An Analysis of the Food Security Situation in Selected Areas across Taunggyi

Vulnerability Analysis & Mapping Unit (VAM)

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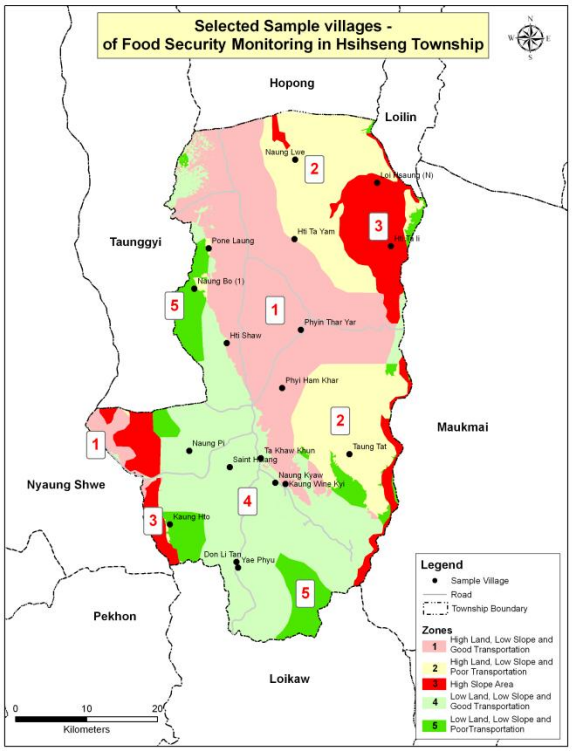
EXECUTIVE SUMMARY

- Across Taunggyi, it is seen that the overall food security situation at the household level is adequate. The main reason for this is the improved access to food that was seen across the sample. More than 90% of HHs report having two or more family members sourcing an income. Keeping in mind that the average HH size is 5 members, this translates into a more stable food security situation at the HH level – as far as access to food is concerned.

  The above is underlined by the following findings:

➢ Two percent of the sample could be classified as having 'Poor' food consumption. By comparison, in other recent WFP assessments the percentage of HHs depicting Poor food consumption was 21% for the Dry Zone (Dec'09), 21% for Lashio (March'10), 22% for Kokang (May'10) and 25% in Wa (June'10).

➢ On average the sample reported spending 50% of their income on food. This is an improvement compared to other areas where it's seen that more than half the sampled HHs spend up-to three-quarter of their income on food.



➢ Thirty three percent (33%) of HHs did not cite any major shock / difficulty that have affected their HH in the past 6 months.

➢ Only 37% of the sample reports undertaking debt in order to buy food – a lower percentage that that seen elsewhere in Myanmar.

➢ Amongst HHs reporting debt; 83% stated that they were confident of being able to repay the debt within 6 months.

- The main obstacle to improved food security is food availability. The findings of this survey underline the findings noted in the joint WFP-UNDP Rapid Assessment of the Potential Impact of Delayed Rains on Harvests carried out in the first week of June.
  The delay in rains is approximately 2 months for most farmers in Taunggyi with rains starting in July instead of May and this delay will result in lowered food availability later in the year (October & November).

- Zones 2 and 3 are the areas with the highest percentage of HHs depicting inadequate food consumption patterns.

Recommendations

Based on the data there is no need to scale up assistance in Taunggyi. However the following recommendations are put forth with the aim of improving food security across the area

a) Focus assistance interventions in Zones 2, 3 and 5 in that order of priority.

b) Continuation of Food-for-Work (FFW) and expansion of Food-for-Training (FFT) interventions that can encourage communities to build and rehabilitate agriculture related community infrastructure and enhance agriculture production.

c) Closely monitor the food security situation in the later part of the year (October-December) to determine if harvests have been drastically reduced due to the low amount of rainfall in the area. Low harvests will further reduce food availability and increase prices resulting in lowered food access.

For questions or comments concerning any aspect of the survey and this report, please contact:

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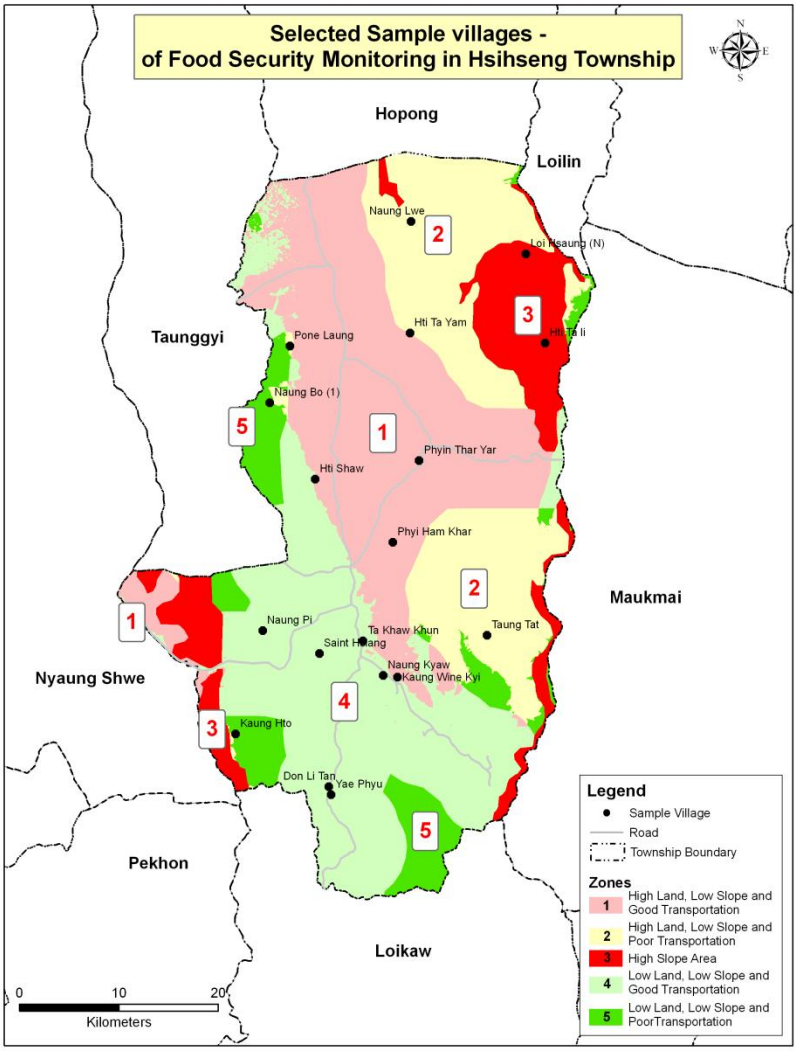
Background

Prior to sampling, WFP established economic zones that were based on land type, terrain and access to transportation.

Good Transportation & Highland Area	(Zone 1)
Poor Transportation & Highland Area	(Zone 2)
High Slope Zone	(Zone 3)
Poor Transportation & Lowland Area	(Zone 4)
Poor Transportation & Highland Area	(Zone 5)

Data collection was carried out in the month of July with 200 HHs. Map 1 depicts the sampled areas across Taunggyi. The WFP would like to thank the Adventist Development & Relief Agency (ADRA) for their cooperation and support.

Map 1: Area Covered by Assessment



Demographics

Across the sample it was seen that approximately 5% of households were headed by women. This is a relatively low figure. It is seen that the highest number of female headed HHs was seen in Zone 4, the Zone classified as having Poor Transportation and Lowland Area.

The average number of members in a HH was 5 with little variation across Zones.

Dependency Ratio: Data on age of members in the household was used to calculate the dependency ratio. The dependency ratio relates the number of children (0-14 years old) and older persons (65 years or over) to the working-age population (15-64 years old). A high dependency ratio indicates that the economically active population faces a greater burden in terms of achieving food security and maintaining a comfortable life-style for the household. The dependency ratio for the sample was 80 – a one point reduction compared to the findings in February' 09. To give the reader an idea of scale it can be seen that the dependency ratio for Laos is 81 and for Netherlands is 42 (WHO, 2007).

Education

Respondents were asked to provide the number of eligible primary aged children in the HH (irrespective of their being enrolled in primary school). Then respondents were asked about the number of actual primary school aged children in their household who were currently enrolled in school. It was seen that for the entire almost all primary-school aged children were enrolled in school at the time of the survey.

The Gross Enrollment Rate (GER) amongst for primary school amongst the sample was 93 for all primary aged children. The GER is calculated by expressing the number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels. However this only reflects the children enrolled and not the fluctuation in attendance over a year.

Table 1: Enrollment Rates for Primary School Aged Children in the Sample

	Number of Primary School Aged Children	Number of Children Enrolled in Primary School	Percentage of Primary School Aged Children Enrolled (%)
Boys	72	68	94 %
Girls	90	84	93 %

When disaggregating the above data by zone, it is seen that Zone 3 (High Slope Zone) had the highest percentage of children enrolled in primary school. In contrast 88% of all children in Zone 5 (Poor Transportation & Highland Area) were currently enrolled in school. However this is still relatively high enrollment percentage when compared to other parts of Myanmar.

The average cost incurred by a HH that did send a child to primary school was 16800 Kyats per year. This is a very low amount when compared to education expenses incurred by HHs in areas

like NRS, Wa or Lashio for example. It is this factor – the low cost of education – that is perhaps the main reason for the high enrollment rate amongst primary school aged children in Taunggyi.

Food Availability

Agriculture

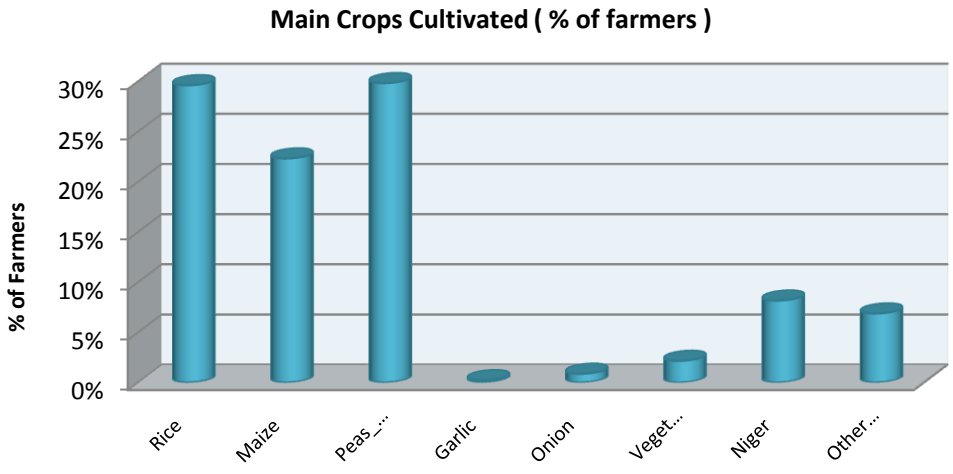
Land Availability and Access
Access to land was very high across zone with the exception of Zone 3 (High Slope Zone). Overall, for the sample it was seen that 90% of the HHs reported some access to land. However this figure drops to 80% for Zone 3 – given the fact that this is area is characterized by steep slope of the terrain, the finding is not surprising.

While land access is relatively good, the amount of land accessed in terms of acres is relatively lower when compared to other parts of the country. The average size of rain-fed plot of land was 3 acres while upland plots on average were 3.5 acres.
The most common type of land accessed was upland plots which were used by 77% of all farmers followed by rain-fed flat land (13%) and wet paddy land (13%).

Nearly every farmer accessed land by virtue of ownership with 12% of the farmers renting land in kind – returning a portion of harvest to the owner in lieu of rent.

Crops
Rice, beans or peas and maize were the most common crops cultivated with the majority of farmers most commonly growing two of these three crops.
An equal percentage of farmers reported the cultivation of rice and beans/peas - Sixty nine percent (69%). Thus multiple cropping is very common in Taunggyi (see below). Fifty two percent of farmers also reported the cultivation of maize. Average acreage of land cultivated per crop per HH was very similar; an average of 1.7 acres.

Figure 1: Main Crops Cultivated – by Percentage of Farmers

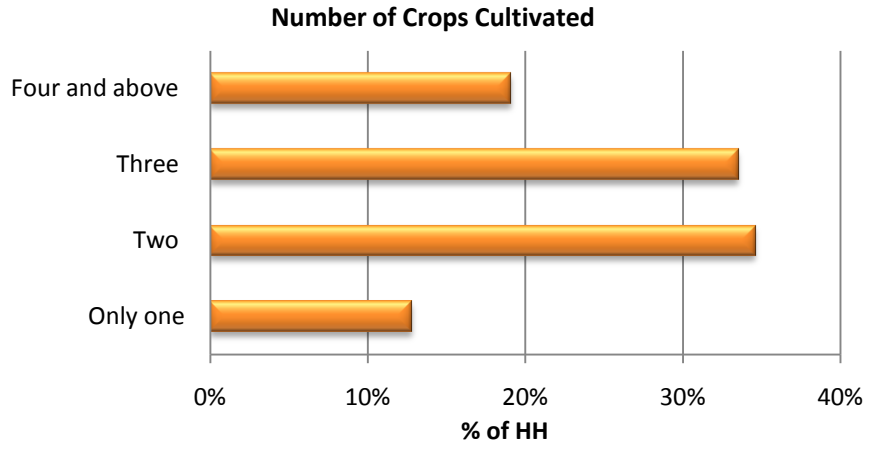


Cropping Patterns

The majority of the farmers practice multi-cropping with such HHs mostly cultivating two (35% of farmers) to three (33%) crops. Approximately 18% of farmers reported the cultivation of four crops. Thus for the sample it is seen that 86% of farmers practice multi-cropping with HHs growing rice and peas or rice, peas and maize.

Approximately 13% of farmers reported the cultivation of only one crop – either rice or peas/beans.

Figure 2: Number of Crops Cultivated by a HH



Labor

Households with access to land were asked if they hired casual labor to help cultivate their land. Thirty five percent (35%) of farmers reported hiring labor with the highest incidence in Zone 5 (Poor Transportation & Highland Area). However the inability to afford labor and the unavailability of sufficient labor are amongst the main constraints preventing farmers from hiring labor (see sub-section on Constraints to agriculture). Thus there are a significant proportion of farmers who require labor but are unable to access it.

Livestock

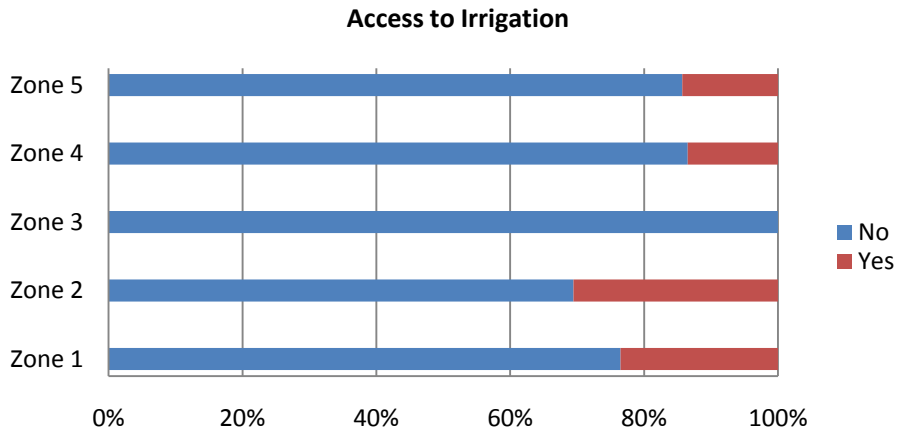
Sixty six percent of the sample (66%) report ownership of livestock. Surprisingly cattle (cows and / or buffalo) and not poultry was the most commonly owned livestock. Zones 2 and 5 had the highest percentage of HHs reporting any livestock ownership. On average, nearly 75% of sampled HHs in these 2 zones owned some livestock.

Irrigation

On average eighteen percent (18%) of the sample reported having access to irrigated land. This is significantly lower than the irrigation access reported in other areas; for example 21% in Kachin (Dec'09), 28% in Lashio (March'10), 22% in NRS (Sept'09) etc.

Amongst the percentage of farmers reporting access to irrigated land; the highest percentage was seen in zones 1 (Good Transportation & Highland Area) and 2 (Poor Transportation & Highland Area). By contrast not a single sampled HH in Zone 3 (High Slope Zone) reported having access to irrigation.

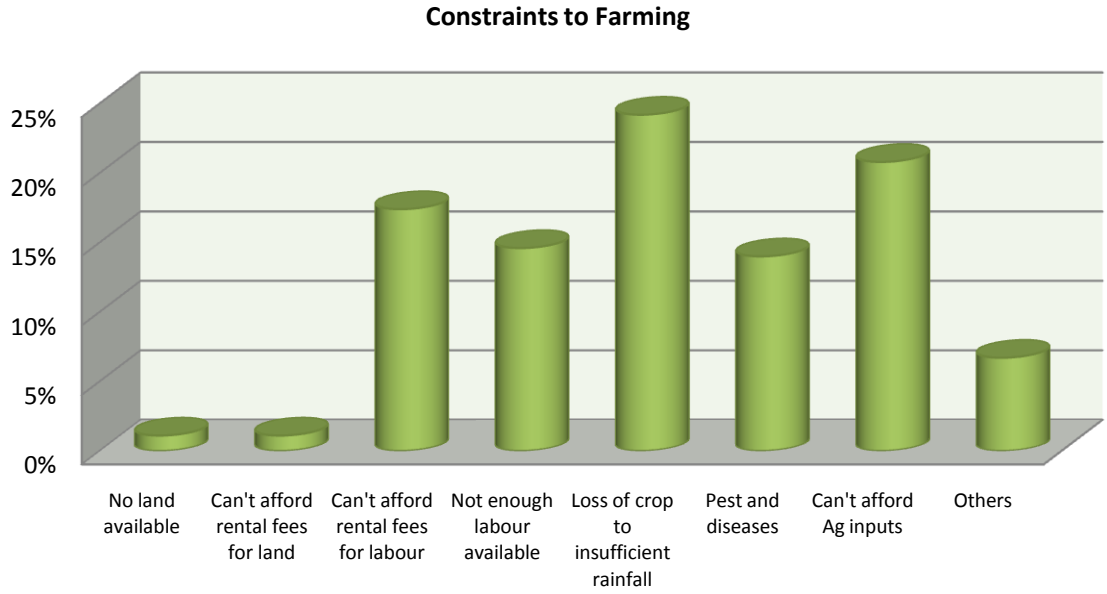
Figure 3: Access to Irrigation, By Zone



Constraints to Agiculture

HHs were asked to list the main constraint or obstacle to farming. *From the data it is clear that the inability to save their harvest combined with the inability to increase the low agricultural productivity is the biggest threat to HH food security across the state.*

Figure 4: Main Constraints to Farming



The most commonly reported constraints to farming were:

1) Loss of crop due to adverse weather conditions / natural disasters
2) Inability to afford good quality seeds, fertilizers and agricultural inputs
3) Inability to afford labor
4) Lack of sufficient labor
5) Loss of crops to pests and diseases

One-fourth of all farmers (255%) in the sample across Taunggyi reported the loss of their crop to natural disasters / adverse weather conditions as being the primary constraint to farming. This finding is in line with findings reported in the joint WFP-UNDP Rapid Assessment of the Potential Impact of Delayed Rains on Harvests carried out in the first week of June. This study highlighted Taunggyi as being most likely to be adversely affected by the delayed rainfall.

In Taunggyi the majority of farmers reported the planting time of rice and beans / peas (the major crops) to be in the months of May & June and the harvesting time to be from August onwards. The delay in rains is approximately 2 months amongst most farmers in Taunggyi with rains starting in July instead of May and this delay will result in lowered food availability later in the year. The problem of delayed rains is compounded by the fact that more than 80% of farmers do not have access to irrigation systems and thus have to depend on natural sources for water for agricultural purposes.
A further obstacle to sufficient harvests is the lack of inputs which result in farmers being unable to maximize agriculture.

The lack of sufficient labor and the inability to afford labor wages (since demand is high wage rates will also be proportionally higher), furthers inhibits productivity.

Thus the lack of water and presence of pests and pathogen affect the quantity of food available; and the lack of labor and basic agricultural inputs results in farmers being unable to increase harvests. Both these factors together result in lowering food availability, increasing staple food prices and increasing household food insecurity.

Analyzing the data by zone, the following pattern is seen:

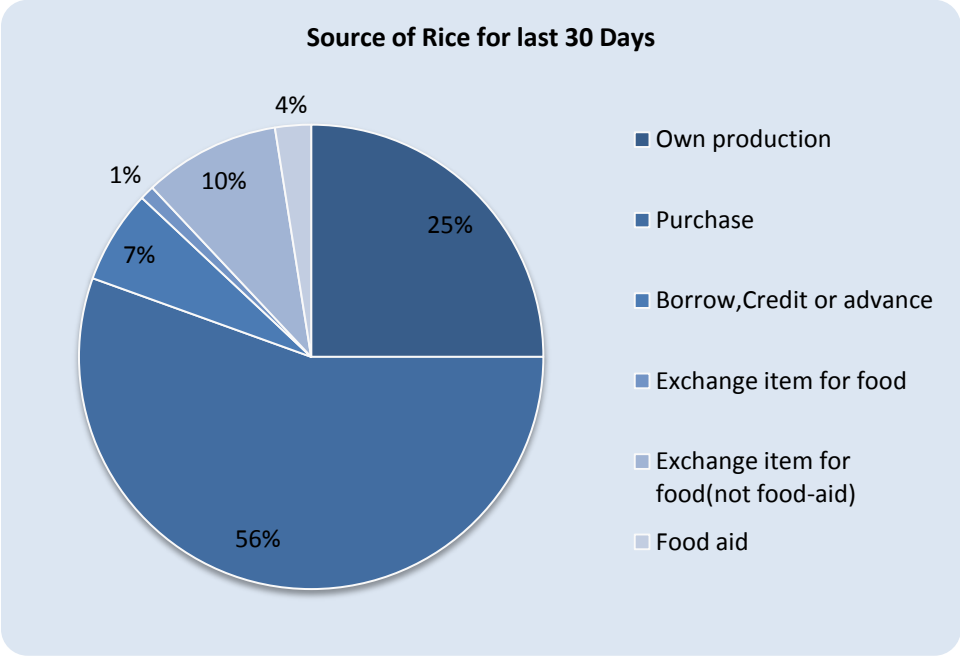
Table : Main Constraints to Agriculture – By Zone

		Zone
1	Zones with highest percentage of farmers (within that township) reporting the loss of crop due to weather conditions as a main constraint to agriculture	Zone 1 Zone 5
2	Zones with highest percentage of farmers (within that township) reporting the lack of basic inputs as a main constraint to agriculture	Zone 5
3	Zones with highest percentage of farmers (within that township) reporting the inability to afford labor as a main constraint to agriculture	Zone 5
4	Zones with highest percentage of farmers (within that township) reporting the lack of sufficient labor as a main constraint to agriculture	Zone 4
5	Zones with highest percentage of farmers (within that township) reporting the loss of crop to pests / diseases as a main constraint to agriculture	Zone 2

FOOD ACCESS

Source of Rice

Figure 5: Source of Rice



Households were asked the source of rice consumed during the prior month (30 days). The most common means by which HH sourced food for household consumption was:

1. Purchase – 56%
2. Own Production – 25%
3. Exchange work for food - 10%

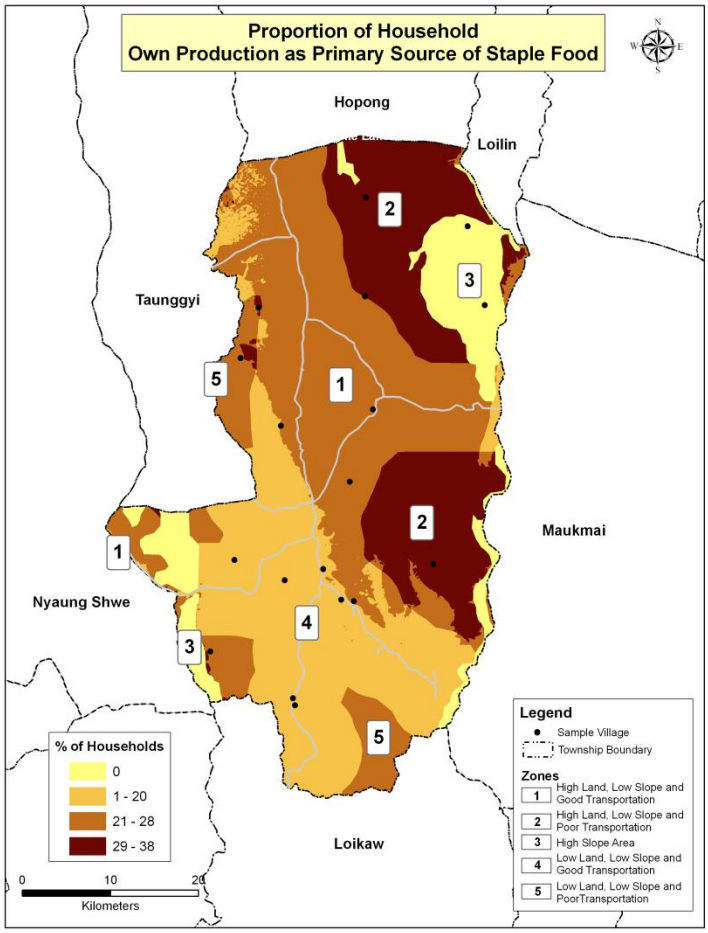
Other forms of access such as exchanging assets, receiving food as a gift etc were hardly relied on. The most common forms of access was either from own production or by purchase. However the fact that the harvest season is scheduled to begin from August end / September is the likely reason for this high reliance on purchase.

Disaggregating the data by zones, the following pattern is seen

1. Zone 2 (38%) and Zone 5 (28%) has the highest percentage of HHs relying on staple food consumption from their own production.
2. Eighty percent (80%) of HHs in Zone 3 rely on purchase for their staple food needs.
3. Approximately 18% of HHs in Zone 3 and 4 report obtaining food by working. This is far higher than the sample average of 10%.
4. Reliance on food aid was highest in Zone 2. Ten percent (10%) of HHs report resorting to food aid to source even their staple food for their HH consumption.

Map 2: Own Production as a Main Source of Rice Consumption

Farmers were also asked to approximate how many months they estimated their rice harvests would last their HH. Half the sample estimate their rice harvests to last them between 3-4 months. Assuming the harvest season this year starts around mid to end August, that would mean that these HHs would be self-sufficient in terms of rice consumption till around early December. It should also be noted that the joint WFP-UNDP Rapid Assessment of the Potential Impact of Delayed Rains on Harvests reports that nearly 70% of farmers in Taunggyi enjoy only one harvest a year. Thus there is a sizeable proportion of farmers who will not have sufficient stocks to last them till their next harvest. If rainfall continues to be sporadic, these farmers face greater risk.



Sources of Income

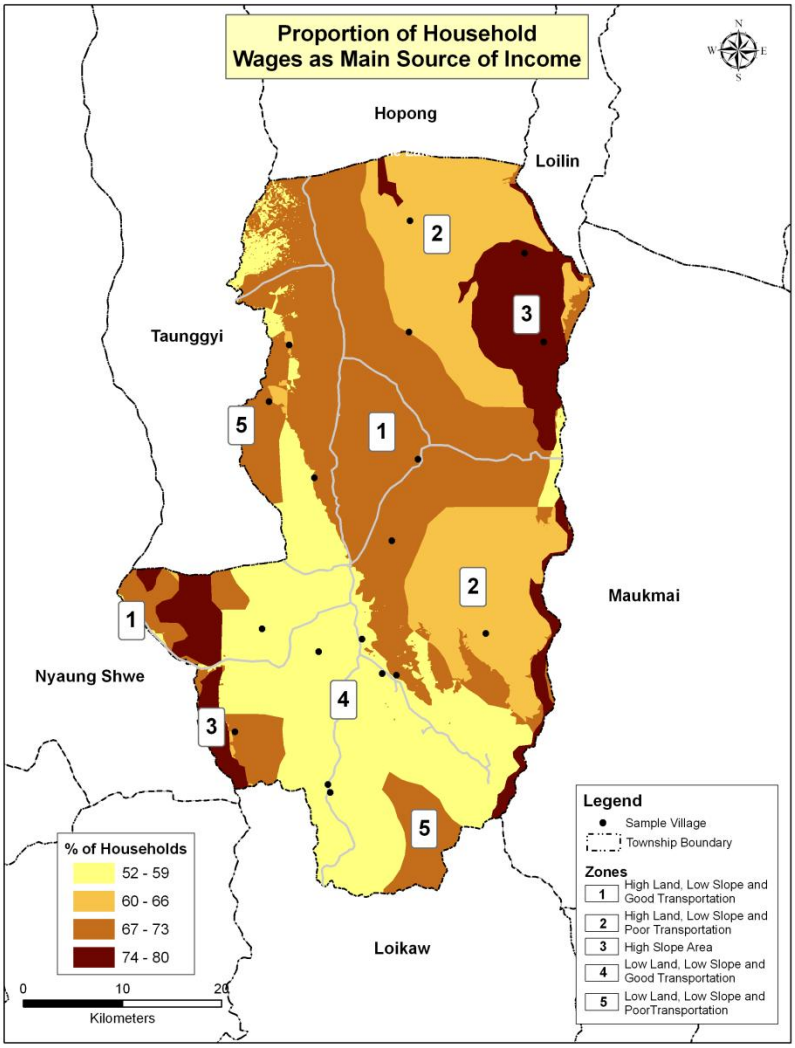
Households were asked to list their sources of income and it is seen that the most common source for households was income derived from wages. Thus despite there being reported a shortage of labor availability as a constraint to agriculture, it can be seen that casual labor is the most common source of incomes. Fifty seven percent (57%) of the sample reported income derived from wages being one of their main sources of income. Agriculture as a source of income was reported by 6% of the sample. This reliance on agriculture to source incomes is lower to that seen in other parts of the country. For example it is seen that 14% of sampled HHs in NRS relied on some income from agriculture while in the Dry Zone this was 23%.

Taunggyi also depicts a higher reliance on small / petty trade as a main source of household income. Nearly 14% of HHs reported generating some income from small trade; this reliance is far higher than that seen in other parts of the country.

More than half the sample (52%) reported two members earning an income. An additional 21% of HHs reported depending on 3 members generating an income. Only 8% of HHs depended on a

single HH member for income. This is a surprising finding – given that the average size of the HH is 5, the fact that 92% of the sample relies on incomes from 2 or more HH members, means that HHs can cope with shocks and also access food more easily. The fact that HHs are able to source income from two or more members is also a primary reason for Taunggyi depicting comparatively good food consumption patterns.

Map 3: Dependence of Wages as a Main Source of Income



Sources of Expenditure

Data on expenditure for food and non-food items, such as education, health transport, etc. were collected to better understand household resource allocation. Food, as a primary expense of the HH was reported by 74% of the sample. The next main primary expense item was farm inputs (17%). Basic expenses such as expenditure on health, education and utilities were minimal (as a primary expense).

Taunggyi exhibits expenditure patterns that are slightly different from other parts of the country. Usually food, education and health are the key expenses. However in Taungyyi it is seen that various kinds of expenditure are reported by a similar percentage of HHs. Expenditure on education, health, farm input, utilities and miscellaneous expenses are all reported by approximately 13% of HHs.

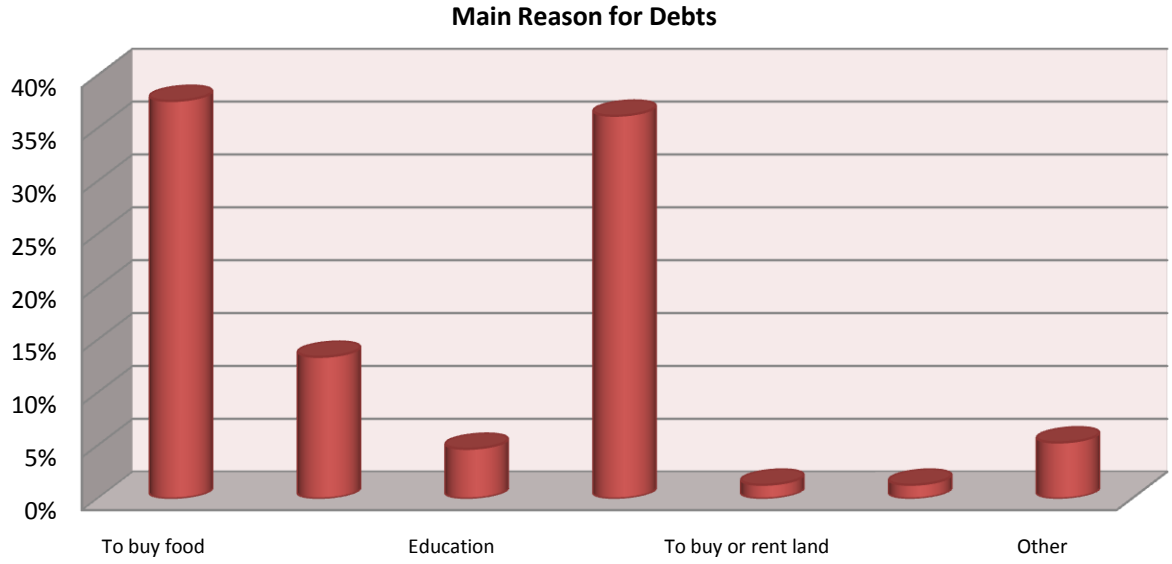
Health is reported as a monthly expenditure by 14% of HHs and this is markedly lower than health expenditure reported in other areas. For example in Wa Fifty seven percent (57%) of the sample reported some monthly expenditure on health.

On average the sample reported spending 50% of their income on food. This is an improvement compared to other areas where it's seen that more than half the sampled HHs spend up-to three-quarter of their income on food.

Access to Credit & Debt

Seventy five percent (75%) of the sample reported currently being in debt and needing to repay their loan. This is a similar percentage to that of 84% (Dry Zone, Dec'09), 83% (NRS, July'09), 74% (Kachin, Dec'09) and 66% (Lashio, March'10).

Figure 6 : Main Reasons for Household Debt



It is clear that the main reasons for HHs to undertake debt can broadly be classified as

1. To buy food – 37%
2. Loans undertaken to buy agricultural inputs – 36%
3. To cover health expenses – 13%

Amongst HHs reporting debt; 83% stated that they were confident of being able to repay the debt within 6 months.

Map 4: Percentage of HHs Undertaking Debt to Buy Food

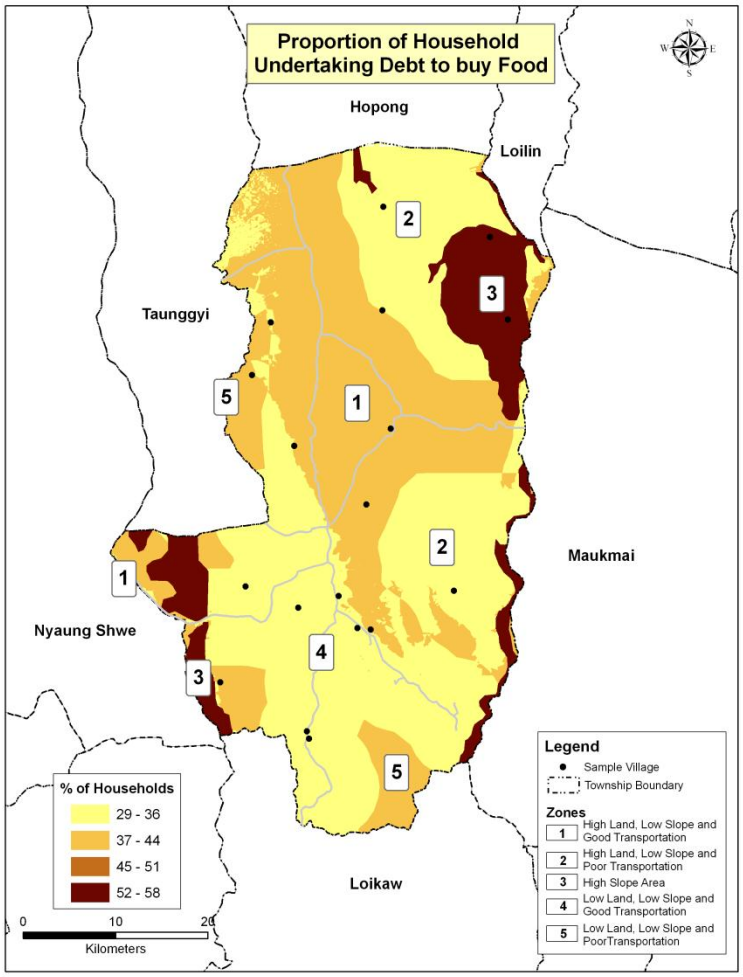
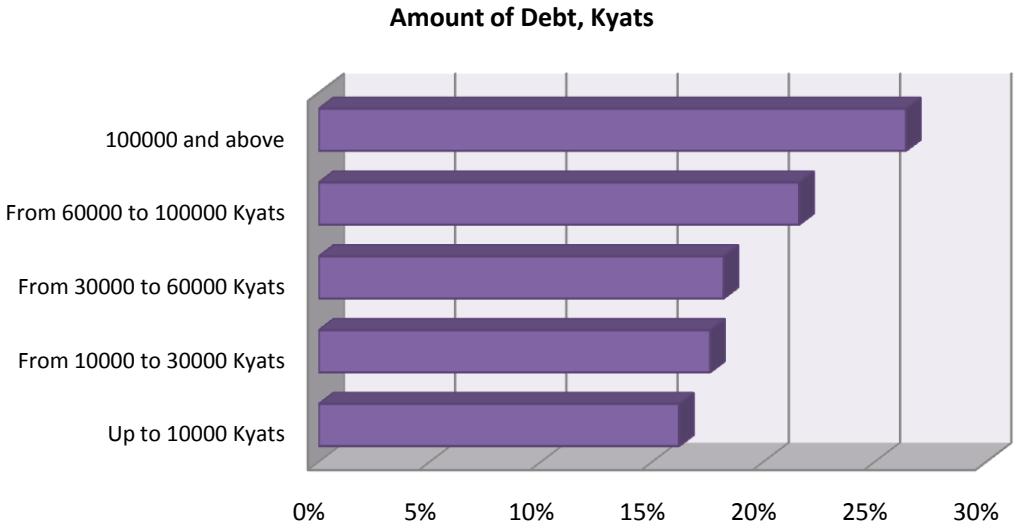


Figure 7: Amount of Debt, in Kyats



Food Consumption

Food Consumption Score (FCS)
Information was collected on the dietary diversity of the HH with respondents being asked to list the number of days a particular food item was consumed by the HH in the 7 days prior to the interview. Thus a '0' for Fruits would indicate that a HH did not consume any fruit in the previous 7 days while a '4' would indicate consumption 4 days out of 7 etc. The mean food consumption score for a 7 day period for the sample was then calculated

Food Consumption Groups were formulated and it is seen that approximately 43% of the sample can be classified as being food insecure. Forty one percent (41%) of the sample can be classified as being 'Borderline' and only 2% as 'Poor'. In other words, 57% of the sample depicts adequate food consumption.

By comparison, in other recent WFP assessments the percentage of HHs depicting Poor food consumption was appreciably higher; 21% for the Dry Zone (Dec'09), 21% for Lashio (March'10), 22% for Kokang (May'10) and 25% in Wa (June'10).

Table : Food Consumption Scores across Zones

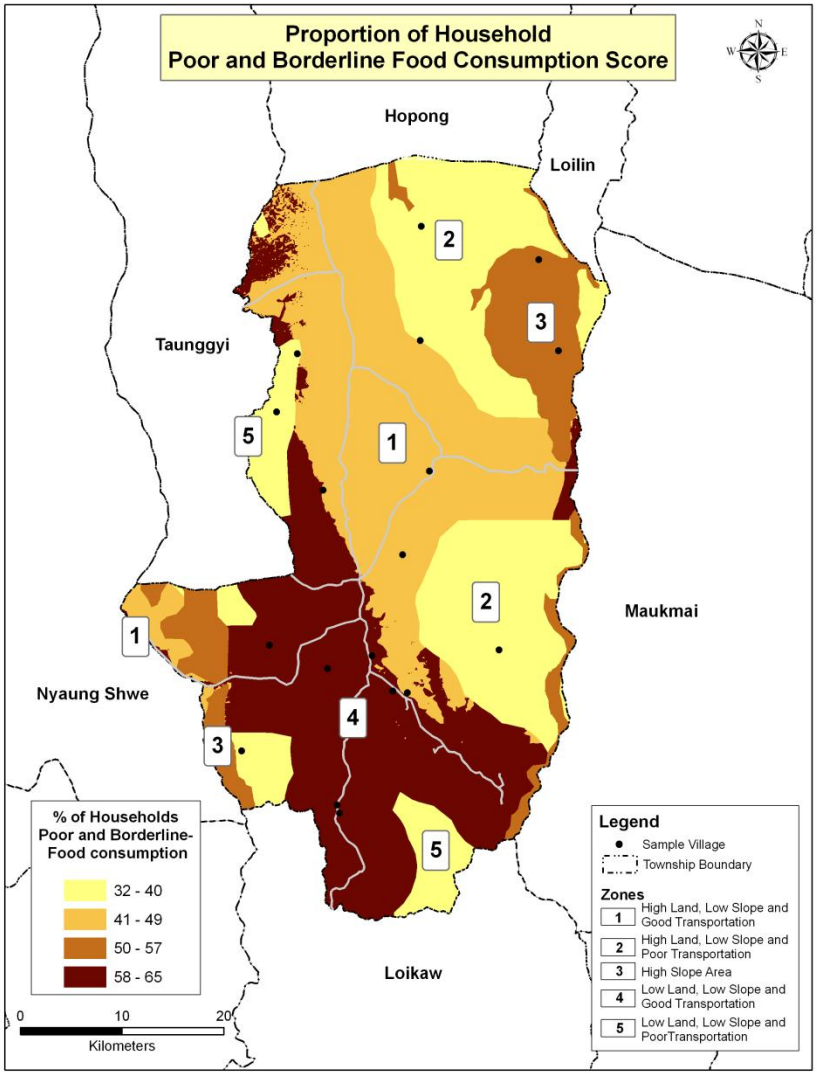
		Percentage of the Sample (%)		
		Poor	Borderline	Acceptable
1	**Zone 1**	3	42	55
2	**Zone 2**	0	32	68
3	**Zone 3**	5	45	50
4	**Zone 4**	3	63	35
5	**Zone 5**	2	30	68

Note: Figures have been rounded

Thus Zones 3 and 4 depict relatively low food consumption patterns as compared to the other zones. By contrast, in Zones 2 and 5, 68%of all sampled HHs depict acceptable food consumption patterns.

It can be summarized that across Taunggyi there are pockets of food insecurity notably in the above mentioned two zones that have a higher percentage of HHs with poor food consumption. WFP's assistance programs should thus focus on these two zones and ensure that food consumption patterns improve.

Map 5: Poor and Borderline Food Consumption



Shocks

Respondents were asked to list the 3 main shocks or difficulties faced by their household in the past 6 months. Once the respondent had listed the shocks he or she was then requested to list the shocks in order of severity from 1 (most severe) to 3 (less severe).

Table 4: Main shocks faced by Households

	Shock	
1	Sickness of HH member/ High health Expenditures	13 %
2	Poor harvest	9%
3	Unable to practice agriculture	9%
4	Debt to reimburse	8%

Note: Figures based on the cumulating of multiple responses.

Thirty three percent (33%) of HHs did not cite any major shock / difficulty that have affected their HH in the past 6 months. Consequently the percentage of HHs citing various shocks is far less for this sample that has been seen in other surveys.

Water and Sanitation

Access to water – Households were asked about the source of their drinking water. Roughly 28% of the sample reported sourcing their drinking water from protected sources. The remaining HHs primarily obtained their water from mountain streams and rivers. Zones 2, 3 & 5 had a higher percentage of HHs reporting the sourcing of water from protected sources (i.e. wells and tube wells). By contrast Zone 4 had the highest number of HHs reporting a reliance on unprotected sources.

Households were also asked if they treated their drinking water and 67% of the sample reported not treating their drinking water. FurthermoreeEighty three percent (83%) of all sampled HHs reported never having received any health education on basic nutrition or hygiene. This is a potential threat that needs to be addressed by health extension & education. For the remaining HHs (that treated their drinking water); filtering of drinking water was the most common method of treatment

Latrine Facilities – Only 5% of the sample reported not having any latrine facilities. This is a relatively lower figure than seen elsewhere in the country; 37% in NRS and 36% in the Dry Zone for example. Amongst the remaining HHs (that had access to latrines); pit latrines were the most common 53%) followed by fly-proof latrines (43%).