



The Impact of Drought on Households in Four Provinces in Eastern Indonesia

The Impact of Drought on Households in Four Provinces in Eastern Indonesia

February 2016

For more information on this report, please contact:

WFP Indonesia

Anthea Webb, Country Director

Amit Wadhwa, Head of Food Security and Nutrition Analysis Unit

wfp.indonesia@wfp.org

anthea.webb@wfp.org

amit.wadhwa@wfp.org

This report is made possible through technical cooperation with the Government of Indonesia's Food Security Agency and by financial support from the Government of Australia and the Government of Germany.



Disclaimer:

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial uses are authorized without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission. Applications for such permission should be addressed to the Director, Communications Division, email: wfp.publications@wfp.org.

The boundaries and names shown and the designation used on the maps in this book do not imply official endorsement of acceptance by the United Nations.

Photos, Front cover: The Jakarta Post/P.J Leo. Back cover: WFP/Amit Wadhwa

Copyright © 2016

El Niño: in December 2015 WFP interviewed 2,400 households in 8 districts hit by drought



3 in 5 households lost income due to drought



1 in 5 households cut spending on food due to drought

1.2 million Indonesians require assistance



1. Government of Indonesia should **provide cash** to poor households dependent on food crop production



2. Ministry of Agriculture should work directly with farmers and **distribute seeds, fertilizer, irrigation, and information**



3. Ministry of Health should provide **supplementary feeding to pregnant and breastfeeding women plus children under 2** in any area with acute malnutrition rates above the critical WHO threshold of 15%

Key findings

1. Across the eight districts surveyed, 40% of primary rice growers lost more than 50% of their crop in the last harvest.
2. Two-thirds of agricultural households said that they had delayed or not yet planted crops in the past three months due to drought. This introduces two significant risks: 1) an extension of the 'lean' season; and 2) increased exposure of secondary rice to the peak dry season. The extended lean season means prices are likely to rise until the next crop is harvested.
3. Drought was reported to have decreased the income of three out of five households surveyed. In 31% of households, the impact was severe (more than 30% reduction in primary income). In Kupang and Timor Tengah Selatan districts, 48% and 40% of households reported a severe impact on income.
4. Almost half of all households engaged in food crop production and those reliant on agricultural wage labor reported a 30% or more reduction in income due to drought.
5. With less income, one in five households reduced expenditure on food to cope with reduced purchasing power. Others relied on a second income source (27%) or reduced non-food expenditure (24%).
6. The most severe and frequent coping strategies were found in Sumba Tengah and Kupang where 30% and 27% were classified as having reduced the number, frequency or quality of meals.
7. Households who experienced severe reductions in income and expressed high levels of negative coping behaviors were deemed the most negatively impacted by drought. In Kupang, 16% of households were highly impacted, followed by 9% in Sumba Tengah and 6% in Lombok Tengah¹.
8. Food insecurity, measured as a combination of poor food consumption, limited coping capacity, and high economic vulnerability, is highest in the three districts in Nusa Tenggara Timur province. In Sumba Tengah, more than half (53%) of households are extremely or moderately food insecure. In Kupang, the figure is 41%, followed by 38% in Timor Tengah Selatan. These households should be prioritized for assistance to prevent irreversible coping behaviors and the consequences of extremely poor diets.
9. In Nusa Tenggara Timur, the extreme dry season has eroded already weak purchasing power and harvests of main crops in 2016 are likely to be impacted, further exacerbating the situation.
10. Outside of Nusa Tenggara Timur - Maluku and Papua require additional focus to determine impact.

¹ See page 28 for more details on this analysis

Table of contents

Key findings	4
Table of contents	5
List of tables	6
List of figures	6
1 Background	8
1.1 Survey objectives and methodology	8
2 Drought impact on households	10
2.1 Impact on household income and food access	10
2.2 Impact on drinking water	14
2.3 Impact on agriculture	17
3 Food security status in drought-affected districts	19
3.1 Overall food security status	19
3.2 Diet quality	20
3.2.1 Micronutrient intake	22
3.3 Coping with reduced access to food	24
3.3.1 Livelihood coping	25
3.3.2 Dietary responses	27
4 External assistance	30
5 The impact of drought beyond the eight districts surveyed	33
6 Situation outlook and recommendations	35
6.1 Situation outlook	35
6.2 Recommendations	39
7 Annex	41
7.1 Computation of key indicators	41
7.1.1 Wealth index	41
7.1.2 Food consumption score	42
7.1.3 Micronutrient intake	44
7.1.4 Livelihood coping strategies	45
7.1.5 Coping strategies index	45
7.1.6 Food security index	46
7.2 District profiles	48
7.3 Tabulation report	58

7.4	Household questionnaire.....	69
-----	------------------------------	----

List of tables

Table 1 - Household food security console.....	19
Table 2 - Overall food security classification by district	20
Table 3 - Micronutrient rich food groups and related food items from the household questionnaire	23
Table 4 - Categorization of severity of livelihood / asset depletion coping strategies.....	25
Table 5 - Percent of households engaged in livelihood / asset depletion coping strategies in the past 30 days.....	26
Table 6 - Percent of households engaging in food consumption related coping behaviors in the past week	28
Table 7 - Districts and population at risk and potentially needing assistance.....	34
Table 8 - Unimproved and improved housing characteristics	42
Table 9: Food groups and weights used to calculate the food consumption score	43
Table 10 - Thresholds for food consumption groups.....	43
Table 11 - Nutrient rich food groups and related food items from the household questionnaire	44
Table 12 - Livelihood coping strategies and severity	45
Table 13 - Food coping strategies and their severity	46
Table 14 - Description of food security index groups	48
Table 15 - District profile description	48
Table 16 - Food consumption score by strata.....	58
Table 17 - Wealth index classification by strata	59
Table 18 - Roof and floor type by strata	60
Table 19 - Main lighting source by strata.....	61
Table 20 - Main cooking source by strata	62
Table 21 - Toilet type by strata	63
Table 22 - Drinking water source during drought by strata.....	64
Table 23 - Normal drinking water source by strata	65
Table 24 - Micronutrient consumption by strata.....	66
Table 25 - Agriculture engagement and livestock ownership by strata	67
Table 26 - Average days of consumption of food groups by strata	68

List of figures

Figure 1 - Location of the eight districts surveyed.....	10
Figure 2 - Impact of drought on main income source by district.....	11
Figure 3 - Impact of drought on main income source by livelihood.....	12
Figure 4 - Main response to reduced income (among those who reported a loss in income).....	13
Figure 5 - Reductions in food expenditure as the main response to income reduction by district	13

Figure 6 - Reductions in food expenditure as the main response to income reduction by wealth group .	14
Figure 7 - Percent of households who changed their drinking water source due to drought by district...	15
Figure 8 - Households with a water source that became unsafe compared to normal during drought	15
Figure 9 - Households who traveled further than normal for drinking water due to drought.....	16
Figure 10 - Households who increased expenditure on water during drought.....	17
Figure 11 - Main sources of primary income across all eight districts.....	18
Figure 12- Rice crop cycles and seasonal change	19
Figure 13 - Food consumption groups by district	21
Figure 14 - Average days of consumption of food groups by district.....	22
Figure 15 - Food consumption groups by wealth quintiles across all eight districts	22
Figure 16 - Frequency of consumption of micronutrient groups across all eight districts	23
Figure 17 - Consumption of iron rich foods by district	24
Figure 18 - Responses to reduced food access in the past 30 days.....	25
Figure 19 - Livelihood coping classification.....	26
Figure 20 - Severity of food coping by district	27
Figure 21 - Food coping categories and coping strategies index by wealth quintiles	28
Figure 22 - Coping strategies index by livelihood	29
Figure 23 - Severe income loss and high CSI by district	30
Figure 24 - Percent of households that purchased Raskin rice in the past 30 days by district	31
Figure 25 - Percent of households receiving assistance due to drought and type of assistance	31
Figure 26 - Percent of households who received drought assistance by district	32
Figure 27 - Percent of households who received drought assistance by wealth quintile	32
Figure 28 - Rainfall anomaly in Java and Bali (10 day intervals from 1-January to 10-February).....	36
Figure 29 - Rainfall anomaly in Nusa Tenggara Timur (10 day intervals from 1-January to 10-February) .	37
Figure 30 - Delays in rice planting in East and Central Java as of December 2015.....	38
Figure 31 - National average price of medium quality rice.....	39
Figure 32 - CARI domains and indicators	47

1 Background

Indonesia is strongly affected by El Nino and La Nina phenomenon. A rise in sea surface temperature in the equatorial Pacific Ocean is associated with decreased rainfall across much of Indonesia. Large parts of the country normally experience long and pronounced dry seasons, particularly in Nusa Tenggara Barat and Nusa Tenggara Timor. During El Nino events, these dry periods are often longer and hotter causing significant impacts on agriculture and livelihoods.

In August 2015, most climate models forecast a strong El Nino effect for the remainder of 2015 and potentially into 2016. By October, drought had been recorded across much of Indonesia, leading to massive fires, and drying of water sources. Delays in the rainy season continued until December or even January for parts of Indonesia. Those delays could have significant impact in the main growing season as planting was delayed in many non-irrigated areas.

Analysis of the situation continued through satellite data and reporting through Government of Indonesia's Disaster Management Agency (BNPB) and the Ministry of Agriculture (MoA). A depiction of the impact on vulnerable populations in drought affected areas was difficult to ascertain. To fill an information gap and to advocate for the needs of vulnerable populations, the World Food Programme in Indonesia sought to deploy a household survey in drought affected areas with high levels of economic vulnerability.

1.1 Survey objectives and methodology

The primary objectives of the survey are to:

1. Determine the level of impact of drought on household food security, drinking water access, livelihoods, and agricultural activities
2. Identify the most impacted populations in terms of geography and livelihoods
3. Provide recommendations to for Government of Indonesia on potential interventions and assistance in targeting

To achieve these objectives, WFP designed a household questionnaire which includes modules on

1. Demographics
2. Household assets
3. Drinking water
4. Sources of income
5. Agriculture
6. Food consumption
7. Coping behaviors
8. External assistance

While the survey has a significant level of scope, questions were kept as simple as possible to keep interviews under one hour. Questionnaire design was developed by WFP, using standard questions and modules as frequently as possible.

Execution of the survey in all drought-impacted areas in Indonesia was not feasible due to time and resource constraints. Budget available for the survey was sufficient to reach eight districts with

statistically representative data. To select the eight districts to be surveyed, analysis of drought exposure was combined with analysis of existing economic vulnerability. Drought exposure was measured through the length of time since the last rain (as of November 2015) while economic vulnerability was assessed through the prevalence of poverty within a district, specifically where more than 20% of the population lived below the poverty line.

Based on this analysis, high priority districts were identified. Practical considerations were then taken into account to determine where a household survey could be deployed with the time and resources available.

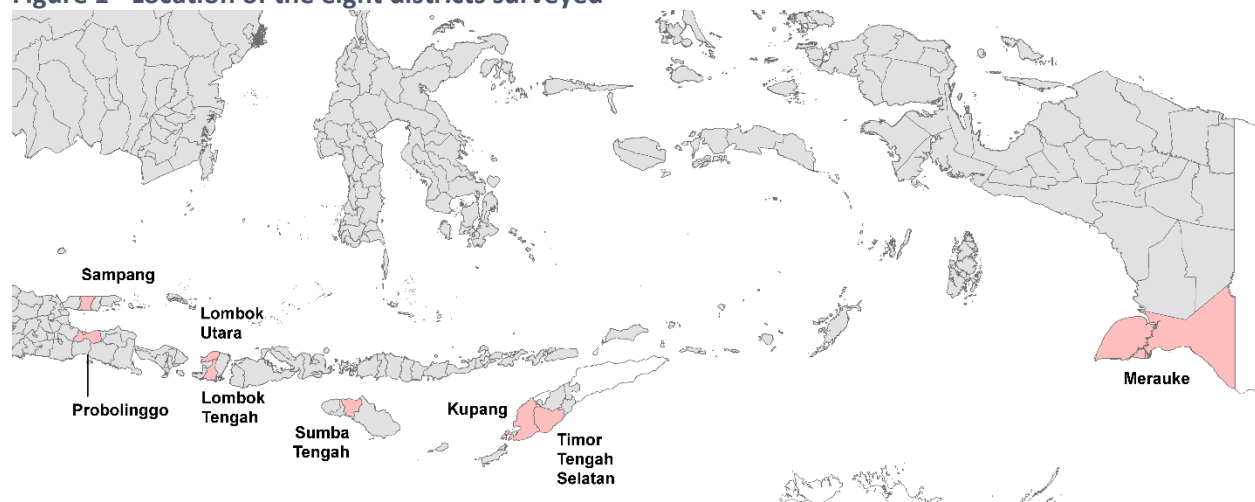
The following eight districts were then selected for the survey:

	Province	District
1	Jawa Timur	Probolinggo
2	Jawa Timur	Sampang
3	Nusa Tenggara Barat	Lombok Tengah
4	Nusa Tenggara Barat	Lombok Utara
5	Nusa Tenggara Timur	Kupang
6	Nusa Tenggara Timur	Sumba Tengah
7	Nusa Tenggara Timur	Timor Tengah Selatan
8	Papua	Merauke

For each district, a required sample size of 300 households was calculated to provide statistically representative data for the district. Within a district, 30 villages were randomly selected using Probability Proportional to Size (PPS). Within a village, 10 households were then randomly selected to be interviewed. In total, the field work took approximately two weeks to complete with most work happening in parallel (though field work started slightly earlier in the two East Java districts and slightly later in Sumba Tengah and Merauke).

A limitation of this survey is the bias introduced by selecting districts that are logistically practical for fieldwork. While this does not mean the results are invalid, it does limit the potential to identify impact in very remote areas. In addition, in Merauke district, a number of villages which were randomly selected for fieldwork were not logistically feasible to reach due to time and cost constraints. Attempts to resample villages led to similar issues. Therefore in Merauke, less villages were visited (20 vs. 30 in other districts) and more households were visited per village (15 vs. 10). This also introduces bias by excluding remote villages and by increasing the effect of homogeneity within a village.

Figure 1 - Location of the eight districts surveyed



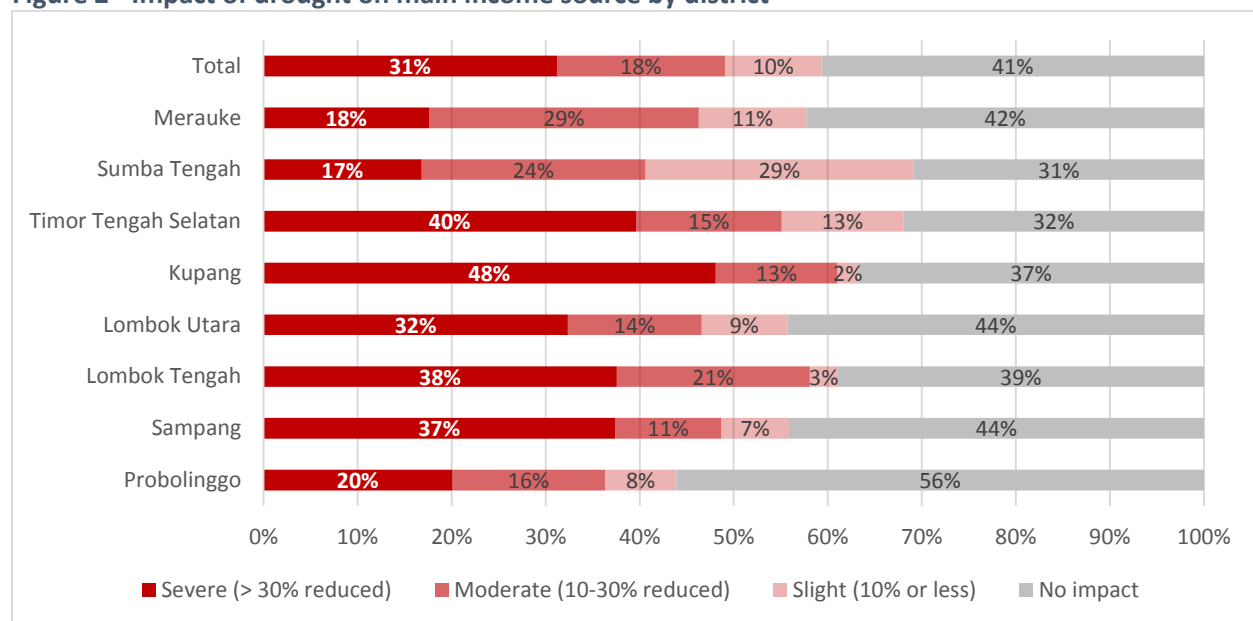
2 Drought impact on households

The districts selected in this survey were chosen specifically for their exposure to drought and presumed limited coping capacity based upon poverty rates. To assess how drought exposure affected households, a series of questions on water access, changes in income, changes in agricultural practice, and responses to reduced food access were asked.

2.1 Impact on household income and food access

One of the most telling and explicit questions was on the impact of drought on primary sources of income. While this question has potential respondent bias issues (self-reporting and attribution of drought as a causal factor), it has shown meaningful results, particularly when combined with questions on coping capacity, as noted later. Households were asked about the severity of any reduction in income (severe, moderate, slight, or no impact). Severe was defined as a greater than 30% reduction. Enumerators were trained to assist households in determining percent change by using the proportional piling method, where physical objects such as small rocks are used to illustrate parts of a sum - in this case, proportion of total income lost due to drought.

Figure 2 - Impact of drought on main income source by district

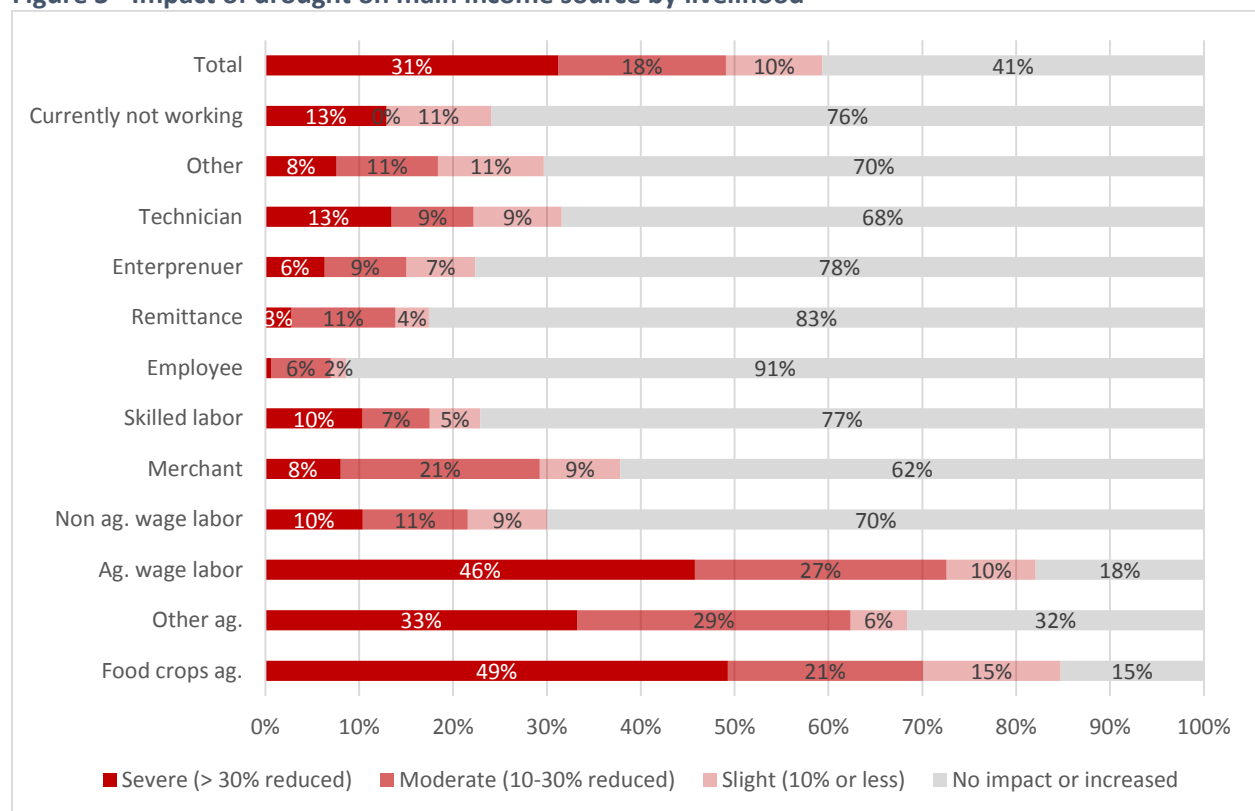


In total, 31% of households surveyed reported a severe negative change in their primary source of income in relation to drought. Another 18% of households reported a moderate reduction (10-30% decrease in primary income) while 10% noted a slight reduction (10% or less reduction in income). Four out of ten surveyed (41%) did not experience a negative impact on their main income source due to drought.

At district level, Kupang reported the highest level of impact of drought on household income with 48% of households stating their primary income was reduced by more than 30% as a result of the drought. Timor Tengah Selatan district was the second most affected with 40% reporting a severe change. The least impacted district is Probolinggo where more than half of households (56%) reported no impact on their main income source.

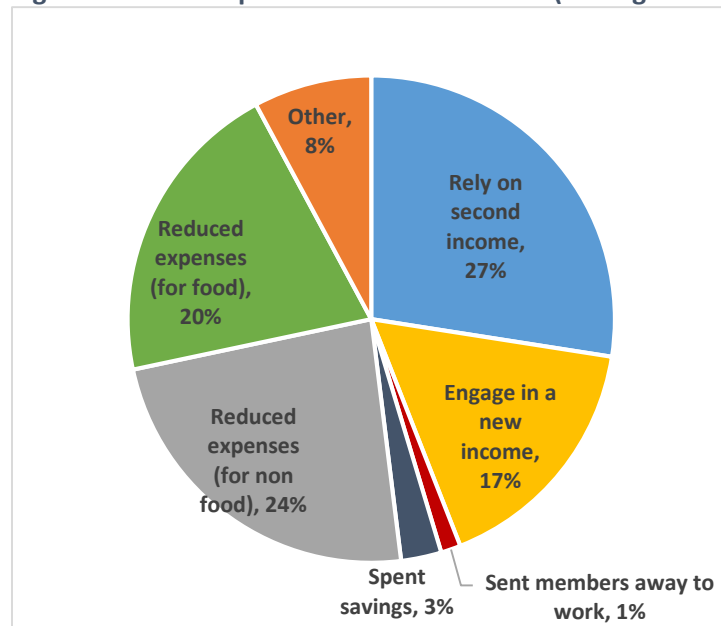
In addition to considering the geographic distribution of impact across districts, impacts on specific livelihoods were assessed. As expected, agricultural dependent households reported the highest rates of drought impact. Households engaged in food crop production and those reliant on agricultural wage labor had the highest rates of income reduction with nearly half (49% and 46%) reporting a 30% or more reduction in income due to drought.

Figure 3 - Impact of drought on main income source by livelihood



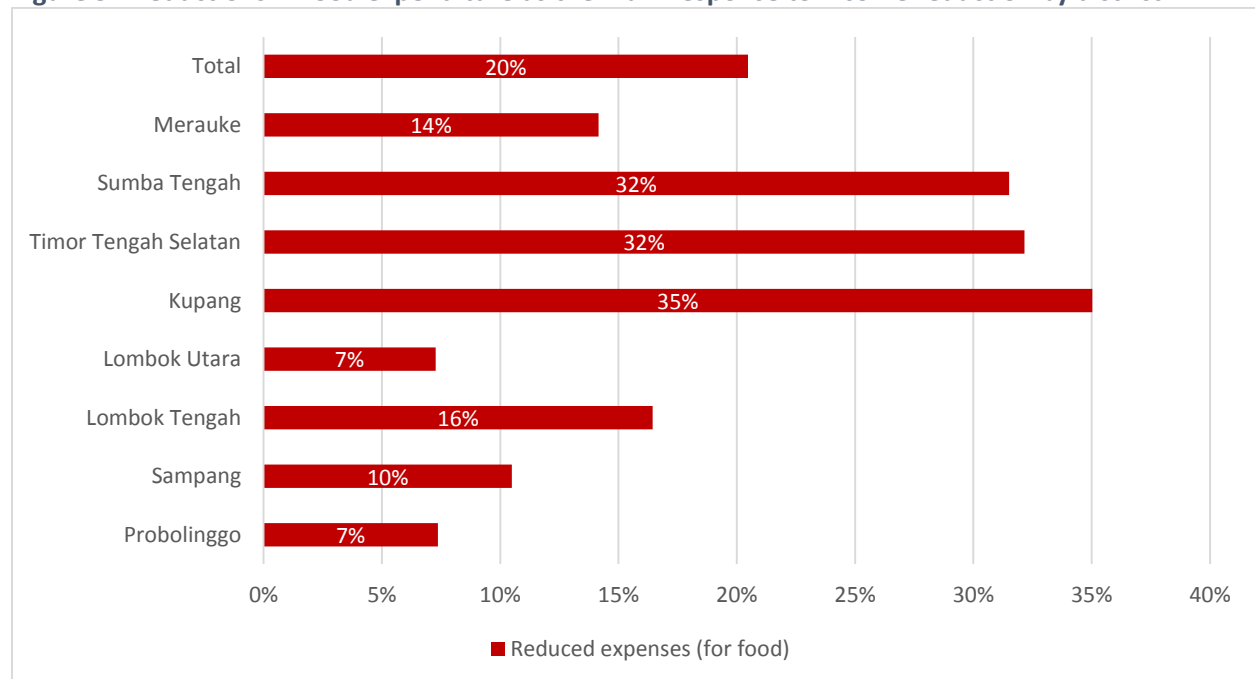
In order to assess how households coped with reductions in income due to drought, they were asked about their responses to the reduction in income. Several options were given and households could select multiple responses which they engaged in, and then were asked to rank the main response. Relying on a second income source was the top ranking response (27%) followed closely by reducing non-food expenditures (24%), food expenditures (20%), and engaging in a new income activity (17%).

Figure 4 - Main response to reduced income (among those who reported a loss in income)



Reductions in expenditure due to income reductions denote high levels of vulnerability, where consumption patterns of a household have been disrupted due to a weather related shock. While the levels of reductions in expenditure are not captured here due to a light and rapid survey design, the prevalence of these responses is telling. Reductions in food expenditures was a common response with 20% of households who reported a change in income indicating this a primary option. About one in three households (32-35%) in each of the three districts surveyed in Nusa Tenggara Timur reduced food expenditure as a primary response to reductions in income.

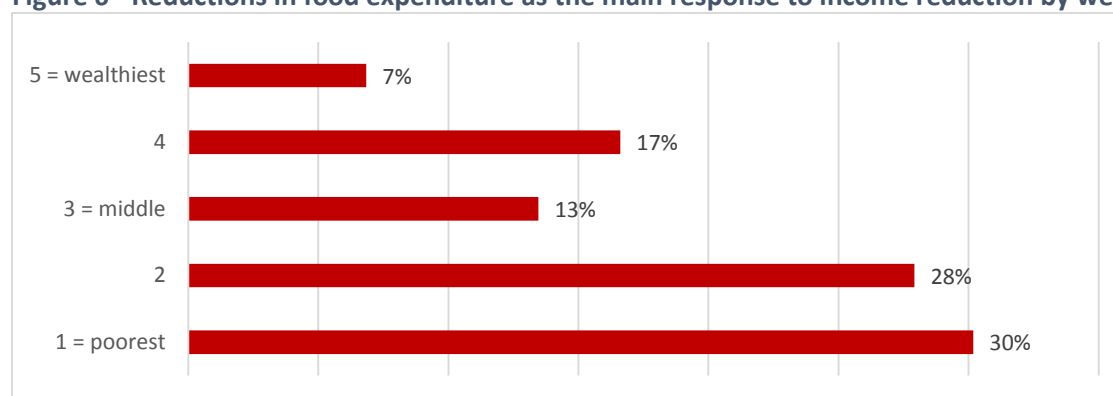
Figure 5 - Reductions in food expenditure as the main response to income reduction by district



Poor households spend a larger share of their income on food than wealthier households. Any shocks affecting poor households can force a reduction in expenditure on food while wealthier households are more likely able to cope through other means. This is seen clearly when comparing wealth groups and the percent of households who reduced their expenditure on food as a primary response to income reduction. See page 41 in the Annex for a description of the construction of wealth groups.

While reductions in income disproportionately affect poor households' access to food, these same households are highly vulnerable to changes in food prices, particularly of rice. A marginal increase in rice prices in Indonesia may lead directly to increases in the poverty headcount³. The World Bank estimates that a sustained 12% increase in the price of rice in Indonesia can cause a 1.3% rise in the poverty rate. This estimation was recently observed practice in the latest poverty figures from Indonesia's Statistical Agency (BPS), which noted an increase in poverty in 2015, with 1.1 million Indonesians falling below the poverty line who previously were not. BPS has directly attributed these newly poor households to an increase in food prices, particularly rice. Rice expenditure elasticity is low - meaning that households are not likely to reduce expenditures on rice even when prices increase. Instead, consumption of other non-staple foods is reduced. These other foods typically include vegetables, fruit, and meat - important sources of micronutrients. See Figure 15 for a more detailed description of the food consumption patterns observed in each wealth group.

Figure 6 - Reductions in food expenditure as the main response to income reduction by wealth group

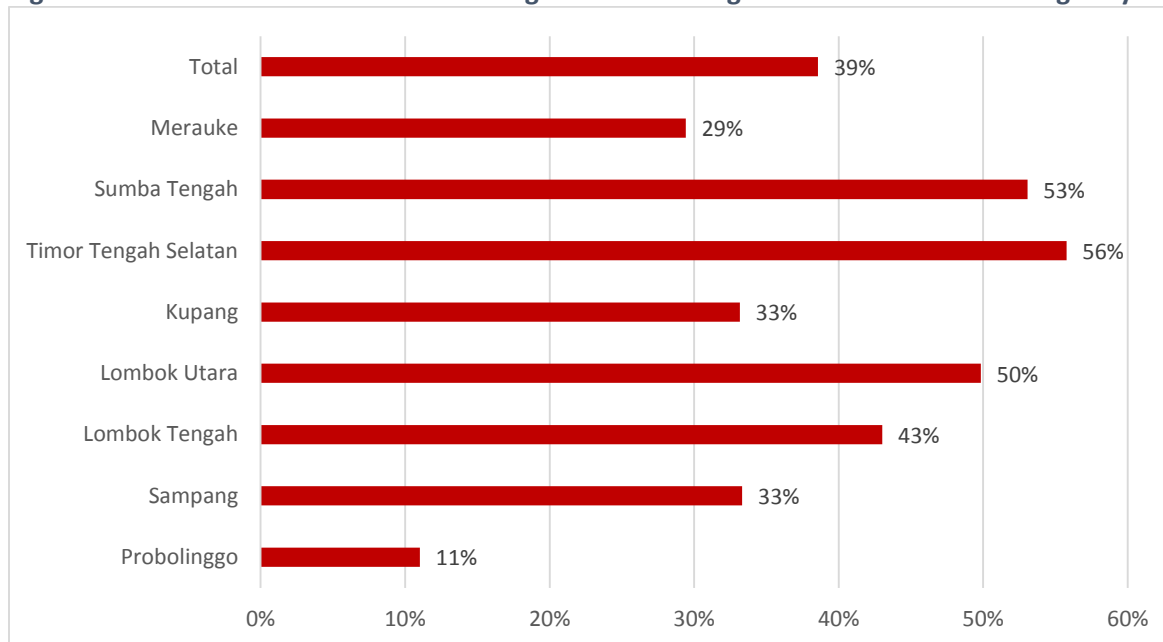


2.2 Impact on drinking water

To assess the impact of drought on access to drinking water, a series of questions were asked on sources of drinking water, both currently and in a 'normal' period, in case of changes over time. Household were also specifically asked if the drinking water source had changed during the drought. In total, 39% of households reported a change in their source of drinking water. In three districts, half or more of households surveyed changed their water source during the drought - Timor Tengah Selatan (56%), Sumba Tengah (53%) and Lombok Utara (50%).

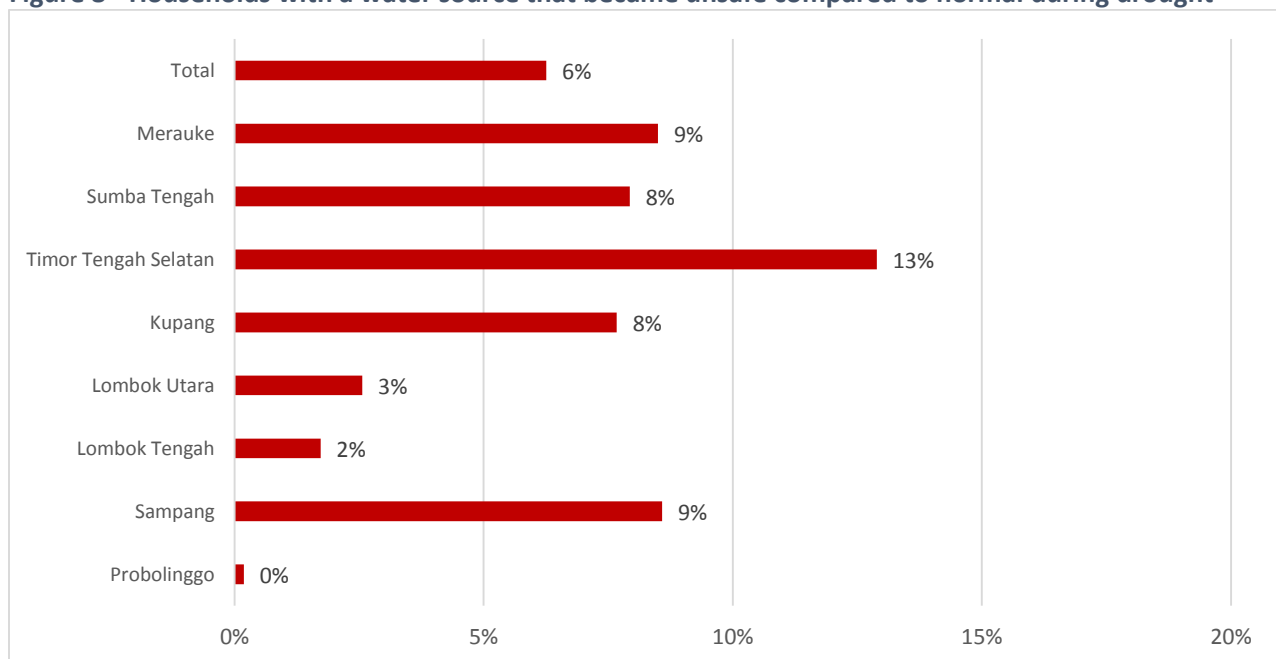
³ Indonesia Economic Quarterly, March 2015. The World Bank.

Figure 7 - Percent of households who changed their drinking water source due to drought by district



Drinking water sources utilized by households during drought and normal periods were classified into safe or unsafe using standard definitions by WHO/UNICEF.⁴ The highest percent of households with a negative change in the quality of drinking water due to drought was in Timor Tengah Selatan district, where 13% of households switched to an unimproved water source.

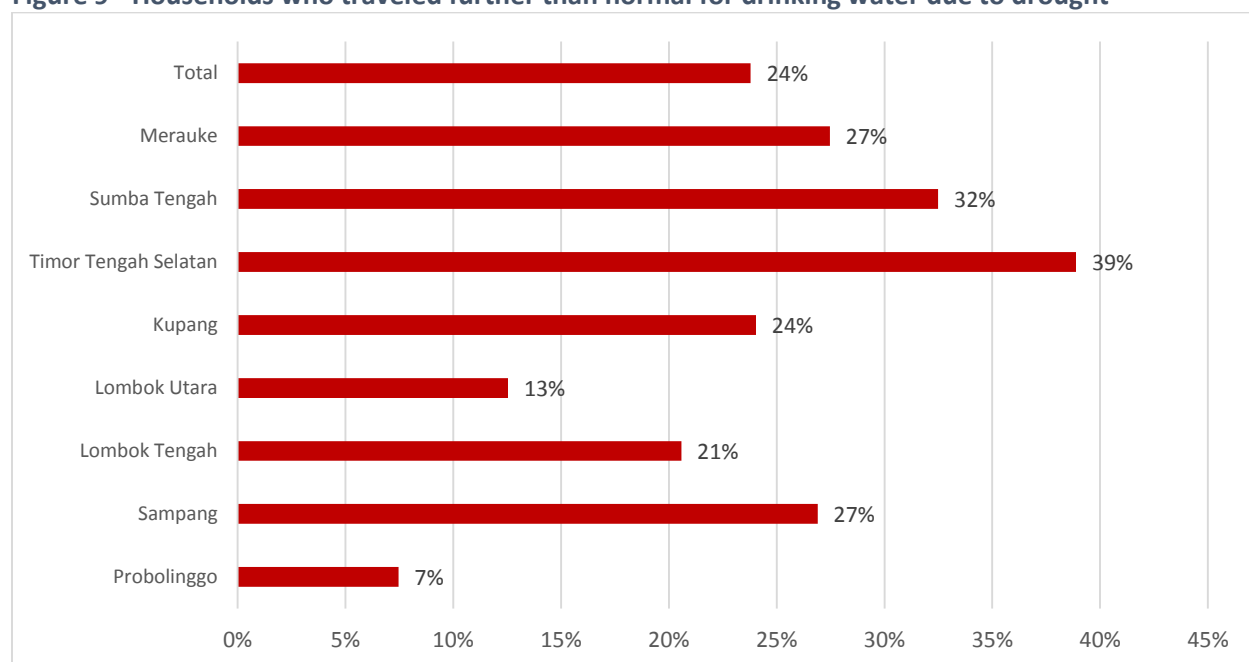
Figure 8 - Households with a water source that became unsafe compared to normal during drought



⁴ One exception to standard classifications was made. JMP defined bottled water as unimproved but in the context of Indonesia this is known to be a normal, safe and continuous water source. <http://www.wssinfo.org/definitions-methods/watsan-categories/>

In addition to the change in water quality, households were asked about the distance to drinking water during drought and normal. In Timor Tengah Selatan, 39% of households had to travel a longer distance to obtain drinking water than during normal periods, followed by Sumba Tengah at 32%. The total distance and travel time were not obtained in this light survey but, distance to water is a known issue within many of the districts visited. According to the Indonesia Demographic and Health Survey of 2012, just 60% of rural Indonesian households have drinking water on premises. Increased travel time to water sources add additional burden to poor households. Women and young girls often carry the brunt of this burden, further contributing to lower attendance rates and higher dropout rates in girls compared to boys.⁵⁶

Figure 9 - Households who traveled further than normal for drinking water due to drought

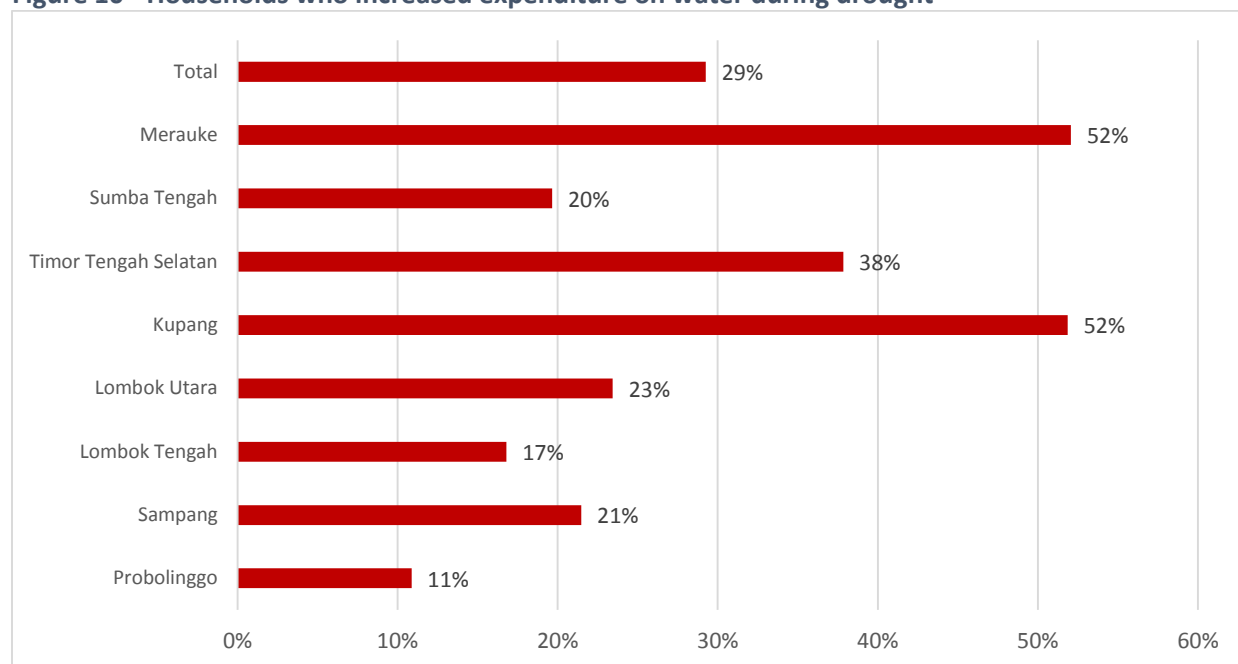


The cost of household water in general frequently rises in the dry season in Indonesia. While a light survey does not allow for specific monetary values in the cost of water, households were asked whether their drinking water source during drought cost more than usual, the same as usual or less than usual. For 29% of households, the price of water increased during the drought. The highest increases were reported in Kupang and Merauke, where 52% of households reported an increase on water expenditure during drought, followed by Timor Tengah Selatan with 38%.

⁵ http://www.ungei.org/resources/files/Final_Poverty_and_Economic.pdf

⁶ http://www.unicef.org/indonesia/girls_education_fact_sheet_final_ENG_1_.pdf

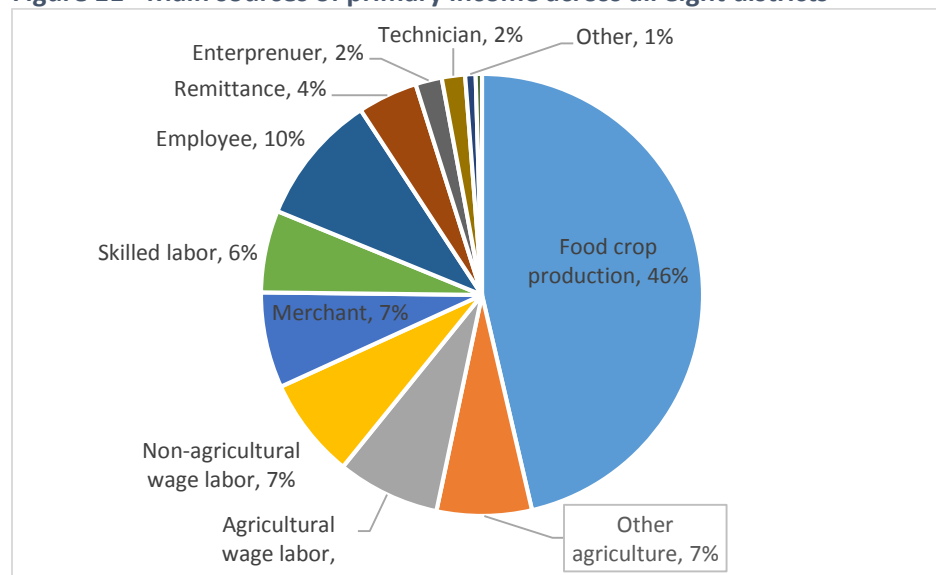
Figure 10 - Households who increased expenditure on water during drought



2.3 Impact on agriculture

Across the eight districts, 61% of households listed some form of agriculture, livestock, and fishing as their main income source. The majority of these households are food crop producers (46%), while a smaller proportion are agricultural wage laborers (8%), fishermen (3%), engaged in livestock (2%), or cash crop producers (3%). By district, the highest proportion of households with food crop production as their main income source were in Timor Tengah Selatan and Sumba Tengah at 81% each. The district with the lowest level of agricultural related livelihoods as a primary income source was in Merauke where just over one third (36%) of households were engaged in agriculture, fishing or livestock in some form, followed by Probolinggo with 47%.

Figure 11 - Main sources of primary income across all eight districts



Overall, the importance of agriculture in these districts highlights the potential impact of poor weather conditions on livelihoods. To assess how drought has affected agricultural households, a series of questions on crop and water management were asked. These questions were only administered to households who noted engagement in agriculture and specifically excluded agricultural wage laborers. This is due to the lack of decision making on crop and water management by daily wage laborers which may lead to uninformed responses.

Among agricultural households, the primary crops grown are predominantly rice (44%) and maize (40%). In some districts (Sampang, Lombok Utara, and Timor Tengah Selatan), cassava is also a common primary crop. Agricultural households were asked about the impact of drought on the harvest of their main crop. It must be noted that this survey was administered in December and harvests in the preceding months are usually significantly less than the main harvest in January to April. Across the eight districts, a total of 40% of primary rice growers noted a major loss with more than 50% of the crop failing in the last harvest. In Sampang, more than half of households (54%) listed rice as their main crop and of these, two-thirds (66%) said their last harvest suffered with a loss of 50% or more.

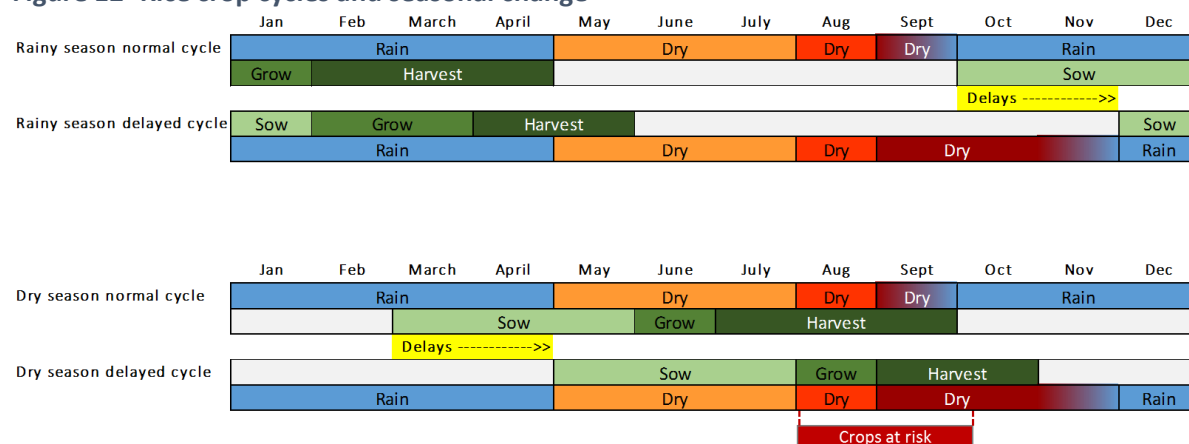
At the time of the interview, few crops were planted. Among farming households, 39% had not yet planted anything, while 34% had planted maize, 13% planted rice, and 3% planted cassava. Of those who had crops in the soil at the time of the interview, 72% stated that the current crop was planted later than usual.

Households were asked if in the past three months due to drought, they had planted a different crop than usual, planted a different variety than usual, delayed planting, or skipped planting altogether. Very few households reported planting a different crop or different variety with just 6% and 3% respectively among agricultural households. Among agricultural households, 39% said that they had delayed planting of some crops in the past three months due to drought, while 26% had not yet planted in the past three months due to drought.

Among farmers who delayed planting in the past three months, the most common crop delayed was maize (64%) followed by rice (25%). Farmers who didn't plant in the past three months due to drought had

mostly not planted rice (37%) and maize (35%). For Nusa Tenggara Timur and east, December is still not yet a critical period for planting and delays are not unexpected. However in Java, this is more delayed than usual. Delays in the planting of the main rice crop have a cascading effect. Two significant risks are introduced by shifting rice cycles in most of Indonesia: 1) an extension of the 'lean' season and 2) increased exposure of secondary rice to the peak dry season as highlighted above. The extended lean season will stretch resources among poorer households who spend a large share of their limited income on food, with prices likely to rise while the next harvest is postponed. In addition, without efforts to accelerate planting immediately daily agricultural wage laborers will continue to have reduced income opportunities.

Figure 12- Rice crop cycles and seasonal change



3 Food security status in drought-affected districts

3.1 Overall food security status

To gauge the overall food security status of households interviewed in this survey, two domains were examined: 1) the current status based on food consumption patterns of the household and 2) the coping capacity of a household based on measures of economic vulnerability and asset depletion. The details of the process for determining the food security status of the household can be found in the Annex, on page 46. Each household was assigned a value of 1-4 where 1 = food secure, 2 = marginally food secure, 3 = moderately food insecure, and 4 = severely food insecure. The household food security console below reports the prevalence of each component of the food security index and the overall classification.

Table 1 - Household food security console

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	73%		21%	6%
	Economic vulnerability	Asset ownership	19%	31%	32%	17%
Coping capacity	Asset depletion	Livelihood coping	62%	22%	12%	4%
Overall food security classification			33%	43%	22%	2%

Severe food insecurity was low, with just 2% of households surveyed in this most extreme category. However, at district level Sumba Tengah and Timor Tengah Selatan each had rates of concern with 7% and 5% respectively in this category. Severely food insecure households are noted for having extreme food consumption gaps, or extreme loss of livelihood assets that will lead to food consumption gaps, or worse.

Moderately food insecure households can be described as having significant food consumption gaps, or being marginally able to meet minimum food needs only with irreversible coping strategies. When considering the moderately food insecure, there are significantly high numbers in the three Nusa Tenggara Timur districts surveyed, with the most concern in Sumba Tengah. In total, more than half of households in Sumba Tengah are food insecure (47% moderately food insecure, 7% severely food insecure).

Table 2 - Overall food security classification by district

District	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Probolinggo	57%	37%	5%	1%
Sampang	50%	49%	1%	0%
Lombok Tengah	34%	37%	28%	1%
Lombok Utara	34%	45%	21%	0%
Kupang	18%	42%	39%	2%
Timor Tengah Selatan	6%	56%	33%	5%
Sumba Tengah	8%	39%	47%	7%
Merauke	60%	39%	1%	0%
Total	33%	43%	22%	2%

3.2 Diet quality

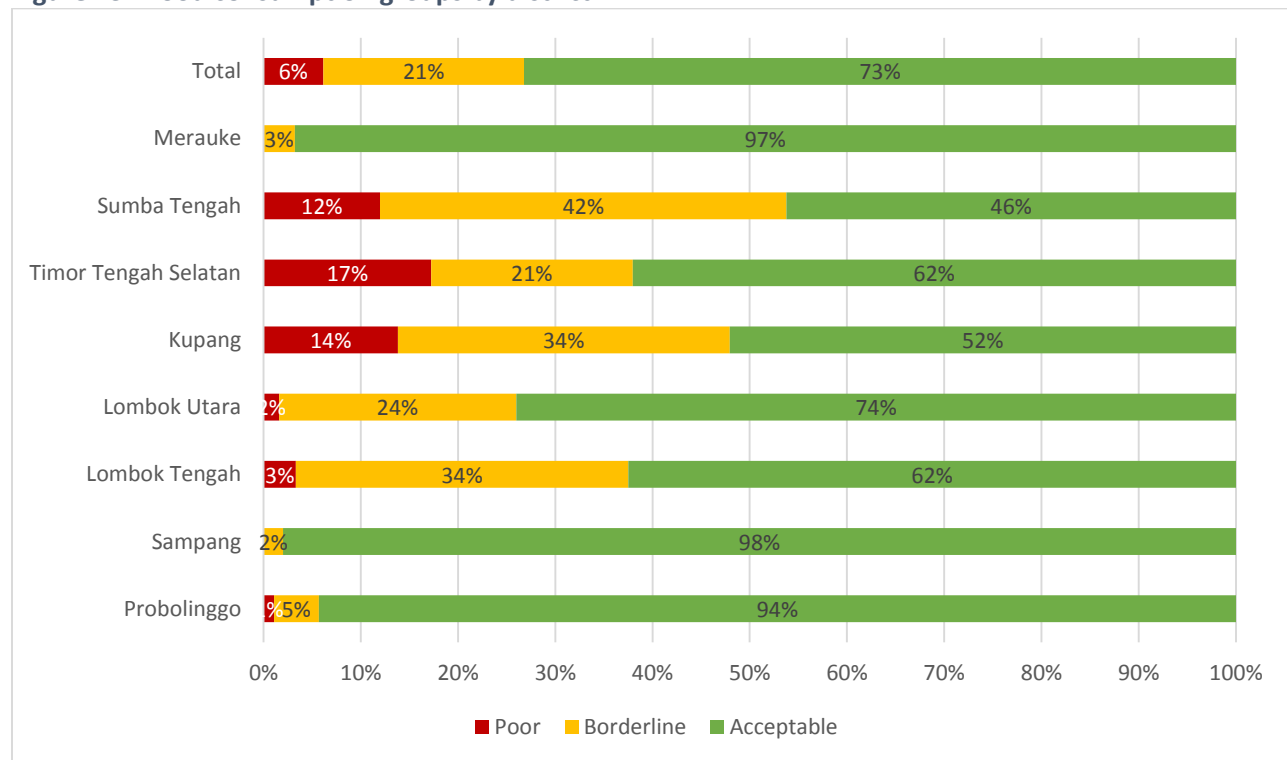
A key component of the food security index is derived from a module on household food consumption. Households were asked to report the number of days over the past week that they consumed various food groups. The responses were multiplied by a weight factor based on the relative nutritional value of each food group and summed together to create the Food Consumption Score (FCS)⁷ - a standard WFP indicator of household food insecurity. The FCS value is then used to categorize households into three groups: poor food consumption, borderline food consumption, and acceptable food consumption. Generally, households with poor food consumption using this definition consume just staples (i.e. rice, maize, and cassava), vegetables, oil, and sugar. This diet seriously lacks in micronutrients and is associated with high rates of poverty and malnutrition.

By district, poor diets were more common in Nusa Tenggara Timur with 17% of households in Timor Tengah Selatan, 14% in Kupang and 12% in Sumba Tengah having poor food consumption. Borderline diets were also common in Nusa Tenggara Timur as well as in the two districts in Lombok. A borderline diet,

⁷ See page 31 in the Annex for details on the calculation of the Food Consumption Score

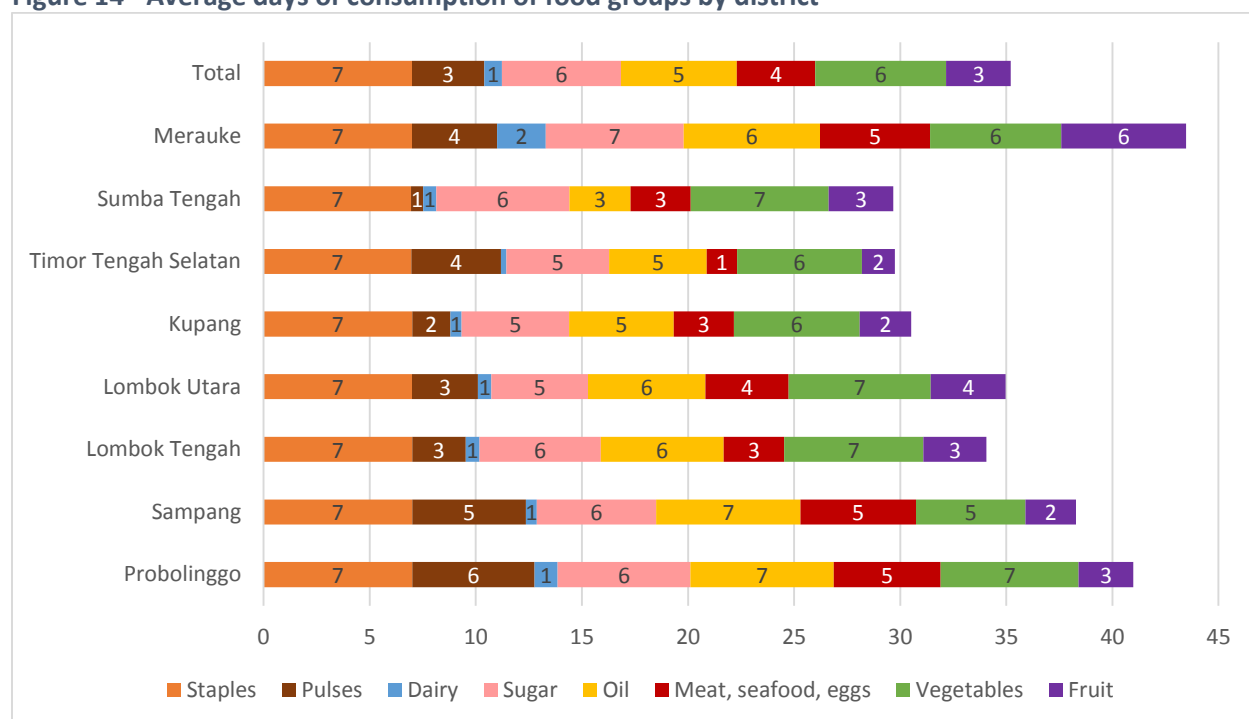
on average, adds consumption of pulses such as tofu, lentils, and nuts to their diet. Diets were acceptable in the two districts in East Java and in Merauke, where consumption of meat, fish, seafood were common.

Figure 13 - Food consumption groups by district



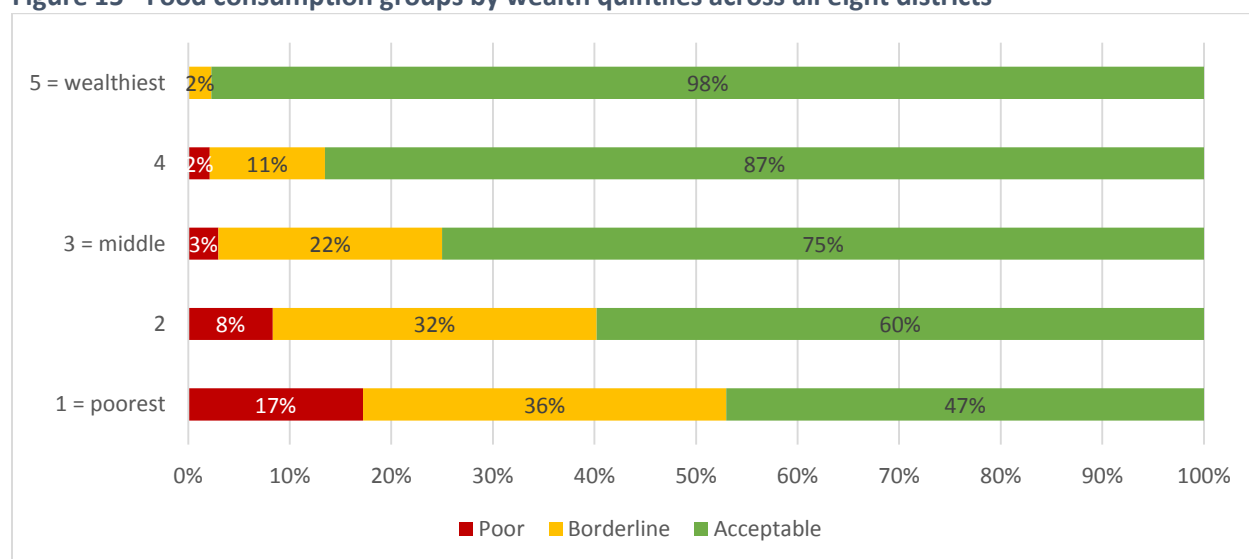
While the FCS provides a measure of overall quality of diet based on frequency of consumption and the relative weight of consumption, a simpler measure of the frequency of consumption of individual food groups is illustrative of dietary diversity, or the lack thereof. Figure 14 below demonstrates the relatively poor diets in Sumba Tengah, Timor Tengah Selatan, and Kupang particularly when compared to Merauke and Probolinggo. In Sumba Tengah, even at aggregate level, pulses and dairy are nearly non-existent in the diet. In Timor Tengah Selatan, meat and dairy are also absent. In contrast, households in Merauke had high frequency of consumption of a variety of food groups with the exception of dairy which has low consumption across all eight districts.

Figure 14 - Average days of consumption of food groups by district



Food consumption patterns are most often directly driven by wealth and poverty. Poor households usually consume a diet with limited diversity - consisting of cereals, oil, and vegetables. This can be seen clearly when the prevalence of each food consumption group is compared against wealth quintiles. Nearly all households (98%) defined as the most wealthy had acceptable food consumption. In contrast, less than half (47%) of households in the poorest wealth quintile had an acceptable diet.

Figure 15 - Food consumption groups by wealth quintiles across all eight districts



3.2.1 Micronutrient intake

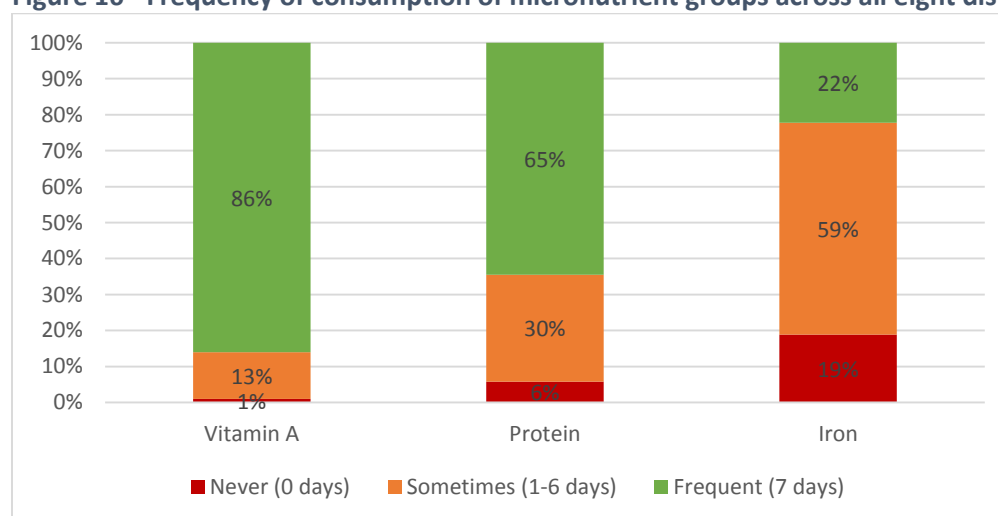
The structure of the food consumption module in the questionnaire design was based upon recent research by WFP on the ability to describe intake of key nutrient groups from WFP's existing survey

instruments with slight modifications. The information gathered for calculation of the FCS provides a wealth of unexploited data that can be used to inform on nutrient rich groups consumed by the household and which are essential for nutritional health and well-being, specifically: protein, iron and vitamin A⁸.

Table 3 - Micronutrient rich food groups and related food items from the household questionnaire

Vitamin-A rich foods	Protein rich foods	Iron rich foods
Milk, yogurt, cheese, and other dairy products	Tofu, tempe, beans, cowpeas, peanuts, lentils, nuts, soy, pigeon peas, and other nuts	Meat including beef, pork, lamb, goat, rabbit, chicken, duck, other birds, insects
Liver, kidney, heart, and other organ meats	Milk, yogurt, cheese, and other dairy products	Liver, kidney, heart, and other organ meats
Eggs	Meat including beef, pork, lamb, goat, rabbit, chicken, duck, other birds, and insects	Fish / shellfish, including canned fish, and other seafood
Orange vegetables (vegetables rich in Vitamin A): carrot, red pepper, pumpkin, orange sweet potatoes	Fish / shellfish, including canned fish, and other seafood	
Dark green leafy vegetables: spinach, broccoli, cassava leaves, and other dark green leaves	Eggs	
Orange fruits (Fruits rich in Vitamin A): mango, papaya		

Figure 16 - Frequency of consumption of micronutrient groups across all eight districts



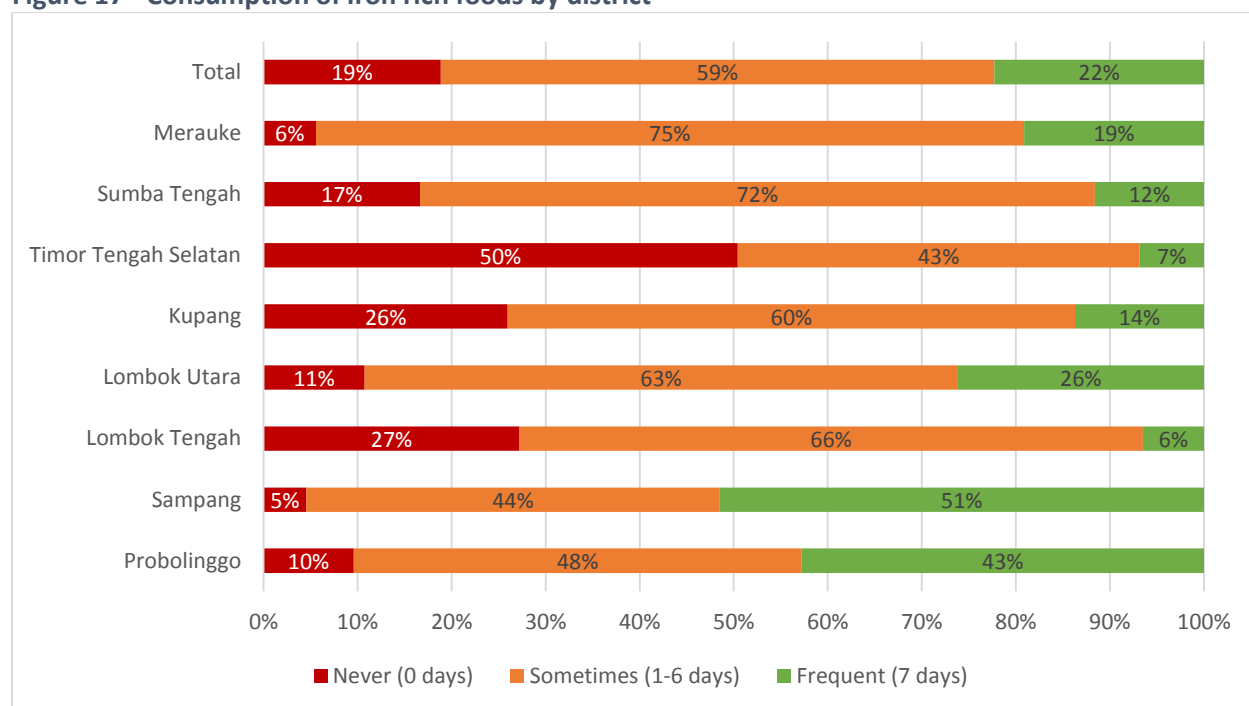
Overall, consumption of vitamin-A rich foods was high across the eight districts with 86% of households consuming these foods on a daily basis. This is somewhat expected in Indonesia where vitamin-A rich tropical fruits, particularly mango and papaya are readily available throughout the country and are relatively affordable. Consumption of protein rich foods is common with 65% of households consuming on a daily basis and 30% consuming sometimes (1-6 days). The primary sources of frequently consumed protein rich foods are eggs and pulses - particularly tofu and tempe.

⁸ See page 33 in the Annex for more details on this new approach

However, when considering iron rich foods, there's a large drop in consumption with just 22% of households consuming these foods daily and 59% sometimes (1-6 days). Most troubling are the 19% with no consumption of iron rich foods. This is of concern given the substantial evidence showing strong linkages between prenatal iron deficiency, iron deficiency in infants, and poor child development⁹. Indonesia's national Scaling-Up Nutrition (SUN) movement aims to address anemia, and low birth weight - both outcomes highly associated with micronutrient deficiencies. This is also reflected in the World Health Assembly's long term goal of decreasing the proportion of anemic women of childbearing age by 50 percent globally by 2025.

District level analysis of iron consumption shows extremely poor consumption in Timor Tengah Selatan district where 50% of households do not consume iron rich foods at all. Whether or not this poor level of iron intake is a direct result of drought impact or a normal condition is unclear. However, given the high rates of malnutrition in Timor Tengah Selatan, it is likely not just a result of the drought.

Figure 17 - Consumption of iron rich foods by district



3.3 Coping with reduced access to food

From a food security perspective, a key concern for populations affected by acute events - including drought - is reduced access to food. A deterioration in food access can be caused by multiple factors, chief among them are reduced economic means to purchase food due to lower income and/or an increase in the cost of food. Another major factor is reduced production among farming households.

The household survey employed two sections on coping responses. The first uses a 30-day recall period and asks if households engaged in a series of livelihood related coping behaviors due to reduced access to food. The second section is an implementation of the Reduced Coping Strategies Index (CSI) module.

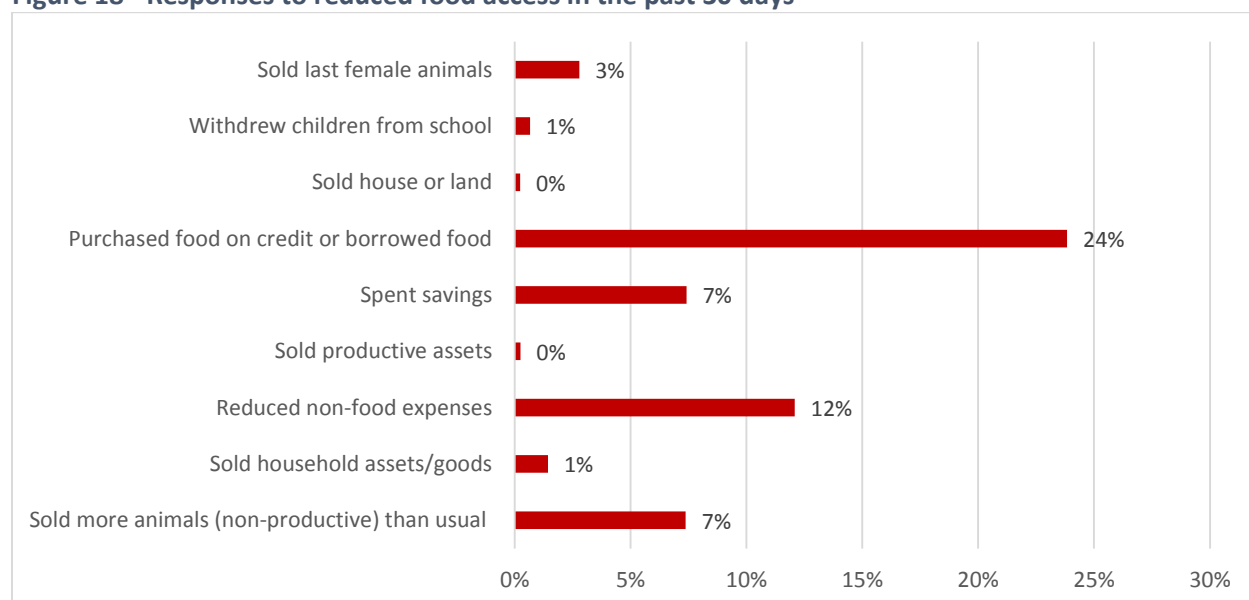
⁹ Iron Deficiency and Child Development, Lozoff. Food and Nutrition Bulletin, December, 2007.
http://fnb.sagepub.com/content/28/4_suppl4/S560.short

The CSI is a standard module which uses a 7-day recall and asks households about dietary responses to reduced food access. While these two variants of responses to food access have similarities, they differ in that the livelihood coping module focuses on non-food consumption related responses while the CSI is specific to reductions in food consumption.

3.3.1 Livelihood coping

In the livelihood coping module, the most common response to reduced food access was purchasing food on credit or borrowing food, which was used by 24% of the households surveyed.

Figure 18 - Responses to reduced food access in the past 30 days



A primary usage of the livelihood coping module is to construct a portion of the coping capacity dimension of the household food security index.¹⁰ Each of the potential responses above is classified in terms of its severity, ranging from stress, to crisis, and emergency levels. The table below lists the severity of each behavior. These severities are based upon a standard approach by WFP launched in 2013.

Table 4 - Categorization of severity of livelihood / asset depletion coping strategies

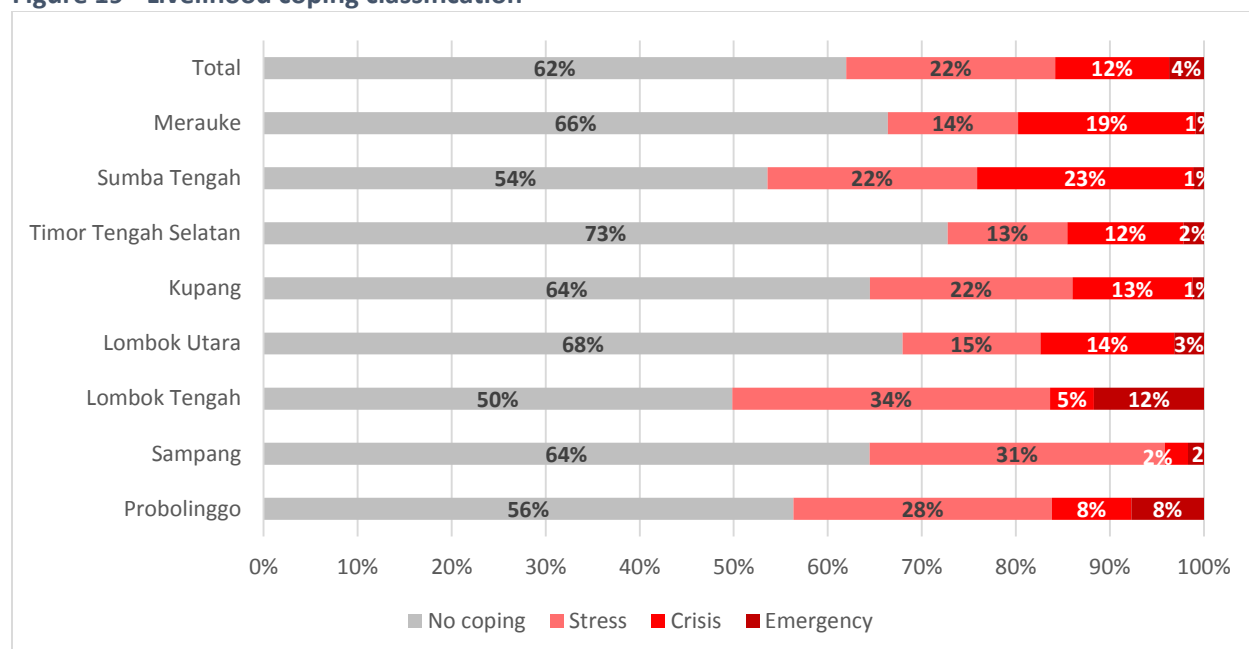
Category	Coping strategy
Stress	Sold more animals (non-productive) than usual
Stress	Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc.)
Stress	Spent savings
Stress	Purchased food on credit
Crisis	Reduced non-food expenses on health (including drugs) and education
Crisis	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)
Crisis	Withdrew children from school
Emergency	Sold last female animals

¹⁰ See page 33 in the Annex for details on construction of the index

Emergency Sold house or land

Following categorization of each of the individual coping strategies, the most severe strategy was used to classify the households' livelihood coping severity. Across the eight districts, 4% of households engaged in emergency level coping behaviors¹¹, 12% in crisis level behaviors and 22% in stress level behaviors.

Figure 19 - Livelihood coping classification



The table below includes all coping behaviors by district. Sales of the last female animals - an emergency level coping behavior - was high in Lombok Tengah where 11% of households reported this behavior. It is possible that this question was not fully understood in the context of a response to reduced food access. The sales of these animals may in fact be a normal behavior. When this component is combined with other food security indicators into the overall index, a correction does seem to address this potential misinterpretation.

Table 5 - Percent of households engaged in livelihood / asset depletion coping strategies in the past 30 days

District	Sold more animals (non-productive) than usual	Sold household assets/goods	Reduced non-food expenses	Sold productive assets	Spent savings	Purchased food on credit or borrowed food	Sold house or land	Withdrew children from school	Sold last female animals
Probolinggo	10%	3%	8%	0%	8%	35%	1%	3%	7%
Sampang	5%	1%	2%	0%	7%	28%	0%	0%	2%
Lombok Tengah	13%	4%	6%	1%	7%	37%	1%	2%	11%
Lombok Utara	4%	3%	14%	2%	3%	22%	2%	1%	2%

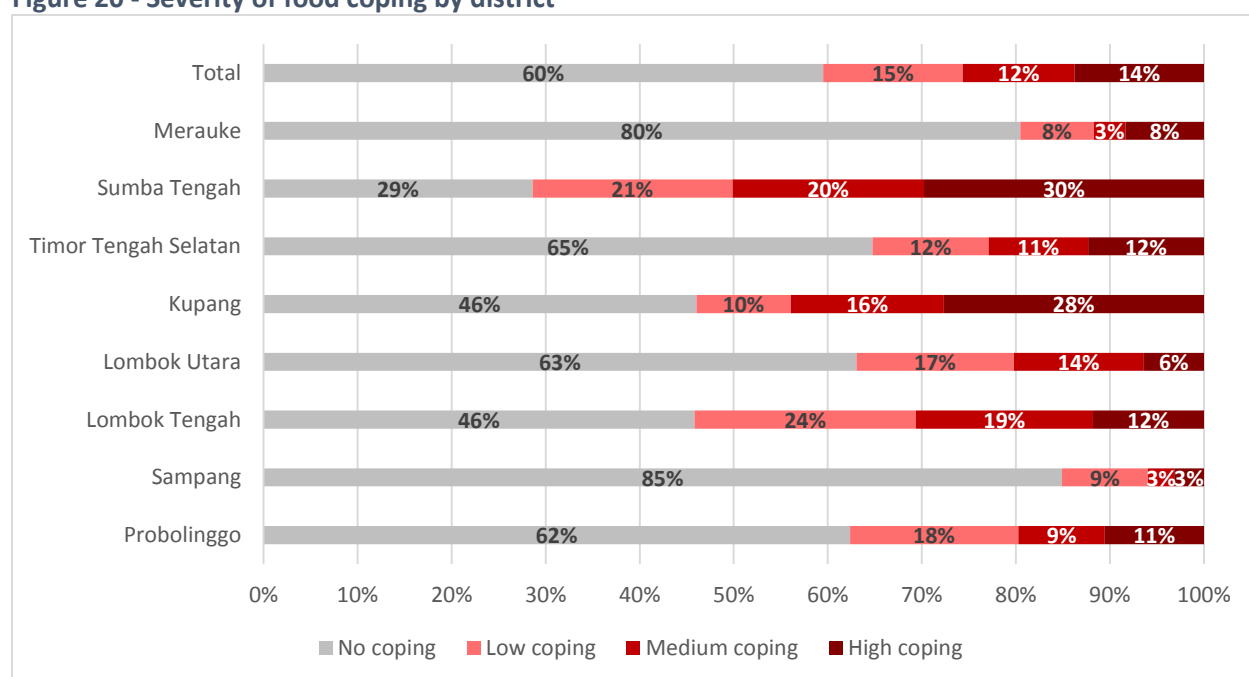
¹¹ A question on begging was included in the survey but it was revealed that it was misinterpreted and an implausibly high proportion of households reported the activity. This was removed in the analysis.

Kupang	17%	0%	13%	0%	7%	17%	0%	0%	1%
Timor Tengah Selatan	9%	0%	13%	0%	1%	18%	0%	0%	2%
Sumba Tengah	3%	1%	23%	1%	18%	22%	0%	0%	1%
Merauke	2%	1%	19%	0%	9%	14%	0%	0%	1%
Total	8%	2%	12%	0%	8%	24%	0%	1%	3%

3.3.2 Dietary responses

A standard module was used to compute the Coping Strategies Index (CSI), a measure of the severity of food relating coping strategies. The CSI asks what households did in terms of changes to diet in the past week due to reduced food access. Options include: relying on less preferred food, less expensive food; borrowing food or relying on help from friends / relatives; reducing the number of meals per day; reducing the portion size of meals; and restricting consumption by adults in order for small children to eat. The frequency of these responses is then multiplied by a severity weight to create the CSI¹². The index was used to create groups across the population depicting the most severe among those surveyed. The most severe (highest CSI scores) were found in Sumba Tengah where 30% of households were placed in this category, followed closely by Kupang with 28%. The lowest levels of food related coping were in Sampang, where 85% did not engage in any of these behaviors, and in Merauke at 80%.

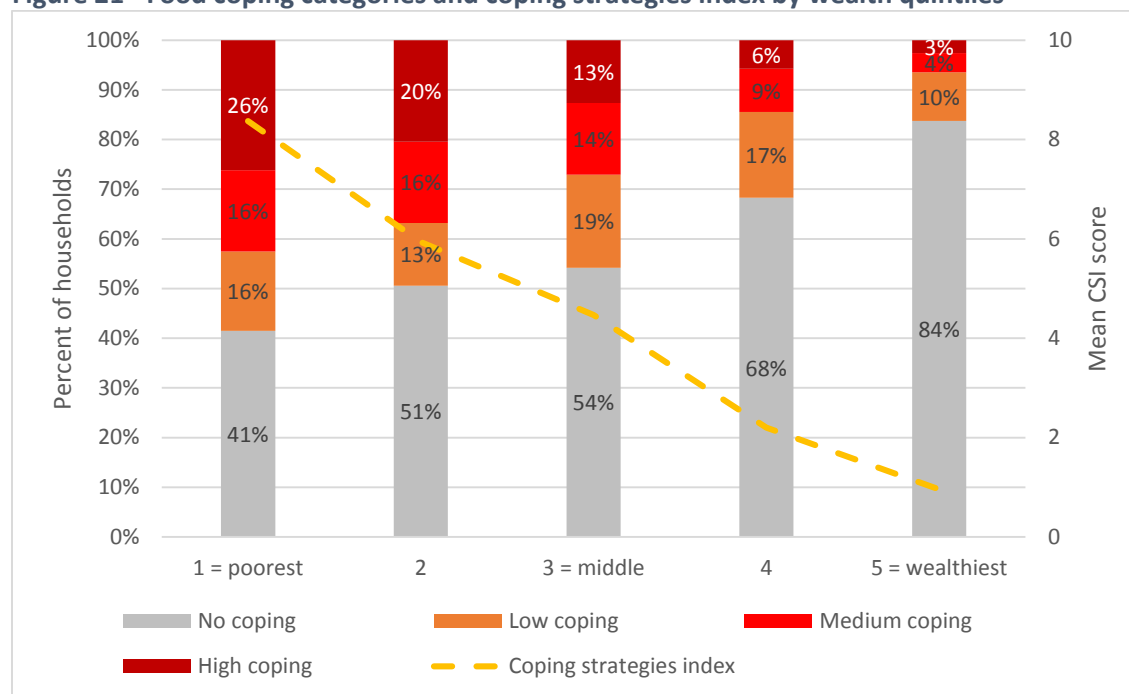
Figure 20 - Severity of food coping by district



As expected, the most severe and concerning levels of negative food coping behaviors are amongst the poorest households. One in four households (26%) in the poorest wealth quintile had high levels of negative food coping behaviors. Households in this quintile on average reduced the number of meals consumed once per week, reduced portion sizes of meals twice per week, and restricted consumption by adults in order for children to eat once per week.

¹² See page 33 in the Annex for more details on the calculation of the CSI

Figure 21 - Food coping categories and coping strategies index by wealth quintiles



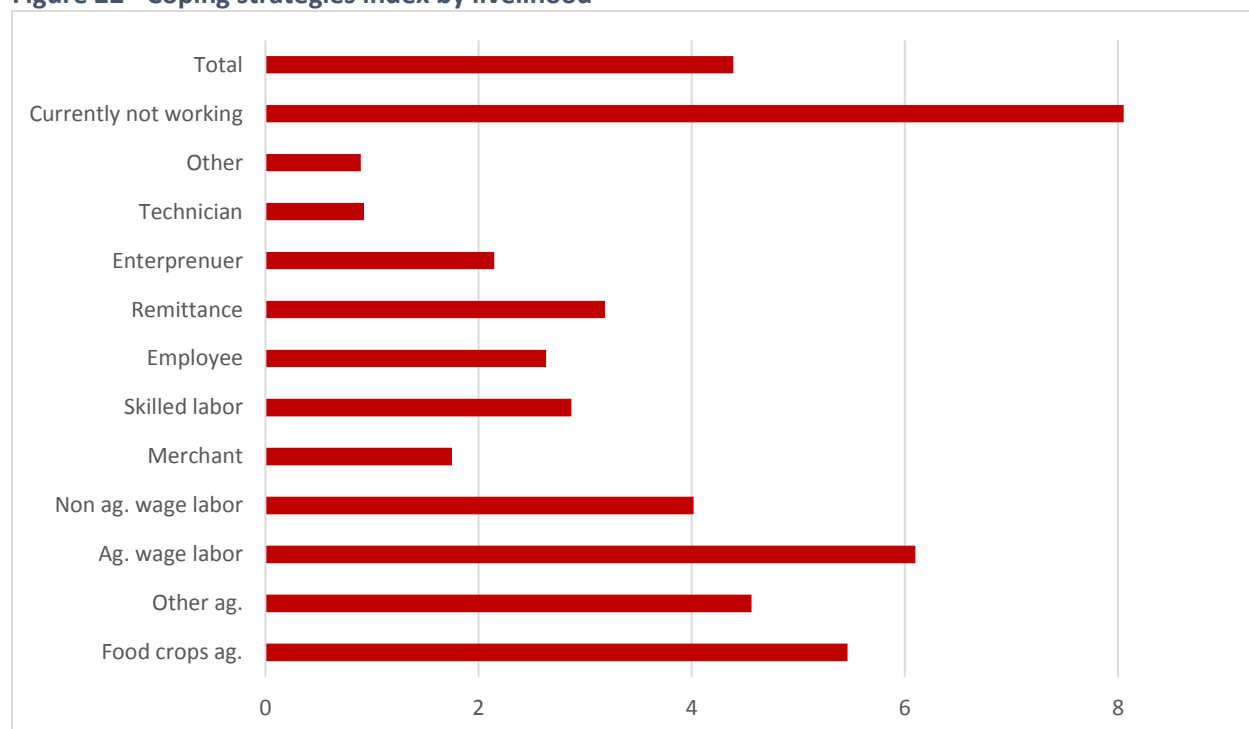
Restriction of consumption by adults for children to eat is a severe and unsustainable response to reduced food access. This behavior was common in Sumba Tengah, where more than a quarter of households (26%) restricted food consumption among adults for children to eat, and also in Kupang were nearly one in five households (19%) used this severe strategy.

Table 6 - Percent of households engaging in food consumption related coping behaviors in the past week

District	Relied on less preferred, less expensive food	Borrowed food or relied on help from friends or relatives	Reduced the number of meals eaten per day	Reduced portion size of meals	Restricted consumption by adults in order for small children to eat
Probolinggo	25.9%	16.4%	11.4%	10.0%	7.5%
Sampang	6.7%	9.1%	3.2%	3.2%	2.9%
Lombok Tengah	34.3%	35.1%	10.6%	11.6%	8.8%
Lombok Utara	22.6%	19.8%	13.0%	13.3%	4.6%
Kupang	21.5%	10.0%	34.4%	38.8%	18.7%
Timor Tengah Selatan	18.0%	10.1%	15.4%	20.3%	11.3%
Sumba Tengah	41.9%	20.4%	34.9%	31.0%	26.1%
Merauke	15.0%	3.6%	8.3%	10.1%	4.8%
Total	23.2%	15.6%	16.4%	17.3%	10.6%

The livelihood groups exhibiting the highest levels of negative food consumption coping strategies are unemployed, agricultural wage laborers, and food crop producers. These are not surprising results given the specific impact of drought on agricultural households and the existing economic vulnerability of unemployed households. Agricultural wage laborers and food crop producers also reported the highest rates of severe impact on income due to drought with 49% and 46% respectively losing more than 30% of their primary income (see Figure 3 on page 12).

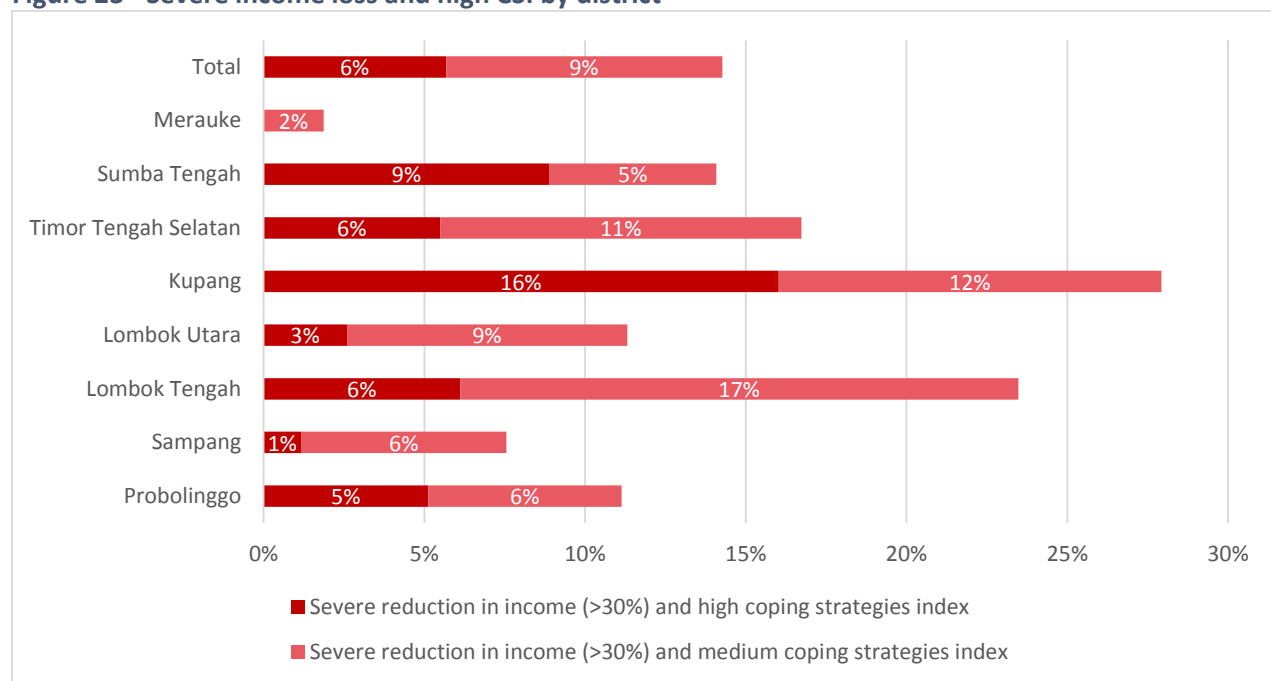
Figure 22 - Coping strategies index by livelihood



Households who faced income reductions and subsequently used severe coping strategies including reducing the number, frequency or quality of meals have low resilience to drought. These households, due to limited coping capacity, were forced to limit their food intake as a response to loss of income. A household-level analysis, which combines income reduction and the coping strategies index illustrates where the impact of drought was felt from a food security perspective. As shown in Figure 23 below, 16% of households in Kupang were highly impacted, followed by 9% in Sumba Tengah and 6% in Lombok Tengah¹³.

¹³ The coping strategies index captures a seven day period prior to the survey which limits the extent to which drought impact can be directly attributed to the CSI score

Figure 23 - Severe income loss and high CSI by district

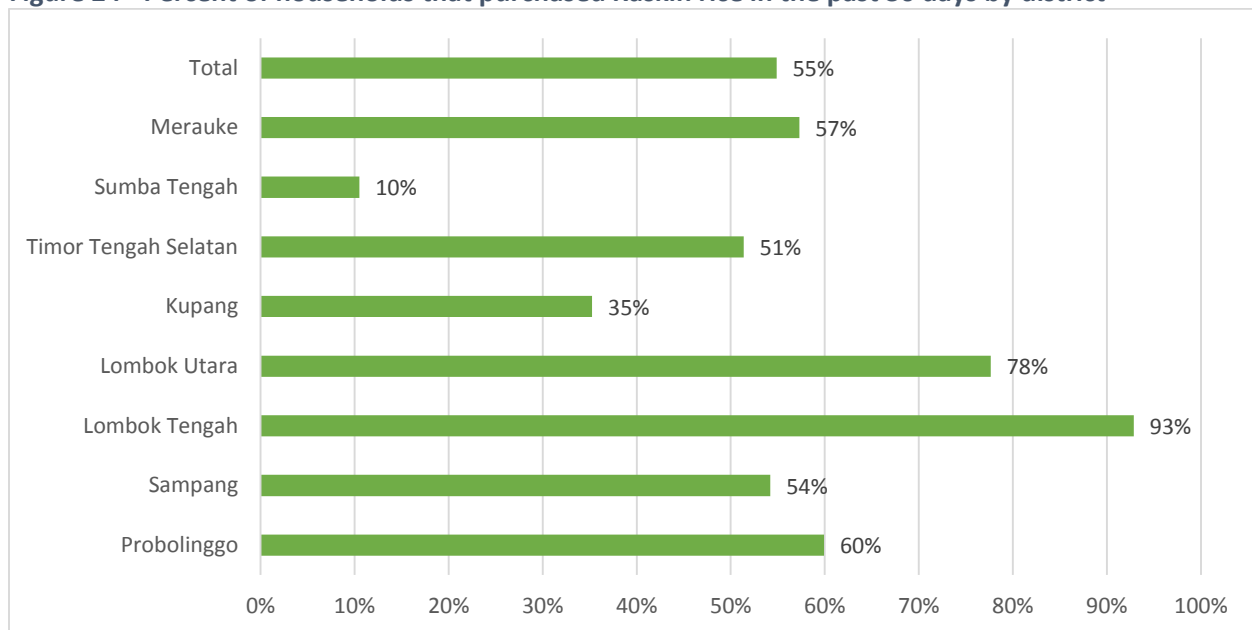


4 External assistance

Households were asked if they received assistance for drought relief, who provided the assistance and the type of assistance received (i.e. food assistance, water distributions, agricultural inputs, cash, etc.). In addition, households were asked if they purchased Raskin rice in the past 30 days.

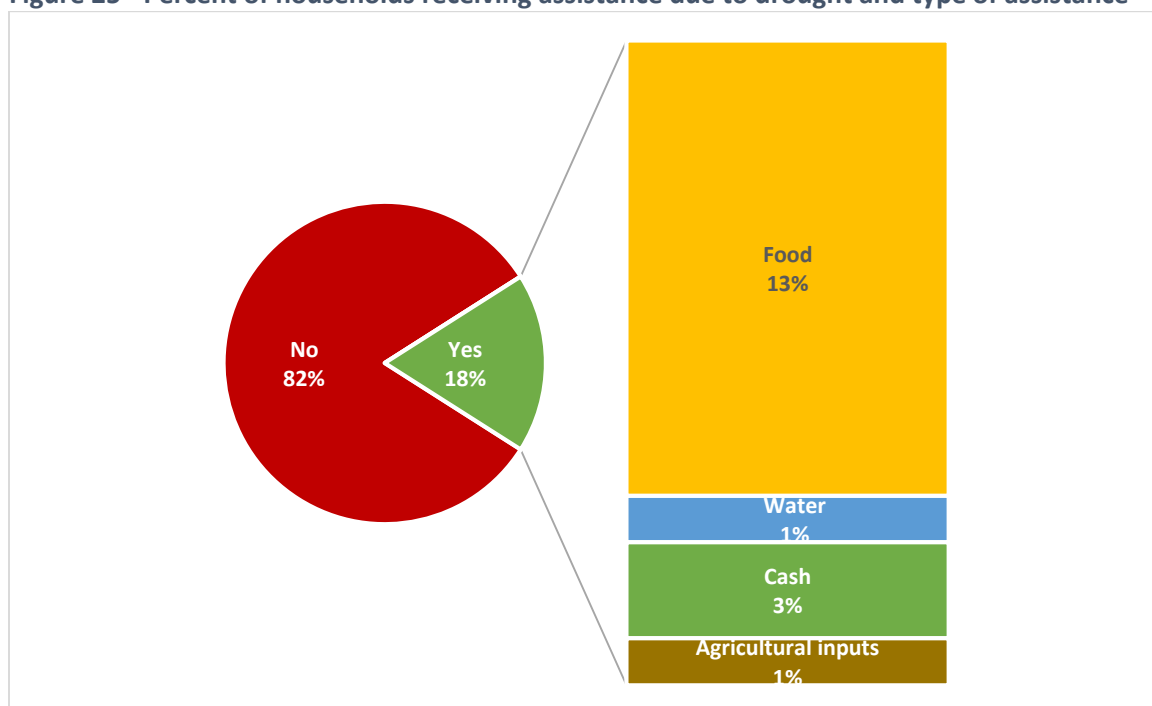
Just over half of household surveyed (55%) purchased Raskin rice within the 30 days prior to the survey. However, across districts, the percent of households purchasing Raskin varied significantly. For example, in Lombok Tengah, nearly all households (93%) purchased Raskin rice while in Sumba Tengah, merely 10% of households purchased Raskin rice in the past 30 days. The survey was conducted during an election period in the two districts in Lombok and in Merauke in Papua, which may have influenced the availability of Raskin rice.

Figure 24 - Percent of households that purchased Raskin rice in the past 30 days by district



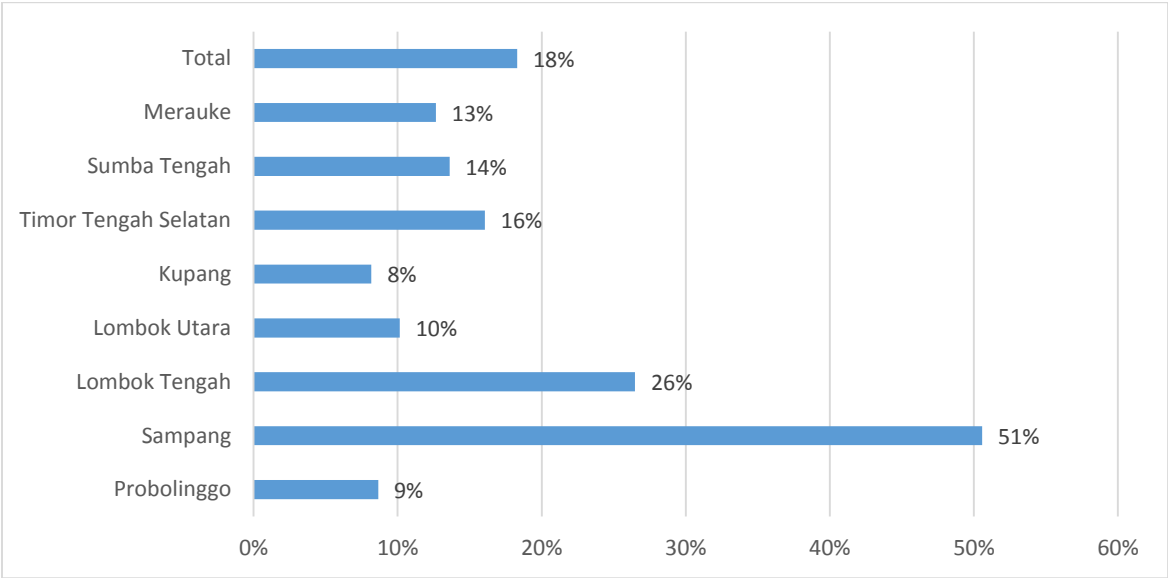
Across the eight districts, about one in five households surveyed (18%) received assistance for drought relief. The most common form of assistance was food assistance, followed by cash, water, and agricultural inputs. Government was nearly the sole provider, accounting for 98% of households who received drought assistance with NGOs (international and local) providing assistance to a few households in Merauke and Kupang.

Figure 25 - Percent of households receiving assistance due to drought and type of assistance



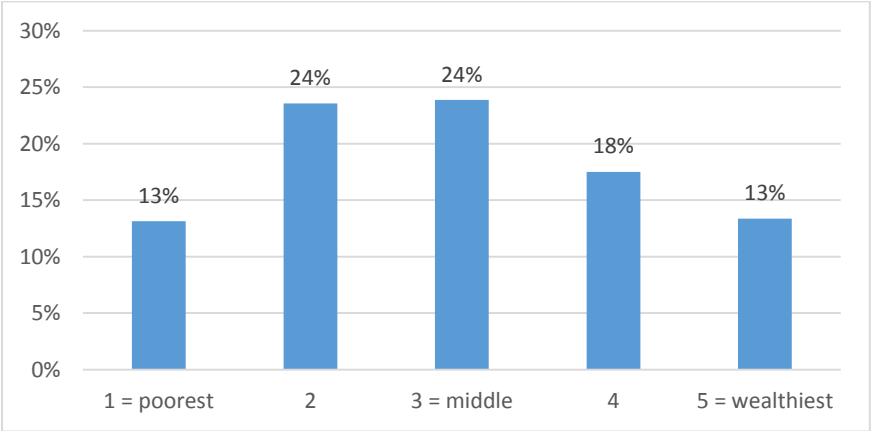
Half of households in Sampang district (51%) had received drought assistance at the time of the survey. Of those households, 89% received food assistance. Lombok Tengah had the second highest proportion of households receiving assistance, with one quarter of those surveyed receiving some benefit. In Lombok Tengah, cash was the primary intervention for 30% of those receiving assistance. While only 10% of households in Lombok Utara received assistance, nearly half (47%) received cash.

Figure 26 - Percent of households who received drought assistance by district



Targeting of assistance is problematic. When considering the population in need from four perspectives: relative levels of poverty, food security status, drought impact on income, and drought impact on agriculture - many of the households in need did not receive assistance. Households in the poorest quintile were equally targeted as households in the wealthiest quintile at 13% each. It must be noted that the wealth quintile is based on a distribution across all eight districts surveyed. Poor districts, specifically Sumba Tengah and Timor Tengah Selatan, account three out of four households in the poorest quintile (74%). Therefore relatively low levels of assistance in these districts as shown in the figure above, accounts for overall low levels of assistance to the poorest quintile. This suggests geographic targeting and household targeting are not optimal based on findings from these eight districts.

Figure 27 - Percent of households who received drought assistance by wealth quintile



Severely food insecure households and food secure households equally received assistance (17% of these households each). In households who had a severe and moderate impact on income, 21% received assistance. However, among households whose income increased during drought, 27% received assistance. Targeting of farmers whose last harvest was impacted was more accurate. Among farmers who reported a crop failure in their last harvest, 24% received assistance while among those whose crop was not affected, 17% received assistance.

5 The impact of drought beyond the eight districts surveyed

Prior to the onset of the current drought in Indonesia, these eight districts had varying degrees of chronic food and nutrition insecurity. Existing vulnerability was most notable in Sumba Tengah and Timor Tengah Selatan. These two districts were identified as high priority districts in the 2015 FSVA, both labeled as priority 2. Poverty rates are high, as is stunting. In Sumba Tengah, 32% of the population lives below the poverty line and 64% of children under five are stunted. In Timor Tengah Selatan, 28% live below the poverty line and 70% of children under five are stunted - the highest rates of chronic malnutrition in all of Indonesia.

The vulnerability of these two districts as identified by the FSVA was corroborated by the survey results where rates of household food insecurity rates were high - 53% in Sumba Tengah and 38% in Timor Tengah Selatan. When the most severe rates of negative food coping behaviors were considered alongside income reduction and food insecurity rates, Sumba Tengah and Timor Tengah Selatan again were determined the most impacted confirming low resilience and high vulnerability in these districts.

In contrast, districts with levels of drought exposure and relatively high levels of economic vulnerability but less food insecure both as defined by the FSVA and by the food security index in this survey were less impacted. Merauke, Lombok Utara, Sampang, and Probolinggo had little impact on incomes, exhibited limited food related coping strategies and had low relatively low rates of food insecurity. Lombok Tengah and Kupang had somewhat mixed results across these criteria.

In terms of livelihoods, as expected, agricultural livelihoods - particularly crop producers and agricultural wage laborers - were most impacted according to the survey results. This can be seen in terms of loss of income, the use of negative food related coping and current food security status.

As previously noted in the methodology the following criteria were used to identify districts at risk:

1. High exposure to drought in the past three months
2. High economic vulnerability based on proportion of population living below the poverty line

Following data analysis from the household survey, a more refined approach was used to estimate the population that may require assistance. The findings of the survey were applied to data from the 2014 SUSENAS and rainfall data analysis using remote sensing techniques. Specifically, the number of people living below the poverty line in districts with high drought exposure and high economic vulnerability were deemed to be at risk. Second, the number of people living below the poverty line and dependent on agriculture as a primary source of income were estimated to be in need of assistance. The results from this analysis are seen in Table 7 below, with 38 districts identified and a total of 1.2 million people potentially in need of assistance.

Table 7 - Districts and population at risk and potentially needing assistance

Province	District	Total district population	Population at risk	Population requiring assistance
Aceh	Kota Subulussalam	73,860	23,623	1,530
DI Yogyakarta	Gunung Kidul	707,158	107,003	49,581
DI Yogyakarta	Kulon Progo	407,330	98,791	33,819
Gorontalo	Boalemo	146,391	34,381	18,979
Gorontalo	Gorontalo	367,951	90,901	41,237
Gorontalo	Pohuwato	143,030	21,254	5,089
Jawa Tengah	Brebes	1,772,737	223,610	52,853
Jawa Tengah	Kebumen	1,180,593	149,426	43,312
Jawa Tengah	Purbalingga	888,396	163,480	45,368
Jawa Tengah	Rembang	614,170	74,312	21,757
Jawa Tengah	Wonosobo	773,058	101,433	28,423
Jawa Timur	Bangkalan	945,285	211,933	107,433
Jawa Timur	Probolinggo	1,131,898	268,120	56,011
Jawa Timur	Sampang	932,163	209,177	69,651
Jawa Timur	Sumenep	1,066,703	196,951	75,335
Maluku	Maluku Tengah	368,278	51,717	6,688
Maluku	Seram Bagian Barat	168,773	64,812	17,553
Maluku	Seram Bagian Timur	106,775	15,455	1,398
Nusa Tenggara Timur	Ende	268,969	21,211	2,227
Nusa Tenggara Timur	Kupang	337,604	58,594	38,022
Nusa Tenggara Timur	Lembata	129,309	42,107	23,211
Nusa Tenggara Timur	Manggarai	314,083	53,585	25,810
Nusa Tenggara Timur	Manggarai Timur	268,131	116,567	63,274
Nusa Tenggara Timur	Rote Ndao	141,897	30,877	13,406
Nusa Tenggara Timur	Sabu Raijua	83,633	25,874	13,244
Nusa Tenggara Timur	Sumba Barat	120,027	33,781	26,667
Nusa Tenggara Timur	Sumba Barat Daya	312,597	121,626	103,660
Nusa Tenggara Timur	Sumba Tengah	67,302	24,229	20,316
Nusa Tenggara Timur	Sumba Timur	242,796	10,628	8,270
Nusa Tenggara Timur	Timor Tengah Selatan	458,225	124,795	107,640
Nusa Tenggara Timur	Timor Tengah Utara	241,867	61,892	44,495
Papua	Jayawijaya	204,032	40,077	40,077
Papua	Mappi	90,448	56,038	3,334
Papua	Mimika	199,069	13,480	-
Papua Barat	Manokwari	204,415	32,078	13,478
Papua Barat	Raja Ampat	45,248	13,866	1,635
Papua Barat	Teluk Bintuni	58,439	5,403	357
Sulawesi Tengah	Tojo Una-Una	146,299	9,664	1,525
Total		15,728,936	3,002,751	1,226,665

Based on findings from this analysis, WFP recommends that the Government of Indonesia focus on Nusa Tenggara Timur where an extreme dry season has eroded already weak purchasing power and harvests of main crops in 2016 are likely to be impacted. With food insecurity and chronic malnutrition rates already high, particularly in Sumba Tengah and Timor Tengah Selatan, there is cause for serious concern. Results from the Food Security and Vulnerability Atlas for Nusa Tenggara Timur¹⁵ province found a total of 14 sub-districts classified as priority 2. Of these 14 sub-districts, eight are in Timor Tengah Selatan district and one in Sumba Tengah. The forthcoming Nusa Tenggara Timur FSVA can be used to further target sub-districts within the province.

This survey was limited by time and resource constraints and did not cover all districts determined to be drought impacted. Indeed, all of Sumba island appears to be highly vulnerable to drought impact, as does Sabu Raijua, and Manggarai Timur.

Outside of Nusa Tenggara Timur - Maluku and Papua require additional focus to determine impact. This study intended to include Maluku Tengah but was logistically not feasible. While Merauke district in Papua was included, households in Merauke were mostly deemed to have more coping capacity than households in the Nusa Tenggara Timur districts surveyed. However, other districts in Papua, particularly Jayawijaya, Mappi, and Mimika will likely have a greater impact.

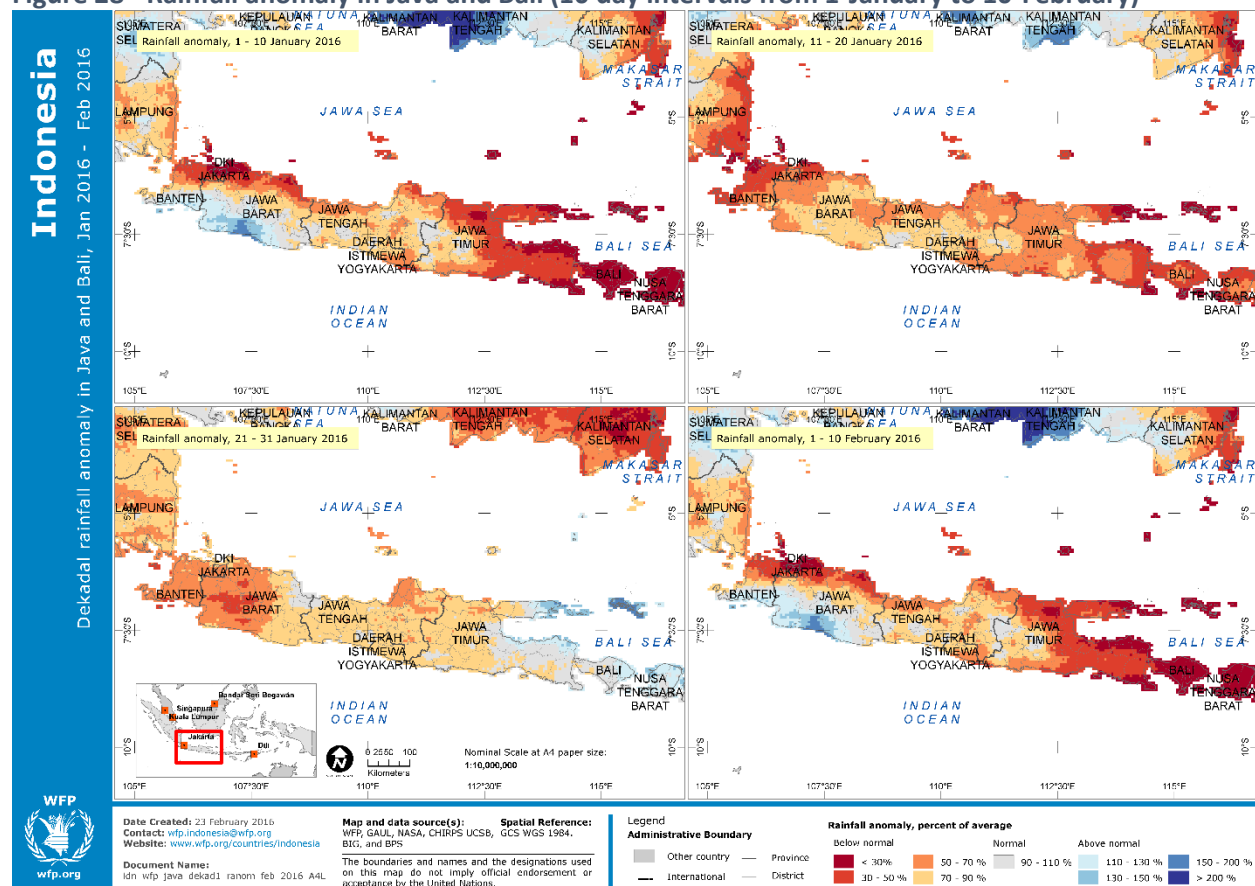
6 Situation outlook and recommendations

6.1 Situation outlook

Since the inception of the household survey data, the rainy season began in Indonesia. However, the rains came one to two months later than usual and at lower levels of precipitation than normal. In addition, rainfall which began in January, did not continue at expected levels in early February. This can be seen in the rainfall anomaly maps below. East Java, Bali and Lombok all have again returned to drier than normal conditions in the most recent observations.

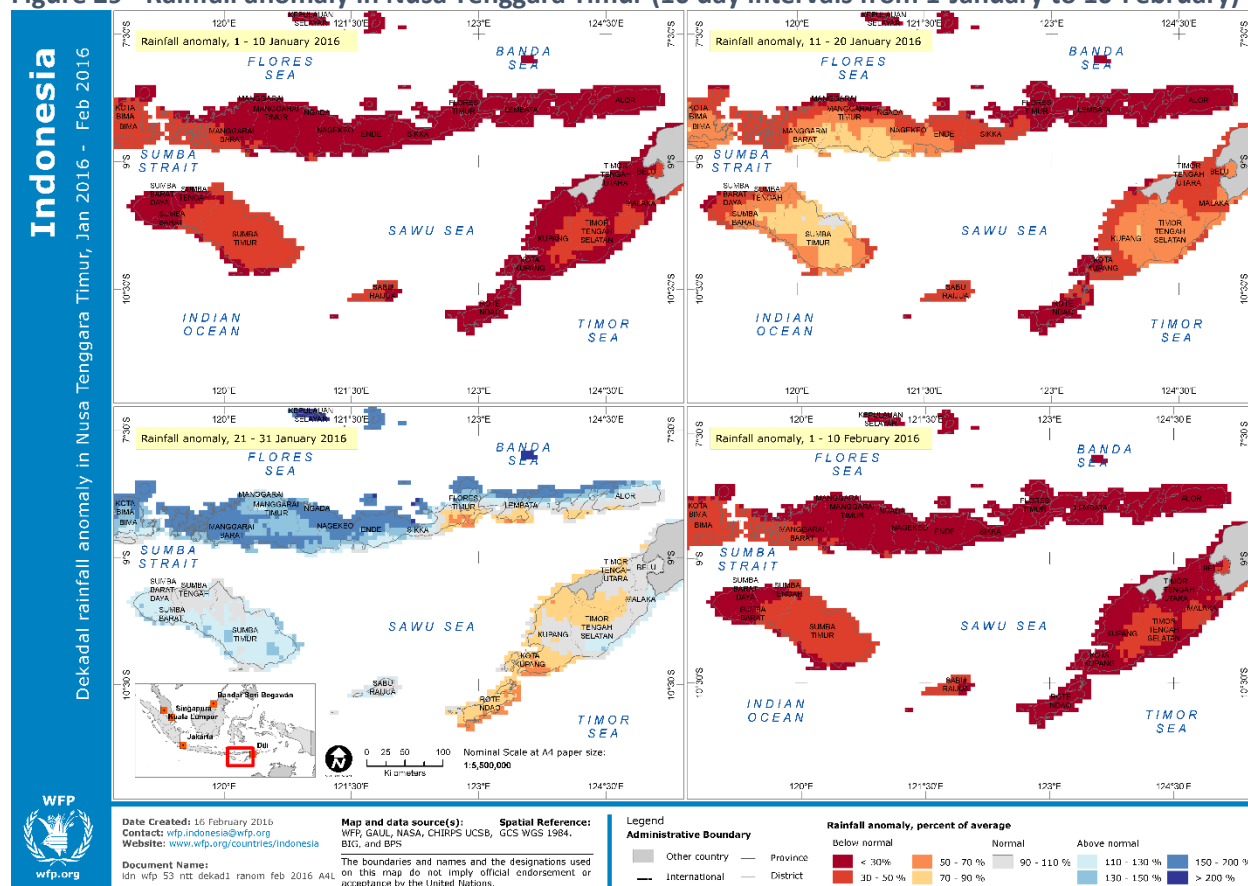
¹⁵ The Nusa Tenggara Timur FSVA evaluates each sub-district in the province while the national FSVA uses districts as the unit of analysis

Figure 28 - Rainfall anomaly in Java and Bali (10 day intervals from 1-January to 10-February)



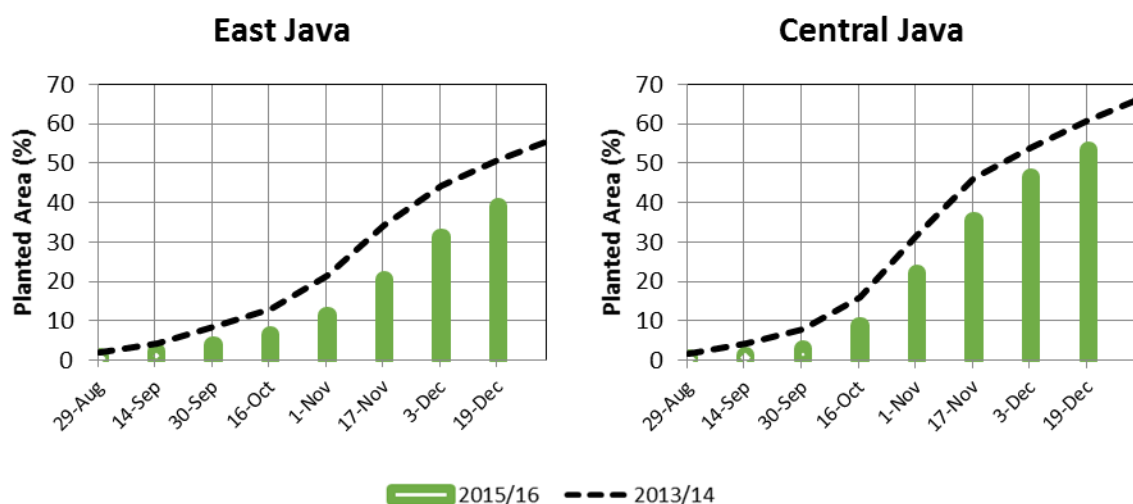
And in Nusa Tenggara Timur, rainfall in the last 10 days of January appeared to have fallen at normal levels compared to historical averages. However, by the first 10 days of February, there was a return to below average precipitation for the entire province. A concerning outcome of this phenomenon is the high likelihood that most farmers would have begun planting by January, after having already waited to plant later than usual, and in February insufficient rain may lead to damaged crops.

Figure 29 - Rainfall anomaly in Nusa Tenggara Timur (10 day intervals from 1-January to 10-February)



Using specialized time-series analysis software to process satellite imagery, the current state of crops was assessed. Estimates are made per each pixel photographed of whether planting has begun based upon the color spectrum observed. All of Indonesia was analyzed using this approach and then compared to the same period over a historical reference point, specifically the 'normal' agricultural year of 2013. At aggregate levels nationally, planting of rice appears on target or better with a total of 3.9 million hectares classified as planted compared to 3.4 million hectares for the same period in 2013.

Figure 30 - Delays in rice planting in East and Central Java as of December 2015

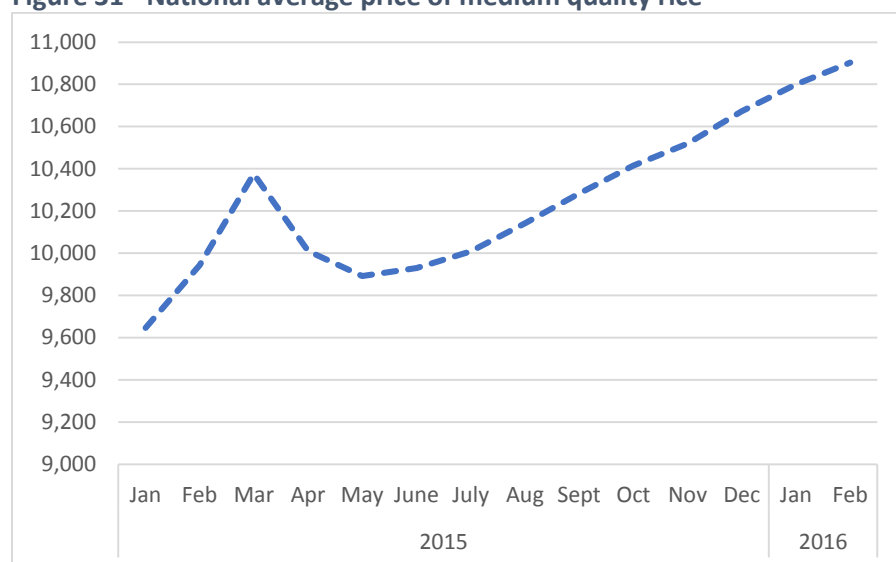


However, sub-nationally, delays in planting can be observed, importantly in key rice producing provinces in Java. At this stage of the current season in 2013, 51% of rice fields were planted in East Java and 61% in Central Java. By comparison, to date in 2015, only 39% of fields have started planting in East Java and 53% in Central Java. Central Java appeared further behind in November, but a significant increase in planting in late November and early December has closed gaps. East Java however remains well behind in planting, with a total of nearly 110,000 hectares delayed for this point in time. Though Nusa Tenggara Timor is not a major rice production area, 15,000 hectares are estimated to be delayed, representing a 33% of rice fields compared to normal.

While the delays in planting may not have an impact on overall production of rice nationally, vulnerable populations will be disproportionately affected. In particular, agricultural wage laborers and crop producers will see their incomes reduced. It is also likely that some farmers who would normally grow rice during the main growing season will switch the more drought tolerant maize, with reduced levels of profit. These scenarios will unfold in March-April 2016 and require monitoring.

The price of rice also requires close monitoring in the coming months as the impact of El Nino on main season harvests unfolds and while imports to provide a buffer to national stocks are still being negotiated and have created significant speculation on rice stocks in Indonesia.

Figure 31 - National average price of medium quality rice



Source: Ministry of Trade

According to data from the Ministry of Trade, between August 2015 and February 2016¹⁶, rice prices have risen by 7.5% while year-on-year, the price of rice rose by 12.0% from January 2015 to January 2016¹⁷. In addition to the rising trend, current rice prices are high, even after adjusting for inflation. With looming issues in the upcoming main harvest and potential negative impacts of drought on rural livelihoods, price monitoring across Indonesia is critical. Urban poor and rainfall dependent farmers are likely to face challenges in procuring food staples, negatively impacting other expenditures.

6.2 Recommendations

To help vulnerable households cope with the effect of reduced income coupled with rising food prices, Government of Indonesia should provide cash assistance to poor households dependent on food crop production. Across 38 vulnerable districts, an estimated 1.2 million Indonesians require assistance. Coordination between multiple government agencies, including Ministry of Agriculture, Ministry of Social Affairs and the National Team for the Acceleration of Poverty Reduction is required to refine targeting and identify target households.

The probability of spikes in acute malnutrition rates are high, particularly in districts where wasting rates increase every year during the lean season. With an extended lean season due to drought and already poor nutrition outcomes, there is justification for immediate interventions in any area with wasting rates crossing above the critical WHO threshold of 15%. Interventions include supplementary feeding to pregnant and lactating women.

Drought has had significant effects at household level, impacting production and reducing farmers' income.. Improved implementation of the existing Special Program for Acceleration of Rice, Maize, and Soybean Self-Sufficiency (UPSUS) so that farmers can access appropriate seeds, fertilizer, irrigation, and information in time is one means to accelerate planting. The Ministry should monitor current crop

¹⁶ As of 22 February, 2016

¹⁷ In February and March of 2015, an extreme anomaly in rice prices occurred, largely attributed to speculation on rice markets.

conditions and prepare for a delayed harvest. Plans for delayed second season planting should be made to prevent exposing crops to the peak dry season.

The main harvest and subsequent price monitoring, sub-nationally, are critical in the coming months. The historical impact of staple food price inflation on poverty in Indonesia is a poignant reminder of the strong influence of rice prices on household budgets. Government should monitor prices and also consider triggers which will elicit a response that will soften the potential increase in poverty as rice prices rise.

7 Annex

7.1 Computation of key indicators

7.1.1 Wealth index

The wealth index is a composite score used to identify relative levels of wealth and poverty at household level within a population of interest. The index is constructed from a series of variables describing asset ownership and housing characteristics.

The wealth index was created using the following steps:

1. Variables from the household asset module and household amenities were recoded to 0 or 1 where 0 = not owning and 1 = owning
2. Assets owned by nearly all households or very few households, having either a prevalence of greater than 95% or less than 5%, were excluded.
3. Livelihood-specific assets such as agricultural land, livestock, ploughs, etc., were excluded as they tend to identify the livelihoods rather than the levels of asset wealth
4. Household characteristics such as the source of drinking water and type of sanitation were recoded to 0 or 1 with 1 signifying an improved source
5. Principal Component Analysis (PCA) was run on the full dataset using the identified variables. The first component of the PCA is used as the wealth index, and quintiles are created (using weighted data) to create 5 equal-size wealth groups, each consisting of 20% of total households in the eight districts. An iterative process was used to improve the analysis
6. A final wealth index and quintiles are determined once the analysis team determines the best iteration to use as the wealth index

The following assets and housing characteristics were used in the final calculation of the wealth index:

- Car ownership
- Motorcycle ownership
- Bicycle ownership
- Refrigerator ownership
- Phone ownerships
- Television ownership
- Improved drinking water classification
- Improved floor
- Improved roof
- Improved source of lighting
- Improved source of cooking fuel
- Improved toilet
- Crowding index based on number of members per size of house

The table below demonstrates the classification of improved vs unimproved for the variables used in the wealth index.

Table 8 - Unimproved and improved housing characteristics

Household Characteristic	Unimproved	Improved
Floor type	Dirt Bamboo/wood (except for teak) Other natural material	Cement Tile, stones, bricks or other hard material
Roof type	Thatch/large leaves/palm Bamboo/wood (except for teak) Other natural material	Metal (corrugated) Tile/ceramic/cement or other hard material (include teak)
Main source of lighting	Kerosene lantern, oil lamp, candle Torch (battery powered) Firewood	Electricity (PLN) Electricity (non-PLN) Generator Solar panel
Main source of cooking	Firewood Charcoal	LPG (Gas Cylinder 3 kg) LPG (Gas Cylinder 12 kg) Electricity Kerosene
Toilet type	Bucket Hanging toilet Shared facility No facilities (river, bush, beach)	Toilet connected to septic-tank Toilet no septic-tank Pit latrine with slab Pit latrine no slab (open pit)
Water source	Unprotected well Unprotected spring Water tank / Drum Water tanker truck Stream, river, lake, etc.	Piped water (PDAM) Public tap Tube well/borehole Protected spring Rain water collection Bottled water

7.1.2 Food consumption score

The food consumption score (FCS) is a composite score based on the dietary diversity, food frequency, and relative nutritional importance of various food groups consumed by a household.

Households were asked how many days in the week preceding the survey they had eaten a food item from a list of various food items eaten commonly in Indonesia. Those items are divided into eight standard food groups: main staples (such as rice, maize, and cassava); pulses (including tofu, tempe, beans and nuts); meat, fish, poultry and eggs; vegetables (including green leafy vegetables); fruits; oils and fats; milk and other dairy products; and sugar.

Once the items are categorized into the appropriate food groups, the relative nutritional value of each group (Table 9) and the frequency of consumption (with a maximum of seven days per group) are used to calculate the FCS. This is done by multiplying each food group frequency by each food group weight, and then summing these scores into one composite score.

$$FCS = \sum x_i * a_i$$

FCS = Food consumption score

x_i = Frequencies of food consumption (number of days each food group was consumed during the past 7 days)

a_i = Weight of each food group (see table below)

Table 9: Food groups and weights used to calculate the food consumption score

Food item	Food group	Weight
Rice, maize, cassava, bread, roots and tubers, plantain	Cereals, tubers and crops	2
Pulses, tofu, tempe, beans and nuts	Pulses	3
Vegetables	Vegetables	1
Fruits	Fruits	1
Fish, seafood, poultry, and meat	Meat and fish	4
Milk and milk products	Milk	4
Sugar, honey and sweets	Sugar	0.5
Oil and butter	Oil	0.5

The FCS is a continuous variable with a range from 0 to 112. To provide more meaningful descriptive analysis of food consumption than reporting average scores, households are categorized into food consumption groups based on their FCS. The standard food consumption groups are poor, borderline, and acceptable food consumption. A score below 21 is considered poor food consumption and a score below 35 is defined as borderline food consumption (Table 2).

A score of 21 is a bare minimum. Scoring below 21 means that a household does NOT eat at least a staple and vegetables on a daily basis and therefore is considered to have a very poor diet. The value 21 is derived from:

- (daily frequency * weight of vegetables) + (daily frequency * weight of staples)
- $(7 * 1) + (7 * 2) = 21$

Households with a FCS between 21 and 35 are considered to have borderline food consumption. The value 35 comes from an expected daily consumption of staple and vegetables complemented by a frequent (4 day / week) consumption of oil and pulses.

- (daily frequency * weight of vegetables) + (daily frequency * weight of staples) + (4 * weight of oil) + (4 * weight of pulses)
- $(7 * 1) + (7 * 2) + (4 * 0.5) + (4 * 3) = 35$

In many Asian and Latin American countries, the standard FCS threshold has been adjusted to account for high consumption of oil and sugar. In these contexts, poor households often consume oil and sugar on a nearly daily basis (6-7 days per week). The effect is that a household with a score of 28 may in fact consume just oil, sugar, staples, and vegetables - a very poor diet. Therefore, a higher threshold better captures what constitutes a poor or borderline diet. The thresholds are raised by a score of seven to account for daily consumption of oil (weight of 0.5) and daily consumption of sugar (weight of 0.5). The raised threshold was applied in the analysis in this survey as noted below.

Table 10 - Thresholds for food consumption groups

Food consumption group	Standard thresholds	Raised thresholds
Poor	0 - 21	0 - 28
Borderline	21.5 - 35	28.5 - 42
Acceptable	> 35	> 42

7.1.3 Micronutrient intake

In most food security assessments carried out by WFP, the FCS is an important indicator for identifying the most food insecure households. However, the FCS is a household level indicator and does not make the link between household access to food, individual dietary intake and nutritional outcomes - stunting, wasting and micronutrient deficiencies. In 2015, WFP developed an analytical method to exploit data captured in the standard food consumption module used to calculate the FCS to provide information on specific nutrients. While it does not allow for calculation of individual nutrient intake, this new method fills a micronutrient analysis gap at the household level and attempts to improve the link between household food access/consumption and nutritional outcomes¹⁸.

Studies from 5 different countries (Uganda, Nepal, Guatemala, El Salvador and Honduras,) showed a positive significant correlation between the number of times nutrient rich food groups are consumed in a one week period and how adequate the intake of that nutrient is for the household. This correlation between number of times and adequacy in intake held for all nutrients and all countries analyzed. A distinction between never (0 times) sometimes (1-6 times) and at least daily (7 times or more) consumption in a week, seems to be useful to assess the likelihood of adequacy. The analysis shows that it is important to discriminate foods that were eaten in a small quantity (less than 15g per capita per day).

To implement this approach, sub-groups of micronutrient rich foods were added to the food consumption module of the household survey. Then, each food group and sub-group was classified into the nutrient group which it provides, some providing multiple nutrients. Then, the frequency of consumption from each nutrient group was categorized into three groups: never consumed (0); some consumption (1 to 6 days a week); and frequent consumption (7 days a week).

Table 11 - Nutrient rich food groups and related food items from the household questionnaire

Vitamin-A rich foods	Protein rich foods	Iron rich foods
Milk, yogurt, cheese, and other dairy products	Tofu, tempe, beans, cowpeas, peanuts, lentils, nuts, soy, pigeon peas, and other nuts	Meat including beef, pork, lamb, goat, rabbit, chicken, duck, other birds, insects
Liver, kidney, heart, and other organ meats	Milk, yogurt, cheese, and other dairy products	Liver, kidney, heart, and other organ meats
Eggs	Meat including beef, pork, lamb, goat, rabbit, chicken, duck, other birds, and insects	Fish / shellfish, including canned fish, and other seafood
Orange vegetables (vegetables rich in Vitamin A): carrot, red pepper, pumpkin, orange sweet potatoes	Fish / shellfish, including canned fish, and other seafood	
Dark green leafy vegetables: spinach, broccoli, cassava leaves, and other dark green leaves	Eggs	
Orange fruits (Fruits rich in Vitamin A): mango, papaya		

¹⁸ Full documentation on this approach is available here: <https://resources.vam.wfp.org/node/87>

7.1.4 Livelihood coping strategies

The Livelihood Coping Strategies indicator is derived from a series of questions regarding the household's experience with livelihood stress and asset depletion during the 30 days prior to survey. Responses were used to understand the stress and insecurity faced by households and describes their capacity to regarding future productivity.

All strategies were classified into three broad groups, including stress, crisis and emergency strategies:

- Stress strategies, such as borrowing money or spending savings, are those which indicate a reduced ability to deal with future shocks due to a current reduction in resources or increase in debts.
- Crisis strategies, such as selling productive assets, directly reduce future productivity, including human capital formation.
- Emergency strategies, such as selling one's land, affect future productivity, but are more difficult to reverse or more dramatic in nature.

Households engaging in routine economic activities that did not involve any of these strategies were considered equivalent to food secure on this indicator. Each household was assigned a value from 1-4 to describe the most severe strategy they employed. The following questions and severity were applied during the analysis:

Table 12 - Livelihood coping strategies and severity

Strategy	Category
Sold household assets/goods (radio, furniture, television, jewelry etc.)	Stress
Sold more animals (non-productive) than usual	Stress
Spent savings	Stress
Purchased food on credit or borrowed food	Stress
Reduced expenses on health (including drugs) and education	Crisis
Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)	Crisis
Withdrew children from school	Crisis
Sold house or land	Emergency
Sold last female animals	Emergency
Begged ¹⁹	Emergency

7.1.5 Coping strategies index

In addition to the livelihood coping module described above, a standard module for capturing the Coping Strategies Index was included in the survey. The Coping Strategies Index (CSI) is a simple indicator of household stress due to a lack of food or money to buy food and their capacity (or lack thereof) to respond.

The CSI is based on a series of responses (strategies) to a single question: "What do you do when you don't have adequate food, and don't have the money to buy food?" It combines the frequency of each

¹⁹ Early in the data cleaning and analysis phase, it became clear that the question on begging was not understood and interpreted as an extreme form of dealing with lack of access to food. A number of households with assets and decent food consumption stated that they had begged in the past 30 days. It is likely that enumerators were not sufficiently trained on this response and were not able to explain the severity. This response was therefore not included in the analysis.

strategy (how many days in the past week was each strategy adopted?) and the severity of each strategy. The severity weights are described below.

Table 13 - Food coping strategies and their severity

Strategy	Severity weight
Eating less preferred foods	1
Borrowing food or relying on help from friends and relatives	2
Limiting portion size at mealtime	1
Limiting adult intake in order for small children to eat	3
Reducing the number of meals per day	1

The CSI is calculated by multiplying the frequency of each strategy (days per week) by the weight and summing the total. The resulting score is on a scale of 0 to 56. The CSI does not have a standard set of thresholds like the FCS to describe groups. However, reporting the CSI score itself is not always clearly understood. A common practice is to split a dataset into four groups: those with a CSI of 0 (meaning no use of negative coping behaviors); low coping, medium coping, and high coping. To create low, medium, high groups, even groups were generated across the eight districts. This allows for comparison of relatively high to relatively low coping in the absence of a standard threshold.

7.1.6 Food security index

A relatively new approach used by WFP to classify household food security includes consolidation of multiple indicators into a single index. This new approach, referred to as the Consolidated Approach to Reporting Indicators of Food Security (CARI)²⁰.

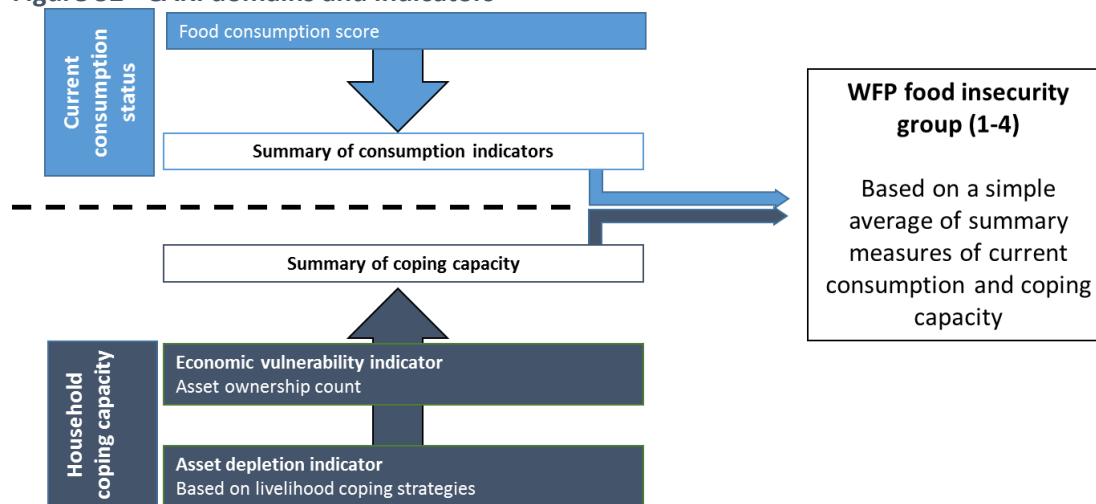
The CARI approach is a classification of households into four descriptive groups: food secure, marginally food secure, moderately food insecure, and severely food insecure. The classification provides a representative estimate of food insecurity within the districts surveyed.

The final CARI output is constructed from three variables across two key dimensions of food insecurity. The current status domain employs food security indicators which measure the adequacy of households' current food consumption, based on the FCS in this survey. The coping capacity domain employs indicators which measure households' economic vulnerability and asset depletion. Specifically, in this survey, this domain is based upon a combination of the livelihood coping strategy indicator as a measure of coping capacity and asset ownership as a measure of economic vulnerability.

Each of three underlying variables is converted to a 4 point scale. At the household level, a value is assigned from 1 to 4 for the three variables. For the FCS, an acceptable food consumption is given a value of 1, borderline a value of 3 and poor a value of 4. For the coping indicator, households with no coping are given a value of 1, those with stress a value of 2, crisis a value of 3 and emergency a value of 4.

²⁰ For full documentation on the CARI, please visit: <https://www.wfp.org/content/consolidated-approach-reporting-indicators-food-security-cari-guidelines>

Figure 32 - CARI domains and indicators



The CARI was designed to use one of two indicators for economic vulnerability: poverty status or share of expenditure on food. Both of these indicators require an extensive module on household consumption and expenditure. This survey was designed to be relatively light and did not include such a module. However, forthcoming research from WFP has further investigated the use of a more simple count of assets as a means of measuring economic vulnerability. This research has demonstrated that the share of expenditure on food is a measure which is less influenced by economic flows and more indicative of economic stock or wealth.

To explore further the relationship between asset ownership and the share of expenditure on food, analysis was conducted on the Indonesia National Socio-Economic Survey (SUSENAS). The SUSENAS includes a comprehensive consumption module along with modules on asset ownership and housing characteristics. A common set of assets which exist in the WFP drought impact survey and the SUSENAS was used in a separate analysis to determine if a set of thresholds could be used to determine the number of assets owned and how well they related to a four point classification of the share of expenditure on food. Using this approach, it was found that households that own 0 to 3 assets had, on average, a very high share of expenditure on food (>75%); those with 4 to 5 assets had a high share of expenditure on food (65 - 75%); those with 6 to 7 had a moderate share of expenditure on food (50 - 65%); while those with a high number of assets, 8 or more, had a low share of expenditure on food (< 50%).

The findings from this analysis on the SUSENAS was then applied to the drought survey, using the same assets and housing characteristics to create a four point classification of economic vulnerability in lieu of the share of expenditure on food. The assets and housing characteristics used are:

- Improved roof
- Improved floor
- Improved drinking water
- Improved toilet
- Improved source of lighting
- Improved source of cooking fuel
- Ownership of a bicycle
- Ownership of a motorcycle

- Ownership of a refrigerator
- Ownership a motor boat

After assigning households a value of 1-4 on the ownership of assets as a measure of economic vulnerability, the standard CARI computation was followed. First the unrounded average of the two coping capacity indicators is calculated for each household. Then, a second average is calculated from the average of the coping domain and the current consumption domain. The final score is then rounded up to provide the overall household food security classification. The table below describes the four groups.

Table 14 - Description of food security index groups

Food security group	Description
1 = Food secure	Able to meet essential food and non-food needs without engaging in atypical coping strategies
2 = Mildly food insecure	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures
3 = Moderately food insecure	Has significant food consumption gaps, OR marginally able to meet minimum food needs only with irreversible coping strategies
4 = Severely food insecure	Has extreme food consumption gaps, OR has extreme loss of livelihood assets will lead to food consumption gaps, or worse

7.2 District profiles

The following pages contain a brief summary of the eight districts visited during the household survey. Some of this information is from secondary sources and some from the survey itself. The table below lists and describes each of the indicators used in the district profiles.

Table 15 - District profile description

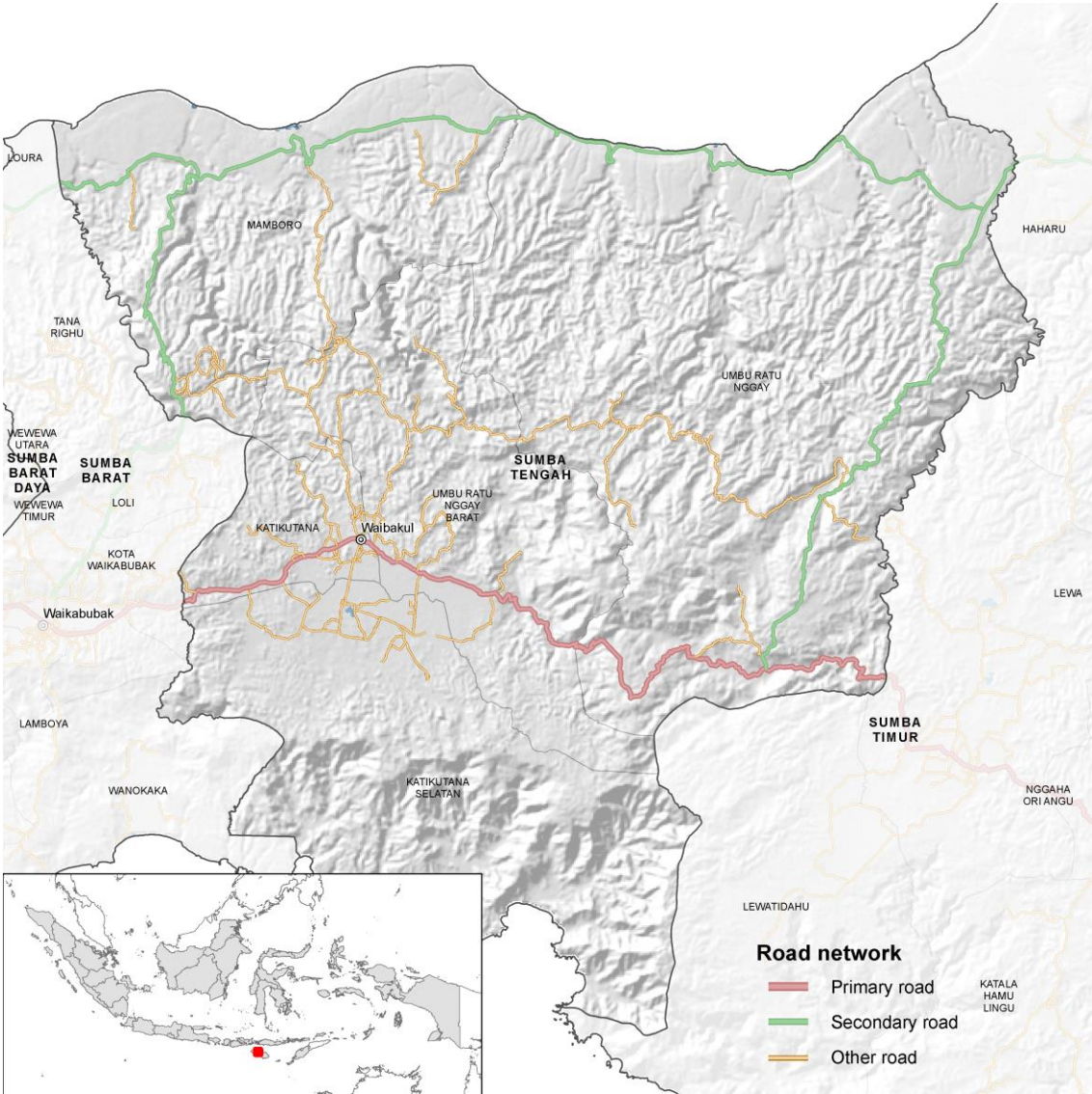
Indicator	Description	Source
District vulnerability classification	An overall classification given to the district based on composite analysis of nine chronic food security indicators. Districts classified as priority 1 are the most vulnerable to chronic food and nutrition security while those classified as priority 6 are the least vulnerable to food and nutrition security	This indicator is from the 2015 Food Security and Vulnerability Atlas, produced by WFP and the Indonesia Food Security Agency. http://fsva.wfp.or.id
Poverty	Percent of the district population living below the poverty line	Estimates by WFP based on the National Socio-Economic Survey (SUSENAS), 2014.
Stunting	Percent of children under five years of age who are too short for their age. Stunted growth is an outcome of chronic malnutrition and is highly prevalent in	Ministry of Health. National Report on Basic Health Research (RISKESDAS), 2013.

	Indonesia, with 37% of children nationally classified as stunted in 2013.	
Household food security classification	A summary of household food insecurity derived from indicators of current diet and coping capacity. More details on the overall classification and its components are available in the Annex of this document.	WFP Household Survey on Drought Impact, 2015.
Drought impact on income, food expenditure, drinking water quality, and costs	Severe impact on income is classified as a 30% or more reduction as reported by households. In response to income reduction, households were asked if they reduced expenditure on food. Drinking water classification is based on a standard WHO/UNICEF definition: http://www.wssinfo.org/definitions-methods/watsan-categories/ . Households were asked if the costs of water increased during drought.	WFP Household Survey on Drought Impact, 2015.
Food consumption coping strategies	The household survey includes the standard Coping Strategies Index (CSI) module. All 2400 households who used food coping behaviors were split into three groups (low, medium, high) based on the severity and frequency of their responses. See the Annex of this document for more details.	WFP Household Survey on Drought Impact, 2015.

Province: Nusa Tenggara Timur

District: Sumba Tengah

District vulnerability classification (FSVA 2015):



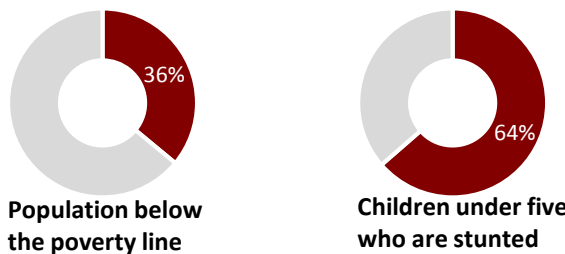
Population and administration

Total population: 67,303

Number of sub-districts: 5

Number of villages: 65

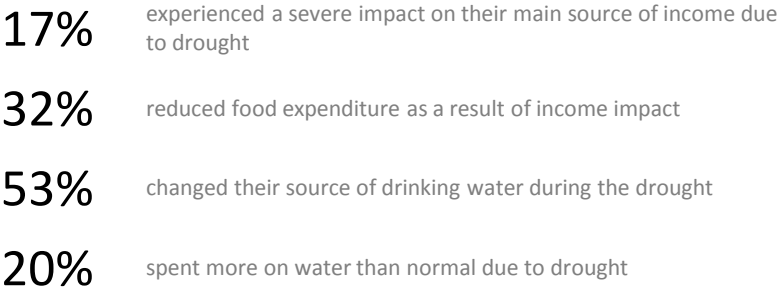
Poverty and chronic malnutrition



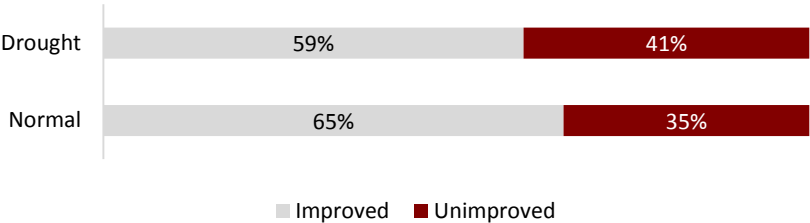
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	46%		42%	12%
Coping capacity	Economic vulnerability	Asset ownership	2%	13%	37%	48%
	Asset depletion	Livelihood coping	54%	22%	23%	1%
Overall food security classification			8%	39%	47%	7%

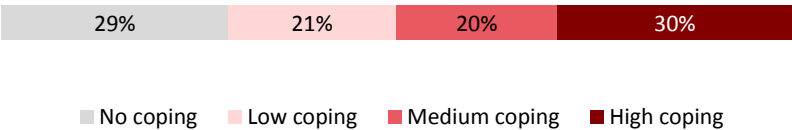
Impact of drought



Sources of drinking water during drought and normally



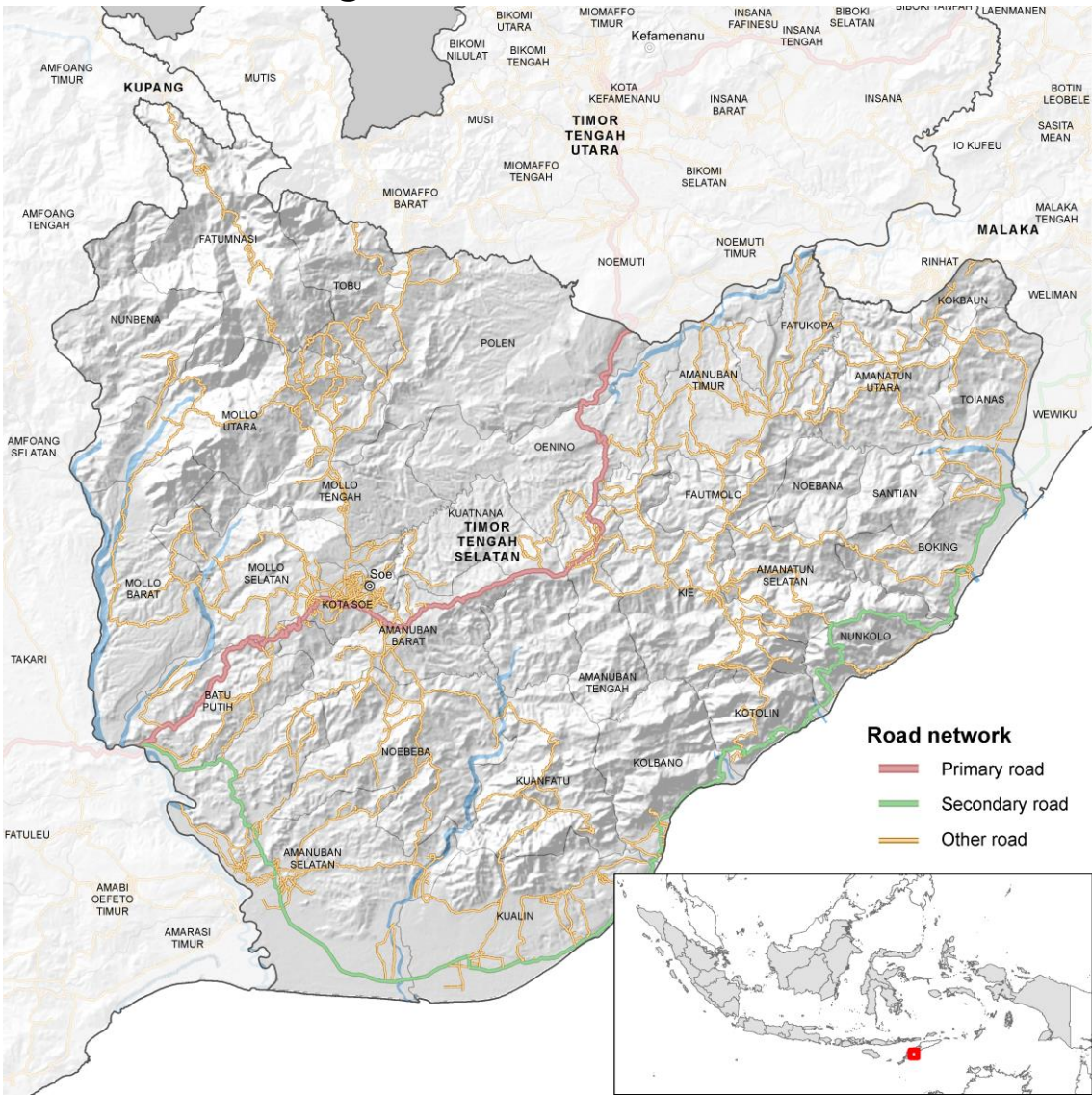
Percent of households using food consumption coping strategies



Province: Nusa Tenggara Timur

District: Timor Tengah Selatan

District vulnerability classification (FSVA 2015):



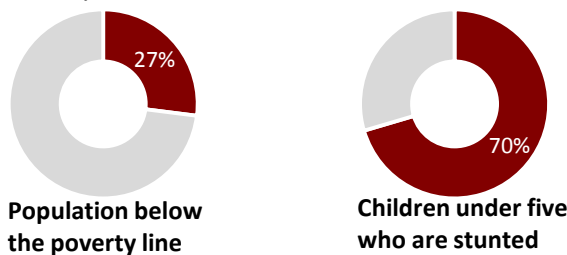
Population and administration

Total population: **458,225**

Number of sub-districts: **32**

Number of villages: **266**

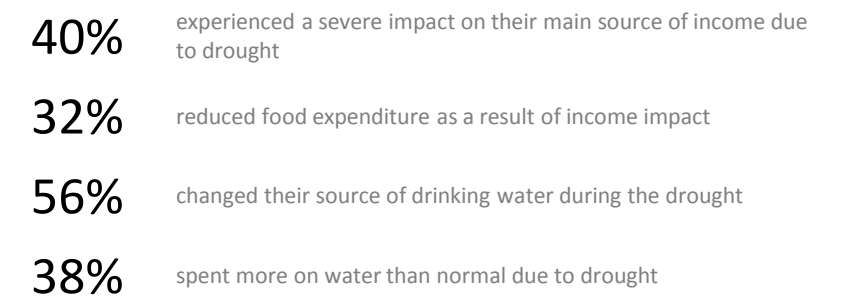
Poverty and chronic malnutrition



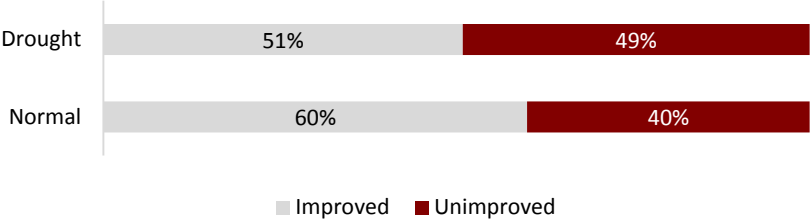
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	62%		21%	17%
Coping capacity	Economic vulnerability	Asset ownership	1%	10%	38%	51%
	Asset depletion	Livelihood coping	73%	13%	12%	2%
Overall food security classification			6%	56%	33%	5%

Impact of drought

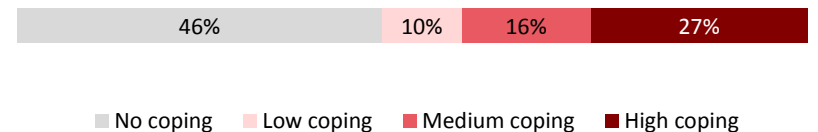


Sources of drinking water during drought and normally



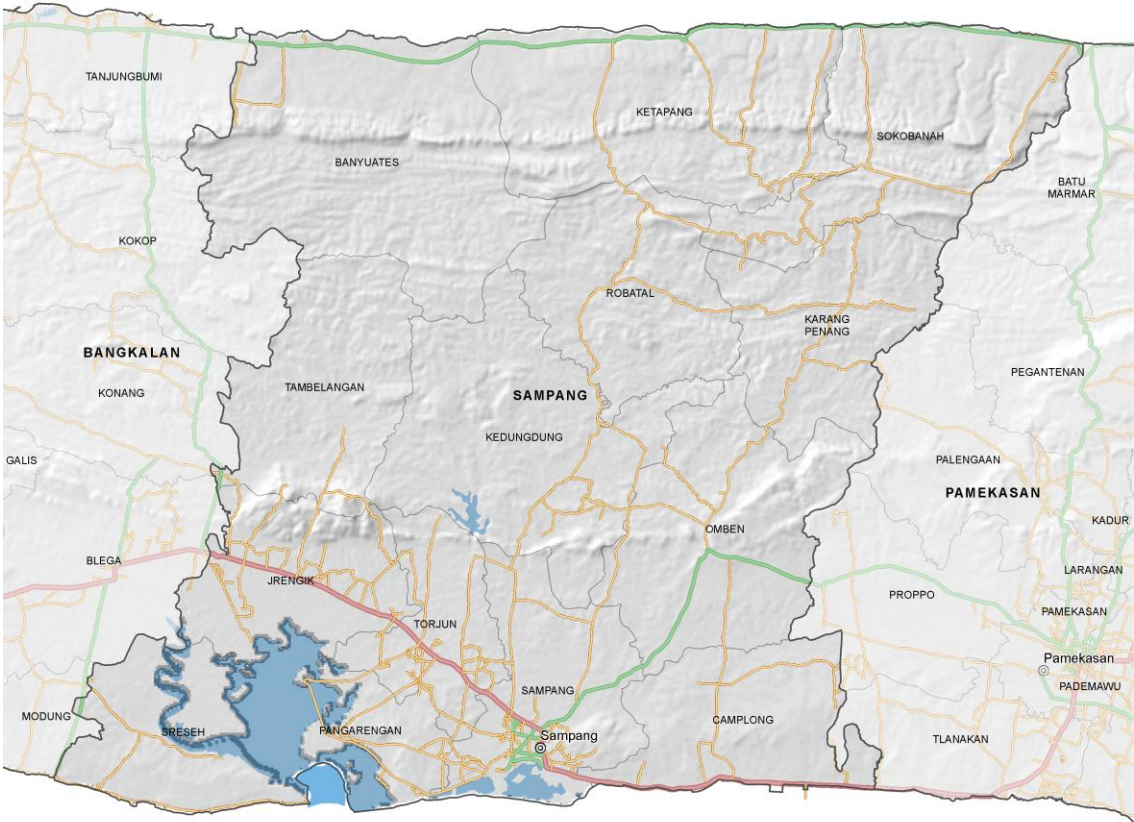
Percent of households using food consumption coping strategies





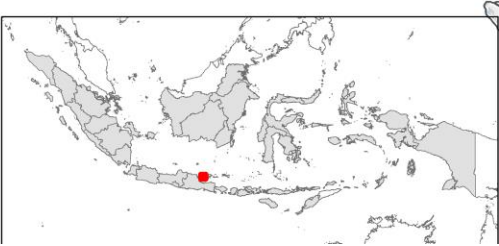
Province: East Java
District: **Sampang**

District vulnerability classification (FSVA 2015):



Road network

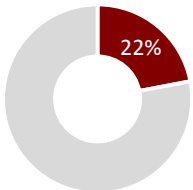
- Primary road
- Secondary road
- Other road



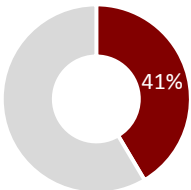
Population and administration

Total population: **932,171**
Number of sub-districts: **14**
Number of villages: **180**

Poverty and chronic malnutrition



Population below the poverty line



Children under five who are stunted

Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	98%		2%	0%
	Economic vulnerability	Asset ownership	29%	36%	33%	2%
Coping capacity	Asset depletion	Livelihood coping	64%	31%	2%	2%
Overall food security classification			50%	49%	1%	0%

Impact of drought

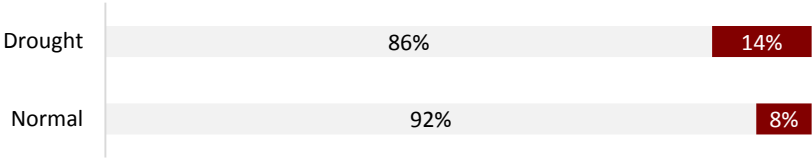
37% experienced a severe impact on their main source of income due to drought

10% reduced food expenditure as a result of income impact

33% changed their source of drinking water during the drought

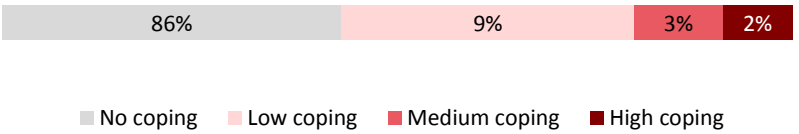
21% spent more on water than normal due to drought

Sources of drinking water during drought and normally



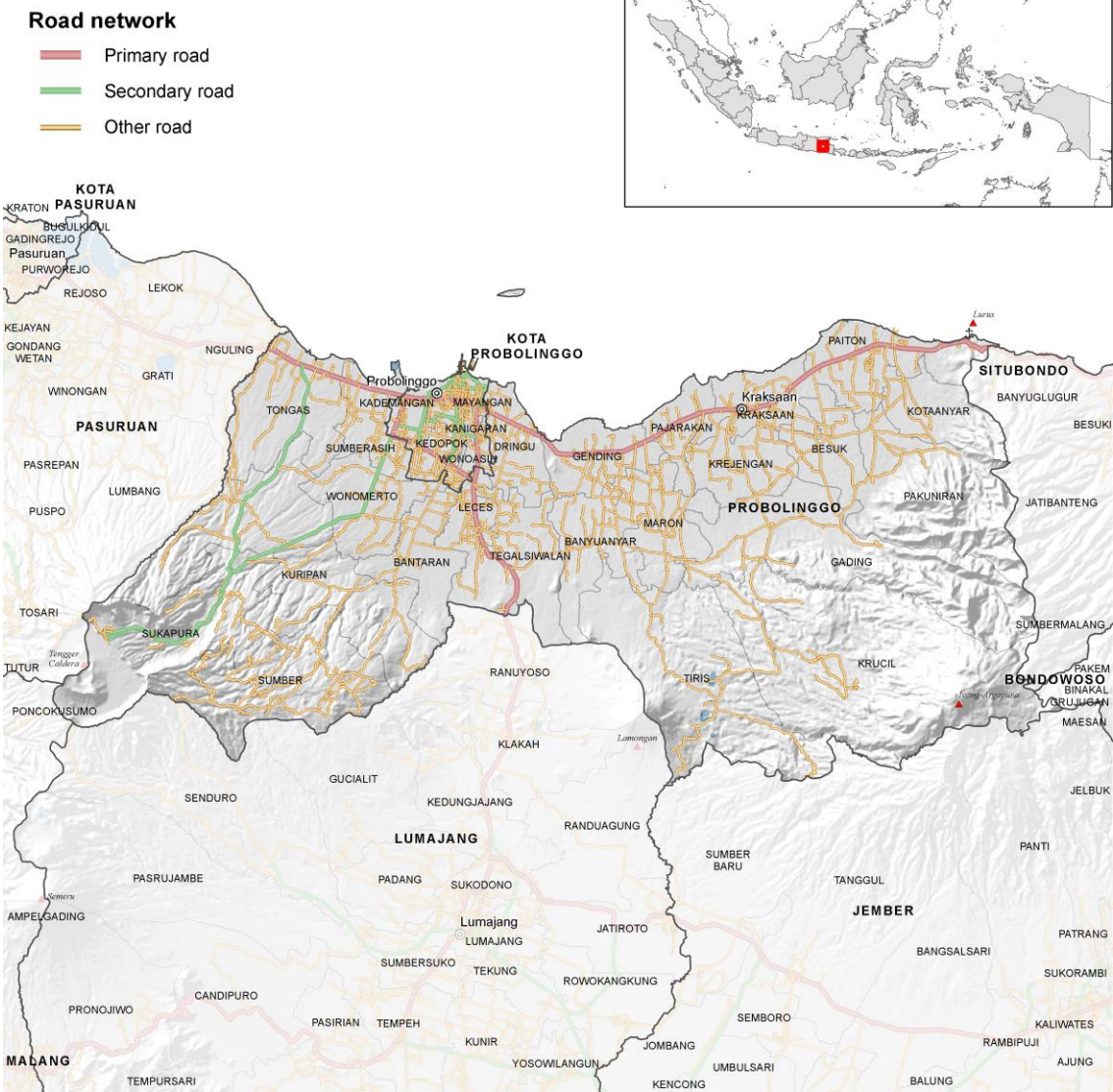
Improved Unimproved

Percent of households using food consumption coping strategies



No coping Low coping Medium coping High coping

Province: East Java
District: **Probolinggo**



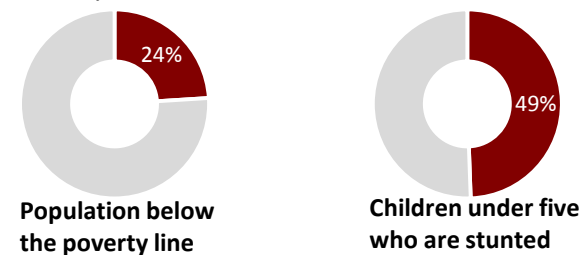
Population and administration

Total population:
1,131,902

Number of sub-districts: **24**

Number of villages: **325**

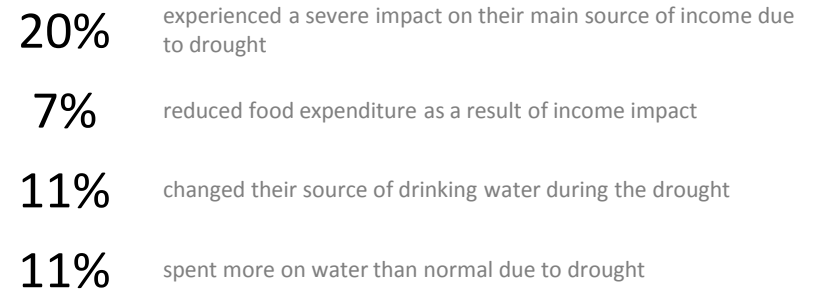
Poverty and chronic malnutrition



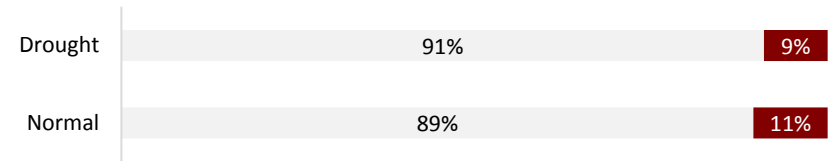
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	94%		5%	1%
	Economic vulnerability	Asset ownership	42%	34%	21%	3%
Coping capacity	Asset depletion	Livelihood coping	56%	28%	8%	8%
Overall food security classification			57%	37%	5%	1%

Impact of drought

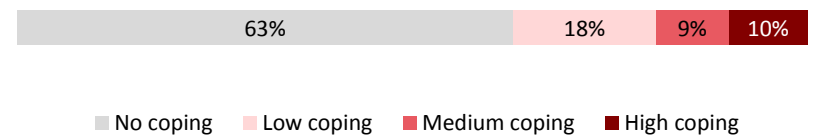


Sources of drinking water during drought and normally



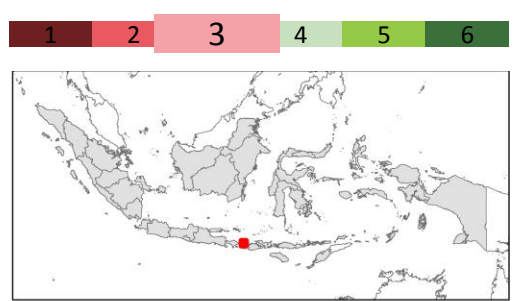
Improved Unimproved

Percent of households using food consumption coping strategies



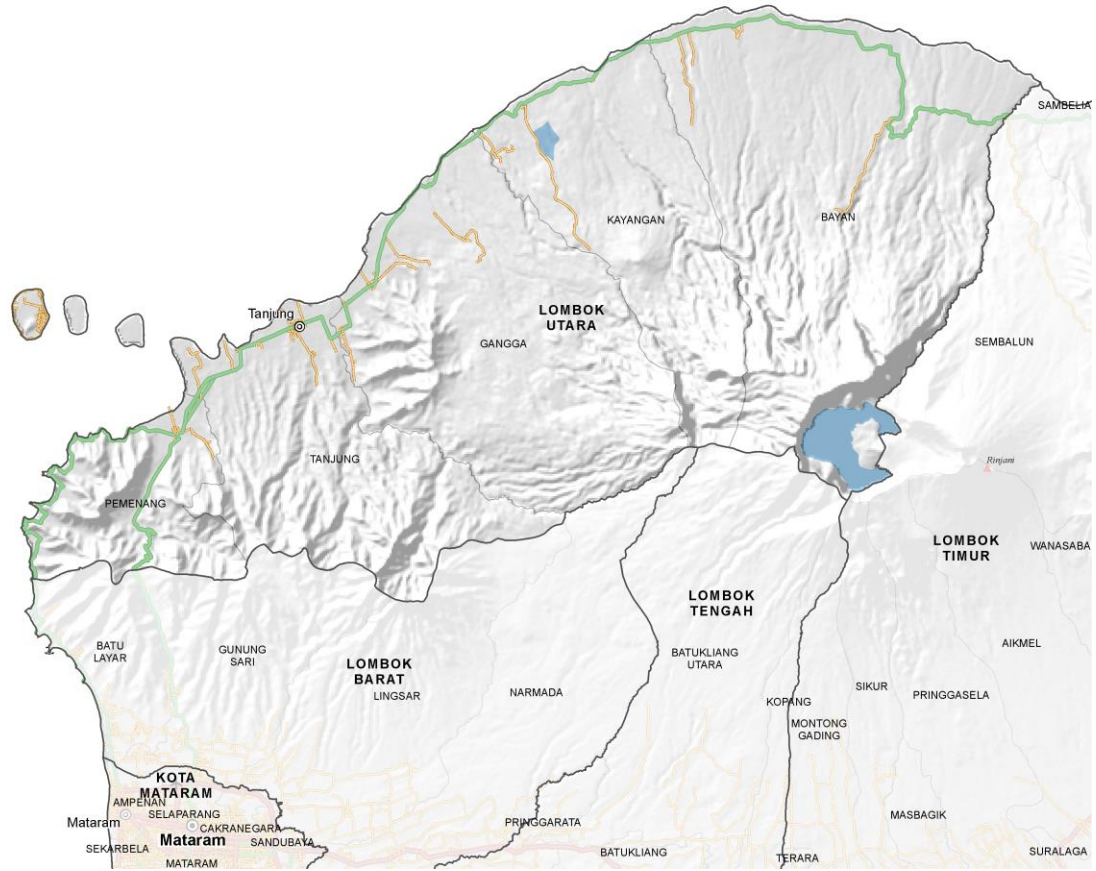
Province: Nusa Tenggara Barat
District: Lombok Utara

District vulnerability classification (FSVA 2015):



Road network

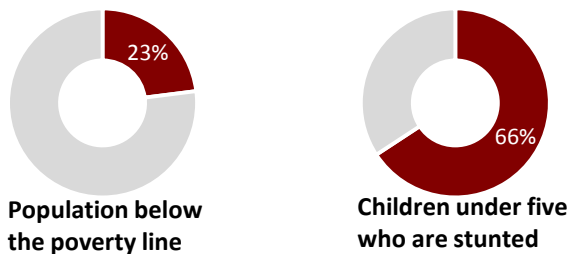
- Primary road
- Secondary road
- Other road



Population and administration

Total population: **209,997**
Number of sub-districts: **5**
Number of villages: **33**

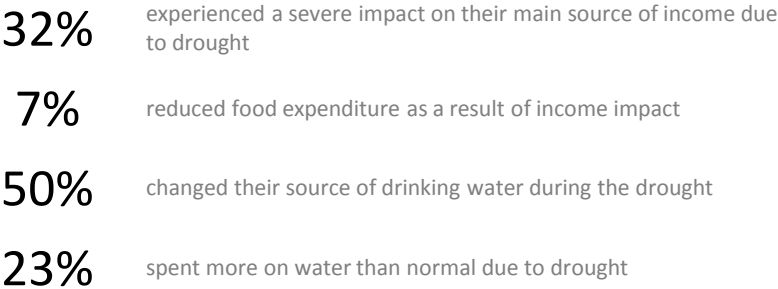
Poverty and chronic malnutrition



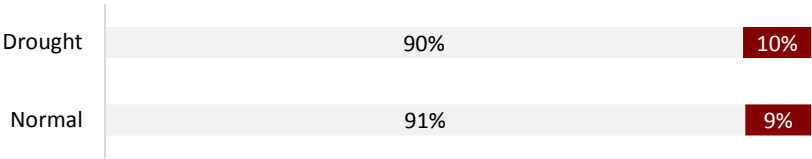
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	74%		24%	2%
Coping capacity	Economic vulnerability	Asset ownership	16%	40%	37%	7%
	Asset depletion	Livelihood coping	68%	15%	14%	3%
Overall food security classification			34%	45%	21%	0%

Impact of drought

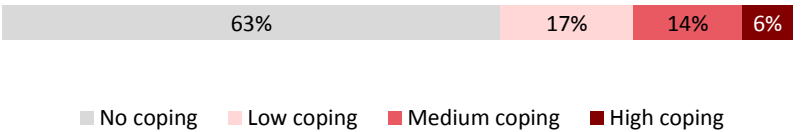


Sources of drinking water during drought and normally



Improved Unimproved

Percent of households using food consumption coping strategies

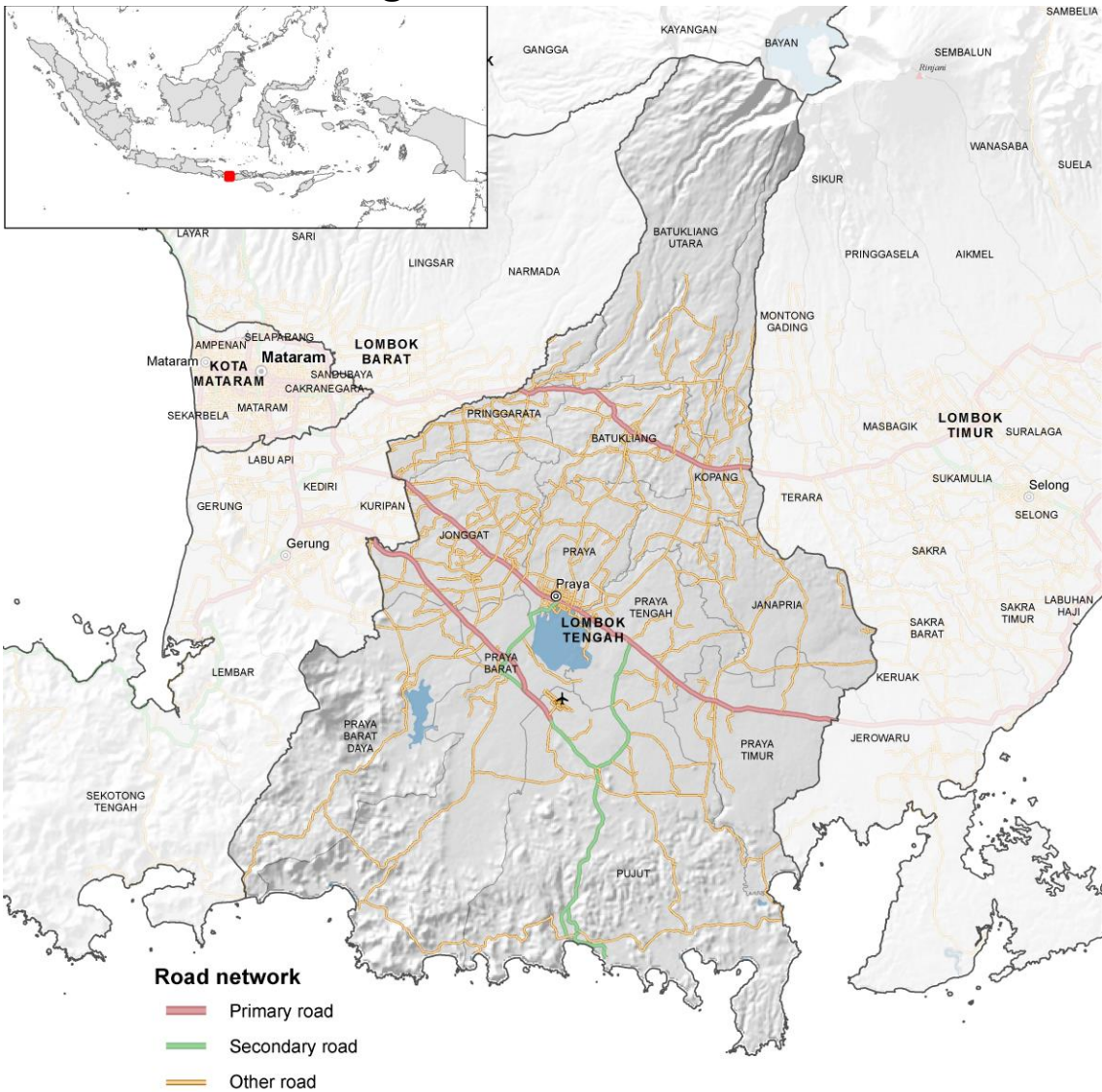


No coping Low coping Medium coping High coping

Province: Nusa Tenggara Barat

District: Lombok Tengah

District vulnerability classification (FSVA 2015):



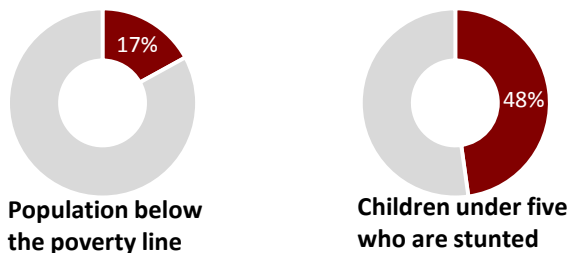
Population and administration

Total population: 903,390

Number of sub-districts: 12

Number of villages: 139

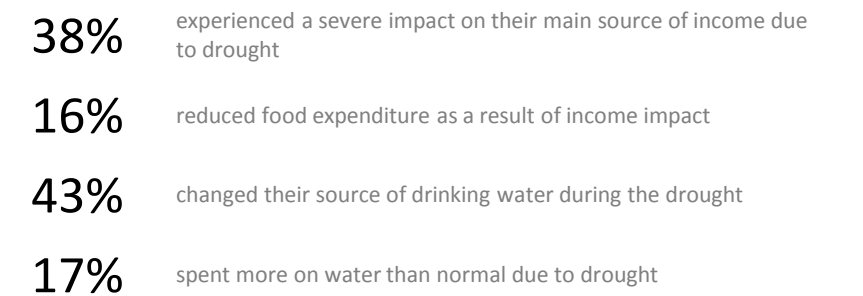
Poverty and chronic malnutrition



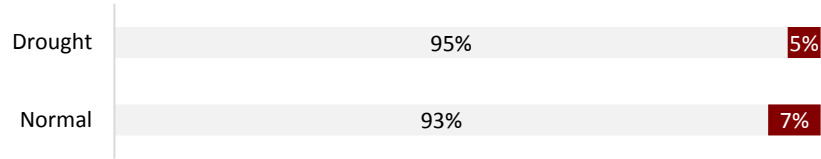
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	62%		34%	3%
Coping capacity	Economic vulnerability	Asset ownership	21%	48%	29%	2%
	Asset depletion	Livelihood coping	50%	34%	5%	12%
Overall food security classification			34%	37%	28%	1%

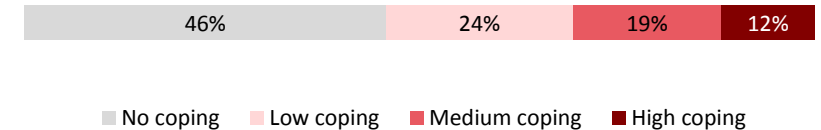
Impact of drought



Sources of drinking water during drought and normally

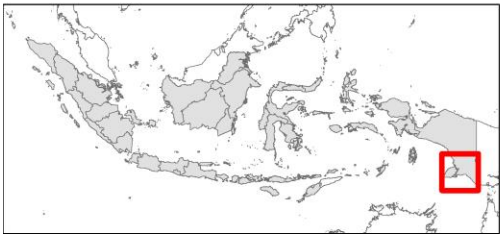
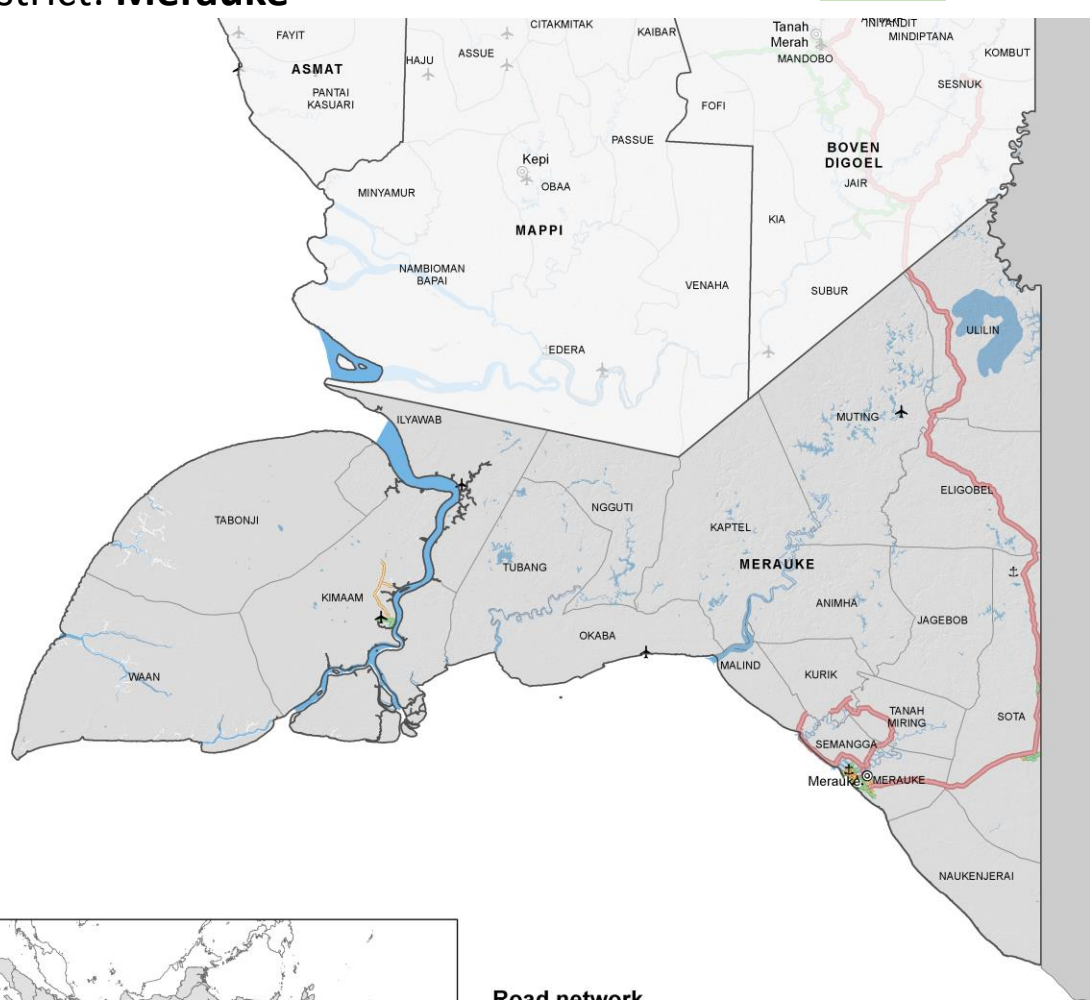


Percent of households using food consumption coping strategies



Province: Papua
District: Merauke

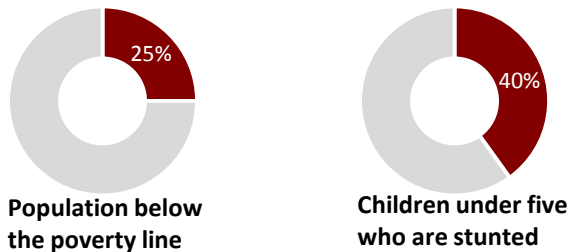
District vulnerability classification (FSVA 2015):



Population and administration

Total population: **213,202**
Number of sub-districts: **20**
Number of villages: **168**

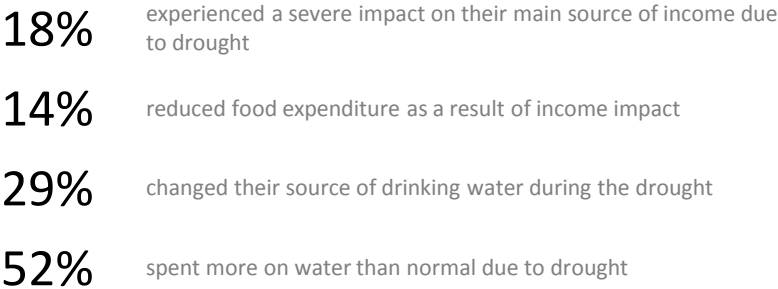
Poverty and chronic malnutrition



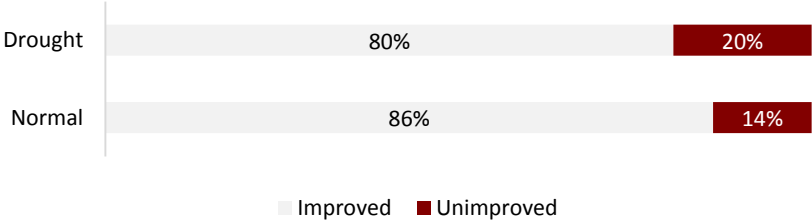
Overall household food security classification and indicators

Domain		Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Current Status	Food consumption	Food consumption score	97%		3%	0%
Coping capacity	Economic vulnerability	Asset ownership	40%	40%	16%	4%
	Asset depletion	Livelihood coping	66%	14%	19%	1%
Overall food security classification			60%	39%	1%	0%

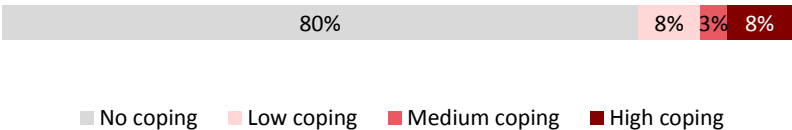
Impact of drought



Sources of drinking water during drought and normally



Percent of households using food consumption coping strategies



7.3 Tabulation report

Table 16 - Food consumption score by strata

			food consumption score	Food Consumption Groups (raised threshold)		
				Poor	Borderline	Acceptable
			Mean	Row N %	Row N %	Row N %
district	Probolinggo		71.44	1.1%	4.6%	94.3%
	Sampang		67.75	0.0%	2.0%	98.0%
	Lombok Tengah		50.87	3.3%	34.2%	62.5%
	Lombok Utara		56.82	1.6%	24.4%	74.0%
	Kupang		46.11	13.8%	34.1%	52.1%
	Timor Tengah Selatan		45.53	17.2%	20.7%	62.0%
	Sumba Tengah		43.54	12.0%	41.8%	46.2%
	Merauke		74.48	0.0%	3.2%	96.8%
	Total		57.05	6.1%	20.7%	73.2%
Main income group	Food crops ag.		50.18	11.2%	26.1%	62.8%
	Other ag.		58.64	0.0%	19.0%	81.0%
	Ag. wage labor		51.86	3.1%	31.3%	65.5%
	Non ag. wage labor		58.87	2.2%	24.0%	73.8%
	Merchant		68.42	1.8%	7.5%	90.6%
	Skilled labor		63.14	1.3%	16.6%	82.2%
	Employee		73.46	0.0%	4.9%	95.1%
	Remittance		63.94	3.6%	8.9%	87.6%
	Entrepreneur		66.76	0.0%	2.5%	97.5%
	Technician		66.84	4.2%	18.8%	76.9%
	Other		59.75	0.0%	25.7%	74.3%
	Currently not working		37.69	27.3%	44.8%	27.9%
Head sex	Male	No formal education	53.95	7.3%	24.6%	68.1%
		Primary school	53.54	8.0%	23.5%	68.6%
		Secondary school	62.74	3.4%	16.1%	80.6%
		Higher education	N/A	0.0%	0.0%	0.0%
		Total	57.31	6.0%	20.6%	73.4%
	Female	No formal education	50.65	14.4%	19.7%	66.0%
		Primary school	51.49	5.5%	27.9%	66.6%
		Secondary school	67.18	1.0%	10.7%	88.3%
		Higher education	N/A	0.0%	0.0%	0.0%
		Total	55.32	6.9%	21.0%	72.1%
wealth index quintiles	1 = poorest		41.86	17.2%	35.8%	47.0%
	2		48.39	8.3%	31.9%	59.8%
	3 = middle		55.81	3.0%	22.0%	75.0%
	4		63.20	2.1%	11.3%	86.5%
	5 = wealthiest		76.00	0.0%	2.3%	97.7%
FCG	Poor		24.04	100.0%	0.0%	0.0%
	Borderline		35.81	0.0%	100.0%	0.0%
	Acceptable		65.81	0.0%	0.0%	100.0%

Table 17 - Wealth index classification by strata

			wealth index classification				
			1 = poorest	2	3 = middle	4	5 = wealthiest
			Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		2.4%	9.0%	15.5%	27.2%	45.9%
	Sampang		1.6%	17.4%	27.2%	25.2%	28.6%
	Lombok Tengah		1.5%	23.2%	29.3%	25.0%	21.0%
	Lombok Utara		9.1%	23.3%	28.1%	24.3%	15.2%
	Kupang		23.2%	29.5%	23.7%	19.3%	4.3%
	Timor Tengah Selatan		57.5%	25.0%	9.9%	5.7%	1.9%
	Sumba Tengah		61.6%	22.2%	10.3%	4.7%	1.3%
	Merauke		3.2%	10.5%	15.9%	28.3%	42.1%
	Total		20.0%	20.0%	20.0%	20.0%	20.0%
Main income group	Food crops ag.		36.0%	21.8%	16.7%	15.3%	10.2%
	Other ag.		15.1%	28.0%	19.9%	22.6%	14.4%
	Ag. wage labor		6.1%	34.7%	37.8%	17.9%	3.5%
	Non ag. wage labor		7.8%	20.7%	29.7%	23.0%	18.7%
	Merchant		4.4%	9.0%	15.6%	28.6%	42.3%
	Skilled labor		4.7%	16.2%	27.7%	18.1%	33.3%
	Employee		1.9%	7.9%	13.4%	27.1%	49.8%
	Remittance		4.8%	13.4%	26.8%	37.9%	17.2%
	Entrepreneur		1.3%	6.0%	6.2%	18.0%	68.4%
	Technician		0.0%	8.6%	26.0%	24.5%	40.9%
	Other		5.6%	54.2%	5.8%	15.1%	19.3%
	Currently not working		38.2%	38.5%	9.1%	5.0%	9.2%
Head sex	Male	No formal education	25.3%	29.7%	19.7%	17.9%	7.4%
		Primary school	24.9%	21.3%	21.3%	17.3%	15.2%
		Secondary school	9.4%	14.9%	18.5%	25.6%	31.5%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	18.7%	19.7%	20.0%	20.8%	20.9%
	Female	No formal education	37.0%	28.6%	22.5%	5.3%	6.6%
		Primary school	32.3%	22.8%	17.7%	15.6%	11.5%
		Secondary school	12.4%	13.0%	21.7%	24.0%	28.9%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	28.5%	22.0%	20.2%	14.7%	14.6%
wealth index quintiles	1 = poorest		100.0%	0.0%	0.0%	0.0%	0.0%
	2		0.0%	100.0%	0.0%	0.0%	0.0%
	3 = middle		0.0%	0.0%	100.0%	0.0%	0.0%
	4		0.0%	0.0%	0.0%	100.0%	0.0%
	5 = wealthiest		0.0%	0.0%	0.0%	0.0%	100.0%
FCG	Poor		56.3%	27.1%	9.7%	6.9%	0.0%
	Borderline		34.7%	30.8%	21.3%	11.0%	2.2%
	Acceptable		12.9%	16.3%	20.5%	23.7%	26.7%

Table 18 - Roof and floor type by strata

			Roof type					Floor type				
			Thatch/ leaves	Bamboo/ wood	Other natural material	Corrugated metal	Tile, ceramics, etc.	Dirt	Bamboo/ wood	Other natural material	Cement	Tile, stones, etc.
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		0.4%	0.7%	0.3%	5.7%	92.8%	13.0%	0.0%	0.0%	13.7%	73.4%
	Sampang		0.0%	0.4%	0.0%	0.8%	98.8%	27.9%	0.0%	0.0%	25.5%	46.6%
	Lombok Tengah		0.4%	0.0%	0.0%	20.8%	78.7%	2.1%	0.0%	0.6%	78.3%	19.0%
	Lombok Utara		6.1%	0.4%	0.8%	61.5%	31.2%	6.3%	2.3%	0.0%	67.4%	23.9%
	Kupang		11.7%	0.3%	8.6%	77.9%	1.4%	35.5%	0.0%	0.0%	53.2%	11.3%
	Timor Tengah Selatan		29.8%	0.0%	5.9%	64.3%	0.0%	56.5%	0.3%	0.4%	39.7%	3.1%
	Sumba Tengah		15.3%	1.9%	2.2%	80.6%	0.0%	15.1%	57.5%	0.4%	25.3%	1.6%
	Merauke		0.0%	1.2%	0.0%	98.7%	0.0%	3.7%	31.5%	0.3%	48.8%	15.8%
	Total		8.0%	0.6%	2.2%	51.3%	37.9%	20.0%	11.4%	0.2%	44.0%	24.3%
Main income group	Food crops ag.		14.5%	0.6%	3.3%	52.1%	29.4%	31.3%	15.5%	0.4%	36.4%	16.4%
	Other ag.		5.1%	2.2%	1.8%	52.3%	38.7%	14.9%	17.6%	0.0%	45.1%	22.4%
	Ag. wage labor		3.7%	0.0%	0.0%	40.7%	55.6%	15.0%	0.2%	0.6%	60.1%	24.1%
	Non ag. wage labor		1.5%	0.0%	3.1%	48.6%	46.8%	10.9%	14.2%	0.0%	47.8%	27.1%
	Merchant		0.8%	0.6%	1.7%	49.5%	47.3%	8.7%	4.3%	0.0%	49.9%	37.1%
	Skilled labor		2.7%	0.0%	1.4%	52.6%	43.3%	9.6%	9.0%	0.0%	53.5%	27.9%
	Employee		0.8%	0.9%	1.3%	54.7%	42.3%	3.0%	4.9%	0.0%	51.2%	40.9%
	Remittance		0.8%	0.8%	0.0%	61.6%	36.8%	16.1%	9.6%	0.0%	55.5%	18.7%
	Entrepreneur		0.0%	0.0%	0.0%	41.0%	59.0%	2.2%	1.3%	0.0%	32.8%	63.7%
	Technician		0.0%	0.0%	0.0%	57.8%	42.2%	3.9%	4.4%	0.0%	35.6%	56.1%
	Other		4.5%	0.4%	0.0%	59.4%	35.7%	21.7%	12.5%	0.0%	48.3%	17.6%
Currently not working		27.3%	0.0%	0.0%	22.0%	50.7%	17.8%	9.6%	0.0%	67.1%	5.6%	
Head sex	Male	No formal education	11.4%	0.2%	2.3%	36.8%	49.2%	30.4%	5.9%	0.2%	45.7%	17.7%
		Primary school	10.4%	0.5%	2.4%	48.8%	37.8%	25.7%	13.9%	0.1%	37.8%	22.6%
		Secondary school	3.5%	0.7%	2.2%	58.7%	34.9%	9.9%	9.8%	0.0%	51.1%	29.2%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	7.8%	0.5%	2.3%	51.4%	38.0%	19.9%	11.3%	0.1%	44.1%	24.6%
	Female	No formal education	16.5%	1.1%	1.4%	40.5%	40.5%	31.1%	7.5%	3.9%	40.1%	17.5%
		Primary school	10.0%	0.9%	1.8%	56.8%	30.5%	23.7%	15.4%	0.0%	46.2%	14.8%
		Secondary school	0.0%	1.2%	2.4%	51.6%	44.8%	4.2%	13.6%	0.0%	41.5%	40.7%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total		9.3%	1.0%	1.8%	50.6%	37.2%	20.9%	12.6%	1.2%	43.1%	22.3%	
wealth index quintiles	1 = poorest		36.6%	1.5%	9.0%	49.9%	2.9%	55.1%	32.7%	0.8%	10.5%	0.9%
	2		2.4%	0.2%	1.3%	68.3%	27.8%	25.4%	9.3%	0.1%	56.8%	8.3%
	3 = middle		0.8%	0.1%	0.6%	52.2%	46.3%	15.1%	6.2%	0.2%	60.2%	18.4%
	4		0.0%	0.9%	0.2%	49.6%	49.3%	4.1%	4.9%	0.0%	57.2%	33.9%
	5 = wealthiest		0.0%	0.3%	0.0%	36.6%	63.1%	0.3%	4.1%	0.0%	35.4%	60.1%
FCG	Poor		30.7%	0.0%	3.4%	58.6%	7.2%	39.9%	17.3%	0.9%	38.9%	3.0%
	Borderline		14.7%	0.8%	3.4%	59.1%	22.0%	24.4%	16.4%	0.3%	47.9%	11.0%
	Acceptable		4.2%	0.6%	1.8%	48.6%	44.8%	17.1%	9.6%	0.1%	43.4%	29.8%

Table 19 - Main lighting source by strata

			Lighting source						
			Electricity (PLN)	Electricity (Non-PLN)	Generator	Solar panel	Kerosene lantern, etc.	Torch (Battery)	Firewood
district	Probolinggo		99.6%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
	Sampang		100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Lombok Tengah		100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Lombok Utara		93.6%	2.6%	0.0%	3.6%	0.2%	0.0%	0.0%
	Kupang		75.9%	0.5%	1.0%	8.4%	14.2%	0.0%	0.0%
	Timor Tengah Selatan		38.9%	3.3%	0.9%	14.0%	42.4%	0.1%	0.4%
	Sumba Tengah		38.1%	2.6%	0.5%	21.8%	36.3%	0.6%	0.0%
	Merauke		98.3%	0.9%	0.2%	0.0%	0.6%	0.0%	0.0%
	Total		80.5%	1.2%	0.3%	6.0%	11.8%	0.1%	0.1%
Main income group	Food crops ag.		64.0%	1.7%	0.5%	10.0%	23.5%	0.2%	0.1%
	Other ag.		91.5%	0.3%	0.0%	4.1%	4.1%	0.0%	0.1%
	Ag. wage labor		94.2%	2.0%	0.0%	3.5%	0.2%	0.0%	0.0%
	Non ag. wage labor		98.7%	0.7%	0.0%	0.0%	0.6%	0.0%	0.0%
	Merchant		96.7%	0.0%	0.0%	3.0%	0.3%	0.0%	0.0%
	Skilled labor		90.0%	0.4%	1.4%	3.5%	4.7%	0.0%	0.0%
	Employee		94.4%	1.3%	0.0%	3.5%	0.8%	0.0%	0.0%
	Remittance		97.0%	0.0%	0.0%	0.9%	2.1%	0.0%	0.0%
	Entrepreneur		98.7%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%
	Technician		100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Other		94.3%	5.3%	0.4%	0.0%	0.0%	0.0%	0.0%
	Currently not working		82.5%	0.0%	0.0%	6.6%	10.8%	0.0%	0.0%
Head sex	Male	No formal education	79.9%	0.8%	0.1%	4.6%	14.5%	0.1%	0.0%
		Primary school	74.5%	1.9%	0.6%	7.5%	15.3%	0.2%	0.0%
		Secondary school	88.3%	0.9%	0.2%	4.4%	6.3%	0.0%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	80.7%	1.3%	0.4%	5.9%	11.5%	0.1%	0.0%
	Female	No formal education	76.3%	0.2%	0.0%	4.8%	17.4%	0.0%	1.4%
		Primary school	75.7%	0.2%	0.0%	7.5%	16.6%	0.0%	0.0%
		Secondary school	89.3%	1.4%	0.0%	6.7%	2.7%	0.0%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	79.4%	0.5%	0.0%	6.5%	13.2%	0.0%	0.4%
wealth index quintiles	1 = poorest		25.2%	2.4%	0.2%	15.4%	56.0%	0.4%	0.3%
	2		83.0%	2.8%	0.5%	11.1%	2.6%	0.0%	0.0%
	3 = middle		95.5%	0.9%	0.6%	2.7%	0.2%	0.0%	0.0%
	4		98.9%	0.0%	0.3%	0.7%	0.0%	0.0%	0.0%
	5 = wealthiest		100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCG	Poor		45.3%	0.7%	0.5%	15.7%	36.8%	0.0%	0.9%
	Borderline		70.0%	1.6%	0.7%	8.3%	19.0%	0.4%	0.0%
	Acceptable		86.4%	1.2%	0.2%	4.5%	7.7%	0.0%	0.0%

Table 20 - Main cooking source by strata

			Cooking source					
			LPG (3kg)	LPG (12kg)	Electricity	Kerosene	Wood	Charcoal
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		46.7%	1.1%	0.0%	0.3%	51.5%	0.4%
	Sampang		36.7%	1.8%	0.0%	0.0%	61.5%	0.0%
	Lombok Tengah		55.6%	0.3%	0.5%	1.2%	42.4%	0.0%
	Lombok Utara		44.2%	0.4%	0.0%	3.1%	52.3%	0.0%
	Kupang		0.0%	0.0%	0.0%	8.7%	91.3%	0.0%
	Timor Tengah Selatan		0.0%	0.0%	0.5%	2.6%	97.0%	0.0%
	Sumba Tengah		0.0%	0.0%	0.0%	1.9%	98.1%	0.0%
	Merauke		0.0%	0.0%	0.3%	78.6%	21.2%	0.0%
	Total		22.9%	0.4%	0.1%	12.0%	64.4%	0.1%
Main income group	Food crops ag.		12.0%	0.1%	0.1%	3.9%	83.9%	0.0%
	Other ag.		16.4%	0.6%	0.8%	18.4%	63.8%	0.0%
	Ag. wage labor		23.4%	0.0%	0.0%	0.3%	75.6%	0.7%
	Non ag. wage labor		30.2%	0.4%	0.0%	17.0%	52.4%	0.0%
	Merchant		41.0%	2.3%	0.0%	28.1%	28.5%	0.0%
	Skilled labor		32.8%	0.0%	0.0%	15.8%	51.5%	0.0%
	Employee		43.7%	0.3%	0.6%	27.1%	28.4%	0.0%
	Remittance		29.5%	0.0%	0.0%	25.2%	45.3%	0.0%
	Entrepreneur		58.6%	5.5%	0.0%	14.1%	21.8%	0.0%
	Technician		34.5%	0.0%	0.0%	31.1%	34.4%	0.0%
	Other		15.1%	0.0%	0.0%	28.0%	56.9%	0.0%
	Currently not working		19.8%	0.0%	0.0%	8.1%	72.1%	0.0%
Head sex	Male	No formal education	12.8%	0.2%	0.0%	5.0%	81.5%	0.5%
		Primary school	19.3%	0.2%	0.2%	8.5%	71.8%	0.0%
		Secondary school	30.9%	0.6%	0.2%	19.1%	49.3%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	23.2%	0.4%	0.2%	12.4%	63.8%	0.1%
	Female	No formal education	15.0%	2.3%	0.0%	4.6%	78.1%	0.0%
		Primary school	13.0%	0.0%	0.0%	10.5%	76.5%	0.0%
		Secondary school	41.5%	0.9%	0.0%	15.2%	42.4%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	21.0%	0.9%	0.0%	10.0%	68.2%	0.0%
wealth index quintiles	1 = poorest		0.3%	0.0%	0.0%	1.2%	98.2%	0.3%
	2		5.2%	0.0%	0.0%	4.3%	90.5%	0.0%
	3 = middle		18.5%	0.2%	0.3%	9.3%	71.8%	0.0%
	4		32.1%	0.4%	0.0%	17.4%	50.1%	0.0%
	5 = wealthiest		58.5%	1.6%	0.4%	28.0%	11.5%	0.0%
FCG	Poor		3.5%	0.0%	0.0%	2.4%	94.0%	0.0%
	Borderline		13.2%	0.0%	0.0%	3.3%	83.6%	0.0%
	Acceptable		27.3%	0.6%	0.2%	15.4%	56.5%	0.1%

Table 21 - Toilet type by strata

			Toilet type							
			Flush/pour connected to septic-tank	Flush/pour flush without septic-tank	Pit latrine with slab	Pit latrine without slab	Bucket	Hanging toilet	Shared toilet facility	No facilities
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		50.7%	4.6%	10.0%	3.4%	0.0%	0.0%	4.3%	27.1%
	Sampang		63.3%	4.0%	10.0%	12.9%	0.0%	0.5%	0.7%	8.6%
	Lombok Tengah		71.5%	2.7%	1.5%	0.6%	0.0%	3.0%	3.9%	16.7%
	Lombok Utara		61.8%	3.1%	2.4%	2.4%	0.0%	0.8%	6.9%	22.7%
	Kupang		71.4%	1.3%	12.0%	11.6%	0.0%	0.0%	0.5%	3.2%
	Timor Tengah Selatan		37.0%	8.0%	17.4%	35.5%	0.0%	0.3%	0.5%	1.5%
	Sumba Tengah		16.0%	4.5%	5.1%	57.8%	0.0%	0.3%	0.0%	16.4%
	Merauke		66.0%	17.5%	1.4%	2.2%	0.0%	0.3%	11.8%	0.7%
	Total		54.7%	5.7%	7.5%	15.8%	0.0%	0.6%	3.6%	12.1%
Main income group	Food crops ag.		41.4%	6.8%	10.8%	28.5%	0.0%	0.5%	1.2%	10.7%
	Other ag.		48.9%	8.4%	10.0%	5.2%	0.0%	0.0%	13.0%	14.6%
	Ag. wage labor		42.5%	2.4%	5.7%	3.9%	0.0%	3.8%	7.7%	34.0%
	Non ag. wage labor		57.0%	5.0%	5.2%	9.1%	0.0%	0.8%	6.8%	16.1%
	Merchant		74.1%	5.6%	3.6%	2.9%	0.0%	0.0%	4.5%	9.4%
	Skilled labor		73.8%	9.3%	3.2%	4.2%	0.0%	0.4%	0.8%	8.4%
	Employee		81.1%	2.3%	3.3%	4.5%	0.0%	0.0%	4.2%	4.6%
	Remittance		91.1%	1.1%	0.0%	4.8%	0.0%	0.0%	0.9%	2.1%
	Entrepreneur		79.7%	8.0%	1.3%	0.0%	0.0%	0.0%	0.0%	10.9%
	Technician		73.6%	2.8%	5.8%	0.0%	0.0%	0.0%	5.6%	12.3%
	Other		50.1%	0.0%	0.0%	14.4%	0.0%	0.0%	12.1%	23.4%
	Currently not working		33.7%	0.0%	11.1%	9.1%	0.0%	11.9%	12.9%	21.3%
Head sex	Male	No formal education	36.7%	3.2%	14.3%	20.7%	0.0%	0.8%	4.5%	19.6%
		Primary school	49.5%	5.5%	9.0%	19.0%	0.0%	0.4%	3.7%	12.8%
		Secondary school	68.1%	7.1%	4.0%	9.8%	0.0%	0.4%	3.6%	7.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	55.5%	5.9%	7.6%	15.5%	0.0%	0.5%	3.8%	11.3%
	Female	No formal education	38.2%	2.7%	6.4%	26.3%	0.0%	2.9%	3.4%	20.1%
		Primary school	46.7%	6.2%	5.9%	16.3%	0.0%	1.9%	1.5%	21.4%
		Secondary school	66.8%	4.7%	7.6%	11.0%	0.0%	0.0%	1.8%	8.2%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	49.4%	4.8%	6.5%	17.9%	0.0%	1.7%	2.1%	17.6%
wealth index quintiles	1 = poorest		14.2%	5.3%	13.7%	47.9%	0.0%	0.2%	1.8%	16.9%
	2		43.4%	5.5%	9.5%	17.3%	0.0%	1.8%	7.0%	15.4%
	3 = middle		56.4%	5.8%	6.4%	8.5%	0.0%	1.0%	5.2%	16.7%
	4		76.6%	5.6%	5.9%	3.7%	0.0%	0.2%	1.3%	6.7%
	5 = wealthiest		82.8%	6.4%	1.8%	1.5%	0.0%	0.2%	2.6%	4.7%
FCG	Poor		33.6%	3.6%	11.5%	36.6%	0.0%	0.0%	0.8%	13.9%
	Borderline		40.2%	2.9%	9.1%	25.3%	0.0%	1.5%	5.7%	15.4%
	Acceptable		60.6%	6.7%	6.6%	11.4%	0.0%	0.5%	3.2%	11.0%

Table 22 - Drinking water source during drought by strata

			Drinking water source during drought											
			Piped water (PDAM)	Public tap	Protected tube well	Protected spring	Rainwater collection	Unprotected tube well	Unprotected spring	Water tank	Water tanker truck	Bottled water/ refill	Stream, river, etc.	Other
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		22.4%	3.8%	41.3%	10.5%	0.5%	0.4%	3.9%	2.1%	0.0%	12.7%	2.5%	0.0%
	Sampang		15.7%	0.0%	59.1%	3.6%	0.0%	2.2%	0.9%	2.3%	7.1%	7.5%	0.9%	0.7%
	Lombok Tengah		13.3%	1.8%	58.3%	6.3%	0.0%	0.7%	1.6%	2.4%	0.0%	15.8%	0.0%	0.0%
	Lombok Utara		32.2%	1.3%	37.9%	11.8%	0.0%	0.7%	1.1%	0.8%	1.7%	7.1%	5.1%	0.2%
	Kupang		7.1%	4.8%	55.3%	8.3%	0.1%	6.3%	4.9%	2.8%	6.4%	0.9%	3.2%	0.0%
	Timor Tengah Selatan		5.0%	6.8%	14.8%	23.8%	0.5%	5.5%	19.8%	6.6%	5.1%	0.0%	12.1%	0.0%
	Sumba Tengah		0.4%	1.6%	27.4%	28.3%	1.8%	6.3%	17.3%	3.4%	1.0%	0.0%	12.5%	0.0%
	Merauke		4.1%	0.0%	15.2%	0.1%	1.2%	2.0%	0.2%	9.7%	6.4%	59.9%	1.3%	0.0%
Total		12.5%	2.5%	38.7%	11.6%	0.5%	3.0%	6.2%	3.8%	3.5%	13.0%	4.7%	0.1%	
Main income group	Food crops ag.		7.5%	2.9%	39.1%	16.3%	0.9%	4.6%	9.9%	2.7%	2.9%	5.7%	7.3%	0.2%
	Other ag.		19.1%	2.3%	30.2%	12.1%	0.2%	1.4%	5.8%	10.2%	5.4%	10.1%	3.2%	0.0%
	Ag. wage labor		17.8%	4.5%	58.4%	5.9%	0.0%	0.7%	2.3%	2.4%	2.1%	2.8%	2.9%	0.0%
	Non ag. wage labor		13.7%	2.1%	45.2%	7.1%	0.0%	2.1%	2.0%	2.3%	4.6%	20.0%	0.5%	0.3%
	Merchant		16.4%	1.4%	36.3%	3.5%	0.1%	0.0%	2.6%	0.9%	6.3%	30.4%	2.1%	0.0%
	Skilled labor		17.8%	2.9%	31.2%	7.8%	0.0%	0.4%	7.1%	11.3%	0.8%	16.0%	4.5%	0.0%
	Employee		17.1%	1.2%	28.6%	8.8%	0.6%	2.1%	1.9%	4.6%	3.8%	29.8%	1.5%	0.0%
	Remittance		15.1%	1.5%	42.7%	6.2%	0.0%	6.0%	0.0%	0.8%	5.1%	21.5%	1.1%	0.0%
	Entrepreneur		16.5%	0.0%	27.8%	9.0%	0.0%	1.2%	1.3%	3.6%	6.8%	33.8%	0.0%	0.0%
	Technician		12.1%	3.7%	35.3%	9.0%	0.0%	0.0%	0.0%	8.7%	0.8%	21.4%	9.0%	0.0%
	Other		45.7%	0.0%	36.9%	1.6%	0.0%	6.4%	9.1%	0.0%	0.0%	0.0%	0.4%	0.0%
	Currently not working		0.0%	0.0%	58.1%	6.6%	0.0%	0.0%	0.0%	9.2%	0.0%	11.9%	14.1%	0.0%
Head sex	Male	No formal education	13.8%	1.9%	45.6%	10.2%	0.0%	3.9%	5.5%	2.9%	2.2%	7.9%	6.3%	0.0%
		Primary school	10.8%	2.7%	38.4%	14.8%	0.7%	4.0%	7.6%	4.1%	4.5%	7.3%	5.0%	0.0%
		Secondary school	13.8%	2.5%	34.7%	8.8%	0.4%	1.9%	4.0%	4.3%	3.5%	21.4%	4.6%	0.1%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	12.4%	2.5%	37.8%	11.8%	0.5%	3.1%	5.9%	4.1%	3.8%	13.1%	5.0%	0.0%
	Female	No formal education	11.3%	0.8%	51.2%	8.4%	0.0%	2.9%	9.1%	2.9%	0.0%	9.5%	3.8%	0.0%
		Primary school	13.9%	2.9%	39.8%	12.7%	0.0%	2.9%	10.7%	1.1%	1.8%	9.9%	2.8%	1.6%
		Secondary school	14.8%	3.5%	44.3%	6.8%	1.9%	0.0%	3.2%	2.1%	2.0%	19.4%	1.9%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	13.4%	2.4%	44.4%	9.9%	0.5%	2.1%	8.3%	1.9%	1.3%	12.2%	2.9%	0.7%
wealth index quintiles	1 = poorest		5.3%	3.1%	21.4%	23.1%	1.4%	6.6%	20.7%	3.8%	1.9%	0.2%	12.6%	0.0%
	2		8.5%	4.2%	48.4%	12.8%	0.1%	4.0%	6.1%	4.0%	4.0%	1.9%	5.8%	0.1%
	3 = middle		13.5%	3.2%	47.1%	9.8%	0.3%	2.6%	2.8%	4.8%	3.3%	9.7%	2.9%	0.0%
	4		16.4%	1.4%	45.0%	6.8%	0.1%	1.5%	0.8%	3.5%	3.9%	18.4%	1.7%	0.5%
	5 = wealthiest		18.9%	0.7%	31.3%	5.4%	0.6%	0.3%	0.6%	2.7%	4.2%	34.7%	0.5%	0.0%
FCG	Poor		4.9%	2.7%	33.1%	24.1%	0.0%	7.0%	11.5%	2.0%	5.5%	1.2%	7.9%	0.0%
	Borderline		11.8%	3.9%	39.3%	14.6%	0.5%	4.6%	12.4%	2.4%	1.1%	3.0%	6.2%	0.1%
	Acceptable		13.3%	2.1%	39.0%	9.7%	0.5%	2.2%	4.1%	4.3%	4.0%	16.7%	4.0%	0.1%

Table 23 - Normal drinking water source by strata

			Normal drinking water source											
			Piped water (PDAM)	Public tap	Protected tube well	Protected spring	Rainwater collection	Unprotected tube well	Unprotected spring	Water tank	Water tanker truck	Bottled water/ refill	Stream, river, etc.	Other
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		23.2%	2.9%	42.7%	8.0%	0.7%	1.1%	3.9%	2.7%	0.0%	12.0%	2.8%	0.0%
	Sampang		15.6%	0.2%	60.5%	3.9%	5.8%	5.8%	0.5%	0.4%	1.0%	6.2%	0.0%	0.0%
	Lombok Tengah		11.7%	0.9%	62.5%	5.4%	0.0%	5.6%	0.3%	1.5%	0.0%	12.0%	0.0%	0.0%
	Lombok Utara		31.9%	1.3%	38.8%	12.8%	0.0%	2.0%	1.5%	0.0%	0.2%	5.8%	5.6%	0.0%
	Kupang		9.2%	4.6%	56.9%	8.4%	0.0%	3.6%	3.8%	4.5%	3.9%	0.9%	4.2%	0.0%
	Timor Tengah Selatan		9.5%	7.7%	23.1%	18.9%	0.5%	7.5%	20.0%	3.6%	0.7%	0.3%	8.1%	0.0%
	Sumba Tengah		0.2%	0.9%	31.7%	23.6%	8.5%	5.8%	17.9%	0.7%	1.0%	0.3%	9.5%	0.0%
	Merauke		4.1%	0.0%	16.5%	0.1%	12.9%	4.3%	0.1%	5.6%	3.6%	52.5%	0.4%	0.0%
Total			13.2%	2.3%	41.6%	10.2%	3.5%	4.5%	6.0%	2.4%	1.3%	11.3%	3.8%	0.0%
Main income group	Food crops ag.		8.7%	2.9%	41.2%	14.1%	4.4%	6.0%	10.2%	2.2%	0.7%	3.7%	5.9%	0.0%
	Other ag.		18.8%	1.0%	30.9%	13.0%	6.7%	5.6%	4.0%	5.5%	1.7%	10.1%	2.5%	0.0%
	Ag. wage labor		16.5%	3.9%	61.5%	5.2%	0.2%	3.0%	2.6%	1.8%	0.5%	2.1%	2.7%	0.0%
	Non ag. wage labor		12.6%	1.3%	50.6%	5.9%	2.2%	4.4%	2.0%	1.4%	3.9%	15.4%	0.5%	0.0%
	Merchant		16.2%	0.9%	36.4%	3.4%	3.9%	2.5%	1.8%	0.9%	2.1%	29.7%	2.1%	0.0%
	Skilled labor		19.7%	3.6%	36.7%	10.3%	3.6%	1.5%	4.4%	2.3%	0.0%	14.8%	3.0%	0.0%
	Employee		18.3%	1.2%	32.9%	5.6%	1.9%	1.8%	1.7%	3.3%	2.6%	28.9%	1.8%	0.0%
	Remittance		16.3%	1.2%	49.8%	4.3%	4.0%	3.1%	0.0%	0.0%	1.2%	20.2%	0.0%	0.0%
	Entrepreneur		17.7%	0.0%	29.2%	9.0%	1.3%	2.4%	0.0%	4.3%	3.6%	32.5%	0.0%	0.0%
	Technician		12.1%	3.7%	41.3%	5.8%	0.0%	2.7%	2.1%	8.7%	0.0%	17.5%	6.2%	0.0%
	Other		45.7%	0.0%	33.5%	1.1%	0.0%	12.5%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Currently not working			0.0%	0.0%	84.3%	6.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%
Head sex	Male	No formal education	13.6%	0.9%	47.4%	10.2%	1.8%	5.7%	6.1%	1.9%	0.4%	8.0%	4.0%	0.0%
		Primary school	12.1%	2.6%	41.5%	11.7%	4.9%	5.2%	8.0%	2.7%	0.9%	6.2%	4.1%	0.0%
		Secondary school	13.9%	2.3%	38.9%	8.2%	3.3%	3.0%	3.3%	2.7%	2.3%	18.2%	4.0%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	13.0%	2.3%	41.1%	10.1%	3.9%	4.4%	5.9%	2.6%	1.4%	11.3%	4.0%	0.0%
	Female	No formal education	12.0%	0.8%	46.0%	10.4%	0.0%	11.3%	6.8%	1.8%	0.6%	8.0%	2.4%	0.0%
		Primary school	15.9%	3.4%	42.2%	11.3%	2.4%	3.6%	9.3%	0.5%	0.0%	8.7%	2.5%	0.0%
		Secondary school	14.8%	2.5%	46.5%	8.6%	0.0%	0.0%	3.2%	1.4%	2.0%	19.1%	1.9%	0.0%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total			14.5%	2.4%	44.5%	10.4%	1.1%	5.0%	7.0%	1.1%	0.7%	11.2%	2.3%	0.0%
wealth index quintiles	1 = poorest		6.6%	3.2%	24.6%	18.0%	5.6%	8.3%	20.3%	2.0%	0.7%	0.0%	10.8%	0.0%
	2		10.3%	3.6%	49.2%	13.5%	2.5%	5.7%	5.4%	3.6%	0.7%	1.8%	3.7%	0.0%
	3 = middle		13.5%	2.8%	51.5%	8.2%	1.5%	4.7%	3.1%	3.0%	1.2%	8.5%	1.9%	0.0%
	4		17.2%	1.5%	45.8%	6.4%	4.4%	3.5%	0.7%	1.4%	2.8%	14.7%	1.6%	0.0%
	5 = wealthiest		18.3%	0.4%	36.8%	4.7%	3.7%	0.2%	0.5%	2.0%	1.1%	31.3%	1.0%	0.0%
FCG	Poor		10.4%	2.2%	34.6%	22.6%	4.3%	5.4%	11.8%	2.4%	1.1%	0.0%	5.2%	0.0%
	Borderline		12.8%	2.9%	41.3%	13.5%	1.8%	5.8%	11.3%	1.9%	0.6%	2.4%	5.5%	0.0%
	Acceptable		13.5%	2.1%	42.2%	8.2%	4.0%	4.0%	4.0%	2.6%	1.5%	14.6%	3.2%	0.0%

Table 24 - Micronutrient consumption by strata

			Vit A rich	Vit A rich consume group			Protein rich	Protein rich consume group			Iron rich	Iron rich consume group		
			Mean	Never	Sometimes	Daily	Mean	Never	Consume	Daily	Mean	Never	Consume	Daily
				Row N %	Row N %	Row N %		Row N %	Row N %	Row N %		Row N %	Row N %	Row N %
district	Probolinggo		12.86	0.0%	9.1%	90.9%	14.19	0.8%	7.1%	92.0%	4.89	9.6%	47.7%	42.7%
	Sampang		9.15	2.0%	25.6%	72.4%	12.58	0.0%	1.4%	98.6%	5.28	4.5%	44.0%	51.5%
	Lombok Tengah		11.98	0.0%	6.7%	93.3%	7.26	2.4%	53.4%	44.2%	2.05	27.2%	66.3%	6.5%
	Lombok Utara		12.22	0.0%	6.3%	93.7%	9.14	2.1%	37.5%	60.4%	3.72	10.7%	63.1%	26.2%
	Kupang		9.45	1.0%	15.7%	83.3%	5.90	12.9%	48.2%	38.9%	2.70	26.0%	60.3%	13.7%
	Timor Tengah Selatan		7.81	4.4%	22.4%	73.2%	6.44	15.4%	23.4%	61.1%	1.43	50.4%	42.8%	6.8%
	Sumba Tengah		10.51	0.8%	12.6%	86.6%	4.87	13.0%	56.5%	30.5%	3.01	16.6%	71.8%	11.6%
	Merauke		16.40	0.0%	5.0%	95.0%	12.50	0.0%	9.5%	90.5%	4.35	5.6%	75.3%	19.1%
	Total		11.30	1.0%	12.9%	86.1%	9.11	5.8%	29.6%	64.6%	3.43	18.8%	58.9%	22.3%
Main income group	Food crops ag.		9.89	2.0%	15.5%	82.5%	7.16	10.7%	36.2%	53.1%	2.76	27.2%	56.5%	16.3%
	Other ag.		10.63	0.0%	20.2%	79.8%	9.54	0.5%	32.1%	67.4%	4.20	9.2%	58.7%	32.1%
	Ag. wage labor		10.22	0.3%	11.4%	88.3%	7.44	1.6%	42.3%	56.1%	2.52	21.7%	61.1%	17.2%
	Non ag. wage labor		11.60	0.0%	10.4%	89.6%	9.40	2.3%	30.7%	67.0%	3.30	13.6%	67.3%	19.1%
	Merchant		12.90	0.8%	10.2%	89.0%	12.20	1.1%	14.9%	84.0%	4.76	6.9%	55.6%	37.6%
	Skilled labor		12.67	0.0%	10.5%	89.5%	10.86	0.7%	22.8%	76.5%	3.89	12.1%	57.6%	30.3%
	Employee		15.99	0.0%	4.6%	95.4%	14.37	0.4%	11.0%	88.6%	4.95	6.2%	59.7%	34.1%
	Remittance		11.99	0.0%	12.1%	87.9%	10.51	4.2%	17.3%	78.5%	4.17	10.0%	71.2%	18.8%
	Entrepreneur		14.04	0.0%	2.5%	97.5%	13.21	0.0%	12.8%	87.2%	5.71	2.5%	56.4%	41.1%
	Technician		14.19	0.0%	11.9%	88.1%	11.40	4.2%	10.2%	85.6%	3.55	15.8%	63.3%	20.9%
	Other		11.27	0.0%	6.5%	93.5%	8.96	0.0%	40.4%	59.6%	3.27	10.9%	85.4%	3.7%
	Currently not working		7.27	6.6%	19.9%	73.4%	4.15	27.3%	50.3%	22.3%	1.43	68.6%	17.2%	14.2%
Head sex	Male	No formal education	9.49	3.1%	16.9%	80.0%	8.34	4.9%	30.4%	64.7%	2.84	24.3%	56.4%	19.2%
		Primary school	10.27	0.9%	14.9%	84.3%	8.03	7.7%	33.3%	59.0%	3.18	21.6%	56.6%	21.8%
		Secondary school	13.27	0.4%	8.5%	91.1%	10.78	3.0%	25.1%	71.9%	3.95	12.6%	63.9%	23.5%
		Higher education		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%
		Total	11.39	1.0%	12.5%	86.5%	9.18	5.4%	29.7%	64.9%	3.45	18.3%	59.5%	22.2%
	Female	No formal education	9.31	2.6%	17.4%	80.0%	7.32	14.8%	27.8%	57.4%	2.93	29.2%	44.3%	26.4%
		Primary school	9.73	1.3%	18.8%	79.9%	7.31	9.0%	34.2%	56.8%	2.65	26.9%	61.6%	11.5%
		Secondary school	13.89	0.0%	8.1%	91.9%	12.41	0.0%	23.4%	76.6%	4.78	7.3%	54.8%	37.8%
		Higher education		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%
		Total	10.68	1.4%	15.6%	83.0%	8.63	8.4%	29.5%	62.1%	3.28	22.5%	54.7%	22.8%
wealth index quintiles	1 = poorest		8.43	2.3%	21.0%	76.8%	4.93	16.9%	45.4%	37.6%	2.03	37.7%	53.7%	8.6%
	2		9.33	1.6%	13.1%	85.4%	6.48	8.0%	42.9%	49.0%	2.55	26.1%	59.0%	14.9%
	3 = middle		10.90	0.5%	14.9%	84.6%	8.41	3.0%	33.3%	63.7%	3.00	16.2%	66.0%	17.8%
	4		12.23	0.8%	10.5%	88.7%	10.80	1.3%	20.3%	78.5%	4.17	9.4%	60.5%	30.2%
	5 = wealthiest		15.59	0.0%	5.2%	94.8%	14.92	0.0%	6.3%	93.7%	5.39	4.7%	55.4%	39.9%
FCG	Poor		5.52	7.2%	33.3%	59.5%	0.37	74.3%	25.7%	0.0%	0.23	83.4%	16.6%	0.0%
	Borderline		8.39	1.1%	20.5%	78.4%	2.93	6.3%	87.1%	6.7%	1.24	33.5%	66.5%	0.0%
	Acceptable		12.62	0.5%	8.9%	90.6%	11.58	0.0%	13.8%	86.2%	4.31	9.3%	60.3%	30.3%

Table 25 - Agriculture engagement and livestock ownership by strata

			Engage in Agriculture		Livestock ownership			Animal Ownership						
			Yes	No	Yes	No	Cattle	Buffalo	Horses	Goats	Pigs	Dogs	Chicken	Ducks
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
district	Probolinggo		41.1%	58.9%	57.3%	42.7%	36.3%	0.0%	0.5%	24.0%	0.0%	0.2%	79.2%	8.9%
	Sampang		64.6%	35.4%	65.4%	34.6%	46.3%	0.1%	0.0%	18.3%	0.0%	0.0%	84.8%	9.5%
	Lombok Tengah		43.1%	56.9%	50.4%	49.6%	23.3%	0.8%	0.0%	8.1%	0.0%	0.0%	85.7%	24.4%
	Lombok Utara		34.4%	65.6%	28.3%	71.7%	55.4%	0.0%	2.3%	13.7%	3.6%	4.0%	63.2%	1.0%
	Kupang		89.8%	10.2%	72.0%	28.0%	33.8%	0.0%	2.0%	11.0%	66.0%	31.3%	59.2%	3.1%
	Timor Tengah Selatan		96.2%	3.8%	78.5%	21.5%	40.4%	0.0%	0.0%	8.9%	75.2%	56.2%	85.0%	0.6%
	Sumba Tengah		94.7%	5.3%	78.6%	21.4%	9.0%	10.7%	19.2%	17.7%	71.7%	82.8%	81.0%	14.9%
	Merauke		26.4%	73.6%	36.8%	63.2%	22.7%	0.0%	4.6%	14.9%	14.2%	25.9%	79.0%	30.9%
	Total		61.3%	38.7%	58.4%	41.6%	32.1%	1.9%	4.1%	14.6%	36.2%	30.5%	77.9%	10.6%
Main income group	Food crops ag.		99.0%	1.0%	71.7%	28.3%	39.0%	2.2%	5.6%	14.4%	46.0%	40.7%	80.1%	9.0%
	Other ag.		47.0%	53.0%	55.6%	44.4%	43.0%	0.0%	0.3%	16.0%	21.7%	15.7%	67.6%	10.8%
	Ag. wage labor		23.0%	77.0%	47.5%	52.5%	40.8%	0.0%	0.0%	15.6%	9.9%	1.0%	73.8%	14.3%
	Non ag. wage labor		20.4%	79.6%	39.6%	60.4%	16.5%	0.0%	0.0%	12.2%	15.3%	11.9%	72.9%	14.2%
	Merchant		19.3%	80.7%	31.7%	68.3%	10.5%	0.0%	0.0%	10.2%	20.3%	2.8%	78.5%	14.5%
	Skilled labor		34.0%	66.0%	61.1%	38.9%	13.5%	0.0%	3.9%	17.2%	21.3%	20.4%	83.3%	11.3%
	Employee		33.6%	66.4%	54.0%	46.0%	17.4%	6.4%	7.1%	14.9%	35.1%	26.2%	80.2%	13.8%
	Remittance		35.0%	65.0%	50.7%	49.3%	15.1%	2.1%	0.0%	11.7%	38.4%	42.8%	57.9%	11.3%
	Entrepreneur		29.9%	70.1%	39.3%	60.7%	19.6%	0.0%	3.4%	28.9%	31.7%	16.8%	84.1%	9.1%
	Technician		6.0%	94.0%	28.8%	71.2%	11.3%	0.0%	0.0%	12.6%	0.0%	0.0%	78.8%	11.8%
	Other		9.2%	90.8%	20.1%	79.9%	11.9%	0.0%	0.0%	8.2%	2.0%	0.0%	98.2%	29.9%
	Currently not working		0.0%	100.0%	25.2%	74.8%	0.0%	0.0%	0.0%	0.0%	35.9%	35.9%	64.1%	0.0%
Head sex	Male	No formal education	68.0%	32.0%	63.3%	36.7%	38.9%	0.0%	0.7%	18.6%	18.0%	18.4%	81.7%	12.9%
		Primary school	68.1%	31.9%	63.1%	36.9%	38.5%	1.5%	3.2%	14.1%	36.2%	30.5%	75.9%	7.7%
		Secondary school	54.1%	45.9%	55.7%	44.3%	24.7%	3.1%	6.4%	13.9%	42.5%	34.7%	80.2%	13.5%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	62.4%	37.6%	60.1%	39.9%	33.3%	1.9%	4.1%	14.6%	36.3%	30.6%	78.2%	10.5%
	Female	No formal education	55.2%	44.8%	29.3%	70.7%	23.1%	0.0%	2.7%	13.7%	23.5%	15.8%	92.8%	6.3%
		Primary school	58.1%	41.9%	56.9%	43.1%	27.1%	1.1%	3.2%	10.9%	36.0%	28.4%	69.5%	14.9%
		Secondary school	45.1%	54.9%	51.0%	49.0%	10.7%	4.6%	6.9%	21.0%	42.7%	42.4%	74.2%	7.9%
		Higher education	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		Total	53.9%	46.1%	47.2%	52.8%	21.7%	1.9%	4.1%	14.3%	35.5%	30.0%	75.2%	11.3%
wealth index quintiles	1 = poorest		90.9%	9.1%	65.3%	34.7%	22.9%	1.3%	8.2%	13.2%	65.4%	65.5%	81.8%	4.5%
	2		65.2%	34.8%	60.0%	40.0%	35.0%	2.8%	3.1%	13.1%	48.3%	35.3%	73.7%	8.7%
	3 = middle		57.6%	42.4%	59.7%	40.3%	35.7%	1.7%	2.3%	12.2%	29.5%	21.5%	75.5%	11.3%
	4		54.7%	45.3%	60.3%	39.7%	36.8%	2.1%	4.2%	16.7%	20.6%	16.6%	77.5%	14.2%
	5 = wealthiest		38.1%	61.9%	46.8%	53.2%	30.7%	1.5%	2.0%	18.6%	8.6%	4.8%	81.5%	16.1%
FCG	Poor		88.2%	11.8%	64.3%	35.7%	28.7%	1.0%	3.4%	15.8%	61.9%	48.0%	75.0%	7.5%
	Borderline		72.2%	27.8%	60.6%	39.4%	29.8%	2.5%	7.2%	11.2%	52.8%	45.0%	75.2%	9.2%
	Acceptable		56.1%	43.9%	57.2%	42.8%	33.2%	1.8%	3.3%	15.5%	28.9%	24.7%	79.0%	11.2%

Table 26 - Average days of consumption of food groups by strata

			Days consumed							
			Staples	Pulses	Dairy	Meat	Vegetables	Fruits	Sugar	Oils and fat
			Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
district	Probolinggo		7.00	5.77	1.08	5.03	6.51	2.57	6.26	6.76
	Sampang		7.00	5.36	0.52	5.45	5.15	2.39	5.62	6.80
	Lombok Tengah		7.00	2.52	0.66	2.85	6.56	2.97	5.71	5.79
	Lombok Utara		6.99	3.11	0.64	3.92	6.70	3.53	4.55	5.53
	Kupang		7.00	1.80	0.53	2.82	5.93	2.43	5.06	4.94
	Timor Tengah Selatan		6.96	4.23	0.26	1.43	5.88	1.56	4.84	4.59
	Sumba Tengah		6.95	0.56	0.62	2.83	6.51	3.04	6.28	2.88
	Merauke		6.99	4.02	2.29	5.19	6.18	5.88	6.50	6.41
	Total		6.99	3.42	0.83	3.69	6.18	3.05	5.60	5.46
Main income group	Food crops ag.		6.98	2.99	0.46	2.89	6.11	2.62	5.63	4.71
	Other ag.		6.98	3.17	0.71	4.42	5.49	3.32	6.08	5.68
	Ag. wage labor		7.00	3.62	0.20	2.92	6.53	2.57	5.31	5.63
	Non ag. wage labor		7.00	3.79	0.66	3.95	6.39	3.00	5.09	6.21
	Merchant		7.00	4.25	1.46	5.03	6.21	3.60	5.53	6.26
	Skilled labor		6.98	4.02	0.98	4.30	6.36	3.72	5.69	6.16
	Employee		7.00	4.20	2.27	5.22	6.34	4.36	5.80	6.55
	Remittance		7.00	3.41	1.44	4.72	6.19	3.22	5.19	6.17
	Entrepreneur		7.00	3.91	1.04	5.21	6.44	3.37	5.64	6.81
	Technician		7.00	3.42	2.01	4.58	6.47	3.47	6.12	6.47
	Other		7.00	4.09	0.43	4.00	6.68	3.24	6.42	5.31
	Currently not working		7.00	1.82	0.00	1.83	4.72	1.39	5.54	4.03
Head sex	Male	No formal education	6.94	4.01	0.40	3.20	5.97	2.21	5.62	5.26
		Primary school	6.99	3.22	0.47	3.43	6.16	2.73	5.62	5.24
		Secondary school	6.99	3.57	1.37	4.18	6.34	3.75	5.73	5.83
		Higher education								
		Total	6.99	3.45	0.82	3.71	6.21	3.08	5.66	5.48
	Female	No formal education	7.00	3.21	0.42	3.14	5.97	2.18	4.85	4.85
		Primary school	6.96	2.97	0.49	3.23	5.77	2.64	5.48	5.30
		Secondary school	7.00	3.61	1.87	4.76	6.31	3.92	5.22	6.01
		Higher education								
		Total	6.98	3.21	0.83	3.60	5.97	2.84	5.22	5.35
wealth index quintiles	1 = poorest		6.97	2.17	0.24	1.99	5.94	2.22	5.16	3.50
	2		6.97	2.85	0.38	2.69	6.13	2.34	5.59	4.90
	3 = middle		7.00	3.32	0.79	3.48	6.18	2.87	5.59	5.85
	4		6.99	3.88	0.90	4.60	6.27	3.27	5.66	6.39
	5 = wealthiest		7.00	4.87	1.82	5.70	6.38	4.54	6.02	6.67
FCG	Poor		6.89	0.10	0.01	0.24	5.07	0.61	3.92	2.71
	Borderline		6.99	1.18	0.03	1.35	6.13	2.05	5.15	3.99
	Acceptable		6.99	4.33	1.12	4.64	6.29	3.53	5.87	6.10

7.4 Household questionnaire

Household questionnaire

INTERVIEWER ID AND LOCATION INFORMATION					
Interviewer					
Team Leader					
Supervisor					
GPS Coordinate	DD MM' SS.SS" BB / DD MM' SS.SS" LU				
Interview date	/ /	Interview begin:	:	Interview end:	:
Province		ID Province			
District		ID District			
Sub-district		ID Sub-district			
Village		ID Village			
Sub-village		RW/RT (if any)	/		
Household ID					
Is this replacement Household?	1. Yes 2. No				
Why the original household replaced?	1. Nobody at home 2. Breadwinner/spouse not at hom 3. Refused to be interviewed 4. Other, specify_____				
Interviewer:			Respondent:		
...../...../.....			/...../.....		

SECTION 1 – Household Module

No	Full Name	Is this the respondent	Sex	Relationship with the breadwinner	Age	Literacy	Education	Marital status
		1. Yes 2. No	1. Male 2. Female	1. Breadwinner 2. Spouse 3. Child / Child in-law 4. Parents / Parents in law 5. Grandchild 6. Siblings (Brother/Sister, Uncle/Aunt, Nephew) 7. Other relatives (Friends)		1. Yes 2. No	1. No formal education 2. Elementary school (not finished) 3. Elementary school (graduated) 4. Junior high school (not finished) 5. Junior high school (graduated) 6. Senior high school (not finished) 7. Senior high school (graduated) 8. Higher education (Diploma/University)	1. Single 2. Married 3. Widower 4. Divorce
1	2	3	4	5	6	7	8	9
1.		☐	☐	☐		☐	☐	☐
2.		☐	☐	☐		☐	☐	☐
3.		☐	☐	☐		☐	☐	☐
4.		☐	☐	☐		☐	☐	☐
5.		☐	☐	☐		☐	☐	☐
6.		☐	☐	☐		☐	☐	☐
7.		☐	☐	☐		☐	☐	☐
8.		☐	☐	☐		☐	☐	☐
9.		☐	☐	☐		☐	☐	☐
10.		☐	☐	☐		☐	☐	☐
11.		☐	☐	☐		☐	☐	☐
12.		☐	☐	☐		☐	☐	☐
13.		☐	☐	☐		☐	☐	☐
14.		☐	☐	☐		☐	☐	☐
15.		☐	☐	☐		☐	☐	☐

SECTION 2 – Asset Ownership Module

2.01. Floor type (<i>observe</i>): 1. Dirt ☐ 2. Bamboo/wood (except for teak) 3. Other natural material 4. Cement 5. Tile, stones, bricks or other hard material 2.02. Roof type (<i>observe</i>): 1. Thatch/large leaves/palm ☐ 2. Bamboo/wood (except for teak) 3. Other natural material 4. Metal (corrugated) 5. Tile/ceramic/cement or other hard material (include teak) 2.03. How many square meters is the home (<i>do not include kitchen and bathroom</i>): <table style="width: 100%;"> <tr> <td>1. Less than 25 m²</td> <td>5. 151 - 200 m²</td> <td style="text-align: right;">☐</td> </tr> <tr> <td>2. 25 - 50 m²</td> <td>6. 201 - 300 m²</td> <td></td> </tr> <tr> <td>3. 51 - 100 m²</td> <td>7. More than 300 m²</td> <td></td> </tr> <tr> <td>4. 101 - 150 m²</td> <td></td> <td></td> </tr> </table> 2.04. Ownership status of the house: 1. Owned ☐ 2. Rent 3. Free rent 2.05. Main source of lighting: <table style="width: 100%;"> <tr> <td>1. Electricity (PLN)</td> <td>5. Kerosene lantern, oil lamp, candle</td> <td rowspan="4" style="text-align: right; vertical-align: middle;">☐</td> </tr> <tr> <td>2. Electricity (non-PLN)</td> <td>6. Torch (battery powered)</td> </tr> <tr> <td>3. Generator</td> <td>7. Firewood</td> </tr> <tr> <td>4. Solar panel</td> <td></td> </tr> </table> 2.06. Main source of cooking: <table style="width: 100%;"> <tr> <td>1. LPG (Gas Cylinder 3 kg)</td> <td>4. Kerosene</td> <td rowspan="3" style="text-align: right; vertical-align: middle;">☐</td> </tr> <tr> <td>2. LPG (Gas Cylinder 12 kg)</td> <td>5. Firewood</td> </tr> <tr> <td>3. Electricity</td> <td>6. Charcoal</td> </tr> </table> 2.07. Toilet type: <table style="width: 100%;"> <tr> <td>1. Toilet connected to septic-tank</td> <td>5. Bucket</td> <td rowspan="5" style="text-align: right; vertical-align: middle;">☐</td> </tr> <tr> <td>2. Toilet no septic-tank</td> <td>6. Hanging toilet</td> </tr> <tr> <td>3. Pit latrine with slab</td> <td>7. Shared facility</td> </tr> <tr> <td>4. Pit latrine no slab (open pit)</td> <td>8. No facilities (river, bush, beach)</td> </tr> <tr> <td></td> <td></td> </tr> </table>	1. Less than 25 m ²	5. 151 - 200 m ²	☐	2. 25 - 50 m ²	6. 201 - 300 m ²		3. 51 - 100 m ²	7. More than 300 m ²		4. 101 - 150 m ²			1. Electricity (PLN)	5. Kerosene lantern, oil lamp, candle	☐	2. Electricity (non-PLN)	6. Torch (battery powered)	3. Generator	7. Firewood	4. Solar panel		1. LPG (Gas Cylinder 3 kg)	4. Kerosene	☐	2. LPG (Gas Cylinder 12 kg)	5. Firewood	3. Electricity	6. Charcoal	1. Toilet connected to septic-tank	5. Bucket	☐	2. Toilet no septic-tank	6. Hanging toilet	3. Pit latrine with slab	7. Shared facility	4. Pit latrine no slab (open pit)	8. No facilities (river, bush, beach)			2.08. Do you own any of the following assets? <table style="width: 100%; border-top: 1px solid black; border-bottom: 1px solid black;"> <thead> <tr> <th style="text-align: left;">Asset type</th> <th style="text-align: right;">1. Yes 2. No</th> </tr> </thead> <tbody> <tr><td>a. Car</td><td style="text-align: right;">☐</td></tr> <tr><td>b. Motor bike</td><td style="text-align: right;">☐</td></tr> <tr><td>c. Bicycle</td><td style="text-align: right;">☐</td></tr> <tr><td>d. Refrigerator</td><td style="text-align: right;">☐</td></tr> <tr><td>e. Smartphone (Handphone with data/internet)</td><td style="text-align: right;">☐</td></tr> <tr><td>f. Handphone (no data/ internet)</td><td style="text-align: right;">☐</td></tr> <tr><td>g. Television</td><td style="text-align: right;">☐</td></tr> <tr><td>h. Sewing machine</td><td style="text-align: right;">☐</td></tr> <tr><td>i. Tractor</td><td style="text-align: right;">☐</td></tr> <tr><td>j. Hand-tractor (Two wheels tractor)</td><td style="text-align: right;">☐</td></tr> <tr><td>k. Plough</td><td style="text-align: right;">☐</td></tr> <tr><td>l. Irrigation pump</td><td style="text-align: right;">☐</td></tr> <tr><td>m. Small rice milling machine</td><td style="text-align: right;">☐</td></tr> <tr><td>n. Fishing pole, nets or trap</td><td style="text-align: right;">☐</td></tr> <tr><td>o. Motor boat</td><td style="text-align: right;">☐</td></tr> <tr><td>p. Boat (without motor)</td><td style="text-align: right;">☐</td></tr> <tr><td>q. Aquaculture pond</td><td style="text-align: right;">☐</td></tr> <tr><td>r. None of above</td><td style="text-align: right;">☐</td></tr> </tbody> </table> 2.09. Do you own livestock? 1. Yes ☐ 2. No (<i>Skip to section 3</i>) 2.10. How many livestock do you have? <i>*Do not include pets</i> <table style="width: 100%;"> <tr> <td>a. Cattle</td> <td style="text-align: center;">_ _ _ _</td> <td>b. Buffalo</td> <td style="text-align: center;">_ _ _ _</td> </tr> <tr> <td>c. Horse</td> <td style="text-align: center;">_ _ _ _</td> <td>d. Goat/Sheep</td> <td style="text-align: center;">_ _ _ _</td> </tr> <tr> <td>e. Pig</td> <td style="text-align: center;">_ _ _ _</td> <td>f. Dog</td> <td style="text-align: center;">_ _ _ _</td> </tr> <tr> <td>g. Chicken</td> <td style="text-align: center;">_ _ _ _</td> <td>h. Duck</td> <td style="text-align: center;">_ _ _ _</td> </tr> </table>	Asset type	1. Yes 2. No	a. Car	☐	b. Motor bike	☐	c. Bicycle	☐	d. Refrigerator	☐	e. Smartphone (Handphone with data/internet)	☐	f. Handphone (no data/ internet)	☐	g. Television	☐	h. Sewing machine	☐	i. Tractor	☐	j. Hand-tractor (Two wheels tractor)	☐	k. Plough	☐	l. Irrigation pump	☐	m. Small rice milling machine	☐	n. Fishing pole, nets or trap	☐	o. Motor boat	☐	p. Boat (without motor)	☐	q. Aquaculture pond	☐	r. None of above	☐	a. Cattle	_ _ _ _	b. Buffalo	_ _ _ _	c. Horse	_ _ _ _	d. Goat/Sheep	_ _ _ _	e. Pig	_ _ _ _	f. Dog	_ _ _ _	g. Chicken	_ _ _ _	h. Duck	_ _ _ _
1. Less than 25 m ²	5. 151 - 200 m ²	☐																																																																																												
2. 25 - 50 m ²	6. 201 - 300 m ²																																																																																													
3. 51 - 100 m ²	7. More than 300 m ²																																																																																													
4. 101 - 150 m ²																																																																																														
1. Electricity (PLN)	5. Kerosene lantern, oil lamp, candle	☐																																																																																												
2. Electricity (non-PLN)	6. Torch (battery powered)																																																																																													
3. Generator	7. Firewood																																																																																													
4. Solar panel																																																																																														
1. LPG (Gas Cylinder 3 kg)	4. Kerosene	☐																																																																																												
2. LPG (Gas Cylinder 12 kg)	5. Firewood																																																																																													
3. Electricity	6. Charcoal																																																																																													
1. Toilet connected to septic-tank	5. Bucket	☐																																																																																												
2. Toilet no septic-tank	6. Hanging toilet																																																																																													
3. Pit latrine with slab	7. Shared facility																																																																																													
4. Pit latrine no slab (open pit)	8. No facilities (river, bush, beach)																																																																																													
Asset type	1. Yes 2. No																																																																																													
a. Car	☐																																																																																													
b. Motor bike	☐																																																																																													
c. Bicycle	☐																																																																																													
d. Refrigerator	☐																																																																																													
e. Smartphone (Handphone with data/internet)	☐																																																																																													
f. Handphone (no data/ internet)	☐																																																																																													
g. Television	☐																																																																																													
h. Sewing machine	☐																																																																																													
i. Tractor	☐																																																																																													
j. Hand-tractor (Two wheels tractor)	☐																																																																																													
k. Plough	☐																																																																																													
l. Irrigation pump	☐																																																																																													
m. Small rice milling machine	☐																																																																																													
n. Fishing pole, nets or trap	☐																																																																																													
o. Motor boat	☐																																																																																													
p. Boat (without motor)	☐																																																																																													
q. Aquaculture pond	☐																																																																																													
r. None of above	☐																																																																																													
a. Cattle	_ _ _ _	b. Buffalo	_ _ _ _																																																																																											
c. Horse	_ _ _ _	d. Goat/Sheep	_ _ _ _																																																																																											
e. Pig	_ _ _ _	f. Dog	_ _ _ _																																																																																											
g. Chicken	_ _ _ _	h. Duck	_ _ _ _																																																																																											

SECTION 3 – Water Source And Sanitation

3.01. Has your main drinking source changed because of the drought? <i>*This may refer to the past if the rains have started</i> 1. Yes 2. No <i>(Skip to 3.03)</i>	
3.02. Has the source of drinking water returned to normal? 1. Yes 2. No	3.06. Is the normal (normal season) drinking water source below ground AND more than 10 meters away from the septic tank? 1. Yes 2. No, the drinking water source is below ground 3. No, the water source less than 10 meter away 4. There is no septic-tank 5. Do not know
3.03. What is your current (drought season) main drinking water source? <i>*if still in drought season, this is the current water source</i> 01. Piped water (PDAM) 02. Public tap 03. Tubewell/borehole 04. Protected spring 05. Rain water collection 06. Unprotected well 07. Unprotected spring 08. Water tank / Drum 09. Water tanker truck 10. Bottled water 11. Stream, river, lake, etc. 12. Other, specify _____	3.07. Is your current (drought season) drinking water source farther away from your normal drinking water source? 1. Yes 2. No 3.08. How much do you CURRENTLY spend on drinking water during the drought? (Rupiah/month)? Rp. _____ / month
3.04. Is the current (drought season) drinking water source below ground AND more than 10 meters away from the septic tank? 1. Yes 4. There is no septic-tank 2. No, the water source above the ground 5. Do not know 3. No, the water source less than 10 meter away	3.09. Is that more, less or same as usual? 1. More than usual 2. Same as usual 3. Less than usual
3.05. What is your normal drinking water source? <i>*Normal situation</i> 01. Piped water (PDAM) 02. Public tap 03. Tubewell/borehole 04. Protected spring 05. Rain water collection 06. Unprotected well 07. Unprotected spring 08. Water tank / Drum 09. Water tanker truck 10. Bottled water 11. Stream, river, lake, etc. 12. Other, specify _____	3.10. Have you noticed members of the household having diarrhea or vomiting more with the current (drought season) water source? 1. Yes, much more than usual 2. Yes, little more than usual 3. No, there is no change from usual 4. No, there is less diarrheal or vomiting than usual 5. There is no household member having diarrhea/vomiting <i>(skip to 3.12)</i>

SECTION 3 – Water Source And Sanitation

3.11. Which household member had diarrhea/vomiting?

Name of household member	HH member ID (see section 1)
1. _____	☐
2. _____	☐
3. _____	☐
4. _____	☐
5. _____	☐
6. _____	☐
7. _____	☐

3.12. In the past two weeks, have any children in the household had diarrhea?

1. Yes
2. No
3. Don't know

☐

3.13. Which children member had diarrhea/vomiting

Name of the child	HH member ID (see section 1)
1. _____	☐
2. _____	☐
3. _____	☐
4. _____	☐
5. _____	☐
6. _____	☐
7. _____	☐

SECTION 4 – Income Module

4.01. What is your main source of income?

- | | | |
|--|--|---|
| 01. Food crops agriculture
02. Cash crops agriculture (Wood/Palm oil/Rubber/Coffee/Cocoa/etc.)
03. Raising/sell livestock/animal products
04. Fishery/Fisherman
05. Salt production
06. Agriculture labor | 07. Non-ag. Labor (construction, factory worker, etc.)
08. Skilled worker (Carpenter, masonry, etc.)
09. Transportation (driver/ ojek/ becak (three wheel bike)
10. Handcraft/artisan
11. Petty trade
12. Trader/seller | 13. Remittance
14. Salaried employee (private sector)
15. Government officer
16. Mining
17. Pensioner
18. Other, specify _____ |
|--|--|---|

4.02. Has the drought affected the main income activity?

- | | |
|---|--|
| 1. Yes, reduce more than 30%
2. Yes, reduce between 10-30%
3. Yes, reduce up to 10% | 4. Yes, it increase (Skip to 4.04)
5. No, there is no change (Skip to 4.04) |
|---|--|

4.03a. What did you do in response the change of main income?

Response	1. Yes 2. No
1. Rely on second income	
2. Engage in new income activity	
3. Sent member away to work	
4. Spent savings or sold assets	
5. Reduce expenses (for non-food expenditure)	
6. Reduce food expenditure (for food expenditure)	
7. Other, specify: _____	

4.03b. From your responses in 4.03a, which are the main response?

SECTION 4 – Income Module

4.04. What is your second income activity?

**Daily-bases labor in agriculture field are included as agricultural labor (but they are not qualified as farmers to respond Module 5)*

- | | | |
|--|--|--|
| 01. Food crops agriculture
02. Cash crops agriculture (Wood/Palm oil/Rubber/Coffee/Cocoa/etc.)
03. Raising/sell livestock/animal products
04. Fishery/Fisherman
05. Salt production
06. Agriculture labor | 07. Non-ag. Labor (construction, factory worker, etc.)
08. Skilled worker (Carpenter, masonry, etc.)
09. Transportation (driver/ ojek/ becak (three wheel bike)
10. Handcraft/artisan
11. Petty trade
12. Trader/seller | 13. Remittance
14. Salaried employee (private sector)
15. Government officer
16. Mining
17. Pensioner
18. Other, specify _____
19. No second income activity (Skip to section 5) |
|--|--|--|

4.05. Has the drought affected the second income activity?

- | | |
|---|--|
| 1. Yes, reduce more than 30%
2. Yes, reduce between 10-30%
3. Yes, reduce up to 10% | 4. Yes, it increase (Skip to section 5)
5. No, there is no change (Skip to section 5) |
|---|--|

4.06a. What did you do in response the change of second income?

Response	1. Yes 2. No
1. Rely on first income	
2. Engage in new income activity	
3. Sent member away to work	
4. Spent savings or sold assets	
5. Reduce expenses (for non-food expenditure)	
6. Reduce food expenditure (for food expenditure)	
7. Other, specify: _____	

4.06b. From your responses in 4.06a, which are the main response?

SECTION 5 – Agriculture Module

5.01. Is this household engaging in agriculture? **this should refer to farming activities specifically – households who are performing occasional daily labor on a farm but not making decisions in planting, irrigation and harvesting should not respond to this Module*

1. Yes

2. No **Check response in 4.01 or 4.04 (skip to section 5B)*

☐

5.02. What is your main crop?

01. Rice

06. Beans (except peanut)

11. Onion

16. Other crops (sago/wheat)

20. Rubber

02. Maize

07. Peanut

12. Mushroom

17. Tobacco

21. Coconut

03. Cassava

08. Cashew

13. Water Spinach

18. Coffee

22. Spices (nutmeg/ clove)

04. Yam

09. Tomato

14. Other vegetables

19. Cocoa

23. Other, specify: _____

05. Potato

10. Chilli

15. Fruits

☐

5.03. Has drought affected the main crop?

1. Yes, harvest reduce (50% or more plant damaged)

3. Yes, harvest reduce 10-25%

5. No, harvest didn't change

2. Yes, harvest reduce 26-50%

4. Yes, harvest reduce less than 10%

☐

5.04. What is your second crop?

01. Rice

06. Beans (except peanut)

11. Onion

16. Other crops (sago/wheat)

21. Coconut

02. Maize

07. Peanut

12. Mushroom

17. Tobacco

22. Spices (nutmeg/ clove)

03. Cassava

08. Cashew

13. Water spinach

18. Coffee

23. Other, specify: _____

04. Yam

09. Tomato

14. Other vegetables

19. Cocoa

24. There is no second crop (skip to 5.06)

05. Potato

10. Chilli

15. Fruits

20. Rubber

☐

5.05. Has drought affected the second crop?

1. Yes, harvest reduce (50% or more plant damaged)

3. Yes, harvest reduce 10-25%

5. No, harvest didn't change

2. Yes, harvest reduce 26-50%

4. Yes, harvest reduce less than 10%

☐

5.06. What is your current crop?

01. Rice

06. Beans (except peanut)

11. Onion

16. Other crops (sago/wheat)

21. Coconut

02. Maize

07. Peanut

12. Mushroom

17. Tobacco

22. Spices (nutmeg/ clove)

03. Cassava

08. Cashew

13. Water spinach

18. Coffee

23. Other, specify: _____

04. Yam

09. Tomato

14. Other vegetables

19. Cocoa

24. Currently no plant (skip to 5.06)

05. Potato

10. Chilli

15. Fruits

20. Rubber

☐

5.07. Did you plant your current crop in the same period as usual?

1. Yes

2. No, It was planted earlier

3. No, it was planted late

☐

SECTION 5 – Agriculture Module

5.08. In the past 3 months, due to lack of water, did you do any of the following?

Activity	1. Yes	2. No	
1. Plant different crops	☐	☐	→ If Yes, ask 5.09a, 5.09b, 5.09c
2. Plant different variety	☐	☐	→ If Yes, ask 5.10
3. Delayed planting	☐	☐	→ If Yes, ask 5.11
4. Did not plant at all	☐	☐	→ If Yes, ask 5.12
5. None of above	☐	☐	→ If Yes, skip to 5.13

5.09a. What is the normal crop that was not planted?

01. Rice	06. Beans (except peanut)	11. Onion	16. Other food crops (sago/wheat)	20. Rubber	
02. Maize	07. Peanut	12. Mushroom	17. Tobacco	21. Coconut	☐
03. Cassava	08. Cashew	13. Water spinach	18. Coffee	22. Spices (nutmeg/ clove)	
04. Yam	09. Tomato	14. Other vegetables	19. Cocoa	23. Other, Specify: _____	
05. Potato	10. Chilli				

5.09b. Which crops did you plant instead? 1. Yes 2. No

01. Rice	☐	09. Tomato	☐	17. Tobacco	☐
02. Maize	☐	10. Chilli	☐	18. Coffee	☐
03. Cassava	☐	11. Onion	☐	19. Cocoa	☐
04. Yam	☐	12. Mushroom	☐	20. Rubber	☐
05. Potato	☐	13. Water spinach	☐	21. Coconut	☐
06. Beans (except peanut)	☐	14. Other vegetables	☐	22. Spices (nutmeg/ clove)	☐
07. Peanut	☐	15. Fruits	☐	23. Other, Specify: _____	☐
08. Cashew	☐	16. Other food crops (sago/wheat)	☐		

5.09c. Which is the main replacement crop?

☐

5.10. Which crop did you plant a different variety of?

01. Rice	06. Beans (except peanut)	11. Onion	16. Other food crops (sago/wheat)	20. Rubber	
02. Maize	07. Peanut	12. Mushroom	17. Tobacco	21. Coconut	☐
03. Cassava	08. Cashew	13. Water spinach	18. Coffee	22. Spices (nutmeg/ clove)	
04. Yam	09. Tomato	14. Other vegetables	19. Cocoa	23. Other, specify: _____	
05. Potato	10. Chilli	15. Fruits			

5.11. Which crop did you delay planting?

01. Rice	06. Beans (except peanut)	11. Onion	16. Other food crops (sago/wheat)	20. Rubber	
02. Maize	07. Peanut	12. Mushroom	17. Tobacco	21. Coconut	☐
03. Cassava	08. Cashew	13. Water spinach	18. Coffee	22. Spices (nutmeg/ clove)	
04. Yam	09. Tomato	14. Other vegetables	19. Cocoa	23. Other, specify: _____	
05. Potato	10. Chili	15. Fruits			

5.12. Which crop did you not plant at all?

01. Rice	06. Beans (except peanut)	11. Onion	16. Other food crops (sago/wheat)	20. Rubber	
02. Maize	07. Peanut	12. Mushroom	17. Tobacco	21. Coconut	☐
03. Cassava	08. Cashew	13. Water spinach	18. Coffee	22. Spices (nutmeg/ clove)	
04. Yam	09. Tomato	14. Other vegetables		23. Other, specify: _____	

SECTION 5 – Agriculture Module

5.13. Land ownership 1. Owned ☐ 2. Rent (include profit sharing) 3. Neither owned/rent		
5.14. How many square meter is your land? m ²		
5.15. Do you irrigate your land? 1. Yes ☐ 2. No (Skip to section 5B)		
5.16. Has your irrigation source change because of the drought? 1. Yes ☐ 2. No (Skip to 5.18)		
5.17. Has your irrigation source returned to normal? 1. Yes ☐ 2. No		
5.18. What is your current (drought season) water source for irrigation? 1. River / Lake 4. Natural spring 7. Deep well (More than 20 meter deep) 2. Dam 5. Run water (include rain water) 8. Government-run water canal 3. Reservoir 6. Shallow well (Not more than 20 meter deep) 9. Other, specify: _____		
5.19. How often is the land currently (during the drought) irrigated 1. Every day 4. Once a week 6. Once every 2 weeks 2. 4 – 6 times a week 5. Less than once a week 7. Between 1 – 2 times a month 3. 2 – 3 times a week (more than once every 2 weeks) 8. Other, specify: _____		
5.20. What is your normal (normal season) water source for irrigation? 1. River / Lake 4. Natural spring 7. Deep well (More than 20 meter deep) 2. Dam 5. Run water (include rain water) 8. Government-run water canal 3. Reservoir 6. Shallow well (Not more than 20 meter deep) 9. Other, specify: _____		
5.21. How often is the land normally (normal season) irrigated 1. Every day 4. Once a week 6. Once every 2 weeks 2. 4 – 6 times a week 5. Less than once a week 7. Between 1 – 2 times a month 3. 2 – 3 times a week (more than once every 2 weeks) 8. Other, specify: _____		
5.22. How much did you spend in the last month on irrigation? (Rupiah/month) Rp. / month		
5.23. Is that more, less or same as usual? 1. More than usual ☐ 2. Same as usual 3. Less than usual		

SECTION 5B – Migration Module

5B.01.	Did any members of the household migrate away in the past three months? <i>*This refers to a household member who used to live and eat here on a daily basis but is now living elsewhere 7 days a week</i>	<input style="width: 30px; height: 20px;" type="checkbox"/>																
	1. Yes 2. No <i>(Skip to section 6)</i>																	
5B.02.	Was this migration a normal activity (i.e. do they normally go away for work)?	<input style="width: 30px; height: 20px;" type="checkbox"/>																
	1. Yes 2. No																	
5B.03.	Did they migrate away due to lack of income relating to drought?	<input style="width: 30px; height: 20px;" type="checkbox"/>																
	1. Yes 2. No																	
5B.04.	Where did they migrate?	<input style="width: 30px; height: 20px;" type="checkbox"/>																
	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">1. To the district capital</td> <td style="width: 33%;">4. To another city in Indonesia</td> <td style="width: 33%;">7. Abroad (inside SE Asia)</td> </tr> <tr> <td>2. To the provincial capita</td> <td>5. To a rural area in Indonesia</td> <td>8. To a Gulf state</td> </tr> <tr> <td>3. To Jakarta</td> <td>6. To Malaysia</td> <td>9. Abroad (other)</td> </tr> </table>	1. To the district capital	4. To another city in Indonesia	7. Abroad (inside SE Asia)	2. To the provincial capita	5. To a rural area in Indonesia	8. To a Gulf state	3. To Jakarta	6. To Malaysia	9. Abroad (other)								
1. To the district capital	4. To another city in Indonesia	7. Abroad (inside SE Asia)																
2. To the provincial capita	5. To a rural area in Indonesia	8. To a Gulf state																
3. To Jakarta	6. To Malaysia	9. Abroad (other)																
5B.05.	Has the household income reduced/ stayed the same / increased due to this migration away?	<input style="width: 30px; height: 20px;" type="checkbox"/>																
	1. Reduced 2. Stayed the same 3. Increased																	
5B.06.	Which members of the household migrated away?																	
	<table style="width: 100%; border: none;"> <tr> <td style="width: 5%;"></td> <td style="border-bottom: 1px solid black; text-align: center;">Name of household member</td> </tr> <tr><td>1.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>2.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>3.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>4.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>5.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>6.</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td>7.</td><td style="border-bottom: 1px solid black;"></td></tr> </table>			Name of household member	1.		2.		3.		4.		5.		6.		7.	
	Name of household member																	
1.																		
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		

SECTION 6 – Consumption Module

6.01. For each of the following food groups, how many days in the past seven days was the food group consumed?

a. Rice, maize, noodles, cassava, taro, yam, sweet potato, sago, potato cassava root (processed), plantain, other tubers	days
b. Beans, tofu, tempe, pigeon pea, other pulses	days
c. Milk , yogurt, cheese, other dairy (Exclude margarine/butter or small amounts of milk for tea / coffee)	days
d. Beef, goat, poultry, pork, eggs and fish	days
d1. Flesh meat: beef, pork, lamb, goat, chicken, duck, other birds, insects	days
d2. Liver, kidney, heart and / or other organ meats	days
d3. Fresh fish, canned fish, shrimp, squid, dried fish, crab, other shellfish	days
d4. Eggs	days
e. All vegetables and leaves	days
e1. Orange vegetables (vegetables rich in Vitamin A) carrot, red pepper, pumpkin, orange sweet potatoes	days
e2. Dark green leafy vegetables Spinach, water spinach, broccoli, cassava leaves, or other dark green leaves including Daun Katuk, daun pepaya, daun turi, saw, etc.)	days
f. All fruits	days
f1. Orange fruits (Fruits rich in Vitamin A) mango, papaya	days
g. Sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweet (sugary drinks)	days
h. Coconut oil, olive oil, other oil (margarine, etc.)	days

6.02. Has the price of rice changed in the last month?

1. *Reduced*
2. *Stayed the same*
3. *Increased*
4. *Do not know*

6.03. For each of the following food groups, how many days in the past seven days was the food group consumed?

a. Rice, maize, noodles, cassava, taro, yam, sweet potato, sago, potato cassava root (processed), plantain, other tubers	days
b. Beans, tofu, tempe, pigeon pea, other pulses	days
c. Milk , yogurt, cheese, other dairy (Exclude margarine/butter or small amounts of milk for tea / coffee)	days
d. Beef, goat, poultry, pork, eggs and fish	days
d1. Flesh meat: beef, pork, lamb, goat, chicken, duck, other birds, insects	days
d2. Liver, kidney, heart and / or other organ meats	days
d3. Fresh fish, canned fish, shrimp, squid, dried fish, crab, other shellfish	days
d4. Eggs	days
e. All vegetables and leaves	days
e1. Orange vegetables (vegetables rich in Vitamin A) carrot, red pepper, pumpkin, orange sweet potatoes	days
e2. Dark green leafy vegetables Spinach, water spinach, broccoli, cassava leaves, or other dark green leaves including Daun Katuk, daun pepaya, daun turi, saw, etc.)	days
f. All fruits	days
f1. Orange fruits (Fruits rich in Vitamin A) mango, papaya	days
g. Sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweet (sugary drinks)	days
h. Coconut oil, olive oil, other oil (margarine, etc.)	days

6.04. Has the price of rice changed in the last month?

1. *Reduced*
2. *Stayed the same*
3. *Increased*
4. *Do not know*

SECTION 7 – Coping and Responses Module

7.01. During the past 30 days, did anyone in your household have to engage in any following behaviours due to a lack of food or a lack of money to buy food?

Please answer with:

1. Yes
2. No, because I did not face a shortage of food or money to buy food
3. No, because I already sold those assets or have engaged in this activity within the last 12 months and cannot continue to do it
4. Not applicable

a. Sold more animals (non-productive) than usual	☐	
b. Sold household assets/goods (radio, furniture, refrigerator, television, jewellery etc.)	☐	
c. Reduced non-food expenses on health (including drugs) and education	☐	
d. Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)	☐	
e. Spent savings	☐	
f. Purchased food on credit or borrowed food	☐	
g. Sold house or land	☐	
h. Withdrew children from school	☐	
i. Sold last female animals	☐	
j. Begged	☐	
a. Sold more animals (non-productive) than usual		☐
b. Sold household assets/goods (radio, furniture, refrigerator, television, jewellery etc.)		☐
c. Reduced non-food expenses on health (including drugs) and education		☐
d. Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)		☐
e. Spent savings		☐
f. Purchased food on credit or borrowed food		☐
g. Sold house or land		☐
h. Withdrew children from school		☐

i. Sold last female animals	
j. Begged	

7.02. During the last 7 days, were there days (and, if so, how many) when your household had to employ one of the following strategies to cope with a lack of food or money to buy it?

a. Rely on less preferred food, less expensive food	days
b. Borrowed food or relied on help from friends / relatives	days
c. Reduced the number of meals per day	days
d. Reduced portion size of meals	days
e. Restrict consumption by adults in order for small children to eat	days
a. Rely on less preferred food, less expensive food	days
b. Borrowed food or relied on help from friends / relatives	days
c. Reduced the number of meals per day	days
d. Reduced portion size of meals	days
e. Restrict consumption by adults in order for small children to eat	days

SECTION 8 – Assistance Module

8.01. Did you receive Raskin in the last 30 days? 1. Yes 2. No 3. Never	
8.02. Due to drought, have you receive any assistance (included additional assistance) from government, NGOs, or community members? 1. Yes 2. No (Skip to Module 9)	
8.03. Who provided the assistance? 1. Government 2. International NGO 3. Local NGO 4. Mosque, Church. 5. Local community member 6. Other, specify _____	
8.04. What kind of assistance? 1. Food (example: Raskin, dll.) 2. Drinking, cooking water (clean water). 3. Cash 4. Crops, irrigation water, hand tractor, other agriculture assistance 5. Other, specify _____	

SECTION 9 – Follow Up Survey

9.01. Are you willing to participate in a follow up survey by phone? <i>*Note that the follow up will take less time, be scheduled based on their availability and will be rewarded with pulsa</i> 1. Yes 2. No	
9.02. Main phone number.	
9.03. Alternative phone number.	
9.04. On what day do you prefer to be called? 1. Monday - Wednesday 2. Friday 3. Saturday 4. Sunday	
9.05. What time of day do you prefer to be called? 1. Morning (7:00 - 12:00) 2. Noon – afternoon (12:00 - 17:00) 3. Afternoon – Night (17:00 - 21:00)	
9.01. Are you willing to participate in a follow up survey by phone? <i>*Note that the follow up will take less time, be scheduled based on their availability and will be rewarded with pulsa</i> 1. Yes 2. No	

9.02. Main phone number.		
9.03. Alternative phone number.		
9.04. On what day do you prefer to be called? 1. <i>Monday - Wednesday</i> 2. <i>Friday</i> 3. <i>Saturday</i> 4. <i>Sunday</i>		
9.05. What time of day do you prefer to be called? 1. <i>Morning (7:00 - 12:00)</i> 2. <i>Noon – afternoon (12:00 - 17:00)</i> 3. <i>Afternoon – Night (17:00 - 21:00)</i>		

---- THANK YOU ----



For more information contact:

World Food Programme
Wisma Keiai, 9th Floor
Jl Jend. Sudirman Kav. 3, Jakarta 10220
Indonesia
T: +62 21 5709004
E: wfp.indonesia@wfp.org
<http://www.wfp.org/countries/indonesia>