

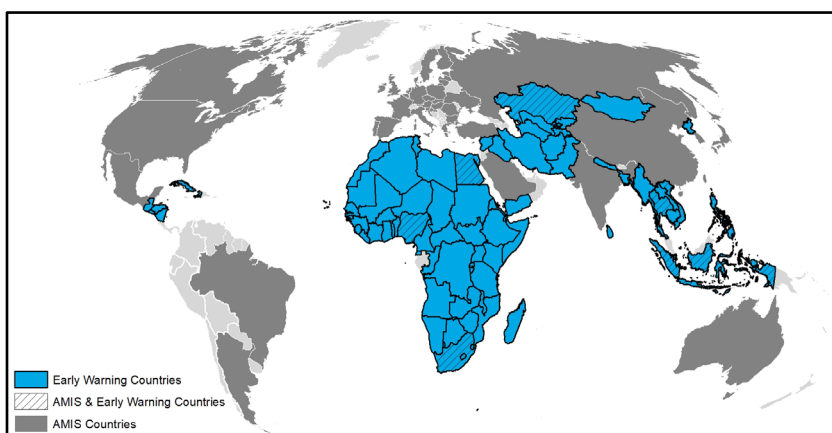


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, harvesting of main season cereals is nearing completion in the north with below-average yields expected in parts of South Sudan and Ethiopia due to persistent dryness and in parts of Yemen, South Sudan, and Sudan due to significant flooding. Planting and development of second season cereals is underway in the south under mixed conditions due to significantly delayed and below-average seasonal rains in many areas (See Regional Outlook Pg. 8). In **West Africa**, harvesting of main season cereals is nearing completion, and climatic conditions are generally favourable. Concern remains in areas impacted by persisting conflict, including parts of Mali, Burkina Faso, Niger, Nigeria, Cameroon, Chad, and the Central African Republic. In the **Middle East and North Africa**, wheat planting is now underway with concern in most areas due to currently delayed and below-average October to December rains, which were a precursor to longer dry conditions in 2021 (See Regional Outlook Pg. 12). In **Southern Africa**, wheat harvesting is nearing completion while planting and development of main season cereals is underway, and overall conditions are favourable except in parts of Angola impacted by early season dryness. In **Central and South Asia**, conditions are mixed for planting and development of winter wheat as ongoing dry conditions are impacting crop emergence in Afghanistan, and floodwaters continue to impact agricultural activities in parts of Pakistan. In northern **Southeast Asia**, harvesting of wet-season rice is underway under mixed conditions as crops in northeastern Thailand and the Philippines were impacted by typhoons and heavy rains. In Indonesia, overall conditions are favourable. In **Central America and the Caribbean**, *Segunda/Posrera* season cereals are developing under favourable conditions despite localized damage from Tropical Storm Julia and Hurricane Lisa. In Haiti, harvesting of second season cereals finalized under generally favourable conditions with slightly below-average yields.



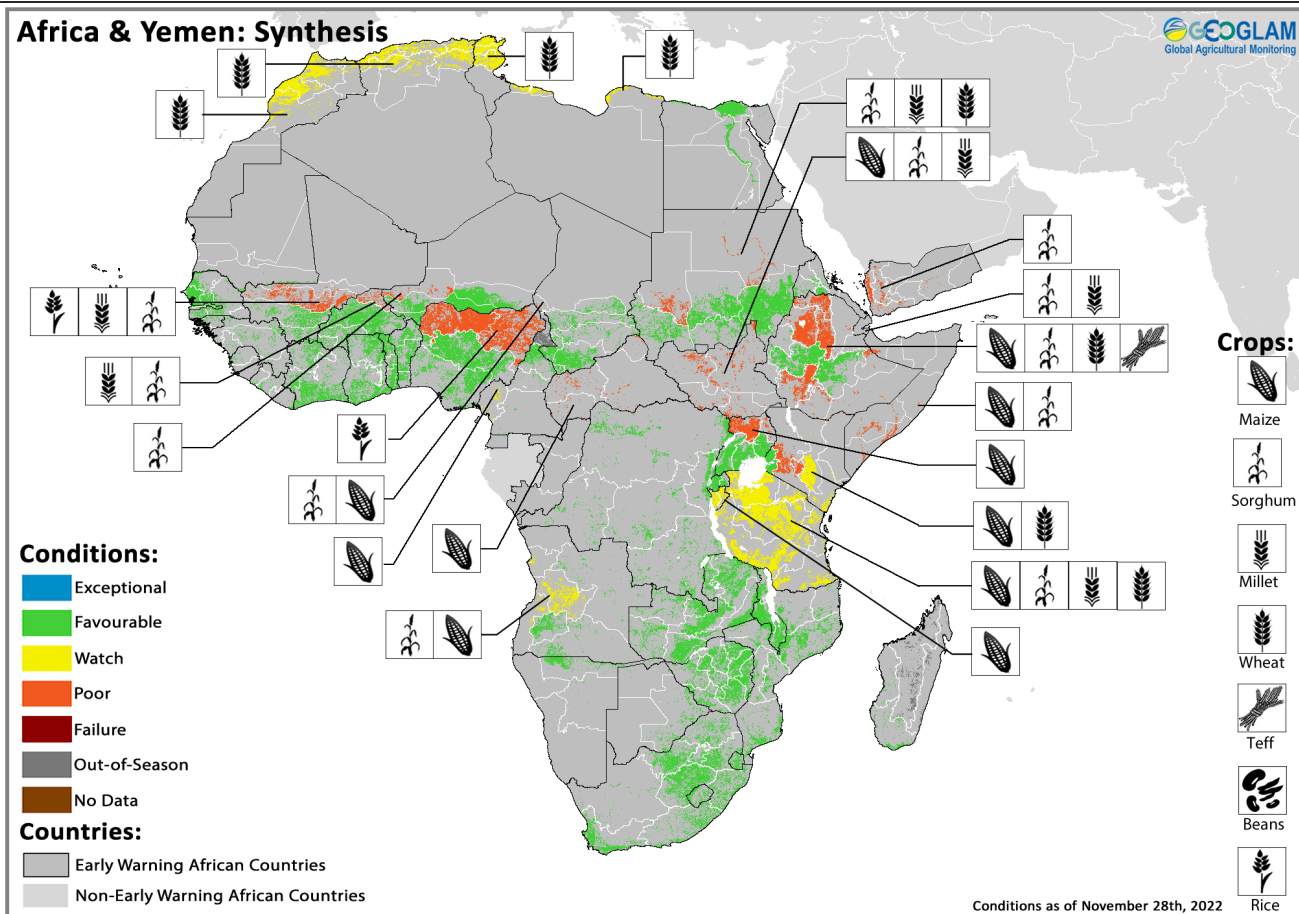
Contents:

Conditions at a Glance.....	2
Global Climate Outlook.....	3
Climate Influences.....	4
East Africa; Regional Climate Outlook.....	5
West Africa.....	9
Middle East & North Africa; Regional Climate Outlook.....	11
Southern Africa; Regional Climate Outlook.....	13
Central & South Asia; Regional Climate Outlook.....	16
Southeast Asia.....	18
Central America & Caribbean.....	20
Appendix – Terminology & Definitions.....	22

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 is nearing completion in the north with below-average yields expected in southeastern South Sudan due to persistent dryness and in parts of Yemen, South Sudan, and Sudan due to significant flood impacts. In Ethiopia, *Meher* season (Long Rains) cereals are unlikely to recover from persistent dryness in parts of the south as well as ongoing conflict in the north. Across the south of the subregion, planting and development of second season cereals continues under mixed conditions as a very poor performance of the October to December rains so far worsened severe drought conditions in affected areas (See Regional Outlook Pg. 8).

WEST AFRICA: Harvesting of main season cereals is nearing completion throughout the subregion while planting and development of second season cereals is underway, and conditions are generally favourable except in conflict-affected areas.

MIDDLE EAST & NORTH AFRICA: Wheat planting is ramping up with concern in most areas due to currently delayed and below-average rains and uncertainty regarding rainfall forecasts through February 2023 (See Regional Outlook Pg. 12).

SOUTHERN AFRICA: Harvesting of wheat crops is nearing completion under favourable conditions. Planting of main season cereals is now underway, and conditions are generally

favourable except in west and northern Angola due to current dry conditions.

CENTRAL & SOUTH ASIA: Planting and development of winter wheat continues under mixed conditions due to ongoing dry conditions in Afghanistan that may continue into the fall and winter 2022-2023 period in some areas (See Regional Outlook Pg. 17) as well as ongoing impacts of unprecedented flooding earlier in the season in Pakistan. Elsewhere, planting conditions are favourable due to rainfall improvements from mid-October.

SOUTHEAST ASIA: In the north, harvesting of wet-season rice has reached its peak month under mixed conditions as crops in northeastern Thailand and the Philippines were impacted by October's typhoons and heavy rains. Elsewhere, yields are expected to be near-average. In Indonesia, harvesting of dry-season rice is nearing completion under favourable conditions.

CENTRAL AMERICA & CARIBBEAN: In Central America, *Segunda/Postre* season cereals are developing under generally favourable conditions as crops in El Salvador and Guatemala have recovered from previous storm damage. In Haiti, harvesting of second season maize and bean crops finalized under generally favourable conditions, albeit with slightly below-average yields due to seasonal dry conditions in the northwest and limited access to agricultural inputs.

Global Climate Outlook: Two-week Forecast of Areas with Above or Below-Average Precipitation

The two-week forecast (Figure 1) indicates a likelihood of above-average rainfall over southern Peru, northern Chile, eastern Brazil, Portugal, Spain, southern France, Italy, Austria, Czechia, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania, Kosovo, Serbia, western Romania, eastern Poland, southern Belarus, Moldova, Ukraine, southern and western Russian Federation, northwestern Kazakhstan, Morocco, southern Republic of Congo, northwest Angola, western South Africa, southern India, southern Thailand, Cambodia, southern Laos, southern Viet Nam, and the Philippines.

There is also a likelihood of below-average rainfall over the Great Lakes region of Canada and the US, northern Ecuador, western and southern Brazil, northern Bolivia, southern Paraguay, Uruguay, central Argentina, Norway, Finland, southern Türkiye, Iraq, Iran, Yemen, Ethiopia, Kenya, Somalia, southeast Tanzania, northern Mozambique, northern Madagascar, Uzbekistan, Turkmenistan, Tajikistan, Afghanistan, northern Pakistan, northwest India, western Nepal, China, eastern Russian Federation, Indonesia, and northern Australia.

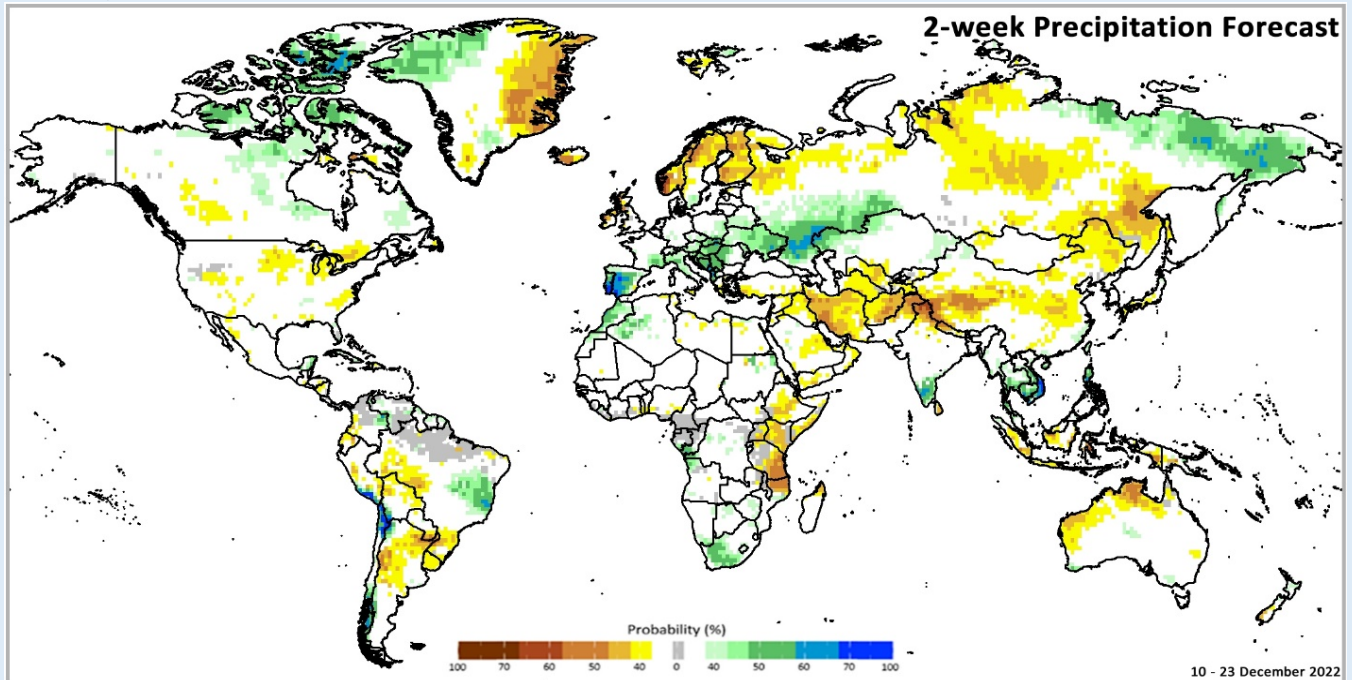


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 10 – 23 December 2022, issued on December 2nd, 2022. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

Climate Influences: La Niña phase is present and forecast to continue into early 2023 while Negative Indian Ocean Dipole weakened and neutral conditions are forecast for December

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase. La Niña conditions will likely continue into early 2023 (76% chance for December to February and 59% chance for January to March), according to the IRI/CPC. Neutral ENSO conditions are likely after that.

Negative Indian Ocean Dipole (IOD) conditions weakened during November, and neutral IOD conditions are forecast for December, signifying the end of the negative IOD event.

Persistent La Niña conditions since late 2020 have produced high impact, multi-year droughts in eastern East Africa, southern South America, Central and Southern Asia, and southern North America. The forecast continuation of La Niña for several more months raises concerns about continued dry conditions in these areas. For [eastern East Africa](#), poor spring rains often follow fall La Niñas, as La Niña-like sea surface temperature gradients can linger after La Niña strength wanes. Recovery from severe drought can be a lengthy process, in which several seasons of improved precipitation may be needed to replenish reservoirs and groundwater, and negative socio-economic impacts can have long-lasting effects in food insecure regions.

Source: UCSB Climate Hazards Center

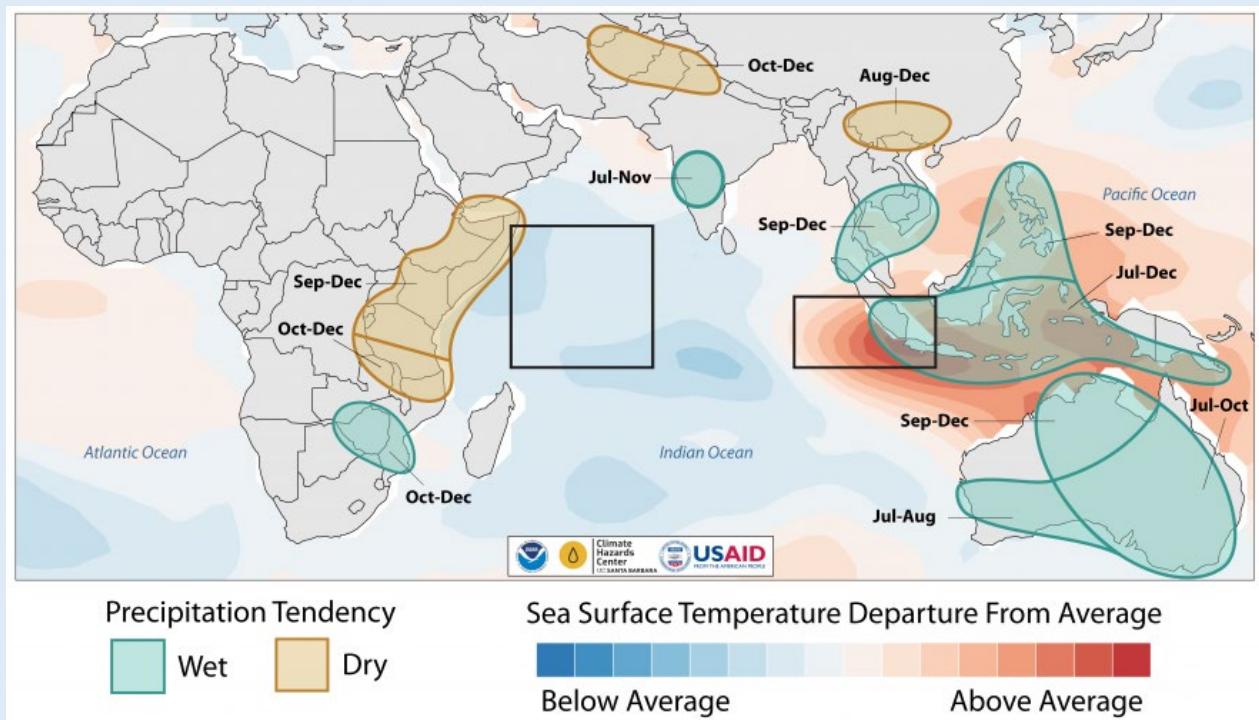
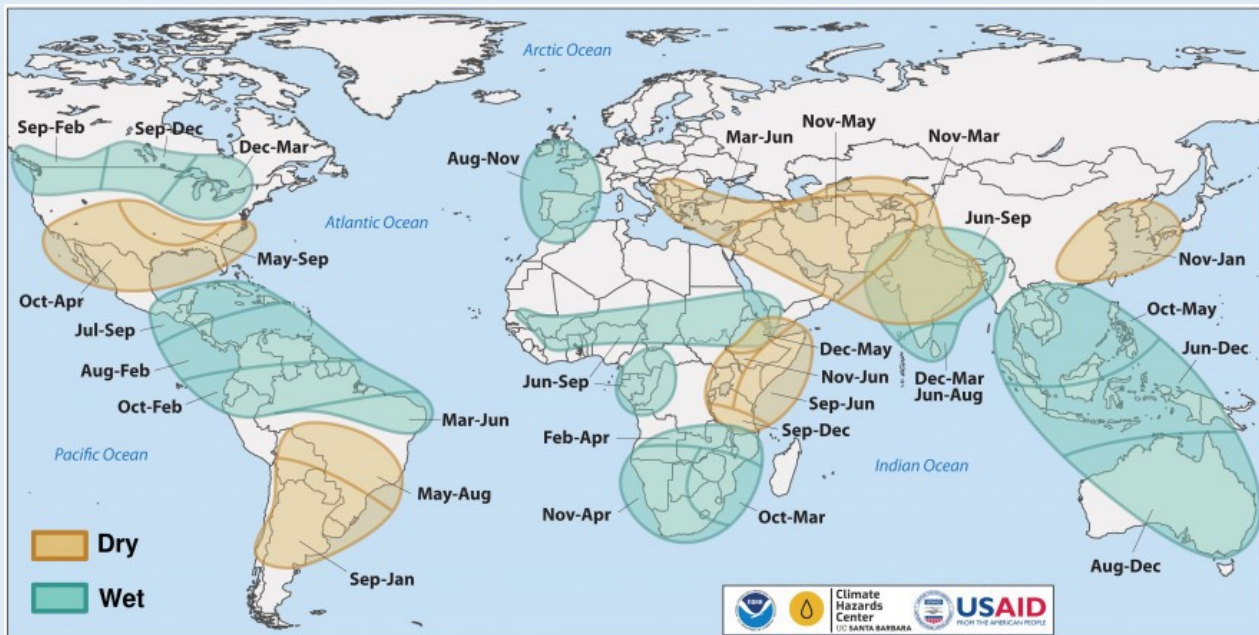
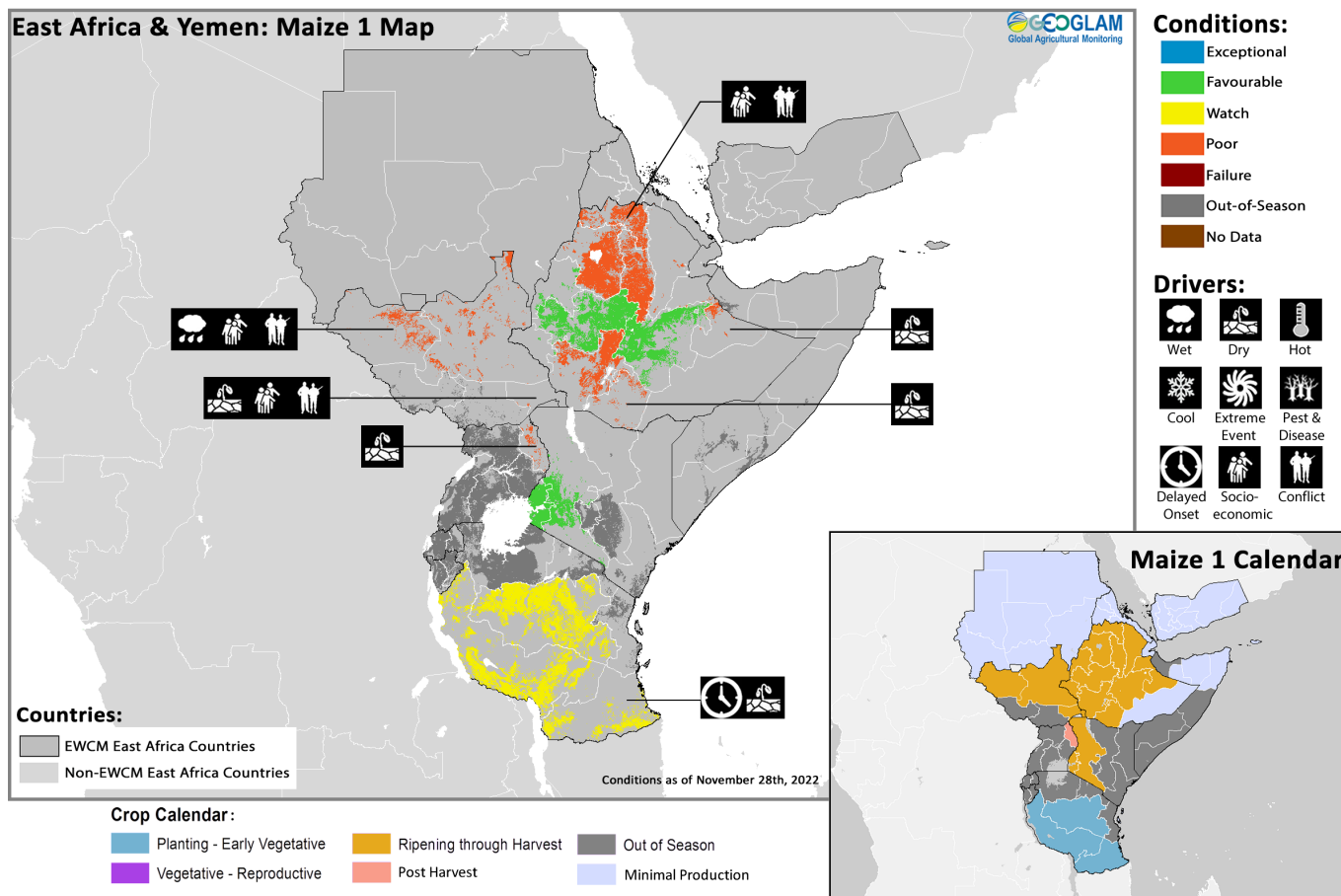


Figure 1. Precipitation tendency during [La Niña](#) (top) and negative [Indian Ocean Dipole](#) conditions (bottom). Source: FEWS NET Agroclimatology Fact Sheets on La Niña and the Indian Ocean Dipole. Source: NOAA & CHC & FEWS NET

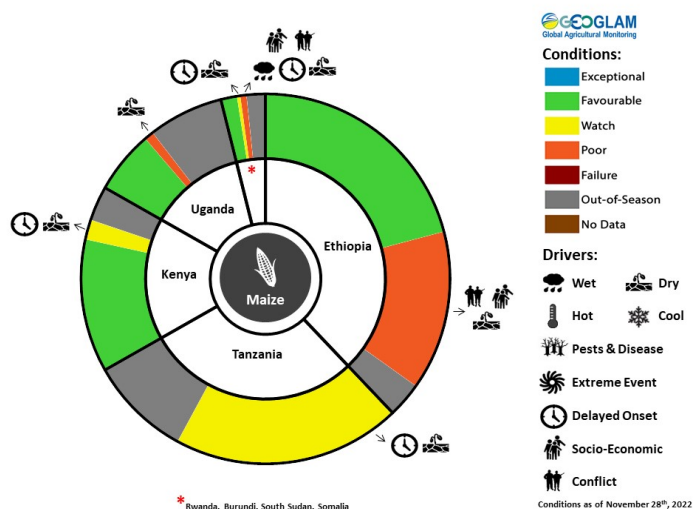
East Africa



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.**

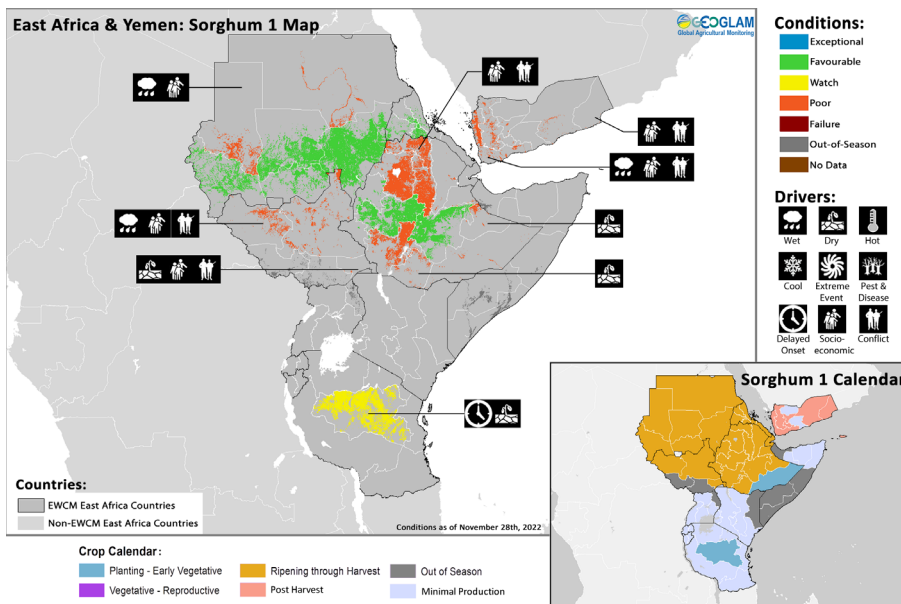
Across the north of the subregion, harvesting of main season cereals is nearing completion under mixed conditions. Crops are unlikely to recover in southeastern **South Sudan** due to persistent dryness as well as in western **Yemen**, north and northwestern **Sudan**, and the northern half of **South Sudan** as heavy seasonal rainfall resulted in flooding over the Nile river basin in **Sudan** and Sudd Wetland areas of **South Sudan**. Socio-economic challenges and conflict also contributed to the expected below-average yields in these regions. Conversely, crops in other regions of **Sudan** have improved from flood impacts, and conditions in **Djibouti** and **Eritrea** remain favourable. In **Ethiopia**, harvesting of *Meher* season (Long Rains) cereals is underway, and conditions remain mixed. Crops in Somali region, southern Oromia, and SNNPR are unlikely to recover from persistent dryness throughout the season while crops in Tigray, Afar, and Amhara are unlikely to recover from ongoing conflict. Elsewhere in **Ethiopia**, conditions remain favourable with near-average yields expected.

Across the south of the subregion, harvesting of main season cereals is nearing completion in Karamoja region in **Uganda** and the unimodal and major producing areas of **Kenya**. Below-average yields are expected in Karamoja and for wheat crops in unimodal **Kenya** due to persistent seasonal dryness. Planting and development of second season cereals is underway across the south of the subregion under mixed conditions. Recent rainfall over the past month has led to crop improvement in **Rwanda** and in east, west, and central **Uganda** where conditions are favourable (See Regional Outlook Pg. 8). Conversely, Short Rains crops in northern **Uganda**, **Somalia**, and northeastern **Kenya** are unlikely to recover, and concern remains in **Burundi**, bimodal areas of the **United Republic of Tanzania**, and in other bimodal and minor producing areas of **Kenya** due to significant rainfall delays and deficits since October. The last four rainy seasons since late 2020 have all been below-average, and the March to May 2022 rainy season



For detailed description of the pie chart please see description box on Pg. 21.

was the driest on record in the last 70 years, leaving large areas of **Somalia**, south and southeastern **Ethiopia**, and north and eastern **Kenya** experiencing the most prolonged drought in recent history. According to the November 7th joint statement on ongoing drought in the Horn of Africa, a very likely fifth consecutive season of drought is now underway following a poor start to the October to December rains, and a sixth below-average rainfall season is the most likely scenario for the March to May 2023 rains (See Regional Outlook Pg. 8). Some worst-affected areas, particularly in bimodal marginal producing areas of **Kenya**, are experiencing the poorest start of the season on record.



*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.***

by above-average rainfall in August and September that continued into October across most parts of the country, benefitting late-planted crops and improving water availability. National production of staple crops is expected to be higher than the previous year and near-average due to good rainfall distribution throughout the growing season and less impacts from flooding compared to the previous year. However, pest infestations, late planting and replanting activities due to flooding, and increased inter-communal clashes will likely impact harvests in affected areas of the north and northwest. Land preparation and planting for the upcoming 2022/2023 winter wheat season is now underway, and the planted area is expected to be lower than the previous year and below-average due to limited access to agricultural inputs and financing as well as uncertainty about the government's commitment to purchase wheat from farmers. In **South Sudan**, harvesting of main season cereals continues while second season maize and sorghum crops will be harvested from December. Throughout the country, crops are unlikely to recover from socio-economic challenges and conflict that continue to impact agricultural activities. Insufficient soil moisture in Kapoeta region located in the southeast as well as heavy rainfall and flooding along the Sudd Wetland areas are also expected to negatively impact yields as record-breaking flooding for a fourth consecutive year affected two-thirds of the country. While crop outcomes are expected to be better than the previous year due to a slight decrease in conflict incidents, yields are still expected at a below-average level. In **Djibouti**, harvesting of main season millet and sorghum crops is now underway, and overall conditions remain favourable. In **Eritrea**, harvesting of main season sorghum and wheat crops is now underway, and overall conditions remain favourable with good rains expected in the west through early December (See Regional Outlook Pg. 8). In **Yemen**, harvesting of main season sorghum crops finalized in November under poor conditions due to conflict and related socio-economic challenges throughout the country as well as heavy rains and widespread flooding in the west.

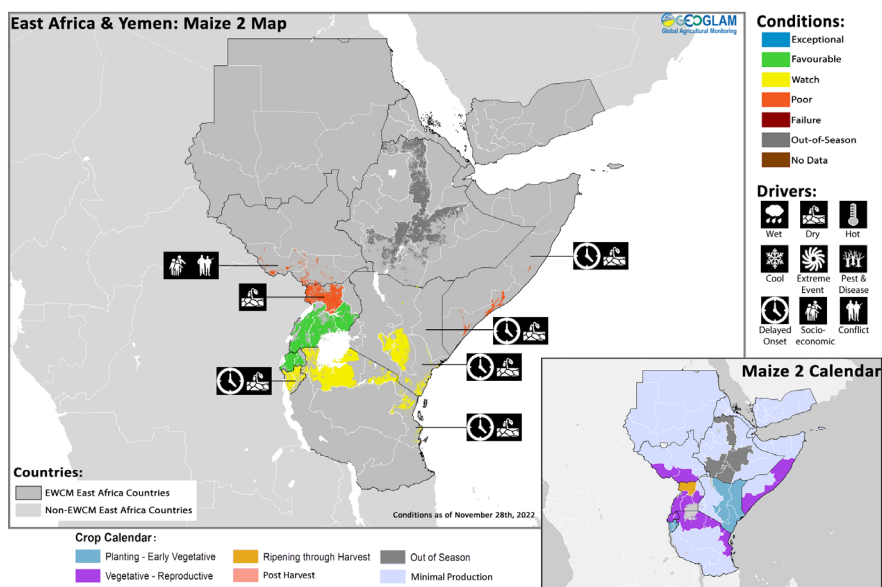
Southern East Africa

In **Somalia**, *Deyr* season maize and sorghum crops are in vegetative to reproductive stage, and conditions have degraded to poor across the country. Large areas of Bay and Bakool regions located in the south of the country as well as localized areas in the north received moderate to heavy rainfall in late October, leading to localized vegetation condition improvements. However, cumulative rainfall since the start of the *Deyr* season remained well below-average across most of the country as of late November (See Regional Outlook Pg. 8). In **Uganda**, harvesting of first season maize finalized in the unimodal Karamoja region under poor conditions due to generally poor seasonal rainfall performance. Second season maize crops are developing under mixed conditions as crops in the northwest are unlikely to recover while rainfall over the past month led to some vegetation improvement in the southern half of the

Northern East Africa & Yemen

In **Ethiopia**, harvesting of *Meher* season (Long Rains) cereals continues under mixed conditions. Crops in Somali region, southern Oromia, and SNNPR are unlikely to recover as erratic and inadequate rains throughout the summer season resulted in drought conditions. Yields in Tigray, Afar, and Amhara are also likely to be below-average due to persisting conflict and socio-economic challenges. Elsewhere, conditions remain favourable as episodic rainfall led to some improvement in vegetation conditions in November (See Regional Outlook Pg. 8). However, heavy rainfall from early August through October also resulted in flooding across 12 woredas in Gambella region, impacting crops in localized areas. In **Sudan**, harvesting of main season millet and sorghum crops is now underway. Conditions in the north and in Northern Darfur have downgraded to poor due to impacts of flooding while yields in other regions are expected to be near-average. The June to September rainy season was characterized

country. However, drier than usual conditions are expected over southern areas through February 2023 (See Regional Outlook Pg. 8). In **Kenya**, harvesting of Long Rains cereals is nearing completion in the unimodal and major producing areas of the west and Rift Valley as well as in the unimodal central region. Wheat harvesting finalized in November, and yields are expected to be below-average due to persistent seasonal dryness. Conversely, conditions for maize and rice, which are still being harvested, have improved from previous dryness as episodic rainfall in November led to some improvement in vegetation conditions. Short Rains maize planting is now underway in the bimodal and minor producing areas of the northeast, coast, and east as well as in the unimodal central region, and crops in the northeast are unlikely to recover while concern remains in other areas due to delayed rainfall onset as well as dry conditions that are forecast to continue across central and southwestern areas through February 2023 (See Regional Outlook Pg. 8). In **Rwanda**, second Season A maize is in vegetative to reproductive stage under favourable conditions for harvest from January. A timely onset to the September to November rainfall season was followed by well above-average rainfall amounts in September, benefitting the establishment of Season A Crops, which account for about 40 percent of aggregate cereal output. However, forecast below-average rainfall for the remainder of the cropping season (See Regional Outlook Pg. 8) as well as low application of fertilizers due to high prices may negatively impact yields. In **Burundi**, planting of second Season A maize continues for harvest from January with concern due to ongoing dry conditions. The onset of the September to December seasonal rains was delayed by about five weeks, resulting in delayed planting and negative impacts to the establishment and development of early planted crops. The central-south and east of the country were most affected by rainfall delays, and only 25 percent of Season A land plots had been planted on time between September and mid-October due to insufficient rainfall. Improved precipitation in November allowed for some households to replant while others lacked sufficient financial access to agricultural inputs for replanting. Forecast below-average rainfall amounts for the remainder of the season (See Regional Outlook Pg. 8) in combination with low application of costly fertilizers could negatively impact yields. In the **United Republic of Tanzania**, *Vuli* season maize crops are in vegetative to reproductive stage along bimodal areas of the northeast, north, and northern coast while planting of *Msimu* and *Masika* season cereals is now underway in unimodal areas of the centre, southwest, and southeast. Concern remains throughout the country due to significant rainfall delays as well as drier than usual conditions that are expected through February 2023 (See Regional Outlook Pg. 8).



*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: Below-average rainfall is forecast to continue through early 2023, resulting in a fifth consecutive below-average rainfall season in some areas

- Very poor October–November 2022 rainfall in the eastern Horn worsened the multi-year, severe drought conditions
- Drier-than-normal conditions are forecast during the next several weeks and into 2023
- Based on multi-agency consensus, below-average rainfall is likely in the eastern Horn during March–May 2023

Over the past month, conditions were drier than average across much of the region (Figure 1-left). The epicenter for suppressed October-to-December (OND) 2022 season rains has been the southeastern Horn— most prominently in eastern Kenya and southern Somalia— resulting in an unprecedented five-season drought sequence. Between October 1st and November 25th, drier-than-average conditions also occurred in northern Somalia, southern and central eastern Ethiopia, southeastern and northwestern Uganda, and in much of Tanzania. Below-average rainfall is likely to continue in many of the OND season rainfall deficit areas during the next several weeks, based on GEFS and ECMWF forecasts through mid-December. Rainfall deficits in central and eastern Kenya and Tanzania are forecast to substantially worsen during this time (Figure 1-middle).

In central and eastern Kenya and southern Somalia, many locations experienced a late rainfall onset, by 10 to 40 days, large 50 to 100+ mm deficits, and received approximately half of typical rainfall totals during October through late November. In portions of Ethiopia's Somali region, southeastern Kenya, and northern and southern Somalia, episodic rainfall led to some improvement in vegetation conditions in November. However, rainfall conditions in November in these areas were mixed, with most areas receiving low additional moisture input. Better rainfall distribution and higher amounts are needed to benefit agriculture and sustain long-lasting grazing areas. In Somalia and southeastern Ethiopia, seasonal rains typically diminish after November, and dry conditions prevail until March, leaving minimal opportunity for near-term recovery of rainfed agriculture, water supplies, and livestock grazing conditions in hard-hit areas. Estimates of water hole levels indicate severe water stress, at the peak of the rainy season.

From December 2022 to February 2023, model forecasts are indicating the continuation of the La Niña drying influence. According to ICPAC, "drier-than-usual conditions are expected over central to south-western Kenya, southern Uganda, Rwanda, Burundi, and Tanzania. The rest of the region is generally dry during this season" (Figure 1-right).

There is broad multi-agency consensus that a [6th consecutive season with poor rainfall performance](#) in the eastern Horn during March-to-May (MAM) 2023 is likely. Models predict that a moderate-strength negative "Western V" sea surface temperature (SST) gradient as very likely during MAM 2023, due to above-average SST in western tropical and subtropical regions of the Pacific Ocean and near-average SST in the Niño3.4 region ([See Agrilinks post](#)). This SST pattern is associated with frequent poor MAM rainy seasons (See [Seasonal Forecast Alert in the November 2022 CM4EW](#) for more information). Precipitation forecasts from WMO and C3S also indicate that suppressed regional rainfall conditions are likely during February to April 2023 in many of these areas, and across equatorial and southern areas of the region.

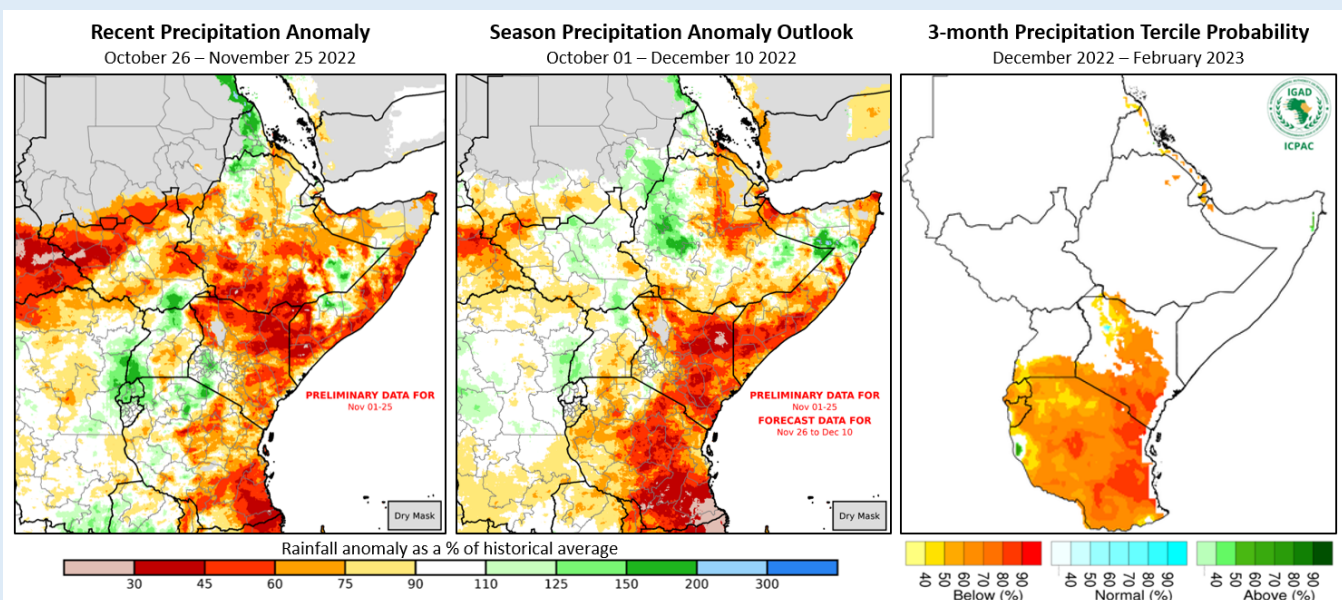
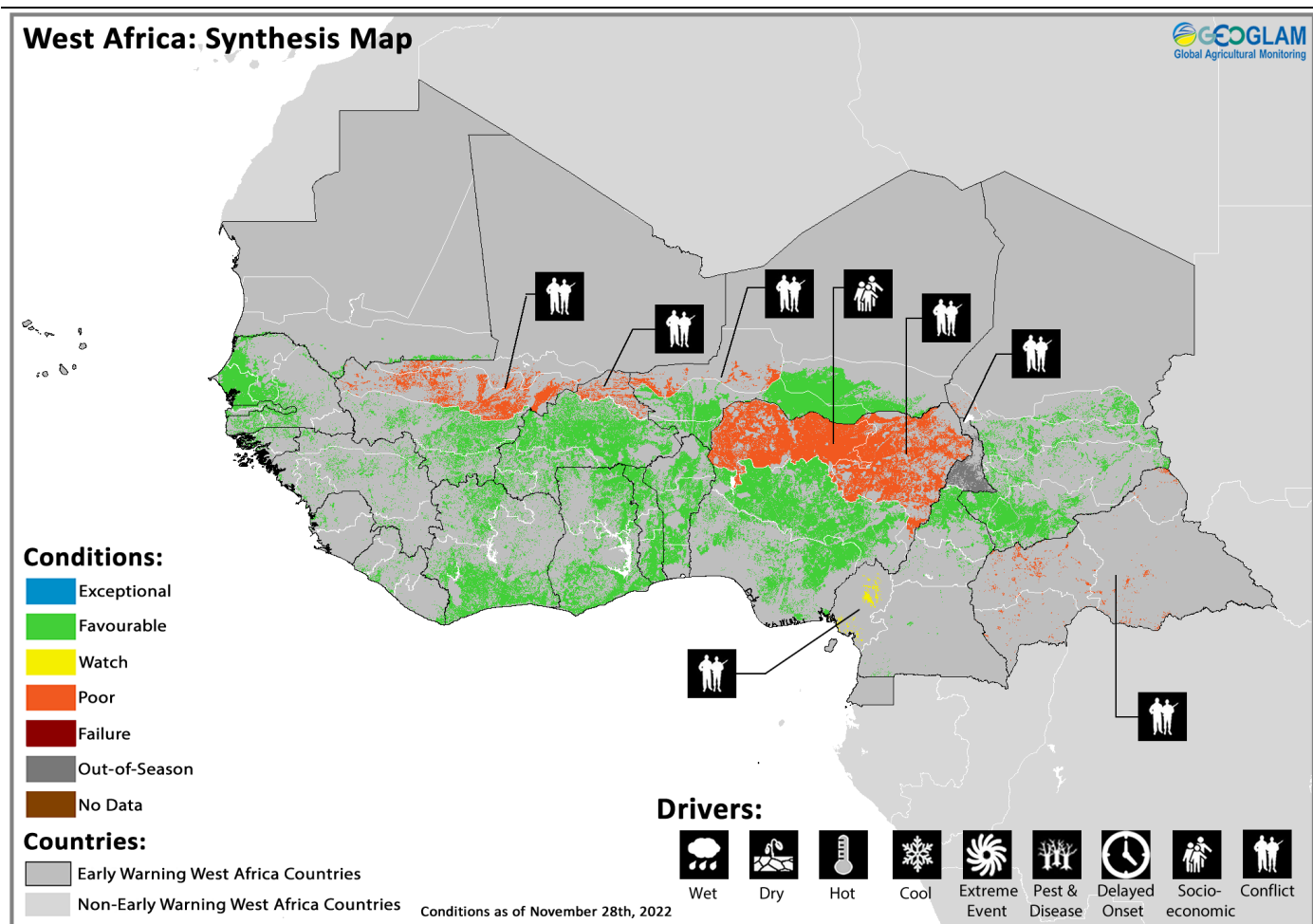


Figure 1. A recent rainfall anomaly, a seasonal rainfall anomaly outlook, and a probabilistic rainfall forecast for December 2022 to February 2023. The left and middle panels are CHC Early Estimates, which compare current precipitation totals to the 1981–2021 CHIRPS average for respective accumulation periods. These show the percent of average precipitation for Oct. 26th to Nov. 25th, 2022 (left), and for Oct. 1st to Dec. 10th (middle). Both panels use CHIRPS Prelim for Nov. 1st to 25th. The middle panel also includes a CHIRPS-GEFS forecast for Nov. 26th – Dec. 10th. The right panel is an IGAD Climate Prediction and Applications Centre (ICPAC) probabilistic forecast for December 2022 to February 2023 precipitation, based on models initialized in November.

Source: UCSB Climate Hazards Center

West Africa



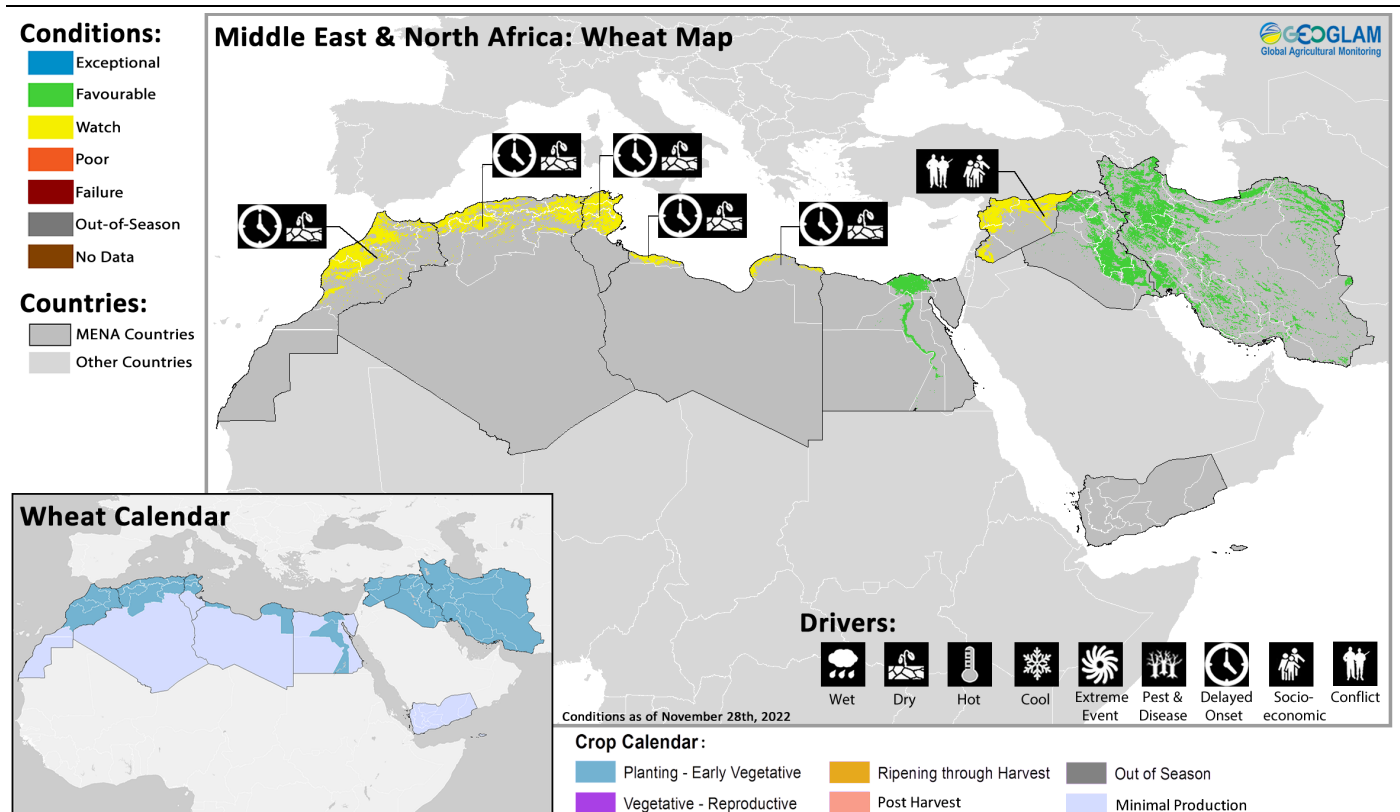
Crop condition map synthesizing crop conditions as of November 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions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

Across the south of the subregion, harvesting of main season cereals is nearing completion in **Cape Verde, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Cote d'Ivoire**, northern **Ghana, Togo, Benin, Nigeria, Cameroon**, and the **Central African Republic**. Harvesting of second season cereals, including maize and rice, is underway in **Nigeria** and central **Cameroon** while crops continue to develop in **Cote d'Ivoire**, southern **Ghana**, southern **Togo**, and southern **Benin**. Along the Sahel, harvesting of main season cereals is nearing completion in **Senegal, Gambia, Mauritania, Mali, Burkina Faso, Niger, and Chad** while planting of second season maize crops is underway in **Mauritania** and **Mali**. Throughout the subregion, conditions remain generally favourable except in north central and northwestern **Nigeria**, where there has been an increase in inter-communal violence, and in areas impacted by persistent conflict, including central **Mali**, northern **Burkina Faso**, western **Niger**, northeastern **Nigeria**, southwestern **Cameroon**, the Lac region in **Chad**, and the **Central African Republic**. In **Benin, Cote d'Ivoire, Ghana, and Togo**, cereal production is expected to be average to above-average due to the combination of abundant rainfall, the provision of subsidized seeds and fertilizers by the national governments, and high market prices that supported an increase in plantings. However, an increase in conflict-related incidents in northern areas of these countries bordering **Mali, Burkina Faso, and Niger**, owing to a spread of the central Sahel security crisis, caused disruptions to agricultural activities and is likely to result in localized shortfalls in production. This year's seasonal rainfall has been generally average to above-average and well distributed throughout the subregion. Flooding was observed in almost all river basins of the Sahelian and Sudanian zone, beginning in July and worsening in August before spreading into the bimodal zone. However, the damaged crop area is a small percentage of the total cropped area in affected countries. Conversely, localized parts of southwestern **Mauritania**, southeastern **Senegal, Guinea, Sierra Leone**, west and eastern **Liberia**, southwestern **Cote d'Ivoire**, central **Ghana**, northwestern **Niger**, central and southern **Nigeria**, southwestern **Cameroon**, and central western regions of the **Central African Republic** may be impacted by the seasonal rainfall deficit from April to the end of the second dekad of November ranging from slight to moderate, with the dry spell less than or equal to 10 days in November through the southern part of the subregion from southern **Guinea** to southern **Central African Republic** (south part of the Soudano-Guinean zone and the bimodal zone). However, the deficits are generally not expected to negatively impact crop performance.

In **Senegal**, a timely start to the rainy season in June was followed by average to above-average and evenly distributed rains between July and October. The good rains boosted soil moisture and benefitted vegetation conditions, supporting yield expectations across most of the country despite pockets of below-average rains and dry spells in parts of northern Podor Department and southeastern

Kédougou Department as well as localized flooding in areas adjacent to the Senegal River. Aggregate 2022 cereal production is expected to increase 12 percent compared to the previous year and 25 percent compared to the five-year average due to increased plantings and high yields. In **Mali**, overall cereal production is forecast to increase 16.7 percent compared to the previous year and 4.8 percent compared to the five-year average due to good rainfall received and despite localized declines due to flooding and insecurity. In **Sierra Leone**, seasonal rains from April to October were conducive for crop development despite rainfall deficits in July and August as well as localized flooding in August in some northwest, west, and southern areas. Aggregate 2022 cereal production is forecast to be 6 percent above the previous year's average level due to increase planted area and favourable growing conditions. In **Liberia**, adequate rainfall from June to October as well as the provision of subsidized seed and fertilizer by the government benefitted crop growth and yields. Aggregate 2022 rice production is forecast at 288,000 tonnes and 10 percent above the five-year average. In **Cote d'Ivoire**, an on time start to the rainy season in April was followed by well distributed and above-average precipitation through October, benefitting soil moisture conditions and crop development. Overall 2022 national cereal production is forecast at a near-average level. Specifically, maize production is expected to be 10 percent above-average due to favourable weather and increased planted area, while rice production is expected to be 7 percent below-average due to the use of poor-quality seeds and low fertilizer application by smallholder farmers. In **Ghana**, a timely onset to the rainy season in March as well as adequate distribution and amounts of seasonal rainfall benefitted crop development and yields. However, heavy rainfall and localized flooding between August and early October resulted in 80,000 hectares of crop damage, mostly in the north. Additionally, the government continued with a programme to distribute fertilizers and improved seeds at subsidized prices for the 2022 cropping season. Overall 2022 national cereal production is forecast to be 35 percent above the five-year average and 10 percent above the previous year's level due to increased plantings and favourable weather conditions throughout the season. In **Togo**, adequate rainfall amounts allowed for timely planting activities, and favourable rainfall through October benefitted crop development across most parts of the country. Overall 2022 national cereal production is forecast to be 6 percent higher than the five-year average and slightly above the previous year's level due to an increase in planted area and good yields. However, heavy rains impacted localized northern parts of the country since October, causing flooding and water level overflow in some communities that destroyed crops. In **Benin**, a timely start to the rainy season in April was followed by favourable cumulative rainfall amounts through October that benefitted planting, crop establishment, and development across most of the country. However, some localized areas in the south experienced below-average rainfall in July and August, and some localized areas in the centre and north experienced flooding in August and early September. Overall 2022 national cereal production is expected to be 5 percent above the five-year average and near the previous year's level. Additionally, the government implemented the distribution of improved seeds and agrochemicals at revised prices to support production. In **Nigeria**, heavy rains in August and September in conjunction with the release of water from a dam in Cameroon resulted in the worst flooding in the last decade, notably in the north along the Komadugu Yobe River Basin and the south along the Benue and Niger rivers. Around 750,000 hectares of cropland, roughly eight percent of the total area for staple crops, were flooded as of mid-October. Additionally, conflict continues in the northeast, though at relatively lower levels compared to previous years, while intercommunal violence continues to intensify in the northwest and north-central states. Total 2022 cereal production is expected at a near-average level due in part to conducive weather conditions as well as an increase in planted area that offset losses associated with flooding and insecurity. Dry season production is expected to start normally in December. While impacts of previous flooding may delay planting activities in affected areas, farmers may relocate cultivation to other viable areas. However, planting is expected to be lower than normal due to high agricultural input prices and the continuation of conflict. In **Chad**, the estimated affected cropland area due to flooding has been revised upwards from 300,000 hectares to 465,000 hectares, according to the UNICEF Chad Flash Update No. 4 Floods from October. In southern areas, heavier than normal monsoon rains have resulted in saturated soils and full rivers. More than half of cropland has been destroyed by flooding in the affected provinces of Mayo Kebbi East, Tandjilé, Logone Occidental, and Mandoul in the south, as well as the city of N'Djamena. The presence of floodwaters is delaying harvesting work in the southern zone. Despite conflict-related disruptions and unprecedented floods, national cereal production is set at an above-average level and higher year-on-year.

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.**

Wheat planting is ramping up across the subregion. In North Africa, low rainfall amounts have delayed planting and early crop development in affected areas, including **Morocco, Algeria, Tunisia, and Libya**, and improved rainfall in December and January will be crucial for favourable crop outcomes. However, there is currently a high level of uncertainty regarding rainfall forecasts through February 2023 (See Regional Outlook Pg. 12).

In the Middle East, climatic conditions are currently favourable despite some areas with rainfall deficits. In **Syria**, sowing conditions are close to average, albeit with a slight rainfall deficit in the north in October. While there is uncertainty regarding December through February rainfall performance, the WMO forecast indicates near-average rainfall in northeastern areas, particularly in the main producing Hassakeh governorate, and below-average rainfall in the northwest (See Regional Outlook Pg. 12). Additionally, concern remains throughout the country due to persisting conflict and related socio-economic challenges. In **Iraq**, conditions are drier than average in the north with only 50 to 60 percent of average rainfall received in October. However, December to February rainfall is forecast to be near-average in the north and above-average in the south, according to the WMO forecast (See Regional Outlook Pg. 12). In **Iran**, sowing conditions are generally favourable except in parts of the northwest, from West Azarbayejan to Ghazvin, where 50 percent of average rainfall was received in October. However, rainfall is expected to be above-average in western areas for the December to February period, according to the WMO forecast (See Regional Outlook Pg. 12).

Regional Outlook: Delayed start to the rains in western areas and uncertainty around December to February rainfall performance

Rainfall during late September to late November was below-average in most western areas, including Morocco, much of northern Algeria, Tunisia, and northwestern Libya (Figure 1-left). Northern Morocco and Tunisia received around half of typical amounts during this time. Some eastern areas were also drier than average, including western Syria, eastern Iraq, and northern Iran.

In western areas, across much of Morocco, Algeria, and Tunisia, season-to-date totals will likely remain much lower than average into early December, based on a forecast from November 26th (Figure 1-left). Northwestern Morocco may benefit from heavy rains more recently forecast during that period.

There is a high level of uncertainty regarding December 2022 to February 2023 rainfall. The WMO (Figure 1-right), NMME, and C3S precipitation forecasts produced in November show overall low agreement and weak signals. However, these all show increased chances for warmer-than-normal temperatures.

Across eastern and western areas, close monitoring is recommended. The observed dry conditions in western wheat production areas are concerning, related to limited replenishment of soil moisture needed to support early vegetative growth. Last year, below-average October-to-December rainfall was a precursor to longer dry conditions and poor crop production outcomes in many areas in Morocco.

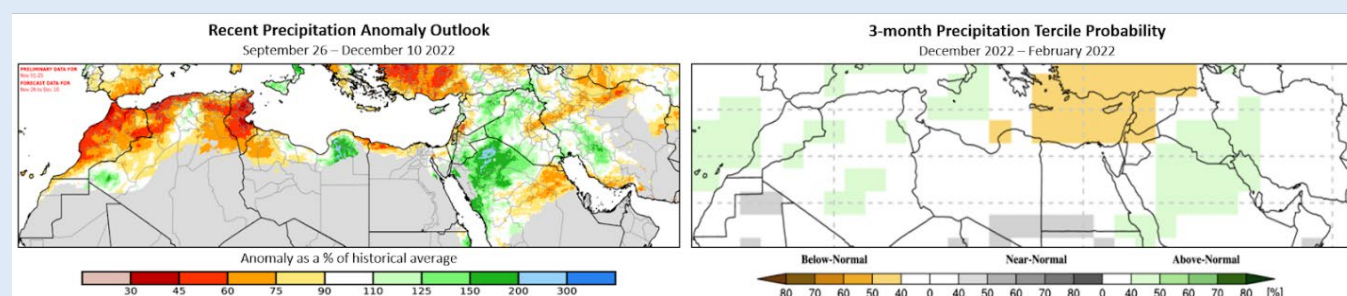
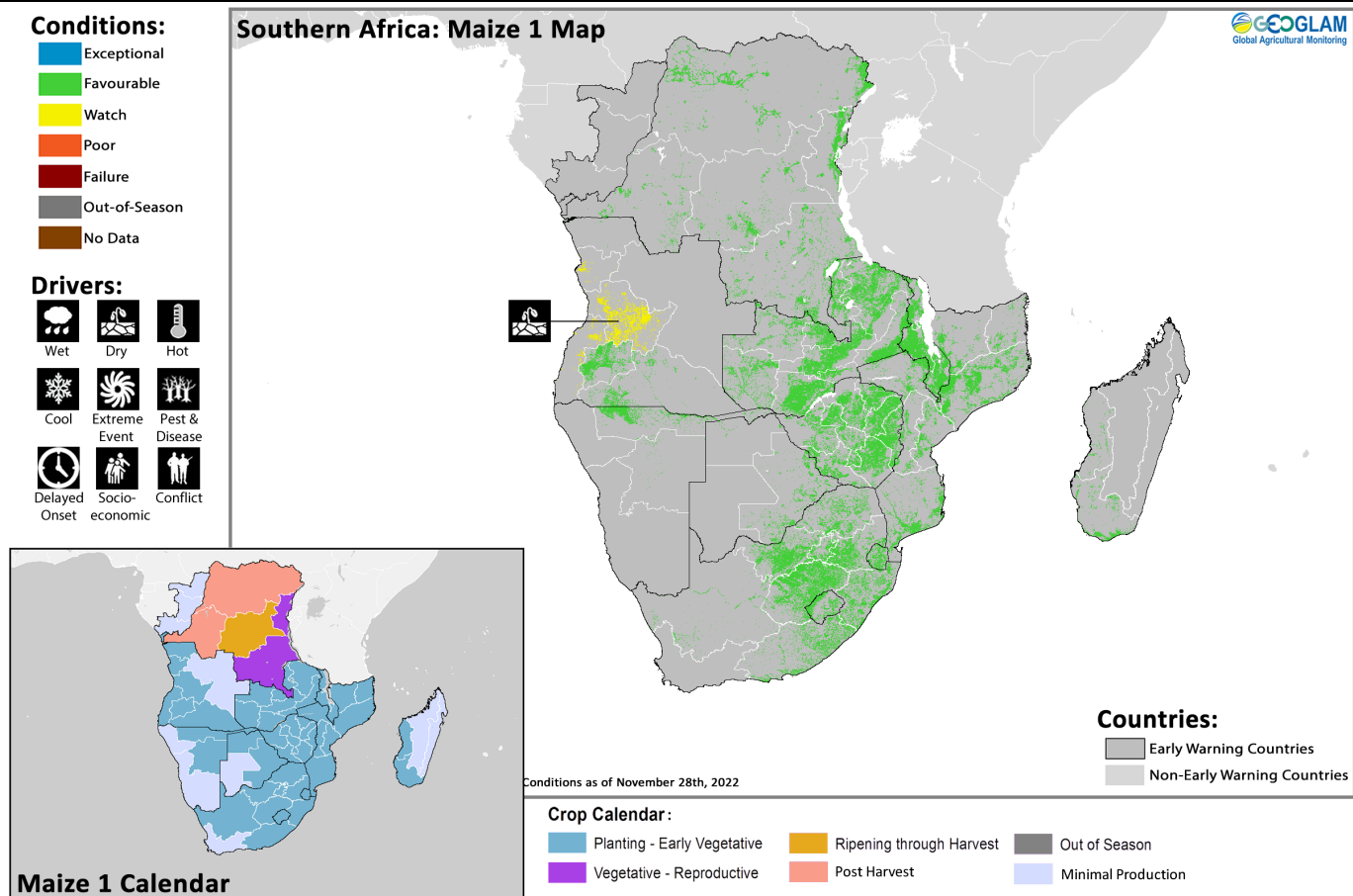


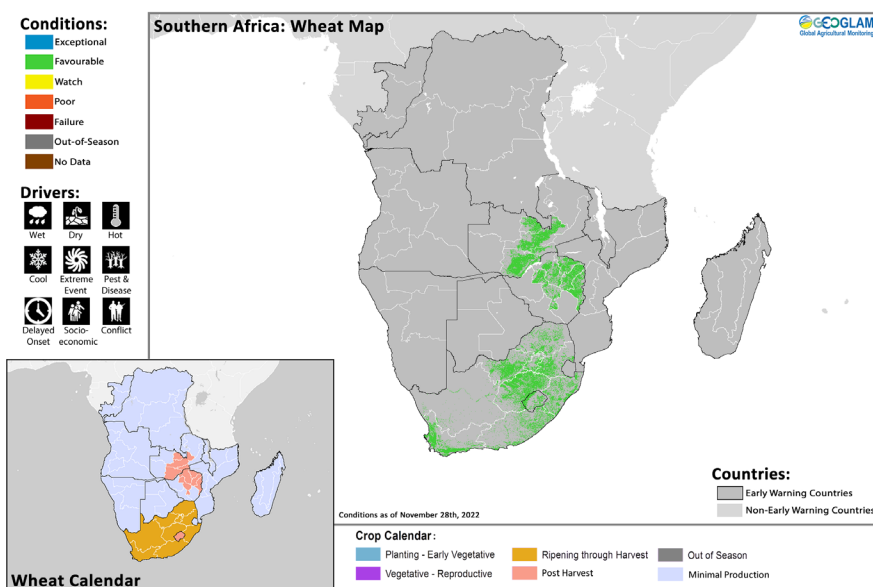
Figure 1. September 26th to December 10th, 2022 rainfall anomaly outlook and a 3-month WMO probabilistic precipitation forecast for December 2022 to February 2023. The left panel is a CHC Early Estimate, which compares current precipitation totals to the 1981-2021 CHIRPS average for respective accumulation periods. This panel shows the precipitation anomaly (mm) for September 26th to December 10th, 2022, using CHIRPS Prelim for Nov. 1st-25th and CHIRPS-GEFS for Nov. 26 - Dec. 10th. The right panel is a WMO probabilistic forecast for December 2022 to February 2023 precipitation tercile, based on models initialized in November. From [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#). Source: UCSB Climate Hazards Center

Southern Africa



Crop condition map synthesizing maize 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, harvesting of wheat crops finalized in **Lesotho, Zambia, and Zimbabwe** in November and is nearing completion in **South Africa**, and end of season conditions are favourable. In **South Africa**, the negative impacts of a relatively dry winter over the main producing region in the southwest was offset by favourable conditions over the interior with adequate soil moisture and ample irrigation water in storage dams. In the Western Cape, yields are expected to be slightly lower than the five-year average due to recent drier conditions during much of the winter.



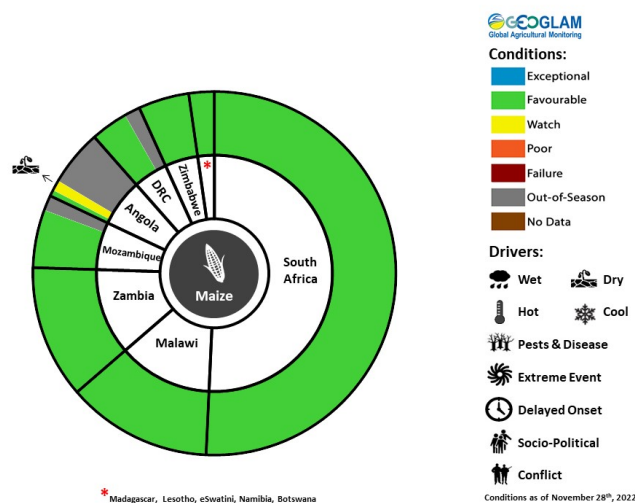
Crop condition map synthesizing wheat conditions as of November 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled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

Planting of main season cereals is underway across the subregion. Despite below-average rainfall totals in northwestern **Zambia**, erratic rainfall since the start of the season in northern **Malawi**, and current below-average rainfall and soil moisture conditions that are forecast to continue into early December in northern **Mozambique**, planting conditions are generally favourable throughout the subregion. However, there is concern in parts of **Angola** due to early season dryness. Additionally, according to the November 2022 SADC Agromet Update, a few areas in the subregion experienced a series of droughts over the last few years and/or below-average rainfall during the 2021/22 season, particularly in southwestern **Angola**, northwestern **Namibia**, southwestern **Madagascar**, parts of western and eastern **Zimbabwe**, and central and southern **Mozambique**. At the start of the current season, these areas have experienced

moderate to good rainfall onset, which has supported regeneration of vegetation and water reserves. However, consistent rains are still needed in areas that have had a timely or early rainfall season onset to prevent early season crop moisture stress and need for replanting.

In **Angola**, the 2022/23 agricultural season is underway with a timely start to seasonal rains across most of the country, except in parts of the main producing west and north where there is delayed rainfall onset with significant deficits. Forecasts indicate a high likelihood of below-average rainfall in parts of the west. Conversely, there was some recent vegetation improvement in the north, and good rains received in mid-November may benefit crop establishment (See Regional Outlook Pg. 15). In **Mozambique**, dry conditions have developed over the past two months in northern areas, particularly in Cabo Delgado and Nampula. While current planting conditions are favourable, forecast below-average rainfall amounts in northern areas through early 2023 may impact crop development. Conversely, the forecast average rainy season in central and southern areas is expected to support crop production; however, there is an increased risk of flooding from January to March 2023 (See Regional Outlook Pg. 15). In **South Africa**, planting conditions are favourable with widespread above-normal rainfall since mid-October.

Some field access issues developed due to wet conditions, but more recent drier conditions may alleviate the problem. In **Madagascar**, above-average rainfall has been observed over central and western areas. In the **Democratic Republic of the Congo**, harvesting of main season maize finalized in the north and west with near-average yields. Elsewhere, planting and development of main season cereals continues under favourable conditions.



For detailed description of the pie chart please see description box on Pg. 21.

Regional Outlook: Hot and drier-than-average conditions during the first half of December are forecast across the northeastern areas

During October 1st to November 25th, rainfall was above-average in central and southern Zambia, Zimbabwe, Botswana, central South Africa, Lesotho, central and western Madagascar, and portions of western Mozambique and southeastern Angola (Figure 1-left). Ample rains in early-to-mid November were largely responsible for those surpluses. Large, 50 to 100+ mm rainfall deficits developed across northwestern Angola since October. Conditions were also drier-than-average in southern DRC, northern Zambia, northern Malawi, northern, eastern, and southwestern Mozambique, Lesotho, northeastern and southern South Africa, and eastern and northern Madagascar.

Hot and drier-than-average conditions during the first half of December could pose risks to crop seedling development, particularly in Zambia, Zimbabwe, Mozambique, and eastern Angola. Below-average rainfall is forecast across many central, eastern, and northeastern areas (Figure 1-middle). Above-average daytime high temperatures are also forecast in these areas and in eastern South Africa and Eswatini.

Longer-range precipitation forecasts favor above-normal rainfall across many southern and central areas during December 2022 to April 2023. This is indicated by NMME, C3S, and WMO (Figure 1-right) multi-model ensembles. Climate influences include the ongoing La Niña and a developing positive Southern Indian Ocean Dipole.

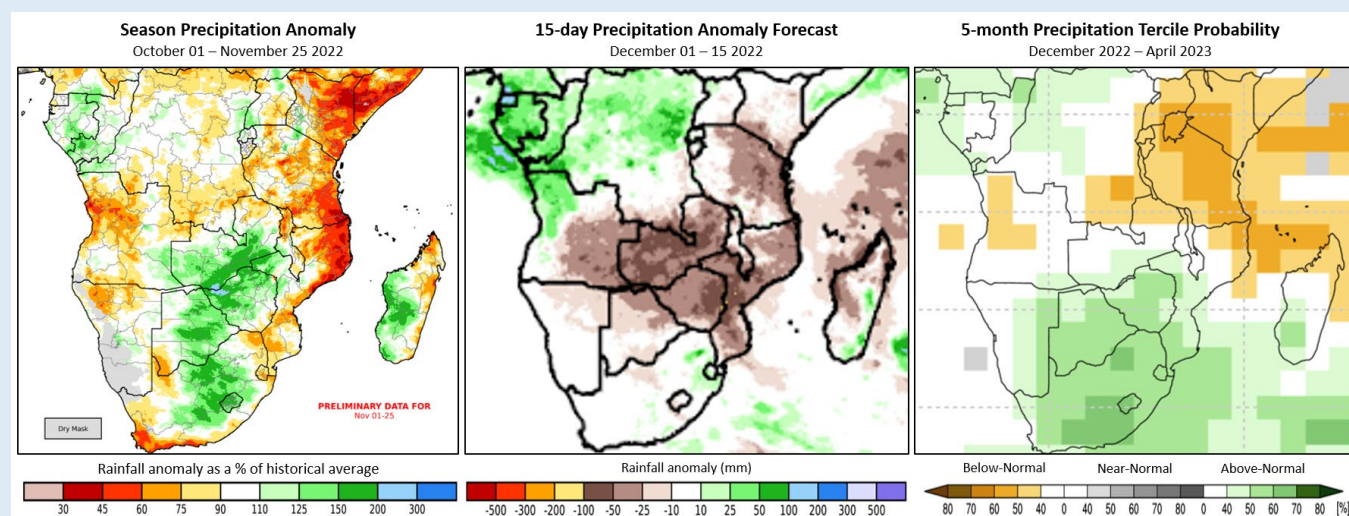
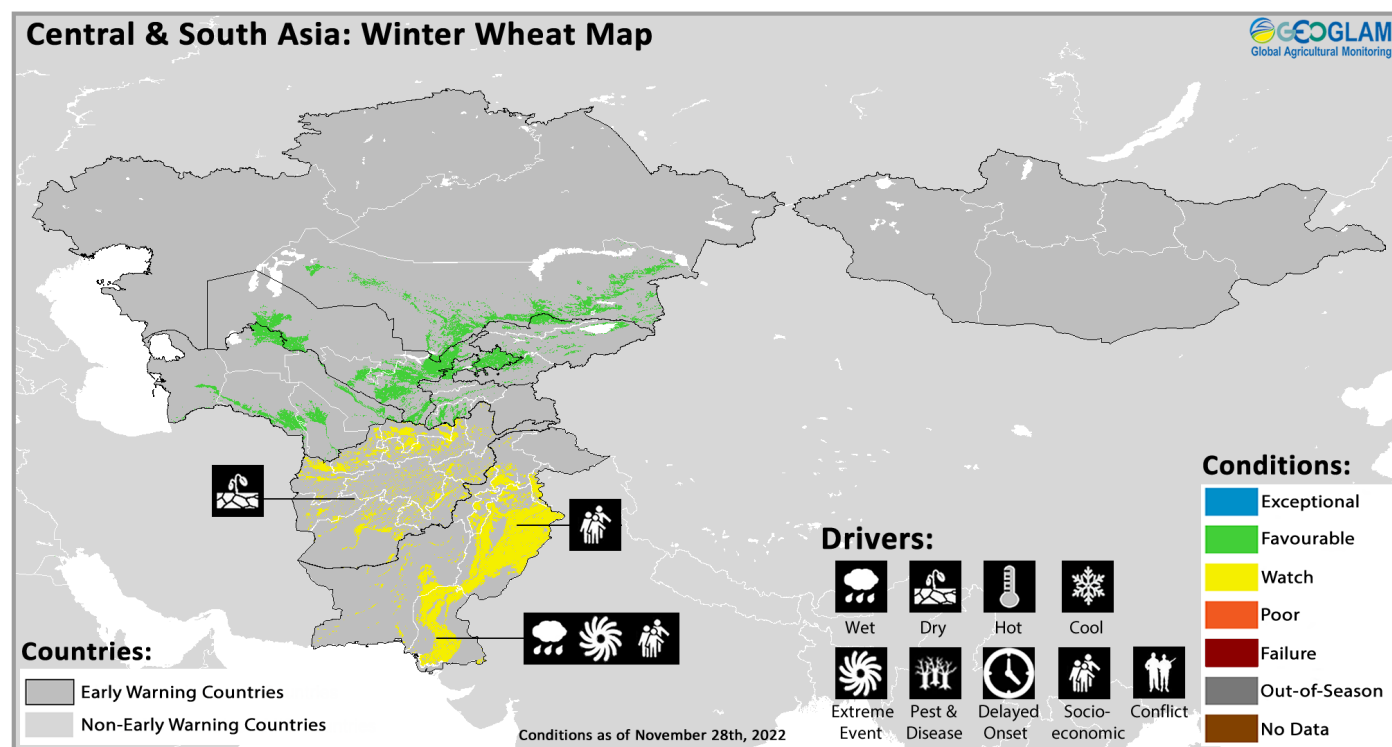


Figure 1. A seasonal rainfall anomaly, a 15-day rainfall anomaly forecast, and a 5-month rainfall probability forecast. The left panel shows the seasonal rainfall performance, represented as a percent of the 1981-2021 CHIRPS historical average, for Oct. 1st, 2022 to Nov. 25th, 2022. The middle panel shows a 15-day CHIRPS-GEFS (unbiased GEFS) forecast from Dec. 1st, with values indicating how the forecast compares to the CHIRPS average for this period. The right panel is a WMO probabilistic forecast for December 2022 to April 2023 precipitation, 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.**

In Central and South Asia, planting and development of winter wheat is underway in **Afghanistan**, southern **Kazakhstan**, **Kyrgyzstan**, **Pakistan**, **Tajikistan**, **Turkmenistan**, and **Uzbekistan** under mixed conditions. Concern remains in **Afghanistan** due to persistent dry conditions as well as in **Pakistan** due to ongoing impacts of unprecedented flooding on *Rabi* wheat crops. Elsewhere, conditions are favourable. Planting of the 2023 winter wheat crops mostly started between September and October under drier than average weather conditions in southern **Kazakhstan**, **Kyrgyzstan**, **Tajikistan**, **Turkmenistan**, and **Uzbekistan**. From mid-October, increased precipitation levels helped to partially restore soil moisture and improve vegetation conditions. However, there is high uncertainty regarding December to February rainfall outcomes across the subregion (See Regional Outlook Pg. 17).

In **Afghanistan**, below-average rainfall through the 2020 to 2021 and 2021 to 2022 wet seasons has severely depleted surface and ground water. Recent favourable precipitation and warm temperatures are supporting planting activities, and planted area is expected to be greater than last season but still below-average. However, high temperatures as well as a return to dry weather from late November dried out soil and slowed the pace of rainfed wheat planting in many areas, particularly in the lower elevations of the central highlands (See Regional Outlook Pg. 17). Planting will continue in conjunction with the progress of monsoon activity westwards to southwards in late November and early December. Above-average temperatures are expected through the end of summer 2023. This could delay adequate snowpack development and indicate earlier than normal snowmelt that may reduce water availability for irrigated crops during the spring and summer months. In **Kazakhstan**, above-normal rainfall in the first dekad of November prevented the completion of sowing activities in the winter wheat growing regions of the south and southeast. However, vegetation conditions remain favourable. In **Pakistan**, harvesting of *Kharif* (summer) season rice and maize crops is nearing completion, and conditions remain mixed as flood waters are still receding after unprecedented heavy rains and flooding between June and August with significant impacts on agricultural production and livelihoods. The floods impacted about a third of the planted area of *Kharif* season crops in Sindh and Balochistan provinces. Conversely, conditions remain favourable in the north of the country, including Punjab, Khyber Pakhtunkhwa, and Federally Administered Tribal Areas, as the ample monsoon rainfall benefitted growing conditions. Sowing of *Rabi* wheat crops began in October and is expected to finalize in December, except in areas of Sindh and Balochistan that remain inundated with floodwaters. Additionally, limited access to seed and fertilizer as well as flood damage to agricultural machinery and irrigation infrastructure may impact planted area.

Regional Outlook: Higher uncertainty around December to February rainfall across the region, and close monitoring is needed

Central areas received above-average precipitation from October 1st to November 25th (Figure 1-left). Some northern and western areas, and portions of central Afghanistan, received below-average precipitation during that period.

Relatively dry weather during late November led to an expansion of precipitation deficit areas in Afghanistan—in northwestern, central highlands, and central parts of the country. Above-average temperatures were also reported. Weather and soil moisture conditions have been more amenable to rainfed wheat planting this fall as compared to last year, according to the Afghanistan Seasonal Monitor. However, warm and dry conditions can adversely impact some stages of early vegetative growth.

A more extensive dry pattern is forecast to develop in central Afghanistan, northern Turkmenistan, northern Uzbekistan, and central Kazakhstan by early December. Below-average precipitation is forecast during this time in many of the areas that had relatively small precipitation deficits through November 25th. This could increase the extent and magnitude of rainfall deficits (Figure 1-middle).

Based on multi-model seasonal precipitation forecasts produced in November, the level of uncertainty about December 2022 to February 2023 (DJF) regional precipitation has increased. Earlier forecasts collectively favored below-normal precipitation across the region associated with La Niña influence, but the November forecasts lack a coherent regional DJF precipitation signal. The WMO forecast continues to indicate elevated chances of below-normal DJF precipitation in southeastern areas (Figure 1-right). Most models predict warmer-than-normal temperatures across the region.

Close monitoring of weather conditions is recommended due to the weaker signal in seasonal precipitation forecasts and the severe hydrologic drought conditions that impacted central and northern Afghanistan during the past two years.

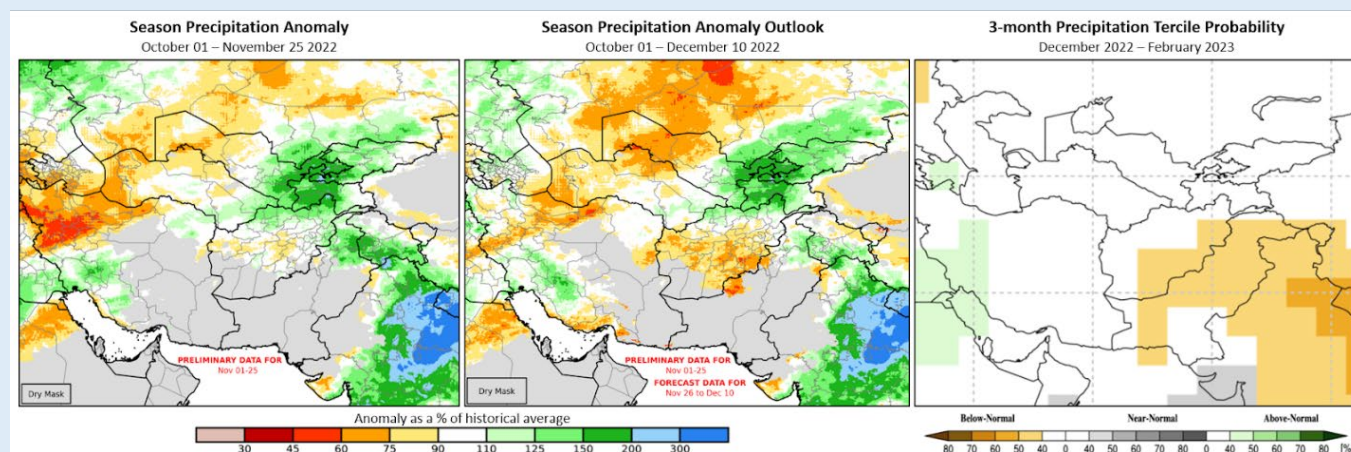
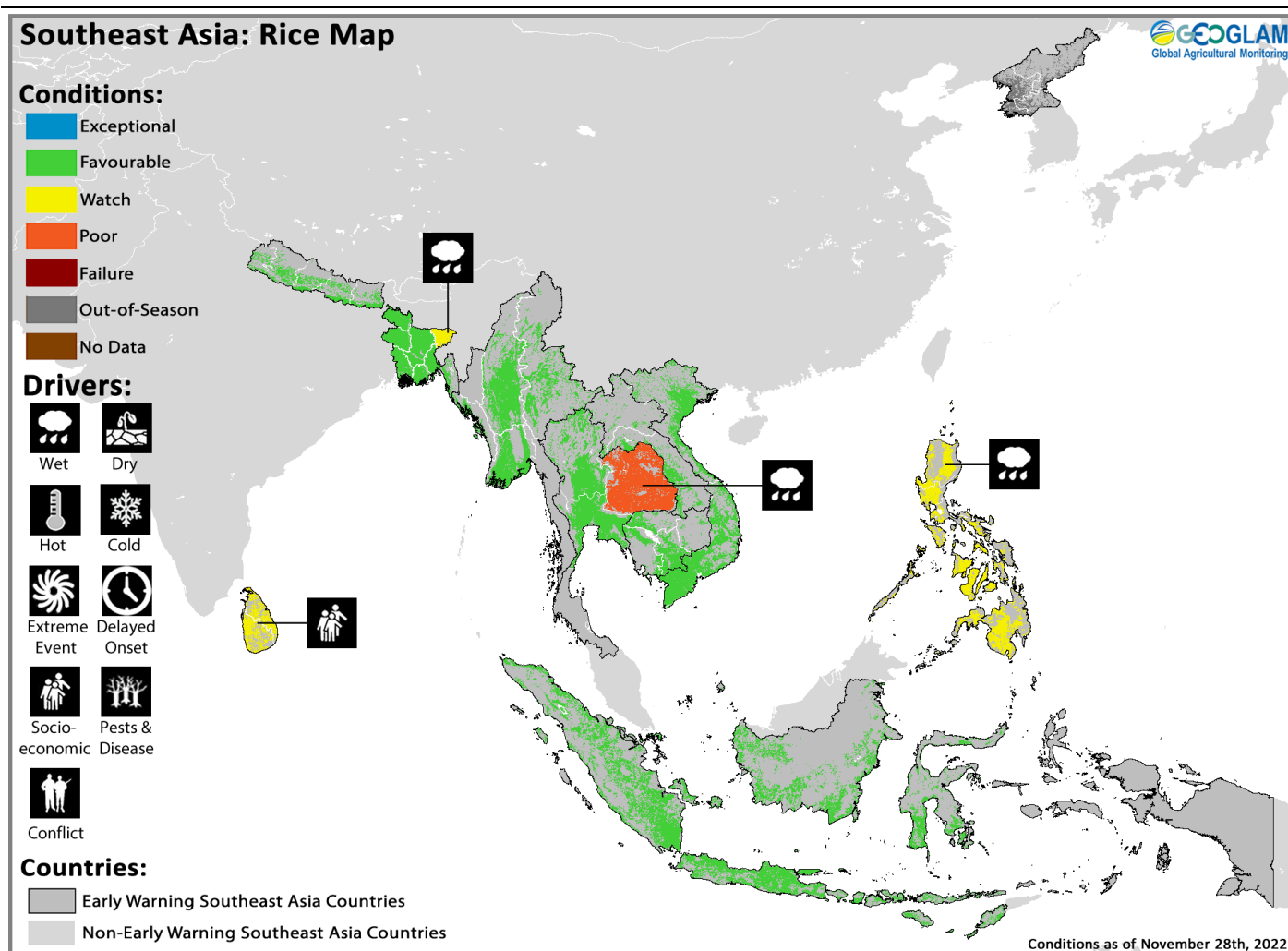


Figure 1. October to early December precipitation anomaly outlook and a probabilistic forecast for December to February. The left and middle panels are CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for respective accumulation periods. These show the percent of average precipitation for Oct. 1st to Nov. 25th, 2022 (left), using CHIRPS Prelim for Nov. 1st to 25th, and for Oct. 1st to Dec. 10th (middle), also using a CHIRPS-GEFS forecast for Nov. 26th - Dec. 10th. The right panel is a WMO probabilistic forecast for December 2022 to February 2023 precipitation, based on models initialized in November. From [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](https://www.wmo.int/en/lead-centre-long-range-forecast-multi-model-ensemble). Source: Climate Hazards Center

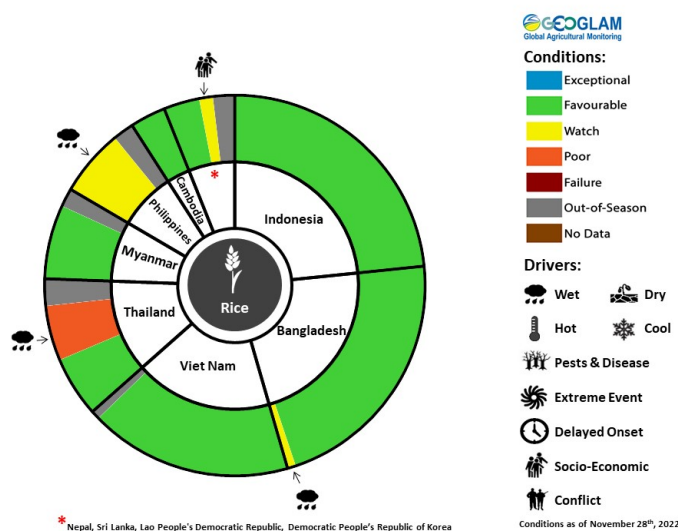
Southeast Asia



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.**

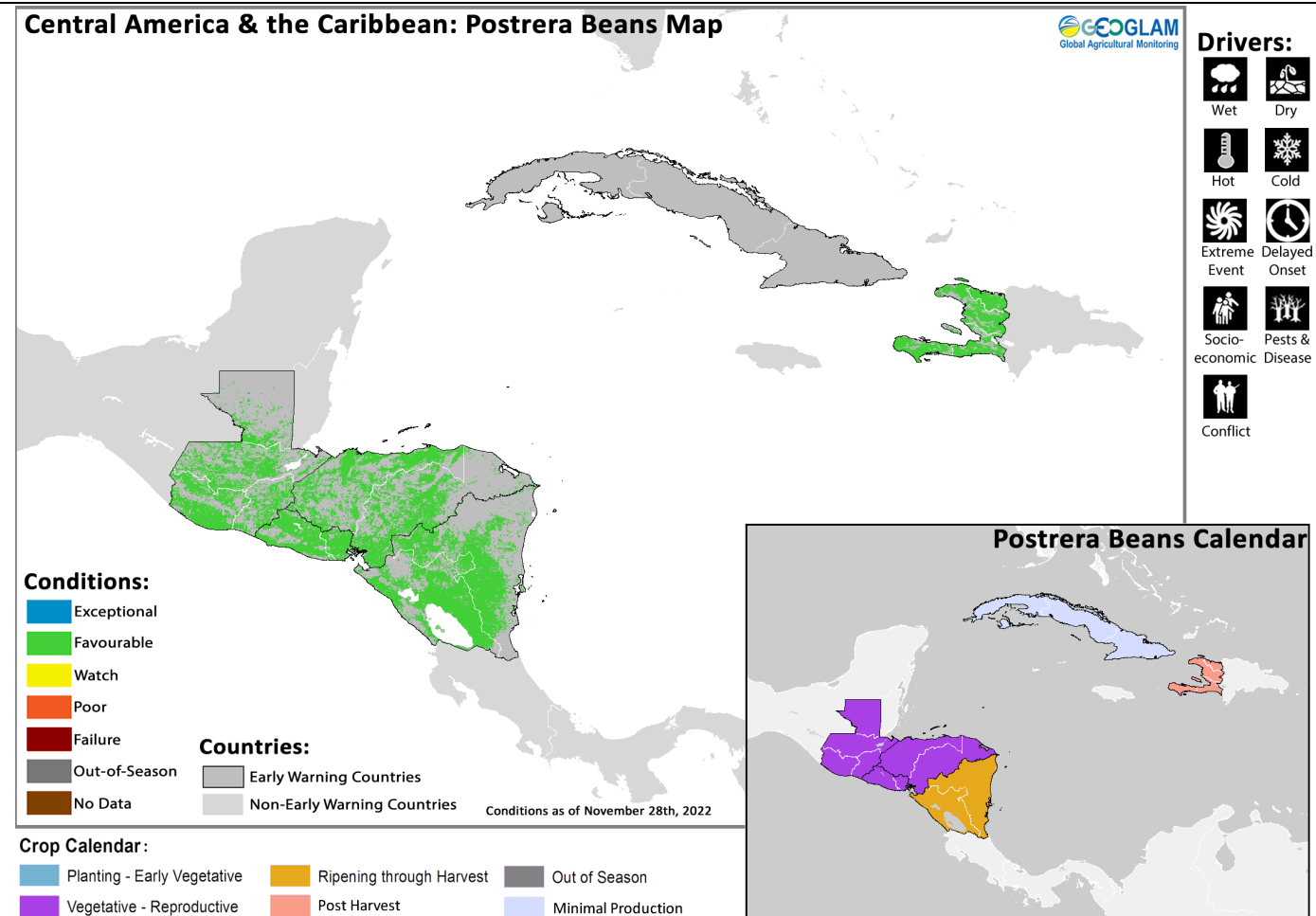
In northern Southeast Asia, harvesting of wet-season rice has reached its peak in November, and conditions are mixed as several countries and regions suffered significant flood damage due to October's typhoons and heavy rains. Crops in northeastern **Thailand** are unlikely to recover, and conditions have downgraded to watch across the **Philippines** due to impacts of flooding. Conversely, conditions remain favourable in areas not affected by flood damage, and yields in these areas are expected to be near-average due to sufficient rainfall during the growing season. Dry-season rice is now in field preparation to seeding stage with favourable weather conditions. In **Indonesia**, harvesting of dry-season rice is nearing completion. Total harvested area is 4.0 million hectares, and yield is forecast to increase slightly compared to the previous year due to sufficient precipitation during the growing season. Planting of wet-season rice has reached its second month, but progress is delayed compared to the previous year. Crops are now in the vegetative phase with good rainfall in late October to mid-November. In the **Philippines**, wet-season rice planted from July to August is now in the maturing to harvesting stage under mixed conditions as the passage of multiple tropical cyclones in October caused severe damage to crops in parts of Luzon and some parts of Visayas and Mindanao. In non-affected areas, growing conditions are favourable. In **Thailand**, harvesting of wet-season rice is ongoing under mixed conditions due to flooding in October that caused extensive damage in the main producing Northeastern region. Production is expected to be the same as the previous year's below-average level, which was also impacted by flood damage. In non-affected areas, increased rainfall is expected to benefit growing conditions. Land preparation of dry-season rice is now underway, and planted area is expected to increase from the previous year due to sufficient irrigation water supply. In **Viet Nam**, harvesting of wet-season rice is ongoing in the north with 0.77 million hectares harvested so far out of 1.52 million hectares planted. Yield is estimated at 5.5 tons per hectare, slightly higher than the previous year due to favourable weather conditions during the growing season. In the south, harvesting continues for the other wet-season rice (autumn-winter rice and seasonal rice) with a total harvested area of 0.46 million hectares and a forecast yield of 5.5 tons per hectare, the same as the previous year. Sowing of dry-season rice begins in the Mekong Delta. In **Laos**, wet-season rice is in the harvesting stage under favourable conditions. In lowland areas, harvesting progress has reached 76 percent of the planted area, and the final harvested area is estimated around 766 thousand hectares. Yield is forecast to be 4.1 tons per hectare, slightly lower than last year due to the impacts of floods and pests late in the growing season. In upland areas, final harvested area is estimated around 92 thousand hectares, and

the production is estimated around 184 thousand tons. In **Myanmar**, planting of wet-season rice is now complete at 6.04 million hectares. Crops are now mainly in the panicle forming to heading stage while early planted areas are now beginning harvest. Over 940 thousand hectares of the wet-season rice has been harvested, producing 3.7 million tons of paddy with a yield of 3.9 tons per hectare, slightly higher than last year. Recent heavy rainfall did not result in severe flooding, and most areas that were affected have been replanted. In **Cambodia**, harvesting of wet-season rice has reached 884 thousand hectares with an estimated yield of 3.7 tons per hectare, slightly lower than last year. Conditions in areas impacted by previous heavy rainfall and flash flooding have improved. Planting of dry-season rice has progressed to 20 percent of the national plan, and crops are now in the sowing to tillering stage under favourable conditions due to sufficient irrigation water supply and sunlight. In **Sri Lanka**, planting of main *Maha* season rice and maize is underway with favourable agro-climatic conditions. According to the Ministry of Agriculture, fertilizer should be available for the *Maha* season as approval has been granted for relevant companies to import urea fertilizers. However, whether farmers will have sufficient access in time is to be determined. In **Nepal**, harvesting of rice crops is now underway, and conditions are favourable due to above-average crop biomass and despite high prices of fuel and fertilizer. Planting of wheat crops continues under favourable conditions for harvest from March 2023. In **Bangladesh**, harvesting of main season maize finalized in November while harvesting of rainfed *Aman* season rice crops, which comprises 35 to 40 percent of total rice production, is nearing completion. Conditions are generally favourable with above-average biomass in all divisions except in Sylhet due to persistent flooding since the end of May. Planting of *Boro* season rice crops, which constitute 55 percent of annual rice output and is mostly irrigated, is now underway, and planting conditions are generally favourable.



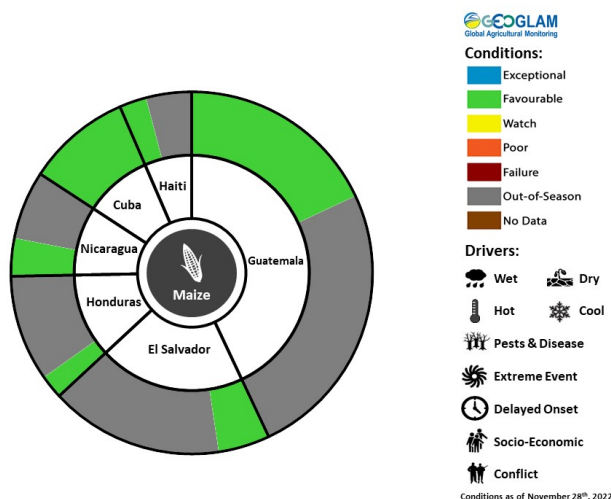
For detailed description of the pie chart please see description box on Pg. 21.

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, harvesting of *Segunda/Postrera* season cereals is now underway in **Nicaragua** while crops continue to develop in **El Salvador, Guatemala, and Honduras** for harvest from December. Overall conditions are favourable, and crops in **El Salvador and Guatemala** have recovered from the previous storm damage with mostly normal development of crops. The passage of Tropical Storm Julia in early October benefitted soil moisture in areas with deficit rainfall and further increased accumulated rainfall to above-average levels in areas with flooding. Some flood damage occurred in regions where crops ready for harvest remained in the field as some farmers awaited favourable humidity conditions and some subsistence farmers lacked grain storage. The ministries of agriculture are evaluating damages, and re-sowing of short-term crops may be carried out in some areas depending on seed availability and residual soil moisture. Similarly, the passage of Hurricane Lisa in early November resulted in soil moisture improvements in deficit areas while other areas experienced damages due to flooding and related pest infestations and diseases that could mainly affect *Postrera* season bean crop yields. According to the Central America and Caribbean FEWS NET Seasonal Monitor, above-average precipitation is expected to continue through February 2023 over southern areas, which could impact *Apante* season crops. In **Guatemala**, some floods and crop losses were reported in localized areas, mainly due to Tropical Storm Julia. According to official estimates, the area with total bean crop losses in October was about 500 hectares accounting for 0.2 percent of the annual planted area. The area with total maize crop losses in October was about 17,000 hectares accounting for 1.8 percent of the annual planted area. In **Honduras and Nicaragua**, crops are developing under generally favourable conditions despite slightly below-average precipitation in November, particularly in western **Nicaragua**, and despite some flooding in localized areas. In **Haiti**, harvesting of second season maize and bean crops finalized in November under generally favourable climatic



For detailed description of the pie chart please see description box on Pg. 21.

conditions except in localized northern areas of the country, particularly from Gonaïves to the southern part of Nord-Ouest, where below-average rainfall conditions as well as erratic temporal rainfall distribution have been observed since the beginning of the *Printemps* season and throughout the second season, resulting in below-average vegetation conditions. Conversely, considerable precipitation improvement has resulted in above-average vegetation conditions and near-average yields throughout the south of the country. However, overall production for both second season maize and bean crops is expected at a below-average level as limited access to agricultural inputs, including seeds which were obtained from the preceding below-average main season, contributed to a contraction in plantings and slightly below-average yields. In **Cuba**, harvesting of main season maize and second season rice finalized in November under favourable conditions despite below-average precipitation since September in the central region as well as previous impacts of Hurricane Ian from late September in western areas. Planting of main season rice crops is now underway, and conditions are favourable.

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 8th, 2022.

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.

	Exceptional
	Favourable
	Watch
	Poor
	Failure
	Out-of-Season
	No Data

"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.

	
Wet	Dry
	
Hot	Cold
	
Extreme Event	Delayed Onset
	
Socio-economic	Pests & Disease
	
Conflict	

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



GEOGLAM

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

Contributing partners



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