RWANDA

FOOD AND NUTRITION SECURITY MONITORING SYSTEM (FNSMS)

ROUND 8 - March. 2014

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Main findings

Although the sample for FNSMS conducted in March 2014 changed compared to previous rounds, findings of FNSMS round 8 showed that food security situation was fairly stable since 2012. Also, households were more food secure in March (74%, 77%, 76% and 72% in 2011, 2012, 2013 and 2014 respectively) compared to September (63%, 69% and 69% in 2011, 2012 and 2013 respectively).[1] This is in line with the findings of other food security assessment including the 2012 CFSVA showing that a lower percentage of households had food stocks from their harvest, and main food commodities tend to be more expensive in September when compared to March.

In March 2014, the percentage of households with unacceptable food consumption was 37%. **The Northern and the Western provinces**, especially along the Congo Nile Crest were the parts of the country with the highest percentage of food insecure households. (32% and 30% respectively).

Like previous rounds, FNSMS round 8 showed that food insecure households remained mainly poor and vulnerable households without diversified livelihood activities and cultivating no or only small plots of land (<0.5 ha). Households headed by women, elderly, single, divorced/separated people, those with precarious livelihood activities and those who did not attend school were vulnerable to food insecurity. Also, shocks played a big role in households food insecurity. The more households were affected by shocks the more they were vulnerable. In march 2014, shocks more reported by households were meteorological related shocks (37%), human diseases (26%) and reduced income or employment (15%).

Considering food diet, FNSMS round 8 showed that all categories of households consumed starches 4 to 7 days per week, vegetables 4 to 6 days per week, pulses 1 to 6 days per week, and rarely consumed oils 2 to 5 days per week. Fruits, milk and meat were not part of their weekly diet.

Compared to previous round and the 2012 CFSVA, the level of chronic malnutrition (stunting) remained high' (44%). Underweight was at 'poor' level (12%) and wasting within 'acceptable' limits (2%).

[1] *excluding households in Kigali city.*

Key definitions

Food security exists when all people, at all times, have physical and economic access to sufficient food in both quantity and quality. In the FNSMS a household is considered to be food insecure if it has poor or borderline food consumption. Household food consumption is estimated with the food consumption score, a WFP corporate indicator that measures the frequency of household level consumption of the main food groups.

The Food Consumption Score (FCS) is a score calculated using the frequency of consumption of different food groups consumed by a household during the 7 days before the survey. It is used to measure household food security. If the household FCS is below a certain threshold value (21) the household has poor food consumption and is qualified as food insecure. Above another threshold value (35) the household has acceptable food consumption and is food secure. Between 21 and 35 consumption is borderline and households are either food insecure or at risk of becoming food insecure.

The Coping Strategy Index (CSI) is an indicator of household food security behavior that reveals how households manage or cope with shortage of food. The CSI measures the frequency and severity of actions taken by households in response to a perceived food shortage. A high CSI means more stress and potential declining food security in a household.

Seasonal food security situation

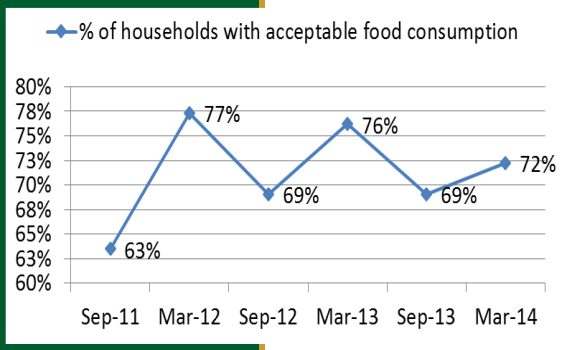


Fig. 1: Households with acceptable food consumption form September 2011 to March 2014

As shown by Findings from FNSMS round 8, food security in rural areas of Rwanda remained stable and follow seasonal patterns (see Fig. 1). The slight change in percentage of households with acceptable food consumption (72%) compared to the situation in March 2013 and 2012 (76 and 77% respectively) might due to the change of the sample in the March 2014 FNSMS compared to other rounds. Nonetheless, the results of FNSMS round 8 remained in line with the results of previous rounds of FNSMS and that of 2012 CFSVA which found that a higher percentage of households have better food consumption in March compared to September. This is due to the fact that previous rounds of FNSMS and 2012 CFSVA showed that fewer households have food from their own production in September than in March, and most of them are likely to face higher food prices when purchasing food in the market. In March, households have still food stocks from the harvest of season A that takes place from December to February.

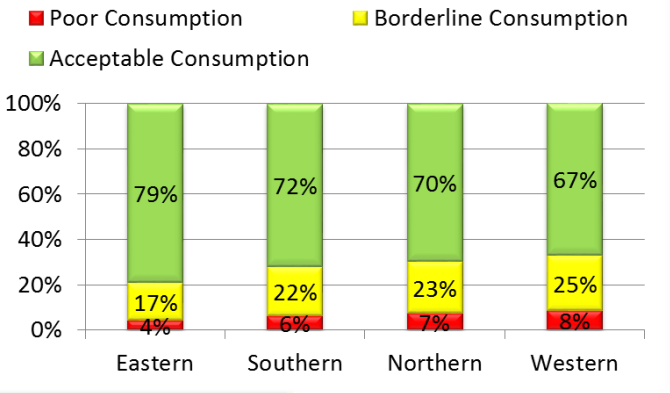


Fig. 2: Food insecurity by province in March 2014

The Western province remained the province with the highest percentage of households with unacceptable food consumption (33%) followed by the Northern province (30%) (see fig. 2). When analyzing data by FEWS NET livelihood zones, the area along Lake Kivu (Lake Kivu coffee and food crops zone) was the area with the highest percentage of food insecure households (56%, see fig. 8). As shown by previous FNSMS rounds, market continued to be the first food source in March 2014(47%) followed by own production (41%).

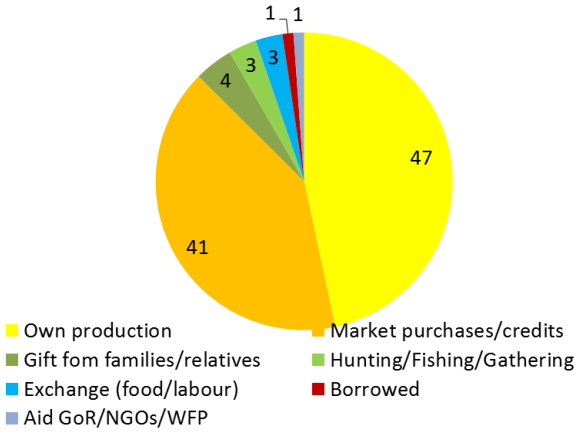
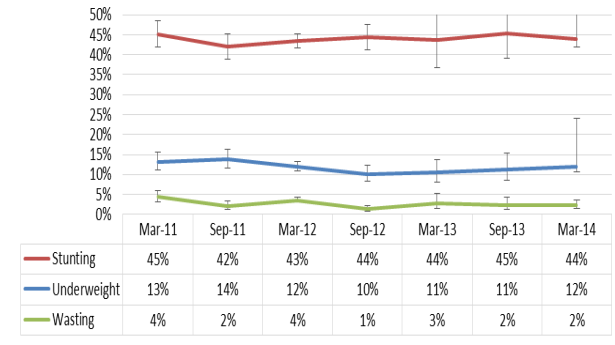


Fig. 3: Food sources in March 2014



	Mar-11	Sep-11	Mar-12	Sep-12	Mar-13	Sep-13	Mar-14
Stunting	45%	42%	43%	44%	44%	45%	44%
Underweight	13%	14%	12%	10%	11%	11%	12%
Wasting	4%	2%	4%	1%	3%	2%	2%

Fig. 4 Prevalence of malnutrition in FNSMS rounds 2,3,4, 5, 6 , 7 and 8

High level chronic malnutrition among children under 5

Findings from FNSMS round 8 showed that the stunting prevalence remained 'very high' (44%; CI 95%: 42%-51%). The underweight prevalence was 12%; CI 95%: 11%-24% while wasting was at 2% CI 95%: 2%-4%, meaning that they kept to be within 'poor' and 'acceptable' limits respectively.

Since 2011, stunting prevalence in the rural area of Rwanda varied between 42 and 45%, underweight between 10 and 13% while wasting was between 1 and 4%. However, observed changes are not statistically significant (fig. 4).

Poor and vulnerable households are found more food insecure

Findings from FNSMS round 8 showed that food security is related to livelihoods and poverty of households. Food insecure households are mainly vulnerable and poor households with precarious livelihoods. This is in line with results from previous rounds

Households headed by females, by people over 60 years old, or by a non married head of household (representing 30%, 24% and 32% of the sample respectively) - were more likely to have poor food consumption patterns. The same was true for households with less diverse and more precarious livelihoods, owning little land, and those who reported a recent shock.

Among households headed by women, only 65% showed acceptable food consumption patterns compared to 75% among those headed by men. 36% of households headed by people over 60 years old reported poor or borderline food consumption while only 26% among those headed by people under 60 years old reported the same.

Households headed by married couples (78% of households) showed significantly better food consumption patterns than others.

Considering households that faced **shocks in the 3 months** preceding the survey, they were more likely to be food insecure. Among households that reported shocks (57% of the sample), only 67% had acceptable food consumption compared to 79% of those that did not face shocks.

The most reported shocks were meteorological related shocks (37%), serious illness or accident of a household member (26%) and loss or reduced household's income (15%).

In terms of **livelihoods,** households with little land, having less diverse and more precarious livelihoods were the less food secure.

Households practicing only one activity were more likely to be food insecure (29%) compared to 73% who had more than one activity. Households who relied on salary or pension (representing 21% of the sample), petty trade (6%), livestock (representing 7% of the sample) or on agriculture (68%) were significantly better off than those who relied on other activities (see Fig. 6)

The more **land** households had, the less likely they were to be food insecure. The FNSMS round 8, found that households with less than 0.5 ha (representing 72% of the sample, see Fig. 5) were significantly more likely to be more stressed to access food than those who owned more than 0.5 ha of land (see Fig. 6).

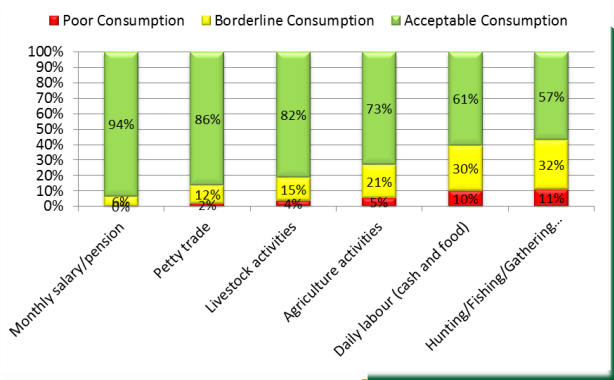


Fig. 5 Food security situation of households compared to livelihoods

The more a household had a purchasing power, the more was food secure. 75% of households spending less than 1000 RWF per month had unacceptable food consumption compared to 21% of households spending more than 1,000 RWF.

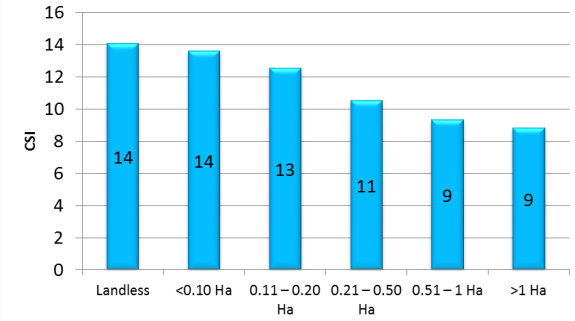


Fig. 6: CSI compared to land ownership.

(*)Shocks more reported by households are meteorological related hocks (45%) and human diseases (31%).

The diet of food insecure households

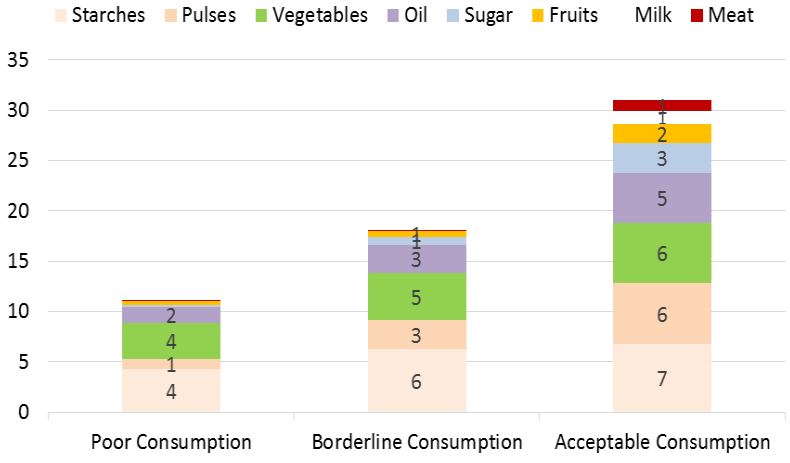


Fig. 7: Type of food consumed by hh food consumption groups

In addition to starches and pulses that are the main staple in Rwanda*, FNSMS round 8 showed that all categories of households consumed vegetables between 4 and 6 days per week, oil between 2 and 5 days per week, and sugar between 1 and 3 days per week. As shown by previous rounds, the diet of food insecure households remained of poor nutritional quality. Fruits, milk and meat were consumed but they were not part of their weekly diet. (see fig. 7).

(*) Starches include cereal and tubers

Conclusion and recommendations

Although the sample of FNSMS changed, FNSMS round 8 showed that food security situation in Rwanda kept the same trends influenced by agricultural seasons, livelihoods and the vulnerability of households. In March 2014, 28% of households living in Rwanda (excluding Kigali City) could be considered to be food insecure based on their food consumption. In addition to this, food consumption of households is better in March than in September due to the availability of food stocks from the season A harvest compared to September. With the depletion of food stocks from the season A, the percentage of food insecure households could increase and exceed 28% until the harvest from the season B in June-July.

Compared to other areas of the country, the Western and Northern Provinces reported a higher percentage of food insecure households. However, the Southern province that was coming at the second place in the order of food insecurity after the Western province in the previous rounds of FNSMS, came at the second place in the order of food security after the Eastern province in the 8th round of FNSMS . This needs to be further looked into.

Food insecure households remained poor and 'vulnerable' households (headed by women, widows, single, elderly or those who did not attend school), having little land, and living off precarious livelihoods.

The level of stunting remained very high (44%) while underweight and wasting remained within 'poor' and 'acceptable' limits respectively.

Based on the findings from FNSMS round 8, the following recommendations can be formulated:

- Keep strengthening existing government, ONE UN and other organizations in designing specific interventions to reduce chronic malnutrition in the country.
- The southern and Western provinces, especially along Lake Kivu zone and the Congo Nile Crest (see Fig. 8), need still a special focus to address the issue of food insecurity.
- Put more efforts in strengthening and increase coverage of timely safety nets for the most vulnerable households.

Nr	Livelihood zone
0	Kigali city
1	Lake Kivu Coffee and food crop
2	West Congo-Nile Crest Tea and food crop
3	Northwest Volcanic Irish Potato
4	East Congo-Nile Highland Subsistance Farm.
5	Central Plateau Cassava and Coffee
6	Northern Highland Beans and Wheat
7	Cent-North High Irish Potato, Bean and Veg
8	Bugesera Cassava
9	Eastern Plateau Mixed Agriculture
10	Southeastern Plateau Banana
11	Eastern Agropastoral
12	Eastern Semi-Arid Agropastoral

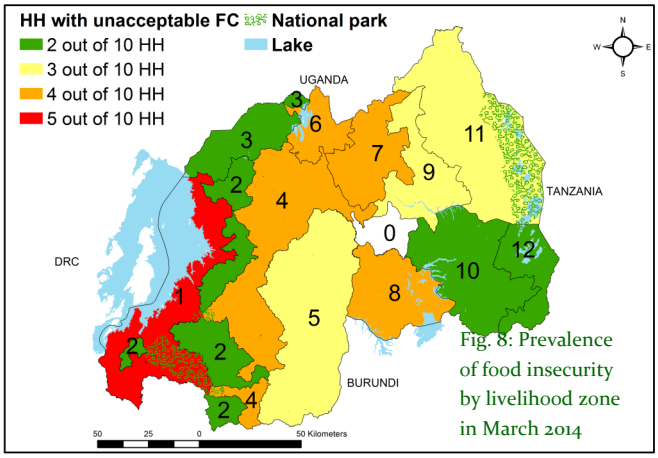


Fig. 8: Prevalence of food insecurity by livelihood zone in March 2014

Background and Methodology

The FNSMS was set up in 2010 by the Ministry of Agriculture and Animal Resources (MINAGRI) and the World Food Programme. This round was coordinated through a Technical Committee composed of MINAGRI (chair), WFP (co-Chair), the National Institute of Statistics (NISR), FEWSNET, the Swiss Agency for Development and Cooperation (SDC) and World Vision.

Since September 2010, the FNSMS is conducted in March and September of every year.

For the 8th round of the FNSMS, data was collected in March 2014. While data was collected from the same sample during previous rounds of FNSMS, the sample change with round 8 but keeping the same sample size. 1344 households were interviewed with a closed questionnaire. The households were selected for interview through a 2 stage sampling approach within 16 strata (groups of districts): 96 enumeration zones (see Fig. 9) were randomly selected (cells at the administrative level). Within each cell 14 households were interviewed. Anthropometric measurements were taken for 655 children under 5 (weight and height, and MUAC for those older than 6 months) and 1104 women aged 15 to 49 (only MUAC).

Ten teams composed of 3 enumerators and 1 team leader collected data for the survey. They underwent two days of refresher training on food security and data collection tools and the use of Personal Digital Assistants (PDAs).

Data analysis was done using SPSS for food security and ENA (using 2006 WHO standards) for nutrition indicator calculations.

Data is representative at the national level (To be questioned as this sample excludes households in Kigali City). When comparisons were made between groups (either demographic, geographical or other) statistical significance of the differences were tested using SPSS statistical tests.

Food security information and nutrition indicators calculated by the FNSMS largely concur with previous reports on food security and nutrition (e.g.: 2012 CFSVA and 2010 RDHS) and demographics of the sampled households are in line with population demographics as reported by the 2012 census.

Households living in Kigali City were excluded from the sample and no micronutrient deficiencies were tested .

The methodology remained the same as FNSMS rounds 3, 5 and 6. The use of PDAs allowed to collect data using electronic questionnaires. GPS was used to locate villages where interviews were conducted.

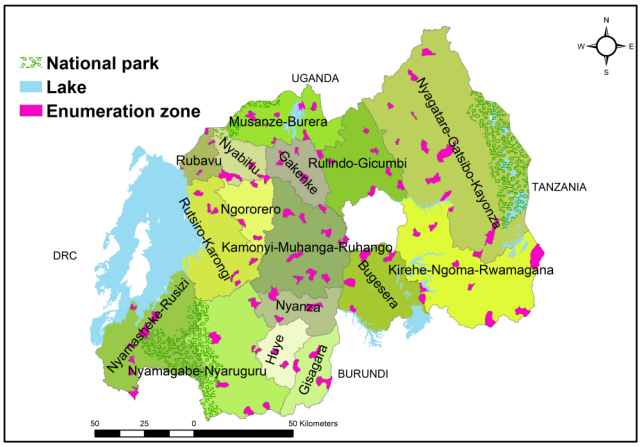


Fig. 9: Distribution of the sampled FNSMS enumeration zones in Rwanda