



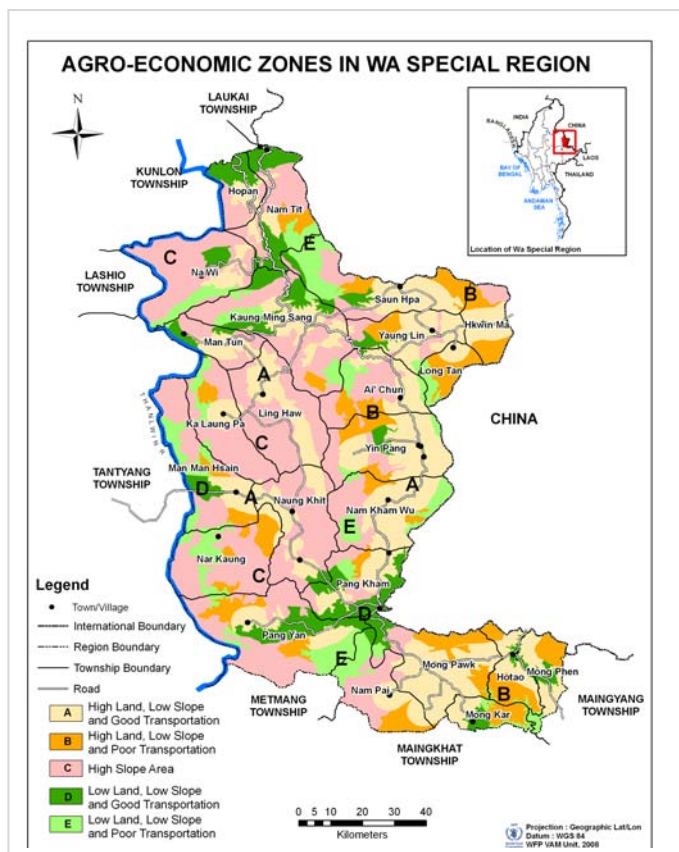
Food Security Profile WA Special Region November 2008

This Report summarizes the findings of the Food Security Profiling assessment carried out across the Wa area in September 2008.

Food Security Profiling in Wa region were carried out by WFP and its Cooperating Partners namely WHH, TDH, CARE (along with Cooperating Partners of KOWI including UNODC, Malteser) and WA local authority in PangKham, Pang Yan, Naung Kit and NamKham Wu Townships to present a snapshot of household food security in that area; 43 villages with 616 households were covered under two district: this assessment. It should be noted that the sample size has statistical limitations. However care was taken to ensure that the geographic coverage of the sample was considerable.

Wa region is administered under the official Wa Special Region 2 of the Northern Shan State. The Administrative capital is Pang Kham. Past studies have described the Wa area as being cohabited by multi-ethnic social groups living in a harsh environment and being forced to resort to multiple coping strategies in order to adapt to the harsh livelihood conditions.

According to the demographic break up; it is seen that Wa represents 61% of the sample followed by Lahu (23%) and Shan (14%). The Chinese and Kachin ethnic groups make up the remaining 2%.



From methodological/analytical perspective, the sampling of villages used probability proportional to size sampling by zoning and households were randomly selected and data collection tools used included the Household & the Key Informant Questionnaire. Zoning prior to the assessment was classified as per:

- | | |
|---|---------------|
| High Land, Low Slope, Good Transportation | Zone A |
| High Land, Low Slope, Poor Transportation | Zone B |
| High Slope | Zone C |
| Low Land, Low Slope, Good Transportation | Zone D |
| Low Land, Low Slope, Poor Transportation | Zone E |

Zoning criteria was set up based on the following criteria (1) Elevation: 1000 meter above and below (2) Slope:30 degree above and below and (3) Transportation: 3 miles buffer from main road.

Methodology of the Food Security Profiling utilizes the methodology formulated by FANTA with special focus on household access to food (related to the frequency with which the households address their food access problems with coping mechanisms) and the dietary diversity (number of foods consumed regularly: two items per meal would mean “deficient”).

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Main findings:

- Access to land was relatively high and uniform across zones compared to other states. It is seen for the sample that lack of labor is the single most common obstacle to the expansion of agriculture by HHs. The problem is further compounded by low quality of arable land.
- Paddy, mostly upland paddy is the most common crop and is cultivated by 92% of farming HHs.
- Over 63% of agricultural HHs have no access to irrigation (a key factor being that a large part of the area is highland). As a result, rice production can fluctuate significantly from year to year and agricultural households lack alternatives that would allow them to maintain stable incomes or cope in times of poor harvest.
- Incomes were most commonly sourced through wage-earning activities or by a combination of temporary informal activities.
- The primary source of expenditure on food was 76% and food was the single most common expenditure with nearly all the sample (97%) reporting food as their first, second or third expenditure source. As per the Household Dietary Diversity Score (HDDS) it is seen that more than 80% of HHs exhibit either deficient (57%) or moderately deficient intake (25%).
- From the Household Food Insecurity Access Scale (HFIAS) it is seen that 84% of the sample perceived themselves to be moderately (47%) or severely (37%) food insecure.
- The fact that 36% of the sample obtains their drinking water from unprotected sources combined with the fact that one-third of the households have no latrines facilities and more than half of the sample have received no basic health education – has severe potential health risks.

Availability

Land Availability and Access

Access to land was very high and uniform across zones. Overall, for the sample it was seen that 96% of the HHs had some access to land.

Amongst HHs that had access to land; up-land holdings were the most commonly reported (96%) followed by wet paddy land (34%) and small gardens (30%).

Average size of landholdings was relatively high (especially when compared to neighboring South Asian countries) and depended on the type of land holding and also showed variation across zones.

On average across all land-holding type, it was seen that Zone A and E had the largest plots; in particular upland plots – an average size of 17 acres for Zone A and 20 acres for Zone E (as compared to an average sample size of 15 acres). Zone C had markedly smaller land holdings (on average) as compared to other zones.

HHs (reporting access to land) were also asked why they did not use more land. It is seen that lack of labor is the single most common reason as to why these HHs (80%) did not increase scale of farming. An additional 18% reported the lack of land availability as a constraint. Thus lack of funds, high input costs, debt-burdens do not seem to be the main constraints to farming. Rather it is the lack of available

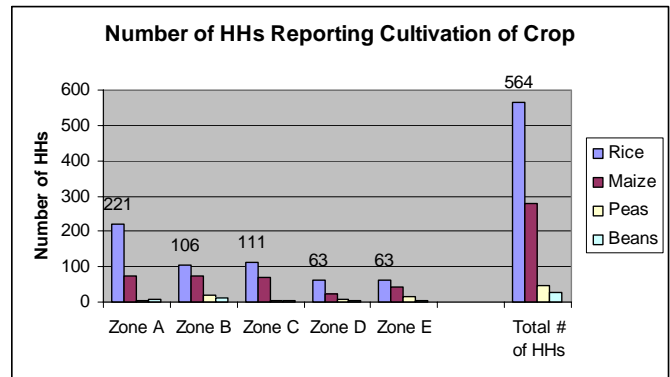
labor. In other words, HHs are willing to pay and need labor (demand) but there is a considerable lack of supply.

Agricultural yields are also affected by poor soil fertility (a result of deforestation and frequent shifting cultivation), irregular rainfall pattern, lack of inputs and agricultural extension services.

Crops

Rice is the most common crop cultivated with 92% of HHs who have some access to agricultural land. Maize was also cultivated by less than half the sample (45%). Peas and beans accounted for less than 8% of households. Keeping in mind land-holding patterns and weather conditions it is not surprising that rice cultivation is most prevalent across sample. However certain implications of this almost total dependence on rice are theorized below.

Upland rice cultivation is most prevalent across sample and this is reflected in average land sizes for each crop grown by a HH in a zone. It is seen that farming HHs typically allocate 9 acres of land for rice cultivation and those HHs that also farm maize typically allot half this acreage. Peas and beans are grown in plots of less than an acre (most probably in small gardens).



Te and rubber are also important crops in the region and more information needs to be collected on the extent of their cultivation, productivity and benefits to farmers.

Irrigation

Only 37% of HHs (with access to land) reported having access to irrigation. This is a worrying statistic as it indicates that

- (a) Over 63% of agricultural HHs have no regular access to irrigation and instead depend on natural sources which results in HHs practicing shifting agriculture. Thus any delay in rains, change in weather conditions would have direct and far-reaching effects on livelihoods.
- (b) HH members would have to spend significant time and effort to source water for agriculture (esp. during the planting season).
- (c) Relatively high land access need not translate into high production since lack of water would mean HHs are forced to cultivate lesser areas.

Food security in Wa does not seem to be constrained by lack of access to land but rather by a combination of factors that adversely affect agricultural productivity and thus food availability.

- 1) Reliance on Rice / Mono-cropping
- 2) Lack of Irrigation Facilities
- 3) Lack of Labor

The heavy reliance on rice cultivation increases the vulnerability of the rural population, as rice farming does not provide a stable income (WB, 2006). As a result of irregular climatic conditions, rice production can fluctuate significantly from year to year and agricultural households lack alternatives that would allow them to maintain stable incomes or cope in times of poor harvest.

This lack of crop diversification is probably driven by the farmer's fear of economic loss which prevents him switching to alternative crops. Among problems faced by individual farmers in growing

other crops is that at most locations, the marketable supply is not large enough to attract other buyers. Further, this lack of a critical minimum supply volume of alternative crops also inhibits the agro-industry from establishing value chains of local food products.

The continuous practice of mono-cropping combined with relatively low use of agri-inputs means that soil fertility levels are constantly threatened. This, over time, will lead to decreased yields and necessitate increased inputs costs by the farmer to maintain yield levels.

Livestock

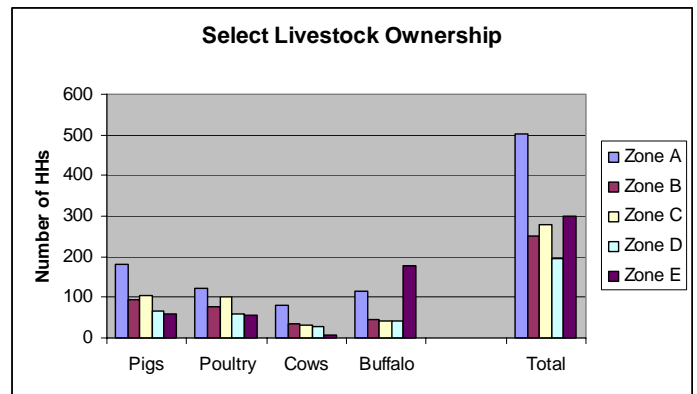
Though reliance on income from livestock is relatively low across the sample; livestock ownership is fairly high. Across the sample, approximately 82% of households reported ownership of some livestock.

Pigs (82%) followed by poultry (68%) were the most commonly reported livestock. It is interesting to note a significantly higher difference in ownership of pigs / swine as compared to poultry. One could expect to see the opposite (particularly in low-income households) as poultry is cheaper to obtain.

A relatively high ownership of cattle is also seen (29% of HHs owning cows and 43% buffalo). Cattle is a valuable asset to households since

- (a). They are used as in agricultural activities and help in tilling.
- (b). Provide a source of nutrition
- (c). Are a valuable source of income and can be sold in times of extreme crisis (coping strategy)

Livestock ownership across zones showed a similar pattern and Zone A had the highest number of HHs reporting ownership of cattle.

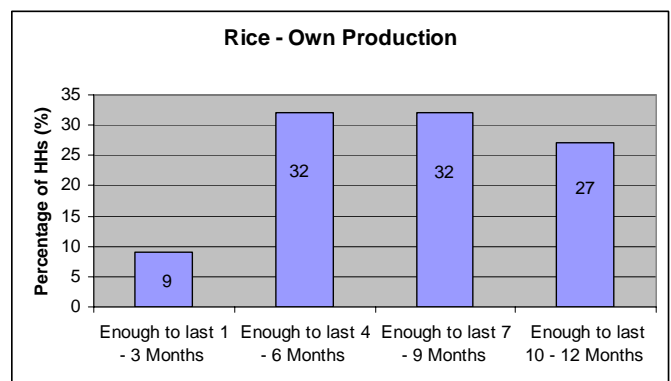


Staple Food Stock

Households were asked to report on approximately how many months their rice or maize stock would last them. From the data it can be seen that 64% of the sample had enough food stock to last them between 4 – 9 months (average being closer to 6 months).

Zones A and B had the highest percentage of HHs reporting adequate staple food stock to last them between 4-9 months (70%). However the zone with best average food stock is Zone D wherein 63% of households reported enough stock to last between 10 -12 months.

Thus across sample HHs seems to be able to generate some buffer against food shocks. However such food stocks refer to only rice or maize. More information needs to be collected on the state of other food stocks and if indeed HHs are able to stock other crops or rely mainly on purchase during the period between harvests.



Access

Source of Income

The most common source of income for households was income derived from wages. Fifty one percent of the sample reported wages being one of their three main sources of income.

However, equally pertinent is the dependency on households to source income from “Other Sources”. Two hundred and fourteen (214) households reported income from other sources as being one of 3 main income sources.

Not much variation is seen across the zones with main income sources being wages followed by other sources. The notable exception being Zone B where the most common source of income reported was from other sources followed by wages.

The relatively high percentage of households depending on other sources for incomes indicates that for these households income earning is a combination of varied activities practiced on an as-and-when basis.

Approximately 10% of the sample reported deriving income from agriculture or livestock. However only 6% of the sample reported income from agriculture as a primary income source. It can be assumed that these households have larger areas of land and are able to afford inputs, labor and thus maximize yields and are able to generate higher levels of income. It should be noted that a greater number of households rely on livestock to generate their primary incomes as compared to agricultural activities.

Agriculture is thus primarily a source of staple food and not an income generating activity.

It is interesting to note that only 6% of the sample reported sourcing income from 3 or more sources. Thus on average it is seen that households obtain income from 2 sources – these most likely being from wage labor and from other sources (a combination of informal, temporary activities).

Sources of Expenditure

Sampled households were asked to list their three main sources of expenditure. Food was the single most common expenditure with nearly all the sample (97%) reporting food as their first, second or third expenditure source. Furthermore, for more than three-fourth of the sample, food was the primary expenditure item. Thus nearly the whole sample reports having to spend on food and more than 75% of these households report expenditure on food as their biggest expense.

Expenditure on health was reported to be the second most common source of expense with 40% of the households reporting it to be one of their three main expenses; followed by expenditure on shelter and clothing (22% of the sample).

It is important to note that education is not an important source of household expenditure and this could be a result of one or more of the below factors:

- There are limited opportunities for education in Wa. Secondary data from the region indicates that only young children (below the age of 9) have access to schooling since in most villages schools have only one teacher and are thus only able to impart education till grade 3. This means that only a small proportion of children can access primary education in township schools. The issue of expenditure on education for HHs with older children is thus moot.

- The opportunity cost of food security is high (Engel's Law; which in this context is seen as the greater the household food insecurity the greater the share of household food expenditure to total expenditure). Households are either unable to afford to send their children to school or urgently need them to supplement household labor. The importance and prevalence of food as a source of expenditure across the sample would also mean that households have less money to spend on other key expenses.

Source of Food

Households were asked the source of their rice consumed during the prior month (July 2008, ending of lean period). More than half the sample (52%) reported that own production was the source of rice consumed by them. This further underlines the fact that households practice agriculture to primarily source staple foods i.e. practice subsistence agriculture. And this activity is in tandem with income sourcing activities practiced by the HH.

Approximately 22% of the sample reported sourcing food on credit, by borrowing, by exchanging items for food and / or working for food. It should be noted that these activities are to a greater or lesser degree – coping strategies. The fact that 22% of the sample resort to these activities to source a staple food points to a significant problem in accessing food (which could be a function of poverty, lack of access to land and lack of employment opportunities).

Approximately 16% of the sample purchased rice for their own consumption. The relatively low reliance on purchase (especially when compared to other recent studies) to source rice across the sample is noteworthy.

Household Dietary Diversity Score

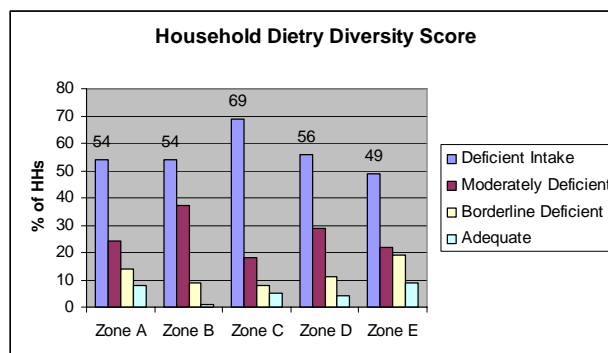
More than 80% of HHs exhibit either deficient (57%) or moderately deficient intake (25%). Furthermore, less than 6% of HH were seen to have adequate consumption.

Across Zones:

Zone C had the highest percentage of HHs with deficient intake (69%).

Zone B and C had the highest percentage of HHs with deficient or moderately deficient intake; over 87% of HHs.

Zones A and D had approximately 9% of HH reporting adequate intake.



This should not be taken to mean that HHs in Wa are lacking food; rather that there is a too high a dependence on staple foods and consumption of various food groups across sample is low. The reasons for this could be any one or more of the below factors:

- Food insecure households (typically lacking income sources) will rely more on staple foods as they are cheaper.
- HHs lacking sufficient income cannot access enough non-staple foods to improve their dietary intake despite spending considerable share of income on food.
- HHs relying on subsistence agriculture would be forced to mainly consume staple foods.

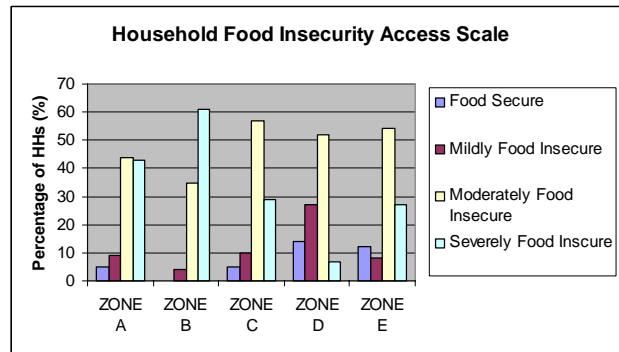
Household Food Security Access

The Household Food Insecurity Access Scale is a series of questions regarding the household's perception of its own food security status. Questions asked (in indicative order of increasing food insecurity) include worrying about not having enough food, not eating preferred foods, reducing the frequency or quantity of food eaten, and skipping meals.

Using the HFIAS classification it was seen that 84% of the sample perceived themselves to be moderately (47%) or severely (37%) food insecure. Only 6% of the HHs believed themselves to be food secure.

Across zones the following patterns emerged:

- Zone D has the highest percentage of food secure (14% compared to a sample average of 6%) and mildly food insecure HHs (27% compared to a sample average of 10%).
- Zone B had the highest percentage of moderate and severely food insecure HHs (96%). This zone also had the highest percentage of severely affected HHs – 61% as compared to 37% for the sample.
- Zones A, C and E have a similar percentage of moderate and severely affected HHs.
- There is a clear difference between Zone D and the other zones in terms of HFIAS.



Utilization

Frequency of Meals - Across the sample it was seen that approximately three-fourth (77%) and one-fourth (23%) of the households ate 3 and 2 meals a day respectively. However across zones, clear discrepancies are seen. Zones B, C and E depict a similar pattern with 85-90% HH reporting the consumption of 3 meals a day. Zones A and D have a far lesser percentage of HHs reporting the consumption of 3 meals a day – 62% and 72%.

Access to water – Households were asked about the source of their drinking water. Piped water was reported to be a source by 33% of the sample and protected wells by 31%. However there was a relatively high percentage of HHs reporting the utilization of water from unprotected sources; 36%. Such a dependence on water from unprotected sources poses a serious health risk especially amongst children.

Latrine Facilities – Sixty eight percent (68%) of the sample stated that they had no latrine facilities. Amongst the remaining HHs (that had access to latrines); direct pit latrines were the most common (23%).

Health Education – A little over half the sampled household (52%) stated that they had not received any health education on nutrition and hygiene.

The fact that 36% of the sample obtains their drinking water from unprotected sources combined with the fact that one-third of the households have no latrines facilities and more than half of the sample have received no basic health education – has severe potential health risks.

Food and Non-Food Aid

Approximately 97% of the sampled households reported receiving some kind of food assistance; primarily thru the Food for Education program. Keeping in mind the fact that most significant expenditure item is food, this assistance is a crucial factor. The food for education program has an increased relevance in the context of the food security situation in Wa. Not only does the program help increase child nutrition, encourage HHs to send or keep children in school; but is also an important cost saving for HHs.

The Chinese Government to Government Rice Donation program accounted for 35% of all received assistance. Across zones it is seen that there is more or less uniform dispersal of food aid. This is noteworthy since it means that zones are not being ignored nor is there any geographical bias in aid dispersal.

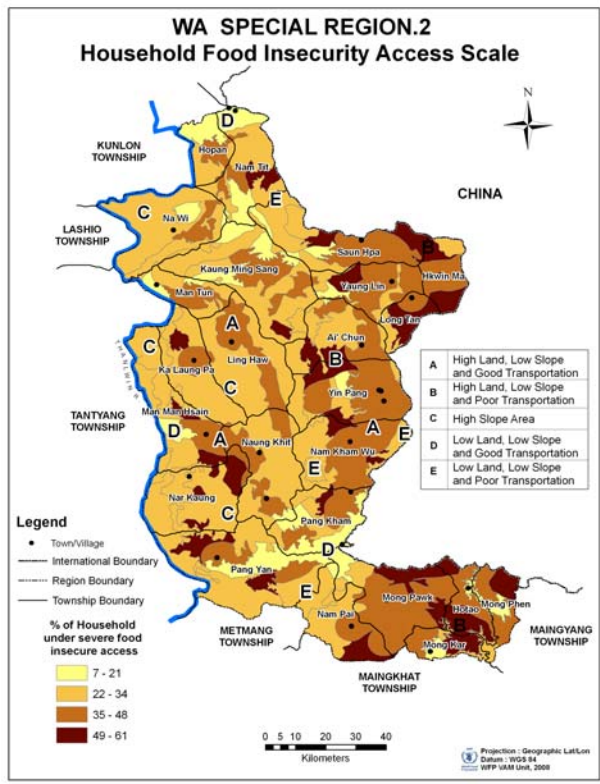
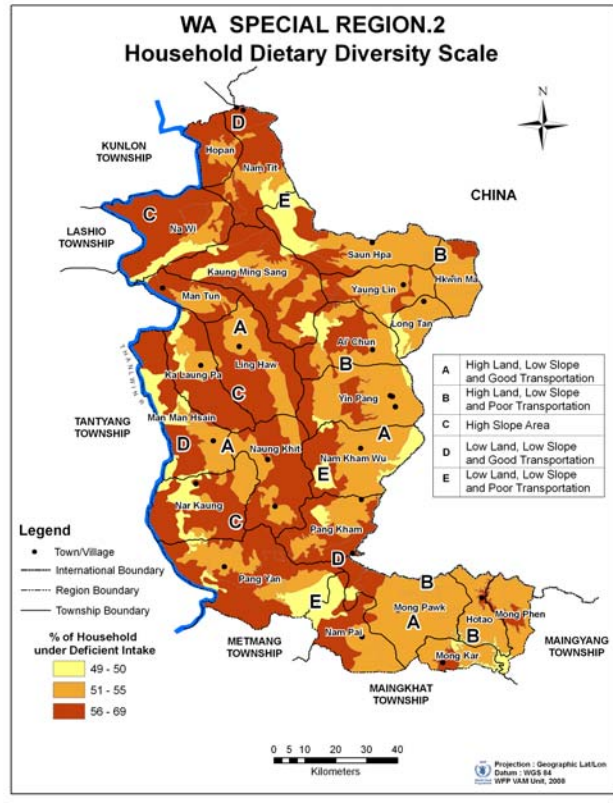
Conclusion and recommendations

Food security in Wa does not seem to be constrained by lack of access to land but rather by a combination of factors that adversely affect agricultural productivity and thus food availability. Low food availability is compounded by lack of access and poor utilization. Agriculture is primarily a source of staple food (Rice) and not an income generating activity for the majority of HHs. Households are unable to maximize agricultural production due to lack of labor availability. Thus, greater access to land does not translate into any tangible advantage for most HHs.

With respect to utilization, it is seen that despite relatively (a) good access to land (b) sizeable agricultural plots (available on average to a HH) and (c) considerable staple food stock; dietary diversity across the sample is poor. This is primarily because HHs are able to produce, consume and stock staple food; but have far less access to other foods, with the net result being 80% of the sample exhibits low dietary diversity.

Recommendations

1. Zone B needs immediate attention as this zone has the highest percentage of moderately and severely food insecure HHs across the sample. It should be noted that access to many places in this zone poses an issue and planning will have to take this factor into account.
2. Food for Education takes on widespread relevance as it provides a strong incentive for HHs to send or keep their children in school. Thus coverage of FFE activities needs to be increased.
3. Agricultural extension activities (with regards to input, cropping practices, access to markets etc) can help households make optimum use of their land. Efforts need to be undertaken to ensure that agriculture in this area becomes more productive.
4. There is clear need for Non-Food aid programs associated with
 - (a). Livestock – particularly when ownership and dependency on livestock by this sample is taken into account.
 - (b). Extension activities related to health and hygiene practices.



ANNEX

Food Security Interventions

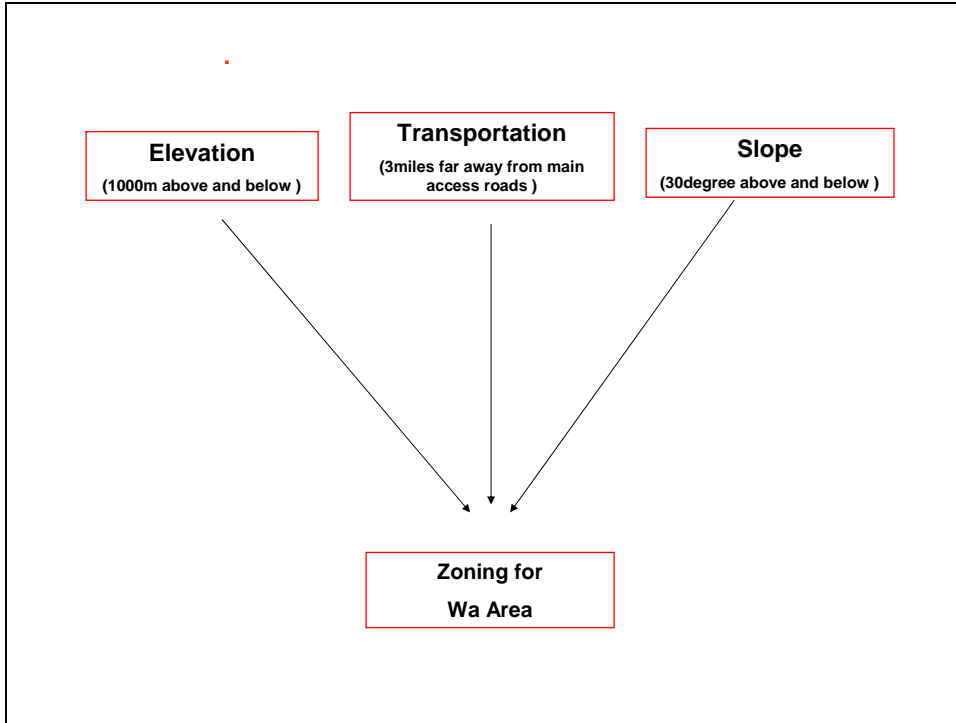
The below is a model that lists the various kinds of possible interventions and linking these to intended beneficiaries. For the purpose of this model, beneficiary types have been classified based on access to agricultural land.

Recommended Interventions for livelihood groups

| livelihood | Total Land acre | Households | | Availability | | | | Accessibility | | | | | | | | Utilization | | | | | | codes for intervention |
|----------------------------|-----------------|------------|----|--------------|---|---|---|---------------|---|---|---|---|----|----|----|-------------|----|----|----|----|----|--|
| | | number | % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | |
| Below subsistence | <2 | 117 | 30 | x | x | x | x | x | x | x | | x | x | x | x | x | x | x | x | x | x | Productive Asset 1.Small gardens 2.input distribution 3. Promoting small livestock for women 4.Community forestry management Economic asset and food 5. Food for work 6. Food for education 7. Food for training 8.Market stabilization/subsidized sales 9.Cash for work 10.Micro finance 11.Formal credit 12.Mother and child nutrition Health hygiene & sanitation 13. Increase number of protected source of water 14. Increase number of fly proof latrines 15.Health education on nutrition and hygiene Other interventions relevant to any FS pillar 16. Makes information on market available 17. Improve monitoring system on FS 18. Enhance decentralization of FS issue |
| Subsistence | 2 to <3 | 47 | 12 | | x | x | x | | x | x | x | | | | | x | x | x | x | x | x | |
| Small Holders | 3 to <5 | 88 | 22 | | | | x | | x | x | | | | | x | x | x | x | x | x | x | |
| Small Holder in transition | 5 to <8 | 75 | 19 | | | | | | x | | | | | | x | x | x | x | x | x | x | |
| Median | 8 to <10 | 22 | 6 | | | | | | x | | | | | | | x | x | x | x | x | x | |
| Median in transition | 10 to <15 | 19 | 5 | | | | | | x | | | | | | | x | x | x | x | x | x | |
| Large | 15 to <20 | 15 | 4 | | | | | | x | | | | | | | x | x | x | x | x | x | |
| Very large | 20 and > | 9 | 2 | | | | | | x | | | | | | | x | x | x | x | x | x | |
| Landless | | 251 | 39 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |

Criteria for Zoning

The below model was used to develop criteria on which the sample was classified into Zones.



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

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