

**Trend Analysis:
Key Food Security &
Nutrition Indicators**

Mozambique



January 2016

**Data collected in
2006, 2009 and 2013**

Mozambique Trend Analysis: Key Food Security & Nutrition Indicators (2016)

This report was produced by the World Food Programme, using data from Mozambique's Technical Secretariat for Food Security and Nutrition (SETSAN).

© World Food Programme, VAM Food Security Analysis

Cover Picture: © WFP/ Ricardo Franco

For information about the Food Security Analysis/VAM, please visit:
<http://www.wfp.org/food-security> or write to: wfp.vaminfo@wfp.org

United Nations World Food Programme Headquarters

Via C.G. Viola 68, Parco de' Medici, 00148, Rome, Italy

For questions or comments concerning any aspect of the surveys or this report please contact:

WFP Mozambique: Ms Ute Meir ute.meir@wfp.org

Mrs Lara Carrilho lara.carrilho@wfp.org

Mr Domingos Reane domingos.reane@wfp.org

WFP Regional Office: Mr Andrew Odero Andrew.odero@wfp.org

Mrs Veronica Rammala veronica.rammala@wfp.org

WFP Headquarters: Ms. Aysha Twose aysha.twose@wfp.org

Mr. John McHarris john.mcharris@wfp.org

Table of Contents

1. KEY POINTS.....	4
2. BACKGROUND AND OBJECTIVES.....	5
3. FOOD CONSUMPTION IN MOZAMBIQUE	6
3.1 Dietary Diversity.....	6
3.2 Food Consumption Score.....	9
3.3 Food Consumption Score – Nutrient Adequacy Analysis.....	18
4. FOOD SOURCES, MARKETS & FOOD PRICES	28
4.1 Food Sources.....	28
4.2 Markets & Food Prices.....	29
5. CONSUMPTION COPING STRATEGIES	32
5.1 Consumption Coping by province.....	33
5.2 Consumption Coping by urban/rural	33
5.3 Consumption coping by gender	34
6. CONCLUSION & SUMMARY OF TRENDS AND EXPLANATIONS	35
7. ANNEXES	41

1. KEY POINTS

- There was a significant improvement in household FCS at national level from 2006 – 2009: the percentage of households with unacceptable food consumption fell from 39% to 27%. However this improvement was not maintained. By 2013, the national prevalence had edged back up to 32%, but had not reached the 2006 levels.
- While urban food insecurity improved slightly between 2009 and 2013, it was rural Mozambique that saw a declining situation, especially the northern provinces of Niassa, Cabo Delgado, Nampula, Zambezia and Tete.
- At provincial level, the brightest picture emerged for Inhambane. Many of its districts suffered from high levels of food insecurity in 2006. By 2009, the situation had improved dramatically though food insecurity persisted in some districts. By 2013, the majority of households in all districts in Inhambane had acceptable FCS.
- Across all years, women were more likely to have unacceptable food security than men but the gap between men and women narrowed with time. Without exception, households headed by women resorted to more frequent and/or more severe coping strategies across all provinces in 2009 and 2013 than those headed by men.
- Nationally, in 2013, the consumption of protein rich foods had barely shifted since 2006 and was considerably worse than in 2009, particularly in rural northern Mozambique. The situation was particularly concerning in Nampula and Zambezia.
- Consumption of heme iron rich foods has also remained worryingly low especially in the north. In fact, the percentage of households that did not consume these foods **at all** in the week before the survey was considerably higher in 2013 than in 2006 and 2009 across all four most northern provinces (Niassa, Cabo Delgado, Zambezia and Nampula) - even though the situation had improved between 2006 and 2009.
- Consumption of vitamin A rich foods has improved remarkably. By 2013, nationally, two in three households were eating vitamin A rich foods on a daily basis, almost treble the 2006 levels. The improvement was particularly striking in urban Mozambique.
- Since 2009 households have become increasingly dependent on buying food from markets and less on their own production, making poorer households who spend a high percentage of their outgoings on food especially vulnerable to food insecurity when market prices are hiked. Mozambique is highly dependent on imported food, so its poorest people are increasingly affected by global events that inflate food prices.

2. BACKGROUND AND OBJECTIVES¹

Mozambique is one of the least developed countries in the world ranked at 178 out of 187 on the Human Development Index. Life expectancy is just 50 years. 24% of the population is chronically food insecure (down from 35% in 2006) and half a million children aged 6-23 months are undernourished.

A reduction in poverty has been seen across the country, with the national poverty rate decreasing from 69.4% in 1996/97 to 54.7% in 2008/09. Moderate and extreme poverty still persists in the central region, in which almost 60% of the population fall below the poverty line (Third National Poverty Survey 2008/2009).

Chronic malnutrition (measured by stunting) remains alarmingly high at 43% of children under five in 2008-2012 (UNDP 2014 Human Development Index). Underlying causes of malnutrition include inadequate nutritional intake due to poor diet diversity, low meal frequency, poor breastfeeding practices, high levels of disease and teenage pregnancy. Chronic malnutrition is more widespread in the poorest Northern provinces, where poor food utilization is common, and access to health services, water and sanitation and education is more limited than in the south.

The prevalence of stunting, already high in infants under 5 months, increases sharply during the first two years of life, mainly because of inadequate feeding practices, especially regarding exclusive breastfeeding and because complementary feeding lacks diversity and is particularly poor in foods of animal origin.

In rural areas, where 70% of the population lives, a main constraint to food security is physical access to food because of limited markets and bad quality roads. Smallholder farmers (who account for 95% of agricultural production) are particularly affected by the frequent natural shocks and climatic events that Mozambique regularly experiences. These include floods (in the Zambezi valley in particular), drought (in southern and central provinces) and cyclones. These natural disasters cause fatalities, casualties, illness and they destroy infrastructure, crops and livelihoods. In urban areas, economic access to food is a major issue, especially in times of soaring food prices.

The country is severely affected by the HIV/AIDS pandemic (11.1% of the adult population is HIV positive according to UNAIDS assessment 2012), which compromises the social and economic progress the country is striving to attain.

The three surveys used for this analysis are two national food security and nutrition baselines conducted in 2006 and 2013 and an annual vulnerability assessment conducted in 2009. All were coordinated by the Technical Secretariat for Food Security and Nutrition (SETSAN) with participation of members and partners, using random sampling by National Statistics Institute (INE).

The 2006 survey interviewed 6,763 households. Data were collected in September in all 10 provinces.

In the 2009 survey, data was collected in all 10 provinces in August. The survey was a collaboration between WFP and the Technical Secretariat for Food Security and Nutrition (SETSAN); it was based on interviews with just over 4,000 households.

For the 2013 survey, data was collected in all 10 provinces from mid-November 2013 to mid-January 2014 from a sample of 6,898 households that were randomly selected. The final report was released in October 2014 by SETSAN. WFP Mozambique's role was to provide data analysis and training.

¹ This section is adapted from the WFP county profile and FAO nutrition country profile http://www.fao.org/ag/AGN/nutrition/moz_en.stm

This trend analysis compares data from three food security and nutrition surveys: that of 2006, 2009 and 2013 to ascertain whether food insecurity and dietary diversity has improved over that time. It looks at provincial level data and compares findings by gender and wealth quintile as well as urban versus rural data, where possible.

It demonstrates and explains trends in key food security indicators across the three surveys. Wherever possible, we have attempted to explain the underlying causes of these trends using data from the monitoring systems and market price information.

As a first step in the process, data collection modules from all three years were closely examined to determine comparability. This included looking at questions, response options and recall periods. Despite the fact that not all the data collection modules were comparable from the three surveys, there were sufficient similar modules to be included in this trend analysis. There may however have been differences in data collection which could impact results. The 2006 survey did not allow for urban vs. rural disaggregation.

3. FOOD CONSUMPTION IN MOZAMBIQUE

3.1 Dietary Diversity

The household dietary diversity score (HDDS)² is a count of food groups consumed by the household in the 24 hours before the interview. It is a snapshot of the economic ability of a household to access a variety of foods. The 2006 and 2009 modules are comparable, but the 2013 module was based on a seven-day recall period, which makes it not comparable with the other two years. However, this module has been included to show general trends in diversity by province, geographical area and gender.

Households consuming a diet heavy in staples with little diversity can be considered food insecure. Vulnerable people spend a larger share, if not all, of their food budget on starchy staples, which provide cheap sources of calories. They forfeit more nutritious items that provide proteins and micro-nutrients.

Throughout the country, rural Mozambican households mainly eat maize. In the north they also eat cassava - a staple with low protein content. Urban households consume maize, wheat products and rice. Except for the green leafy vegetables which often accompany the staples, the diet is lacking in micronutrient-rich foods (other vegetables, fruit and foods of animal origin) and protein, although in urban areas the consumption of street foods, snacks and sugar-rich foods is becoming more common.

The above-mentioned cereals and starchy roots provide almost 80% of the dietary energy supply. Nationally, the consumption of staples has remained constant across the three survey years with around four in five families consuming them daily. Fruit and vegetable consumption has been increasing: in 2009 just one in five households consumed them daily rising to about three in four by 2013. See section 3.3 on Food Consumption Score-Nutrient Adequacy Analysis for more detailed information on consumption of micronutrient foods.

² Guidelines for Measuring Household and Individual Dietary Diversity:
http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/FAO-guidelines-dietary-diversity2011.pdf

Nationally, from 2006 – 2009 the HDDS dropped slightly: on average households consumed 5.3 out of 12 food groups in 2006 falling to just five in 2009 (see figures 1 and 2).

Figure 1: HDDS score nationally and by province, 2006 vs. 2009

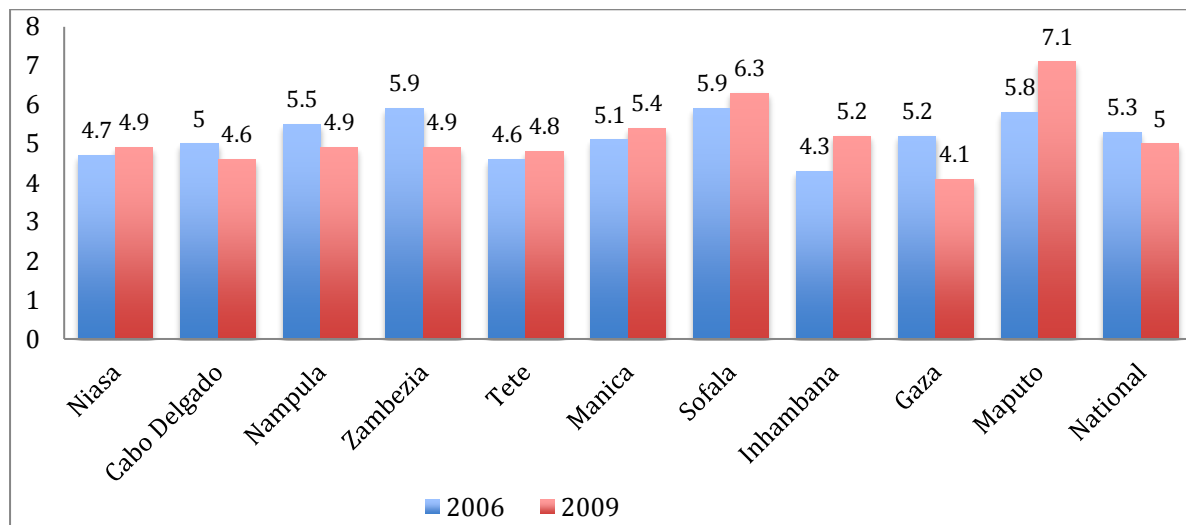
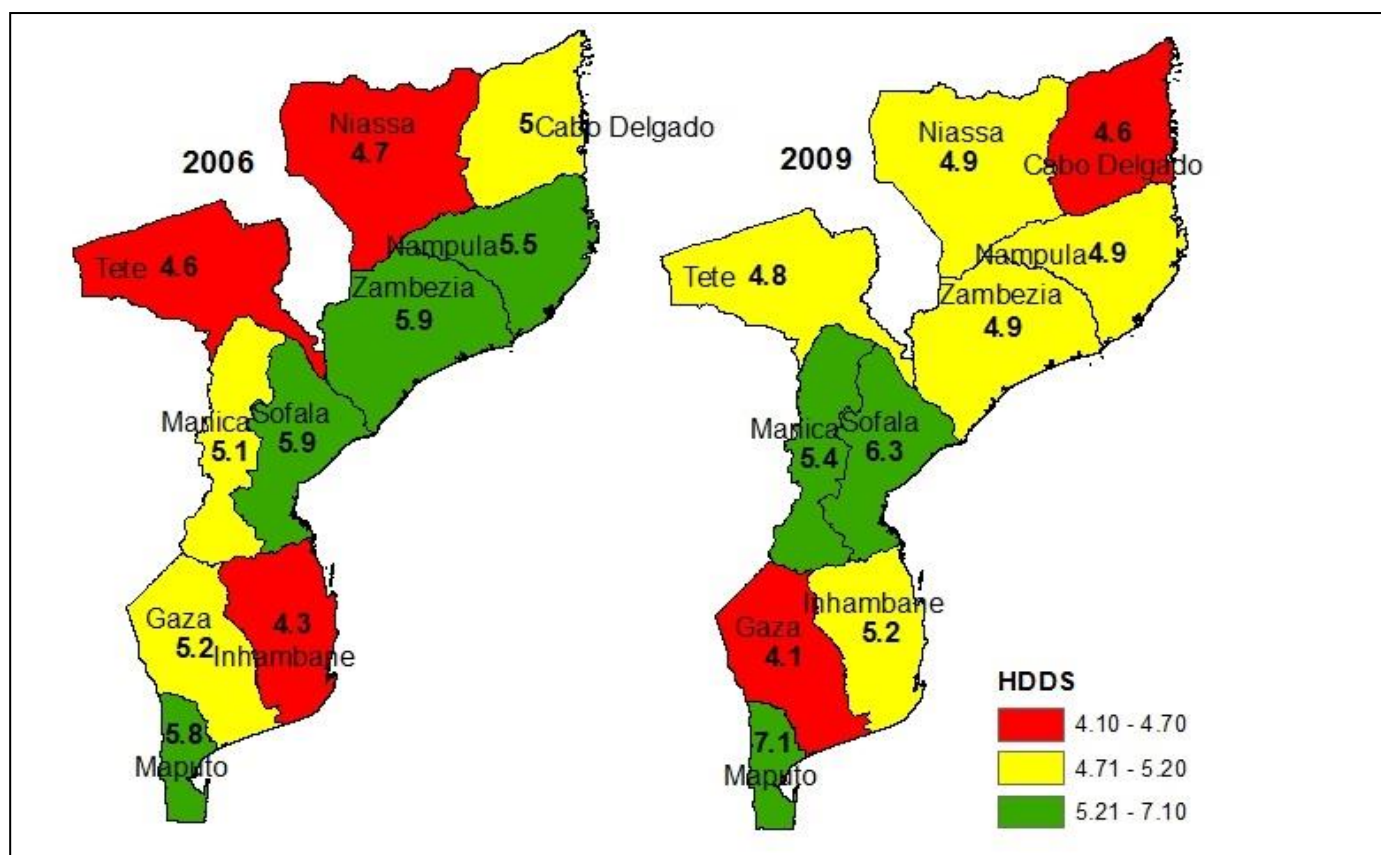


Figure 2: HDDS score by province, 2006 vs. 2009, maps



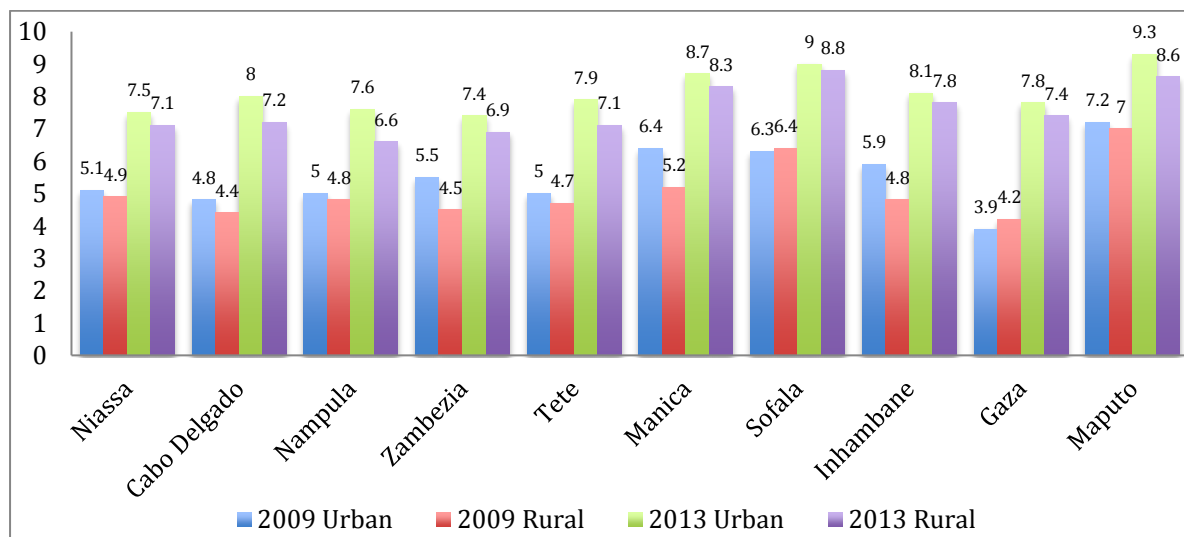
At the provincial level there was a strong positive change between 2006 and 2009 in the capital Maputo from 5.8 to 7.1. However, HDDS scores worsened in Cabo Delgado, Nampula and Zambezia in the north. This may be linked to above normal rainfall and floods in recent years, which have reduced agricultural yield in this surplus producing area of the country. Although the 2013 data is not comparable with the other two years, the Northern provinces and Gaza also had the lowest dietary diversity scores in 2013 over a seven day recall.

Urban households had better food diversity than rural in all provinces in both 2009 and 2013 except in urban Gaza in 2009, where dietary diversity was the poorest in the country at just 3.9.

In 2006, Inhambane in the south had the lowest dietary diversity score. There was encouraging province-level improvement over the following three years, but with a very marked difference between urban & rural Inhambane, with food diversity far lower in the province’s rural communities.

Urban households had better food diversity than rural in all provinces both in 2009 and 2013 except in urban Gaza in 2009, where dietary diversity was the poorest in the country at just 3.9 (figure 3). Please note that as mentioned above, the 2006 survey did not allow for urban rural comparisons.

Figure 3: Dietary diversity score urban vs. rural, 2009 and 2013



Please note that these two years are not comparable as the recall period differed – thus the scores may look higher in 2013 than in 2009, but this is misleading.

As table 1 shows, households headed by women had lower diversity than those headed by men in the three surveys, across all provinces with the exception of Cabo Delgado and Gaza in 2009 and Nampula in 2006. Between 2006 and 2009, dietary diversity in households headed by women worsened in the three northern provinces of Niassa, Nampula, Zambezia, and in Gaza in the south. Although the 2013 data isn’t comparable with the other two years, we can still see that women-headed households in these four Northern provinces fared the worst along with those in the other two northern provinces of Cabo Delgado and Tete.

And across all three years there was a slight increase in diversity as the wealth quintile increased, but the difference was most marked for the highest quintile: it appears the richest quintile can afford a considerably more varied diet than that of the poorest 80%. This finding was particularly strong in 2013.

Table 1: Average household dietary diversity score at provincial level, male vs. female headed households, 2006, 2009 and 2013

	2006		2009		2013	
	Male	Female	Male	Female	Male	Female
Niassa	4.6	5.0	5.0	4.6	7.5	7.1
Cabo Delgado	5.2	4.2	4.5	4.6	8.0	7.2
Nampula	5.2	5.9	4.9	4.8	7.6	6.6
Zambezia	5.9	5.6	5.0	4.6	7.4	6.9
Tete	4.8	3.9	4.9	4.3	7.9	7.1
Manica	5.0	4.9	5.5	5.1	8.7	8.3
Sofala	6.2	5.3	6.4	5.9	9.0	8.8
Inhambane	4.6	4.2	5.3	4.9	8.1	7.8
Gaza	5.4	5.0	4.0	4.2	7.8	7.4
Maputo	5.8	5.8	7.2	6.8	9.3	8.6

Please note 2013 is not comparable with two other survey years as recall period was different

3.2 Food Consumption Score

The household dietary diversity analysis does not take into account the nutritious values of the items consumed, whereas the Food Consumption Score (FCS) combines food diversity, food frequency (the number of days each food group is consumed) and the relative nutritional importance of different food groups by assigning each with a weight. The FCS is a standardized frequency weighted diet diversity score. It is therefore a good proxy indicator of household food security. It is computed by grouping together the food items for which consumption was assessed over a seven-day recall period. The frequency represents the number of days the food was consumed in one week, ranging from '0' (never) to '7' (every day). A weight is assigned to each food group based on nutritional quality (see table 2). The FCS is calculated by multiplying the frequency by the nutritional weight for each food group, and summing all food groups together.

The specific quantities consumed are not recorded within the FCS. Only food items consumed in a substantial quantity during the seven-day recall period are recorded; small quantities are not included.

Once the FCS is computed, two thresholds (21 and 35) are used to distinguish consumption level. The thresholds define three groups: households with **poor** food consumption (≤ 21); **borderline** food consumption (> 21 and ≤ 35); and **acceptable** food consumption (> 35).

Both poor and borderline food consumption are considered unacceptable.

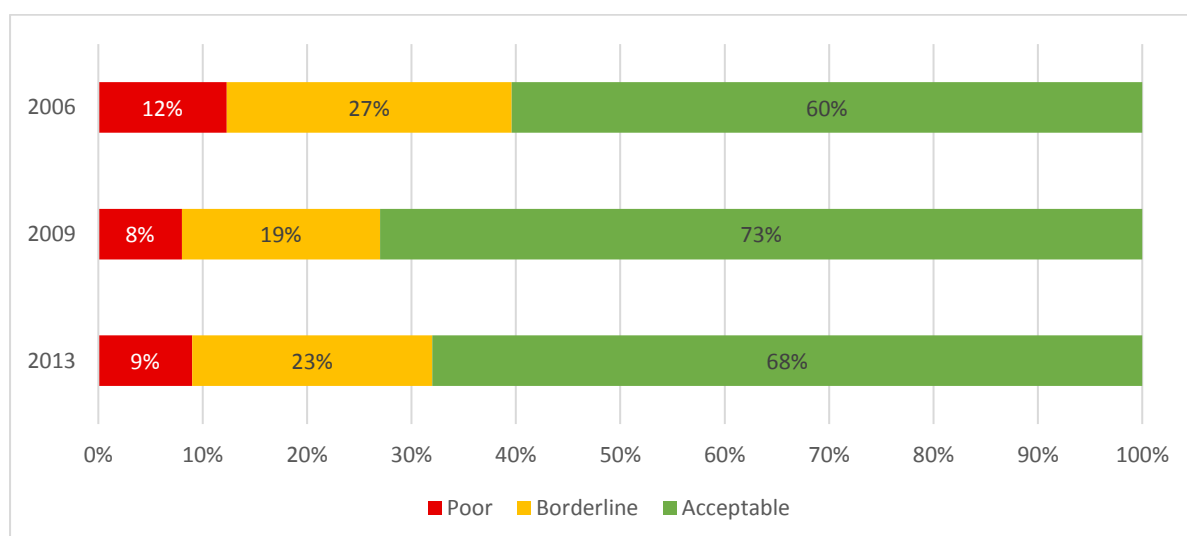
Table 2: Food items, groups and weights for calculation of FCS

Food Items	Food Group	Weight
1. Cereals: corn, wheat, sorghum, rice, bread; Roots and tubers: manioc, sweet potatoes; Banana	Staples	2
2. Pulses: peanuts, beans	Pulses	3
3. Vegetables: including green leafy vegetables, shoots	Vegetables	1
4. Fruits	Fruits	1
5. Animal Proteins: fish, meat, eggs	Meat & fish	4
6. Milk & milk products	Milk	4
7. Oil and fats	Oil	0.5
8. Sugar	Sugar	0.5

3.2.1. National FCS

As figure 4 shows, there was a large improvement in the household FCS at national level from 2006 – 2009 with the percentage of households with unacceptable food consumption (poor + borderline) falling from 39% to 27% of households. However this improvement was not maintained and by 2013 the national prevalence of households with unacceptable food consumption had edged back up to 32%, but had not reached the 2006 levels.

Figure 4: Household food security status (by FCS), 2006, 2009 and 2013



3.2.2 FCS by rural/urban

Figure 5 shows that between 2009 and 2013 food security in urban areas improved very slightly. By 2013, only a fifth of urban households were considered food insecure. So the national prevalence figure was affected by the declining situation in rural Mozambique where the percentage of food insecure households rose from 30% to 38%.

Food insecurity has improved in urban areas between 2009 and 2013 but declined in rural Mozambique

Figure 5: Urban vs. rural food security status (by FCS), 2009 and 2013

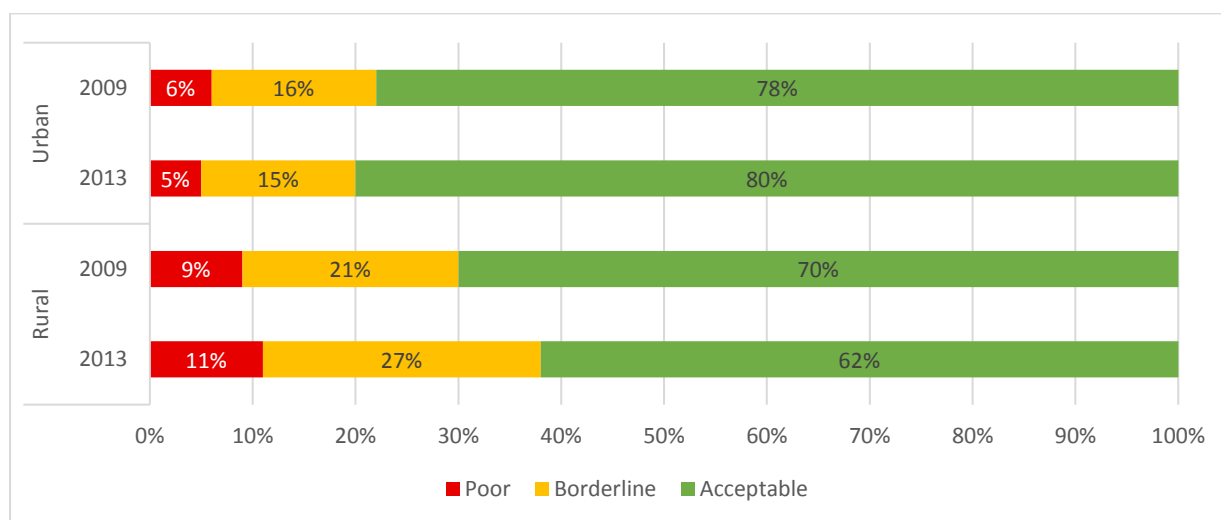
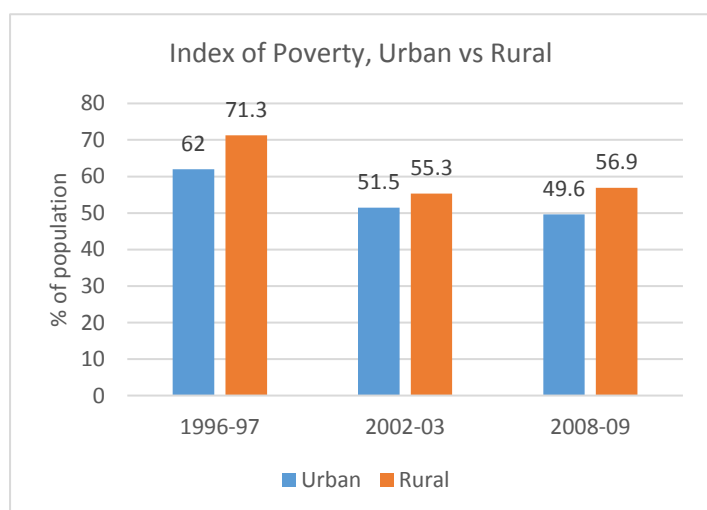


Figure 6: Poverty Headcount- 1996/97, 2002/03, 2008/09



The Mozambican National Institute of Statistics conducted nationally representative household budget surveys in 1996/97, 2002/03 and 2008/09. These surveys allow comparison of trends in consumption poverty. In Figure 6, the data demonstrates that although poverty rates are declining, urban poverty has declined more steadily than rural poverty. And similar to the food security figures above, there was a moderate increase in rural poverty in the most

recent survey (08/09) – however the report clearly notes that this increase (from 55.3% to 56.9%) is not statistically significant. Refer to Annex 1 for province level poverty figures across the surveys.

3.2.3 FCS by province

The improvement in food consumption between 2006 and 2009 was especially marked in the two northern provinces of Niassa and Nampula and in Inhambane, which all had a very high prevalence of households with poor food consumption in 2006. In 2009, food insecurity was dispersed across the country. In this year, it was worst in drought and flood prone Gaza; only 45% of rural Gaza households achieved acceptable levels of food consumption in 2009. Some 72% of households with land reported that they did not harvest at all. Both urban and rural households in this province were highly dependent on purchasing their food especially maize, peanuts and rice (for more on food sources and markets, see section 4).

By 2013, regional trends emerged; there was a clear north - south divide with food insecurity most severe in the five poorer northern provinces of Niassa, Cabo Delgado, Nampula, Zambezia and Tete (see table 3 and figures 6 and 7). Food insecurity prevalence in Niassa worsened slightly by comparison with 2009, and food insecurity prevalence in Nampula hit 2006 levels. As explained above, the deterioration of food consumption in the northern region may be due to disasters (above normal rainfall and floods) that have occurred in the recent years, reducing agricultural production.

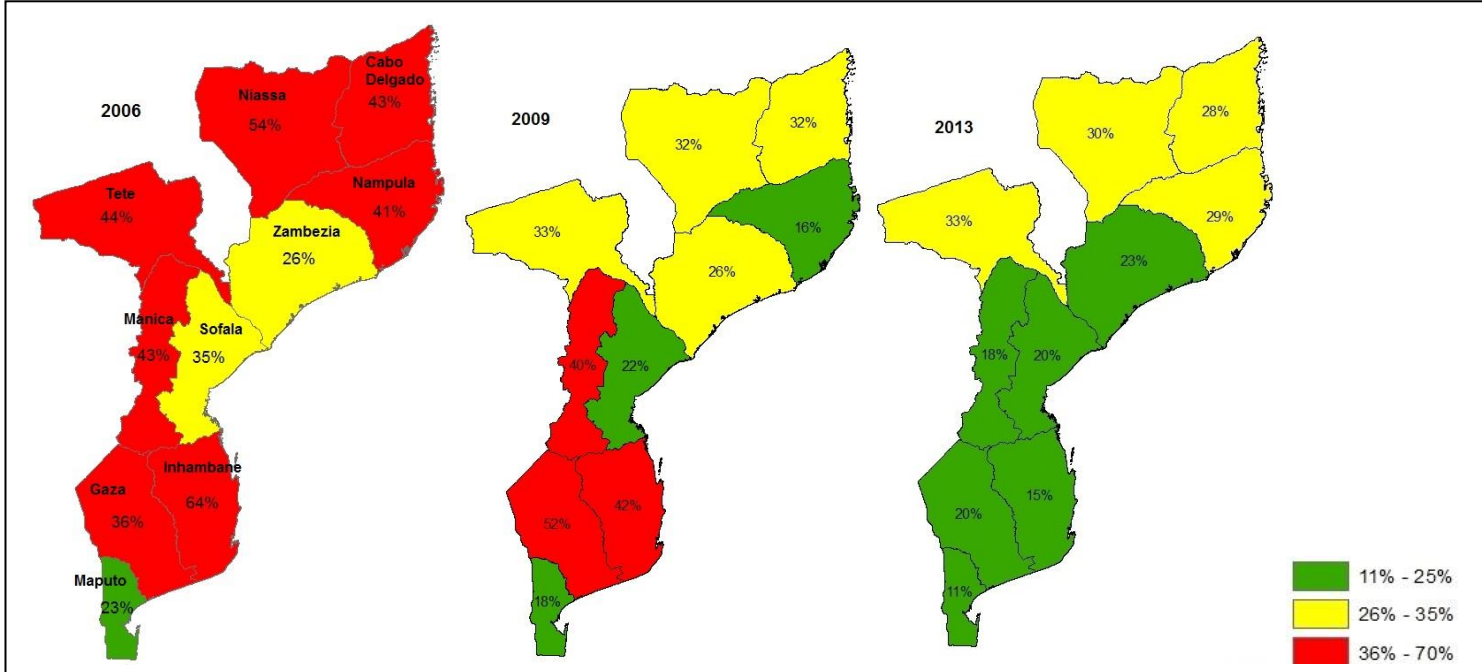
The brightest picture emerged for the southern province of Inhambane, where the situation continued to improve considerably; by 2013 some 82% of households had acceptable food security. Fortunately for Inhambane, it has not been affected by disasters in recent years. This stability likely contributed to the improvement in household food security.

Table 3: Household food security status by FCS indicator by province, 2006, 2009, 2013

	2006			2009			2013		
	Poor	Borderline	Acceptable	Poor	Borderline	Acceptable	Poor	Borderline	Acceptable
Niassa	44	10	46	3	29	69	14	30	56
Cabo Delgado	7	36	57	15	17	68	13	28	61
Nampula	14	27	59	3	13	84	15	29	57
Zambezia	2	24	73	11	15	75	13	23	64
Tete	11	33	56	9	24	67	11	33	57
Manica	6	37	57	11	29	60	4	18	78
Sofala	12	23	65	2	20	77	1	20	79
Inhambane	31	33	37	8	34	58	3	15	82
Gaza	9	27	65	14	38	47	4	20	78

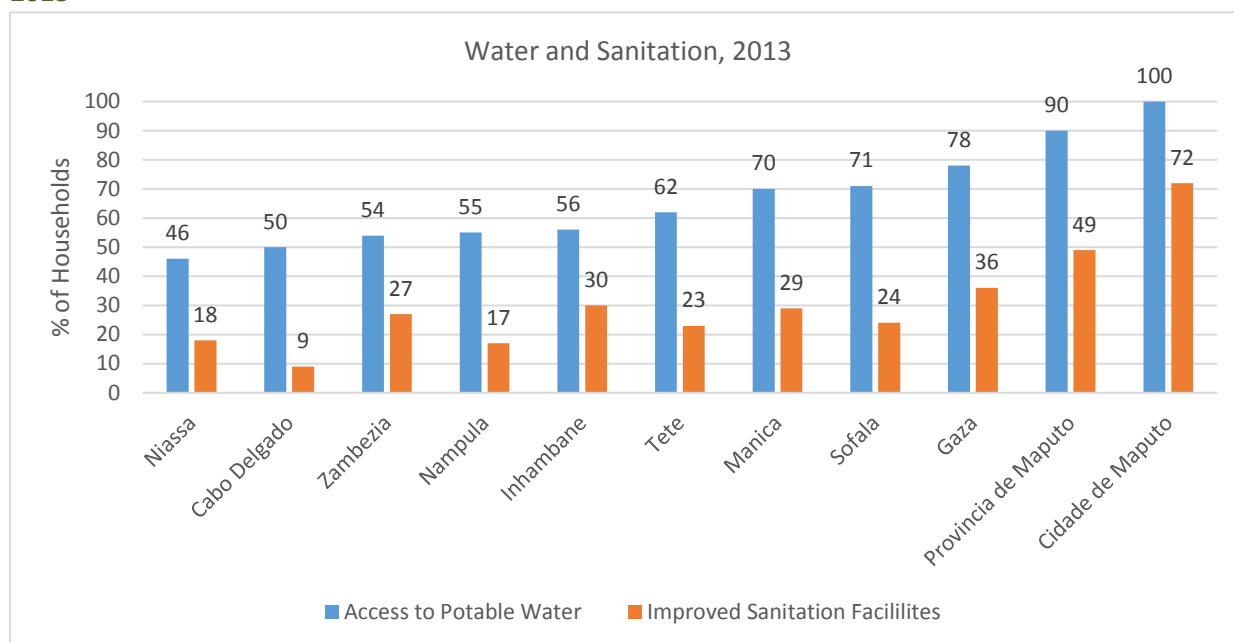
Maputo	2	21	77	6	12	83	1	11	88
--------	---	----	----	---	----	----	---	----	----

Figure 7: Percentage of Households with Poor & Borderline Food Consumption Score by Province, 2006, 2009, 2013



Similarly, it is interesting to note that access to potable water and improved sanitation services seems to follow similar patterns in 2013. The northern districts are clearly worse off by these measurements (see Figure 8), which indicates less infrastructure development and investment in public services in these areas of the country. Rates of childhood morbidity are also higher in these areas (see Annex 3). These factors could influence household expenditure patterns and therefore food security, though the link between the two cannot be concretely established with these datasets.

Figure 8: Percentage of households with potable water access and improved sanitation facilities, 2013



3.2.4 FCS by district

Using census and sample data and weights, the survey data at province level was analysed to extrapolate district figures. Below is spotlights on three districts with interesting trends: Nampula, Maputo and Inhambane.

Nampula Spotlight: FCS Trends

In 2006 the high food insecurity prevalence figure for Nampula province was skewed by that of four of its districts. These were Meconta (88% poor FCS), Malema, Muecate and Murrupula. By 2009, the majority of households in these districts and others in the province (except Memba, Nacaroa and Nampula) were considered to have acceptable FCS.

But by 2013, the food security situation had worsened again in these districts, especially in Muecate and Meconta as well as in Angoche, Erati-Namapa, Ilha de Mocambique, Memba, and Monapo





Inhambane Spotlight: FCS Trends

Many of Inhambane's districts suffered from high levels of food insecurity in 2006. These were chiefly Govuro, Homoine, Inharrime, Jangamo, Morrumbene and Zavala.

By 2009, the situation had improved dramatically though food insecurity persisted in Jangamo and worsened in Mabote and Panda. As mentioned above, the situation continued to improve through 2013 by which time the majority of households in all districts had acceptable FCS

Maputo Spotlight: FCS Trends

Over the course of the three survey years Maputo province has seen a steady improvement in household food security status. By 2013 about 88% of households had acceptable food security.

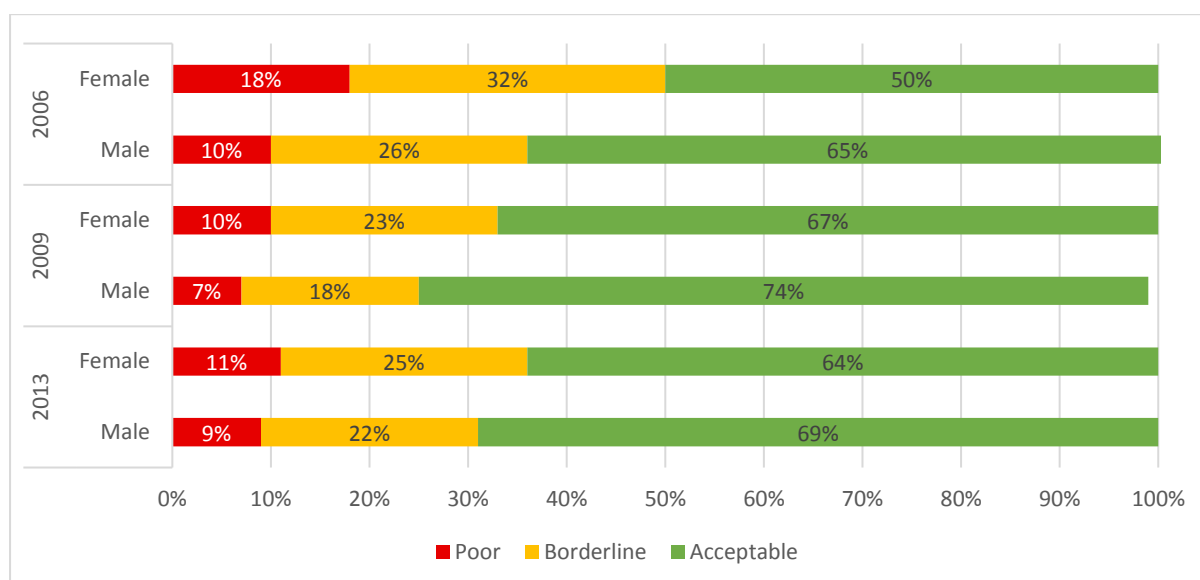
In the capital, Maputo city, the prevalence was even higher at 93% and slightly lower in rural districts of the province though not falling below 72% except in Matutuine district where 73% of households had borderline and 9% poor FCS. In 2013 food security in this latter district was markedly worse than in 2006 and 2009.



3.2.5 FCS by gender

As figure 10 shows, across all the years, female-headed households were more likely to have unacceptable food security than male-headed households but this gap narrowed with time; by 2013 the difference was only 5%.

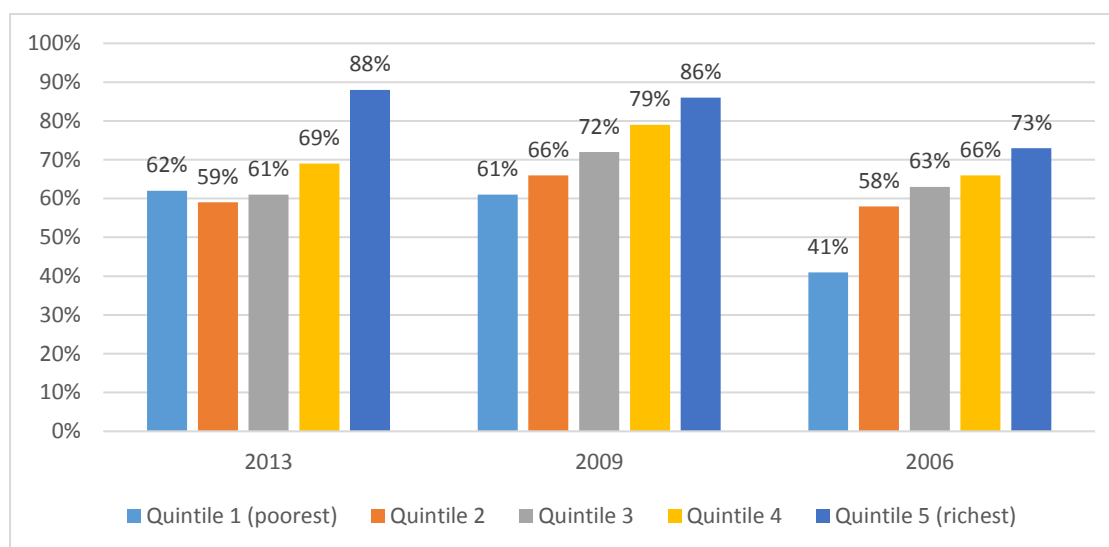
Figure 10: Household food security status (by FCS) male-headed households vs female-headed households, 2006, 2009 and 2013



3.2.6 FCS by Wealth Quintiles

A wealth index is constructed through Principal Component Analysis; it is a composite measure of a household's standard of living. The wealth index uses a variety of assets and housing characteristics to split households into quintiles. It is well documented that food security status is closely correlated with wealth status and all three surveys bear this out: the higher the wealth quintile the better the food consumption score of the household. The difference in food security when measured by the FCS between the middle three quintiles was not so marked, especially in 2013. Those in the wealthiest quintile consistently enjoyed an elevated food security status throughout all three survey years.

Figure 11: Percentage of households with acceptable food consumption by wealth quintile, 2006, 2009, 2013

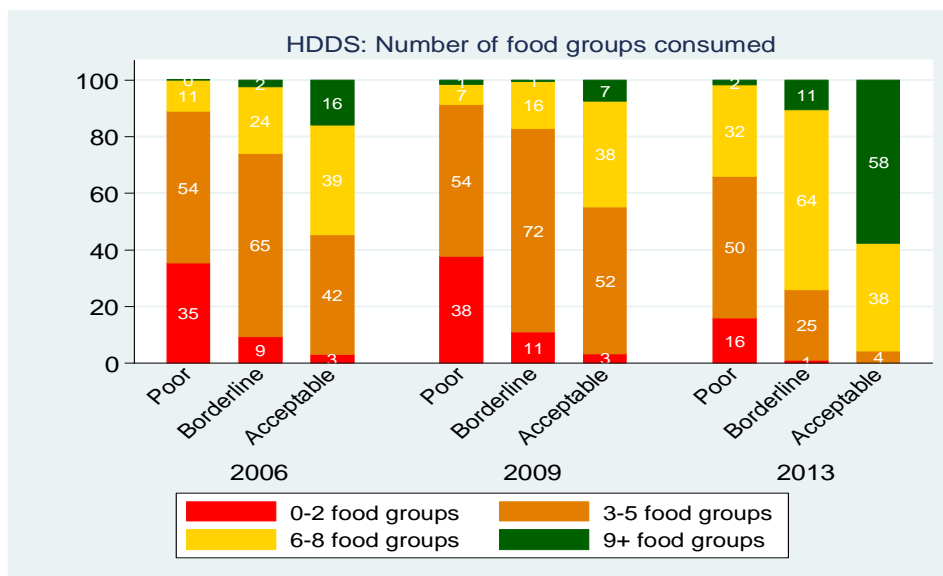


3.2.7 FCS Groups and Dietary Diversity

As the FCS is constructed based on frequency of food groups consumed and each group's nutritional weight, it is logical that households with higher FCS will have more diverse diets. This is demonstrated when examining the diversity of diets by FCS groups.

In 2006 and 2009, well over a third of households with poor FCS consumed two or fewer food groups in the 24 hours before the survey – using data from the HDDS module. Most likely, this would be a staple and green vegetable. Very few ate more than five food groups. As noted above, the 2006 and 2009 HDDS modules were 24 hour recall, while the 2013 HDDS module was based on 7 day recall. Despite the fact that the two modules are not comparable, the pattern is the same; some 16% of households with poor FCS consumed 0-2 food groups in the previous week.

Figure 12: Number of food groups (from HDDS module) consumed by FC group



3.3 Food Consumption Score – Nutrient Adequacy Analysis

The Food Consumption Score Nutrient Adequacy Analysis (FCS-N)³ attempts to improve the link between household level food access/consumption and nutritional outcomes. The analysis uses data collected through the FCS module, and examines how often a household eats foods rich in a certain nutrient. The thesis of FCS-N is that the number of times a household eats a food particularly rich in a specific nutrient can be used to assess the likely adequacy of that nutrient.

Through the validation process, a distinction has been made between three categories: never (0 times) sometimes (1-6 times) and at least daily (7 times or more) consumption in a week.

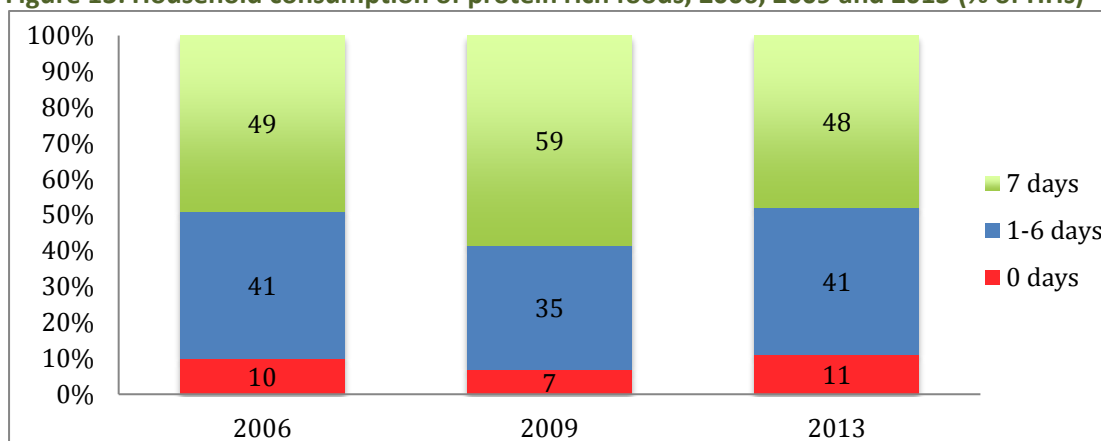
The following sections show the consumption of protein rich foods remains low for about half of households and the consumption of hem iron rich foods is very infrequent for almost all households, while consumption of vitamin A rich foods has improved remarkably. The frequency of fruit and vegetable consumption reduced from 2006 to 2009 and increased from 2009 to 2013, with 71% of households consuming these products seven days a week.

³ See Food Consumption Score-Nutrition technical guidance for more details

3.3.1 Protein

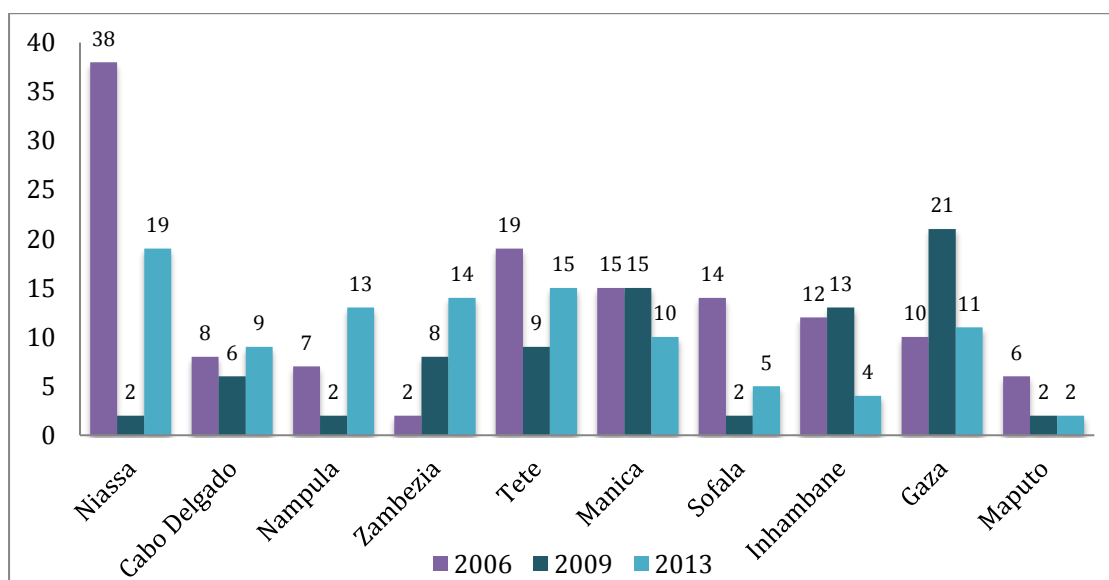
Nationally, in 2013, the consumption of protein rich foods had barely shifted since 2006 and was considerably worse than in 2009 (see figure 13).

Figure 13: Household consumption of protein rich foods, 2006, 2009 and 2013 (% of HHs)



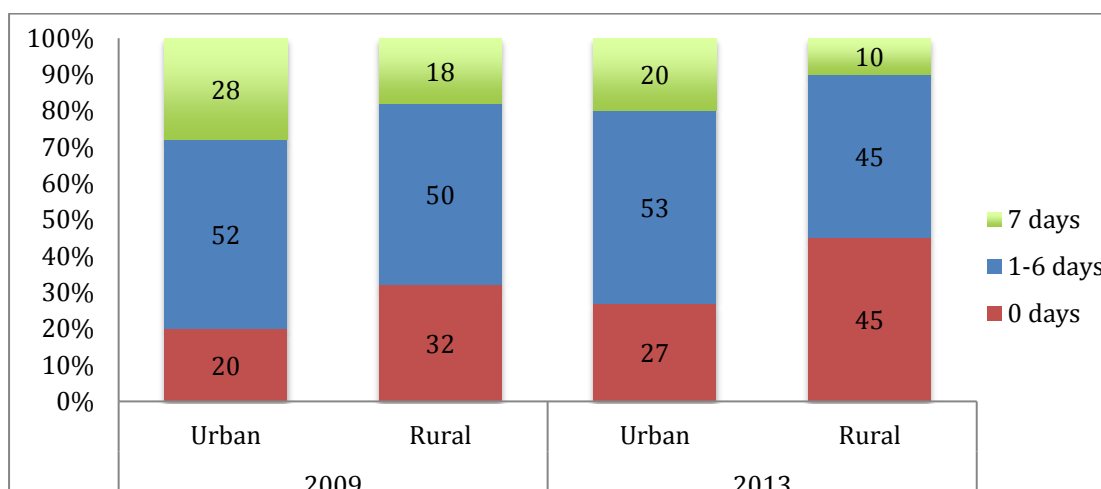
The situation was particularly concerning in Nampula and Zambezia, where the percentage of households not consuming protein at all in the week before the survey was much higher than in the previous two surveys, and in Niassa and Tete where it remained high. However, improvements have been especially encouraging in the southern provinces of Inhambane, and Maputo.

Figure 14: Percentage of households that did not consume protein rich foods in the 7 days before the survey, by province 2006, 2009 and 2013



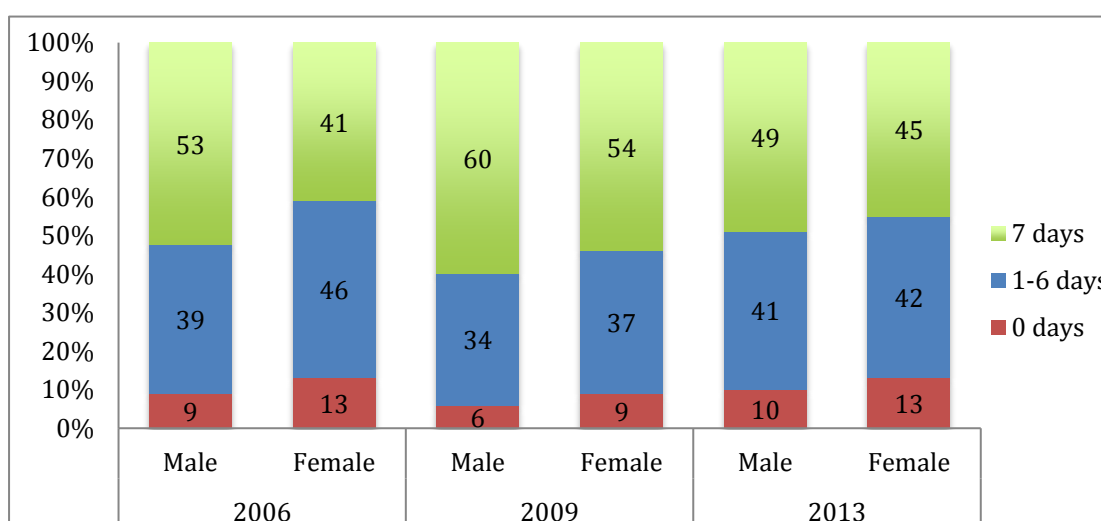
Both in 2009 and 2013, protein consumption was lower in rural than urban areas (urban/rural split data was not available for 2006). Notably by 2013 consumption was considerably lower in rural Mozambique than it had been four years earlier (see figure 15).

Figure 15: Consumption of protein rich foods, urban and rural, 2009 and 2013 (% of HHs)



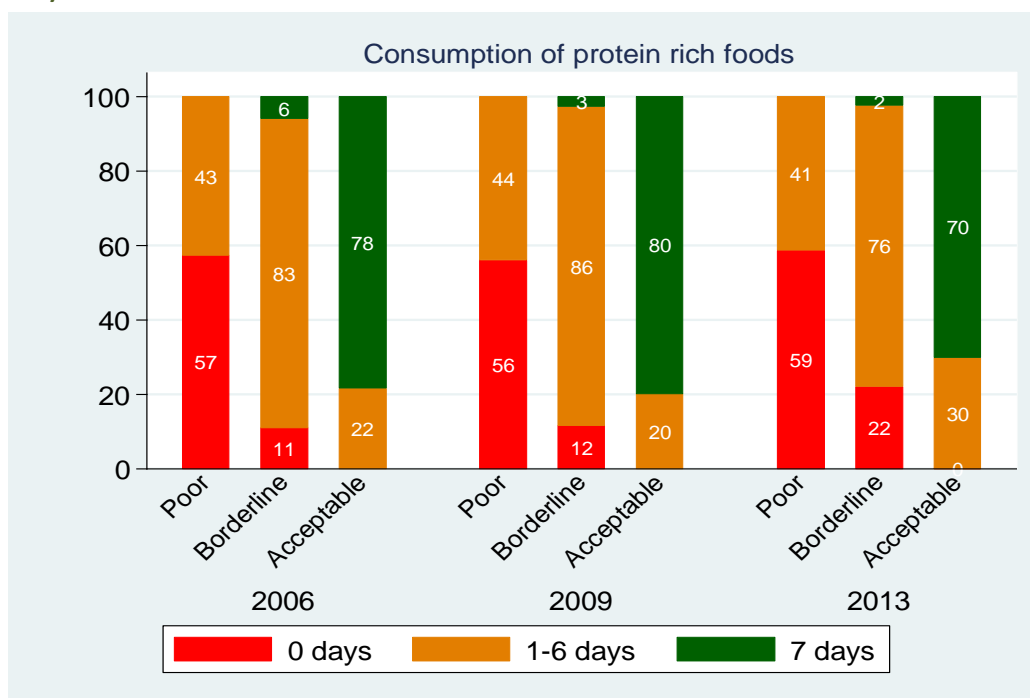
As figure 16 shows, households headed by women were more likely to have low protein diets than those headed by men according to all three surveys but the gap between the sexes had narrowed slightly by 2013.

Figure 16: Consumption of protein rich foods male vs female headed households, 2006, 2009 and 2013 (% of HHs)



Across all the three survey years, households with poor FCS had diets that were severely lacking in proteins with the situation remaining constant across the years. Conversely, across the three survey years, the large majority (70-80%) of those with acceptable food consumption ate protein rich foods every day (see figure 17).

Figure 17: Consumption of protein rich foods by Food Consumption Groups, 2006, 2009, 2013 (% of HHs)



3.3.2 Vitamin A

Vitamin A (retinol) is an essential nutrient needed in small amounts by humans for the normal functioning of the visual system; growth and development; and maintenance of epithelial cellular integrity, immune function and reproduction (FAO/WHO, 2002). It is found in animal products, liver and fish liver oils (especially), egg yolk and dairy products, green leafy vegetables, yellow vegetables (e.g., pumpkins, squash and carrots), and yellow and orange non-citrus fruits (e.g., mangoes, apricots and papaya).

In 2001-2002, a national survey found that 71.2% of children aged 6-59 months were deficient in Vitamin A.⁴ In 2003, 52% of children aged 6-59 months in Mozambique had received Vitamin A supplementation;⁵ that figure had increased to 75% by 2011.⁶

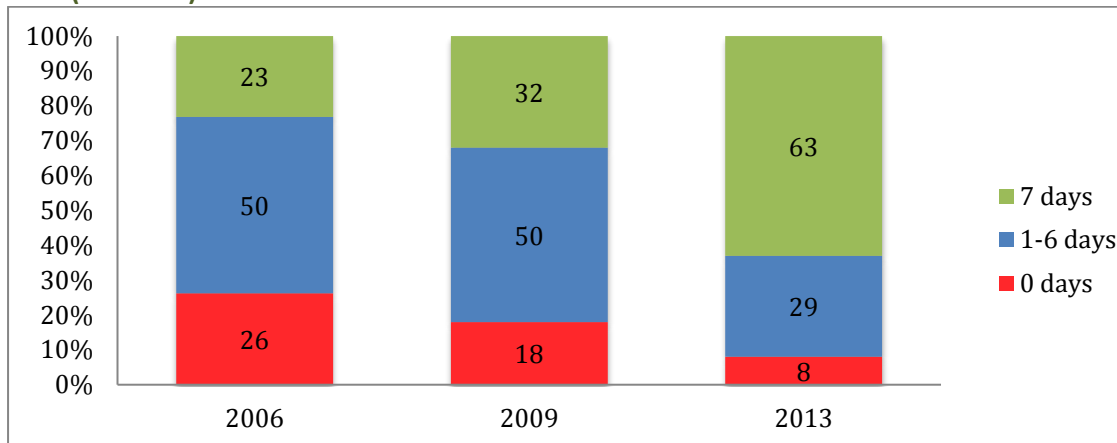
There was a very encouraging rise in the household level consumption of vitamin A rich foods in Mozambique over the course of the three survey years. At the national level, 63% of households were consuming vitamin A rich foods on a daily basis in 2013 - almost treble the 2006 levels . It is possible that this huge increase is due to differences in data collection modules.

⁴ Aguayo, Victor M., et al. "Vitamin A deficiency and child mortality in Mozambique." *Public Health Nutrition* 8.01 (2005): 29-31.

⁵ Instituto Nacional de Estatística, Ministério da Saúde [Mozambique] and Macro International Inc. Mozambique Demographic and Health Survey 2003 [Dataset]. Data Extract from MZIR41.SAV and MZHR41.SAV. Integrated Demographic and Health Series (IDHS), version 1.0, Minnesota Population Center and ICF International [Distributors]. Accessed from <http://idhsdata.org> on 11 January 2016.

⁶ Instituto Nacional de Estatística, Ministério da Saúde [Mozambique] and ICF International. Mozambique Demographic and Health Survey 2011 [Dataset]. Data Extract from MZIR62.SAV and MZHR62.SAV. Integrated Demographic and Health Series (IDHS), version 1.0, Minnesota Population Center and ICF International [Distributors]. Accessed from <http://idhsdata.org> on 11 January 2016.

Figure 18: Household level frequency of consumption of vitamin A rich foods, 2006, 2009 and 2013 (% of HHs)



The improvement in consumption of Vitamin A rich foods was consistent across all provinces and was especially clear in Niassa and Inhambane (see Figure 19). The positive change was particularly striking in urban Mozambique. Figure 20 shows that while in 2009 there was little difference between urban and rural areas, the difference was clear in 2013, especially in Nampula where 19% of rural households did not consume vitamin A rich foods versus just 6% of urban.

Figure 19: Percentage of households that did not consume vitamin A rich foods in the 7 days before the survey, maps, 2006, 2009 and 2013

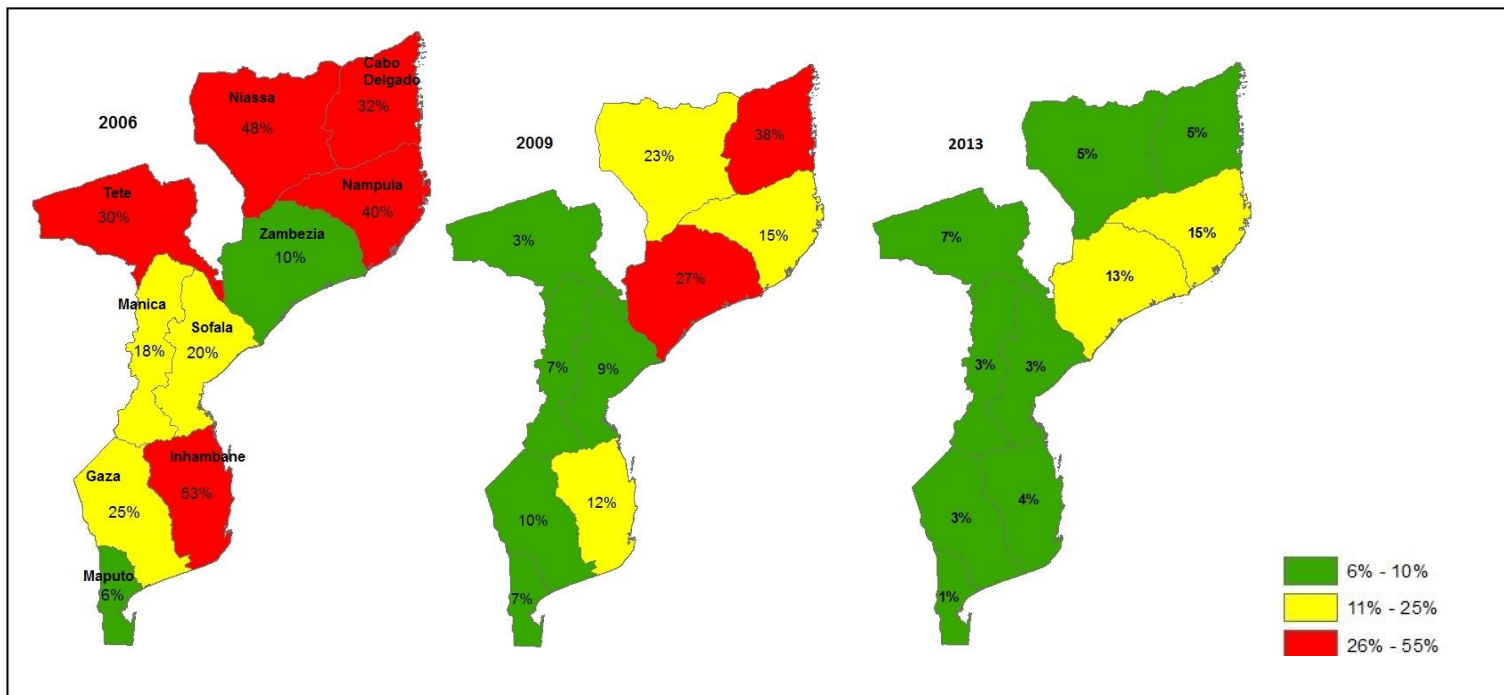
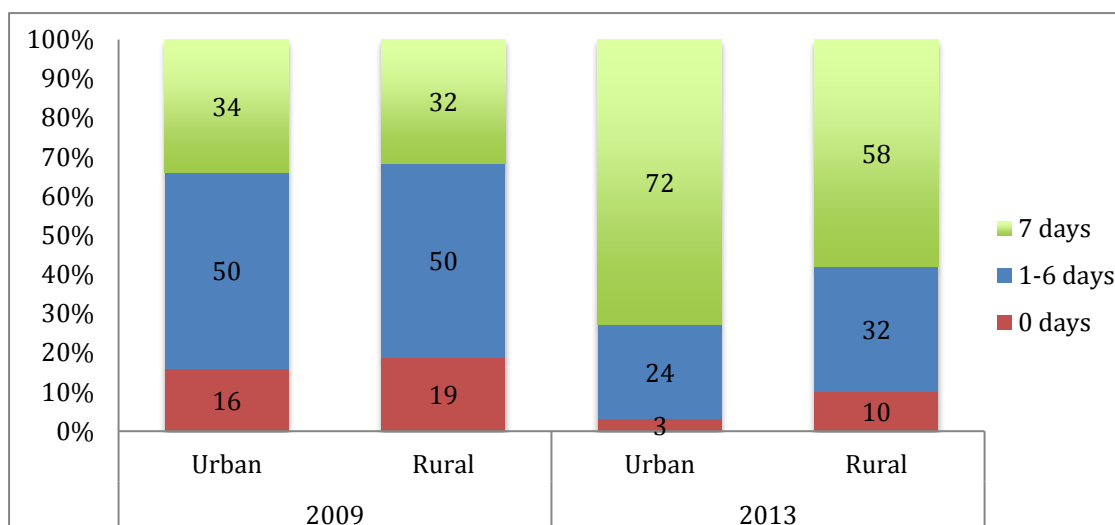


Figure 20: Consumption of vitamin A rich foods, urban and rural, 2009 and 2013 (% of HHs)



By 2013, there was little difference in consumption of vitamin A rich foods by gender of the household head, but it had been more marked in the previous years (Figure 23). The exception was Nampula province, where in 2013, 25% of households headed by women had not consumed any products rich in vitamin A in the week before the survey compared with 13% of those headed by men.

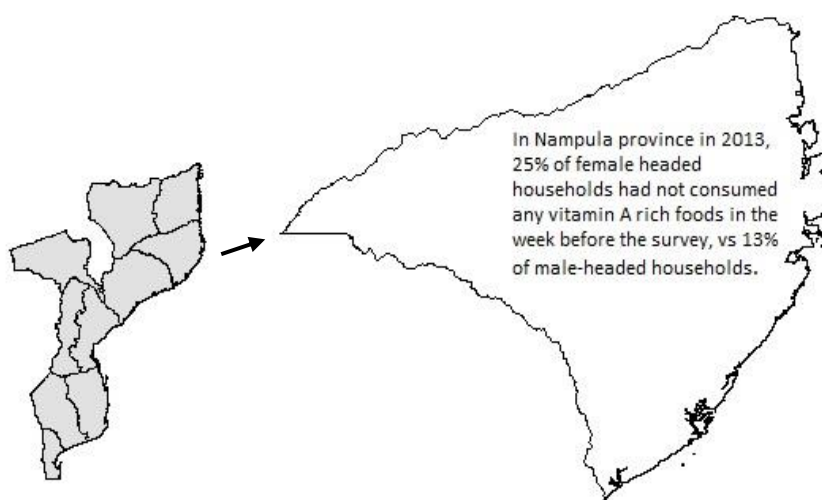
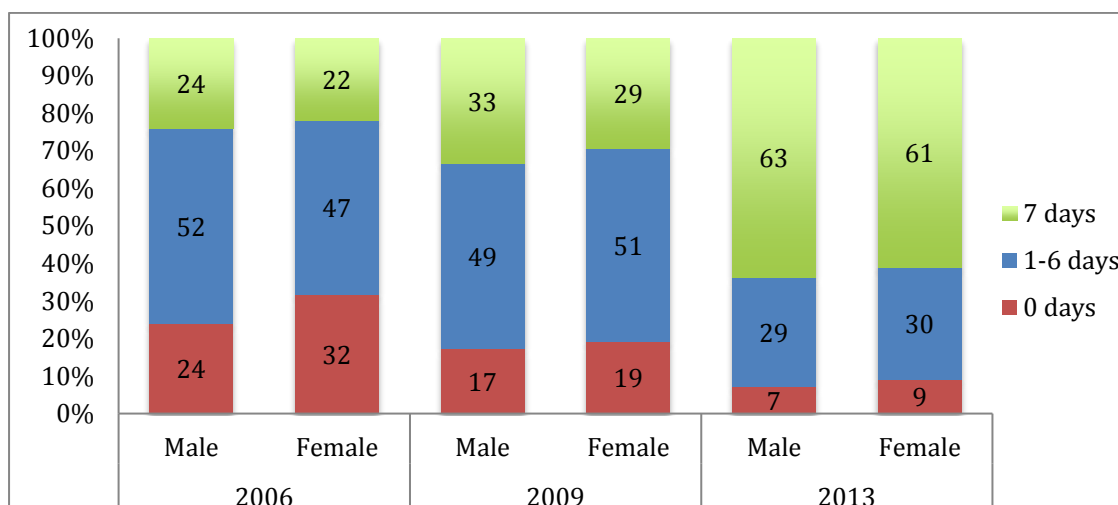
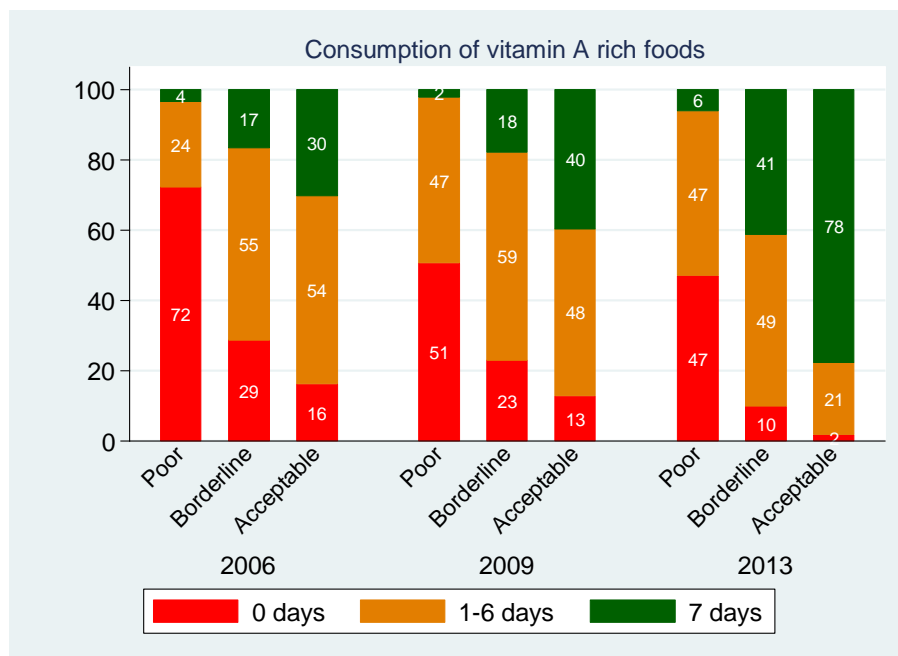


Figure 21: Consumption of vitamin A rich foods male vs female headed households, 2006, 2009 and 2013 (% of HHs)



When considering Vitamin A rich food consumption by FCS groups, by 2013 even those households with unacceptable food consumption were more likely to consume foods rich in vitamin A than they were in the previous two survey years. By 2013, almost 80% of households with acceptable FCS were eating vitamin A rich food on a daily basis. (see figure 22)

Figure 22: Consumption of vitamin A rich foods by FCS groups, 2006, 2009 and 2013 (% of HHs)



3.3.3 Hem Iron

The body absorbs the most iron from hem sources rather than non-hem. Hem iron is found in animal foods that originally contained hemoglobin, such as red meats, fish and poultry. Nationally, households in Mozambique were consuming hem iron rich foods less frequently in 2013 than in 2006

and 2009. Coverage of iron supplementation in women remained insufficient in 2013, especially in rural areas; only 9% of mothers who gave birth in the five years preceding the DHS survey had received iron supplements, in comparison with 23% in urban areas.⁷

Figure 23: Household level consumption of hem iron rich foods 2006, 2009 and 2013 (% of HHs)

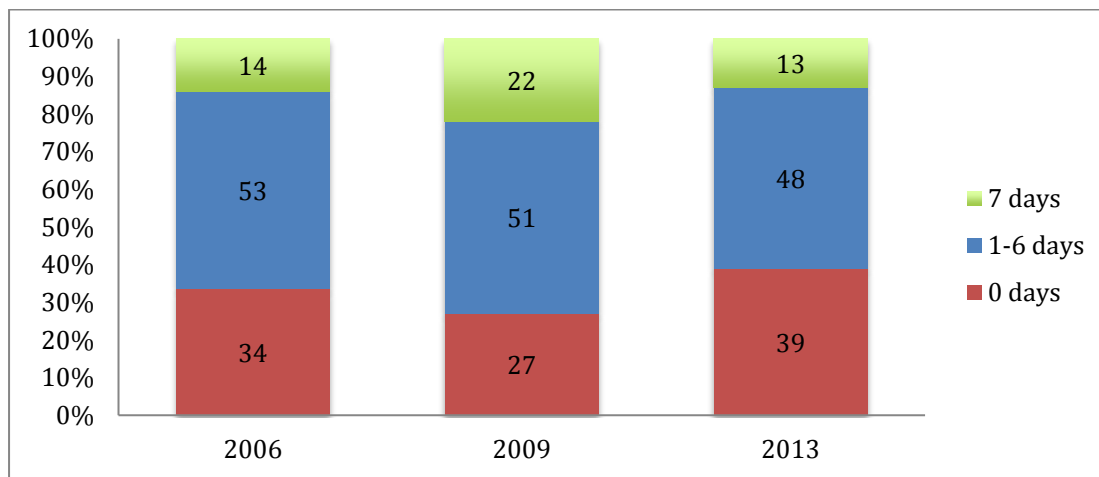
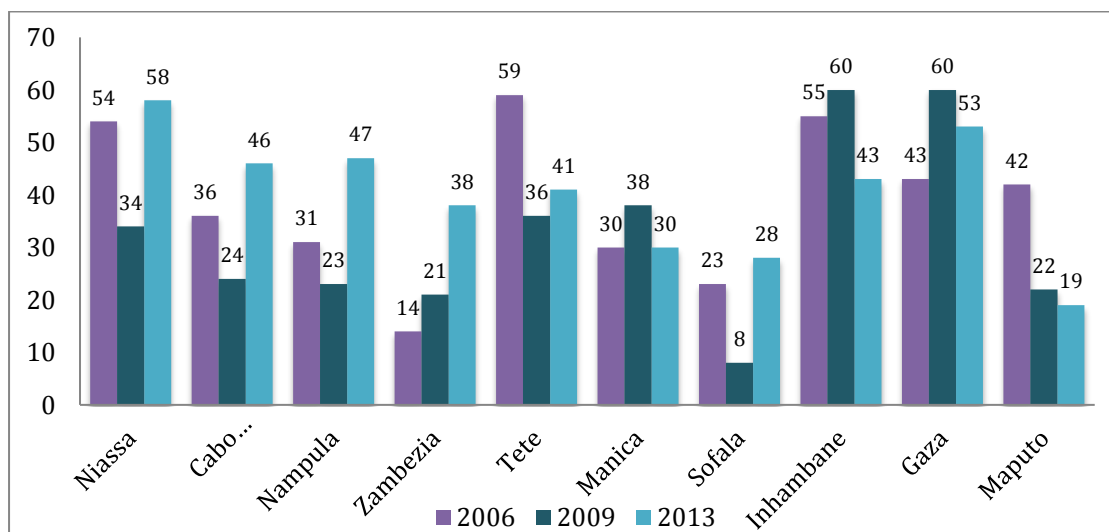


Figure 24 shows that hem iron consumption was particularly poor by 2013 across all four most northern provinces (Niassa, Cabo Delgado, Zambezia and Nampula) - even though the situation had improved between 2006 and 2009. This figure also illustrates that in multiple provinces in 2013, over 45% of the population did not consume any hem iron in the 7 days preceding the survey. The data shows Niassa, Cabo Delgado, Nampula and Gaza as the worst in the country.

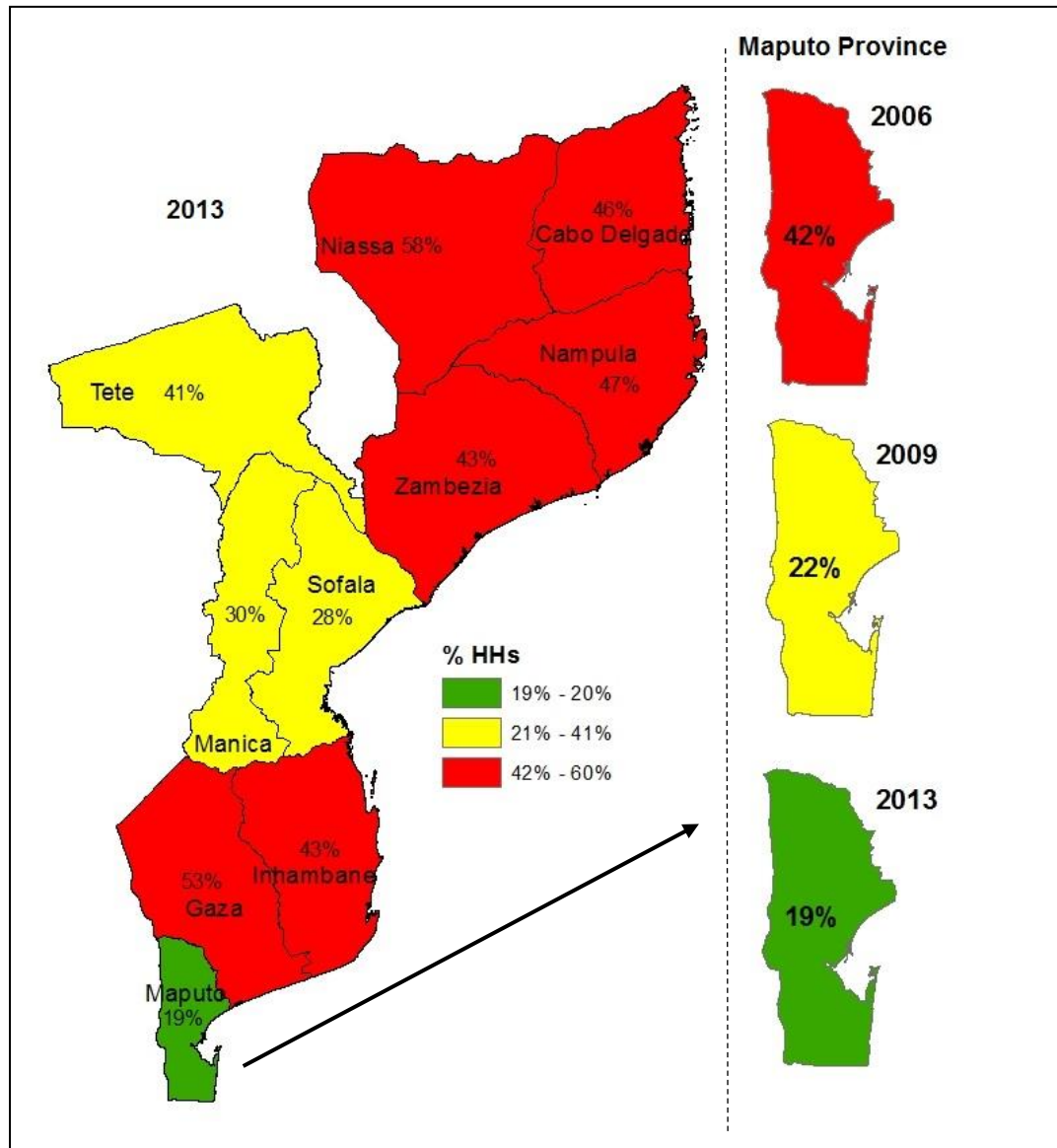
Figure 24: Percentage of households that did not consume hem iron rich foods in the 7 days before the survey, by province, 2006, 2009 and 2013



⁷ Instituto Nacional de Estatística, Ministério da Saúde [Mozambique] and Macro International Inc. Mozambique Demographic and Health Survey 2003 [Dataset]. Data Extract from MZIR41.SAV and MZHR41.SAV. Integrated Demographic and Health Series (IDHS), version 1.0, Minnesota Population Center and ICF International [Distributors]. Accessed from <http://idhsdata.org> on 11 January 2016.

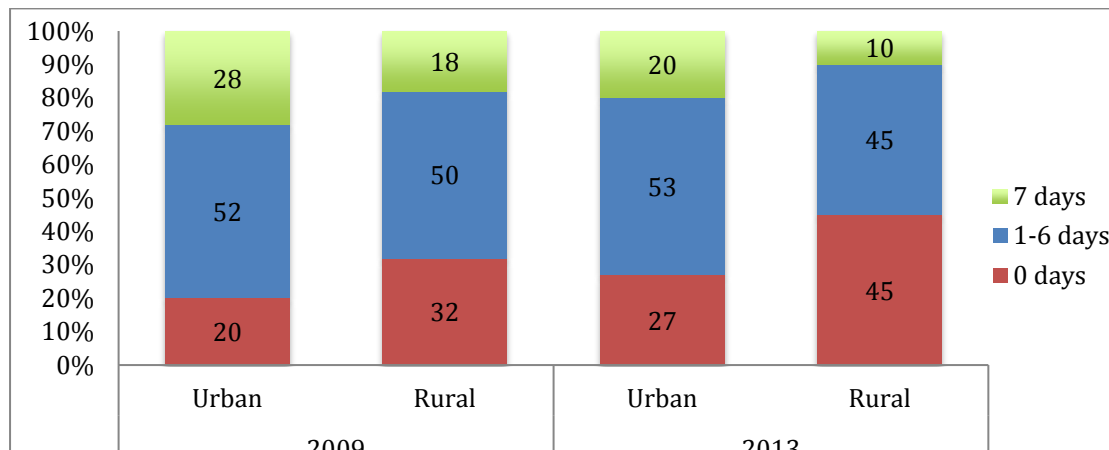
In Gaza and Inhambane hem iron consumption has been persistently low though there was some improvement in these provinces between 2009 and 2013. The only province to experience consistent improvement from 2006-2013 was Maputo.

Figure 25: Percentage of households that did not consume hem iron rich foods in the 7 days before the survey, by province, map, 2013. Spotlight on Maputo.



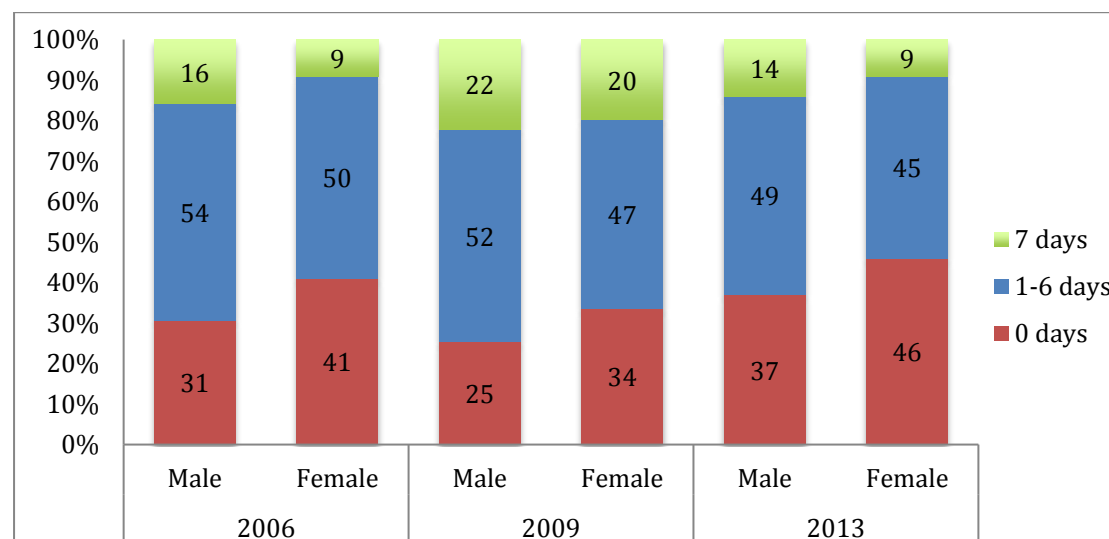
For both 2009 and 2013 lack of hem iron consumption was of greater concern in rural than urban areas (see figure 26).

Figure 26: Consumption of hem iron rich foods, urban and rural, 2009 and 2013 (% of HHs)



Across all years, women-headed households were less likely to consume these foods than those headed by men and the gap between the genders has neither narrowed nor widened. In 2013, some 70% of Niassa households headed by women failed to eat these foods in the week before the survey compared with 54% of male headed households.

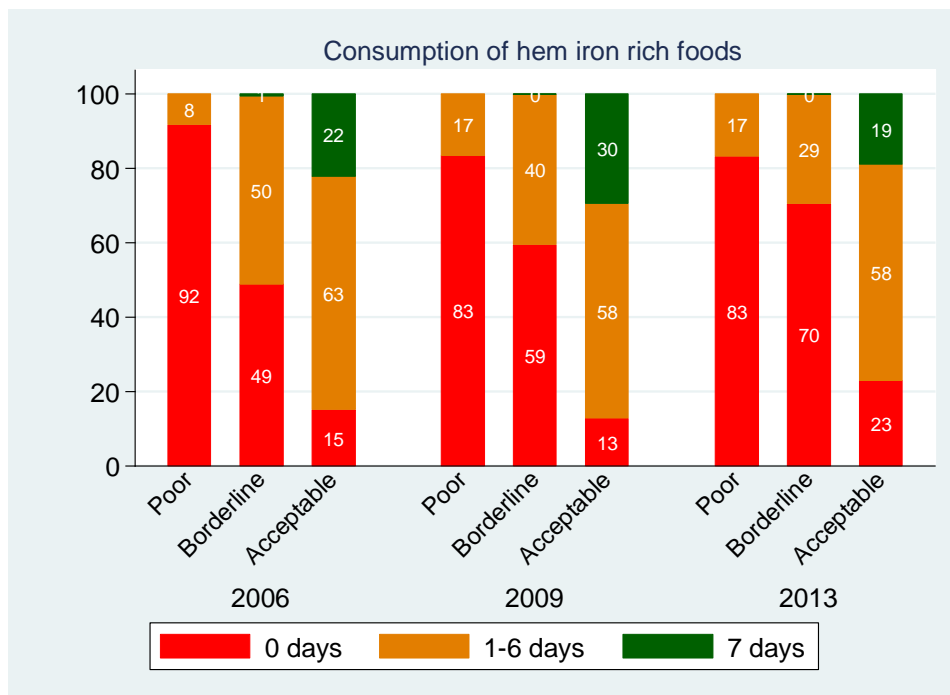
Figure 27: Consumption of hem iron rich foods, female headed households versus male, 2006, 2009 and 2013 (% of HHs)



In a similar pattern to the consumption of protein, across all three survey years, households with poor FCS consumed diets severely lacking in hem iron. Households with acceptable FCS consumed hem iron

rich foods far more frequently than the other households, but still only 20% of those with acceptable FCS consumed hem iron rich foods daily (see figure 28).

Figure 28: Consumption of hem iron rich foods by FCS group, 2006, 2009 and 2013 (% of HHs)



4. FOOD SOURCES, MARKETS & FOOD PRICES

In order to identify groups and geographical areas likely to face challenges with rising food prices, it is vital to understand the degree of reliance that households have on sourcing their food from shops versus their own production.

4.1 Food Sources

The analysis shows that since 2009 households across the country have become increasingly dependent on buying food from markets and less on their own production. For instance in 2009, 57% mainly bought their food, and by 2013, this proportion had risen to 68% with the reliance on own production dropping to 40%.

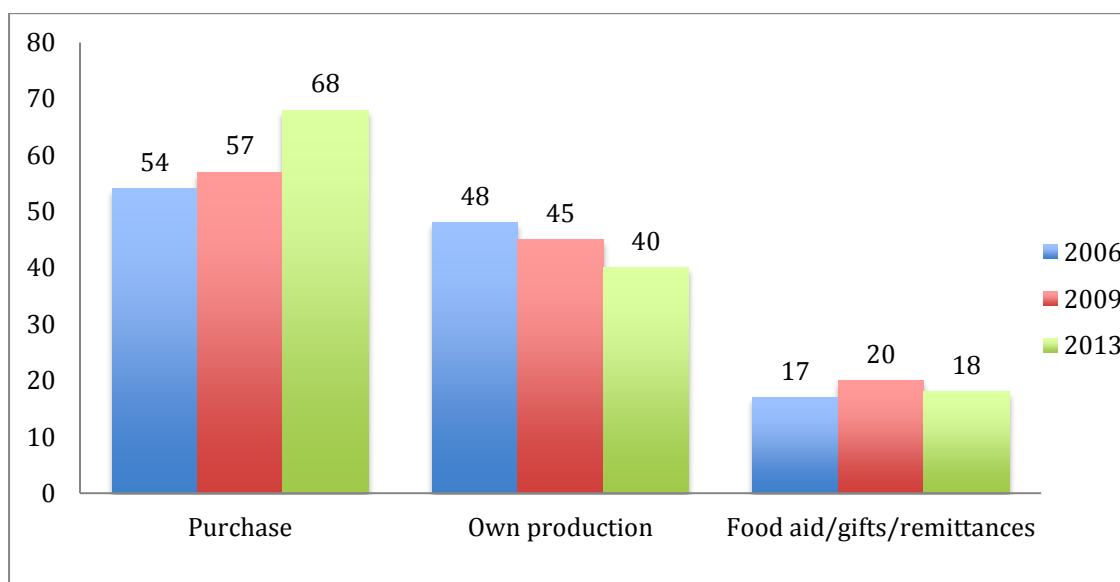
Households in the south of the country were consistently more likely to purchase their food than elsewhere across all three surveys, peaking at 81% in 2013. But the shift towards market dependency was most marked in the north of the country between 2009 and 2013. In 2009, northern households were slightly more reliant on growing (53%) than buying (49%) their food, but within four years 64% purchased and 41% grew their food. This increasing reliance on purchase in the north coincides with increasing food insecurity in the region.

Households have become increasingly reliant on purchasing their food from markets. Although southerners are more likely to be market dependent, the shift from home production to purchase has been more pronounced in the north

Unsurprisingly, urban households were more likely to buy their food than rural. Still, it appears that, between 2009 and 2013, there has been a strong downward shift in urban agriculture, with 85% of urban dwellers sourcing their food from markets in 2013, compared with 64% in 2009.

While in terms of whether they bought or grew their food, there was little difference between male and female headed households over the years, women-headed households were consistently more likely to receive food in the form of aid, gifts or remittances than those headed by men.

Figure 29: Household food sources, 2006, 2009 and 2013



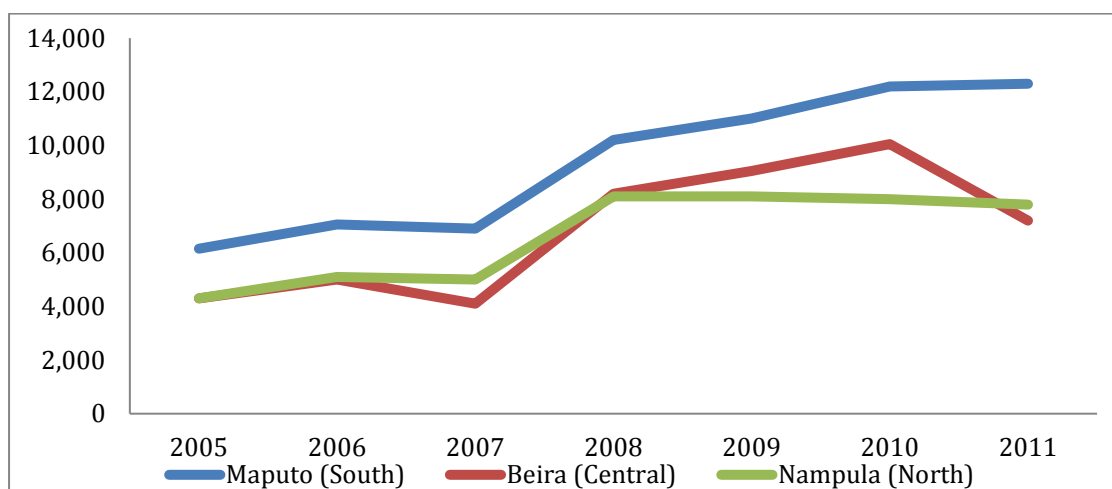
This increasing dependency on purchasing food makes households far more vulnerable to price hikes, especially poor households and those that are already spending a high proportion of their budget on food. Mozambique heavily depends on imported food (it is a net importer of maize) so households are highly exposed to international price shocks.

4.2 Markets & Food Prices

Beginning in 2006, international prices for basic agricultural commodities such as maize and rice rose to levels not experienced since the mid-70s. In 2008, the cereal price was 2.8 times higher than in 2000. In July 2010 it remained 1.9 times higher than in 2000. In fact, FAO’s world food price index rose to a record high in February 2011, overtaking the previous record set in June 2008.

At the peak of the global food crisis in 2008, the maize price in Mozambique increased by 63% versus 2007 levels (SIMA).

Figure 30: Retail price of maize by region (MT/tonne)



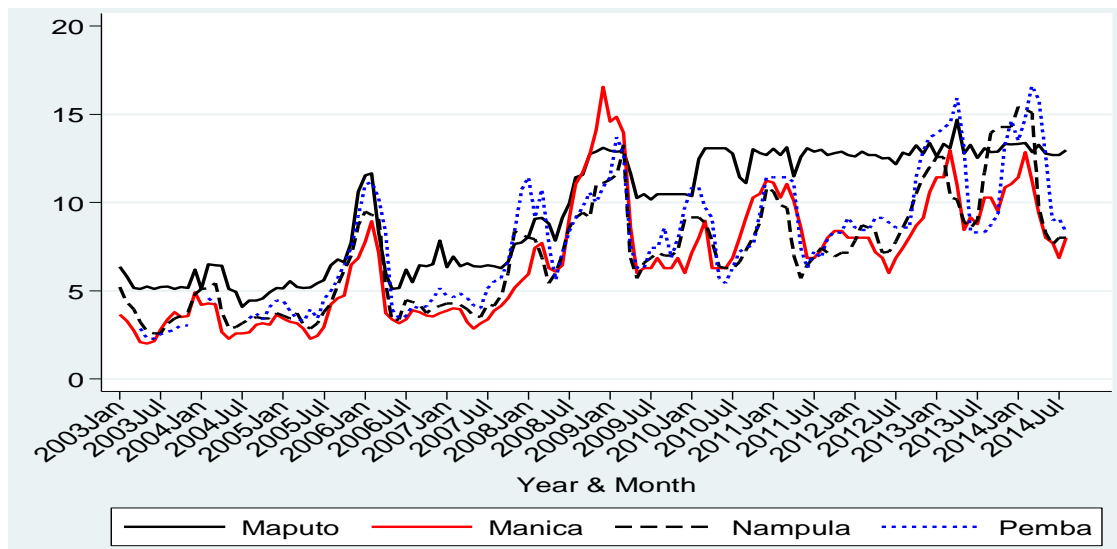
Source: SIMA

While Mozambique is a net importer of maize at the national level, differences exist between regions. In the south it is a net importer from South Africa, while in the north and center maize imports mainly occur from Malawi and other neighboring countries during lean periods. Throughout most of the year, the Northern region exports mainly to Malawi, Tanzania and Zimbabwe.

Retail prices are consistently higher in Maputo because the supply from the region is not enough to meet demand. The long distance between Maputo and the producer areas make transport costs high, creating huge barriers in terms of market integration.

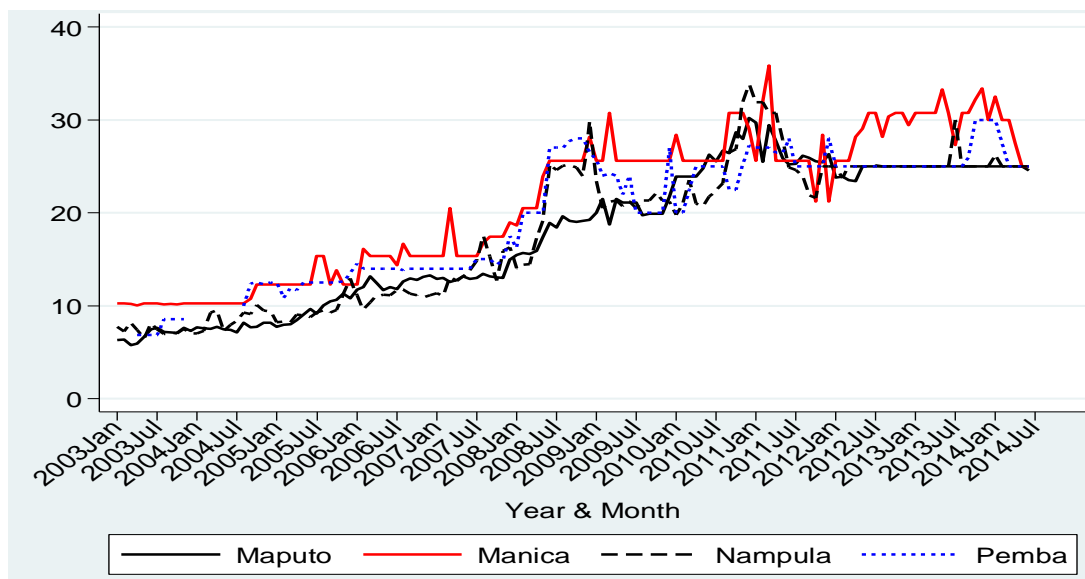
The more detailed figures below better demonstrate the volatility of maize and rice prices, particularly the price of maize. Maize prices tend to spike across all markets in the lean season, which are generally from October – February in the southern and central regions, and December – March in the north. This variation affects household purchasing power, becoming more critical during the lean season, when the prices spike and households have less income to spend. It is important to note that the price of the basic food basket is largely influenced by maize, the main staple in Mozambique.

Figure 31: Maize price trends (Meticais per kg) January 2003 – July 2014



Source: SIMA

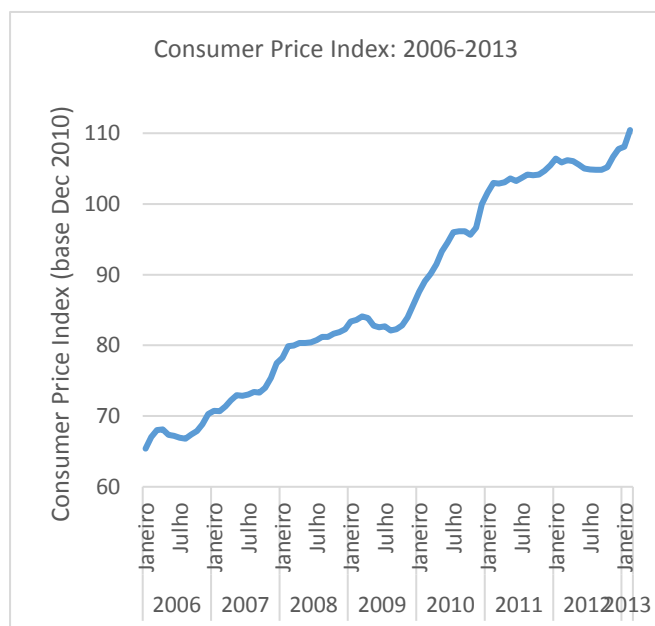
Figure 32: Rice price trends (Meticais per kg) January 2013 – July 2014



Source: SIMA

The Mozambique Consumer Price Index (CPI) is calculated by the National Institute of Statistics. It demonstrates changes in the overall cost of living, including the cost of food, water, energy, health

Figure 33: Consumer Price Index 2006-2013



and other goods and services. The following graph demonstrates that between 2006 and 2009 the CPI increased annually between around 2-6%. However, the cost of living in Mozambique increased drastically in 2010. More specifically, between October 2009 and July 2010, the cost of living increased by over 13%. This is in comparison to a 2.38% increase during 2009. SIMA data for the period from October 2008 to October 2010 demonstrates price increases of 48%, and increase of 19% from June to October 2010.

Source: INE, www.ine.gov.mz

Climatic events also have a major impact on prices. Small scale farmers are responsible for 70% of total food production, but many have plots of less than one hectare and they are wholly reliant on timely rainfall for irrigation. Their crops are poorly diversified and yields low. The 2004/5 drought - in the south in particular - caused price hikes while flooding in the central provinces (along the River Zambezi) and a drought in the south further contributed to price hikes in 2008/9.

5. CONSUMPTION COPING STRATEGIES

When confronted with sudden negative events such as a natural disaster, food price rises, illness of household member or loss of employment, households compromise by, for example, buying cheaper products and/or switching to less preferred food, limiting portion size and reducing the number of meals eaten in a day. These coping mechanisms may have severe nutritional impacts, and they may undermine the future food security status of a household.

The Coping Strategies Index⁸ measures behaviour – what people do when they cannot access enough food. This is often used as a proxy measure of household food security. A series of questions about how a household manages to cope with a shortfall in food for consumption results in a simple numeric score: the higher the score the more likely a household is to be food insecure, or engaging in strategies that will result in future food insecurity.

All three surveys asked questions about consumption related coping strategies, but with slightly different measures. The 2006 survey did not collect information on frequency of use for coping strategies, so it was not possible to compute a coping strategies index for that year. Furthermore,

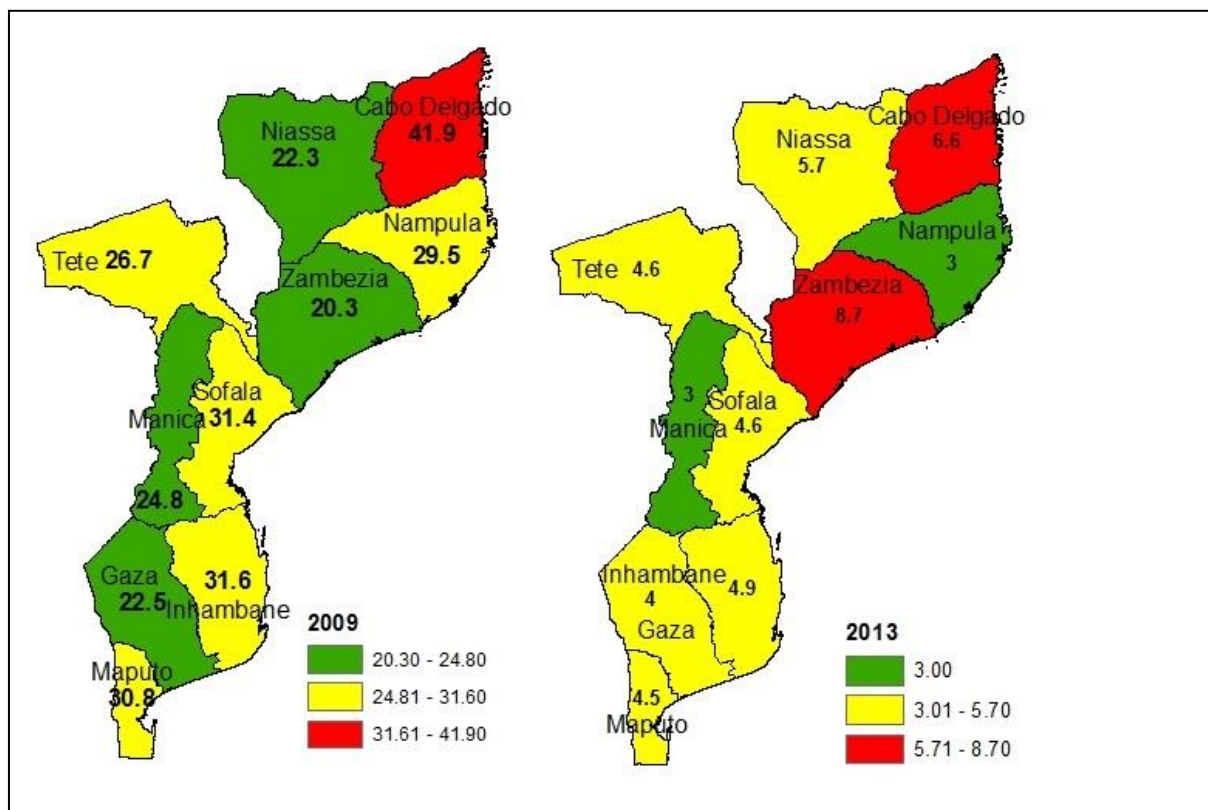
⁸ The Coping Strategies Index Field Methods Manual: http://www.fsnnetwork.org/sites/default/files/coping_strategies_tool.pdf

the 2009 and 2013 data are not comparable since there were differences in the data collection modules: 2009 asked about 12 specific consumption coping strategies over a 30 day recall period, while 2013 asked about 7 specific consumption coping strategies over a seven day recall period. As a result, the scale for the 2009 scores is higher than for the 2013 scores. Despite the lack of comparability, it is still useful to look at the trends.

5.1 Consumption Coping by province

The figures below show that consumption coping was high in Cabo Delgado in both years which tallies with it having a higher than average percentage of households with poor food consumption in both years. As we have already seen, by 2013 the four northernmost provinces (Niassa, Cabo Delgado, Nampula and Zambezia) were most likely to be food insecure. These were also the most likely to have a higher use of consumption coping strategies with the exception of Nampula.

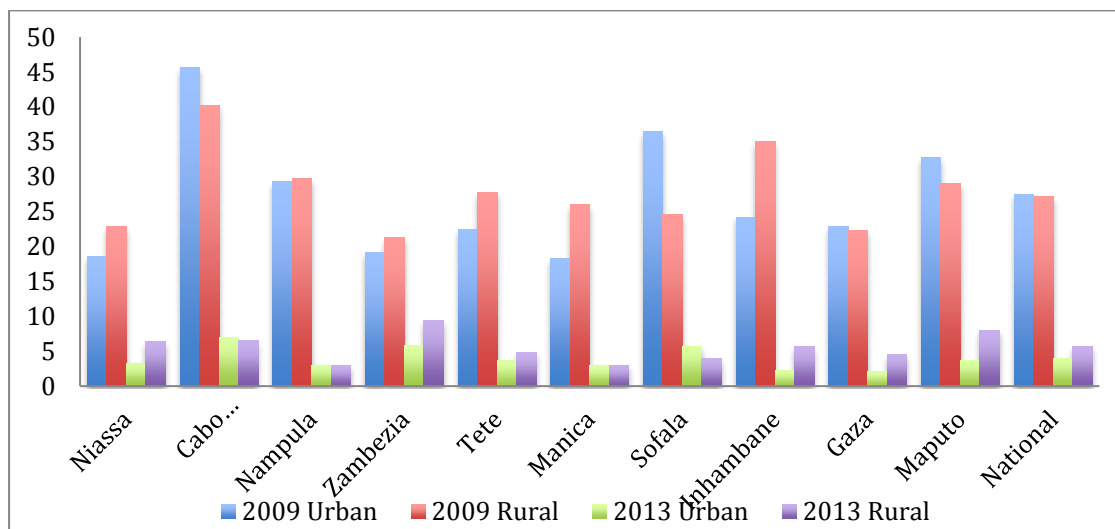
Figure 34: Consumption Coping score by province 2009 (based on 30 day recall) and 2013 (based on seven day recall), map



5.2 Consumption Coping by urban/rural

Across both years consumption coping scores were higher in urban Cabo Delgado and Sofala than rural. Otherwise coping strategies were generally more frequent and severe in rural provinces than urban with the exception of Gaza and Maputo in 2009. In 2009, rural Inhambane was far worse than urban and in 2013 the use of coping consumption strategies was particularly severe in rural Zambezia and Maputo.

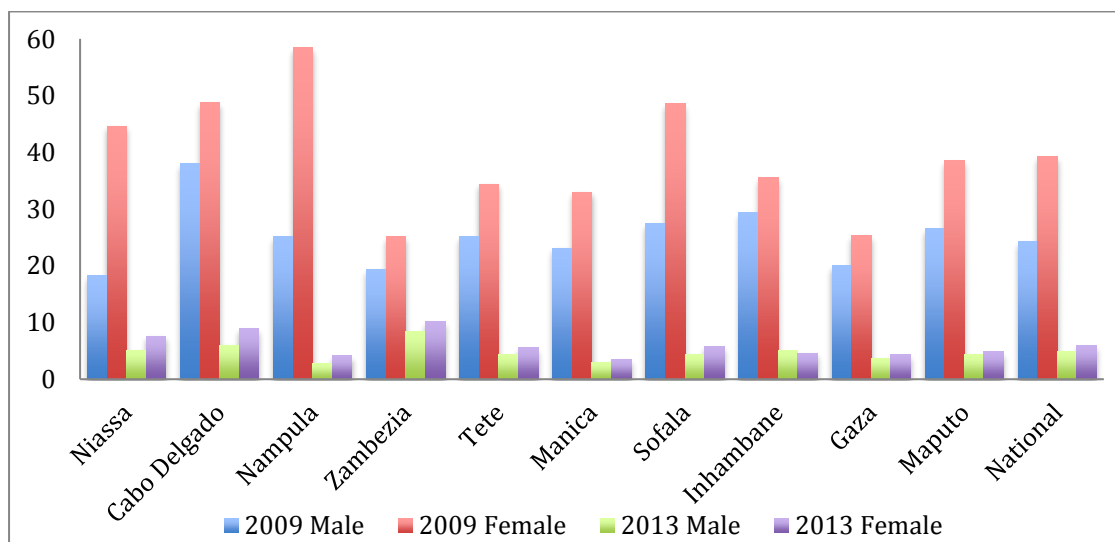
Figure 35: Urban vs. rural consumption coping score, 2006 (based on 30 day recall) and 2009 (based on seven day recall)



5.3 Consumption coping by gender

Without exception households headed by women resorted to more frequent and/or more severe coping strategies across all provinces in both years than those headed by men.

Figure 36: Male vs. female consumption coping score, 2009 (based on 30 day recall) and 2013 (based on seven day recall)



6. CONCLUSION & SUMMARY OF TRENDS AND EXPLANATIONS

<p>Food security was generally better in 2009 than the other years</p>	<p>In 2009 and 2010 the total maize production reached high levels compared with 2005-2008 which reduced imports and brought Mozambique close to self-sufficiency in its key staple. However significant global food price increases in 2010 combined with recurring flooding and drought pushed maize prices in Mozambique to unprecedented high levels.</p>
<p>The exception to the above was Gaza and Cabo Delgado. Dietary diversity was especially low in urban Gaza in 09.</p>	<p>Gaza has the highest prevalence of HIV in the country. According to the 2009 national survey on the prevalence, risks, behaviors and information on HIV and AIDS in Mozambique, some 30% of women and 17% of men were HIV positive, which was double the national average. HIV has an immediate impact on a household's food security by increasing health expenditures, reducing human labor availability and creating a care demand. In the long term the household is caught in a cycle of poverty and vulnerability: they tend to deplete their assets and land and cannot invest in the younger generation.</p> <p>In 2009 the shock frequency was particularly high in Cabo Delgado where 21% of households reported one shock and 10% more than one. These were mainly drought, wild animals attacking crops and chronic illness. The reduced CSI was far higher in this province than elsewhere in the country.</p>
<p>By 2013 there had been major improvements in food consumption of households in Inhambane, Gaza and Sofala.</p>	<p>However, this did not necessarily mean that households in these provinces were sustainably food secure in the long term. SETSAN compiled a food security index based on five indicators:</p> <ul style="list-style-type: none"> ▪ The FCS ▪ The severity of livelihood coping strategies. ▪ The number of months a household reportedly has difficulty having enough to eat in the past year ▪ The duration of maize stocks from the last major harvest ▪ The major source of household income (casual labour, begging and food aid were considered a risk to food insecurity while wage earning, being a pensioner or receiving remittances were considered likely to favour it) <p>Households in Gaza, Inhambane and Zambezia experienced the longest periods of insufficient access to food. The percentage of households dependent on low and unstable income was highest in Manica, Tete, Niassa, Zambezia, Gaza and Maputo province and lowest in Cabo Delgado, Maputo city and Nampula. Cabo Delgado, Zambezia and Gaza had the highest proportion of households that</p>

There was a clear north vs. south divide by 2013. Household food consumption was poorest in northern and best in central and southern provinces.

There was a clear urban vs. rural divide by 2013. The prevalence of food insecurity in rural areas was almost double that of urban (29% vs 15%).

adopted crisis or emergency livelihood strategies to cope with shocks. When the five indicators were summed the cumulative percentage of moderately and severely food insecure households was highest for Cabo Delgado, Tete, Zambezia and Gaza.

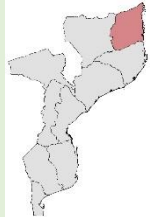
Central and northern provinces have greater agricultural potential, more fertile soil and more abundant rainfall than other parts of the country while in southern areas the climate is drier, soil poorer and natural disasters such as drought and flood are more frequent. Despite this, northern households have become increasingly reliant on buying their food, coinciding with the increase in food insecurity.

Over the three years food insecurity steadily worsened in Zambezia, which had the highest use of consumption coping strategies in 2013 followed by Cabo Delgado and Niassa. Zambezia has the highest percentage of small farmers either without land, or cultivating less than 0.5 ha.

We have seen that protein and hem iron consumption was lower across all four most northern provinces (Niassa, Cabo Delgado, Zambezia and Nampula) in 2013 than in 2006 and 2009. In these northern areas of the country, the main dish consumed is generally cereals or roots/tubers with leafy vegetables – i.e. very limited protein consumption.

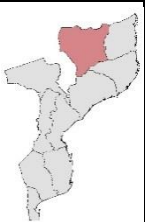
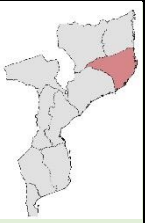
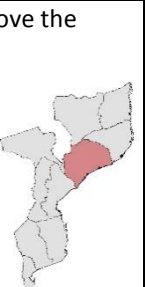
In these northern provinces, access to healthcare, potable water and improved sanitation services is limited, indicating less infrastructure development and investment in public services. In a related finding, rates of childhood morbidity are also higher in these areas. These factors could influence household expenditure patterns and impact food security, thereby partially explaining this north south divide.





The rural areas continue to face more food insecurity because they primarily rely on own production, which is highly dependent on rainfall – which has been unpredictable in many areas of Mozambique in recent years. In addition to this, urban areas of the country have seen decreases in poverty, while rural areas actually saw a small increase between survey years 2002-03 and 2008-09. Rural areas have limited infrastructure development in comparison to urban areas, including less access to health and education facilities, worse road conditions and difficult communication. All of these factors contribute to higher food insecurity in rural areas.

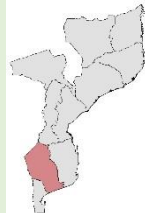

Summary Analysis		% HHs with poor or borderline Food Consumption Score			Average Dietary Diversity Score ⁹		% HHs with 0 days consumption of Vit A rich food			% HHs with 0 days consumption of hem iron rich food			% HHs with 0 days consumption of protein rich food			Average Consumption Coping Score ¹⁰	
		'06	'09	'13	'06	'09	'06	'09	'13	'06	'09	'13	'06	'09	'13	'09	'13
National	<ul style="list-style-type: none"> Food security was generally better in 2009 than the other years. From 09-13 a decrease in overall FCS was driven by rural areas, where households with unacceptable food consumption increased from 30% to 38%. There was a clear north vs. south divide by 2013, with poorer household food consumption in the north. There was a clear urban vs. rural divide by 2013. The prevalence of food insecurity in rural areas was almost double that of urban (29% vs 15%). 	40%	27%	32%	5.3	5	26%	18%	8%	38%	34%	58%	10%	7%	11%	27	5
Cabo Delgado	<ul style="list-style-type: none"> Consistent improvements in average food consumption score across survey years From 06-09, decreases in dietary diversity of male headed-households, but increases for female-headed households Overall decreases in consumption of protein rich foods Very high use of coping strategies across surveys; particularly high in urban areas. 	43%	32%	28%	5	4.6	32%	38%	5%	36%	24%	46%	8%	6%	9%	42	7

⁹ 2013 based on 7 day recall rather than 24 hour – not comparable

¹⁰ 2009 survey used 12 strategies and 30 day recall, and 2013 used 7 strategies and 7 day recall – not comparable

Niassa	<ul style="list-style-type: none"> FCS worse than national average for all survey years, despite consistent province-level improvements. Between 06-09, decreases in dietary diversity for female headed households, but increases for male-headed households Increases in consumption of Vitamin A rich foods Lowest frequency of consumption of hem iron rich foods by 2013; large gap between male and female-headed households 	54%	32%	30%	4.7	4.9	48%	23%	5%	54%	34%	58%	38%	2%	19%	22	6
Nampula	<ul style="list-style-type: none"> Between 06-09, decreases in dietary diversity for female headed households In 2013, rural areas of Nampula reached the worst dietary diversity in the country Consistently low FCS in Muecate and Meconte districts Decreases in consumption of protein rich foods 	41%	16%	29%	5.5	4.9	40%	15%	15%	31%	23%	47%	7%	2%	13%	30	3
Zambezia	<ul style="list-style-type: none"> Improvements in food consumption scores; above the national average for all survey years Between 06-09, decreases in dietary diversity Decreases in consumption of protein rich foods; lowest levels across the country by 2013 Large decreases in consumption of hem iron rich foods across survey years Highest use of coping strategies by 2013; particularly high in rural areas 	26%	26%	23%	5.9	4.9	10%	27%	13%	14%	21%	38%	2%	8%	14%	20	9

Tete	<ul style="list-style-type: none"> Stagnant FCS scores from 09-13; worst province average FCS by 2013 FCS scores consistently below national average Improvements in dietary diversity 2009 showed least frequent consumption of micronutrient rich foods; improvements by 2013, but not reaching 2006 levels Use of coping strategies more frequent in rural areas, but 2013 showed decrease in discrepancy between urban and rural areas. 	44%	33%	33%	4.6	4.8	30%	3%	7%	59%	36%	41%	19%	9%	15%	27	5
Sofala	<ul style="list-style-type: none"> Steady improvements in FCS scores across the three years; consistently above national average Large improvements in consumption of Vitamin A rich foods Across survey years, more frequent use of coping strategies in urban areas than in rural areas 	35%	22%	20%	5.9	6.3	20%	9%	3%	23%	8%	26%	14%	2%	5%	31	5
Manica	<ul style="list-style-type: none"> Consistent improvements in FCS; huge positive change between 09-13 Improvements in consumption of protein and vitamin A rich foods In 2009, much more frequent use of coping strategies in rural areas compared to urban; equal use by 2013. 	43%	40%	18%	5.1	5.4	18%	7%	3%	30%	38%	30%	15%	15%	10%	25	3
Inhambane	<ul style="list-style-type: none"> Lowest dietary diversity score in 2006. Improvements, but strong urban rural differences. Huge improvements in FCS across the three years Persistent food insecurity in Jangamo, Mabote and Panda districts 	64%	42%	15%	4.3	5.2	53%	12%	4%	55%	60%	43%	12%	13%	4%	32	5

	<ul style="list-style-type: none"> Increases in consumption of protein rich foods Between 09-13, improvements in consumption of hem iron rich foods Increases in consumption of Vitamin A rich foods 																	
Gaza	<ul style="list-style-type: none"> 06-09 serious decrease in FCS and dietary diversity scores; worst province average by 09. Improvements in FCS by 2013 Dietary diversity consistently below national average Persistently low consumption of hem iron rich foods, with some improvement by 2013. Increasing discrepancy between urban and rural areas in use of coping strategies; rural areas worse than urban by 2013 	36%	52%	20%	5.2	4.1	25%	10%	3%	43%	60%	53%	10%	21%	11%	23	4	
Maputo	<ul style="list-style-type: none"> Strong increases in dietary diversity Steady increases in FCS across the years; best average FCS of all provinces in 2013 – 88% of households with acceptable food security Matutuine district with lowest FCS in the province; lower in 2013 than previous years. Consistent improvement in frequency of consumption of hem iron rich foods High use of coping strategies in rural areas by 2013 	23%	18%	11%	5.8	7.1	6%	7%	1%	42%	22%	19%	6%	2%	2%	31	5	

7. ANNEXES

Annex 1: Poverty Incidence

Index of Poverty Incidence (%)

Location	1996-97	2002-03	2008-09
National	69.4	54.1	54.7
Urban	62	51.5	49.6
Rural	71.3	55.3	56.9
North (Niassa, Cabo Delgado and Nampula Provinces)	66.3	55.3	46.5
Center (Zambezia, Tete, Manica and Sofala Provinces)	73.8	45.5	59.7
South (Inhambane, Gaza, Maputo Province)	65.8	66.5	56.9
Niassa	70.6	52.1	31.9
Cabo Delgado	57.4	63.2	37.4
Nampula	68.9	52.6	54.7
Zambezia	68.1	44.6	70.5
Tete	82.3	59.8	42
Manica	62.6	43.6	55.1
Sofala	87.9	36.1	58
Inhambane	82.6	80.7	57.9
Gaza	64.6	60.1	62.5
Provincia de Maputo	65.6	69.3	67.5
Cidade de Maputo	47.8	53.6	36.2

Source: 3rd report of poverty- Ministério da Planificação e Desenvolvimento 2010,

Annex 2: Water and Sanitation, 2013

Access to potable water and improved sanitation facilities

Location	Access to potable water (% of HHs)	Access to sanitation (% of HHs)
National	63	27
Urban	85	46
Rural	53	18
Niassa	46	18
Cabo Delgado	50	9
Nampula	55	17
Zambezia	54	27
Tete	62	23
Manica	70	29
Sofala	71	24
Inhambane	56	30
Gaza	78	36
Provincia de Maputo	90	49
Cidade de Maputo	100	72

Source: FSN baseline 2013

Annex 3: Child Morbidity

Prevalence of diarrhoea, fever, cough and of one or more of the three in the two weeks preceding the interview in children 0-23 months by district, urban/rural and livelihood.

Location	Diarrhoea	Fever	Cough	Diarrhoea, Fever or Cough
National	26	33	25	49
Urban	25	28	27	51
rural	26	35	24	51
Niassa	28	25	25	43
Cabo Delgado	27	36	25	53
Nampula	33	42	27	60
Zambezia	31	49	19	59
Tete	15	23	18	38
Manica	13	13	11	23
Sofala	28	30	32	55
Inhambane	16	31	28	48
Gaza	26	30	40	57
Provincia de Maputo	23	25	37	51
Cidade de Maputo	27	21	32	51

Source; FSN baseline 2013

Annex 4: Malnutrition, 2013

Rates of wasting, stunting and insufficient growth (% of children)

Location	Wasting	Stunting	Insufficient Growth
National	7.2	43.3	21
Urban	6.4	38.8	16.7
Rural	7.6	45.1	22.8
Niassa	5.8	44	21.3
Cabo Delgado	6.2	50.1	20.2
Nampula	12	49.5	30.9
Zambezia	8.5	40.9	19.8
Tete	8.7	51.8	29.5
Manica	5.8	47.9	16.7
Sofala	7	47.7	29.9
Inhambane	3	30.9	8.8
Gaza	3.3	39	13.4
Provincia de Maputo	3.9	25.6	9.3
Cidade de Maputo	2.7	31.4	6.7

Source: Food Security & Nutrition Baseline 2013