

# Food and Nutrition Security Bulletin - Issue 2 (August – October 2009)

## Central Sulawesi Province

Indonesia Food and Nutrition Security Monitoring System (FNSMS)



Jointly produced by:



Central Sulawesi Food Security Office  
Central Food Security Agency  
The United Nations World Food Programme (WFP)  
The United Nations Children's Fund (UNICEF)  
The International Labour Organization (ILO)

## Highlights

- In Central Sulawesi province, the proportion of food insecure and vulnerable household slightly decreased in rural area, while no significant change was observed in urban area (Figure 4). This was likely due to the increased monthly expenditure and decreased share of expenditure on food, as food consumption remained almost unchanged.
- In both areas, food security status was associated with structural factors such as education level of household head, main income source, use of latrine, ownership of assets and type of cooking fuel. No association was found between experienced difficulties and household food security in both areas. This indicates that the food insecurity in Central Sulawesi is not transient but rather chronic.
- Nearly half of households who were engaged in agriculture produced less than one fourth of their annual requirement in 2009 (Annex 2). This indicates that most farmers are heavily dependent on food purchase. As a result, both farmers and non-farmers are dependent on food purchase. They are considered as highly vulnerable to price increases as well as income falls.
- However, existing formal supports were mainly to support short-term needs of the households such as RASKIN and BLT, and interventions for livelihood support such as and income generation had a low level of coverage.

## Recommendations

- The future interventions aiming to improve household food security should focus on structural causes of chronic food insecurity such as: income generation/diversification, agricultural intensification, and increasing ownership of asset.
- Nearly half of the households using wood as a main cooking fuel and those without latrine are found to be food insecure. These criteria will be appropriate targeting criteria for interventions. However, the number of owned household asset was not associated with food security.
- Since food insecure households are dependent on food purchase, monitoring the prices of basic commodities as well as household expenditure patterns is important to provide early warning for the deterioration of household food security.

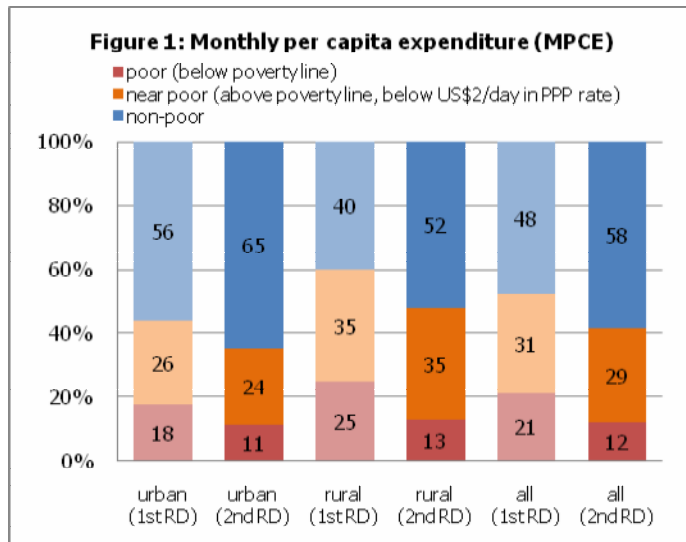
## Methodology

- **Sampling:** 250 households (urban: 125; rural:125) were randomly selected and interviewed using a pre-tested questionnaire. In the 2<sup>nd</sup> round, 248 households (urban: 125; rural: 123) were interviewed.
- **Collected data:** household composition, education, child labour, type of housing, water source, type of cooking fuel, food crops, ownership of land, livestock, assets , cash income sources, joblessness, migration, food access, food consumption (last 7 days), expenditures, difficulties, coping strategies and formal assistance.
- **Food security indicators:** Food access groups were determined by matching the monthly per capita expenditure (MPCE) groups (poor, near-poor, non-poor) with monthly food expenditure groups (poor, average, good), Data on food eaten by household members in the last 7 days were used to define a food consumption score (FCS), a proxy of current household food security. The calculation and the rationale for the thresholds are presented in Annex 1. A composite food security groups were determined by matching the food consumption groups with and food access groups. This resulted in three final categories namely food insecure, vulnerable and food secure.
- **Data entry and analyses:** ANOVA and Chi-square tests were used to assess differences in household food security. For all analyses, a probability value of 0.05 was accepted as significant. SPSS 16.0 was used.

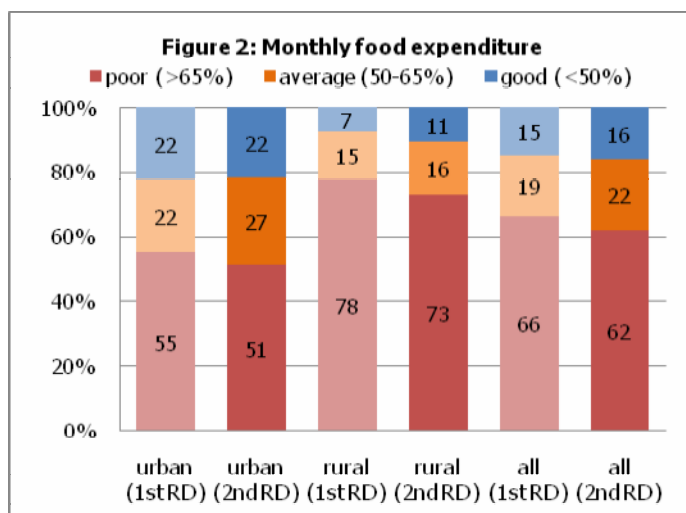
All details of the methodology are presented in Annex 1.

## How many are food insecure and where are they?

**Food Access:** Overall, based on the monthly expenditure per capita, the proportion of the household who spent less than provincial poverty line was reduced in both areas during the 2<sup>nd</sup> round (from 25% to 13% in rural, from 18% to 11% in urban). In the 2<sup>nd</sup> round, more than half of them are considered to be in the non-poor group. This might be related to increased financial contribution to social events during the national holiday season.



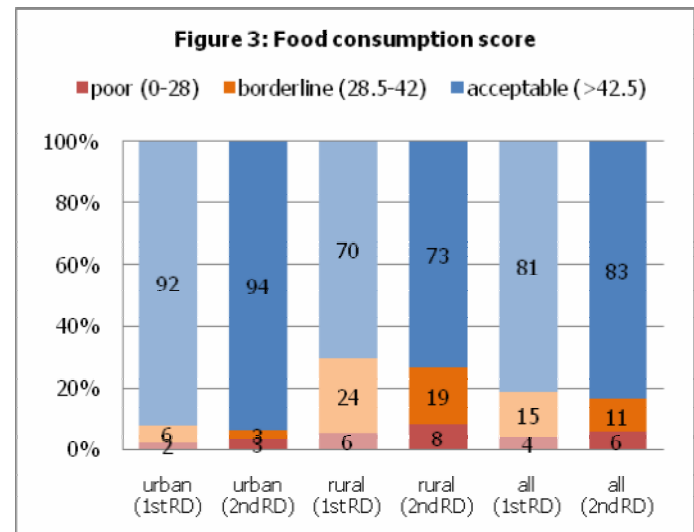
In rural area, less household were classified as poor share of expenditure on food (>65% of total expenditure) but the proportion is very high (70% of all households). The proportion remained almost unchanged in urban area. Detailed analysis on expenditure showed that households decreased the expenditure on cereals from 31% in the 1<sup>st</sup> round to 19% in 2<sup>nd</sup> round (Figure 2). This is likely due to harvest of cereals.



**Food Consumption:** The results of the food consumption score (FCS) indicate no significant change in the proportion of food insecure households between the 1<sup>st</sup> and 2<sup>nd</sup> rounds (Figure 3). However, the proportion of the households with a poor FCS was increased twice in Banggai Kepulauan district (16% in the 2<sup>nd</sup> round, 8% in

the 1<sup>st</sup> round). None of the households in Morowali district was in the poor group both in the 1<sup>st</sup> and 2<sup>nd</sup> rounds.

Overall, no significant change was observed in the frequency of meal. However, in Buol district, all young children were fed only 2 meals per day, 73% of women of reproductive age received only 2 meals per day, and 45% of other household members received only 2 meals per day over the past 7 days.



Food security is a multi-faceted concept as it is articulated in the definitions (Box 1 and 2). Therefore, a single indicator cannot measure it. Results from multiple indicators should be triangulated to identify the food insecure and vulnerable. In the FNSMS, the level of household food security was also estimated through the cross-tabulations of the monthly per capita expenditure, the share of food expenditure and food consumption score.

### Box 1: Definition of food security (World Food Summit, 1996)

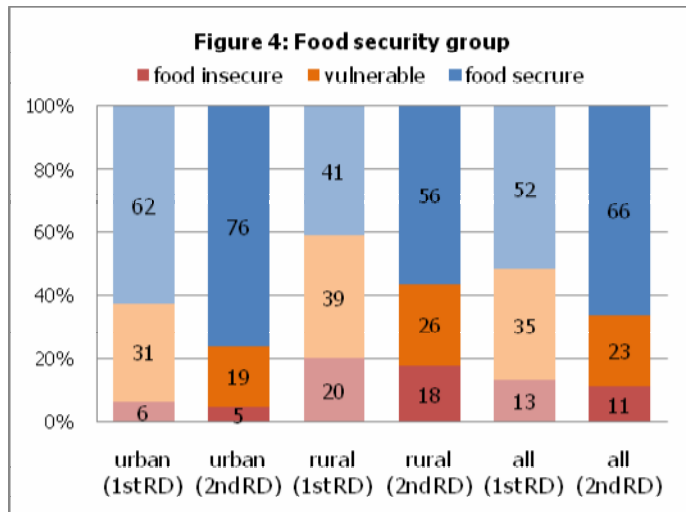
Food security exists when "All people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

### Box 2: Definition of food security (Government of Indonesia, 1996)

Food Security is the fulfilment of food for every household, reflected from the availability of food in sufficient quantity and quality, safe, evenly distributed and accessible by people.

**Composite food security group:** The results of the composite food security group indicate that the proportion of food insecure and vulnerable household slightly decreased in rural area, while no significant change was observed in urban area (Figure 4). This was likely due to the increased monthly expenditure and

decreased share of expenditure on food, as food consumption remained almost unchanged.

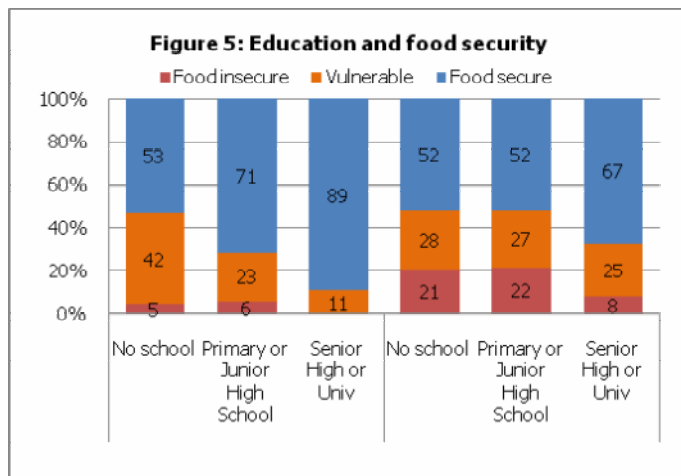


Similar to the 1st monitoring period, Banggai Kepulauan district had the highest percentage of food insecure households (1st round: 25%, 2nd round: 20%), while the lowest percentage was observed in Morowali district (6% in both 2nd and 1st rounds).

### Who are the food insecure?

To identify food insecure households, household food security was investigated according to different characteristics.

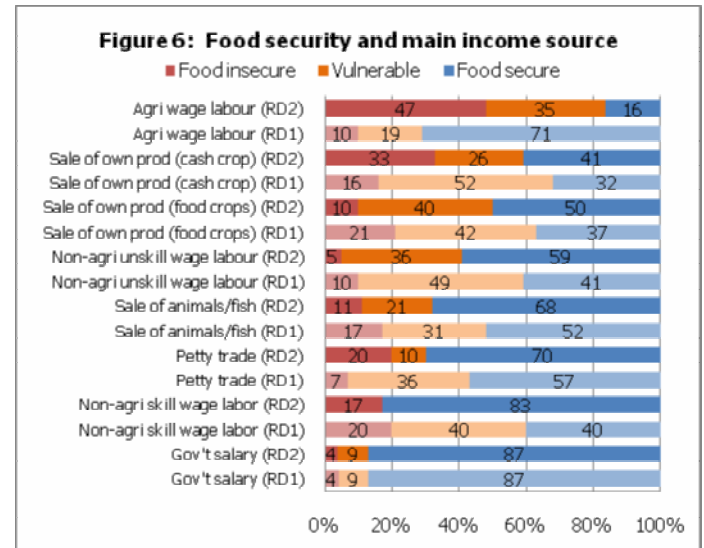
**Education:** Overall, 20% of household heads had never attended school or did not complete primary school. In urban area, the proportion of food insecure households was clearly higher among those households. In rural area, on the other hand, the proportion of food insecure was equally high among those who never attended school or did not complete primary school and completed primary school or junior high school (Figure 5).



Note: The data was not collected in the 1st round.

**Income source:** A higher proportion of food insecure and vulnerable households were found among households depending on sell of own products (cash and food crops). Meanwhile, much less food insecure households were found among those having regular and reliable income source such as self-employment and salary earners. The

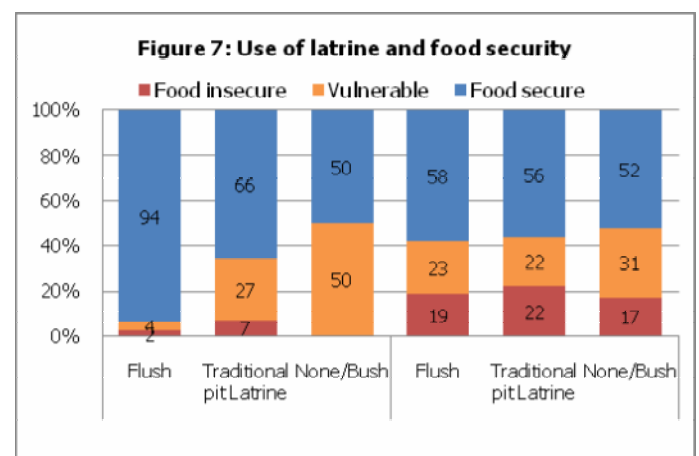
proportion of the food insecure among agricultural wage labour and sale of own production (cash crops) significantly increased in the 2nd round.



Similar to the 1st round, more sale of cash crops and sale of animal/fish were found in Banggai Kepulauan (27%, 24% respectively) and Parigi Mountong (22%, 18%), and more non-agriculture unskilled wage labour and sale cash crops were found in Donggala (30%, 12%) and Buol (22%, 18%) districts.

**Expenditure pattern:** Some differences in expenditure pattern were found between food insecure and secure households. Food insecure households spent a significantly larger share of their expenditure on cereals (27%) than food secure households (19%). Food insecure households tend also to spend more on sugar (6%) than food secure households (2%). Food insecure households spend less on education and health (2%) than the food secure (4%). Both food secure and insecure household spend around 4% of their monthly expenditure on social events.

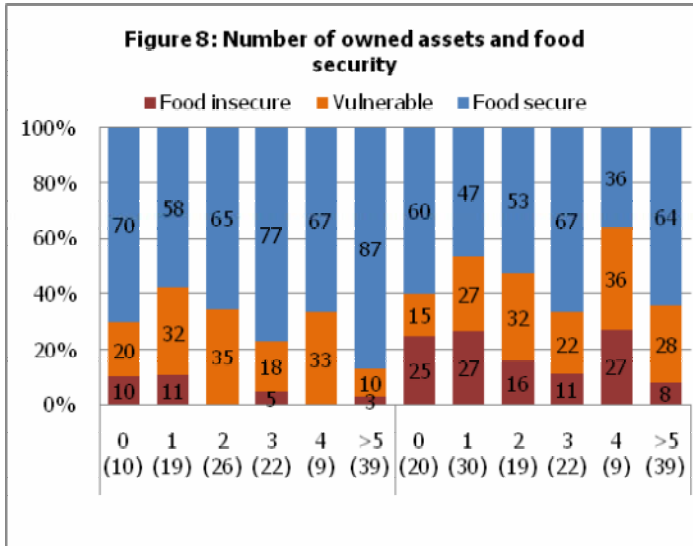
**Use of latrine:** 16% of urban households did not have access to latrine and more vulnerable households were found among them. In rural area, 42% of household did not have access to latrine, but no significant difference in food security status was observed between the households using latrine and not using it (Figure 7).



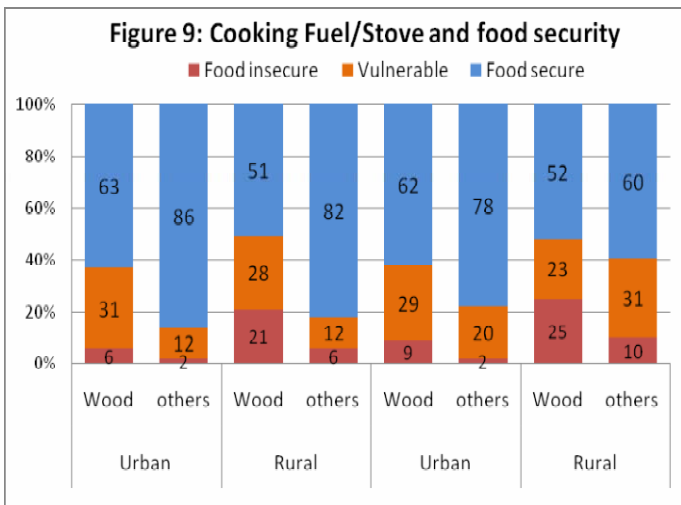
Note: The data was not collected in the 1st round

Assets: Farming machineries are more commonly owned by food insecure households, while a refrigerator and motorbike were predominantly owned by food secure households. No significant change in ownership of assets was observed between the 1<sup>st</sup> and 2<sup>nd</sup> rounds.

Nearly half of rural household owned less than 2 assets and more food secure households were found among them. However, household food security status did not significantly vary by the number of owned assets (Figure 8).



Cooking fuel: More food insecure households were found among those who were using wood as a main cooking fuel (Figure 9). The majority of households (70%) were using wood as cooking fuel, and 42% of households did not have a stove for cooking. No significant change was observed between the 1<sup>st</sup> and 2<sup>nd</sup> Round.



**Crop production:** No association was found between food security status and household crop production. Nearly half of households who were engaged in agriculture produced less than one fourth of their annual requirement in 2009 (Annex 2). This indicates that most farmers are heavily dependent on food purchase.

**Transient or chronic:** In total, 53% of household experienced difficulty to buy foods or to cover other

essential expenditures during the past 30 days. More urban households (58%) experienced than rural households (47%). However, no association was found between experienced difficulties and household food security in both tingaareas. This indicates that the food insecurity in Central Sulawesi is not transient but rather chronic.

In summary, livelihoods and structural factors such as education level of household head, main income source, use of latrine, ownership of assets and type of cooking fuel.

However, it appears that household food security do not vary according to the gender and age of household head, household size, child absenteeism, child labour, water source, production of staple food, unemployment, migration, experienced shocks, and coping strategy index. Food insecure households were found to be dependent on food purchase. They are considered as highly vulnerable to price increases as well as income falls.

Based on the above results, the situation is likely to be chronic, rather than transitory since food insecurity seems to be mostly associated to structural factors.

However, existing formal supports were mainly to support short-term needs of the households such as RASKIN and BLT, and interventions for livelihood support such as and income generation had a low level of coverage.

## How are they coping?

**Experienced difficulties:** The 3 most frequently answered difficulties faced between July-October were related to cash availability and price increase (Annex 2). A few percentage of households mentioned high health cost as difficulty. No significant change from 1<sup>st</sup> round was observed.

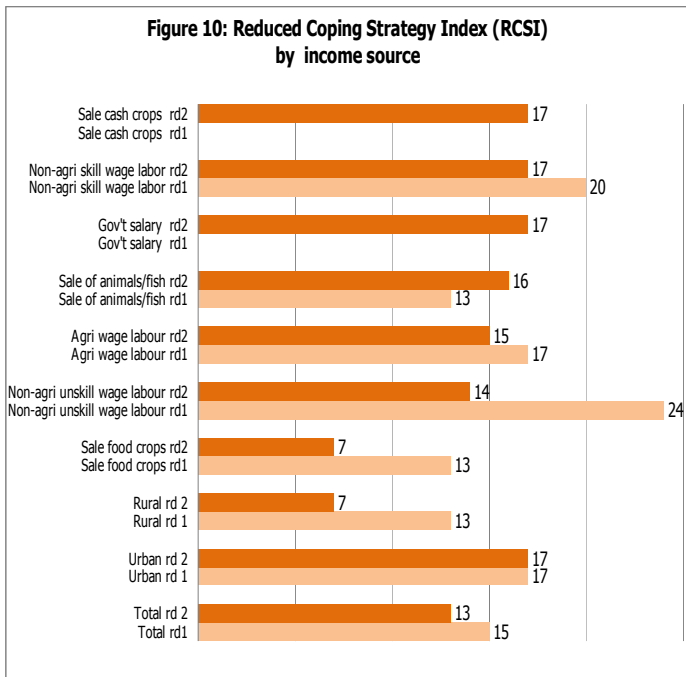
**High commodity prices:** The prices of commodities were investigated. No significant differences were found between urban and rural area in all items, except tofu (higher in rural). It is known that the prices are closely linked with national prices which marked significant increase since early 2007. This explains frequently mentioned high commodity prices as a main difficulty. Moreover, the increased commodity prices deteriorate food accessibility not only in urban areas, but also in rural areas where food insecure households are dependent on market for their foods.

**Coping strategies:** Coping strategies are used by people to make use of their own capacities to offset the threads to their food security. The households mostly adopted long-term livelihood strategies which were at non-depleted level to acquire food rather than short-term strategies such as alternation of consumption patterns.

Commonly adopted coping strategies were seeking alternative or additional jobs (24%), extending working hours (22%), and reduce snack (12%). No significant

difference was observed between urban and rural households. Fewer households seek additional jobs (28% in the 1<sup>st</sup> round) and more extended working hours (11% in the 1<sup>st</sup> round) compared to the 1<sup>st</sup> round. Again, main coping strategies of the households aim to increase the access to cash.

**Who is struggling the most? :** To identify the households who were struggling the most, the Reduced Coping Strategy Index (RCSI) was calculated. The average RCSI was 13 (urban: 17, rural: 7). No significant difference in RCSI among main income source group was observed in the 2<sup>nd</sup> round. Some groups such as sale of cash crops, government employee struggled more than 1<sup>st</sup> round but overall score level remains same.



**Formal assistance:** During May – July 2009, the subsidized rice for the poor program (RASKIN) and unconditional cash transfer program (BLT) were two major assistance programs. There were no or negligible livelihood support programs and nutrition programs in all areas.

Overall, Raskin program assisted 26% of the households (urban: 18%, rural: 43%). No significant change in the percentage of assisted household was observed from the 1<sup>st</sup> round.

As it was observed in the 1<sup>st</sup> round, the program assisted more food insecure and vulnerable households than food secure. However, nearly half of the recipients were food secure.

Only 17% (14% in urban, 20% in rural) of households received BLT program in the 2<sup>nd</sup> monitoring period and the proportion was significantly reduced from the 1<sup>st</sup> period (36% in total, 23% in urban, 50% in rural).

## Is the situation likely to change in the coming months?

Since the main causes of food insecurity in Central Sulawesi are more related to underlying livelihood factors rather than natural shocks, the problem will persist for an extended period of time. Therefore, significant improvement is not expected in short-term. However, human-induced shocks such as commodity price increase and financial crisis will considerably affect the vulnerable and food insecure who are dependent on cash for their food access. Therefore, in addition to the sudden-onset disasters (such as earthquake) the following three factors are considered as risk factors in the coming months.

**Price increase:** Commodity prices, particularly sugar and kerosene, are still upward trend at national level. The price of rice is also volatile from early 2010 due to the delayed planting in main production areas. Since food insecure households spend a large portion of their expenditure for sugar, sudden and significant increase of sugar price may deteriorate their food access.

**BLT:** The unconditional cash transfer program which provided poor households with Rp 700,000 per year will be discontinued. This may affect the food access of the recipients particularly of those who have limited cash income.

## Recommendations

The future interventions aiming to improve household food security should focus on structural causes of chronic food insecurity such as income generation/diversification, agriculture intensification and asset creation.

**Income generation/diversification:** Food insecure and vulnerable households were found more among those who rely on unsustainable, unstable and low income source. Efforts should be made to provide or improve household income, whilst at the same time encouraging diversification into activities with higher and more stable incomes, through introduction of rural financial schemes, undertaking value chain analysis of key crops, training in enterprise development, and market infrastructure development.

**Agriculture intensification:** With 70% of households spending more than 65% of monthly expenditure on food in rural area after harvesting season, it is clear that household productivity is very limited. Efforts to intensify the crop production at household level should be pursued through promoting agricultural extension service, improved seed and so on.

**Asset creation:** Food insecure households tend to have less access to assts for food utilization such as cooking stove and productive assets. Energy efficient stove (smart stove) will be an option for reducing those households' workload to collect woods for fuel, improving the housing condition and reducing the household expenditure and deforestation.

**Targeting food insecure:** A refrigerator and motorbike were predominantly owned by food secure households. Farming machineries are more commonly owned by food insecure households. Nearly half of the households using wood as a main cooking fuel and those without latrine are found to be food insecure. These criteria will be appropriate targeting criteria for interventions.

**Monitoring commodity prices:** Since food insecure households are dependent on market for their foods, monitoring the prices of basic commodities as well as household expenditure patterns is important to provide early warning for the deterioration of household food security.

### Next monitoring period

The 3<sup>rd</sup> monitoring period will be November 2009 – January 2010. The bulletin will be released in March 2010.

## ANNEX 1

### Methodology of Household Food Security Analysis

Household food security in this FNSMS Bulletin is analyzed using methodology which is highlighted in the second edition of Emergency Food Security Assessment (EFSA) Handbook (WFP, January 2009). The analysis is based on the Food and Nutrition Security Conceptual Framework which considers food availability, food access and utilization as core determinants of food security and link these to households' livelihood strategies and assets.

Because the FNSMS aims to assess food security at household level, the analysis is focused on food access (Monthly Per Capita Expenditure, Share of Food Expenditure), food utilization (Food Consumption Score) and coping strategies (Reduced Coping Strategy Index). Other shock-related indicators of transitory food insecurity were also analyzed (experienced difficulties/problems, absenteeism of school age children, child labor, joblessness, in – and out-migration). From the above, the analysis can answer **five key questions** of food security and vulnerability: **How many** households are food insecure? **Where** are the food insecure? **Who** are the food insecure? **Why** are they food insecure? And **How** are they coping?

#### 1. Monthly Per Capita Expenditure (MPCE)

The households are asked about their monthly expenditure (including cash, credit, own production) spent on food and non-food items during the last calendar month before the survey to approximate their income. The monthly per capita expenditure is calculated, and then households are categorized into three groups (poor, near poor, non-poor) based on the latest provincial poverty line (BPS 2008), and the World Bank's threshold for the near-poor at US\$2 PPP (Purchasing Power Parity) which is converted into IDR using the 2008 national PPP exchange rate. The thresholds in IDR are as follows:

- **Poor:** less than IDR 126,746 for rural NTT, 199,006 for urban NTT  
less than IDR 150,968 for rural, IDR 179,261 for urban of West Kalimantan  
less than IDR 155,432 for rural, IDR 183,408 for urban of East Java  
less than IDR 160,527 for rural, IDR 196,229 for urban Central Sulawesi
- **Near poor:** between the above regional poverty line and US2 PPP or IDR 331,846 for all provinces
- **Non-poor:** more than IDR 331,846 for all provinces

#### 2. Share of Food Expenditure

The share of food expenditure of total expenditure is a proxy indicator of household food security. The higher the share of food expenditure, the greater the likelihood that a household has poor food access. The commonly used threshold for the share of food expenditure are used to classify households into poor, average and good food expenditure groups:

- **Poor:** food expenditure is **more than 65%** of total household expenditure
- **Average:** food expenditure is at **50-65%** of total household expenditure
- **Good:** food expenditure is **less than 50%** of total household expenditure

#### 3. Food Consumption Score (FCS)

The FCS is considered as an adequate proxy indicator of current food security because the FCS captures several elements of food access and food utilization (consumption).

Household food consumption is calculated using a proxy indicator - the Food Consumption Score (FCS). FCS is a composite score based on dietary frequency, food frequency and relative nutrition importance of different food groups.

*Dietary diversity* is the number of individual foods or food groups consumed over the past seven days. *Food frequency* is the number of days (in the past 7 days) that a specific food item has been consumed by a household. Household food consumption is the consumption pattern (*frequency \* diversity*) of households over the past seven days.

#### Calculation of FCS and household food consumption groups

1. Using standard 7-day food frequency data, group all the food items into specific food groups.
2. Sum all the consumption frequencies of food items of the same group, and recode the value of each group above 7 as 7.
3. Multiply the value obtained for each food group by its weight and create new weighted food group scores.
4. Sum the weighed food group scores, thus, creating the food consumption score (FCS). The most diversified and best consumption with maximal FCS at 112 means that all food groups are eaten 7 days a week.
5. Using the appropriate thresholds, recode the variable food consumption score, from a continuous variable to a categorical variable, to calculate the percentage of households of poor, borderline and acceptable food consumption.

**Food Items, Food Group and Weight (FNSMS, Indonesia, 2008)**

No	FOOD ITEMS	Food groups	Weight
1	Maize, maize porridge, rice, sorghum, millet pasta, bread and other cereals	Cereals and tuber	2
2	Cassava, potatoes and sweet potatoes		
3	Beans. Peas, groundnuts and cashew nuts	Pulses	3
4	Vegetables and leaves	Vegetables	1
5	Fruits	Fruit	1
6	Beef, goat, poultry, pork, eggs and fish	Meat and fish	4
7	Milk yogurt and other diary	Milk	4
8	Sugar and sugar products	Sugar	0.5
9	Oils, fats and butter	Oil	0.5
10	Condiments	Condiments	0

**Food Consumption Score thresholds**

The following thresholds of FSC are used to categorize households into three food consumption groups based on the knowledge of consumption behaviors of the majority of Indonesian at present, which are:

Food consumption groups	Food Consumption Score	Description
Poor	0-28	An expected consumption of staple 7 days, vegetables 5-6 days, sugar 3-4 days, oil/fat 1 day a week, while animal proteins are totally absent
Borderline	28.5 -42	An expected consumption of staple 7 days, vegetables 6-7 days, sugar 3-4 days, oil/fat 3 days, meat/fish/egg/pulses 1-2 days a week, while dairy products are totally absent
Acceptable	> 42	As defined for the borderline group with more number of days a week eating meat, fish, egg, oil, and complemented by other foods such as pulses, fruits, milk

4. Reduced Coping Strategy Index (RCSI)

When livelihoods are negatively affected by a shock /crisis, households may adopt various mechanisms (strategies) which are not adopted in a normal day-to-day life, to cope with reduced or declining access to food.

Coping Strategy Index (CSI) is often used as a proxy indicator of household food insecurity. CSI is based on a list of behaviors (coping strategies). CSI combines: (i) the *frequency* of each strategy (how many times each strategy was adopted?); and (ii) their *severity* (how serious is each strategy?) for households reporting food consumption problems. Higher CSI indicates a worse food security situation and vice versa. CSI is a particularly powerful tool for monitoring the same households or population over time. There are two types: "full CSI" and "reduced CSI".

In this FSNMS, RCSI is used. RCSI is based on the same short list of 5 coping strategies, and the same severity weights. It is very useful for comparing across regions and countries, or across income/livelihood groups, because it focuses on the same set of behaviors. The maximal RCSI is 240 during the past 30 days (i.e. all 5 strategies are applied every day). There are no universal thresholds for RCSI.

Table below is an example of RCSI of this analysis, with RCSI at 27.

Coping Strategies	Raw score	Universal Severity Weight	Weighted Score = Frequency x
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			Weight
1. Eating less preferred /expensive foods	5	1	5
2. Borrowing food or relying on help from friends and relatives	2	2	4
3. Limiting portion size at mealtime	7	1	7
4. Limiting adult intake in order for small children to eat	2	3	6
5. Reducing the number of meals per day	5	1	5
<b>Total Household Score – Reduced CSI</b>	<b>Sum down the total for each individual strategy</b>		<b>27</b>

5. Estimation of proportion of food insecure households based on composite food security (How many?)

The level of household food security is calculated through two cross-tabulations of the above three indicators.

Firstly, monthly per capita expenditure groups (poor, near-poor, non-poor) are cross-tabulated with food expenditure groups (poor, average, good) to identify *three food access groups* (poor, average, good). Table below is an example of the first cross-tabulation. Poor food access households (51%, in red cells) are those having either poor or near-poor monthly per capita expenditure combined with either poor or average food expenditure.

Monthly per capita expenditure	Poor	Near-poor	Non-poor
Food expenditure			
<b>Poor (&gt;65% of total expenditure)</b>	32%	3%	1%
<b>Average (50-65% total expenditure)</b>	16%	4%	1%
<b>Good (&lt;50% of total expenditure)</b>	34%	6%	4%

Note: Red = Poor food access, Yellow = Average food access, Green = Good food access

Secondly, food consumption groups and food access groups derived from the first cross-tabulation are matched to identify *three composite food security groups* (food insecure, vulnerable and food secure). Table below is an example of the second cross-tabulation. Food insecure households (29%, in red cells) are those having either poor or average food access combined with either poor or borderline food consumption.

Food access	Poor	Average	Good
Food consumption			
<b>Poor (0-28 scores)</b>	9%	6%	0%
<b>Borderline (28.5 – 42 scores)</b>	14%	8%	1%
<b>Acceptable (&gt; 42 scores)</b>	27%	26%	9%

Note: Red = Food insecure, Yellow = Vulnerable, Green = Food secure

6. Determination of characteristics of food insecure households

Identified food insecure households are matched with their livelihood characteristics such as location, sex, age and education of household head, household size, age dependency ratio, main cash income source, housing, water and sanitation, land and livestock ownership, assets, coping strategies, child education and labor, unemployment, migration, etc. to answer other four questions: Where, Who, Why they are food insecure, and How they are coping.

These analyses allow for determining whether food insecurity is chronic (long-term, persistent) caused by underlying structural and contextual factors which do not change quickly (local climate, soil type, local governance system, public infrastructure – roads, irrigation, land tenure, etc.), or transitory (short term, transient) mostly caused by dynamic factors which can change quickly (natural disasters, displacement, diseases, migration, soaring food prices).

## ANNEX 2. Main socio-economic characteristics of surveyed households

Area: All 4 provinces East Java Nusa Tenggara Timur West Kalimantan Central Sulawesi

Period: 1<sup>st</sup> MP (Jun-Jul 09) 2<sup>nd</sup> MP (Oct-Nov 09) 3<sup>rd</sup> MP (Jan-Feb 10) 4<sup>th</sup> MP (Mar-Apr 10)

\* = difference between urban and rural is significant (P<0.05)

Characteristics	Urban		Rural		All	
	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)
1. Gender of household head						
<b>Male</b>	88	86	91	91	90	89
<b>Female</b>	12	14	9	9	10	11
2. Age of household head (mean)	46	46	46	46	46	46
3. Education level of household head						
<b>No school, incomplete primary school</b>		15		24		20
<b>Primary or junior high school completed</b>	n.a.	55	n.a.	56	n.a.	56
<b>High school or university completed</b>		30		20		25
4. Household size (mean)	5	5	5	5	5	5
5. Household having under 5 children	37	37	31	31	34	34
<b>Average number (person)</b>	1	1	1	1	1	1
6. Household having at least 1 school aged child	84	85	73	72	78	78
7. Percentage of dependants	50	50	47	45	48	48
8. Households having a child absent from school last month	19	14	29	24	23	18
<b>Due to child labour</b>	1	1	1	0	1	1
<b>Working hours 0-4 hours/day</b>	100	100	100	0	100	100
<b>Working hours &gt;4 hours/day</b>	0	0	0	0	0	0
<b>Engaged in household chore</b>	100	100	0	0	50	100
<b>Supporting family business</b>	0	0	0	0	0	0
<b>Working in informal sectors</b>	0	0	100	0	50	0
9. Housing conditions (* 1st and 2nd)						
<b>Non-durable (wood, herb)</b>	41	35	30	23	35	29
<b>Semi permanent (ground part: durable, upper part: non-durable)</b>	21	27	33	29	27	28
<b>Durable (brick, cement)</b>	38	38	38	48	38	43
10. Type of dwelling						
<b>Individual house (separated from neighbour)</b>	97	91	99	96	98	94
<b>Flat in multi-storey building</b>	1	2	1	2	1	2
<b>Room(s) in a shared house or shared flat</b>	2	6	0	2	1	4
11. Access to water sources *						
<b>Improved (piped water, public tap, tube well/borehole, protected well, protected spring water, rain water)</b>	86	86	50	59	68	72
<b>Unimproved (river, unprotected well/spring water, canal, bottled/refilled water supplied by factory/individual)</b>	14	14	50	41	32	28
12. Distance to the main source of drinking water *						
<b>less than 30 minutes</b>		94		99		97
<b>30 to 60 minutes</b>	n.a.	6	n.a.	1	n.a.	3
<b>more than 60 minutes</b>		0		0		0
13. Cooking fuel *						
<b>Wood</b>	58	54	88	86	73	70
<b>Others (kerosene, LPG, biogas, electricity)</b>	42	46	12	14	27	30
14. Type of latrine *						
<b>Flush latrine/toilet with water</b>		37		50		44
<b>Traditional pit latrine (no water)</b>	n.a.	47	n.a.	7	n.a.	27
<b>None/bush (go to forest, river, lake, dam, beach etc)</b>		16		42		29
15. Ownership of land *						
<b>Households do not own land</b>	91	94	25	23	58	58
<b>Households own land</b>	9	6	75	77	42	42
16. Average owned land size (ha, among those who own land)	0	1	0	1	0	1
17. Owned land size (among those who own land)						
<b>Households own the land sized less than 0.5 ha</b>	27	25	3	7	6	9
<b>Households own the land sized more than 0.5 ha</b>	73	75	97	93	94	91
<b>Households do not rent land</b>	99	99	98	99	99	99
<b>Households rent land</b>	1	1	2	1	1	1
19. Investment of land						
<b>Households do not invest land</b>	0	100	0	100	0	100
<b>Households invest land</b>	0	0	100	0	100	0

Characteristics	Urban		Rural		All	
	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)
18. Rental of land						
20. Mortgage of land						
<b>Households do not mortgage out land</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Households mortgage land</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
21. Staple food production in a normal year *						
<b>Households do not produce staple food in a normal year</b>	<b>96</b>	<b>96</b>	<b>50</b>	<b>43</b>	<b>73</b>	<b>70</b>
<b>Households produce staple food in a normal year</b>	<b>4</b>	<b>4</b>	<b>50</b>	<b>57</b>	<b>27</b>	<b>30</b>
22. Average production of staple food in a normal year (kg, among those who produce staple food)	<b>402</b>	<b>295</b>	<b>1158</b>	<b>5</b>	<b>1102</b>	<b>346</b>
23. Level of the staple requirement met by own product in a normal year (among those who produce) *						
<b>HH Production meets less than 3 months requirement</b>	<b>60</b>	<b>98</b>	<b>16</b>	<b>62</b>	<b>19</b>	<b>80</b>
<b>HH Production meets from 3 to 7 months requirement</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>5</b>	<b>16</b>	<b>3</b>
<b>HH Production meets more than 7 months requirement</b>	<b>40</b>	<b>1</b>	<b>66</b>	<b>33</b>	<b>64</b>	<b>17</b>
24. Sale of cereals in a normal year						
<b>None</b>	<b>0</b>	<b>25</b>	<b>7</b>	<b>8</b>	<b>6</b>	<b>9</b>
<b>Less than half</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>39</b>	<b>35</b>	<b>36</b>
<b>About half</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>14</b>	<b>27</b>	<b>13</b>
<b>More than half</b>	<b>75</b>	<b>25</b>	<b>16</b>	<b>12</b>	<b>20</b>	<b>13</b>
<b>All</b>	<b>25</b>	<b>50</b>	<b>11</b>	<b>27</b>	<b>12</b>	<b>29</b>
25. Sale of tubers in a normal year						
<b>None</b>	<b>50</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>16</b>	<b>12</b>
<b>Less than half</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>42</b>	<b>32</b>	<b>40</b>
<b>About half</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>25</b>	<b>12</b>	<b>24</b>
<b>More than half</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>24</b>	<b>0</b>
<b>All</b>	<b>50</b>	<b>100</b>	<b>13</b>	<b>21</b>	<b>16</b>	<b>24</b>
26. Staple food production in 2009 *						
<b>Households do not produce staple food in a normal year</b>	<b>96</b>	<b>96</b>	<b>51</b>	<b>46</b>	<b>74</b>	<b>71</b>
<b>Households produce staple food in a normal year</b>	<b>4</b>	<b>4</b>	<b>49</b>	<b>54</b>	<b>26</b>	<b>29</b>
27. Average production of staple food in 2009 (kg, among those who produce staple food in 2009)	<b>883</b>	<b>102</b>	<b>482</b>	<b>419</b>	<b>512</b>	<b>397</b>
28. Average production of staple food in 2009 (met requirement, among those who produce staple in 2009) *						
<b>HH Production meets less than 3 months requirement</b>	<b>80</b>	<b>80</b>	<b>36</b>	<b>39</b>	<b>39</b>	<b>42</b>
<b>HH Production meets from 3 to 7 months requirement</b>	<b>0</b>	<b>20</b>	<b>20</b>	<b>10</b>	<b>18</b>	<b>11</b>
<b>HH Production meets more than 7 months requirement</b>	<b>20</b>	<b>0</b>	<b>44</b>	<b>51</b>	<b>42</b>	<b>47</b>
29. Level of the 2009 staple requirement met by accumulated harvested crops ( mean %, ± SD) *	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
30. Staple (cereals and tubers) in stock						
<b>Households without staple in stock</b>	<b>33</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>20</b>	<b>1</b>
<b>Households with staple in stock</b>	<b>67</b>	<b>100</b>	<b>93</b>	<b>98</b>	<b>80</b>	<b>99</b>
31. Average amount of staple in stock (kg, among those who had stock) *	<b>42</b>	<b>129</b>	<b>83</b>	<b>221</b>	<b>62</b>	<b>174</b>
32. Number of days which last current cereals in stock (among those who had staple in stock)	<b>54</b>	<b>25</b>	<b>57</b>	<b>146</b>	<b>57</b>	<b>143</b>
33. Number of days which last current tubers in stock (among those who had staple in stock)	<b>120</b>	<b>0</b>	<b>51</b>	<b>63</b>	<b>55</b>	
34. Ownership of livestock *						
<b>Household without livestock</b>	<b>80</b>	<b>82</b>	<b>50</b>	<b>50</b>	<b>65</b>	<b>66</b>
<b>Households own livestock</b>	<b>20</b>	<b>18</b>	<b>50</b>	<b>50</b>	<b>35</b>	<b>34</b>
35. Average number of livestock	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>7</b>
36. Number of owned assets *						
<b>None (0)</b>	<b>6</b>	<b>8</b>	<b>24</b>	<b>16</b>	<b>15</b>	<b>12</b>
<b>From 1 to 3</b>	<b>54</b>	<b>54</b>	<b>47</b>	<b>54</b>	<b>50</b>	<b>54</b>
<b>More than 4</b>	<b>40</b>	<b>38</b>	<b>29</b>	<b>29</b>	<b>34</b>	<b>34</b>
37. Number of hh members regularly earning income						
<b>None (0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>1 person</b>	<b>71</b>	<b>67</b>	<b>71</b>	<b>72</b>	<b>71</b>	<b>70</b>
<b>2 persons</b>	<b>21</b>	<b>26</b>	<b>26</b>	<b>25</b>	<b>24</b>	<b>26</b>
<b>More than 3 persons</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>4</b>

Characteristics		Urban		Rural		All	
		1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)
38.	Number of income sources						
	<b>None (0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
	<b>1 source</b>	<b>63</b>	<b>61</b>	<b>54</b>	<b>43</b>	<b>58</b>	<b>52</b>
	<b>2 sources</b>	<b>33</b>	<b>34</b>	<b>46</b>	<b>54</b>	<b>39</b>	<b>44</b>
	<b>More than 3 persons</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>4</b>
39.	Main income source (3 predominant) *						
	<b>1st</b>	<b>Non-agri unskilled wage labour</b>	<b>Non-agri unskilled wage labour</b>	<b>Sale of own products (cash crop)</b>	<b>Sale of own products (cash crop)</b>	<b>Non-agri unskilled wage labour</b>	<b>Sale of own products (cash crop)</b>
	<b>2nd</b>	<b>Sale of animal/fish</b>	<b>Sale of animal/fish</b>	<b>Sale of own products (food crops)</b>	<b>Agricultural wage labour</b>	<b>Non-agri unskilled wage labour</b>	<b>Non-agri unskilled wage labour</b>
	<b>3rd</b>	<b>Self-employ of mid scale</b>	<b>Self-employ of mid scale</b>	<b>Gov't employee</b>	<b>Nonagri unskill wage labour</b>	<b>Sale of animal/fish</b>	<b>Sale of animal/fish</b>
40.	Households having unemployed members	<b>9</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>2</b>
41.	Household having out-migrated members in Indonesia and abroad *	<b>1</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>2</b>
42.	Number of meals per day (12-59 months old children)						
	<b>None (0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>1 meals per day</b>	<b>13</b>	<b>13</b>	<b>8</b>	<b>18</b>	<b>11</b>	<b>15</b>
	<b>2 meals per day</b>	<b>6</b>	<b>13</b>	<b>0</b>	<b>10</b>	<b>4</b>	<b>12</b>
	<b>More than 3 meals per day</b>	<b>81</b>	<b>74</b>	<b>92</b>	<b>72</b>	<b>86</b>	<b>73</b>
43.	Number of meals per day (15-49 years old) (%)						
	<b>None (0)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
	<b>1 meals per day</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>15</b>	<b>4</b>	<b>11</b>
	<b>2 meals per day</b>	<b>8</b>	<b>19</b>	<b>5</b>	<b>12</b>	<b>7</b>	<b>16</b>
	<b>More than 3 meals per day</b>	<b>83</b>	<b>73</b>	<b>95</b>	<b>73</b>	<b>89</b>	<b>73</b>
44.	Number of meals per day (other household members)						
	<b>None (0)</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>
	<b>1 meals per day</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>
	<b>2 meals per day</b>	<b>11</b>	<b>23</b>	<b>4</b>	<b>10</b>	<b>7</b>	<b>16</b>
	<b>More than 3 meals per day</b>	<b>87</b>	<b>76</b>	<b>93</b>	<b>87</b>	<b>90</b>	<b>81</b>
45.	Food consumption score (FCS) *						
	<b>poor (0-28)</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>8</b>	<b>4</b>	<b>6</b>
	<b>borderline (28.5-42)</b>	<b>6</b>	<b>3</b>	<b>24</b>	<b>19</b>	<b>15</b>	<b>11</b>
	<b>acceptable (&gt;42.5)</b>	<b>92</b>	<b>94</b>	<b>70</b>	<b>73</b>	<b>81</b>	<b>83</b>
46.	Monthly food expenditure *						
	<b>poor (&gt;65%)</b>	<b>55</b>	<b>51</b>	<b>78</b>	<b>73</b>	<b>66</b>	<b>62</b>
	<b>average (50-65%)</b>	<b>22</b>	<b>27</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>22</b>
	<b>good (&lt;50%)</b>	<b>22</b>	<b>22</b>	<b>7</b>	<b>11</b>	<b>15</b>	<b>16</b>
47.	Monthly per capita expenditure (MPCE) *						
	<b>poor (below poverty line)</b>	<b>18</b>	<b>11</b>	<b>25</b>	<b>13</b>	<b>21</b>	<b>12</b>
	<b>near poor (above poverty line, below US\$2/day in PPP rate)</b>	<b>26</b>	<b>24</b>	<b>35</b>	<b>35</b>	<b>31</b>	<b>29</b>
	<b>non-poor</b>	<b>56</b>	<b>65</b>	<b>40</b>	<b>52</b>	<b>48</b>	<b>58</b>
48.	32. Food security group *						
	<b>food insecure</b>	<b>6</b>	<b>5</b>	<b>20</b>	<b>18</b>	<b>13</b>	<b>11</b>
	<b>vulnerable</b>	<b>31</b>	<b>19</b>	<b>39</b>	<b>26</b>	<b>35</b>	<b>23</b>
	<b>food secure</b>	<b>62</b>	<b>76</b>	<b>41</b>	<b>56</b>	<b>52</b>	<b>66</b>
49.	Most frequently experienced difficulties in the past 3 months *						
	<b>1st</b>	<b>Limited cash</b>	<b>Limited cash</b>	<b>No difficulty</b>	<b>Limited cash</b>	<b>Limited cash</b>	<b>Limited cash</b>
	<b>2nd</b>	<b>High food price</b>	<b>No difficulty</b>	<b>High food prices</b>	<b>No difficulty</b>	<b>No difficulty</b>	<b>No difficulty</b>
	<b>3rd</b>	<b>Health expend</b>	<b>High food prices</b>	<b>Health expend</b>	<b>High food prices</b>	<b>Health expend</b>	<b>High food prices</b>
50.	Households experienced any shocks in the past 30days						
	<b>Yes, experienced</b>	<b>47</b>	<b>58</b>	<b>30</b>	<b>47</b>	<b>38</b>	<b>53</b>
	<b>No, not experienced</b>	<b>53</b>	<b>42</b>	<b>70</b>	<b>53</b>	<b>62</b>	<b>47</b>

Characteristics		Urban		Rural		All	
		1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)	1 <sup>st</sup> Round (May - Jul)	2 <sup>nd</sup> Round (Aug - Oct)
51.	Most frequently applied coping strategies						
	1st	Seek alternative /additional jobs	Extend working hours to gain income	Seek alternative /additional jobs	Seek additional jobs	Seek alternative /additional jobs	Seek alternative or additional jobs
	2nd	Limit portion size at meals	Seek alternative or additional jobs	Reduce snacks	Extend working hours	Reduce snacks	Extend working hours to gain income
	3rd	Restrict consumption by adults for small children to eat	Reduce snacks	Rely on less preferred/expensive food	Reduce snacks	Reduce number of meals eaten in a day	Reduce snacks
52.	Coping Strategy Index (mean)	71	17	63	7	67	13
53.	Household assisted by RASKIN program	50	24	71	29	60	26
54.	Household assisted by BLT program	24	14	42	20	33	17

## ANNEX 3 Prices of basic commodities

	Commodity	Current price (IDR/kg, ltr, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
4 Provinces (All)	Rice (RASKIN)	2,090	↓	→	↑	↓	→	↑
	Rice (High quality)	6,379						
	Rice (Medium quality)	5,411						
	Rice (Low quality)	3,559						
	Maize	5,516						
	Noodle (Fortified)	1,490						
	Noodle (Unfortified medium quality)	1,357						
	Tempe	1,502						
	Tofu	1,186						
	Egg	17,882						
	Cooking oil (Bimoli)	11,747						
	Cooking oil (Local)	7,195						
	Sugar (Regular)	10,264						
	Sugar (Brown)	9,682						
	Kerosene	3,730						
	Commodity	Current price (IDR/kg, lir, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
4 Provinces (Urban)	Rice (RASKIN)	1,863	↓	→	↑	↓	→	↑
	Rice (High quality)	6,491						
	Rice (Medium quality)	5,373						
	Rice (Low quality)	4,588						
	Maize	5,654						
	Noodle (Fortified)	1,489						
	Noodle (Unfortified medium quality)	1,313						
	Tempe	1,379						
	Tofu	836						
	Egg	17,935						
	Cooking oil (Bimoli)	11,698						
	Cooking oil (Local)	7,592						
	Sugar (Regular)	10,231						
	Sugar (Brown)	9,852						
	Kerosene	3,670						
	Commodity	Current price (IDR/kg, lir, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
4 Provinces (Rural)	Rice (RASKIN)	2,160	↓	→	↑	↓	→	↑
	Rice (High quality)	6,244						
	Rice (Medium quality)	5,543						
	Rice (Low quality)	3,148						
	Maize	5,360						
	Noodle (Fortified)	1,490						
	Noodle (Unfortified medium quality)	1,400						
	Tempe	1,676						
	Tofu	1,642						
	Egg	17,823						
	Cooking oil (Bimoli)	11,810						
	Cooking oil (Local)	6,922						
	Sugar (Regular)	10,297						
	Sugar (Brown)	9,510						
	Kerosene	3,790						

	Commodity	Current price (IDR/kg, ltr, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
Central Sulawesi (All)	Rice (RASKIN)	n.a.	↓	→	↑	↓	→	↑
	Rice (High quality)	6,632						
	Rice (Medium quality)	5,573						
	Rice (Low quality)	n.a.						
	Maize	2,926						
	Noodle (Fortified)	1,534						
	Noodle (Unfortified medium quality)	1,372						
	Tempe	1,842						
	Tofu	1,261						
	Egg	18,031						
	Cooking oil (Bimoli)	9,928						
	Cooking oil (Local)	7,025						
	Sugar (Regular)	9,859						
	Sugar (Brown)	10,000						
	Kerosene	4,208						
	Commodity	Current price (IDR/kg, lir, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
Central Sulawesi (Urban)	Rice (RASKIN)	n.a.	↓	→	↑	↓	→	↑
	Rice (High quality)	7,120						
	Rice (Medium quality)	5,000						
	Rice (Low quality)	n.a.						
	Maize	2,831						
	Noodle (Fortified)	1,568						
	Noodle (Unfortified medium quality)	1,309						
	Tempe	1,707						
	Tofu	1,056						
	Egg	18,549						
	Cooking oil (Bimoli)	9,552						
	Cooking oil (Local)	7,462						
	Sugar (Regular)	10,247						
	Sugar (Brown)	10,000						
	Kerosene	4,112						
	Commodity	Current price (IDR/kg, lir, piece)	Change in price (%)			Average monthly change over		
			1 m	3 m	1 yr	1 m	3 m	1 yr
Central Sulawesi (Rural)	Rice (RASKIN)	n.a.	↓	→	↑	↓	→	↑
	Rice (High quality)	6,196						
	Rice (Medium quality)	5,000						
	Rice (Low quality)	n.a.						
	Maize	3,052						
	Noodle (Fortified)	1,491						
	Noodle (Unfortified medium quality)	1,413						
	Tempe	1,978						
	Tofu	1,500						
	Egg	17,438						
	Cooking oil (Bimoli)	12,000						
	Cooking oil (Local)	6,729						
	Sugar (Regular)	9,432						
	Sugar (Brown)	10,000						
	Kerosene	4,306						

↑ Price increase move normal price fluctuation

→ Normal price fluctuation

↓ Price decrease below normal fluctuation

Price fluctuation is considered normal if the change is within 5% for 1 month, or within 10% for 3 months or within 15% for one year.