Crop failure will drive Emergency (IPC Phase 4) food insecurity in the South until next harvests

KEY MESSAGES

- High levels of acute food insecurity will persist in southern Madagascar through the end of the lean season in February 2017 due to crop failures caused by this year’s drought. In the absence of assistance, poor households residing in worst-affected areas are expected to face large food consumption gaps, in line with Emergency (IPC Phase 4) food insecurity. Increased acute malnutrition and excess mortality are also likely. Stressed (IPC Phase 2 and 2!) and Crisis (IPC Phase 3 and 3!) outcomes are expected in other southern areas.

- Although 2017 crop production will likely be below average in the South, food security outcomes are expected to improve following the harvest of pulses in March 2017 and the harvest of maize in April 2017. Between May and June, most households will experience Minimal (IPC Phase 1) outcomes with the exception of zones where households have depleted most of their productive assets. In these areas, the recovery will be slower and Stressed (IPC Phase 2) outcomes are expected during next year’s harvest period.

- Outside of the South, households in most parts of Madagascar will continue to have seasonally normal access to food due to average income levels, crops from their own production, and regular market supplies from local harvests and rice imports. As a result, most other areas will experience Minimal (IPC Phase 1) acute food insecurity between October 2016 and May 2017.

SEASONAL CALENDAR FOR A TYPICAL YEAR
NATIONAL OVERVIEW

Current Situation

Seasonal progress

- **Cropped areas**: Madagascar has many different agricultural seasons, depending on the crop, location and irrigation infrastructure available. Rice, as usual, is currently reaching maturity in the extreme North, the agropastoral Mid-West, Ankoratra and the central highlands and is being harvested in the Southeastern forest corridor. Maize and cassava are reaching maturity in the area of Tamatave, the southern highlands and the West. In most northern and central areas of the country, including Haute Matsiatra, Alaotra Mangoro, Analamanga, Itasy, Vakinankaratra and Bongolava, key informants indicate that the area planted during the past four months is similar to last year’s levels. However, in the South, particularly in the Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24), observations from partners suggest that land preparations are covering a smaller than normal area. This is due to a lack of seeds and other inputs as a result of farmers’ limited capacity to invest in inputs following two consecutive below-average harvests.

- **Export cash crops**: Vanilla, cinnamon, cloves, pepper and essential oils account for a large share of Madagascar’s export value and are currently selling at high prices on international markets. For example, the price of vanilla, for which Madagascar is the world’s leading producer, is rising. After the period from August to December 2015, during which farm gate vanilla prices rose 200 percent, they now are at 40,000 Ar/Kg which is about 5 percent above last year’s levels. These high prices are helping to provide favorable incomes for the roughly 200,000 people employed in Madagascar’s vanilla sector. Export cash crops are harvested during the months of October and November in the North-East and along the eastern coast. Other cash crops, including pulses, litchi, sugarcane, and khat, are also currently being harvested with normal production levels expected.

- **Crop production**: Since Madagascar doesn’t have a single agricultural season, large markets enjoy an almost continuous supply of domestic food products. However, while better than last year, 2016 staple food production did not perform particularly well. More specifically, the recent CFSAM estimated that national rice production, a key cereal crop in Madagascar, was slightly below the five-year average. Cassava and maize production were also estimated to be down by 16 percent and nearly 50 percent, respectively. Maize, which is farmed mostly in the Central and Southern parts of the country, experienced particularly poor production levels in the regions of Anosy, Androy and Atsimi Andrefana where it was about a tenth of the five-year average. In these zones, rice production was also estimated to be about one third of the five-year average. The main drivers of this low production was drought in the South and reduced area cropped in Ihorombe, Sofia and Menabe due to 1) flooding at the beginning of 2016 and 2) structural issues that have decreased the attractiveness of farming in these areas.

- **Livestock**: According to the 2016 CFSAM, pastures in most areas of the country are abundant and of good quality. As a result, livestock are also in good conditions. However, Madagascar has seen a declining trend in its total herd size due to
civil insecurity and forest fires with the cattle population passed from 9.7 million in 2005 to 6.5 million this year, according to Ministry of Agriculture and Livestock, as quoted by the CFSAM report. In the South, herd sizes have also diminished over the past four years due to stressed sales caused by food insecurity.

**Markets and trade**

- **Rice imports**: Imported rice is an important staple food for many households in Madagascar. Observatoire du Riz (OdR) stopped reporting on import levels in April 2015 but local observations suggest that imports are currently at below-average levels due to the depreciation of the Malagasy Ariary in recent years and, as the CFSAM suggests, reduced domestic demand as poor households increasing their consumption of cheaper staples such as maize and cassava. The September price of imported rice is currently above the 2011-2014 average at most markets (ex. +23 percent in Mananjary and +20 percent in Toamasina). An exception, however, is Antsiranana where imported rice prices are down 15 percent compared to average.

- **Prices for locally grown food products**: Rice, maize and cassava prices usually peak in December and January during the height of the normal lean season. At markets monitored by FEWS NET using OdR price data, gasy rice prices at large markets have increased above the 2011-2014 average (currently +17 percent in Antananarivo, +5 percent in Fianarantsoa and +19 percent in Ihosy). Additionally, the recent CFSAM report, using data from INSTAT, reports a price increase of 5.5 percent at key markets between August 2015 and August 2016. Rice prices are particularly high compared to past years in the southern regions due to an early start of the lean season. In Ambovombe, for example, the price of gasy rice is 32 percent higher than the 2011-2014 average. The most commonly consumed staple foods in the South, maize and cassava, have also experienced price increases. For example, September maize prices at Ambovombe were 83 percent above the four-year average while cassava prices were up 79 percent.

**Other key factors**

- **Humanitarian assistance**: Food assistance to drought-affected areas of the South is currently being provided by WFP, ADRA and CRS in the districts of Bekily, Ampianihy, Tsihombe, Beloha, Ambovombe, and Amboasary. From June to September, the overall food distribution caseload receiving half rations increased from about 220,000 to about 400,000 beneficiaries, including recipients of cash distributions which increased from about 37,000 (July and August) to 80,000 in September. Food distributions by ADRA to approximately 10,000 beneficiary households in Bekily and Ampianihy and food distribution by CRS to 13,715 beneficiaries in Beloha and 20,050 beneficiaries in Tsihombe were factored into FEWS NET’s humanitarian assistance analysis. Based on this analysis, FEWS NET estimates that CRS’s and ADRA’s humanitarian assistance is likely playing an important role in preventing more severe food insecurity, in line with a higher IPC area classification, in Tsihombe and parts of Bekily district located in **Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24)**.
Assumptions

The most likely scenario for the October 2016 to May 2017 period is based on the following national level assumptions:

- **Rainfall**: Seasonal forecasts suggest that in the eastern and southern parts of the country, there will be a slight delay in the onset of the rainy season with normal to below-normal rainfall until December but not to a magnitude that would affect crop development. In the rest of the country (ex. Menabe, Boeny, Melaky, Betsiboka and Bongolava), forecasts indicate normal to above-normal rainfall during this time period. Normal rainfall levels are expected from January to March 2017, which should allow for the normal completion of the agricultural campaign.

- **Crop production**: Due to both a normal rainy season and cropped area, annual 2016/17 rice and maize crop production, harvested between December and May, will be average at the national level. However, cassava production, usually harvested between March and September 2017 outside of the North, will be below normal given the difficulties of trading and propagating planting material to fill local shortages, especially in southern areas which usually accounts for 35 percent of national production.

- **Income and labor**: In most of the country, agricultural labor and wages will likely be near average. However, in areas affected by last year’s drought, income levels and labor opportunities for agricultural work (ex. land preparation, weeding and harvesting) are assumed to be below average due to the reduced area cropped. Outside of the South, incomes from agricultural labor in cash crop plantations, tourism, fishing and handcraft sectors will also remain similar to last year’s levels.

- **Export cash crops**: According to specialized commodities trading projections (AgraNet, BusinessWire and AusHachmann Canada), the outlook for the vanilla, cinnamon, cloves, pepper and essential oils sectors are positive, due to expectations for continued high international prices. For example, the farm gate price of vanilla will likely remain at 40,000 Ar/Kg, or about 5 percent above last year’s levels. In the drought-affected areas of the South, income from cash crops such as watermelons, cowpeas and black-eyed peas that - depending on location - are harvested from February to May and are expected to be normal, like in other parts of the country, given that these crops are usually farmed on smaller plots and by better-off households.

- **Security context**: FEWS NET assumes that activities by well-armed dahalo groups will not disrupt trade flows between cities on the high plains and the Baro Plateau in the South.

- **Macroeconomic context and imports**: The value of the Malagasy Ariary is expected to remain stable at around 3,200 MSA/USD to 3,238 MSA/USD through the outlook period, according to Trading Economics global macro models and analysts’ expectations. As a result, imports of rice are expected to remain at status quo levels.

- **Staple prices**: Due to expected below-average crop production, maize, gasy rice, and imported rice prices will remain above the 2011-2014 average throughout the scenario period at most markets. Food prices typically peak between approximately December and February during the height of the lean season, and will then generally fall during the harvest period as demand falls and supplies improve on local markets.

- **Humanitarian assistance**: CRS will supply food to 13,715 beneficiaries in Beloha and 20,050 beneficiaries in Tsihombe per month during the next six months, reaching approximately 12 and 17 percent of the Beloha’s and Tsihombe’s populations, respectively. In addition, monthly food distributions by ADRA will reach approximately 10,000 beneficiary households in Bekily and Ampanihy during the next six months.

Most Likely Food Security Outcomes

- **Households in most parts of Madagascar** will continue to have relatively normal access to food due to normal income levels, crops from own production and regular market supplies from 2016 harvests and rice imports. As a result, these areas will continue to experience **Minimal (IPC Phase 1)** acute food insecurity between October 2016 and May 2017.

- **In the Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24)**, food insecurity is expected to be elevated due to the impacts of several consecutive years of below-average production on food and incomes sources. To cope, atypical migration, livestock sales, and the consumption of sour cactus pear will continue through the end of the lean season in February 2017. However, despite these efforts, households will still be unable to meet basic food consumption requirements, and are expected to face large food consumption gap, in line with **Emergency (IPC Phase 4)**, until the harvest of pulses in March 2017 and the harvest of maize in April 2017. Due to food assistance distribution in the next six months that will help to offset food deficits, Tsimhombé district will be in **Crisis (IPC Phase 3)** while Bekily district will be **Stressed (IPC Phase 2)**. Although production will likely be below average, food security outcomes are
expected to improve for most between April and May. However, the recovery process will be slowed by below-normal staple food production and agricultural incomes and assets (ex. livestock) that were depleted during the particularly difficult lean season. As a result, despite the harvest period, most households in this livelihood zone will experience **Stressed (IPC Phase 2)** food security outcomes.

- Outside of the **Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24)**, in the parts of the districts of Ampanihy, Amboasary, and Betioky, the effects of this year’s drought was slightly less severe but is still contributing to elevated levels of food insecurity. More specifically, the early exhaustion of household food stocks, the reduction of livestock herds, and high prices of cassava and maize on local markets will contribute to atypically poor dietary diversity and food consumption gaps, in line with **Crisis (IPC Phase 3)** acute food insecurity from November 2016 until cassava and maize crops can be harvested in April 2017. After April and through the remainder of the Outlook period to May, food consumption will normalize and households will return to **Stressed (IPC Phase 2)** and **Minimal (IPC Phase 1)** acute food insecurity.

### AREAS OF CONCERN

**Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24)**

- **Context:** This zone is located in the southernmost part of the country and is known for being the country’s driest (semi-arid) area, with an average rainfall of only 300 mm/year in southern areas. The zone is typically a cassava surplus producing zone and is the country’s highest producer of dried cassava. Maize production is the second most important crop in the zone, and is more often sold for cash rather than consumed on the farm. Rice is by far the least common crop in the zone. Typically, poor households hold less than a half hectare of land and fewer than five small ruminants.

**Current Situation**

- **Crop production:** The main maize harvest that normally takes place between April and May failed during the 2016 year. Additionally, in the northern parts of the districts of Amboasary and Ambovomboe, and the majority of the district of Bekily, the August harvest of cassava and sweet potato was about 70 percent of normal, according to FAO. In a normal year, stocks from these harvests would last for three months, but since this year’s production was below normal, it lasted for about two months, or until October. Additionally, a recent FEWS NET/FAO assessment found that the production of cassava and sweet potatoes failed almost entirely in the districts of Tsihombe and Beloha, as well as in the southern parts of Ambovomboe, Amboasary and Bekily.

- **Sources of income:** At this time, households in this livelihood zone are engaged in a variety of income-generating activities, including:
  
  - **Migration:** Atypical migration has characterized the area since approximately November 2015. At this time of year, migration of some active household members to mining jobs or urban areas is normal. However, all FEWS NET field visits in 2016 assessed a higher than normal seasonal migration this year. Additionally, it was found that migration often engaged a larger number to all household members and a significant share of households did not return to their areas of origin during the main harvest period in May 2016. A recent mission by FEWS NET and FAO in the districts of Ambovomboe, Tsihombe and Beloha estimated through focus groups that the population of some villages is 40 to 80 percent of what they were in 2015.
  
  - **Fishing:** Fishing communities began the fishing season in September as normal after the seasonal three-month break when seas are rough, and can now count on fish as a source of food and income. However, this activity is only
undertaken by communities along the coast which account for less than five percent of the total population of the livelihood zone.

○ **Non-agricultural activities:** Households, especially in the districts of Beloha and Tsihombe, are currently intensifying non-agricultural activities (ex. sales of charcoal, water, and firewood) as coping strategies. However, prices for these commodities have fallen to below-average levels given the increase in the number of sellers this year.

○ **Livestock sales:** According to the 2016 CFSAM survey, the sale of productive livestock were undertaken by 43 percent of households in Tsihombe, 42 percent in Ambovombe, 36 percent in Beloha and 30 percent in Amboasary. Additionally, in the districts of Tsihombe and Beloha, herds are already at a critical level with only better-off households still owning animals. More specifically, according to the 2016 CFSAM, three out of four households did not possess any cattle in August, and compared with July 2015 (also a year of well below-average agricultural production), fewer animals are owned by a small group of better-off households. Even the better-off households own mostly goats this year, rather than cattle, which is more commonly observed among poor households.

○ **Sale of other assets:** Households have undertook a process of assets depletion over the past few months. For example, in addition to the sale of productive livestock, the 2016 CFSAM survey found that 20 percent of households in Beloha and 30 percent of households in Tsihombe have sold their house or land.

- **Supply and demand on markets:** With the exception of rice, trade flows are currently atypical within the livelihood zone. Usually, at this time of the year, the area is a net food seller of tubers and maize. However, due to the crop failures in the zone, low-quality maize is currently flowing into livelihood zone from Tuléar while cassava and sweet potatoes produced in the north are supplying the districts of Beloha and Tsihombe. Additionally, demand for staple foods is generally below average due to high prices and eroded purchasing power. According to traders’ focus groups held in September, the volumes traded were approximately 30 percent of normal for this period of the year.

- **Food prices:** Although historical price data for Madagascar is limited, staple food prices on local markets in the livelihood zone are well above January 2016, peak lean season levels. For example, September maize prices were 59 percent higher than January 2016 levels in Tsihombe and were 45 percent higher in Amboasary. Rice prices (gasy and imported) at these two markets have also increased by 17 to 29 percent during this time period. However, cassava and sweet potatoes, commodities which in this period are particularly consumed by poor households, were relatively stable or declined during this time period.

- **Humanitarian assistance:** Between the months of July and September half rations (i.e. for 15 days every month) were distributed to about 300,000 beneficiaries in the livelihood zone, primarily from WFP. Additionally, after recent financial contributions, the number of beneficiaries doubled in October. CRS is providing food assistance to 20,050 beneficiaries in Tsihombe and to 13,715 beneficiaries in Beloha over the next six months, which will reach 17 percent of the population in Tsihombe and 12 percent of the population in Beloha. ADRA is also providing approximately 20,000 people with food in parts of Bekily included in this livelihood zone. Based on this analysis, FEWS NET estimates that CRS’s and ADRA’s...
humanitarian assistance is likely playing an important role in preventing more severe food insecurity, in line with a higher IPC area classification, in parts of Bekily and Tsihombe districts.

- **Food security indicators from the CFSAM survey**: WFP and FAO’s CFSAM survey conducted in July 2016, the typical harvest period, collected food consumption score (FCS) and reduced coping strategy index (rCSI) data which suggested that surveyed households were facing elevated levels of food insecurity. For example, the share of households in the region of Androy with poor and borderline food consumption was found to be 50 and 26 percent, respectively, in 2016. This suggests an increase in the percentage of respondents with poor food consumption compared to last year’s survey (poor FCS: 33 percent; borderline FCS: 42 percent). Additionally, the share of households with an rCSI of between 5 and 20 (roughly in line with IPC Phase 2) and greater or equal to 21 (roughly in line with IPC Phase 3 or higher) was 25 percent and 63 percent, respectively.

- **Other food consumption information**: A recent FEWS NET/FAO assessment found that households reported large food consumption gaps due to an absence of food stocks, which is similar to reports from recent WFP and SISAV bulletins. This has caused households, particularly in the districts of Tsihombe and Beloha, to be market dependent for a prolonged period of time, and while staples are available in the markets, decreased purchasing power is constraining poor households’ food access. Consequently, households are reducing their food intake and increasing their consumption of sour cactus fruit (*Opuntia Stricta*).

- **Nutrition**: UNICEF and the *Office National de Nutrition* (ONN) conduct regular nutritional screenings of children in this area, using Mid-Upper Arm Circumference (MUAC) measured by local “animateurs communautairs”. From these data it does not appear to be any major uptick in Global Acute Malnutrition (GAM) though the percentage of children with global acute malnutrition was found to be highest in Tsihombe (11.4 percent).

### Assumptions

The most likely scenario for the October 2016 – May 2017 period is based on the following livelihood zone level assumptions:

- **Agricultural production**: Below-normal areas will be cropped, partially because of lack of seeds and households’ low ability to pay for labor with their below-average incomes this year. Therefore, despite the absence of any expected agroclimatological shocks during the upcoming rainy season, the harvest of maize in April/May is expected to be below average, especially in Tsihombe and Beloha. The harvest of short-cycle crops (watermelons and sweet potatoes in January/February, pulses in March), however, will be normal.

- **Agricultural labor incomes**: Wages will be below average for land preparation because even with the potential for decreased supply of labor, laborers are usually paid in-kind with food which is more expensive than usual, and demand will be below average.

- **Fishing**: Incomes from fishing activities and sales will likely to seasonally normal along coastal areas.

- **Livestock**: Stress sales of livestock will continue in the northern part of the livelihood zone. Meanwhile, in the districts of Tsihombe and Beloha, livestock herds have already been depleted, except for those of better-off households so households will not have animals to sell during the scenario period. This decrease in the number of cattle in the zone will also result in a shortage of animals for traction, causing the hiring of draught animal power to be more expensive than usual.

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1 rCSI thresholds used are from recommendations provided in the study "Comparing Household Food Consumption Indicators to Inform Acute Food Insecurity Phase Classification".

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**Figure 6. Number of children with global acute malnutrition, based on MUAC screening data**

Source: UNICEF/ONN
- **Maize supply and demand:** Maize will continue to be sourced from Tuléar until the next harvest in April 2017, though supplies on local markets will be below average. Additionally, demand will be below average until January due to weak household purchasing power. In February, harvests of cash crops and related labor opportunities will provide cash to certain households, increasing demand for maize immediately before the start of maize harvests. Between April and May, demand will fall once again as households consume their own production.

- **Transportation costs:** Road conditions will likely be poor between November and March as usual due to the rainy season. This will increase transportation costs in more isolated markets.

- **Prices:** Below-average supply levels and seasonally normal increases in transportation costs will drive well above-average food prices, despite expectations that household purchasing power will remain weak. More specifically, maize prices are projected to be more than 50 percent above the 2010 – 2014 average in January 2017 at the Ambovombe market. Prices will fall starting in April with the next harvest though they will still remain significantly above previous years’ levels.

- **Humanitarian assistance:** Monthly food distributions will be provided by ADRA to approximately 20,000 people in parts of Bekily and by CRS to approximately 20,050 beneficiaries in Tsihombe and 13,715 beneficiaries in Beloha through March 2017. However the assistance in Beloha will not be enough to change the phase classification.

**Most Likely Food Security Outcomes**

- Typically, food production of local harvests covers food and non-food needs for households in the zone until November. However, given that this year’s maize harvests failed and cassava and sweet potatoes harvests only occurred in northern areas of the livelihood zone, household food stocks have already been exhausted. Though households are currently trying to cope by increasing migration movements and intensifying the sale of forest products (ex. charcoal, firewood) and assets at above-average levels in search of cash, these efforts are not expected to offset the impacts of below-average agricultural-related incomes and high food prices on their purchasing power during the ongoing lean season. Consequently, households will continue to consume above-average levels of sour cactus fruit (*Opuntia Stricta*) throughout the scenario period and unripen sweet cactus pear (*Opuntia Ficus Indica*) starting in December/January. They will also likely reduce the quantity and quality of their meals, resulting in large food consumption gaps, a rise in acute malnutrition rates, and excess mortality. As a result, **Emergency (IPC Phase 4)** food insecurity is expected until the start of the harvest of pulses in March 2017. Exceptions, however, are parts of Bekily and Tsihombe within the livelihood zone where food assistance from ADRA and CRS is expected to play a key role in preventing large food consumption gaps between November 2016 and March 2017. **Crisis (IPC Phase 3)** outcomes are expected in Tsihombe and **Stressed (IPC Phase 2)** in Bekily.

- Between April and May, the harvest of key staples (maize, cassava and sweet potatoes) will provide poor households with a source of food and income, enabling them to better cover basic needs. However, given the level of asset stripping expected during the lean season, the recovery process is expected to be slow. With this in mind, more than 20 percent

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2 Sweet cactus pears are normally consumed starting in February but will be consumed before they have ripened this year as households rely on this food source as a coping strategy.
of households will likely continue to rely on atypical coping strategies and be unable to meet essential non-food expenditures, in line with Stressed (IPC Phase 2) food insecurity.

**Mahafaly Plateau: Cassava (MG 23)**

- **Context:** Livelihood zone 23 is characterized by low-elevation plateaus (100 to 300 m). Raising livestock is more widespread than agriculture, mostly dominated by small herds of goats and to a lesser extent, flocks of sheep. Raising cattle is also important, but most are raised for ceremonial purposes rather than economic reasons. The zone’s main crops are cassava and legumes. Maize is also grown, but in smaller quantities than in neighboring livelihood zones. There is little to no rice cultivation in the Mahafaly Plateau zone (with the exception of the Bezaha Mahafaly plain, Ejeda, and around Bekily), nor much production of cash crops.

**Current Situation**

- **Crop production:** The main maize harvest that normally takes place in April and May failed this year. The 2016 CFSAM estimates the maize production in the region of Atsimo Andrefana that loosely coincides with the livelihood zone was only 5 percent of the five-year average. The August and September production of cassava and sweet potato was also sporadic across the livelihood zone with the provisional 2016 estimate for cassava production in Atsimo Andrefana Region at 76,693 MT, or 37 percent of its five-year average. While the harvest was near normal in the northern part of the zone, near Betioky, north of the Onlhele river and in the districts of Toliara II, it was well below normal in the majority of the district of Ampanihy and the southern part of district of Betioky, and it failed completely in the municipalities of Itampolo and Androka (district of Ampanihy), according to anecdotal reports by partners.

- **Market and trade:** Trade flows of cassava from northern parts of the zone have increased due to below-average production in the southern parts. In September, the price of dried cassava in Tuléar, the main market for which data is available, was 550 MGA/kg, which is up 10 percent compared to 2014 levels. Similarly, the prices of imported and vary gasy rice were 23 and 20 percent higher, respectively. Market demand in the southern part of the zone is currently below average due to high prices and eroded purchasing power.

- **Sources of income:** Given that on-farm labor opportunities are seasonally low at this time of the year, households in this livelihood zone are engaged in a variety of other income-generating activities, including:
  
  - **Fishing:** Fishing communities began the fishing season as normal in September after the seasonal three-month break from June to August when seas are rough, and are now counting on this source for food and income. However, this activity is only undertaken by communities along the coast, accounting for about 3 percent of the total population of the livelihood zone.
  
  - **Non-agricultural activities:** Similar to in livelihood zone 24, households are currently intensifying the sale of non-agricultural products (ex. charcoal, water, firewood) at atypically high levels. However, prices of these products are below average given the increase in the number of sellers.
  
  - **Livestock rearing:** The majority of rural households raise livestock as their main source of income and normally keeping a herd of about 10 goats or sheep. Additionally, at this time of the year, households typically capitalize on the sale of crops to purchase livestock in preparation for the lean season. However, given food security difficulties this year, households have been selling, rather than purchasing, above-average numbers of animals, causing their herd sizes to not seasonally increase this year.
  
  - **Sale of other assets:** Data from the July 2016 CFSAM found that the stripping of productive assets was evident, particularly in Ampanihy where 17 percent of households reported the depletion of savings, 13 percent reported the sale of their house or land, and 19 percent reported the sale of their seeds for the next agricultural campaign.

- **Food Consumption:** According to the results of the FAO/WFP CFSAM, 22 percent of households in Atsimo Andrefana had “poor” food consumption and 28 percent had “borderline” food consumption in July 2016. This represents an increase compared to the 2015 results when 3 percent and 30 percent of households had poor and borderline consumption, respectively. The share of households with an rCSI of between 5 and 20 (roughly in line with IPC Phase 2) and greater or
equal to 21 (roughly in line with IPC Phase 3 or higher) was 40 percent and 44 percent, respectively. Although the data is not representative at a district level, the CFSAM results suggest particularly severe outcomes in the district of Ampanihy and to a lesser extent, Betioky.

- **Nutrition**: Similar to livelihood zone 24, UNICEF and the Office National de Nutrition (ONN) conduct regular nutritional screenings of children in Betioky, using Mid-Upper Arm Circumference (MUAC). This data not appear to be any major uptick in Global Acute Malnutrition (GAM) with the percentage of children with global acute malnutrition at 4.3 percent in August 2016.

**Assumptions**

The most likely scenario for the October 2016 – May 2017 period is based on the following zone level assumptions:

- **Agricultural Production**: Normal production of crops that typically are harvested in December (onions and groundnuts), April to August (cassava) and maize (April) are expected across the livelihood zone during the 2016/17 agricultural season. The coastal areas of Itampolo and Androka, however, will likely produce less than normal due to expected reductions in the area cropped caused by a lack of seeds and other inputs.
- **Agricultural Labor**: Below-normal demand for agricultural labor is expected in the coastal municipalities of Itampolo and Androka. However, agricultural labor opportunities and incomes are expected to be normal elsewhere.
- **Livestock**: Stress sales of livestock will continue through the lean season. However, herd sizes are larger than in the neighboring livelihood zones so there will be no shortage of animals for traction during land preparation activities.
- **Other income sources**: Normal levels of labor migration to informal gold mining sites close to Ejeda are expected. Additionally, fishing activities along coastal areas will continue at average levels.
- **Market supply and demand**: Maize and rice will continue to be sourced from Tuléar until the next harvest in April 2017 and cassava will flow to the South from northern parts of the livelihood zone. In these southern areas, however, market supplies will remain below-average. Additionally, demand will be below average until April due to weak household purchasing power. Between April and May, demand will also be seasonally low as households consume their own production.
- **Food prices**: Prices of cassava and maize will likely remain significantly above average until April when these products will be harvested. After the start of harvests, prices will fall seasonally as market supplies improve and demand decreases though they will likely remain above previous year’s levels.

**Most Likely Food Security Outcomes**

- **Households in the northern part of the livelihood zone** including Betioky, north of the Onilehe River, and the district of Tolila II will be able to satisfy their basic food and non-food needs, given relatively normal incomes and average crop production levels during the second half of the outlook period. In these areas, **Minimal (IPC Phase 1)** acute food insecurity throughout the Outlook period.

- **In the coastal areas of Itampolo and Androka** where this year’s crop production was particularly low, poor households will primarily be market dependent but will face limited purchasing power due to above-average prices and below-average income-earning opportunities. In these areas, households are expected to adopt atypical coping strategies, particularly liquidating their remaining stock of productive livestock but will likely still face serious food consumption gaps, consistently with **Emergency (IPC Phase 4)** outcomes until the cassava and maize crops can be harvested in April 2017. Similar to poor households in much of livelihood zone 24, the recovery process is expected to be slow due to ongoing asset stripping and as a result, more than 20 percent of households will continue to face **Stress (IPC Phase 2)** outcomes during the April and May harvest periods.

- **In the district of Ampanihy and the southern part of district of Betioky**, food stock have been exhausted earlier than normal and livestock herds are at currently reduced. In these areas, wild foods such as Sosa (*Dioscorea sosa*), babo (*Dioscorea bemandri*), Ovi (*Dioscorea acuminate*), sweet cactus fruit (*Opuntia ficus indica*) and kily (a mix of *Tamarindus* and ashes) will be collected and consumed earlier than usual and before maturity starting in December as a coping strategy. However, this will not fully offset the effects of high market prices and an extended lean period. Dietary quantity and quality is expected to deteriorate, causing poor households to face **Crisis (IPC Phase 3)** acute food insecurity from
Other areas of concern

**Center-south: staple crops, industrial sisal, zebu (MG 22)**

- **Crop production:** About two thirds of the zone have two rice cropping seasons, with the main rice season normally sown in December-January and harvested in April-May. Rice is mostly farmed in the districts of Betroka and Fort Dauphin although production levels have been steadily declining over the last four years due to poor rainfall. The district of Betroka has suffered most because although it is one of the biggest producers, only one cycle per year can usually be harvested. Rice in the district of Fort Dauphin is usually farmed in two cycles per year, i.e. harvests in April and in October. According to the local staff of the Ministry of Agriculture and Livestock, the first harvest in 2016 was well below average but the second harvest was relatively normal. In addition to rice, this area is also favorable for maize, sweet potatoes and cassava cropping. In the district of Betroka and the Upper Mandraré, maize production was below-normal but did not completely fail. Cassava production, harvested in September, was also about 70 percent of normal in the Upper Mandraré, which provided a stock for two months (against the usual three), and above normal income from its sale given atypically high prices in the zone.

- **Income opportunities:** On-farm labor opportunities were seasonally low until September but are now increasing for the preparation of rice paddies. Households are also intensifying non-agricultural activities, and SISAV (Sept. 2016) reports an increase of informal Beryl and Citrine mining in Behara (district of Amboasary), improving incomes and households’ access to food markets.

- **Current food consumption:** According to the results of the FAO/WFP CFSAM 48 percent of households had poor food consumption, and 39 percent had borderline consumption in the district of Amboasary in July 2016.

- **Projected food security outcomes:** Assuming a below-normal duration of household food stocks, especially maize, market purchases will likely begin earlier than normal in Amboasary and the district of Betroka. Until the harvest of short-cycle crops in February, households will then consume primarily wild foods and foods from market purchases. During this time period, most households will be able to minimally meet food needs, although poor households will be unable to afford some essential nonfood expenditures, in line with **Stress (IPC Phase 2)** food security outcomes. However, the harvest of pulses, in March, will mark the end of the lean season and the main staples harvest in April and May will provide a source of food and cover basic needs. Consequently, from March to the end of the Outlook period in May, this zone will face **Minimal (IPC Phase 1)** acute food insecurity.

**Southeast: coffee, litchi, cassava (MG 19), comprising the regions of Vatovavy Fitovinany and Atsimo Atsinanana**

- **Crop production:** This area is characterized by cash crop plantations and small plots of staple crops. In general, below-normal levels of precipitation in 2016...
did not allow for a normal production of rice, especially in Atsimo Atsinana, where yields were 60 percent of the five-year average, and in Vatovavy Fitovinany where it was 92 percent of the five-year average, according to provisional data from CFSAM. However, households’ access to food has improved since the recent harvest of yams and cassava (in Vatovavy Fitovinany) and of cash crops, which are sources of food and income, including from agricultural labor. Furthermore, in some areas of Vatovavy Fitovinany, two cycles of rice are typically farmed, which creates additional demand for daily labor for land preparation activities from September to November. However, in some municipalities of the districts of Vohipeno (Vatovavy Fitovinany) and Farafangana (Atsimo Atsinanana), due to significant post-harvest losses from heavy rains during the rice harvest, households have below-average food stocks that exhausted in October, and will have to access food through market purchases earlier than normal.

- **Projected food security outcomes:** A prolonged market dependence, coupled with the observed adoption as early as September of coping strategies typically only seen during the peak of the lean season (consumption of wild food and increased migration) will drive **Stressed (IPC Phase 2)** food security outcomes between December and January for those communities. Beyond this time, and throughout the rest of the Outlook period, rice production will likely allow households to meet minimum food and non-food needs, consistently with **Minimal (IPC Phase 1)** outcomes.

### EVENTS THAT MIGHT CHANGE THE OUTLOOK

**Table 1: Possible events over the next eight months that could change the most-likely scenario.**

<table>
<thead>
<tr>
<th>Areas</th>
<th>Events</th>
<th>Impact on food security conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Depreciation of the Malagasy Ariary</td>
<td><img src="https://via.placeholder.com/150" alt="" /> Increased prices for imported goods and fuel, which could erode the purchasing power of poor households and limit food access. In this scenario, a larger number of people would likely be food insecure.</td>
</tr>
<tr>
<td>National</td>
<td>Particularly strong cyclone strikes Madagascar</td>
<td><img src="https://via.placeholder.com/150" alt="" /> Increased prices for imported goods and fuel, which could erode the purchasing power of poor households and limit food access. In this scenario, a larger number of people would likely be food insecure.</td>
</tr>
<tr>
<td>Livelihood zones 23 and 24 in the south</td>
<td>Increased humanitarian assistance</td>
<td><img src="https://via.placeholder.com/150" alt="" /> Humanitarian assistance could improve food consumption, protect livelihoods, and result in better food security outcomes and agricultural production during the 2017 year.</td>
</tr>
<tr>
<td>Livelihood zones 23 and 24 in the south</td>
<td>Well-armed dahalo groups disrupt trade flows</td>
<td><img src="https://via.placeholder.com/150" alt="" /> Reduced trade flows and market supplies could drive up food prices in the South, further limiting household food access through market purchase.</td>
</tr>
</tbody>
</table>

### ABOUT SCENARIO DEVELOPMENT

To project food security outcomes over a six-month period, FEWS NET develops a set of assumptions about likely events, their effects, and the probable responses of various actors. FEWS NET analyzes those assumptions in the context of current conditions and local livelihoods to develop scenarios estimating food security outcomes. Typically, FEWS NET reports the most likely scenario. To learn more about this approach to scenario development, visit [www.fews.net/scenario_development](http://www.fews.net/scenario_development).