



Comprehensive Food Security and
Vulnerability Analysis and
Nutrition Survey
Rwanda 2012

Rwanda's great economic progress remains tempered by poverty, high population growth and malnutrition

Rwanda is a small, landlocked, densely populated country with little capital and few natural resources. Since the 1994 genocide it has made commendable progress in reducing poverty levels (from about 56.7% of the population in 2005/6 to 44.9% in 2010/2011.¹) and increasing agricultural production. It also has a rapidly growing economy (GDP growth of 8.6% in 2011).

Despite these improvements, Rwanda is still facing many developmental challenges including population growth, widespread poverty and high levels of chronic malnutrition.

The Comprehensive Food Security and Vulnerability Analysis (CFSVA) and Nutrition Survey 2012 is the third of its kind conducted in Rwanda, following those of 2006 and 2009. The purpose is to gain a better understanding of the nature and extent of food insecurity and malnutrition in the country. It seeks to analyse trends of food insecurity and malnutrition over time, measuring their extent and depth and identifying their underlying causes.

In addition, building on the recently released 'Third Integrated Household Living Conditions Survey' (EICV 3) and 'Rwanda Demographic Health Survey 2010' (DHS 2010), this study is specifically geared towards producing evidence based support for targeting (including at district level) of social protection and other assistance aimed at eliminating food insecurity and malnutrition in Rwanda.

Methodology and partners

Both primary and secondary data analysis were carried out. The analyses build on the results of similar surveys conducted in 2006 and 2009 and on the more recently released EICV 3 and DHS 2010.

Primary data collection took place over six weeks from early March to the end of April 2012, a period in between harvests when only 30% to 40% of all households have food stocks from their previous harvest. The survey was designed to provide statistically representative and precise information at the district level. Urban, rural and peri-urban households were all included in the sample.

In total, 748 key informant interviews were conducted while the household questionnaire was administered in 7498 households, and valid anthropometric measurements were taken for 7418 women and 4651 children. Mothers or carers of 1613 children aged 6-23 months were given a specific Infant and Young Child Feeding module. Personal digital assistants were used for the data collection.

The assessment was led by the Ministry of Agriculture and Animal Resources (MINAGRI), the National Institute of Statistics of Rwanda (NISR) and the World Food Programme (WFP). It was supported by the Swiss Agency for Development and Cooperation (SDC), One UN, WFP (via the Bill and Melinda Gates foundation), the Canadian International Development Agency (CIDA), World Vision Rwanda, Famine Early Warning Systems Network (FEWS NET) and MINAGRI. It was coordinated by the CFSVA and Nutrition Survey technical committee of MINAGRI and NISR in partnership with the Ministries of Local Government (MINALOC), Disaster Management and Refugee Affairs (MIDIMAR), Health (MINISANTE) and Gender and Family Promotion (MIGEPFOP).

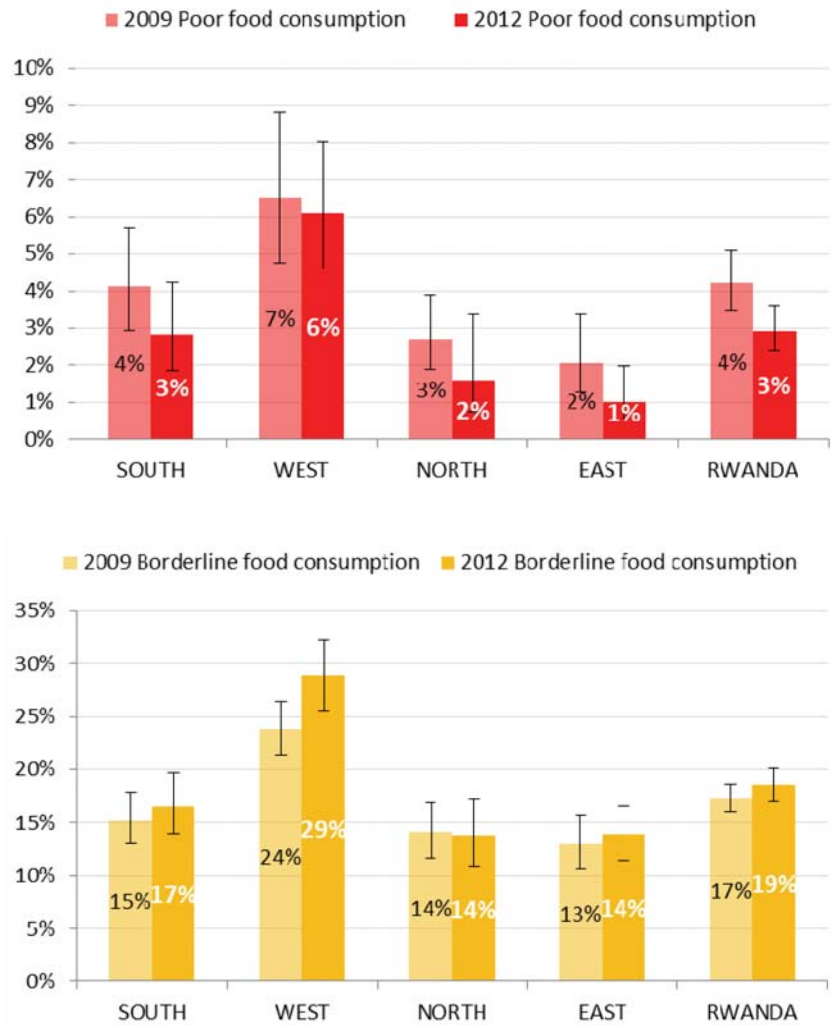
¹ EICV 3

Likely improvement in food security in last three years

In March/April 2012, one in five Rwandan households (21%) had unacceptable food consumption and could be considered to be food insecure. Out of the total population, 4% had poor food consumption (82,000 households), which represents an extremely insufficient and unbalanced diet, and 17% borderline food consumption (378,000 households). These figures show clear improvement since the 2006 CFSVA and seem to indicate a slight, although not confirmed, improvement in household food consumption since the last CFSVA and Nutrition Survey was conducted in February/March 2009.

This CFSVA uses the food consumption score as a preferred single indicator of 'current' household food security. Households with poor or borderline food consumption are considered to be food insecure while those with acceptable food consumption are food secure.

Food insecurity by province 2012 vs 2009 Confidence interval: 95%



Source: CFSVA and Nutrition Survey, 2009 and 2012



Stunting rates remain very high

Acute malnutrition among children aged between six months and five years² is the only nutrition indicator within 'acceptable' limits (3.6%).³ The prevalence of underweight,⁴ at 12%⁵ is classified as 'poor'.⁶

The prevalence of chronic malnutrition⁷ among children of this age has remained 'very high' in Rwanda over the last 20 years⁸ and still stands at 43%,⁹ making it one of the countries with the highest chronic malnutrition rates in the region.

Young mothers, mothers who have not completed secondary education and mothers who are stunted themselves are more likely to have stunted children.

The smaller the newborn, the more likely the child is to be stunted later on. After birth, stunting levels increase with age, particularly after the first year, confirming that the process of chronic undernutrition starts in the mother's womb. In Rwanda, boys are more stunted than girls.

²Wasting, measured by weight-for-height
³(CI 3.1-4.3%).

⁴Reflects both chronic and acute malnutrition, measured as weight for age

⁵(CI: 10.9-13.2%)

⁶WHO child growth standards

⁷Stunting, measured by height-for-age

⁸49% in 1992, 51% in 2005, 44% in 2010

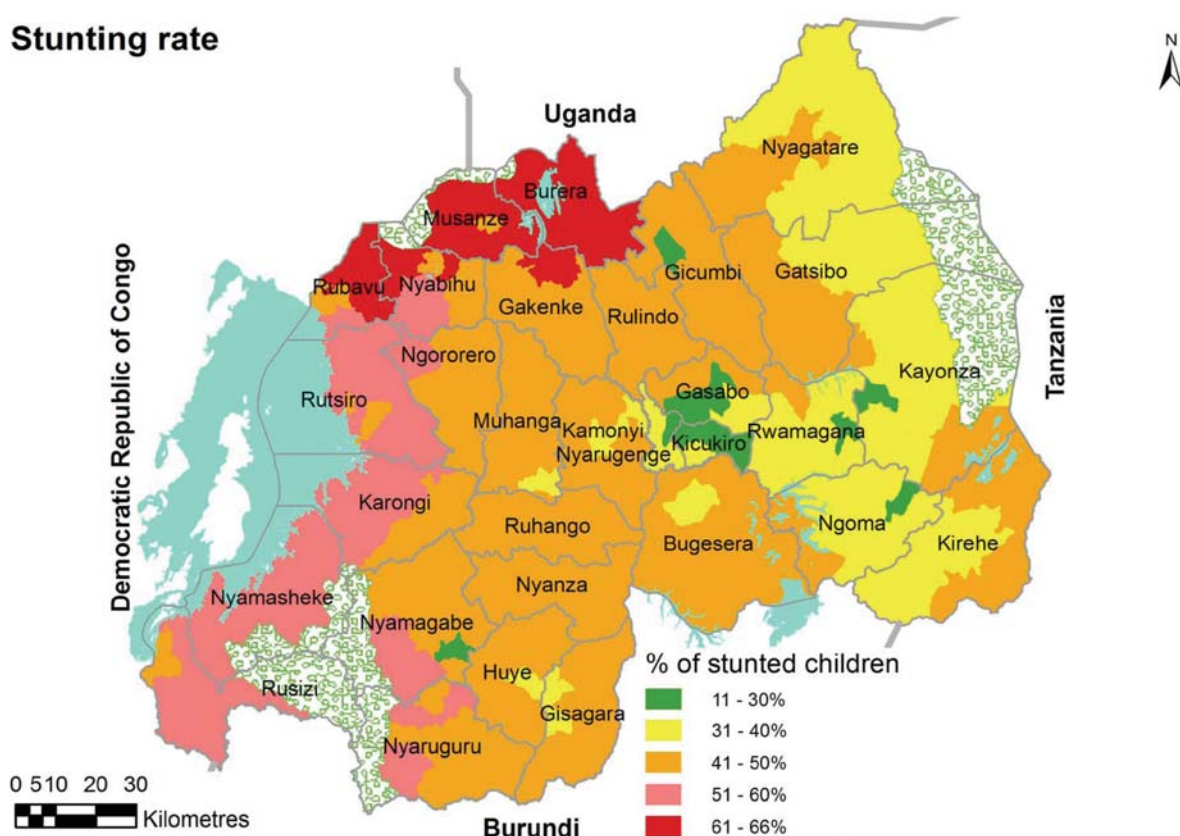
⁹(CI: 42.7-45.2%)

The types of foods consumed by children¹⁰ the day before the survey, which can be assumed as a proxy for the food consumed during the last 12 months, were significant predictors of their stunting. In particular, children between one and two years old who had consumed milk products, were significantly less stunted than other children of the same age category. Poorer children, as defined by their households' ubudehe category,¹¹ wealth or crowding are more likely to be stunted. Rates of stunting in the lowest two ubudehe categories exceed 50%.¹²

Children living in rural areas, on steeply sloping land and isolated from services such as hospitals are more likely to be stunted.

The northern livelihood zones have the highest rates of stunting, exceeding 60% in rural areas, followed by rural areas bordering Lake Kivu (51% stunting), and along the Congo Nile Crest (50%). At provincial level, the northern and western provinces have the highest rates of stunting with over half of all children between six months and five years of age stunted. Kigali has the lowest estimated stunting prevalence of all provinces.

Stunting rate



¹⁰Children between 12 and 23 months.

¹¹Since 2006, the government of Rwanda has generalized a system of classifying all Rwandan households into six categories that reflect their poverty. The categories should be based on criteria related to food insecurity and malnutrition.

¹²60% for category 1: those living in abject poverty and 53% for those in category 2: the very poor.



The food insecure are poor, rural families with irregular incomes

In Rwanda in March/April 2012, the food insecure were typically poor, rural households, living in small crowded homes, depending on low income agriculture and casual labour.

Household level poverty (measured by the wealth index) is an underlying cause of both food insecurity and malnutrition. Households in the two poorest wealth quintiles¹³ account for 73% of households with poor food consumption and 64% of households with borderline food consumption. Poor households simply cannot afford to access enough nutritious food to live a healthy active life or to invest in their livelihood. They are more vulnerable to high food prices - especially during the lean season when their own stocks have run dry. And they have no monetary buffer to protect them from the consequences of shocks such as drought, flooding, illness, crop disease etc.

The food insecure are more likely to rely on a small number of livelihood activities; often have no kitchen garden and their household food stocks are not sufficient to last through the lean season until the next harvest. The further households are located from a main road or market, the more likely they are to be food insecure. Food insecure households are more likely to be headed by a lowly educated, elderly person. The higher the level of education of the household head, the lower the likelihood of the household having a low food consumption score. By the same token, the lower the level of a mother's education the greater the chances of her having chronically malnourished (stunted) children.

Having a higher number of livelihood activities is significantly associated with better food consumption and food security. Households relying on more diversified activities, and especially urban households not involved in agricultural production, are better off in terms of food security.

Low income agriculturalists, agricultural workers and unskilled daily labourers (among the main livelihood activities in the country) have a lower food consumption score than households that are relying on livelihoods such as employment and business, agro-pastoralism, agriculture with medium/high income, selling of agriculture products, and those involved in informal selling.

In Rwanda, households that are not involved in agriculture at all are relatively better off than those that are. However, 85% of households in Rwanda cultivate land and rely on agriculture or livestock as the main (and often only) livelihood activity. For many of these households, access to productive land is a problem. The smaller the plot they are cultivating the more likely they are to have a low food consumption score. Some 60% of farming households cultivate plots smaller than 0.5 ha (26% below 0.2 ha) often on steep slopes with poor soil fertility.

¹³The 40% poorest households as measured by the wealth index.



Remote households and those in the western province face greater risk of food insecurity

Over 80% of food insecure households and households with stunted children live in rural villages.¹⁴ Percentages of households with unacceptable food consumption are especially high in the rural areas bordering Lake Kivu (42%) and West and East of the Congo Nile Crest (43% and 29% respectively), where soils are less fertile and the land more susceptible to erosion. Food insecure households are likely to live in remote villages far from the main roads. The further

households are from a main road, market, hospital or other public infrastructure, the more likely they are to be food insecure and their children are to be stunted.

The western province accounts for the largest numbers and highest rates of food insecure households.¹⁵ Although it is home to less than a quarter of all Rwandan households, half of all households with poor food consumption

¹⁴89% and 84% of households respectively

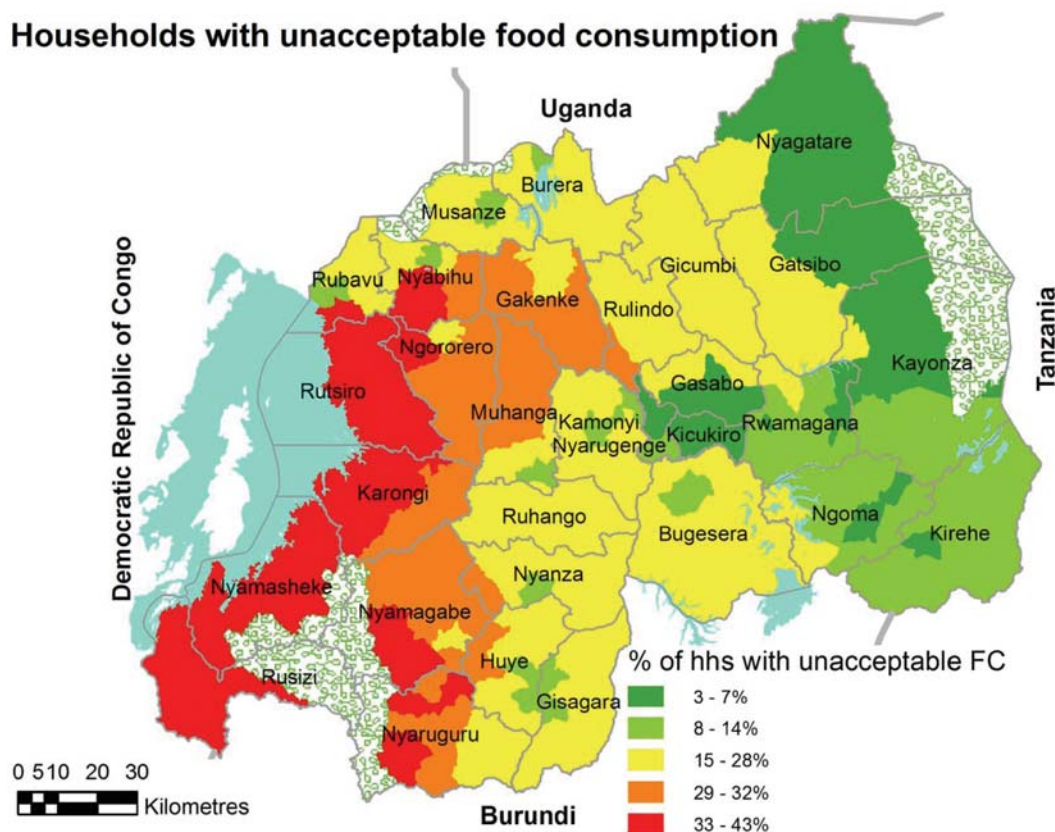
¹⁵65% of the rural households with unacceptable food consumption

live there as do 38% of those with borderline food consumption. Kigali has by far the highest proportion of households with acceptable food consumption¹⁶ followed by the eastern province,¹⁷ which is relatively better off than other provinces but most prone to rainfall deficit.

At district level, Rutsiro (53%), Ngororero (44%), Rusizi (49%), Nyamasheke (37%) and Karongi (37%) have the highest percentages of households with unacceptable consumption.

The poorer districts tend to have the highest share of households with poor food consumption and are located in the western and southern provinces. Almost three in four (70%) households with poor or borderline food consumption are in 13 districts - Ngororero, Rutsiro, Karongi, Rusizi, Gatsibo, Nyamasheke, Nyamagabe, Bugesera, Nyanza, Burera, Gakenke, Rubavu and Rulindo.

Households with unacceptable food consumption



¹⁶with between 88 and 96% households with acceptable food consumption

¹⁷between 84 and 88% households with acceptable food consumption

Rwandans face seasonal food access problems and are becoming increasingly market dependent

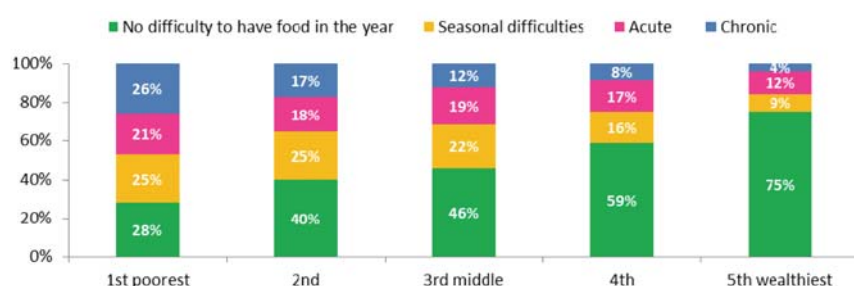
Lack of food availability does not seem to be driving food insecurity. Food production is increasing in Rwanda, markets are functioning relatively well and food is flowing easily within and outside the country thanks to the well-connected road network and market infrastructure.

One fifth (20%) of all households experienced recurrent seasonal challenges accessing food for their families (seasonal food access problems) in the year preceding the survey, while 17% experienced unusual difficulties at some point in the year in providing their families with food (acute food access problems) and 14% encountered these problems for most of the year (chronic food access problems). So in total, 51% of all households reported some type of difficulty

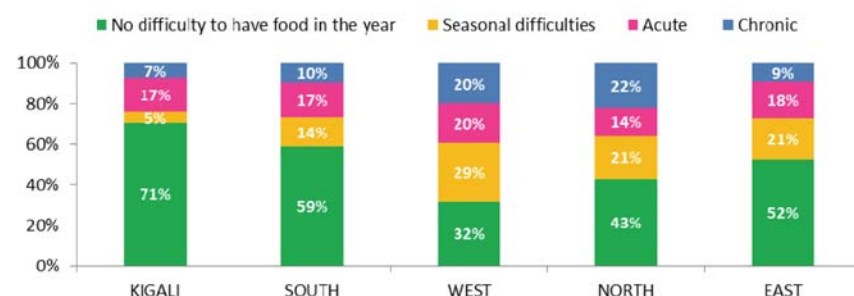
in accessing food in the 12 months preceding the survey.

Household reliance on markets is increasing, and constitutes the main source of food for Rwandans²¹ who, on average, spend almost half of their expenses on food. Seasonal price variations of staple crops are an important constraint to household access to food, especially during the lean seasons when private food stocks have run dry. Seasonal falls in demand for casual labour may also explain the seasonality of food security patterns for those households that rely on casual work as a livelihood source. Finally, as expected, households that still had food stocks from their last harvest available at the time of the survey had better food consumption and were significantly more food secure than those who did not.

Percentage of households reporting seasonal, acute and chronic difficulties in accessing food by wealth quintile



Percentage of households reporting seasonal, acute and chronic difficulties in accessing food by province



²¹ Markets provide, on average, 65% of the food consumed by a household with own production contributing an average of 30%. Other sources include fishing, gathering, hunting, exchange, borrowing, gifts and food aid.

Climatic shocks increase household vulnerability to food insecurity

Almost half (45%) of Rwanda's population faces the prospect of losing a major part of their livelihoods and becoming food insecure if confronted with moderate or severe rainfall deficits. If a major rainfall deficit were to affect the East (which happens every 4-5 years) an additional 170,000 households would become food insecure.

A fifth of Rwandan households are vulnerable to flooding with those in the southern and western provinces more exposed. As with drought/rain shortages, it is the high number of farming households, the poor and those that already have borderline food consumption patterns, that are hit hardest.

Recommendations

Based on these results, this report formulates recommendations on the way forward to improve food and nutrition security in Rwanda. They are related to:

- Improving coverage and targeting of assistance and social protection safety nets
- Upgrading household living conditions, strengthening livelihood strategies and tackling poverty
- Developing and diversifying agricultural production
- Building community resilience to food and nutrition insecurity
- Improving child food consumption
- Monitoring and further analysing the food security and malnutrition situation.



For more information, please contact:

Ernest Ruzindaza, Permanent Secretary
MINAGRI: eruzindaza@minagri.gov.rw

Yusuf Murangwa, Director General
NISR: yusuf.murangwa@statistics.gov.rw

Abdoulaye Balde, Representative & Country Director
WFP: Abdoulaye.Balde@wfp.org



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