Near normal tuber production in Southern Madagascar is expected to improve food security outcomes

KEY MESSAGES

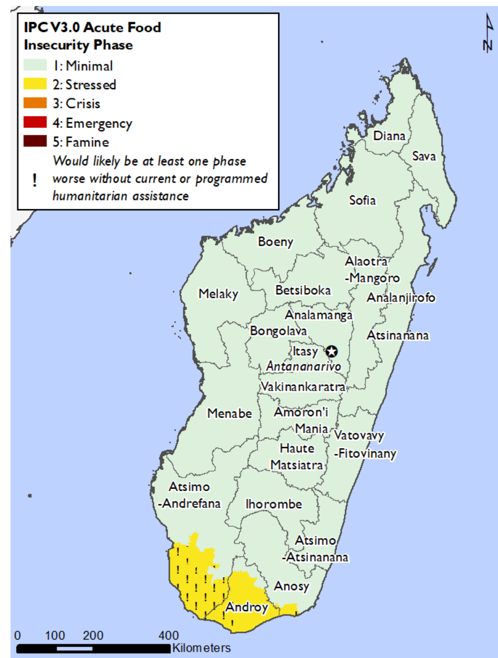
- The 2018/19 rainy season concluded with cumulative above normal rainfall in northern and southwestern parts of Madagascar, below normal along the central-west and the central-east coasts and normal to slightly below normal throughout the rest of the country.

- Overall national rice production will likely be 3.3 million MT, maize production will likely be around 215,000 MT, and cassava production around 2.6 million MT. Each of these similar to last year. Production of sorghum and millet is also increasing, particularly in Androy and Itasy regions.

- Most food security programs and projects like ASOTRY and FARANO of FFP, CRS's HAVELO, ADRA's ZINA and HOPE, and WFP's emergency projects are at their end-line evaluations and closure. Other projects are expected starting in October 2019, but with lower coverage.

- In June 2019, poor and very poor households in the southwest and far south of Madagascar are experiencing Stressed (IPC Phase 2) with large contribution of humanitarian food assistance in Ampanihy district, Beloha district and the four most vulnerable communes of Fort-Dauphin which are in Crisis (IPC Phase 2!).

Current food security outcomes, June 2019



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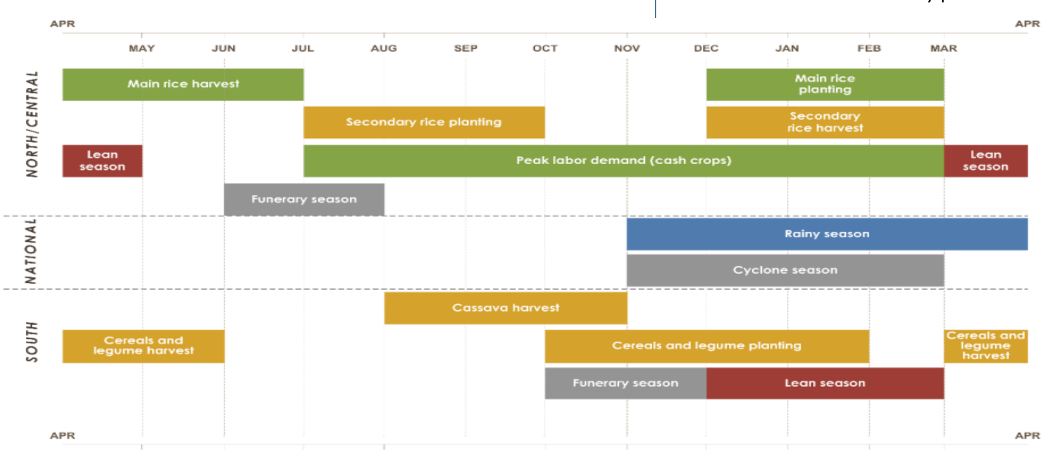
SEASONAL CALENDAR FOR A TYPICAL YEAR



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NATIONAL OVERVIEW

Current situation

2018/2019 rainy season

The 2018/19 rainy season concluded with cumulative above normal rainfall in northern and southwestern parts of Madagascar, below normal along the central-west and the central-east coasts and normal to slightly below normal throughout the rest of the country. This was favorable for crop growth, particularly maize and rice, in main agricultural producing areas such as Vakinakaratra, Boeny and Haute Matsiatra.

Agricultural campaign

The main rice harvest is ongoing throughout the country through the end of June. Production in the Highlands is better than last year due to better rainfall conditions. However, Western Madagascar and some localities in the east were affected by rainfall deficits which had an impact on rice and maize production. Farmers in Central regions who harvest earlier are preparing their land for off-season crops like beans and vegetables.

Export cash crops

Vanilla still accounts for a large share of Madagascar's export value. The new campaign started in May 2019 in SAVA region. Production from the last season slightly increased, and quality increased as well compared to last year, thanks to favorable rainfall in Northern Madagascar. Green vanilla was sold at above the normal price of MGA 150,000 to 210,000 per kilo in early June. Other cash crops, like coffee, are currently being harvested in southeastern Madagascar which brings income to smallholder farmers. Production is estimated to be near normal and prices are 10 percent above the 5-year average.

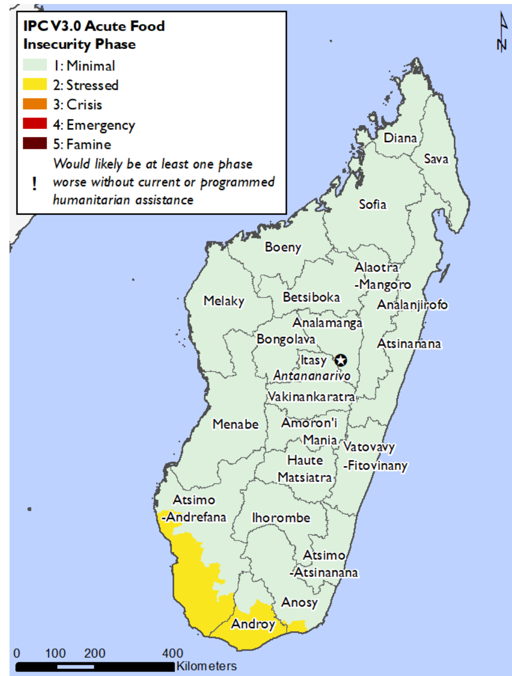
Livestock in Southern Madagascar

Herd sizes are currently increasing with the availability of food and good pasture conditions. Livestock prices decreased 20 percent during the peak of the lean season (January to February 2019) in the southwest compared to the beginning of the lean season (November to December), then increased by 60 percent at the beginning of harvests (March to April). Current prices are 15 to 40 percent higher than usual because of good cattle body conditions.

Nutrition in Southern Madagascar

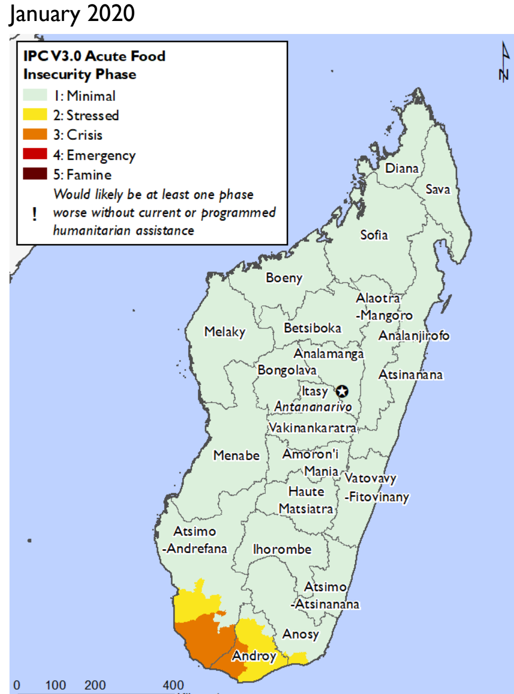
The results of exhaustive screenings by the Nutrition Cluster show a deterioration of the nutritional situation in southern districts during the first quarter of 2019 compared to the last quarter of 2018 and compared to the first quarter of 2018. In the districts of Betioky, Ambovombe and Bekily GAM by MUAC levels were above 15 percent (in line with Phase 4 or 5 according to IPC Acute Malnutrition protocols). In the districts of Beloha and Tsihombe GAM by MUAC levels were between 10 and 15 percent (in line with Phase 3 or 4 according to IPC Acute Malnutrition protocols). In Amboasary and Fort-Dauphin GAM by MUAC levels were below 10 percent (in line with Phase 1 or 2 according to IPC Acute Malnutrition protocols). Globally, the reason of the deterioration is the severity of the lean season due to below average agricultural production and less availability of water. In addition, the number of admissions to CRENAS in some districts increased in March 2019 due to the measles epidemic.

Projected food security outcomes, June to September 2019



Source: *FEWS NET*

Projected food security outcomes, October 2019 to January 2020



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Markets and trade

Macroeconomic context

The exchange rate of the Malagasy Ariary to the US Dollar continues to decline and the Malagasy Ariary has lost 10 percent of its value against the US Dollar compared to the same period last year. This has serious consequences on the prices of local and imported items and negatively affects household purchasing power, particularly in urban areas. Nevertheless, fuel prices have stabilized since December as international prices are still lower than before the last increase. Inflation also seems to be contained with a rate of 5.9 percent in February 2019 compared to 10.3 percent in February 2018.

Rice imports

According to OdR, 125,000 MT of rice were imported between January and May 2019. This is half of last year's quantities in the same period; and 25 percent below the 5-year average. Compared to previous months, rice imports slightly increased in March when the government ordered more than 16,000 MT of rice from Pakistan to be sold at subsidized prices to poor households, particularly in vulnerable areas like those in Southern Madagascar.

Prices of staple foods

2019 national rice production is expected to be better than 2018 thanks to favorable rain conditions in main producing areas, except in western areas. First harvests were completed in March. Prices are lower than last year but have started to decrease compared to recent months. Following normal seasonality, the beginning of the main harvest led to greater price decreases reaching a minimum of 1,720 Ariary in May 2019.

Other factors

New Global State Policy

As part of the "Initiative for the Emergence of Madagascar" Program, the new government of Madagascar sold around 16,000 MT of imported rice at subsidized prices in the most vulnerable areas of the country, such as in Southern Madagascar, and the main cities. The program took place in April/May 2019. This price is 40 percent lower than the market price. Each household could purchase up to 3 kilos, which contributed to approximately 2-5 percent of the food needs of very poor and poor households.

Humanitarian Assistance

Most humanitarian assistance ends this month. ASOTRY and FARANO programs of FFP are at their end-line evaluations and closure. ADRA's food security projects in Ampanihy and Betioky like ZINA, HOPE and "*Sakafo Manavotra*" with FFP also end in June 2019. Only the FIAVOTA safety net program of FID/WOLRD BANK/UNICEF is continuing beyond 2020. This consists of strengthening education, nutrition and livelihood by transferring conditional cash to beneficiaries. CSR also continue to support fishing activities in Tsihombe and Beloha through their LOVA project by end March 2020. They have a new project indeed named FIAROVA under USAID/OFDA fund which goes through May 2019 to September 2020 and which includes general food distribution, food for assets, and community-based management of acute malnutrition.

Assumptions

The most likely scenario for the June 2019 to January 2020 period is based on the following national level assumptions:

- **2019/2020 rainy season:** The National Meteorological Department of Madagascar forecasts normal to below normal rainfall in the southwest, central, east and northern Madagascar between June and August 2019. Rainfall will likely be normal to above normal in the Southeast and Western areas of the country. Meanwhile, the NOAA NMME probabilistic forecast does not predict any severe rainfall deficits for the outlook period.
- **Agricultural production:** Overall national rice production will likely be 3.3 Million MT which is similar to last year but 10 percent below the 5-year average. On the other hand, maize cropped areas increased compared to last year particularly in zones where rainfall was abundant like in South, Central and Northern Madagascar. However, most maize crops in Southern and Southwestern Madagascar were infested by Fall Army Worm (*Spodoptera Frigiperda*, FAW) leading to crop failure. Therefore, overall national maize production will likely be around 215,000 MT like last year which is 30 percent below the 5-year average. Cassava production increased in the South, where it is primarily grown, bringing the national production to 2.6 Million MT which is 6 percent higher than last year but still 4 percent below the 5-year average. Production of sorghum and millet is also increasing, particularly in Androy and Itasy regions.

- **Livestock prices:** In South Madagascar livestock prices will likely continue to increase, with the arrival of the tuber harvests, to near normal, around 500,000 MGA for a cow, 120,000 MGA for a goat, and 150,000 MGA for a sheep in August. Prices will start to decrease again at the beginning of the lean season in November but will remain higher than last year between 300,000 and 400,000 MGA for a cow, around 90,000 MGA for a goat and 110,000 MGA for a sheep.

- **Labor demand and income**: Labor demand will increase with the cassava and sweet potato harvests from June to September 2019 in Southern Madagascar. Elsewhere, rice harvest will continue until the end of June and followed by legumes and pulses planting that will also require labor. From October 2019 to January 2020 land preparation will take place and labor demand will likely increase because of the expectations of favorable rainfall for agriculture. Farmers will likely have access to enough seeds and cuttings to increase planted areas.

- **Rice imports:** Imports of rice are expected to decrease in the next few months because of local harvests. Less than 20,0000 MT will be likely imported per month until October 2019. Then, the quantity will increase above 30,000 MT per month between November 2019 and January 2020 because of the lean season. In total, rice imports in 2018/2019 will likely be around 380,000 MT which are half of last marketing year and near the 5-year average.

- **Macroeconomic context**: According to trading economics, inflation will likely stabilize around 6 percent until January 2020, which will help to avoid sudden food price increases within the outlook period. However, the exchange rate will likely continue to decline by 4 percent through the outlook period which will continue to hamper household purchasing power.

- **Staple prices:** Prices of staple goods will likely start to increase again in mid-June with preparations for Independence Day and will stabilize at around 1,850 Ariary until October 2019. Throughout the projection period prices of local rice in Antananarivo will likely remain above the 5-year average due to the persistence of general inflation. In Tulear, with the ongoing harvest of cereals and the expected arrival of the imported rice to be sold at subsidized prices in southern Madagascar in May 2019, prices will likely decrease in May and June and will slowly increase again in July. It will likely remain above average within the outlook period. For the next few months prices will likely decrease to be around 800 Ariary per kilo in July with the arrival of products from main harvests in other districts where production is likely higher such as Betroka, Tsivory, Andranovory, Bekily, Betioky. Prices will likely slowly increase between August and November and will sharply increase until January 2020. Maize prices in Ambovombe will be below last year's level and near 5-year average within the projection period.

- **Livestock herd sizes and livestock health:** Since the rainy season has ended pasture will likely be dry and will be insufficient for cattle. Therefore, animals will start to be fed with sweet potato and cassava leaves from June to September and with cactus (*O. Ficusindica*) and sugarcane leaves from October 2019 to January 2020. Livestock health could degrade in the worst areas, but in general herds will remain stable within the outlook period.

- **Nutrition in Southern Madagascar:** Between June and September, acute malnutrition will likely reduce due to increased food availability following the main harvests, improved water access particularly in Beloha, and the improved vaccination and other campaign coverages particularly in Ampanihy. Nevertheless, GAM levels will remain serious (GAM between 10 to 14.9 percent) in most of the districts except Ampanihy where GAM levels will likely stay critical (above or equal to 15 percent). GAM levels in Tsihombe, Amboasary and Fort-Dauphin will likely be acceptable or alert (GAM below 10 percent). The number of admissions in CRENAS will also decrease but remain above average, which is between 200 and 300 per district, in Ambovombe and Ampanihy, and below average in Amboasary and Fort-Dauphin. Starting from October through the end of the outlook period, the prevalence of acute malnutrition will likely increase because of the lean season. Nevertheless, the situation will be better than during the last season and will be near normal.

- **Humanitarian Assistance**: From June to September 2019 humanitarian food assistance will likely decrease and will transition to more cash interventions and resilience activities to create assets. October 2019 to January 2020 food distribution will resume but with less coverage. Some long-term program like CRS's LOVA will continue through the year until mid-2020. Humanitarian assistance addressing nutrition will likely increase throughout the outlook period due to the announcement the deteriorating nutritional situation in many districts of the south. Through recent EU funding, UNICEF will likely increase the current coverage of prevention and treatment of severe acute malnutrition by 10 percent by targeting 3,500 more children living in remote area at high risk of death to be detected and treated. They will also each receive a hygiene kit that will allow them to recover more quickly and avoid relapses. 40,000 parents will also likely be trained in malnutrition screening techniques.

Most likely Food Security Outcomes

In the **Extreme south: cassava, maize, and livestock rearing livelihood zone (MG 24)**, food insecurity is expected to be less severe than in previous months due to the main tuber harvest. However, food gaps will persist because of less diverse food consumption patterns and coping strategies like eating non-mature crops or reducing the number and quantity of meals. Moreover, poor households' dependence on markets is still high and prices remain above normal. Acute malnutrition prevalence is above 10 percent in the zone despite large humanitarian food assistance coverage. Therefore, households in the zone are in **Stressed (IPC Phase 2!) acute food insecurity** in June 2019. Between July and September 2019, households will likely not have very diverse diets, mostly consisting of starches. Unlike the current situation, fewer households will adopt food consumption based coping strategies and will eat an adequate number and quantity of meals. Livelihood strategies will likely remain the same as current ones but with lower proportions. As the nutritional situation will likely remain in an Alert situation and humanitarian assistance will likely be very limited during the harvest period, very poor and poor households in the zone will be in **Stressed (IPC Phase 2) between July and September 2019.** From October onwards, the situation will be like the June to September period except in Beloha where the effect of last year's drought and near zero maize production will likely lead households to using coping strategies earlier than usual. Poor and very poor households will likely face **Stressed (IPC Phase 2) acute food insecurity in most of the zone and Crisis (IPC Phase 3)** in Beloha **between October 2019 and January 2020.**

In the **Southwest: cassava and small ruminants (MG 23)**, food insecurity improved compared to previous months due to the harvest period. Moreover, pulses and cereal production improved in Betioky and surrounding communes allowing a better food availability among households and at markets. Nevertheless, the situation remains more severe in Ampanihy because of the high prevalence of acute malnutrition. Households adopted more severee coping strategies like reducing adult meals to allow children eat or over-selling productive and non-productive livestock. Therefore, the very poor and poor households in the area are currently experiencing **Stressed (IPC Phase 2) acute food insecurity in June 2019 with a higher contribution of humanitarian food assistance in Ampanihy, leading households in that area to face Stressed (IPC Phase 2!).** Between July and September 2019, food consumption will improve as the very poor will be able to access fresh cassava and sweet potatoes from the main harvest. Humanitarian assistance will likely be little to none during this period so poor and very poor households will likely be in **Stressed (IPC Phase 2) between July and September 2019.** From October onwards, staple consumption will reduce with the end of harvests and market prices will likely start to increase. Food gaps will increase given the limited food stocks and low incomes. Humanitarian assistance will likely resume but with low coverage in Ampanihy. Poor and very poor households will likely face **Stressed (IPC Phase 2) in the zone and Crisis (IPC Phase 3) acute food insecurity in Ampanihy between October 2019 and January 2020.**

Local stresses have been identified in western and eastern parts of Madagascar due to the localized rainfall deficits, but the impacts are not sufficient enough to classify zones in these areas as food insecure. Therefore, **households throughout Madagascar** will remain in Minimal (IPC Phase 1) acute food insecurity outside the areas of concerns throughout the outlook period.

EVENTS THAT MIGHT CHANGE THE OUTLOOK

Possible events over the next eight months that could change the most-likely scenario.

Areas	Events	Impact on food security
National	Fall Armyworm (Spodoptera Frigiperda	Migration of FAW may follow the coast northward (following better rainfall and warmer temperatures). Despite the population decrease, this migration may pose a threat to farming in northern Atsimo Andrefana and potentially to the irrigated rice fields around Morombe. It is assumed that damage to cassava will be minimal, and that in general the pest will be less important for off-season crops in Atsimo Andrefana and Androy than for was for maize.
Southern Madagascar	Locusts	Due to the favorable weather conditions for locust breeding in the south and southern highlands, large swarms may form in some districts. This may affect the next season planting of cereals and legumes. Expected crop production will be reduced despite favorable weather conditions, and food insecurity will be more severe. Specifically, areas projected to be in Stress (IPC Phase 2) may deteriorate to Crisis (IPC Phase 3) between October 2019 and January 2010

AREAS OF CONCERN

Androy Semi-Arid Cassava, Maize and Livestock (MG 24) - Beloha district

Current Situation

- **2018/2019 rainy season:** Rains began in Beloha in the last week of November and according to the agrometeorological bulletin published by the National Unit for Agricultural Meteorology with the support of FAO in March 2019, recorded rainfall in Beloha was near normal, which was favorable for cereal sowing, while rainfall in Androy region was below normal but above last year according to the cumulative rainfall data from EWS-USGS.

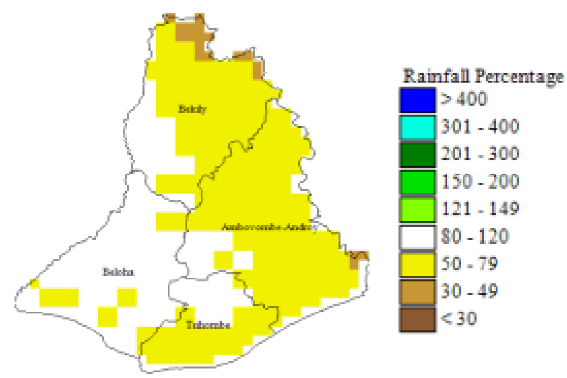
- **Staple crop production**: During the 2018/19 agricultural campaign, farmers in Beloha mainly planted cassava, maize, pulses, sweet potatoes, millet and sorghum. All farmers planted cassava in July and August and started to harvest it early in April. Production is expected to be greater than last year thanks to favorable rainfall. Only about one third of farmers planted maize because of lack of seeds. The maize harvest was expected in March and April, but production was near zero due to late rainfall and fall armyworm infestations. Around half of farmers also planted pulses in October and November which were also harvested in March and April. Production was higher than last year but remained below normal due to limited access to seeds. Sweet potatoes were planted in April and May, after the maize, and will be harvested in July and August. Sweet potato production is also expected to be higher than last year. Sorghum was planted by around twenty percent of famers in October and was harvested in March and April. Millet was planted in December and will be harvested in June. Both sorghum and millet are becoming more popular crops in the region.

- **Prices of staple foods**: Prices are decreasing compared to previous months in Beloha because of the recent harvest period. Nevertheless, they remain above 2018 and average prices as supply is below normal. This is restricting poor households' ability to purchase staple foods at markets. Imported rice, is 11 percent higher than last year and 15 percent above the 5-year average. Prices of local rice are similar to last year but 30 percent above the 5-year average. Maize prices are nearly 30 percent above 2018 prices because of the poor 2019 production. Dried cassava is no longer sold in markets as households have transitioned to fresh cassava.

Figure 1. Map of Livelihood Zone 24: Androy Semi-Arid Cassava, Maize and Livestock

Source: *FEWS NET*

Figure 2. Rainfall in Androy Region in March 2019



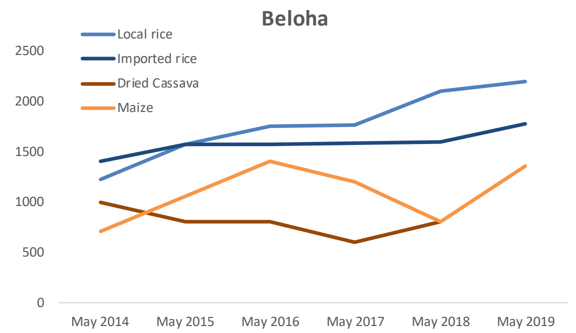
Source: *Meteo Madagascar/FAO*

- **Sources of food**: Nearly 15 percent of staple foods that are currently consumed come from own production. While cereal stocks are exhausted for poor and very poor households, some cassava and sweet potatoes stocks remain and will last until around September. Nearly 80 percent of cereals and tubers currently consumed come from market purchases. About 65 percent of pulses are also purchased, while 30 percent come from own production, and few are from food assistance or gifts. Most vegetables (cassava and sweet potato leaves, melon) and fruits (mangos, tamarind, cactus) come from own production or gathering. Milk, meat and fish are mostly purhcased, as well as oil and sugar. Currently, Beloha market is less supplied than normal following the failed maize harvest and only some fresh cassava and potatoes from Ambovombe are sold. Cereals like imported rice from Fort-Dauphin, local rice from Amboasary or Fort-Dauphin and small quantities of locally grown sorghum is also available. Wild food availability has decreased, and no cactus is sold at markets because of unavailability.

- **Water availability and pasture conditions:** Water availability, both for people and livestock, has largely improved in Beloha compared to last year at the same period thanks to the near normal rain. During the FEWS NET field assessment in early May 2019, the Menarandra river was flowing again following the previous two years when it was dry. According to the 5th bulletin on drought produced by the EU-funded WASH Cluster, the level of groundwater in Beloha was near normal in April 2019. Nevertheless, due to the end of rainy season, water prices have slightly increased from MGA 400 in March to MGA 500 per jerrycan in April. Meanwhile, the pipeline constructed under UNICEF funding, from Ampotaka, a fokontany close to Menarandra river, to Beloha Chief District and surroundings communes (more than 20 km) is now functioning and is providing drinking water to nearby villages. NDVI shows normal vegetation in pastoral areas of Beloha.

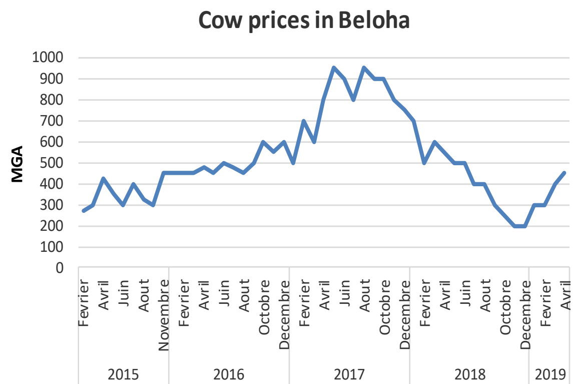
- **Livestock herds and prices**: Livestock sales have slowed as food availability has improved. However, it is still an important source of income for households in Beloha. Livestock prices are slightly higher than in previous months due to better livestock body conditions and decreased supply. Nevertheless, prices remain 10 percent below last year and 20 percent below the 4-year average. A cow cost MGA 450,000 in April/May 2019 compared to MGA 500,000 in 2018 and MGA 560,000 on average (Source: SISAV/CRS). Most buyers are from northern districts such as Bekily or Betroka.

Figure 3. Staple food price variation in Beloha



Source: *OdR*

Figure 4. Change in the price of a cow since January 2015 in Beloha



Source: *SISAV Data*

- **Labor availability and prices:** Agriculture-based casual employment was below normal this cropping season. Despite rains allowing farmers to prepare their land and sow in November and December, a lack of seeds limited the cropped areas to near half of possessed lands. Moreover, fewer cereals and pulses than normal could be harvested in March and April. Fortunately, weeding activities are near normal in cassava and sweet potato fields in May. Labor wages are normally low in February, then start to increase in March to reach a peak between July and September according to SISAV data. In May 2019, one day of labor paid around MGA 3,000, which is 20 percent higher than last year and 40 percent above the 5-year average.

- **Humanitarian Assistance**: Around 8,000 households in two communes of Beloha (Marolinta and Tranovaho), which are more than 30 percent of the total population in Beloha, continue to receive food assistance from CRS through the Havelo project. This project is part of the ASOTRY program funded by USAID and has been ongoing since January 2019. Within that project, a household receives 36 kilos of sorghum, 4 liters of oil, 12.5 kilos of fortified flour, and 4.5 kilos of yellow split peas per month, which covers 40 percent of poor and very poor households' food needs. WFP's in-kind or cash distribution program is also ongoing in June in other communes where CRS does not intervene. Another 20 percent receive cash transfers of 70,000 Ariary per month, which also fills 40 percent of poor and very poor households' needs in the zone.

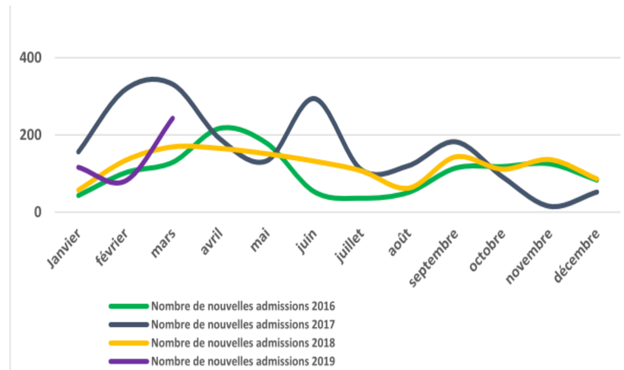
- **Nutrition**: The results of exhaustive screenings by the Nutrition Cluster during the first quarter of 2019 show an Alert situation in Beloha with a proxy-GAM between 10 and 15 percent. The situation in Beloha deteriorated compared to the last quarter of 2018 and compared to the first quarter of 2018, particularly in Tranovaho and Kopoke communes, because of the severity of the lean season and the poor availability of water at the end of 2018. The 2018/2019 measles epidemic also aggravated the situation. The GAM prevalence likely reduced during the second quarter 2019 because of the improved access to drinking water, the main season harvest, and the improvement of the measles vaccination campaign coverage, but may remain in Alert status.

Assumptions

The most likely scenario for the June 2019 to January 2020 period is based on the following zone level assumptions:

- **Agroclimatology**: The next rainy season will likely start on time in November in Androy Region where the district of Beloha is located. NMME forecasts show normal rainfall in that part of Madagascar between July and September 2019 followed by above normal rainfall between October and December 2019. This will allow farmers to prepare land and to plant cereals and pulses on time, provided they have enough seeds.
- **Staple production**: Tuber production is expected to be near normal in Beloha. Markets will be well supplied from June to September with cassava and sweet potato products. Maize production is likely near zero. Even through production of other cereals is increasing, the supply will be below average and below last year.

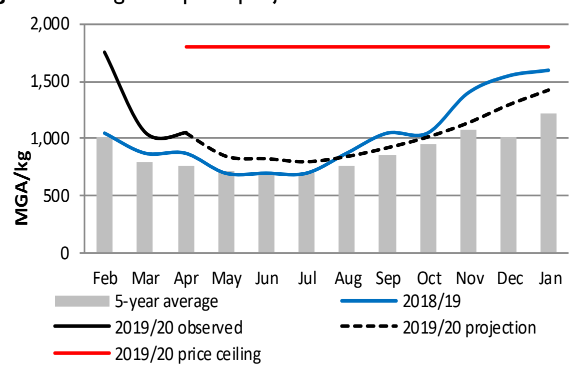
Figure 5. Admissions to CRENAS in Beloha District since 2016



Source: *Nutrition Cluster Bulletin, Third quarter 2018*

- **Staple food prices:** According to FEWS NET price projection, prices of maize in Ambovombe, the reference market for the most vulnerable areas of MG24 will likely remain near average from June to September. Then, prices will increase beginning in September through January 2020, and will likely be above average due to insufficient supply. A maximum of 1,400 ariary per kilo (equal to 350 ariary per cup) will likely be reached in January. Prices in Beloha, which is an importer of maize, will likely follow Ambovombe's price trends plus a differential of around MGA 400 for transportation and storage. Prices will likely reach 1,800 Ariary per kilo (equal to 450 per cup) by January 2020. Dried cassava prices will slightly decrease at the beginning of the June to September period because of harvests but will remain near normal because of near normal production. Prices will likely increase but will remain near normal by January 2020. Prices of imported rice will be near normal due to some sales at subsidized prices. Meanwhile, tuber prices will be near normal within the outlook period.

Figure 6. Integrated price projection of Maize in Ambovombe



Source: *FEWS NET*

- **Availability of wild foods:** The proportion of people selling cactus is expected to reduce from June to September with tuber harvests; and to disappear from October 2019 to January 2020. Sales of other wild food like "*moky*" or "*sosa*" (a wild yam) may also appear from June to September and those of sugar cane and tamarind from October 2019 to January 2020 but the proportion will likely be lower than last year. Typically, wild foods are less consumed and less available from June to September but highly available and consumed from October 2019 to January 2020. (*Flacourtia indica*) lamonty and (*Salvadora angustifolia*) *Sasavy* are the most preferred species consumed during the lean season (October 2019 to January 2020). (*Tamarindus indica*) Kily and (*Poupartia caffra*) *Sakoa* are both consumed during the harvest period and the lean season but less so in the harvest period.
- **Nutrition**: From July to September that normally cover the peak of the harvests, levels of acute malnutrition are likely to improve slightly and will return to "under control" (proxy-GAM under 10 percent) due to less morbidity prevalence during the rainy season. Humanitarian assistance related to nutrition is expected to be strengthened and likely will have some positive impacts on wasting. Centers will likely be supplied, and mobile consultations will resume in the district with funding from the EU. The level of acute malnutrition will likely increase starting in October and will likely continue through January

2020 due to the start of the lean season but will remain "under control". CRENAS admissions will likely be less than 200 children in the whole district of Beloha within the outlook period.

- **Livestock conditions and prices**: Livestock sales will be near average as people are restoring their herds. Prices will continue increasing and will likely vary between MGA 500,000 and MGA 600,000, which is near average within the outlook period.
- **Labor opportunities and wage rates:** Labor opportunities will remain stable and near normal from June to September with the sweet potato and cassava weeding and harvests. The same scenario will likely happen from October 2019 to January 2020 - the main farming season may start on-time with the normal rain expected in October. Labor wages will likely follow the normal seasonality: slight increase between June and October, stability from November to December and decrease from January to February. It will likely vary between 2,500 ariary and 3,500 Ariary.
- **Pastureland and water availability**: Pasture conditions are expected to deteriorate normally from June to September because of the dry season until the first rains in November. Water availability will also likely decrease but will be better than last year because of the existence of new infrastructure. Water prices will increase steadily until October.
- **Humanitarian Assistance**: Most humanitarian interventions in Beloha ended in May 2019. During the harvest months beginning in June, no major humanitarian assistance is planned nor funded. Nevertheless, the safety nets program will likely continue, and some resilience programs are also expected to begin in October 2019. Humanitarian assistance will likely be normal within the outlook period and will target less than 20 percent of the population.

Most Likely Food Security Outcomes

Food consumption is improving in Beloha following the end of the lean season. However, poor and very poor households are still not easily meeting their food needs and some households have changed their food consumption habits. Most of them have reduced the number of meals they eat in a day or have eaten less preferred foods like fresh cassava instead of maize. Others have reduced the quantity they eat at each meal. More than half of households in Beloha have also eaten non-mature crops because they do not have stocks from last harvest anymore and the production of maize in March and April was near zero. Some have also eaten the seeds they normally would reserve for the next cropping season. Households also reduced their expenditures on agricultural inputs and other non-food expenditures or have mobilized their savings. Nevertheless, the nutritional situation in Beloha is in alert and most humanitarian food assistance programs in the district continue until end June, resulting in very poor and poor households in Beloha experiencing **Stress (IPC Phase 2!) acute food insecurity in June 2019.**

Between July and September 2019, taking in consideration the consumption patterns of the last few years during the same period, households will likely not have very diverse diets, mostly consisting of starches. Unlike the current situation, fewer households will adopt food consumption based coping strategies and will eat an adequate number and quantity of meals. Livelihood strategies will likely remain the same as current ones but with lower proportions. More than half of households in Beloha will likely continue eating seeds they would normally reserve for the next cropping season. Households will likely reduce their expenditures for non-food items and for agricultural inputs. As the nutritional situation will likely remain in an Alert situation and humanitarian assistance will likely be very limited during the harvest period, very poor and poor households will be in **Stressed (IPC Phase 2) between July and September 2019.**

From October onwards, the situation will be similar to the June to September period since tuber stocks are expected to last until September. People will start eating dried cassava bought from markets. Households will reduce the number of meals and the quantity eaten per day. In addition to coping strategies already adopted in the June to September period, households will start to sell livestock to able to buy food at the market. Livestock prices will reduce but not as severely as last year and will likely remain near normal between MGA 400,000 to MGA 500,000. Households will also use their savings or start to borrow food or money to fill their food need gaps and to able to start the new cropping season when rains arrive because they will have already eaten their reserve of seeds. The nutritional situation will stabilize, and humanitarian assistance will resume but with low coverage. **Poor and very poor households will likely face Crisis (IPC Phase 3) acute food insecurity in Beloha between October 2019 and January 2020.**

Mahafaly Plain: Cassava, Goats and Cattle (MG 23) - Ampanihy district

Current Situation

- **2018/2019 rainy season:** Rain in Ampanihy first fell in October 2018 and according to the National Department of Meteorology, the district of Ampanihy received above normal rainfall between October 01, 2018 and April 28, 2019. This was favorable for agriculture and for livestock rearing.

- **Staple crop production**: During the 2018/2019 agricultural campaign, farmers in Ampanihy district of MG23 mainly planted cassava, maize, pulses, sweet potatoes and peanuts. Tubers and maize are mainly consumed while pulses and peanuts are sold. Around 80 percent of farmers planted cassava in October and are expected to harvest from June through August. Production is expected to be higher than 2018 thanks to favorable rainfall. Peanuts were sown by about two thirds of farmers in November and were harvested in March. Production was near normal. Most farmers also planted pulses in November and December and harvested them in March. Pulse production was also near normal. Only around one third of farmers planted maize in November and December due to lack of seeds. They harvested in March, but production was near zero due to serious fall armyworm infestations. Some farmers believe that they must deforest areas to plant on new land to avoid fall armyworm. Sweet potatoes were also planted by one third of farmers in January and harvests occurred in March and April.

Figure 7. Location of the Mahafaly Plain: Cassava, Goats and Cattle livelihood zone

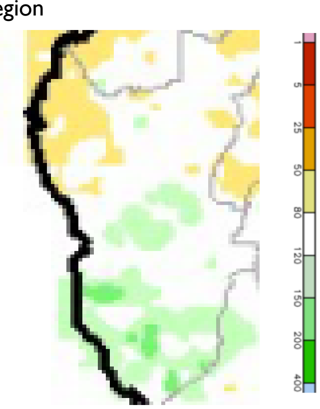
Source: *FEWS NET*

- **Market supplies:** During the FEWS NET field assessment in early May, Ampanihy markets (Chef-lieu, Androka and Andranobory) were functioning but food availability was low. There were few sellers of maize, sweet potatoes and pulses from surroundings communes, but prices were lower than in Betioky. Many women still sold yellow cactus fruits, at the Chef-Lieu of Ampanihy, which was unusual in that period. Some pumpkins were also found at the markets. Sweet potatoes are not available. However, green garden vegetables that are promoted by some humanitarian projects are available in areas like Betioky and are sold at very low prices.

- **Prices of staple foods**: Prices of imported rice are 10 percent higher than last year despite the sale of subsidized rice by local authorities at 40 percent lower than market prices, due to the persistence of low food availability in the district. Local rice and maize prices decreased compared to previous months in Ampanihy because of the main harvest period, while imported rice and dried cassava stabilized. Nevertheless, prices remain 20 to 50 percent above normal: 52 percent for maize due to lower production and for 100 percent for dried cassava because the harvest has not started yet. Households instead mostly ate and sold fresh cassava. This is limiting access to food from markets for poor households.

- **Water availability and pasture conditions** Most households in the zone do not have good access to a drinking water source, both for in-land and coastal areas. Water in the zone comes from seasonal rivers such as Onilahy River and Linta River. Those rivers continue to flow in May, but the level of water has started to reduce. Households in Androka had to travel 5km to fetch water. In town, the price of water also slightly increased from MGA 400 in March to MGA 500 per jerrycan. Nevertheless, water availability has improved compared to 2018 during the same period. According to the 6th bulletin on drought produced by the EU-funded WASH Cluster, the level of groundwater in Ampanihy was alarming in May 2019 and NDVI showed that pastureland was starting to dry, except along the Linta River.

Figure 8. Percent of normal rainfall received from October 1st to April 28th, 2018 in Atsimo Andrefana region



Source: *Meteo Madagascar/NOAA*

- **Livestock herds and prices**: Livestock sales have slowed as food availability improved. However, small ruminant sales contribute to near 20 percent of the income for poor households in Ampanihy. Livestock prices slightly increased compared to previous months due to better livestock body condistion and the decrease of supply. On average in April and May, a cow cost 450,000 MGA, a goat 100,000 MGA and a sheep 120,000 MGA. Those prices are around 50 percent higher

- than in early 2019 and 20 percent higher than the last quarter of 2018. Cattle mainly eat sweet potato leaves and dry maize leaves as pastureland has started to be dry.
- **Humanitarian assistance**: WFP intervenes in 10 communes with cash distribution as an emergency program and in another 4 communes with food for assets as a resilience program. They target more than 20 percent of the population. The food ration consists of 40 kilos of rice, 3 kilos of split peas and 1.75 liters of oil, which contribute to nearly 40 percent of needs among poor and very poor households. Cash transfers of 70,000 ariary per household contribute to around 40 percent of needs among poor and very poor households. ADRA's emergency project with FFP continues to target more than 10,000 beneficiaries in 8 communes until June, as well as the Zina program supporting livelihoods.

Figure 9. Staple food price variation in Ampanihy

Items (in kg)	Average (May 2003-2005)	May 2018	May 2019
Local rice	1,470	1,750	1 750
Imported rice	1,400	1,580	1,750
Dried cassava	650	500	1,000
Maize	850	810	1,230

Source: *OdR Data*

- **Nutrition**: The results of exhaustive screenings by the Government of Madagascar (National Office of Nutrition and Ministry of Health) show a constant deterioration of the nutritional situation in Ampanihy since the beginning of 2018. Since the second quarter of 2018, the district has been in an emergency situation, whereas it was in alert in the first quarter of 2018. All the communes in Ampanihy had a proxy-MAG above 15 percent during the first quarter of 2019.

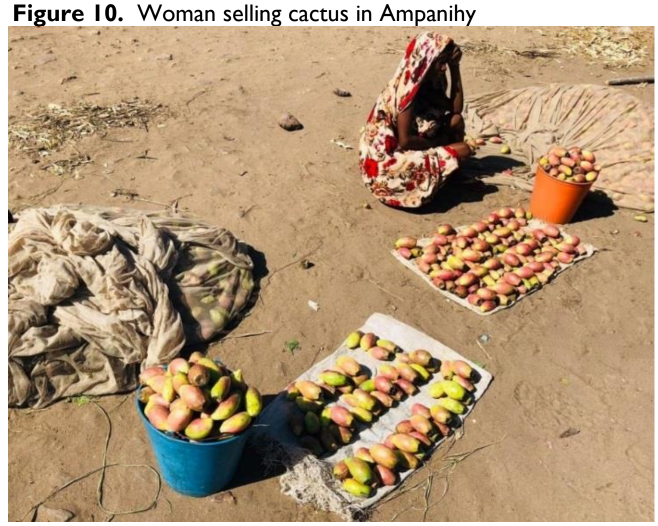
Assumptions

The most likely scenario for the June 2019 to January 2020 period is based on the following zone level assumptions:

- **Next rainy season**: The next rainy season will likely start in November 2019 in the Atsimo Andrefana Region where the district of Ampanihy is located. NMME forecasts show normal rainfall between July and September 2019 followed by above normal rainfall between October and December 2019. This will allow farmers to prepare land and to plant cereals and pulses on time provided they have enough seeds.

- **Cropped area**: Successive years of poor production have left insufficient seeds for the next cropping season, particularly as people have resorted to eating seeds to cope with food gaps during the lean season. The prices of seeds at the market dramatically increase when rains begin, which limits the ability of poor households to access seeds. As a result, cropped areas will likely be below normal despite the expected normal rainy season.

Figure 10. Woman selling cactus in Ampanihy



Source: *FEWS NET*

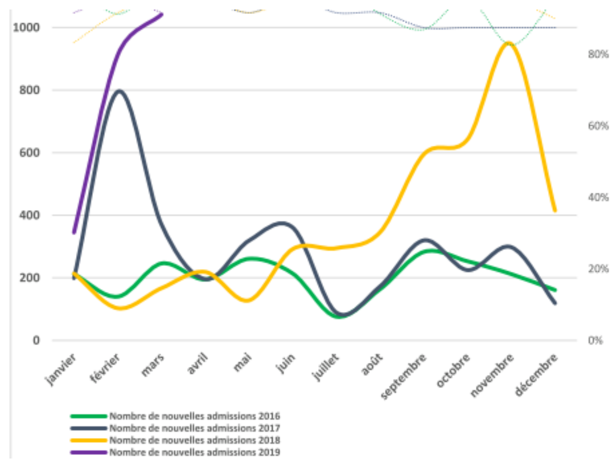
- **Pest infestations**: Fall armyworm will not be observed within the outlook period since it mainly infests maize crops which will not be sown until November and December when rains begin. However, locusts are currently starting to appear and may attack crops such as sweet potatoes and cassava, and pasture. This will reduce yields and will likely compromise the beginning of the next cropping season as they also may eat the new buds of cereals and legumes. All programs against against locust stopped in recent years, so instead farmers revert to bush fires to control locusts.
- **Staple food prices:** According to FEWS NET price projections, prices of imported rice in Tulear, the main market reference for the zone, will slightly decrease in from June to September 2019 but will likely remain above normal because of low local production. Then it will increase in October and will stabilize at above normal prices again from October 2019 to January 2020. Prices of cereals in Ampanihy also will follow this trend.

- **Availability of wild foods**: From June to September 2019, tamarind will likely be available, but its consumption will be limited since people will still have tubers to eat. Wild foods will be sold rather than consumed to get more income. Wild food consumption is expected to be more important from October 2019 to January 2020 when mangoes will also be available. Consumption of wild foods will likely contribute to 20 percent of needs for very poor households during this period.

- **Nutrition**: The nutritional situation in Ampanihy will likely improve from June to September 2019 with improved food availability and the wider measles vaccination campaign. Humanitarian assistance for nutrition is expected to be strengthened and likely have some positive impact on wasting. Centers will likely be supplied, and mobile consultations will resume in the district with EU funding. The level of acute malnutrition will likely increase starting in October due to the start of the lean season. Therefore, Ampanihy will likely be Alert within the outlook period. CRENAS admissions will likely be between 200 and 400 Children in the whole district.

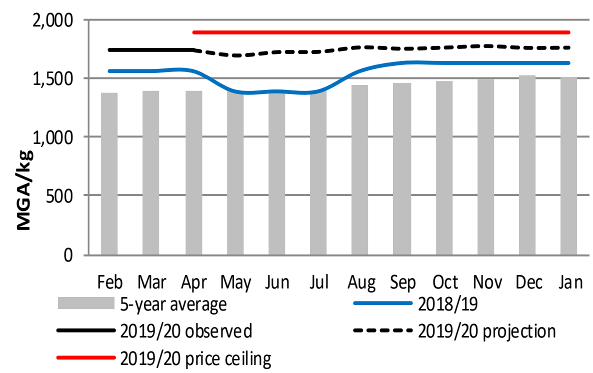
- **Livestock conditions and prices**: Livestock sales will likely remain stable or decrease from June to September 2019 since households still have food stocks. However, small ruminant sales will likely increase starting in October to provide income for purchasing food since household's dependence on market will likely increase. Therefore, livestock prices will continue to increase with the arrival of the main harvest. Prices will be near normal between 500,000-600,000 MGA for a cow, 100,000-120,000 MGA for a goat and 130,000-150,000 MGA for a sheep by the end of the outlook period.

Figure 11. Trend of the number of new admissions to CRENAS in Ampanihy District, 2016-2018



Source: *Nutrition Cluster Bulletin, First quarter 2019*

Figure 12. Integrated price projection of Imported rice in Tulear



Source: *FEWS NET*

- **Income sources:** Labor opportunity will remain stable and near normal from June to September 2019 with the sweet potato and cassava weeding and harvests. The same scenario will likely happen from October 2019 to January 2020: the main farming season may start on-time with normal rain expected in October. Labor wages will likely follow normal seasonality: slight increase between June and October, stability in November and December and decrease in January and February. It will likely vary between 5,000 and 10,000 MGA per plot.

- **Humanitarian Assistance**: Most planned food assistance from WFP and ADRA (both ASOTRY and ZINA programs) ended in June 2019. Humanitarian assistance will likely resume at the beginning of the lean season in October 2019 but will likely be less than last five years.

Most Likely Food Security Outcomes

Some households have changed their food consumption habits and have reduced the quantity of their meals or have reduced adult consumption to allow children to eat (particularly because of the high prevalence of acute malnutrition). Others have eaten less preferred foods like imported rice. Seasonal migration was very high during the lean season but has reduced since the beginning of harvests in March and April. Poor households do not have any more livestock to sell so their main livelihood strategies to fill their income gap is from cash crop sales, intensifying agricultural labor, eating non-mature crops, reducing non-food expenditures, or using savings. Less than approximately 20 percent of households have adopted more serious strategies like over-selling productive and non-productive livestock or taking children out of school. Meanwhile, the prevalence of acute malnutrition remains above 15 percent in the district. As most humanitarian food assistance programs continue until end June, the very poor and poor households in Ampanihy are currently experiencing **Stress (IPC Phase 2!) acute food insecurity in June 2019.**

Between July and September 2019, food consumption will improve compared to June as the very poor will be able to access fresh cassava and sweet potatoes from the main harvest. Consumption of wild food will reduce. The situation will be better than last year in the same period. Sales of wild foods will reduce, but sales of tamarind will still contribute significantly to income for poor households. Local labor will also be intensified. Household heads who migrated will likely come back to their land. Wood and charcoal sales will remain at the same level as in June. Sales of staple foosd will likely be lower than normal due to the below average cereal production. Humanitarian assistance will likely be little to none during this period. Given the expected improvement of the nutritional situation to alert, poor and very poor households in Ampanihy will likely be in **Stressed (IPC Phase 2) between July and September 2019.**

From October onwards, staple consumption will reduce with the end of harvests and market prices will likely start to increase. Food gaps will increase given the limited food stocks and low incomes. Food consumption strategies may consist of eating less-preferred foods and reducing numbers of meals. For poor households, activities related to agricultural will be intensified during planting season. Sales of wild foods like mangoes will reappear. Sales of staple foods will slightly decrease and will remain below normal. Humanitarian assistance will likely resume but with low coverage. Given that the nutritional situation may shift to emergency again, poor and very poor households will likely face **Crisis (IPC Phase 3) acute food insecurity between October 2019 and January 2020.**

EVENTS THAT MIGHT CHANGE THE OUTLOOK

Possible events over the next eight months that could change the most-likely scenario.

Areas	Events	Impact on food security
Southern Madagascar	Locusts	Due to the favorable weather conditions for locust breeding in the south and southern highlands, large swarms may form in some districts. This may affect the next season planting of cereals and legumes. Expected crop production will be reduced despite favorable weather conditions, and food insecurity will be more severe. Specifically, areas projected to be in Stress (IPC Phase 2) may deteriorate to Crisis (IPC Phase 3) between October 2019 and January 2010

ABOUT SCENARIO DEVELOPMENT

To project food security outcomes, FEWS NET develops a set of assumptions about likely events, their effects, and the probable responses of various actors. FEWS NET analyzes these assumptions in the context of current conditions and local livelihoods to arrive at a most likely scenario for the coming eight months. Learn more here.