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GIEWS Special Alert No. 345

East Africa

Severe dryness at the start of 2019 first rainy season and unfavourable weather forecasts raise food security concerns

Highlights

- Severe dryness prevailed in March 2019 and in the first half of April in large parts of Eastern Africa, as the Tropical Cyclone "Idai" redirected precipitations away from the subregion.
- Weather forecasts previously pointed to average to above-average March-May rains, but subsequent updates predicted dry conditions in April and a mixed performance of rains in May depending on the locality.
- The current dry weather conditions are severely affecting pastoral areas, compounding the impact of the poor 2018 October-December rains and raising major food security concerns.
- The severe dry conditions impacted planting and germination of crops in several areas, and crop production is expected at well below-average levels.
- Major areas of concern are northern and eastern Kenya, Somalia, southeastern Ethiopia, Uganda and northeastern United Republic of Tanzania.
- Recurrent climatic shocks have undermined household resilience. Urgent support to agricultural livelihoods is critically needed.

The poor October-December 2018 rains and the harsh dry season of January/February 2019 were followed by severe dryness at the start of the 2019 March-May season in several areas of East Africa. The suppressed rainfall between early March and mid-April was largely caused by the Tropical Cyclone "Idai", which formed in early March in the Mozambique Channel and redirected precipitations away from East Africa. The severe dryness has resulted in the delay and disruption of planting operations and has severely impacted crop germination. In pastoral areas, the dry conditions caused the deterioration of already poor rangeland conditions and widespread water shortages, with a significant worsening of animal body condition. The worst affected areas are most of Somalia and southeastern Ethiopia, which did not receive any significant precipitation so far, and northern and eastern Kenya, where some scattered showers were received only in late March. In most of Uganda and in some northeastern areas of the United Republic of Tanzania, cumulative rainfall between early March and mid-April was up to 85 percent below average.

Earlier weather forecasts pointed to average to above-average March-May rains, but subsequent updates predicted dry conditions in April in most of the subregion. If dryness, as forecasted, continues for the rest of the month, the already poor vegetation conditions will further deteriorate in the cropping areas affected by the early-season dryness, and substantial yield reductions are likely. In pastoral areas of southeastern Ethiopia, central and northern Somalia, and northern and eastern Kenya, the persistence of dry weather conditions in April, normally the peak of the rainy season, is expected to cause a further deterioration of animal body conditions and sharp decline in milk production.

Rainfall forecasts for May point to persisting dry conditions in most of Somalia and in northern and eastern Kenya, while average to above-average rains are expected in eastern Ethiopia, southern and northwestern Somalia, southern Kenya and parts of Uganda and the United Republic of Tanzania. In crop producing areas of Uganda, southern Somalia, eastern Ethiopia, southeastern Kenya and northeastern United Republic of Tanzania, where harvests are gathered in June/July, these late season rains are likely to be insufficient for crop recovery, and below-average harvests are expected. Substantial crop production shortfalls are expected in Uganda, the main cereal exporter in the subregion, in Somalia and in marginal agricultural areas of southeastern Kenya, which already obtained a reduced 2018 second season harvest in early 2019. By contrast, the forecast above-average rains in May could lift crop prospects in key growing areas in southwestern Kenya, where the "long-rains" extend up to August. In pastoral areas of southeastern Ethiopia, the expected above-average rains in May should ease the accumulated moisture deficits but are not expected to fully regenerate pastoral resources before the onset of the dry season in June.

Persisting water and pasture shortages are expected to force herders to recur to distress sales of livestock and to cull offspring to save milk producing females. As a result, herd sizes, which have been gradually increasing in 2018 after the massive losses caused by the 2016/17 drought, are likely to decline again, with negative consequences for pastoralist livelihoods that will likely lead to further pastoral destitution and displacement.

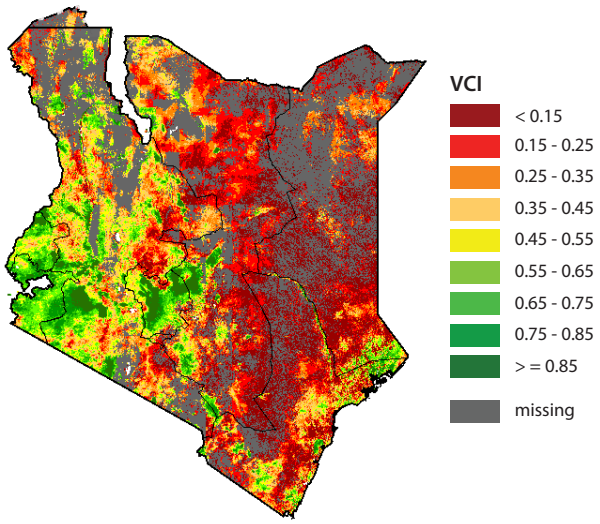
Prices of maize remained at low levels throughout the first quarter of 2019, due to abundant availabilities from the above-average 2018 main season harvests. Subsequently, they surged in early April in several markets of Kenya and Uganda, driven by concerns over the impact of the dry conditions on the performance of current crops, and they are now up to 35 percent higher than 12 months earlier.

In the areas most affected by the 2016/17 drought and by the current dry conditions in Somalia, Kenya and in the Somali region of eastern Ethiopia, the number of people facing severe food insecurity substantially declined in 2018 following the abundant March-May rainy season and, in early 2019, the number was estimated at 4.34 million. This is substantially lower than the estimate of 7.40 million in mid-2017, at the height of the impact of the 2016/17 drought. However, in recent years, several failed rainy seasons, starting with the El Niño-induced drought in 2015, have significantly eroded the resilience capacity of a large number of households and there is a high risk of a worsening of the food security situation, if rainfall deficits, as forecasted, continue in April and May. A close monitoring of weather and market conditions is warranted and a timely and effective support to the agricultural sector is required.

Kenya

Severe rainfall deficits at the start of the 2019 "long-rains" season seriously impacted crop planting and germination and current vegetation conditions are generally poor. In high potential cropping areas of the southwestern "maize basket" (Bungoma, Lugari, Kericho, Nakuru, Nandi North, Nandi South, Trans Nzoia and Uasin Gishu counties), which account for about 50 percent of the aggregated "long-rains" maize production, cumulative rainfall between February and mid-April was 40-80 percent below

Figure 1: Kenya - Vegetation Condition Index (VCI) *(March 2019)*



Note: The Index calculation is based on METOP-AVHRR data.

Source: FAO-GIEWS Earth Observation - *www.fao.org/giews/earthobservation*.

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average. Seasonal rains were so far very poor also in the southwestern and central medium-potential cropping areas and in southeastern and coastal marginal agriculture livelihood zones. In several of these areas, some rains were received only in late March, while coastal Lamu county and southeastern Kitui and Makueni counties, as of mid-April, received almost no precipitations. As the "long-rains" season normally extends until August in western Kenya, a partial recovery of water stressed crops would be possible in high potential cropping areas of the southwestern "maize basket" if, as forecasted, rains improve in May. By contrast, in southeastern and coastal marginal agriculture areas, with seasonal rains peaking in April and subsiding in early June, if as forecasted, dry conditions continue in the second half of April, the improved rains expected in May will be insufficient for crop recovery and a below-average harvest will be expected. This will potentially result in the second consecutive reduced output, after the poor 2018/19 "short-rains" harvest, gathered last February, estimated at more than 60 percent below average due to inadequate precipitations.

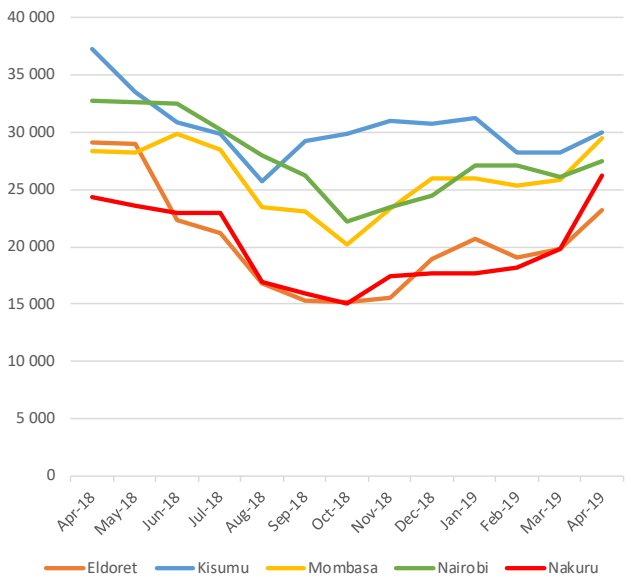
The performance of the 2018 October-December rainy season was poor also over the northern and northeastern pastoral areas, as well as central and southern agropastoral areas, as the cumulative seasonal rainfall was 30-70 percent below average. Subsequently, the initial phase of the March-May "long-rains" season was characterized by very poor precipitations. In eastern Mandera, Wajir, Garissa and Isiolo and northern Marsabit and Samburu counties cumulative rainfall between March and mid-April was 60-75 percent below average, with some scattered showers received only in late March, while northern Turkana, eastern Tana River, central Baringo and Laikipia, and southern Kajado counties have not received significant rains so far. The cumulative impact of the poor 2018 October-December "short-rains" and of the current dryness has resulted in very poor vegetation conditions and in a sharp decrease in pasture, browsing and water availability. According to the Government's National Drought Management Authority, as of March, out of the 23 counties located in the Arid and Semiarid Lands, covering about 80 percent of the country's landmass, 15 were declared to be in "drought alert phase[1]" and five in "drought alarm phase[2]". Overall, in 20 out of 23 counties conditions were assessed to be deteriorating during the month. The five counties in drought alarm phase, all located in pastoral areas, are Turkana and Marsabit counties in the north and Mandera, Wajir and Garissa counties in the east where, due to the severe water and pasture stress, livestock body conditions are generally poor, and some animal deaths have already been reported in Turkana county. Livestock trekking distances to water points from grazing fields have surged in recent months to very high levels. In Mandera county, for example, trekking distances increased from a low 5 km in October 2018 to more than 20 in March 2019, when they were more than twice the long-term average. Milk production is at low levels and in Turkana, Mandera, Wajir and Garissa counties it was estimated in March at about half the long-term average. Prices of livestock generally declined in recent months with the deterioration of body conditions. The expected persistence of dry conditions for the remainder of April and in May in northern pastoral areas will likely lead to critical pasture and water shortages, to severe animal emaciation and to a further decline in milk production, with grave negative consequences for pastoralist livelihoods.

Prices of cereals remained stable at low levels in the first quarter of 2019, due to the large carryover stocks from the above-average 2018 "long-rains" harvest and food assistance operations. However, sharp price increases have been recently recorded in markets located in the southwestern "grain basket". In Eldoret and Nakuru markets, prices of maize surged by 20-30 percent in April, driven by concerns over the impact of the dry conditions on the performance of current crops. However, prices remained around their year-earlier levels also in these markets. The generally low cereal prices have limited so far the decline in terms of trade for pastoralists. However, if rains

[1] The "drought alert phase" is triggered when meteorological drought indicators (Vegetation Condition Index and Standard Precipitation Index) move outside seasonal ranges.

[2] The "drought alarm phase" is triggered when the meteorological drought indicators and at least three production indicators out of five (livestock body conditions, crop conditions, milk production, livestock migration, livestock mortality rates) move outside seasonal ranges.

Figure 2: Kenya - Wholesale prices of maize
(Kenyan Shilling per tonne)



Source: Regional Agricultural Trade Intelligence Network.

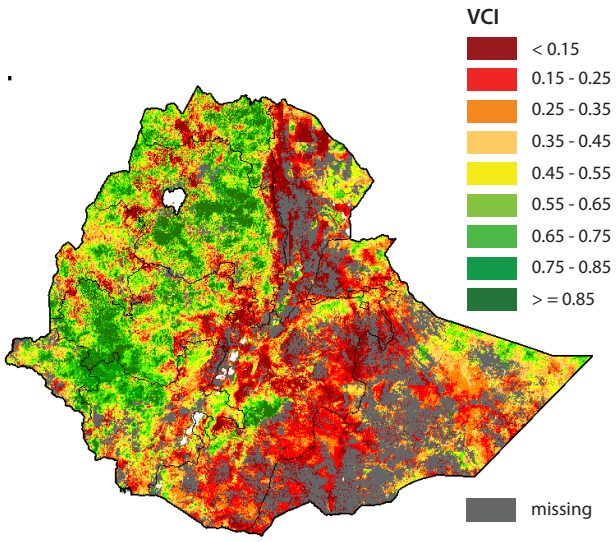
in late April and in May will be poor as forecasted, further declines in livestock body conditions and sale values will be expected, as well as increases in cereal prices, with a consequent decline in terms of trade and purchasing power for pastoralist and market dependent households.

Ethiopia

Planting of "belg" crops, for harvest from June, is usually completed in March. However, in eastern "belg" rains receiving areas in eastern Oromia Region, poor precipitations from February to mid-April delayed planting and affected crop germination. The most severe rainfall deficits were recorded in Arsi, Bale, East and West Harerghe zones, where cumulative rains from February to March were 60-80 percent below average. Improved rains in the first half of April eased the moisture deficits accumulated during the previous weeks, but current vegetation conditions are still very poor. The expected return of dry conditions in the remainder of April should result in a further deterioration of vegetation conditions and in significant crop production shortfalls, as the forecasted improved precipitations in May will be late and insufficient for crop recovery. In these areas, as long-cycle, high yielding cereal varieties to be harvested in October are sown during the "belg" season, the area planted is likely to decline due to late "belg" rains that prevented farmers from timely preparing land. In eastern Oromia, a below-average "belg" harvest will potentially result in a second consecutive reduced output, after the 2018 "meher" harvest, estimated at below-average levels due to unfavourable weather conditions.

In pastoral areas of southern Oromia Region and southern Somali regions, the recovery from the severe 2016/17 drought, prompted by abundant 2018 March-May rains, was curbed by a poor performance of the 2018 October-December "deyr/hageya" rains. In Borena zone of southern Oromia Region and in western areas of the southern Somali region, seasonal rains were 55-75 percent below average, while in easternmost areas of southern Somali region (Korahe and Doolo zones) the "deyr" season almost completely failed. As a result, the regeneration of rangeland resources was minimal and, during the January-February "jilaal" dry season, pasture conditions sharply deteriorated. Subsequently, the 2019 March-May "gu/genna" rainy season was characterized by severe dryness in March and the first half of April, with the southern Somali region remaining so far almost completely dry and some scattered, below-average showers received only in Borena zone of southern

Figure 3: Ethopia - Vegetation Condition Index (VCI)
(March 2019)



Note: The Index calculation is based on METOP-AVHRR data.

Source: FAO-GIEWS Earth Observation *www.fao.org/giews/earthobservation*.

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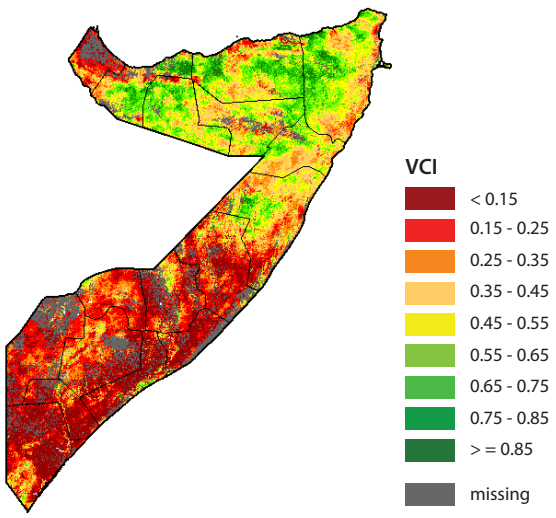
Oromia Region. The cumulative impact of the poor 2018 October-December rains and the current dry conditions has caused the deterioration of vegetation conditions to very poor levels.

Livestock body conditions and milk production have sharply declined due to severe forage and water deficits, and the consequent decrease in livestock prices and terms of trade for pastoralists resulted in severe food access constrains. If rains in the rest of April will be poor as predicted, the situation will likely deteriorate further to critical levels, and the expected distress sales and livestock deaths will result in a reduction of herd sizes, already below average following the devastating 2016/17 drought. The forecast improved rains in May could ease the accumulated moisture deficits but are not expected to fully regenerate pastoral resources before the onset of the dry season in June.

Vegetation conditions are also poor in several northern pastoral areas of Afar Region and northern Somali region, where pastures have been affected by the cumulative impact of below-average July-September 2018 "karan/karma" rains, followed by dry conditions in March and in the first half of April, at start of the 2019 "diraac/sugum" rainy season.

Figure 4: Somalia - Vegetation Condition Index (VCI) *(March 2019)*



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Somalia

The 2018 October-December "deyr" rainy season had a poor performance, with agropastoral areas in the south receiving about half of the average seasonal precipitations, while in several central and northern pastoral areas seasonal rains were up to 80 percent below average. As a result, the aggregate 2018 "deyr" cereal production was estimated to be 22 percent below the long-term (1995-2017) average. In pastoral areas, the lasting beneficial effects on pasture and water availability of the abundant 2018 April-June "gu" rains limited to some extent the impact of the poor "deyr" precipitations that followed and, despite a general decline in animal body conditions, no animal deaths were reported. Subsequently, water scarcity became widespread and animal conditions continued to deteriorate during the harsh January-March "jilaal" dry season, characterized by higher-than-average land surface temperatures.

The "gu" rainy season normally starts in late March, peaks in April and subsides in early June. This year, some precipitations were received in late March only in some southwestern areas of Gedo and Lower Juba regions, while most of the country has not received, as of mid-April, significant precipitations, and current vegetation conditions are very poor. According to the latest weather forecasts, dry conditions will persist in April, except in southern Gedo, Bay and Bakool regions and in northwestern regions. While these rains could result in a partial recovery of sorghum crops in the "sorghum belt" in Bay region, persisting dryness in the Lower Shabelle region, the main maize producing area, and in the "cowpea belt" in Galgaduud and Mudug regions, where cowpea is intercropped with sorghum, will result in widespread crop failures. In May, the areas receiving rains are expected to expand to Middle and Lower Shabelle regions, but these late season rains are not expected to lift crop prospects in these areas, as April accounts for up to 65 percent of the "gu" seasonal rains and damage to crops will be irreversible. As a result, production prospects for "gu" crops, to be harvested from July, are unfavourable, likely leading to a second consecutive reduced cereal output, after the poor 2018 "deyr" harvest.

In central and northern pastoral areas, where dry conditions have prevailed since late 2018, watering points have dried up and water trucking is the main water source. Prices of water are almost twice the five-year average, and poor households are financing

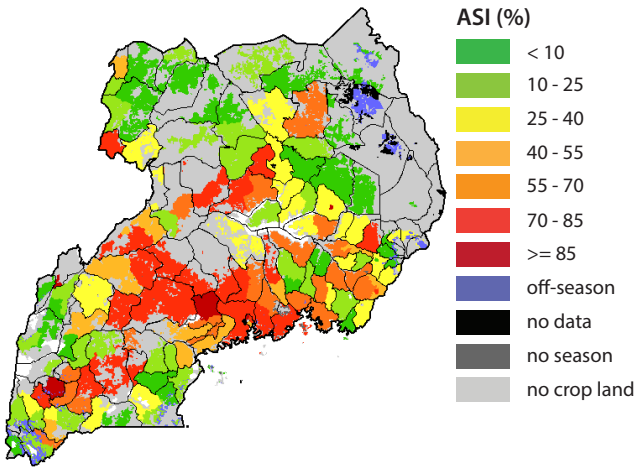
water purchases through credit, substantially increasing their usually high levels of indebtedness. Goat and sheep abortions have been reported and milk production has declined to low levels. Prices of livestock declined in recent months as animal body conditions started to deteriorate faster than normal after the poor "deyr" rains. In some markets, prices of goats declined by about 25 percent between December 2018 and March 2019, as seasonal patterns were compounded by a faster than normal deterioration of body conditions due to the poor rains in the 2018 "deyr" season and at start of the 2019 "gu" season. In the markets where this sharp price declines were observed, prices of goats are now up to 30 percent lower than one year earlier.

The expected persistence of dry conditions for the remainder of April and in May in central and northeastern pastoral regions should lead to a further deterioration of livestock body conditions, and animal deaths are expected. Milk production will decline further, with a negative impact on food availability. In addition, if herders will be unable to provide feed and water for their animals, they may be forced to recur to distress sales and to cull offspring to save milk producing females. As a result, herd sizes, which have been gradually increasing in 2018 after the massive losses caused by the 2016/17 drought, will decline again, with severe negative consequences for pastoralist livelihoods. In northwestern regions, improved rains are expected in late April and May. While they will ease the accumulated moisture deficits, they are not expected to fully regenerate pastoral resources before the onset of the dry season in June 2019.

Uganda

In bi-modal rainfall areas that cover most of the country except the agropastoral uni-modal rainfall Karamoja region in the northeast, seasonal rains, after a timely in onset in late February, have been so far very poor. Cumulative precipitations between March and mid-April were 25-85 percent below average, with near-normal to normal rainfall amounts received only in some southwestern districts. As a result, planting has been significantly delayed and is still underway in northern areas, while in central and southern regions the rainfall deficits severely affected crop germination. According to FAO's Agricultural

Figure 5: Uganda - Agricultural Stress Index (ASI)
(from dekad 1: March 2019 to dekad 1: April 2019)



Note: ASI measures the percentage of the crop land area affected by the drought per GAUL 2 region. The Index calculation is based on METOP-AVHRR data.

Source: FAO-GIEWS Earth Observation *www.fao.org/giews/earthobservation*.

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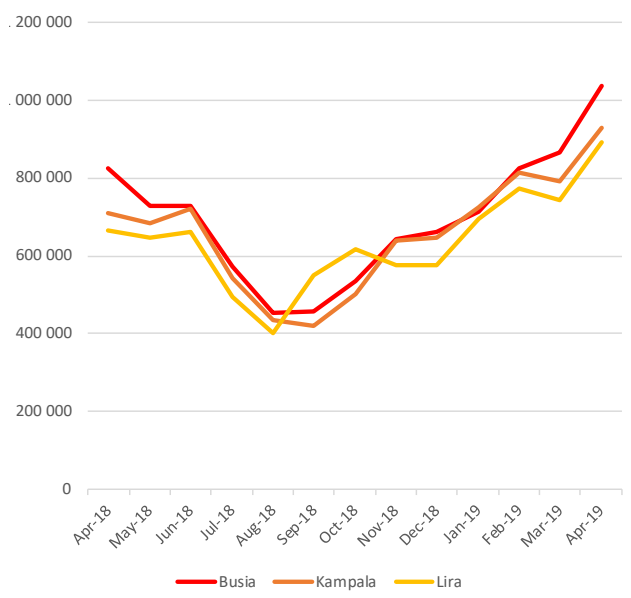
Stress Index System (ASI), severe drought is currently affecting more than 55 percent of cropland in several northern and southern cropping areas, and more than 70 percent of cropland in the central regions. The forecasted poor rains for the rest of April are likely to result in further planting delays and in crop failures in several areas. The forecasted improved rains in May will be insufficient for crop recovery, and a below-average first season harvest, to be gathered in June, is expected. As Uganda is a key cereal exporter in the subregion, the expected crop production shortfalls will result in lower exports to structurally deficit countries including Kenya, South Sudan, Rwanda and Burundi, thus having a major impact on food availability at regional level.

In the agropastoral Karamoja region, crops are planted in April and harvested in August-September. The cumulative rainfall between February and mid-April was between 50 and 75 percent below-average, substantially delaying planting operations. This will result in a delayed 2019 harvest, further prolonging the lean season, which already began much earlier than normal, as the 2018 harvest was estimated at well below-average levels due to erratic rains.

In pastoral areas of the cattle corridor, the current dryness has resulted in pasture and water shortages, with significantly declining productivity and prices. According to field reports, animal conditions are also poor in the Karamoja region, as the insufficient

Figure 6: Uganda - Wholesale prices of maize
(Uganda Shilling per kg)



Source: Regional Agricultural Trade Intelligence Network.

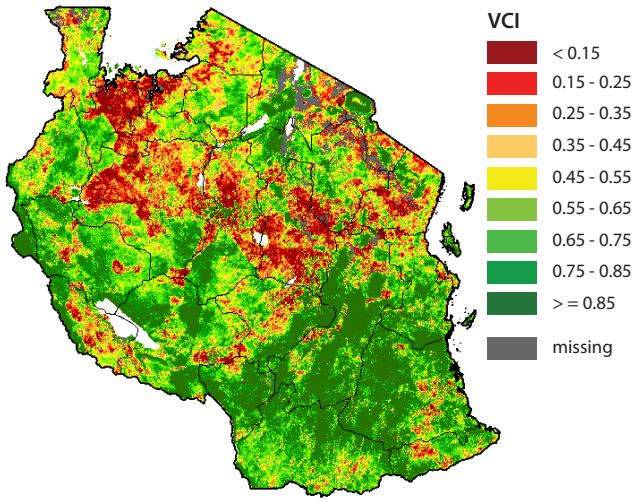
2018 rains and the dry conditions at start of the 2019 rainy season resulted in substantial pasture and water shortages.

Prices of maize have been following an increasing trend since early 2019, as seasonal patterns were compounded by an earlier-than-usual depletion of stocks as the 2018 second season harvest, completed last January, was affected by localized production shortfalls due to inadequate precipitations. However, they remained around their year-earlier levels until late March, on account of the abundant availabilities from the above-average 2018 first season harvest. Price increases sharply accelerated in April due to concerns over the impact of the dry conditions on the performance of current crops, with maize prices surging by 18-20 percent. As a result of the recent increases, current prices of maize are 25-35 percent higher than one year earlier.

The United Republic of Tanzania

In several northeastern bi-modal rainfall areas, planting and establishment of "masika" crops, for harvest from July, have been affected by dry conditions in March and in the first half of April. The most severe rainfall deficits have been recorded in the northern Manyara region and in northeastern Arusha, Tanga and Kilimanjaro regions, where cumulative precipitations during March and mid-April were between 50 and 75 percent below average and current vegetation conditions are poor. In these regions, the expected persistence of poor rains for the remainder of April could cause substantial cereal production shortfalls, as the forecasted improved rains in May would be insufficient for crop recovery. This would result in a second consecutive reduced output, after the 2018/19 "vuli" harvest, gathered last January, affected by delayed and below-average seasonal rains. In uni-modal central and southern areas, where crops were planted in late 2018, the major "msimu" harvest will be gathered from May. In central Geita, Katavi, Singida and Tabora regions, cumulative rainfall between February and mid-April was 20-35 percent below average, and crops are currently affected by moisture stress. However, as these regions are among the few areas where rains for the remainder of April are expected at above-average levels, vegetation conditions and crop prospects will likely improve. In key-producing areas of the southern highlands, as forecasted, rains in the first half of April were 20-30 percent below average. Current vegetation conditions are still above average, as precipitation between November and March were adequate, but they are likely to deteriorate if rains in April will continue at below-average levels.

Figure 7: United Republic of Tanzania - Vegetation Condition Index (VCI), *(March 2019)*



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