KENYA Food Security Outlook  
December 2018 to May 2019

Stressed (IPC Phase 2) outcomes likely to be widespread following below-average short rains season

KEY MESSAGES

- In marginal agricultural areas, the October to December short rains season has been significantly below average and short rains crop production is expected to be 70 percent of average. However, surplus long rains production and re-planting of short rains crops by better-off households in some areas have sustained high agricultural labor demand and above-average terms of trade, facilitating food access for the poor. As a result, deterioration in food security is most likely to be gradual, but Stressed (IPC Phase 2) outcomes are anticipated to be widespread in the February to May 2019 period.

- Stressed (IPC Phase 2) outcomes are expected to be sustained across pastoral livelihood zones. Although deterioration in rangeland resources is likely to drive earlier-than-normal livestock migration and increase resource-based conflict, above-average goat-to-maize terms of trade, high livestock birth rates, and milk production are likely to enable most households to meet their minimum food needs through May 2019. However, the number of poor households in Crisis (IPC Phase 3) is expected to increase in areas most affected by conflict, including Turkana, Samburu, Wajir and Garissa counties.

- Across Kenya, surplus carryover stocks, above-average long rains production, regional cross-border staple food imports, and above-average livestock prices are expected to maintain above-average food access for poor households that rely on market purchases through May 2019. In November, maize prices across key urban and rural reference markets ranged from near-average to 36 percent below the five-year average. The notable exception is in Garissa market, where maize prices were seven percent above the five-year average. Across pastoral markets, goat prices ranged from eight to 59 percent above the five-year average.

SEASONAL CALENDAR FOR A TYPICAL YEAR

Source: FEWS NET

FEWS NET classification is IPC-compatible. IPC-compatible analysis follows key IPC protocols but does not necessarily reflect the consensus of national food security partners.
NATIONAL OVERVIEW

Current Situation

Food security has remained high across Kenya since the end of the exceptionally above-average March to May 2018 long rains season, but is now declining due to erratic rainfall performance during the October to December short rains season. Above-average milk production and high livestock prices in pastoral areas, available household food stocks in marginal agricultural areas, and below-average staple food prices nationwide have maintained food availability and access and sustained Minimal (IPC Phase 1) and Stressed (IPC Phase 2) outcomes. However, rainfall deficits during the short rains season have negatively impacted water and forage resources and cropping activities, which is likely to lead to a decline in food security until the start of the 2019 long rains season in March.

Seasonal performance: The October to December short rains season has been defined by a late onset, erratic rainfall distribution, and mixed seasonal accumulation. The onset of rainfall was 10 to 20 days late in the southeast; 20 to 30 days late in parts of Turkana and Mandera counties; and more than 40 days late across the rest of northern Kenya. In eastern Kenya, total cumulative rainfall is 55 to 85 percent of normal, according to satellite-derived estimates and confirmed by field reports (Figure 1). These areas also experienced poor rainfall distribution with long dry spells. Across the rest of the country, total rainfall was also significantly below average until early December, but recent heavy rains alleviated these deficits. Currently, Kenya’s western, southern, northeastern, and coastal areas have accumulated average to above-average rainfall ranging from 95 to 145 percent of normal. The short rains season is critical to marginal agricultural production, accounting for approximately 70 percent of annual maize production. It is also significant for replenishment of rangeland resources in eastern pastoral livelihood zones.

Seasonal progress: Food availability is currently being driven by carryover stocks from the 2017–2018 production year as well as the ongoing 2018 long rains harvest in high and medium agricultural production areas in the Rift Valley and western Kenya, which will be completed in January 2019. Consistent with previous projections, early estimates indicate that households are harvesting above-average maize yields due to the above-average March to May rainfall. However, bean crop yields are lower than normal since excess rainfall resulted in soil waterlogging and occurrences of fungus. In general, the late onset of rain and subsequent dry spells prevented germination and forced many households in marginal agricultural areas to replant their crops. From late November through mid-December, land preparation, planting, and first weeding of maize, cowpeas, and pigeon peas as well as drought-tolerant crops like millet, sorghum, and green grams are still underway. However, performance varies across counties. In Kilifi county, for instance, planting was staggered and crop development currently spans the emergent, vegetative, and reproductive stages; there are also reports of Fall Armyworm (FAW) infestations at typical levels. In contrast, in Kwale county, crop development is favorable due to relatively better rainfall performance. As a result of staggered planting and replanting activities, agricultural labor opportunities are above-average despite the poor performance of the short rains, elevating household income. In unimodal production areas in western Kenya, weeding for the 2019 short rains crop is ongoing.

Pasture, Livestock, and Water: Despite earlier rainfall deficits, rangeland resources in pastoral areas remain generally...
favorable due to the lasting impact of the 2018 March to May long rains. Vegetation conditions measured by NDVI indicate below-average to average conditions across most of Kenya and above-average conditions in the northeast and southeast (Figure 2), while field reports indicate that forage remains good in Marsabit, fair to poor in Turkana, and fair to good elsewhere. Distances between grazing areas and water sources for livestock range from three kilometers in Mandera to 12.2 kilometers in Marsabit; the trekking distance is average in Turkana, 60 to 77 percent below average in Isiolo and Mandera, and 15 to 21 percent above average in Wajir and Marsabit. Consequently, livestock body conditions remain good overall except in Wajir, where conditions are good to fair, and Turkana, where conditions are fair to poor. Milk production in October ranged between 1.3 and 6.1 liters per day, and was within average in Makueni and Kitui, 50 percent below average in Turkana, 80 to 90 percent above average in Marsabit and Kalifi, and 19 to 57 percent below average in the rest of the country. Field reports indicate production increased in November, when the kidding, lambing, and calving season began. Herd sizes are improving with livestock birth rates that range from average to above average, given favorable conditions for conception during the long rains season. As a result, milk consumption and sales have increased at the household level, providing additional calories and income to poor households.

**Markets and trade:** Low staple food prices and high goat prices have resulted in above-average terms of trade, facilitating household food access. From October to November, wholesale maize prices in urban reference markets were 14 to 36 percent below the five-year average, driven by cross-border imports and enhanced production since early 2018. Similarly, dry bean prices are six and 12 percent below the five-year average in Nairobi and Mombasa. Maize and bean prices remained 10 to 45 percent below 2017 prices across all reference markets, an indication that harvests in the 2017/2018 production season were significantly better than 2016/2017. Goat prices remained eight to 27 percent above average across all reference markets except in Isiolo and Marsabit, where prices were 33 and 59 percent above average, respectively. Prices are being driven by atypically good body conditions, increasing the value of each goat. While near-average in Garissa, the terms of trade are 21 to 28 percent above average in most other pastoral markets and an exceptional 55 and 74 percent above average in Turkana and Marsabit, respectively.

**Interannual Assistance:** Households continue to receive interannual assistance in both pastoral and marginal agricultural areas in different modalities. Approximately 100,000 households in Turkana, Marsabit, Mandera, and Wajir counties continue to receive cash through the ongoing Hunger Safety Net Program, providing an estimated 65 percent of monthly caloric requirements. Asset creation programs, implemented by WFP, also continue to support households. Supplementary feeding programs to manage acute malnutrition, supported by UNICEF and World Food Program (WFP), are also ongoing in counties where GAM prevalence is higher than 10 percent. Across all counties, the national county governments also continue to provide general food distribution to households.

**Conflict and Insecurity:** Incidences of conflict and insecurity at this time of the year are atypical. The short rains usually replenish rangeland resources and drive livestock and wild animals to wet season grazing areas where adequate natural resources serve to minimize conflict. In October, however, large numbers of camels from Isiolo county migrated into Tharaka Nithi county, increasing the potential for conflict. In Kitui county, conflict incidents over forage were reported in Mutha ward of Kitui South sub-county, resulting in the death of one person. In Isiolo, border disputes and communal tensions were reported along the Isiolo-Garissa border in Eldera Centre and Duse-Kinna areas, which forced households to flee and seek refuge in Garbatulla Centre. In Taita Taveta, the presence of herds of camels from other areas was reported near community settlement areas in Sagalla and Mwatate wards. Human-wildlife conflict was also reported in Makueni, where elephants from...
neighbouring Tsavo East National Park invaded several farms along River Athi in Masongaleni ward.

As a result of the above factors, most households in marginal agricultural areas are currently able to meet their minimum food needs and are in Minimal (IPC Phase 1), consuming two to three meals per day. In pastoral areas, most households are Stressed (IPC Phase 2) and report consuming one to two meals per day. Carryover stocks from long rains production, above-average milk production, and above-average terms of trade are driving improved food security compared to 2017 in both pastoral and marginal agricultural areas. In some agricultural counties such as Lamu and Makueni, where poor households harvested lower amounts, food stocks are now depleted but households are earning income from agricultural labor and benefitting from below-average staple food prices. Pastoral households are also access to food through above-average goats-to-cereals terms of trade. These households are Stressed (IPC Phase 2) and unable to afford essential non-food purchases. In November, consumption coping strategies measured by the reduced coping strategies index (rCSI) indicated mixed trends across the country, with an increase in use in Makueni, Tharaka Nithi, Kilifi and Taita Taveta counties and a decline in use in Isiolo, Marsabit, Kitui, and Kwale counties compared to October. According to October NDMA sentinel site data, the proportion of children at risk of malnutrition measured by Middle Upper Arm Circumference <135mm show that in most counties the proportion of children “at risk” remains 14 to 33 percent below the five-year average. In Isiolo and Tharaka sub county, those at risk are 57 and 76 percent below average. In Turkana, Kwale, and Garissa, the proportion is nine, 20, and 25 percent above the five-year average, respectively.

In refugee settlements, households predominantly rely on humanitarian food assistance to meet their minimum food needs. The two main refugee camps in Kenya are Kakuma and Dadaab, which primarily house refugees from South Sudan, Ethiopia, and Somalia. Every month there is an influx of at least 1,200 refugees. Currently, there about 470,000 refugees and asylum seekers. WFP and other humanitarian agencies typically deliver a full ration of 2,100 kilocalories; however, due to recent budget cuts, some refugees are receiving about 85 percent of the full ration. These settlements are classified as Stressed (!) (IPC Phase 2!), with humanitarian assistance preventing worse outcomes.

**Assumptions**

The December 2018 to May 2019 most likely scenario is based on the following national level assumptions:

- The latest IRI/CPC probability forecast indicates a 90 percent likelihood of El Niño conditions from December to March and a 60 percent likelihood through May, combined with a neutral Indian Ocean Dipole. Rainfall during the end of the short rains season in December is most likely to be slightly above average. Total cumulative rainfall is projected to be less than 75 percent of normal in central, eastern, and far northwestern Kenya, while localized areas in the northeast, southwest, northwest, and coastal Kenya are expected accumulate rainfall more than 110 percent of normal.

- The 2019 March to May **long rains season** is most likely to be average in eastern Kenya, but below average in the southeast. The 2019 February to August unimodal season in western Kenya is most likely to be average. However, there remain a wide range of possible outcomes due to the forecast uncertainty associated with El Niño.

- NOAA/CPC ensemble forecast models predict **air temperature** anomalies of 0.25 – 0.5 C° above average in most of eastern Kenya through February 2019 and 0.5 – 1 C° above average across most of the rest of country through May 2019.

- According to FEWS NET’s estimates, **2018 long rains maize production** in high and medium potential areas of western Kenya and the Rift Valley is expected to be about 15 percent above the five-year average, enhanced by significantly above average rainfall during the March to May long rains season. The harvest period will run through January 2019.

- Nationally, the late onset of the season and below-average cumulative rainfall are likely to result in below-average **short rains maize crop production**. February 2019 harvests are expected to be at least 30 percent below the five-year average. However, production of drought-tolerant green grams, cowpeas, sorghum, and millet are likely to be average.

- Due to improved, integrated pest management undertaken by national and county governments and partners since 2017, the state and county departments of agriculture estimate damage from **Fall Armyworm (FAW)** on long rains crop production is less than 10 percent. Damage to short rains crop production will likely be less than that observed in 2017.
Based on FEWS NET’s integrated price projections, wholesale staple food prices in Nairobi are projected to remain below the five-year average and 2017 prices. Maize prices are expected to hover at KES 20-22/kg through May, reflecting a marginal increase as supplies from source markets outside of Nairobi seasonally dwindle, but remain 35-39 percent below the five-year average. Dry bean prices are expected to remain 12-18 percent below the five-year average, likely declining from KES 59/kg to KES 56/kg from December to January and increasing to KES 58-64/kg from February to May. Similarly, rural reference markets are expected to maintain below-average maize prices throughout the projection period, despite below-average short rains production in marginal agricultural areas, due to above-average long rains production and regional staple food imports. Historically, performance of the marginal agricultural short rains season has had minimal impact on market prices.

Although cumulative rainfall will be below average, brief periods of high intensity rains in late November are likely to result in stagnant water, which is expected to lead to a resurgence in Rift Valley Fever in December and early January. Counties that experienced outbreaks in June, including parts of Wajir, Isiolo, Tana River, Mandera, and Garissa counties, may likely have active vectors and isolated infections where control of the disease has not been entirely effective. Surveillance remains high and effective control measures like quarantines, vaccination, and treatment are expected to keep human and livestock casualty levels lower than those in the June to August 2018 period.

Interannual assistance programs implemented by multilateral donors and national county governments, including HSNP, asset creation, supplementary feeding, and food distribution relief, are expected to continue at current levels.

**Most Likely Food Security Outcomes**

In pastoral areas, Stressed (IPC Phase 2) outcomes are likely to be sustained throughout the scenario period. Calving, lambing, and kidding will continue in December at average to above-average levels, enhancing milk production, consumption, and sales. This is expected to increase household income and prevent declines in current levels of malnutrition. Beginning in January, however, forage and water sources are expected to become depleted due to the erratic 2018 short rains. Livestock body conditions and milk productivity are consequently expected to decline until the next cohort of births in March, especially in parts of Turkana, Wajir, Garissa, and Marsabit counties. Distances from grazing areas to water sources will likely increase to above-average levels, contributing to deterioration in body conditions and leading to earlier-than-normal migration to dry season grazing areas in mid- to late January. This is anticipated to reduce household access to milk, though some milking livestock will remain behind at the homestead. However, FEWS NET’s integrated price analysis of Garissa and Lodwar markets project goat prices will remain above average, enhancing household income. At the same time, above-average 2018 long rains harvests are expected from high and medium potential agricultural production areas, which will likely drive below-average staple food prices through May. As a result, favorable goat-to-staples terms-of-trade is expected to be maintained. Most poor households will be able to access food, but will likely reduce expenditures on non-food needs.

However, from February to March, some households are likely to experience Crisis (IPC Phase 3) outcomes in parts of Turkana, Wajir, Garissa, and Marsabit. Food insecurity will be heightened among the poorest households as livestock increasingly migrate to dry season grazing areas. Increased resource-based conflict is also likely as livestock herders clash over rangeland resources. High but typical Critical levels (GAM WHZ 15-29.9 percent) of acute malnutrition are likely to be sustained through December to May 2019 in Mandera, Turkana, and Samburu counties and in parts of Baringo and Marsabit counties, primarily driven by chronic issues such as poor childcare feeding practices and limited access to health facilities. However, the forecasted average March to May long rains are expected to regenerate forage and water resources by mid-April and livestock are expected to return to wet season grazing areas. Beginning in mid-March, average lambing and kidding is anticipated due to average conception levels during the short rains season, which would increase milk production to average levels. From April to May, livestock body conditions are expected to improve, leading to improved livestock value and milk productivity. Yet these improvements would increase the likelihood for cattle raids, which tend to peak when livestock are in peak body condition and rival herders seek to restock their own herds.
In marginal agricultural areas, a majority of households will have depleted their surplus food stocks by December and will be entirely dependent on market purchases of staple food items. Normally, household food stocks would have depleted much earlier in August, and households typically derive upwards of 60 percent of their food from market purchases in any given year. Short-cycle vegetable crops typically available in December will be average. Given that staple food prices are projected to remain below-average due to surplus long rains supply from high and medium potential agricultural areas, however, improved purchasing power will enable poor households to meet their minimum food needs, even with varying levels of agricultural labor income earned during the short rains season. In addition, calving and lambing is expected to be above average through December given high conception during the long rains season, which will maintain above-average milk production. Most areas will remain in Minimal (IPC Phase 1) through January, but Nyeri (Kieni), Makueni, and Lamu will be Stressed (IPC Phase 2).

During the January to March harvest period, long-cycle short rains maize crops will be at least 30 percent below average, though drought-tolerant crops, like green grams and sorghum, will be near average. Agricultural wage labor opportunities will be consequently below average. This is expected to result in below-average household income and food sources. Households are likely to increase livestock and poultry sales in January and charcoal sales through March to obtain income for food purchases. From March to May, the long rains are forecast to be below average, creating agricultural labor opportunities at likely below-average levels and providing reduced levels of income to households. Malnutrition levels are likely to increase due to reduced food and milk availability, but remain within ‘Acceptable’ (GAM WHZ < 5 percent or MUAC < 6 percent) levels. Households will likely also expand their reliance on alternative livelihoods options such as remittances and petty trade, and the some may also increase their reliance on consumption based coping strategies. Stressed (IPC Phase 2) outcomes are expected to become more widespread through May, occurring in parts of Makueni, Meru North, Lamu, Embu (Mbeere), Nyeri (Kieni) and Kitui.

In refugee settlements, humanitarian assistance is planned, funded and likely throughout the scenario period. As a result, most refugees sheltering in the refugee camps will remain Stressed (IPC Phase 2).

**AREAS OF CONCERN**

**Eastern Pastoral Livelihood Zone**

**Current Situation**

In this livelihood zone, poor households rely on livestock production as their primary source of income, supplemented by casual labor, sales of natural resources, and gifts and social support. Market purchases, interannual assistance, and livestock products are their primary sources of food. A typical poor household owns 5-10 sheep and goats, 0-2 cattle and no camels. The main drivers of food insecurity are drought, animal rustling, prevalence of endemic livestock pests and disease, and high levels of insecurity and ethnic conflict that limit market functioning and access. After the 2016/2017 drought, which led to Crisis (IPC Phase 3) outcomes across most of the livelihood zone, the 2018 March to May long rains brought about significant improvements in food security. This rainfall supported improved livestock body conditions, enhanced milk production, and raised livestock market prices, leading to better food availability and access. As a result, food security outcomes improved to Stressed (IPC Phase 2) by June 2018 and this has persisted through mid-December.

Rainfall performance during the October to December short rains season has been below average. The onset of the season was 10 to 20 days late across most of Garissa county, and more than 40 days late in parts of Garissa and across most of Wajir county. According to satellite-derived estimates, rainfall quantity is currently 55 to 85 percent of average across both counties, but localized areas of western Wajir and western Garissa have severe deficits that are less than 55 percent of average. The temporal distribution of rainfall has also been poor across the livelihood zone, characterized by frequent, long dry spells. As a result, livestock trekking distances from grazing areas to main water sources,
including boreholes, water pans, dams, and rivers, are currently 15 to 21 percent above average. In Wajir South and Wajir West, water pans have dried up and households are dependent on boreholes and water trucking. However, most livestock remain in wet season grazing areas and have yet to begin migrating to traditional dry season grazing areas.

Since mid-October, forage availability as indicated by NDVI has trended towards below-average levels (Figure 2). Field reports indicate that pasture is mostly fair to poor in Wajir but fair to good in Wajir North, Tarbaj and Wajir East, and is likely to sustain livestock until January. In Garissa, pasture remains good and is projected to sustain livestock until February. Browse availability is also good in Garissa but good to fair in Wajir, with the exception of Wajir West, Eldas, and Wajir South where it is almost depleted; it is expected to last until February in Wajir and March in Garissa. Livestock body conditions are good across all species in Garissa. In Wajir, camel and goat body conditions remain good, but cattle and sheep body conditions have declined somewhat and are now considered fair. Despite below-average rainfall, milk production has increased given that it is the peak period for livestock births, which are average to above-average following high conception levels during the long rains season. Milk production is 57 percent above average in Wajir and 27 percent above average in Garissa across all species, though cattle and camel are producing the most milk, which benefits poor households through milk gifts and in-kind labor. No major livestock disease outbreaks have been reported in either county, though there have been cases of *peste des petites ruminants* (PPR), contagious caprine pre-pneumonia (CCPP), contagious bovine pleuropneumonia (CBPP) and sheep and goat pox in Wajir East and Wajir South. In Garissa, suspected cases of lumpy skin disease were also reported.

Maize prices in November were seven percent above the five-year average in Garissa reference market, driven by high demand as a result of the 2016/2017 drought and by flood damage to local crop supplies during the 2018 long rains season. In Wajir reference market, maize prices were near average, attributed to low household demand – given a preference for maize substitutes for consumption – and above-average maize supply on the national level. Goat prices were eight to 17 percent below the five-year average driven by good livestock body conditions. Current terms of trade remain favorable, with the sale of a goat equivalent to 53 kilograms of maize in Garissa, which is near the five-year average, and 81 kilograms of maize in Wajir, which is 21 percent above the five-year average.

Other income sources such as casual labor, which typically provides 30 percent of household income, remain average to above average. Namely, the increased rate of livestock births has elevated livestock labor opportunities like herding. Income from gifts from better-off households is also above average due to the increase in livestock herd sizes and livestock value. Income from small business/self-employment remains at average levels. Interannual assistance through food aid and school feeding programs also remains at average levels.

Given increased milk availability and improved food access facilitated by low staple food prices and higher income from livestock and livestock product sales, poor households are currently able to access their minimum food needs. However, households are employing consumption coping strategies, including a reduced number of meals per day, reliance on less preferred food, and a reduction in the quantity of food consumed by adults. During the 2018 KFSSG Long Rains Assessment, the nutrition IPC analysis determined a malnutrition prevalence of ‘Serious’ (GAM WHZ 10.0 -14.9 percent) in Garissa and Wajir. According to data collected from NDMA sentinel sites in October, the proportion of children under five years of age considered at risk of malnutrition, measured by Middle Upper Arm Circumference (MUAC) <135mm, declined seasonally in Wajir but increased in Garissa from October to November. In Wajir, the proportion of children “at risk” is 12.4, which is 24 percent below the five-year average and attributed to improved milk consumption and food access. In Garissa, the proportion “at risk” is 19.1, which is 25 percent above the five-year average and attributed to increased child illness and poor health practices. Despite food security gains, poor households are still unable to afford some essential non-food expenditures, due to limited income generating capacity from low livestock holdings. As a result, this area is classified as Stressed (IPC Phase 2).

**Assumptions**

In addition to the national-level assumptions, the following assumptions have been made for Eastern Pastoral livelihood zone:

- According to FEWS NET’s integrated price analysis, reduced maize supply is expected to continue to keep maize prices in Garissa reference market 7 to 9 percent above the five-year average through May, though prices will remain below 2017 prices. Prices are likely to rise from KES 60 to KES 67 from December to April, as the maize supply dwindles following the anticipated below-average short rains harvest. When maize from Ethiopia and Meru become available in May, prices are expected to drop to KES 59.

- According to FEWS NET’s integrated price analysis, goat prices are expected to follow seasonal trends and remain above
average. Current good body conditions are expected to only gradually decline, due to expected pasture and water availability and migration to better-off dry season grazing areas, sustaining high prices. As a result, prices are expected to be 8 to 15 percent above average, ranging from KES 2,700 to 3,400 through May. Prices are likely to gradually decline from KES 3,400 in December to approximately KES 2,700 in March, before rising to about KES 3,000 to 3,150 from April to May. Prices are expected to be below 2017 prices from January to April.

- **Above-average lambing and kidding rates** are expected to continue in December, given above-average conception rates during the long rains season. However, calving rates are somewhat low. Short rains conception rates will likely be average since forage and water availability have remained sufficient despite poor rainfall, resulting in average births in March and April. As a result, livestock labor demand is likely to be above-average through January and average through May.

- As water scarcity increases from mid-December onward, earlier-than-normal **migration** is expected as households in Wajir South and Wajir West are likely to migrate to dry-season grazing grounds in search of water. Pastoralists normally migrate their herds beginning in mid-February. Wajir South pastoralists are likely to move to neighboring Somalia, while those from Wajir West are expected to move to Marsabit (Moyale sub-county) and Wajir North.

- **Resource-based conflict incidents** are likely to increase from late December to March in parts of Garissa (Lagdera and Dadaab) and Wajir (Wajir West and Wajir South), where forage and water resource scarcity is likely to be relatively high. **Insecurity** is expected to persist throughout the scenario period along parts of Hulugho, Ijara, and Dadaab bordering Somalia, and pastoralists may have reduced access to forage and water resources due to fear of armed militia attacks.

**Most Likely Food Security Outcomes**

**From December 2018 to January 2019**, most households will sustain Stressed (IPC Phase 2) outcomes. In December, poor households will continue to benefit from above-average lambing and kidding, from which above-average milk production will increase household milk consumption and provide increased income from milk sales. In addition, households will access increased livestock labor opportunities, earning above-average levels of income and in-kind milk. However, deterioration in forage and water resources is likely to begin in mid-December as a result of below-average rainfall, prompting earlier-than-normal migration from Wajir South and Wajir West. As trekking distances increase, livestock body conditions and milk productivity will initially begin to decline. By mid- to late January, milk production is expected to decline seasonally but to depressed levels. Combined with the impact of earlier-than-normal livestock migration, households will begin to consume moderately less milk, which is expected to elevate the prevalence of malnutrition in children under five, but within ‘Serious’ (GAM WHZ 10.0 -14.9 percent) levels. Although goat prices will begin to decline as a result of poorer livestock quality, prices are likely to remain above average, which will maintain average goat-to-cereals terms of trade since staple food prices are similarly above average. Meanwhile, interannual assistance programs, including Food for Assets, supplementary feeding programs, and food relief distribution, will supplement household food and income sources. As a result, most households will have sufficient food and income to meet their minimum food needs, but will forgo non-food expenditures.

**From February to May 2019**, food security is expected to continue to slowly deteriorate until the beginning of the long rains season in mid- to late-March, and then gradually improve. In February and March, most livestock will be in dry-season grazing areas, continuing to limit the availability of milk at the homestead for household consumption. Livestock body conditions and, consequently, livestock prices are expected to continue to seasonally decline; however, prices are projected to remain slightly above average even during the dry season. Combined with slightly above-average staple food prices, livestock prices are anticipated to maintain household purchasing power at average levels, facilitating food access. In addition, households are likely to earn average to above-average levels of income from casual labor and receive gifts. During this period, the prevalence of acute malnutrition is expected to deteriorate to ‘Critical’ (GAM WHZ 15-29.9 percent) in children under five years of age, which is typical for the dry season.

With the start of the 2019 long rains in March, food security is expected to begin to rebound as forage and water resources are replenished and livestock body conditions are restored. As livestock return to wet-season grazing areas and average levels of calving, kidding and lambing occur, household milk consumption and livestock and livestock product sales will seasonally increase. As a result, the frequency of consumption and livelihood-based coping strategies will likely decrease as typical sources of food and income improve to normal levels. Most poor households are expected to remain Stressed (IPC Phase 2) through May. Some poor households in parts of Wajir (Wajir South, Wajir West) and Garissa (Lagdera, Dadaab and Balambala) that have been worst affected by the poor short rains season and are prone to conflict are likely to be in Crisis (IPC Phase 3),
but this is unlikely to occur at the area level.

**Northern and Northwestern Pastoral Livelihood Zones**

**Current Situation**

Poor households in these two livelihood zones have similar typical sources of food and income. They rely on a mix of livestock production, remittances, charcoal/firewood sales and safety net programs to earn income, while their food sources include market food purchases, own livestock production, wild foods, and school feeding or interannual food distribution programs. Poor households typically own 5 to 10 sheep and goats and no large ruminants, except in Samburu county, where they own 2 to 5 cattle. Restricted market access and high levels of insecurity and intercommunal conflict make it difficult for households to meet their food needs without assistance. The area experienced significant improvements in food security from mid-2017 driven by off-season rain and the above-average 2018 long rains season, in spite of substantial flooding and crop losses. Herd sizes at the household level remain below normal due to losses suffered during the 2016/2017 drought, but high birth rates in 2018 have accelerated restocking efforts. Given broad similarities in livelihoods and the shocks and assumptions over the projection period, these livelihood zones are analyzed together.

Rainfall performance during the October to December short rains season has been erratic. The start of season was delayed by more than 40 days in most areas, which was the longest delay compared to other livelihood zones in Kenya. The start of season was also delayed by 10 days in northern Turkana and central Marsabit and about 20 days in northern Marsabit. By the end of the peak month of November, total cumulative rainfall was less than 55 percent of normal in most of Turkana, North Horr sub-county in Marsabit, and Pokot North sub-county in West Pokot, while the remaining areas in Turkana, Marsabit, Samburu and West Pokot received cumulative rainfall ranging from 55 to 70 percent of normal. However, heavy rainfall in early to mid-December increased cumulative totals to more than 130 percent of normal in Turkana Central, Turkana East, Turkana South sub-counties in Turkana county and northwestern Laisamis in Marsabit county.

In spite of the erratic performance of the short rains, field reports indicate forage has remained atypically above average in West Pokot and Marsabit and is likely to last through January, due to the impact of the above-average long rains. Though some alleviation is expected due to the recent heavy rainfall, pastures have rapidly deteriorated in Turkana North, Turkana West, Loima, and Turkana Central in Turkana county; Laisamis and North Horr in Marsabit county; and Samburu East sub-county in Samburu county. Most critical water sources in West Pokot and Marsabit have been replenished by the rains, but water availability is below normal in North Horr and Laisamis in Marsabit, most of Samburu, and Turkana. Livestock trekking distances from grazing areas to water sources are three percent below average in West Pokot, average in Turkana, and 21 to 38 percent above average in Marsabit and Samburu. Migration of livestock remains broadly limited to traditional areas within the respective counties. In Turkana, however, due to wildfires that burned more than 50 hectares of grassland in the traditional fall-back areas of Kibish and Lokichar, approximately 25 percent of livestock from lower Turkana West and Turkana North have moved to Kotarak and Naipa on the border with northeastern Uganda (southern Karamoja), while those from upper northern areas of Turkana North and Turkana West have moved into Southern Sudan. In Samburu East sub-county, five to 10 percent of livestock have migrated into Laikipia County. Minimal levels of typical livestock diseases have been reported, including CCPP, PPR, Trypanosomiasis, and mange.

Household income from livestock production is widely above-average across all counties. Livestock body conditions range from fair to good for all species across the livelihood zones, maintaining high livestock resale value, though in Turkana, body conditions range from fair to poor. Calving, lambing, and kidding rates are above-average given high conception during the long rains season. Livestock labor opportunities from herding are also above average. Goat milk production has remained above average since January in West Pokot and since March in Marsabit, ranging from 1.7 to 3.6 liters per day. In Turkana and Samburu, however, milk production is trending below average. Household milk consumption overall has improved relative to 2017 and income from milk sales is higher than normal. At the same time, households are also earning typical
levels of income from charcoal sales and remittances, and continuing to benefit from interannual safety net programs.

In November, goat prices ranged from 16 to 39 percent above the five-year average, driven by above-average body conditions. Maize prices were 9 to 19 percent below average due to increased market supply from high and medium agricultural production areas and cross-border imports from neighboring Ethiopia and Uganda. As a result, the amount of maize grain purchased from the sale of one goat ranges from 56 kilograms in Turkana to 157 kilograms in West Pokot, which is 32 to 72 percent above the five-year average. This has kept household purchasing power significantly high since March in Marsabit and since July 2017 in the rest of the counties.

In summary, most poor households are able to access their minimum food needs due to increased milk availability and improved food access enabled by average to above-average income from livestock production and above-average terms of trade. In addition, sentinel site data from the National Drought Management Authority (NDMA) for the month of November indicated that the proportion of children at risk of malnutrition, as measured by the Middle Upper Arm Circumference (MUAC) <135mm, ranged from 7 to 53 percent below the five-year average. This is likely driven by relatively higher levels of food and milk consumption. However, a significant number of poor households are still employing consumption-based coping strategies, especially consumption of less preferred/cheaper foods and a reduction in meal portions, and most cannot afford non-food expenditures. As a result, Stressed (IPC phase 2) outcomes currently prevail.

**Assumptions**

In addition to the national-level assumptions, the following assumptions have been made for Northern Pastoral and Northwestern Pastoral livelihood zones:

- **Given erratic rainfall and gradual depletion of forage and water resources, earlier-than-normal livestock migration** is expected from January to March and may lead to resource-based and intercommunal conflicts between livestock herders over pasture, water, and grazing rights. Increased conflict would lead to the destruction of property and loss of livestock. Cattle rustling and territorial/ethnic conflicts are expected to continue in Turkana East and Kibish sub-counties and Todonyang areas, restricting livestock movement and access to rangeland resources in these areas. However, if the resurgence of above-average rains in Turkana County that occurred during the first two weeks of December persists until January, livestock migration and potential conflicts with host communities will be less likely.

- **Calving and kidding rates** are expected to be above average in December due to high conception rates as a result of favorable forage and water conditions during the March to May long rains season. **Conception rates** for cattle and goats are expected to remain average in December due to sufficient forage and water resources that are currently available.

- **Given high levels of calving and kidding, livestock production and herding labor demand is expected to be above average in December and average from January to May.**

- According to FEWS NET’s integrated price analysis in Lodwar reference market in Turkana, surplus staple food supplies from neighboring domestic and cross-border source markets are likely to continue to keep prices low through May. **Maize prices** are projected to follow seasonal trends but remain 17 to 27 percent below the five-year average, peaking at KES 64 in January, when demand is highest prior to the short rains harvest. Prices are expected to reach their lowest point in February and March at KES 61, then seasonally rise through May. Prices are projected to remain below 2017 prices.

- **Based on FEWS NET’s integrated price analysis in Lodwar market in Turkana, goat prices** are projected to range from KES 3,100 to 3,500 from January to May, which is 21 to 28 percent above the five-year average but below 2017 prices. Prices are expected to decline gradually from KES 3,500 in December to KES 3,200 in March. From April to May, prices will range from KES 3,200 to 3,500.

**Most Likely Food Security Outcomes**

**From December 2018 to January 2019**, both livelihood zones will be Stressed (IPC Phase 2), though the number of poor households in Crisis (IPC Phase 3) is likely to increase. As forage and water resources become depleted, earlier-than-normal livestock migration is likely to occur. In parts of Marsabit (North Horr, Laisamis), Samburu (Samburu East), and Turkana (northern areas of Turkana North and Turkana West), livestock are likely to migrate into neighboring sub-counties and into northeastern Uganda (southern Karamoja areas). However, in Turkana Central, Turkana East, Turkana South sub counties in Turkana, recent above-average rainfall in early December is likely to temporarily improve water and forage conditions and curtail current livestock migrations. In January, migration is likely to increase resource-based conflicts, affecting access to pasture, water, and markets. Some loss of livestock during skirmishes is possible. However, livestock body conditions are
expected to remain relatively fair to good through January, keeping livestock prices above the five-year average and contributing to enhanced milk production, though production in Turkana and Samburu will be lower. Should current rainfall persist until January, however, Turkana would see improvement in livestock body conditions and milk production to average levels. Further, above-average kidding and lambing rates are likely to maintain livestock labor demand and sustain average to slightly above-average milk production. As a result, poor households’ income from livestock and milk sales and livestock wage labor – their most significant sources of income – is expected to be average. Above-average goat-to-maize terms of trade is likely to maintain current household food access overall, and keep malnutrition among children under five below the five-year average. The utilization of consumption-based coping strategies are anticipated to increase seasonally but remain below typical levels, except for some poor households in Turkana North, Turkana West, Loima, Turkana South, North Horr, Laisamis, and Samburu East, where the use of consumption-based strategies is expected to increase due to low livestock productivity, migration, and conflict. These latter households are expected to deteriorate to Crisis (IPC Phase 3).

From February 2019 to May 2019, food security is likely to deteriorate at the peak of the dry season in February but rebound with the onset of the forecast average March to May long rains. In February, livestock migration and conflict is expected to increase, disrupting livelihood activities in dry-season grazing areas in Turkana, Samburu, Marsabit and West Pokot. Additionally, livestock body conditions are expected to decline, leading to a seasonal decrease in milk productivity in Marsabit and West Pokot and further suppressing production in Turkana and Samburu. With the onset of the long rains in mid-March, the combined effect of reduced milk consumption and a seasonal increase in waterborne diseases, fever, and malaria are anticipated to increase malnutrition prevalence to typical ‘Critical’ levels (GAM WHZ 15-29.9 percent) in Turkana, Samburu, West Pokot and Marsabit. However, replenished forage and water resources will attract livestock back to wet season grazing areas, thereby restoring livestock body conditions and initiating calving and kidding activities. As a result, household milk consumption, livestock and milk sales, and livestock wage labor demand will return to normal. Combined with above-average terms of trade, household food availability and access is expected to enable most poor households to meet their minimum food needs and reduce their reliance on consumption-based coping strategies. However, households are still slowly rebuilding their livelihoods from the impact of the previous drought and have reduced numbers of livestock, meaning they are unable to afford their non-food needs and are likely to sustain Stressed (IPC Phase 2) outcomes. Households in high conflict areas like Turkana North and South, Samburu East, and North Horr that face restricted rangeland and market access and are prevented from engaging in regular livelihood activities will likely face Crisis (IPC Phase 3) outcomes for most of the scenario period, even with sustained interannual assistance.

EVENTS THAT MIGHT CHANGE THE OUTLOOK

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

<table>
<thead>
<tr>
<th>Area</th>
<th>Event</th>
<th>Impact on food security outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Significant reduction in cross-border staple food imports</td>
<td>Should below-average harvests in the East Africa region result in a reduction in staple food imports, this would deplete market supply nationally and lead to an increase in staple food prices. This would reduce the terms of trade and negatively impact household food access, reducing food consumption nationwide.</td>
</tr>
<tr>
<td>Eastern Pastoral Livelihood Zone</td>
<td>Outbreak of Rift Valley Fever</td>
<td>An outbreak of Rift Valley Fever in this livelihood zone would result in a quarantine of livestock and restrict sales and consumption of livestock and livestock products. In addition to the effect of the below average short rains, this would significantly impact pastoralists’ level of income and restrict their ability to purchase food, leading to increased food insecurity, reduced dietary diversity, and increased malnutrition. Crisis (IPC Phase 3) outcomes would be likely in the affected areas.</td>
</tr>
<tr>
<td>Northwestern and Northern Pastoral Livelihood Zone</td>
<td>Below average March - May long rains</td>
<td>Below-average rainfall would accelerate the deterioration of rangeland resources and reduce livestock productivity. Livestock would remain in the dry season grazing areas far from the homestead. As a result, household milk consumption and income from livestock and milk sales and livestock wage labor would decline, increasing malnutrition and increasing the number of households facing Crisis (IPC Phase 3) outcomes.</td>
</tr>
</tbody>
</table>

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.