Main findings

A higher percentage of households are food insecure in September (31%) than in March 2012 (23%). This confirms the seasonality of food security in Rwanda as demonstrated in previous FNSMS rounds and by the 2012 CFSVA and Nutrition Survey. In fact, when comparing September to March, a lower percentage of households still have food stocks from their harvest, and prices of the main food commodities tend to be higher (CFSVA 2012).

Compared to last September (2011), when 36% of households outside of Kigali had either poor or borderline food consumption, the overall food security situation seems to have improved for households. In particular, the situation has significantly improved only in the South. Reasons for the significant improvement of food security level in the southern province need to be clarified.

The Western province remains the province with the highest percentage of food insecure households, especially along Lake Kivu and the Congo Nile Crest where 55% and 45% of households respectively reported unacceptable food consumption in September 2012.

Food insecure households are poor and vulnerable households without diversified livelihood activities and cultivating no, or only small plots of land (<0.5 ha). They tend to be headed by women, elderly, uneducated or unmarried people. Their access to food has often been affected by shocks (high food prices, human and crop diseases).

Food insecure households eat starches 5 days per week and only rarely pulses, vegetables and oils (2 days/week).

Levels of chronic malnutrition (stunting) are still ‘very high’ (44%). Underweight is ‘poor’ (10%) and wasting is the only nutrition indicator within ‘acceptable’ limits (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 a quick and simple 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 insecurity still high but improving

Fig. 1 illustrates clear patterns of seasonal food insecurity. A higher percentage of households have better food consumption in March than in September.

31% of households in Rwanda (the sample excludes households residing in Kigali province) had unacceptable food consumption in September 2012, compared to an estimated 23% in March 2012.

As explained by the 2012 CFSVA and Nutrition Survey, the higher level of food insecurity of households in September reflects the higher difficulties they face in accessing food; less households have food from their own production in September than in March and they are likely to face higher food prices when purchasing food in the market. These constraints to food access will only become more important until the next harvest and it is therefore likely that between October and December 2012 the percentage of households with unacceptable food consumption will continue to increase and exceed the 31% observed in September 2012.

Nevertheless, compared to September 2011, there seems to have been an improvement in the food security situation with a relatively lower percentage of households with unacceptable food consumption in September 2012 (31% compared to 36% in Sept. 2011).

Overall the food security situation of households improved significantly only in the southern province, where the percentage of households with acceptable food consumption increased from 63% in September 2011 to 76% in September 2012. As it was beyond the scope of this monitoring survey to determine the reasons behind this change, these need to be further looked into.

The West remains the province with the highest percentage of households with unacceptable food consumption (45%) (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). This is in line with the findings of the 2012 CFSVA, that links these high levels of food insecurity in the West to lower household level crop diversity, smaller household food stocks that tend to last less, and relative isolation from facilities (markets). Rates of poverty in those areas are high, as is the percentage of households relying on low income farming. Land there is highly sloping and soil less fertile than in other areas of the country.

Among children under 5, levels of acute malnutrition remain acceptable but chronic malnutrition is still too high

Results of the FNSMS round 5 are in the range with those of previous rounds in term of nutrition (fig. 5): the stunting prevalence remains ‘very high’ (44%; CI 95%: 41%-48%) while underweight prevalence can be qualified as ‘poor’ (10%; CI 95%: 8%-12%). Acute malnutrition remains the only nutrition indicator to be within ‘acceptable’ limits at 1% (CI 95%: 1%-2%) (see fig. 3).

The differences in levels of stunting between rounds are not statistically significant.
The food insecure are poor and vulnerable households

Households found to be vulnerable to food insecurity have the same characteristics as in previous FNSMS rounds.

Percentages of food insecure households were significantly higher among households headed by women, by people over 60 years old or by widows (representing 26%, 19% and 22% of the sample respectively). The same was true for households spending less, cultivating little land, having less diverse or sustainable livelihood activities, and those recently affected by shocks:

- 43% of households headed by women reported unacceptable food consumption compared to only 27% of those headed by men;
- 42% of households headed by widows/widowers had unacceptable food consumption;
- 39% of households headed by elderly had unacceptable food consumption compared to only 29% among those headed by young people (18 to 60 years old);
- 25% of households spending more than 10,000 RWF per month had unacceptable food consumption compared to 53% households spending less than 1,000 RWF;
- Households cultivating more than 0.5 ha of land have better food consumption compared to landless and households with less than 0.5 ha (see fig. 6). Households with less than 0.5 ha of land also had to deal more with lack of food (CSI above 8 compared to 5 in households with more than 0.5 ha);
- 74% of households with more than one livelihood activity had acceptable food consumption compared to 60% of those with only one activity (60%);
- 95% and 90% of households relying on salaries/pensions and on petty trade respectively had acceptable food consumption compared to only 56 % for those relying on daily labor.
- Among 48% of households who reported shocks, only 64% showed acceptable food consumption while 67% of households who did not face any shock had acceptable food consumption.*

About food eaten

No changes were observed in the frequency of consumption of various foods by household food consumption groups when comparing to previous rounds.

Overall, in Rwanda starches and pulses are the main staple foods.* The diet of food insecure households is of poor nutritional quality. They consume mainly starches (6 and 4 days per week for borderline and poor food consumption households respectively), pulses (4 and 2 days per week) and rarely vegetables (see fig. 7).

Only households with acceptable food consumption consume fruits, milk, meat and sugar at least once per week.

(*)The most reported shocks were weather related shocks such as drought, floods, landslides or hailstorms (47%), followed by serious illness or accidents of household members (28%).

(*) Starches include cereal and tubers.
Conclusion and recommendations

In September 2012, 31% of households living in Rwanda (excluding Kigali province) could be considered to be food insecure based on their food consumption. Because of seasonal issues such as households gradually running out of food stocks and food prices expected to rise it is likely that the percentage of food insecure households will continue to increase until the next harvest due to start in December (Season A 2013).

Food insecure households remain those poor and ‘vulnerable’ households (headed by women, widows, single, elderly), having little land, and living off precarious livelihoods. They live mostly in the West, along Lake Kivu and the Congo Nile Crest.

Levels of stunting remain ‘very high’ and underweight ‘poor’. Only wasting is within ‘acceptable’ limits.

Based on the findings of this FNSMS round 5, the following recommendations can be formulated:

- Conduct more in depth analysis of the reasons behind the improvement of the food security situation in the Southern province;
- Continue efforts for integration of FNSMS into the Government’s M&E system to monitor the impact of efforts to eradicate malnutrition and food insecurity in Rwanda;
- Design and implement specific interventions to reduce the high levels of chronic malnutrition in the country;
- Diversify and strengthen livelihoods especially for those cultivating little land and depending on precarious livelihoods;
- Strengthen and increase coverage of timely safety nets (including seasonal) for most vulnerable households;
- Focus on the western part of the country to address food security, especially along Lake Kivu zone and the Congo Nile Crest (see Fig. 8).

Background and Methodology

The FNSMS was set up in 2010 by the Ministry of Agriculture (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), FAO, 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 5th round of the FNSMS, data was collected in September 2012. 1343 households were interviewed with a closed questionnaire. This round came after FNSMS round 4 for which data were collected within the 2012 CFPSVA. 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 877 children under 5 (weight and height, and MUAC for those older than 6 months) and 1364 women aged 15 to 49 (only MUAC).

A total of 978 of the same households were visited between rounds 2 and 5.

Ten teams composed of 3 enumerators and 1 team leader collected the data for the survey. All team had participated in previous FNSMS rounds. They underwent 2 days 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. 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 CFPSVA and 2010 RDHS) and demographics of the sampled households are in line with population demographics as reported by the 2002 census.

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

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