

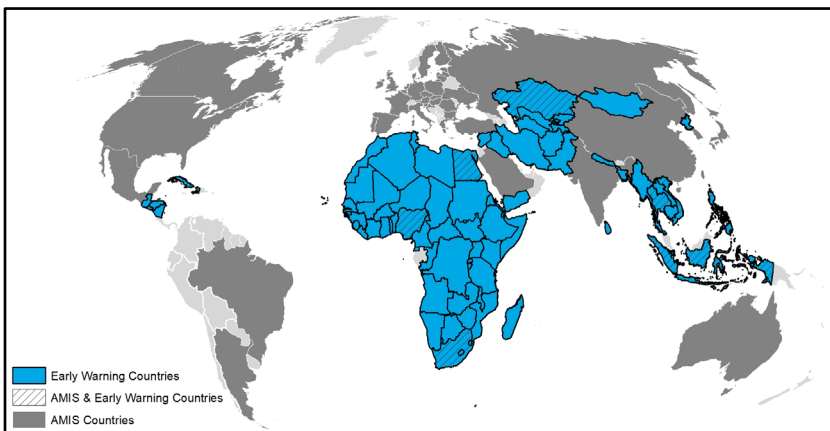


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, main season crops in South Sudan and Yemen are unlikely to recover from the impacts of conflict, socio-economic challenges, and flooding while in Ethiopia, conditions remain mixed due to conflict in the north and dry conditions in the southwest. In the south of the subregion, there is concern for short rains season cereals due to early-season dryness and forecasts pointing to below-average rains for the remainder of the October to December rainy season (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). In **West Africa**, harvesting of main season cereals is nearing completion in the south and is underway along the Sahel, and agroclimatic conditions remain favourable except in central Mali, southwestern Chad, and other localized areas with flood impacts and in conflict-affected areas. In the **Middle East and North Africa**, wheat planting has started under favourable conditions. However, forecasts are indicating the likelihood for below-average rainfall through February in eastern areas (See Regional Outlook Pg. 13). In **Southern Africa**, harvesting of wheat crops is nearing completion while planting of main season cereals is ramping up, and conditions are generally favourable. In **Central and South Asia**, harvesting of spring wheat finalized with poor conditions in Afghanistan and northeastern Kazakhstan and favourable conditions elsewhere. Planting of spring wheat is underway, and there is concern due to dry conditions that are forecast to continue through early 2023 (See Regional Outlook Pg. 17). In **Southeast Asia**, harvesting of wet-season rice is underway in northern mainland areas while harvesting of dry-season rice continues in Indonesia, and conditions are generally favourable except in parts of Cambodia, the Philippines, and northern Thailand where heavy rainfall negatively impacted crops. In **Central America and the Caribbean**, *Segunda/Postrema* season cereals are developing under mixed conditions as Tropical Storm Julia negatively impacted crops in affected areas, particularly bean crops in El Salvador and Guatemala.



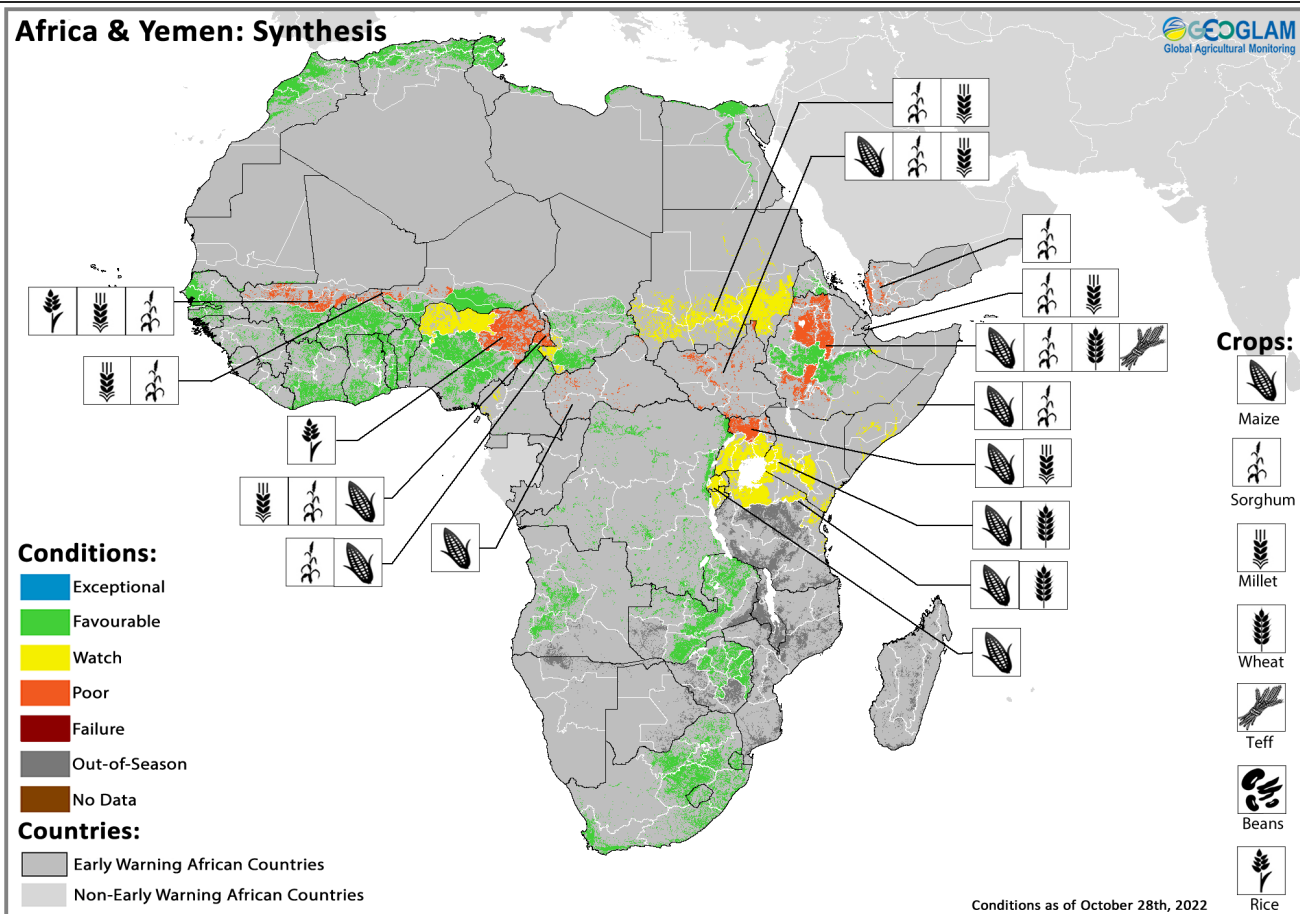
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GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of October 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of October 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 underway in the north, and crops are unlikely to recover in South Sudan and Yemen due to impacts of conflict, socio-economic challenges, and flooding while in Ethiopia, conditions are mixed for Meher season (Long Rains) cereals due to conflict in the north and dry conditions in the southwest. There is concern for short rains season cereals in the south of the subregion due to early-season dryness and forecasts pointing to below-average rains for the remainder of the October to December rainy season. In addition, the March to May 2023 rains are also likely to be below-average (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8).

WEST AFRICA: Harvesting of main season maize is nearing completion in the south of the subregion while harvesting of main season cereals continues along the Sahel, and agroclimatic conditions are favourable except in central Mali, southwestern Chad, and other localized areas impacted by heavy rainfall and flooding as well as in conflict-affected areas.

MIDDLE EAST & NORTH AFRICA: Wheat planting has begun in some areas under favourable conditions, but progress is limited as most crops are planted in November and December. Below-normal rainfall is forecast in eastern areas through early February 2023 (See Regional Outlook Pg. 13).

SOUTHERN AFRICA: Harvesting of wheat crops is nearing completion under favourable conditions. Planting of main

season cereals is underway, and conditions are favourable with above-average rainfall amounts forecast in many south and central areas through early 2023 (See Regional Outlook Pg. 15).

CENTRAL & SOUTH ASIA: Harvesting of spring wheat is complete with poor end of season conditions in Afghanistan and northeastern Kazakhstan and favourable conditions elsewhere. Winter wheat planting is underway with concern due to dry conditions that are forecast to continue through early 2023 (See Regional Outlook Pg. 17).

SOUTHEAST ASIA: Harvesting of wet-season rice is underway in northern mainland areas while harvesting of dry-season rice continues in Indonesia. While conditions remain generally favourable due to good rainfall received, conditions in parts of Cambodia, the Philippines, and northeastern Thailand have been downgraded to watch due to negative impacts of heavy rainfall.

CENTRAL AMERICA & CARIBBEAN: Harvesting of *Primera* season cereals mostly finalized last month under favourable conditions. However, post-harvest losses are expected for subsistence farmers due to the passage of Tropical Storm Julia. *Segunda/Postre* season cereals are developing under mixed conditions as the passage of Tropical Storm Julia negatively impacted crops in the early development stages. In Cuba, there is concern in areas of the west impacted by Hurricane Ian.

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 northcentral Canada, southwest United States, eastern Venezuela, Guyana, Suriname, northern and northeastern Brazil, western Argentina, South Africa, Botswana, Zimbabwe, southern DRC, western Madagascar, Iraq, Iran, Afghanistan, Tajikistan, northern Pakistan, northwest India, northern and central China, central Viet Nam, southern Laos, Cambodia, eastern Thailand, the Philippines, central Indonesia, and northern and eastern Australia.

There is also a likelihood of below-average rainfall over the central Prairies in Canada, southeast and mid-Atlantic United States, Mexico, eastern Cuba, Columbia, Ecuador, Peru, western Bolivia, western and southern Brazil, eastern Paraguay, eastern Argentina, Uruguay, southern Chile, Portugal, western Spain, southern and eastern Poland, Hungary, Bosnia and Herzegovina, Serbia, Bulgaria, Albania, North Macedonia, Greece, western and northern Türkiye, southern Belarus, Ukraine, the Russian Federation, Georgia, western Kazakhstan, western Uzbekistan, western Turkmenistan, northern Morocco, northern Algeria, southern Mali, northern Guinea, northern Côte d'Ivoire, northern Ghana, Togo, Benin, Nigeria, Cameroon, southern Chad, the Central African Republic, South Sudan, central Ethiopia, northern Uganda, northwest Kenya, southeast Tanzania, northern Mozambique, southwest Angola, western Namibia, northern Madagascar, southern India, southern China, northern Viet Nam, northern Laos, western Myanmar, Japan, and New Zealand.

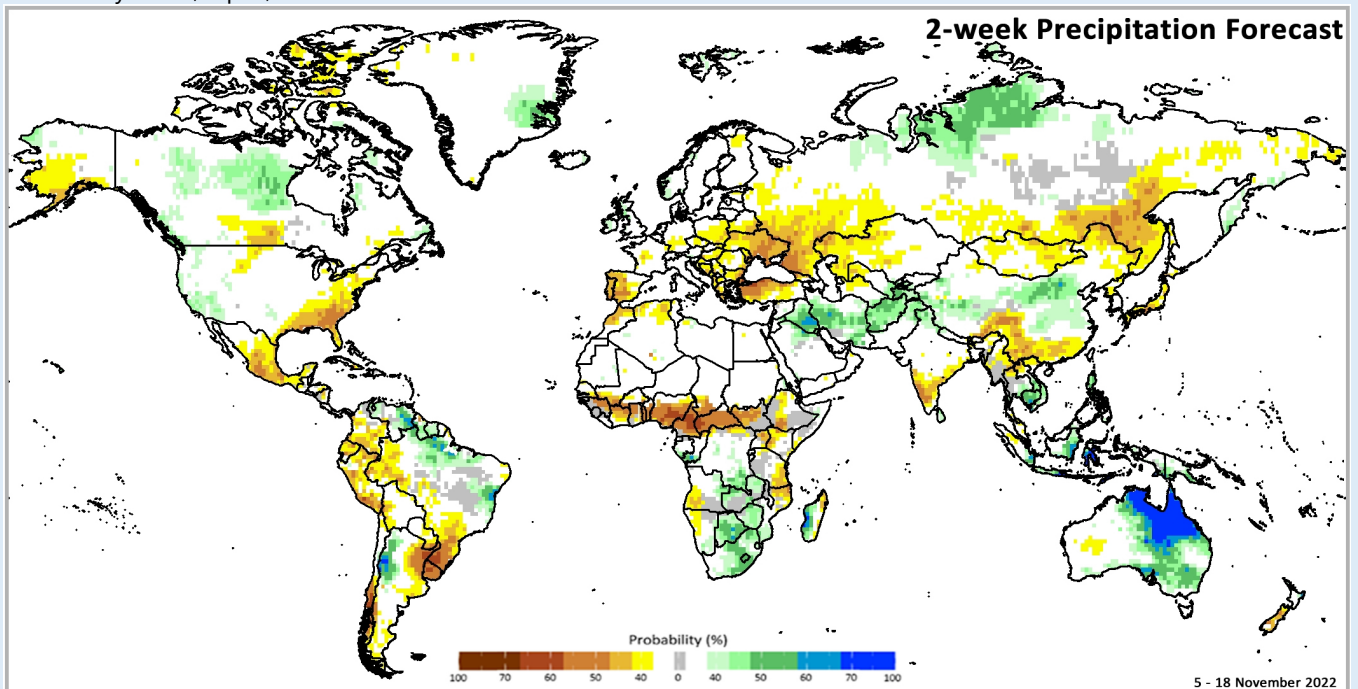


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 5 – 18 November 2022, issued on October 28th, 2022. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](https://www.iri.columbia.edu/our-work-and-services/forecasts/subseasonal-forecasts-maproom)

Climate Influences: La Niña phase is present and forecast to continue into early 2023 and Negative Indian Ocean Dipole conditions are present and forecast through November

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase. La Niña conditions will likely continue into early 2023 (86% chance for November to January and 59% chance for January to March), according to the IRI/CPC.

Negative Indian Ocean Dipole (IOD) conditions are present and are expected through November. A transition towards neutral IOD is forecast for December (~55% chance), according to the Australia Bureau of Meteorology.

Associated with the co-occurring La Niña and negative IOD conditions there are very high risks of severe drought impacts across the Horn of Africa, and heavy rainfall and flooding in Australia and southeast Asia. Additionally, La Niña conditions for a third year in a row raises concerns about repeat dry conditions in eastern East Africa, southern South America, Central and Southern Asia, and southern North America, where multiple rainfall seasons have been below-average since late 2020. Historically, co-occurring La Niña and negative IOD events have led to very dry conditions in East Africa during boreal fall, and fall La Niñas are very often followed by poor spring rains as well, even if La Niña strength wanes.

Source: UCSB Climate Hazards Center

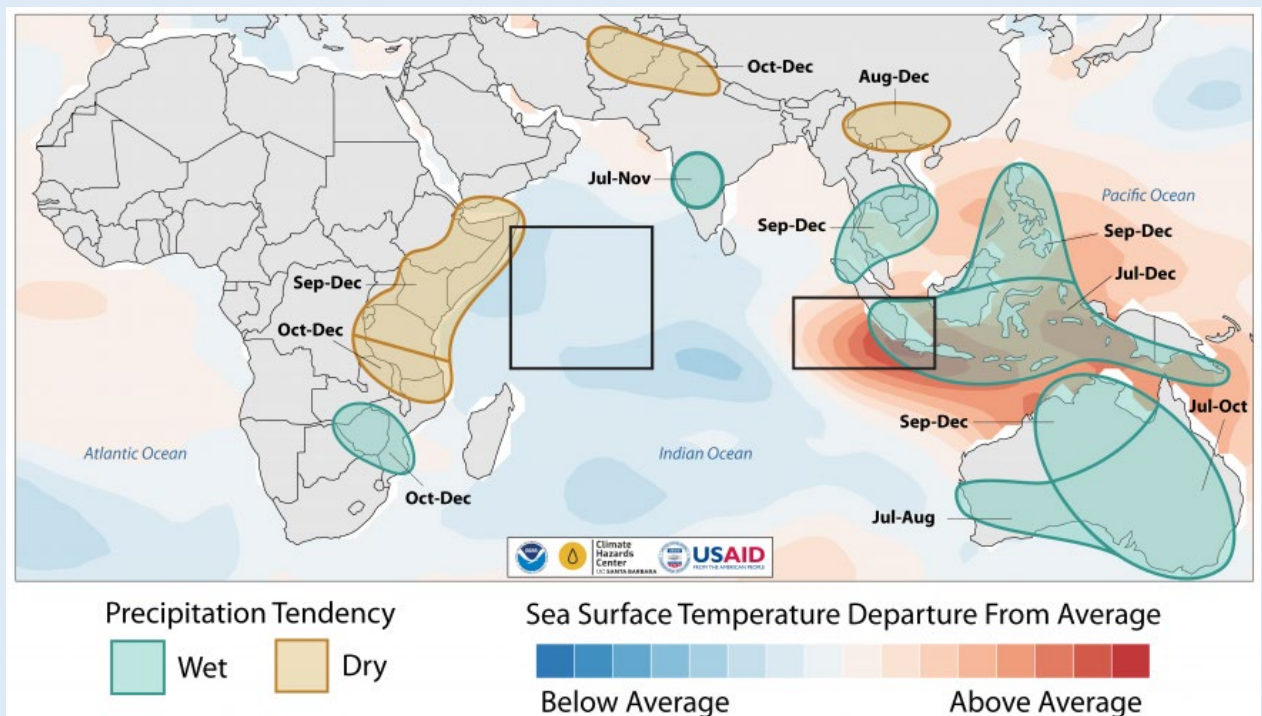
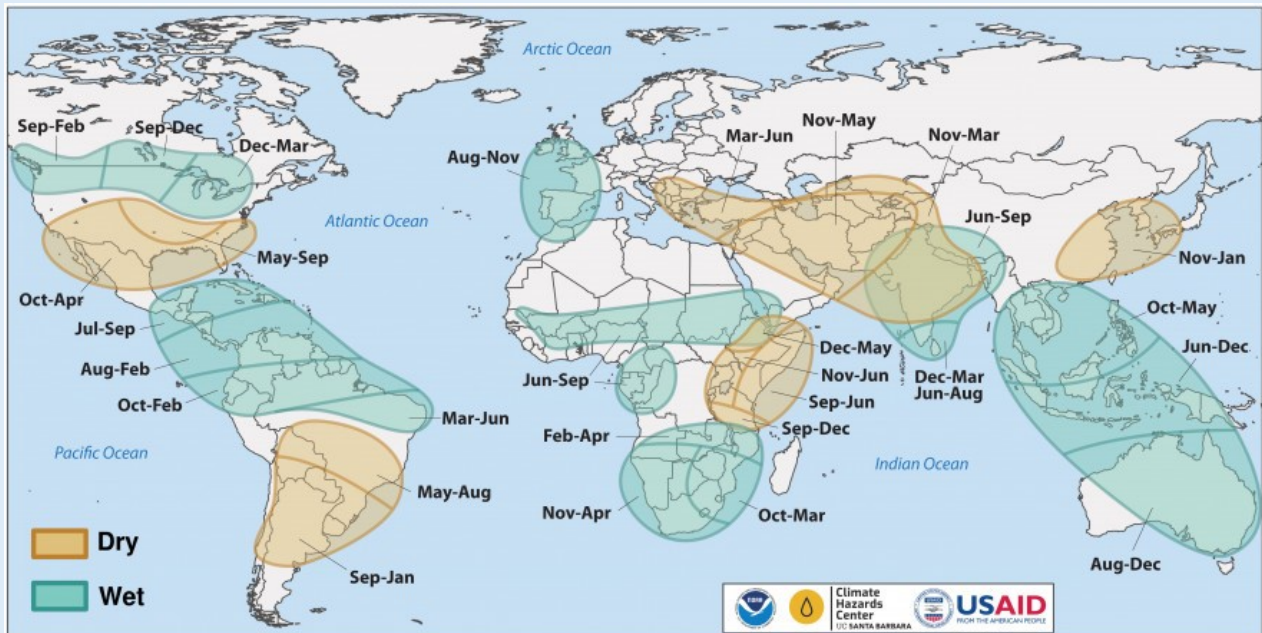


Figure 1. Precipitation tendency during *La Niña* (top) and negative *Indian Ocean Dipole* conditions (bottom). Source: FEWS NET Agroclimatology Fact Sheets on La Niña and the Indian Ocean Dipole. Source: NOAA & CHC & FEWS NET

Seasonal Forecast Alert: Elevated chances for below-normal rainfall in the eastern Horn for March to May 2023 which could result in an unprecedented sixth consecutive poor rainfall season in affected areas

- A below-normal rainfall season in the eastern Horn is the most-likely scenario for March-to-May 2023
- Amid a food security crisis, the region is at risk of prolonged drought impacts and a 6th dry season

There are elevated chances for below-normal March-April-May (MAM) 2023 rainfall in the eastern Horn, based on the pattern of forecast Pacific sea surface temperatures (SST). This pattern is often associated with below-average rainfall in the eastern Horn during this season. A strong negative Western V Gradient (WVG) is forecast for MAM 2023, associated with very warm SST in the western tropical and subtropical regions of the Pacific Ocean ('Western V' region) and near-average SST in the central-eastern equatorial Pacific (Nino3.4 region). The WVG represents the combined effects of La Niñas and climate warming trends; these resulting Pacific SST gradients promote strong and persistent La Niña-like disruptions to wind and rainfall patterns. In eastern East Africa, most recent MAM seasons that have followed or coincided with La Niña events have had below-normal rainfall (75% of these since 1998).

Models provide skillful predictions for the MAM WVG at this lead time, and particularly for negative WVG conditions. Figure 1-middle shows this using historical October NMME ensemble mean WVG forecasts and observed WVG values. Based on the MAM 2023 WVG forecast (shown in red), and average rainfall for areas south and east of 8N, 5S, during similarly forecast MAM seasons, there is a 62% chance of below-normal rainfall in MAM 2023 ([explanation](#)). A rainfall outlook map for MAM 2023 based on these same seasons shows below-normal rains frequently occurred across many locations (Figure-1 right). Wetter outcomes are of course possible, and in some cases can be difficult to predict in advance.

While there are limitations to accuracy at this lead time, current SST forecasts provide a clear picture: Negative WVG conditions will very likely follow the currently active La Niña. This situation is associated with almost a doubling of the chances of below-normal MAM rainfall in eastern East Africa. Considering the four consecutive poor rainfall seasons in the eastern Horn since late 2020, the pessimistic expectations for the current OND 2022 season and forecast MAM 2023 season, and the ongoing severe impacts to food, nutrition and water security, population displacement, and health and mortality, this situation is extremely concerning.

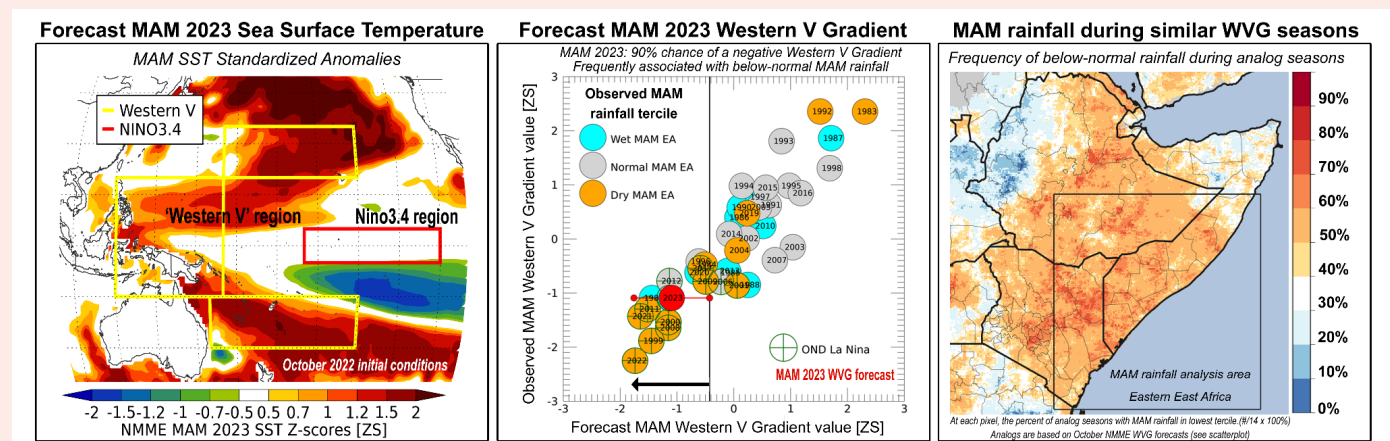
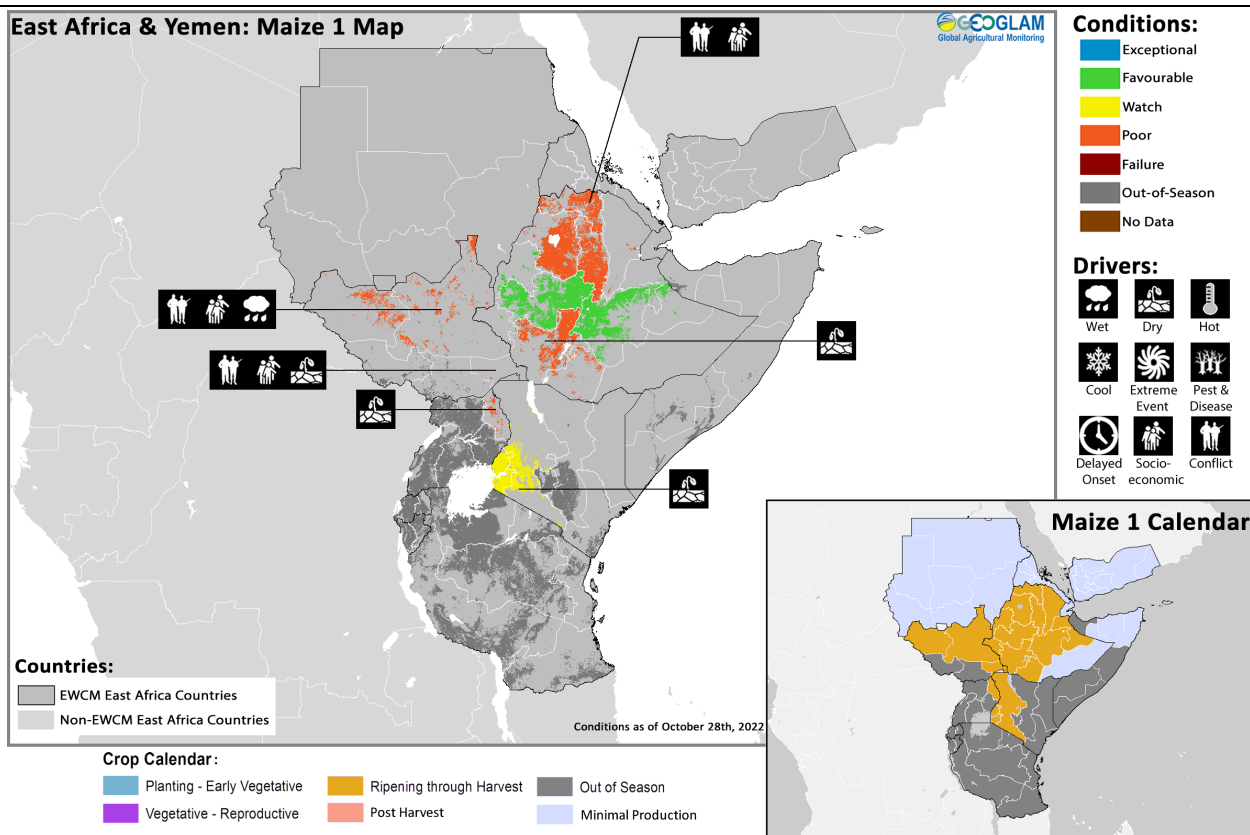


Figure 1. A concern for MAM 2023 rainfall in Eastern East Africa ([explanation](#)). Left: Forecast March-April-May (MAM) 2023 Indian and Pacific Ocean sea surface temperatures (SST). Middle: Western V Gradient (WVG) SST index values. These are based on NMME model forecasts from October 1982-2022. Boxes on the map show the SST regions used for the WVG index: $WVG = Z(Nino3.4\ SST) - Z(Western\ V\ SST)$. The scatter plot shows how forecast WVG values at this lead time compare to observed WVG values. The forecast MAM season is labeled at each point. Colors: Red- MAM 2023 WVG forecast and 80% confidence interval, based on bootstrapping previous forecasts. Orange, silver, and cyan- Identify below-normal, normal, and above-normal MAM rainfall outcomes, respectively. Crosses: MAM seasons after La Niña events that were active during the previous October-to-December (OND) or longer. Right: Map showing the per-pixel frequency of below-normal CHIRPS rainfall during the 14 seasons selected as analogs for MAM 2023, based on these having WVG forecasts within the 80% confidence interval.

Source: UCSB Climate Hazards Center

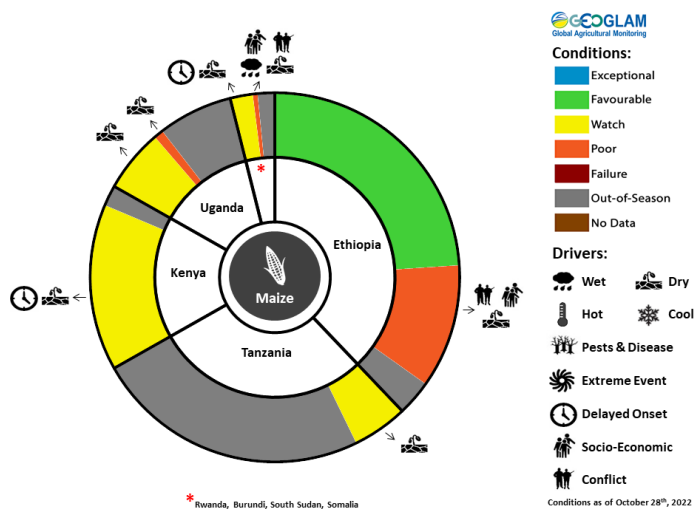
East Africa



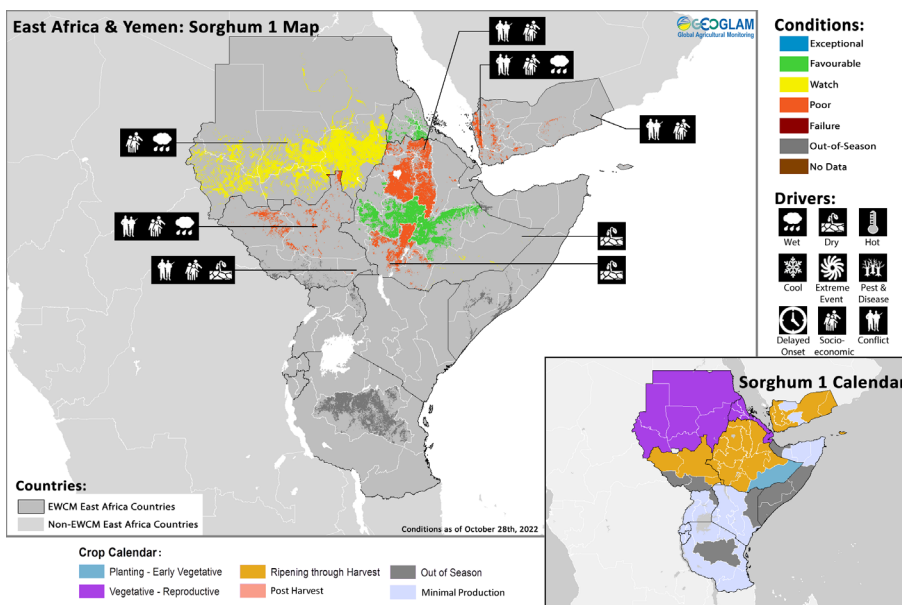
Crop condition map synthesizing Maize 1 crop conditions as of October 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled on the map with their driver.**

Across the north of the subregion, harvesting of main season cereals is underway in **South Sudan** and **Yemen** while crops continue to develop in **Sudan**, **Eritrea**, and **Djibouti** for harvest from November. Second season cereals are also in vegetative to reproductive stage in southern **South Sudan**. Crops in **South Sudan** and **Yemen** are unlikely to recover from persistent conflict and related socio-economic challenges impacting agricultural production, heavy seasonal rainfall resulting in flooding in the Sudd Wetland areas of **South Sudan** and in western **Yemen**, and dry conditions in southeastern **South Sudan**. Additionally, concern remains in the Nile river basin in **Sudan** due to torrential rains and flash floods throughout the season as well as macro-economic challenges impacting agricultural input access and production. Conversely, conditions in **Djibouti** and **Eritrea** remain favourable. In **Ethiopia**, harvesting of *Meher* season (Long Rains) cereals continues under mixed conditions. Crops are unlikely to recover in the conflict-affected northern regions of Tigray, Afar, and Amhara as well as in SNNPR region located in the southwest and in southern Oromia where dry conditions continue. Elsewhere in the country, harvesting conditions remain favourable. In South Somali, planting of main season cereals has just begun with concern due to persistent dryness.

Across the south of the subregion, harvesting of main season cereals is nearing completion in northern and Karamoja region in **Uganda** and unimodal and major producing areas of **Kenya** under mixed conditions with below-average yields expected in **Uganda**. Planting and development of second season cereals is underway in **Uganda**, **Burundi**, **Rwanda**, **Somalia**, the **United Republic of Tanzania**, the key-producing unimodal central region in **Kenya**, and bimodal marginal agriculture areas of southeastern **Kenya**. There is concern in most areas due to early-season dryness and forecasts pointing to below-average rains for the remainder of the October to December rainy season. Communities across the eastern Horn continue to face the devastating impacts of drought following four consecutive seasons of below-average rainfall in some areas, with the current rainy season very likely to be below-average. An exceptional five-season drought sequence is expected in southeastern areas of the Horn. In addition, the March to May 2023 rainfall season is also likely to be below-average (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8).



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



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

persistent dryness. In **Sudan**, main season millet and sorghum crops continue to develop for harvest from November, and concern remains due to the impacts of torrential rains and flash floods throughout the season, particularly in the Nile River basin, as well as macro-economic challenges that impact access to agricultural inputs. Land preparation is underway for wheat crops in the east and north, and planting will begin next month. In **South Sudan**, harvesting of 2022 crops is underway in northern and central unimodal rainfall areas, while in southern bimodal rainfall areas, 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. The country has faced four consecutive years of unusually widespread flooding, with this year's large-scale flooding affecting 9 out of 10 states. In **Djibouti**, main season millet and sorghum crops are in vegetative to reproductive stage for harvest from November, and overall conditions remain favourable. In **Eritrea**, main season sorghum and wheat crops are in vegetative to reproductive stage for harvest from November, and overall conditions remain favourable. The June to September *Kiremti* rainy season was characterized by a timely onset with cumulative precipitation of 5 to 20 percent above-average, benefitting crop establishment and development. In **Yemen**, harvesting of main season sorghum crops is nearing completion, and below-average yields are expected due to conflict and related socio-economic challenges throughout the country as well as heavy rains and widespread flooding that impacted much of the country from the second half of July through August, particularly in the west.

Southern East Africa

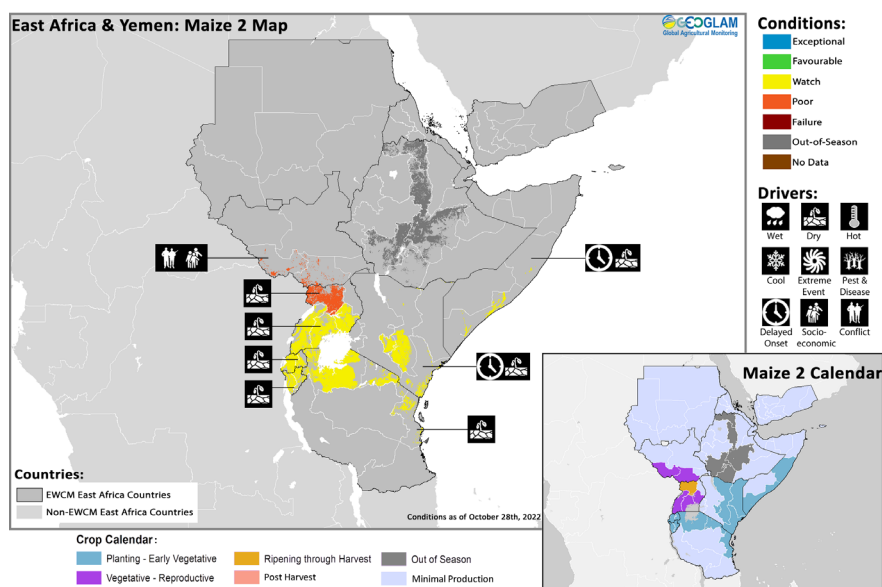
In **Somalia**, planting of *Deyr* season maize and sorghum crops is underway with concern in all areas as the country continues to face unprecedented drought conditions following four consecutive failed rainy seasons as well as the currently delayed onset of the October to December *Deyr* rains. According to the FEWS NET Somalia Seasonal Monitor, most of the country remained dry during the October 1st to 20th period, except for some localized areas in the south, centre, and northwest. Moderate to large seasonal rainfall deficits are expected by mid-November in southern areas, and dry conditions are forecast to continue into early 2023 (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). In **Uganda**, harvesting of main season cereals finalized in the north and is nearing completion in Karamoja, and below-average yields are expected due to generally poor seasonal rainfall performance and despite rainfall in September that resulted in some crop improvement. Harvesting of second season maize crops is now underway in the north. Elsewhere in the country, second season maize crops are in the reproductive stage for harvest from December. The September to November rainy season had a timely onset with average to slightly below-average precipitation. However, rains in October were below-average, and forecasts indicate below-average precipitation for the remainder of the cropping season (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). In **Kenya**, harvesting of Long Rains cereals is underway in unimodal and major producing areas of the west and Rift Valley as well as in the unimodal central region. Conditions in the west and Rift Valley have downgraded to watch as dry conditions may slightly impact production outcomes. The 2022 Long Rains production estimate for maize in medium and high rainfall areas of the west and Rift Valley is projected to decline by 10 to 15 percent below the long-term average due to the late onset of the Long Rains and dry spells during the critical stages of growth that resulted in reduced production per unit area in

Northern East Africa & Yemen

In **Ethiopia**, harvesting of *Meher* season (Long Rains) cereals continues under mixed conditions. Crops in SNNPR and southern Oromia are unlikely to recover from below-average rains since June. Many areas in the south and southeast have experienced below-average *Belg* and *Kiremt* rains with erratic distribution since March 2022. Conversely, rainfall is above-average in areas of the north and west (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). Additionally, below-average yields are expected in the northern regions of Tigray, Amhara, and Afar where conflict and related socio-economic challenges continue to impact agricultural activities. Conversely, agroclimatic conditions in Afar have improved from last month's combined impacts of insufficient soil moisture in the south and flooding in some areas. Elsewhere, harvesting conditions are favourable. In South Somali region located in the southeast, planting of main season cereals has just begun with concern due to

most counties. Conversely, conditions remain favourable for mostly irrigated rice crops in the centre as the recently constructed Thiba dam has increased irrigation water supply almost two-fold and is expected to benefit crop development. In October, the national irrigation board indicated that the dam was full to capacity. Planting of Short Rains maize crops is now underway in bimodal southeastern marginal agricultural areas. There is concern due to delayed rainfall onset in combination with moderate to large seasonal deficits expected by mid-November, and dry conditions are forecast to continue into early 2023 (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). In **Rwanda** and **Burundi**, planting of Season A maize crops began this month. While soil moisture levels and vegetation conditions are currently at a good level in **Rwanda** and northern **Burundi**, there is concern in both countries due to current dry conditions that are forecast to continue through early 2023 (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8) as well as low fertilizer application in **Rwanda**.

In the **United Republic of Tanzania**, planting of *Masika* season wheat and *Vuli* season maize is underway in bimodal areas of the northeast, north, and northern coast for harvest from December. There is concern as moderate to large seasonal deficits are expected by mid-November in north and eastern areas, and dry conditions are forecast to continue into early 2023 (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 8). Land preparation is underway for *Msimu* season cereals in unimodal and major producing areas of the centre and south, and planting will begin next month.



*Crop condition map synthesizing Maize 2 conditions as of October 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 January 2023, resulting in a fifth consecutive below-average rainfall season in some areas

- High alert for likely severe drought conditions during October-December 2022
- Very poor observed rainfall conditions are forecast to continue

Very poor rainfall performance materialized during recent weeks in eastern Kenya, Somalia, [southern and southeastern Ethiopia](#), and in areas to the south (Figure 1-left). The ITCZ maintained an anomalous northern position into October that continued above-average rainfall in northern and western Ethiopia and Sudan.

Improved water resources are badly needed for human health, livestock support, and cropping opportunities, following the multi-year drought in eastern areas. While rains in late October benefitted portions of eastern Kenya and southern Somalia, consistent and expansive wet conditions are required for drought recovery. Below-average rainfall is forecast during the next two weeks, across much of eastern Kenya, southern Somalia, southern and southeastern Ethiopia, and Tanzania. Moderate-to-large seasonal rainfall deficits are expected by mid-November, and many locations in central and eastern Kenya, southern Somalia, and northern and eastern Tanzania are predicted to have close-to or less-than half of typical rainfall amounts since September 1st (Figure 1-middle).

In many of the affected below-average areas, drier-than-average conditions will likely continue due to impacts from La Niña and a negative Indian Ocean Dipole. Longer range outlooks are also pessimistic. ICPAC is forecasting elevated chances of below-normal November 2022 to January 2023 rainfall across equatorial and southern areas (Figure 1 right).

The October-to-December (OND) 2022 rainy season is very likely to be below-average and poorly distributed in the southeastern Horn, marking an exceptional and unprecedented five-season drought sequence, which follows the driest [March-April-May](#) season since reliable records began in 1950. Based on the conditions to-date and pessimistic rainfall outlooks, there is a high risk of severe drought impacts during OND 2022. During similar very dry seasons in eastern Kenya and southern Somalia, water resources, pasture conditions, and crop outcomes were very poor.

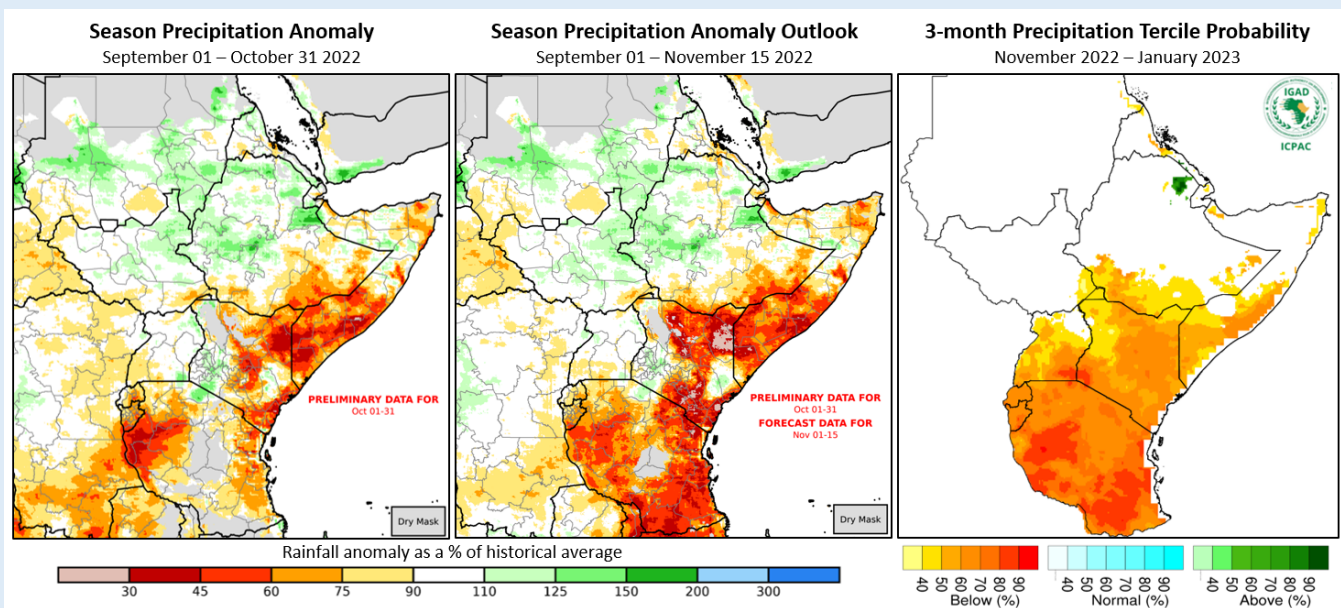
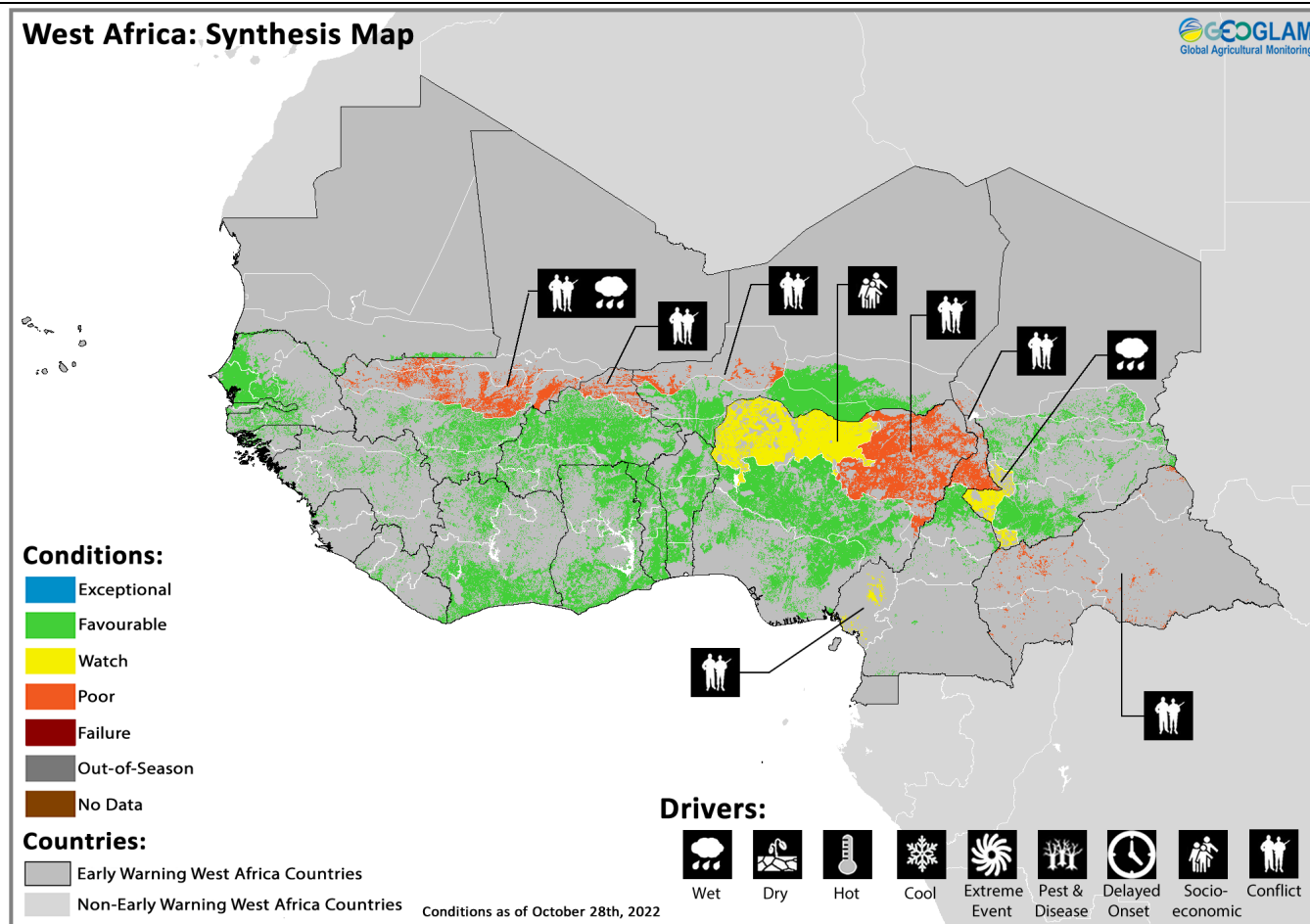


Figure 1. September-to-October precipitation anomaly, September-to-November precipitation anomaly outlook, and a 3-month precipitation tercile probability for November 2022 to January 2023. The left and middle panels are CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for their respective accumulation periods. These show the percent of average for September 1st to October 31st, 2022 (left) and for September 1st to November 15th (middle). Preliminary data is used for October 1st – 31st. In the middle panel, CHIRPS-GEFS forecast data is used for October 26th - November 15th. The right panel is an IGAD Climate Prediction and Applications Centre (ICPAC) probabilistic forecast for November 2022 to January 2023 precipitation.

Source: UCSB Climate Hazards Center

West Africa



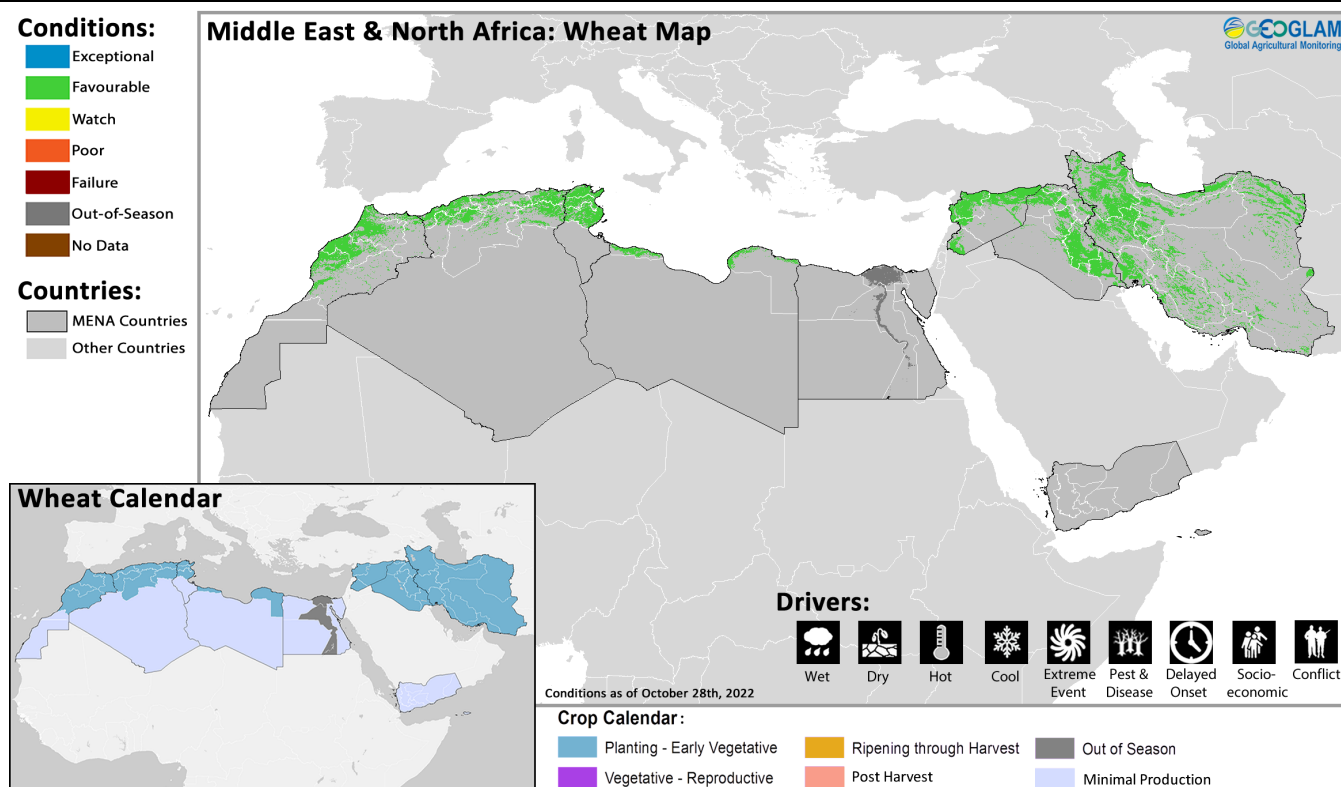
Crop condition map synthesizing crop conditions as of October 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions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

Along the south of the subregion, harvesting of main season maize finalized in northern **Ghana**, northern **Togo**, northern **Benin**, and the Far North region of **Cameroon** while harvesting is nearing completion in **Guinea**, central **Cameroon**, and the **Central African Republic**. Harvesting of second season maize crops is underway in central **Cameroon** while crops continue to develop in **Cote d'Ivoire**, southern **Ghana**, southern **Togo**, southern **Benin**, and southern **Nigeria**. Along the Sahel, harvesting of main season cereals is underway in **Mauritania**, **Senegal**, **Gambia**, **Guinea-Bissau**, **Mali**, **Burkina Faso**, **Niger**, and **Chad** while planting of second season cereals is underway in **Mauritania** and **Mali**. Throughout the subregion, agroclimatic conditions remain generally favourable for crop development except in central **Mali**, southwestern **Chad**, and other localized areas impacted by flooding. The 2022 rainfall season has been average to above-average and well distributed throughout the subregion, generally benefitting crop growth and development. However, above-average rainfall, saturated soils, and flooding are impacting crops in localized areas of the subregion, particularly along parts of the Sahel and adjacent areas of the south of the subregion, including northern **Ghana**, northern **Togo**, parts of **Benin**, central and northern **Nigeria**, northern **Cameroon**, and northern parts of the **Central African Republic**. Conversely, in localized parts of southwestern **Mauritania**, western **Mali**, **Guinea**, **Sierra Leone**, **Liberia**, western **Cote d'Ivoire**, central **Ghana**, central and southern **Nigeria**, and southwestern **Cameroon**, seasonal rainfall deficits from April to the end of the second decade of October range from slight to moderate. However, the water requirement satisfaction index for main season cereals remains sufficient. Additionally, there is concern in areas impacted by persisting conflict, including central **Mali**, northern **Burkina Faso**, western **Niger**, northeastern **Nigeria**, Lac region in **Chad**, the Far North and southwest regions of **Cameroon**, and the **Central African Republic**. In these areas, crop conditions in the harvesting stage have been downgraded to poor. Below-average maize yields are also possible in northwest and north-central **Nigeria** where inter-communal clashes and crime, separate from the conflict in the northeast, are impacting field access and agricultural activities.

In **Mauritania**, a timely start to the rainy season in June was followed by average to above-average rainfall from June through August that supported planting and crop establishment. However, flooding through mid-September resulted in localized crop damages, particularly in the south and southeast. Overall 2022 national cereal production is forecast at a near-average level of 400,000 tonnes and 13 percent above the previous year's reduced level. In **Mali**, sufficient rains at the start of the rainy season from late May through June supported early planting activities. However, below-average rainfall amounts in July through early August in some south, central, and western regions resulted in planting delays, and while good rains through September supported crop development, flooding resulted in some crop losses. Furthermore, limited availability and the high price of fertilizer is expected to curb yield outcomes. In

Burkina Faso, a timely start to the rainy season in June was followed by average to above-average rainfall through September that generally supported planting and crop development. However, limited availability, high prices, and low subsidized volumes of fertilizers resulted in low application that reduced yields. Overall 2022 cereal production is forecast at 4.3 million tonnes and 10 percent below the 2021 near-average level. In **Niger**, a timely start to the rainy season in June was followed by erratic rainfall distribution from July to September that impacted crops in the west and east and then torrential rains in August and September that resulted in severe flooding and localized crop losses. Furthermore, about 48,000 hectares of crops were reportedly impacted by pests. National cereal production for 2022 is forecast at 4.7 million tonnes, which is above last year's reduced harvest, as crops benefitted from abundant rains as well as the distribution of fertilizers and pesticides by the government. However, production is also 10 percent below the five-year average due to impacts of localized flooding, pests, and ongoing conflict. In **Chad**, a timely onset of seasonal rains in April benefitted early planting conditions. However, a dry spell in southern areas between May and June as well as torrential rains across the country between July and September impacted crop development, and flooding resulted in the destruction of 300,000 hectares of crops as well as disruptions to agricultural livelihoods and loss of productive assets. Furthermore, more than 500 hectares of crops were affected by pests in the southwest. In **Benin**, heavy rainfall fell across central areas in September, bringing flooding and localized crop damage across 22 municipalities, particularly in Ouesse, Savalou, Zogbodome, Zagnanado, Tchaourou, Karimama, Dangbo, Bonou, Ze, and Athieme. In **Nigeria**, most of the country experienced a timely start to the rainy season except in the northeast where rainfall delays resulted in delays to planting activities. Average to above-average precipitation from July to September benefitted crops but resulted in flooding along riverine areas in the centre and northeast, affecting 640,000 hectares of crops as of mid-September. As of late October, the country was experiencing widespread flooding in 29 of the country's 36 states, resulting in localized damage to farmland as well as infrastructure and livelihood loss. The northeastern states of Adamawa, Borno, and Yobe have also been affected by unprecedented heavy rainfall since the onset of the rainy season in June as well as spillage from when the Lagdo dam in northern Cameroon was opened to release excess water. Conversely, the southeast has received less than 80 percent of normal rainfall during the last two months. However, the below-average precipitation in the southeast is not expected to have a significant impact on crop production as the region experiences continuous rainfall throughout the year except in the small western bimodal zone. Furthermore, while a recent decrease in violent incidents allowed more farmers to cultivate in the northeast, rising insecurity in the north centre and northwest, separate from the conflict in the northeast, resulted in limited field access and restricted agricultural activities. National cereal production is expected to be slightly below-average due to impacts of flooding, conflict in the north, and low application of agricultural inputs due to high international prices of fuel and fertilizer. In the **Central African Republic**, above-average precipitation from July benefitted crop development but resulted in localized flooding and crop damage. National cereal yields are likely to be impacted by persisting conflict as well as elevated international prices of fuel and fertilizer that have reduced their use and application, particularly among smallholder farmers.

Middle East & North Africa



Crop condition map synthesizing wheat conditions as of October 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 has just begun in some areas, and planting conditions are currently favourable. However, progress is currently limited as most planting occurs in November and December once soil moisture is replenished, and below-normal rainfall conditions are forecast in eastern areas of the subregion through early November. There is also an increasing likelihood of below-normal rainfall through February 2023 in eastern and some western areas according to recent forecasts (See Regional Outlook Pg. 13). In **Iran**, accumulated precipitation from September to early October was 80 percent below the 10-year average in the mostly rainfed wheat-growing areas. More rainfall is particularly needed in western areas where a large portion of wheat is grown. **Iraq** and **Syria** are also facing severe dry and hot weather that could damage crops. In **Egypt**, harvesting of summer-planted rice and maize crops is nearing completion, and conditions remain favourable. Irrigated rice prospects are currently poor in **Iraq** as the rice area has strongly decreased in Qadissiya and Najaf due to a shortage of irrigation water, and vegetation conditions are close to average in **Iran**.

Regional Outlook: Increased chances for below-normal November 2022 to February 2023 rainfall across eastern areas

Dry conditions are forecast in Morocco, Algeria, Tunisia, and western Libya through the first week of November. Moderate early season rainfall deficits may develop in northern areas of these countries, according to a two-week unbiased GEFS forecast combined with late September to late-October rainfall estimates (Figure 1-left).

There are increased chances of below-normal November 2022-to-February 2023 rainfall across eastern areas of the region, and also in some western locations, according to October forecasts from several international forecasting centers. Seasonal temperatures will likely be warmer-than-normal.

Across eastern and western areas, close monitoring is recommended. The long-range rainfall forecast signal is weak in western areas, while current indications for a sluggish start to seasonal rains are consistent with NMME and WMO forecasts for possible below-normal OND 2022 rainfall in some areas. Figure 1-right shows the latest WMO forecast for November–December rainfall. 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.

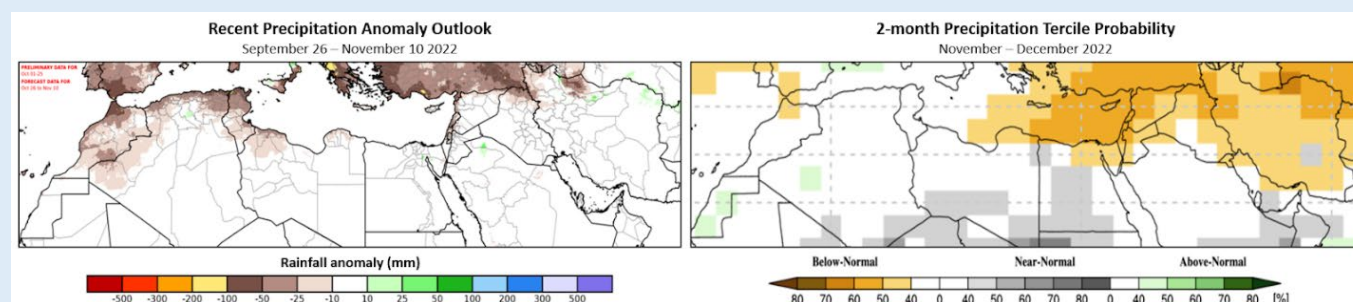
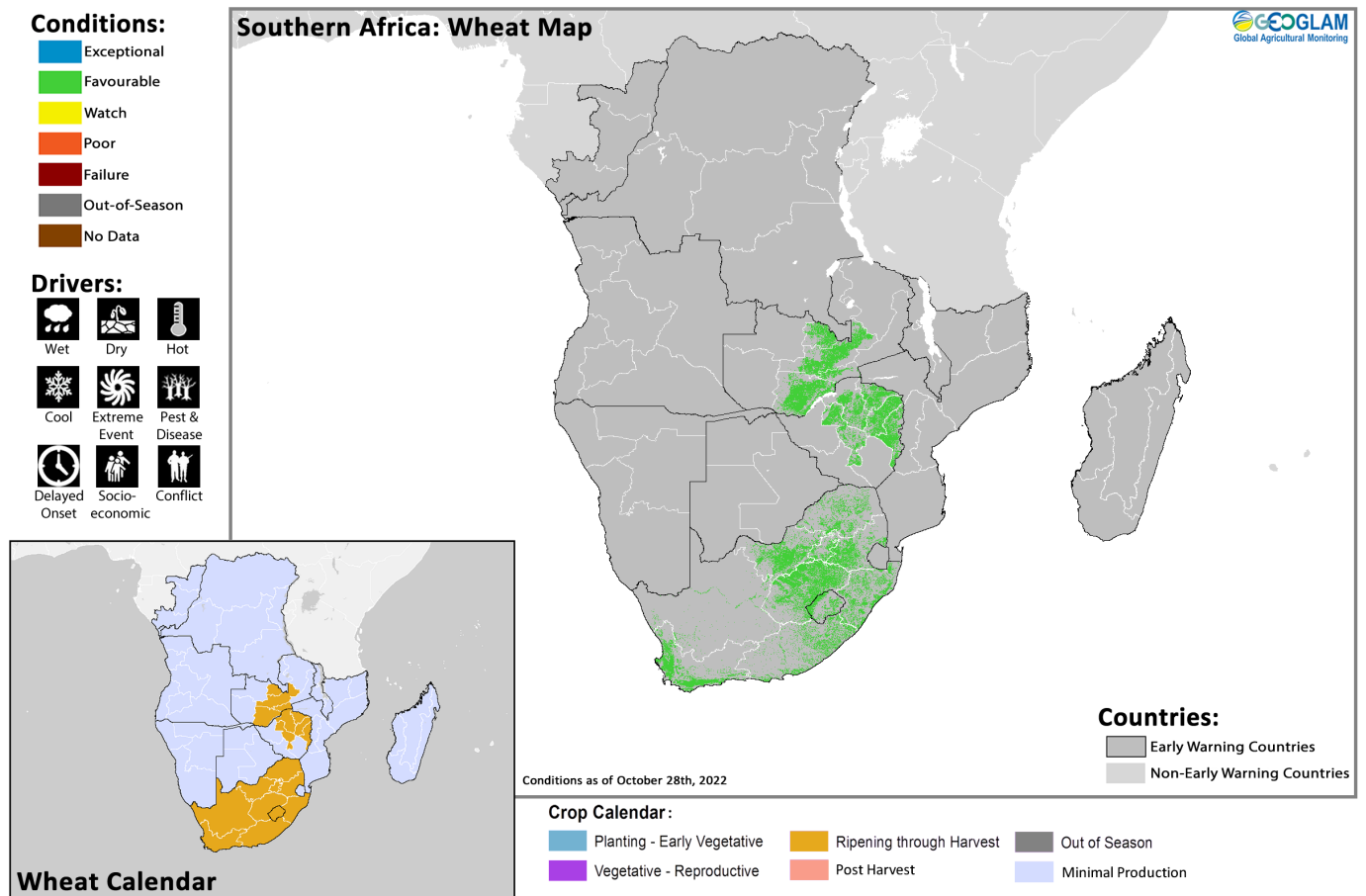


Figure 1. September 26th to November 10th, 2022 rainfall anomaly outlook and a 2-month WMO probabilistic precipitation forecast for November to December 2022. The left panel is a CHC Early Estimate, which compares current precipitation totals to the 1981-2021 CHIRPS average for respective accumulation periods. This panel shows the precipitation anomaly (mm) for September 26th to November 10th, 2022, using CHIRPS Prelim for October 1st-25th and CHIRPS-GEFS for October 26 - November 10th. The right panel is a WMO probabilistic forecast for November-to-December 2022 precipitation terciles, based on models initialized in October. From [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#).

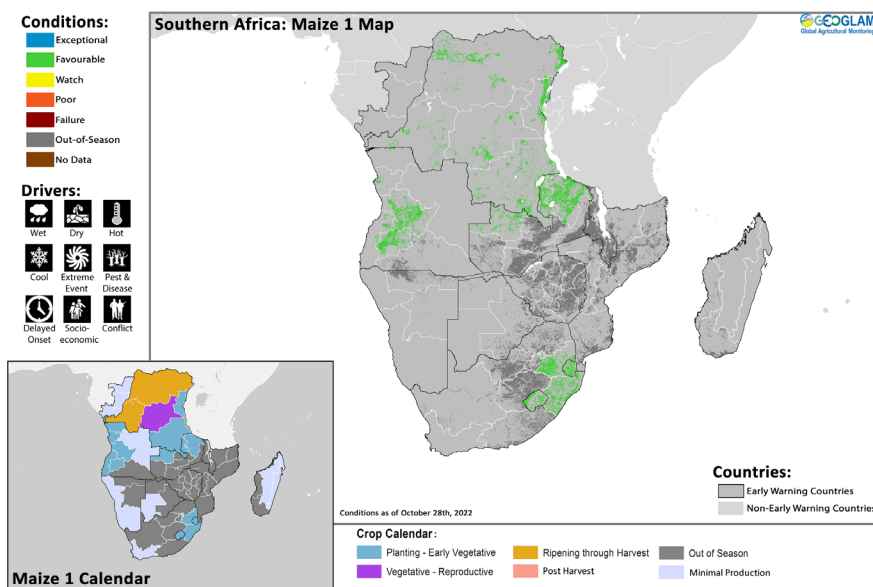
Source: UCSB Climate Hazards Center

Southern Africa



Crop condition map synthesizing wheat conditions as of October 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.**

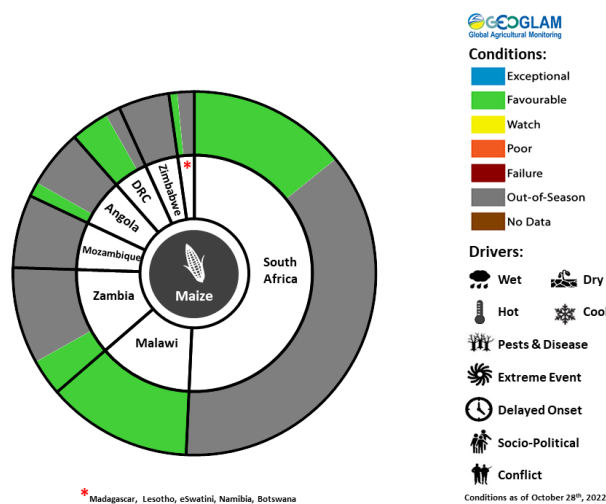
In Southern Africa, harvesting of wheat crops is nearing completion in **Lesotho, South Africa, Zambia, and Zimbabwe**, and conditions are generally favourable. In **South Africa**, conditions throughout the country are favourable given relatively high soil moisture levels combined with recent widespread rain. While a relatively dry winter resulted in lower yield expectations over the main producing area in the winter rainfall region, mild conditions going into spring lessened the potential negative impacts of low rainfall. National production is expected at 2.2 million tonnes, well above the five-year average.



Crop condition map synthesizing Maize 1 conditions as of October 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.**

Land preparation and planting of main season cereals is underway across Southern Africa under generally favourable conditions, and above-average rainfall is forecast through March 2023 in many south and central areas with the possibility of localized heavy rains in eastern areas for late October to early November (See Regional Outlook Pg. 15). In **Angola**, much of the central and northern areas are experiencing delayed rainfall onset. While current planting conditions are favourable, forecasts indicate below-normal rainfall in these areas through March (See Regional Outlook Pg. 15). In eastern **South Africa**, soil moisture and dam levels are favourable, and widespread rain over the summer rainfall region since mid-October is supporting maize planting and emergence. In the **Democratic Republic of the Congo**, harvesting of main season maize is underway in the north and west while planting and

development continues in other regions, and overall conditions are favourable. However, some localized areas in the centre, east, and south have experienced below-average rainfall over the past month.



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

Regional Outlook: Wetter than normal November to March 2023 forecast in southern and central areas

During most of October, below-average or low rainfall occurred in most northern and central areas (Figure 1-left), as was indicated by earlier forecasts. Above-average rainfall occurred in the northwest and in portions of southeastern South Africa and central Madagascar.

Ample early season rains are forecast for late October to early November in central and southern areas (Figure 1-middle). Southern Zambia, Zimbabwe, Botswana, southern Mozambique, eastern South Africa, and central Madagascar are expected to receive above-average rains during this time, with the possibility of localized heavy rains in eastern areas.

A wetter-than-normal November 2022 to March 2023 is forecast in many southern and central areas. This is indicated by several international forecasting centers, such as the WMO (Figure 1-right), and is consistent with La Niña impacts on regional rainfall patterns. Forecast warm sea surface temperatures in the southwestern Indian Ocean may also increase rainfall in the southeast. In northeastern areas, in southern DRC, and in western Angola, below-normal rainfall is anticipated at least through January. The latest SubX and ECMWF forecasts indicate below-average rainfall in northern Mozambique, northern Madagascar, and portions of western Angola through November, and longer-range WMO, NMME, and C3S forecasts indicate those patterns will likely continue.

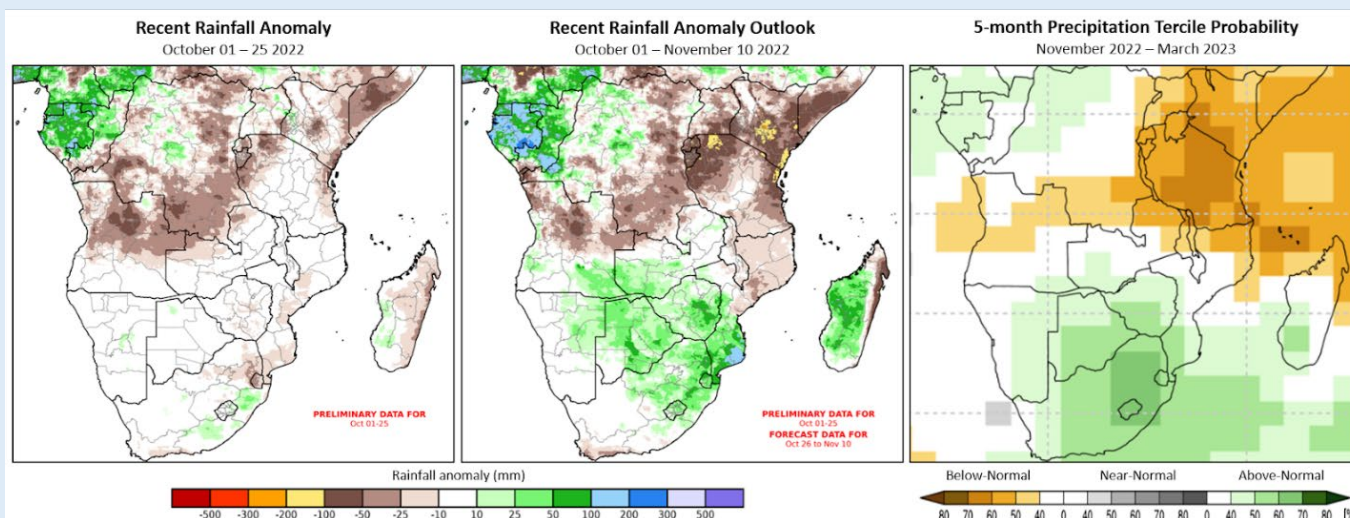
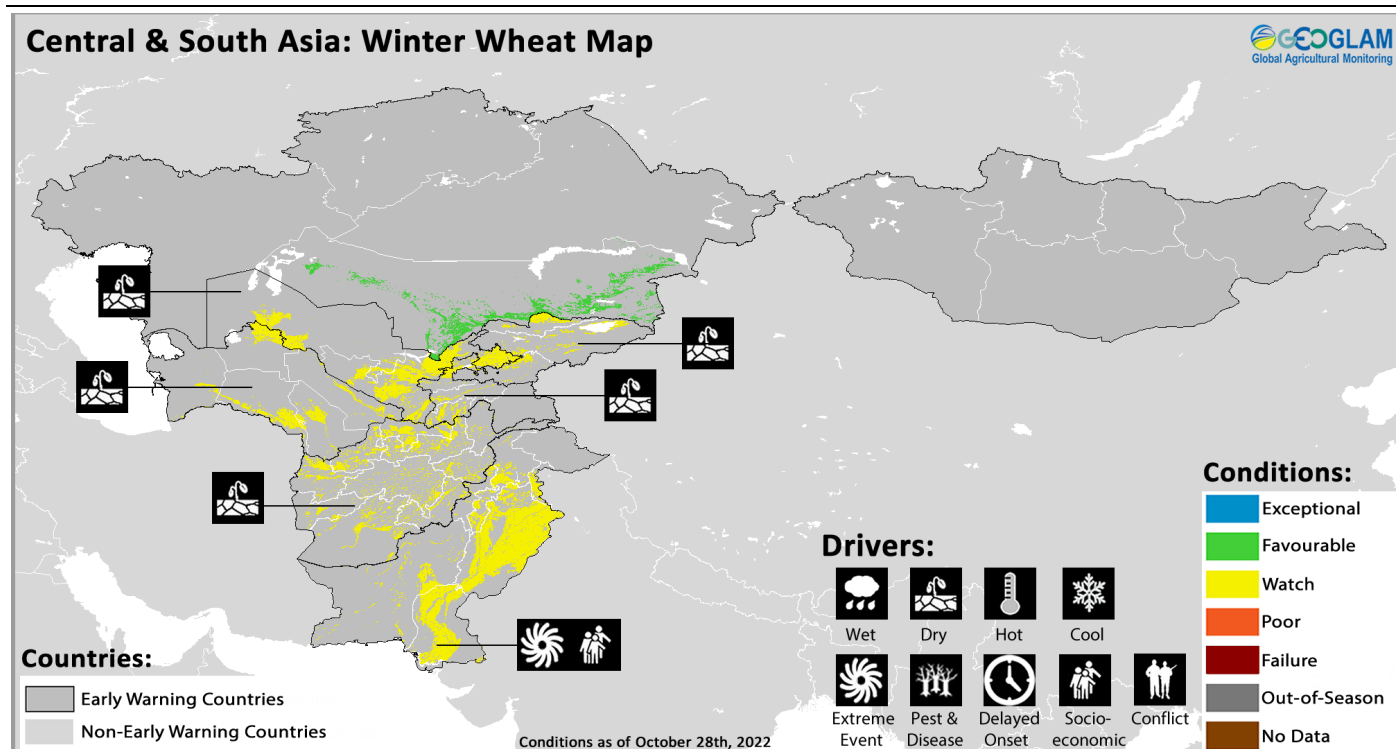


Figure 1. October 1st-25th and October 1st to November 10th 2022 rainfall anomalies, and a 5-month precipitation probability forecast for November 2022 to March 2023. The left and middle panels are CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for their respective accumulation periods. These show the anomaly (mm) for October 1st to 25th, 2022 (left) and for October 1st to November 10th (middle). Preliminary data is used for October 1st - 25th. In the middle panel, CHIRPS-GEFS forecast data is used for October 26th - November 10th. The right panel is a WMO probabilistic forecast for November-to-December 2022 precipitation terciles, based on models initialized in October. From WMO Lead Centre Long-Range Forecast Multi-Model Ensemble. Source: UCSB Climate Hazards Center

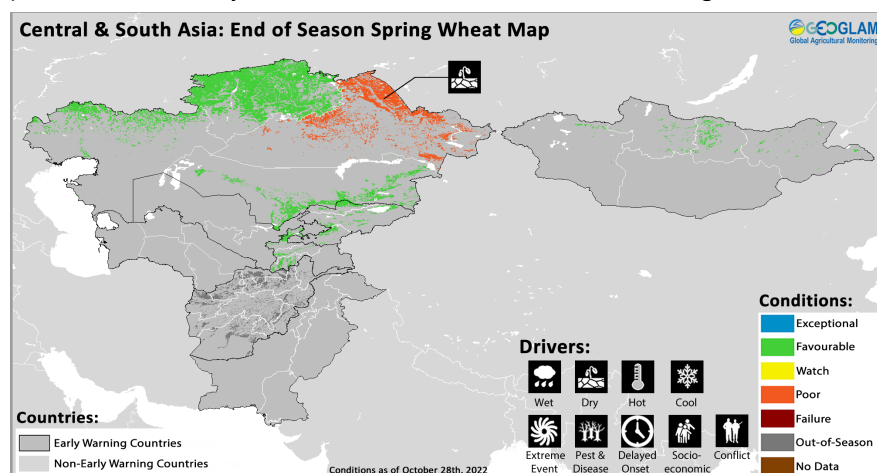
Central & South Asia



Crop condition map synthesizing Winter Wheat conditions as of October 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 of winter wheat is underway in **Afghanistan**, southern **Kazakhstan**, **Kyrgyzstan**, **Pakistan**, **Tajikistan**, **Turkmenistan**, and **Uzbekistan** for harvest from March 2023, and there is concern throughout the subregion due to continued dry conditions from the previous season that are expected to continue through the fall and winter 2022–2023 period, raising concern for low snowpack and reduced runoff and groundwater recharge (See Regional Outlook Pg. 17). In **Afghanistan**, deficient precipitation in October has slowed planting activities in the winter wheat-growing regions. According to the FEWS NET Afghanistan Seasonal Monitor, the dry soil conditions at the beginning of the typical planting period for winter wheat may have impacted farmer decisions to plant. In **Pakistan**, planting of the *Rabi* wheat crop, almost entirely irrigated, normally takes place between October and December. As many areas are still flooded, planting operations for the 2022/23 wheat crop are expected to be severely hampered. In addition, floods resulted in the loss or damage of agricultural inputs, including seed stocks, fertilizers, machinery at the household level, and irrigation infrastructure, which may result in a contraction in the planted area and may have a negative impact on crop development.

Harvesting of spring wheat finalized in August and September in **Afghanistan** and **Mongolia** and finalized this month in **Kazakhstan**, **Kyrgyzstan**, **Mongolia**, and **Tajikistan** under mixed conditions. Poor conditions resulted in most areas of **Afghanistan** due to persistent hot and dry conditions as well as in the northeastern region of **Kazakhstan** due to previous dry conditions that resulted in



Crop condition map synthesizing Spring Wheat conditions as of October 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.**

below-average yields. However, in **Kazakhstan**, the total 2022 wheat production, including winter and spring crops, is forecast at an above-average level of 14.5 million metric tons, according to the October 24th USDA update. Elsewhere in the subregion, final conditions are favourable with near-average yields expected. In **Pakistan**, harvesting of *Kharif* (summer) season rice and maize crops is nearing completion, and overall conditions are mixed as the country continues to face the impacts of unprecedented monsoon rain from mid-June that triggered one of the country's worst floods in a decade. While flood waters have begun to recede, nearly a fourth of the country's area was still underwater between September 26th and October 2nd, and the waters could take another 3 to 6 more months to fully recede. In the flood-impacted areas, many households

rely on agriculture and livestock production for their livelihoods, and damage to these sectors will have a major impact on the food security situation and economy in the coming months. Throughout the country, most of the *Kharif* season crop damage occurred in Sindh, Punjab, Balochistan, and Khyber Pakhtunkhwa provinces respectively, and most of the livestock losses occurred in Balochistan, Sindh, and Punjab respectively. As of mid-October, large parts of Sindh and eastern Balochistan remained underwater. Crops are unlikely to recover in Sindh province, and summer crops may also be impacted in Balochistan, Khyber Pakhtunkhwa, and Punjab provinces. Elsewhere, conditions remain favourable.

Regional Outlook: Third consecutive year with below-normal rainfall for fall and winter 2022-2023 is forecast in some areas

During late September to mid-October, most areas were dry or received below-average precipitation. Current forecasts indicate above-average precipitation in northern Afghanistan and central and northern Central Asia during late October and early November, and average amounts elsewhere (Figure 1-left).

A third consecutive year with below-normal fall and winter precipitation is expected due to La Niña conditions that are forecast to persist through early 2023. There is a 50-60% chance of below-normal precipitation from central Afghanistan to eastern Uzbekistan, and warmer and drier-than-normal conditions are likely throughout the region, based on the latest WMO forecasts (Figure 1-middle and right).

The pessimistic outlook for late 2022 to early 2023 raises concerns for low snowpack, reduced runoff and groundwater recharge, and related challenges to rainfed and irrigated wheat production. Many areas in Central and Southern Asia—where drier-than-normal conditions are forecast—had below-average precipitation throughout the 2020-2021 and 2021-2022 winter and spring crop growing seasons.

In Afghanistan, the outlook suggests low chances for recovery during this season. During 2021 and 2022, severe hydrologic drought conditions developed in central and northern Afghanistan, and this had major impacts on wheat production. While wet conditions are likely in the next two weeks, there is low confidence in locations and amounts due to varying model forecasts. The ECMWF Extended Range forecast indicates drier-than-average conditions in central and southern areas in mid-to-late November.

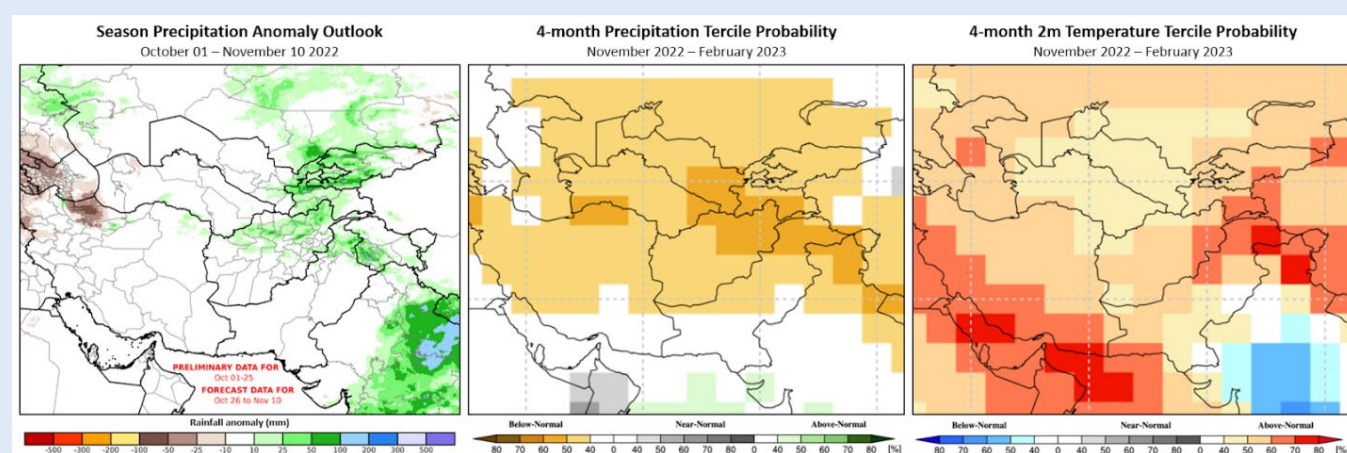
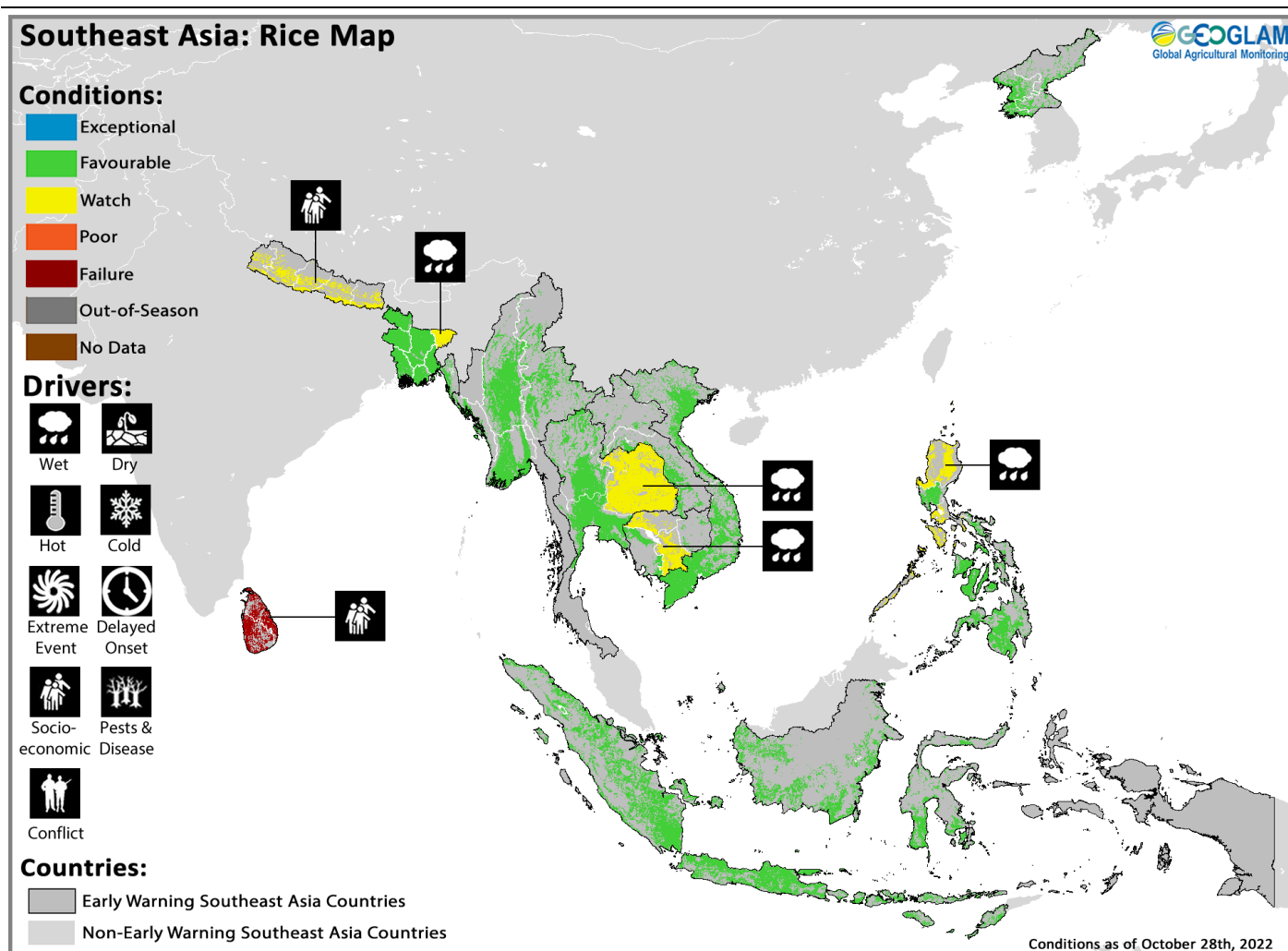


Figure 1. October-to-November seasonal rainfall anomaly outlook and 4-month WMO probabilistic forecasts of precipitation and 2m temperature for November 2022 to February 2023. The left panel is a CHC Early Estimate, which compares current precipitation totals to the 1981-2021 CHIRPS average for respective accumulation periods. This panel shows the precipitation anomaly (mm) for October to November 10th, 2022, using CHIRPS Prelim for October 01-25 and CHIRPS-GEFS for October 26 - November 10th. The middle and right panels are WMO probabilistic forecasts for November-to-February 2022-2023 precipitation and 2m temperature terciles, respectively, based on models initialized in October. From [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#).

Source: Climate Hazards Center

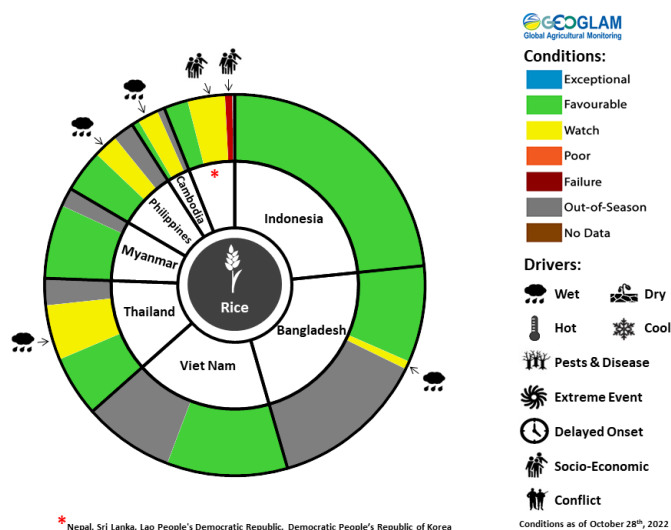
Southeast Asia



Crop condition map synthesizing rice conditions as of October 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.**

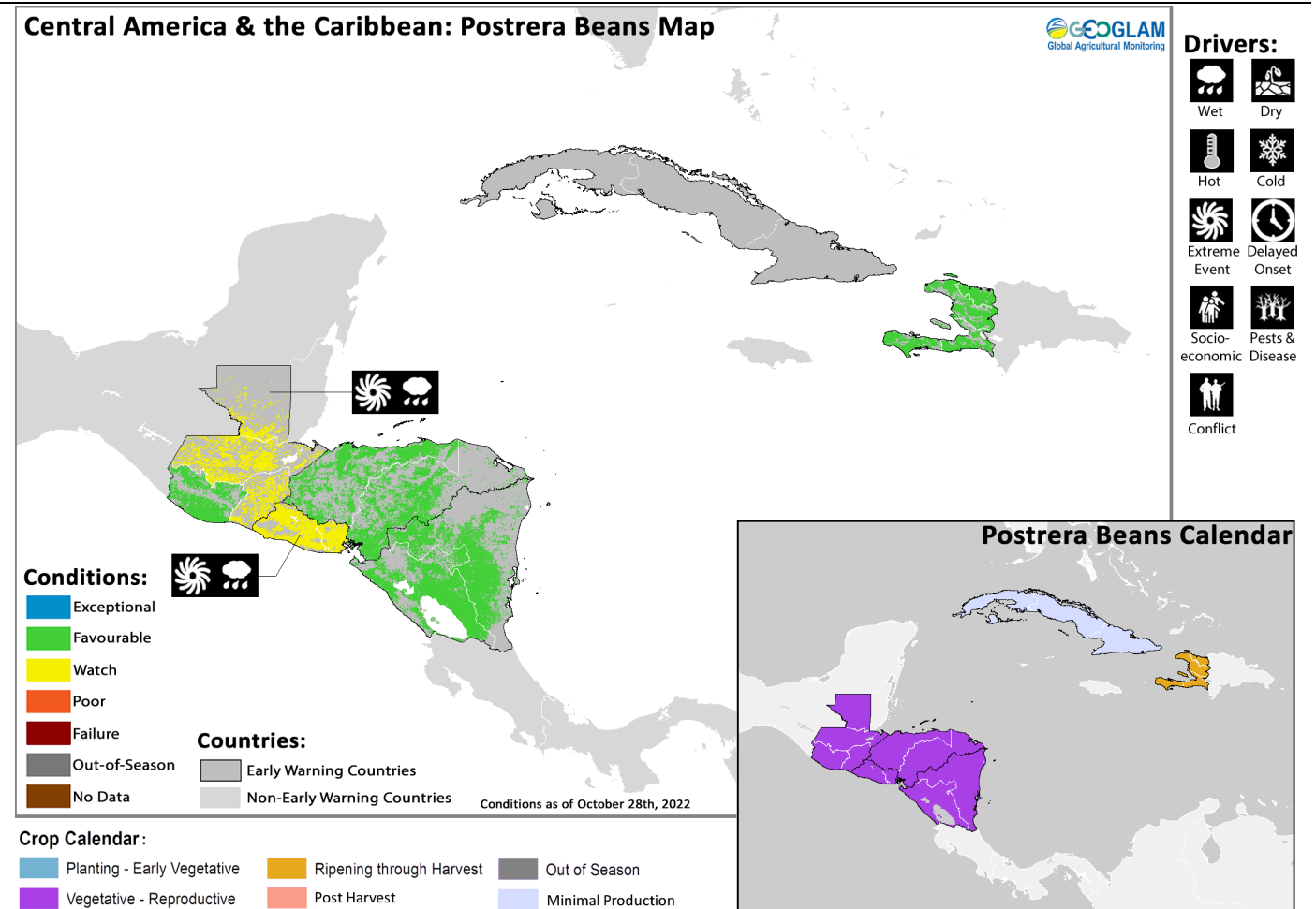
In northern Southeast Asia, harvesting of wet-season rice is underway, and conditions are generally favourable due to sufficient rainfall received during the growing period. However, heavy rains have resulted in damages in many areas that may result in production declines. Conditions in parts of **Cambodia**, the **Philippines**, and northeastern **Thailand** have been downgraded to watch due to impacts of heavy rainfall, landslides, and flooding. In **Indonesia**, harvesting of dry-season rice continues under favourable conditions due to sufficient irrigation water supply during the growing period while the sowing of wet-season rice begins, albeit in limited areas so far. In the **Philippines**, wet-season rice planted from July to August is in the heading to flowering stage under generally favourable conditions in most parts of the country due to above-normal rainfall conditions that benefitted crop development. However, four tropical cyclones impacted the country during September, with Super Typhoon Karding bringing heavy rainfall and flooding in most parts of Northern and Southern Luzon where conditions have downgraded to watch. The extent of crop damage is currently under evaluation. In **Thailand**, wet-season rice is in the grain filling stage under generally favourable conditions. However, monsoon weather, including Typhoon Noru which hit the country on September 28th, brought strong winds and heavy rainfall over much of the country that pushed dams to their capacity, resulting in significant flooding, particularly in northeast and southern provinces. In the northeast, conditions have downgraded to watch as up to 20 percent of the total planted area may have been damaged. Damage to rice fields in the north and central regions is less extensive as some areas were harvested prior to the floods, and some areas had other crops planted in place of rice as a result of the flooding. Overall, impacts of flooding are expected to reduce rice production this year. In **Viet Nam**, harvesting of wet-season rice has begun in the north under favourable conditions. The yield is estimated at about 5.24 tons per hectare, which is 1 percent higher than last year due to better irrigation preparation. In the south, harvesting is wrapping up for summer-autumn rice (wet-season). The average yield is estimated at 5.64 tons per hectare, which is 1 percent lower than last year due to heavy rain that has affected crops in the grain filling stage. Harvesting has also begun for the other wet-season rice (autumn-winter rice and seasonal rice), and yield forecasts are lower than last year due to the negative impacts of heavy rain and storm surges. The country was impacted by Typhoon Noru (locally named Karding) on September 28th and Tropical Storm Sonca on October 14th. After successive storm surges from the end of September through October 18th, the impact of the storms and flooding is considered the worst since 2007. In **Laos**, wet-season rice is in the grain filling to early harvesting stage under favourable conditions. In lowland

areas, the final planted area is 768 thousand hectares accounting for 102 percent of the national plan, and 20 percent of the planted area has been harvested. However, 1.6 thousand hectares are estimated to have been damaged by flooding and pests in the second half of September. In upland areas, the final planted area was 92 thousand hectares, and 31 percent of the planted area has been harvested. In **Myanmar**, planting of wet-season rice is now complete, and the final planted area is 6 million hectares accounting for 98.7 percent of the national plan. Crops are now mostly in the panicle forming stage, and conditions are generally favourable with no significant damage from high rainfall amounts. Harvesting of earlier planted wet-season rice began this month with a yield of 3.97 tons per hectare, slightly higher than the previous year. However, limited use of agricultural inputs due to high prices is expected to affect total 2022 production outcomes. In **Cambodia**, planted area of wet-season rice has reached 2.7 million hectares accounting for 104 percent of the national plan. However, heavy rainfall resulted in flash flooding and damage to rice fields in 21 provinces, and conditions have been downgraded to watch in affected areas. The affected area has expanded to 5 percent of planted area in the northeast and northwest, especially the region around Tonle sap lake. Sixty percent of early planted rice has been harvested with a forecast yield of around 3.9 tons per hectare, slightly lower than last year due to flood damage. The government is providing seeds of rice and vegetables for support to affected farmers. In **Sri Lanka**, harvesting of *Yala* season rice, which accounts for 30 percent of annual rice production, is underway with significant yield declines expected. Aggregate paddy production for 2022 is forecast at 3 million tonnes and 40 percent lower than the previous year, primarily due to low yield as a result of reduced application of fertilizers and pesticides amidst import bans and severe economic challenges. Planting of *Maha* season rice and maize is now underway. Current agroclimatic conditions are favourable, and petrol availability has improved with a positive impact on land preparation and planting. However, prices of agricultural inputs remain high, raising concerns about access by farmers and the potential impact on the area planted and yields. In **Nepal**, rice crops are in vegetative to reproductive stage for harvest from November, and concern remains due to high prices of fuel and fertilizer. Planting of wheat crops has just begun under favourable conditions, and planted area is expected to remain close to last years above-average level reflecting the strong demand and increasing prices. In **Bangladesh**, harvesting of maize crops is underway while *Aman* season rice crops continue to develop for harvest from November, and conditions remain generally favourable except in Sylhet where previous heavy monsoon rains and runoff from northeastern India may impact crop outcomes. Additionally, Tropical Storm Sitrang made landfall over the central coast on October 24th, gradually weakening into a Tropical Depression while moving northwards over the country before finally dissipating over northern areas on October 25th. The storm brought strong winds and heavy rainfall that could impact crop harvesting and development. Land preparation is underway for *Boro* season rice crops, which make up 55 percent of annual output and are mostly irrigated. In the **Democratic People's Republic of Korea**, harvesting of rice and maize crops is now complete. Despite below-average rainfall at the start of the season as well as limited application of agrochemicals, ample rainfall 40 to 60 percent above-average between the end of June and mid-September has resulted in favourable end of season conditions.



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

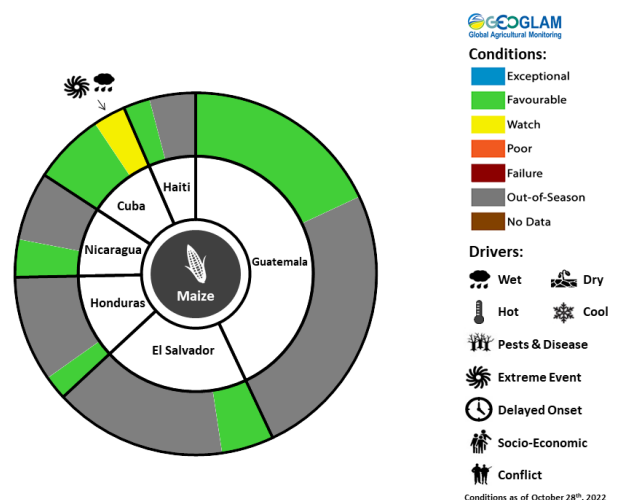
Central America & Caribbean



Crop condition map synthesizing Postrera season bean conditions as of October 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 *Primera* season cereals mostly finalized last month in **El Salvador, Guatemala, Honduras, and Nicaragua** under generally favourable conditions despite heavy rains in September that resulted in localized crop damage. However, some subsistence farmers left crops in the field as they lack barns to store the harvests, and the passage of Tropical Storm Julia in early October brought heavy rains and flooding that damaged the remaining crops, negatively impacting yields with significant post-harvest losses expected.

Segunda/Prostrera season cereals are now in vegetative to reproductive stage in **El Salvador, Guatemala, Honduras, and Nicaragua**. Conditions are mixed as Tropical Storm Julia negatively impacted crops in the early development stages in affected areas, particularly for *Prostrera* season bean crops in **El Salvador and Guatemala**. On October 9th, Hurricane Julia made landfall on the Caribbean coast of **Nicaragua** as a Category 1 storm before quickly weakening to a tropical storm. The storm followed a similar path to Eta and Iota in 2020, impacting the Caribbean coast of **Nicaragua**. The storm then brought heavy rainfall across **El Salvador, Honduras, and Guatemala**. Short-term crop replanting activities may be carried out in areas where losses were reported due to heavy rains, depending on the availability of seeds and residual soil moisture. However, ongoing above-average rainfall is restricting replanting operations in northern Petén, Franja, Transversal del Norte, and Eastern areas of **Guatemala** as well as in **El Salvador**. Furthermore, Hurricane Lisa made landfall in Belize on November 2nd as a category 1 storm, bringing above-average rainfall to the coastal departments of **Nicaragua and Honduras**. Flooded areas have already been reported in Petén department of **Guatemala** and may impact crops in affected areas.



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

During the October to December 2022 rainfall period, average rainfall conditions are expected in countries of northern Central America, and above-average rainfall is expected for **Nicaragua**. However, accumulated rainfall could be higher than average due to the impacts of Tropical Storms Julia and Hurricane Lisa. In **Honduras**, forecast above-average rainfall amounts through December are likely to benefit crop development but may result in excessive moisture, particularly as the Atlantic hurricane season lasts until the end of November with additional storms having the potential to affect crops. In **Haiti**, harvesting of main season rice crops finalized under poor conditions due to prolonged dryness throughout the season, with the Nord-Ouest zone being the most affected by limited precipitation over prolonged periods. Harvesting of second season maize and bean crops is underway. Overall conditions are favourable despite irregular rainfall performance and despite low vegetation conditions in localized areas of the minor producing north. In **Cuba**, harvesting of main season maize and second season rice crops is underway, and there is concern in areas of the west impacted by Hurricane Ian. On September 27th, Hurricane Ian made landfall in Pinar Del Rio province, battering large areas of western Cuba as a Category 3 hurricane and causing significant damage to agricultural infrastructure. Land preparation is underway for main season rice crops, and planting will begin next month.

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 November 3rd, 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.



"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



Global Agricultural Monitoring

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Contributing partners



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