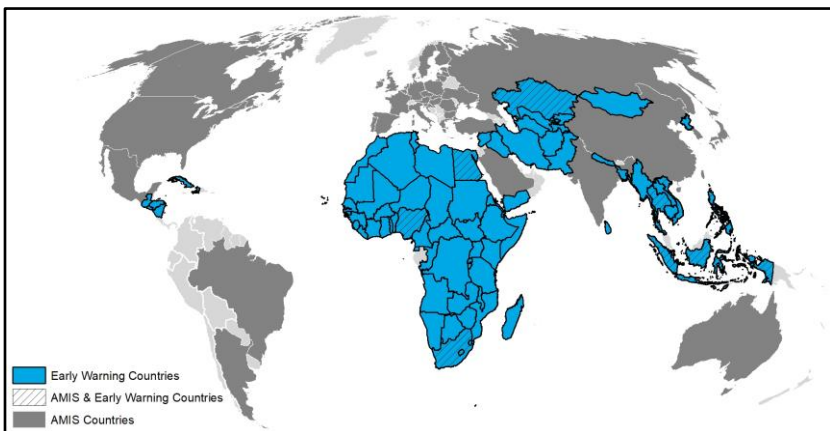


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, harvest finalized for secondary *Belg* crops in Ethiopia under poor conditions, and conditions are mixed for *Meher* season cereals due to rainfall deficits, flooding, and ongoing insecurity. In the south of the subregion, dry conditions following several consecutive seasons of failed rains are impacting crops in many areas, and poor conditions have resulted in parts of Uganda, the United Republic of Tanzania, Kenya, and Somalia for main season crops. In **West Africa**, main season cereals are developing under generally favourable conditions except in parts of western Mauritania where dry conditions are present. Conflict continues to impact agricultural activities in affected areas. In the **Middle East and North Africa**, harvesting of winter wheat finalized under mixed conditions with below to well below-average yields in Morocco, central and western Algeria, central Tunisia, Syria, Iraq, and central and southern parts of Iran due to persistent dryness as well as conflict in Syria. In **Southern Africa**, harvesting of main season cereals mostly finalized in May and June under mixed conditions. Wheat crops are in vegetative to reproductive stage for harvest from September, and conditions remain generally favourable. In **Central and South Asia**, harvesting of winter wheat is nearing completion with below to well below-average yields expected in Afghanistan and southeastern Turkmenistan. Spring wheat crops are unlikely to recover in Afghanistan while crops in Tajikistan have improved from previous dryness. In **Southeast Asia**, wet-season rice is developing under favourable conditions, though rising prices of agricultural inputs may impact production outcomes in some areas. In **Central America and the Caribbean**, *Primera* season cereals continue to develop under generally favourable conditions, and early harvesting has begun in Guatemala. In Haiti, main season cereals are unlikely to recover from dry and hot conditions.



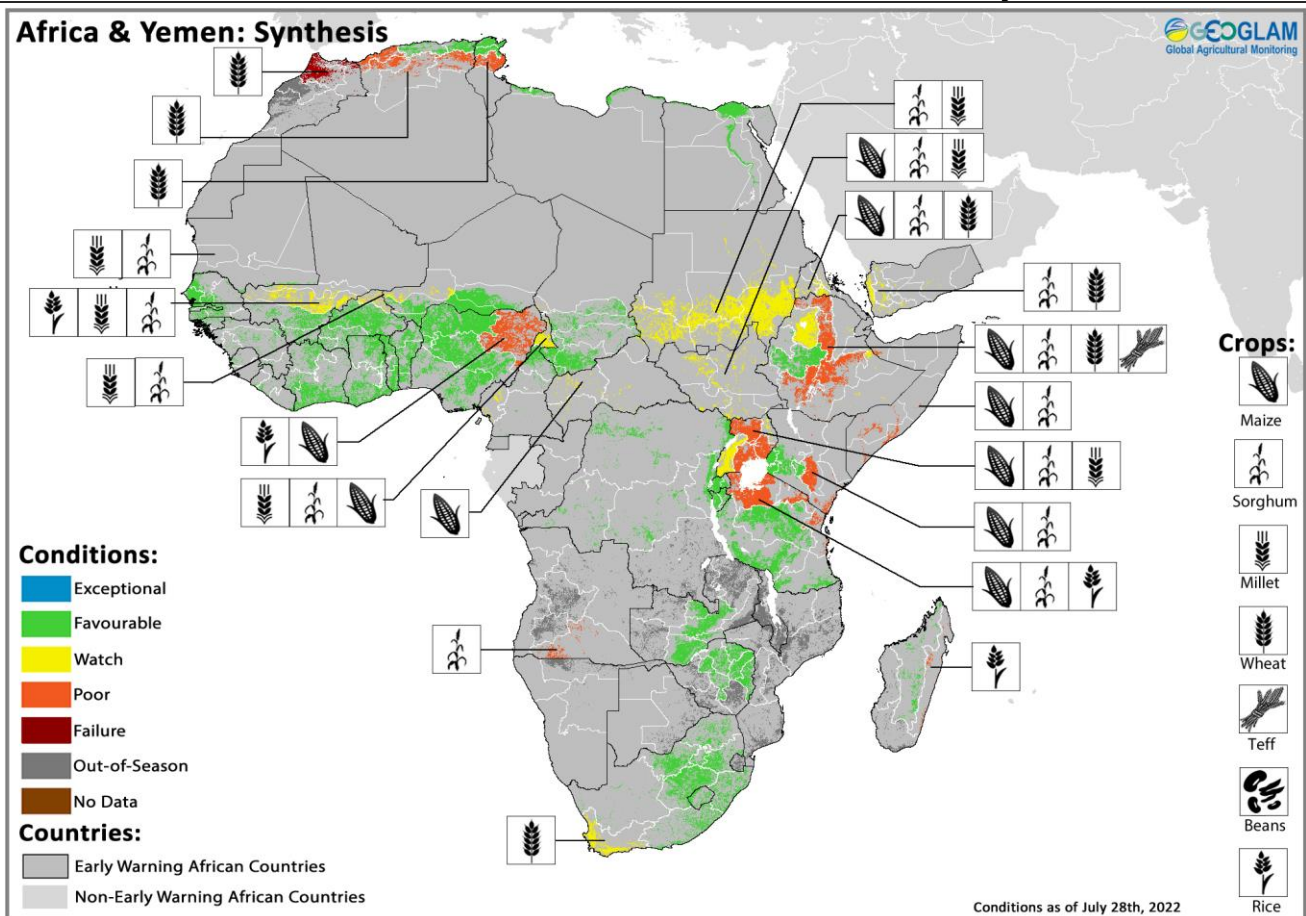
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GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of July 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of July 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: Harvest finalized for secondary *Belg* crops in Ethiopia with below-average yields, and conditions are mixed for *Meher* season cereals due to rainfall deficits, flooding, and ongoing insecurity. In the south of the subregion, dry conditions following several consecutive seasons of failed rains are impacting crops in many areas, and poor conditions have resulted in parts of Uganda, the United Republic of Tanzania, Kenya, and Somalia for main season crops. There is increasing concern over the possibility of a fifth consecutive below-average rainy season in October to December 2022 (See Seasonal Forecast Alert Pg. 5)

WEST AFRICA: Main season cereals are in vegetative to reproductive and early harvesting stage along the Gulf of Guinea countries while planting and development continues along the Sahel. Conditions are generally favourable except in parts of western Mauritania where dry conditions are present as well as in conflict affected regions.

MIDDLE EAST & NORTH AFRICA: Harvesting of winter wheat finalized under mixed conditions with well below-average yields in Morocco and northern Syria and below-average yields in central and western Algeria, central Tunisia, southern Syria, Iraq, and central and southern parts of Iran due to persistent dryness. Ongoing conflict and socio-economic challenges also impacted crops in Syria. Elsewhere, final conditions are favourable.

SOUTHERN AFRICA: Harvesting of main season cereals finalized in May and June under mixed conditions due to persistent dryness and damage from tropical storms. Wheat crops are developing under generally favourable conditions for harvest from September.

CENTRAL & SOUTH ASIA: Harvesting of winter wheat is nearing completion under mixed conditions with below to well below-average yields in Afghanistan and below-average yields in southeastern Turkmenistan due to dry and hot conditions throughout the season. Spring wheat crops are also unlikely to recover in Afghanistan, and concern remains in northern Kazakhstan. Elsewhere, conditions are favourable.

SOUTHEAST ASIA: In the north, wet-season rice is developing under favourable conditions, though rising prices of agricultural inputs in some countries may impact production outcomes. In Indonesia, conditions are favourable for harvesting of wet-season rice and sowing of dry-season rice.

CENTRAL AMERICA & CARIBBEAN: *Primera* season cereals continue to develop under generally favourable conditions despite localized flooding and crop losses in parts of Honduras and Guatemala. In Haiti, main season cereals are unlikely to recover from rainfall deficits and high temperatures during the *Printemps* season.

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 the southwest in US, Baja California and Baja California Sur in Mexico, southern Columbia, Ecuador, northern Peru, northern and southeast Brazil, southern Mali, Niger, northeast Nigeria, Chad, Sudan, Eritrea, northern and eastern Ethiopia, southern South Sudan, northern Uganda, northwest Kenya, southern and northcentral South Africa, Yemen, southern Iran, western Turkmenistan, northeastern Kazakhstan, eastern Kyrgyzstan, southwest Pakistan, eastern India, northeast China, central Mongolia, Republic of Korea, Malaysia, Indonesia, Papua New Guinea, and southern and eastern Australia.

There is also a likelihood of below-average rainfall over the western Prairies in Canada, the Pacific Northwest and southern Plains in the US, eastern Mexico, northern Guatemala, northern Honduras, eastern Venezuela, Southern Guyana, Suriname, French Guiana, northeast Brazil, Uruguay, southern Argentina, central and southern Chile, Ireland, the United Kingdom, northern Spain, northern France, northern Germany, Poland, southern Norway, southern Sweden, Bulgaria, western Turkey, southern Ukraine, western Russian Federation, western Mauritania, eastern Guinea, Sierra Leone, Liberia, Côte d'Ivoire, southern Burkina Faso, Ghana, Togo, Benin, southern Nigeria, Cameroon, Equatorial Guinea, Gabon, the Republic of the Congo, the western Democratic Republic of the Congo, southern Tanzania, northern Mozambique, southern Somalia, northeast South Sudan, Southern India, Tajikistan, western Mongolia, and southern Japan.

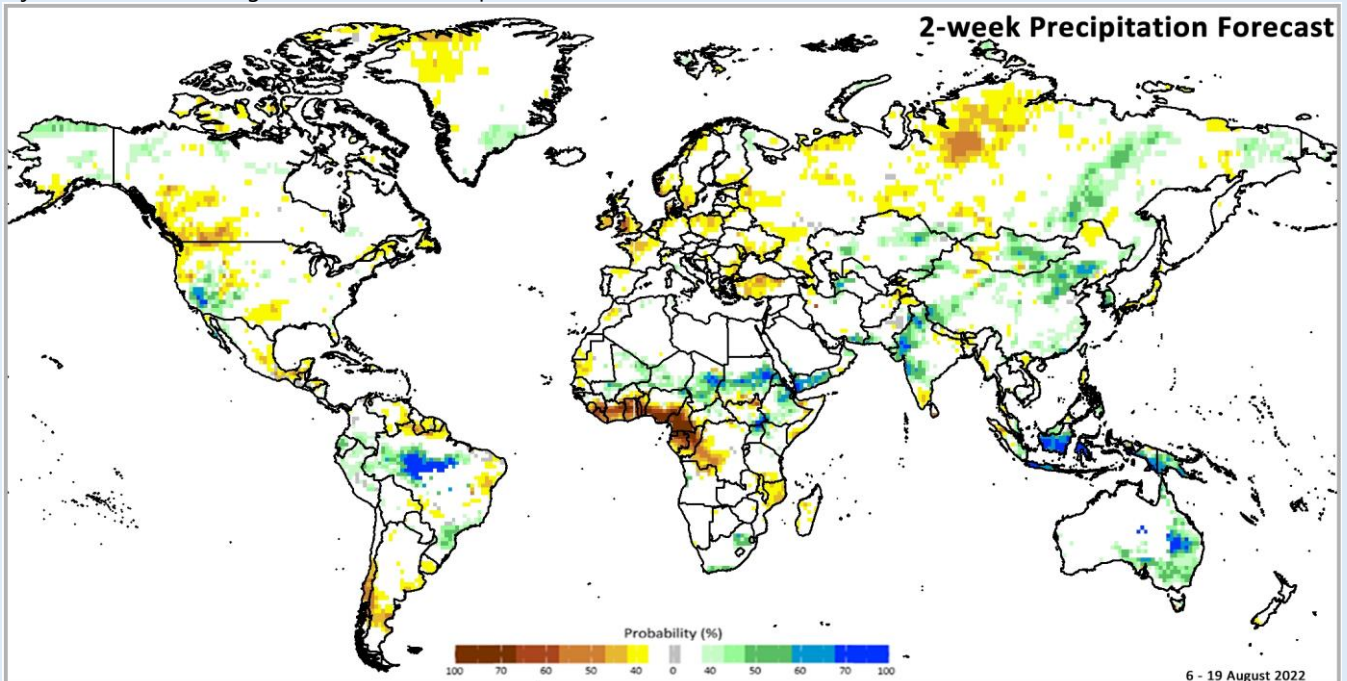


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 6 – 19 August 2022, issued on July 29th, 2022. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](https://www.ccmr.cgd.noaa.gov/iri-subseasonal-forecasts-maproom)

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

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase and is expected to remain as La Niña into early 2023, according to the IRI/CPC. Weak La Niña conditions are likely during July to September (60% chance) and are forecast to strengthen after that (66% chance for October to December). There are low chances for El Niño conditions during this time.

If La Niña conditions persist or redevelop in late 2022, it would be the third year in a row with a La Niña event, which is uncommon. La Niña could elevate the risks of repeated dry conditions in negatively affected regions, such as 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.

Negative Indian Ocean Dipole (IOD) conditions are emerging and are forecast to last through November or longer. Models indicate that this may be a strong IOD event. Negative IOD and La Niña conditions often happen in tandem. During previous tandem events, there have been severe drought impacts across the Horn of Africa, and heavy rainfall and flooding in Australia and southeast Asia. *Source: UCSB Climate Hazards Center*

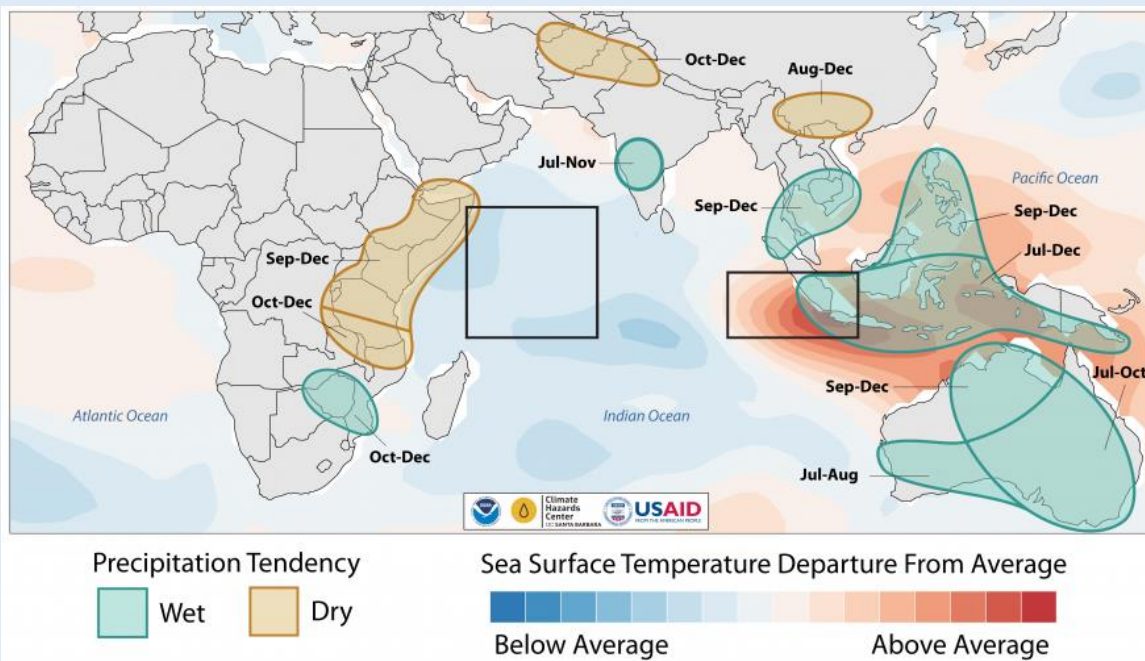
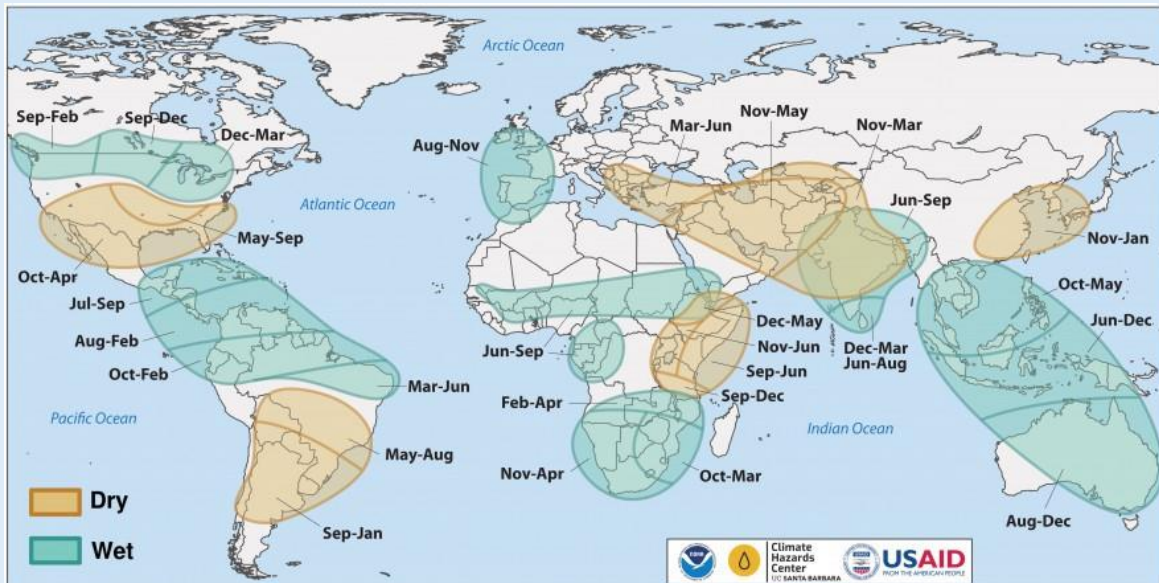


Figure 1. Precipitation tendency during *La Niña* (top) and negative *Indian Ocean Dipole* conditions (bottom). *Source: FEWS NET Agroclimatology Fact Sheets on La Niña and the Indian Ocean Dipole. Source: NOAA & CHC & FEWS NET*

Seasonal Forecast Alert: Unprecedented fifth consecutive below-normal rainfall season is forecast in eastern East Africa for OND 2022

During June 26th to July 25th, conditions were drier than average in Uganda, western Kenya, southern and central South Sudan, and in southwestern, central and central-eastern Ethiopia (Figure 1 top-left). Seasonal rains in northern areas of the region have had mixed performances thus far, with average to above-average rainfall in Sudan and northern and western Ethiopia, and below-average rainfall in areas to the south. An outlook for cumulative rainfall from March 1st to August 10th (Figure 1 top-right), based on a combination of data and forecast amounts, shows the widespread below-average rainfall pattern that expanded into western equatorial areas, and continued in southern and central Ethiopia, after producing severe drought in the eastern Horn. Rainfall totals in many affected areas range from 75% of average to localized areas of 30% of average. In large areas of Ethiopia, northern Uganda, and Somalia, these are among the [lowest on the 42-year CHIRPS rainfall record](#).

Models continue to favor above-normal rainfall during August and September, in much of Ethiopia, Sudan, South Sudan, Uganda, and western Kenya, based on the WMO (Figure 1 bottom-left) and July 29th [IRI SubX forecasts](#) for August 6th to 26th. Warmer-than-normal conditions may continue through the dry season in some drought-affected areas of Kenya, Somalia, and southeastern Ethiopia.

A 5th consecutive below-normal season in eastern East Africa is expected during October-to-December (OND) 2022. This is associated with forecasts indicating strong [negative Indian Ocean Dipole \(IOD\)](#), moderate [La Niña](#), and strong [West Pacific Gradient \(WPG\)](#) conditions. These could potentially have extensive adverse rainfall impacts, both in terms of area and duration. The latest models show a highly confident outlook for below-normal OND 2022 precipitation (> 70% chances) in eastern Kenya, southern and central Somalia, eastern Tanzania, and southeastern Ethiopia, based on the WMO forecast from July (Figure 1 bottom-middle). ICPAC (Figure 1 bottom-right), NMME, and C3S forecasts also predict increased chances for reduced rainfall in eastern, equatorial, and southern areas during OND 2022. The combination of negative IOD and La Niña conditions could produce an exceptionally dry OND outcome, similar to signature drought years like 2010 and 1998. Recent La Niña events with strong WPG conditions are associated with increased chances for back-to-back OND and March-to-May (MAM) droughts, with the past two years being examples of this. If those large-scale conditions develop, it would also prompt concerns for a 6th poor season in eastern areas, in MAM 2023.

A failed OND 2022 rainfall season could be catastrophic. The [world's worst acute food insecurity emergency of 2022](#) is occurring over the Horn of Africa, in part due to the relentless drought conditions in arid and semi-arid areas in Kenya, Somalia, and southern and southeastern Ethiopia during the past two years. Communities are struggling with severely limited access to food and water, disease outbreaks, repeated crop losses, millions of livestock deaths, reduced labor opportunities, and high food and fuel prices. Multiple areas in Somalia are at [risk of famine](#), and increases in hunger-related mortality have already occurred. In marginal, short-season cropping areas, crop production can be significantly limited by delayed or poorly distributed rainfall during October to November. Another season with poor rainfall performance, combined with continued macroeconomic shocks, conflict, and [insufficient humanitarian responses](#) could drastically increase the [severity and magnitude of food insecurity](#) in the region.

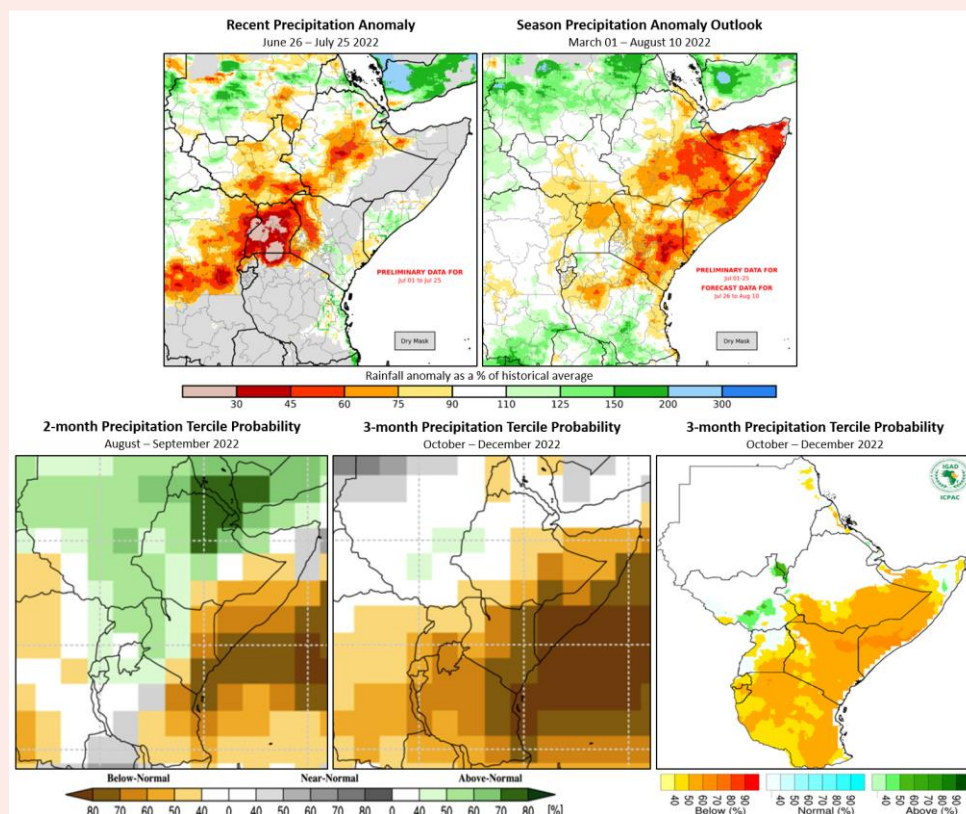
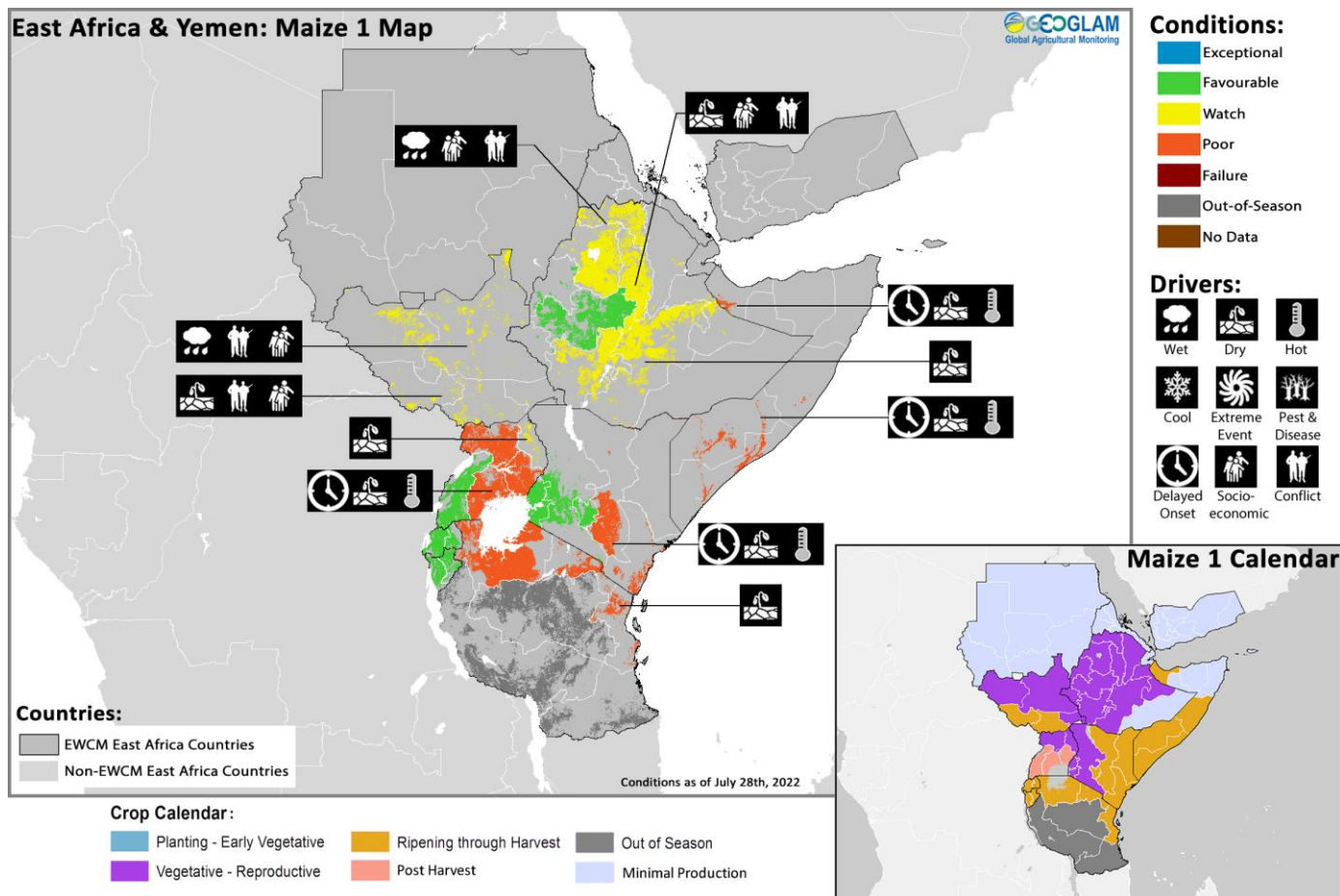


Figure 1. June 26th to July 25th and March 1st-to-August 10th, 2022 precipitation anomalies, and probability forecasts for August-to-September and October-to-December 2022 precipitation. Top: CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for their respective accumulation periods. These show the percent of average for June 26th to July 25th, 2022 (left), based on CHIRPS final data through July and preliminary data for July, and for March 1st-to-August 10th (right) using a bias-corrected GEFS forecast for July 26th to August 10th. Bottom: Seasonal precipitation forecasts based on models initialized in July. WMO probabilistic forecasts for August-to-September and October-to-December 2022 (left and middle), from the WMO Lead Centre Long-Range Forecast Multi-Model Ensemble. ICPAC probabilistic forecast for October-to-December 2022 (right). Source: UCSB Climate Hazards Center

East Africa



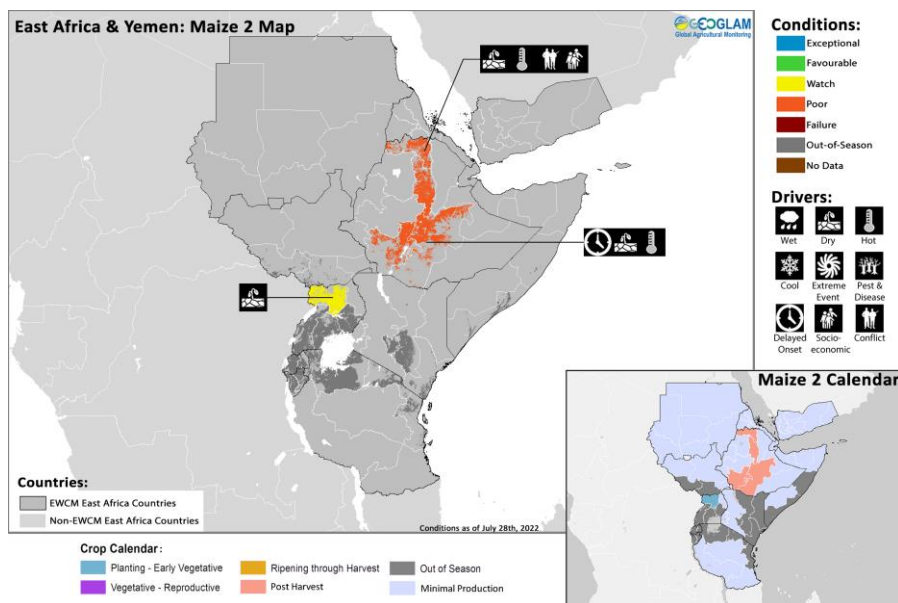
Crop condition map synthesizing Maize 1 crop conditions as of July 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are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

Across the north of the subregion, harvesting of main season cereals is underway in southern bimodal rainfall areas of **South Sudan** while planting and development continues in northern unimodal rainfall areas of **South Sudan, Sudan, Eritrea, Djibouti, and Yemen**. There is concern in most areas due to persistent dryness across west and southern **South Sudan** and **Yemen**, flooding in eastern **South Sudan** and east and southern **Sudan**, and persistent conflict and related socio-economic challenges across **South Sudan** and **Yemen**. In **Ethiopia**, *Meher* season (Long Rains) cereals are in vegetative to reproductive stage for harvest from September, and conditions are mixed with dry conditions impacting crops in the southwest, centre, and centre-east, wetter than normal conditions impacting crops in the north and west, and ongoing conflict in the north (See Seasonal Forecast Alert Pg. 5). Harvesting of *Belg* season (Short Rains) maize crops finalized under poor conditions as crops were affected by severe rainfall deficits, hot temperatures, and conflict in the north.

Across the south of the subregion, harvesting of main season cereals finalized in central and eastern **Uganda** and is nearing completion in **Burundi, Rwanda, the United Republic of Tanzania, bimodal areas of Kenya, and Somalia** while crops continue to develop in unimodal areas of **Kenya** and northern areas of **Uganda** for harvest from August. Overall conditions remain mixed as crops in **Uganda**, bimodal areas of the **United Republic of Tanzania**, bimodal areas of **Kenya**, and **Somalia** are unlikely to recover from persistent dry and hot conditions throughout the season. Elsewhere, conditions are favourable. As of early July, large parts of **Somalia**, southern and south-eastern **Ethiopia**, and northern and eastern **Kenya** are facing the most prolonged drought in recent history following four consecutive failed rainy seasons. Drought conditions in the Horn of Africa are likely to worsen over the July to September period, and early forecasts indicate a possible fifth below-average rainfall season for October to December 2022 for eastern, equatorial, and southern areas of the subregion that is likely to exacerbate extreme drought conditions (See Seasonal Forecast Alert Pg. 5). Additionally, macro-economic spill-over effects from the war in Ukraine continue to inflate agricultural production costs throughout the subregion due to higher prices of fuel and agricultural inputs while many regions are simultaneously contending with multiple climatic shocks, including flooding in parts of the north as well as an expected fifth consecutive below-average rainfall season.

Northern East Africa & Yemen

In **Ethiopia**, *Meher* season (Long Rains) cereals are in vegetative to reproductive stage for harvest from September. Conditions are mixed as prolonged drought in the south and central Rift Valley and eastern highlands cropping areas are disrupting pastoral and



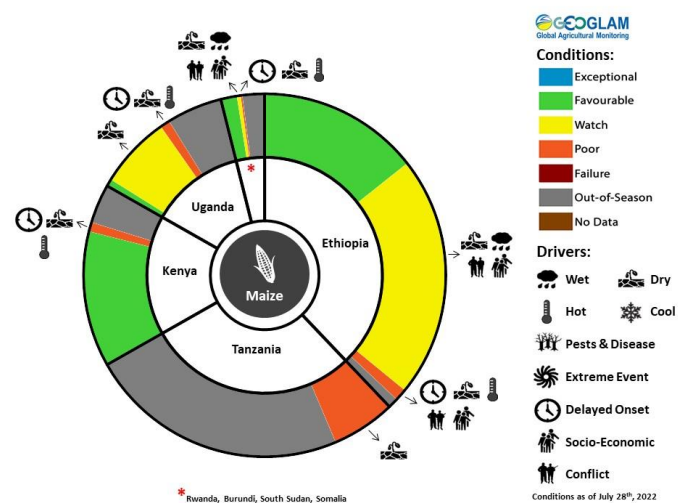
Crop condition map synthesizing Maize 2 conditions as of July 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled on the map with their driver.**

concern due to socio-economic challenges impacting production costs as well as heavy rainfall and flooding in some south and eastern areas. Planted area and yields are likely to be affected by the increase in the price of fuel and agricultural input prices as well as inflation and limited foreign currency reserves. Mechanized and semi-mechanized and irrigated sectors, which make up about half of cereal output, will be most affected. Additionally, the start of the June to September rainy season has been mixed, with below-average rainfall amounts received over eastern key producing areas, including Gedaref and Sennar states, and above-average rainfall amounts received over most of the western Greater Darfur Region and in the southern Greater Kordofan Region as of early July. Since the start of the rainy season, heavy rains and flooding have affected Sennar, Kassala, South Darfur, South Kordofan, and White Nile states. The rainy season lasts until September, and the peak of the rains and flooding is typically observed in August and September. Above-average seasonal rains are forecast for this period, which is expected to have a positive impact on crops but heightens the risk of flooding, particularly along low-lying and riverine areas (See Seasonal Forecast Alert Pg. 5). In **South Sudan**, harvesting of main season cereals is underway in southern bimodal rainfall areas while crops continue to develop in northern unimodal rainfall areas. Insufficient rainfall since early May has resulted in abnormal dryness in west and southern areas, and parts of the southwest have been affected by drought conditions. Conversely, heavy rainfall and flooding may impact production in parts of the northeastern quadrant of the country. Additionally, crop production is likely to be affected by persistent conflict and socio-economic challenges throughout the country. In **Djibouti** and **Eritrea**, planting of main season cereals is underway for harvest from November, and there is some concern related to current and forecast dry conditions for the October to December period (See Seasonal Forecast Alert Pg. 5). In **Yemen**, main season sorghum and spring wheat crops are in vegetative to reproductive stage, and concern remains due to previous dry conditions followed by heavy rains and flooding in early June that affected Ad Dali', Al Hodeidah, Hadramawt, Hajjah, and Ta'iz governorates. Additionally, torrential rains impacted several areas between the 13th and 25th of July, resulting in flash flooding and infrastructure damage in several areas, including the capital Sanaa.

Southern East Africa

In **Somalia**, harvesting of *Gu* season cereals is underway, and below-average yields are expected from the combined impacts of a delayed start to the seasonal rains, below-average precipitation in June and July, hot temperatures, and an early end to the rains before late-planted crops reached maturity. The March to June *Gu* rains marked the fourth consecutive below-average rainy season, and many regions experienced the lowest rainfall amounts in more than 40 years. In **Uganda**, harvesting of first season cereals is

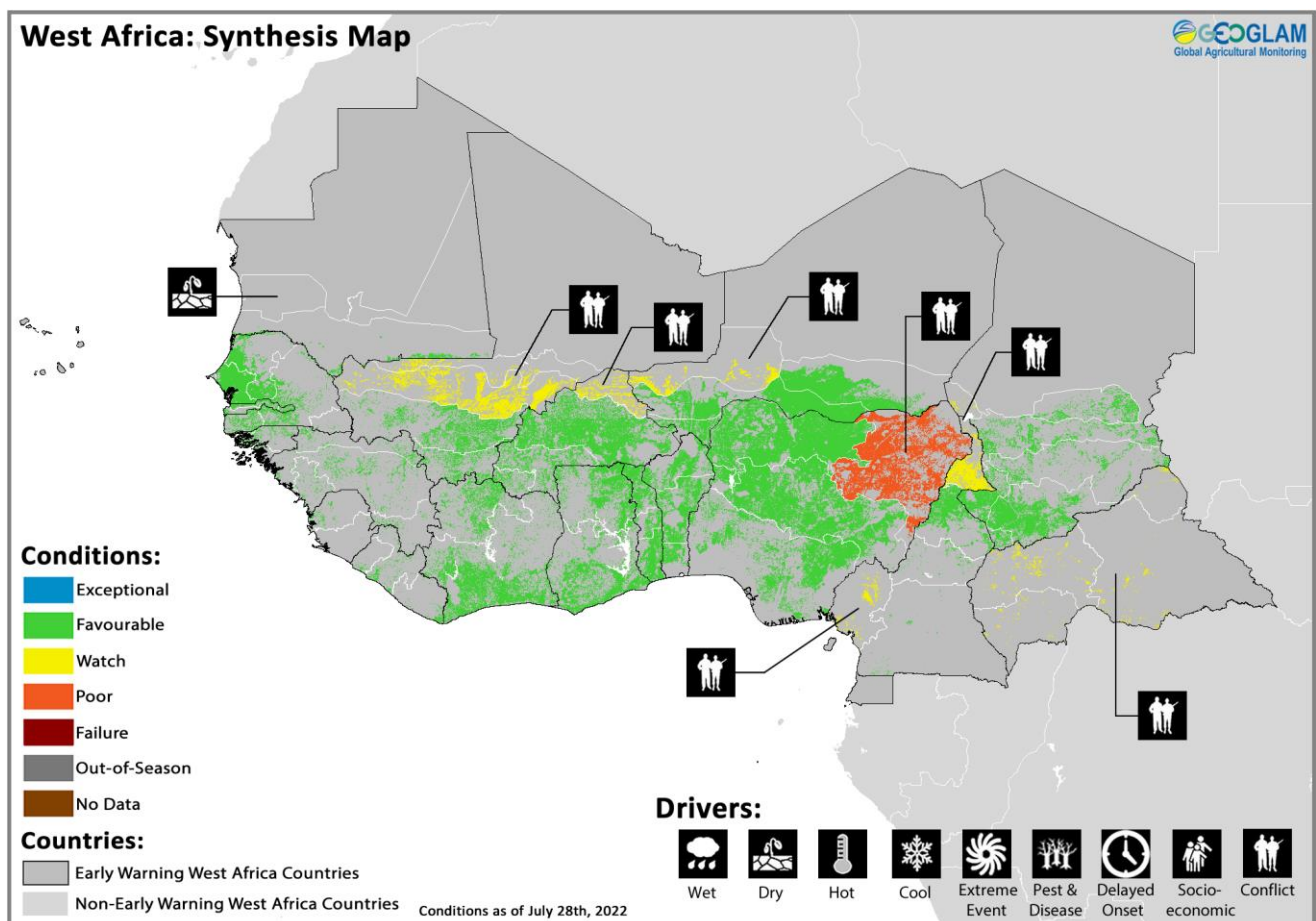
agro-pastoral livelihoods. These areas received below-average to average rainfall during June and July, following exceptionally low February to May 2022 rainfall. Long-cycle crops in these areas, and *Kiremt* season crops in some central and southern areas, could be negatively impacted if poor rainfall performance continues. Conversely, recent heavy rains in parts of the north and west have resulted in flooding and infrastructure damage. Conflict and related socio-economic challenges also continue to disrupt agricultural production and livelihoods in the northern regions of Tigray, Afar, and Amhara. Harvesting of *Belg* season (Short Rains) maize crops finalized under poor conditions as crops were affected by severe rainfall deficits and hot temperatures as well as the conflict situation in the north. However, in southern parts of SNNPR, farmers were able to harvest due to some rainfall received. In **Sudan**, planting of main season millet and sorghum crops continues for harvest from November, and there is



For detailed description of the pie chart please see description box on Pg. 17.

nearing completion. Crops in the bimodal rainfall areas of the northwest, east, and centre are unlikely to recover from delayed onset, generally below-average rainfall performance, and hot temperatures, and concern remains in Karamoja region in the northeast. Conversely, heavy rainfall since July 30th has triggered landslides, flooding, and river overflows in the Eastern region, particularly in areas of Mbale, Kapchorwa, and Sironko districts. Conditions in the west remain favourable. In the northwest, planting of second season maize crops is underway. Despite suboptimal rainfall performance in June and July, vegetation conditions are good. However, a continuation of dry conditions in these areas will likely impact crop development (See Seasonal Forecast Alert Pg. 5). In **Kenya**, harvesting of Long Rains maize crops is underway in bimodal marginal agriculture areas. While improved precipitation between late April and early May led to limited crop recovery along the coastal strip, below-average yields are expected due to prevailing drought conditions since late 2020 and failure of the March to May rainy season. Up to 85 percent of cropland has been affected by drought as of mid-July. Forecasts indicate an increasing likelihood of a fifth consecutive poor rainy season during the October to December Short Rains (See Seasonal Forecast Alert Pg. 5). In unimodal and major producing areas of the West and Rift Valley as well as in the central region, main season cereals continue to develop under favourable conditions. Despite cumulative rainfall levels of 10 to 20 percent below-average received between March and June, precipitation amounts were sufficient to allow for good crop establishment and development. Forecast above-average rainfall amounts through September in the West is expected to benefit crop development (See Seasonal Forecast Alert Pg. 5). In **Burundi** and **Rwanda**, harvesting of Season B maize and rice crops is underway, and conditions are favourable. In the **United Republic of Tanzania**, harvesting of *Masika* and *Msimu* season cereals is nearing completion with below-average yields expected for *Masika* season cereals along bimodal areas of the northeast, north, and northern coast due to below-average rains. Conversely, conditions remain favourable for *Msimu* season rice crops in unimodal and major producing areas of the centre, southwest, and southeast.

West Africa

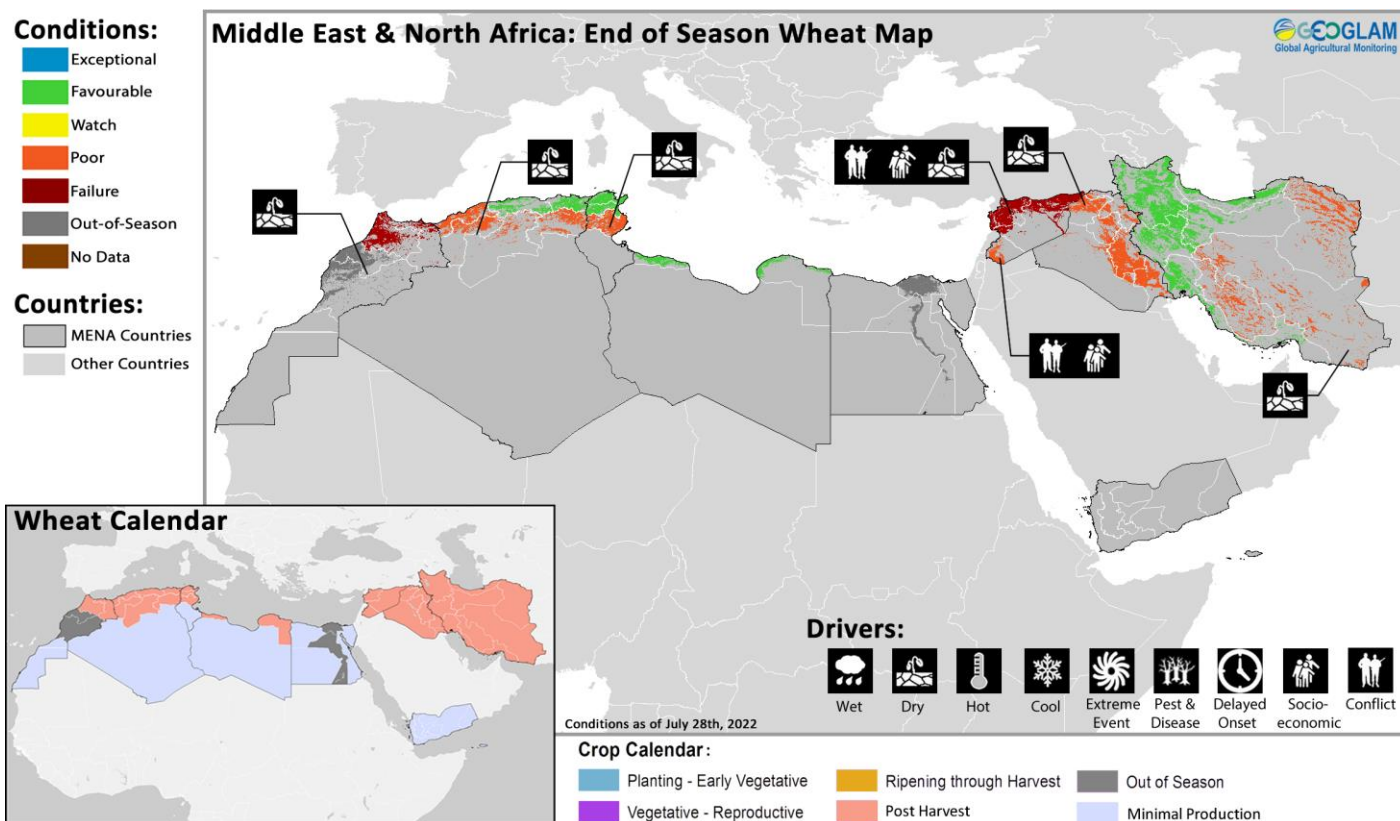


Crop condition map synthesizing crop conditions as of July 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are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

In West Africa, main season maize is in vegetative to reproductive and early harvesting stage along the Gulf of Guinea countries, including **Guinea-Bissau, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria**, and northern **Cameroon**. Planting and development of second season maize is underway in **Nigeria** and central and southern **Cameroon**. Along the Sahel, planting and development of main season cereals, including sorghum and millet, continues in **Mauritania, Senegal, Gambia**, southern **Mali, Burkina Faso**, southern **Niger**, southern **Chad**, and the **Central African Republic**. Throughout the subregion, climatic conditions remain generally favourable except in western **Mauritania** where dry conditions are present as well as in localized parts of central **Mali** where limited rainfall since May resulted in a short dry spell. Additionally, concern remains in areas impacted by

persisting conflict, including northeastern **Nigeria**, the Far North and southwest regions of **Cameroon**, the **Central African Republic**, Lac region in **Chad**, northern **Burkina Faso**, central **Mali**, and western **Niger**. In **Cote d'Ivoire**, above-average rainfall since June 16th, including torrential rains on June 21st, resulted in major flooding and landslides in localized areas of Abidjan region in the southeast. Throughout the subregion, high international prices of fuel and fertilizers as a spill over effect of the war in Ukraine could impact yields, particularly in countries that rely on fertilizer imports. According to the FAO Crop Prospects and Food Situation report, the governments of **Ghana**, **Mali**, **Mauritania**, **Niger**, and **Togo** have implemented a fertilizer subsidy scheme to increase fertilizer application.

Middle East & North Africa



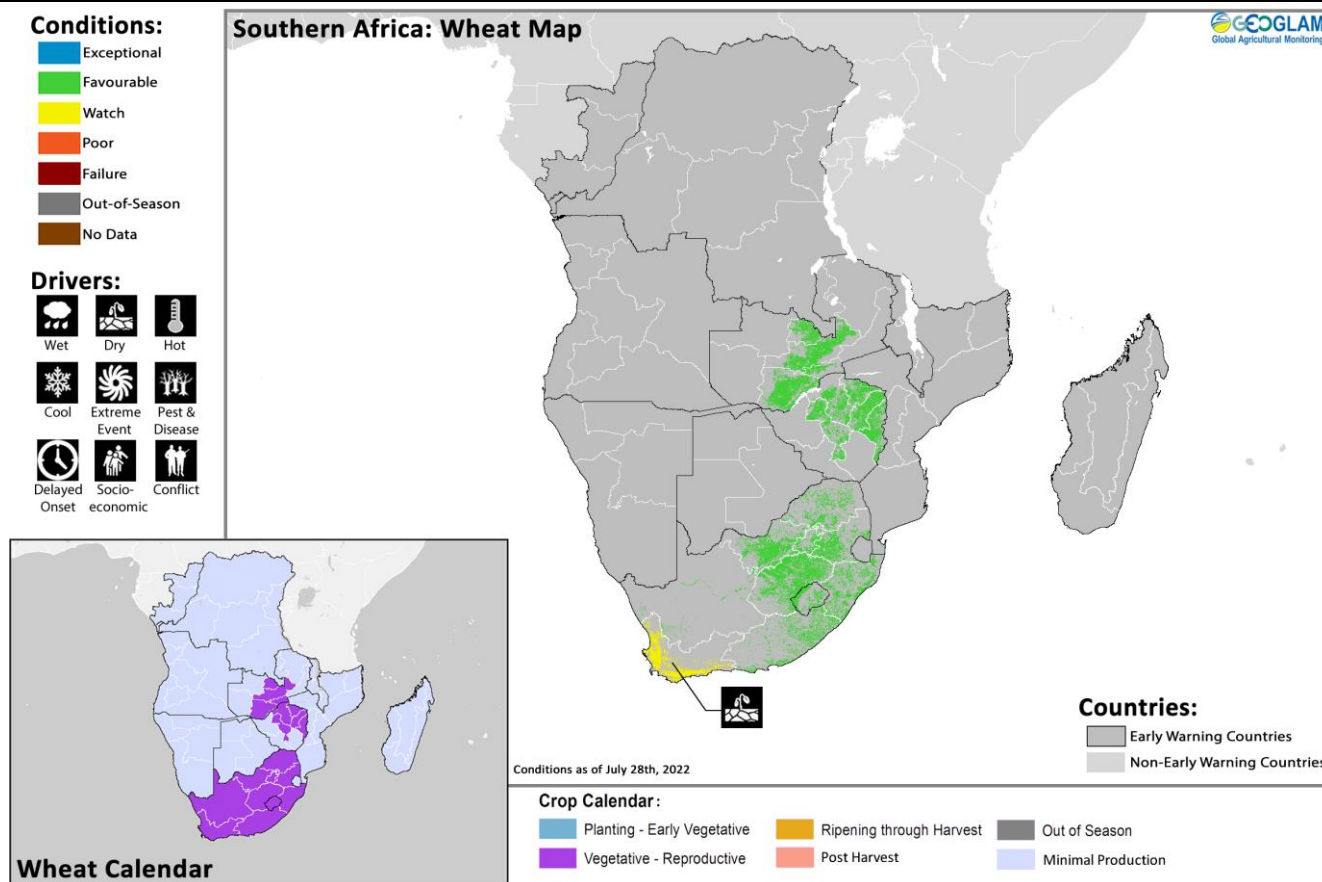
Crop condition map synthesizing wheat conditions as of July 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are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

In the Middle East and North Africa, harvesting of wheat finalized in **Morocco**, **Algeria**, **Tunisia**, **Libya**, **Syria**, **Iraq**, and **Iran** under mixed conditions. Persistent dryness throughout much of the season resulted in crop failure with well below-average yields in **Morocco** and parts of northern **Syria** and poor conditions with below-average yields in central and western **Algeria**, central **Tunisia**, southern **Syria**, **Iraq**, and central and southern parts of **Iran**. Additionally, persisting conflict and socio-economic challenges contributed to poor conditions throughout **Syria**. Conversely, near-average yields resulted in northern **Algeria**, northern **Tunisia**, **Libya**, and northern parts of **Iran**.

In **Morocco**, good rainfall at the start of the season was followed by dry conditions from November with less than half of the normal precipitation received between November 2021 and February 2022, resulting in widespread drought and crop losses. Abundant precipitation between March and April was too late for crops to recover, and production is estimated at 2.5 million tonnes, which is more than 55 percent below the five-year average. In **Libya**, final yields are near-average, although production was limited due to protracted conflict and socio-economic challenges. In **Syria**, crops in parts of the north, including in Aleppo, Hassakeh, Raqqa, and Dayr Az Zor have failed due to a delayed start to the season and drought conditions. Conversely, in the south, crop biomass is close to or slightly below-average, though final conditions are poor as conflict and socio-economic impacts continue to be the primary drivers impacting agriculture throughout the country. In **Iraq**, below-average yields resulted due to persistent dryness throughout the country, particularly in the north and in the main producing Ninewah governorate and in Dahuk and Diyala governorates, as well as the government's decision to reduce the planted area of irrigated crops by half to reduce water demand in response to the drought. Wheat harvest is estimated at 2.5 metric tonnes, a significant decline compared to 4.2 metric tonnes in 2021 and 6.2 million tonnes in 2020. In **Iran**, insufficient irrigation water and above-average temperatures from December 2021 impacted crop outcomes in some central and southern regions, including Fars, Esfahan, and Khorasan. Elsewhere, final yields are near-average as rainfall in other areas of the country was favourable. Planting of main season rice crops is underway, and conditions are favourable. In late June, heavy rain impacted the eastern part of the country, leading to flash floods, and two consecutive earthquakes impacted parts of the south.

Additional heavy rainfall affected southwestern areas with river overflows and flash floods in late July, particularly in Fars province. In **Egypt**, planting of *Nili* season (Nile Flood) rice crops is underway for harvest from December, and planting conditions are favourable.

Southern Africa



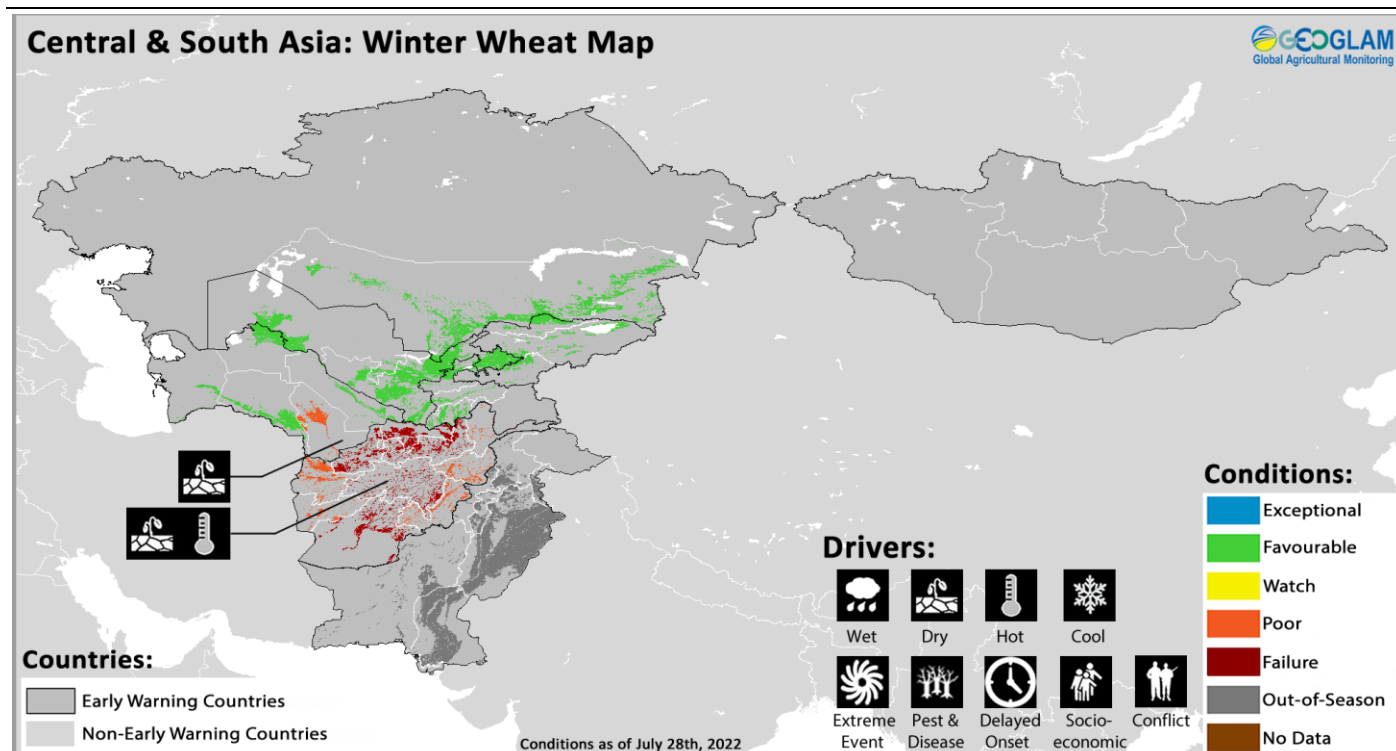
Crop condition map synthesizing wheat conditions as of July 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are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

In Southern Africa, harvesting of main season cereals mostly finalized in May and June under mixed conditions due to persistent dryness throughout the season as well as damage from the passage of several tropical storms across parts of **Mozambique, Malawi, and Madagascar**. In **Madagascar**, harvesting of main season rice crops finalized this month with near-average yields and production at the national scale, reflecting generally favourable conditions in the main producing regions. Conversely, tropical storm damage impacted yields in the minor producing eastern region.

Winter wheat crops are in vegetative to reproductive stage across **Lesotho, South Africa, Zambia, and Zimbabwe** for harvest from September, and agro-climatic conditions remain generally favourable. In **South Africa**, there is some concern over the winter rainfall region in the Western Cape, where about 70 percent of production takes place, as relatively dry conditions during May and July could have a negative impact on crop outcomes, especially if widespread above-normal rainfall doesn't occur during August. Conversely, due to widespread above-normal rainfall during the summer and autumn over the interior, soil moisture and water for irrigation is sufficient for production over the summer rainfall region. Additionally, early planting indications forecast a 5 percent increase in sown area compared to the five-year average in response to high prices and supply disruption concerns.

In the **Democratic Republic of the Congo**, planting and development of main season cereals is underway, and conditions remain favourable. In bimodal northern provinces, harvesting of second season maize crops finalized under favourable conditions with near-average precipitation in most cropping areas and despite below-average rainfall in the beginning of the season. In the east, harvesting activities are nearing completion under generally favourable conditions except in parts of Maniema, North Kivu, and south Kivu provinces in the central-east where heavy rains in mid-April resulted in localized flooding and crop damage. While erratic rainfall through much of the season may have impacted crops, rainfall improvements in May are likely to benefit yields in other areas. However, increased violence in eastern provinces has resulted in population displacements and localized disruptions of agricultural operations.

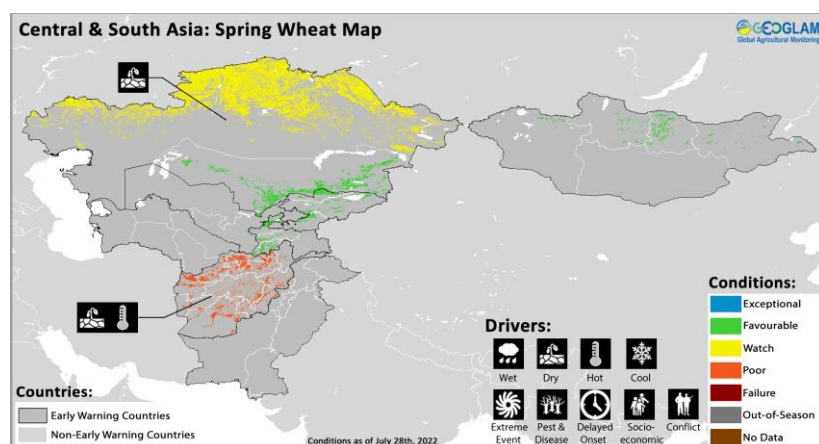
Central & South Asia



Crop condition map synthesizing Winter Wheat conditions as of July 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, harvesting of winter wheat finalized last month in **Pakistan** under favourable conditions while harvesting finalized this month in **Afghanistan** and is nearing completion in **Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan**. Failure conditions have resulted in parts of north, central, and southern **Afghanistan**, and poor conditions have resulted in east and western regions of **Afghanistan** and Mary region of southeastern **Turkmenistan** due to persistent dry and hot conditions throughout the season. Conversely, conditions have recently improved in Khatlon province and Tadjikistan Territories of **Tajikistan** and Ahal region of south-central **Turkmenistan**. Elsewhere, conditions remain favourable. In **Afghanistan**, the country continues to be affected by one of the worst droughts in recent years, significantly impacting food crops and reducing water supplies. Additionally, the southeastern region of the country was recently impacted by a 5.9 magnitude earthquake on June 22nd. The epicentre was in Paktika provinces, and Khost province was also affected. Continuous rains in late June following the earthquake resulted in mudslides, landslides, and flooding, hampering relief efforts and compounding damages. Additional heavy rainfall in early July resulted in further flash flooding, critical infrastructure damage, and displacement, particularly in Nangarhar and Nuristan provinces in the eastern region and Ghazni and Parwan in the central region. In southern **Kazakhstan**, conditions are favourable for winter wheat which accounts for 5 percent of annual wheat output. In **Tajikistan**, average wheat yields in June were near-average, though harvest is still ongoing. In the main producing Khatlon province, soil moisture is near-average, and according to preliminary estimates from the country's

statistics office, average June yields are near to slightly higher than the previous year's average yields. In **Kyrgyzstan**, favourable weather conditions benefitted crop yields in early May prior to the harvest, and overall winter and spring output is forecast at a near-average level of 560 thousand tonnes.



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

Harvesting of spring wheat crops is nearing completion in **Afghanistan** while crops continue to develop in **Kazakhstan, Kyrgyzstan, Mongolia, and Tajikistan** for harvest from August. Crops in **Afghanistan** are unlikely to recover from persistent hot and dry conditions, and concern remains in northern **Kazakhstan** due to previous dry conditions at the start of the season that have resulted in below-average crop biomass as of July. However, rainfall improvements in June in combination with forecast above-average precipitation for the remainder of the

season may result in crop improvements. Throughout the country, sown area of the spring wheat crop, which accounts for 95 percent of annual wheat output, is 5 percent above-average. In the main producing Khatlon province in **Tajikistan**, crops have improved from previous dry conditions. Elsewhere in the subregion, conditions remain favourable. In **Pakistan**, planting of *Kharif* (summer) season rice crops and main season maize crops continues for harvest from September, and planting conditions remain favourable. However, forecast below-average October to December precipitation may impact crop outcomes in affected areas (See Seasonal Forecast Alert Pg. 12).

Seasonal Forecast Alert: Increased likelihood of a third consecutive year of below-average October to December precipitation across much of the region

There are elevated risks of a third consecutive year with below-average precipitation in parts of Central and Southern Asia, associated with anticipated La Niña conditions during fall and winter 2022-2023 (~65% chance for October through January). Most models are predicting below-normal precipitation during October-to-December (OND) 2022, based on NMME, C3S, and WMO forecasts from July. A strong majority of the WMO forecast ensemble (60-70%) indicates below-normal OND precipitation in Afghanistan, southeastern Turkmenistan and Uzbekistan, and western Tajikistan (Figure 1-left).

The La Niña outlook and OND precipitation forecasts raise concerns about adverse weather during the 2022-2023 winter wheat growing season, the possibility of reduced sowing during OND, impacts on production, and reduced chances of recovery from ongoing hydrological drought. Below-average October-to-May precipitation during the past two years (Figure 1-middle and right), also associated with La Niña conditions, resulted in poor and failed crop conditions for winter wheat across parts of the region. Similar outcomes are possible for a third year in a row. Water resources have been impacted by two years of below-average seasonal snowpack in southern areas, and particularly by this past year having the [worst snow season](#) in over 20 years.

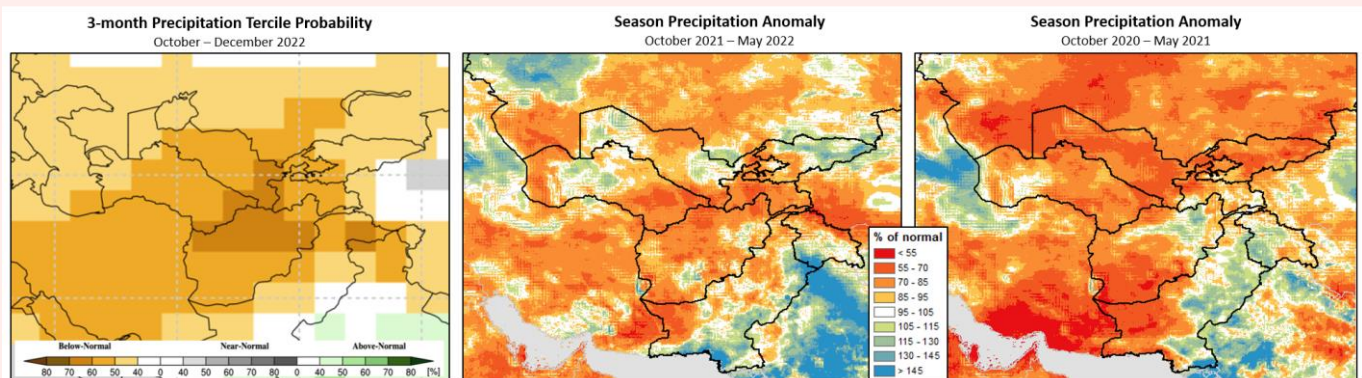
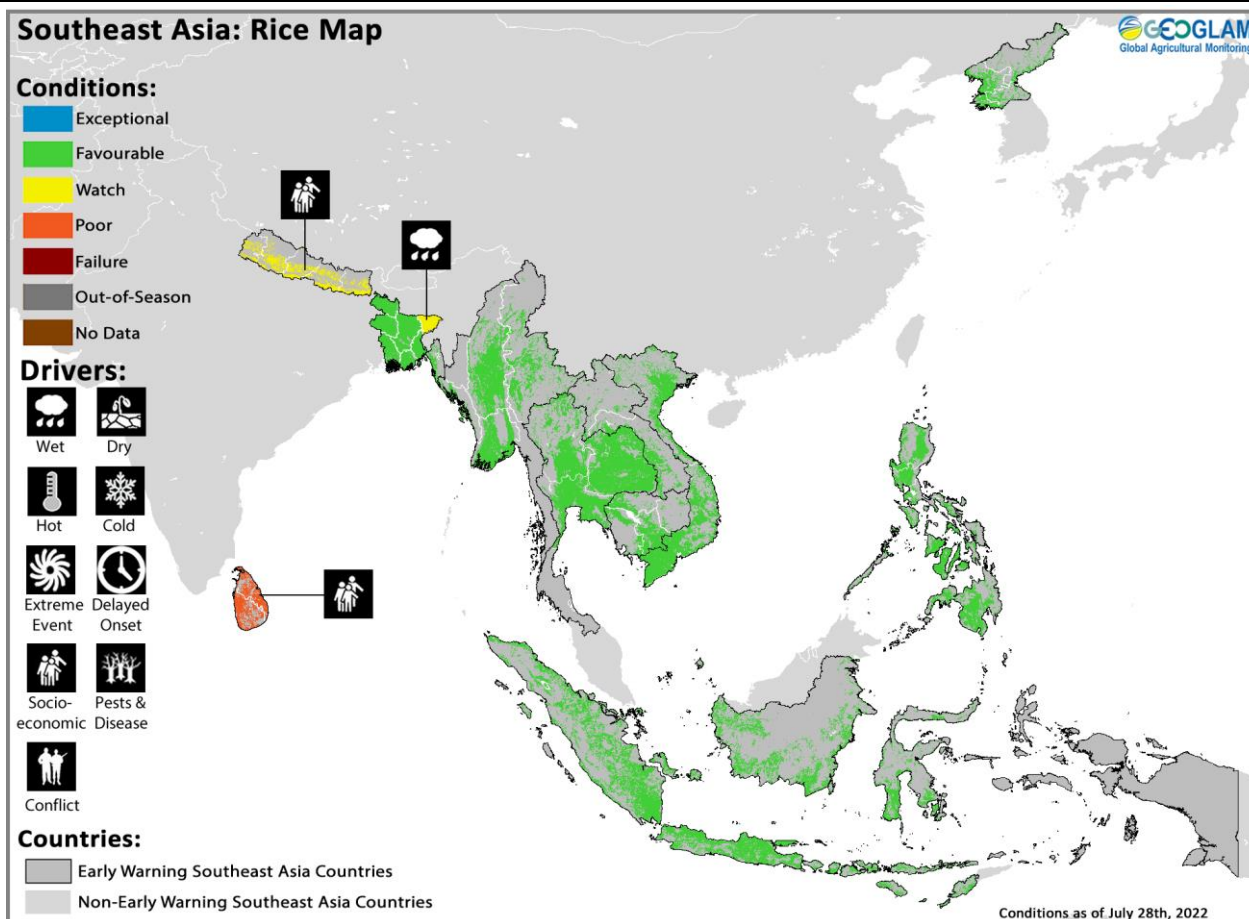


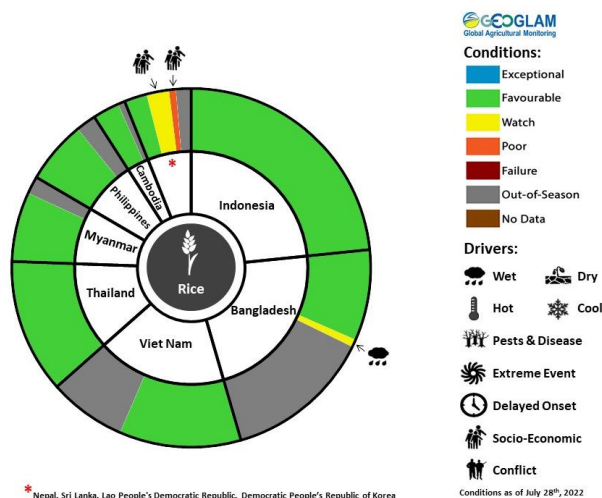
Figure 1. A probabilistic precipitation forecast for October-to-December 2022 and season precipitation anomalies for October-to-May 2021-22 and 2020-21. The left panel is a WMO probabilistic forecast for October-to-December 2022 precipitation, based on models initialized in July. From the WMO Lead Centre Long-Range Forecast Multi-Model Ensemble. The middle and right panels are October-to-May season precipitation anomalies, which compare October-to-May precipitation totals from 2021-22 (middle) and 2020-21 (right) to the 1981-2010 historical season average. Source: UCSB Climate Hazards Center

Southeast Asia



Crop condition map synthesizing rice conditions as of July 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, wet-season rice is in seeding to growing stage under favourable conditions with sufficient rainfall received. While heavy rains impacted some areas, no significant damage has been reported. However, forecast above-average precipitation for much of the subregion through November increases the risk of flooding (See Regional Outlook Pg. 14). Additionally, rising prices of agricultural inputs in some countries, including **Thailand, Viet Nam, and Laos**, may impact production outcomes. In **Indonesia**, harvesting of wet-season rice is wrapping up under favourable conditions with sufficient water and sunlight received during the growing period. Harvested area is currently 6.3 million hectares and is 4.1 percent higher than last year. Recent rainfall has helped to support the sowing of dry-season rice. In the **Philippines**, wet-season rice is in the maturing stage under favourable conditions despite the passage of two tropical cyclones in the second half of June that brought heavy rainfall to the western portions of Luzon and Visayas. Additionally, on July 27th, a 7.0 magnitude earthquake struck the mountainous province of Abra in the northwest of the country, resulting in landslides and infrastructure damage in localized areas. In **Thailand**, wet-season rice is in the tillering stage under favourable conditions. A total sown area increase compared to last year is expected due to ample rainfall and good paddy prices and despite a decrease in paddy area in the Northern and Western regions due to the late harvesting of dry-season rice. Yield is also expected to increase slightly compared to the previous year, which was affected by flooding. However, yield may also be constrained if farmers reduce the use of fertilizers and pesticides due to rising prices. In northern **Viet Nam**, harvesting of winter-spring rice (dry-season) is wrapping up with yields of 6.21 tons per hectare and 3.6 percent lower than last year due to erratic weather and a switch away from industrial fertilizer due to high prices. Summer-autumn (wet-season) rice is in seeding and tillering stages under favourable conditions due to sufficient irrigation preparation. In the south, summer-autumn rice (wet-season) is in young panicle forming and grain filling stages under favourable conditions with harvesting just beginning for early planted crops in the Mekong River Delta.



For detailed description of the pie chart please see description box on Pg. 17.

Sowing of autumn-winter rice (wet-season) is beginning. In lowland areas of **Laos**, wet-season rice is in seeding stage under favourable conditions with sufficient irrigation water supply. Planted area has progressed to 77 percent of the national plan. However, final planted area is expected to be slightly lower than the national plan due to high prices of agricultural inputs. In upland areas, planting progress is now complete and has reached 85 percent of the national plan. In **Myanmar**, planting of wet-season rice continues under favourable conditions and has reached 2.03 million hectares and 33.5 percent of the national plan. Monsoon weather generally favoured planting work despite localized flooding, and planted crops are now at tillering stage. In **Cambodia**, wet-season rice is in flowering to grain filling stage under favourable conditions, and planted area has reached 1.9 million hectares and 70 percent of the national plan. However, planting progress is slower than the previous year due to heavy rain and flooding in some areas. Additionally, heavy rain in the first half of July may impact crop development. In **Sri Lanka**, *Yala* season maize and rice crops are in vegetative to reproductive stage for harvest from August, and production is expected to decrease sharply as a result of severe shortages of fertilizer, fuel, and pesticides, and the country continues to be affected by the worst economic crisis since its independence in 1948. In **Nepal**, main season maize crops are in vegetative to reproductive stage while planting of main season rice is underway, and concern remains throughout the country as production is likely to be impacted by the high price of fuel and fertilizer. In **Bangladesh**, harvesting of *Boro* season rice crops finalized last month with near-average yields with production estimates at 30.3 million tonnes. Planting of *Aman* season rice crops, which accounts for 35 percent of annual rice output and is mostly rainfed, as well as main season maize crops continues under generally favourable conditions. Maize output is forecast at an above-average level due to an expansion in sown area as a result of high demand and domestic prices, and yield is also expected to be above-average due to favourable weather conditions and the use of high-yielding seed varieties. However, since May, heavy monsoon rains and runoff from northeastern India have inundated large parts of the country, causing damage to infrastructure, farmlands, and livelihoods. As of late June, large areas of Sunamganj and Sylhet districts in Sylhet division are submerged, and Habiganj, Brahmanbaria, Maulvibazar, Netrakona, and Kishoreganj have also been affected. In the **Democratic People's Republic of Korea**, main season maize and rice crops are in vegetative to reproductive stage for harvest from August, and agro-climatic conditions remain generally favourable with close to average crop biomass. Despite some delayed growth in South Hwanghae province, possibly due to dry conditions in April and May, the country received heavy rainfall at the end of June that replenished water reserves and resulted in localized flooding.

Regional Outlook: Above-average rainfall forecast to continue in most areas during September to November

In recent weeks, rainfall totals were above-average or average in most areas of the region (Figure 1-left). Rainfall was below-average in Bangladesh, central and northern Myanmar, northern Laos, and eastern Malaysia. In Thailand, highly above-average rainfall led to [flooding](#) in multiple provinces in July.

An outlook for April 1st to August 10th indicates largely above-average season-to-date rainfall totals across southern and northeastern areas. Ongoing rainfall deficits could intensify in southern Bangladesh and central Myanmar from forecast drier-than-average conditions (Figure 1-middle left). Myanmar may continue to receive below-average rainfall through August, based on the WMO forecast (Figure 1-middle-right). In northeastern areas, the two-week forecast shows mainly above-average rainfall during late July and early August.

Models continue to predict a transition to wetter-than-average conditions in northeastern areas during September-to-November (Figure 1-right). In most southern areas, wetter-than-average conditions will very likely continue through November, based on agreement from a large majority of models from multiple forecasting centers. These are indicating typical impacts from possible warmer-than-average conditions in the Indo-Pacific Ocean region, negative Indian Ocean Dipole, and La Niña conditions. Models also indicate relatively dry conditions in northern Indonesia and west Malaysia, and above-average temperatures in Bangladesh, Myanmar, southern Thailand, the Philippines, and Indonesia.

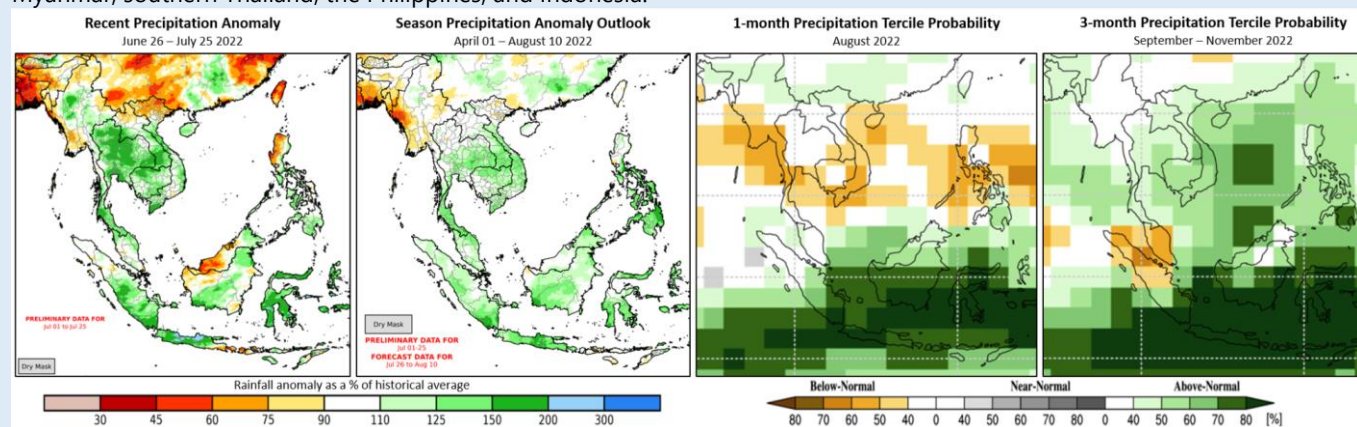
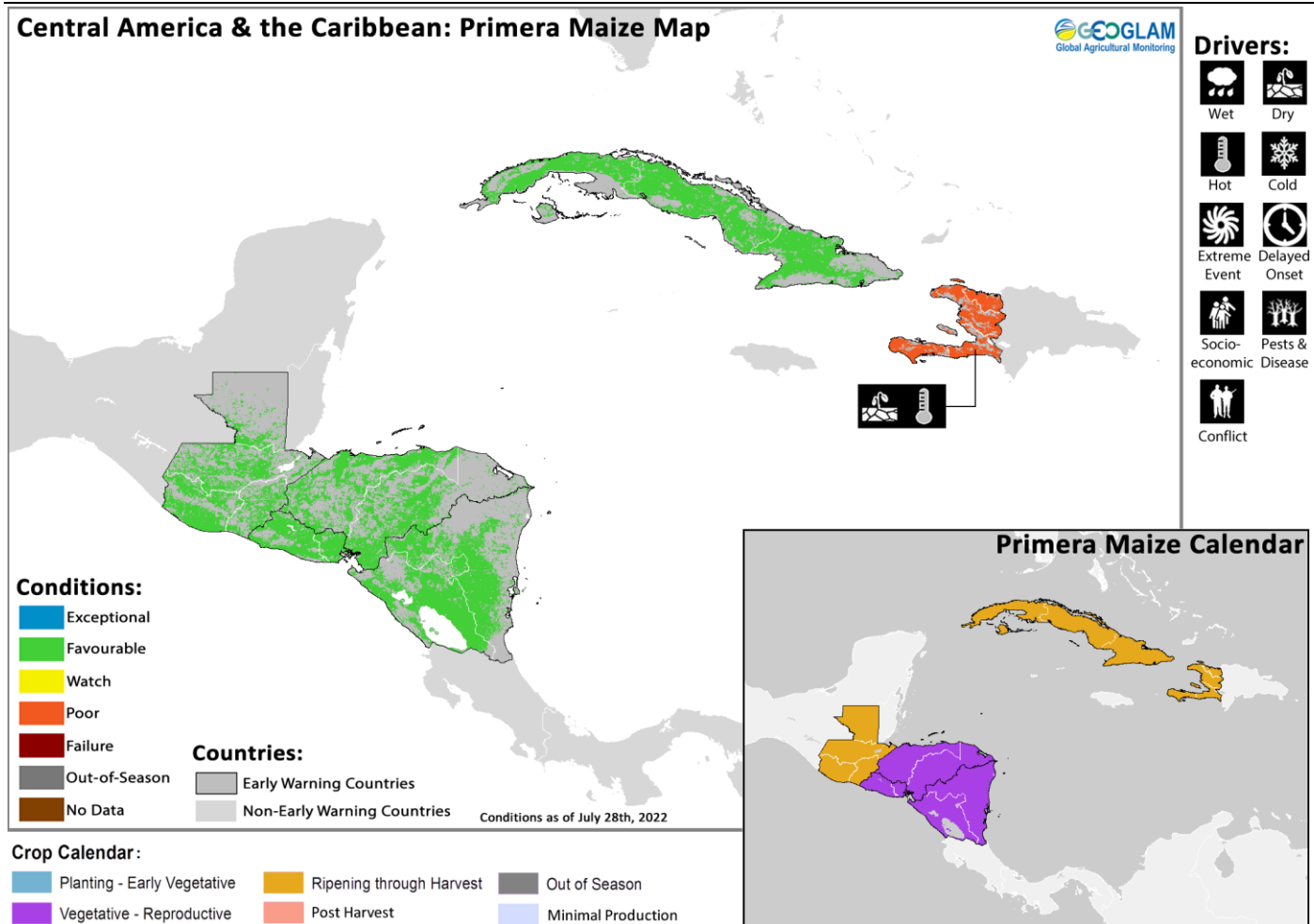


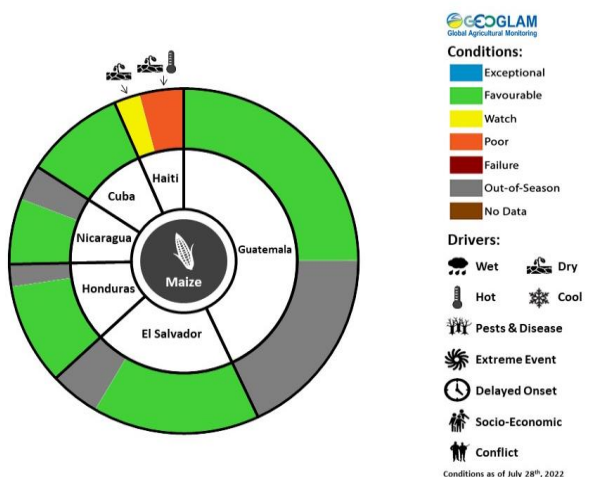
Figure 1. June 26th to July 25th and April 1st to August 10th, 2022 precipitation anomalies, and probability forecasts for August and September-to-November 2022 precipitation. The left two panels are CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for their respective accumulation periods. These use a combination of final and preliminary data, and for middle-left, also a two-week bias-corrected GEFS forecast. Left: Percent of average for June 26th to July 25th, 2022. Middle-left: Percent of average for April 1st to August 10th. Preliminary data for July 1st - 25th; forecast data for July 26th to August 10th. The right two panels show WMO probabilistic forecasts for August (middle-right) and September-to-November (right) 2022 precipitation, based on models initialized in July. From the WMO Lead Centre Long-Range Forecast Multi-Model Ensemble. Source: UCSB Climate Hazards Center

Central America & Caribbean



Crop condition map synthesizing *Primera* season maize conditions as of July 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, early harvesting of *Primera* season cereals is underway in **Guatemala** while crops continue to develop in **El Salvador**, **Honduras**, and **Nicaragua** for harvest from August. Overall conditions are favourable despite below-average rainfall observed in some areas during late June and July as reduced seasonal rainfall is typical for this period (See Regional Outlook Pg. 16). Additionally, the reduced rainfall helped to lessen the excess soil moisture, particularly in northern **Honduras** where conditions have improved from the previous month. Conversely, localized areas of Huehuetenango, Alta Verapaz, Chiquimula, and Zacapa in **Guatemala** as well as Ocotepeque, Santa Barbará, Copán, Cortés, and Yoro in northwestern **Honduras** reported localized crop losses related to flooding in riverine areas. Additional heavy rainfall in late July caused localized flooding in the northeastern Gracias a Dios department of **Honduras**. Pests have also been reported along the Dry Corridor of Central America with localized impacts. Furthermore, aggregate 2022 maize output for Central America is expected to be slightly below-average due to reduced plantings as the increase in fuel prices and agricultural inputs continues to result in rising production and transportation costs. The governments of **Guatemala**, **El Salvador**, and **Honduras** distributed free seeds and fertilizers to smallholder farmers in an effort to combat the planting declines. Forecast above-average rainfall amounts with a likely active hurricane season from June to November could benefit crop development but also increases the risk of excessive moisture and flooding, which could constrain yields (See Regional Outlook Pg. 16). In **Haiti**, harvesting of main season cereals is nearing completion, and crops are unlikely to recover from rainfall deficits and temperature increases during the *Printemps* season. Following favourable rainfall in March and April, precipitation declined to below-average levels in May and June during the grain-filling stage. Field reports indicate the situation is worse in the Central Plateau, particularly Haut Plateau, Artibonite, North, Northeast, Northwest, and West. Additionally,



For detailed description of the pie chart please see description box on Pg. 17.

production of maize and bean crops is forecast at a below-average level as a result of reduced plantings due to the high costs and limited availability of agricultural inputs and high fuel prices. Land preparation of second season maize crops is now underway for harvest from October, and despite near-average rainfall in the last two weeks, planting activities are delayed as erratic rainfall distribution and elevated temperatures have reduced soil moisture. However, forecasts indicate near to above-average rainfall amounts through October, which is expected to replenish soil moisture deficits (See Regional Outlook Pg. 16). In **Cuba**, harvesting of main season maize crops is underway while second season rice crops continue to develop for harvest from September. Despite below-average rainfall in July, conditions remain favourable throughout the country due to good rainfall received in previous months.

Regional Outlook: Elevated chances of above-normal August to October rainfall across much of Central America

During recent weeks, between June 26th and July 25th, rainfall totals were below-average in northern Central America and in Haiti and the Dominican Republic, and average to above-average in eastern Honduras, most of Nicaragua, and areas to the south (Figure 1-left). In central and northern Guatemala, western Honduras, El Salvador, and Belize, preliminary data indicate moderate-to-large rainfall deficits during this time, ranging from 50 mm to greater than 100 mm below-average. Impacts could vary, but in some areas the dry conditions may have been beneficial for crop harvesting, as these occurred during a typical period of reduced seasonal rainfall.

In Haiti, the dry conditions in recent weeks followed earlier periods of untimely, below-average rainfall during the cropping season. An outlook for below-average April 1st to August 10th rainfall totals, based on a combination of data and a two-week forecast, reflects those recurring dry conditions (Figure 1-middle). Central America areas are likely to have average or above-average April 1st-to-August 10th rainfall. There were some very wet periods during April to June, and in early July, Tropical Storm Bonnie also brought heavy rain to Nicaragua, El Salvador, Costa Rica, and eastern Honduras.

Models continue to predict elevated chances of above-normal August-to-October 2022 rainfall in Central America. This is indicated for most areas by the NMME ensemble forecast from July (Figure 1-right). In northern areas and Haiti, however, there is low confidence in that outlook due to relatively low levels of model agreement in WMO and C3S ensemble forecasts. Due to the anticipated very active 2022 Atlantic hurricane season, there are increased risks of flash floods, landslides, and other storm-related hazards.

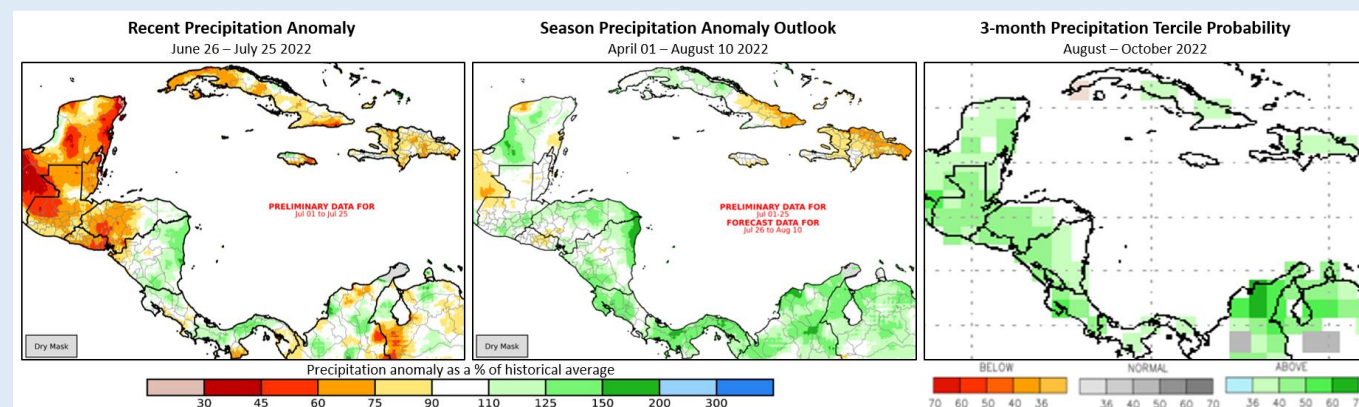


Figure 1. June 26th to July 25th and April 1st-to-August 10th, 2022 precipitation anomalies, and a probability forecast for August-to-October 2022 precipitation. The left two panels are CHC Early Estimates, which compare current precipitation totals to the 1981-2021 CHIRPS average for their respective accumulation periods. These show the percent of average for June 26th to July 25th, 2022 based on CHIRPS final data through the end of June and preliminary data for July (left), and April 1st-to-August 10th based on these data and a two-week bias-corrected GEFS forecast for July 26th to August 10th (middle). The right panel is a 3-month NMME probabilistic precipitation forecast for August-to-October, 2022, based on July 2022 initial conditions. The forecast probability is calculated as the percentage of all 79 NMME ensemble members that fall in a given tercile (above/below/near-normal). White color indicates there is no dominant category across the model forecasts. NMME image from the [NOAA CPC Climate Forecasts](https://www.noaa.gov/cpc). Source: UCSB Climate Hazards Center

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 August 4th, 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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Prepared by members of the GEOGLAM Community of Practice, coordinated by the University of Maryland Center for Global Agricultural Research and funded through NASA Harvest.



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

Contributing partners



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