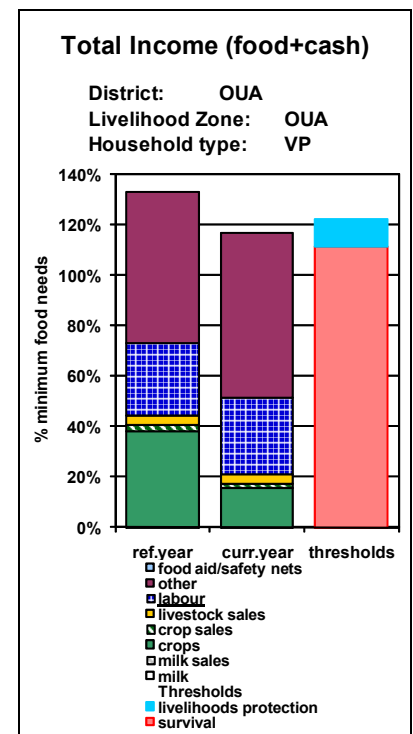


*Household Economy Approach (HEA) Outcome Analysis:
Ouallam Cropping/Herding with High Work Outmigration Livelihood Zone*

Key messages

- This analysis of the Ouallam department Cropping/Herding with High Work Outmigration livelihood zone shows that despite a year of poor crop production, in the most likely scenario, very poor and poor households will not face food deficits during the 2011/12 consumption year (Figure 1).
- However, very poor households in this zone (approximately 15-20 percent of the population) are likely to require assistance to meet essential non-food needs (e.g. purchase of seeds, spending on health and education) beginning in May 2012.
- Very poor households would only face household food deficits if millet prices exceed 290 XOF/kg, 24 percent above 2011 peak seasonal prices. This is considered unlikely.
- While household level food deficits are not anticipated in these areas, severe, chronic issues do exist and the need for appropriate developmental interventions persists.
- This analysis is not applicable to the agropastoral zones of Téra, Tillabéri and Fillengué departments, where reliance on agricultural production is relatively more important and access to remittances and firewood sales is more limited. Though there are no HEA baselines for these areas to allow for a comparable analysis, evidence suggests that poorer agropastoral households in Téra, Tillabéri and Fillengué are expected to face food deficits during the 2012 lean season. However, food insecurity is not expected to surpass Crisis (IPC Phase 3) levels in these areas.

Figure 1. HEA analysis outcomes for very poor households in Agro-Sylvo-Pastoral LHZ in Ouallam, Niger, October 2011-September 2012.



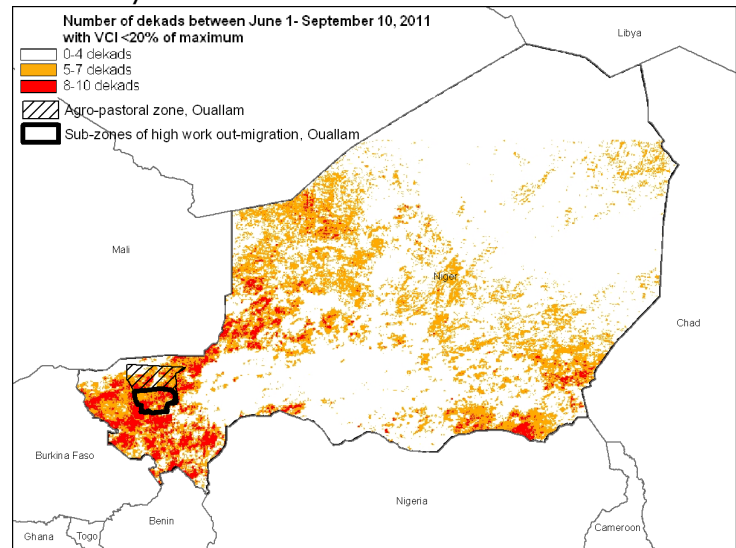
Background

The Tillabéri region in northwestern Niger has been identified as one of the most important areas for food security monitoring in the 2011-2012 consumption year. The recent agricultural season was marred by the late onset of rains, as well as an overall rainfall deficit and grasshopper damage at the end of September 2011. Pre-harvest surveys completed in mid-October estimated that cereal crop production in the agropastoral zone of Tillabéri will be poor. In order to assess the impacts of this poor cropping season, FEWS NET conducted household economy outcome analysis for agropastoral areas of Ouallam, an area at the epicenter of the poor 2011 seasonal performance. This analysis uses data on the current hazard and 'filters' it through livelihoods baseline data to estimate future food and cash incomes for households in various wealth groups (very poor, poor, middle and better-off).

Field work for the baseline study was completed by Save the Children in the Simiri commune of Ouallam, part of the *Cropping/Herding with High Work Outmigration* livelihood zone (NE06 in the FEWS NET livelihood zone map).¹ Based on expert judgment, FEWS NET determined that the differences in livelihoods between southern Ouallam and northern agropastoral Ouallam are not significant. Therefore, this analysis is considered applicable for all of agropastoral Ouallam, including both the surveyed area and the hatched area of the map (Figure 2). These areas are distinct from other agropastoralists in the Tillabéri region as livelihoods in Ouallam are more heavily oriented towards labor and market opportunities in Niamey. This appears in the household economy in the form of remittances, migratory labor, and income generated from the sale of firewood. Remittances are sent by family members living in Niamey (and even as far as Nigeria, Togo, Benin and Cote d'Ivoire) and benefit all wealth groups in the livelihood zone.

The principle way in which poor and very poor households accessed food in the reference year was through purchase (55-60 percent) followed by own production (approximately 40 percent). The main sources of income in the reference year were self-employment activities (firewood, hay, and fencing sales), remittances, and labor migration. Self-employment activities comprised 25-40 percent of household income, while remittances and labor migration together made up 30-45 percent of households income. Local employment and livestock sales together comprised the remaining 30 percent of annual revenues.

Figure 2. Map showing areas with poor vegetation conditions and area of analysis.



The above map shows the number of dekads between June 1 and September 10, 2011 during which the Vegetation Condition Index was less than 20 percent of the maximum. The Vegetation Condition Index is an indicator of the relative vigor of the vegetation in response to moisture conditions with respect to the ecologically-defined minimum and maximum limits of Normalized Difference Vegetation Index values (2001-2010).
Source: FEWS NET

The Problem Statement: Projected changes in the current year as compared to the reference year

The agropastoral areas of Ouallam were analyzed using the Livelihood Impact Analysis Spreadsheet (LIAS)², which compares problem specifications to reference year food and income sources to forecast food and livelihood security outcomes over the next 12 months. The problem specifications for this analysis are primarily related to the effects of the recent rainfall deficits. However, other changes compared to the reference year (October 2008-September 2009), particularly related to prices and inflation, are also included. Reference and current-year data used to calculate the problem specifications were gathered from a variety of sources, including agriculture technicians from Ouallam Department, Tillabéri regional authorities, and interviews with herders and sellers of forest products. Price data refers to the Ouallam market and was drawn from the SIMA database (for cereals and cowpeas) and SIMB databases (for livestock).

For this analysis, the problem specification was defined based on the following assumptions:

- Given the combined impacts of poor rainfall and poor distribution, **harvests of millet, sorghum and cowpea are expected to be poor, with cereal production levels estimated between 30-40 percent of reference year levels and cowpea production estimated at 20 percent of reference year levels.** Reference year data from 2008/09 was sourced from the Department of Agriculture in Ouallam. Current year projections are sourced from the Ministry of Agriculture Statistics Division's Report on the Preliminary Evaluation of the 2011 Harvest.

¹ The LIAS and baseline fieldwork is the result of work carried out by Save the Children. Refer to the Livelihood Zone Profile for Ouallam Department Agro Sylvo-Pastorale, April 2011 for more information on this zone.

² Developed by FEG Consulting, the LIAS is an Excel-based tool that uses data on a current or future hazard and 'filters' it through the livelihoods baseline data to estimate future food and cash incomes for households living in different livelihood zones and at different levels of wealth (very poor, poor, middle and better-off).

- Based on an analysis of millet prices in Ouallam using SIMA data, peak cereal prices occur between May and September. However, so far in the current year, millet prices have not followed seasonal trends remaining near peak 2011 levels. FEWS NET expects cereal prices in 2011/12 to remain at these higher levels. Given current price levels and recent market trends, prices are expected to increase 15 percent over last year's May-September average. As such, **the problem specification for 2011/12 price levels is 4 percent lower than the 2008/09 baseline year.**
- **Total cattle and shoats holdings were assumed to be 96 percent and 94 percent, respectively, of 2008/09 holdings.** This calculation assumes 2009/10 losses based on the Rapid assessment of the impact of the pastoral crisis of 2010 ("*Evaluation rapide de l'impact de la crise pastorale de 2010*") published in June 2011 and assumes typical herd growth rates for Niger (cattle: 2 percent, sheep: 3 percent, and goats: 2.5 percent) in other years.
- Assuming that hay production in 2011/12 is correlated relatively closely with rainfall, hay production is expected to be 50 percent of the 2008/09 levels. FEWS NET's interviews with hay middlemen indicate that hay prices are likely to be approximately 133 percent of 2008/09 levels given reduced production and increased demand. Due to the drop in production poorer households will sell less hay than in the reference year, and, although higher, prices are not expected to be high enough to offset lower sales. **Therefore net income from hay sales is assumed to be 35 percent below 2008/09 levels.**
- The average price of cattle in 2008/09 was approximately 261,000 XOF, according to the National Livestock Market Information System (*Système d'information marché bétail - SIMB*). The average current price of cattle in Ouallam is approximately 280,000 XOF. Assuming that this current price difference is consistent throughout the consumption year, cattle prices will be about 107 percent of 2008/09 levels. Based on similar calculations, prices of sheep are expected to be about 25 percent higher than 2008/09. For the price of goats, the assumption is that prices in the current year are expected to be equal to those in 2008/09 (30,000 XOF).
- **FEWS NET's interviews with pastoralists in the field indicated that the number of milking animals within herds has declined since 2008.** Among herds of Azawak cattle (dairy cattle), the average number of milking cows is approximately 80 percent of 2008 levels, and daily milk production per cow is approximately 60 percent of 2008 levels.
- Because **the demand for labor at the beginning of the season tends not to be affected by poor rainfall**, in-kind payments for plowing were assumed to be the same as 2008; however, in-kind payments for harvesting were reduced as per the reduction of millet production for the current year to 38 percent of the reference year.
- The primary crop sold in this livelihood zone is cowpea. An estimate for cowpea producer prices in October-November 2011 was derived using the price of cowpea in the Ouallam market for October 2011 which was 278 XOF. Under this assumption, **producer prices for cowpea are greater than last year, and approximately 185 percent of 2008/09. Prices are expected to be high due to poor production of cowpeas.**
- Field observations indicate that income from remittances is likely to be average to above average. This is due in part to high demand for reconstruction labor in Cote d'Ivoire and a related increase in the flow of migrants. Changes in global cocoa prices are not expected to significantly affect demand for harvest labor this season.
- The daily wage for agricultural labor is assumed to be 1,000 XOF, the same as in 2008/09. This is slightly lower than the 1,500 XOF observed in September 2011 due to the assumption the agricultural production shocks will increase the supply and decrease the demand for daily labor compared to September 2011 levels.
- Income from local construction and brickmaking labor is expected to be the same as in 2008/09.
- Firewood prices are expected to be 133 percent of 2008/09 prices based on interviews with vendors in Ouallam.
- The price of fertilizer, used mainly by middle and better-off households, is estimated to be approximately 150 percent of 2008 levels based on Brent Crude and fertilizer (DAP, TSP, Urea, KCL) price trends (data sourced from World Bank Commodity Price Data, aka, Pink Sheet).
- IMF data suggests **that price increases due to inflation between 2008/09 and 2011/12 are approximately eight percent.** This was applied to all prices for which specific problem specifications were not made.
- **The analysis assumes that households employ no coping strategies and receive no humanitarian assistance throughout the consumption year.** Many households in Ouallam are currently receiving assistance that is not

considered in the analysis (nor the baseline data) but that could have a positive, mitigating effect on household food security, including cash transfers (implemented by ACTED) and restocking of sheep and goats (implemented by CRS).

- The analysis assumes that all other factors remain as the same as they were in the reference year.

Most-likely scenario outcomes for the current consumption year (October 2010-September 2012)

Very poor households, which make up approximately 15-20 percent of the population in this livelihood zone and are at greatest risk of acute food insecurity, are the primary focus of this analysis. The effect of this season's poor agricultural performance on poorer households is manifested in the amount of food needs that are met through own production, which is estimated to drop to 15-20 percent. Very poor households are expected to make up the difference through increased market purchases of the local staple millet.

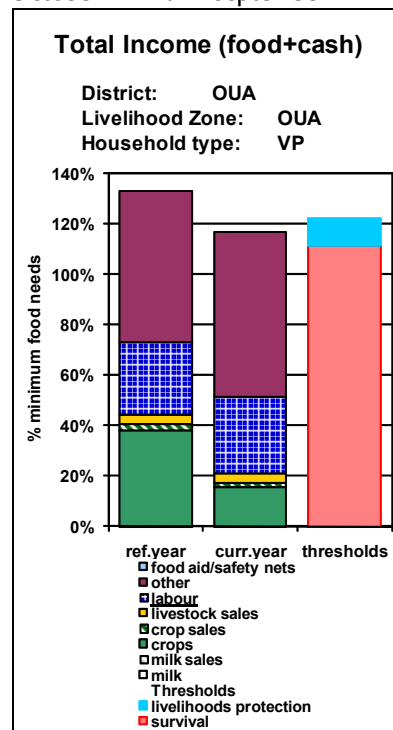
Another effect of poor rainfall in 2011 is the reduced availability of grasses, which is expected to be about half of what it would be in a normal year. Despite higher prices, the decrease in availability of this natural resource results in a drop in the amount of income households normally earn from the sale of hay. In the current year, income from the sale of firewood is expected to increase due to an increase in the price of firewood since the reference year. The net effect, however, is no change to overall income from self-employment activities from the reference year. There is no expected change in the amount of income from remittances. Labor earnings (including migratory labor, local construction, and local agricultural labor) are also expected to remain the same as in the reference year. In the most likely scenario, the price of millet is expected to be slightly less (4 percent) than reference year prices. Total cash incomes for very poor households are expected to remain close to reference-year levels. However, the reduction in the amount of food normally accessed through own production will mean an increased reliance on staple purchase to meet household food needs. Increased spending on staple food translates into a reduction of the amount of income very poor households have for spending on other important purchases, resulting in a partial livelihoods protection deficit. This deficit means that very poor households would not have the income required to fully sustain local livelihoods such as access to basic services (health and education), purchase of seeds and tools, and items needed to maintain a locally acceptable standard of living (i.e. purchase of basic clothing, tea).

Middle and better-off households are not expected to face deficits in the current year, despite an estimated 30-40 percent drop from reference year levels in the amount of food needs met through own crop production. Cash income for middle and better-off households is expected to remain at reference year levels. Also, millet to livestock terms of trade are more favorable than in the reference year, as evidenced by slightly lower millet prices and higher livestock prices.

Levels of household food purchases in this livelihood zone are highest from May to September and when households are most likely to experience livelihood protection or food deficits. Income from migratory labor is reduced as household members who had sought work outside of the zone return in preparation for the next agricultural season. Prices for staple foods also tend to be highest during this period. It is therefore projected that very poor households would begin to face livelihood protection deficits beginning in May 2012, as millet prices approach annual peaks.

This analysis does not take into account coping strategies that households might employ. Typical coping strategies include minimizing non-essential spending and increasing access to cash by intensifying self-employment activities and seeking increased amounts of remittances. The coping capacity of poorer households is limited by a weak asset base and the limited number of active household members available to work. However, increased income from remittances would be expected to positively affect food security outcomes for poorer households.

Figure 3. HEA analysis outcomes for very poor households in Agro-Sylvo-Pastoral LHZ in Ouallam, Niger, October 2011-September 2012.

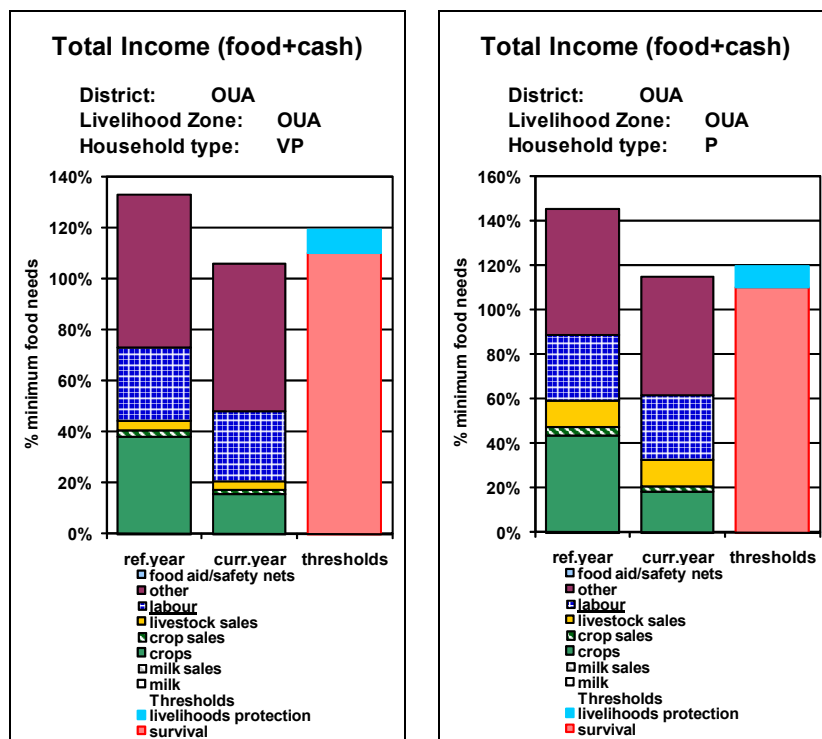


Source: Save the Children/FEWS NET

What if prices are higher than in the most-likely scenario?

Based on current trends, prices are not expected to exceed reference year levels, which were relative high as compared to previous years due to the global food price crisis. However, given the importance of this variable and the difficulty in predicting long term price outcomes, an additional scenario has been developed using provisory November 2011 millet prices and applying a seasonal price index developed using seven years of historical data from the Ouallam market. Though not considered likely, this alternative scenario assumes a 30 percent increase in the price of millet over May-September 2011 prices (304 XOF/Kg). In this scenario, very poor households would not be able to meet minimum food requirements with total food and income levels dropping just below the survival threshold (Fig. 4). Under this same scenario, poor households would be expected to face a 5 percent livelihood protection deficit (Figure 5).

Figures 4 and 5. Scenario outcomes for Very Poor and Poor households assuming a 30% increase in lean season millet prices (304 XOF/Kg)



Very poor households: 4% survival deficit.

Poor Households: 5% livelihood protection deficit.

Source: Save the Children/FEWS NET

Implications for monitoring

This analysis of the Ouallam department Agro-sylvo-pastoral zone (corresponding to NE06 Cropping/Herding with High Work Outmigration) shows that in the most likely scenario, despite a year of poor crop production, the poorest households are expected to face only a partial livelihoods protection deficit. Income from remittances and market opportunities created by a steady demand for forest products in Niamey buffer poorer households in this livelihood zone from more severe food security outcomes. The analysis is based on projections about future conditions and prices, projections that should be reviewed and updated as additional data becomes available. It is essential to monitor the price of millet, as purchase is the primary way households access food in this livelihood zone. Also, as this analysis is based on pre-harvest production estimates, it will be necessary to update the analysis using updated post-harvest production figures once the data becomes available.

Implications for assistance needs

Under the most likely scenario described above, the analysis does not indicate a need for emergency life-saving assistance. However very poor households in this zone (approximately 15-20 percent of the population) are likely to benefit from assistance which helps them to meet essential non-food needs (e.g. purchase of seeds, spending on health and education, purchase of basic clothing). In order to ensure that these households are able to protect their already very limited asset base, interventions designed increase access to cash or food will likely be required. Because poorer households are generally already using all available labor assets, direct transfers of food or cash may more effectively target the poorest households than food- or cash-for-work programs might. Assistance would need to begin by April 2012, before typical seasonal price increases begin in May.

Based on this analysis and information on historical rates of malnutrition in the Ouallam department, FEWS NET would classify very poor households in Ouallam as Stressed (IPC Phase 2) for the May-September 2012 period. All other wealth groups would be classified as No Acute Food Insecurity (IPC Phase 1) in the most-likely scenario (Figure 7).

In a worst case scenario, staple food prices would be more than 30 percent higher than 2010/11 levels and would result in small survival deficits among very poor households. Though this is considered unlikely, additional food assistance would be needed if this scenario were realized.

Finally, it is important to note that while the focus of this analysis is on emergency needs to save lives and maintain current livelihoods the absence of survival deficits does not suggest that severe, chronic issues do not exist. Ouallam district is known to suffer from some of the highest rates of global acute malnutrition in Niger and the need for appropriate development interventions persists.

Figure 6. Table of key monitoring priorities

Parameter	When	Which Markets
Millet Prices	All year, but particularly from May-September 2012	Ouallam
Grass availability and price	December 2011-January 2012	Ouallam
Migratory labor availability and wage rates	January to May 2012	Rice producing centers in Tillaberi, Tera; Niamey
Firewood prices	January to April 2012	Niamey
Availability and wage for local agricultural labor	June to July 2012	Localities within Ouallam
Remittances: labor rates for domestic workers	All year	Niamey

Source: FEWS NET

Figure 7. IPC phase classification projected by wealth group for May-September 2012.

Household Wealth Group	Most likely scenario: 15% increase over peak 2011 millet prices	Scenario 2: 30% increase over peak 2011 millet prices
Very Poor	Phase 2	Phase 3
Poor	Phase 1	Phase 2
Middle	Phase 1	Phase 1
Better-off	Phase 1	Phase 1

Source: FEWS NET