

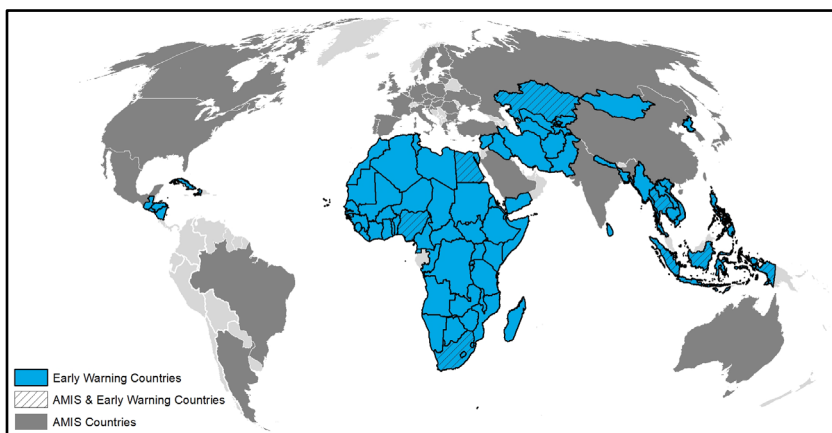


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, harvesting conditions are mostly poor for main season cereals in the north, and conditions are mixed for planting of second season cereals in the south as above-average rains, which are forecast to continue into early 2024, have resulted in severe flooding (See Regional Outlook Pg. 7). In **West Africa**, harvesting of main season cereals is wrapping up, and overall conditions remain favourable due to beneficial weather outcomes throughout the season and despite localized flood impacts. Only conflict and socio-economic affected regions are expected to see yield declines. In the **Middle East and North Africa**, wheat planting continues with rainfall deficits impacting parts of western North Africa. Elsewhere, agro-climatic conditions are generally favourable. In **Southern Africa**, wheat harvesting is mostly complete under favourable conditions. Planting of main season cereals is continuing under mixed conditions due to delayed rainfall onset, and forecast El Niño-induced dry conditions are likely to impact cropping outcomes in south and central areas (See Regional Outlook Pg. 13). In **Central and South Asia**, conditions are mostly favourable for winter wheat planting despite some delays resulting from current dry conditions that are forecast to continue into early December. However, forecast rainfall improvements into early 2024 are expected to benefit this season’s wheat outcomes. In **Southeast Asia**, conditions are generally favourable for dry-season rice harvesting in the south and wet-season rice harvesting in the north, except in Thailand where early season drought and damage from later heavy rains are likely to impact yields. In **Central America & the Caribbean**, *Segunda/Postre* yields are likely to be affected by antecedent prolonged dry conditions extending into the beginning of the season in September, followed by periods of irregular and above-average rains from October that resulted in flood damage. In Cuba, end of season conditions are favourable.



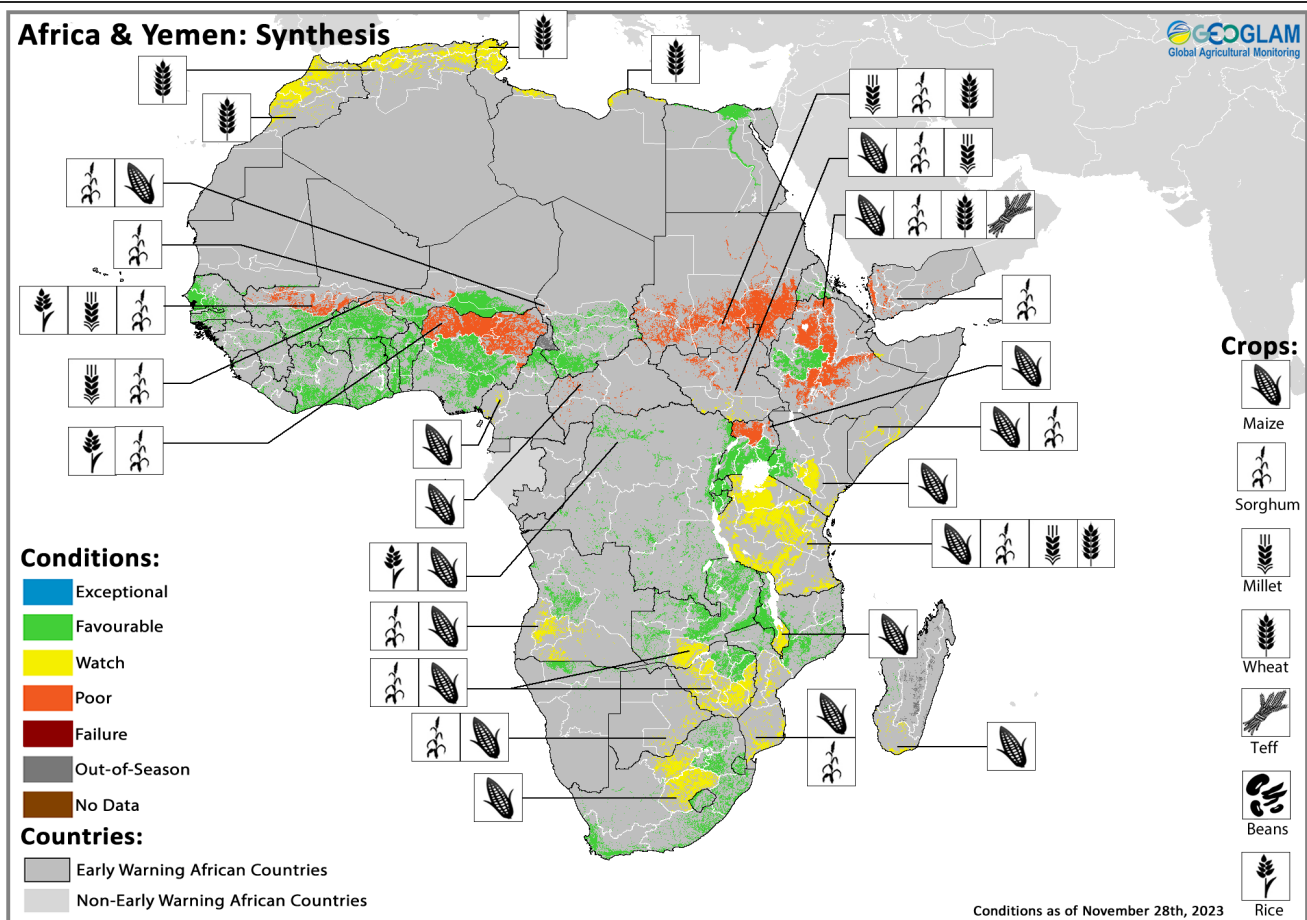
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GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of November 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of November 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: Harvesting of main season cereals in the north continues under generally poor conditions due to a combination of prior seasonal deficits, recent enhanced rains and resultant flooding, and ongoing conflict and socio-economic challenges in affected areas. In the south, planting of second season cereals continues under mixed conditions as the onset of the *Deyr*/Short Rains season brought much heavier than normal rainfall that led to extensive flooding, and above-average rains are expected to continue through early 2024 (See Regional Outlook Pg. 7).

WEST AFRICA: Harvesting of main season cereals is wrapping up in all countries, and second season cereals continue to develop along the Gulf of Guinea as harvesting is underway along the Sahel. Generally conducive weather outcomes have been particularly favourable for crop development this season, and only conflict and socio-economic affected regions will experience poor outcomes.

MIDDLE EAST & NORTH AFRICA: Wheat planting is underway with dry concerns in western North Africa and generally favourable agro-climatic conditions in eastern North Africa and the Middle East. Socio-economic challenges continue to impact agricultural activities in Libya and Syria.

SOUTHERN AFRICA: Wheat harvesting is complete or nearing completion with favourable yield outcomes expected in all

countries. Planting of main season cereals is ramping up, and antecedent dry conditions from the previous season in combination with El Niño linked forecasts of hotter and drier than average conditions in the south and centre could impact 2024 harvests (See Regional Outlook Pg. 13).

CENTRAL & SOUTH ASIA: Winter wheat planting continues under favourable conditions despite below-average fall precipitation received in some areas that is delaying planting activities, and forecast above-average seasonal precipitation is expected to support wheat cultivation.

SOUTHEAST ASIA: In the south, conditions are favourable for dry-season rice harvesting and wet-season rice planting. In the north, conditions are generally favourable as wet-season harvesting wraps up, except in Thailand where yields are expected to be below-average. Elsewhere, conditions are generally favourable except for rice crops in Nepal.

CENTRAL AMERICA & CARIBBEAN: Conditions have degraded to poor for *Segunda* season maize crops in Central America and *Été* season maize and bean crops in Haiti and remain under watch for *Postre* season bean crops in Central America due to dry and hot conditions from the previous season that extended into September, followed by irregular and sporadic high-intensity rainfall and flooding from October during advanced crop growth stages.

Global Climate Outlook: Two-week forecast of areas of above or below-average precipitation

The two-week forecast (Figure 1) indicates a likelihood of above-average rainfall over eastern Ontario and Quebec in Canada, the southeast US, southeast Mexico, southern Peru, southern Brazil, northern Uruguay, eastern Argentina, Gabon, southern Republic of the Congo, the Democratic Republic of the Congo, Uganda, Rwanda, Burundi, western Tanzania, northern Angola, northeastern Madagascar, northern Kazakhstan, central and eastern regions of the Russian Federation, western China, the Democratic Republic of Korea, the Republic of Korea, Myanmar, Viet Nam, Laos, southern Thailand, and the central Philippines.

There is also a likelihood of below-average rainfall over northern Canada, the western US, northwest Mexico, eastern Venezuela, southern and eastern Guyana, Suriname, southern French Guiana, northern and central Brazil, southern Chile, Czechia, southern Poland, southern and western Ukraine, Romania, Serbia, southern Russian Federation, Sierra Leone, southern Angola, Namibia, southern Zambia, northern Zimbabwe, central Mozambique, western South Africa, northeast Iran, eastern Turkmenistan, Uzbekistan, Afghanistan, Tajikistan, southern Kyrgyzstan, northern Pakistan, northwest India, Sri Lanka, northern Bangladesh, Indonesia, southern Papua New Guinea, and northern Australia.

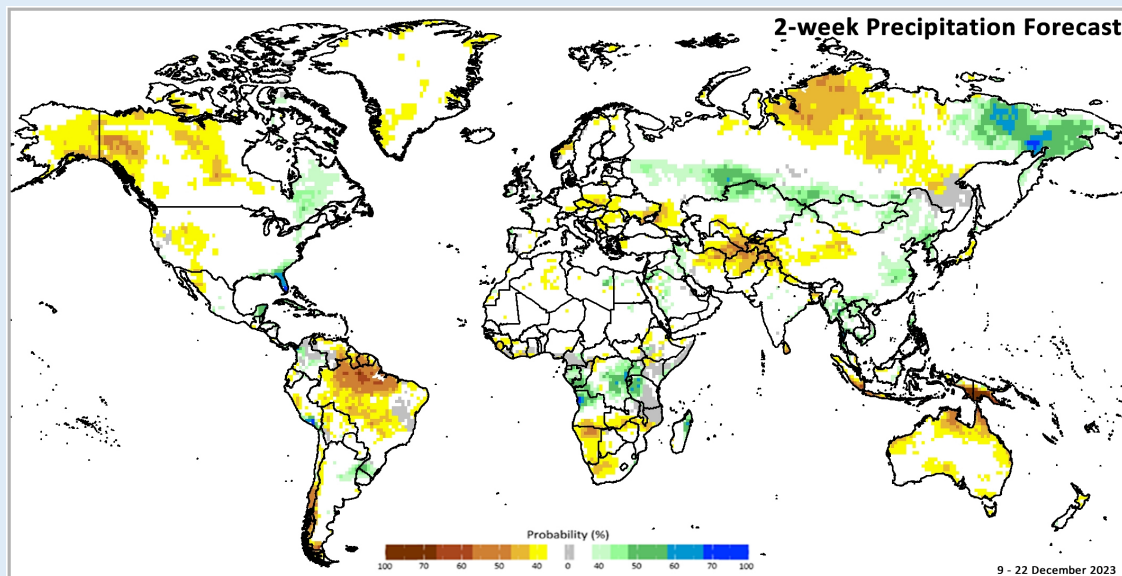


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 9 – 22 December 2023, issued on 1 December 2023. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

Climate Influences: Ongoing strong El Niño forecast to last through March to May 2024 and strong Positive IOD expected to weaken in December

The ongoing El Niño is developing into a strong event and will likely maintain its strength into early 2024, possibly even becoming a historically strong event (35 percent chance). El Niño conditions will likely continue into March to May 2024 (88 percent chance) and transition to ENSO-neutral by May to July (55 percent chance), according to the North America forecast.

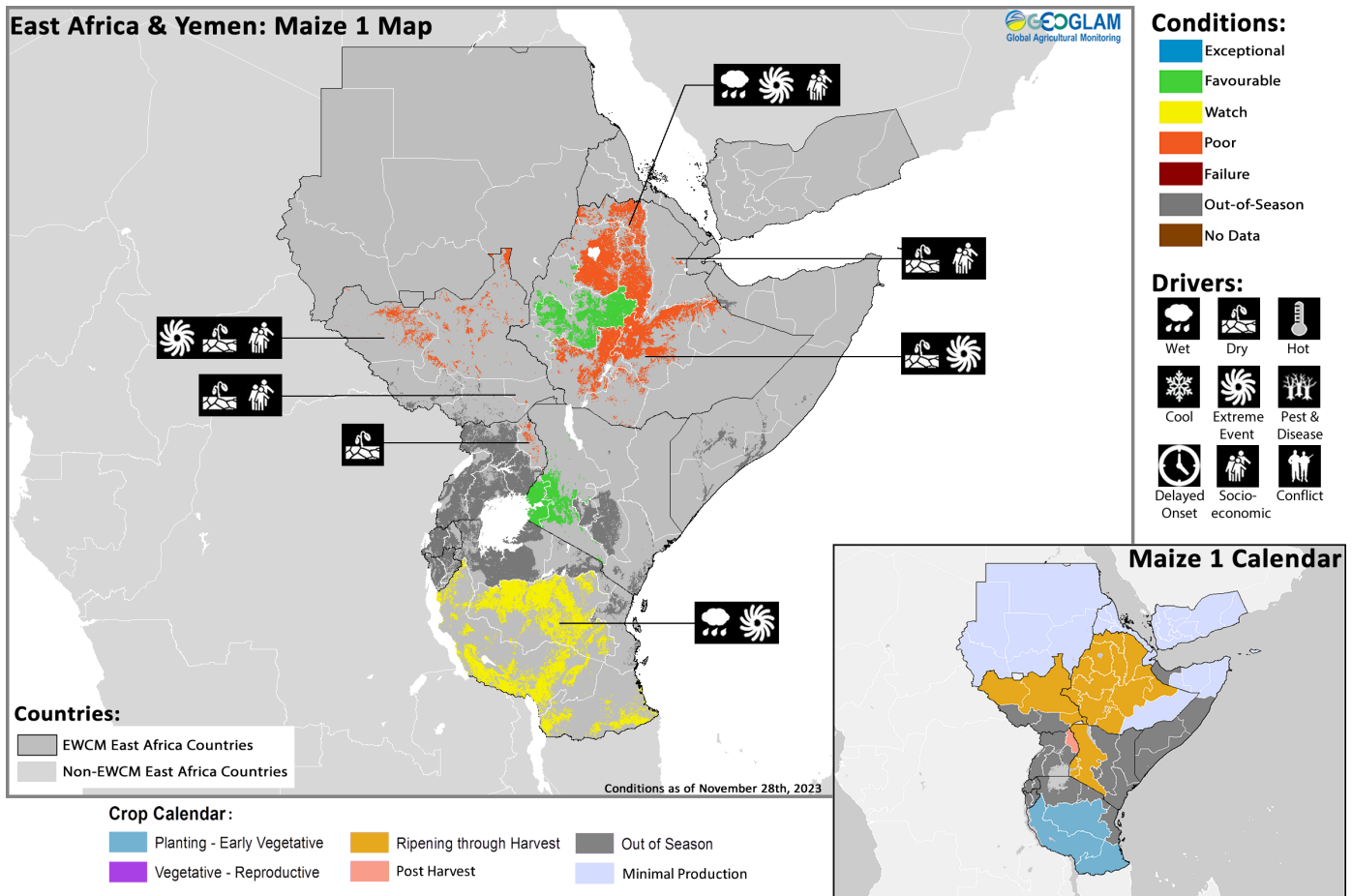
El Niño events tend to enhance precipitation in Central Asia, southern North America, south-eastern South America, east and southern East Africa, and south-eastern China. Drier-than-average conditions tend to occur in Central America, northern South America, parts of the northern U.S. and Canada, Southern Africa, Northern China, the Maritime Continent, and Australia.

The ongoing strong positive Indian Ocean Dipole (IOD) event will likely weaken in December but last into January, according to the Australian Bureau of Meteorology. The combination of positive IOD and El Niño conditions have led to intense rain and severe flooding in East Africa and dry conditions in Australia and the Maritime Continent.

Globally, temperatures during 2023 have been the warmest on record, and the warming influence of El Niño will likely continue this upward trend. Warmer temperatures will exacerbate rainfall deficits.

Source: UCSB Climate Hazards Center

East Africa



Crop condition map synthesizing Maize 1 crop conditions as of November 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.**

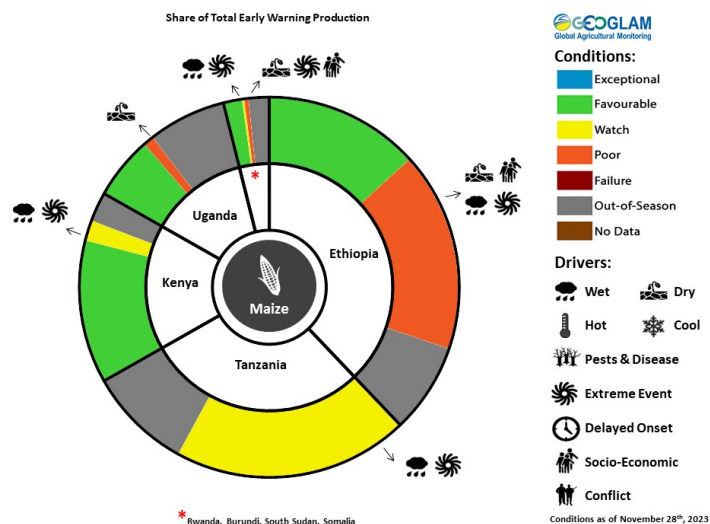
Across northern East Africa, harvesting of main season cereals finalized in **Yemen** and is underway in **Eritrea**, unimodal areas of **South Sudan**, and **Sudan** under generally poor conditions except in **Eritrea**. Dry conditions earlier in the season impacted crops in unimodal areas of **South Sudan** while enhanced rains from October resulted in flooding across mostly the same areas, except in Kapoeta located in the southeast. Furthermore, a combination of conflict and related socio-economic challenges influenced poor conditions in **Sudan**, **South Sudan**, and **Yemen**. In **Ethiopia**, harvesting of *Meher* season cereals continues under mixed conditions with ongoing concern in agricultural areas impacted by a combination of prior seasonal rainfall deficits, including in the southwest, centre, north-centre, and northeast, and a switch to above-average rains and resultant flooding from October in most areas, except for the north-centre and northeast where rains remained near to below-normal (See Regional Outlook Pg. 7). There is also ongoing concern in northern areas impacted by localized pockets of conflict and residual socio-economic challenges.

Across southern East Africa, harvesting of main season cereals finalized in unimodal areas of **Kenya** and unimodal areas of **Uganda** under favourable conditions except in Karamoja region of northeastern **Uganda** where end of season conditions are poor due to persistent dryness. Planting and development of second season maize and sorghum crops continues in **Uganda**, **Rwanda**, **Burundi**, the **United Republic of Tanzania**, **Kenya**, and **Somalia** for harvest from December. Conditions are mixed as the season ramps up due to impacts of enhanced rains from October and resultant flooding.

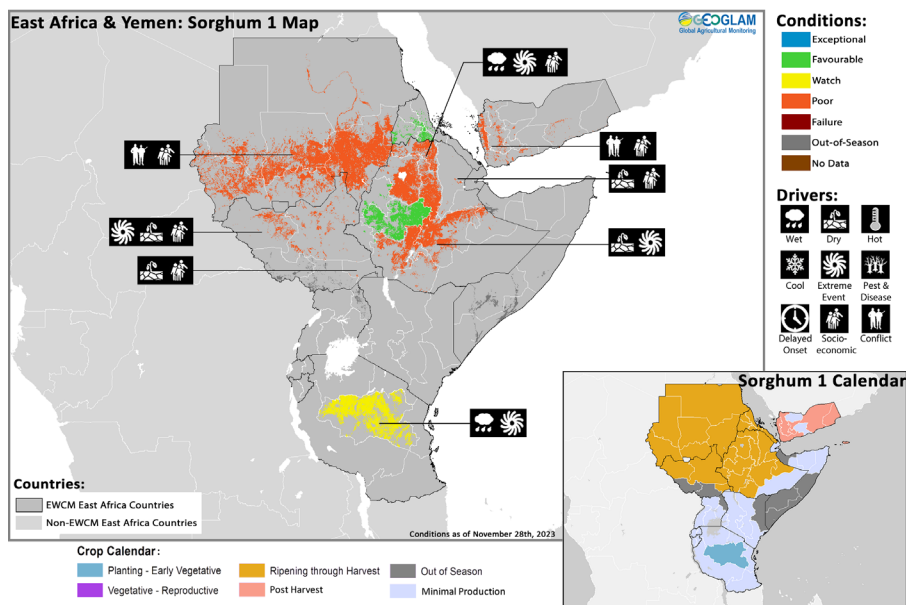
After three years of consecutive La Niña-induced drought conditions from 2020 to 2023, the onset of the October to December *Deyr*/Short Rains season brought much heavier than normal rainfall that led to extensive flooding in **Somalia**, **Ethiopia**, **Kenya**, and the **United Republic of Tanzania** and caused the Juba and Shabelle Rivers to surpass their high-risk levels by mid-November, triggering further severe flooding. In the first half of December, a short reprieve from the wet conditions is anticipated in some north and eastern areas while **Uganda**, **Rwanda**, **Burundi**, the **United Republic of Tanzania**, and western **Kenya** are expected to receive above-average amounts, and a continuation of above-average rainfall is expected for most areas through February 2024 (See Regional Outlook Pg. 7). For the season overall, the wet conditions are likely to have a net positive impact on cropping outcomes despite potential damage from waterlogging, flooding, and pest and disease outbreaks. For regions that experience crop damage, a likely continuation of high rainfall amounts will provide an extension of the typical growing period, allowing farmers to carry out replanting efforts.

Northern East Africa & Yemen

In **Ethiopia**, harvesting of *Meher* season cereals continues under mixed conditions with concern due to combined impacts of prior seasonal rainfall deficits, a switch to above-average rains and flooding from October that disrupted harvest activities in most areas, and ongoing socio-economic issues. Dry conditions during the first half of the season in the southwest, centre, north-centre, and northeastern areas were followed by heavy rainfall since early November that has been affecting most areas of the country, particularly in the Somali Region, resulting in flash floods and river overflows (See Regional Outlook Pg. 7). Furthermore, residual pockets of conflict in the north and related socio-economic challenges continue to impact agricultural activities. In unimodal areas of north, central, and southeastern **South Sudan**, harvesting of first season cereals continues, and poor outcomes are expected as a result of previously poor seasonal rainfall performance followed by recent enhanced rains and flooding in most areas, with the exception of Kapoeta located in the



For detailed description of the pie chart please see description box on Pg. 18.



Crop condition map synthesizing Sorghum 1 conditions as of November 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.**

November (See Regional Outlook Pg. 7). In **Yemen**, sorghum harvesting finalized under poor conditions due to persistent conflict and socio-economic challenges.

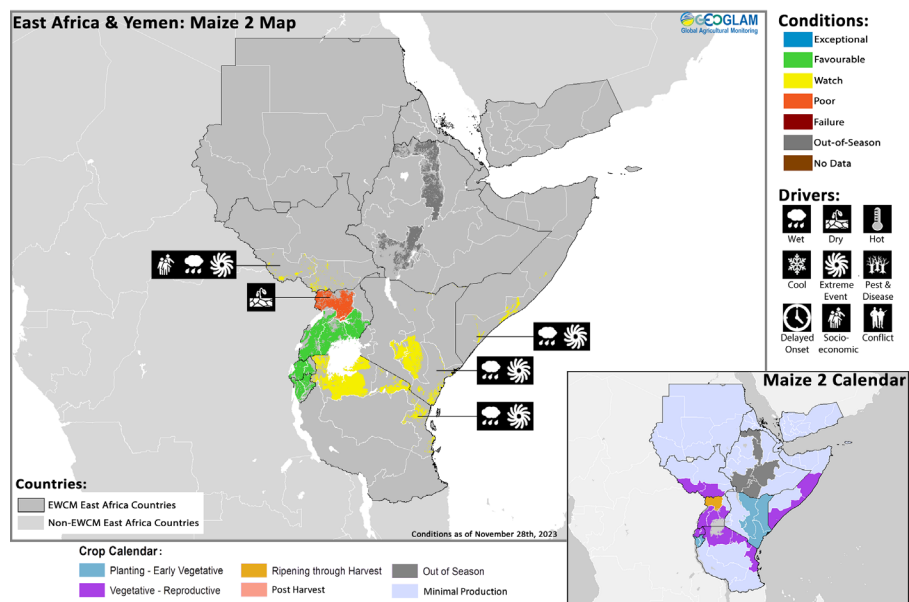
Southern East Africa

In **Uganda**, harvesting of first season maize finalized in the northeast, and harvesting of second season maize finalized in the north-centre and northwest under poor conditions due to poor rainfall performance earlier in the season. Second season maize crops continue to develop in bimodal areas with a recent improvement to favourable conditions in the centre and west as enhanced rains are benefitting crop performance. In **Kenya**, harvesting of Long Rains cereals is complete or nearing completion in unimodal rainfall areas in the western half of the country under favourable conditions. However, in the north Rift Valley area, fields were harvested before the onset of the October rains, which may result in post-harvest losses as crops were stored before they were fully dried. Planting of Short Rains maize is underway in bimodal areas in the eastern half of the country as well as in the unimodal centre, and there is concern as heavy rainfall since early November has been impacting the eastern part of the country with flooding and river overflows. The October to December Short Rains began on time across most areas, and cumulative rainfall was over 150 percent of the 40-year average as of late November and over 300 percent of average in Mandera, located in the northeastern tip of the country. As of late November, 36 out of 47 counties have been affected by recent severe flooding, and over 17,600 acres of farmland have been destroyed, according to the [IFRC Emergency Appeal report](#). The full impacts of flooding on this season's agricultural production will depend on households' abilities to recover their livelihoods and replant crops. Above-average rains are expected to continue

southeast (See Regional Outlook Pg. 7). Second season maize and sorghum continue to develop in the Equatoria states, and there are similar concerns related to the enhanced rains. Furthermore, socio-economic challenges related to the prior active conflict situation continue to influence agricultural outcomes throughout the country. In **Sudan**, harvesting of main season millet and sorghum crops is underway, and poor outcomes are expected due to weather inconsistencies and the ongoing conflict situation. Despite average to above-average cumulative June to September precipitation outcomes, a combination of irregular rainfall distribution and conflict is expected to result in poor yields. Production is also expected to be below last year and below-average, and rural areas close to conflict-affected urban areas throughout Greater Darfur and Greater Kordofan will experience significantly below-average harvests. In **Eritrea**, harvesting of main season sorghum and wheat is underway, and conditions remain favourable with mostly above-average rains received in

through early 2024 due to the current strong El Niño and positive IOD (See Climate Influences Pg. 3), and continued flooding is likely during this period. In the east, there is a 70 percent chance that rainfall will be in the top 20 percent of historical climatological data. In **Rwanda**, Season A crops, which account for 60 percent of aggregate cereal production, are in vegetative to reproductive stage for harvest from January. The September to November Short Rains season was characterized by a timely onset with above-average rainfall amounts and a positive impact on crop establishment. Despite below-average rainfall in October over some areas, adequate soil moisture accumulations benefitted vegetation conditions, which have been upgraded to favourable. In **Burundi**, planting of Season A maize crops continues under favourable conditions as a timely onset of the Short Rains by the end of September was followed by above-average rainfall through

November (See Regional Outlook Pg. 7), benefitting planting and crop emergence. However, localized flooding, landslides, and erosion impacts have damaged crops in affected areas. In **Somalia**, *Deyr* season maize and sorghum crops are in vegetative to reproductive stage with concern as the October to December *Deyr* rainfall season began slightly early to on time and intensified in October, resulting in severe flooding and waterlogging along riverine and agropastoral areas of the south, displacement, and damage to standing crops. The rains caused the Shabelle River to overflow the surrounding areas of central Somalia and cause the Juba River to overflow the surrounding areas of western Somalia. On November 6, the Somalia Disaster Management Agency declared an emergency in areas impacted by torrential *Deyr* rains and flooding, particularly in South West and Jubaland states, and a high risk of flooding remains along the Juba and Shabelle Rivers (See Regional Outlook Pg. 7). Furthermore, in late November, heavy rains and flooding extended to more areas, including in South West State, Hirshabelle and Jubaland states, and Banadir region. The damage is expected to result in below-average *Deyr* crop production at the national level, but the rains will support production and food access in areas not as heavily affected. In the **United Republic of Tanzania**, planting of *Msimu* season cereals is underway in unimodal areas while *Vuli* season maize is developing in bimodal areas of the north, and there is concern as heavy rainfall has been affecting parts of the north, west, and east with flash flooding, river overflows, and landslides since mid-October, particularly in Arusha Region in the north, Kigoma and Kagera Regions in the west, and Zanzibar Island in the east.



*Crop condition map synthesizing Maize 2 conditions as of November 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.***

Regional Outlook: Highly above-normal rainfall received across much of the region caused severe flooding in parts of Ethiopia, Somalia, and Kenya, and above-average rains are forecast to continue through February

East Africa received highly above-average rainfall between late October and late November (Figure 1-left). At or close-to record high rainfall amounts for this period are indicated by preliminary data for many locations (Figure 1-middle-left). These extreme conditions led to severe flooding in Ethiopia, Somalia, Kenya, and Burundi.

In Ethiopia, out-of-season and heavy rains in northern and central areas disrupted *Meher* crop harvesting activities, and severe flooding caused fatalities in southwestern, southern, and eastern regions. Reports from Ethiopia describe the situation as catastrophic, with flooding that is overall worse than in 2019. Locations most severely impacted by flooding are in the southwest in Gambella, southern South Ethiopia Regional State, and Borena - and in the southern half of Somali Regional State of Ethiopia. In Somali, flash floods affected more than half a million people, with more than 20 fatalities and many impacted by the loss of homes, infrastructure, livestock, and submerged cropland areas.

In Somalia, the locally extreme rains and the inundation of Jubba and Shabelle River watersheds killed more than 96 people and displaced nearly 800,000- many of them refugees. Major damages occurred in Beledweyne- a city that flooded in November and earlier this year- as well as in Luuq, Baadheere, and elsewhere. OCHA estimated that 1.5 million hectares of croplands will be inundated through December. As of November 30th, FAO SWALIM river gauges reported the Jubba River water levels were at bankfull point with ongoing high flood risk, at and downstream of Bualle (Middle Juba region). There are similar concerns along the Shabelle River, in Beledweyne and in gauged locations downstream.

In Kenya, as of November 30th, floods have killed 136 people and affected more than 460,000. The worst hit areas have been in Tana River, Garissa, Wajir, and Mandera counties. Kenya's El Niño Emergency and Disaster Response Command Center also reported 2,500 livestock deaths, flooded cropland in Garissa and Wajir, and that airdrops were required to bring food to flooded areas.

During the next two weeks, the GEFS predicts a break from very wet conditions in most northern equatorial zones- in southern Ethiopia, northern and central-eastern Kenya, and southwestern Somalia. Meanwhile, above-average rainfall is forecast in Uganda, western and southern Kenya, southern coastal Somalia, Rwanda, Burundi, and Tanzania (Figure 1 middle-right). Wet conditions are likely to persist in western equatorial areas and southwestern Ethiopia, and a later-than-usual dry season onset is likely in the eastern Horn, based on long range forecasts. There is a high level of agreement among models for above-normal December 2023-to-February 2024 rainfall totals across the region (Figure 1-right). Extreme rain is expected to continue, associated with strong El Niño and positive Indian Ocean Dipole conditions, and with this is the unfortunate expectation for the continued negative impacts across parts of the region including loss of lives, infrastructure damage, and hardships for displaced populations. In flooded areas with poor sanitation resources, there will be ongoing risks of water-borne disease outbreaks.

The observed and forecast wet conditions are anticipated to have overall positive impacts on cropping conditions in the region, but with localized crop losses from waterlogging and disease. A timely rainfall onset is expected in Tanzania's unimodal cropping areas, with high chances of rainfall being heavier and more frequent than usual over the next several months. In the eastern Horn, surface water points and above-average NDVI indicate that rangeland and water resources are in much better condition compared to recent years when drought conditions prevailed.

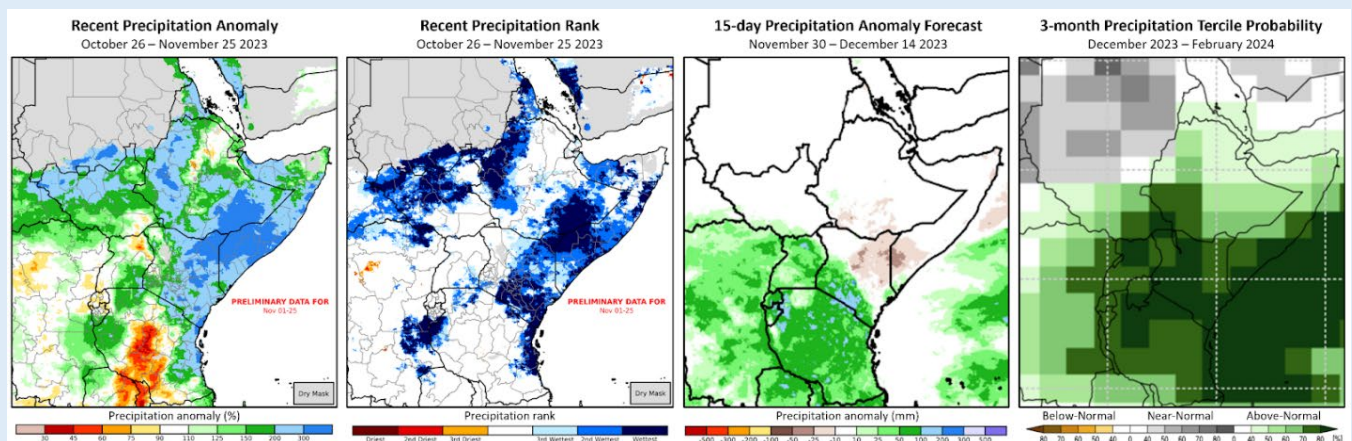
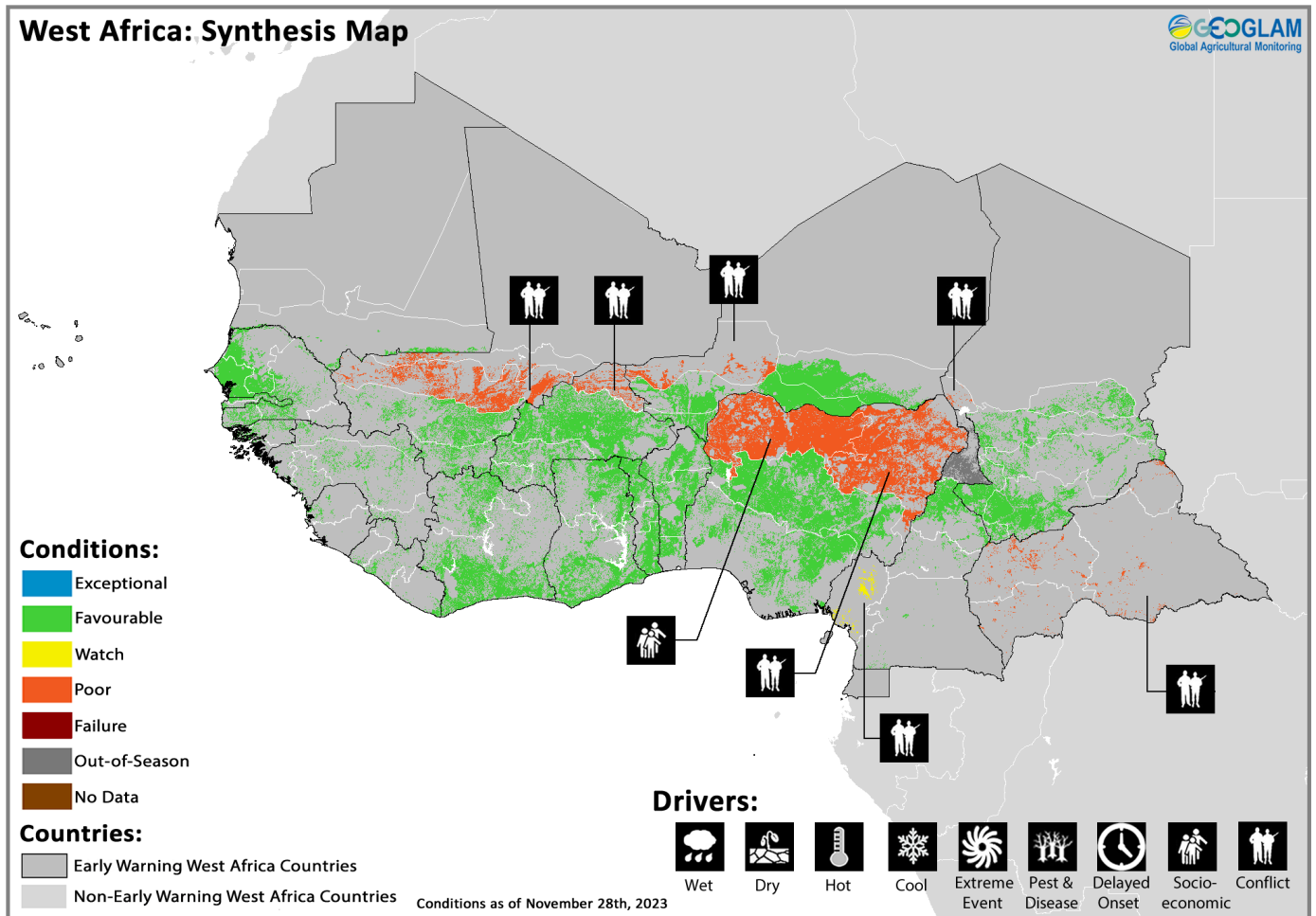


Figure 1. A seasonal rainfall anomaly, a seasonal rainfall rank, a 15-day precipitation anomaly forecast, and a 3-month probabilistic rainfall forecast. Left and middle-left: *CHC Early Estimates*, which compare October 26th - November 25th, 2023, precipitation totals to the 1981-2022 CHIRPS average for the same accumulation period. Both panels use CHIRPS Preliminary for Nov. 1st to 25th. The left panel shows the percent of average precipitation. The middle-left panel shows how the precipitation total ranks compared to the CHIRPS historical record. The middle-right panel is a 15-day CHIRPS-GEFS (unbiased GEFS) forecast from November 30th, with values indicating how forecast rainfall totals compare to the CHIRPS average for this period. Right: WMO probabilistic forecast for DJF 2023-2024 precipitation tercile, based on models initialized in November, from the *WMO Lead Centre Long-Range Forecast Multi-Model Ensemble*. Source: UCSB Climate Hazards Center

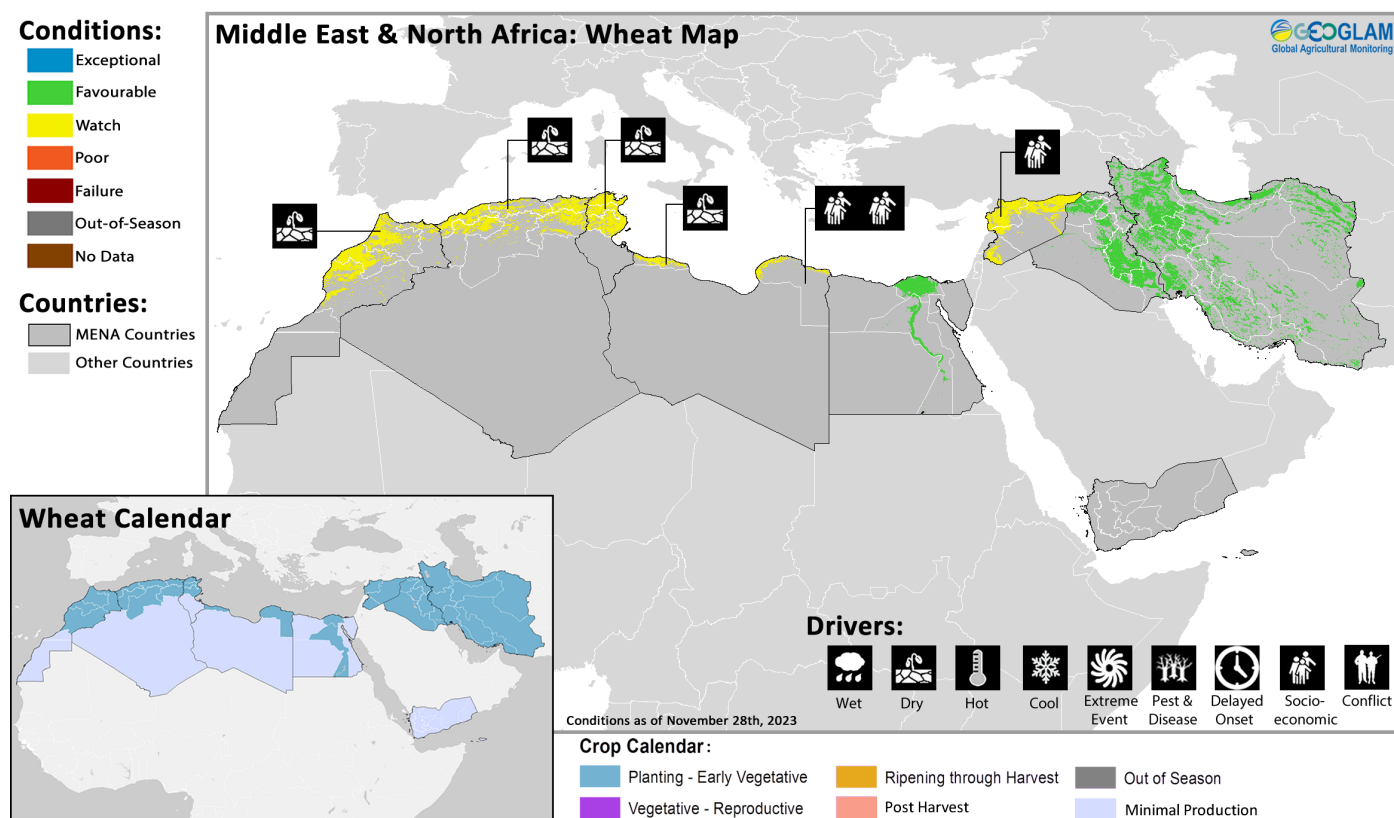
West Africa



Crop condition map synthesizing crop conditions as of November 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 West Africa, harvesting of main season cereals is wrapping up in all countries, including in the Sahel countries of **Mauritania, Senegal, Gambia, Guinea-Bissau, Mali, Burkina Faso, Niger, and Chad** as well as the countries south of the Sahel including **Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, and the Central African Republic**. Additionally, harvesting of second season cereals is nearing completion in the Sahel countries while crops continue to develop along the Gulf of Guinea areas. This season's weather outcomes have been particularly conducive for crop development, and agro-climatic conditions have remained generally favourable since the beginning of the season despite some localized flooding impacts and periods of cumulative rainfall deficits in some areas. Only regions impacted by persistent conflict or socio-economic challenges are expected to see yield declines due to reduced access to agricultural areas, including in central **Mali**, northern **Burkina Faso**, western **Niger**, northern **Nigeria**, western **Chad**, the Far North and Southwestern regions of **Cameroon**, and the **Central African Republic**. Aggregate cereal production for the region is expected to be 76.5 million tonnes; a 1 percent decline from the previous season and a 3 percent increase compared to the five-year average. The production decline compared to the previous year is most pronounced in areas of the Lake Chad basin, including in **Niger** (-13 percent), **Chad** (-7.5 percent) and **Nigeria** (-7 percent) according to the November 22-24 [Regional Food Crisis Prevention and Management System \(PREGEC\) report](#). In **Mauritania**, dry cereal production is expected to be 35 percent below the five-year average due to limited rains received in several areas, while irrigated rice production is expected to increase 45 percent compared to the average, according to the November [FEWS NET Key Message update](#). In northern unimodal rainfall areas of **Ghana**, generally adequate rainfall amounts from May to September are expected to result in generally favourable cropping outcomes. However, below-average rainfall amounts in eastern parts of the Northern Region will likely result in localized production shortfalls. In **Niger**, cereal production has declined by 2 percent compared to the five-year average, according to the November [FEWS NET Key Message Update](#), as a result of localized areas impacted by flooding and dry spells during parts of the season as well as field abandonment resulting from ongoing insecurity. In **Nigeria**, cereal production is expected to be lower than the five-year average due to a combination of dry spells in July and August in the north, localized flooding, ongoing conflict, and high input costs.

Middle East & North Africa



Crop condition map synthesizing wheat conditions as of November 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 and North Africa, wheat planting is underway in all regions. In western North Africa, concerns about dry conditions are beginning to materialize where only infrequent low to moderate rainfall has been received. Conversely, generally favourable agro-climatic conditions prevail in eastern North Africa and the Middle East where the start of the season has been wetter than average. This general rainfall pattern is expected to continue into February 2024, raising concerns for wheat production across areas of western North Africa expected to receive low rainfall amounts (See Regional Outlook Pg. 10). Additionally, socio-economic challenges relating to insecurity continue to impact agricultural production throughout **Libya** and **Syria**. In North Africa, dry conditions for the start of the season have resulted in moisture deficits in **Morocco**, **Algeria**, **Tunisia**, and western **Libya** despite abundant rainfall received in mid-November in parts of **Algeria** and **Tunisia**. In **Morocco**, deficits are less pronounced in the north compared to the south. In **Libya**, only the western portion of the country is currently affected by the dry conditions. In **Egypt**, conditions are favourable for ongoing wheat planting activities. Maize and summer-planted rice harvesting finalized in November while *Nili* season (Nile Flood) rice crops continue to develop, and overall conditions remain favourable with near-average yields expected. In the Middle East, generally above-average temperatures and adequate rainfall performance in November have been favourable for wheat planting and early crop growth despite some areas of north and northeastern **Iran** receiving only 60 percent of average rainfall.

Regional Outlook: Poor start to seasonal rains across western North Africa with below-average precipitation expected to continue through February

Seasonal rains have begun poorly in North Africa, while the Middle East has been wetter than average. Across much of North Africa, rainfall has been infrequent and only low to moderate amounts have been received. By late November, substantial rainfall deficits had developed in Morocco, western Algeria, eastern Tunisia, and in portions of Libya. Below-average rainfall is forecast during the next two weeks in most of these areas. If these conditions materialize, it would mean several weeks of mainly dry conditions during a period when rains would typically be increasing, and much lower than normal November 1st to December 10th rainfall totals across North Africa (Figure 1-left). Rainfall deficits may also develop in Iran, based on preliminary and forecast data.

During recent weeks, Syria, Iraq, and southwestern Iran received above-average rainfall, and models indicate that wetter-than-normal conditions may continue in the Middle East during December 2023 to February 2024 (Figure 1-middle).

Western North Africa is an area to watch for possible continuation of dry conditions from December 2023 to February 2024. While there is a high level of uncertainty, WMO (Figure 1-middle) and NMME forecasts indicate slightly elevated chances of below-normal rainfall in some locations, paired with above-normal temperatures across the region. During the past two years, persistent dryness throughout the wheat growing season led to poor yields in parts of Morocco, Algeria, and Tunisia. A long-lead outlook for February 2024 soil moisture conditions, based on October 2023 soil moisture and NMME model forecasts from November, indicates that this year could potentially have similar challenges (Figure 1-right).

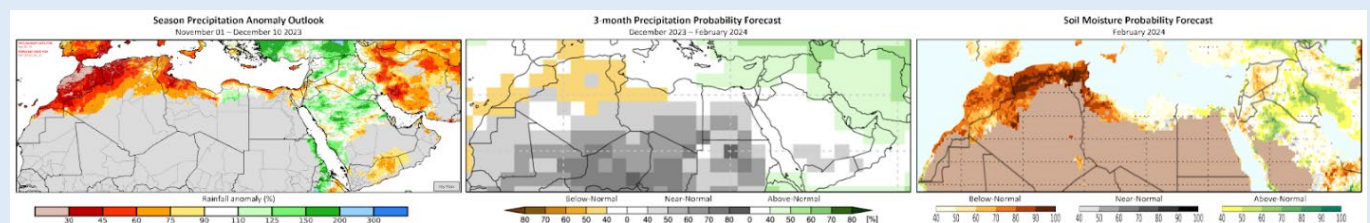
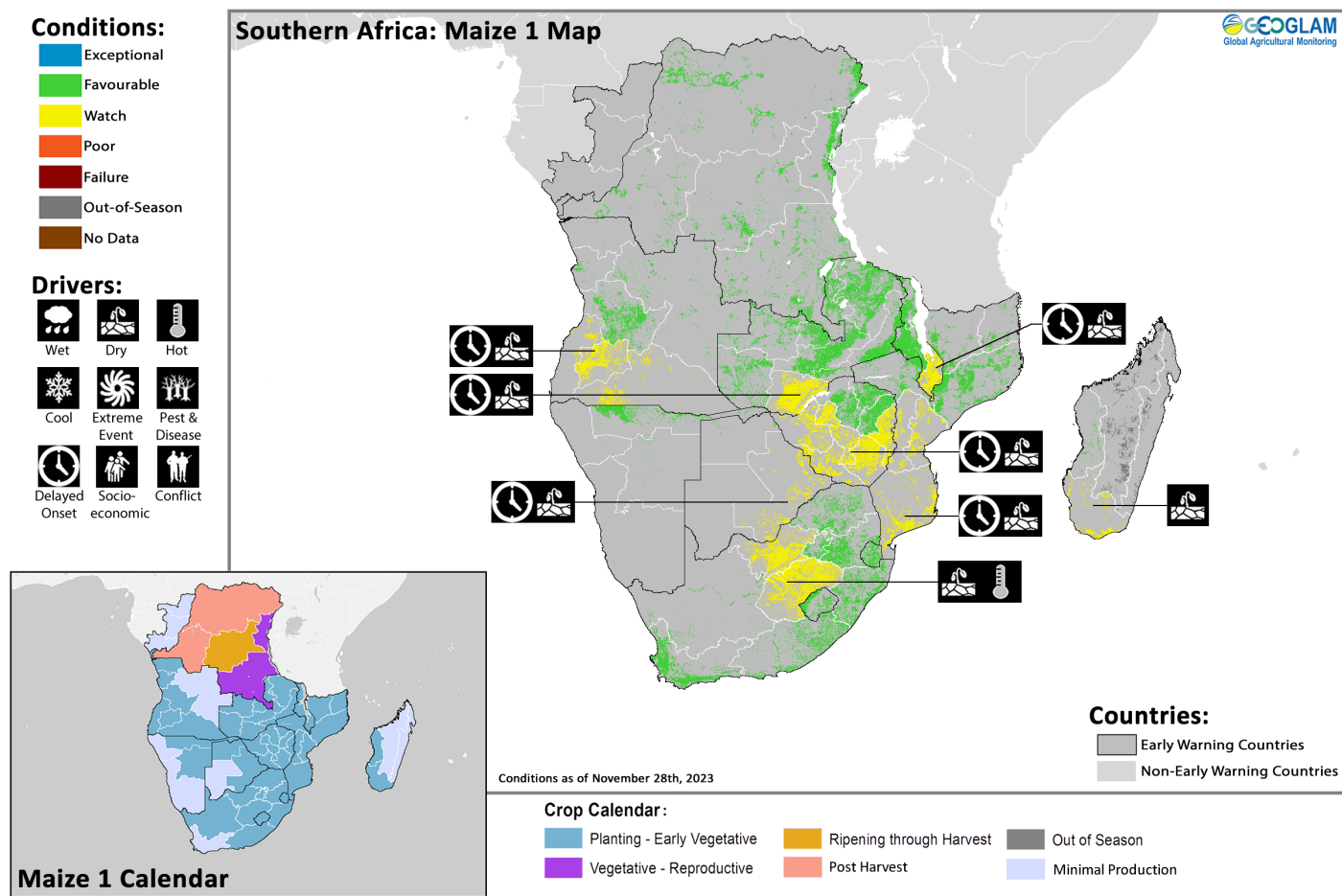


Figure 1. November 1st to December 10th rainfall anomaly outlook, a probabilistic rainfall forecast for December 2023 to February 2024, and probabilistic soil moisture forecast for February 2024 Left: An outlook for percent of average rainfall for November 1st to December 10th, 2023, based on CHIRPS preliminary data for Nov. 1st to 25th and a 15-day CHIRPS-GEFS forecast from Nov. 26th. Average is the 1981-2022 CHIRPS average for this 40-day period. From [CHC Early Estimates](#). Middle: WMO probabilistic forecast for DJF 2023-2024 precipitation terciles, based on models initialized in November, from the [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#). Right: Probabilistic forecast for February 2024 root zone soil moisture tercile, from the [NASA Hydrological Forecast and Analysis System's FLDAS forecast](#). This outlook uses CHIRPS and MERRA-2 reanalysis data through October 2023, and forecasted meteorological conditions for Nov. 2023 to Feb. 2024 from the North American Multi-Model Ensemble (NMME) and the GEOSv2 model. Source: UCSB Climate Hazards Center

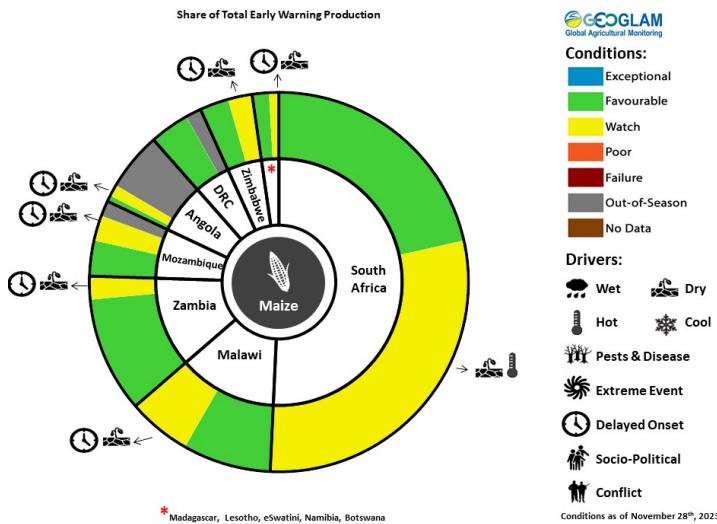
Southern Africa



Crop condition map synthesizing Maize 1 conditions as of November 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, wheat harvesting finalized in **Zambia, Zimbabwe, and Lesotho** under favourable conditions. In **South Africa**, harvesting activities are nearing completion with near-average yields expected as warm and dry conditions are supporting progress over the summer and winter rainfall regions. Planting of main season cereals is ramping up across the region in **Angola, Zambia, Namibia, Botswana, Zimbabwe, Malawi, Mozambique, South Africa, Lesotho, eSwatini, and Madagascar** for harvest from February 2024. Planting has been delayed in some areas due to lingering dry conditions from the previous season and a delayed rainfall onset for the current season. As a result, crop conditions have been downgraded to watch in southern **Angola**, southern **Zambia**, most of **Zimbabwe**, eastern **Botswana**, north-central **South Africa**, central and southern **Mozambique**, southern **Malawi**, and southern **Madagascar** where rains are needed for successful crop establishment. Parts of western **Madagascar** are also impacted by the dry conditions, but to a lesser extent. The current strong El Niño event is typically associated with hotter and drier than average conditions for the October to March rainy season, likely impacting 2024 harvests (See Regional Outlook Pg. 13).

In **Angola**, antecedent dry conditions in the previous season were followed by delayed rainfall onset and high surface temperatures for the current season, resulting in planting disruptions and below-average vegetation conditions in southern areas. As of late November, soil moisture was only 60 to 80 percent of normal, leading to lower than normal land preparation. However, some regions experienced rainfall improvement from early November, and overall conditions in the northern half of the country remain favourable. In **Botswana**, the country has experienced extremely dry and hot conditions for the start of the season, and effective rains have not yet been received. In **Zimbabwe**, average to above-average rainfall in October was followed by dry and hot weather in November that prevented an effective start to the November to February rainy season and is contributing to limited planting activities. In **Malawi**, limited and scattered rains were received in some south and central districts in early November, causing some planting delays until mid-November. In **Mozambique**, most households have prepared their fields and are awaiting effective rains to begin planting activities. Recently planted crops in Maputo located in the south and in parts of the centre are emerging. In the north, an effective start to the rainy season is only expected from December. Farmers plan to implement delayed and staggered plantings with short-cycle seed varieties, mostly acquired from local markets, and medium-cycle seeds, acquired from prior harvests, to reduce the risk of unsuccessful plantings with the expected low rains and high temperatures through December (See Regional Outlook Pg. 13). In eastern regions of **South Africa**, spring and early summer rainfall are supporting planting and emergence of maize crops. In the west, dry and hot conditions are still present, and rainfall will be needed in December for successful cultivation. However, forecast dry



For detailed description of the pie chart please see description box on Pg.18.

conditions are expected to continue through the end of the year and into March 2024 (See Regional Outlook Pg. 13). In **Lesotho**, the rainy season began on time in most parts of the country in October, though some major producing lowland areas are experiencing early season deficits and are still waiting for an effective start to the rainy season. The Ministry of Agriculture will offer subsidized seeds and fertilizer for the start of the planting season. However, better-off households are still expected to plant less than normal to save seed supply and minimize potential losses as a result of both the expected El Niño-induced dry season in combination with a delayed rainfall onset and warmer than normal temperatures expected through December (See Regional Outlook Pg. 13). In **Madagascar**, El Niño is expected to bring average to above-average rainfall to northern areas and below-average rainfall to south and western areas through March 2024 (See Regional Outlook Pg. 13), which is likely to negatively impact main season production. Near-average rainfall in October allowed some households to begin planting despite localized deficit areas along the western coast, though the start of the rainfall season typically does not begin until early December

in some south and western areas. Additionally, a below-average number of cyclones is expected through January. In the **Democratic Republic of the Congo**, harvesting of main season cereals is nearing completion in the north, west, and centre while planting and development continue in the east and southeast, and overall conditions are favourable as northern areas have received sufficient rains to mitigate previous deficits.

Regional Outlook: Rainfall deficits across parts of the region are expected to worsen through December and potentially continue through March 2024

Drier-than-average conditions in November led to the development of rainfall deficits in southern Zambia, Zimbabwe, eastern Botswana, central and southern Mozambique, central and southern Madagascar, and portions of southern Angola and eastern South Africa. These followed the mixed, but generally near-average rainfall pattern observed in October. The rainfall season typically begins in mid-November in most areas, though the timing varies from October to December across the region.

GEFS and ECMWF forecasts indicate several weeks of below-average rainfall in central and southern areas. If these conditions materialize, October 1st to December 10th rainfall totals may be well below-average in northern and western South Africa, Botswana, central and southern Zimbabwe, southwestern Madagascar, and portions of central and southern Mozambique (Figure 1-left). Several consecutive weeks of drier-than-average conditions, combined with observed and forecast hotter-than-average temperatures during November and December (Figure 1-middle), will likely delay planting in affected areas. Average or above-average rainfall conditions are expected elsewhere, with rainfall totals exceeding 125% of average in central Namibia, western Angola, and northeastern Mozambique (Figure 1-left).

Longer-range precipitation forecasts, for December 2023 to March 2024, predict increased chances of below-normal rainfall in central and southern areas, including southern Angola, southern Zambia, Namibia, Botswana, Zimbabwe, southern Mozambique, South Africa, eSwatini, and Lesotho. Above-normal rainfall is likely in the northeast, including northern Zambia, northern Mozambique, the D.R.C., and Tanzania (Figure 1-right). This is consistent with what [we would expect from El Niño](#)—warm, dry conditions in central and southern areas, and above-average rainfall in the north and northeast. Models predict high chances for above-normal temperatures throughout the growing season, raising the risks of heat damage to maize development and yields, especially during dry spells. An analysis of previous years with strong El Niño conditions illustrates that if this season progresses similarly, maize cropping conditions [may be well-below-average](#) throughout the southern half of the region, particularly in eastern South Africa, Zimbabwe, southern Zambia, and central and southern Mozambique.

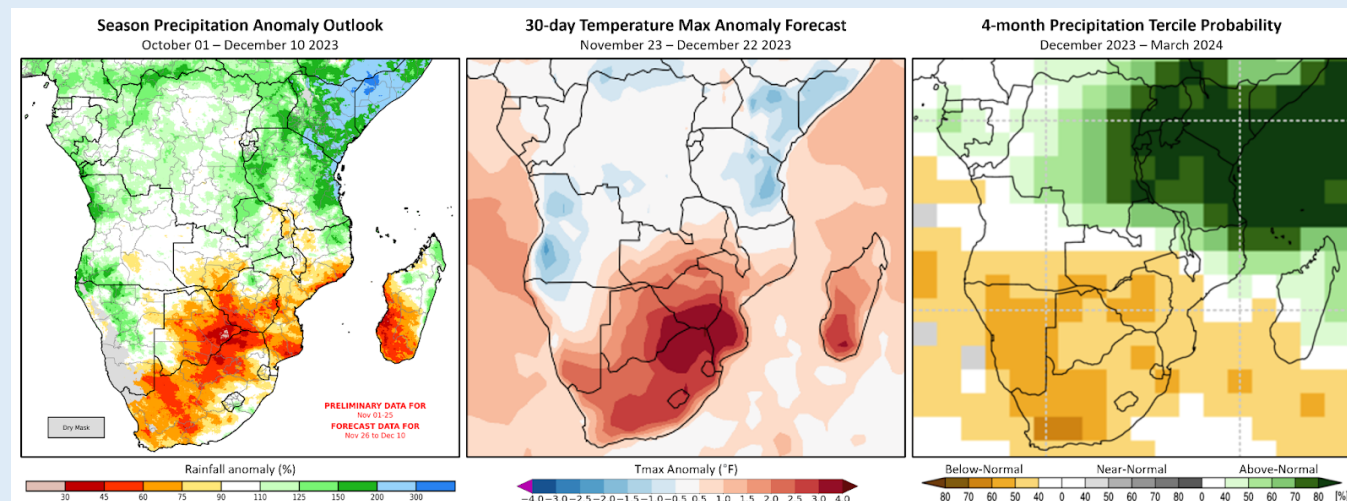
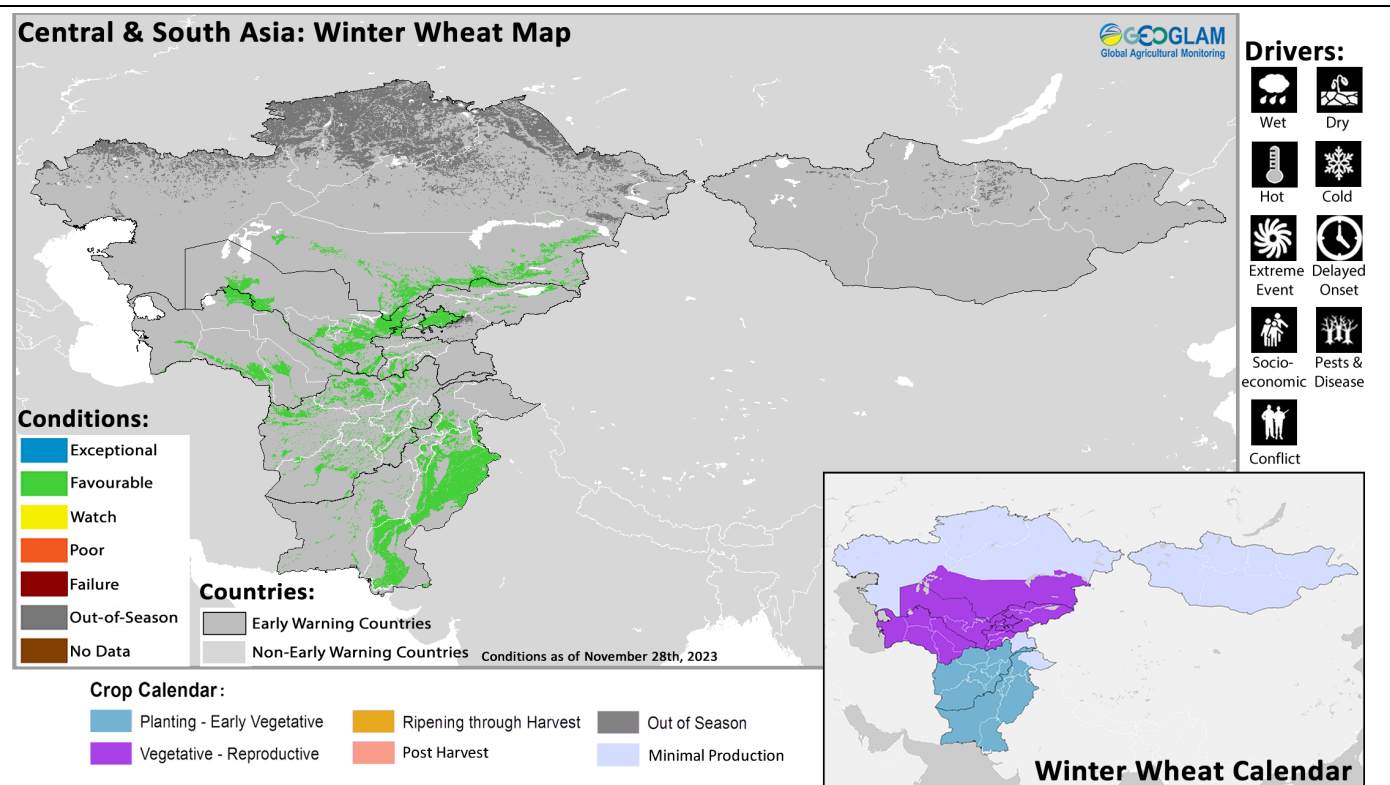


Figure 1. October 1st to December 10th rainfall anomaly outlook, forecast next 30-day mean maximum temperature anomaly, and a 4-month probabilistic rainfall forecast for December 2023 to March 2024. Left: An outlook for percent of average rainfall for October 1st to December 10th, 2023, based on CHIRPS preliminary data for Nov. 1st to 25th and a 15-day CHIRPS-GEFS forecast from Nov. 26th. Average is the 1981-2022 CHIRPS mean for this 40-day period. From [CHC Early Estimates](#). Middle: Forecast next 30-day mean maximum 2m temperature anomaly, for Nov. 23 to Dec. 22, 2023, based on four SubX models initialized Nov. 17-23. From [CHC Monitoring with SubX](#). Right: WMO probabilistic forecast for DJFM 2023-2024 precipitation tercile, based on models initialized in November, from the [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#). Source: UCSB Climate Hazards Center

Central & South Asia

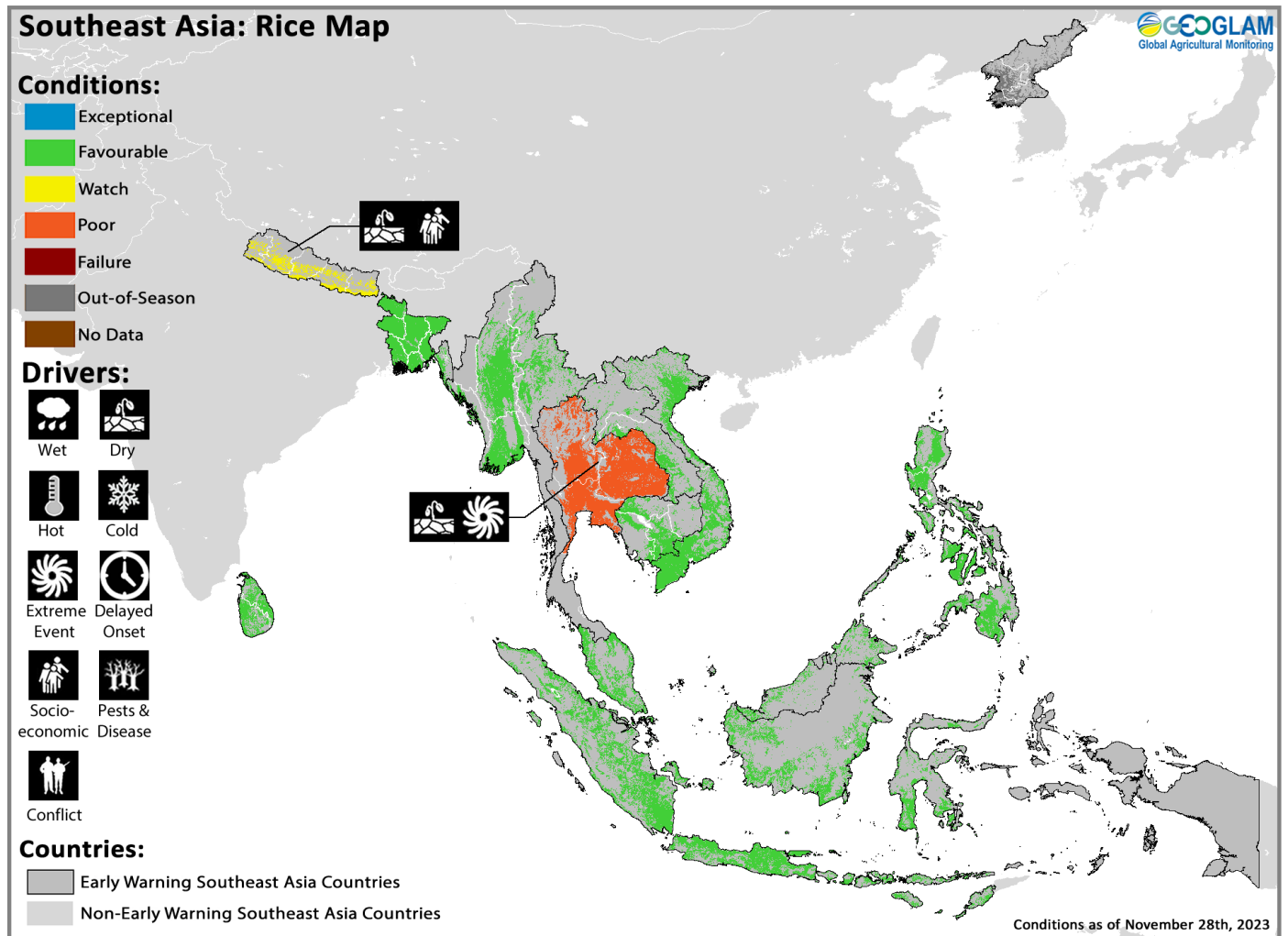


Crop condition map synthesizing Winter Wheat conditions as of November 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions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

Planting and development of winter wheat continues across the region in southern **Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, Afghanistan, and Pakistan** under favourable conditions with recent improvement from last month's residual dry concerns from the previous season in southern **Kazakhstan** and **Kyrgyzstan**. Fall 2023 precipitation has so far been below-average in **Kyrgyzstan**, northern **Afghanistan**, and central **Tajikistan**, and the drier-than-average conditions resulted in snow water equivalent and snow depths lagging far behind typical levels for late November. The dry conditions are currently forecast to continue into early December. However, the current El Niño is associated with generally above-average precipitation into early 2024, which is expected to support the progress of wheat cultivation throughout the region.

In **Afghanistan**, planting progress is slower than a typical year for both rainfed and irrigated winter wheat due to below-average precipitation in most areas and lower than normal soil moisture, with the exception of areas in the south and southwest that received above-average precipitation from the beginning of October. Generally, about 40 percent of the rainfed areas and 50 percent of the irrigated areas have been cultivated. However, groundwater levels in upstream areas are still sufficient to support cultivation, and growing conditions for planted crops are favourable. While the rainfall season used to last for six months, the country now typically receives closer to three months of good rainfall and snow due to impacts of climate change. Winter wheat planting may continue into late December, but if sufficient humidity conditions are not reached, these areas will be used instead for spring wheat cultivation. Overall, the area under cultivation for winter wheat is expected to be below-average. However, forecast high rainfall amounts are likely to benefit wheat cultivation this season, especially in rainfed areas. High levels of flooding are expected in parts of the country from March to May 2024 due to forecast above-average rainfall and high temperatures that will contribute to the melting of likely above-average snowpack. The high temperatures may also contribute to moisture stress and reduced water availability for rainfed crops. While the expected flooding may result in some crop damage, it could also beneficially increase groundwater levels for irrigation. Furthermore, maize and rice harvesting finalized in November under mixed conditions. Production is better than last year in the north, northeast, and eastern parts of the country. However, some provinces in other areas harvested below-average yields due to insufficient surface water levels and groundwater supply for irrigation. In **Pakistan**, harvesting of main season maize finalized in November while harvesting of *Kharif* (summer) season rice continues, and conditions are favourable. Planting of *Rabi* season wheat is underway, and adequate soil moisture levels are benefitting crops that are primarily irrigated, including in the main producing Punjab and Sindh provinces. Planted area is expected at an above-average level of 9 million tonnes due to near-record domestic prices and strong demand. Furthermore, above-average irrigation water availability in the main provinces is expected to benefit further planting operations and yield outcomes.

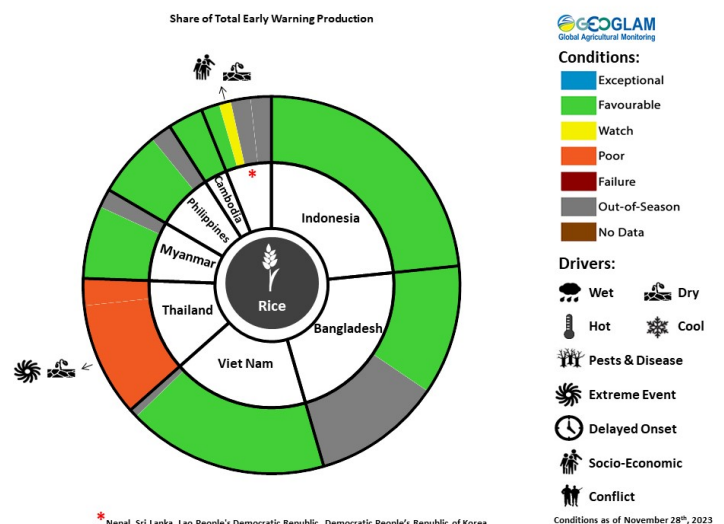
Southeast Asia



Crop condition map synthesizing rice conditions as of November 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 Southeast Asia, including **Indonesia, Malaysia, and Brunei**, harvesting of dry-season rice is nearing completion while planting of wet-season rice continues, and overall conditions are favourable. In northern Southeast Asia, including **Myanmar, Thailand, Laos, Cambodia, Viet Nam, and the Philippines**, harvesting of wet-season rice reached its peak in November, and conditions are generally favourable except in **Thailand** where yields are expected to be below-average. Generally, the region experienced a dry trend in the early growing season followed by rainfall improvements later in the season that were mostly adequate for crop development. However, in **Thailand**, conditions are poor as drought resulted in a reduction in planted area and yield, and heavy rains in September and October resulted in some crop damage. Dry-season rice is now in the field preparation to seeding stage with favourable weather conditions for the start of the season. Elsewhere in Southeast Asia, including **Nepal, Bangladesh, and Sri Lanka**, conditions remain generally favourable except for rice crops in **Nepal** as rainfall deficits and high input costs may impact final yields.

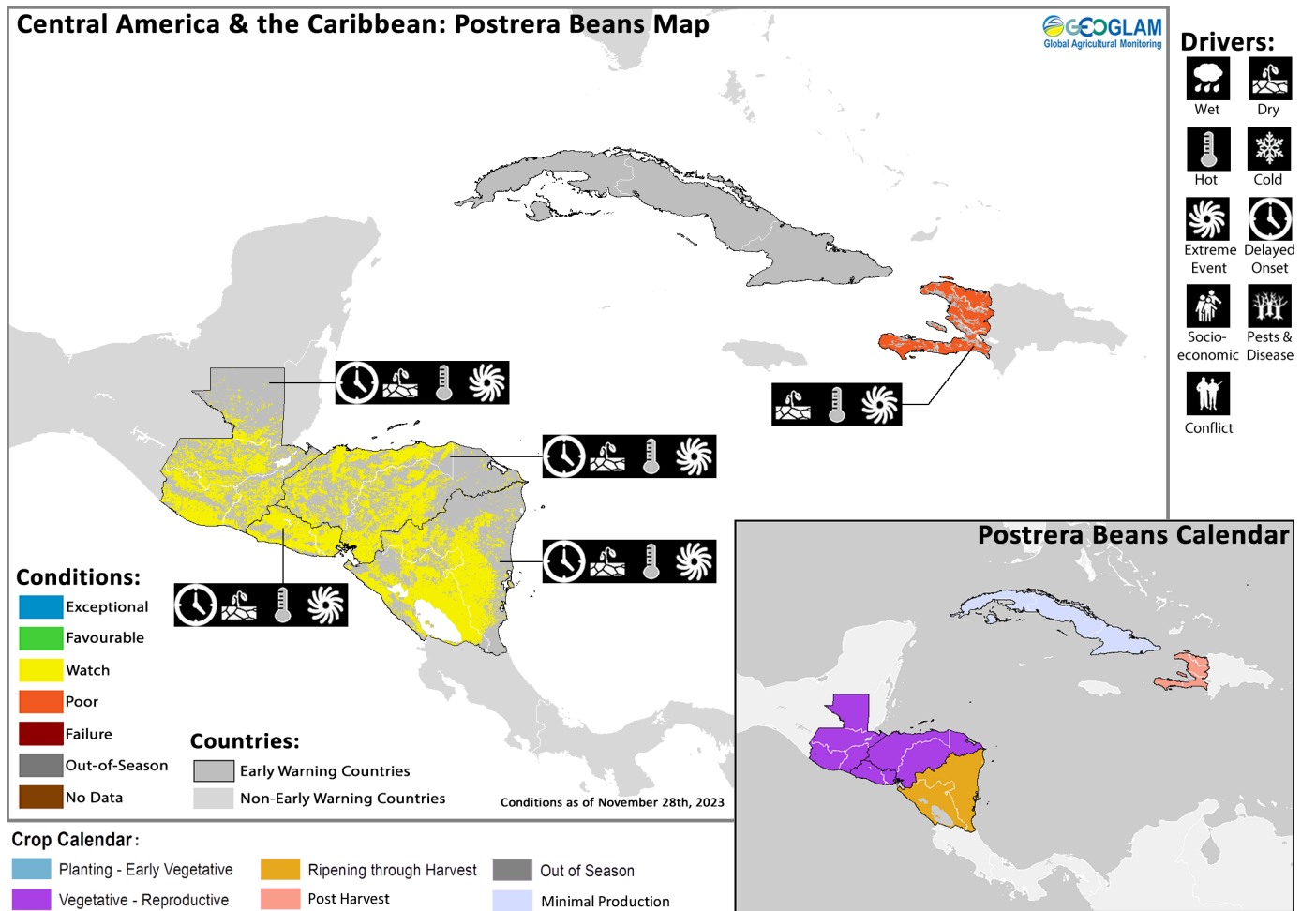
In **Indonesia**, harvesting of dry-season rice is nearing completion with a total harvested area of 3.7 hectares, which is 6.7 percent lower than last year, and yield is expected to be slightly better than the previous dry season due to sufficient sunlight received during the growing season. Planting of wet-season rice reached its second month in November at 1.3 million hectares, which is 11.5 percent lower than the last wet season. However, planting progress is similar to a typical year despite uneven precipitation and despite farmers waiting for



For detailed description of the pie chart please see description box on Pg. 18.

the best planting window to begin sowing operations. Water shortages that were previously recorded in Java and some other areas were mostly abated by rainfall received in early November, and while some regions are still reporting drought, there has been no significant impact to rice development. In **Malaysia**, planting of wet-season rice began in August and will continue through February 2024. Planting progress has reached 37 percent of the national plan and is slower than a typical year as heavy rains in eastern parts of Peninsular Malaysia resulted in some flooding. However, planted area is expected to increase from the initial prospect following the recent announcement of a subsidy program by the government. In northwestern areas of the country where crops were planted earlier, harvesting has begun under favourable conditions. In **Brunei**, planting of wet-season rice is about 90 percent complete in rainfed areas, with most crops now in the tillering stage, and about 50 percent complete in irrigated areas. Conditions are favourable despite a slight planting delay resulting from heavy rainfall received in November. In the **Philippines**, wet-season rice planted from July to August is now in the maturing to harvesting stage, and yield prospects are generally favourable. While Typhoon Jenny and several other weather systems affected the country in October, no major damage was reported. In **Thailand**, harvesting of wet-season rice is underway with a total harvested area of 9.3 million hectares, which is 1.8 percent lower than the previous year. Yields are also expected to be below-average due to a combination of drought conditions from June to August and flood damage in September and October, and production is expected to decrease by 5 percent. Dry-season rice is now in the land preparation stage, and planted area is expected to decrease from the previous year due to deficit irrigation and natural water supply. In northern **Viet Nam**, harvesting of the main wet-season (seasonal) rice finalized with an estimated yield of 5.5 tons per hectare, which is the same as last year. In the south, harvesting of the other wet-season (autumn-winter and seasonal) rice is underway with a total harvested area of 0.42 million hectares, and yield is forecast to be 5.6 tons per hectare higher than last year due to warm weather and better irrigation preparation. Planting of dry-season (winter-spring) rice is just beginning in some provinces in the Mekong Delta. In lowland areas of **Laos**, wet-season rice is in the harvesting stage with favourable yield prospects despite delayed harvesting progress compared to the previous year due to the late start to the rainy season. The final harvested area is expected to be 796 thousand hectares, and the production is expected to be 3.5 million tons. In upland areas, the final harvested area is expected to be 101 thousand hectares with a yield of 2.05 tons per hectare. In **Myanmar**, harvesting of wet-season rice reached 935 thousand hectares, accounting for 15.4 percent of the planted area of 6.07 million hectares, and progress is similar to last year. About 4 million tons of paddy has been produced with a yield of 4.27 tons per hectare, which is higher than last year. In **Cambodia**, harvesting of wet-season rice reached 1 million hectares with an estimated yield of 3.7 tons per hectare, which is similar to last year. Sowing of dry-season rice is underway with a planted area of 496 thousand hectares, accounting for 23 percent of the national plan, and growing conditions are favourable with sufficient irrigation water supply and sunlight levels. In **Sri Lanka**, planting of *Maha* season maize and rice, which is mostly irrigated and accounts for about 70 percent of annual rice production, is underway and conditions are favourable. In **Nepal**, rice harvesting is now underway, and dry concerns and high input costs may impact final yields. Wheat planting continues under favourable conditions. In **Bangladesh**, harvesting of both sorghum as well as *Aman* season rice crops, which account for 35 percent of rice production, is currently underway. *Aman* season rice production is expected at an above-average level due to likely high yields and despite localized crop losses due to flooding in the Chattogram Division in late August. Planting of maize, wheat, and *Boro* season rice, which accounts for 55 percent of rice production, is just beginning under favourable conditions.

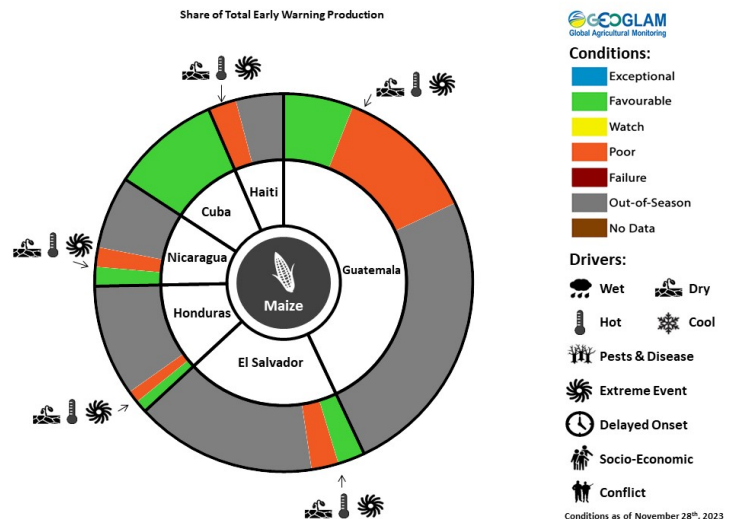
Central America & Caribbean



Crop condition map synthesizing Postrera season Bean conditions as of November 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 America, *Segunda* season maize crops and *Postrera* season bean crops are mostly in vegetative to reproductive stage across **El Salvador, Guatemala, Honduras, and Nicaragua**. *Segunda* maize crops have been downgraded to poor conditions as they are unlikely to recover from antecedent dry and hot weather during the *Primera* season which continued into September, followed by irregular rainfall with sporadic high-intensity precipitation from October that resulted in flooding and crop damage during advanced growth stages. *Postrera* bean crops remain under watch conditions. While *Postrera* bean crops are typically in vegetative to reproductive stage by this time of year, sowing activities are delayed due to irregular rainfall and lack of adequate soil moisture in the northern half of **Guatemala**, southern **Honduras**, and northern **Nicaragua**.

In **Guatemala**, El Niño-induced weather irregularities including delayed rainfall onset, limited precipitation, and high temperatures resulted in partial to total losses to the *Segunda/Postrera* season for subsistence farmers. Conversely, commercial farming operations that utilize irrigation are expecting average maize production. In **Honduras**, harvesting of main season rice finalized in November with slightly below-average yields in the key producing department of Comayagua and average yields elsewhere, while second season rice continues to develop under favourable conditions as the crops are primarily irrigated. Both seasons account for similar importance to annual production levels. In **Nicaragua**, there is particular concern for the Caribbean Basin area where deficit rains persist and forecasts indicate a continuation of below-average amounts. In **Haiti**, *Été* season maize and bean harvesting finalized in November under poor conditions as irregular rainfall, including periods of high-intensity



For detailed description of the pie chart please see description box on Pg.18.

precipitation, and above-average temperatures affected the normal development of crops. Flooding in November particularly impacted bean crops in the Grand'Anse, Nippes, Sud, and Nord-Ouest regions. Furthermore, high inflation and low employment opportunities continue to limit household purchasing power and access to agricultural inputs, which is expected to impact second season rice and *Hiver* season bean sowing activities beginning in December as well as main season rice and *Printemps* season maize and bean sowing activities beginning in March 2024. In the Artibonite Department, which is responsible for 90 percent of rice production, security issues continue to prevent farmers from fully engaging in agricultural activities and cause reduced access to inputs and labour from other regions. Access to irrigation water supply is also diminished by lack of maintenance and fuel shortages. In **Cuba**, harvesting of main season maize and second season rice finalized in November, and generally favourable agro-climatic conditions contributed to good yields. However, the area sown remained below-average, constrained by low availability of agricultural inputs.

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 slice 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 Crop Monitor for AMIS, published December 7th, 2023.

i Sources and Disclaimers:

The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners FEWS NET, JRC, WFP, ARC, AFSIS, 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 www.cropmonitor.org

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.

Note: In areas where conflict is a driver of crop condition, crop conditions are compared to the pre-conflict average rather than the average conditions over the past 5 years. In areas where conflict is protracted and based on expert analysis on a case by case basis, crop conditions will be compared to the average conditions over the past five 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.

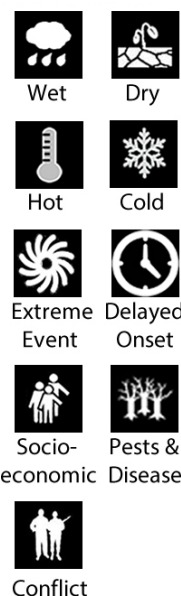
Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)

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.



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 | |
| Togo | 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 | |

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 & Caribbean | | | | |
|-----------------------------|-------|---------------|---------------|---------------|
| 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 |



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Contributing partners



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