



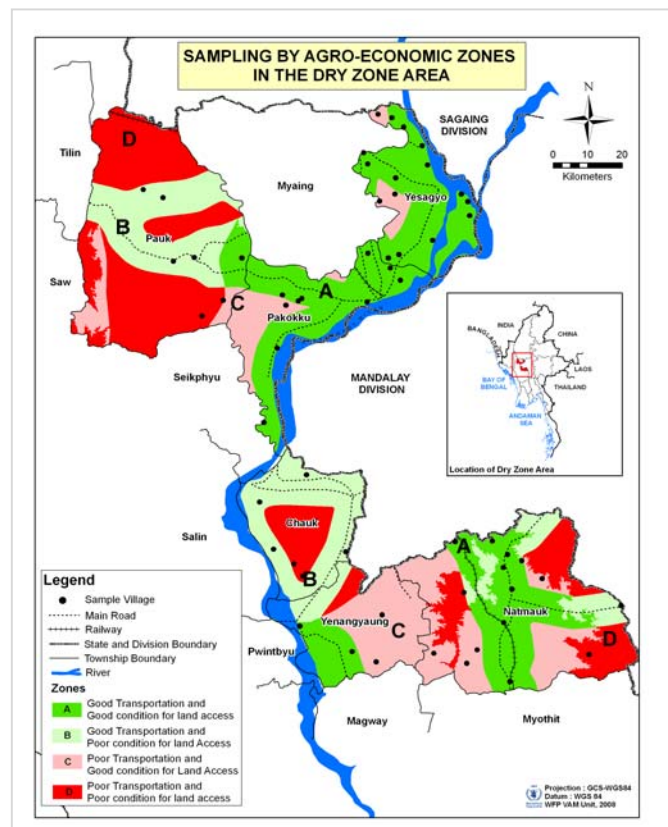
Food Security Profile Dry Zone – Magway Division WFP project area November 2008

This Report summarizes the findings of the Food Security Profiling assessment carried out across the Dry Zone, especially in Magway Division in August 2008.

This is the first time a Food Security Profiling exercise has been conducted in the Dry Zone by the WFP and its Cooperating Partners, including OISCA, TDH, REAM, ADRA, and World Vision and the line department for Dryzone Department of Development Affairs. This profile attempts to present a snapshot of household food security in the Dry Zone; 463 households in 59 villages under WFP project area of 6 townships: Pakokku, Pauk, Yesagy, Natmauk, Chauk & Yenanchaung were covered under 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.

The Dry Zone area is one of the more critical areas in the Union where the fragile ecosystem (a result of natural and human behaviour) has had adverse effects on household food security.

Magway Division includes a vast semi-arid lowland surrounded by Mandalay Division the East and the Rahine Yoma and Chin hills on the West, Bago Division on the South and Sagaing Division in the north. The region also includes two major rivers, Ayeyarwady and Chindwin that flow through the Dry Zone from North to South towards the Delta. Average annual rainfall is low (500 to 1000 mm) compared to 5000 mm in other parts of the country.



From methodological/analytical perspective, the sampling was randomly selected and data collection tools used included the Household & the Key Informant Questionnaire. Zoning prior to the assessment was classified as per:

- Good Transportation & Good Land Access (Zone A)
- Good Transportation & Poor Land Access (Zone B)
- Poor Transportation & Good Land Access (Zone C)
- Poor Transportation & Poor Land Access (Zone D)

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”).

Main findings:

- Sixty one percent (61%) of the sampled households have access to land. Agricultural households practice mixed cropping with most HHs growing at least 2 crops per season. Peas, rather than rice, appear to be the most important crop.
- Three-fourth of the sample source food thru purchase.
- Eighty nine percent (89%) of the sampled HHs declared food as the primary source of expenditure while health and education represent the most important secondary expenditures.
- From the Household Food Insecurity Access Scale (HFIAS) it is seen that 22 % of the sample are classified as food secure; 7 % as mildly food insecure and 71% are either moderately (39%) and / or severely (32%) food insecure.
- As per the Household Dietary Diversity Score (HDDS) it is seen that 27% of all sampled HHs are classified as having deficient intake
- The fact that 26% of the sample obtains their drinking water from unprotected sources combined with the fact that nearly 30% of the households have no latrines facilities and approximately 66% of the sample have received no basic health education – has severe potential health risks.

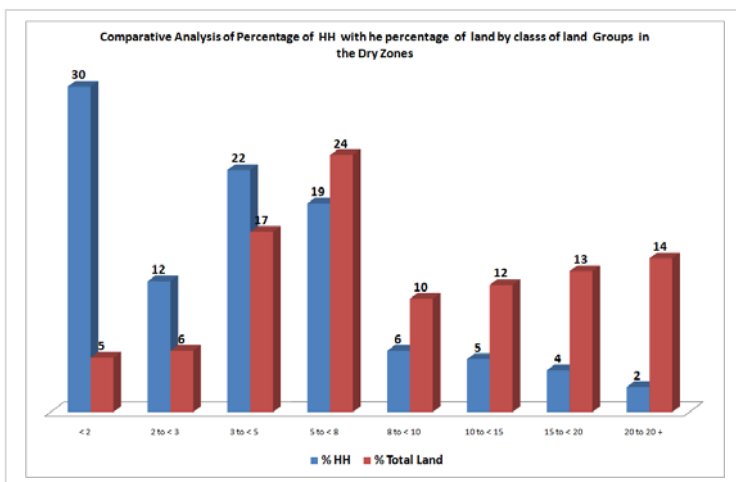
Availability

Land Availability and Access

Physical and Economic access to food are two key factors that influence the level of food security at the individual and household level. The former mainly refers to own production of the household while the latter depends on income sourced by the household.

It is seen that 61% of the sampled households have access to land; own production for this group being at least one source of food and /or income. The remaining 39% of the sample reported sourcing food primarily thru income generating activities (and possibly food aid).

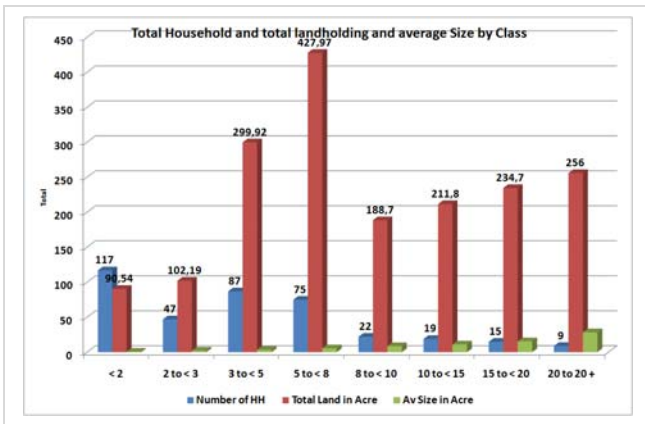
Looking at household access to land across the agro-economic zones; it is seen that the zones with best conditions (good transportation, good land conditions) has the highest number of households with access to land and the highest number of acres cultivated. One thousand and seventeen acres (1017) were reported to be cultivated by 190 HHs in Zone C as compared to 188 acres by 47 HHs in the Zone B. Thus in Zone B households would primarily depend on wages and non-agricultural activities as source of livelihood and agriculture, where practiced, would be a support function or a source of food rather than income.



Among households with access to land; the majority enjoyed access by virtue of ownership. Approximately 6% of households (with access to land) rented land.

The sample shows wide variations with respect to land distribution. As can be seen in the accompanying figure – 30% of the sampled households accounted for 5% of cultivated land. These households own less than 2 acres on average. This is in

sharp contrast with 17% of households who account for almost half of all cultivated land reported by the sample (minimum land holding size for this group being 8 -10 acres). The disparity in land ownership is even greater when households with less than one acre are taken into account.



The next figure compares groups of households with similar access to land (in terms of land size) across the sample. The pattern that emerges is similar to the one seen above (seen here in number of HHs rather than percentage) – 43 HHs across the sample accounting for 703 acres of cultivated land.

Cropping Patterns

Multi cropping is widely practiced with 35% of farming households reporting the cultivation of 4 or more crops. Only 18% of households (with access to land) reported the cultivation of one crop. Multi-cropping provides many benefits including:

- (1) Provides households with a buffer in case of failure of one crop (particularly due to pests /pathogens).
- (2) Helps maintain soil fertility compared to intensive mono-cropping which depletes soil fertility levels at a faster rate.
- (3) Households can rely on more sources of food from their own production rather than sourcing only the staple crop.
- (4) Households find it easier to practice a combination of subsistence agriculture and the deriving of income from crop sales.

Rice is not the most widely grown crop (as soil type and rainfall patterns are not conducive to rice cultivation) and peas, beans, maize, sesame and groundnuts are the commonly grown crops. Pea was most commonly cited by households that reported growing only one crop. Amongst households growing more than 2 crops; it was seen across the sample that the preferred crop mix usually included a combination of legumes and a staple crop; for example multi-cropping of peas, maize and sesame/groundnuts.

Livestock

Livestock plays a crucial role in household food security as it provides a source of income and nutrition as well being a key asset (especially during times of extreme crisis). Common livestock include cattle, poultry, goats, sheep and pigs. Amongst these, cattle are by far the most important. Twenty five percent (25%) of the sample did not own any livestock. For the remaining sample it was seen that cows and goats were the most commonly owned livestock. Zones A and C had relatively high ownership of cows while Zone D had highest overall ownership of all livestock.

Access

Source of Income

Wages are the primary source of income and indeed, take on an increased relevance amongst households that have little or no access to land. For these households, subsistence agriculture is not a viable option and food is mainly sourced thru a combination of income-generating activities, food aid and food for work.

Data on wage earnings and household's access to land was compared and it was seen that amongst households reporting an access to land of less than 2 acres; 66% reported at least one member earning a wage. While other households (with access to more land) also report members earning wages; the percentage is far less. In other words, across the sample wages are most commonly sourced by households unable to depend on agriculture to source food and incomes. For this group, wages do not constitute a supplement to farm income but rather the primary source of household income.

With respect to number of sources of income, approximately 4% of the HHs reported having three or more sources, and 29% of the sample reported two sources. The majority of the households reported sourcing income from one source.

Wages (33%) is the most important, followed by farming (27%), and trade (6%) were the most common primary sources of income. Across zones it was seen that the main sources of income were wages followed by income from farming

Taking into account average wage rates, number of earners per HH and number of days of work per day for the sample; it is estimated that an average HH in the Dry Zone earns between 15000 - 25000 Kyats per week.

Sources of Expenditure

Only a small percentage of households cultivate rice. As a result, most households reported purchasing rice that they consume. The fact that wages play a crucial role in household food security (especially amongst households with little or no access to land) underlines the fact that purchase is a key means of sourcing food. This is reflected in household expenditure patterns.

Eighty nine percent (89%) of the sampled HHs declared food as the primary source of expenditure, followed by farm input (3.3%). Health and education (19% each) were declared as the most important secondary source of expenditures followed by farm inputs (14%). While this is a significant percentage of HHs reporting expenditure on health and education; the fact that primary expenditure is overwhelmingly on food implies that expenditure on non-food items, where applicable, would not be sizeable in terms of amount of money spent. Furthermore, it can be hypothesized that households reporting expenditure on agricultural inputs would tend to be those with access to larger areas of land which would benefit from economies of scale and more intensive farming.

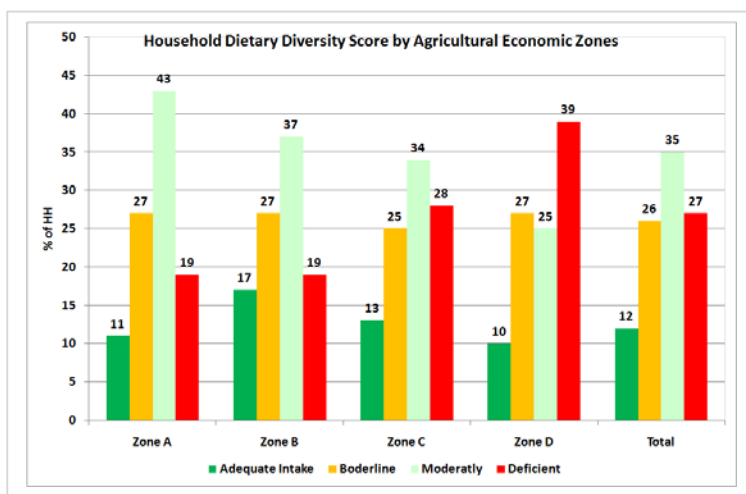
Note: Combined data from UNDP and WFP sources shows that price of rice (both median and lower quality) has been above consumer price index for this commodity (comparison of 2006 and 2008 prices). However, daily wage labour has increased at a faster rate when compared to the increase of price of rice¹. In a way, the inflation on rice can be cancelled out by the increased rate of wages, which

¹ Crop and Food Supply Assessment Mission(CFSAM), 2008

may represent a gain in purchasing power (with respect to rice) for households which depend on wage labour in the Dry Zone.

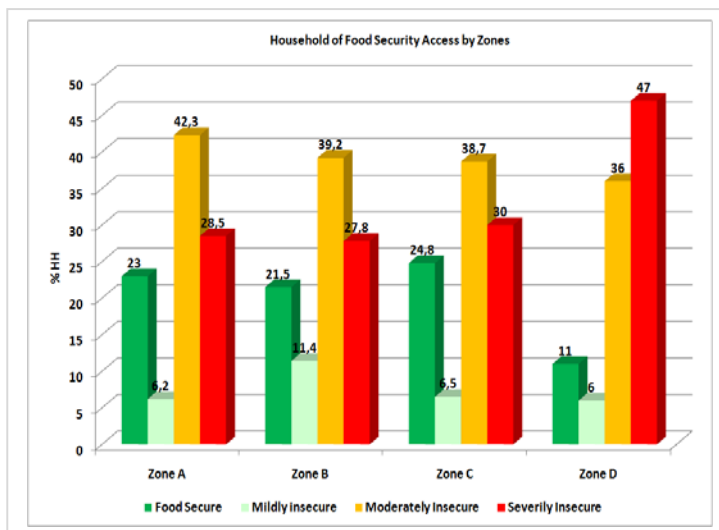
Household Dietary Diversity Score

Upon analysis of the Household Dietary Diversity Score (HDDS) it is seen that 27% of all sampled HHs are classified as having deficient intake; followed by 35% at moderate, 26% at border line and 12% at the adequate level. Deficient dietary intake is varied across the four zones ranging from 39% (Zone D) to 19% (Zone A). Zone B has the highest percentage of HHs (17%) with adequate intake while Zone D and A have the poorest dietary diversity for the sample.



Household Food Security Access

From the Household Food Insecurity Access Scale (HFIAS) it is seen that 22% of the sample are classified as food secure; 7% as mildly food insecure and 71% are either moderately (39%) and / or severely (32%) food insecure. As was seen upon analysis of the HDDS; Zone D has the highest percentage of HHs classified as severely food insecure



Utilization

The majority of households reported the consumption of 3 meals per day and no significant variation in number of meals is seen across zones.

Food purchase was reported as the most common means of sourcing food by three-fourth of the sample followed by obtaining food by borrowing or on credit.

It should be noted that only 5% of the sample reported sourcing food for consumption from their own production. The trend does not mean that households are unable to produce. It appears that the mixed cropping practiced by HHs is mainly with an aim to sell produce and obtain incomes (which the HH then uses to purchase food) rather than agricultural production for direct consumption.

Water Sanitation, Health & Nutrition Education

Accesses to water – Households were asked about the source of their drinking water. Protected wells were reported to be a source by 39 % of the sample and borehole pumps by 33%. Twenty six percent (26%) of the HHs reported the utilization of water from unprotected sources. For this group water from unprotected sources poses a serious health risk especially amongst children.

Latrine Facilities – Twenty nine percent (29%) of the sample stated that they had no latrine facilities. Amongst the remaining HHs (that had access to latrines); fly-proof latrines were the most common (62%).

Health Education – Approximately one-third of the sample (34%) stated that they had received any education on nutrition and hygiene.

The fact that 26% of the sample obtains their drinking water from unprotected sources combined with the fact that nearly 30% of the households have no latrines facilities and approximately 66% of the sample have received no basic health education – has severe potential health risks.

Assistance

Only 74 households or 11% of the sample reported receiving any food assistance, but data did not allow for the disaggregation by type of program. However it should be stressed that the sample for this study is a product of random sampling across the dry zone, in particular the 6 townships of Magway Division (with emphasis to include areas in which the WFP has no presence). This was so as to obtain a clearer picture of on-ground realities across the zone.

Non-food assistance followed the same trend. Seventeen percent of the sample reported receiving non-food aid with assistance for income generation being the most common.

Conclusion and recommendations

Across the sample it is seen that:

- Amongst households having access to land, a wide disparity is seen – a relatively large number of HHs retain a small portion of land as compared to a few HHs that account for a bulk of the land.
- High crop diversification is seen but this does not necessarily translate into good household food security or dietary diversity.
- Rice, despite being the staple food crop, is not the primary choice of crop grown by farmers.
- The majority of HHs derive their food from purchase, and, wages are the primary source of income and the major expenditure is on food.
- Despite having better overall conditions (Good transportation and Good Land) Zone C has a higher percentage of vulnerable HHs when compared to Zone A and B. With respect to access to land; while Zone C has greater access – 50% of the HHs reporting renting land and 42% of Zone C HHs cultivate less than 3 acres. Thus in this zone, overall higher access to land does not automatically translate into good household food security.

Recommendations

1. There is a clear and urgent need for food aid and such an intervention should necessarily include the following groups
 - ✓ Larger households with no access to land and dependent on only wages as their one source of income
 - ✓ Households with reduced access to land (less than one acre, representing 15% of the sample).

This is, of course, in addition to areas identified as food insecure (see map) and other vulnerable groups such as women-headed HHs or HHs with disabled members etc

2. Need to focus interventions in Zone D and Zone C as these zones had a higher percentage of HHs with lowered access to food and deficient dietary intake.
3. Agriculture is primarily a support function and majority of households are unable to source significant food or income from this activity. Further information is needed on the productivity of agriculture – in particular yield rates and cost-benefit ratio – so that efficient interventions can be formulated.
4. There is a need for non-food aid assistance particularly extension activities related to health and hygiene practices.

Note: The maps on the following page

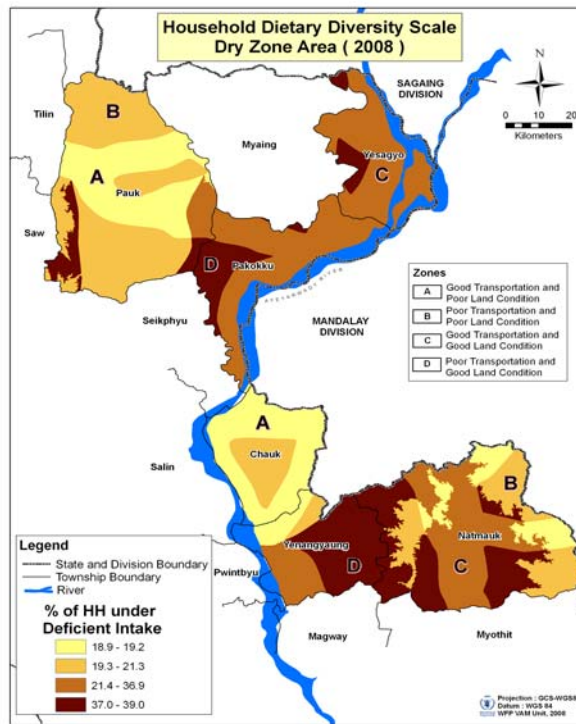
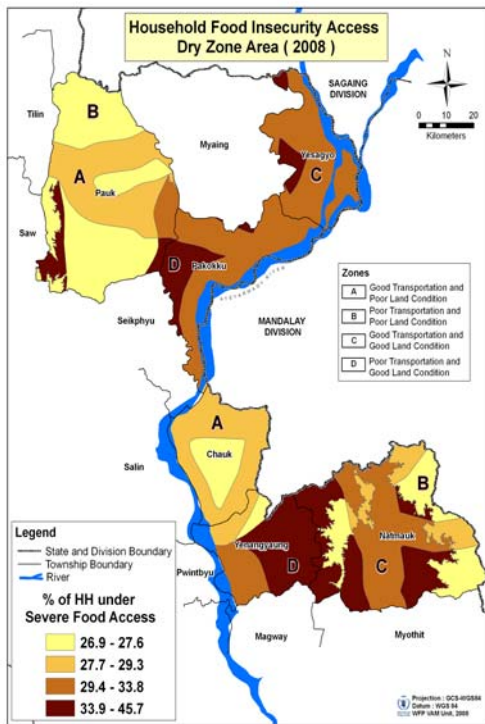
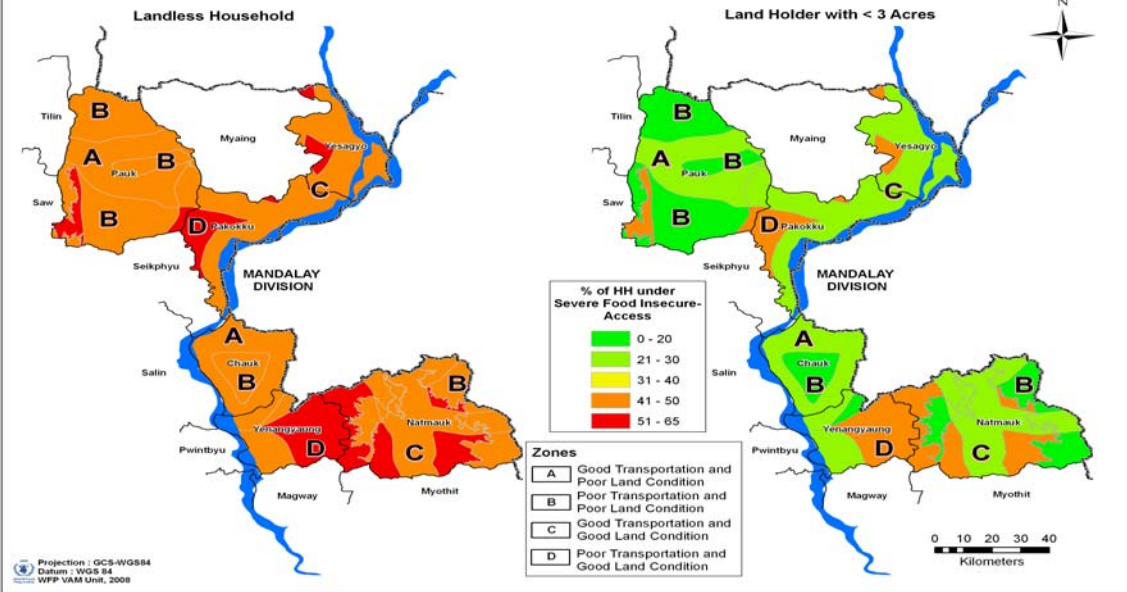
- (1) Illustrate the prevalence of food insecurity amongst HHs with reduced (less than 3 acres) or no access to land
- (2) Spatial distribution of food insecure HHs as per the Household Food Insecurity Access Scale
- (3) Spatial distribution of deficient dietary intake as per Household Dietary Diversity Scale

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

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LEVEL OF FOOD SECURITY AMONG MOST VULNERABLE GROUPS



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	
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.

