

EARLY WARNING

Overview:

In East Africa, prospects for upcoming harvests are unfavourable in several central and southern parts of the region due to severe early and mid-season dryness. In West Africa, main season maize planting continues across the south of the region and conditions are favourable with good rains received. In the Middle East and North Africa, harvest has started for winter cereals and conditions are generally favourable due to good rains throughout the season except in parts of Morocco where poor production has resulted from dry conditions. In Southern Africa, harvest is complete for main season maize crops and below average production and in some cases crop failure has resulted across much of the region due to delay onset rains severe drv conditions and throughout the season. In Central and South Asia, harvest has started for winter wheat crops and conditions are favourable despite some dry conditions in May. In northern Southeast Asia, dry-season rice harvest is nearing completion and production prospects are favourable except in parts of Thailand and Philippines due to low rainfall and insufficient irrigation. In Central America and the Caribbean, planting started in May for the primera season and conditions are generally favourable except in north Guatemala and parts of Haiti due to dry conditions.







Contents:

Conditions at a Glance	2
Global Climate Outlook	3
East Africa & Yemen; Regional Climate Outlook	3
West Africa	6
Middle East & North Africa	7
Southern Africa	8
Central & South Asia	10
Southeast Asia	11
Central America & Caribbean	12
Appendix – Terminology & Definitions	13



The Crop Monitor is a part of GEOGLAM, a GEO global initiative.



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Regions that are in other than favourable conditions are labeled on the map with a symbol representing the crop(s) affected.**

EAST AFRICA: After exceptionally dry conditions in March and April, abundant rains in May marginally improved vegetation conditions, but damage to crops was largely irreversible, and prospects for upcoming first season harvests remain unfavourable in Somalia, Uganda, southeastern Kenya, eastern Ethiopia and northeastern United Republic of Tanzania.

WEST AFRICA: Main season maize planting started in March across the south of the region and onset of rains have been timely across all areas with sufficient rainfall amounts continuing in May.

MIDDLE EAST & NORTH AFRICA: In the Middle East, harvest is underway for the 2018-2019 winter cereals and conditions have been excellent with abundant rainfall since the start of the season. However, concern remains in Iraq and Syria due to ongoing conflict. In North Africa, harvest is underway and conditions are favourable with sufficient rainfall received except in marginal producing areas of Morocco.

SOUTHERN AFRICA: Harvest for the main summer cropping season is complete and poor production and, in some cases, crop failure has resulted across many areas due a delay of onset

rains, record droughts during the season and impact from two tropical cyclones over Mozambique and surrounding areas.

CENTRAL & SOUTH ASIA: Harvest of the 2018-2019 winter wheat crop started in June and conditions in the main producing areas remain favourable due to sufficient precipitation during the season and despite below average rainfall in May.

SOUTHEAST ASIA: In the northern side of Southeast Asia, harvest of dry season rice has almost completed except for North Vietnam and production prospects are generally favourable. However, there is concern in northeastern Thailand and parts of the Philippines due to water shortages during the season that may impact final yields.

CENTRAL AMERICA & CARIBBEAN: The primera season started this month across the region with onset of the rains in May and conditions are generally favourable for planting. Average amounts of rainfall have been received but with irregular distribution causing some pockets of dry conditions across north and east Guatemala.



The Crop Monitor for Early Warning is a part of GEOGLAM, a GEO global initiative. <u>www.cropmonitor.org</u>



Global Climate Outlook: Weak El Niño conditions are present and forecast to continue.

Weak El Niño conditions are present and are forecast to continue through the Northern Hemisphere summer and fall (~70% chance for June to August and after that, a 55-60% chance). Associated with this event are increased chances of below-normal June to August rainfall in the Maritime Continent, eastern Australia, Central America, the Caribbean, and northern South America. The Indian Ocean Dipole is forecast to be positive during June to August. Such conditions tend to enhance (suppress) rainfall in parts of East Africa (southern and central Australia).

Source: UCSB Climate Hazards Center

East Africa & Yemen



Crop condition map synthesizing conditions as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled on the map with their driver.**

In central and southern parts of the subregion, the March-May rainy season has been characterized by severe dryness during March and most of April, with cumulative precipitations between March and the second dekad of April estimated at less than 20 percent of average across most of the Horn of Africa. The unfavourable weather conditions, among the driest on record in several areas and characterized by above-average land surface temperatures, caused substantial planting delays of main season crops across Somalia, Kenya, Uganda, and in "Belg" receiving areas in central and eastern Ethiopia, and resulted in poor germination and in crop wilting, negatively affecting planted area and yields. Above-average precipitations in late April and May reduced the moisture deficits and marginally improved vegetation conditions, but damage to crops was largely irreversible, and prospects remain highly unfavourable. In **Somalia**, "Gu" rains started in late April, after a three week delay, and have been below-average in most areas. In key crop-growing Bay and Lower Shabelle regions, severe early-season dryness led to widespread germination failures and to very poor vegetation conditions. Abundant rains in May did not reverse the expected decline in yields for most rainfed crops, as they occurred too late during the growing season, and the "Gu" harvest is expected to be 40-50 percent below-average. In **Kenya**, in high potential cropping



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map with their driver**.

through September rains are above average in major southwestern growing areas, a substantial recovery of water stressed crops is still possible, as crops are normally harvested from October (See Regional Outlook pg. 5). By contrast, in southeastern and coastal marginal agriculture areas, where seasonal rains usually subside in early June, damage to crops is irreversible, and the harvest is forecast to be about 50 percent below-average. In bi-modal rainfall areas of Uganda covering most of the country, exceptionally dry conditions prevailing in March and most of April severely affected planting activities and crop germination and establishment. Subsequently, improved rains in late April and May halved the rainfall deficits and lifted crop prospects, but vegetation conditions remained poor in several areas and the harvest is expected to be 30-50 percent below-average, depending on the performance of late season rains in June. In the unimodal northeastern Karamoja region, the onset of seasonal rains occurred in May with about a month delay, and currently cumulative rains are 35-45 percent below-average. However, above-average rains are expected in the coming months, and a satisfactory, albeit delayed harvest can be expected, as seasonal rains normally extend until September in this area. In Ethiopia, harvesting of secondary season "belg" crops will start in June and the outlook is mixed. In the highlands of eastern Amhara and southern Tigray regions, the February-to-May rainy season had a generally good performance, while in eastern SNNP region, below-average precipitations in February and

Crop Monitor for Early Warning

areas of the southwestern "maize basket", cumulative rainfall between February and mid-April was up to 80 percent below average. Improved rains between mid-April and late May partly offset the rainfall deficits and resulted in an improvement of vegetation conditions. Seasonal rains were delayed and well below-average also in other cropping areas, with the most severe rainfall deficits recorded in some central medium potential and in cropping areas most southeastern and coastal marginal agriculture livelihood zones. In these areas, drought conditions prevailed in March and April, and despite localized heavy rains in May, cumulative seasonal precipitations were 30-65 percent below-average. In coastal areas, planting occurred later than other areas and the recent rains may have benefitted crops. If June





March were followed by improved rains in April and May, which offset the moisture deficits, but vegetation conditions remained below-average. Significant crop production shortfalls are expected in eastern areas of the Oromia region, where seasonal rains were 30-60 percent below-average, and current vegetation conditions are very poor. In central and southern unimodal areas of the **United Republic of Tanzania**, the major "msimu" harvest began in May, and crop prospects are generally favourable, as seasonal rains were adequate over most cropping areas, except in some central regions where vegetation conditions immediately before the harvest were below-average due to erratic precipitations. By contrast, in northeastern bimodal areas, the recently started "Masika" harvest is expected at below-average levels due erratic and below-average rains. In southern bimodal rainfall areas of **South Sudan**, planting of first season crops began in April with about a one-month delay, due to a late onset of seasonal rains. Adequate precipitations in May benefited crop germination, and vegetation conditions are currently favourable. An improvement of the security situation encouraged voluntary returns of displaced farmers, but planted area remains well below the pre-conflict levels, as conflict persists in

several areas, constraining access to fields. In **Rwanda** and **Burundi**, cumulative rains in February and March were about 50 percent below-average, but above-average rains in May improved vegetation conditions and the recently started "B" harvests are expected at average to above-average levels.

In major growing areas of western Ethiopia, in Eritrea, northern South Sudan and the Sudan, planting of the 2019 main season crops has just started and conditions are mixed with below average rains in May. The full onset of the rains will start in June and rainfall during June-September will be key to support crop establishment and growth (See Regional Outlook pg. 5).

Regional Outlook: Potential for above average June rainfall across high production areas of Ethiopia and Kenya.

Cumulative rainfall since March 1st is likely to remain below average through the forecast period (up to June 15th) in much of Kenya, some of Somalia, southern and northeastern Ethiopia, and parts of northern Tanzania (Figure 1-left). After substantial delays in seasonal rainfall onset and dry spells, most areas experienced improved rainfall during late April. May rainfall was average to below average in most of Kenya, while some eastern Horn areas experienced periodic above average rainfall.

The near term forecast, through June 18th, shows a high probability of above average rainfall in Ethiopia over southwestern to northwestern areas and central highlands, in South Sudan, western and southeastern Uganda, and in western Kenya. Below average rainfall is forecast in coastal areas of northeastern Tanzania, Kenya, and southeastern Somalia. The forecast for the first two weeks of June is included in the rainfall anomaly composite shown in Figure 1 (left). The forecast for June 12th to 18th is shown on the right. Forecasts beyond this period, which are less reliable, indicate wetter than normal conditions will continue in western areas of East Africa through the end of June.

It is possible that weak El Niño conditions will persist during the June to September season, but most seasonal forecasts available in early June do not indicate it would have major negative impacts in East Africa. This may be related to warmer than normal conditions in the western Indian Ocean and other regional factors having more influence. However, below normal JJAS rainfall has occurred during some previous weak El Niño's. Some of the JJAS 2019 forecasts available in early June show increased chances of below average rainfall in the northern sector including parts of Sudan, northern Ethiopia, and Eritrea. Available forecasts show more consensus as to increased chances for average to above average JJAS rainfall in western areas of the region, including western Kenya, Uganda, South Sudan, southern Sudan, and southwestern Ethiopia.



Figure 1. On the left, a preliminary estimate of March 1st through June 15th, 2019 rainfall in terms of the difference from the 1981 to 2018 average (Source: UCSB CHC). This Climate Hazards Center Early Estimate combines CHIRPS final and preliminary rainfall with an unbiased version of the 15-day GEFS ensemble mean forecast. On the left, the GEFS rainfall probability forecast for June 12th to 18th (Source: NOAA/CPC, June 4th).

Source: UCSB Climate Hazards Center

West Africa



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map with their driver.**

Planting operations for main season maize and sorghum across the south of the region are favourable due to timely onset of rains and good rainfall continuing into May across all areas. Sowing of main season rice continued this month in **Sierra Leone**, **Ghana** and **Nigeria** and growing conditions are favourable due to good weather supporting crop growth and no major crop infestation. However, in northeast **Nigeria**, in recent months, heightened tensions and ongoing conflict has increasingly limited the access to farmland and agricultural activities. Harvest is complete for second season rice in **Mauritania** and final production was favourable. In the far north region of **Cameroon**, while weather conditions are favourable, land preparation continues to be affected by civil unrest. In addition, fall armyworm is present in maize crops especially in the departments of Kupe and Manenguba in the southwest and Mezam, Bui, Menchum, Boyo, Ngoketunjia, and Momo in the northwest and is likely to impact yields. In **Central African Republic**, while weather conditions are favourable with good rains received since the start of the season, persisting civil insecurity continues to hamper crop production and constrain area planted due to farm abandonment and unrest, notably in the center and northwest.

Middle East & North Africa



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled** on the map with their driver.

In the Middle East, harvest is underway for 2018-2019 winter cereals. Due to abundant rainfall since the start of the season, which resulted in flooding across many parts of the subregion, above average harvests are expected across Iran, Iraq and Syria. In **Iran**, heavy rain in the last two weeks of March after an already wet season led to flash flood events across North Khorosan, Razavi Khorosan, Gilan, Mazandaran, Golestan, and Semnan provinces in the north of the country and Khuzestan in the south, resulting in deaths and severe infrastructure damage. Production losses in flooded areas were offset by production gains elsewhere as a result of precipitation benefiting crop development. In **Iraq**, despite major flooding at the end of March across eastern and northern provinces, national authorities are expecting a bumper harvest due to above average rains throughout the season. However, production potential across both **Syria** and **Iraq** remains constrained by ongoing or recently ceased conflict continuing to impact availability of agricultural inputs and affect agricultural production.

In North Africa, harvest is underway for winter cereals. Sufficient precipitation in autumn, which supported sowing and establishment, was followed by generally average rains from January through March except in parts of Morocco and Algeria where dry conditions were present. Above average rains from March through April improved some of the previously dry conditions across western **Algeria**. In **Morocco**, crop prospects are below average in the marginal producing areas of northeast (Oriental) and Central due to below average rainfall since December combined with above average temperatures. Reports from the Moroccan government forecast wheat production to be one third less than the previous year. In **Tunisia**, despite recent heavy rains in March, April and parts of May and resulting water logging problems in the north and central regions, crop prospects remain favourable however, heavy rains may impact final yields. In **Egypt** and **Libya**, conditions are favourable for wheat crops which are generally irrigated.

Southern Africa



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map with their driver.**

In Southern Africa, harvest is complete for the main summer cropping season and poor, and in some cases failed production has resulted across many areas. Rains were delayed by more than a month resulting in reduced planted area across some of the key maize growing areas of South Africa and Zambia. Some rainfall came in early January, reducing rainfall deficits in the east. However, this was followed by a number of long dry spells, the most significant of which lasted for 4-6 weeks from mid-February to late March across the central and central west parts of the region, resulting in widespread wilting across the worst affected areas of Angola, Namibia, Botswana, Zimbabwe and southern parts of Zambia and Mozambique. Tropical Cyclone Idai struck central Mozambique in March causing heavy rains and floods and resulting in significant damage across central Mozambique, southern Malawi and eastern Zimbabwe. This was followed by Tropical Cyclone Kenneth, which struck northern Mozambique at the end of April compounding previous flood damage and leading to further infrastructure damage. In southern Democratic Republic of Congo, production prospects for main season cereals are near average due to generally average rains throughout the season. However, the ongoing conflict in the north across Kasai, North Kivu, South Kivu, Ituri and Tanganyika regions continues to disrupt agricultural activities and limit farmers' access to crop growing areas. In May, the ongoing conflict has especially disrupted agricultural activities in north and south Kivu. In Angola, delay of onset rains and erratic rainfall since the start of the season resulted in reduced planted area and below average production across the



For detailed description of the pie chart please see box below.

Crop Monitor for Early Warning

worst affected south and coastal areas. In the highlands, final harvest is expected to be reduced in the southern areas, notably over southern Huila. In north and northwest areas of the highlands, good rains where received and production is expected to be average. In Zambia, failure conditions have resulted across the high producing south due to high temperatures and extreme moisture deficits throughout the season and cumulative rainfall less than 80 percent of the average in south, west and central parts of the country. However, in the lower maize-producing north and north west, favourable production is expected. In Malawi, average to above average production has resulted due to abundant rainfall from late December to early January, followed by generally average rains in February and March. Some crop losses resulted from waterlogging and flooding from Cyclone Idai; however, according to the Ministry of Agriculture reports from May, crop estimates are above average. In Zimbabwe, significantly below average production has resulted across the country due to drought conditions that worsened throughout the season. Across worst affected areas of Matabeleland, Masvingo and Midlands, cumulative rainfall has been less than 80 percent of the average in most parts of the country. Flooding from Cyclone Idai caused further damage to cropping areas. Official estimates indicate that national maize output is expected to decrease by 54 percent, compared to last year's production. In Namibia, while production prospects are average across the centre of the country where commercial agriculture predominates and maize is irrigated, crop failure is expected for rain fed crops in this region. In the north and Kunene, crop failure has resulted due to drought conditions. Total rainfall received across these areas has been less than 50 percent of the average and national production prospects are well below average. In Madagascar, while rainfall was erratic and below average from December through early February across the west and east, rainfall improved in late February and then in March due to rainfall from Tropical Cyclone Idai and overall production prospects have improved and are favourable. In the south, rainfall has been near average throughout the season and production prospects are favourable. In many areas of Botswana, this was driest season since 1981; rainfall received since the start of the season was more than 80 percent below average, resulting in reduced planted area, reduced water levels and deteriorated pastures. Production is expected to be well below average. In Mozambique, flooding in March from Tropical Cyclone Idai caused extensive crop losses and significant impacts to crop production. This was followed by flooding in the northwest from Tropical Cyclone Kenneth in April, which resulted in further crop damage. IPC Phase 3 outcomes are projected across much of the country and even harvests currently underway in the south are not expected to improve food security due to a significantly reduced harvest. In Lesotho, production prospects are below average due to delayed onset rains and persistent dry and hot conditions in December and January. While some crops were able to recover mid-season following rains in February to mid-March overall production is expected to be below average. In South Africa, production prospects remain below normal for white maize (western areas) following a very delayed start to the rainy season which negatively affected planting and dry conditions in late March. However, widespread rain during April and a delayed onset of cold conditions may still have a positive effect going forward. For yellow maize (eastern parts), production is expected to be near normal.

Central & South Asia



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map with their driver.**

In Central Asia, harvesting of winter cereals started at the beginning of June. Since January, in the main producing areas of southwestern Tajikistan, in Turkmenistan and in Uzbekistan, precipitations were overall adequate and conditions remain favorable despite below average rainfall in the first half of May. In southern Kazakhstan, average precipitations from January through April were followed by well below average rainfall in May however, winter wheat conditions remain favourable. In Kyrgyzstan, rainfall was scarce and below average from February to early May; however, crop conditions remain favourable. Planting of spring cereals is virtually complete in Central Asia, under generally favourable conditions. As of mid-May, aggregate precipitations were close to the average level in the main spring wheat producing regions of Kazakhstan, namely Kostanay, Akmola and North Kazakhstan and vegetation conditions are close to average across Turkmenistan and Kyrgyzstan. In Mongolia, planting continues for spring wheat crops for harvest in September and conditions are favourable. In Afghanistan, irrigated and rain fed wheat are mostly at flowering to early-maturity stages of growth and conditions are average to above-average across the country. Conditions also remain favourable for spring wheat crops due to good rainfall since March. While weather conditions have been above average, structural issues including lack of agricultural inputs are likely to constrain production potential. In Pakistan, harvest will complete in June for the rabi wheat crop planted in November 2018 and average output is expected except in Sindh province due to below average rainfall early in the season, which has impacted planting and operations and reduced irrigation water amounts. In Punjab province, where there were some concerns early in the season due to dry conditions, rainfall improved from January onwards and was almost double the average level for the period of January to April and average output is expected. Planting has started for 2019 summer crops (kharif) and conditions are favourable at the start of the season.

Southeast Asia



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map with their driver.**

In the northern side of Southeast Asia, harvest of dry-season rice is almost complete except for in North Viet Nam and production prospects are generally favourable. In Philippines and Thailand, while the yield condition is generally fair to good, harvested area is slightly decreased due to insufficient rainfall. Field preparations and early sowings are underway for wet-season rice crops and conditions are favourable. In Viet Nam, conditions are favourable for winter spring rice (dry-season rice) across the country as harvest progresses in the south. Sowing of wet-season rice has begun under favourable conditions in the south earlier than last year. In Thailand, dryseason rice harvest is almost complete under generally favourable conditions with a decrease in production expected due to a decrease in total sown area. Dry conditions have negatively impacted conditions in the northeastern region and to a lesser extent the north. In Laos, dry-season rice is in harvesting stage and under generally favourable conditions with good weather supporting harvest. Planting operations for wet-season rice will start in June. In Cambodia, sowing of wet-season rice started in May and conditions are favourable. In Myanmar, sowing of dry-season rice is complete and planting area has increased from the previous year due to favourable weather. No significant damage to planted dry-season rice crops resulted from Tropical cyclone Fani in April and production prospects are favourable. In the Philippines, harvest of dry-season rice is wrapping up under generally favourable conditions with a slight reduction in harvested



For detailed description of the pie chart please see box below.

area and yields compared to last year. Preparations are underway for wet-season sowing. In **Indonesia**, harvest of wet-season rice continues with yields expected to be close to average. Sowing of dry-season rice enters the second month with low conditions. In the **Democratic People's Republic of Korea**, wheat and barley harvest is expected to start in June and below average yields are expected because of winter kill (due to lack of snow cover in a number of areas) and poorly dispersed rainfall during the season, as

12 No.39 – June 2019

Crop Monitor for Early Warning

well as irrigation water shortages and lack of inputs. In **Nepal**, main season maize is in vegetative to reproductive stage and conditions are favourable due good weather and sufficient irrigation water supply. Planting has started for the main season rice crop and conditions are favourable. In **Bangladesh**, harvest is underway for the *boro* rice crop planted in December and conditions have been favourable throughout the season due to sufficient rainfall. Cyclone Fani made landfall in May in the north over Rajshahi; however, production was not significantly impacted. In **Sri Lanka**, the *yala* rice crop, planted in April, is in vegetative to reproductive stage and there is concern from early season dryness.

Central America & Caribbean



Crop condition map synthesizing information as of May 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled on the map with their driver.**

The primera season started this month across the region with onset of rains in May and conditions are generally favourable for planting. Rains received have been in average amounts but with irregular distribution, which has caused some pocket of dry conditions across north and east **Guatemala**. In **Haiti**, planting started in March for main season crops and rains in May improved previously dry conditions across much of the south and centre. However, concern remains in the Transversale due to erratic rainfall that may impact maize. In **Cuba**, harvest is complete for second season rice crops and production has been favourable due to generally good rainfall throughout the season and above average irrigation water supply. Rain fed summer season rice is in vegetative to reproductive stage and conditions are favourable due to average rainfall.

Pie Chart Description: Each slice represents a country's share of total regional production. The proportion within each national slice is colored according to the crop conditions within a specific growing area; grey indicates that the respective area is out of season. Sections within each slide are weighted by the sub-national production statistics (5-year average) of the respective country. The section within each national slice also accounts for multiple cropping seasons (i.e. spring and winter wheat) and are a result of combining totals from multiple seasons to represent the total yearly national production. When conditions are other than favourable icons are added that provide information on the key climatic drivers affecting conditions.

Information on crop conditions in the main production and export countries can be found in the AMIS Market Monitor, published June 6th 2019.

Appendix

Crop Conditions:

Exceptional: Conditions are much better than average* at time of reporting. This label is only used during the grain-filling through harvest stages.

Favourable: Conditions range from slightly lower to slightly better than average* at reporting time.

Watch: Conditions are not far from average* but there is a potential risk to final production. The crop can still recover to average or near average conditions if the ground situation improves. This label is only used during the planting-early vegetative and the vegetative-reproductive stages.

Poor: Crop conditions are well below average. Crop yields are likely to be 10-25% below average. This is used when crops are stunted and are not likely to recover, and impact on production is likely.

Failure: Crop conditions are extremely poor. Crop yields are likely to be 25% or more below average.

Out of Season: Crops are not currently planted or in development during this time. **No Data:** No reliable source of data is available at this time.

"Average" refers to the average conditions over the past 5 years.

Drivers:

These represent the key climatic drivers that are having an impact on crop condition status. They result in production impacts and can act as either positive or negative drivers of crop conditions.

Wet: Higher than average wetness.

Dry: Drier than average.

Hot: Hotter than average.

Cool: Cooler than average or risk of frost damage.

Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)

Delayed-Onset: Late start of the season.

Pest & Disease: Destructive insects, birds, animals, or plant disease.

Socio-economic: Social or economic factors that impact crop conditions (i.e. policy changes, agricultural subsidies, government intervention, etc.)

Conflict: Armed conflict or civil unrest that is preventing the planting, working, or harvesting of the fields by the farmers.







ot C







Socio- Pests & economic Disease



conne



The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners FEWS NET, JRC, WFP, ARC, Asia RiCE, MESA, ICPAC, FAO GIEWS, Applied Geosolutions and UMD. The findings and conclusions in this joint multi-agency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts. More detailed information on the GEOGLAM crop assessments is available at <u>www.cropmonitor.org</u>

Crop Season Nomenclature:

In countries that contain multiple cropping seasons for the same crop, the following charts identifies the national season name associated with each crop season within the Crop Monitor for Early Warning.

MENA				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Egypt	Rice	Summer-planted	Nili season (Nile Flood)	

East Africa				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Burundi	Maize	Season B	Season A	
Ethiopia	Maize	Meher Season (long rains)	Belg Season (short rains)	
Kenya	Maize	Long Rains	Short Rains	
Somalia	Maize	Gu Season	Deyr Season	
Somalia	Sorghum	Gu Season	Deyr Season	
Uganda	Maize	First Season	Second Season	
United Republic of Tanzania	Maize	Long Rains	Short Rains	
United Republic of Tanzania	Sorghum	Long Rains	Short Rains	

West Africa				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Benin	Maize	Main season	Second season	
Cameroon	Maize	Main season	Second season	
Cote d'Ivoire	Maize	Main season	Second season	
Ghana	Maize	Main season	Second season	
Mauritania	Rice	Main season	Off-season	
Nigeria	Maize	Main season	Short-season	
Nigeria	Rice	Main season	Off-season	
Тодо	Maize	Main season	Second season	

Southern Africa				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Democratic Republic of the Congo	Maize	Main season	Second season	
Mozambique	Maize	Main season	Second season	

Southeast Asia				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Bangladesh	Rice	Boro	Aman	
Cambodia	Rice	Wet season	Dry season	
Indonesia	Rice	Main season	Second season	
Lao People's Democratic Republic	Rice	Wet season	Dry season	
Myanmar	Rice	Wet season	Dry season	
Philippines	Rice	Wet season	Dry season	
Sri Lanka	Rice	Maha	Yala	
Thailand	Rice	Wet season	Dry season	
Viet Nam	Rice	Wet season (Autumn)	Dry season (Winter/Spring)	

Central & South Asia				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Afghanistan	Wheat	Winter-planted	Spring-planted	
Kazakhstan	Wheat	Winter-planted	Spring-planted	
Kyrgyzstan	Wheat	Winter-planted	Spring-planted	
Tajikistan	Wheat	Winter-planted	Spring-planted	

Sources and Disclaimers:

The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners FEWS NET, JRC, WFP, ARC, Asia RiCE, MESA, ICPAC, FAO GIEWS, Applied Geosolutions and UMD. The findings and conclusions in this joint multi-agency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts. More detailed information on the GEOGLAM crop assessments is available at <u>www.cropmonitor.org</u>

Crop Season Nomenclature:

In countries that contain multiple cropping seasons for the same crop, the following charts identifies the national season name associated with each crop season within the Crop Monitor for Early Warning.

Central America & Carribean				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Cuba	Rice	Main season	Second season	
El Salvador	Beans	Primera	Postrera	
El Salvador	Maize	Primera	Segunda	
Guatemala	Beans	Primera	Postrera	Apante
Guatemala	Maize	Primera	Segunda	
Haiti	Maize	Main season	Second season	
Honduras	Beans	Primera	Postrera	
Honduras	Maize	Primera	Segunda	
Nicaragua	Beans	Primera	Postrera	Apante

i Sources and Disclaimers:

The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners FEWS NET, JRC, WFP, ARC, Asia RiCE, MESA, ICPAC, FAO GIEWS, Applied Geosolutions and UMD. The findings and conclusions in this joint multi-agency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts. More detailed information on the GEOGLAM crop assessments is available at <u>www.cropmonitor.org</u>





Prepared by members of the GEOGLAM Community of Practice, coordinated by the University of Maryland Center for Global Agricultural Research and funded through NASA Harvest.



GROUP ON EARTH OBSERVATIONS The Crop Monitor is a part of GEOGLAM, a GEO global initiative.

Cover Photo by: Tamuka Magadzire

Early Warning partners



*EC contribution is provided by the Joint Research Centre of the European Commission