 5-47: Average Number of Workers (under 18) per household in the surveyed villages (Sept. 2016)

The actual number of workers (male and female) was not used to indicate the size of the employed population but to show on average how many members (male and female) in a household were employed for living or generating income. On average between 1.2 and 1.6 mature male members and 0.6 to 1.7 mature female members were employed.

The size of the early youth (under 18) workforce was small compared to the mature workforce with the average number of early youth workers ranging from 0.01 to 0.13 for male and 0.01 to 0.11 for female.

5.3.7.2 Types of Employment

Households were asked about the number of household members (male and female) in different types of employment or business.

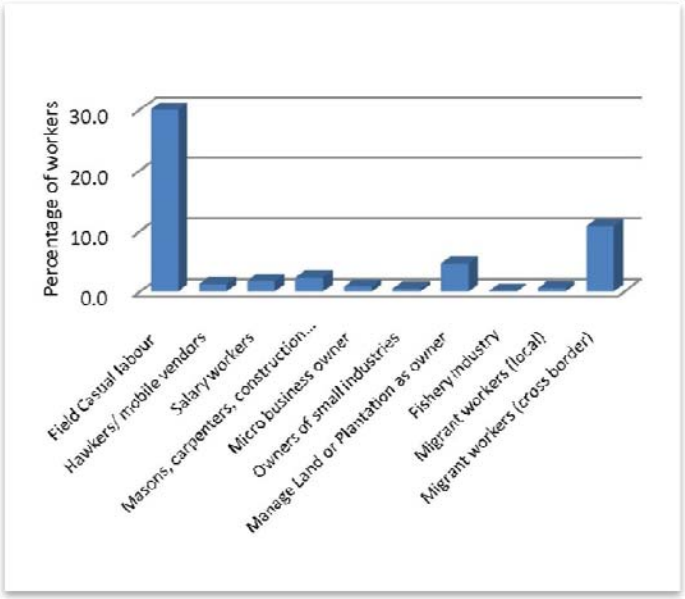


Figure 5-48: Overall Percentage of Males in different employent in the surveyed villages (Sept. 2016)

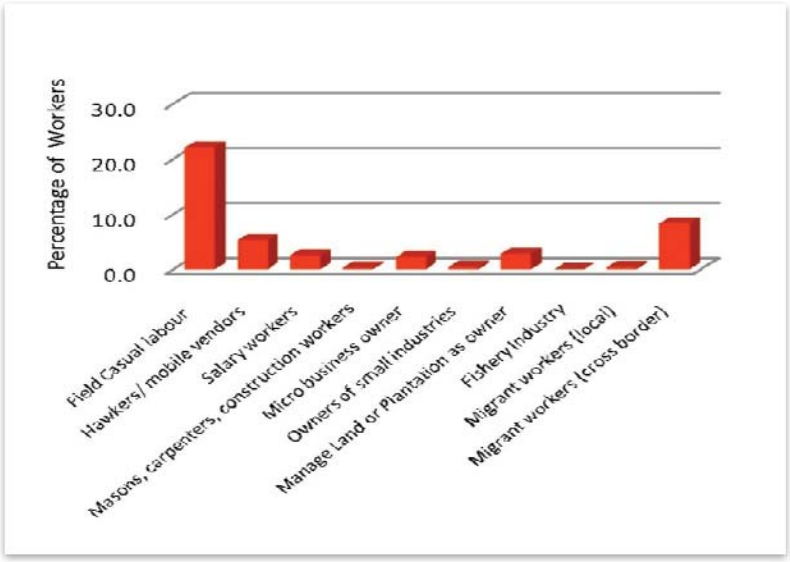


Figure 5-49: Overall Percentage of Females in different employents in the surveyed villages (Sept. 2016)

Most of the male and female workforce was employed as field casual labourers (male 31.5%, female 22.1%). The second largest group, both male and female, were employed as cross-border migrant workers (male 10.7%,

female 8.2). 5.3% of the female workforce was hawkers or mobile vendors. 4.7 % of the male workforce was engaged in managing land or as plantation owners.

Labour contracts and social security entitlement
The survey found that very few household members work in a factory or in government. Those who were working for private businesses had no labour contracts and very few workers had social welfare entitlement.

5.3.8 Gender Aspects

This section looks at the gender relation situation in the survey villages, focusing on three aspects of gender relation:

- gender division of work,
  rights and responsibilities of males and females, and
- decision-makers in the household.

5.3.8.1 Division of Work

Households were asked how they normally allocate household activities between male and female members. To simplify interpretation of the ratio between male-performing and female-performing for a particular type of work or actvitiy, number of femaleperforming households for the type of work was taken as 1 and then show how male performing households compared.

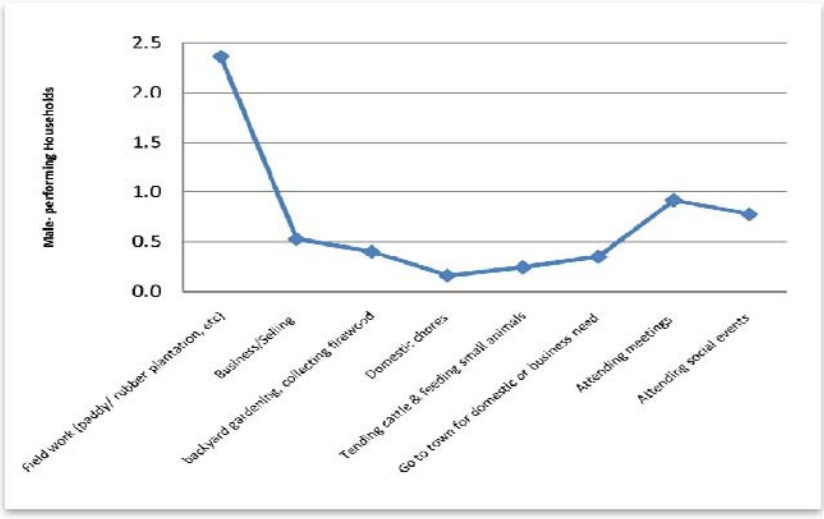


Figure 5-50: Overall Sitation - Division of labour between Male & Female (female performing households as 1) in the surveyed villages (Sept. 2016)

The chart shows that male members were more involved in field work (paddy/rubber plantation) than females (2.4:1). Activities such as attending meetings and social events, males and females were more or less equally involved (0.9:1 and 0.8:1 respectively). For other activities, males were far less involved than females, i.e., male ratio ranged 0.2 to 0.5 only.

5.3.8.2 Rights and Responsibilities

Households were asked how they normally allocate rights and responsibilities for domestic activities between male and female members. Like previous case, number of households where female has the particular rights or responsibility was assumed as 1 and then show how the number of households where male has rights and responsibility compared to the female's.

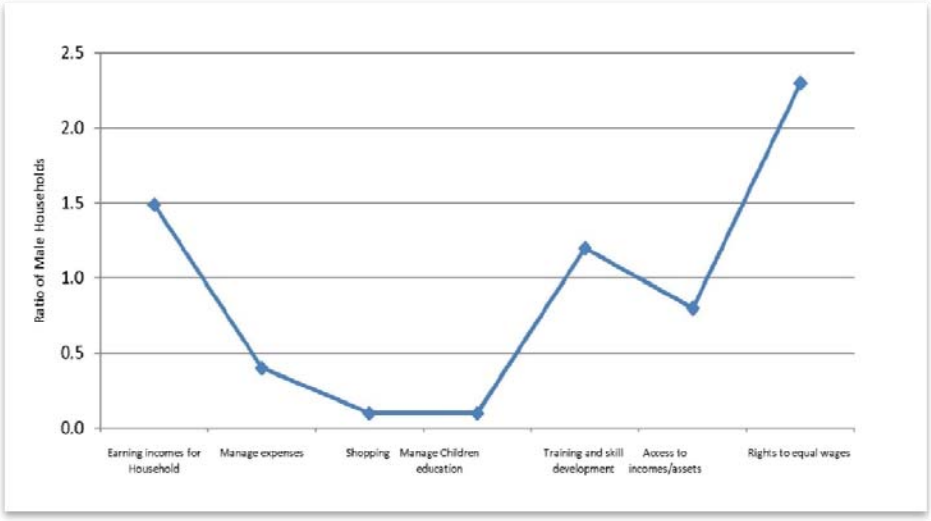


Figure 5-51: Overall Situation - Right & Responsibility between male and female (Female speific household as 1) in the surveyed villages (Sept. 2016)

The ratio of male members was larger than that of females in taking responsibilities to earn income (1.5:1) but less than female ratio in managing expenses, doing shopping and managing children's education (0.4:1, 0.1:1 and 0.1:1 respectively).

On the other hand, male members had more rights to equal pay (2.3:1). Male and female members had more or less equal rights in training and skills development opportunities (1.2:1) and access to household income and assets (0.8:1).

5.3.8.3 Decision Makers in the Households

Households were asked to identify who would normally be the decision maker in important household issues. For a particular issue (e.g deciding which school children should atten) the number of household where female is decision maker was assumed as basic unit or 1 and then find out the ratio between households where female and male are decision makers (i,e (female=1 and male =x).

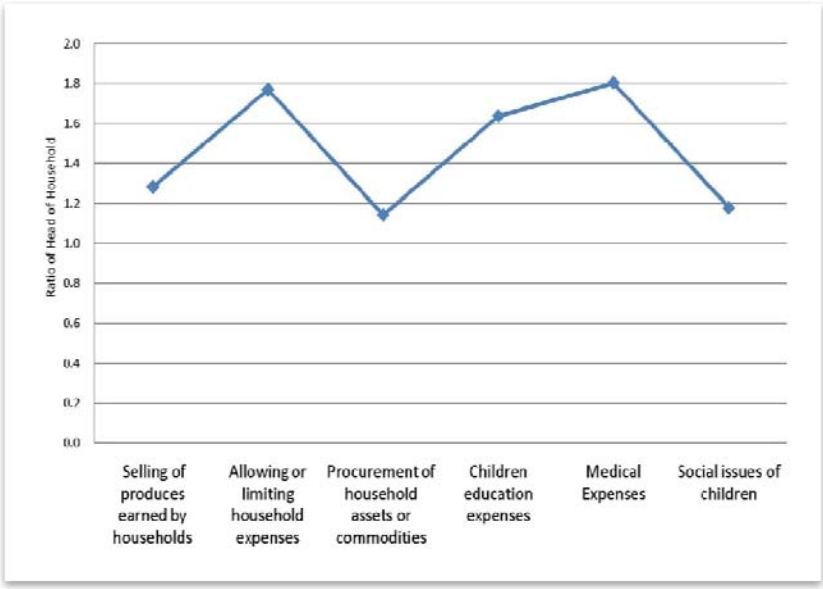


Figure 5-52: Overall Situation - Decision makers (between male and female) in the households in the surveyed villages (Sept. 2016) (number of households

The male ratio was greater in decision making in all the household issues listed (i.e above 1 which indicates female ratio) In particular, more male members made decisions on the issue of "allowing or limiting household and medical expenses" with a ratio of (1.8:1) in favour of male. On the other hand, male and female had almost equal say in the procurement of household assets and commodities and on social issues of their children (such as marriage).

5.3.9 Household Assets

This section recognizes ownership of house and house compound land (premises) as an indication of possessing some material assets. Households who had or had no own houses or house compounds were recorded and collate into tables and graphs. To further investigate the levels of asset, data was collected on the size and type of house, size of the house compound, type of legal title and other household property such as bicycle, motor cycle, three-wheel vehicle, etc.

5.3.9.1 Ownership of House and House Compound

Households were asked whether they own the house and house compound where they are living on or whether they live as tenant, co-tenant, etc.

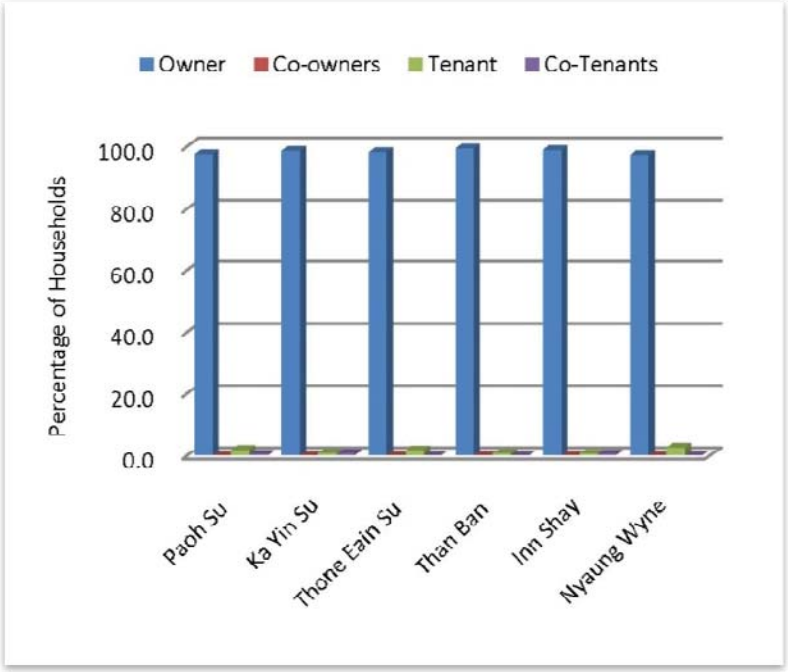


Figure 5-53: House Owernship situations in the surveyed villages (Sept. 2016)

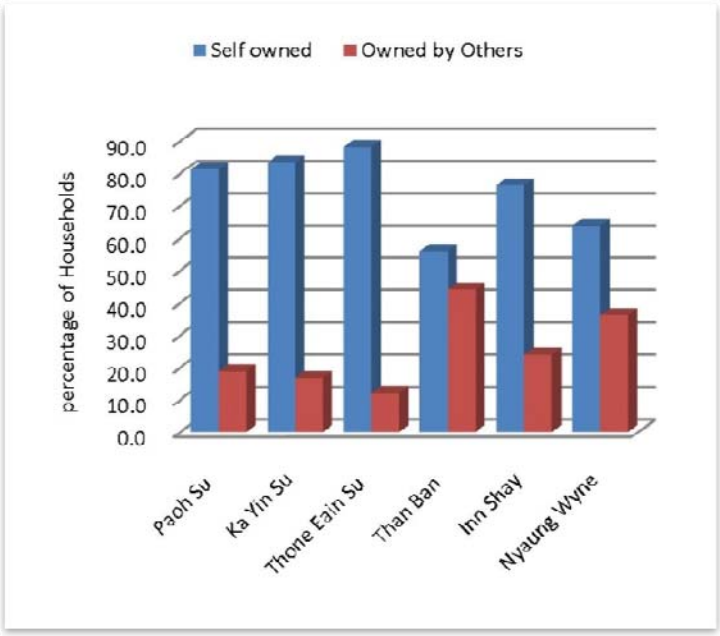


Figure 5-54: Ownership Situations of house compound (premises) in the surveyed villages (Sept. 2016)

House ownership was nearly (98-99%) in the villages. Ownership of house compound land was not so universal, particularly in Than Ban and Nyaung Wyne. It was reported that residential land in these two villages were owned by the nearby tyre factory.

5.3.9.2 Legal Title of House Compound Land

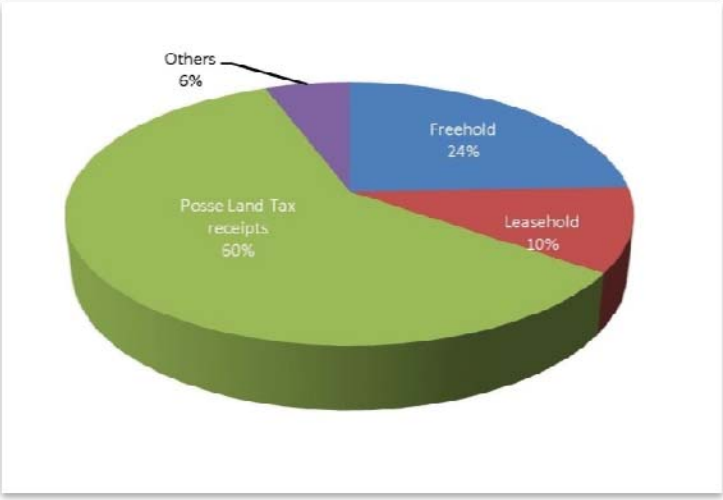


Figure 5-55: Overall Situation - legal title of house compound land in the surveyed villages (Sept. 2016)

Freehold land (ancestral land) and leasehold land (30 and 60 years government grant land) are two common types of land legal title. Some households had to rely on land tax payment receipts as evidence of legal title. Legal title could be confirmed in the land register kept at the Land Record Department. 60% of the house land owners were holding land tax payment receipts as a legal document. 24% and 10% of the land owner households were reported to have legal documents in hand. Households on land owned by government departments must or must not pay rent, depending on departmental policy.

5.3.9.3 Size of Houses and House Compounds

The size of the houses is measured in square feet. House compounds are measured in acres (1 acre = 0.4047 hectare). House size varied from 20'x40' (less than 1000 sq.ft.), 40'x60' (equal to about 2,500 sq.ft.) and 60'x80' (equal to about 5,000 sq.ft.) and so on.

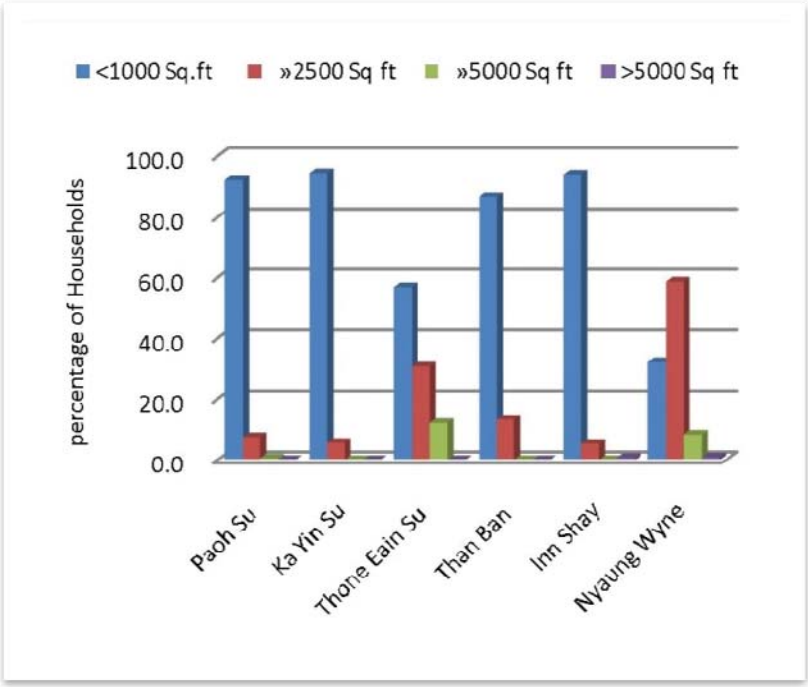


Figure 5-56: Size of Houses in the surveyed villages (Sept. 2016)

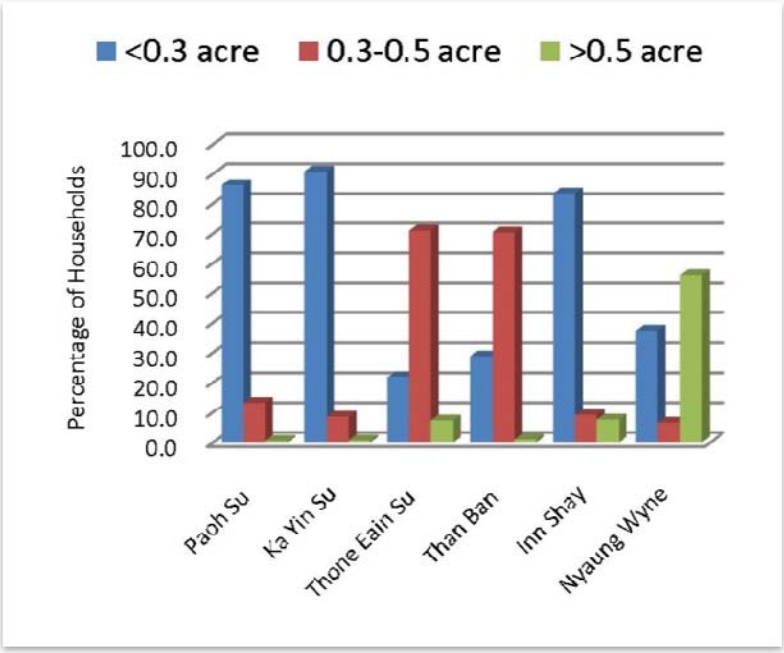


Figure 5-57: Area of House compound land in the surveyed villages (Sept. 2016)

The majority of the houses (87% to 94%) were less than 1000 sq. ft., except in Thone Ein Su and Nyuang Wyne. Households in those two villages had a wider variety of sizes. As to the size of the house compound, most households (83% to 91%) had less than 0.3 acre in Pa-oh Su, Kayin Su and Inn Shey. On the other hand, Thone Ein Su and Than Ban had more

households with larger compounds (0.3 to 0.5 acres). In Nyuang Wyne the number of households with the large compounds (over 0.5 acres) was remarkably high (56%).

Type of Houses
Houses are traditionally defined by the types of construction materials, namely brick houses, wooden houses and huts.

Number of Storeys
Houses are also distinguishable by the number of storeys. They included ground floor or one-storey houses, two-storey houses and three and more storey houses.

55% of the households were wooden, having been built many years ago when timber prices were still low. Most of the brick houses were new and are an indication of the wealth of house owners. 27% of the households live in huts. Most households (87%) were one-storey houses.

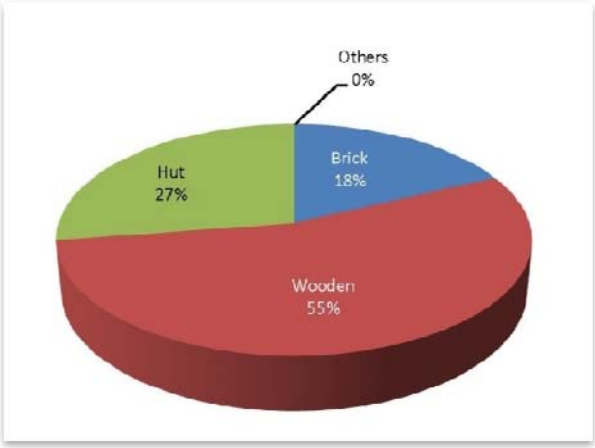


Figure 5-58: Overall Situation - types of houses in the surveyed villages (Sept. 2016

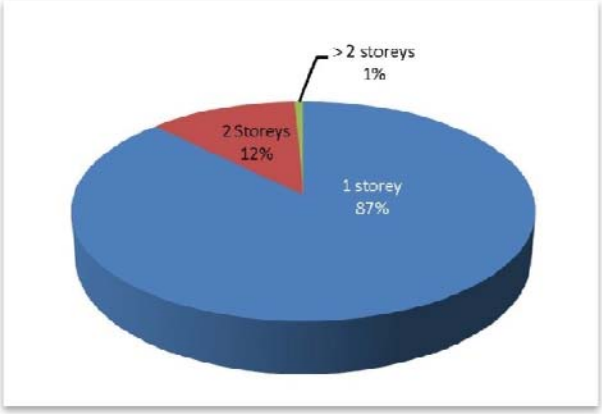


Figure 5-59: House Structure - numbers of storeys in the surveyed villages (Sept. 2016)

5.3.9.4 Other Household Property

Other household property includes motor cycles, bicycles, motor cars, three wheel vehicles, etc., which could be seen as an indication of material assets.

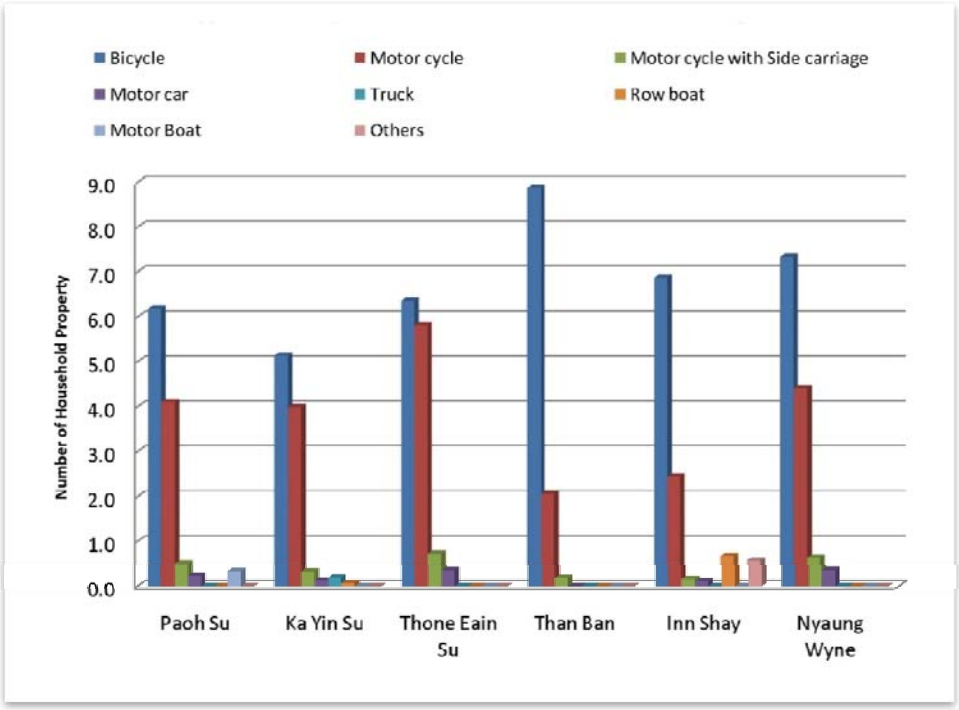


Figure 5-60: Possesion of other household property numbers of each type o fasset per 10 households in the surveyed villages (Sept. 2016)

Bicycles and motor bikes were the most common household property. Than Ban village had 9 bicycles per 10 households or almost one bicycle per household. Other villages had bicycles ranging from 5 to 7 per 10 households. Motor bikes are the second most common household property, ranging from 2 to 6 per 10 households.

Because of the proximity to the Thaton town, the surveyed villages lean more on the urban than the rural economy. The town market serves both consumers and producers. The area is also on the main road to Hpa-an town with a highway providing access to the eastern border.

5.3.10 Productive Assets

This section studies the productive assets possessed by the households including land, retail businesses, industries and other assets such as vehicles, cattle, livestock, farm implements and fishing boats, etc. The study focuses on land size, land use, productivity, types of industries and number of other productive assets.

5.3.10.1 Ownership of shops

A number of retail shops exist in the villages. Data was collected to determine the percentage of households who own or rent shops from others.

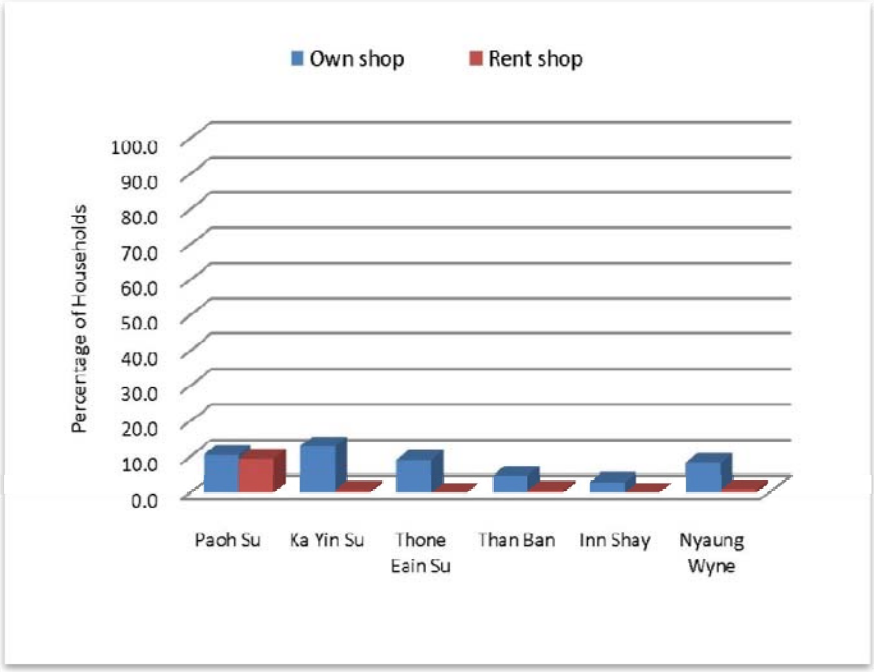


Figure 5-61: Shop owernship in the surveyed villages (Sept. 2016)

The graph shows that fewer than 10% of the households in most of the villages own retail shops.

The percentage of shop owner households was a little larger (11 to 12%) in Pa-oh Su and Kayin Su. These two villages are located on the main motor road and have a fairly large number of households. Likewise, Thone Ein Su and Nyaung Wyne village, two other villages on the main motor road have 8 to 9% of households who own shops

In most cases the shops are retail shops selling vegetables, fruits, grocery, general store items, cold drinks, food and snacks and tea shops, etc.

5.3.10.2 Ownership of Small Industries

Only 12% of the households were engaged in the small industry sector with a large number concentrated in Pa-oh Su. Other villages had no or very little industry. Sewing and tailoring businesses occupy the largest percentage (30%) of the sector with oil mills second (25%). The percentages went down to 16% for bamboo crafts and electrical repair services and 9% to motor bike repair workshops.

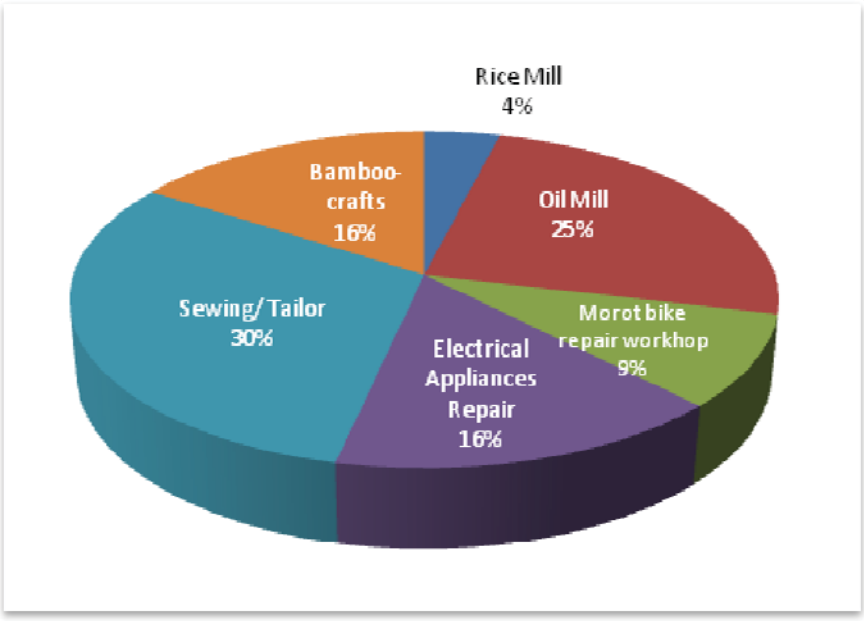


Figure 5-62: Overall situation -percentage of small industries in the surveyed villages (Sept. 2016)

5.3.10.3 Ownership of Productive Lands

Productive lands are lands used for producing agricultural crops for consumption or industrial use. Data was collected to determine the percentage of land owners and non-land owners.

Productive lands are used for paddy fields and large rubber plantations. Households also grow betel nut trees or rubber seedlings or vegetables in their own backyards.

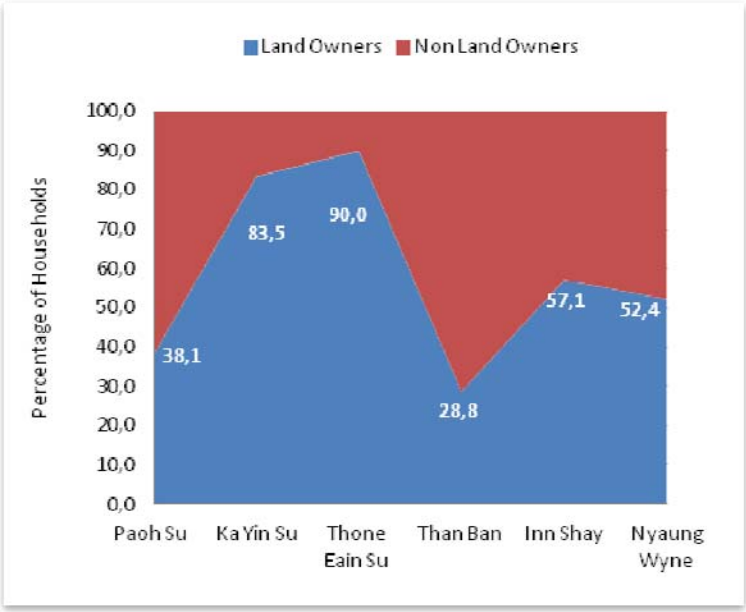


Figure 5-63: Ownership of Productive Land in the surveyed villages (Sept. 2016)

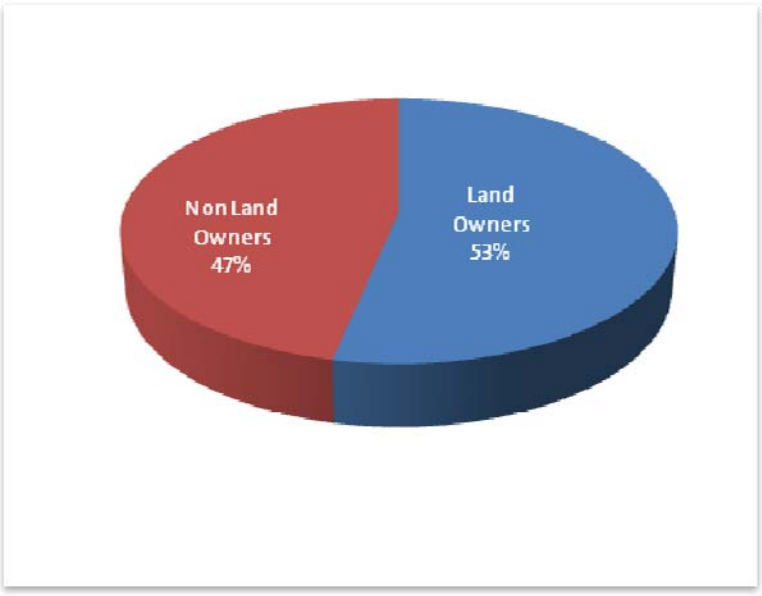


Figure 5-64: Overall situation - Owernship of Productive Land in the surveyed villages (Sept. 2016)

Land owner households make up 53%. Village-wise, Kayin Su and Thone Ein Su had the largest percentage of land owner households (83.5% and 90% respectively). The smallest number of land owner households is in Than Ban (28.8%). Thers are a few landless people who rent idle land owned by other people to grow seasonable vegetables.

5.3.10.4 Ownership of Different Types of Land

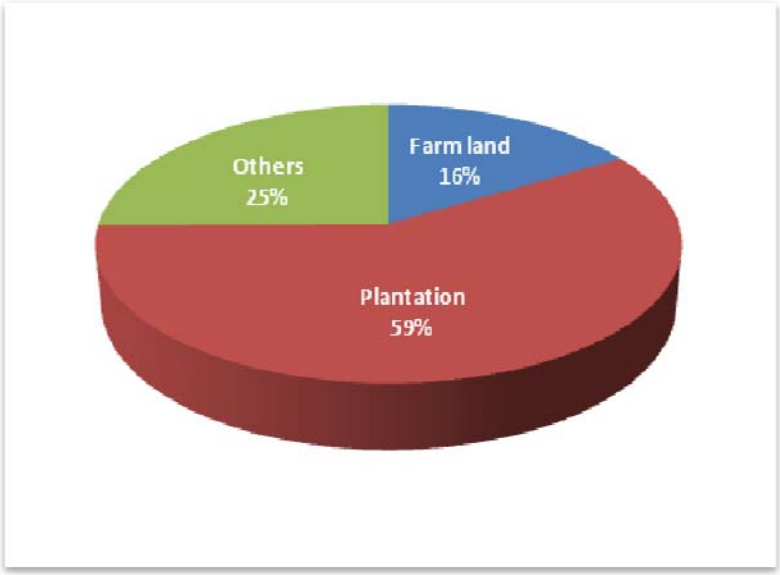


Figure 5-65: Overall situation - types of productive land owned by households in the surveyed villages (Sept. 2016)

Land owned by the households is registered as residential land, farm land, plantation land, and others. Farm and plantation land are regarded as productive land in this survey.

According to the results of Topic 5.3.10.3 above, about 53% of the households own productive land. Further data was collected to determine the number of households owning different types of productive land. 59% of productive land owner households had plantation land, 16% of the land owners had farm land, and other 25% own other types of land, such as gardens, poultry farms, etc.

5.3.10.5 Size of Productive Land Owned by Households

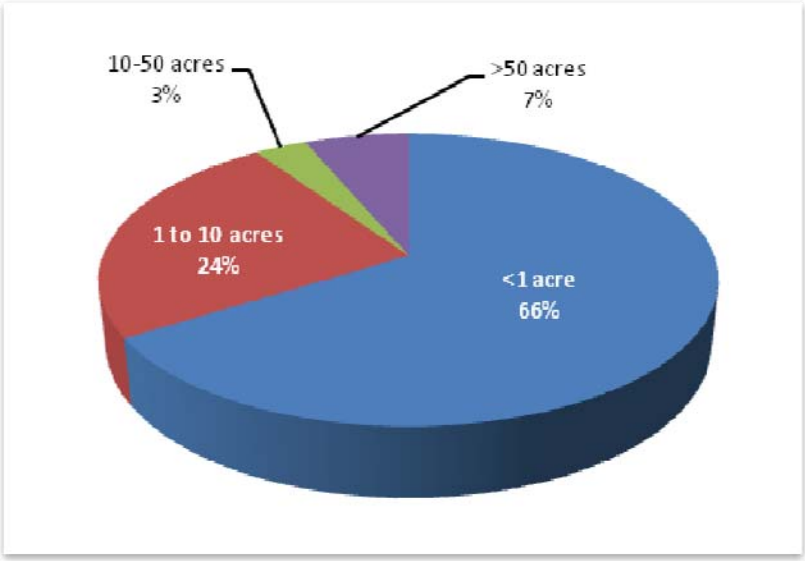


Figure 5-66: Overall situation - sizes of productive lands owned by households in the surveyed villages (Sept. 2016)

Households were asked to identify the size of their own land categorizing it into the given classes, ranging from less than 1 acre to more than 50 acres.

The largest group of households (66% of the land owning households) owned less than 1 acre of land. The second largest group (24%) owns between 1 and 10 acres. The biggest (more than 50 acres) was owned by 7% of the households.

5.3.10.6 Ownership of Other Productive Assets

Other productive assets included passenger vehicles, trucks, cattle, livestock, farm implements, fishing boats and fishing gear, etc. Households were asked to give the numerical amount of their productive assets. Livestock (chicken, ducks, pigs, goats) is the the largest asset, followed by cattle (buffalo 390 and bullocks 80). Other assets, like passenger bus, trucks, farm implements, fishing boats were lower (ranging from 6 to 20).

The majority of the households did not have assets likes vehicles, trucks, tractors, hand tillers, farm implements, fishing boats and gear (average 80%). An average of 30% of households did not have any livestock (buffalo, bullock, chicken, duck, pig, etc).

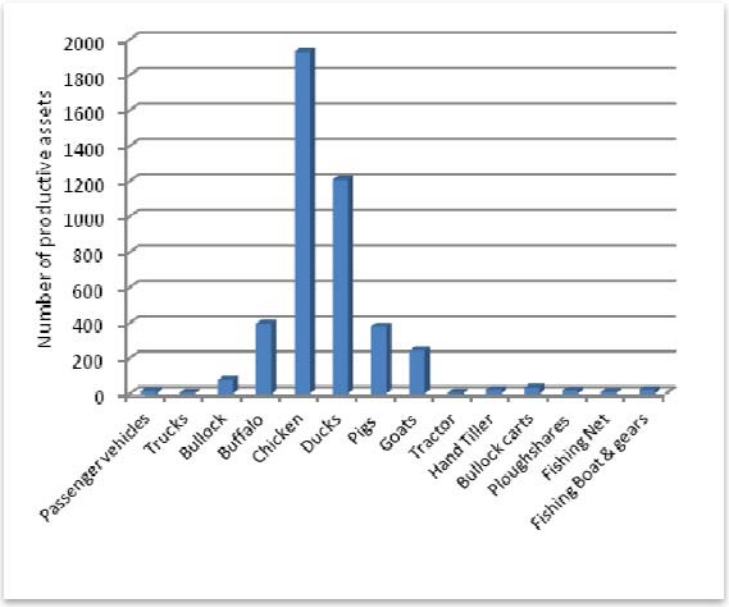


Figure 5-67: Ownership of other productive assets in the surveyed villages (Sept. 2016)

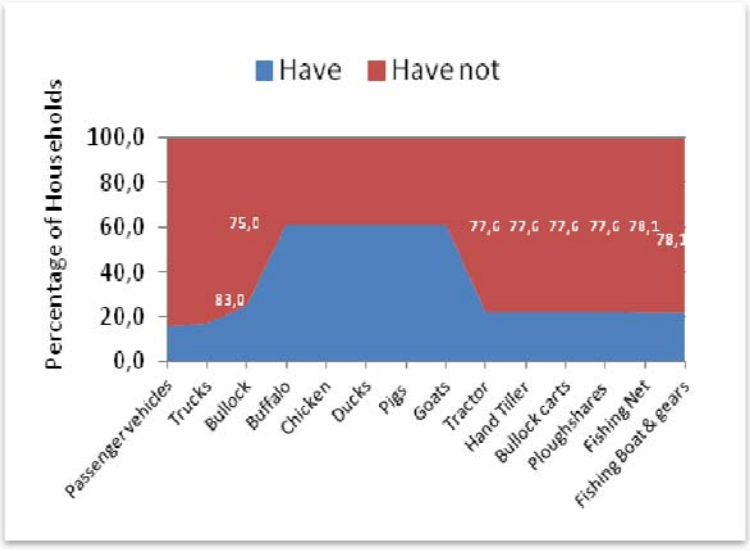


Figure 5-68: Overall situation - ownership of other productive assets - percentages of "have" or "have not" households in the surveyed villages (Sept. 2016)

5.3.11 Household Income, Expenditure and Debt

5.3.11.1 Main Sources of Household Income

Households were asked to identify the sources of income relevant to their individual households

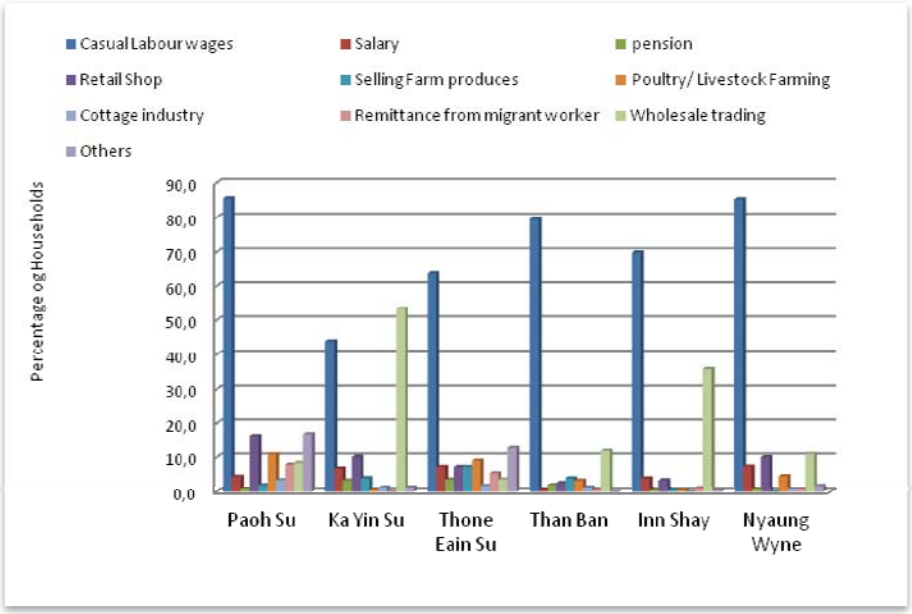


Figure 5-69: Situation of household main income sources in the surveyed villages (Sept. 2016)

The majority of the households relied on income from casual labour with percentages ranging from 44% in Kayin Su, 60% to 80% in Thone Ein Su, Than Ban and Inn Shey to 85% in Pa-oh Su and Nyaung Wyne.

Kayin Su and Inn Shey have many households who earn incomes from wholesale trading. Traditionally, rubber and rice paddy are main commodities in wholesale trading. This could be interpreted that Kayin Su was fairly well-off as more households were depending on wholesale trading than casual labour. Households in Pa-oh Su and Thone Ein Su had motley income sources with comparable numbers of households in each income source group: salary (4.5% & 7%), retail shops (16.3% & 7%), remittance from migrant workers (7.9% & 5.5%), poultry/livestock farming (10.9% & 9.1%), cottage industry (3.5% & 1.8%), wholesale trading (8.4% & 3.6%), etc. Other main income sources included fishing, saw mills, construction, photo copying, desktop publishing and mobile phone services, etc.

5.3.11.2 Household Subsidiary Income Sources

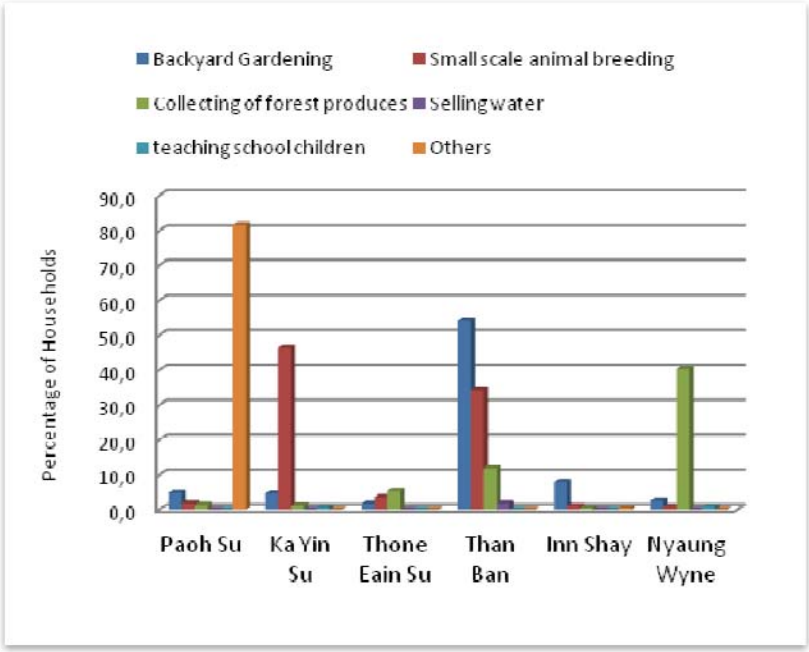


Figure 5-70: Percentages of subsidiary income sources in the surveyed villages (Sept. 2016)

Rural households are habitually engaged in additional income-generating activities to supplement their main income. These activities can be undertaken by any household member at their convenience. These additional sources do not provide incomes substantial enough to make a living but they ease the burden of the main income earners in a household. Small scale animal breeding, collecting forest products (firewood, bamboo shoots, etc.), and backyard gardening are the most common subsidiary income sources for the households. There are also many other sources of income including small vendors, betel nut shops, making traditional talismans, etc. 35% and 45% of the households in Kayin Su and Than Ban earned side income from small animal breeding, whereas 12% of the households in Than Ban and 40% in Nyaung Wyne earned side income from collecting forest produces.

5.3.11.3 Collection of NTFPs

Besides agricultural farmlands, non-timber forest products (NFTPs) are an optional mean for supporting household income and livelihood in the survey villages. Marketable local NFTPs include bamboo shoots, mushroom, herbal roots, fuel wood, etc. The population engaged in the business includes women, young girls, and members of landless and poor households. The collection places for NFTPs are commonly located deep in hilly grounds and are covered by forest land. There is generally no need for a permit from the forestry department to collect the products.

The data collected in the survey included the number of households in the individual survey villages who earn incomes by collecting forest products. The data were used to identify the extent of *informal land use* by expressing the number of those user households as a percentage of the village total.

It was found that the average percentage of households who were using NFTPs for subsistence livelihood in all surveyed villages is 8.4%. This was far less than the percentage of households engaging as casual labor in agriculture farming (72.4%). The situations of individual villages are shown below.

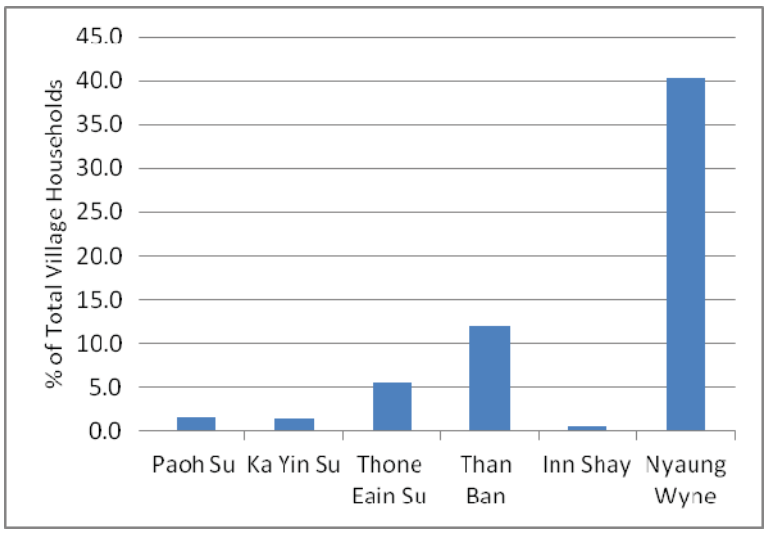


Figure 5-71: Households Using Other Land Use Options (i.e Collecting of Forest Products) in the surveyed villages (Sept. 2016)

The percentages of households using NTFPs for subsistence livelihood are very low in Paoh Su, Kayin Su amd Inn Shey villages (1.4 to 1.5% of total village households), and are relatively high in Than Ban and Nyaung Wyne villages. These two are the closest to the power plant and tyre plant.

In a casual talk, a girl in Nyaung Wyne village said she earned an average of 2,000 MMK a day by collecting NTFPs in the hill. However, the current survey study did not cover identification and mitigation of any possible impacts from the plant refurbishment and linked facilities (e.g water pipeline). Since the lands used for collecting NTFPs are generally located in hilly areas far away from the power plant, it is difficult to identify the impact made on the land by the plant refurbishment.

The lands used by village people to collect NTFPs are generally located in forest land, making people subject to the legal provisions of the forest laws. Some of the most important provisions for the present case are:

- Forest land is declared and administered by the Ministry of Forestry in accordance with the 'Forest Law' and its rules and regulations.
- Permission is required from the Ministry for extracting timber, cutting fire-wood, producing charcoal or catching fish from a 'Reserved Forest Area'.
- Individuals shall pay license fees to the forest department for wood-cutting, for charcoal production or for extraction of forest products etc. in forest land. Trespassers (residents) may be prosecuted under Forest Law.

Households who use land for collecting NTFPs have less risk of impact from the plant refurbishment, but households who use land for agriculture farming and rubber plantation might have a larger risk of impact from those sources. In case of land acquisition, the users needed to show legal documents and certification of land tenure. The land users are usually granted permit to use land (form 7) or in the absence of that, they might use the land tax receipts as evidence of tenure.

Legal provisions governing the types of land acquisition and instructions for calculating compensation amounts are provided in Farm Land Law and Farmland Rule. Some of the extracts (translation into English) are given below.

Paragraph 67(a) in Farmland Rule– Compensation for Crops and Buildings;

(1) For currently cultivated paddy and other seasonal crops - Based on average acre yield of specific crops, the current market value of crops multiplied by 3

(2) For existing perennial plants-Based on the current value of the plants, market value of the plants multiplied by 3

(3) For dwellings or structures existing on land that have been constructed or any other measures taken on land to enhance the value of land, current market value multiplied by 2

Paragraph 67(b) – Compensation for Land

(1) If the land is used for non-profitable construction work or national security purpose in the long-term interest of the nation; current market value of land confiscated thereof

(2) If the land is used for conducting profitable businesses in the long-term interest of the nation; The sum agreed by the holder of tilling rights to the amount not causing him/her grievance (or) The sum not less than the market value assessed by the Compensation Committee (formed by Central Land Administration Committee) based on the specific types of business being conducted on the land

It should be noted that village households need to be aware of the laws mentioned above and follow the rules and regulation.

5.3.11.4 Household Incomes and Expenditure Situation

The average income and expenditure during the previous 12 months were collated to indicate the income and expenditure levels of households.

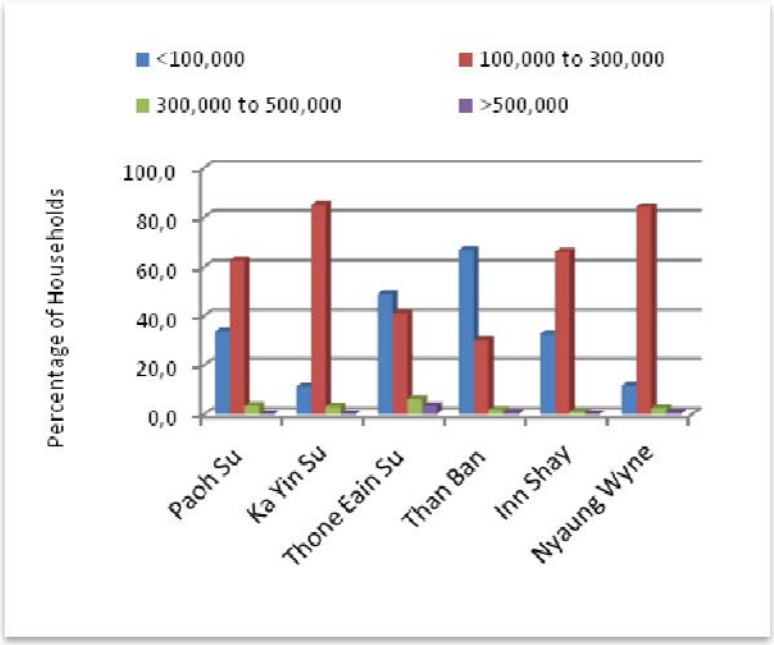


Figure 5-72: Expenditure levels of households in the surveyed villages (monthly average during previous 12 months) (Sept. 2016)

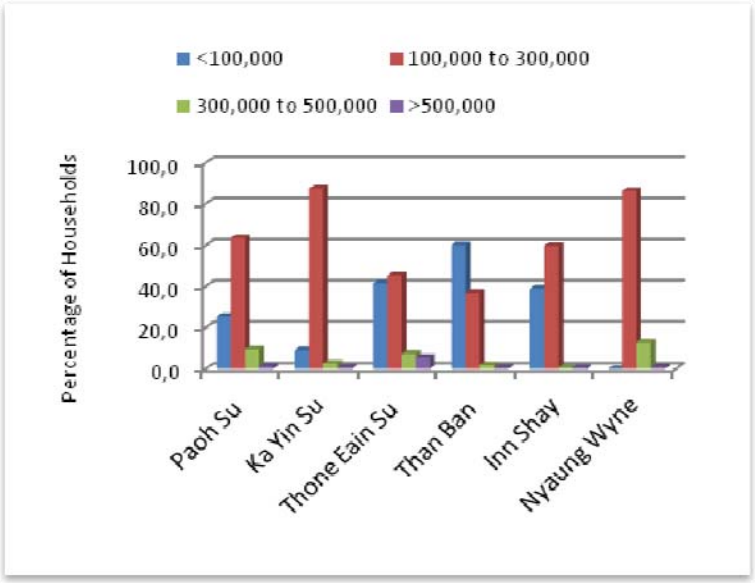


Figure 5-73: Income levels of households in the surveyed villages (monthly average during previous 12 months) (Sept. 2016)

Household expenditure levels

Households which had a monthly average expenditure of 100,000 - 300,000 MMK (equiv. to 248.3 USD - at September 2016 exchange rate) formed the largest group. They occupied 60% to 80% of the households (Pa-oh Su 63%, Inn Shey 66%, Nyaung Wyne 84%, Kayin Su 85%). The second largest group has a monthly expenditure of less than 100,000 MMK (ca. 74 USD). They occupied 49% of village households in Thone Ein Su and 67% in Than Ban. Very few households reached higher expenditure levels of 300,000 to 500,000 and >500,000 MMK (equivalent to 413.9 USD).

Household Income Levels

The distribution pattern of income level between the villages resembles that of the expenditure level. Here, the group of households with an average monthly income of 100,000 to 300,000 MMK formed the majority (Pa-oh Su 63.5%, Inn Shey 60%, Nyaung Wyne 86%, Kayin Su 87%). The second largest group was the <100,000 MMK average monthly income level group. They occupied 41.5% of the households in Thone Ein Su and 60.3% in Than Ban Villages. This group also occupied 25% in Pa-oh Su and 39% in Inn Shey villages.

5.3.11.5 Levels of Main Expenditure Items

Household expenditures have been surveyed in more detail in order to determine the type of the main expenditure items. These were identified as (a) food costs (b) clothing/household utensils (c) house rent/maintenance (d) healthcare/medical expenses (e) child education (f) electricity, water and other fees and (g) expenditure for social purposes.

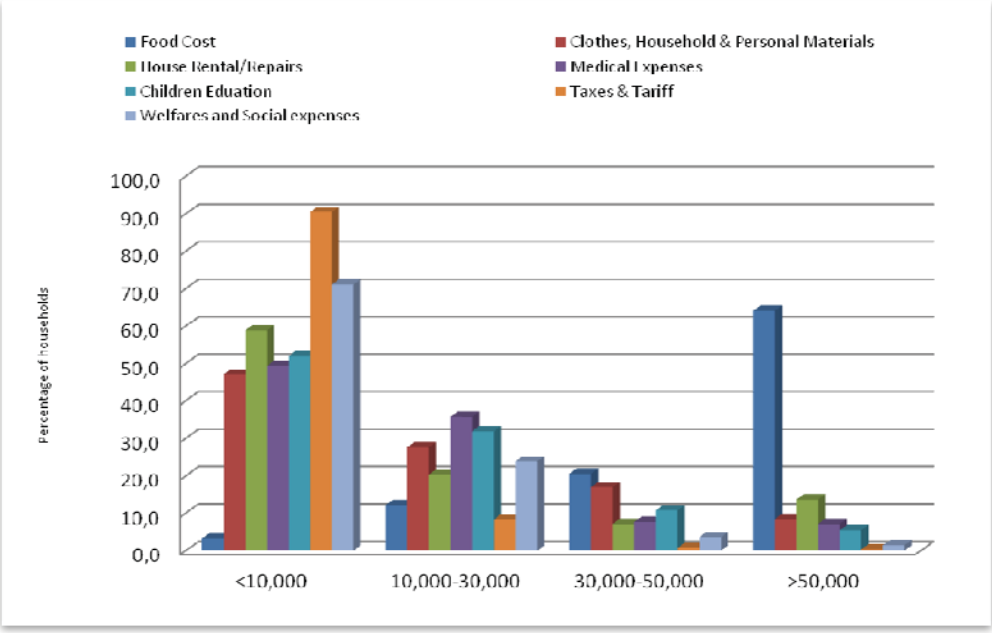


Figure 5-74: Overall Situation - levels of household expenditure in the surveyed villages (Sept. 2016)

Generally, number of households spending less than 10,000 MMK for different expenditures items was larger than those who spent more than 10,000 MMK for the same expenditure items. This could lead to the conclusion that the majority of households spent less than 10,000 MMK for any expenditure item. For example, for clothing, household and personal materials, 47.1% of the households spent less than 10,000 MMK, while 27.5% spent 10,000 to 30,000 MMK, 16.9% spent 30,000 to 50,000 MMK, and only 8.5% spent more than 50,000 MMK.

The exception was food. Most households (64%) spent over 50,000 MMK monthly on food.

5.3.11.6 Coverage of Income over Expenditure

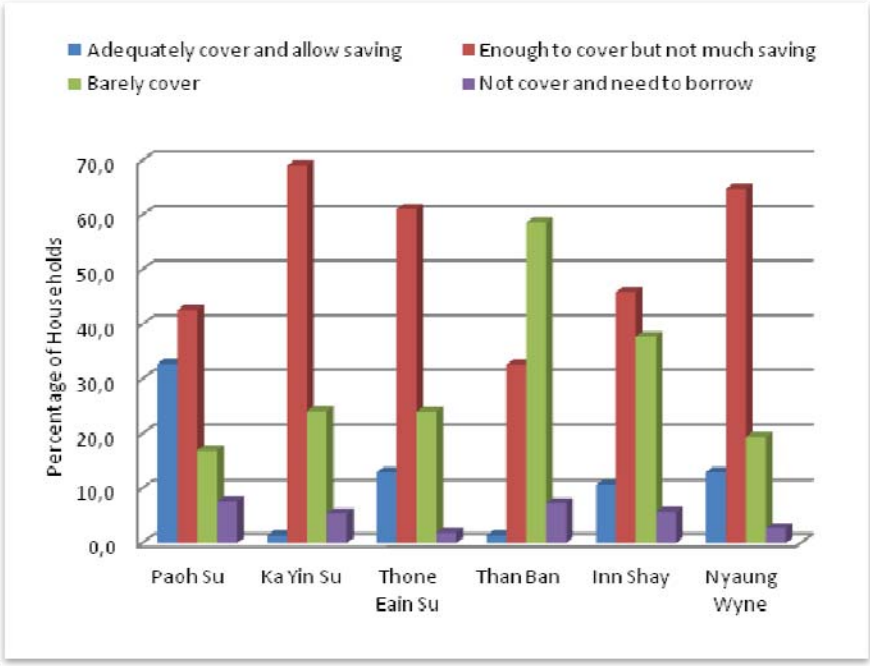


Figure 5-75: Extent of Income's coverage over expenditure in the surveyed villages (Sept. 2016)

The topic analyses to what extent the household incomes cover the household expenditures. Levels of coverage were defined as (1) adequately covered and allowing savings, (2) Enough to cover but not saving much, (3) Barely covering and (4) Not covering at all and need to borrow.

Only a few households were found to have adequate income to cover expenditures and were able to save (from 1% to 10%, for all villages with the exception of 32% in Pa-oh Su). A fairly high percentage of households had enough income to cover but could not save much (42% to 70%), or had barely enough income to cover expenditures (17% to 58%). Some (2.8% to 7.7%) had to borrow.

5.3.11.7 Household Debt Situation

The household debt situation was expressed in terms of frequency and duration of debt occurrences. The debt situation indicators included (1) occasionally falling into debt, frequently in debt, (3) always in debt and (4) no debts at all.

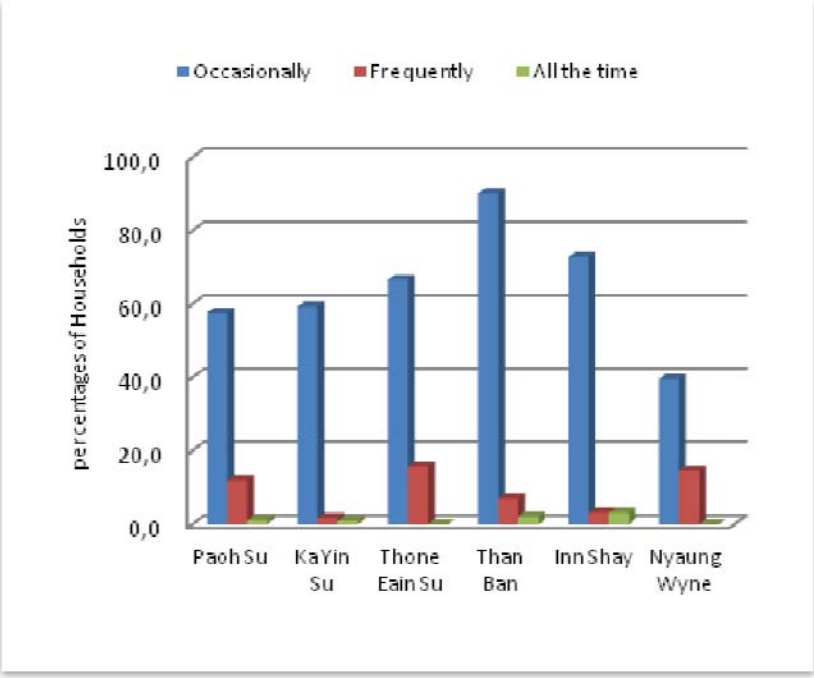


Figure 5-76: Household debt situation in the surveyed villages (Sept. 2016)

The figure shows that the majority of the households in the villages incurred debts only occasionally. The percentage of occasional debts ranged from 40% in Nyaung Wyne to 90% in Than Ban. A few percentages of households had frequent debt in all surveyed villages (from 1.8% in Kayin Su to 14.6 % in Nyaung Wyne and 15.7 % in Thone Ein Su).

5.3.11.8 Coping with Debt Problems

Households were asked how they cope with the debt situations. The coping strategy included (1) borrowing money from relatives (2) going to small loan (pawn) shops (3) borrowing from private money lenders by depositing personal household items, gold or valuables (4) selling gold or other valuables or assets, etc.

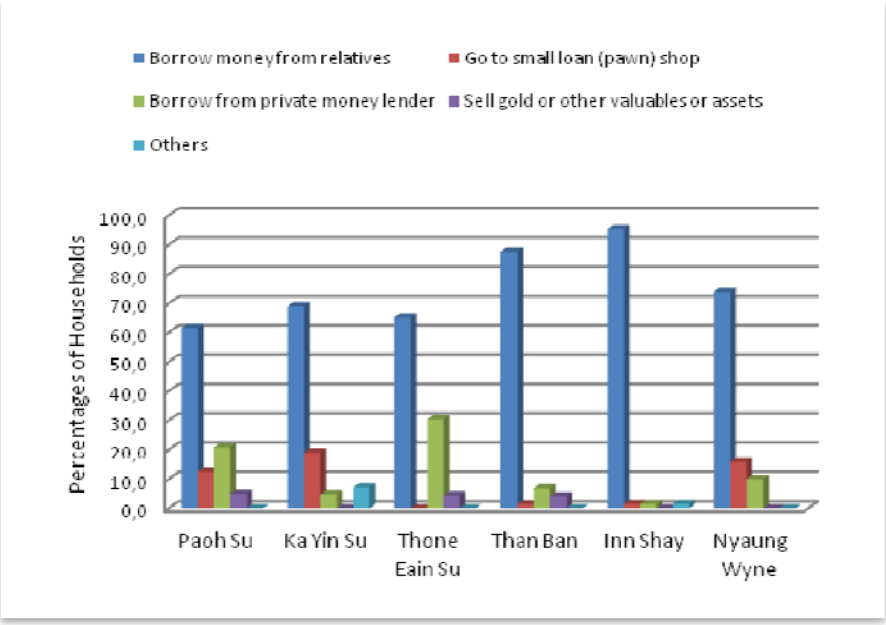


Figure 5-77: Household coping with debt strategies in the surveyed villages (Sept. 2016)

Most households coped with debt situations by borrowing money from relatives (ranging from 62% in Pa-oh Su to 94% in Inn Shey). The second most-used coping strategy was 'borrowing from a private money lender' between the households and it ranged from 1.5% in Inn Shey to 30% in Thone Ein Su. A private money lending group from Thaton town came to these villages to lend money at a reasonable monthly interest rate. Another coping strategy was to go to a pawn shop to borrow money. The households using this strategy ranged from 1.5% in Than Ban and Inn Shey to 19% in Kayin Su.

5.3.12 Food Security

This section investigates the food security situation encountered by the households. As rice is the basic food in Myanmar, it is used as an indicator to survey the food security situation. The study included household rice supply sources, household rice consumption, the number of rice shortage months in a year, reasons for rice shortages and how households were coping with rice shortage problems.

5.3.12.1 Rice Supply Sources for Households

The survey on the supply sources for the households was to determine how many households obtained rice directly from the fields as payment for their labour in the field, or procured it by cash payment from rice sellers. In an agricultural-based economy, it is a business practice to pay a field worker in

agricultural products (such as rice) at harvest time rather than in cash. This is usually known as “in kind” payment, a payment method more used in isolated areas (such as hilly or inaccessible areas), where the barter system is more convenient than a cash economy. The survey villages however, have access to the town market in Thaton by an all-weather road and only 10 kilometers away. The respondents confirmed that 95% of the households received cash for their wages and they bought rice from the market.

5.3.12.2 Households Rice Consumption Rates

It is assumed that rice consumption rate will be different between households, depending on the size of the household and the different consumption rates of adults and children, men and women. The survey on household rice consumption was intended to determine the ranges of monthly household rice consumption and the distribution of households over different consumption range.

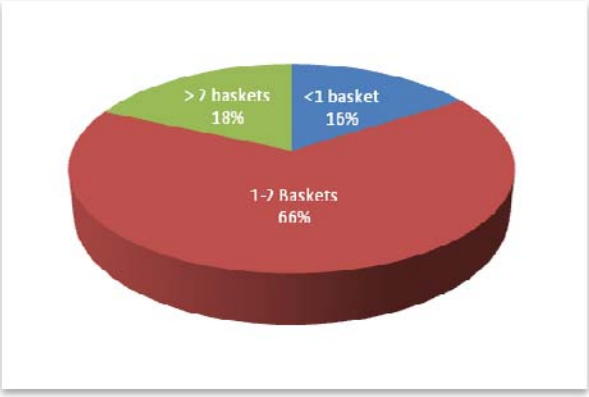


Figure 5-78: Overall situation - household monthly rice consumption in the surveyed villages (Sept. 2016)

The figure above considers the households of all the surveyed villages as a whole and showed the distribution of households between different consumption rates. 66% of the households consumed 1-2 baskets of rice monthly. (1.5 baskets of rice = 50 kilos). Considering an average household size of 5.2 persons, each person on average consumed 10 kg of rice per month, or 300 grs per day.

5.3.12.3 Rice Markets for Households

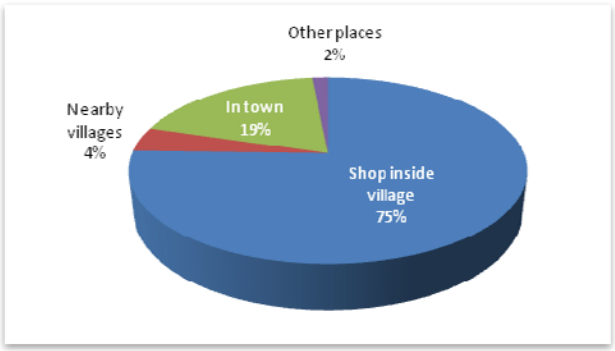


Figure 5-79: Rice market for households - overall situation in the surveyed villages (Sept. 2016)

The survey of the rice market was to determine the accessibility of households to the rice market, a topic the food security survey should comprehend. 75% of the households bought rice from shops inside the villages. This showed that an adequate market existed inside the villages. However, 19% of households tended to buy rice in town. The option was made possible for households who could easily use daily transport to go to town.

5.3.12.4 Rice Shortage Months

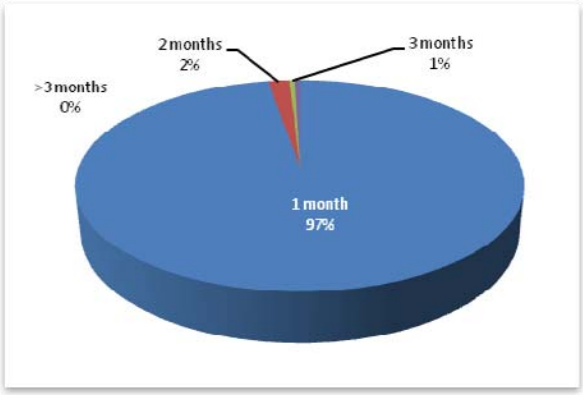


Figure 5-80: Rice shortage months - overall situation in the surveyed villages (Sept. 2016)

The survey on rice shortage months investigated the levels of rice shortage and the percentages of households encountering different levels of rice shortage. 97% of the households had a one-month rice shortage in a year, which is not considered to be a very serious situation.

5.3.12.5 Causes of Rice Shortage

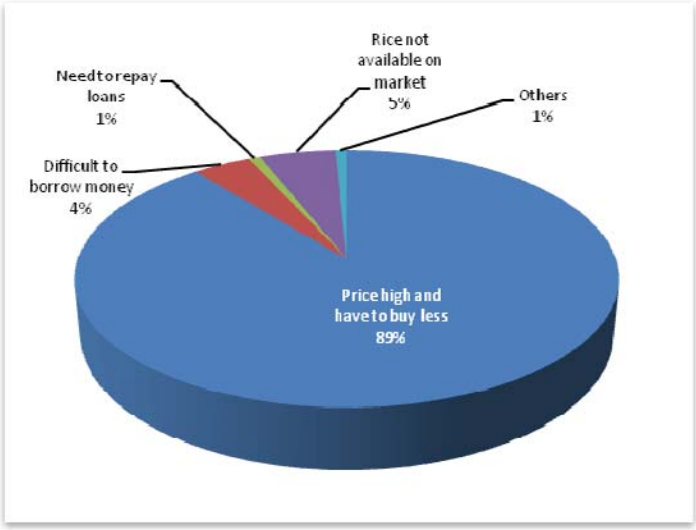


Figure 5-81: Reasons for rice shortage - overall situation in the surveyed villages (Sept. 2016)

The causes of rice shortages can be seen as an affordability (economic) problem or a market (physical) problem. It was mostly an economic problem because even if a rice shop is next door, a household cannot buy or need to buy less if they have no money. It is possible for a household to buy rice on deferred payment or borrow money to buy rice. Physical causes came into play in the off-season, when there is not enough supply on the market or in the event of natural disasters where supply cannot reach the market.

The main reason for rice shortages in the villages was that prices were high and households could not afford to buy an adequate amount of rice. This was the case for 89% of the households. For another 5%, the reason was that rice was not available on the market.

5.3.12.6 Household Coping strategies for Rice Shortages

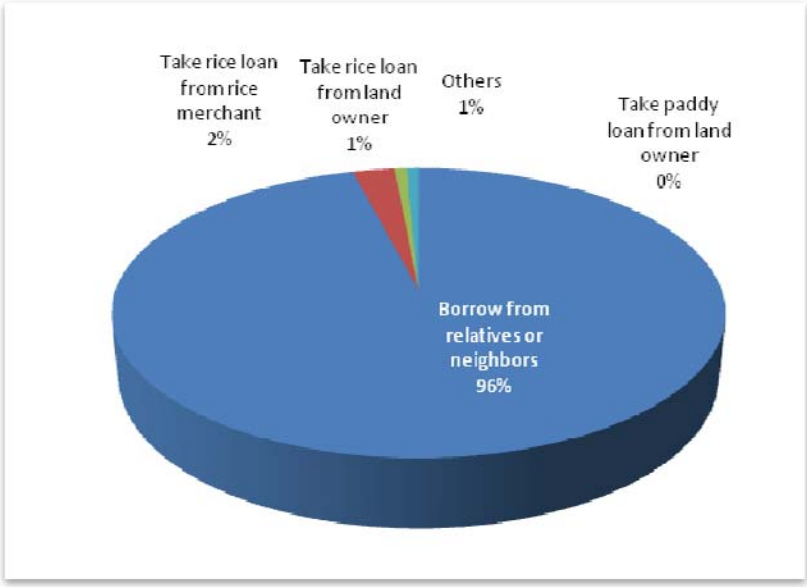


Figure 5-82: Household coping strategies for rice shortage situation - overall situation in the surveyed villages (Sept. 2016)

The survey shows how households were coping with rice shortages. Households were asked to list the option most relevant to them:

(1) Borrow from relatives or neighbours
(2) Take rice loan from rice merchant at high interest rate
(3) Take rice loan from land owner by committing in advance to work in the fields when farm season comes (the wage rates paid to the workers in these cases are usully less than normal rates as substitue for interest on loan)
(4) Take paddy loan from land owner and pay back in kind at higher rate, etc.

Most households (96%) chose to borrow rice from relatives. A small percentage of rice shortage households opted for rice loans from rice merchants to cope with the situation.

5.3.13 Electricity Supply and Usage

The electricity sector is the main theme of the survey, as it provides a direct link between the Thaton Power Plant and the socio-economic lives of the village communities. The study includes:

(1) Electric Power Connection system
(2) Household utilization of electricity
(3) Household consumption of electricity and payment of bills
(4) Likes and Dislikes of electricity supply system

(5) Long-term household perspectives on power plant
(6) Willingness to pay
(7) Communication & information system between power plant and village communities, etc.

5.3.13.1 Connection System

The topic looks at households which are connected to the electric power line and the line connection system for households.

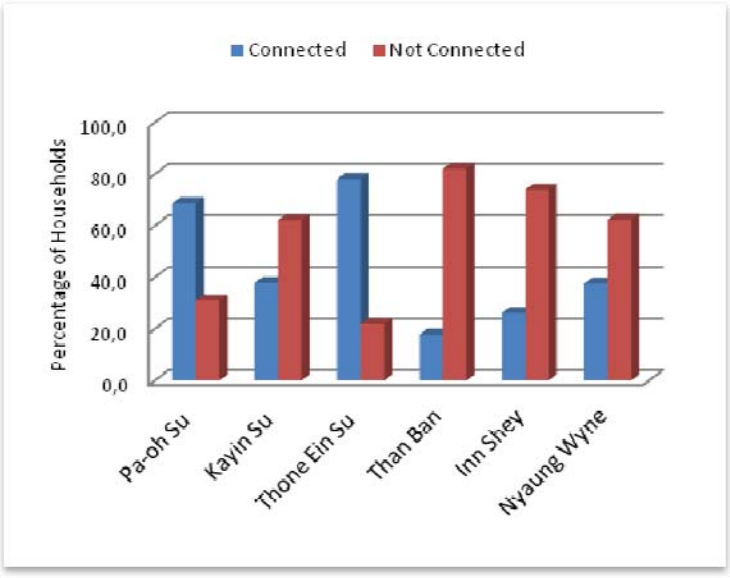


Figure 5-83: Household connection to electric power line in the surveyed villages (Sept. 2016)

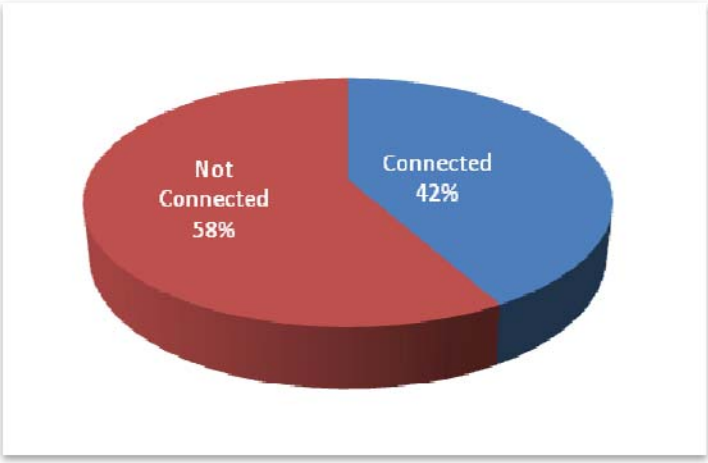


Figure 5-84: Overall situation of household connection to electric power line in the surveyed villages (Sept. 2016)

Percentages of households connected to electricity ranged from 18% in Than Ban to 78% in Thone Ein Su. In average, 58% of the households had connection to the electric power line.

Line connection system
As a rule, households were only allowed to have direct connection to the power line. However, some poor households were allowed to connect through their neighbours. The conditions for indirect connections were that the households must be located within a fence and they had to be relatives. 91% of the households had a direct line connection, and 9% indirect connection through their neighbours.

Other features of the electric connection system
Meters were provided to households who had a direct connection to the power line. The electricity tariff was paid according to the meter reading and a household required to pay a monthly maintenance fee for the meter. Indirect connection user households did not have an electric gauge meter, they paid to host households at an agreed rate. In average 65% of the households have meters.

Power regulators were used to maintain adequate voltage levels for proper functioning of the electricity supply. In average, only 15% of the households had power regulators.

Energy-Saving Lighting
Energy-saving bulbs are used for power saving. In average 36% of the households were using them.

Transformers
Seven transformers were provided to cover all the villages. 89% of the respondents knew about the transformer located in their villages.

Knowledge of the electricity supply from the Thaton power Plant
83% of the respondents received the news from the village electrification committee and 12% from relatives or neighbours and other people. 5% knew about the service from plant personnel.

Cost of network construction
Electricity supply system for the survey villages was founded on a self-reliance system. Households had to contribute an upfront cost for the network construction and the connecting cable line to their houses. Costs started at one million MMK and then reduced from 700,000 to 500,000 and finally to 300,000 MMK (equivalent to 248.3 USD). Public and religious buildings, such as schools, pagodas, temples and monasteries, were exempt from paying upfront costs.

5.3.13.2 Utilisation of Electricity

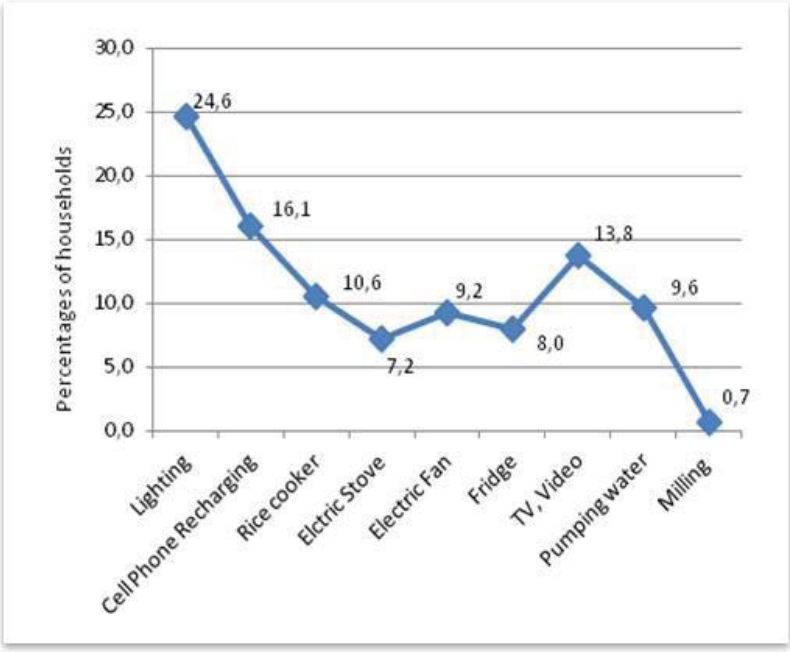


Figure 5-85: Overall Situation in the Utilization of electricity by households in the surveyed villages (Sept 2016)

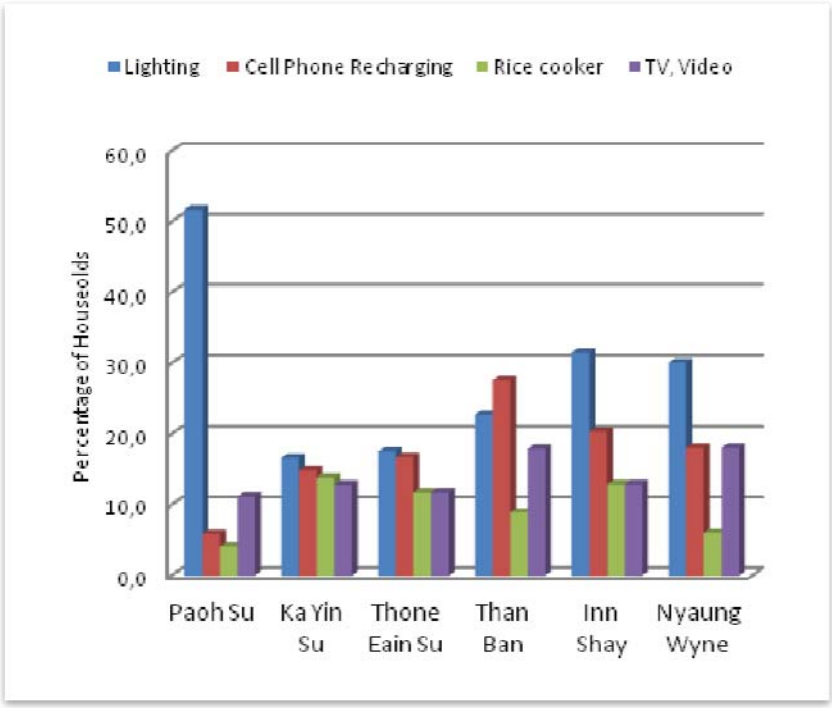


Figure 5-86: Electricity Utilization situations in the surveyed villages (Sept. 2016)

Households using the electricity supply confirmed that the electricity was provided from the Thaton power plant. The Village Electrification Committee collected contributions from them to pay for the upfront cost of network construction and the cable connection to the households.

Households were using electricity for various purposes, ranging from lighting to driving milling machines. The most common utilization of electricity was lighting (24.6% of the households). The least utilization was in milling (0.7%). A village-wise review of electricity utilization also showed that households using electricity for lighting purpose were the largest group (Pa-oh Su 51.8%, Inn Shey and Nyaung Wyne about 30% each, etc). The second most common utilization was cell phone charging. Than Ban had more households in cell phone charging (28%) than all the other villages. Using electricity for TV and video ranged from 11% in Pa-oh Su to 18% in Nyaung Wyne. Utilisation of rice cookers ranged from 4.1% in Pa-oh Su to 13.0% in Inn Shey.

Lighting for public and religious buildings
Schools were the most common places where lighting was provided by the community, followed by pagodas and temples. Other uses were street lighting and Dhamma houses (where religious events are held).

5.3.13.3 Alternative Energy Sources for Households

As mentioned above, not all households have access to the electricity supply provided by the Thaton Power Plant. Reasons for not using electricity were also surveyed.

The most common reason was that households could not afford to pay the contribution for the network construction. The percentages of these households ranged from 78% in Pa-oh Su to 95% in Than Ban. A few households (1.7% to 20%) did not think electricity was essential for them.

Alternative energy sources for the households in survey villages included candles, oil lamps, battery-powered LED lights and solar home systems for lighting, firewood for cooking and diesel generators, solar pumps for driving engines and cattle for pulling. The number of households using candles for lighting ranged from 33% in Pa-oh Su to 84% in Nyaung Wyne while households using firewood for alternative energy ranged from 8% in Nyang Wyne to 48% in Kayin Su.

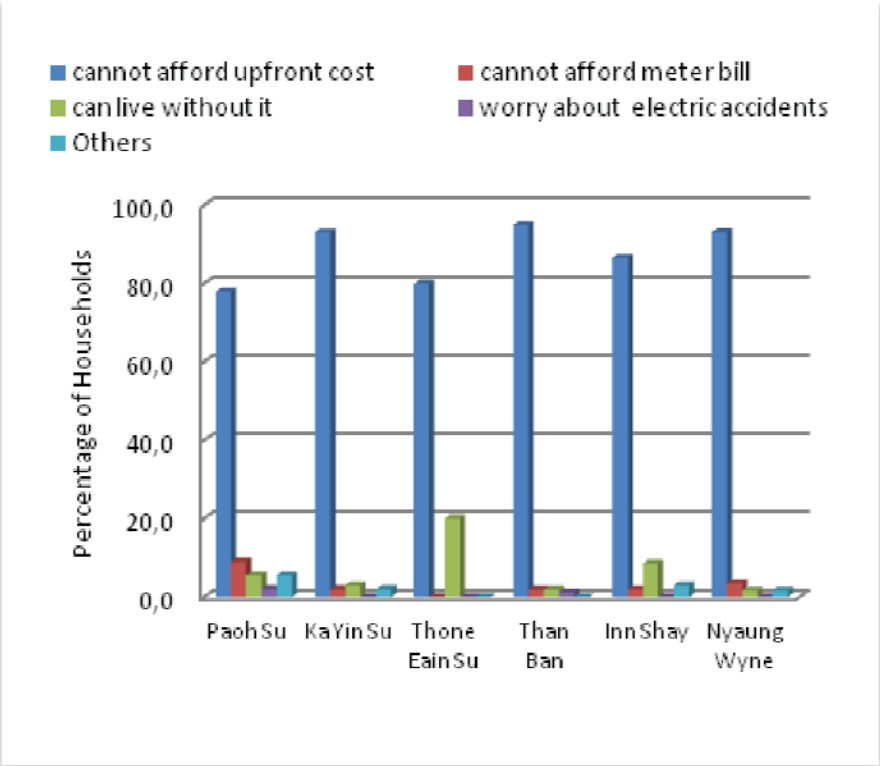


Figure 5-87: Reasons for not using electricity in individual households in the surveyed villages (Sept. 2016)

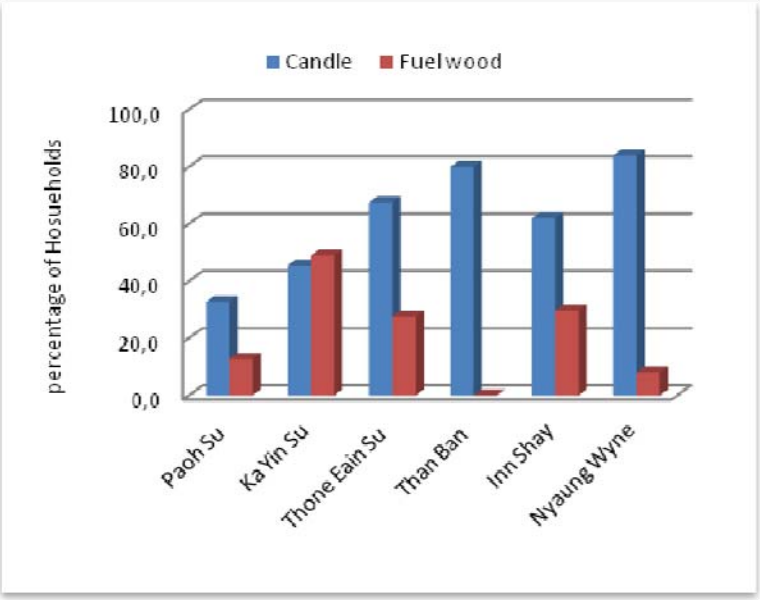


Figure 5-88: Overall Situation on household use of alternative energy sources (candle & firewood) in the surveyed villages (Sept. 2016)

5.3.13.4 Electricity Consumption

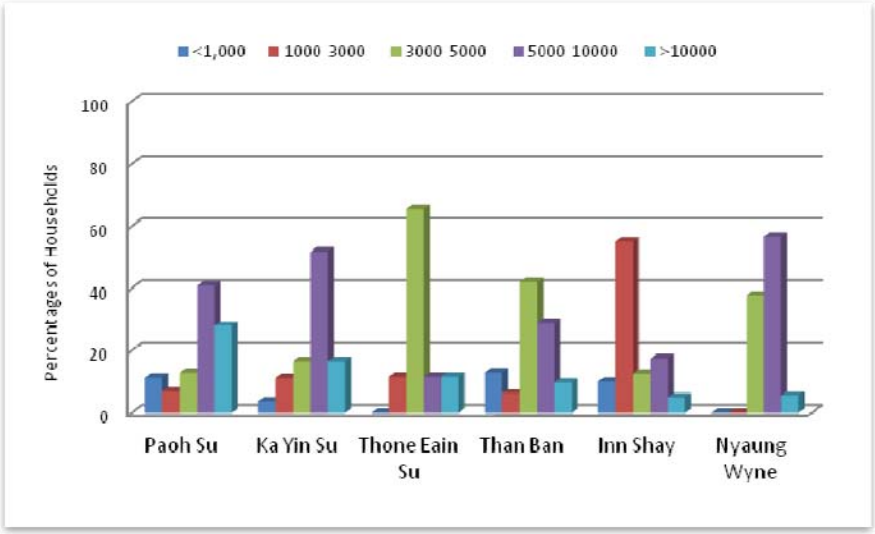


Figure 5-89: Household Consumption of electricity in the surveyed villages (Sept. 2016)

Consumption levels were divided into four groups. The two most common groups were 3,000 - 5,000 MMK and 5,000-10,000 MMK (2.5, 4.1 and 8.3 USD respectively). The number of households in the first group ranged from 13% in Pa-oh Su to 65.4% in Thone Ein Su. Percentages of households in the second group ranged from 11% in Pa-oh Su to 57% in Kayin Su.

5.3.13.5 Bill Collection Methods

Electricity bills are collected by meter reading. Most households liked the current method of collection by meter reading. However, households in Than Ban were found to have a different opinion. 34.3 % of the households in Than Ban liked the current method, but 42.9% thought electricity should be provided free of charge; another 11.4 % liked the system which charged on the basis of type and number of electric appliances, and another 11.4% liked to be charged at a fixed rate.

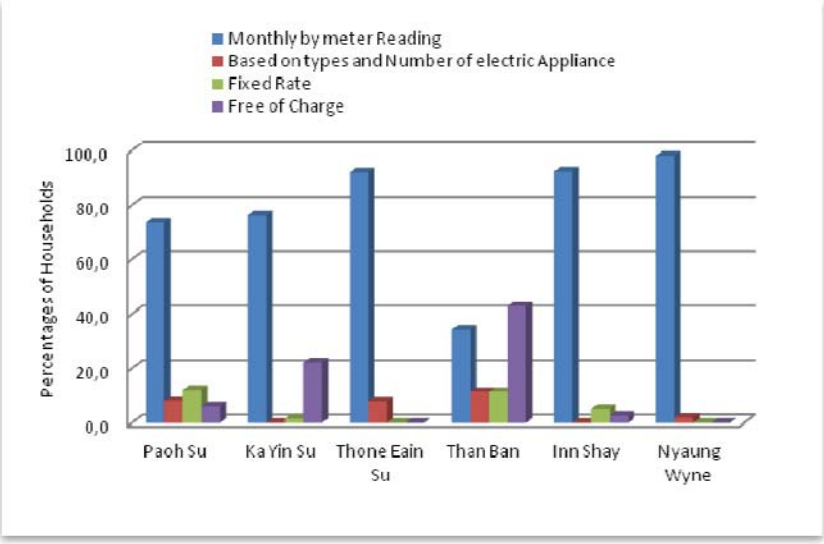


Figure 5-90: Household opinion about the electricity bills collection methods in the surveyed villages (Sept. 2016)

5.3.13.6 Opinion about the Electricity Supply System

Households were given the opportunity to express their opinion about the current electricity supply system. A number of benefits and problems with regard to the electricity supply services were listed under “Like” or “Dislike” and households were requested to prioritise them. The results were shown in the graphs below.

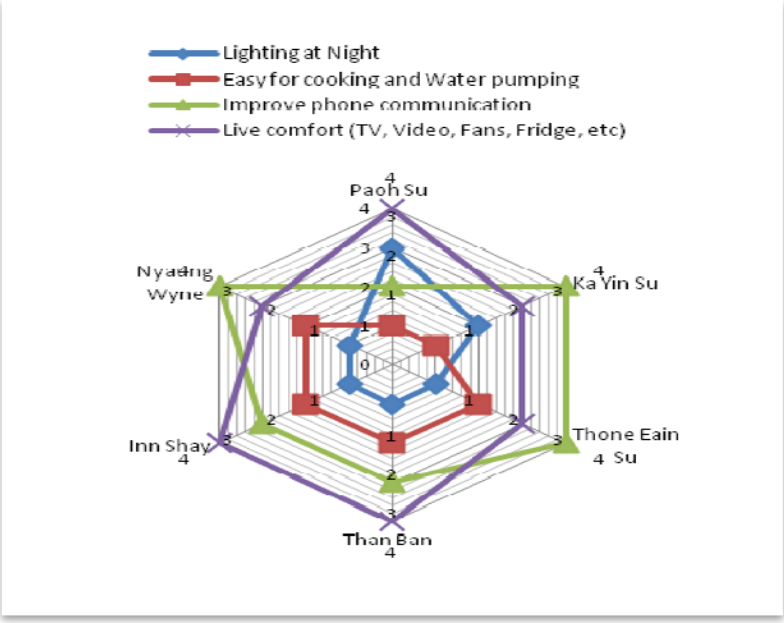


Figure 5-91: Priority levels expressed by household on benefits of electricity supply services in the surveyed villages (Sept. 2016)

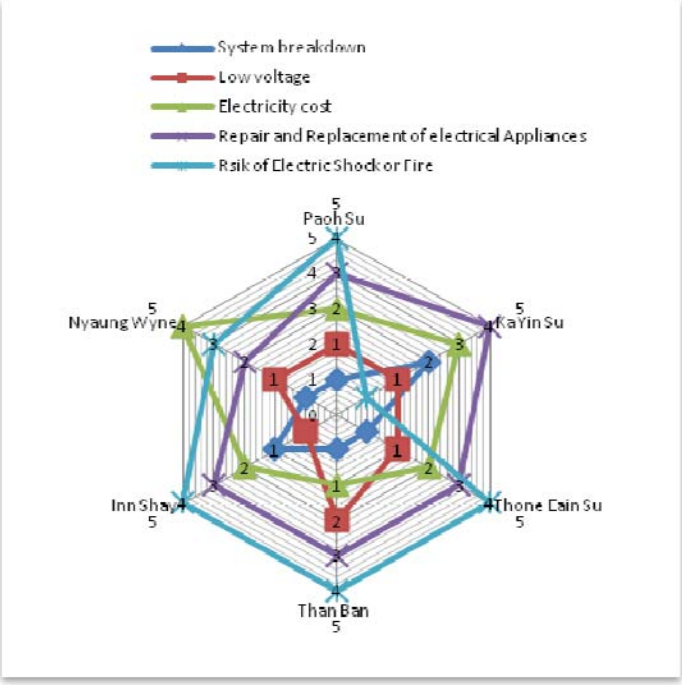


Figure 5-92: Dislike levels expressed by households on the faults and problems of electricity supply service in the surveyed villages (Sept. 2016)

In general, two benefits which households liked most were; (1) easy for cooking and water pumping and (2) lighting at night. Two other benefits (improved phone communication and enjoying living comfort) were not so important.

As for “dislikes”, the households generally disliked most “system failure and “low voltage problems”.

5.3.13.7 Households’ Long-term Perspectives of the Electricity Supply Services

Households were requested to give their long-term view of the electricity supply services in general and the power supply programmes from the Thaton Power Plant in particular. A number of issues were listed including environmental impact, social impact, public safety, employment opportunities, local interest and national interest.

Figure 5-93: Community long term perspective views of impact of power supply programme in the surveyed villages (Sept. 2016)

The long-term perspectives were generally positive. In particular, a fairly high percentage of households (69%) rated the impact on employment opportunities and local interest as good. However, many households (27 to 43%) who thought that power supply programmes had no impact on the issues listed.

5.3.13.8 Willingness to Pay

Household willingness to pay is an important issue for any public utility services, such as water and electricity supply. The current survey shows the public view on the following questions:

a) Is the current electric tariff reasonable?
b) How to reduce the electrical tariff?
c) Are you willing to pay higher fees for better services?
d) Should government provide free electricity to rural population?

The answers to the questions above are as follows:

a) The current tariff charged by the village self-help electricity supply programme was a little higher than that charged in urban areas. However, 83% of the surveyed households considered the current electric tariff reasonable.

b) A list of tariff reduction strategies was presented in the questionnaires to the households. These strategies had been tried successfully in other countries. The findings from the household feedback are listed below:

- A concession rate for poor households (social tariff) - 39% of the households agreed on this strategy;
- A concession rate for energy-saving households – 11% of the households agreed on this strategy;
- The remaining households (50%) had no opinion on the matter.

c) Energy developers tend to improve the quality of the services and then raise the tariff as compensation for the improvements. However, many households still could not appreciate this business idea. 68.3% of the households said they thought the current tariff rate was allright and did not want to pay a higher rate for better services.

d) Some government programmes have village electrification schemes which give substantial subsidies for rural areas or provide electricity free of charge. This idea was put to the households. 64% thought that it was correct for the government to provide electricity free of charge in rural areas.

5.3.13.9 Household Incomes and Connection to Electricity

There has been much discussion on the causes of the high percentages of households with no connection to electricity in the surveyed villages. Capacity of the households to pay for the installation cost was the one most raised reasons. To validate or deny the statement, the relationship between connected or non connected households and their economic situations is analysed in this report. The household monthly income was used as an indicator of the economic situation. Household monthly incomes were collected in four brackets during the survey, namely: below MMK 100,000, 100,000 to 300,000, 300,000 to 500,000 and above 500,000. Percentages of connected and non-connected households within each of the income brackets are charted in the graph. The overall situation (covering all villages under study) of the relationship is found as follows.

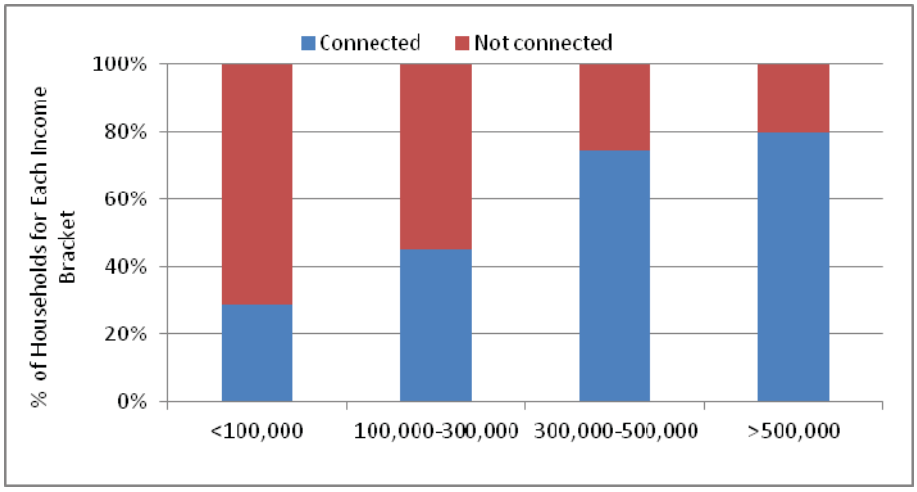


Figure 5-94: Relationship of Household Income and Connection to Electricity in all surveyed Villages (Sept. 2016)

The chart above shows that percentage of connected households is the lowest (28.7%) in the lowest income bracket (i.e, less than 100,000 MMK). As the household income level goes up, the electroicoty connection rate gradually increases (for example 44.9% and 74.5% respectively for income brackets of 100,000 to 300,000 and 300,000 to 500,000 MMK), until it reaches the highest point (80%) in the highest income bracket (more than 500,000 MMK). In other words, the lower the income of households, the lower the percentage of households connected to the electricity network.

Therefore it is fair to interpret from the chart above that among households having lower income levels, a large majority is not willing to use their money to pay for the connection to electricity. As the household income levels increase, more households tend to get connected to the electricity. Therefore, in a general sense, *affordability* is the main decisive factor for households to choose between connecting or not connecting to the electricity network. It should also be noted that there are still some households in the higher income groups who choose not to connect to the electricity.

Further analysis of the relationship between household income and connection to electricity is also done in individual survey villages. The results are shown below.

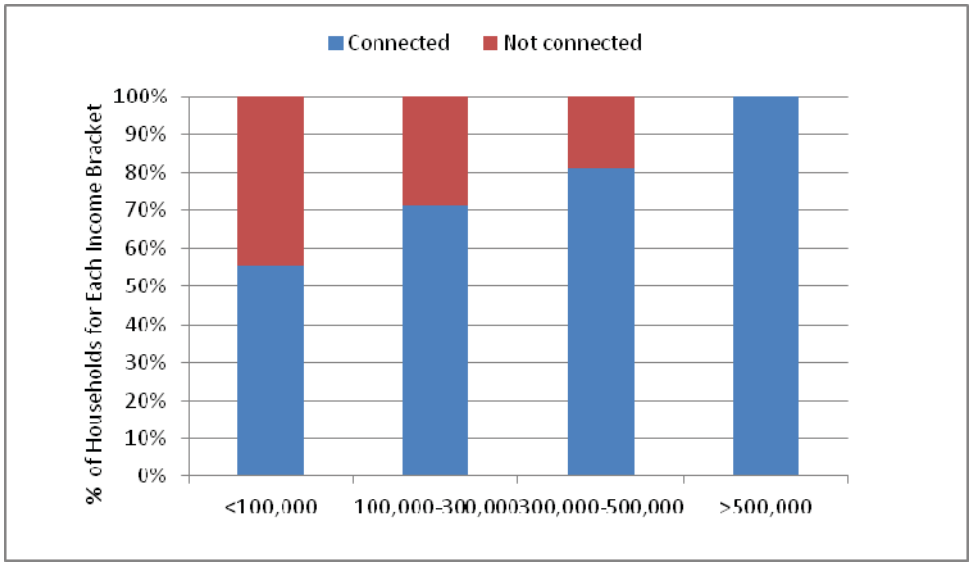


Figure 5-95: Relationship between Household Income and Connection to Electricity in Pa-oh Su Village (Sept. 2016)

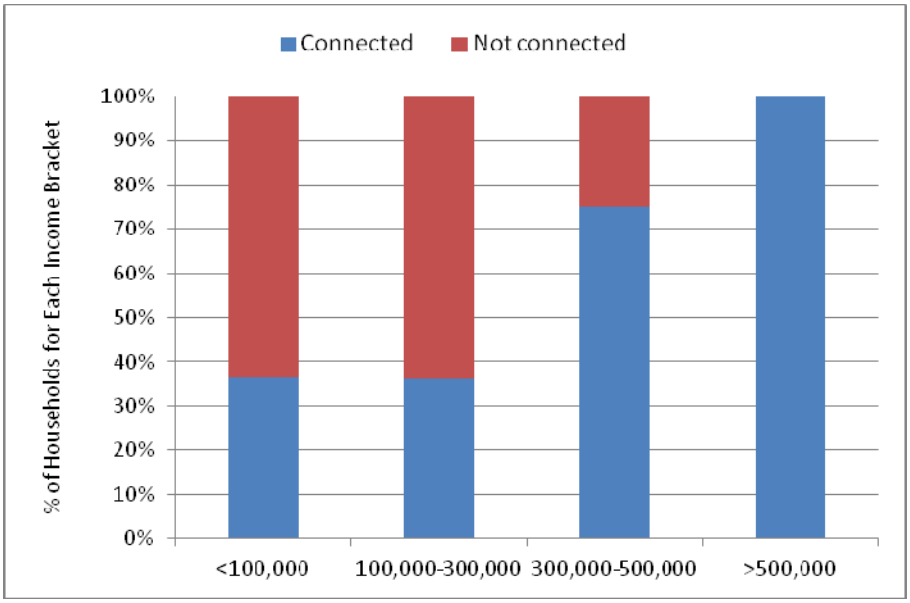


Figure 5-96: Relationship between Household Income and Connection to Electricity in Kayin Su Village (Sept. 2016)

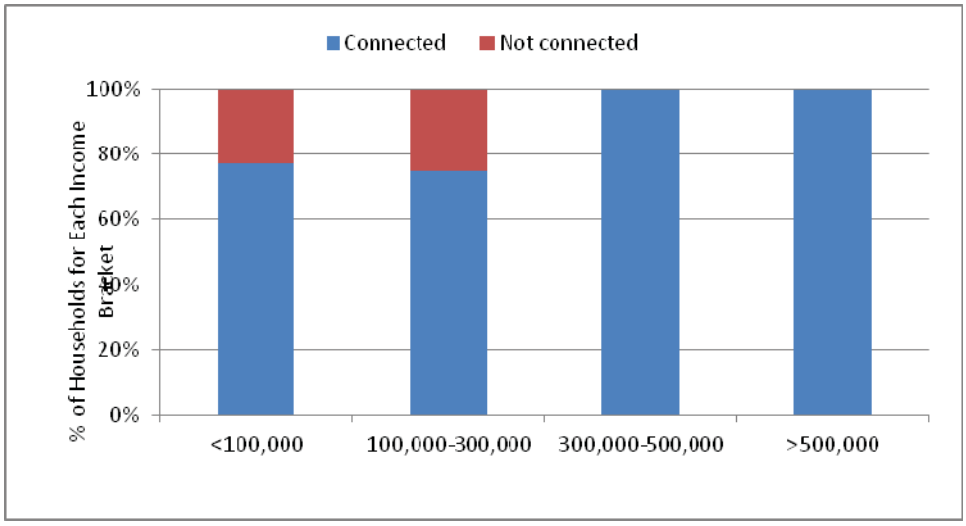


Figure 5-97: Relationship between Household Income and Connection to Electricity in Thone Ein Su Village (Sept. 2016)

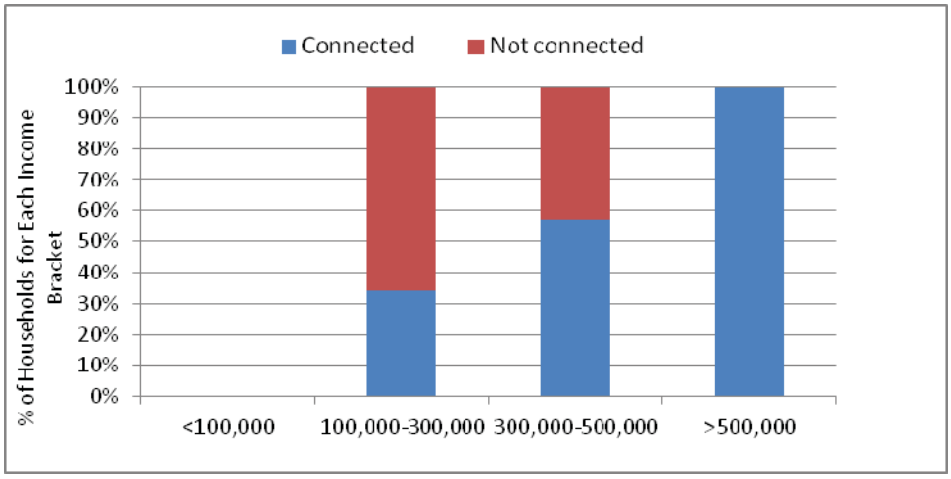


Figure 5-98: Relationship between Household Income and Connection to Electricity in Than Ban Village (Sept. 2016)

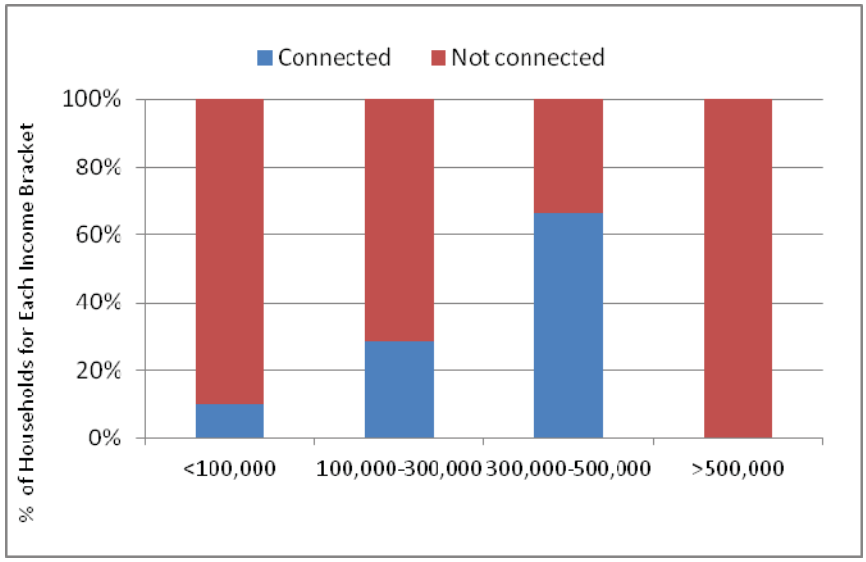


Figure 5-99: Relationship between Household Income and Connection to Electricity in Inn Shey Village (Sept 2016)

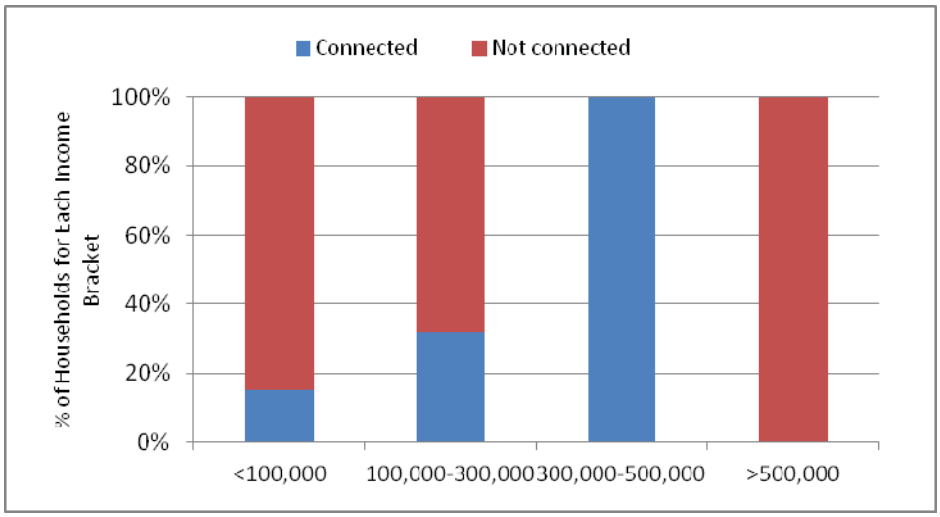


Figure 5-100: Relationship between Household Income and Connection to Electricity in Nyaung Wyne Village (Sept. 2016)

The relationship between household income and connection to electricity in the individual survey villages follows more or less the same pattern as identified for the overall situation: the lower the income bracket, the lower the percentage of connected households. There are some exceptions though. The highest income households in Than Ban and Inn Shey villages (two villages located furthest from the Yangon-Hpa-an Union Highway) do not have connection to electricity. But the number of highest income households in both villages is very few (0.6 - 0.7% of village total households) and this may explain why they do not connect. Also, in Kayin Su and Thone Ein Su

villages, the percentages of connected households in two lower income brackets (100,000 MMK and 100,000 to 300,000 MMK) are nearly the same. There is no household with less than 100,000 MMK in Nyaung Wyne village.

5.3.13.10 Information Sharing and Communication between the Thaton Power Plant and the Village Communities

The investigation focused on the communication process between the power plant management and the village communities to determine:

1. How the village communities are informed about the electricity supply programmes.

2. How much were they able to participate in the planning and implementation of the power supply programmes.

3. How the communities were given necessary information so that they could participate meaningfully in the discussion and decision-making that would affect their lives?

4. The arrangements for communities to access the power plant management in order to report situations and make complaints.

The survey showed that the Village Electrification Committee (VEC) was the essential communication link between the power plant management and the village communities. Information about any activities was passed to the committee and then to the communities at village meetings. The committee maintained a close relationship with the plant management, acting very much like an agent of the plant management. The committee also mobilized the house owners to raise funds to pay for the network construction.

44% of the respondents said that they received information from village representatives who attended the meetings with the Village Electrification Committee. Another 46% said that the committee came to their villages to discuss the matters at village meetings. A small percentage (4.7%) of respondents said that they received information from the messengers who came to deliver information materials to be posted on the public notice boards.

Communication between VEC and Plant Management and Feedback Mechanism

Locating of an industrial establishment into an area surrounded by farming communities generally poses apparent controversies over issues such as environment and land use. In the case of Thaton Power Plant there was no land acquisition issues as generally happen in mining business. However,

two nearest villages (Paoh Su, Than Ban, etc) were experiencing noises emitting from the plant and occasional storm water coming from the direction of the plant. Other villages worried about consequences of fire and explosion, air pollution and health hazards. Without proper exposure of information, there would be grounds for two different neighbors (government staff and rural farming communities) to have misconceptions.

On the other hand, there was no specific work unit (such as public relations) in the power plant to listen to and record the feedback from the communities and deal with the issues. The relatively clean energy guaranteed by gas fire power generation technology and a track record of zero major incidents over years of operation provided a strong argument to contradict the views of communities. However, there had been no face to face discussions on the issues between two parties because no one party taking initiative.

In addition, there was not much social interaction between people of the communities and the power plant. No villagers from surrounding villages work in the plant. Most workers and staff came from Thaton town and other staff lived in housing quarters separate from surrounding villages. No mutual participation in social events (such as weddings, religious events, etc) between two societies.

Under the circumstance, the power plant had established contact with Village Electrification Committee through assisting village electrification system. Basically, the primary department for village electrification activities within a township was Electricity Supply Enterprise (ESE). But the enterprise, while monitoring electricity supply coverage situation over the country, was mainly involved in supplying electricity to towns and villages through the grid line. The VEC made direct dealing with power plant management on matters relating to electricity installation and also reported to township engineer of ESE on the update progress of village electrification implementation and coverage. At the same time the power plant management and Township Engineer communicated with village communities through the committee.

Because the VEC comprised of village elders, ethnic group leaders, active villagers and village-tract administrator, the relationship opened for the power plant management and township ESE manager a communication channel to reach village communities and maintained a working partnership. It enabled them to seek help from the village communities and implementing occasional activities in the villages. In return, the power plant and township engineer provided technical support in electrification activities, helped VEC to manage emergencies (circuit breakdown, braking of a lamp post, etc) and shared casual information of the events in the surrounding locality.

The formal relation between VEC and the power plant was like the one between customer and service provider. There were occasional meetings

between the power plant management and VEC members on active duty, the discussion and agreements were not recorded in writing. There were very few regular meetings with full committee members. Discussions were usually related to village electrification activities and matters of current concerns from both sides.

It was difficult for an outside observer to suggest a feedback system with the information collected from the survey. One of the critical things was that both village communities and power plant need to be convinced that the feedback system was essential and had the will to carry it out. Then the system should be applicable in practice and both parties felt it useful and comfortable. This would need more studies and careful contemplation.

If a feedback system must be worked out, then it should be developed through an evolutional process where power plant and representatives of communities can work out a system that they understand and willing to maintain. Most power plants in the country are sensitive about security and they have no specific public relation unit to look after communication with local/general public. But it must be admitted that local communities have a stake in power plant management because of environmental concerns and their conceived rights of accessibility to electricity. Current communication link between power plant and communities is mainly conveyed through VEC. The process should start with existing VEC-power plant communication linkage and make it more inclusive of population segments and interest groups through organized interacting processes. Then VEC and community representatives can then continuously engage power plant management in a dialogue to achieve agreements from them to provide information in a system (communication channels, target groups, contents, media, frequency, timing, places, etc) which both sides feel essential, useful and satisfactory.

5.3.14 Village/Community organisations

This section reviews existing community-level organisations and how household members participate in these.

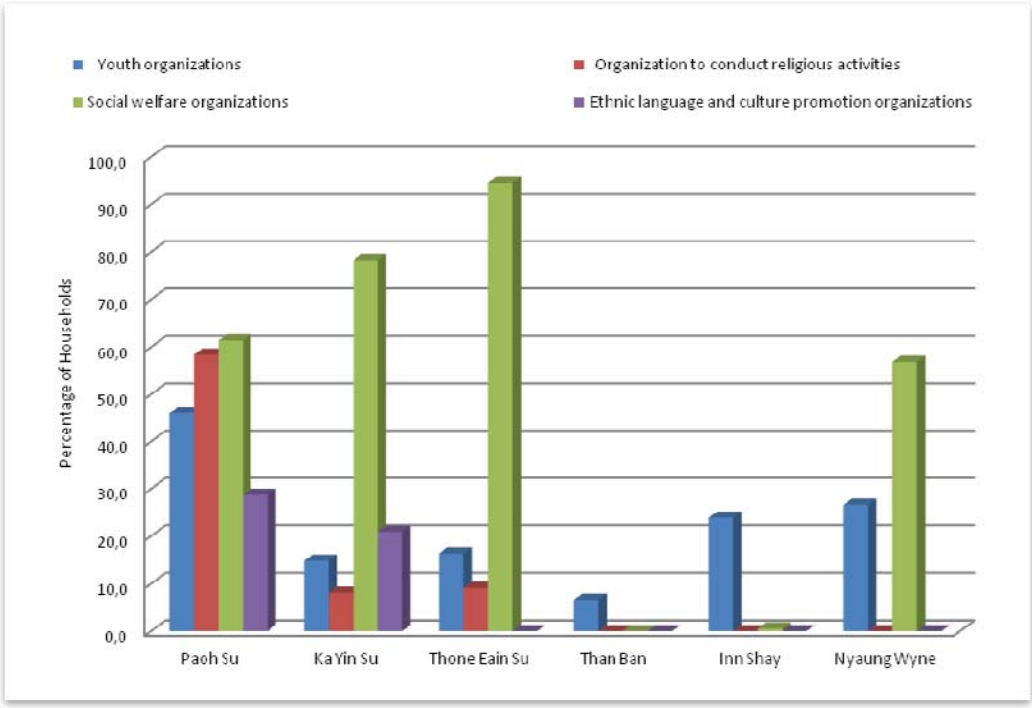


Figure 5-101: Community Organizations in the surveyed villages (Sept. 2016)

Although there are about fifteen types of local organisations, the most influential ones are the 4 shown in Figure 5-101. Fairly high percentages of households participate in social welfare organizations in all villages, except Than Ban and Inn Shey village. Pa-oh Su village was strong in community level organization, as a fairly high percentage of households participated in all types of organisations.

5.3.14.1 Analysis of Community Organizations

A score of community organizations were found to be existing and operating in the survey villages with different objectives and performing different activities. Most of the organizations were informal spontaneous organizations responding to the needs of the people, the locality or the time. Association with the organizations is voluntary. Very few of the organizations had a legal background for their existence and operations, but at the same timethey do not run contrary to the laws. Most of them are not registered under a particular law. Their set up, rules, regulations and intended activities are usually not obliged to be scrutinized by village or township authorities, as long as they are not involved in criminal or civil

legal cases. However, all community organizations are operated under the knowledge and recognition of the village administrator. Some formal organizations (e.g auxiliary fire brigade, red cross, etc.) are actually under the administration of the village administrator.

Except for the Village Electrification Committee, nearly all existing community organizations have objectives not specifically concerned with the Thaton power plant. They are generally involved in maintaining religious traditional practices, promoting cultural activities, and undertaking social welfare and charity activities.

Most community organizations limit their area of operation within the villages and have traditionally been maintained for years or decades. In some villages, ethnic literature and cultural groups were loosely affiliated to the same organizations at township or regional levels.

The Village Electrification Committee is basically concerned with bringing electricity supply to the villages. The committee and village communities they represent have a stake in electricity supply activities planned and implemented by the Township Electricity Supply Enterprise (ESE). The committee has gone through a long official process to get permission from the Township ESE for tapping the power from the power plant. It mobilized village households to cooperate in raising funds to finance the cost of construction and installation of an electricity supply system using power sourced from the plant. The Township ESE provided technical know-how on power supply system installation, and assigned technicians to give instructions and solve problems in actual installation work.

It was reported that some sections of communities in Inn Shey village had electricity supply from other power supply system than the one constructed by the Village Electrification Committee. The other supply line was alleged to come from an army regiment stationed near the village. The number of households recorded in the survey included all households from both categories.

Citizen rights issues were articulated by a few local active individuals within their immediate circles and though small and isolate, they represented the voice from a corner of the society. Eventually, they may organize themselves into a formal group and win legitimacy and recognition through mobilizing the support of communities. In that case, they will become the voice of a sector of population and represent their interest in related political discussions. However, there is still lack of organized bodies such as advocacy groups with a defined mission, mandate, policies, rules and regulations at the village community level to the people about citizen rights.

5.3.14.2 Self-Help Equitable Village Electrification System

Generally, the self-help village electrification system is applied for village communities located far from the grid line. It uses off-grid energy sources (most commonly solar home system or solar mini-grid) for electrical power supply. In the case of a solar home system, an individual household pais for its own device albeit in a subsided rate. No common fund was needed to establish a common facility for power generation and supply. In the case of current survey villages, the power supply is provided through the installation of an electricity supply network including cable wire, lamp posts, transformers, etc. This network is not considered as a private property but as a communal facility. The investment sum needed to pay for the cost of installation is financed by the user households. Government or other stakeholders may think about subsidizing the cost for the benefit of all households.

In principle, the Village Electrification System installed in the survey villages was supposed to be a public facility like a village pond or a village footpath which all households would have equal access to. The self-help approach adopted by the VEC required all households to make an equal contribution regardless of their economic or social status to be qualified to participate in the system. Unlike some other community infrastructures (village pond, village road), a village electrification project needs to procure specific construction and installation materials (transformers, wire cable, concrete lamp posts, etc) and skilled workers from third party suppliers and service providers. This implies that the village households were not able to use their labor or other forms of in-kind (collecting locally available construction materials) as part of their contribution for the project. This, together with the sizeable initial investment of electrification meant that households needed to contribute with a relatively large sum of cash to be able to participate in the system. However, cash is a scarce commodity for most of the households in rural areas, particularly for poor households, and for these it became impossible to participate in the self-help system.

In conclusion, the self help electrification system did not achieve the equitable participation of all households in the system and the desired universal benefit to all households. The current survey results and observation on the ground did not clearly show the relationship between ethnicity and non-connected households, but it did clearly relate the non-connected households to their low-income status.

The VEC had made several changes to scale down the sum of contribution (from 1,000,000 to 700,000 to 500,000 and finally to 300,000 MMK) to achieve better inclusiveness of beneficiary households. Under this context, households were allowed to pay different contributions to enjoy the same benefit. The VEC was prepared to offer even lower priced concessions for poorer households as it accumulated enough capital to afford the expense.

The practice of allowing households to contribute a sum according to their affordability is considered to be more compliant with the *principle of equitability* than that of requiring all households to pay the same amount regardless of their affordability. However, the equitability shall be applied universally or it will defeat its purpose. Sensible consideration shall also be given to the legitimate benefit of supposedly better-off households who had contributed larger sums of contribution earlier. Actually, it was the very thought that was hindering the VEC to further scaling down of the contribution sum.

Therefore, some kind of arrangement should be worked out whereby all contributors, regardless of the size of the contribution, should be able to enjoy the benefit and at the same time retain their contribution as their shares to the project and be awarded from the successful operation of electrification, a fair sum of return proportionate to their contributions.

For this purpose therefore, the VEC could perhaps reform itself into a business enterprise and adopt a businesslike management system. It could take the form of a partnership business or a community utility firm and employ a professional manager under an elected board of directors to conduct business activities with development orientation. The households would retain their sums of contribution as shares and continuing participating in the project. If and as the business became successful, they would get returns either as share dividends or in the form of better electrification services or other forms of community development.

5.4 Findings from the Data collected by Questionnaires - Part II - Ethnic Households

This component of the report is devoted to the socio-economic situation and issues of ethnic groups living in the surveyed villages. The study topics include composition of different ethnic households in the villages, their religions, languages, cultures, relationship between different ethnic groups, problems encountered by ethnic groups, etc.

Ethnic groups living in the 4 survey villages include Kayin, Pa-oh, Mon, Bamar and Yakhine. The majority of the population in the localities are Kayin, Bamar and Pa-oh. Although geographically and administratively Thaton township belongs to the Mon State, Mon presence in the township is receding. Mon national political party activists admitted that Mon political influence was not so strong in Thaton Township. In Kyar Ban village, Kayin and Pa-oh ethnic households live in their own communities which are divided by the motor road. Kayin is dominant ethnic group in Than Ban and Inn Shey villages. Different composition of ethnic groups existed in other villages. Kyar Ban, Than Ban and Inn Shey villages administratively belong to Du Yin Seik Village Tract which shares the border with Kayin State/Hpa-an Township. Nyaung Wyne village is located in another village tract (Htaung Hmu).

5.4.1 Identities of Ethnic Households

It is fairly common to find multi-ethnic households in survey villages. Inter-ethnic marriages between different ethnic groups are not restricted. Members of many households have different ethnic origins. For example, the husband of a household is Pa-oh while the wife is Kayin. Some households with extended families have members belonging to more than two ethnic groups. During the survey, respondents were asked to identify the ethnic origin of their household members and to tick out the relevant ethnic groups on the questionnaire paper. Ethnic identity of a household is usually defined by the ethnic origin of the household head.

The percentage of multi-ethnic households is 15.8% at the time of survey. Percentages of ethnic households and population in individual villages are shown below.

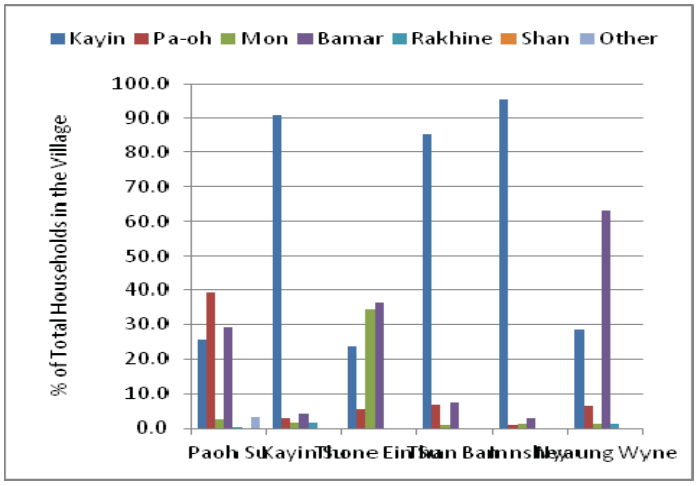


Figure 5-102: Percentage of Ethnic Households in each of the surveyed villages (Sept. 2016)

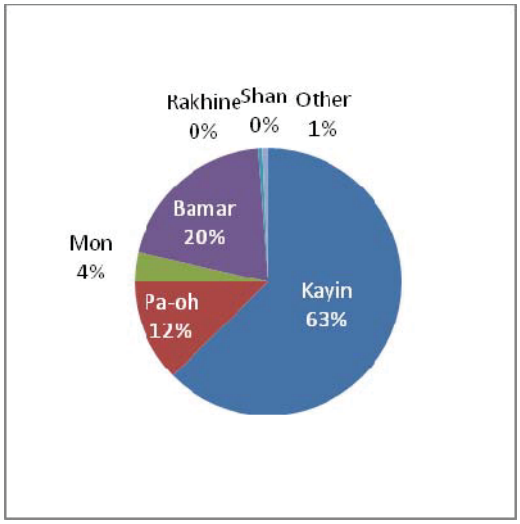


Figure 5-103: Overall percentage of Ethnic Households in the surveyed villages (Sept. 2016)

Kayin Ethnic households live in the overwhelming majority in Kayin Su, Than Ban and Inn Shey villages. The Pa-oh ethnic group was the largest only in Pa-oh Su, although the margin over other groups is not as distinguishable as the Kayin ethnic group in the above 3 villages. Bamar and Mon ethnic households are the majority in Thone Ein Su village and Bamar households were the largest in Nyaung Wyne village. The last two villages were on the main road from Thaton to Hpa-an. As an overall percentage, Kayin ethnic households are the largest group (63%), followed by Bamar (20%) and Pa-oh (12%).

5.4.2 Population of Ethnic Households

The population of ethnic households was obtained by segregating all the households in each survey village into different ethnic households and by adding together the population of all households belonging to a same ethnic group. This exercise was repeated for all ethnic groups and in all survey villages. The ethnicity of a household is defined by the ethnic origin of its household head. The Overall percentage of single-ethnic households (i.e. all household members belonging to one ethnic group) in all survey villages was 84.2% and the method represented a fairly close reflection of the true situation. The results are shown below.

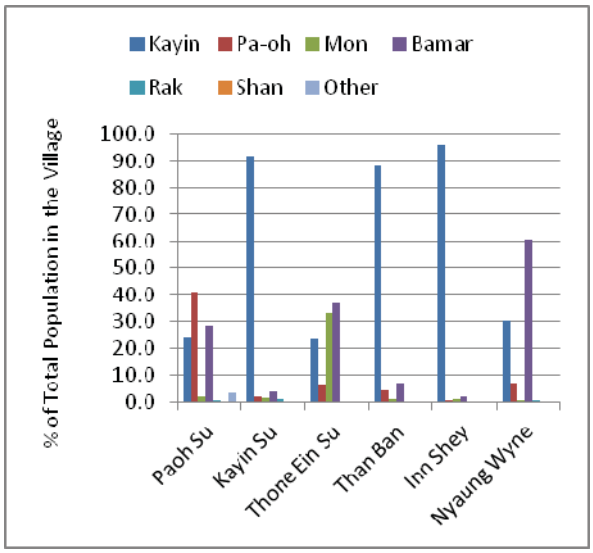


Figure 5-104: Percentage of Population of Ethnic Households in Individual Survey Villages (Sept 2016)

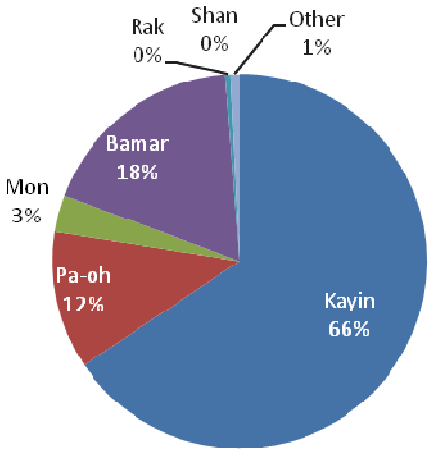


Figure 5-105: Overall Percentage of Population of Ethnic Households in All Survey Villages (Sept 2016)

The distribution of population by ethnicity in each survey village and in overall situation looked very similar to that of the ethnic households. For example, the population of Kayin households was the largest in Kayin Su, Than Ban and Inn Shey villages. The population of Pa-oh households was the largest in Paoh Su village. Population of Bamar and Mon was the largest in Thone Ein Su and Bamar largest in Nyaung Wyne village. Overall, the population of Kayin households is the largest (66%), followed by Bamar (18%) and Pa-oh (12%).

5.4.3 Diversity of Religion

Households were asked about the religions followed by household members (for example, Buddhist, Christian or Animist).The results are shown below.

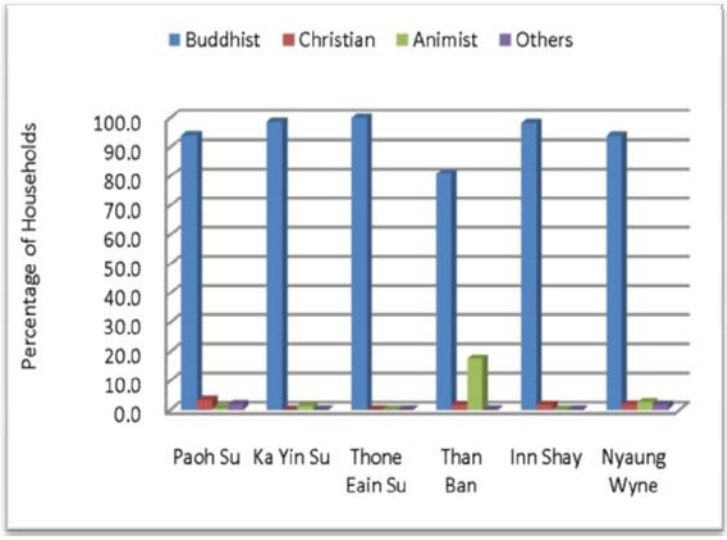


Figure 5-106: Religion Diversity (percentage of Households) in the surveyed villages (Sept. 2016)

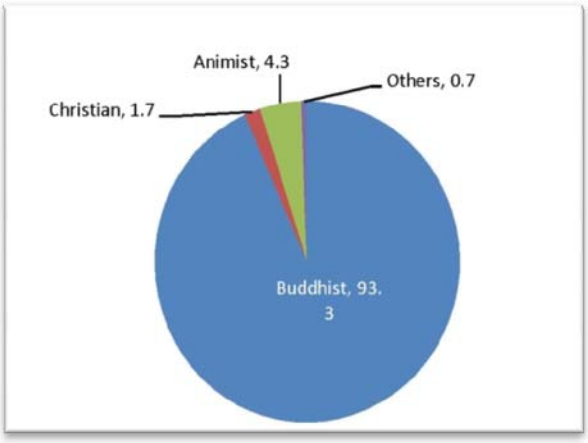


Figure 5-107: Religion Diversity (percentage of total Households) in the surveyed villages (Sept. 2016)

The overwhelming majority of households are Buddhist (above 90%) in all villages except Than Ban. Than Ban has a significant percentage (17.4%) of Animist households. Overall, the percentage of Buddhists in all survey villages is 93.3%, Animist is 4.3% and Christian is 1.7%.

5.4.4 Different Languages

Households were asked about the languages they used in daily life. In a household whose members spoke Pa-oh and Kayin languages, one point was given for each language regardless of how many household members spoke the languages.

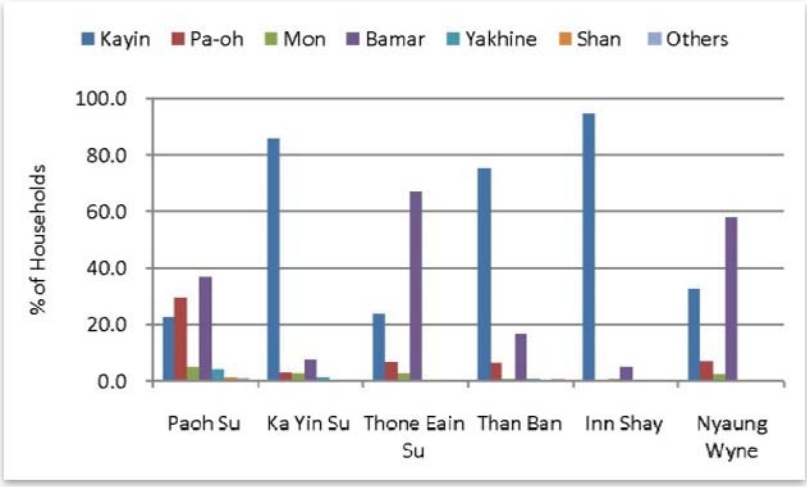


Figure 5-108: Language Diversity (percentage of total Households) in the surveyed villages (Sept. 2016)

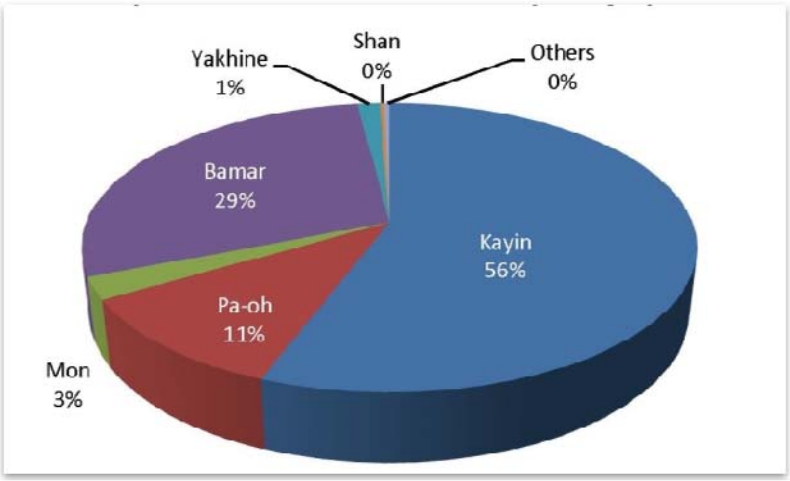


Figure 5-109: Language Diversity (percentage of total Households) in the surveyed villages (Sept. 2016)

Language diversity resembles closely the religion diversity. The Kayin language is used by the majority of the households in Kayin Su, Than Ban

and Inn Shey. Thone Ein Su and Nyaung Wyne mostly used Bamar which is recognized as a national language. In the Pa-oh Su village, Pa-oh, Kayin and Bamar languages were more or less used by an equal number of households. Many young Pa-oh people could no longer speak, read or write their own ethnic language, which may explain the smaller percentage of households who spoke Pa-oh. Kayin was the most used language. A small percentage of households used Mon language, an indication of the minimal influence of the Mon ethnic group in this part (Thaton) of Mon State.

5.4.5 Cultural Diversity

Pagoda festivals, and observance of religious days and rituals are used as indicative practices of different cultures. Common differences existed between Buddhists and Animists. Households were asked which activities or rituals they practiced.

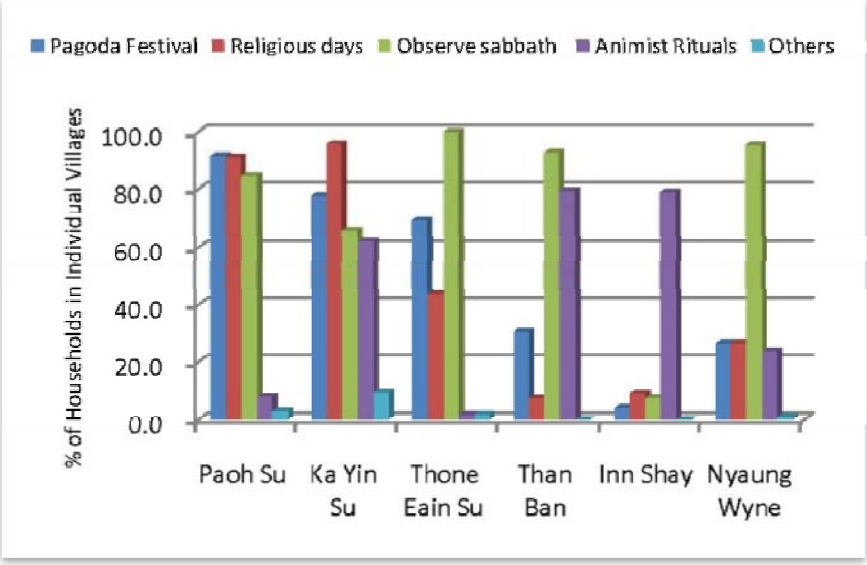


Figure 5-110: Cultural Diversity (percentage of total Households) in the surveyed villages (Sept. 2016)

The majority of the households in all but Inn Shey villages (60% in Kayin Su and above 80% in other villages) observed Sabbath Days which meant they were preserving an important Buddhist custom. Other Buddhist cultural practices, like celebrating pagoda festivals and religious days could also be observed in Pa-oh Su, Kayin Su and Thone Ein Su.

On the other hand, a significant percentage of households practised Animist rituals in Kayin Su, Than Ban and Inn Shey (60-80%). Given that those three villages have a high percentage of the Kayin ethnic group, it might be deducted that the Kayin people tend to follow Animist practices along with other religious activities. Inn Shey seemed to lean on single cultural system

as the number of households practising animist rituals was far more than other cultural practices. Households in Pa-oh Su tended to observe all Buddhist cultural practices (the Sabbath and other religious days, pagoda festivals, etc).

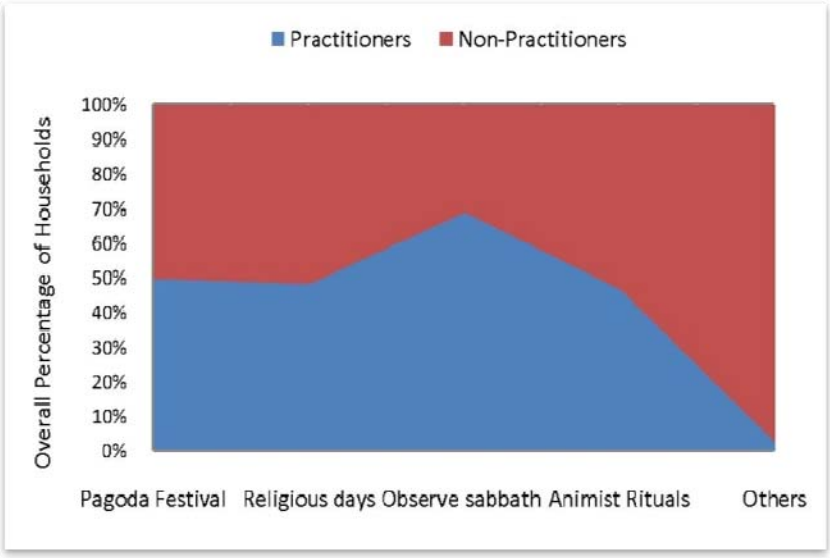


Figure 5-111: Cultural Diversity (Overall Percentage of Practictioning Households) in the surveyed villages (Sept. 2016)

Overall situations showed that households observing Buddhist Sabbath days had the highest percentage (69%), followed by households observing Pagoda festivals (50%), religious days (48%) and animist rituals (47%)

5.4.6 Ethnic Relationships as Perceived by Ethnic Households

Relations between ethnic people were categorized into 3 levels:

(1) Friendly
(2) Normal
(3) Living separately in own communities with little interaction.

Households were asked to judge the level according to their observations.

Data for the topic was obtained by segregating all households in each of the villages in terms of Ethnicity; afterwards, the number of households with different perception of the ethnic relationship was recorded and counted. The number of households is presented as a percentage of the total number of households in the village to facilitate comparison across all ethnic groups in the village. Data for each village was aggregated (number of households collected for each ethnic group in all survey villages were added together) to obtain data for the overall situation. This is showed in the chart below.

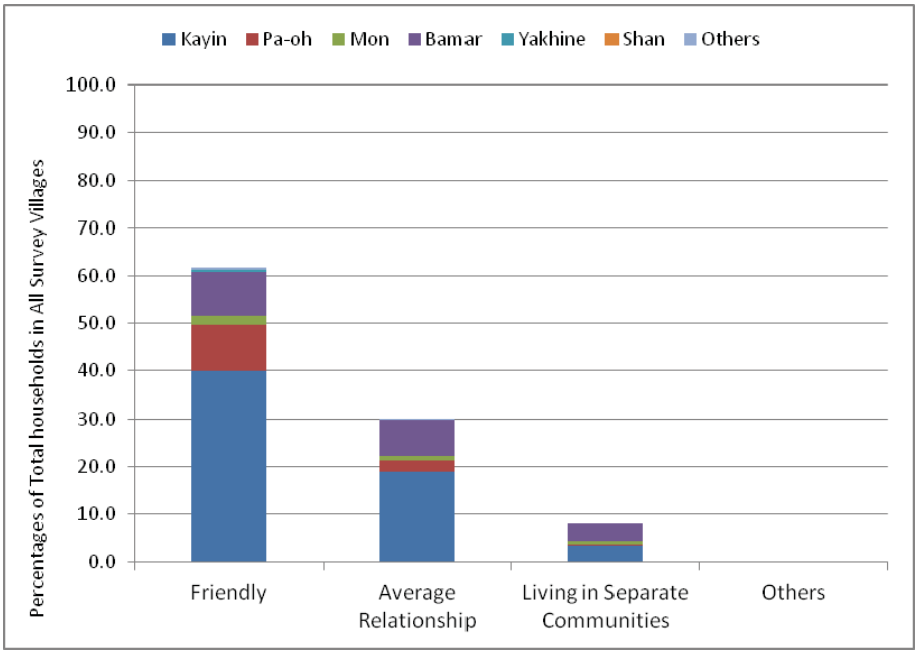


Figure 5-112: Overall Perception of Ethnic Relationships as Evidenced by Ethnic Households in All Surveyed Villages (Sept. 2016)

In the 30% of total households who perceived ethnic relationship as *normal* or *average*, Kayin households made up about 20%, Paoh households 2.4%, Bamar households 7.5%, Mon households 1% and Yakhine and other ethnic groups 0.2%.In the 8% of total households who perceived ethnic relationship as *Living in Separate Communities*, Kayin households comprised about 3.5%, Paoh households zero percent, Bamar housholds 3.6%, Mon households 0.7% and Yakhine and other groups 0%. This shows that there is similarity and diversity of opinions within every ethnic group in regards to the perception on the ethnic relationship.

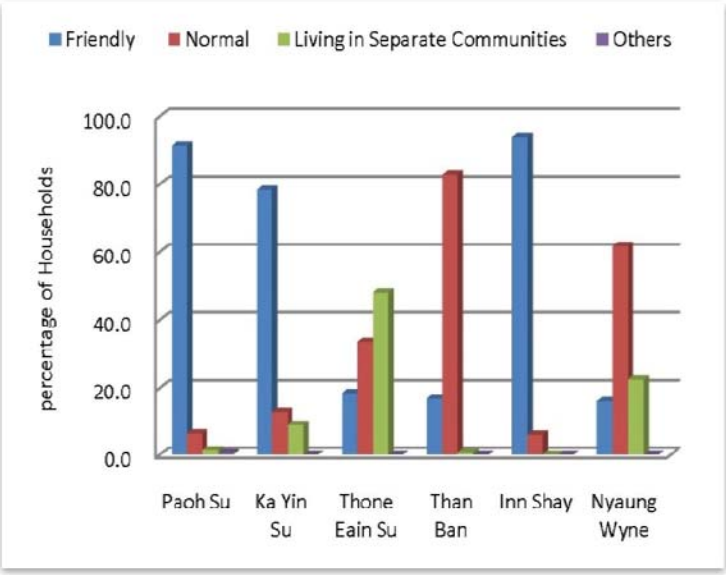


Figure 5-113: Ethnic Relationship as Perceived by Ethnic Households in Individual Villages (Sept. 2016)

The two Kayin villages with the largest number of Kayin ethnic households judged the relationship between the different ethnic groups as *friendly*: Kayin Su (78%) and Inn Shey (94%). However, another Kayin village, Than Ban (Kayin 81%), assessed the relationship as *normal*. In Pa-oh Su, where households are divided evenly between Pa-oh, Kayin and Bamar, the relationship was judged as friendly by 92% of village households. In Nyaung Wyne village, 63% of the households rated the relation as normal. Thone Ein Su had a more diverse opinion of the relationships: friendly 18.5%, normal 33.3%, living separately 48.1%.

The situation of individual villages is shown individually below.

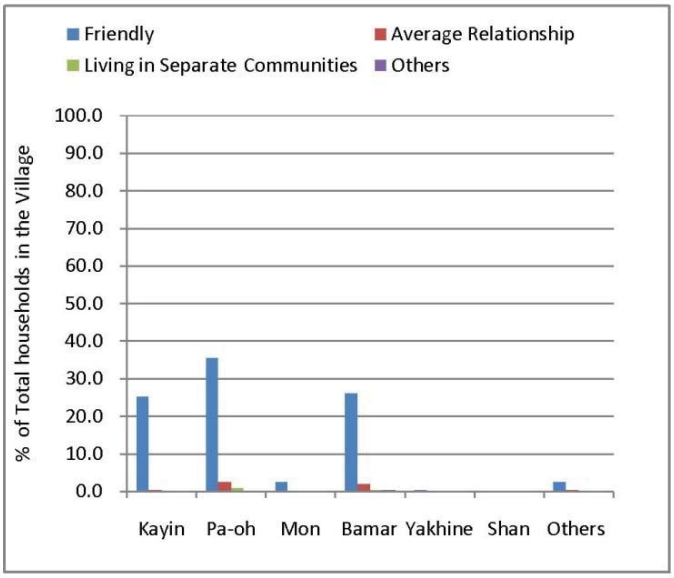


Figure 5-114: Ethnic Relationships as perceived by Ethnic Households in Paoh Su village (Sept. 2016)

In Paoh Su village, the three larger ethnic groups of Paoh, Kayin and Bamar hadthe majority of their households sharing the same perception of *friendliness* in ethnic relationships. The same situations were also found in other ethnic groups in the village (e.g Mon and Others). Total percentage of households who perceive a *friendly* relation was 91.7 %, an indication of the overall sentiment shared by whole village community.

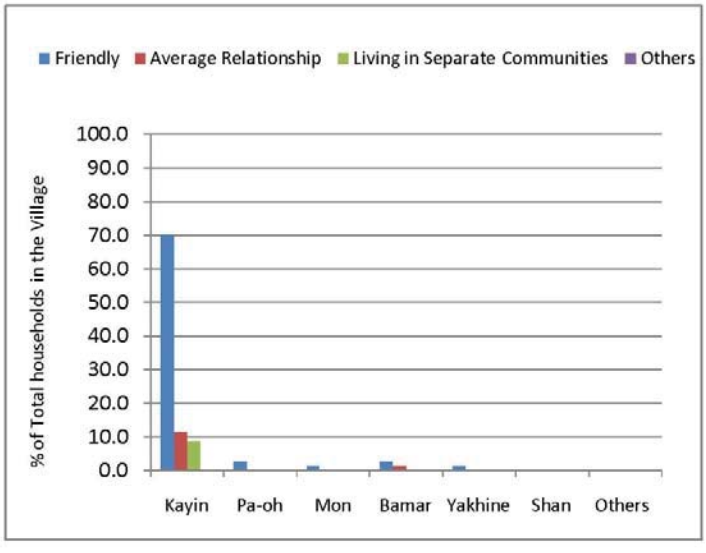


Figure 5-115: Ethnic Relationships as perceived by Ethnic Households in Kayin Su village (Sept. 2016)

In Kayin Su village, where Kayin is the largest ethnic group, the percentage of Kayin households who perceive the ethnic relationship as *friendly* is the highest (70%). Other ethnic groups also showed similar perception, although their percentages were small. A noteworthy situation in Kayin Su village was that considerable percentages of Kayin households showed diverse perception from the majority. For example, about 11% perceived the relationship as *average* while about 9% thought different ethnic groups were *living in separate communities*.

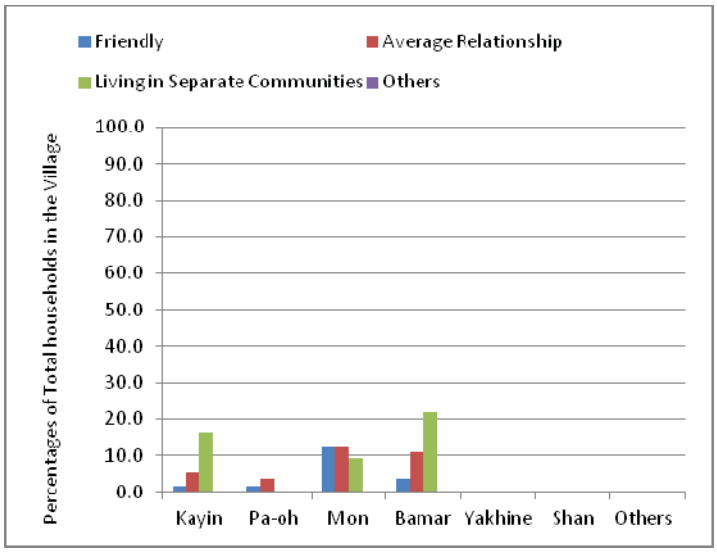


Figure 5-116: Ethnic Relationships as perceived by Ethnic Households in Thone Ein Su village (Sept. 2016)

The diversity of perception of ethnic relationships is more discernible in Thone Ein Su village than in others. For examples, within thr Mon ethnic group, the rating of different relationship levels was evenly spread among households (same 12.7% for *friendly* and *average* levels and 9% for *living in separate communities* level). The Bamar and Kayin ethnic groups also showed diversity of perceptions, although households tended to skew to the level of *living in separate communities* (22% for Bamar and 16% for Kayin*).* Paoh ethnic group shared tiny percentages in *friendly* and *average* levels.

No particular perception in Thone Ein Su can claim overwhelming proportion over the others. The exposure to a wider environment (the village is on the express motor road from Yangon to Hpa-an), and a balanced proportion of ethnic households in the village might be contributing to this situation. Bamar, Mon and Kayion ethnic groups shared balanced percentages of households in the village (36% for Bamar, 34% for Mon and 24% for Kayin).

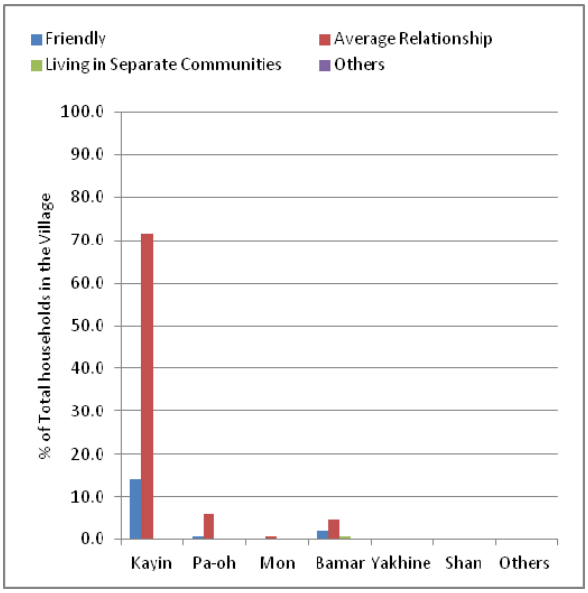


Figure 5-117: Ethnic Relationship as perceived by Ethnic Households in Than Ban village (Sept. 2016)

In Than Ban village, the majority of Kayin households shared the same perception on ethnic relationship (71% for *average*). However, there was a small percentage of households (14%) in Kayin ethnic group whose perception deviated from the majority, as they rated ethnic relationships as *friendly* rather than *average*. Other ethnic groups (Paoh, Bamar and Mon) had much smaller percentages of households who shared the perception of ethnic relationships as *friendly* and *average*. There are no Yakhine and Shan ethnic groups in the village.

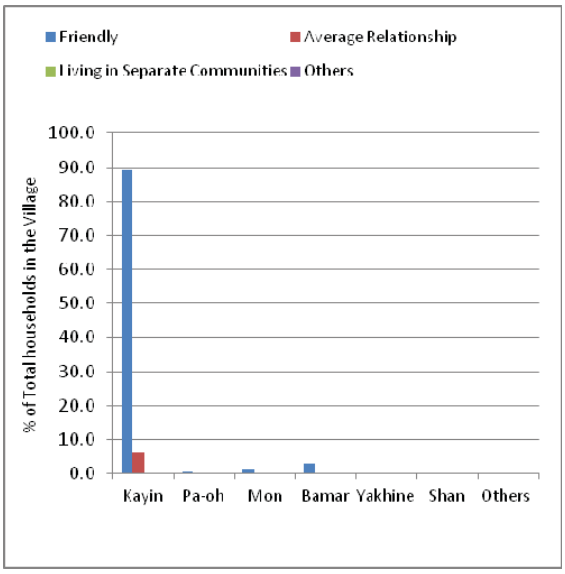


Figure 5-118: Ethnic Relationships as perceived by Ethnic Households in Inn Shey village (Sept. 2016)

The situation in Inn Shey village has a similar pattern as that in Than Ban. The important difference is that the majority of households (89%) shares the *friendly* as their perception on ethnic relationship rather than *average*, as was the case in Than Ban. Other ethnic groups (Bamar, Paoh and Mon) have tiny percentages of households who shared the *friendly* perception.

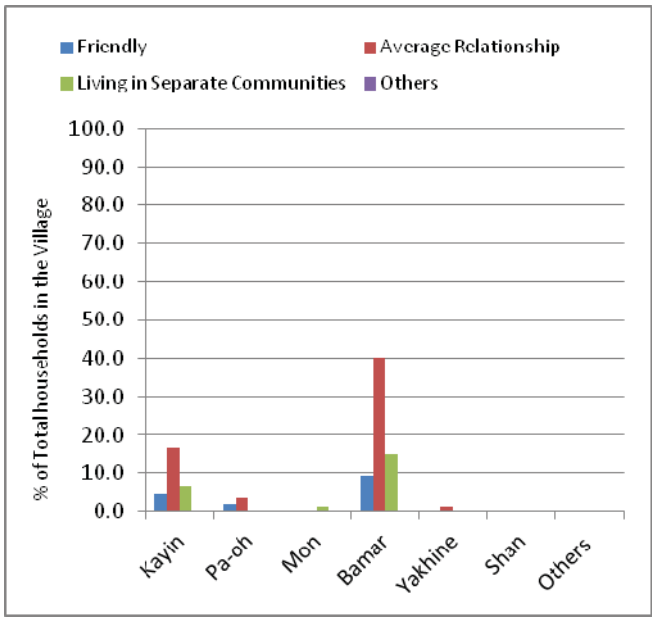


Figure 5-119: Ethnic Relationship as perceived by Ethnic Households in Nyaung Wyne village

The situation in Nyaung Wyne village looked alike to that of Thoen Ein Su. The village is also on the Yangon-Hpa-an Union Highway motor road and liable to exposure to the „outside world". Bamar and Kayin ethnic groups have the highest percentages of households in the village. Households in these two ethnic groups the shared same pattern of perception on ethnic relationships: highest percentage for *average* level (total 57%), fair percentage for *living in separate communities* level (total 21%) and lowest in *friendly* level (total 14%).

The perception of these two ethnic groups would reflect the general perception of the village. Paoh, Mon and Yakhine ethnic groups had small percentage of households whose perception varied from *friendly* (total 1.9%) to *average* (total 4.6%) and *living in separate communities* (total 0.9%).

5.4.7 Inter marriage between different ethinicities

As another indication of the relationship between different ethnic groups, inter-marriage was also investigated.

Overall, 62% of the total households in all survey villages rated the relationship between different ethnic groups as *friendly*; 30% rated as *normal*; 8% rated as *living in separate communities*.

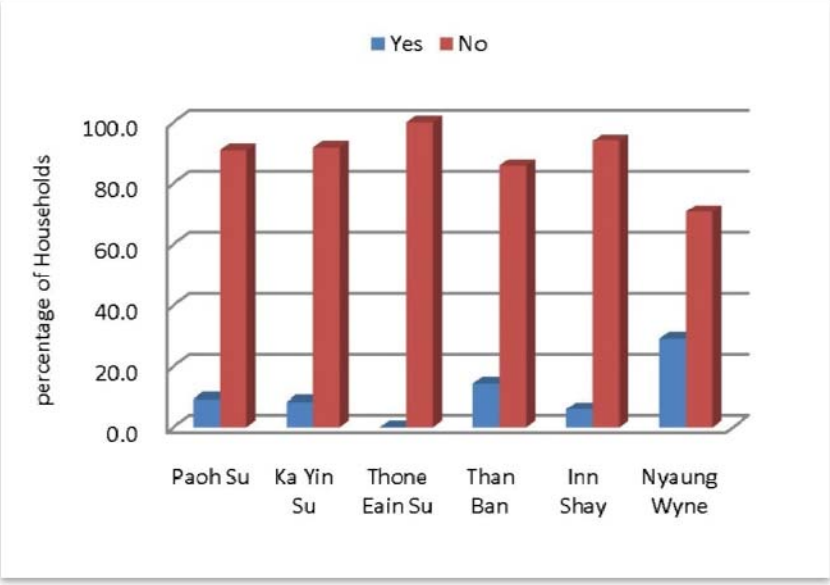


Figure 5-120: Households with Inter-marriages between Ethnic Groups in the surveyed villages (Sept. 2016)

Fewer than 10% of the households had inter-marriage cases in Pa-oh Su, Kayin Su, Thone Ein Su and Inn Shey. Than Ban had 14% and Nyaung Wyne, with 29%, had the largest number of households with inter-marriage cases.

5.4.8 Problems encountered by Ethnic Minorities

Households were asked to define the difficulties and problems commonly encountered by ethnic minorities. Altogether 9 types of problems were listed. A number of problems ranging from one to nine was reported by one household.

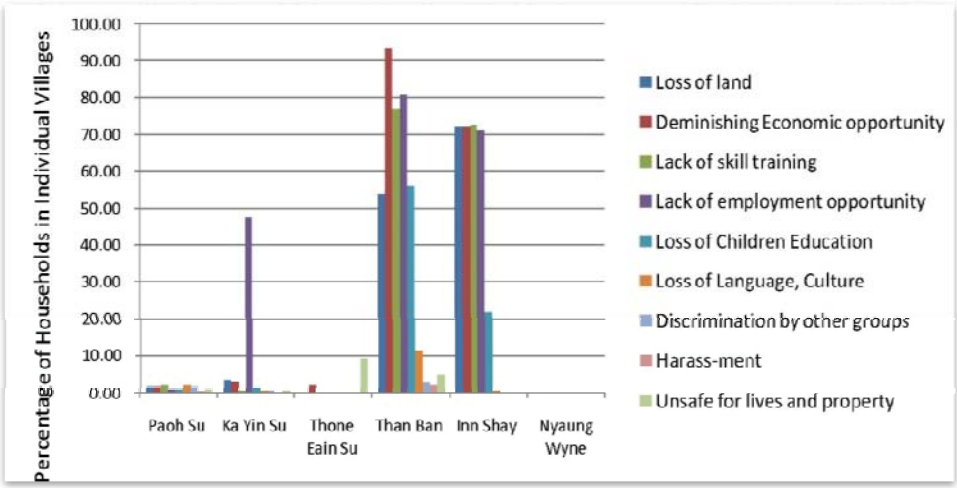


Figure 5-121: Problems for Ethnic Minorities in individual surveyed villages (Sept. 2016)

A large proportion of the households in Than Ban and Inn Shey seem to have many different kinds of problems, particularly: diminishing economic opportunities, land loss and lack of skills training. Kayin Su had one particular problem – the lack of employment opportunities. On the other hand, Pa-oh Su, Thone Ein Su and Nyaung Wyne seem to have few or no problems at all. Taken as a whole, the following were the most commonly encountered problems:

Problems	Percentage of the households
Lack of employment	38%
Diminishing economic opportunity	31%
Lack of skills training	30%
Loss of land	26%

Note: Two or more types of problem can be encountered by the same household

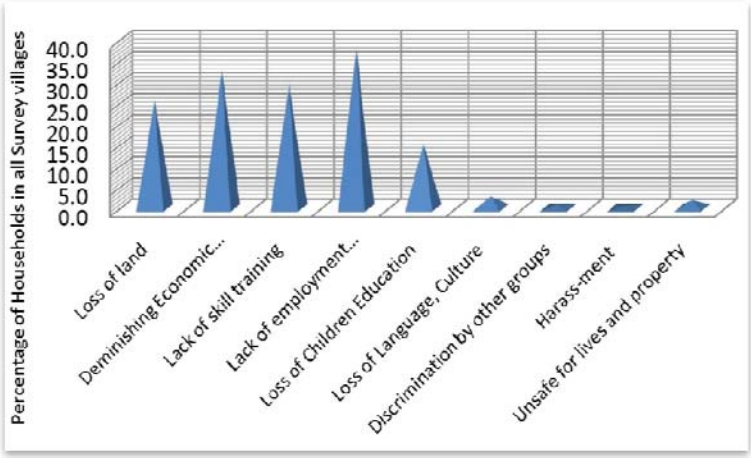


Figure 5-122: Problems for Ethnic Minorities in All Surveyed Villages (Sept. 2016)

The data for each ethnic group is shown below.

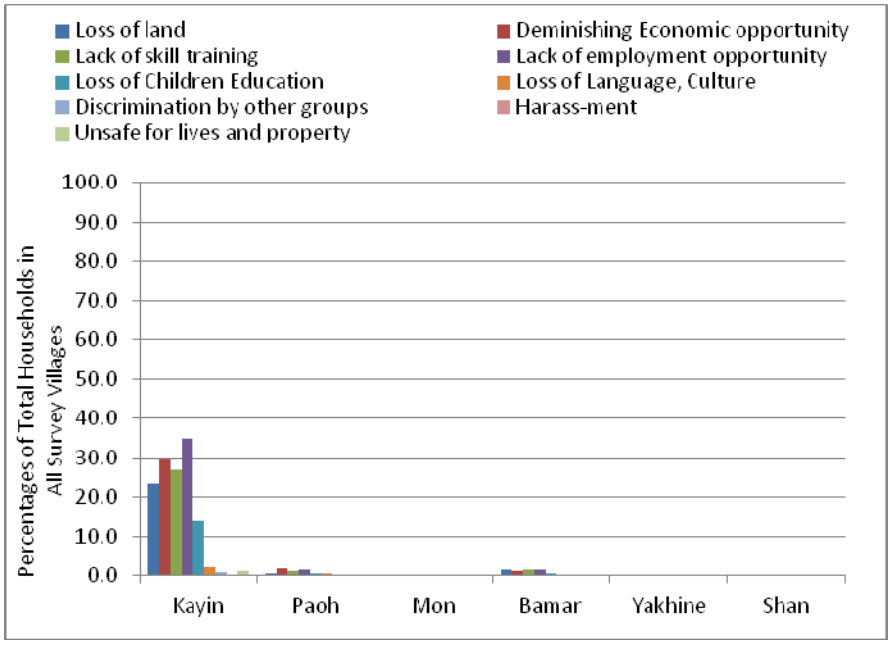


Figure 5-123: Problems for Ethnic Households by Ethnic Group (Overall Situation for All Survey Villages) (Sept. 2016)

Problems for ethnic groups are mostly concentrated in the Kayin, especially (1) Lack of employment opportunities and (2) Diminishing economic opportunities. Other important problems in the descending order of percentages of affected households were (1) Lack of skill training (26.8%), (2) Loss of Land (23.3%) and (3) Loss of children education (13.9%). There were other types of problems encountered by much smaller percentages of Kayin households (loss of language and culture 2.1%, unsafe for lives and property 1.3%, discrimination by other groups 0.8% and harassment by other 0.8%).

The situation for other ethnic groups is less serious. A scalar score system was used for rating the relative severity of the five most common problems. In this system, 1 is taken as basic severity score for the smallest percentage of affected households associated with a type of problem. The relative severity score for higher percentages of affected households were obtained by comparing the highest percentages to the percentage of basic score. The result is shown below.

Problems	% of affected HH			Severity Scores		
	Paoh	Mon	Bamar	Paoh	Mon	Bamar
Loss of land	0.6	0.2	1.5	3.0	1.0	7.5
Diminishing Economic opportunity	1.8	0.4	1.3	4.5	1.0	3.3
Lack of skill training	1.2	0.2	1.4	6.0	1.0	7.0
Lack of employment opportunity	1.4	0.4	1.4	3.5	1.0	3.5
Loss of Children Education	0.6	0.1	0.5	6.0	1.0	5.0
Total				23.0	5.0	26.3

Table 5-8: Score Sheet for Comparing Severity of Problems encountered by Ethnic Groups (Sept. 2016)

According to the order of severity scores, Bamar stood at the top of three ethnic groups and can be regarded as having problem severity only next to Kayin. The Pa-oh ethnic groupIS slightly lower in problem severity than Bamar; and problem severity for the Mon ethnic group is at the lowest.

The situation in individual villages is shown below.

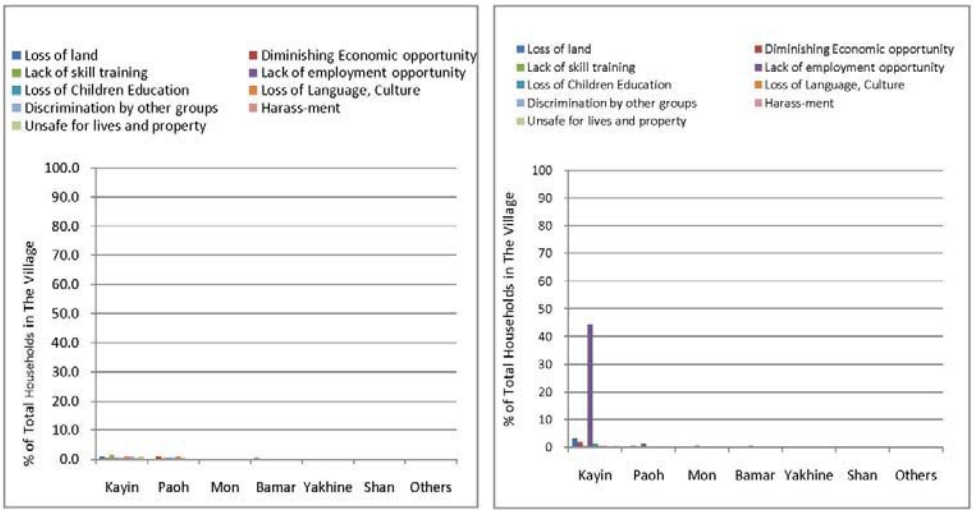


Figure 5-124: Problems for Ethnic Households in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016)

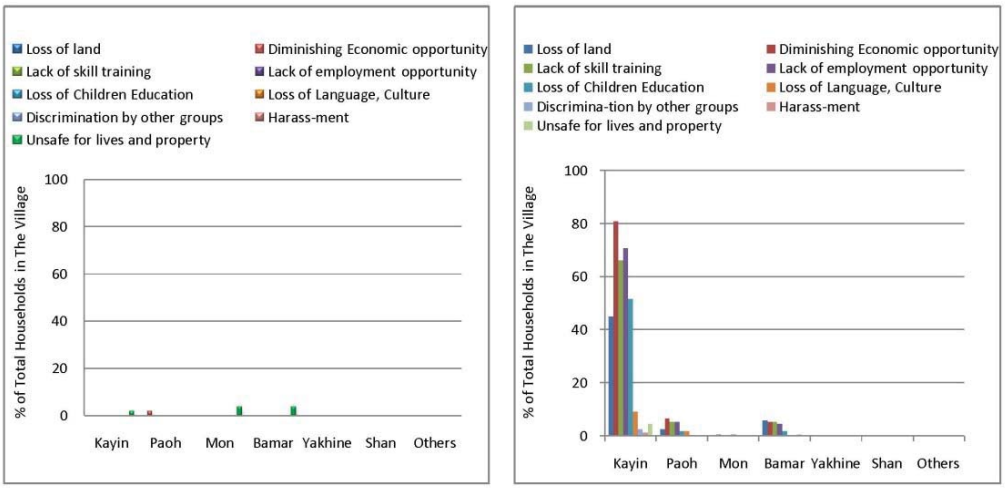


Figure 5-125: Problems for Ethnic Households in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016)

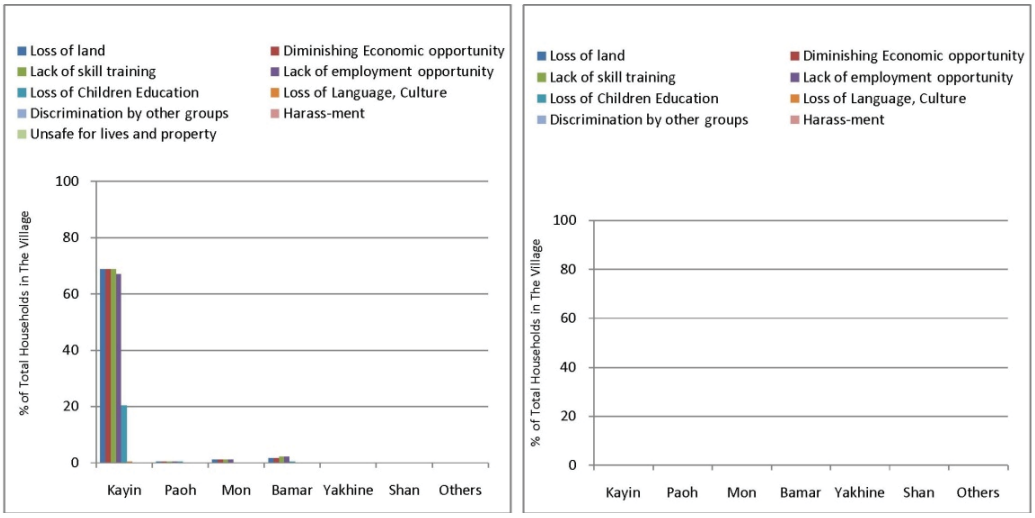


Figure 5-126: Problems for Ethnic Households in Inn Shey Village (left) and Nyaung Wyne Village (right) (Sept. 2016)

The problem situation is most distinct in Kayin Su, Than Ban and Inn Shey villages where Kayin had the largest percentage of households (90.5%, 85% and 95.4% respectively). The severity of problems clearly appeared in Kayin ethnic households in these three villages. Than Ban and Inn Shey villages had high percentages of Kayin households encountering at least (5) types of problems. Furthermore, Paoh and Bamar ethnic groups had also showed discernable percentages of problem-affected households in Than Ban village. On the other hand, Paoh Su and Thone Ein Su had very few percentages of problem-affected households. None of listed problems were reported in Nyaung Wyne village.

5.4.9 Accessibility of Ethnic Households to Health Services

Health Services in survey areas include district hospital in town, doctors or health assistant in private medical practices, rural health center, traditional healers and treatment by using household medicines. Ethnic households were segregated and the number of households accessible to various health services was recorded.

The accessibility of ethnic households to health services is not mutually exclusive and many households were found to have accessibility to several kinds of health services. The chart below shows the overall situation. There are no Shan ethnic households in the surveyed villages.

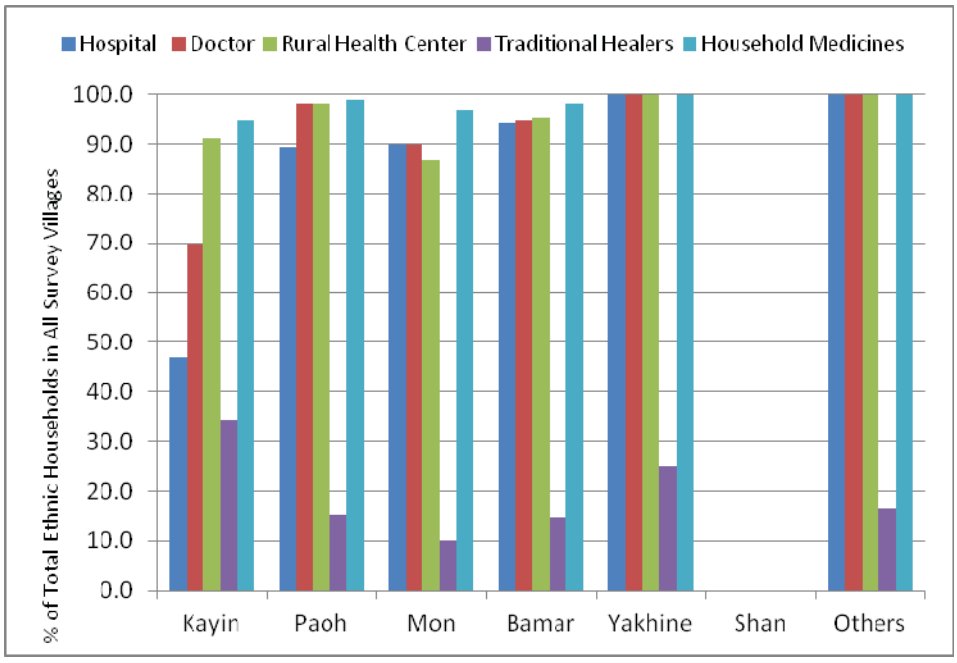


Figure 5-127: Accessibility of Ethnic Households to Health Services (Overall Situation) in All Survey Villages (Sept. 2016)

It is observable from the figure above that all ethnic groups have accessibility to all kinds of health services, although with varied degrees in terms of percentages of households. For example, in Kayin ethnic group, rural health center and household medicines were accessible by largest percentages of households (above 90%), followed by health services provided by doctors and hospital (about 70% and 47% respectively). Traditional healers were least accessible for Kayin households.

Accessibility to health services for other ethnic groups (Paoh, Bamar, Mon, Yakhine and Others) generally follow the same pattern. One salient variation is the fact that higher percentages of households in these ethnic groups have a larger acess to doctors and hospital services than the Kayins. Traditional healers remained the least accessible to these ethnic groups as well.

Health accessibility of ethnic households in individual survey villages is shown below.

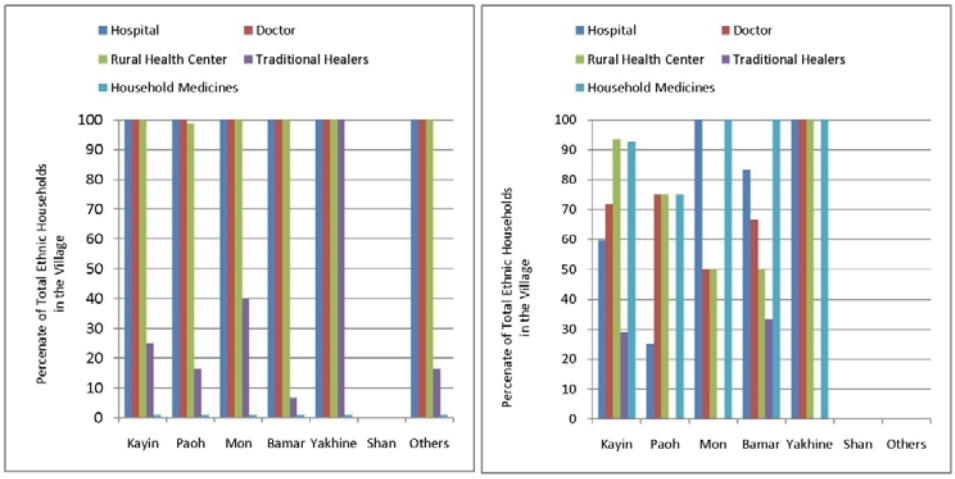


Figure 5-128: Accessibility of Ethnic Households to Health Services in Paoh Su Village (left) and Kayin Su Village (right) (Sept. 2016)

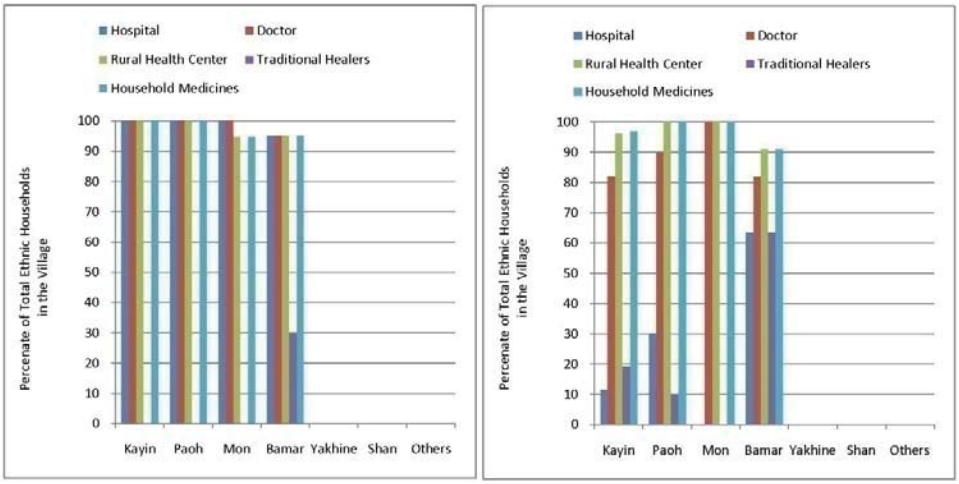


Figure 5-129: Accessibility of Ethnic Households to Health Services in Thone Ein Su Village (left) and in Than Ban Village (Sept. 2016)

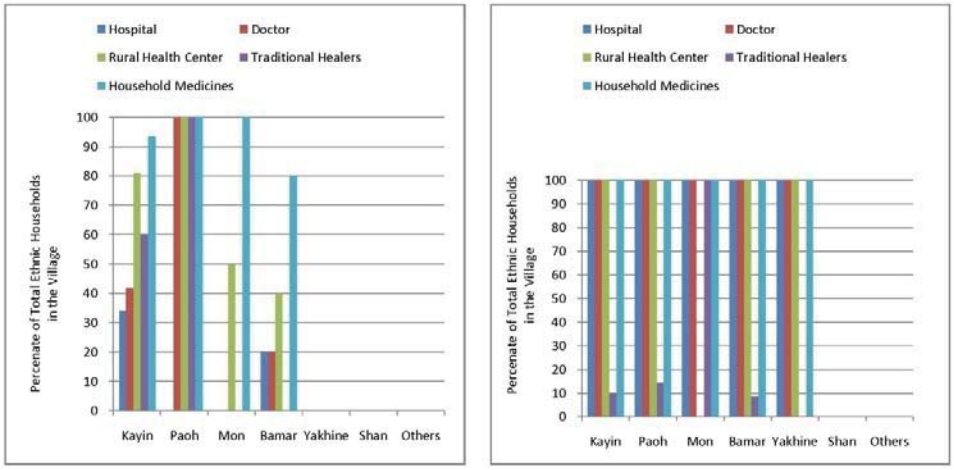


Figure 5-130: Accessibility of Ethnic Households to Health Services in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016)

Health Accessibility of ethnic households in the three survey villages (Paoh Su, Thone Ein Su and Nyaung Wyne) was similar albeit some minor deviations. In all these villages, there were generally high percentages of households with access to hospital, doctor, rural health center and household medicines and low percentage to traditional healers. An important exception was that all ethnic households in Paoh Su had very limited access (average 1%) to household medicines. Another point was that Mon ethnic households in Nyaung Wyne have no access to rural health center. However, the percentage of Mon households was too small (less than 1% of total households) in the village, and the result does not interfere with the general representation of the situation. Also, Bamar have a higher percentage of households with accessibility to traditional healers than other ethnic groups in Than Ban (61%), Kayin Su (32%) and Thone Ein Su (30%). Mon also had 40% of households with access to traditional healers.

In the other three villages (Kayin Su, Than Ban and Inn Shey), access to health services did not show similar uniformity among ethnic households. As Kayin households constituted the majority (85% to 95%) in all three villages, their accessibility would be responsible in shaping the general accessibility picture of the villages. As such, accessibility of Kayin households to health services in Kayin Su village was found to be almost identical to Kayin ethnic representation in overall situation. Than Ban and Inn Shey villages deviated from the overall situation in the sense that a higher percentage of households had accessibility to traditional healers than to hospital services.

5.4.10 Accessibility of Ethnic Households to Drinking Water Sources

The most common drinking water sources for the survey villages were found to be water wells owned by households (own wells) and water wells for public use (public wells). Together they made up 98.5% of the total number of water sources for all survey villages. Other drinking water sources comprised of bottled water.

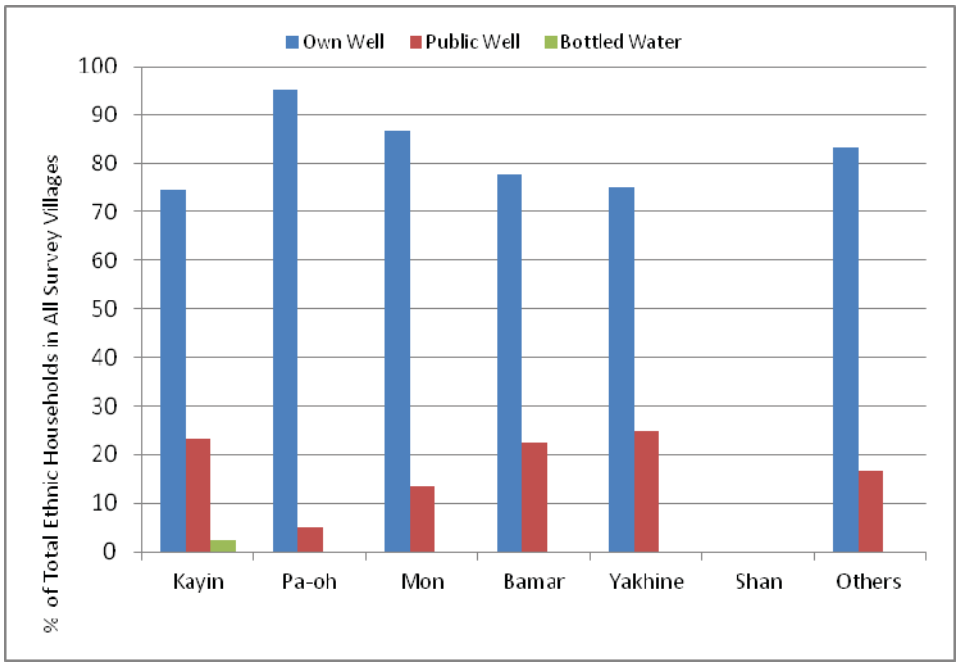


Figure 5-131: Accessibility of Ethnic Households to Drinking Water Sources (Overall Situation for All Survey Villages - Sept. 2016)

The overall situation shows that all ethnic groups share a similar situation in terms of households' accessibility to drinking water sources. The percentages of households who own water wells are higher than those of households who use public wells, albeit with various proportions:

- 72.3% vs. 23.3% for Kayin (with ratio of 3.2 to 1)
- 95.2% vs. 4.8% for Paoh (with ratio of 19.8 to 1)
- 86.7% vs. 13.3 % for Mon (with ratio of 6.5 to 1)
- 77.6 % vs. 22.3% for Bamar (with ration of 3.5 to 1)
- 75.0% vs. 25.0% for Yakhine (with ration of 3.0 to 1)
- 83.3% vs. 16.7% for other ethnic groups (with ration of 5.0 to 1).

If the high ratio of well owners to public well users is an indication of good accessibility to drinking water, all ethnic groups would be regarded as having good accessibility since the ratio in all ethnic groups is generally large. Pa-oh households having the largest ratio would be regarded as having the best accessibility, Mon and other ethnic groups in the middle, and Kayin,

Bamar and Yakhine the least. No Shan ethnic group was reported in the survey villages.

The situation in individual survey villages are shown below.

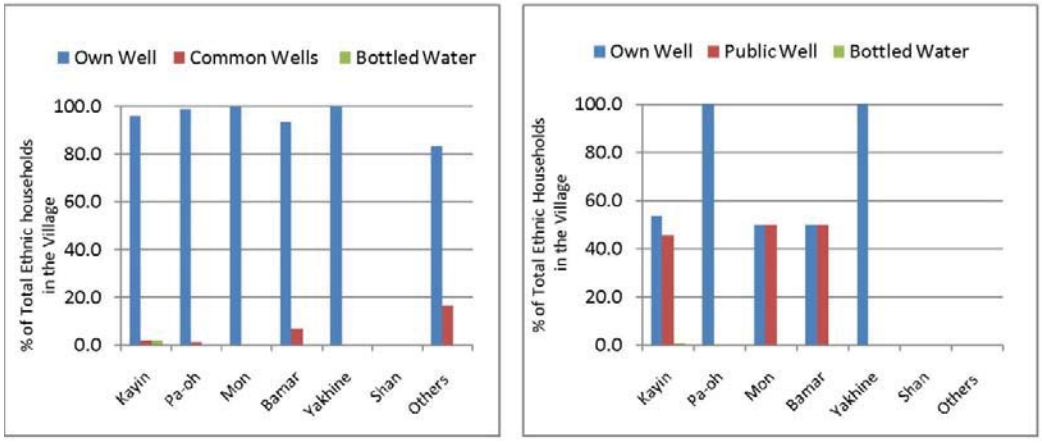


Figure 5-132: Accessibility of Ethnic Households to Drinking Water in Paoh Su Village (left) and Kayin Su Village (right) (Sept. 2016)

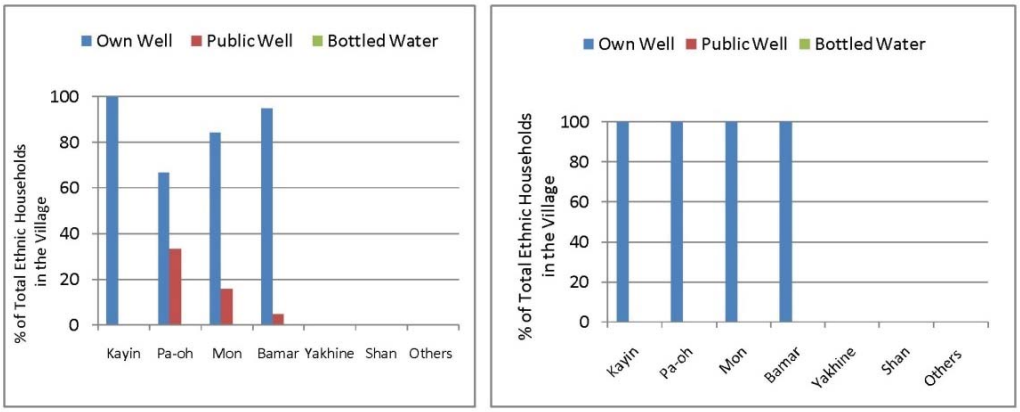


Figure 5-133: Accessibility of Ethnic Households to Drinking Water in hone Ein Su Village (left) and Than Ban Village (right) (Sept. 2016)

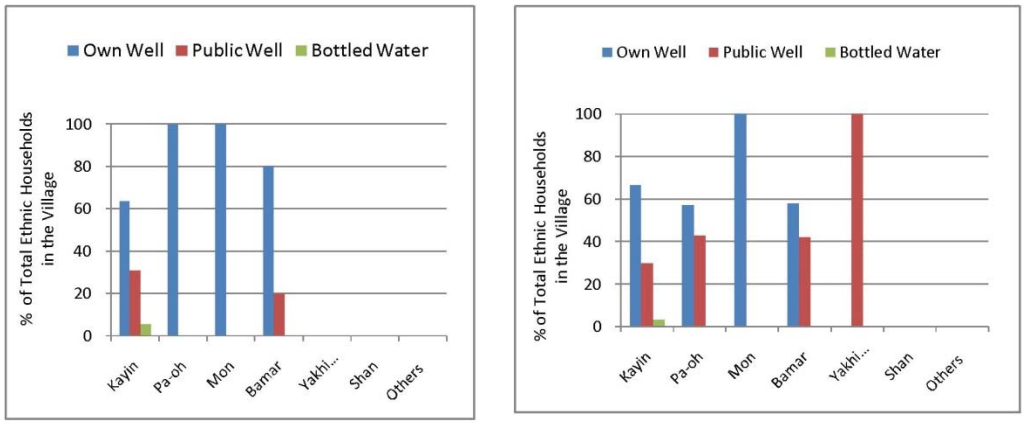


Figure 5-134: Accessibility of Ethnic Households to Drinking Water in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept 2016)

In Paoh Su village, almost all households of different ethnic groups used private wells. A few percentages of households among Bamar and other ethnic groups use public wells. In Kayin Su village, Kayin, Bamar and Mon households about equally use private and public wells altogether. All households among Paoh and Yakhine use private wells.In Thone Ein Su village, all Kayin households use private wells. Percentages of households among Bamar and Mon ethnic groups who use private well were also high. 60% of Paoh households use private wells. In Than Ban village, all ethnic households use private wells. In Inn Shey village, about 60% of Kayin households use private wells. All Paoh and Mon households use private wells. 80% of Bamar households used private wells. In Nyaung Wyne village, all Mon households used private wells. About an equal percentage of households among Kayin, Paoh and Bamar ethnic groups use private and public well altogether. Although small in number, all Yakhine households use public wells.

5.4.11 Education Situation

The data for this topic was obtained for each survey village by segregating households by ethnicity at a time (e.g filtering Kayin households first, and then Paoh ones and Mon and so on) and collecting from these households the number of people who had attained different education levels. The segregating and collecting of data was done for all ethnic households in every survey village. The number of people is presented in percentage of total effective population of the village. Effective population for educational analysis does not cover children unde 5 years old, and those household members who were away during the survey and whose education level could not be ascertained by other household members. Data obtained for each village were then added together to show the overall situation. To facilitate the assessment, education attainment levels were recognized as two groups. The higher group covered from university education to middle school level,

and the lower group from primary education to illiterate levels. The chart below shows the overall education attainment situation for ethnic households.

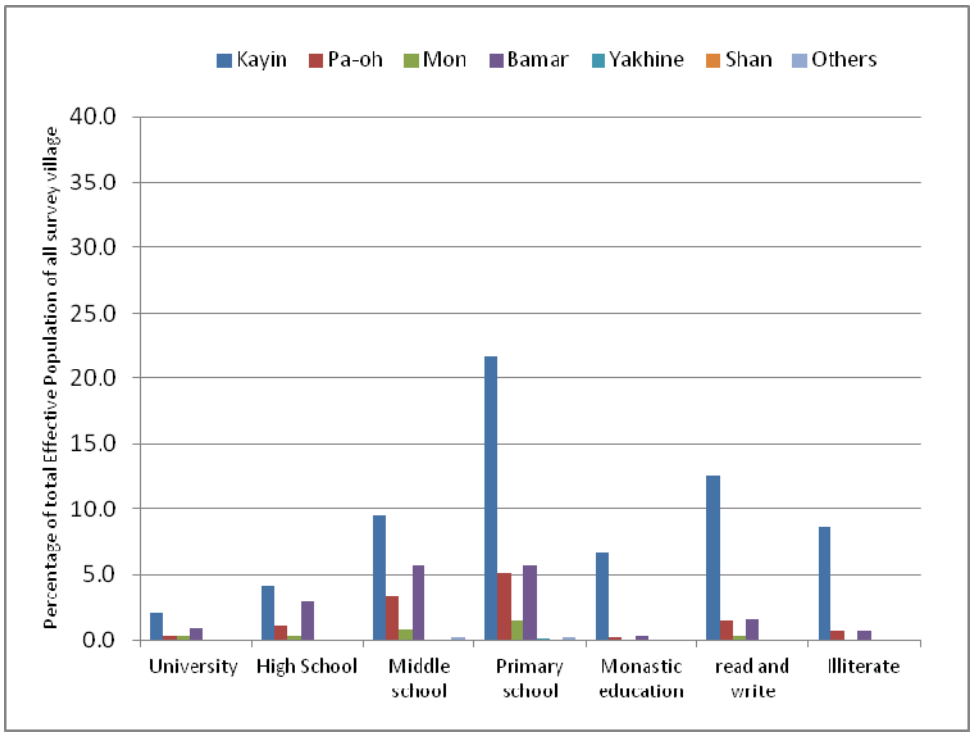


Figure 5-135: Ethnic Composition in Education Attainment Levels in All Survey Villages (Sept 2016)

General Observation. One can see from the chart above that Kayin households constitute the largest percentage of attainment population at all education levels. It means that Kayin households had permeated into and constituted the majority in attainment population (people who had attained a specific education level) at all education levels from university education down to illiterate level. Given that Kayin ethnic group occupies 62% of the total households (and of total population presumably) of all survey villages and is the largest among the ethnic groups in survey villages, the sizes of attainment population produced by Kayin households will be contributing significantly to overall education attainment situation of survey villages. In other words, overall education attainment situation of survey villages will depend significantly on the education attainment level of Kayin households.

The overall situation of education attainment level for ethnic groups is analyzed as below.

Kayin. Although Kayin households had produced the highest percentages of population at higher education attainment levels (2.1% for university education and 4.2% for high school levels), the percentages of population at

lower education attainment levels from Kayin households are also the highest among ethnic groups (6.7% for monastic education, 12.5% for read and write and 8.7% for illiterate levels). However, the largest percentage of attainment population from Kayin households is found at primary education attainment level (21.7% of total population of all survey villages). Therefore while Kayin households stand first in having people with higher education attainment levels and can boast about their highly educated fellows over other ethnic groups, they bore the highest percentage of population who had attained only lower education levels.

Bamar. Next to Kayin ethnic group, Bamar households have the second highest percentages of population with higher education (0.9% for university education and 2.9% for high school education levels). However, Bamar households were found to constitute two dominant groups at primary school education (5.7%) and middle school education attainment levels (5.7%). Also, their percentages of lower education levels are much lower compared to Kayin ethnic group's, i.e, 0.4% for monastic education, 1.6 % for read and write level and 0.8% for illiterate levels. Therefore, while Bamar households stood second in higher education attainment, there is a small segment of Bamar household members who could not rise up above lower education levels and the fact was weakening overall education attainment of Bamar households.

Paoh. Among Paoh households, middle school and primary school education attainment percentages were higher than other education levels (5.1% and 3.4% respectively of total population of all survey villages). The percentages of population of Paoh households with higher education were fairly low (0.3% for university education and 1.1% for high school education levels). However, the percentages of population with lower education levels (0.3% for monastic education, 1.5% for read and write and 0.7% for illiterate levels) is almost on pair with Bamar but much lower than Kayin. Therefore, while Paoh households fell behind Kayin and Bamar at higher education attainment level, they fared better (because they had lower percentages of people at lower education levels) by a small margin than Bamar and by a larger margin than Kayin at lower education attainment levels.

Mon. Like Paoh, Mon households have the two largest groups with primary and middle school education attainment levels (1.5% and 0.8% respectively of total population of all survey villages). The percentages of population with higher education attainment levels (0.3% for university education and 0.4% for high school education levels) is the lowest among all ethnic groups. However, their percentages of population at lower education attainment levels are also the lowest among all ethnic groups (0.1% for monastic education, 0.4 % for read and write and 0.1% for illiterate levels). Therefore, while Mon households would lag behind other ethnic household

in terms of higher education attainment level, it would stand first because they had lowest percentage of people at lower education levels.

Rakhine and other ethnic groups were not included in the overall analysis as the numbers of their households is too small to make important changes in the overall analysis.

Overall, a similarity can be observed in the education attainment situation for all ethnic groups. This is the highest percentages of people at primary and probably middle school attainment levels in all ethnic groups. The group included school children currently attending primary and middle schools plus adults who had left school at primary or middle school levels.

Kayin households showed the tendency or potential to achieve higher education levels than other ethnic households (judging from their highest percentages of people with high education), but the achievement seemed to be watered-down by percentages of people (6.7% to 21.5%) at lower education levels. The fact that the percentage of Kayin households was the largest (62% of total households of all survey villages) made it more difficult for them to achieve equitable attainment results across the board.

On the other hand, Bamar households did not have such a high percentage (of people) at high education attainment levels as Kayins. But their achievement at high education attainment level was not weighed down by the percentage of people at low education level as in the case of Kayin. Therefore the overall attainment situation is higher among the ethnic groups.

Paoh households had similar percentages (of people) at low education attainment levels as the Bamar. But they did not have percentages at higher education attainment levels as large as those of the Bamar. Therefore, overall education attainment level of Paoh households are not as high.

Mon households had showed an even picture in the attainment percentages at all education levels.

By using arbitrary merit indexes relevant to each education attainment level - giving positive indexes relatively to different higher education levels and negative indexes relatively to different lower education levels, an assessment with some validity can be made on the education attainment situation of ethnic groups.

Ethnic Groups	University	High School	Middle school	Primary School	Monastic education	Read and write	Illiterate
Kayin	2.1	4.2	9.5	21.7	6.7	12.5	8.7
Paoh	0.3	1.1	3.4	5.1	0.3	1.5	0.7
Bamar	0.9	2.9	5.7	5.7	0.4	1.6	0.8
Mon	0.3	0.4	0.8	1.5	0.1	0.4	0.1
Merit index	5	3	1	-0.5	-0.5	-1	-2

Note. Merit indexes are based on the relative value of individual education levels.

Table 5-9: Percentage of Ethnic Population at Different Education Attainment levels and Relative Arbitrary Merit Indexes

Ethnic Groups	Scores for Different Education Attainment Levels							Total Score
	Univer-sity	High School	Middle school	Primary School	Monastic education	Read and write	Illite rate	
Kayin	10.5	12.6	9.5	-10.85	-3.35	-12.5	-17.4	-11.5
Paoh	1.5	3.3	3.4	-2.55	-0.15	-1.5	-1.4	2.6
Bamar	4.5	8.7	5.7	-2.85	-0.2	-1.6	-1.6	12.65
Mon	1.5	1.2	0.8	-0.75	-0.05	-0.4	-0.2	2.1

Table 5.12: Education Attainment Score Sheet for Ethnic Groups

On the whole therefore, Bamar households could be considered as attaining the highest education level (score 12.65). Paoh and Mon came second (score 2.6 and 2.1 respectively) and Kayin as lowest.

Situations of education attainment levels in individual survey villages were also analyzed. The results are shown below.

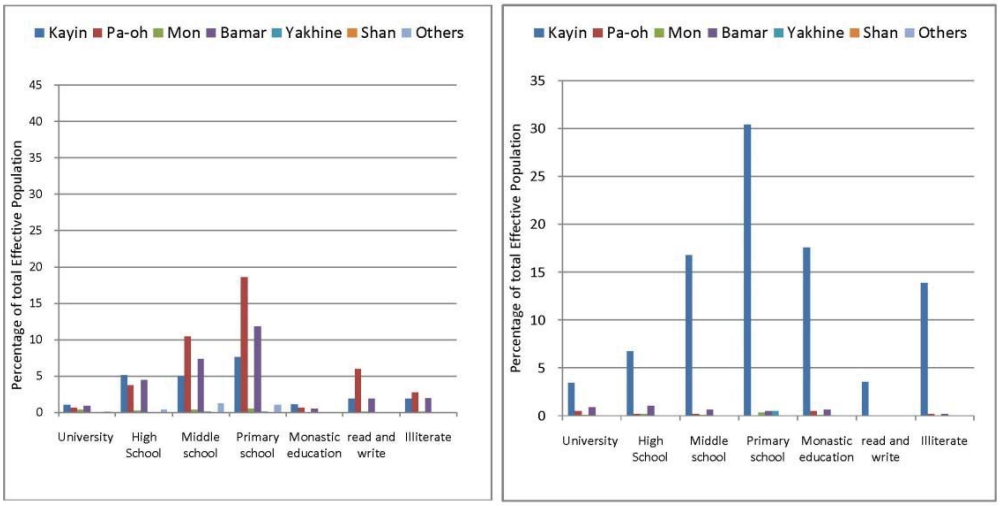


Figure 5-136: Ethnic Composition in Education Levels Attainment in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016)

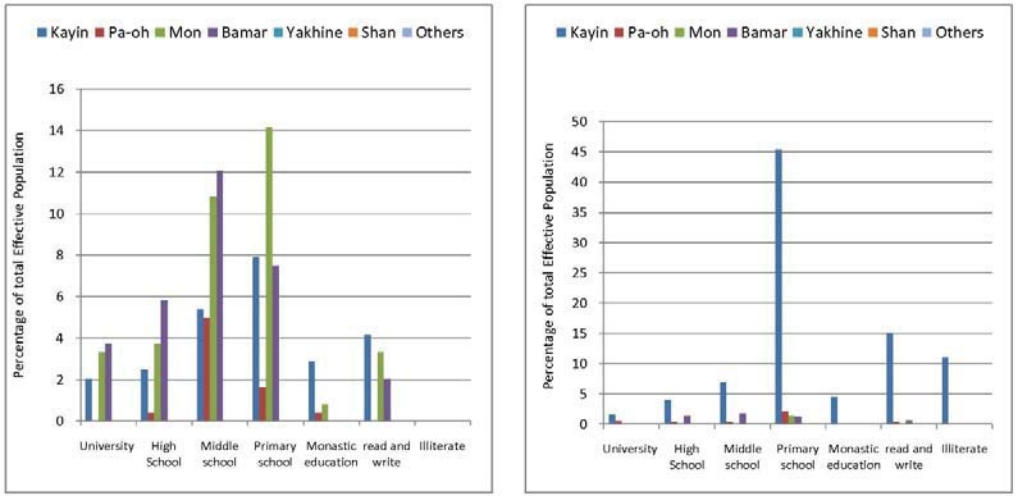


Figure 5-137: Ethnic Composition in Education Levels Attainment in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept 2016)

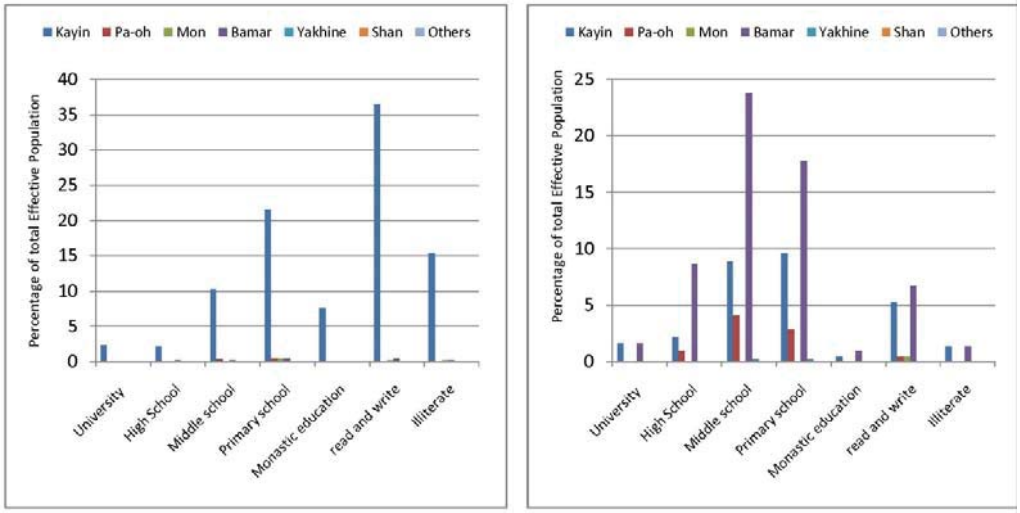


Figure 5-138: Ethnic Composition in Education Levels Attainment in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016)

Using the same arbitrary merit index, the performance of ethnic households in education attainment for individual survey villages is summarized below.

Village Name	Highest	2nd highest	3rd Highest
Paoh Su	Kayin	Bamar	Paoh
Kayin Su	Bamar	Paoh	Mon
Thone Ein Su	Bamar	Mon	Kayin
Than Ban	Bamar	Paoh	Mon
Inn Shey	Bamar	Paoh	Mon
Nyaung Wyne	Bamar	Kayin	Paoh

Table 5-10: Education Attainment of Ethnic Households in Individual Survey Villages

The above table indicated that Bamar ethnic group had the highest education attainment level, Paoh was the second highest and followed by Mon and Kayin.

5.4.12 Employment of Ethnic Population

Data for this topic was obtained by segregating all households in a village in terms of different ethnicity and by recording and counting for each ethnic group the number of people employed gainfully. The employed population was further divided into male and female. Segregation by different age groups (e.g over 18 and under 18) was not done as in earlier analysis because the population under 18 was too small to warrant a representative consideration. The number of employed population (both male and female) was presented as average number of people per ethnic household. Data

obtained for the survey villages were aggregated to arrive at overall situation.

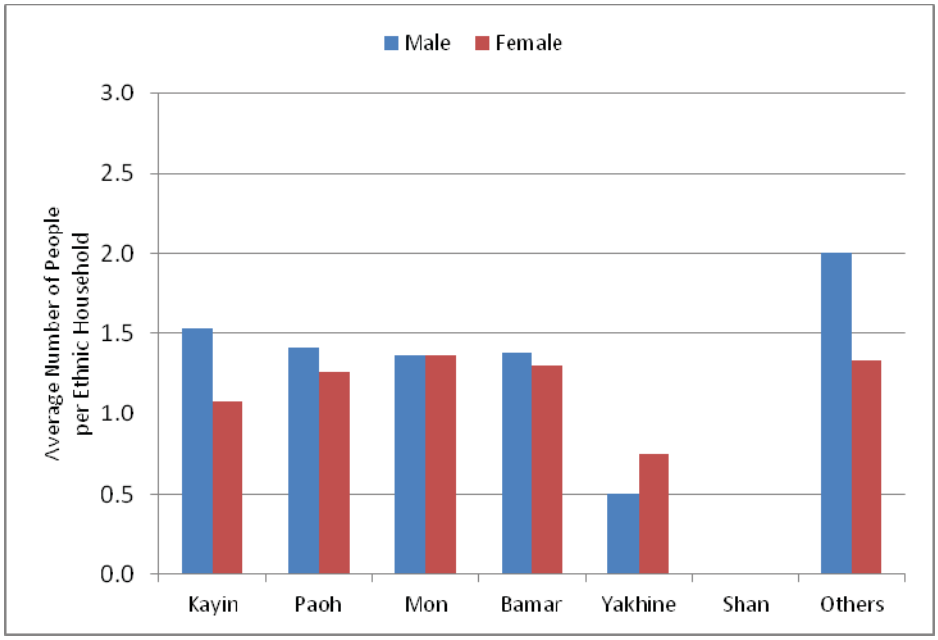


Figure 5-139: Average Number of People Employed Per Ethnic Household - Overall Situation for All Surveyed Villages (Sept. 2016)

The size of employed population (number of people per household) for both male and female was almost the same in the major ethnic groups (i.e., 1.5 for Kayin, same 1.4 for Bamar, Paoh and Mon in male group, and 1.1 for Kayin, 1.3 for Paoh and Bamar, and 1.4 for Mon in female group). Yakhine and other ethnic groups showed different situations (0.5 for male and 0.75 for female in Yakhine households and 2.0 for male and 1.3 for female in other ethnic groups). But percentages of households for the later two ethnic groups were too small compared to major ethnic groups to warrant a representive consideration. The employment rate shows that on average across all ethnic households, there are about 1.5 male and 1.1 female in each household who are working to support the household.

Numbers of employed population for different ethnic groups in individual survey villages were shown below.

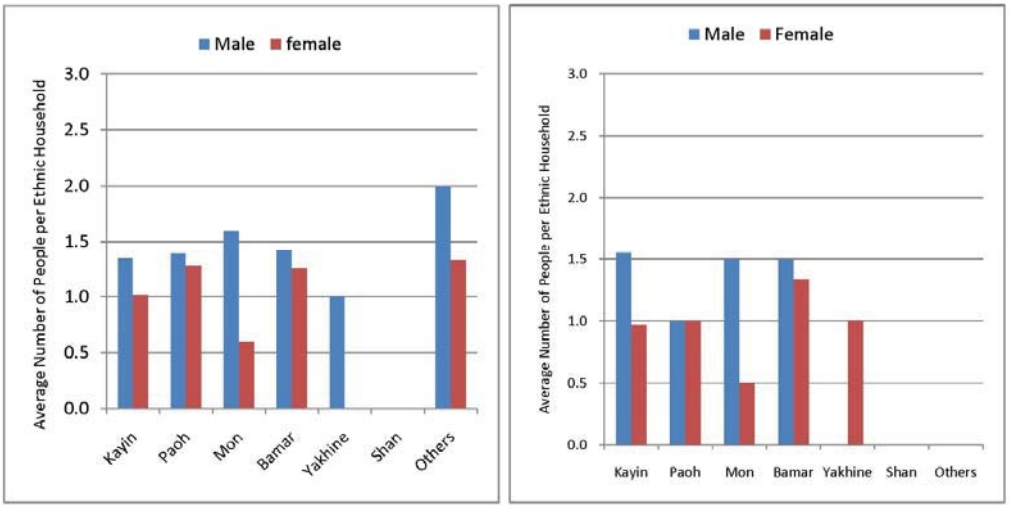


Figure 5-140: Average Number of People Employed per Ethnic Household in Paoh Su Village (left) and in Kayin Su Village (right) (Sept. 2016)

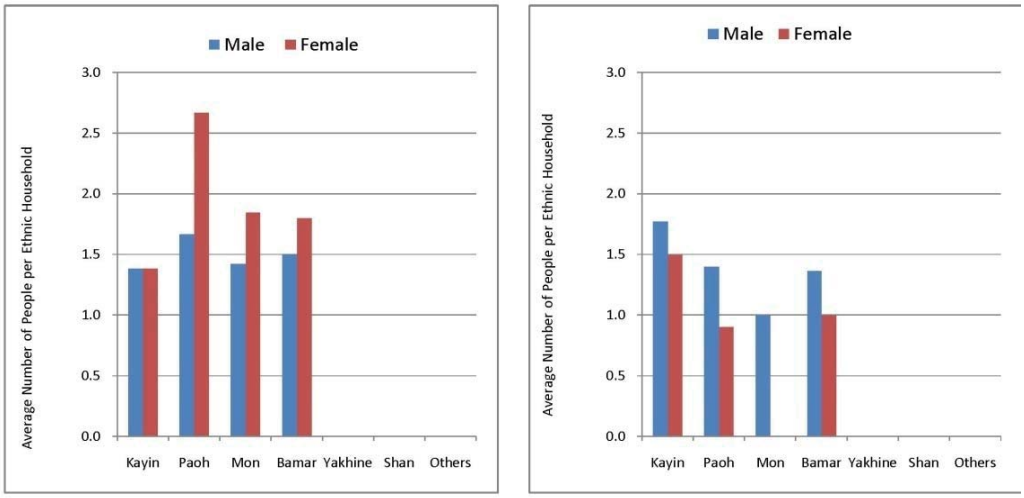


Figure 5-141: Average Number of People Employed per Ethnic Household in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016)

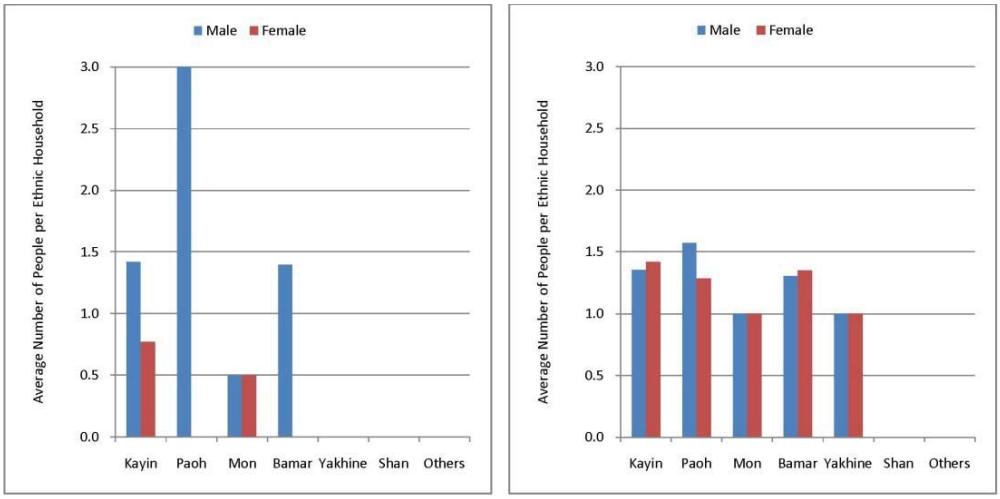


Figure 5-142: Average Number of People Employed per Ethnic Household in Inn Shey Village and in Nyaung Wyne Village (Sept. 2016)

For **Kayin** ethnic group, the numbers of employed people per household ranged from 1.3 to 1.8 for male and 0.8 to 1.8 for female over the survey villages. The highest number of employed male was found in Than Ban (1.8), Kayin Su (1.5) and Inn Shey (1.4) where there were overwhelming percentages of Kayin households. The highest number of employed male was found in Than Ban village (1.8) but in Inn Shey, where there are similar high percentage of Kayin households, the number for employed female was 0.8, registering the lowest among survey villages. In other villages where Kayin households constitute an average of 25% of the village‘s total households, the numbers of people employed per Kayin household ranged from 1.3 to 1.4)for male and 1.0 to 1.4 for female. The employment population figures showed that Kayin households had a modest rate of employment (around 1.5 per household for male and 1.1 for female).

For **Paoh** ethnic group, the number of employed male per household ranged from (1.0) to (3.0) and that of female from (0.0) to (3.0) across the survey villages. In Paoh Su village where Paoh ethnic group was the majority (in terms of percentage of households), there was average (1.4) male and (1.0) female employed per household. The figures indicated that a fair rate of employment for Paoh people in Paoh Su village. The average number of employed Paoh male per household in Inn Shey village was quite high (3.0). But it was not significant in terms of actual number of employed male and female because the percentage of Paoh households in these two village was very low (a fraction of 1% of total number of households). Thone Ein Su village also showed high Paoh female emplomet rate (average 2.7 per household). On the whole, Paoh households show employment rates of (1.4) per household for male and (1.3) for female.

For **Mon** ethnic group, the number of employed people per households ranged from (0.5) to (1.5) for male and (0.5) to (1.8) for female. Thone Ein

Su village was important for Mon ethnic group because the percentage of Mon households was highest in this village than any other village. The average numbers of Mon people per household employed in the village were 1.4 for male and 1.8 for female. The figures also showed moderate rate of employment for Mon households. Overall, Mon households showed employment rates of 1.36 per households both for male and female.

For **Bamar** ethnic group, the number of employed people per households ranged from (1.3) to (1.5) for male and (1.3) to (1.8) for female. The number of employed female per household in Inn Shey village was zero. But the village had so few percentages of Bamar households as to effect serious problem. In Nyaung Wyne village where Bamar households were the majority (over 60% of total), the numbers of employed people were 1.30 per household for male and 1.35 for female. In Thone Ein Su and Paoh Su villages where Bamar households constituted over 25% of village total, the numbers of employed people were 1.5 and 1.4 per household respectively for male and (1.8) and (1.3) respectively for female. Overall, Bamar households showed employment rates of 1.4 per household for male and 1.3 for female.

Yakhine ethnic groups showed same employment rate of 1.0 per households for male in Paoh Su and Nyuang Wyne villages and same 1.0 per household for female in Kayin Su and Nyaung Wyne. Overall employment rates were 0.5 per household for male and 0.75 for female.

Other ethnic groups only existed in Paoh Su village and their households showed a fairly high rate of employment (2.0 per household for male and 1.33 for female). However, the percentage of their households was too small (2.9% of village total) to have impact on the whole situation in the village.

5.4.13 Household Debt Situation for Ethnic Groups

Household debt is used to indicate wealth or poverty status of households. It does not include loans taken for business investment purposes. Household debt situations are classified into 4 levels: (1) No debt at all (2), occasionally in (debt), (3) frequently in debt and (4) all the time in debt.

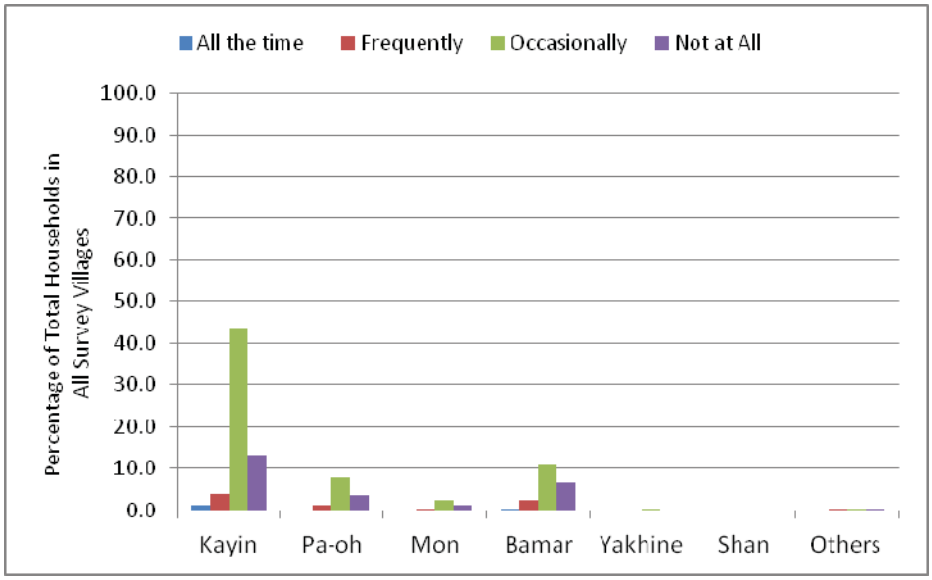


Figure 5-143: Debt Situation of Ethnic Households - Overall Situation for All Survey Villages (Sept 2016)

The overall household debt situation showed there were no prominent debt problems in all ethnic groups. Even for Kayin ethnic group, which perhaps had showed most obvious of household debt situations, there were quite small percentages of households which had debts all the time (1.2%) and which were frequently in debt (3.9%). Both percentages were related to total households of all survey villages. The most significant debt situation for Kayin household was the high percentage of households who had occasional debt (43.9%). But the off-setting factor was the 13.1% of households with no debt at all.

Bamar households have apparent debt problems though not as obvious as the Kayin's. Among Bamar ethnic group, households with all time debt problems made up 0.3% of total households of all survey villages households, households with frequent debt problems 2.4% and households with occasional debt problems.11.1%.

For **Paoh** ethnic group, no household faced the *all time debt* situation. Households with frequent debt problems were 1.3% of total households of all survey villages and households with occasional debt problems 7.8%.

Mon ethnic households had showed less debt problems; Mon households with frequent debt problems made up only 0.3% of total households in all survey villages and Mon households with occasional debt problems made up another 2.4%.

Yakhine households showed least of debt problems. Total of Yakhine households had occasional debt problems and it represented only 0.1% of total households of all survey villages.

Household debt situations for individual survey villages are shown below.

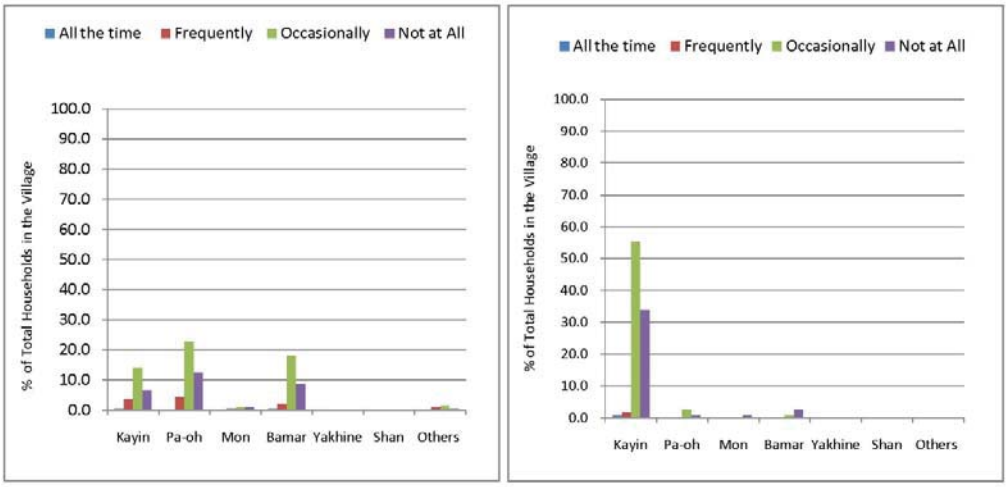


Figure 5-144: Debt Situation of Ethnic Households in Paoh Su Village (left) and in Kayin Su Village (right) (Sept 2016)

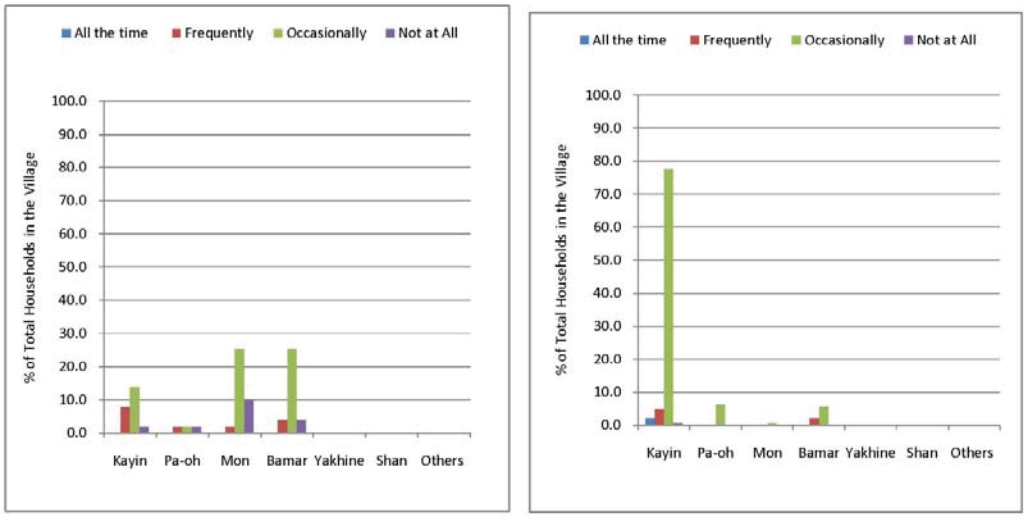


Figure 5-145: Debt Situation of Ethnic Households in Thone Ein Su Village (left) and in Than Ban Village (right) (Sept. 2016)

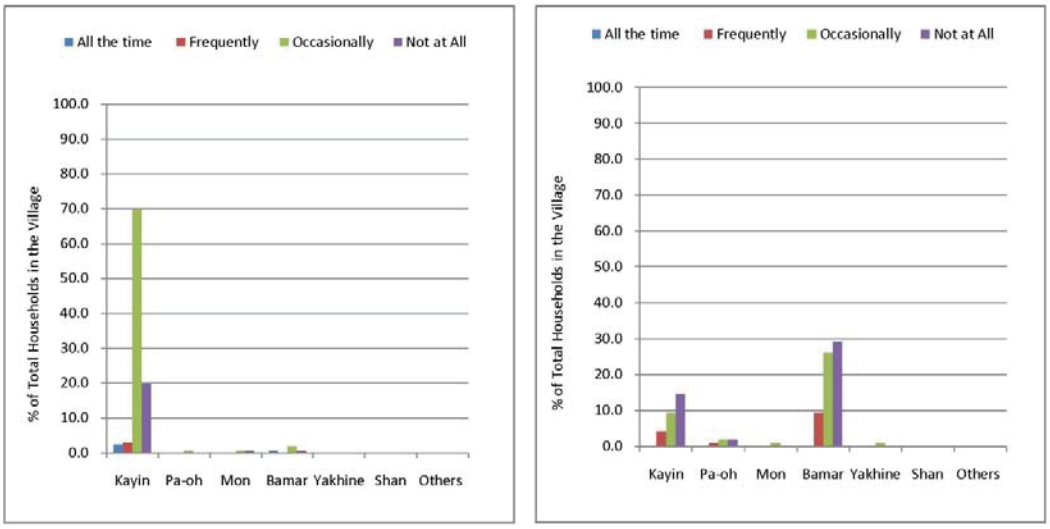


Figure 5-146: Debt Situation of Ethnic Households in Inn Shey Village (left) and in Nyaung Wyne Village (right) (Sept. 2016)

In Paoh Su village, three major ethnic groups (Paoh, Bamar and Kayin) had similar pattern of household debt situations. The pattern for these three ethnic groups were (1) Percentages of households with occasional debt problems were highest, (2) those with no debt problems were in the middle and (3) those with frequent debt problems were lowest.

In Kayin Su village, household debt situations were most discernable in Kayin ethnic group. Households with occasional debt situation and those with no debt problems at all occupied highest proportion of households.

In Thone Ein Su village, household debt situations were most obvious in Mon, Bamar and Kayin ethnic groups. Households with occasional debt problems constituted highest percentages in these ethnic groups.

In Than Ban village, Kayin ethnic group clearly disclosed debt situations. The percentage of households with occasional debt problems was overwhelmingly higher (78% of total households in the village).

Similarly in Inn Shey village, household debt situation appeared clearly in Kayin ethnic households. Percentage of Kayin households with occasional debt problems was highest in this village as well.

In Nyaung Wyne village, Bamar and Kayin ethnic groups showed clear debt situations. The deviation from debt patterns of other villages was that percentages of households with *no debt problems at all* were the highest while that of households with *occasional debt* problems was the second highest.

5.4.14 Accessibility of Ethnic Households to Electricity

Electricity is made available in the survey villages by means of self-help village electrification system. See Section 5.3.14.2 for information about thgis system. The overall percentage of non-connection households for all villages was found to be 58%. Households failing or declining to pay their dues are not connected.

Interviews with leaders of different ethnic groups asserted that the main reason for non-connection to electricity was unwillingness or inability to pay for the required sums.

Overall Situation. Findings from the survey showed the following status of connection versus non-connection to electrical supply network among households of different ethnic groups. The columns were constructed by taking the total number of households from all the villages for each ethnic group (Kayin, Pa-oh, Mon and so on) as 100%.

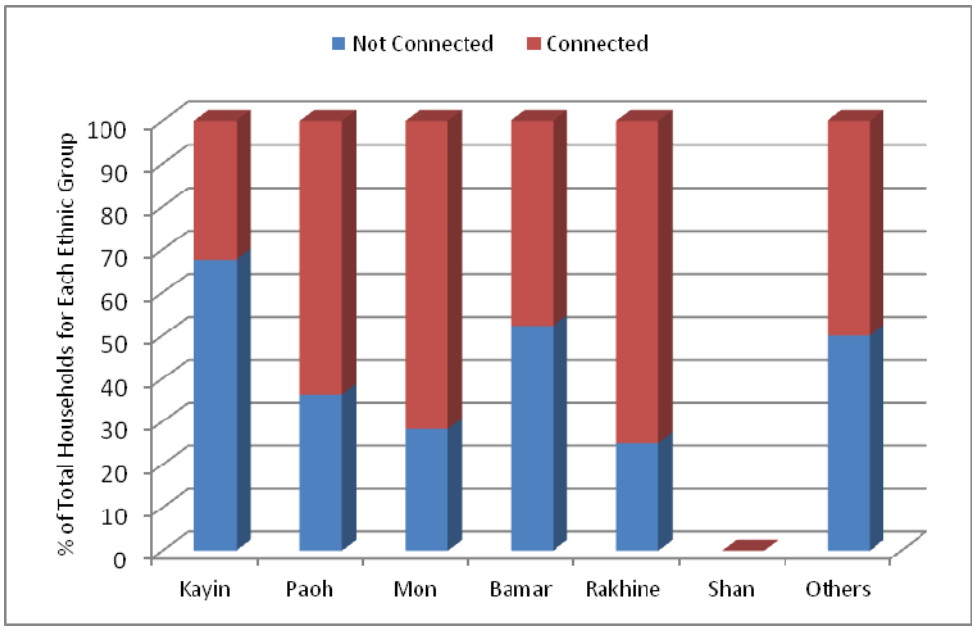


Figure 5-147: Status of Connection vs Non connection to electricity among Households of Different Ethnic Groups in All Survey Villages (Sept. 2016)

Ethnicity-wise, the largest percentages of *non-connected* households were found (in descending order) in Kayin (67%), Bamar (52%), Pa-oh (36%), Mon (28%) and Rakhine (25%). Other group (50%) was an exception. Conversely, the percentages of connected households were (in ascending order) 33% for Kayin, 48% for Bamar, 64% for Pa-oh, 72% for Mon and 75% for Ralhine.

Overall, two-third of Kayin and half of Bamar households had no *connection* to electricity. Paoh and Mon ethnic groups showed lower *non-connected to connected households ratio*s. Mon had the lowest (1:3 approx), Paoh came next (1:2). Rakhine and other ethnic groups had the ratios of (1:3) and (1:1) respectively.

Situations in Different Villages. Status of connection versus non-connection to electricity for a particular ethnic group in different survey villages were showed in following charts. One chart was used to show the situation of one particular ethnic group. Total number of households (for the ethnic group) in each village was taken as 100%.

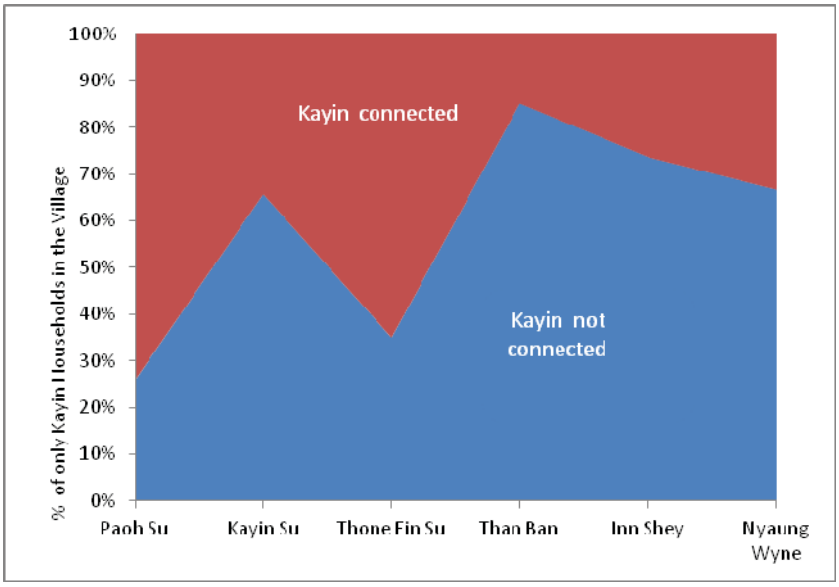


Figure 5-148: Status of Connection vs Non connection to Electricity among Kayin Ethnic Households in Individual Survey Villages (Sept 2016)

Kayin. A look at the chart showed percentages of non-connected households for Kayin ethnic group were generally high in most villages. Particularly, Than Ban, Inn Shey and Kayin Su had highest percentages of non-connected households (85.2, 73.7 and 65.7% respectively).Incidentally, Kayin households were found to be most concentrated (more than 80% of village total) in these villages (see earlier charts under ethnicity topic). In addition, Nyaung Wyne village also showed 66.7% of non-connected Kayin households.

However, the situations were reversed in two remaining villages of Pa-oh Su and Thone Ein Su. The percentages of Kayin non-connected households were: 35% in Thone Ein Su; 25.9% in Pa-oh Su.

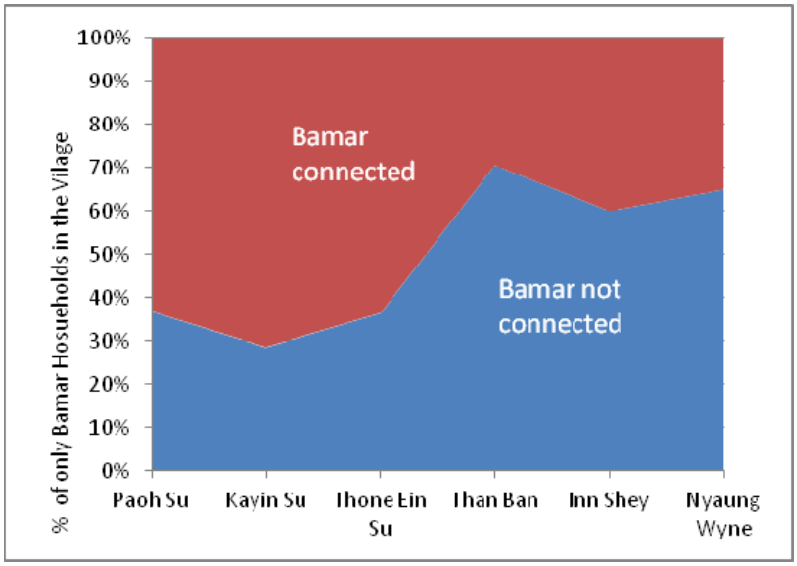


Figure 5-149: Status of Connection vs Non connection to Electricity among Bamar Ethnic Households in Individual Survey Villages (Sept 2016)

Bamar. The chart showed a more balanced situation between non-connected and connected households over the range of survey villages. Three villages showed higher percentages of Bamar *non-connected* households: 70.1% in Than Ban, 64.9% in Nyaung Wyne, 60% in Inn Shey. However, other three villages showed the reversed situations or lower than 50% of Bamar non-connected households: 36.8% in Pa-oh Su, 36.3% in Thone Ein Su and 28.6% in Kayin Su.

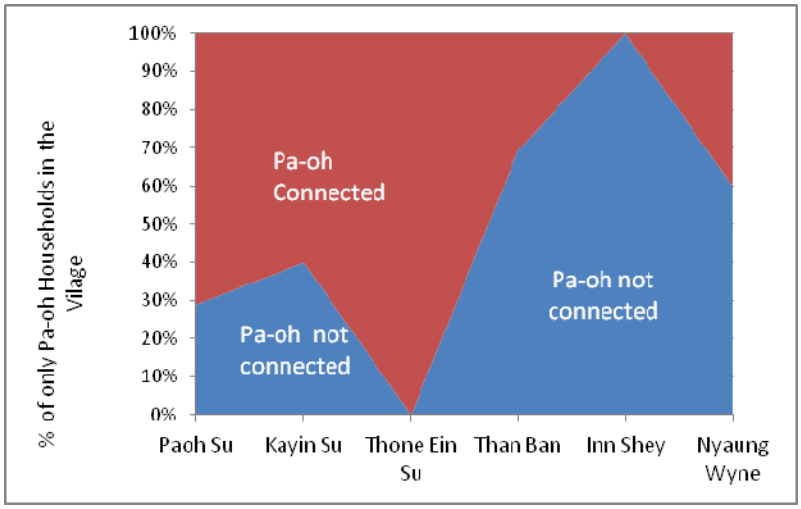


Figure 5-150: Status of Connection vs Non connection to Electricity among Paoh Ethnic Households in Individual Survey Villages (Sept. 2016)

Pa-oh. The chart showed a fairly *better* situation among Pa-oh ethnic households in terms of *connection to electricity*. More than half of Pa-oh households had *connection to electricity* in the following three villages:

- 100% in Thone Ein Su
- 71% in Pa-oh Su
- 60% in Kayin Su

Percentages of Pa-oh households having connection to electricity in the following villages were lower than 50% though:

- 40% in Nyaung Wyne
- 31% in Than Ban
- 0% in Inn Shey

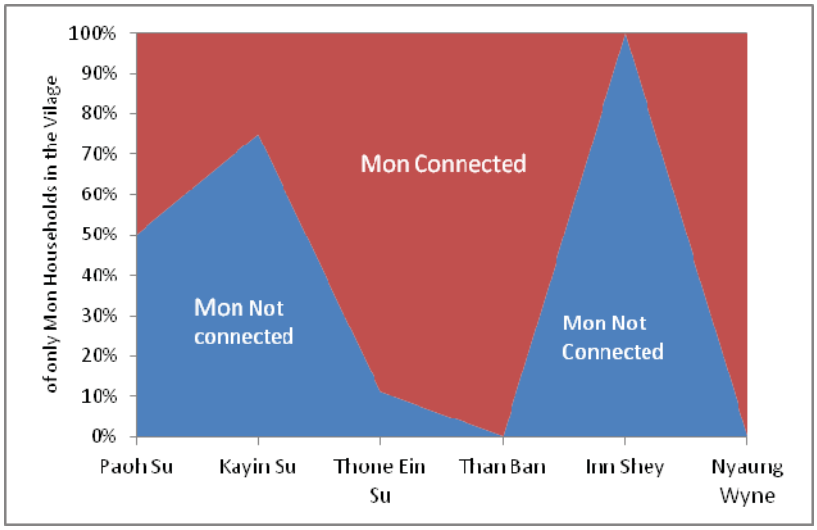


Figure 5-151: Status of Connection vs Non connection to Electricity among Mon Ethnic Households in Individual Survey Villages (Sept. 2016)

Mon. Mon ethnic group showed still better situation of connected households in comparison with other ethnic groups.

The percentages of Mon *connected households* were relatively high in the following four villages:

- 100% in Nyaung Wyne
- 100% in Than Ban
- 89% in Thone Ein Su
- 50% in Pa-oh Su

On the other hand, percentages of Mon households *having connection to electricity* were lower in the following two villages:

- 25% in Kayin Su
- 0% in Inn Shey

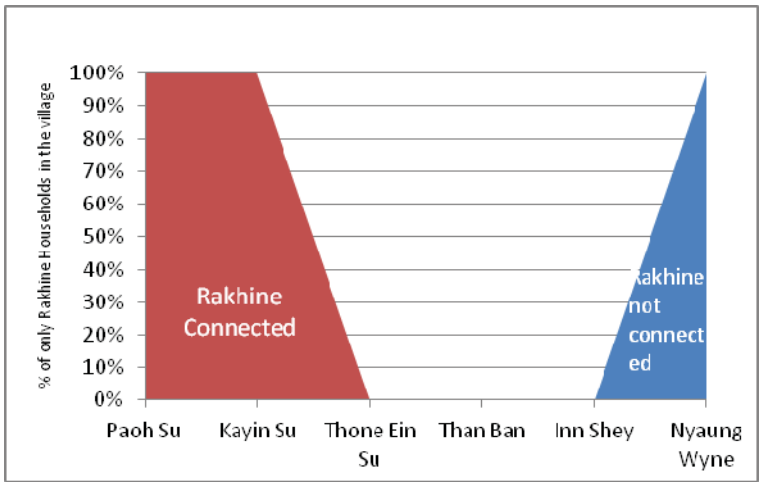


Figure 5-152: Status of Connection vs Non connection to Electricity among Yakhine Ethnic Households in Individual Survey Villages (Sept. 2016)

Rakhine. Rakhine ethnic group occupied nil to around 1% of total households in every survey village.

The situation of connected to non connected households for Rakhine ethnic group showed two extremes. Whereas 100% of Rakhine connected households were found in both Pa-oh Su and Kayin Su villages, 0% connection situation was found in Nyaung Wyne. No Rakhine households were reported to exist in three other villages.

Summarizing the findings from the studies under Overall Situation and Situations in Different Villages, a conclusion on the ethnicity-wise situations of non-connected (conversely connected) households in terms of overall levels and their distribution among the survey villages could be drawn as follows:

Kayin – Overall NHH was 67%. This was concentrated in Kayin-concentrated villages. Average 70% of non-connected households existed in 4 out of 6 villages.

Bamar – Overall NHH was 52%. This was distributed fairly balanced among villages. Average 65% NHH existed in half the number of survey villages.

Pa-oh – Overall CHH was 64%. This was distributed at fairly high percentage (77%) in half the number of survey villages.

Mon – Overall CHH was 72%. This was distributed at high percentage (85%) in 4 villages

Rakhine – Overall CHH was 75%. This was distributed extremely unevenly. 100% CHH in 2 villages and 0% CHH in one village.

Although Rakhine and Mon had fairly high percentages of connected households (75% and 72%) their total percentages of households were not high enough (only around 1% of total households in all villages) to provide leverage for raising the overall ratio of connected households (58%). **Note:** NHH= not connected households. CHH= connected Households.

Cross Cutting Study. Both of above studies singled out one particular ethnic group at one time and studied the status of NHH or CHH in terms of overall level and their distribution over the survey villages. Both methods were sufficient to indicate how high or low overall level of CHH (or NHH) is for each ethnic group and where the CHH or NHH were concentrated. But the studies did not show why a particular ethnic group had higher or lower NHH than others, etc. For example, why Kayin ethnic group had higher percentage of NHHs than other groups, etc.?

The following chart used the total number of households in all the survey villages as 100 and the percentages of NHHs and CHHs for individual ethnic groups were charted in columns.

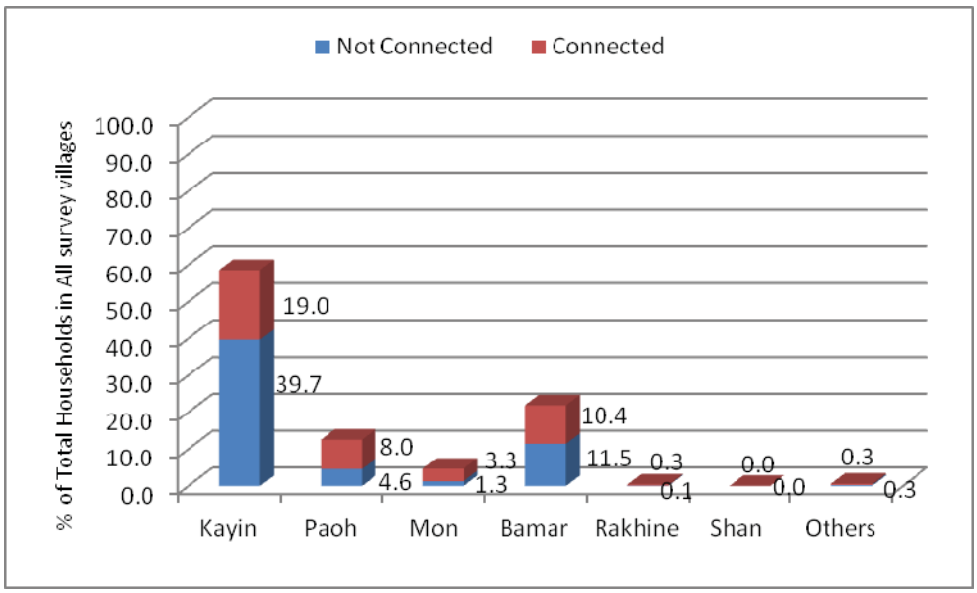


Figure 5-153: Status of Connection vs Non connection to electricity among households of Different Ethnic Groups in All survey Villages (Sept. 2016) (Total number of households in all survey villages =100)

On two tallest columns which represented Kayin and Bamar ethnic groups respectively, the percentage of NHHs is higher than those of CHHs. These two ethnic groups also happened to be having the largest percentages of households than other groups. On the other hand, percentages of NHHs became lower on the shorter columns where the percentages of ethnic households were lower as shown on Pa-oh, Mon and Rakhine columns.

A general trend could probably be identified as follows. When the total household percentage of an ethnic group in a community is small, the percentage of NHHs was lower and that of CHHs was higher (as shown in Rakhine, Mon and Pao-oh). As an ethnic group accumulated itself in a community, their household percentage grew larger and when it passed over a certain level, the percentage of NHH become higher and that of CHH lower. That *critical percentage level* of households could be different from one ethnic group to another. However, the general trend of "the more an ethnic group concentrated in one community, the wider ratio between NHHs (increasing) and CHHs (decreasing) in the community" seemed to be valid for all ethnic groups.

The chart below presents the situation of household connection to electricity (using percentages of NHHs vs CHHs) over all survey villages.

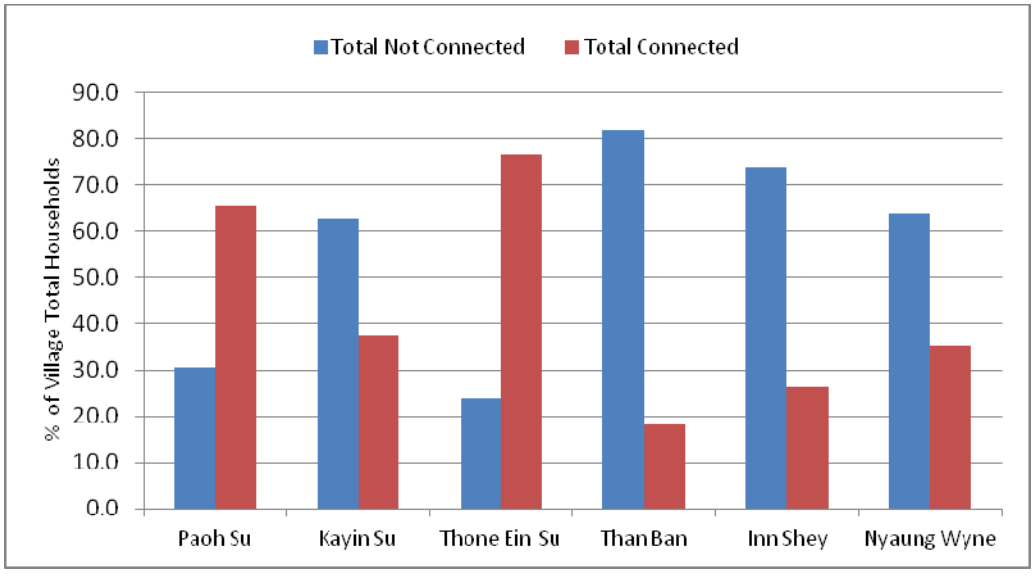


Figure 5-154: Status of Non-Connected vs Connected Households in All Survey Villages (Sept 2016)

Than Ban, Inn Shey and Kayin Su were highly Kayin concentrated villages and the percentage of NHHs was high. Nyaung Wyne village was Bamar concentrated village and it also showed high percentage of NHHs although not as high as Kayin villages. Pa-oh Su was a Pa-oh concentrated village (35.2% of village total households) but the concentration did not reach critical percentage level and therefore did not conform to the general trend.

Similarly, although Thone Ei Su was a Mon concentrated village (35.5% of village total households), it also deviate from the general trend.

Concentration of households of an ethnic group was usually found in indigenous ethnic village communities because a population with a long history in a community tended to grow and attracted same ethnic people over time. Applying the above trend, one could assume that percentage of NHHs would grow in indigenous villages. The situations in Than Ban, Inn Shey and Kayin Su (Kayin indigenous villages) and Nyaung Wyne (Bamar indigenous village) were proofs for the assumption. On the other hand, Pa-oh Su had largely lost the characteristics of an indigenous village as they tended to drift elsewhere. Therefore the general trend did not apply to the village.

5.5 Findings from Key Informant Interviews

Key Informant Interviews were part of the social survey plan designed to collect relevant information from key information sources. It is intended that the household social survey and key informant interviews would supplement each other in collecting and analyzing information. While the household survey generally aimed at collecting household-specific information (such as household population, age, gender, education, health and livelihood conditions of members), key informant interviews generally focused on collecting information on different social sectors from knowledgeable persons in the particular sector. They provided information on the education, health, social, economic and ethnic situations existing in the society.

Key informants for the current interviews were selected from different sources including village administration, village electrification committee, medical officer, health assistant, school head mistress, ethnic leaders, young activist, neighboring factory and government departments in the township. Altogether, 12 individuals were interviewed. In addition, information collected from the visits to the villages were also included to supplement information gaps such as livelihood of village population.

More Key Informant Interviews were conducted to discuss environmental and public health issues with representatives of the following entities: Department of Agriculture (DOA), Thaton; District Health Department, Thaton; Township General Administrative Department, Thaton; Rural Health Center, Kyar Ban; Administrative Office, Du Yin Seik Village Tract; Village Electrification Committee, Kyar Ban; Pao Youth Organization, Kyar Ban; Kayin Youth Organization, Kyar Ban; Administrative Office, Kyar Ban. Villagers were also invited for the interview.

Key thematic issues are presented in the matrixes below. The full texts of the interviews are presented in the annex.

5.5.1 Matrix of Viewpoints taken by different Ethnic Groups on Some Ethnic Issues

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
Relationship between ethnic groups	Kayin Ethnic Leader. I have not experienced any cases of non-ethnic outsiders coming to encroach land in the village. Similarly, I see no discrimination on Kayin people by other organizations or departments outside of the village. Kayin ethnic Leader. We want fair and equitable treatment among all ethnic groups I see no reason why Kayin or any other ethnic group for that matter should be given special privileges. We want fair and equitable treatment among all ethnic groups. The way we look at our situations is based on geographical locality rather than ethnicity. They want development of geographical areas more than development of ethnic population. However, there may be households	Paoh Ethnic Leader. We need peace and tranquility. A Key problem is low level of education among young people. I think we have no need for special concessions. Paoh Youth. I think Poah people habor a genuine hurt feeling as a minority. Collectively they have the mentality to live in peace rather than fighting for their rights. Whenever encroachment to their place happened, they would rather move to deep jungle rather than stand up to the intruders. But individually, especially among the young and those who have been exposed to outside world start to find themselves discontent with the situations. Personally, I believed that Pa-oh people should be treated with equality as other tribe, especially Bamar, particularly in enjoying the fruits of	A member of village committee. Pa-oh National Party has a presence in Thaton and main Pa-oh organizations from Taunggyi come down to Thaton every year to organize events intended to revive pa-oh ethnic identity, culture and literature. Paoh Festival was celebrated every year in Thaton and it was a gathering of Paoh people from different parts of the country to share their views and discuss on the development of Poah ethnic groups.

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
	who needed help because of their current economic situations.	development (more employment, skill training, etc). Among Poah young people, there were talks about introducing a system of allocating proportional slots of employment for different ethnic groups.	
Equitable Development Participation in Development	Kayin Ethnic leader. A decisive factor for socio-economic development of a household were its human brain power, size and strength of labor force, skills and diligence and other personal factors of household members. These factors were not specific to any ethnic group. Another important point was that economic development would only thrive on sound political policies. Member of Kayin Literature & Cultural Committee. About half of the households in the village tract had more or less difficulties in their livelihood. Rubber plantation, monsoon paddy and summer paddy were the main sources of livelihood for local population. Three out of a hundred	Paoh Ethnic leader. First and foremost, I believed that education is the key foundation of development for Paoh ethnic people. Without access to opportunity for education, young people had very little hope to find a job and they felt they had no future in the village. Prospect of finding a job across the border was a strong pulling factor for them and many of them embraced it as a way to escape from present frustration. Paoh Youth. We saw that whenever a development programme or a production business came to this area, local people were not given opportunities to participate in the programme or business activities. People from outside were brought to the area instead. Outsiders could not care much about local interest	Observation of a villager. Paoh Leaders from southern Shan State and other area (Taungoo in Bago Region) came down to the gathering to promote conservation of Paoh identity, Paoh culture and literature and social and economic development of Paoh people and Paoh communities.

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
	households had their own lands and only they were assured of stable income sources. The employment opportunity for local population was very limited and people resorted on migrating across the border to find jobs.	and did not understand local custom. They often created problems which tarnished the image of local population. We need equal treatment in the rights of livelihood among all ethnic groups.	
Displacement and Integration		Paoh Youth. Thaton area had been the birth place of indigenous Pa-oh people and it was once a Paoh kingdom. Sometime in the history, Paoh people lost their kingdom to Mon and pa-oh people started to disperse to remote and wilderness areas just to avoid further clashes regarding the claims on the land entitlement. The drifting of Pa-oh tribe from Thaton got farther and farther until they reached Shan plateau. At present, pa-oh population is concentrated in Sothern Shan State (Taunggyi, Pinlaung, Hopong, Si Seng, etc) The extent of Pa-on people's displacement could be seen from the fact that there are pockets of pa-oh population (usually in the remote	A member of village committee. Paoh leaders are making great effort to the advancement of Paoh ethnic people. Paoh people from other places came to gather in Thaton to celebrate Paoh Festival on the full moon of Tabaung Month (usually fall in March). We think that some of the local groups were making things complicated by instigating people to make difficult demand in the name of citizens' rights. We needed to be careful not to come into a confrontation

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
		area) scattered along the way from Thaton to Taunggyi, including Htantabin near Taungoo (in Bago region) and Loikaw (in Kayah state). It was said that Pa-oh present leaders had hailed from Thaton areas. The disperse of Paoh ethnic population made them weaker. Small groups of Paoh people went to different places, married local people and raised families. Some even went across the border. There is no longer reunion of paoh people. Gradually, Paoh identity was lost and many youngsters could no longer speak their language and preserve own culture. Paoh Ethnic Leader. I admitted that I felt Paoh ethnic peoples were lagging behind in development. I thought that the main problem was education. General education level of Paoh people is low. Parents were so poor that they took along children when they migrated to other places to find jobs. They went to places	situation with them.

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
		in Mon State and Kayin State to work in rubber plantation or brick kilns. Their children would enroll in the school at school reopening season (April and May) but they had to discontinue the education and went with their parents to other placed in November and December and then came back to villages again during monsoon seasons. As a result, these children could not pursue school education as other children.	
Seeking Development/ Advancement in Lives			Member of a village committee. I think Kayin ethnic youths are very different in that aspect. Many Kayin youths want education, looking for opportunities to advance in life. There are dormitories in Yangon outskirts to provide Kayin youths to stay and attend training. Kayin religious leaders themselves had D Lit. degrees and understand the value of education and how to motivate young people to seek

Topics	Kayin (quoted text)	Paoh (quoted text)	Other sources (quoted text)
			advancement. Observation of a villagers. I believed that most parents in the village could somehow afford to send their children to school. But it was school children themselves who did not want to go to school. They tended to leave school at 4 to 7 grade levels and ended up in finding work as masons, brick baking workers or rubber sap collectors. There was one big monastery in Thaton which was established to provide accommodation and facilities to young Paoh people who wanted to come to town to study and seek further opportunities. But due to lack of education and narrowness of outlook, very few Paoh youths came to seek their life advancement in town.

5.5.2 A Matrix of Viewpoints taken by some Stakeholders on Some Social, Economic and Environmental Issues

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
Self-Hep Village Electrification and Access to Electricity	Village Administration. We found that a considerable portion of households in target villages could not afford contribution payment as required by "Self-Help" Scheme. I think that since the committee had brought the network to the door step of all households, it remained for the households to put their effort to get the access to the line. We can assure that since the current distribution network had sufficient capacity to provide electricity for all household in the villages, those households who had no connection so far just needed to indicate their willingness to pay by giving a token sum and they would be connected to power line. I think that since people had paid their due to bring the distribution network to the village, it would need good justification for people who wanted to get access to electricity without paying their due. Member of VEC. We (the electrification	Paoh Ethnic Leader. I know that many households were not connected to electricity supplied by Thaton power plant despite the power line had reached the streets inside the village. The common reason was that poor households could not afford the upfront contribution of cash required by "self-help electrification system" and also the cost of cable to connect from main line to their houses. I think that village electrification situation would not be improved if left to village communities because other households would not be able to help poor ones. I think that government would	A teaching staff of a state high school. Electricity supply for school is sufficient and stable. There is a transformer provided specially for the school. Access to electricity is good for school children in that they can study at night under sufficient lighting. Power plant in the area also enabled ethnic people to get access to electricity. Village households can help each other to solve the difficulties of poor households. By consulting with village authorities, the upfront payment for connecting to the power line was gradually reduced and enabled people to spend less

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
	committee) think that we have managed to bring the power line to the front of households in the villages and if the households do not take effort to pay for the cost, we committee think that we could help them no more. We think that it is a matter of judgment between priorities. Members of households would indulge themselves in drinking, video shows and other pleasure seeking activities, but they were not willing to save money to pay for a village scheme. Some households were even demanding for free meter bill. We wondered how they would justify it. We think that some of the local groups were making things complicated by instigating people to make difficult demand in the name of citizens' rights. We needed to be careful not to come into a confrontation situation with them.	need to intervene to find ways and means for poor households to get electricity. The department concerned or the government should be able to provide people with a power plant without directly charging the cost of construction onto the population. Kayin Ethnic Leader. I doubt if it would help poor households if they were provided loans to pay for the upfront cost. I was not sure that poor households would like to take loans or whether they would be able to pay back loans. Paoh Ethnic Leader. On the electricity supply programme, I thought that there was no problem. The voltage level was stable although there were occasional power breakdowns. I knew many Paoh ethnic households had connection to	for the connection. There is no divisive feeling between connected and non-connected households. People continued to help each other. For example, connected households provided an emergency power line to non-connected households for lighting at night during their social occasions of joy or grief. Development of school multi-media facilities is seen as potential area which may be triggered by the construction of new power plant. But it would still need technology and sufficient funds to equip and maintain existing and new facilities. The other potential area is in desk top publishing business and again it needed maintenance skills and supply of spare parts for the printers and copiers.

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
		electricity supply line. I estimated that it took about 4 to 5 years for electric supply from Thaton Power Plant to reach the villages. The voltage is usually sufficient but there were occasional light out due to system failure. A member of Kayin Literature & Cultural Group. We welcomed industrial establishments in our areas because we thought that a factory would provide employment opportunities for local population in say 4 or 5 or even 10 villages. But we also understand that there could also be good and bad aspects for every business. So far we have no report of serious problems about Thaton Gas Turbine Power Plant by local population and the fact that the plant had stood so for many years was a proof of its safety. But we still did not know	There are also opportunities in small scale industrial sector provided electricity supply is stable and efficient. For example, rice milling, drill machine, powder grinding machine

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
		for sure that it would remain safe for the future. Externally we could keep watch on the plant but we needed to have understanding on what happened inside the plant. Local people needed to have education to understand the risks and be aware of what were happening in their surrounding that could affect their livelihood. On the construction of new power plant, I wanted to reflect the general feeling of local population. I think people in the vicinity of power plant should enjoy the benefit generated from the plant. If I may cite an analogy, a tree could provide cooling shade to its surrounding areas and not to other faraway places, so a power plant should benefit all communities nestled around it. Therefore, if for example, some poor households	

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
		were not getting electricity because they could not pay for contribution funds, some measures should be taken to include them as actual beneficiaries. For example, a poor household should be connected from its neighbors with as lowest cost as the technical standard would allow	
Employment opportunities for the youth	Village Administration We have some ideas of employment creation for village young people who have passed high school examination. We knew a few village youths who have learnt the house-wiring skills from vocational training schools and that it would be good for them if the plant could provide jobs to them.	Kayin Ethnic Leader. My view on poverty problem is that poor households would not be able to raise themselves up from poverty status if their grand- parents or parents did not leave sizeable economic base (e.g land, cattle and other productive assets or gold and other valuables, etc) to them. Without own productive assets, I would say that poor households had to rely on local land owners for casual labour such as land clearing, paddy field	The weakness of rural area is that it is different from towns in the sense that it has less opportunity for development. It needed external support. The illiteracy in the area is low (less than 5% of population) and most of illiterate people are among the old age people. Most middle aged people are literate. A few school children come from well-off households. Rich parents in villages send their children to

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
		work or collecting of rubber sap. Incomes from filed works which were seasonal and depended on good harvest were rarely enough for poor households to meet their various expenses, especially for households with small children. My idea to help poor households is to create more employment opportunities for field workers and rubber plant workers to get employment around the year A Member of Kayin Literature & Cultural Group. According to my observation, about half of the households in the villager tract had more or less difficulties in their livelihood. Rubber plantation, monsoon paddy and summer paddy were the main sources of livelihood for local population. Three out of a hundred households had their	boarding schools in Mawlamyine or Hpa-an cities. There are about 50 households who are average in wealth ranking and most of school children come from poor casual labour parents. Some children have no parents and stayed with uncles, aunts or other relatives. Some were too poor to bring lunch to school.

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
		own lands and only they were assured of stable income sources. The employment opportunity for local population was very limited and people resorted on migrating across the border to find jobs. I would say almost every household had one or more members at one time or another migrate across the border to work as laborers. Elder people of Pa-oh communities observed that village young people had very low education level and could not find jobs in factories and other businesses and they ended up in working as laborer in rubber plantation or as masons or laborers in brick-making kilns.	
Health, Water Supply and Sanitation			Personnel of Health Department. Most common cases treated at the district hospital included Acute Respiratory Infection (ARI)

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
			(which was believed to be caused by capricious changes in the weather with symptom of sneezing and coughing), and Non-communicable Diseases (NDC) such as heart disease, lung disease and cancer and Road Traffic Accidents (RTA). Common diseases found in the area included high incidence of common cold, cough and hypertension. There were a few cases of diarrhea, diabetes, dysentery and polio. Cases of diarrhea and dysentery had been reduced since the introduction of use of fly proof latrines. There were also a few cases of food poison and hepatitis. Cases of malaria infection inside the area had not been reported for more than three years.

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
			Village households have constructed hand dug wells on their own for water supply Fly proof latrines were also constructed by village households on their own. Solid Waste disposal was also done by village households on their own initiative Most households keep the waste in an isolated place and then burn it in fine weather. Some households with basic health knowledge buried the waste in the pits. Other households which were located near the wooded areas tended to dispose solid waste in the wood. Medical waste such as blood was burnt in the incinerator. Other sharp materials such as syringe were buried in the pit. Rural people have changed their

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
			healthcare practiced from relying on the quacks or folk medicines in the past to come to rural healthcare center at present. This was partly due to the adequate supply of medicine at the health center. Health department was providing medicines in packages on door to door basis and the packages contained varieties of medicine to meet the need of the areas. Medicines were also provided for diabetes cases.
Livelihood and Environment, Climate issues	Village Tract Administrator • Working as migrant workers in Thailand, Malaysia, Singapore and Japan is one of the main occupations for villagers. Generally, only half of the migrant workers are doing well. Migrant workers and their families hoped that current political changes in Myanmar and improvement in job opportunities will bring them back to work in their home country. Member of Village Electrification Committee	Pa-oh and Kayin Ethnic Leaders • There are presently no flood or drought problems in this area • The rice production was reduced in 2015 because of floods in some areas of the village. • Deforestation is a problem. The encroachment of the monoculture of rubber	Villagers from Than Ban and Kyar Ban • The agriculture-based economy is disappointing; the rice production is very fluctuating, depending on weather and rain patterns. Pest and diseases have been prevalent in the past years

Issues	Village Electrification Committee/ Village Administration (quoted text)	Ethnic leaders /Community households (quoted text)	Government Department (quoted text)
	• The local economy depends on the rubber price. Since 2-3 years ago, the prices have been declining, not much profit is obtained from the rubber plantations presently. • The heavy traffic is becoming a big problem The new highway linking Yangon – Bago – Myawady exposed people and roadside residents to traffic accidents, dust and noise, • Encroachment of pasture / grazing lands by some villagers has been happening since 2014 – about 60 households are currently settled in pasture lands, mostly in proximity of Inn Shay village; the problem is not settled yet.	plantation removed the natural and secondary forests. There has been scarcity of fuel wood for the poor villagers.	

6. Comparison with Historical Data

An Environmental and Social Assessment for the Thaton Power Plant was conducted in 2013 by NorConsult. The assessment contains a socio-economic survey with topics also covered by Fichtner's survey (Septmeber 2016). The two studies shared common data such as segregation of population by gender or ethnical origin, education, household incomes and expenditures, affordability and wiliness to pay for electricity, etc. The findings from two surveys provide an opportunity for comparison over a time period and measurement of changes in social situations within a time space of 3 years (from 2013 to 2016). There were difficulties though due to the differences in the surveys' methodology and definition of the target villages.

- NorConsult used a sample household survey approach with 10% of total households as respondents. Fichtner undertook a full survey which covered 100% of the households in the villages. Naturally, there are discrepancies in the findings or conclusions between the two surveys due to this fact.
- The ranges of variables defined in the two surveys were different in many cases. For example, the ranges in education and income levels were not the same in two surveys. For example, primary education level was divided in two levels (on-going and graduated) by Norconsult, and combined into one in the current survey. Also, the ranges relative to household income and expenditure were different in the two surveys.
- In NorConsult's survey, the households were divided into two main groups on the basis of whether they were connected or not connected to electricity (HHN and HHC), and data analysis was done separately for two groups. There was no such classification in the current survey, except when specific situations concerning the connected or non-connected households were needed for analysis. For example, what percentages of households of different ethnic groups were connected or non-connected to electricity?
- In the current survey, the largest village Kyar Ban was divided into three communities (Paoh Su, Kayin Su and Thone Ein Su) according to special characteristics of communities (e.g. Paoh Su is Paoh- concentrated, Kayin Su is Kayin's concentrated part of village, etc).
- There seem to be differences in the two surveys in defining the survey area of Nyaung Wyne village. In NorConsult's survey, there are references to the survey area of Nyaung Wyne village as including Nyaung Wyne and Lay Tine (both villages belong to a village tract, i.e., Htaung Mu). Fichtner's survey area included Nyaung Wyne only.
- The power plant staff was left out, and Inn Shey village was added in the current survey. Data for Paoh Su, Kayin Su and Thone Ein Su were combined into Kyar Ban village to facilitate comparison with NorConsult's results.

Even giving the methodology diffrences above, this section presents a compariosn of the results between the two surveys: Norconsult (2003) and Fichtner (2016).

6.1 Changes in the number of Households and Population

Name	Number of Households		Number of Population	
	NorConsult Survey (2013)	Fichtner Survey (2016)	NorConsult Survey (2013)	Fichtner Survey (2016)
Kyar Ban	330	405	1,500	2144
Than Ban	150	151	800	852
Nyaun Wyne	252	109	1,476	508
Staff House	120		576	
Inn Shey		176		895
Total	852	841	4352	4399

Table 6-1: Changes in the number of households and population during the time lapse between the two surveys

Kyar Ban Village – Substantial changes in the number of households (from 330 to 405 or an increase of 22.7%), and population (from 1,500 to 2,144 or an increase of 42.9%) can be observed.
Than Ban Village – The number of households and population showed slight changes
Nyaung Wyne Village – The decline in the number of households and population in the village within 3 years was fairly sharp. The different ways the two surveys defined the survey area of the village might explain this result.

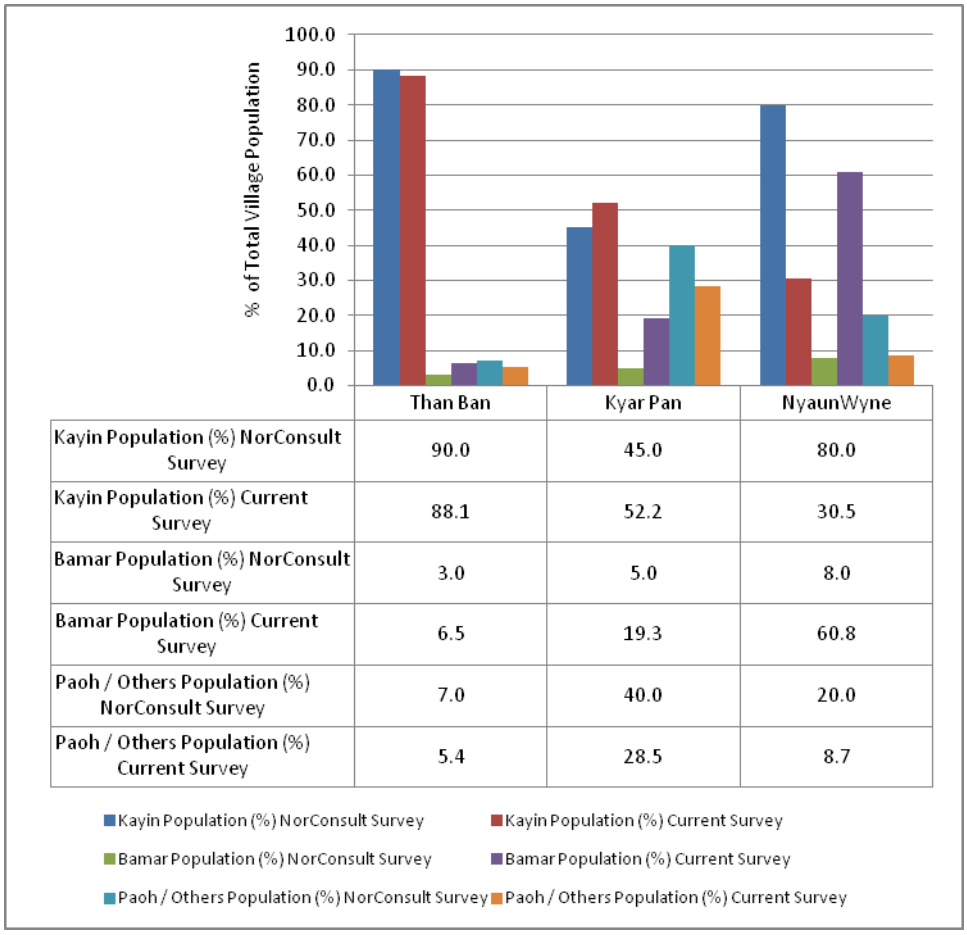
6.1.1 Male and Female Population

Village	Male Population (%)		Female Population (%)	
	NorConsult Survey (HHN+HHC) (2013)	Fichtner Survey (2016)	NorConsult Survey (HHN+HHC) (2013)	Fichtner Survey (2016)
Kyar Ban	51.1	45.8	48.9	54.2
Than ban	52.5	49.8	47.5	50.2
Nyaung Wyne	52.6	48.0	47.4	52.0
Staff House	53.3		46.7	
Inn Shey		48.3		51.7
Total	52.0	47.2	48.0	52.6

Table 6-2: Changes of the % of Male and Female population during the time lapse between the two surveys

The trend of changes in all survey villages was that the male population tended to go down slightly, while the female tended to go up slightly between the time of NorConsult‘s survey (2013) and 2016.

6.2 Changes in the Ethnic Population



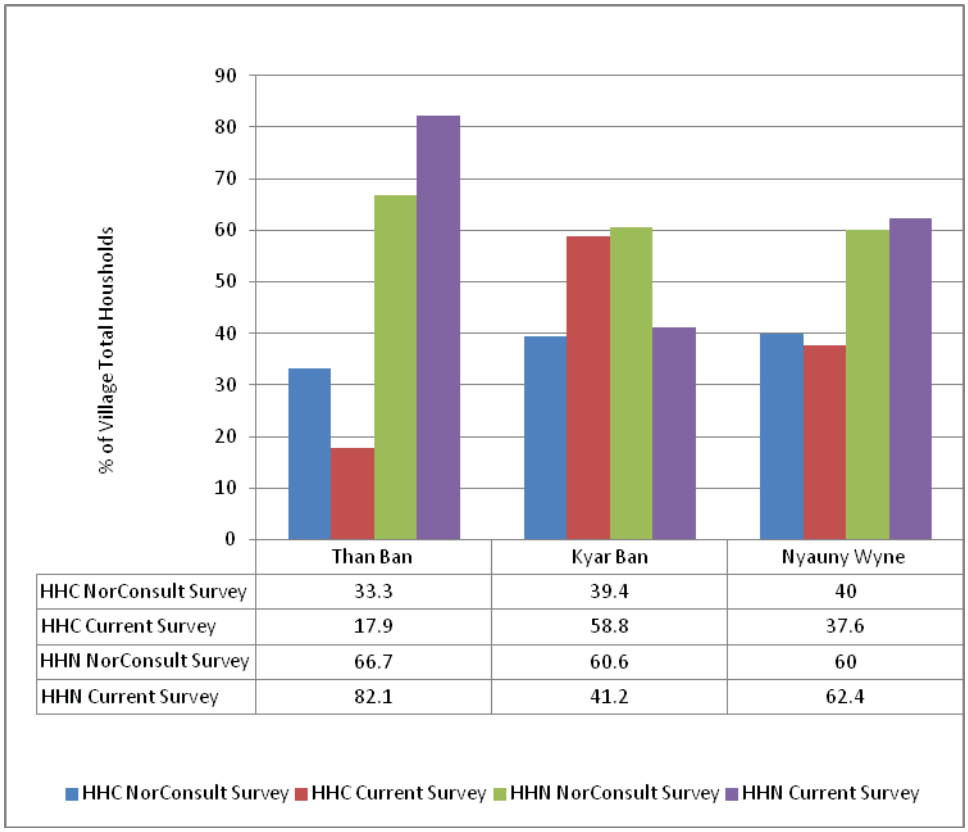
	Than Ban	Kyar Pan	NyaunWyne
Kayin Population (%) NorConsult Survey	90.0	45.0	80.0
Kayin Population (%) Current Survey	88.1	52.2	30.5
Bamar Population (%) NorConsult Survey	3.0	5.0	8.0
Bamar Population (%) Current Survey	6.5	19.3	60.8
Paoh / Others Population (%) NorConsult Survey	7.0	40.0	20.0
Paoh / Others Population (%) Current Survey	5.4	28.5	8.7

Figure 6-1: Changes in Ethnic Population during the time lapse between the two surveys

Changes in individual ethnic population in the survey villages during the time lapse between two surveys is shown as above.

Than Ban Village – The population of individual ethnic groups has shown only slight changes in the village; a sligh fall in Kayin, a fair rise in Bamar and a slight fall in Paoh and other ethnic groups.
Kyar Ban Village – Like in the case of Than Ban village, no large changes in individual ethnic groups occured in the village. The Kayin population rose slightly, the Bamar population showed a fairly high increase, the Paoh and other people showed a slight fall.
Nyaung Wyne Village - The Population in individual ethnic groups showed drastic change. The Kayin population fell sharly, while the Bamar rose sharply. The Paoh and other ethnic groups showed a slight fall of population as in the two other villages.

6.3 Changes in the Rate of Electricity Connection



	Than Ban	Kyar Ban	Nyauny Wyne
HHC NorConsult Survey	33.3	39.4	40
HHC Current Survey	17.9	58.8	37.6
HHN NorConsult Survey	66.7	60.6	60
HHN Current Survey	82.1	41.2	62.4

Figure 6-2: Changes in HHC & HHN in Survey Villages During the Time Lapse between THE Two Surveys

Note: *HHC= Connected households. HHN= Non-connected households*

The changes in the percentage of connected households (HHC) and non-connected households (HHN) in the three surveyed villages during the time lapse between two surveys are:

Than Ban Village – A fairly sharp fall in HHC, and consequently a fairly sharp rise in HHN.
Kyar Ban Village – A slight rise in HHC and a slight fall in HHN.
Nyaung Wyne Village – A slight fall in HHC and a parallel fall in HHN.

7. Risk Analysis

The existing Thaton power plant was constructed in 1984 as part of electricity generation development plan of the then Ministry of Electric Power (MoEP). In the close neighbourhood of the power plant there is the Thaton Tyre Plant which was built earlier, is larger in size and occupies about one thousand acres of land. In earlier times, because of the uneven proportion of the size and the operations between the two plants, the image of the power plant was often overshadowed by that of the tyre plant. For some years, the general public thought that the electrical power from Thaton was supplied by the tyre plant. However, the existence of Thaton Power Plant was known to neighborhood village communities through their villagers who had worked in the tyre plant and the power plant, and also from the noise emitted from the power plant, audible especially at night. Nonetheless, local people had scant information on how the power plant was operating and what types of services or benefits were being provided by the plant.

Because of its role as an important public utility service facility, security consideration given by the senior management level in the power plant seemed to prevail over the requirement for exposure of information and consultation with local communities. For security reasons, there was a check point at the entrance and visitors were required to report to the guard in charge before they could pass through the gate. There was no specific work unit in the power plant organization set up to deal with public related issues.

Gas turbine power generating technology offers cleaner energy than other sources of energy such as coal. However, based on information collected from mass media (newspapers, journals, magazines, etc) and social media (facebook, viber, etc), the local inhabitants contacted with data regarding environment pollution and naturally become worried about something they knew a little but not quite well. Without planned and managed information disclosure procedures by the plant management, and the paralell lack of interaction with local communities, the worries of the local people could not be clarified, giving space to the appearence of misconceptions and rumors about the plant's environmental impacts. An active village leader in Kayin Su part of Kyar Ban village said that "… although no incidents happened in the power plant so far, we did not know what was being done in the plant and therefore we could not be assured that it would not happen in, say, fifty years…". The "Special Events Register" kept in the power plant to document and report incidents occurred in the plant shows that there were incidents related to thunder strikes on the components of the supply system located in the open space which caused minor damages to the supply system. Therefore, despite being proved as a safe technology over the world, the power plant ran the risk of being considered as a constant worry for the local communities.

Thaton Power Plant also ran the risk of disappointing the community expectations for full coverage of electric supply to all households in the villages or to borrow from development jargons, of people having equitable

participation in the services provided by the power plant construction project. The risk factor is more significant and real for the plant but the condition for risk management is vastly out of control of the power plant. The new power plant is part of the ministerial electrical power development plan, and it will be incorporated into the national electrification plan. Local electrification is therefore not necessarily one of the objectives of the project. However, as the new project is located in their vicinity, village communities surrounding the power plant naturally expected to be included as direct and immediate participants in the project. This did not happen nor is expected to happen in the near future, and the community may feel disappointed.

Community self-reliant village electrification initiatives helped to some extent to satisfy the need of community households. However, lacking assistance from other stakeholders, the community initiatives also created new problems. The majority of households could not or would not pay a contribution or fund for sharing the costs of installation of the system (cable wire, lamp posts, transformers and technician fees, etc). They are willing to pay for the use of electricity but reluctant to pay for the installation cost. They lament that “even though a tree was providing coolness to those who stayed within the reach of its shade, the local communities who were located near the power plant could not enjoy the benefit from the plant”. Therefore, management of expecttation regarding the electrification of village households constitutes a contextual risk for the image and good relations of the new power plant project with the neigbouring inhabitants.

8. Conclusion

8.1 Conclusion of the Social Survey

The initial and the full socio-economic surveys, as well as the Key Informant Interviews provided important and varied information on several topics about the villages surrounding the Thaton Power Plant.

The majority of the responses were neutral and mild. Many interviewees agreed to participate in the survey and they were satisfied with the interviews. Some used the interviews as an opportunity to disclose their expectations regarding the specific themes. Many mentioned that they wanted material support.

The main conclusions of the study are summarized below.

8.1.1 General Socio-Economic Situation

The villages under survey are located in a 10-kilometer radius of the Thaton Township. Two motor roads (all-weather tar roads) provide easy access to Thaton town and to the neighbouring Hpa-an city in Kayin State.

The villages have access to education and healthcare services provided in Thaton and the area also has an appropriate social infrastructure (education and health).

Village people are aware of proper healthcare practices and they make good use of the services provided by rural health centres and private doctors.

School education is provided by one high school, two primary schools and one middle school (in the tyre factory). However, the general educational level of the village population is low. Many youths tend to leave school to find jobs across the border. About 29% of children of school-going age are out of school.

Hand-dug wells are used as water supply sources and water shortage poses no serious problems except for some households. It is said that wells do not dry up even in dry seasons. Water shortage rarely lasts longer than one month in a year. People also collect and store rain water for drinking purposes.

The survey areas are inhabited by different ethnic groups, of which Kayin is the largest followed by Bamar and Pa-oh. The majority of the population is Buddhist. Although different ethnic groups choose to live in their close communities, friendly relationships exist between the different ethnic groups.

The area relies on an agriculture-based economy where the main crops are rubber and paddy. Most of the workforce is employed in the agricultural

sector, with farm labourers being the largest group. There are some small industries such as oil and rice mills. It is alleged that the State Government is looking for a site to open an industrial zone not far from the area.

Most households have their own houses. About half of the households in the area own productive land.

Household income is generally low. Many households rely on remittances from migrant workers to support their household incomes. Average households sometimes have difficulty because of low incomes in slack seasons. Most households manage to ride through difficult times one way or another without falling in debt. There are no reports of serious household debts.

There are public transport services providing daily transport to the border town of Myawaddy.

8.1.2 Social Impact of the Power Plant on Village Communities

There are no serious reports from village communities about the negative impact of the existing power plant. Some households in Than Ban (nearest the plant) notice the noises coming from the plant at night.

Villagers have little exposure to the presence and operation of the power plant and generally they cannot think of any impact (good or bad) caused by the power plant.

No villagers from surrounding villages are employed in the power plant. No mutual participation exists in social events (such as weddings, religious events, etc.) between plant staff and community members from surrounding villages.

8.1.3 Benefits from the Power Plant Project

The primary interest of the village community concerning the new power plant is to get access to electricity supply. Power cables have been installed along the main and small roads inside the villages. However, about half of total households in the surveyed villages are not connected to the electricity supply network. The main reason is that many households cannot afford to contribute to the Self Help Funds required to meet the costs of installing an electricity supply.

Village Electrification Committees and households concerned have negotiated for some time and they still have not found ways to solve the problems. Some households expressed the opinion that the government should pay the installation costs and help poor households to get access to electricity.

8.1.4 Development Opportunities

The electricity supply is believed to be able to trigger development of other sectors as a rippling effect when the required conditions or the enabling environments are in place. In particular, the electrical energy sector can promote and improve the small industries sector in the rural economy. A few households (10 to 25%) are engaged in agriculture-produce-based processing industries such as oil and rice mills. In most cases, the industries use fuel (e.g. diesel) for energy. There are a few photo copying services, desktop publishing and mobile phone service shops in Pa-oh Su. Some shops also sell cold drinks using refrigerators. Obviously, the village communities at present have no technical, business and investment foundation to benefit from the new energy sources from the new power plant.

8.1.5 Risk of Investment for the New Power Plant

The Thaton power plant has been operating for more than 30 years and so far no major incidents have been reported. Lightning is reported to have struck the premises, which caused damage to parts of the installation, but no dangerous situations have been caused to the workers or the population.

Normally, a community will welcome industrial establishments as a sign that the government is prioritizing the development of the local area. People tend to regard the establishmentas improving the image of their areas or township, even if it is unknown whether they will benefit from the new development initiatives It shall be noted that the new power plant will provide electricity to the national network, and not necessarily locally. The Tyre Factory is probably widely known because of its large size (once it was said to own more than 1,000 acres of land). However, when news finally spread regarding eventual benefits to be delivered by the power plant, people began to expect to obtain them regardless of their conditions.

The current community Self Help Fund Raising Scheme has inadvertently marginalized many poor households from access to electricity. That is causing community resentement to a certain extent. As illustrated by a Kayin ethnic group leader, people would like to “enjoy the cooling shade of a tree growing in their compound”.

Community leaders also expressed their expectation about creating employment opportunities for young village people who have the required skills (house-wiring) in the electricity supply programme. Pa-oh ethnic group activists are advocating a fair share of employment opportunities between all ethnic groups in the new industrial development. However, they are not targeting any specific factory or plant. Instead, they mean that this shall be an ethical practice to be observed by the government development programme. Community leaders assured that they have no grudges or hostile attitude towards the Thaton Power Plant.

8.1.6 People

In the survey areas, Kayin and Pa-oh are the two main ethnic groups whereby their ethnicity must be given close attention.

The Kayin do not feel threatened as a minority ethnic group because they are the majority. In addition, the survey area is relatively close to Hpa-an (ca. 30 km), where this group is well represented. The group does not wish to be treated in a special way, because its members believe that this would create jealousy and hostility among other minority groups.

The Kayin do not feel that the poverty among the households is related to the actions and attitude of the majority ethnic group towards those less represented. Instead, the main reasons for poverty are labour, skill and diligence-related, as well as other personal factors of the individual households.

The Kayin leaders and people generally wish for development of geographical areas rather than for development of their ethnic population. They see no reason why they should be handled in a special way.

Regarding the Pa-oh, other issues are posed. It is said that the Thaton area was the birth place of the indigenous Pa-oh people, and that Thaton was once a Pa-oh kingdom. Sometime in history, the Pa-oh lost their kingdom to the Mon, and started to disperse to remote and wild areas to avoid clashes regarding land entitlement claims. The drifting of the Pa-oh tribe away from Thaton took this tribe up to the Shan plateau. At present, the Pa-oh population is concentrated in the Southern Shan State (Taunggyi, Pinlaung, Hopong, Si Seng, etc.). There are pockets of Pa-oh population (usually in the remote areas) scattered along the way from Thaton to Taunggyi, including Loikaw (Kayah state).

Considering the above, the Pa-oh people may have a genuine *hurt* feeling as a minority. Collectively and historically, this tribe wished to live in peace rather than fight for their rights. Whenever someone encroached into their areas, they would rather move to the deep jungle than to stand up to the intruders. But individually, and especially the young and those who have been exposed to the outside world, the Pa-oh started to find themselves discontent with the situation. The Pa-oh National Party has a presence in Thaton and the main Pa-oh organizations from Taunggyi come down to Thaton every year to organize events intended to revive the Pa-oh ethnic identity, culture and literature.

Among young Pa-oh, the feeling that their people should be treated just like any other tribe, especially the Bamar, harbored. This refers particularly to enjoying the fruits of development (employment, skill training, etc). They even expressed the wish for a system of allocating proportional employment opportunities to different ethnic groups. Young Pa-oh people feel discriminated by the media, i.e., they feel that the media provides a larger

coverage when other tribes (e.g Yakhine) are mistreated. They believe in the importance of providing more education for their people.

Any action plan for a particular ethnic minority group (ex. Indigenous Peoples Action Plan) should be carefully planned. The question to keep in mind regards: which problems or wrongdoings do they want to address and to whom? The Pa-oh people are not against other ethnic groups, but against administrative and business circles (unfortunately, Bamar). Besides, if an ethnic group is given special treatment, there will be resistance from other groups. Presently there are complaints that some local ethnic groups are complicating things by instigating ethnic people to make difficult demands in the name of citizens' rights.

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10. Annexes

10.1 Annex 1: Full Texts of Key Informant Interviews

Social Issues

10.1.1 Event No.1: Interview with Village Administrator of Du Yin Seik Village Tract

Date: 07.09.16
Time: 10:00-11:00

Beginning of quoted text:

„My name is xxx. I am Administrator of Duyin Seik Village Tract. I am responsible for 7 villages including all the villages surrounding the Thaton Power Plant. One of our functions and duties is "helping and assisting in implementing works relating to rural development and poverty reduction". I was one of the village leaders who conceived the idea of a village electrification plan through connecting an electricity supply cable line from the Thaton Power Plant to the surrounding villages.

In fact, the village electrification plan started on the initiative of village elders and well-off personnel who were inspired by the electrification of other communities around the plant and who wanted to bring electricity to their village. The process was a long and tedious one. Firstly, the Village Electrification Committee was formed a couple of years ago with village leaders and active villagers. Then the committee negotiated with the power plant management to agree on supplying electricity to the villages. After that, the village leaders made a case for the electrification of the villages and submitted an application to secure a distribution line from the power plant to the villages. The application was submitted to the township Engineer of the Township Electric Supply Enterprise for recommendation that the power generation was sufficient for distribution to the villages. The application went through township level to district and state level ESE to get their recommendations and finally to the Ministry in Nay Pyi Taw where the application was given final approval.

At the same time, the Township Electricity Supply Enterprise was also concerned with supplying electricity to more and more places in Thaton. The enterprise had a plan to reach villages by generating and distributing more electricity.

The electricity distribution system in the village was carried out by the Self Help Scheme which required each household to make an upfront payment to get connected. The scheme was established after consultation with the communities. The criteria for households to get connected to the

power line were (1) to contribute a specified amount to pay collectively for the upfront cost of construction of distribution network and (2) to follow the rules and regulations concerning the utilization of electricity.

The contribution payment started at 1 million MMK and was reduced to 700,000 MMK, then to 500,000 and finally to 300,000. The reduction was made at committee meetings to enable more households to be connected. Those households which could not pay the cost were not connected. Distribution lines were connected into the villages and electric posts were erected along the village road and households had to pay for the cable from the distribution line into their houses

The Village Electrification Committee consisted of 7 to 9 members representing different villages. Members changed due to age or at their own request. The committee included representatives of village communities and a private operator running the power supply business. The committee dealt direct with the power plant management on matters relating to electricity supply and also reported to the township engineer of ESE on the update progress of the village electrification programmes. In contrast, the plant management and Township Engineer communicated mainly with village communities through the committee.

Monthly electricity fees were collected by the committee and submitted to the power plant. at a rate of 50 MMK per unit (kWh) compared to 35 MMK charged on the households in town (supplied from National Grid). Payments from the households were used to pay for transformers, electric cables and concrete posts. When the electricity distribution network was completed in 4 villages (Kyar Ban, Than Ban, Inn shay and Nyaung Wyne) the committee was still left with a significant amount of funds which they reserved to use for maintaining or repairing transformers, including replacement and hiring technicians to do the repair work.

Although the committee wanted full coverage of households with electricity supply in all the target villages, a considerable portion of the households in these villages could not afford the payment required by “Self-Help” Scheme.

A survey of non-connected households showed that these were not limited to Kayin or Pa-oh or a particular ethnic group. Non-connection was often related to low income, lack of employment, debt burden, disability and widow-headed households.

To help poor households, the Village Electrification Committee tried some solutions to the problem. In exceptional cases, the committee allowed poor households to connect, free of charge, a sub-line from an adjacent house on condition that both houses were in the same compound and the two house owners related.

I think that, since the committee had brought the network to the door step of every household, it was up to the households to try to get access to the

line. And, since the current distribution network had sufficient capacity to provide electricity to all the household in the villages, those households with no connection so far only had to indicate their willingness to pay by giving a token sum and they would be connected to the power line. I think that, since people paid their dues to bring the distribution network to the village, people who wanted access to the electricity without paying would need very good reasons for this. I observed the behaviour of some people and found that while they would not hesitate to spend money on drink or video shows, they would fiercely resist paying for the electricity.

Providing loans for poor households to pay for the upfront cost would not motivate them to take loans because they feared it would be an additional burden to their households. Already, there were private money lenders who came down from Thaton town to do business in village communities. They offered an interest rate of 2.5 % per month on their loan which did not motivate poor households to take loans to pay for contribution.

I was dwelling on the idea of having an international agency (e.g. World Bank) provide grants through a project and that the grant should supplement the existing community fund. The committee could continue to connect cable lines to all the remaining households and also extend to further villages. At present, some villages (Su Inn, Nga Ma Oh) are showing interest in getting a connection line but they are too far away and the number of households interested too low to warrant construction of a new line. However, the committee currently has sufficient funds to pay for the repair and maintenance cost including replacing transformers."

End of quoted text.

10.1.2 Event No.2: Interview with A Member of Village Electrification Committee

Date: 12.9.16
Time: 10:00-11:00

Beginning of quoted text:

"My name is xxx. I am a member of the Village Electricity Committee for Duyin Seik Village Tract. It was formed by village leaders and active villagers in Duyin Seik some years ago. The committee was asked to negotiate with the power plant management to establish a power cable line for the surrounding villages and also mobilized communities to raise initial funds to pay for the electric supply network. Since then, the committee had established a good working relationship with the power plant management and achieved permission to install a network to bring electricity supply to surrounding villages.

During initial discussions with the Thaton Power Plant Management and township electricity supply enterprise, we were told that the plant would provide electricians and technical services free of charge for the

construction, but the communities had to pay for material costs such as electric cables, lamp posts, etc. We explained the situation to community representatives and we decided to launch a “Self Help” electrification scheme to raise funds to pay for this. That meant every household wanting a connection to the power line had to pay a contribution to the electrification fund.

We had expected that mobilizing and funds raising process was not an easy task as many households could not afford the contribution. We tried to accommodate as much as we could. The contribution per household was reduced from one million MMK to seven hundred thousand to finally three hundred thousand MMK. Still, many households would not join in the scheme. We (the electrification committee) think that, having brought the power line to the front of households, if the households did not try to pay, we could help them no more. We had to consider priorities. While some members of the households would indulge themselves in drinking, video shows and other pleasure-seeking activities, they were not willing to save money to pay for a village scheme. Some households were even demanding free meter bills. We wondered how they would justify this as reasonable.

Some of the local groups made things complicated by instigating people to make difficult demands in the name of citizens’ rights. We had to be careful not to come into a confrontational situation with them.

I came to this area as a young student when my father was employed in the Thaton Tyre Plant. Later I married a Pa-oh girl and raised my family in Pa-oh Su. We have a rubber plantation.

We have no need for special concessions for any particular ethnic group. All we need is peace and tranquillity. The key problem is the low level of education of young people. Most parents in the village could somehow afford to send their children to school, but it was the schoolchildren themselves who did not want to go. They tended to leave the school at 4 to 7 grade levels and ended up finding work as masons, brick baking workers or rubber sap collectors.

There is no lack of Pa-oh leaders who are making great effort to advance the Pa-oh ethnic people. Pa-oh people came together in Thaton to celebrate the Pa-oh Festival on the full moon of the Tabaung Month (usually in March). Pa-oh Leaders from southern Shan State and other areas (Taungoo in Bago Region) come to the gathering to promote the conservation of the Pa-oh identity, Pa-oh culture and literature and social and economic development of the Pa-oh people and communities. There is one big monastery in Thaton which was established to provide accommodation and facilities to young Pa-oh people wanting to study and seek further opportunities. But, due to their lack of education and narrow-minded attitudes, very few Pa-oh youths sought their life advancement in town. Unlike other ethnic youths who were working all over Asian

countries, the furthest place Pa-oh youths had reached was Masot, the Thai border town with Kayin state.

I think Kayin ethnic youths are very different in this. Many Kayin youths want education and look for opportunities to advance in life. There are dormitories in the outskirts of Yangon where Kayin youths can stay and attend training. Kayin religious leaders themselves have Ph.D. Lit. degrees and understand the value of education and how to motivate young people to seek advancement.

My observation is that Kayin Su is developing because of its educated inhabitants and Inn Shay is also initiating development because of educated young people."

End of quoted text

10.1.3 Event No.3: Interview with Kayin Ethnic Leader of Kayin Su, Kyar Ban Village

Date: 11.9.16
Time: 12:00-13:00

Beginning of quoted text:

"My name is Xxxt. As per village custom, I am still recognized as the Leader of Youth (Lu Pyo Gaung), although I am 78 years old. I have not been replaced since I became leader many years ago. (Note: This may be seen as an indication of respect to elders and a sense of unity behind the leadership. But it may also indicate the lack of practices in grooming young people for the line of leadership).

I have not encountered any cases of non-ethnic outsiders coming to encroach on land in the village [in fact, social survey results showed that about 90% of the population in Kayin Su belong to Kayin ethnic group].

Similarly, I see no discrimination on Kayin people by other organisations or departments outside the village. My view on the poverty problem is that poor households will not be able to leave poverty behind if their grandparents or parents do not leave a sizeable economic base (e.g. land, cattle and other productive assets or gold and other valuables, etc) to them. Without their own productive assets, poor households have to rely on local land owners for casual labour such as land clearing, paddy field work or collecting rubber sap. Incomes from jobs which are seasonal and depend on good harvests are rarely enough for poor households to cope, especially for households with many small children.

My idea to help poor households is to create more employment opportunities for workers and rubber plant workers to get employment for the entire year. (This is supported by the findings from the survey which

shows that 47% of the households in Kayin Su recognized lack of employment opportunities as their main problem).

I know that many households are not connected to the electricity supplied by the Thaton power Plant even though the power line had reached their village. The common reason was that poor households could not afford the upfront cash payment required by the "self-help electrification system" nor the cost of connecting the cable to their houses. This situation will not be improved if it is left up to the village communities because wealthier households would not be able to help poor ones. I think the government should intervene to find ways and means for poor households to get electricity.

I estimated that it took about 4 to 5 years for the electric supply from the Thaton Power Plant to reach the villages. The voltage is usually sufficient but there are occasional system failures. Households are happy to have electric lighting at night because candles are difficult light during the monsoon season. Electricity costs 50 kyats per unit (kWh) and my electric bills are about 7,000 Kyats a month."

End of quoted text.

When asked if it would help if poor households were given loans to pay the upfront cost, the ethnic leader said he was not sure whether poor households would like to take loans or whether they would be able to pay back loans.

10.1.4 Event No.4: Interview with a Leader of Kayin Literature & Culture Group, Kayin Su village

Date: 07.09.16
Time: 10:00-11:00

Beginning of quoted text:

"My name is xxx. I am the leader of the Kayin Literature and Culture Group in Kayin Su village. The group organises traditional events and festivals for the Kayin ethnic people in Kyar Ban. I worked in a factory across the border for 15 to 16 years. I own 3 to 4 acres of paddy fields which was on raised land and soil fertility was poor. I have worked in the field since I came back but the yield from the field was low (about 100 baskets a year). I also traded in paddy and other crops.

My observation is that about half of the households in the village have difficulties regarding their livelihood. Rubber plantations, monsoon paddies and summer paddies are the main sources of livelihood for the local population. 3% of the households have their own lands and only they are guaranteed stable income sources. Employment opportunities for the local population are very limited and people resort to migrating across the border to find jobs. I would say almost every household has at least

member who, at some time or another, migrates across the border to work as labourers.
I knew that the electricity supply programme from the Thaton power plant to the surrounding villages had been continued for some years. This was good for the communities in many respects. However, in my estimation, about half of the households in some villages still had no connection to the electricity supply.

We welcomed industrial establishments in our areas because we thought that a factory would provide employment opportunities for the local population in, perhaps 4 or 5 or even 10 villages. But we also understand that there can also be good and bad aspects for every business. So far we have no report of any serious problems about the Thaton Gas Turbine Power Plant from the local population and the fact that the plant had stood so for many years is proof of its safety. But we still do not know for sure that it will remain safe in the future. Externally we can keep watch on the plant but we have to know what is happening inside the plant. Local people need education to understand the risks and be aware of what is things happening in their surroundings which could affect their livelihood.

I think that being under development has nothing to do with ethnicity. The decisive factors for the socio-economic development of a household are its human brain power, the size and strength of the labour force, skills and diligence and other personal factors of the household members. These factors are not specific to any ethnic group. Another important thing is that economic development will only thrive on sound political policies.
I see no reason why Kayin, or any other ethnic group for that matter, should be given special privileges. We want fair and equitable treatment between all ethnic groups. The way we look at our situations is based on geographical locality rather than ethnicity. We want to develop geographical areas more than developing the ethnic population. However, there may be households who needed help because of their current economic situation.

Very few people know about the Thaton gas turbine power plant or the construction of a new plant. Local people know more about the Thaton Tyre Plant because it was a huge industrial establishment in the area. I think there is no cause for concern about local people's reaction to the new plant construction. People know very little about the new project and there has been no attempt on the part of the plant management to inform local people or organize community consultations for the construction of the new power plant.

On the construction of the new power plant, I wanted to reflect the general feeling of local population. I think people in the vicinity of the power plant should enjoy the benefits generated from the plant. If I may cite an analogy, a tree provides cooling shade to its surrounding areas and not to other far- away places, so a power plant should benefit all the communities nestled around it. Therefore, if for example, some poor households were not getting electricity because they could not pay

towards the contribution funds, some measures should be taken to include them as actual beneficiaries. For example, a poor household should be connected from its neighbours as cheaply as the technical standard would allow. We could also cite practical cases to further our argument; for example, when a public road or a hospital or a power plant near a city was constructed, people did not pay the construction costs. Therefore the department concerned or the government should be able to provide people with a power plant without directly charging the population for the cost of construction.

Other concern of the surrounding village communities was, as I mentioned before, the risk of explosion, fire and other safety hazards. The risk could increase as the plant is getting old and routine diligence measures are slackening."

End of quoted text.

10.1.5 Event No.5: Interview with Pa-oh Ethnic Leader of Pa-oh Su, Kyar Ban Village

Date: 15.09.16
Time: 10:00-11:30

Beginning of quoted text:

"My name is xxx. I have been Pa-oh ethnic leader of Pa-oh Su village since my election to the post many years ago. We make our living by running a general trading business ranging from paddy trading to flower gardening.

I remember that Pa-oh Su village had been established in my grandparents' time. I admit that I felt Pa-oh ethnic peoples were lagging behind in development. I thought that the main problem was education. The general educational level of the Pa-oh people is low. Parents are so poor that they take their children along when they migrate to other places to find jobs. They go to places in Mon State and Kayin State to work in rubber plantations or brick kilns. Their children enrol in the school at school reopening season (April and May) but they have to discontinue the education and go with their parents to other places in November and December and then come back to the villages again during the monsoon seasons. As a result, these children cannot pursue school education as regularly as other children.

First and foremost, I believe that education is the key foundation of development for the Pa-oh people. Without access to opportunities for education, young people have very little hope of finding a job and they feel they have no future in the village. The prospect of finding a job across the border is a strong pulling factor for them and many of them embrace it as a way to escape from their present frustration.

On the electricity supply programme, I thought that this was no problem. The voltage level was stable although there were occasional power breakdowns. I know many Pa-oh ethnic households are connected to the electricity supply line."

End of quoted text.

Note: It was said that the Paoh ethnic leader has dedicated his time, energy and money to the development of the village and the Pa-oh ethnic population.

10.1.6 Event No.6: Interview with a Village Activist in Pa-oh Su, Kyar Ban Village

Date: 10.09.16
Time: 10 to 11 am

Beginning of quoted text:

"My name is xxx. I live in Pa-oh Su village. I studied up to matriculation class (Grade 10). I am interested in ethnic affairs and joined a Pa-oh ethnic organization. I like to be involved in community activities and I am a volunteer helping mobilize communities to participate in the activities initiated by the village administration office.
I have learnt about the history of ethnic group in the Thaton area. In fact it was the birth place of the indigenous Pa-oh people and that Thaton was once a Pa-oh kingdom. Sometime in history, the Pa-oh people lost their kingdom to Mon and started to disperse to remote places and wilderness areas just to avoid further clashes regarding the claims to land entitlement. The Pa-oh tribe from the Thaton drifted farther and farther until they reached Shan plateau. At present, the Pa-oh population is concentrated in Southern Shan State (Taunggyi, Pinlaung, Hopong, Si Seng, etc). The extent of the Pa-on people's displacement can be seen from the fact that there are pockets of Pa-oh population (usually in remote areas) scattered between the Thaton and Taunggyi, including Htantabin near Taungoo (in the Bago region) and Loikaw (in Kayah state). Current Pa-oh leaders are said to hail from the Thaton area.

I think that dispersal made the Pa-oh ethnic population weaker. Small groups of the Pa-oh people went to different places, married local people and raised families. Some even went across the border. There is no longer a reunion of the Pa-oh people. Gradually, the Pa-oh identity has been lost and many youngsters can no longer speak their language or preserve own culture.

I think the Poah people, as a minority, harbor genuine feelings of hurt. Collectively, they have the mentality to live in peace rather than fighting for their rights. Whenever encroachment occurs, they would rather move into the deep jungle rather than stand up to the intruders. But individually, especially among the young and those who have been exposed to the

outside world, are starting to be discontent with the situation. The Pa-oh National Party has a presence in the Thaton and the main Pa-oh organisations from Taunggyi come down to the Thaton every year to organize events intended to revive Pa-oh ethnic identity, culture and literature. The Pa-oh Festival is celebrated every year in the Thaton and it is a gathering of the Pa-oh people from different parts of the country to share views and discuss the development of Poah ethnic groups.

Personally, I believe that the Pa-oh people should be treated like other tribes, especially Bamar, particularly in enjoying the fruits of development (more employment, skills training, etc). Among young Poah people, there are talks about introducing a system of allocating proportional slots of employment to different ethnic groups. Whenever a development programme or a production business comes to this area, local people are not given opportunities to participate in the programme or the business activities. Instead, people from outside are brought to the area. Outsiders do not care much about local interests or understand local customs. They often create problems which tarnish the image of the local population. We need equal treatment in the rights of livelihood between all ethnic groups. When other ethnic groups are mistreated (e.g. Yakhine) there is a great row in the media. If we have more educated Pa-oh people, we can also make a strong case for our ethnic people like other ethnic groups have done."

End of quted text.

10.1.7 Event No.7: Interview with District Medical Officer, Thaton District Hospital

Date: 07.09.16
Time: 10:00-10:15

Beginning of quoted text:

"My name is xxx. I am the District Medical Officer at the Thaton District Hospital. Thaton has a district level general hospital with 50 beds to provide healthcare and medical treatment services to the population of the Thaton District. The most common cases treated at the hospital include Acute Respiratory Infection (ARI) (believed to be caused by capricious changes in the weather with symptoms of sneezing and coughing), Non-communicable Diseases (NDC) such as heart disease, lung disease and cancer and road traffic accidents (RTA).

Hazardous waste from the hospital is collected and disposed of by hospital management while public waste is collected and disposed of by the town development committee twice a week."

End of quoted text.

10.1.8 Event No.8: Interview with a Health Assistant, Thaton District Hospital

Date: 07.09.16
Time: 11:00-12:30

Beginning of quoted text:

"My name is xxx. I have worked in Rural Health Centre in Kyar Ban Tract for more than 10 years. I was recently transferred to the Thaton District Hospital in the same position."

End of quoted text.

There are three health centres in the surroundings of the Thaton Power plant.

- Kyar Ban Rural Health Centre with a Health Assistant in charge, one lady health visitor, two midwives and one health supervisor grade 2.
- Tyre Plant Clinic – one medical doctor in charge, several nurses and two midwives
- Power Plant health centre- one senior nurse acting as health assistant in charge

Common diseases found in the area include a high incidence of the common cold, coughs and hypertension. There are a few cases of diarrhoea, diabetes, dysentery and polio. Cases of diarrhoea and dysentery have been reduced since the introduction of fly proof latrines. There are also a few cases of food poisoning and hepatitis. Cases of malaria infection inside the area have not been reported for three years which enable health department to declare the area as One Seat Area.

Village households have constructed hand-dug wells on their own for water supply. House compounds are large and an adequate distance is kept between toilet and well so that there is no contamination from underground seepage.

Fly proof latrines are also constructed by village households on their own. It is claimed that Kyar Ban has achieved 70% coverage of FPL. Some households tried to use septic tanks for their toilets but the septic tanks constructed by local masons usually did not meet the required. Some years ago (2007), there was an outbreak of cholera in the community living in the waterlogged areas with no sanitary latrines.

Solid Waste disposal is done by village households on their own initiatives. Most households keep the waste in an isolated place and then burn it in fine weather. Some households with basic health knowledge bury the waste in a pit. Other households located near wooded areas tend to dispose of solid waste in the woods. Medical waste, such as blood, is

burnt in the incinerator and other sharp materials, such as syringes, buried.

Kyar Ban Rural Health Centre basically provides preventive healthcare services, only treating minor illnesses. There are only out-t patients. It provides daily ante-natal care and if labour signs are diagnosed, patients are referred to the hospital in town where an OG will diagnose the condition and advice patients to make delivery in the RHC or in the hospital (for complicated cases).

As a measure for prevention of HIV/AIDS, the “Prevention of Infection from Mother to Child” programme was launched in the township where pregnant mothers were encouraged to have consulting and take a test. If the case is confirmed, the patient is transferred to hospital to take ART treatment. There are about 2 to 3 such cases every year. However, there is no data on the HIV- positive cases in the public.

Deaths among adults are mainly due to heart attack and hypertension. Alcoholism is high among young people who end up mentally distraught. For children, blood poisoning and ARI are deadly killer diseases. There are also cases of infants dying of congenital defects.

There is a history of JE (Japanese Encephalitis) in the area. It is transferred by domestic animals with frequent cases of still born animals as the initial symptom. The vector was a kind of mosquito which thrives in dirty water.

Rural people have changed their healthcare practices, from relying on the quacks or folk medicines in the past to come to rural healthcare centre. This was partly due to the adequate supply of medicine at the health centres. On a door-to-door basis the health department provides medicine in packages which contain medicine to meet the need of the areas. At the start of each day, the health centre provides health education to the visitors and sees the patients and weighs the under 5 children. Medicines are also provided for diabetes.

The areas surrounding the power plant are on the road and they are easily exposed to information and knowledge from other places. So the area is not so far behind in terms of development.

There are no reports of the tyre factory having environmental effects on the surrounding areas as the compound is large enough to confine the impact. However, there are reportedly cases of MDR Tuberculosis among tyre factory workers from inhaling carbon particles. There were healthcare services provided for the workers inside the factory such as providing milk or milk money for the workers.

10.1.9 Event No.9: Interview with a Teaching Staff, State High School, Kyar Ban Village

Date: 09.09.16
Time: 10:00-11:00

Xxx is the acting Headmistress of the Kyar Ban State High School. The Headmistress is on a training course at present.

There are three primary schools and one high school in Kyar Ban Tract to provide schooling in 4 target villages. Two primary schools are in Than Ban and Inn Shey and the High School is in Kyar Ban. The school's areas of service covered three village tracts in the Thaton Township and extended to several villages on the border with Hpa an township. The total number of schoolchildren was 1483 (May 2016). The Kyar Ban High school has classes ranging from kindergarten up to 10th grade.

Education levels/Grades	Number of class rooms	Remarks
1 Primary (Kindergarten, grades 1 to 4)	5	One class room for each grade
2 Middle school level (Grades 5 to 8)	12	3 class rooms for each grade
3 High school level (Grades 9 and 10)	8	4 class rooms for each grade
Total number of class rooms	25	

The average capacity of class is 50 plus. The number of school teachers and other staff members is as follows:

- Primary school teachers 2
- Middle school teachers 23
- High school teachers 12
- Total teaching staff 37

There is also 8 non-teaching staff.

The electricity supply for the school is sufficient and stable. There is a transformer provided specially for the school. Garbage is collected and put into a pit in the corner of the compound to be burnt on fine weather days. No urban waste collection services are provided in the school or surrounding areas. Drinking water is provided from a tube well driven by a pump. The water storage tank has a capacity of 3000 gallons. There is a filter tank for basic drinking water treatment. School health is provided by school teachers who have trained in first aid and a first aid box is provided with basic medicine supplies. The township Health Department visits the school every year to give general health check-ups.

Common diseases among the schoolchildren are dizziness, headaches and stomach-aches. Dizziness is suffered mostly by high grade schoolchildren probably due to studying too much. There are no cases of violence between the schoolchildren nor is there smoking or drug abuse in school. Mobile phones are prohibited inside the school compound.

A few schoolchildren come from well-off households. Rich parents in the villages send their children to boarding schools in Mawlamyaing or Hpa-an. There are about 50 households who are average in wealth ranking and most often schoolchildren come from poor casual labour parents. Some children have no parents and stay with uncles, aunts or other relatives. Some are too poor to bring lunch to school.

The high school in Kyar Ban village also provides non-formal education class on a modest scale. It allows drop-out schoolchildren of 10 to 12 years of age to attend evening classes. External school teachers are employed to teach the classes. At present there are 16 children attending grade 4 classes.

The weakness of the rural area is that, unlike towns, it has less opportunity for development and needs external support. The illiteracy in the area is low (less than 5% of the population) and most of the illiterate are elderly. Most middle-aged people are literate.

Access to electricity is good for the schoolchildren in that they can study at night under sufficient lighting. The power plant in the area also allows ethnic people access to electricity. Village households can help each other to solve the difficulties of poor households. By consulting village authorities, the upfront payment for connecting to the power line was gradually reduced and enabled people to spend less on the connection. There is no divisive feeling between connected and non-connected households. People continue to help each other for example connected households provide emergency lines to non-connected households for lighting at night and during their social occasions of joy or grief.

Development of school multi-media facilities is seen as a potential area which may be triggered by the construction of the new power plant. But it would still need technology and sufficient funds to furnish and maintain the facilities. The other potential area is in desk top publishing and again it needs maintenance skills and a good supply of spare parts for the printers and copiers.

There are also opportunities, such as rice milling, drill machine, powder grinding machine, in the small-scale industrial sector if the electricity supply is stable and efficient.

Community leaders have admitted that there are practical difficulties for children in poor households to continue school education and the prospects of young people and their children on the value of education were two critical problems for promoting educational levels. When poor

households have to move from place to place every year to find work, they take along their children who have to discontinue their schooling. Many young people could not resist the attraction of finding work across the border and abandon their schooling to work as migrant workers. Almost every household in the 4 villages have one or two household members working across the border.

The problem seems more acute in Pa-oh communities. The leaders of the Pa-oh communities observed that young village people have a very low educational level and, unable to find jobs in factories and other businesses, ended up working as labourers in rubber plantation or as masons or labourers in brick-making kilns.

10.1.10 Event No.10: Interview with a Management Staff of Thaton Tyre Plant

Date: 11.09.16
Time: 10:00-11:00

Xxx is a management staff at the Thaton Tyre Plant. The tyre factory was constructed in 1985 and at that time was named No. 21 Heavy Industry factory under Myanmar Tyre and Rubber Produces Enterprise. It was then under the management of No. 2 Industry Ministry and many military personnel were recruited along with civilians.

At the beginning, there were 2000 staff and production capacity was 400,000 tyres per year. Over the years, production was reduced, many old staff retired and military personnel were withdrawn. Production was reduced to 120,000 a year. At present, the staff in the tyre plant numbers 500. Of these, more than 300 live with their families in staff housing quarters. The total number of people living in staff quarters ranged from 1,500 to 2,000. The housing area is divided into 6 wards, each has about 60 households. About 100 staff live in Thaton town and there are two trucks ferrying them to and from the factory. People living in staff quarter usually come from other places.

The tyre factory occupies 1,100 acres and 55 acres of land was transferred to the Thaton power plant for constructing the plant.

Electric power is supplied by the Thaton Power Plant by a 6.6 KV cable which is reduced to 440 volts at the factory. There are 10 transformers and 30 motors in running condition.

The water supply to the factory is by pipeline from the Don Tha Mee River (about 7 kilometers). The water serves as drinking water after filtering and other treatment. There are 6 tanks of 10 cubic meters to store drinking water. It provides drinking water for staff housing quarters both in the tyre factory and the power plant. There are also two tube wells in the factory compounds. Hydrant pipelines were laid in the staff housing

quarter and water faucets were established at the corners of the residential areas.

There is little industrial solid waste as it is either recycled or sold as raw materials for other industries. For example, the defected tyre ply is recycled for production or sold to a factory in Thingyangyun in Yangon. The waste water produced by cooling engines is channelled by underground drains to the nearby pond. The closed operating system enables capturing of steam and water in a recycling process. Waste water must only be disposed of when the filter is cleaned.

Solid waste from household is put in a pit provided for the purpose.

Water from the Done Tha Mee River is also provided to the Thaton Power Plant for industrial use. In return, the power plant provides steam to the factory for the heat treatment of tyres.

There is a clinic managed by the tyre factory to provide healthcare for workers and staff. It has 20 beds for in-patients and is staffed by one doctor, one health assistant and nurses. The clinic treats to minor diseases such as the common cold. The township Social Welfare Department also provides medical check-ups for the factory workers. There are also some social organisations which come to provide eye test and hepatitis tests.

Medicine supply is provided by the Ministry and as the stock is not always sufficient for the patients, some medicines are bought from other sources. People other than the factory staff are also accepted and treated at the clinic.

All factory workers and staff have to register with the social welfare and are entitled to benefit from social welfare programmes including health care services. Last year the social welfare department launched a new programme and a mobile clinic vehicle started to come to the factory to provide healthcare services.

The most common diseases among the workers and staff are the common cold and hypertension. There were 3 to 4 staff infected by the hepatitis virus.

To reduce occupational hazard risks, workers have heat-resisting gloves and masks are given to workers handling carbon and rubber. Previously workers were given milk to reduce the effect of toxic materials on the lungs. Now they are given milk money. There are also safety devices installed on the roller belt system so the engines stop when touched.

There is a technical training school in the factory compound where factory officials teach the children of factory staff who show interest in learning skills. Training lasts two months and trainees are allowed to work as apprentices in the tyre factory. Later they are recruited as new workers or staff. This programme ensures a reserve of fresh workers for

the factory. New workers and staff are also recruited from graduates of technical schools and colleges run by other ministries. Notice for recruitment is usually posted on the notice board in the factory and the news is disseminated by word of mouth. No vacancies are posted in the newspaper.

Factory workers and staff who work in the factory possess technical skills very different to other industry. As a result, workers or staff did not change their jobs but stayed at the factory until they retired.

10.1.11 Event No.11: Interview with Township Engineer, Electricity Supply Enterprise, Thaton Township

Date: 07.09.16
Time: 11:00-11:30

Xxx is Township Engineer in the Electricity Supply Enterprise, Thaton Township. The township is under the administration of the ESE Head Office in Nay Pyi Taw. Every township ESE is responsible for preparing a short-term (5 year) and an annual electrification plan and budget within the framework of the national electrification plan. The Government has an electrification policy for urban and rural areas. The National Electrification Plan (NEP) has defined policies for the electrification of rural areas.

Currently the village electrification programme in the Thaton Township is targeting villages in Du Yin Seik Village tract. The concern of the township ESE is to develop a network construction design which covers as many villages as possible. It also has to coordinate with other power supply programmes (such as the village self-help electrification scheme) to avoid overlapping plans in a same area.

10.1.12 Event No.12: Interview with Deputy Staff Officer, Department of Rural Development, the Thaton Township

Date: 30.08.16
Time: 14:00-14:30

The department is responsible for implementing rural development and poverty reduction programmes pursuant to government policies. There are two parallel departments to look after development affairs. The Township Department of Development Affairs (DDA) is responsible for urban development and rural development is the main concern of the Department of Rural Development.

Department of Rural Development prepares annual plans and budgets for rural areas in the township and reviews the implementation progress status quarterly. For the fiscal year 2016-17, the department has no activity plans for the villages surrounding the Thaton Power Plant. The

Thaton Township department currently has four main development programme (1) Upgrading branch roads (e.g. district to district motor road) , (2) Solar Home System for lighting (3) construction of low cost housing, (4) construction of fly proof latrines.

Environmental and Public Health Issues

10.1.13 Event No. 1: Interview with DOA, Thaton

The following persons were interviewed at the Department of Agriculture of Thaton:

- Thaton District Manager:
- Township Manager:
- Deputy Township Manager:

Problems identified in Thaton during the interview are as follows:

- Garbage management – the garbage dump is becoming large, and the garbage cannot be burnt in the rainy season; the bad smells of the disposal site affects the neighborhood. The Township City Development Committee is trying to find a new disposal site.
- Mining industries: Several companies were established for extraction of gravels, crushed stones, and chippings. The communities protest against some of these companies since they think the negative impact on environment and people is huge.
- No significant problems for drinking water – this is coming mostly from tube wells and dug wells in good quality and sufficient quantity.

10.1.14 Event No. 2: Interview with the District Health Department, Thaton

The Head of District Health Department has been interviewed by the Consultant. The main results are as follows:

- Concerning environmental health problems in Thaton and the hospital, there are no serious issues to point out;
- There is no significant incidence of water borne diseases due to a good water quality;
- Public / municipal wastes are cleared up by the Thaton City Development Committee twice a week;
- The hospital waste such as glasses and syringes is managed by the hospital staff for waste management;
- Sometimes the waste blocks the small waterways / creeks in the rainy season because some residents discard their waste there;
- The common diseases are: ARI (Acute Respiratory tract Infection) and NCD (Non Communicable Diseases, such as hypertension, Cancer, etc.)

- RTA (Road Traffic Accidents) are becoming more often.

10.1.15 Event No. 3: Interview with the Township General Administrative Department, Thaton

The Township General Administrative Officer conveyed the following information:

Socioeconomic surveys in the township are welcome. However, it is necessary to inform the Mon State Administrative Authorities in advance to get permission. For example the EPGE (Nay Pyi Taw) should issue a letter to the Mon State Government mentioning the activities. Therefore, the secondary data from the offices can be shared as necessary, and their representatives can cooperate with the activities.

10.1.16 Event No. 4: Interview with the Rural Health Center, Kyar Ban Village

Xxx (53 year-old) is a Health Assistant in the Rural Health Center (RHC) of Kyar Ban. The results of the interview are summarized as follows:

- The RHC of Kyar Ban covers 61 villages with 10,992 households and a population of 67,883.
- The most common diseases are common cold, hypertension, diabetes, diarrhea, and dysentery.
- An outbreak of diarrhea and dysentery happened in 2007, but the occurrence of these diseases reduced since the latrine system was improved.
- Many households have latrines with a concrete septic tank while the most (70%) have fly-proof system. A few household have direct pit latrines.
- There is no sanitary waste water management; the waste water goes directly into the ground.
- For the medical waste from RHC, the staff takes care of the garbage. Because the RHC has only out patients, no large quantities of medical waste are generated.
- Individual households dump their garbage in a garbage pit or burn it.
- Drinking water is reportedly safe and clean, and comes from hand-dug wells.
- The community has grown increasingly aware of good medical care practices; most patients come to RHC, hospitals, and clinics in Thaton. Since 2014, the medical care system has improved country wise, with more budget for medical care, and a “door-to-door “system of medical care has been implemented.
- Concerning with Tyre factory and the Thtaon CCGT, the staffs are working and living in the separate compound, far from the villages and there is not much communication with surrounding villages.

10.1.17 Event No.5 Interview with Village Tract Administrator, Du Yin Seik Village Tract

Xxx (39 year-old), Administrative officer of the Du Yin Seik Village Tract has been interviewed. Under this village tract there are three ethnic groups – Karen, Pa-o and Bamar. The Karen are the majority, while the Bamar are the minority. The main results of the interview are:

- No problems have been pointed by the interviewee related to garbage, drinking water and household water use. Noise and dust levels have been however pointed as problematic.
- U Kyaw Tun welcomes the new Thaton CCGT because it brings improvement of electricity supply not only for the whole country, but also for the villages nearby.
- In Kyar Ban village, the village roads are not systematically formed, so the power distribution lines are not placed in position. Only about 50% of the total households can access electricity in the current situation. The poor households cannot afford the initial cost of about 300,000 Kyats (power distribution line and electric meter).
- Almost every household has dug wells; about five tube wells are available in public buildings (monastery, schools, etc.).
- The village has about 10 manually powered tillers, 1 tractor, 1 van-car, 1 tipper, and about 10 shops (tea shops, grocery, and snacks).
- Government employees are a few in the village: 2-3, 10 school teachers
- The main occupation of the village is doing migrant worker in Thailand, Malaysia, Singapore and Japan. Almost every household has one to three family members who are working abroad. Some work there for a short period (1-3 years), some for a long one (more than 10 years). Generally, only half of the migrant workers are doing well. Migrants often feel inferiority and discrimination in the hosting countries. They hope that with the current political changes in Myanmar, improvements in job opportunities will allow them to come back and work in their home country.
- The residents are of Pao, Kayin and Bamar ethnicities, numbered in a descending order. These ethnic groups have been living together for centuries – no conflicts among them. Inside the village there is only one pagoda/ monastery and only one school so that they all are brought up together.

10.1.18 Event No. 6 Interview with Village Electrification Committee, Kyar Ban Village

No serious issues for the environmental and health concerns have been identified by xxx, a member of the Kyar Ban Village Electrification Committee. The following was discussed:

- The heavy traffic is becoming a big problem – the construction of new roads started five years ago (highway of Myawady – Bago – Yangon,

connection from District to District, the road passing the town). The villages are built along the road side, exposing the people to traffic accidents, dust and noise, which are unbearable for the roadside residents.

- Land confiscation has been done in 1990 for a rubber plantation by the Ministry of Industry. Land owners and farmers claim back a total of more than 100 acres. The dispute is still in court.
- Encroachment of pasture / grazing lands by some villagers had happened since 2014 – about 60 households are currently settled in pasture lands, mostly in proximity of Inn Shay village; the problem is not settled yet.
- Most villagers have rubber plantations of few acres (3-5 acres), and a few rice lands (2-3 acres).
- About 7 households possess about 100 acres. of rubber plantations.
- Most of the households posses less than 5 acres. and work as casual labors tapping rubber.
- The local economy depends on the rubber price. Since 2-3 years ago, the prices have been declining, so that not so much profit is obtained from the rubber plantations presently.
- Some villagers have plantations of Eugenia or betel (leaf) as a business.

10.1.19 Event No (7) Interviews with the Paoh Youth and Karen Youth Organizations, Kyar Ban

The responsibility of the ethnic groups leaders lies mainly in organizing social and religious activities in the village. The leaders are elected from the village elders with criteria such as its own will to be a leader, respectability, social behavior, etc. Only one leader in a village is common, but if the population is large there can be two ethnic youth leaders in a village.

U xx, Paoh Youth leader from the Kyar Ban village (54 years of age), and his wife (52 years of age) have been interviewed. In addition, Xxx , Kayin Youth leader (78 years old), from Kyar Ban village and his wife (75 years old) have been interviewed. The pointed issues and problems are similar to those pointed in the interviews described above in this Section. Other issues are as follows:

- There are presently no flood or drought problems in this area.
- Most of the villagers are rubber farmers, only a few numbers are doing rice farming.
- The rice production was reduced in 2015 because of floods in some areas of the village.
- Rubber workers (tappers) travel to the plantation fields where they stay for several months. The children have to accompany the family, causing their education to be disrupted.
- Deforestation is pointed as a problem. It occurs not due to timber extraction, but due to the need to plant rubber trees. The encroachment

of the monoculture of rubber plantation removed the natural and secondary forests. There has been scarcity of fuel wood for the poor villagers. In addition, the poor households who depend on the forest are facing difficulties to collect NTFP (Non-timber Forest Products), such as bamboo shoots, mushroom, wild animals and etc.

- Conflicts among ethnic groups: in Kyar Ban village, the Karen groups live in the southern side of the Thaton – Pha-an Highway while the Pao group is in the northern side of the Highway. No conflicts among the groups have been recorded in this area. They have been living harmoniously and peacefully. There are many cases of marriage within different groups. They never feel inferiority or any discrimination due to the groups they belong to.

10.1.20 Event No.8 Interviews with Villagers at the Administrative Office, Kyar Ban

The following persons were interviewed at the Kyar Ban Administrative Office:

1. U Xxx, Head of Hundred-household, Kayin National, 53 years old, owns 2 acres of rubber trees and 3 acres of rice fields.
2. U Xxx, Kayin National, 50 years old, rice farmer with 1.5 acres.
3. U Xxx, Kayin National, 53 years old, rice farmer with 1.5 acres.
4. U Xxx Kayin National, 55 years old, rice farmer with 2 acres.
5. Daw Xxx, Kayin National, 40 years old, rice farmer with 1.5 acres.
6. U Xxx, Kayin National, 61 year-old, rice farmer with 1.5 acres, owns 2 acres of rubber trees.

The Than Ban village (near Kyar Ban) can be assumed as a Kayin village; only a few residents are Pa-O and Bamar (only about 10 households each).

The agriculture-based economy is disappointing: the rice production is very fluctuating, depending on weather and rain patterns. Pest and diseases have been prevalent in the past years. For the rubber production, there are generally no difficulties, except for the decline of the rubber price in recent years. Some households grow betel (leaf) and own about 1 -2 acres of plantations.

In general, rice farmers are small holder farmers owning less than 5 acres and produce rice only for own family consumption. Most rubber farmers possess 2-3 acres of plantation. The largest plantations are less than 20 acres. The large ones (1,000 -1,500 acres) are owned by the people from Thaton and other places.

There are significant numbers of poor households. A transformer for Than Ban village was established about 6 months ago. Among the 128 houses in Than Ban village, only about 20 households could benefit from it. Most

families cannot afford the initial cost of transmission/ distribution line and electric meter (about 300,000 Kyats).

The village infrastructure has been improved, such as the new State High School , new roads, and easy telephone communication. The education of young people is improved, and so there are less people working abroad nowadays. However, about 50% are still migrant laborers, particularly in Thailand

10.2 Annex 2: Photographic Documentation

10.2.1 Full socio-economic survey (August and September 2016)

Figure 10-1: Explanation on survey questionnaire to the volunteer village youth (6-9-2016)

Figure 10-2: Explanation on survey questionnaire to the volunteer village youth (6-9-2016) (2)

Figure 10-3: Water source is enough for household use, Kyar Ban village

Figure 10-4: Eugenia plantation, Kyar Ban village

Figure 10-5: Latrines of septic tank system at the corner of the compound, Kyar Ban village

Figure 10-6: Fly-proof latrine at the back of the house, blue color structure, Kyar Ban village

Figure 10-7: Survey visit at Karin- youth leader, Kyar Ban village (7-9-2016)

Figure 10-8: Discussion at a coffee shop, Kyar Ban village (7-9-2016)

Figure 10-9: Group discussion with villagers from Than Ban village (8-9-2016)

Figure 10-10: Kyar Ban State High School

Figure 10-11: Rural Health Center in Kyar Ban

Figure 10-12: Preparing Betel leaves for the market in Than Ban Village

Figure 10-13: Raising goats for additional

Figure 10-14: A traditional Kayin House with animist worship-shed in

income in Kayin Su	**Kayin Su**
Figure 10-15: A sub-power line connected to the house of a relative	**Figure 10-16: Overhead lines**
Figure 10-17: A sub-power line connected to the house of a relative	**Figure 10-18: View of Thaton Power Plant from Than Ban**
Figure 10-19: Rubber sheet after processing	**Figure 10-20: A fruit shop on the main motor road**
Figure 10-21: A Saw Mill Pa-oh Su	**Figure 10-22: A general store in Kayin Su**

Figure 10-23: A Mobile Phone seller in Pa-oh Su

10.3 Annex 3: Questionnaires used in the Socio-Economic Study

10.3.1 Household Survey Socio-Economic Survey Questionnaires - English

Sr.No. ☐☐ ☐☐☐

Household Survey Socio-Economic Survey Questionnaires

Village Name ..... Village Code .....

Date of Survey .....

Name of Numerator ..... Signature .....

Name of Supervisor ..... Signature .....

Household Code No. ..... Ward/Section..... Age of Respondent.....

Connection to Power Line - Yes ..... No. .....

General Instruction – Insert (√) or digital figure (in the line marked with•) to the blanks as relevant

1. Demographic data (to insert √ in the blank as relevant)

*a. Household population Male _____ Female ____Total _____

*b. Population by age group

(1) Below 5 year	Male	Female	Total .....
(2) 5 to 18 year	Male	Female	Total .....
(3)18 to 60 year	Male	Female	Total .....
(4) Above 60	Male	Female	Total .....

*c. Number of children attending school Male ..... Female ..... Total .....

*d. Number of household members staying away or stay only for some months of the year
Male ..... Female ..... Total .....

*e.

*f. Number of disable /elderly persons in the household
Male ..... Female ..... Total .....

*g. People living in the households and their relationship to head of household (to insert √ in relevant blanks)

(1) Household Head Male ..... or Female .....
(2) Spouse Yes..... No.....
(3)Grandfathers/Grandmothers from both sides Yes..... No.....
(4) Fathers, mothers and their relatives from both sides Yes..... No.....
(5) Brothers and sisters from both sides Yes ..... No.....
(6) Sons and daughters and their spouses and grandchildren Yes..... No.....
(7) Others Yes..... No.....

2. Ethnicity, Religion & Culture (to insert √ in relevant blanks)

a. What ethnic groups do your household members belong to? (can be more than one)
(1) Kayin..... (2) Pa-oh..... (3) Mon..... (4) Bamar..... (5) Rakhine.....

1

(1) Kayin..... (2) Pa-oh..... (3) Mon..... (4) Bamar..... (5) Rakhine.....
(6) Shan..... (7) Others (Please specify) .....

b. What religions do your household members follow? (can be more than one)
(1) Buddhist..... (2) Christian ..... (3) Animist..... (4) Others (Please specify)
.....

c. What languages do your household members use in daily communication?
(1) Kayin..... (2) Pa-oh..... (3) Mon..... (4) Bamar..... (5) Rakhine.....
(6) Shan..... (7) Others (Please specify).....

d. What traditional cultural/religious activities do you condact?
(1) Celebrate pagoda festival .....(2) Celebrate important religious day .....
(3) Observe Sabbath ..... (4) Observe animist ritual..... (5) Others (Please specify)
.....

e. What do you think is the relationship among different ethnic groups?
(1) Friendly ..... (2) Normal..... (3) Living separately and little interaction.....

f. Is there intermarriage of different ethnic groups in your household Yes..... No.....

g. What kinds of difficulties or problems are being encountered by ethnic minorities?
(insert V in relevant blanks)

(1) Loss of land	.....
(2) Diminishing economic business opportunities	.....
(3) Lack of opportunities for livelihood skill development	.....
(4) Lack of employment opportunities	.....
(5) Loss of education for children	.....
(6) Discrimination by other ethnic races and organizations	.....
(7) Harassment by other other ethnic races and organizations	.....
(8) Feelings of insecurity for lives and properties	.....

3. Educational Data

*a. Educational level of household members

		Male	Female	Total
1	University graduate			
2	High school (9-10 grade)			
3	Middle school (5-8 grade)			
4	Primary school (up to 4 grade)			
5	Monastic education			
6	Can read and write			
7	Illiterate			

*b. Number of school-going age children - Male ..... Female ..... Total .....

*c Number of school-going children who are out of school - Male ..... Female ..... Total .....

d. Level of school attended by household (to insert V in relevant blanks)
(1) University..... (2) Technical college..... (3)High school .....(4)Middle school .....
(5) Primary school .....

e. Location of school - (1) Inside village ..... (2) Outside village within 1 kilometer.....

4. Health Data

4.1 Incidence of diseases

*a. Name the five most common diseases by that affect the household (insert √ for the 5 most common diseases)

(1)	Malaria	(8)	Pneumonia	(15)	Measles .....
(2)	TB	(9)	Asthma	(16)	Dengue .....
(3)	Diarrhea	(10)	Gastric	(17)	Whooping cough .....
(4)	Dysentery	(11)	Diabetes	(18)	Meningitis .....
(5)	Typhoid	(12)	Hypertension	(19)	Epilepsy .....
(6)	Jaundice	(13)	Heart disease	(20)	Malnutrition .....
(7)	Influenza	(14)	Kidney disease		

(21) Others (Pls specify and give ranking) .....

4.2 Access to Healthcare Services (to insert √ in relevant blanks)

a. Easy accessibility to healthcare service when you or your household members are not well and need treatment
   (1) See a doctor Yes..... No.....
   (2) Go to Rural Health Center Yes..... No.....
   (3) Go to traditional healer Yes..... No.....
   (4) Take medicine by own self Yes..... No.....
b. Do you know the place providing healthcare facilities ? Yes ..... No.....
c. Where is it? (1) Inside the village.....(2) in nearby village.....(3) in town.....
d. Do you know how many staff work in rural health center? Yes..... No.....
e. If there is no rural health center in your village, which is the nearest one?
   (1) within 1 kilo ..... (2) within 1 to 2 kilo..... (3) More than 2 kilo .....

4.3 Healthcare Behavior of Households:

a. Have your household members ever been to a doctor? Yes..... No.....
b. Have your household members ever been to a rural health center? Yes..... No.....
*c. What can you do when your household members are not well (List the treatment in order of your preference, ie, from priority 1 to 4)
   (1) See a doctor .....
   (2) Go to Rural Healthcare Center .....
   (3) Go to traditional healer .....
   (4) Take medicine by own self .....
*d. How many times have your household members visited a doctor in the past 12 months .....

5 Water Supply

5.1 Sources of Water

a. Where do you get drinking water? (Insert √ in relevant blank)
   (1) Own well .....(2) Village well ..... (3)River.....(4)Lake.....(5) Dam ..... (6) water sellers .....(7)Tap water .....(8) Bottled water .....(9) Other.....
b. Where do you get water for cooking, washing , cleaning , bathing and other household uses

(1) Own well ..... (2) Village well .....(3) River.....(4) Lake.....(5) Dam .....(6) Water sellers .....

c. Who in the household usually goes to collect water or drive water pump? Male..... Female.....

5.2 Water availability

a. Is there shortage of water during the year? Yes..... No. .....
b. How long is the water shortage? (1) One month ..... (2) Two months .....(3) Three months..... (4) More than three months .....
c. How do you cope with water shortage during the months?

(1) Save water during monsoon ..... (2) Buy water from water sellers.....(3) Go to other villages to fetch water..... (3) Use less water than usual.....(4) Others (Pls specify) .....

5.3 Water Quality

a. How does the drinking water taste? (1) Fresh .....(2) Salty.....(3) Undesirable colour and taste.....
b. Have you noticed any change of taste in the water you drink? Yes..... No.....
c. Have you experienced health problem because of water you drink? Yes..... No .....
d. Have you experienced health problems because the water is polluted by bacteria or chemical toxins? (1) Poisoning of internal organs.....(2) skin problem.....(3) Eye sores..... (4) Diarrhea..... ..... (4) Jaundice..... (5)Others (Pls specify) .....

6. Hygiene & Sanitation

6.1 Personal Hygiene

a. Do you understand the importance of washig your hand? Yes..... No.....
b. When do you wash your hand? (1) Before eating ..... (2) After eating..... (3) After using toilet ..... (4) Other (Pls specify) .....

6.2 Use of Toilet/Disposal of human waste

a. Do you have latrine in your house? Yes..... No.....
b. Which types of toilet do you use? (1) FLP ..... (2) Direct pit..... (3) Use neighbor's toilet..... (4) Use public toilet ..... (5)Defecate in the bush ..... (6) Others (Pls specify).....
c. What do you use to clean yourself after using toilet? (1) Water..... (2) Water and soap..... (3) Paper..... (4) Other materials .....
d. For how long have you used FPL? (1) Less than 1 year ..... (2) 1-5 years..... (3) Over 5 years .....
e. How is the human waste in the toilet disposed of? (1) Buried ..... (2) Used as compost .....(3) Dispose on the ground or into drain.....(4) Collected by municipal service .....(5)Others (Pls specify) .....

6.3 Disposal of Garbage/Environmental sanitation

a. How is your houshold waste disposed of ? (1) burn it .....(2) throw it in the pit ..... (3) throw it in garbage tank..... (4) throw it into river or creek ..... (5) throw on the ground .....
(6) Others (Pls specify).....
b. Do you know there is garbage collection service provided by the municipal department?
Yes..... No.....
c. Do you have sewage system for disposing waste water and human waste? Yes..... No.....

6.4 Food Hygiene

a. Do you clean food carefully before cooking? Yes..... No.....
b. Do you keep pots and pans clean Yes..... No.....
c. Do you cook meat and fish to a well-done condition? Yes..... No.....
d. DO you take care to cover your food? Yes..... No.....
e. Do you filter water for drinking? Yes..... No.....
f. Do you boil water for drinking? Yes..... No.....
g. Have there been cases of food poisoning? Yes..... No. .....

7. Natural Environmental Data

7.1 Natural Environmental Degradation

a. Water sources (wells and ponds) drying up. Yes..... No..... Don't know.....
b. Diminishing marine creatures in rivers, lakes, etc Yes..... No..... Don't know.....
c. Deforestation Yes..... No..... Don't know.....
d. Diminishing forest products Yes..... No..... Don't know.....
e. Diminishing pasture lands Yes..... No..... Don't know.....
f. Increasing ultra violet rays Yes..... No..... Don't know.....

7.2. Environmental pollution

a. Pollution of water bodies by waste disposal from houses and factories. Yes..... No..... Don't know.....
b. Smoke from three-stone stoves affecting eyes and respiratory system Yes..... No..... Don't know....
c. Air pollution caused by smoke from factories and workshops Yes..... No..... Don't know....
d. Noise from houses, factories and workshops Yes..... No..... Don't know....

7.3 Effects of climate change

a. Increasing day temperature year by year Yes..... No..... Don't know....
b. Heavy rain experienced in more and more years Yes..... No..... Don't know....
c. Droughts experienced in more and more years Yes..... No..... Don't know....
d. Floods experienced in more and more years Yes..... No..... Don't know....
e. More strong wind and storms experienced Yes..... No..... Don't know....

8. Employment Data

8.1 Household work force (insert digital in relevant blanks)

*a. How many household members have gainful employment?

(i) Over 18 of age Male ..... Female ..... Total.....
(ii) Under 18 of age Male ..... Female ..... Total.....

8.2 Types of Employment

a. What types of employment are your household members engaged in?

(1) Field Casual labour - Male ..... Female ..... Total.....
(2) Hawkers/ mobile vendors – Male ..... Female..... Total.....
(3) Salary workers (factory, school, etc) – Male ..... Female..... Total.....
(4) Masons, carpenters, construction workers Male ..... Female..... Total.....
(5) Micro business owner (house shop, betel leave, etc) - Male ..... Female..... Total.....
(6) Owners of small industries Male ..... Female..... Total.....
(rice mill, fish breeding, livestock breeding, food production)
(7) Manage Land or Plantation as owner Male ..... Female ..... Total.....
(8) Fishery (production of fish sauce, dried fish) Male ..... Female ..... Total.....
(9) Migrant workers (local) – Male ..... Female ..... Total.....
(10)Migrant workers (cross border) - Male ..... Female ..... Total.....
(11)Others - (pls specify)
(12)..... Male .....Female.....Total.....
(13)..... Male .....Female.....Total.....

8.3 Employment contract

a. Do factory workers (household members) have employment contracts? Yes..... No.....
b. Are they covered by social welfare benefits? Yes..... No.....

9. Gender Relations Data

9.1 Division of Labour

a. How do you normally divide domestic and business activities between male and female members of your household?

(1) Field work (paddy/ rubber plantation, etc) Male ..... Female .....
(2) Business/Selling Male ..... Female .....
(3) Other Income generating activities Male ..... Female .....
(backyard gardening, collecting firewood
forest produce)
(4) Domestic chores (cooking, washing, cleaning, - Male ..... Female .....
fetching water, taking care of children/aged people Male ..... Female .....
(5) Tending cattle & feeding small animals Male ..... Female .....
(6)Going to town for domestic or business purposes Male ..... Female .....
(7) Attending meetings Male..... Female .....
(8) Attending social events (wedding, funeral, donation) Male..... Female .....
Others (pease specify)

9.2 Responsibility & Rights

a. How are responsibilities and rights divided among male and female members of your household?

(1) Earning incomes to provide for household expenses. Male..... Female.....
(2) Managing household expenses Male..... Female.....
(3) Doing shopping at market or shops? Male..... Female.....
(4) Managing children's education Male..... Female.....

(5) Opportunities for training and skill development Male..... Female.....
(6) Access to household incomes/assets Male..... Female.....
(7) Entitlement for higher wages Male.....
Female.....

9.3 Decision making

a. Who makes decision in your households on the following issues

(1) Selling of produces earned by households Head of HH..... Spouse..... Others.....
(2) Allowing or limiting household expenses Head of HH..... ..Spouse..... .Others.....
(3) Procurement of household assets or commodities Head of HH..... Spouse..... Others.....
(4) Children's education expenses Head of HH..... Spouse..... Others.....
(5) Social issues of children (e.g marriage) Head of HH..... Spouse..... Others.....

10. Asset Ownership (insert √ in relevant blanks)

10.1 House and house compound

a. Do you own the house or are you a tenant? (1) Owner.....(2)Co-owner..... (4) Tenant.....
(5) Co-tenant.....

b. If you don't own the house, who does? (1) Private owner..... (2) Relatives.....
(3) Government..... ....(4) Bank collateral..... (5) Others (Pls specify) .....

c. Do you own the house compound land ? Yes..... No.....
(1) Sole owner..... ..(2) Co-owner..... (3) Government owned.....

d. If you own the land, what kind of legal title do you have? (1) Freehold..... (2) Leasehold..... (3) Possess land tax payment receipt.....(4) Others (Pls specify) .....

e. If you don't own the land, who does?
(1) Private land owner..... (2) Relatives'..... (3) Government .....(4) Others .....

f. What is the size of your house and compound?
(i) House – (1) Less than 1000 sq ft ..... (2) about 2500sq ft ..... (3) about 5000 Sq ft.....
(4) More than 5000 sq.ft .....
(ii) Compound- (1) Less than 0.3 acre ..... (2) 0.3 to 0.5 acre ..... (3) More than 0.5 acre.....

g. Type of your house
(1) Brick house – (CG iron sheet/tile roofing, brick walls, concrete floor)
(2) Wooden house - (CG iron sheet/tile roofing, wooden wall, wooden floor)
(3) Hut - (thatch/leaf roofing, thatch, leaves, bamboo walling, bamboo/mud floor)
(4)Others (pls specify).....

h. Number of storeys – (1) One storey..... (2) Two ..... (3) Three..... (4) More.....

i. Other household assets
(1) Bicycle..... (2) Motor bike..... (3) Motor bike with side attached carriage.....
(4) Motor car.....(5) Truck..... (6) Row boat..... (7) Motor boat..... (8) Others .....
(Pls specify).....

11. Productive Assets (insert √ in relevant blanks)

a. Do you own or rent a shop? (1) Own..... (2) Rent .....

b. Where is your shop? (1) At own house ..... (2) In commercial areas..... (3) In market place.....(4) Others (Pls specify).....

c. Do you rent house to other people for living or doing business? Yes..... No.....

d. Do you own small industries?
(1) Rice mill ..... (2) oil mill..... (3) motor bike repair ..... (4) Electrical appliance repair shop .....(5) Sewing/tailoring..... (6) Bamboo craft (e.g making farmer' hats).....
(7) Others (Pls specify).....

e. Do you own land? Yes..... No.....

f. Which type of land? (1) Residential land ..... (2) Farm land .....(3) Plantation Land.....
(4) Others (Pls specify).....

g. Area of land you owns
(1) Less than 1 acre..... (2) 1 to 10 acre..... (3) 10 to 50 acre..... (4) more than 50 acres.....

h. How do you use your own land ? (1) Own Production..... (2) Rent to others ..... (3) Donated for community use ..... (4) Others.....

*i Productivity of your land per year? (Pls insert amount in numerals)
Paddy (basket) ..... Rubber (viss) ..... Betel leaves (viss) .....
Others (Pls specify) – Name of Product..... Yield per season.....
Name of Product..... Yield per season.....

*j Do you own vehicles for transporting passengers? (1) Number..... (2) not at all ..... .

*k Do you own trucks for transporting goods? 1) Number..... (2) not at all ..... .

*l Do you own cattle? (1) Number..... (2) not at all ..... .

*m Do you own poultry, pigs and goats? (1) number of chicken ..... (2) number of ducks.....(3) number of Pig ..... (4) number of goats..... (5) Not at all.....

*n Do you have farm implements? (1) number of Tractors ..... (2) number of hand-tillers..... (3) number of bullock carts.....(4) number of ploughshare.....(5) Not at all .....

12. 10. Sources of Incomes (insert √ in relevant blanks)

a. What are main sources of incomes for your households? (can be more than one)
(1) Casual Labour wages .....(2) Salary ..... (3) pension.....(4)Retail Shop .....
(5) Selling Farm produces ..... (6) Poultry/Livestock Farming ..... (7) Cottage industry .....(8)Remittance from migrant workers ..... (9) Wholesale trading .....
(10) Others (Pls specify) .....

b. Other subsidiary income for your households? (can be more than one)
(1) Backyard gardening..... (2) Small scale animal breeding ..... (3) Collection of forest produce..... (4) Selling water..... (5) teaching school children.....
(6) Others (Pls specify).....

13. Expenditure, Income and Debt (insert √ in relevant blanks)

What was the average monthly Income and expenditure of your household in the previous 12 months?

	Less than 100,000	100,000 to 300,000	300,000 to 500,000	above 500,000

a. Monthly Expenditure				
b.Monthly Income				

c. What is the composition of main expenditure items in your household during previous 12 months?

Expenditure items	Below 10,000 MMK	10.000 to 30,000 MMK	30,000 to 50,000 MMK	Above 50,000 MMK
1.Food cost				
2.Clothing/ household utensils				
3.House rent/maintenance				
4.Healthcare/Medical expenses				
5.Children education				
6.Electricity, Water and other tariff				
7. Expenditure for social purpose				

a. To what extent does your household income cover your household expenditures?
(1)Adequately cover and allow saving ..... (2) Enough to cover but not much saving .....
(3) Barely cover..... (4) Not cover and need to borrow .....

b. Have you borrowed money or incurred debts?
(1)Occasionally..... (2) Frequently..... (3) All the time .....

c. How do you cope with debt problems?
(1)Borrow money from relatives..... (2) Go to small loan (pawn) shop ..... (3) Borrow from private money lender by depositing personal or household items ..... (4) Borrow money from private land owner by deposit gold or valuables ..... (5) Sell gold or other valuables or assets.....(6) Others (Pls specify).....

14. Food security (insert √ in relevant blanks)

a. How do you receive for your pay by working for land owner?
(1) Cash ..... (2) In-kind (paddy or rice or other produces) .....

b. What is monthly average consumption of rice in your households?
(1)Less than 1 basket ..... (2) 1- 2 baskets..... (3) More than 2 baskets.....

c. Where can you buy rice to meet consumption? (1) in the village..... (2)Nearby villages ..... (3) In town ..... (4) Others (Pls specify).....

d. How many months in a year do you have rice shortage?
(1) One month ..... (2) Two months..... (3) three months..... (4) More than three months.....

e. What are the causes of rice shortage?
(1)Price high and have to buy less ..... (2) Difficult to borrow money to buy rice .....
(3)Need to repay loans to rice sellers or land owners and not enough left to eat.....
(4) Rice not available on market ..... (5) Others (Pls specify).....

f. How do you cope with rice shortage problems?
(1)Borrow from relatives or neighbor ..... (2) Take rice loan from rice merchant at high interest rate ..... (3) Take rice loan from land owner by committing in advance to work in the fields at deducted wage when farm season comes ..... (4) Take paddy loan from land owner and pay back in kind at higher rate ..... (5) Others (pls specify)

15. Energy Sector (insert √ in relevant blanks)

15.1 Electric Power Connection system

a. How is your house connected to electric power line?

(1) Directly connected..... (2) through neighbor.....

b. Do you have meter ? Yes..... No.....

c.Do you have voltage regulator? Yes..... No.....

d. Do you use energy-saving electric appliances? Yes..... No.....

e.Do you know there is transformer for your village? Yes..... No.

f. How do you know about the electric power connection to your village?

(1) from power plant persons at village meeting..... (2) from village electrification committee..... (3) from relatives and neighbors..... (4) from other people.....

g. How is the cost of connection paid?

(1) self –help system..... (2) provided freely.....

15.2 Electricity utilization

a. Are you connected to electricity supplied by Thaton Power Plant? Yes..... No .....

b. Do you have to pay upfront cost for connection? Yes..... No.....

c. If you are not connected, why?

(1)cannot afford upfront cost .....(2) cannot afford meter bill..... (3) can live without it.....

(4) worry about electric accidents..... (5) Others (pls specify).....

d. How do you use electricity in your household?

(1) Lighting .....(2) Recharging cell phone ..... (3) Rice cooker ..... (4) Electric stove .....(5)Electric Fan ..... (6) Fridge ..... (7) Entertainment (TV/Video)..... (8) Pump water..... (9) Milling and other cottage industry.....

(10) Others (Pls specify).....

e.Is electricity used for public purpose?

(1) Street lighting..... (2) School building..... (3) Pagoda/Temple..... (4) Religious houses.....(5) Community Hall ..... (6) Others (Pls specify) .....

f.What other energy sources is your household using currently?

(1) candle....., (2) Oil lamp ..... (3) LED lamps power charged by battery .....

(4) Solar panel..... (5) Diesel engine..... (6)Fuel wood..... (7) Gas.....

(8) Solar pump ..... (9)Cattle for pulling .....(10) Others (Pls specify) .....

15.3 Electricity consumption and payment of bill

a. What is monthly electricity consumption of your household?

(1) Below 1000 MMK ..... (2) 1000-3000MMK..... (3) 3000-5000MMK.....

(4)5000- 10,000 MMK..... (5) Above 10000MMK.....

b. How do you like the electric bill to be collected?

(1)Monthly by meter reading..... (2) Based on the type and number of electrical utility .....

(3) Fixed rate..... (4) Free provision .....

15.4 Like and Dislikes on electricity supply system

a. What do you like best (in order of priority) about the benefits from access to electricity?

(1) Night lighting, studying, working Priority No.....
(2) Make it easy for cooking, water pumping Priority No.....
(3) Improve phone communication Priority No.....
(4) Living comfort (TV, Video, Fans, Fridge, etc) Priority No.....

b. What do you dislike most (in order of priority) about current electrical supply system?

1.System breakdown Priority No.....
2. Low voltage Priority No.....
3. Pay high electric tariff Priority No.....
4. Repair and replacement of electrical utility Priority No.....
5. Risk of electrical shock and fire Priority No.....

15.5. Long Terms Perspectives

a. What potential impact in long term do you perceive from Thaton Power Plant?

(1) Environment impact – (1) good..... (2) bad..... (3) no impact.....
(2) Social Impact - (1) good..... (2) bad..... (3) no impact.....
(3) Public Safety - (1) good..... (2) bad..... (3) no impact.....
(4) Employment Opportunity - (1) good..... (2) bad..... (3) no impact.....
(5) Local interest-- (1) good..... (2) bad..... (3) no impact.....
(6) National Interest- (1) good..... (2) bad..... (3) no impact.....

15.6 Willingness to pay

a. Do you think current electric tariff is reasonable? Yes..... No.....
b. How do you think the plant management can reduce electrical tariff?
(1)Concession rate for poor households..... (2) Concession rate for energy saving households.....(3) No idea.....
c. If electricity supply system is improved and more services are available, are you willing to use it and pay more tariff? Yes..... No.....
d. Do you think it reasonable that government should provide free electricity to rural population? Yes..... No.....

15.7 Communication & information system between power plant and village communities (Insert √ in relevant blanks)

a. How does power plant give information/news to village communities?

(1) Call village representatives to the plant for meeting and give the news .....
(2) Come to village and conduct mass meeting to give the news.....
(3) Send messenger to villages to tell the new or give information materials to post on the village notice board.....
(4) Put the news on notice boards at the power plant .....

b. Do the power plant have a grievance redressing mechanism for user households? Yes..... No.....

c. How adequate is the power plant's communication system to enable people to participate intelligently in the discussion of issues and suggestions for improvement?
(1) adequate..... (2) not adequate..... (3) don't know.....

16. Village/Community organizations

a. Are your household members participating in voluntary village organizations as members? (insert √ in relevant blanks)

(1) Youth organizations	Yes ..... No.....
(2) Organization to conduct religious activities	Yes ..... No.....
(3) Social welfare organizations	Yes ..... No.....
(4) Ethnic language and culture promotion organizations	Yes ..... No.....
(5) Auxiliary fire brigade	Yes ..... No.....
(6) Red cross brigade	Yes ..... No.....
(7) Women' Affairs Association	Yes ..... No.....
(8) Maternity and Childcare Association	Yes ..... No.....
(9) Farmers group, Fishermen group	Yes ..... No.....
(10)Cooperatives	Yes ..... No.....
(11) Political parties	Yes ..... No.....
(12)NGOs	Yes ..... No.....
(13)Others (Pls specify)	Yes ..... No.....

17. Remarks, Observations or Comments of Interviewer and Interviewee

10.3.2 Household Survey Socio-Economic Survey Questionnaires - Burmese

အမှတ်စဉ် □□-□□□

မြန်မာနိုင်ငံ လျှပ်စစ်ဓွမ်းအင်စီမံချက် - သထုံခါတ်အားပေးစက်ရုံ
သဘာဝပတ်ဂန်းကျင်နှင့်လူမှုရေးစီမံခန့်ခွဲမှု ဆိုင်ရာအကြံပေးအဖွဲ့
အိမ်ထောင်စုလူမှုစီးပွားရေးအခြေအနေစစ်တမ်းကောက်ယူရန်မေးခွန်းများ

စာရင်းကောက်သည့်ကျေးရွာအမည် ..... ကျေးရွာအမှတ်သင်္ကေတ .....

စာရင်းကောက်သည့်နေ့စွဲ.....

စာရင်းကောက်သူအမည်..... လက်မှတ်.....

ကြီးကြပ်သူအမည် ..... လက်မှတ်.....

အိမ်ထောင်စုအမှတ်သင်္ကေတ ..... အစု ..... ဖြေဆိုသူ၏အသက်.....

လျှပ်စစ်မီးသွယ်ပြီး..... မပြီး .....

ညွှန်ကြားချက် - ကွက်လပ်များတွင် √ နှင့် * ပြသည့်အမှတ်စဉ်တွင်ကိန်းဂဏန်းလိုအပ်သလိုရေးသွင်းပါ။

၁.လူဦးရေ အချက်အလက်များ (ကွက်လပ်များတွင်သင့်လျော်သလိုလူဦးရေထည့်သွင်းရန်)

*က အိမ်ထောင်စုလူဦးရေ - ကျား ..... မ..... ပေါင်း.....

*ခ. အသက်အပိုင်းအခြားအလိုက်အိမ်ထောင်စုလူဦးရေ

(၁) အသက် ၅နှစ် အောက် - ကျား ..... မ..... ပေါင်း.....

(၂) ၅နှစ် မှ ၁၈နှစ် ထိ - ကျား ..... မ..... ပေါင်း.....

(၃) ၁၈နှစ် မှ ၆၀ နှစ်အထိ ကျား ..... မ..... ပေါင်း.....

(၄) ၆၀ နှစ် အထက် - ကျား ..... မ..... ပေါင်း.....

*ဂ. အိမ်ထောင်စုရှိကျောင်းနေကလေးဦးရေ - ကျား ..... မ..... ပေါင်း.....

*ဃ. အဝေးတွင်အလုပ်လုပ်ကိုင်နေသူအိမ်ထောင်စုဝင်ဦးရေ - ကျား ..... မ.....ပေါင်း.....

*င. အိမ်ထောင်စုရှိအိုမင်းမစွမ်းလူဦးရေ - ကျား ..... မ.....ပေါင်း.....

*စ.သင့်အိမ်ထောင်စုတွင်အတူနေသူများ- (ကွက်လပ်တွင်သင့်လျော်သလို (√) ရေးသွင်းပါ)

(၁) အိမ်ထောင်စုဦးစီး ကျား .....မ.....

(၂) ဇနီး/ခင်ပွန်း ရှိ ..... မရှိ.....

(၃) နှစ်ဖက်အဘိုးအဖွားများ ရှိ ..... မရှိ.....

(၄) နှစ်ဖက်မိဘနှင့်ငှင်းတို့ဆွေမျိုးရင်းချာများ ရှိ ..... မရှိ.....

(၅) နှစ်ဖက်ညီအစ်ကိုမောင်နမညီမများ ရှိ ..... မရှိ.....

(၆) သား၊သမီးနှင့်ငှင်းတို့၏ဇနီးခင်ပွန်းနှင့်မြေးများ ရှိ ..... မရှိ.....

(၇) အခြားအတူနေသူများ ရှိ ..... မရှိ.....

1

၂. တိုင်းရင်းသားလူမျိုးဘာသာကိုးကွယ်မှုဆိုင်ရာအချက်အလက်များ (သင့်လျော်သည့်ကွက်လပ်တွင် √ မှတ်သားပါ)

က. အိမ်ထောင်စုတွင်ပါဝင်သည့်လူမျိုးများ

(၁) ကရင်..... (၂) ပအို၀်..... (၃) မွန်..... (၄) ဗမာ..... (၅) ရခိုင်..... (၆) ရှမ်း.....
(၇) အခြား (လူမျိုးအမည်ဖော်ပြရန်).....

ခ. အိမ်ထောင်စုတွင်ကိုးကွယ်သည့်ဘာသာများ

(၁) ဗုဒ္ဓဘာသာ..... (၂) ခရစ်ယန်ဘာသာ..... (၃) နတ်ကိုးကွယ်.....
(၄) အခြား (ကိုးကွယ်သည့်ဘာသာအမည်ကိုဖော်ပြရန်).....

ဂ. နေ့စဉ်ပြောဆိုသုံးစွဲနေသောဘာသာစကားအမျိုးအစား

(၁) ကရင်..... (၂) ပအို၀်..... (၃) မွန်..... (၄) ဗမာ..... (၅) ရခိုင်..... (၆) ရှမ်း.....
(၇) အခြား (ဘာသာစကားအမည်ဖော်ပြရန်).....

ဃ. လိုက်နာကျင့်သုံးနေသောဓိုးရာယဉ်ကျေးမှုဓလေ့များ

(၁) ဘုရားပွဲ..... (၂) ဘာသာရေးဓါကြီးရက်ကြီး..... (၃) ဥပုသ်သီလဆောက်တည်ခြင်း.....
(၄) နတ်စားပူဇော်ခြင်း..... (၅) အခြား.....

င. သင့်အနေဖြင့်လူမျိုးများအကြားဆက်ဆံရေးကိုမည်သို့ထင်မြင်သနည်း

(၁) ချစ်ကြည်ရင်းနှီးမှုရှိသည်..... (၂) သာမန်ဆက်ဆံရေး ရှိသည်..... (၃) သီးခြားအစုဖြင့် နေထိုင်ကြပြီး ဆက်ဆံမှုနည်းပါး (၄) အခြား(ရှင်းလင်းဖော်ပြပါ).....

စ. သင့်အိမ်ထောင်စုတွင်တိုင်းရင်းလူမျိုးမတူသူများအိမ်ထောင်ပြုမှုရှိပါသလား ။ ရှိ..... မရှိ.....

ဆ. တိုင်းရင်းသားလူနည်းစုများတွေ့ကြုံနေရသောအခက်အခဲပြဿနာများရှိပါသလား (သင့်လျော်သည့် ကွက်လပ်တွင် √ မှတ်သားပါ)

(၁) မြေယာဆုံးရှုံးမှုများ .....
(၂) စီးပွားရေးလုပ်ကွက်များကျဉ်းမြောင်းလာခြင်း .....
(၃) အသက်မွေးအတတ်ပညာသင်ကြားခွင့်နည်းပါးခြင်း .....
(၄) အလုပ်အကိုင်အခွင့်အလမ်းနည်းပါးခြင်း .....
(၅) ကလေးများပညာသင်ကြားခွင့်ဆုံးရှုံးခြင်း .....
(၆) ဘာသာစကားနှင့်ယဉ်ကျေးမှုပျောက်ကွယ်လာခြင်း .....
(၇) အခြားလူမျိုးအဖွဲ့အစည်းများမှခွဲခြားဆက်ဆံမှု .....
(၈) အခြားလူမျိုးအဖွဲ့အစည်းများ၏နှောက်ယှက်မှု .....
(၉) အသက်အိုးအိမ်လုံခြုံမှုမရှိဟုခံစားခြင်း .....

၃. ပညာရေးဆိုင်ရာအချက်အလက်များ

*က. အိမ်ထောင်ဝင်များ၏ပညာအရည်အချင်း (ကွက်လပ်များတွင်သင့်လျော်သလိုဖြည့်ရေးသွင်းရန်)

		ကျား	မ	ပေါင်း
၁	တက္ကသိုလ်၊သိပ္ပံကျောင်းဘွဲ့ရ			
၂	အထက်တန်း(၉-၁၀ တန်းအောင်)			
၃	အလယ်တန်း (၅-၈ တန်းအောင်)			
၄	မူလတန်း (၄ တန်းအောင်)			
၅	ဘုန်းတော်ကြီးသင်ကျောင်း			
၆	ရေးတတ်ဖတ်တတ်			
၇	စာမတတ်			

*ခ. ကျောင်းနေအရွယ်ကလေးဦးရေ - ကျား..... မ.....ပေါင်း.....

*ဂ. ကျောင်းနေအရွယ်ကလေးဦးရေမှကျောင်းမနေသောကလေးဦးရေ ကျား..... မ.....ပေါင်း.....

ဃ. တက်ရောက်နေသောကျောင်းအဆင့်အတန်း (ကွက်လပ်တွင်√ ရေးသွင်းရန်)

(၁) တက္ကသိုလ်.....(၂) သိပ္ပံကျောင်း..... (၃) အထက်တန်းကျောင်း.....

(၄) အလယ်တန်းကျောင်း.....(၅) မူလတန်းကျောင်း..... (၆) အခြား.....

င. ကျောင်းတည်နေရာ (ကွက်လပ်တွင်√ ရေးသွင်းရန်)

(၁) ကျေးရွာအတွင်း..... (၂) ကျေးရွာနှင့်(၁ကီလို)မိုင်၀က်အတွင်း..... (၃) ကျေးရွာနှင့် မိုင်၀က်အထက်..... (၄) မြို့ပေါ် .....(၅) အခြား.....

၄. ကျန်းမာရေးဆိုင်ရာအချက်အလက်များ

၄.၁ အဖြစ်များသောရောဂါများ

* က. အဖြစ်များသောအဓိကရောဂါ (၅) မျိုးကိုဖော်ပြပါ - (သက်ဆိုင်ရာကွက်လပ် တွင် √ ရေးသွင်းရန်၊ အဖြစ်အများဆုံး ရောဂါ ၅မျိုး ကိုသာရွေးချယ်ရန်)

(၁) ငှက်ဖျား ..... (၈) အဆုတ်အအေးမိ ..... (၁၅) ဝက်သက် .....
(၂) တီဘီ ..... (၉) ပန်းနာရင်ကြပ် ..... (၁၆) သွေးလွန်တုပ်ကွေး .....
(၃) ဝမ်းပျက်ဝမ်းလျှောခြင်း..... (၁၀) အစာအိမ်ရောဂါ ..... (၁၇) ဆုံစိုကြွက်ညှာချောင်းဆိုး .....
(၄) ဝမ်းကိုက် ..... (၁၁) ဆီးချို ..... (၁၈) ဦးနှောက်အမြေးရောင် .....
(၅) အူရောင်ငန်းဖျား ..... (၁၂) သွေးတိုး ..... (၁၉) အတက်ရောဂါ .....
(၆) အသဲရောင်အသားဝါ... (၁၃) နှလုံးရောဂါ ..... (၂၀) အာဟာရချို့တဲ့ခြင်း .....
(၇) တုပ်ကွေး ..... (၁၄) ကျောက်ကပ်ရောဂါ .....

အခြား (ရောဂါအမည်နှင့်အဖြစ်များ အဆင့်ရေးသွင်းရန်).....

၄.၂ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့်လက်လှမ်းမီမှုအခြေအနေ

က. သင်သို့မဟုတ်သင့်အိမ်ထောင်စုများနာမကျန်းဖြစ်၍ဆေးကုသမှုခံယူရန်လိုအပ်လျှင် သင်လက်လှမ်းမှီသော ကျန်းမာရေးစောင့်ရှောက်မှု နည်းလမ်းများ (သင့်လျော်သောကွက်လပ်တွင် √ ရေးသွင်းပါ)

(၁) ဆေးရုံ လွယ်..... မလွယ်.....

(၂) ဆရာဝန်ဆေးခန်း လွယ်..... မလွယ်.....

(၃) ကျေးလက်ကျန်းမာရေးဆေးခန်း လွယ်..... မလွယ်.....

(၄) တိုင်းရင်းဆေးဆရာ/နတ်ဆရာ လွယ်..... မလွယ်.....

(၅) မိမိဘာသာဆေးဝယ်သောက်ရန်ဆေးဆိုင် လွယ်..... မလွယ်.....

ခ. ကျန်းမာရေးစောင့်ရှောက်မှုပေးသည့်ဌာနရှိသည့်နေရာကိုသိပါသလား။ သိ..... မသိ.....

ဂ. မည်သည့်နေရာတွင်ရှိသနည်း။ (သင့်လျော်သည့်ကွက်လပ်တွင်√ ရေးသွင်းပါ)

(၁) ကျေးရွာအတွင်း..... (၂) အခြားကျေးရွာတွင်ရှိသည်..... (၃) မြို့ပေါ်တွင်ရှိသည်.....

ဃ. ကျေးလက်ကျန်းမာရေးဆေးခန်းတွင်ဝန်ထမ်းဘယ်နှစ်ဦးရှိသည်ကိုသိပါသလား။ သိ..... မသိ.....

ဇ. သင့်ကျေးရွာတွင်ကျေးလက်ဆေးပေးခန်းမရှိလျှင်အနီးဆုံးဆေးခန်းနှင့်မည်မျှကွာဝေးသနည်း

(၁) မိုင်ဝက်အတွင်း..... (၂) မိုင်ဝက်မှတစ်မိုင်အတွင်း..... (၃) တစ်မိုင်ထက်ဝေး..... (၄) မသိပါ.....

၄.၃ ကျန်းမာရေးစောင့်ရှောက်မှုအသိပညာနှင့်အလေ့အထများ

က. သင့်မိသားစုများဆရာဝန်ပြဘူးပါသလား ။ ပြဘူးသည်..... မပြဘူးပါ.....

ခ. ကျေးလက်ကျန်းမာရေးဆေးခန်းကိုပြဘူးပါသလား ပြဘူးသည်..... မပြဘူးပါ.....

*ဂ. သင့်မိသားစုဝင်တစ်ဦးမကျန်းမာလျှင်သင်ရွေးချယ်သည့်ဆေးကုသမှုခံယူသည့်နည်းလမ်းများကိုဦးစားပေးအလိုက် အမှတ်စဉ်ပေးပါ။ (ဦးစားပေးအဆင့် ၁ မှ ၄ အထိ)

(၁) ဆရာဝန်ပြသည် .....

(၂) ကျေးလက်ဆေးပေးခန်းပြသည် .....

(၃) တိုင်းရင်းဆေးဆရာ (သို့) နတ်ဆရာပြသည် .....

(၄) ကိုယ်တိုင်ဆေးဝယ်သောက်သည် .....

*ဃ. လွန်ခဲ့သည့် ၁၂ လအတွင်းသင့်မိသားစုဝင်များအတွက်ဆရာဝန်ပြဘူးသည့်အကြိမ်ပေါင်း.....

၅. ရေရရှိရေးဆိုင်ရာအချက်အလက်များ (သင့်လျော်သည့်ကွက်လပ်တွင်√ ရေးသွင်းပါ)

၅.၁ ရေရရှိနိုင်သောအရင်းအမြစ်များ

က သောက်ရေကိုမည်သည့်နေရာမှရယူသလဲ (သင့်လျော်သောကွက်လပ်တွင် √ ရေးသွင်းပါ)

(၁) ကိုယ်ပိုင်ရေတွင်း.....(၂) အများပိုင်ရေတွင်း ..... (၃) မြစ်ချောင်း ..... (၄) ရေကန်/အင်း.....

(၅)ဆည်ရေ ..... (၆) ရေထမ်းရောင်းသူ..... (၇) ဘုံဘိုင်ရေ ..... (၈) ရေသန့်ဘူး..... (၉) အခြား.....

ခ. သုံးရေ (ချက်ပြုတ်လော်ဖွတ်ရေဆိုး) အတွက်မည်သည့်နေရာမှရယူသလဲ (သင့်လျော်သော ကွက်လပ်တွင် √ ရေးသွင်းပါ)

(၁) ကိုယ်ပိုင်ရေတွင်း.....(၂) အများပိုင်ရေတွင်း ..... (၃) မြစ်ချောင်း ..... (၄) ရေကန်/အင်း.....
(၅)ဆည်ရေ ..... (၆) ရေထမ်းရောင်းသူ..... (၇) ဘုံတိုင်ရေ ..... (၈) အခြား.....

၈. သင့်အိမ်ထောင်စုတွင်မည်သူရေခတ်/ရေစက်မောင်းလေ့ရှိသလဲ။ (၁) ကျား ..... (၂) မ.....

၅.၂ ရေရှားပါးမှု

က. တစ်နှစ်အတွင်းရေရှားသည့်လများရှိပါသလား။ ရှိ..... မရှိ.....

ခ. တစ်နှစ်တွင်အများဆုံးရေရှားသည့်လမည်မျှရှိသနည်း ။ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။
(၁) တစ်လ..... (၂) နှစ်လ..... (၃) သုံးလ..... (၄) သုံးလအထက်.....

ဂ. ရေရှားသည့်လများတွင်သင့်အိမ်ထောင်စုမည်သို့ဖြေရှင်းသနည်း။ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။
(၁) မိုးတွင်းမှရေသိုလှောင်သုံးစွဲသည် .....(၂) ရေပယ်သုံးသည်..... (၃) အခြားရွာတွင်သွား ခတ်သည်..... (၄) ရေချွေတာသုံးသည်..... (၅) အခြားနည်းများ (ဖြေရှင်းနည်းကိုရေးပြပါ)
.....

၅.၃ သောက်သုံးရေဆိုင်ရာအရည်အသွေး

က. သင်တို့သောက်သုံးရေ၏အရသာရှိသနည်း။ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)
(၁) ရေရှိ..... (၂) ရေငံ..... (၃) အရောင်နှင့်အရသာမကောင်း.....

ခ. သင်တို့သောက်သုံးရေများအရောင်နှင့်အရသာပြောင်းလဲမှုရှိလာသည်ကိုသတိပြုမိပါသလား။
ရှိ.....ရှိ.....

ဂ. မသန့်ရှင်းသောသောက်ရေကြောင့်ရောဂါရသည်ကိုကြုံဘူးပါသလား။ ရှိ..... မရှိ.....

ဃ. သောက်သုံးရေတွင်ပိုးမွှားနှင့်ဓါတုအဆိပ်များပါရှိခြင်းကြောင့်ဖြစ်သောရောဂါများဖြစ်ဘူးပါသလား။
(သင့်လျော်သောကွက်လပ်တွင် √ ရေးသွင်းပါ)

(၁) ခန္ဓာကိုယ်တွင်းအဆိပ်သင့်မှု.....(၂) အရေပြားအဆိပ်သင့်မှု..... (၃) မျက်စိနာ.....
(၄) ဂမ်းပျက်ဂမ်းလျှော ..... (၅) အသဲရောင်အသားဝါ.....(၆)အခြား (ရောဂါအမည်များဖော်ပြပါ)
.....

<u>၆။ သန့်ရှင်းရေးဆိုင်ရာအချက်အလက်များ</u>

၆.၁ တစ်ကိုယ်ရေသန့်ရှင်းရေး

(က) လက်ဆေးခြင်းအလေ့အထသည်ရောဂါကာကွယ်ရေးအတွက်အရေးကြီးကိုသင်နှင့်သင့်အိမ်ထောင်စုဂင်များ သိရှိပါသလား။ သိပါသည်..... မသိပါ.....

(ခ) သင်တို့အိမ်ထောင်စုဝင်များ မည်သည့်အချိန်တွင်လက်ဆေးသည့်အလေ့အထရှိသလဲ။

(၁) အစာမစားမီ ..... (၂) အစာစားပြီး..... (၃) အိမ်သာသုံးစွဲပြီး..... (၄) အခြား.....

၆.၂ အိမ်သာသုံးစွဲခြင်း။အညစ်အကြေးစွန့်ခြင်း(သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

(က) သင့်အိမ်တွင် အိမ်သာရှိပါသလား။ ရှိ..... မရှိ.....

(ခ) မည်သည့်အိမ်သာအမျိုးအစားကိုအသုံးပြုသနည်း

(၁) ယင်လုံအိမ်သာ..... (၂) ကျင်းအိမ်သာ..... (၃) အိမ်နီးနားချင်းအိမ်သာ..... (၄) အများသုံး အိမ်သာ..... (၅) တောထိုင်..... (၆) အခြား.....

(ဂ) အိမ်သာသုံးစွဲပြီးလျှင်ကိုယ်လက်သန့်ရှင်းရေးအတွက်ဘာကိုသုံးသလဲ။

(၁) ရေ..... (၂) ရေနှင့်ဆပ်ပြာ.....(၃) စက္ကူ..... (၄) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

(ဃ) သင့်အိမ်ထောင်စုတွင်ယင်လုံအိမ်သာသုံးစွဲခြင်းမည်မျှကြာပြီလဲ။

(၁) တစ်နှစ်အောက်..... (၂) ၁နှစ်မှ ၅နှစ်..... (၃) ငါးနှစ်အထက်.....

(င) အိမ်သာမှအညစ်အကြေးများကိုမည်သို့စွန့်ပစ်သနည်း။

(၁) ကျင်းကိုမြေဖို့သည်..... (၂)ဇီဝမြေဩဇာအဖြစ်သုံးသည်..... (၃) မြေကြီးပေါ်(သို့) မြောင်းထဲသို့စွန့်ပစ်သည်..... (၄) စည်ပင်မှလာရောက်သိမ်းဆည်းသည်..... (၅) အခြား (ရှင်းလင်းဖော်ပြပါ).....

၆.၃ အမှိုက်စွန့်ပစ်ခြင်းနှင့်ပတ်ဝန်းကျင်သန့်ရှင်းရေး (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

က. သင့်အိမ်မှအမှိုက်များကိုမည်သို့စွန့်ပစ်သနည်း။

(၁) မီးရှို့ပစ်သည်..... (၂) အမှိုက်ကျင်းထဲပစ်သည်.....(၃) အများသုံးအမှိုက်ပုံးအမှိုက်ကန်တွင် ပစ်သည် .....(၄) ချောင်းထဲပစ်သည် .....(၅) မြေကြီးပေါ်ကြဲသလိုပစ်သည်.....

(၆) အခြား (ရှင်းလင်းဖော်ပြပါ).....

ခ. သင့်အိမ်တွင်စည်ပင်သာယာဌာနမှအမှိုက်သိမ်းစနစ်ရောက်ပါသလား။ ရှိ..... မရှိ.....

ဂ. သင့်အိမ်တွင်ရေဆိုးနှင့်မိလ္လာစွန့်ပစ်ရန်မိလ္လာကန်နှင့်ပြွန်များရှိပါသလား။ ရှိ..... မရှိ.....

၆.၄ အစားအစာသန့်ရှင်းမှု (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

က. အသားငါးဟင်းသီးဟင်းရွက်များစသည့်အစားအစာများကိုမချက်ပြုတ်မီသေချာစွာ ဆေးကြောသန့်စင်သည့်အလေ့အကျင့်ရှိပါသလား ရှိ.....မရှိ.....

ခ. အိုးခွက်ပန်းကန်များကိုသန့်ရှင်းစွာထားသည့်အလေ့အကျင့်ရှိပါသလား ရှိ.....မရှိ.....

ဂ. အသားငါးများကိုသေချာကျက်အောင်ချက်ပြုတ်လေ့ရှိပါသလား ရှိ.....မရှိ.....

ဃ. အစားအစာများကိုသေချာစွာဖုံးအုပ်ထားသည့်အလေ့အကျင့်ရှိပါသလား ရှိ.....မရှိ.....

င. ရေကိုစစ်ပြီးသောက်သုံးသည့်အကျင့်ရှိပါသလား ရှိ.....မရှိ.....

စ. ရေကိုကြိုချက်သောက်သုံးသည့်အကျင့်ရှိပါသလား ရှိ.....မရှိ.....

ဆ. သင့်အိမ်ထောင်စုတွင်အစာအဆိပ်သင့်မှုကြုံဘူးပါသလား ရှိ.....မရှိ.....

၇. သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်များ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

၇.၁ သဘာဝပတ်ဝန်းကျင်ယိုယွင်းမှုအခြေအနေ။

က. ရေတွင်းရေကန်စသည့်ရေထွက်များခမ်းခြောက်လာသည် မှန်.....မှား..... မသိပါ.....

ခ. မြစ်ချောင်းအင်းအိုင်များတွင်ငါးပုဇွန်ရေသတ္တဝါများရှားပါးလာသည်။ မှန်.....မှား..... မသိပါ.....

ဂ. သစ်တောများပြုန်းတီးလာသည်။ မှန်.....မှား..... မသိပါ.....

ဃ. ထင်းနှင့်သစ်တောထွက်ပစ္စည်းများရှားပါးလာသည်။ မှန်.....မှား..... မသိပါ.....

င. စားကျက်မြေများရှားပါးလာသည်။ မှန်.....မှား..... မသိပါ.....

စ. ခရမ်းလွန်ရောင်ခြည်ဒဏ်ပို၍ခံစားရသည် မှန်.....မှား..... မသိပါ.....

၇.၂ သဘာဝပတ်ဝန်းကျင်ညစ်ညမ်းမှုအခြေအနေ

က. နေအိမ်နှင့်စက်ရုံများမှအမှိုက်နှင့်အညစ်အကြေးများကြောင့်ရေတွင်း၊
ရေကန်၊အင်းအိုင်၊ချောင်းမြောင်းစသည့်ရေထုများညစ်ညမ်းလာသည် - မှန်.....မှား.....မသိပါ.....

ခ. ဖိုခနောင့်မီးဖိုများကြောင့်မျက်စိနှင့်အသက်ရှူလမ်းကြောင်းထိခိုက်မှုရှိသည်။ မှန်.....မှား...မသိပါ...

ဂ. စက်ရုံအလုပ်ရုံများမှထွက်သောမီးခိုးနှင့်ဓါတ်ငွေ့များကြောင့်လေထု
ညစ်ညမ်းလာသည်။ မှန်.....မှား...မသိပါ...

ဃ. ရပ်ကွက်၊စက်ရုံ၊အလုပ်ရုံများမှအသံများကြောင့် အသံဆူညံမှုရှိသည် မှန်.....မှား.....မသိပါ.....

၇.၃ ရာသီဥတုပြောင်းလဲမှုအခြေအနေ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

က. တစ်နှစ်ထက်တစ်နှစ်နွေအပူဖိုနှိပ်မြင့်တက်လာသည်။ မှန်.....မှား.....မသိပါ.....

ခ. မိုးကြိုးသည့်နှစ်များပိုများလာသည်။ မှန်.....မှား.....မသိပါ.....

ဂ. မိုးခေါင်မှုဖြစ်သည့်နှစ်များပိုများလာသည်။ မှန်.....မှား.....မသိပါ.....

ဃ. ရေကြီးသည့်နှစ်များပိုများလာသည်။ မှန်.....မှား.....မသိပါ.....

စ. မုန်တိုင်းနှင့်လေပြင်းတိုက်ခတ်မှုများပိုမိုကြုံတွေ့လာသည်။ မှန်.....မှား.....မသိပါ.....

၈. အလုပ်အကိုင်ဆိုင်ရာအချက်အလက်များ

၈.၁ အိမ်ထောင်စုအတွင်းအလုပ်လုပ်သူဦးရေ (ကွက်လပ်တွင်သင့်လျော်သော ကိန်းဂဏန်းရေးသွင်းပါ။)

အိမ်ထောင်စုတွင်အလုပ်အကိုင်ရှိပြီးကိုယ်ပိုင်ဝင်ငွေရှိသူလူဦးရေ -

*က. အသက် (၁၈) နှစ်အထက်ဦးရေ - ကျား ..... မ.....ပေါင်း.....

* ခ. အသက် (၁၈) နှစ်အောက်ကလေးအလုပ်သမားဦးရေ - ကျား ..... မ.....ပေါင်း.....

၈.၂ အလုပ်အကိုင်အမျိုးအစား (ကွက်လပ်တွင်သင့်လျော်သော ကိန်းဂဏန်းရေးသွင်းပါ။)

* က. သင့်အိမ်ထောင်စုဝင်များလုပ်ကိုင်နေသောအလုပ်အကိုင်အမျိုးအစားနှင့်ဦးရေ

(၁) ကျေးမန့်စားလုပ်သား ကျား .....မ..... ပေါင်း.....

(၂) ဈေးရောင်း၊ခေါင်းရွက်ဂျတ်တိုး ကျား .....မ..... ပေါင်း.....

(၃) လခစား (စက်ရုံ၊ကျောင်း၊ဌာနစသဖြင့်) – ကျား .....မ..... ပေါင်း.....

(၄) လက်သမားပန်းရံစသည့်ဆောက်လုပ်ရေးလုပ်သား ကျား .....မ..... ပေါင်း.....

(၅) အသေးစားကုန်သွယ်လုပ်ငန်းပိုင်ရှင်(ဈေးဆိုင်ဟယ်ရောင်း) ကျား .....မ..... ပေါင်း.....

(၆) အသေးစားထုတ်လုပ်မှုလုပ်ငန်းပိုင်ရှင် ကျား .....မ..... ပေါင်း.....

(ဟာလာစက်ဖွေမြေရေးငါးဖမ်းစားသောက်ကုန်စသဖြင့်) ကျား .....မ..... ပေါင်း.....

(၇) လယ်ပိုင်ကွမ်းခြံစာဘာခြံပိုင်ရှင် ကျား .....မ..... ပေါင်း.....

(၈) ငါးဖမ်းနှင့်ရေလုပ်ငန်း (ငပိငါးခြောက်ငံပြာရည်) ကျား .....မ..... ပေါင်း.....

(၉) ရွှေ့ပြောင်းလုပ်သား (ပြည်တွင်း) ကျား .....မ..... ပေါင်း.....

(၁၀) ရွှေ့ပြောင်းလုပ်သား (ပြည်ပ) ကျား .....မ..... ပေါင်း.....

(၁၁) အခြား ..... ကျား .....မ..... ပေါင်း.....

(၁၂) အခြား ..... ကျား .....မ..... ပေါင်း.....

၈.၃ အလုပ်အကိုင်စာရွက်စာတမ်း (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

က. စက်ရုံအလုပ်ရုံတို့တွင်လုပ်ကိုင်နေသည့်သူများတွင်အလုပ်အကိုင်စာရွက်စာတမ်းရှိပါသလား။ ရှိ..... မရှိ.....

ခ. ၄င်းတို့တွင်လူမှုဖူလုံရေးအခွင့်အရေးများရရှိပါသလား။ ရှိ..... မရှိ.....

၉. <u>ကျားမဆက်ဆံရေးကဏ္ဍ ဆိုင်ရာအချက်အလက်များ</u> (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)

၉.၁ အိမ်ထောင်စုအတွင်းအလုပ်အကိုင်ခွဲခြားမှု

(က) သင့်အိမ်ထောင်စုတွင်အိမ်မှုကိစ္စနှင့်စီးပွားရေးလုပ်ငန်းများကိုပံ့မှန်အားဖြင့်မည်သို့ခွဲခြားထားသနည်း

(၁) လယ်ယာထွန်ယက်နှင့်ခြံလုပ်ငန်း ကျား.....မ.....

(၂) အရောင်းအဝယ်လုပ်ငန်း ကျား.....မ.....

(၃) အခြားဝင်ငွေရလုပ်ငန်း (အိမ်နောက်ဖေးစိုက်ခင်း၊ ထင်းကောက်၊မို့ရှာမျှစ်ရှာ) ကျား.....မ.....

(၄) အိမ်တွင်းမှု (ချက်ပြုတ်လျှော်ဖွတ်အိမ်သန့်ရှင်း ရေခပ်၊ကလေးထိန်း၊ သက်ကြီးရွယ်အိုပြုစု) ကျား.....မ.....

(၅) တိရစ္ဆာန်အစာကျွေးထိန်ကျောင်း ကျား.....မ.....

(၆) မြို့တက် (ကုန်ရောင်း၊အိမ်သုံးပစ္စည်းဝယ်) ကျား.....မ.....

(၇) အစည်းအဝေးများတက်ရောက်ခြင်း ကျား.....မ.....

(၈) အလှူမင်္ဂလာစသည့်သာရေးနှင့်နာရေးကိစ္စများ ကျား.....မ.....

၉.၂ အိမ်ထောင်စုအတွင်းတာဝန်နှင့်လုပ်ပိုင်ခွင့်သတ်မှတ်ပုံ

က. သင့်အိမ်ထောင်စုဝင်ယောကျ်ားမိန်းမများတွင်မည်သို့တာဝန်နှင့်လုပ်ပိုင်ခွင့်ကန့်သတ်ပေးလေ့ရှိသလဲ

(၁) အိမ်ထောင်စုအသုံးစရိတ်အတွက်ဝင်ငွေရှာရန် ကျား.....မ.....

(၂) အိမ်ထောင်စုဝင်ငွေကိုစီမံခန့်ခွဲသုံးစွဲရန် ကျား.....မ.....

(၃) ဈေးဝယ် (မီးဖိုချောင်နှင့်အိမ်သုံးပစ္စည်းများ၊အဝတ်အစား) ကျား.....မ.....

(၄) ကလေးပညာရေး (ကျောင်းကြိုပို့၊စာအံစသဖြင့်) ကျား.....မ.....

(၅) အသိပညာအတတ်ပညာဖွံ့ဖြိုးရေးအတွက်သင်တန်းတက်ခွင့် ကျား.....မ.....

(၆) ငွေကြေးနှင့်အိမ်ထောင်စုပိုင်ပစ္စည်းများသုံးစွဲခွင့် ကျား.....မ.....

(၇) အမျိုးသားအမျိုးသမီး လုပ်ခတန်းတူရပိုင်ခွင့် ကျား.....မ.....

၉.၃ အိမ်ထောင်စုအတွင်းဆုံးဖြတ်ပိုင်ခွင့်သတ်မှတ်ထားခြင်း

က. သင့်အိမ်ထောင်စုတွင် အောက်ပါကိစ္စများကိုမည်သူကအဆုံးအဖြတ်ပေးသနည်း

(၁)အိမ်ထောင်စုပိုင်သီးနှံထွက်ကုန်ရောင်းချခြင်း အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

(၂) အိမ်သုံးစရိတ်သတ်မှတ်ပေးခြင်း အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

(၃) ပိုင်ဆိုင်ပစ္စည်းအသုံးအဆောင်ပစ္စည်းများဝယ်ယူခြင်း အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

(၄) ကလေးပညာရေးစရိတ်သတ်မှတ်ပေးခြင်း အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

(၅) ဆေးကုသစရိတ်သတ်မှတ်ပေးခြင်း အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

(၆) သားသမီးများ၏အိမ်ထောင်ရေးနှင့်အခြားလူမှုရေးကိစ္စများ အိမ်ထောင်ဦးစီး..... ဇနီးခင်ပွန်း.....

<u>၁၀. အိမ်ထောင်စုပိုင်ပစ္စည်းများ (သင့်လျော်သောကွက်လပ်တွင် √ မှတ်သားပါ။)</u>

၁၀.၁ အိမ်နှင့်အိမ်ပိုင်း

က. ယခုနေအိမ်ကိုပိုင်သလား၊အငှားနေသလား

(၁) အိမ်ပိုင် ..... (၂) စပ်တူပိုင်..... (၃) အိမ်ငှား..... (၄) စပ်တူအိမ်ငှား.....

ခ. သင့်အိမ်ကိုမပိုင်ပါက၊မည်သူပိုင်သနည်း

(၁) ပုဂ္ဂလိကအိမ်ပိုင်ရှင်..... (၂) ဆွေမျိုးပိုင်..... (၃) အစိုးရပိုင်..... (၄) အပေါင်ခံထား.....

(၅) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

ဂ. အိမ်ပိုင်းကိုသင်ကိုယ်ပိုင်ဖြစ်ပါသလား (၁) ဟုတ်သည်..... (၂) မဟုတ်ပါ.....

ဃ သင့်အိမ်ပိုင်းမြေကိုသင်ပိုင်ဆိုင်ပါက၊ပိုင်ဆိုင်မှုအမျိုးအစား (၁) ဘိုးဘွားပိုင်..... (၂) မြေရံ .....

(၃) မြေခွန်ပြေစာရှိ.....(၄) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

င. သင်မြေမပိုင်ပါက၊မည်သူပိုင်သနည်း

(၁) ပုဂ္ဂလိကမြေပိုင်ရှင်.....(၂) ဆွေမျိုးပိုင်..... (၃) အစိုးရပိုင်.....

(၄) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

စ. သင့်အိမ်နှင့်အိမ်ပိုင်း၏အကျယ်အဝန်း

အိမ်အကျယ် - (၁) စတုရန်းပေ ၁၀၀၀ အောက်..... (၂) စတုရန်းပေ ၁၀၀၀ မှ ၂၅၀၀ ထိ.....

(၃) စတုရန်းပေ၂၅၀၀ မှ ၅၀၀၀ ထိ (၄) စတုရန်း ၅၀၀၀ အထက် .....

အိမ်ပိုင်းအကျယ် - (၁) ၀.၃ ကော အောက်..... .....(၂) ၀.၃ မှ ၀.၅ ကော အထိ..... (၃) ၀.၅ကော အထက်.....

ဆ. အိမ်အမျိုးအစား

(၁) လုံးချင်းတိုက် ..... (အမိုး-သွပ်၊အုတ်ကျောတ်၊ အကာ-အုတ်နံရံ၊ ကြမ်းခင်း-ကွန်ကရစ်)

(၂) ပျဉ်ထောင်အိမ်.....(အမိုးသွပ်၊အုတ်ကျောတ်။ အကာ-ပျဉ်။ ကြမ်းခင်း-ပျဉ်)

(၃) တဲအိမ် ..... (အမိုး ခနဲ၊ဖက်။ အကာ-ဖက်၊ခနဲ၊ဝါးကပ်။ ကြမ်းခင်း-ဝါး၊မြေစိုက်)

(၄) အခြား (အမျိုးအမည်ဖော်ပြပါ) .....

ဇ. အထပ်အရေအတွက် - (၁) မြေစိုက် ..... (၂) နှစ်ထပ်..... (၃) နှစ်ထပ်အထက် .....

၁၀.၂ အခြားပိုင်ဆိုင်ပစ္စည်းများ

(၁) စက်ဘီး.....(၂) မော်တော်ဆိုင်ကယ်..... (၃) သုံးဘီးဆိုက်ကွ်..... (၄) မော်တော်ကား.....

(၅) ကုန်တင်ယာဉ်..... (၆) လှေ..... (၇) စက်လှေ.....(၇)အခြား.....

၁၁. ကုန်ထုတ်အရင်းအနှီးပိုင်ဆိုင်မှုများ

က. သင့်ကိုယ်ပိုင်(သို့) အငှားဆိုင်ခန်းရှိပါသလား ။ (၁) ကိုယ်ပိုင်ဆိုင်ခန်း..... (၂) အငှားဆိုင်ခန်း.....

ခ. သင့်ဆိုင်ခန်းဘယ်မှရှိပါသလဲ (၁) အိမ်တွင်ရှိ ..... (၂) လမ်းမကြီးအချက်အချာနေရာတွင်ရှိ .....

(၃) ဈေးကြီးထဲတွင်ရှိ..... (၄) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

ဂ. သင်ပိုင်အိမ်(သို့) ဆိုင်ခန်းအားအခြားသူများအားငှားရမ်းထားပါသလား။ ရှိ..... မရှိ.....

ဃ. သင်ပိုင်စက်မှုလက်မှုလုပ်ငန်းရှိပါသလား။

(၁) ဟာလာစက်..... (၂) ဆီစက်.....(၃) ဆိုင်ကယ်ပြင်..... (၄) လျှပ်စစ်ပစ္စည်းပြင်ဆိုင်.....

(၅) စက်ချုပ်.....(၆) ခမောက်ချုပ်နှင့်ဝါးထည်လက်မှုလုပ်ငန်း.....(၇) အခြား (ရှင်းလင်းဖော်ပြပါ)

.....

ငဲ. သင်မြေပိုင်ရှိပါသလား ။ ရှိ..... မရှိ.....

စ. သင်ပိုင်မြေအမျိုးအစားများ (၁) အိမ်မြေ..... (၂) လယ်မြေ.....(၃) ခြံမြေ.....(၄) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

ဆ. သင်ပိုင်မြေ၏အရွယ်အစား

(၁) တစ်ကောအောက်..... (၂) ၁ ကေမှ ၁၀ ကောထိ..... (၃) ၁၀ မှ ၅၀ ကော အထိ.....

(၄) ၅၀ ကော အထက် .....

ဇ. သင်ပိုင်မြေကိုမည်သို့အသုံးချသလဲ။ (၁) ကိုယ်တိုင်စိုက်ပျိုးထုတ်လုပ်..... (၂) အခြားသူများ သို့ငှားထား ..... (၃) အများအတွက်လှူထား ..... (၄) အခြား (ရှင်းလင်းဖော်ပြပါ).....

.....

* ဈ. သင်ပိုင်မြေမှုပျိမ်းမျှတစ်နှစ်အထွက်နှုန်း (အရေအတွက်ဖြည့်သွင်းရန်)

(၁) စပါး (တင်းရေ)..... (၂) ရာဘာ (ပိသာ)..... (၃) ကွမ်းရွက် (ပိသာ).....

အခြား- ထွက်ကုန်အမည် တစ်ရာသီအထွက်နှုန်း

(၄) ....

(၅) ....

*ည. လူစီးအင့်ားယာဉ်အရေအတွက် (၁) အစီးရေ..... (၂) မရှိ.....

*ဋ. ကုန်တင်အင့်ားယာဉ်အရေအတွက် (၁) အစီးရေ.....(၂) မရှိ.....

*ဌ သင်ပိုင်ကျွဲနွားကောင်ရေ - (၁) ကျွဲ.....(၂) နွား..... (၃) မရှိ.....

*ဍ သင်ပိုင်ကြက်ဘဲဂက်ဆိတ်ကောင်ရေ။ (၁) ကြက်.....(၂) ဘဲ.....(၃) ဂက်..... .. (၄)ဆိတ်.....
(၅) မရှိ.....

*ဎ. သင်ပိုင်လယ်ယာသုံးပစ္စည်းအရေအတွက် - (၁) ထွန်စက်.....(၂) လက်တွန်းထွန်စက်.....
(၃) လှည်း..... (၄)ထွန်ထယ်..... (၅) မရှိ.....

*ဏ. သင်ပိုင်ငါးဖမ်းကိရိယာအရေအတွက် - (၁) ပိုက်.....ခု (၂) လှေ..... စီး (၃) မရှိ.....

၁၂. ဂင်ငွေရရှိသည့်အရင်းအမြစ် (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)

က. သင့်အိမ်ထောင်စုအဓိကမှီခိုနေရသည့်ဂင်ငွေအမျိုးအစားများ (တစ်ခုထက်ပိုနိုင်သည်)

(၁) နေ့စားလုပ်ခ.....(၂) ဂန်ထမ်းလစာ..... (၃) ပင်စင်လစာ.....(၄) လက်လီဆိုင် .....

(၅) လယ်ယာထွက်ကုန်ရောင်းရငွေ..... (၆) မွေးမြူရေးခြံမှဂင်ငွေ..... (၇) အသေးစား စက်မှုလက်မှုလုပ်ငန်းမှဂင်ငွေ.....(၈) လက္ကားအရောင်းအဂယ်လုပ်ငန်းမှဂင်ငွေ.....

(၉) ပြည်ပသို့အလုပ်လုပ်ကိုင်သူများမှပို့ငွေ..... (၁၀) အခြားဂင်ငွေ (ရှင်းလင်းဖော်ပြပါ).....
.....

ခ. သင့်အိမ်ထောင်စုအတွက်ရရှိသော အပိုဂင်ငွေအမျိုးအစားများ (တစ်ခုထက်ပိုနိုင်သည်)

(၁) အိမ်နောက်ဖေးခြံစိုက်..... (၂) တစ်နှိုင်တစ်ပိုင်မွေးမြူရေး .....(၃) မျှစ်ဂါးစသည့် သစ်တော ထွက်ပစ္စည်းရှာဖွေရောင်းချခြင်း..... (၄)ရေစည်လှည်းတွန်း..... (၅) ကျူရှင်သင်.....

(၆) အခြား (ရှင်းလင်းဖော်ပြပါ) .....

၁၃. အသုံးစရိတ်ဂင်ငွေနှင့်အကြွေး (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)

လွန်ခဲ့သည့် ၁၂လအတွင်း သင့်အိမ်ထောင်စုတစ်လပျမ်းမျ အသုံးစရိတ်နှင့်ဂင်ငွေများ

	(၁) ကျပ် တစ်သိန်း အောက်	(၂) ကျပ်တစ်သိန်း မှသုံးသိန်းထိ	(၃) ကျပ်သုံးသိန်း မှငါးသိန်းထိ	(၄) ၅သိန်း အထက်
က. လစဉ်ပျမ်းမျအသုံးစရိတ်				
ခ. လစဉ်ပျမ်းမျဂင်ငွေ				

၈. လွန်ခဲ့သည့်၁၂ လအတွင်းသင့်အိမ်ထောင်စုအတွက်အဓိကကုန်ကျစရိတ်များတစ်လပျမ်းမျှကုန်ကျနှုန်း
ကိုဖော်ပြပါ။ (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)

ကုန်ကျစရိတ်အမျိုးအစား	၁၀၀၀၀ ကျပ် ထိ	၁၀၀၀၀ မှ ၃၀၀၀၀ ကျပ်ထိ	၃၀၀၀၀ မှ ၅၀၀၀၀ ကျပ် ထိ	၅၀၀၀၀ ကျပ် အထက်
၁. စားစရိတ်				
၂. အဝတ်အစား/လူသုံးအိမ်သုံးပစ္စည်းစရိတ်				
၃. အိမ်ငှား/အိမ်ပြင်ဆင်စရိတ်				
၄. ဆေးကုသစရိတ်				
၅. ကလေးပညာရေးစရိတ်				
၆.အခွန်အခများ				
၇.သာရေးနာရေးနှင့်လူမှုရေးကုန်ကျစရိတ်များ				

၉. သင့်နှစ်စဉ်အိမ်ထောင်စုဝင်ငွေသည်နှစ်စဉ်ကုန်ကျစရိတ်ကိုမည်မျှကာမိသလဲ

(၁) လုံလောက်သည့်အပြင်စုမိဆောင်းမိသည်..... (၂) လုံလောက်သော်လည်းအပိုအလျှံ အနည်း
ငယ်သာရှိ..... (၃) မလုံမလောက်ဖြစ်သည်.....(၄) လုံးဝမလုံလောက်၍အကြွေးတင်သည်.....

၁၀. သင့်အိမ်ထောင်စုတွင်ငွေချေးယူရခြင်းငွေကြေးအကြွေးတင်ခြင်းအခြေအနေ

(၁) တခါတရံ ..... (၂) မကြာခဏ..... (၃) အမြဲတန်း..... (၄) အကြွေးမရှိ.....

၁၁. အကြွေးတင်သည့်အခက်အခဲကိုမည်သို့ဖြေရှင်းသနည်း (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)

(၁) ဆွေမျိုးများထံမှအကူအညီတောင်းသည်.....

(၂) အပေါင်ဆိုင်သွားသည်.....

(၃) ငွေတိုးချေးသူများထံလူသုံးအိမ်သုံးပစ္စည်းပေါင်နှံပြီးငွေချေးသည်.....

(၄) ငွေတိုးချေးသူထံ ရွှေပေါင်ခံထားပြီးငွေချေးသည်.....

(၅) စုဆောင်းထားသည့်ရွှေ (သို့) လက်ဝတ်တန်ဆာပစ္စည်း ရောင်းသည်.....

(၆) အခြားနည်း (ရှင်းလင်းဖော်ပြပါ).....

၁၄. <u>စားနပ်ရိက္ခာဖူလုံမှု အခြေအနေ</u> (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)

က. လယ်ယာခြံမြေတွင်လုပ်ကိုင်သူအိမ်ထောင်စုဝင်များ လုပ်ခကိုမည်သည့်ပစ္စည်းဖြင့်ရရှိသလဲ။

(၁) ငွေကြေး ..... (၂) ထွက်ကုန်ပစ္စည်း (စပါးနှင့်အခြားထွက်ကုန်များ).....

ခ. သင့်အိမ်ထောင်စုတွင်လစဉ်ပျမ်းမျှဆန်စားသုံးမှုမည်မျှရှိသလဲ

(၁) တစ်တင်းအောက်..... (၂) ၁ မှ ၂ တင်း ထိ..... (၃) ၂တင်းအထက်.....

ဂ. စားသုံးရန်ဆန်ကိုမည်သည့်နေရာတွင်ဂယ်ယူသလဲ။

(၁) ရွာထဲရှိဆိုင်တွင်..... (၂)အနီးနားရွာတွင်..... (၃) မြို့ပေါ်တွင်.....

(၄) အခြား (ရှင်းလင်းဖော်ပြပါ).....

ဃ. သင့်အိမ်ထောင်စုတွင်တစ်နှစ်အတွင်းပျမ်းမျှဆန်ပြတ်သည့်လမည်မျှရှိသလဲ။

(၁) တစ်လနှင့်တစ်လအောက်..... (၂) နှစ်လ..... (၃) သုံးလ..... (၄)သုံးလအထက်.....

၈. သင့်အိမ်ထောင်စုတွင်ဆန်ပြတ်လပ်သည့်အကြောင်းရင်းများ

(၁) ငွေကြေးမလုံလောက်၍ဆန်လျှော့ဝယ်..... (၂) ငွေချေးရန်ခက်ခဲ၍ဆန်မဝယ်နိုင်.....

(၃) လယ်ရှင် (သို့) ဆန်ကုန်သည်ထံမှ အတိုးကြီးပေးဆန်ကြွေးပြန်ဆပ်ရသဖြင့်စားဖို့မလုံလောက်.....

(၄) ဈေးကွက်တွင်ဆန်ပြတ်လပ်နေသဖြင့်..... (၅) အခြားအကြောင်းများ (ရှင်းလင်းဖော်ပြပါ)

.....

၉. ဆန်ပြတ်လပ်သည့်အခက်အခဲကိုမည်သို့ဖြေရှင်းသနည်း

(၁) အိမ်နီးချင်း (သို့) ဆွေမျိုးများထံမှဆန်ချေးယူ(သို့)ငွေချေးပြီးဆန်ဝယ်သည်.....

(၂) ဆန်ကုန်သည်ထံမှ အတိုးပေးချေးသည်..... (၃) လယ်ပိုင်ရှင် (သို့) ဆန်ကုန်သည်ထံမှကြိုတင်ဆန်ချေးပြီး လုပ်ငန်းရာသီချိန်တွင်ငှင်းလယ်ယာတွင်လုပ်ကိုင်ပြီးလုပ်အားခဖြင့်ပြန်ဆပ်သည်.....

(၄)လယ်ပိုင်ရှင်ထံမှကြိုတင်ဆန်ချေးပြီးလုပ်ငန်းရာသီတွင်ငှင်းထံလုပ်ကိုင်ပြီးသီးနှံ ပေါ်ချိန်တွင် ရရှိသည့်မိမိရရှိသည့်သီးနှံဖေစုဖြင့် ပြန်ဆပ်သည်..... (၅) အခြားနည်းများ(ရှင်းလင်း ဖော်ပြပါ)

.....

၁၅. <u>လျှပ်စစ်စွမ်းအင်ဆိုင်ရာအချက်အလက်များ (သင့်လျော်သောကွက်လပ်တွင် မှတ်√ သားပါ)</u>

၁၅.၁ လျှပ်စစ်ဓါတ်အားဆက်သွယ်မှုစနစ်

က. သင့်အိမ်အတွက်ဓါတ်အားလိုင်းမည်သို့ဆက်သို့ဆက်သွယ်ထားသနည်း

(၁)မီးတိုင်မှတိုက်ရိုက်ဆက်သွယ်..... (၂) အိမ်နီးနားချင်းထံမှတဆင့်ဆက်သွယ်.....

ခ. လျှပ်စစ်မီတာရှိ..... မရှိ.....

ဂ. မီးအားမြင့်စက်ရှိ.....မရှိ.....

ဃ. စွမ်းအင်ချွေတာမီးလုံးမီးချောင်း သုံး..... မသုံး.....

င. သင့်ကျေးရွာအတွက် ထရန်စဖော်မာ (transformer) ရှိသည်ကိုသိပါသလား။ သိ..... မသိ.....

စ. ဓါတ်အားပေးစက်ရုံမှလျှပ်စစ်ဓါတ်အားလိုင်းဆက်သွယ်ပေးမည့်သတင်းကိုသင်မည်သို့သိရှိသနည်း

(၁) စက်ရုံမှအစည်းအဝေးခေါ်ပြောသည်.....(၂) ကျေးလက်မီးလင်းရေးကော်မတီထံမှသိရသည်.....

(၃) ဆွေမျိုး၊အိမ်နီးချင်းထံမှသိရသည်..... (၄) အခြားသူများထံမှသိရသည်.....

ဆ. လျှပ်စစ်မီးလိုင်းဆက်သွယ်သည့်ကုန်ကျစရိတ်ကိုမည်သို့ကျခံသနည်း

(၁) ကိုယ်ထူကိုယ်ထစနစ် ..... (၂) အခမဲ့စနစ်.....

၁၅.၂ လျှပ်စစ်ဓါတ်အားသုံးစွဲမှု

က. သင့်အိမ်ကိုသထုံလျှပ်စစ်ဓါတ်အားပေးစက်ရုံနှင့်မီးသွယ်ထားပါသလား။ မှန်..... မမှန်ပါ.....

ခ. သင့်အိမ်ကိုမီးသွယ်ရန်ကိုယ်ထူကိုယ်ထစနစ်ဖြင့်ကောက်ခံသည့်ထည့်ဝင်ငွေကိုထည့်ခဲ့ပါသလား။

ထည့်ခဲ့သည်။..... မထည့်ခဲ့ပါ.....

ဂ. သင့်အိမ်ကိုမီးမသွယ်ရသေးလျှင်ဘာကြောင့်မသွယ်ရသေးပါသလဲ။

(၁) ထည့်ဝင်ငွေမတတ်နိုင်သဖြင့်.....(၂) မိတာစမတတ်နိုင်သဖြင့်..... (၃) မရှိလည်း ဖြစ်သဖြင့်.....

(၄)လျှပ်စစ်အသုံးအဆောင်ပစ္စည်းကြောက်ရွံ့သဖြင့်.....(၅) အခြား (ရှင်းလင်း ဖော်ပြပါ) .....

ဃ. သင့်အိမ်တွင်လျှပ်စစ်ဓါတ်အားကိုအသုံးပြုပုံ (အဖြေတစ်ခုထက်ပိုနိုင်ပါသည်)

(၁) အလင်းရောင်ရရှိရန်.....(၂) ဖုန်းအားသွင်းရန်..... (၃) လျှပ်စစ်ပေါင်းအိုးဖြင့်ထမင်းချက်.....

(၄) လျှပ်စစ်မီးဖိုသုံးရန်..... (၅) လျှပ်စစ်ပန်ကာ ..... (၆) ရေခဲသေတ္တာ..... (၇)တီဗွီ၊ဗွီဒီယို.....

(၈) ရေစုတ်တင်ရန်.....(၉) ကြိတ်ခွဲစက်မောင်းနှင်ရန်.....(၁၀) အခြား (ရှင်းလင်း ဖော်ပြပါ).....

.....

ဇ. လျှပ်စစ်ဓါတ်အားကိုရပ်ရွာအတွက်အသုံးပြုပါသလား

(၁) လမ်းမီးထွန်း..... (၂) စာသင်ကျောင်း..... (၃) စေတီ..... (၄) ဘုန်းကြီးကျောင်း.....

(၅) မွေးရုံ ..... (၆) ကျေးရွာခမ်းမ..... (၇) အခြား (ရှင်းလင်း ဖော်ပြပါ).....

စ. သင့်အိမ်ထောင်စုတွင်သုံးစွဲနေသော အခြားစွမ်းအင်အမျိုးအစားများ

(၁) ဖယောင်းတိုင်..... (၂) မီးခွက်..... (၃) ဘက်ထရီဖြင့်မီးထွန်း.....(၄) ဆိုလာမီးအိမ်.....

(၅) ဒီဇယ်အင်ဂျင်.....(၆) ထင်း..... (၇) ဂက်စ်ဓါတ်ငွေ့ ..... (၈) ဆိုလာရေစုတ်စက် .....

(၉)ကျွဲနွား ဖြင့်ဆီကြိတ်..... (၁၀) အခြား (ရှင်းလင်း ဖော်ပြပါ).....

၁၅.၃ လျှပ်စစ်ဓါတ်အားသုံးစွဲမှုပမာဏနှင့်မီတာခကုန်ကျစရိတ်

က. သင့်အိမ်ထောင်စုတွင်လစဉ်လျှပ်စစ်မီတာခကုန်ကျစရိတ်မည်မျှရှိသနည်း

(၁) ကျပ် ၁၀၀၀ အောက်..... (၂) ၁၀၀၀ မှ ၃၀၀၀ ကျပ်..... (၃) ၃၀၀၀ မှ ၅၀၀၀ ကျပ်.....

(၄) ၅၀၀၀ မှ ၁၀၀၀၀ ကျပ်..... (၅) ကျပ် ၁၀၀၀၀ အထက်.....

ခ. လျှပ်စစ်မီတာခကိုမည်သို့ကောက်ယူစေလိုသနည်း

(၁) လစဉ်မီတာဖတ်ပြီးကောက်ယူရန်..... (၂) အသုံးပြုသည့်လျှပ်စစ်ပစ္စည်းဓါတ်အားသုံးစွဲနှုန်းနှင့် အရေအတွက်ကိုမူတည်ပြီးကောက်ယူရန်..... (၃) ပုံသေနှုန်းထားဖြင့်ကောက်ယူရန်.....

(၄) အခမဲ့ဖြန့်ဖြူးရန် .....

၁၅.၄ လက်ရှိလျှပ်စစ်ဓါတ်အားပေးစနစ်မှရရှိသည့်အကျိုးအမြတ်များအပေါ် သုံးသပ်ချက်များ

*က.လက်ရှိလျှပ်စစ်ဓါတ်အားမှရရှိသည့်အကျိုးကျေးဇူးများမှအနှစ်သက်ဆုံး အချက်များ (ဦးစားပေးအ ဆင့်အလိုက်)

(၁) ညအချိန်မီးအလင်းရောင်ရရှိစာဖတ်နိုင်၊အလုပ်လုပ်နိုင်ခြင်း ဦးပေးအဆင့်.....

(၂) ထမင်းဟင်းချက်၊ရေတင်ခြင်းလွယ်ကူလာခြင်း ဦးစားပေးအဆင့်.....

(၃) ဖုန်းဆက်သွယ်မှုအထောက်အကူပြုခြင်း ဦးစားပေးအဆင့်.....

(၄) လူနေမှုအဆင့်မြင့်လာခြင်း (တီဗွီ၊ဗွီဒီယို၊ ပန်ကာ၊ရေခဲသေတ္တာ) ဦးစားပေးအဆင့်.....

*ခ. လက်ရှိလျှပ်စစ်ဓါတ်အားပေးစနစ်မှ သင်မကြိုက်ဆုံးအချက်များကိုဦးစားပေးအဆင့်အလိုက်ဖော်ပြပါ။

(၁) လျှပ်စစ်ဓါတ်အားပြတ်တောက်ခြင်း ဦးစားပေးအဆင့်.....

(၂) မီးအားမပြည့်ခြင်း ဦးစားပေးအဆင့်.....

(၃) လျှပ်စစ်မီတာခပေးဆောင်ရခြင်း ဦးစားပေးအဆင့်.....

(၄) လျှပ်စစ်ပစ္စည်းများပျက်လျှင်ပြင်ဆင်လဲလှယ်ရခြင်း ဦးစားပေးအဆင့်.....

(၅) လျှပ်စစ်ဓါတ်လိုက်ခြင်းနှင့်မတော်တဆမီးလောင်မှုများ ဦးစားပေးအဆင့်.....

၁၅.၅ ရေရှည်သုံးသပ်ချက်

က. လက်ရှိဓါတ်အားပေးစက်ရုံ မှရေရှည်တွင်အကျိုးသက်ရောက်နိုင်မှုများ

(၁) သဘာဝပတ်ဝန်းကျင်ပေါ်အကျိုးသက်ရောက်မှု (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ.....

(၂) လူမှုရေးကိစ္စများအပေါ်အကျိုးသက်ရောက်မှု (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ.....

(၃) အများပြည်သူလုံခြုံရေး (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ.....

(၄) အလုပ်အကိုင်အခွင့်အလမ်း (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ.....

(၅) ဒေသခံအကျိုးစီးပွား (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ...

(၆) နိုင်ငံတော်အကျိုးစီးပွား (၁) ကောင်း..... (၂) ဆိုး..... (၃) မသိပါ.....

၁၅.၆ လျှပ်စစ်မီတာခပေးချေလိုမှု

က. လက်ရှိကောက်ခံနေသောမီတာခနှုန်းထားသည်သင့်လျော်မှုတာမှုရှိပါသလား။ ရှိ..... မရှိ.....

ခ. လက်ရှိမီတာခသက်သာအောင်မည်သို့ဆောင်ရွက်နိုင်မည်နည်း

(၁)ဆင်းရဲသောအိမ်ထောင်များကိုလျှော့ဈေးနှုန်းထားဖြင့်ကောက်ခံခြင်း .....

(၂) လျှပ်စစ်သုံးစွဲမှုချွေတာသည့်အိမ်ထောင်စုအားချီးမြှင့်သောနှုန်းထားဖြင့်ကောက်ယူခြင်း.....

(၃) မသိပါ .....

ဂ. လက်ရှိလျှပ်စစ်ဓါတ်အားဖြန့်ဖြူးစနစ်ကိုပိုမိုကောင်းမွန်အောင်ပြုပြင်ပြီးဂန်ဆောင်မှုများကိုပိုမိုပြီးထိရောက်အောင်ပေးနိုင်ပါက သင့်အနေဖြင့် မီတာခကိုပိုပေးချင်ပါသလား။ ပေးချင်သည် ..... မပေးချင်.....

ဃ. ကျေးလက်ပြည်သူများအားလျှပ်စစ်မီတာခကိုအစိုးရမှအခမဲ့ဖြန့်ဖြူးပေးရန်ဆီလျော်မှန်ကန်မှုရှိသည်ဟုသင်ယူဆပါသလား ။ ယူဆပါသည်.....မယူဆပါ.....

၁၅.၇ လျှပ်စစ်ဓါတ်အားပေးစက်ရုံမှကျေးရွာလူထုဆက်သွယ်ပြန်ကြားရေးစနစ်

က. လျှပ်စစ်ဓါတ်အားပေးစက်ရုံမှကျေးရွာလူထုသို့သတင်းအချက်အလက်ပေးလိုလျှင်-

(သင့်လျော်သည့်ကွက်လပ် တွင်√ မှတ်သားပါ)

(၁) ကျေးရွာကိုယ်စားလှယ်များကိုစက်ရုံသို့အစည်းအဝေးခေါ်ပြောသည်.....

(၂) ကျေးရွာတစ်ရွာချင်းသို့လာရောက်ပြီးအစည်းအဝေးခေါ်ပြောသည်.....

(၃) ကျေးရွာသို့လူလွှတ်ပြော၊စာပို့သည်.....

(၄) စက်ရုံကြော်ငြာသင်ပုန်းတွင်ကြော်ငြာကပ်ပြီးအကြောင်းကြားသည်.....

၉. ကျေးရွာလူထုမှ နစ်နာမှုများတိုင်ကြားသည်ကိုလက်ခံဖြေရှင်းပေးသည့်စနစ် ရှိ..... မရှိ.....

၈. လျှပ်စစ်ဓါတ်အားပေးလုပ်ငန်းများတွင်ပါဂင်ဆွေးနွေးနိုင်ရန်သက်ဆိုင်သူများသို့သတင်းအချက်အလက်များအကြောင်းကြားပေးမှုအခြေအနေ

(၁) လုံလောက်စွာသိရှိရသည်..... (၂) မလုံလောက်ပါ.....

၁၆. ကျေးရွာအဖွဲ့အစည်းများ

က. သင့်ကျေးရွာတွင်လူတိုင်းဆန္ဒအလျောက်ပါဂင်ခွင့်ရှိသည့် ကျေးရွာအသင်းအဖွဲ့များတွင်သင့်အိမ်ထောင်စုဂင်များကအဖွဲ့ဂင်အဖြစ်ပါဂင်ဆောင်ရွက်နေပါသလား

၁. လူငယ်များကိုအခြေခံသောအဖွဲ့အစည်းများ(ကာလသားအဖွဲ့)	အဖွဲ့ဂင်.....မဂင်.....
၂. ဘာသာရေးလုပ်ငန်းများဆောင်ရွက်ရန်အဖွဲ့အစည်းများ(ဂတ်ရွတ်အသင်း)	အဖွဲ့ဂင်.....မဂင်.....
၃. လူမှုရေးကူညီမှုအသင်းများ (ဓမ္မပါလအသင်း)	အဖွဲ့ဂင်.....မဂင်.....
၄. တိုင်းရင်းသားစာပေနှင့်ယဉ်ကျေးမှုမြှင့်တင်ရေးအဖွဲ့	အဖွဲ့ဂင်.....မဂင်.....
၅. အရန်မီးသတ်တပ်ဖွဲ့	အဖွဲ့ဂင်.....မဂင်.....
၆. ကြက်ခြေနီတပ်ဖွဲ့	အဖွဲ့ဂင်.....မဂင်.....
၇. အမျိုးသမီးရေးရာအဖွဲ့	အဖွဲ့ဂင်.....မဂင်.....
၈. မိခင်နှင့်ကလေးစောင့်ရှောက်မှုအဖွဲ့	အဖွဲ့ဂင်.....မဂင်.....
၉. လုပ်ငန်းတူသူများဖွဲ့စည်းထားသောအဖွဲ့ (ဥပမာ-လယ်သမားအဖွဲ့၊ ရေလုပ်သားအဖွဲ့)	အဖွဲ့ဂင်.....မဂင်.....
၁၀ သမဂါယမအသင်း	အဖွဲ့ဂင်.....မဂင်.....
၁၁. နိုင်ငံရေးပါတီများ	အဖွဲ့ဂင်.....မဂင်.....
၁၂. အင်ဂျီအိုအဖွဲ့များ	အဖွဲ့ဂင်.....မဂင်.....
၁၃. အခြားအဖွဲ့များ	အဖွဲ့ဂင်.....မဂင်.....