

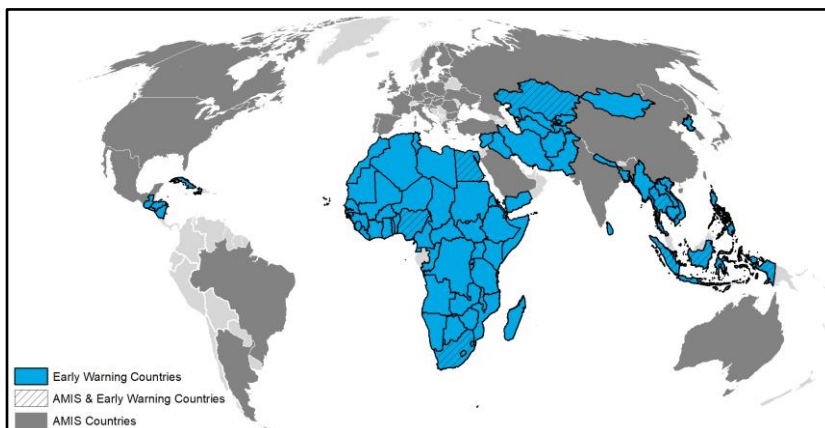


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, harvesting of main season cereals is underway in the north with mixed conditions due to conflict impacts in parts of Ethiopia, South Sudan, and Yemen and flooding in South Sudan and Sudan. There is also concern for second season cereals across the south due to delayed onset and dry conditions and forecast below-average rainfall for the coming months. In **West Africa**, harvesting of main season cereals is underway throughout the subregion, and conditions are generally favourable except in regions impacted by persisting conflict and dry conditions. In the **Middle East and North Africa**, early planting of winter wheat crops has commenced under favourable conditions except in regions impacted by conflict and socio-economic challenges. In **Southern Africa**, harvesting of winter wheat crops is underway, and planting of main season cereals has commenced under favourable conditions. In **Central and South Asia**, planting of winter wheat crops has begun under mixed conditions due to dry and hot conditions in parts of Afghanistan and Turkmenistan. Harvesting of spring wheat crops finalized under mixed conditions due to persistent dryness throughout the season. In northern **Southeast Asia**, wet-season rice conditions have degraded in parts of Cambodia, Myanmar, Thailand, and the Philippines due to heavy rainfall and flooding. In **Central America and the Caribbean**, *Segunda/Postrema* season cereals are developing under mixed conditions due to erratic and below-average rains in parts of Guatemala and Honduras as well as localized flooding. In Haiti, main and second season crops are unlikely to recover from prevailing dryness.



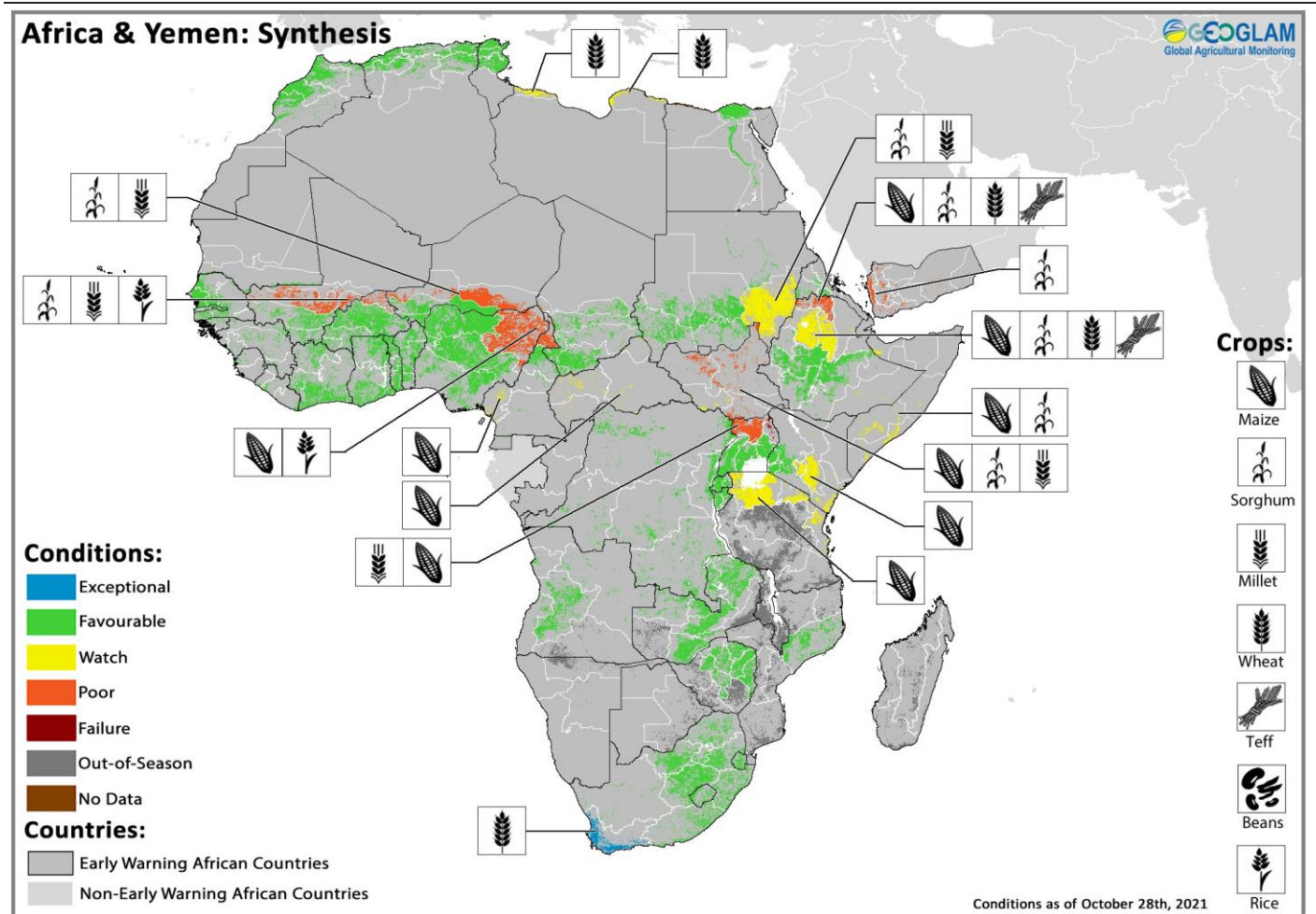
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GEOGLAM Crop Monitor for Early Warning

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 with mixed conditions in Ethiopia due to ongoing conflict in Tigray and poor conditions in South Sudan and Yemen due to impacts from flooding, conflict, and socio-economic challenges. In the south, planting and development of second season cereals is underway with concern due to a delayed rainfall onset and dry conditions, and below-average rainfall is forecast for the October to December period (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 9).

WEST AFRICA: Harvesting of main season maize crops is wrapping up in the south while harvesting of main season cereals is underway in the north, and conditions are generally favourable except in parts of Mali, Niger, Burkina Faso, and Cameroon impacted by dry conditions and in regions impacted by persisting conflict.

MIDDLE EAST & NORTH AFRICA: Early planting of winter wheat crops has commenced under generally favourable conditions except in conflict affected regions of Syria and Libya. Also, forecast drier than average conditions are likely for much of the Middle East (See Regional Outlook Pg. 11).

SOUTHERN AFRICA: Harvesting of winter wheat crops is underway, and overall conditions are favourable. Planting of

main season cereals has begun, and conditions are favourable despite delayed rainfall onset in parts of Angola. Forecasts of average to above-average seasonal rainfall from December is likely to benefit yields (See Regional Outlook Pg. 14).

CENTRAL & SOUTH ASIA: Planting of winter wheat crops has begun under mixed conditions as dry and hot conditions may impact crop development in parts of Afghanistan and southeastern Turkmenistan. Harvesting of spring wheat crops finalized under mixed conditions as persistent dryness throughout the season resulted in below-average yields.

SOUTHEAST ASIA: In the north, conditions for wet-season rice have degraded in parts of Cambodia, Myanmar, Thailand, and the Philippines due to the effects of heavy rainfall and flooding from late September. In Indonesia, harvesting of dry-season rice is underway while planting of wet-season rice has begun, and overall conditions are favourable.

CENTRAL AMERICA & CARIBBEAN: In Central America, *Segunda/Postre* season cereals are developing under mixed conditions due to erratic and below-average rains in parts of Guatemala and southern Honduras. In the Caribbean, harvesting of both main and second season cereals is underway, and crops in Haiti are unlikely to recover due to prevailing dryness.

Global Climate Outlook: 30-day Forecast of Areas with Above or Below-Average Precipitation

The 30-day precipitation forecast indicates a likelihood of above-average rainfall over the northeast of the United States, central and northern Brazil, western Ecuador, central Peru, central Bolivia, western Paraguay, northern and western Argentina, Wales, northeastern France, Portugal, southern India, northern Myanmar, southern China, northern Japan, Indonesia, and northern and eastern Australia.

There is also a likelihood of below-average rainfall in the Dominican Republic, southern Brazil, eastern Paraguay, Uruguay, southern Chile, southern Ethiopia, Somalia, Kenya, southern Democratic Republic of Congo, Burundi, Tanzania, eastern Angola, Zambia, Mozambique, northeastern Zimbabwe, Madagascar, and northern Philippines.

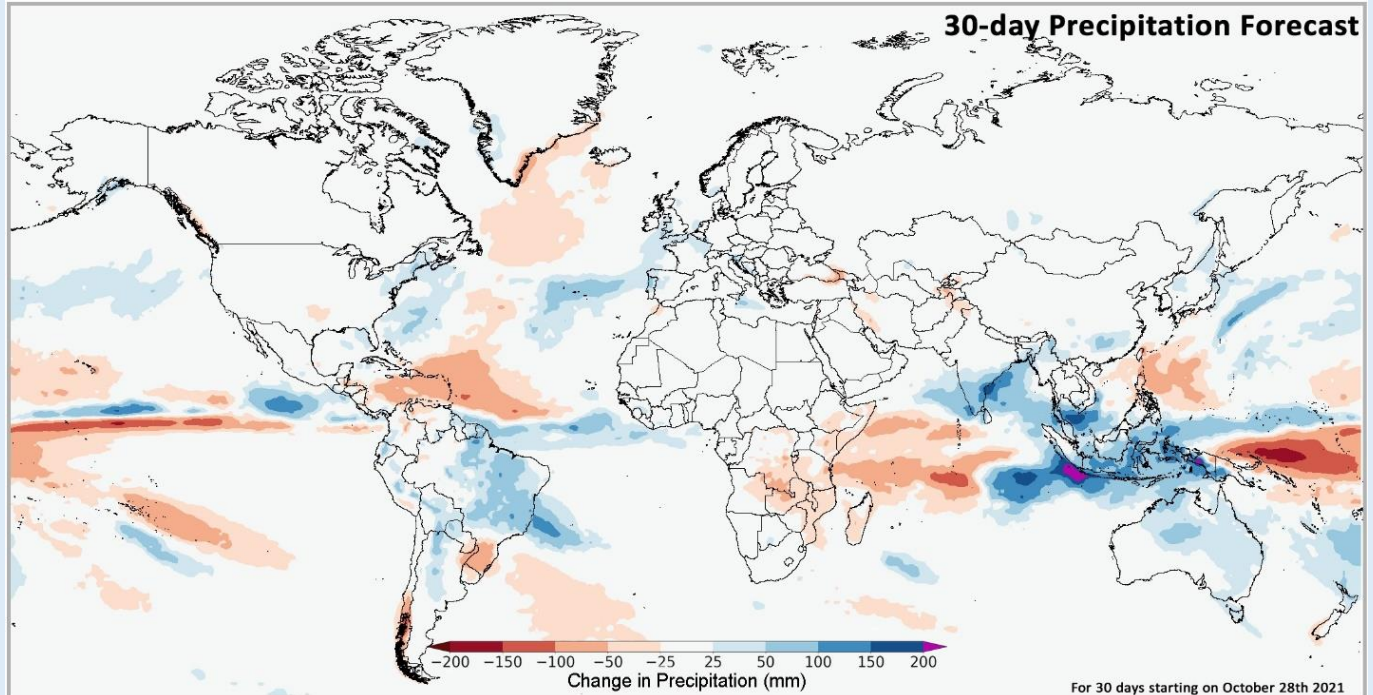


Figure 1. Forecast of areas with above or below-average precipitation over the next 30-days starting on October 28th 2021. The image is the multimodel mean of precipitations anomaly from the Subseasonal Experiment ([SubX](#)) model forecasts for that day. The anomaly is based on the 1999 to 2016 model average. Skill assessments of SubX can be accessed [here](#). Source: UCSB Climate Hazards Center

Climate Influences: La Niña event present and expected to continue during November to January, and negative IOD event currently underway

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase with NOAA CPC/IRI issuing a La Niña Advisory in October. La Niña conditions are expected to continue during November to January (93% chance) and into April (63% chance for February-March-April). Climate forecasts also anticipate exceptionally warm west Pacific Ocean conditions, which can amplify the impact of cool eastern Pacific La Niña conditions.

La Niña conditions typically increase the chances of below-average precipitation in East Africa, Central and South Asia, southern South America, the southern United States, northern Mexico, and eastern East Asia. There are elevated risks of a two-year sequence of dry conditions in these regions, associated with La Niña conditions last year and this year. La Niña conditions typically increase the chances of above-average precipitation in parts of Southeast Asia, Australia, Southern Africa, and northern South America.

The Indian Ocean Dipole (IOD) is in a negative state. Most models forecast a return to neutral by December. Negative IOD conditions typically increase the chances of above-average precipitation in Southeast Asia and Australia and below-average precipitation in East Africa.

Source: UCSB Climate Hazards Center

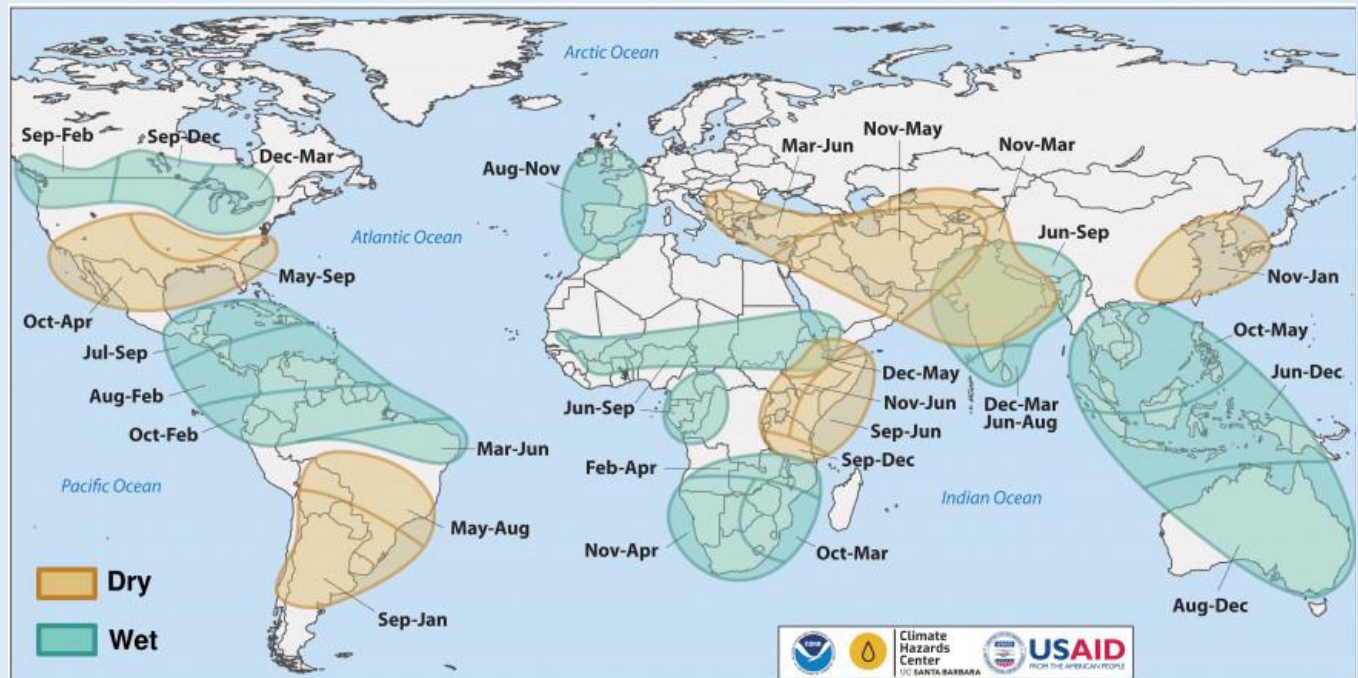


Figure 1. Timing of wet and dry conditions related to La Niña <https://fews.net/la-ni%C3%B1a-and-precipitation>. Source: NOAA & CHC & FEWS NET

Desert Locust Update: Breeding may occur in parts of Ethiopia, Somalia, and Eritrea with the onset of OND rains

In **Ethiopia**, a few summer-bred swarms likely formed in Afar, southeastern Tigray, and eastern Amhara regions. Swarms are expected to migrate to the Red Sea coast of Eritrea and to eastern Ethiopia and northern Somalia. In **Somalia**, a few mature spring-bred swarms are present in the northeast, though no swarms have been reported recently in the northwest. In **Sudan**, minimal scattered adults are present in the interior, and a few groups are forming in northern Khartoum. In **Yemen**, a few summer-bred swarms are likely present in the interior. A few swarms will likely migrate from the interior to the coasts for winter breeding. With the onset of the October to December rainfall period, breeding is likely to occur in parts of eastern **Ethiopia**, north and northwestern **Somalia**, and coastal **Eritrea**.

Seasonal Forecast Alert: Third consecutive poor rainfall season emerging for OND 2021, and fourth consecutive season likely for MAM 2022

A third consecutive poor rainfall season is emerging in eastern East Africa (See Regional Outlook Pg. 9), and there is also concern for a likely fourth poor rainfall season in March-April-May (MAM) 2022. The October–November–December (OND) 2021 season rainfall performance in eastern areas is, thus far, consistent with the elevated risk of below-normal rainfall during La Niña and negative Indian Ocean Dipole conditions and with ICPAC and climate model rainfall forecasts in advance of this season.

Concerns for poor MAM 2022 rainfall performance are founded upon the [in-progress](#) La Niña event, the forecast Pacific Ocean sea surface temperature (SST) configuration for MAM 2022, and below-normal MAM rainfall during many similar years. For MAM 2022, NMME models confidently predict much warmer-than-average SSTs across the western Pacific Ocean and cooler-than-average SSTs in the equatorial eastern Pacific Ocean (Figure 1-left). This forecast indicates that a strong “Western V” tropical-extratropical gradient (WVG) could help produce La Niña-like suppressed rainfall impacts in the eastern Horn during MAM, even if eastern Pacific SST are not cool enough to meet La Niña criteria in MAM. There is a ~90% chance of strong MAM WVG conditions. Five-month lead NMME forecasts for WVG conditions during MAM are skillful (Figure 1-right), due to the models’ ability to forecast La Niña-related SST variations and the strong warming trend in the western Pacific. In years when climate models forecast a strong negative WVG, as they do for MAM 2022 (red circle), many MAM seasons had below-normal rainfall (orange circles show all below-normal seasons).

Climate models do not provide reliable long-range rainfall predictions for the MAM season. Using recent historical analogs as a guide, based on similar La Niña and WVG climate conditions, the chance for below-normal rainfall in MAM 2022 is [higher than 50%](#) in [many areas](#) of the eastern Horn. Back-to-back dry OND and MAM seasons emerged under similar conditions last year, and predictions of those dry seasons were accurate. Given the high likelihood of a poor OND 2021 season, and the anticipated MAM 2022 Pacific Ocean conditions, it is likely that the eastern East Africa region will experience four sequential dry seasons.

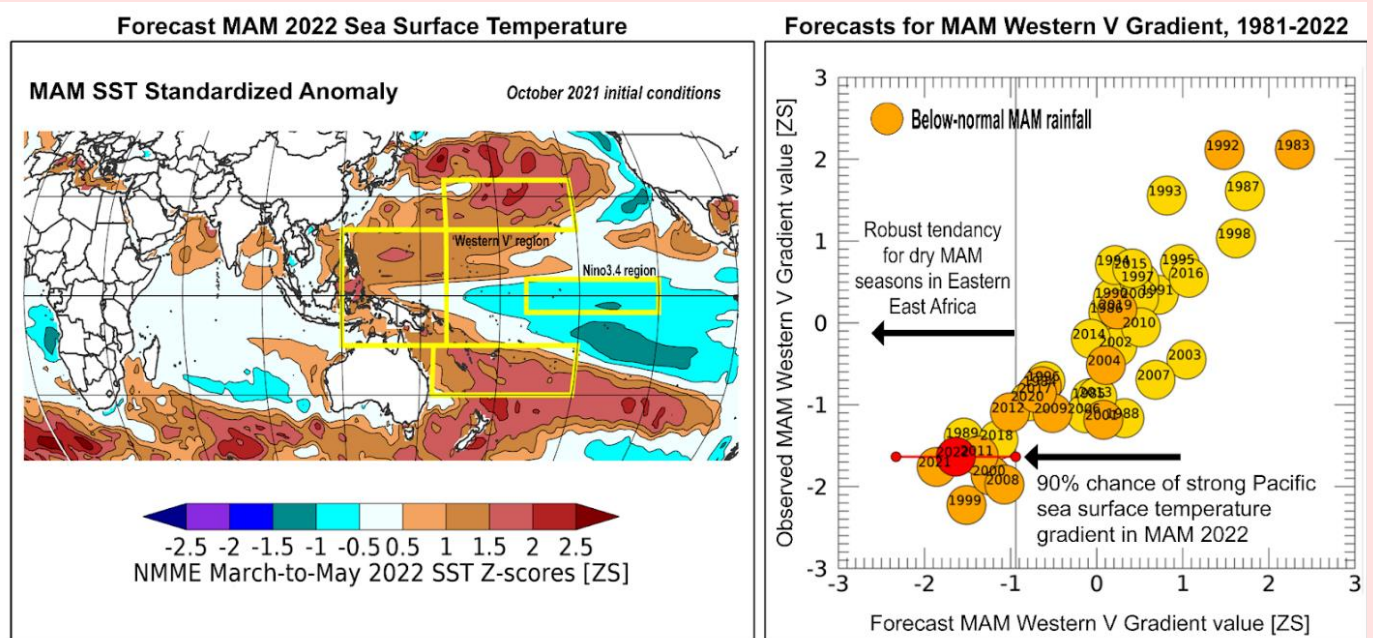
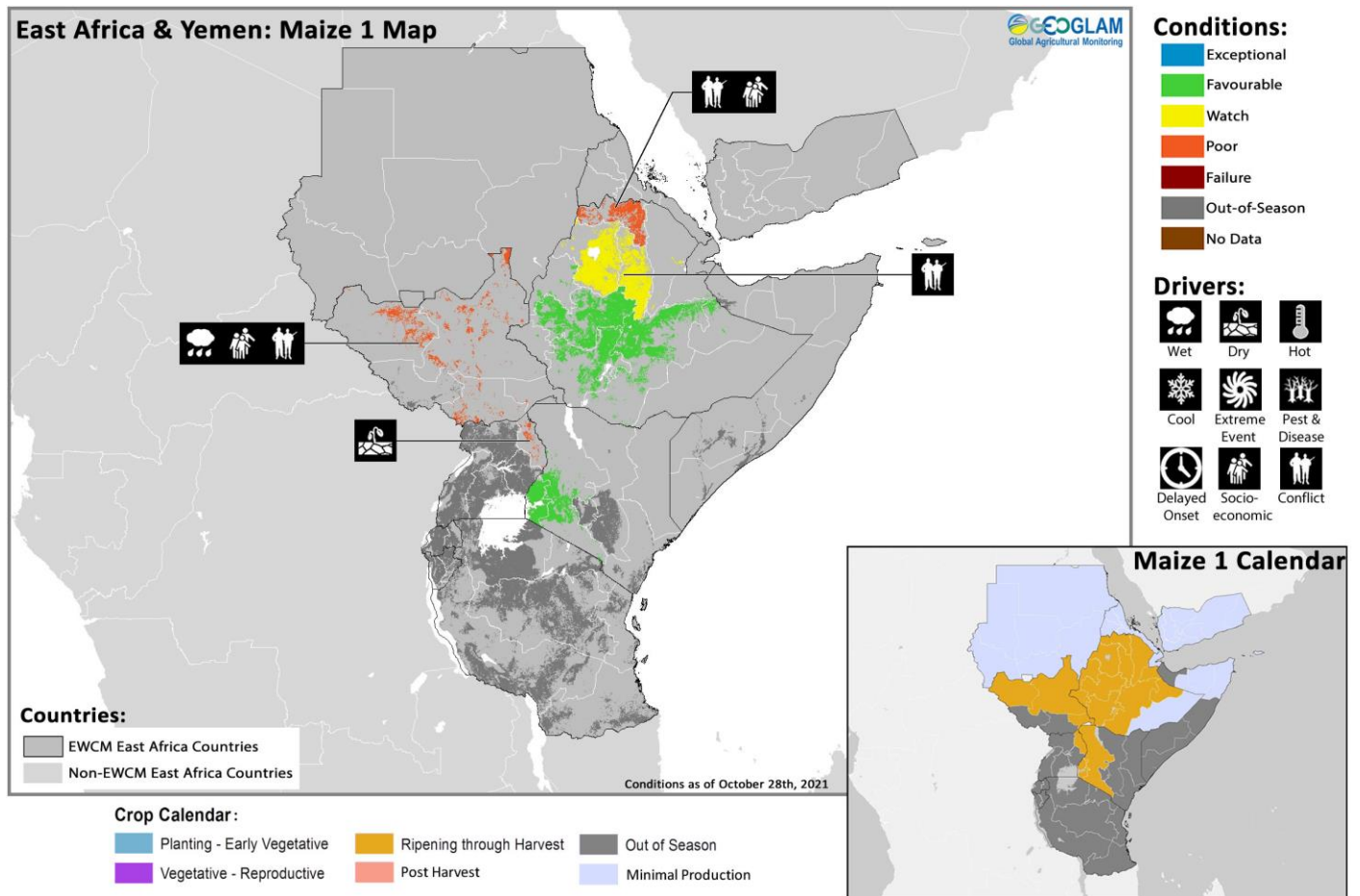


Figure 1. Indications for a likely below-normal MAM 2022 season. Left— Map showing October NMME model mean forecast sea surface temperatures for March–April–May (MAM) 2022, presented as standardized anomalies (Z-scores) to illustrate the historical forecast extremity of warm Western V-region SST (three connected western Pacific yellow boxes) and Nino 3.4 region SST (eastern yellow box). NMME models used are: CanCM4i, COLA-RSMAS-CCSM4, GEM-NEMO, NASA-GEOSS2S, and NCEP-CFSv2. SST is standardized using a 1982–2021 baseline. Right— Scatterplot of predicted and observed MAM Western V Gradient (WVG) values. The “Western V gradient” is the difference between standardized NINO3.4 and Western V time series. Forecasts based on October NMME predictions. There is a 90% chance of strong Pacific Ocean sea surface temperature WVG gradient conditions during MAM 2022. The red circle shows the 2022 forecast. All below-normal eastern East African MAM rainy seasons are noted with orange circles. When strong negative WVG values have occurred or been predicted, below-normal MAM rains have been likely. More details are provided in a Climate Hazards Center Blog (<http://blog.chc.ucsb.edu/?p=1030>). Source: Climate Hazards Center

East Africa & Yemen

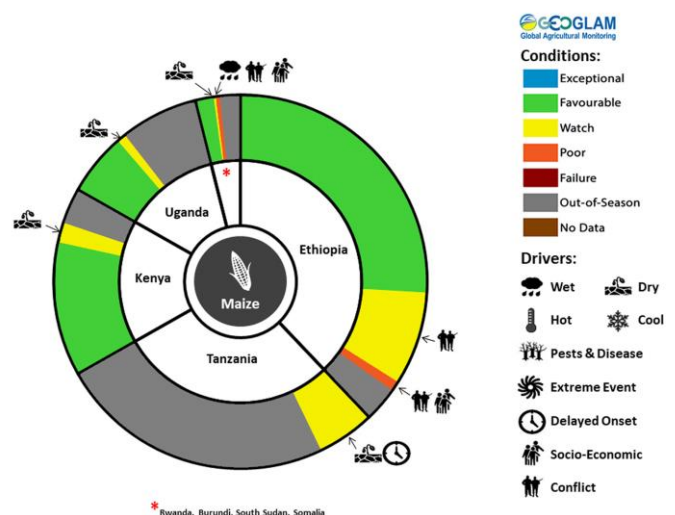


Crop condition map synthesizing Maize 1 crop conditions as of October 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable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

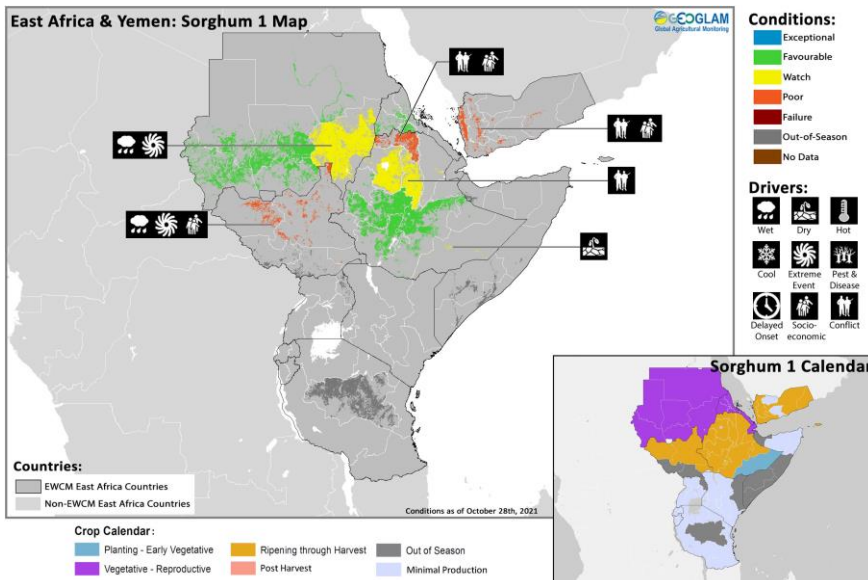
In the north of the subregion, harvesting of June to September main season cereals is underway in **Ethiopia, South Sudan, and Yemen** while crops continue to develop in **Djibouti, Eritrea, and Sudan** for harvest from November. In **Ethiopia**, conditions are mixed for *Meher* season crops due to ongoing conflict in the north. Additionally, below-average yields are expected in **South Sudan** and **Yemen** due to impacts from flooding, conflict, and socio-economic challenges, and there is some concern in localized areas of eastern **Sudan** due to flooding. Elsewhere, conditions are generally favourable.

In the south of the subregion, harvesting of main season cereals is wrapping up in northern **Uganda** and the main producing regions in **Kenya**, and crops in Karamoja region in **Uganda** have failed due to flooding in May followed by persistent dryness throughout the season. Planting and development of second season cereals is underway across **Uganda, Rwanda, Somalia, the United Republic of Tanzania, Burundi, and Kenya**, and conditions are mixed as dry conditions and a delayed start to the rainfall season are causing concern in parts of **Somalia, the United Republic of Tanzania, Kenya, and Uganda**.

Across many parts of the subregion, including eastern **Kenya**, southern **Somalia**, and Belg-receiving regions in **Ethiopia**, two consecutive poor rainy seasons have resulted in below-average crop production and deteriorated food security situations. Dry conditions are forecast to continue through late November, particularly in parts of **Kenya, Uganda, southern Somalia, southern Ethiopia and South Sudan**. Additionally, there are increased chances of a fourth below-average rainy season during March to May 2022 in eastern **Ethiopia, Kenya, and Somalia** (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 9). While the desert locust situation is not currently impacting cropping areas significantly, seasonal rains may promote breeding and egg laying (See Desert Locust Alert Pg. 4).

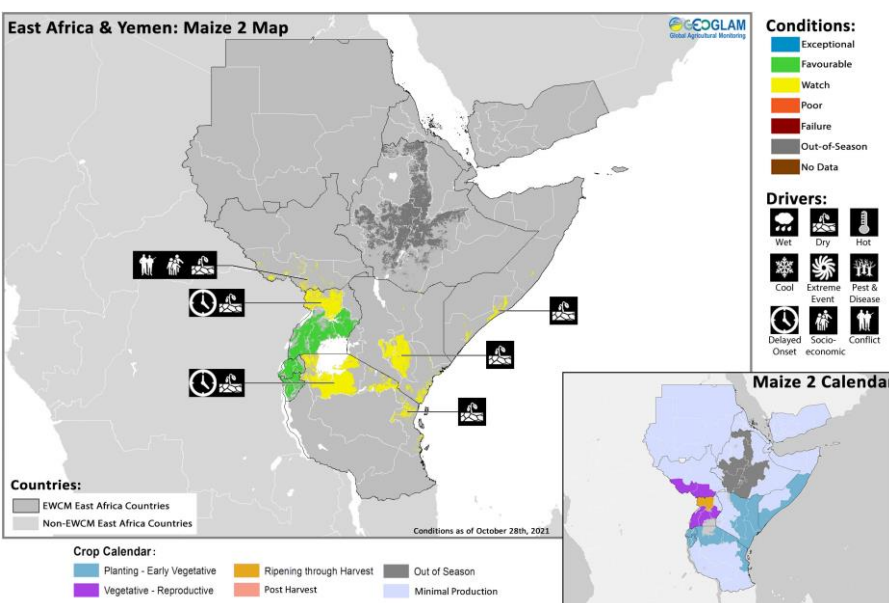


For detailed description of the pie chart please see description box on Pg. 21.



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.**

underway with concern due to current dry conditions that are forecast to continue through November (See Regional Outlook Pg. 9). In **Sudan**, main season millet and sorghum crops are in vegetative to reproductive stage for harvest from November, and conditions are generally favourable except in the east where previous flooding may impact final yields. While some crops may recover, crop damage was extensive, and soils remain saturated. Land preparation is underway for winter wheat crops, and planting will begin in November. In **South Sudan**, harvesting of first season cereals is underway, and below-average yields are expected due to the impacts of conflict and socio-economic challenges, widespread flooding since the beginning of the season, and dry conditions in parts of Kapoeta during the early stages of growth which were followed by heavy rains near maturation and harvesting. Since May, more than 700,000 people have been affected by widespread flooding, with Jonglei and Unity states being the worst affected. Rains are expected to continue in eastern parts of the country for the remainder of the year. For some areas, this is the third consecutive year of flooding, and this year is compounding impacts from previous years. Conversely, second season maize and sorghum crops are in vegetative to reproductive stage, and there is concern as parts of the south are experiencing some rainfall deficits. While there could be time for some crop recovery if November rainfall improves, precipitation is likely to remain below-average (See Regional Outlook Pg. 9). In **Djibouti**, main season millet and sorghum crops are in vegetative to reproductive stage for harvest from November, and conditions are favourable. In **Eritrea**, main season sorghum and winter wheat crops continue to develop under favourable conditions for harvest from November. In **Yemen**, harvesting of main season sorghum crops is nearing completion, and conditions are poor due to persistent socio-economic challenges and conflict.



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.**

Northern East Africa & Yemen

In **Ethiopia**, harvesting of Meher season (Long Rains) cereals is underway, and conditions are mixed due to ongoing conflict and socio-economic challenges in Tigray that have since extended to neighbouring parts of Afar and East and West Amhara. The conflict in Tigray has resulted in displacement, livelihood disruption, and increased food insecurity. Only 370,000 hectares of land have been planted as of late October, a 47 percent decline compared to the previous year due in part to a lack of fuel and cash for transportation of agricultural inputs. In Amhara, agricultural support facilities have been damaged and looted due to conflict. Elsewhere, conditions remain generally favourable for ongoing harvesting activities; however, there are pockets of dry spells and below-average rains in East Oromia, and localized flooding has reduced harvests in parts of Gambela. In South Somali region, planting of main season sorghum and teff crops is

Southern East Africa

In Karamoja region in **Uganda**, harvesting of first season maize is nearing completion, and crops have failed due to episodes of flooding followed by extreme dry conditions. Erratic rains in March delayed planting activities of first season cereals and negatively impacted crop germination. This was followed by flooding in May and then below-average and erratic rainfall for much of the cropping season which significantly impacted yields. Rainfall improvements from mid-September eased dry conditions; however, heavy rainfall also resulted in severe floods, waterlogging, and crop damage in Napak District of Karamoja region. Throughout the country, second season maize crops are developing under generally favourable conditions except in some northern areas where below-average rains and poor soil moisture remain a concern. Conversely, in eastern parts of the country, landslides, hailstorms, and heavy

winds resulted in localized crop destruction in some districts. Rainfall through December is likely to be below-average in the southern half of the country (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 9). In **Kenya**, harvesting of 2021 Long Rains cereals is underway in major producing unimodal rainfall areas of the West and Rift Valley, and overall conditions remain favourable as average to above-average cumulative rainfall has generally benefitted crop development. However, erratic rainfall in these areas from March to May resulted in replanting and some crop damage. Despite improved precipitation from July to September, national maize production is forecast to be eight percent below-average due to earlier dry spells, though yields remain near-average. Planting of Short Rains maize crops is underway, and there is concern due to dry conditions and poor rainfall forecasted for the October to December Short Rains which could result in a third consecutive poor rainy season in the north and eastern areas (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 9). In **Somalia**, planting of *Deyr* season maize and sorghum crops is underway with concern due to continued dry conditions. Rains have so far been minimal to absent throughout most parts of the country, and below-average rainfall is forecast to continue through the end of the year and through early 2022 (See Seasonal Forecast Alert Pg. 5 and Regional Outlook Pg. 9). In **Burundi**, planting of second Season A maize crops began in October under favourable conditions, and harvesting will take place from January. In **Rwanda**, planting of second Season A maize crops continued in October under generally favourable conditions, though some concern remains due to below-average rains in October which are forecast to continue through November (See Regional Outlook Pg. 9). In the **United Republic of Tanzania**, planting of *Vuli* season maize and *Masika* season wheat is underway in northern bimodal rainfall areas, and concern remains as delayed rainfall onset and dry conditions may impact crop development with up to 50 percent rainfall deficits in some areas. Land preparation is underway for *Msimu* season cereals in unimodal and major producing regions of the central, southwest, and southeast, and planting will begin in November.

Regional Outlook: Poor start to the OND rainfall season, and increased chances of below-average rainfall to continue through January 2022

Rainfall deficits in October have led to a very poor start to the October–November–December (OND) 2021 rainfall season, and as we approach the midpoint of the season in many eastern areas, rainfall forecasts continue to be pessimistic. The increasing likelihood for a below-normal OND 2021 season in these areas is highly concerning, given that a series of poor rainfall seasons recently impacted the eastern Horn. There are also elevated chances of a fourth poor rainfall season in March–April–May 2022 (See Seasonal Forecast Alert Pg. 5).

Many areas, including southeastern Ethiopia, southern and central Somalia, central and eastern Kenya, and northeastern Tanzania received less-than 60% of average rainfall for October 1st through October 25th (Figure 1-top left). In Somalia, some areas received only a small fraction of typical amounts. In Ethiopia, prevailing average to above-average conditions from recent months continued into October, exceeding 150% of average in some central, western, and northern areas. In the central Oromia region, rainfall since March was [historically low](#) and erratic, though rainfall in late September to early October somewhat improved seasonal totals.

Poor October-to-date rainfall performance will likely continue or worsen in many areas (Figure 1-top right). If pessimistic forecasts materialize, rainfall amounts from October through mid-November may be the [lowest in the past 40 years](#). The two-week forecast indicates below-average rainfall in southern Somalia, southern Ethiopia, Kenya, Uganda, and Tanzania through November 10th. During November 13th to the 26th, most SubX models predict increased chances of below-normal rainfall across the region (Figure 1-bottom left). These latest dry forecasts are highly concerning. In southeastern Ethiopia and southern Somalia, seasonal rains typically peak in October to early November, so the observations and forecasts indicate a poor season overall. In Kenya, the majority of OND season rains are usually received by the 2nd or 3rd week of November. In areas of central-eastern Kenya, OND rains contribute more than half the annual rainfall total.

Longer-range models predict increased chances for drier-than-normal conditions during November–December–January in Ethiopia, northern and eastern Kenya, and Somalia (Figure 1-bottom right). Models have lower agreement elsewhere in the region. Temperatures are likely to be warmer-than-normal across most areas of the region, particularly in central and eastern Kenya, southern Somalia, and eastern Tanzania (not shown). Dry conditions often result from negative Indian Ocean Dipole and La Niña-like conditions, which have been present recently.

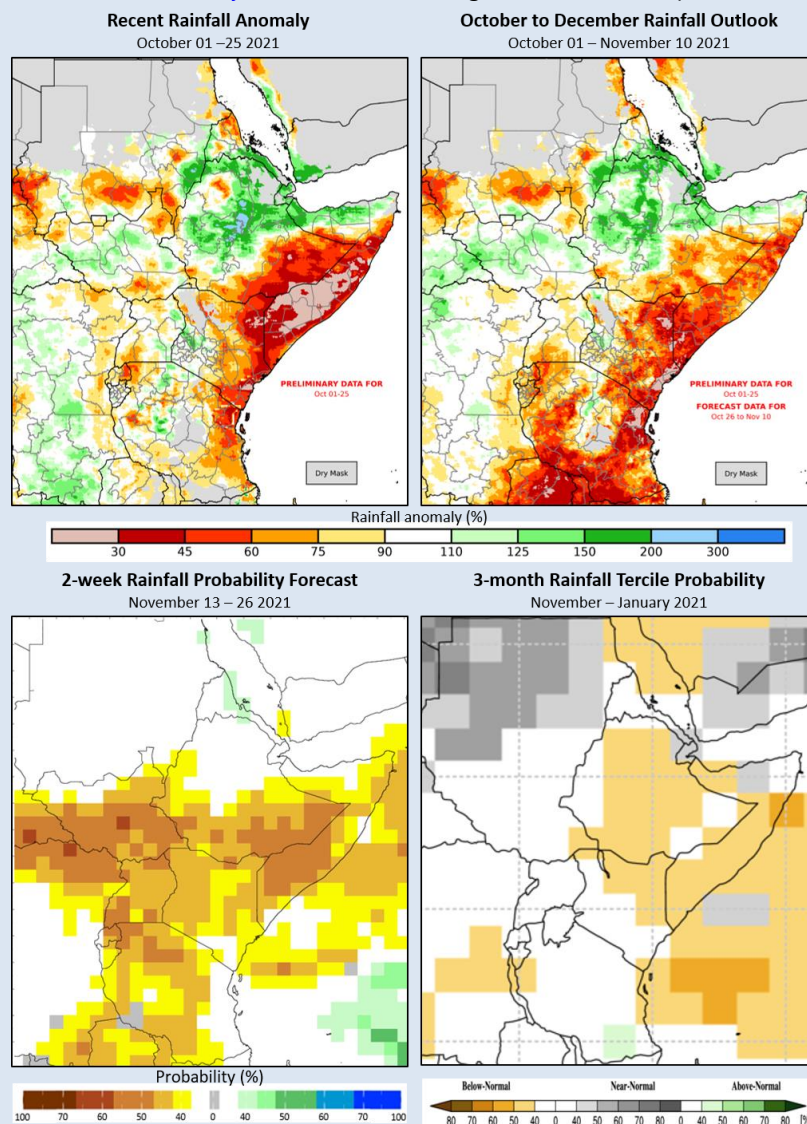
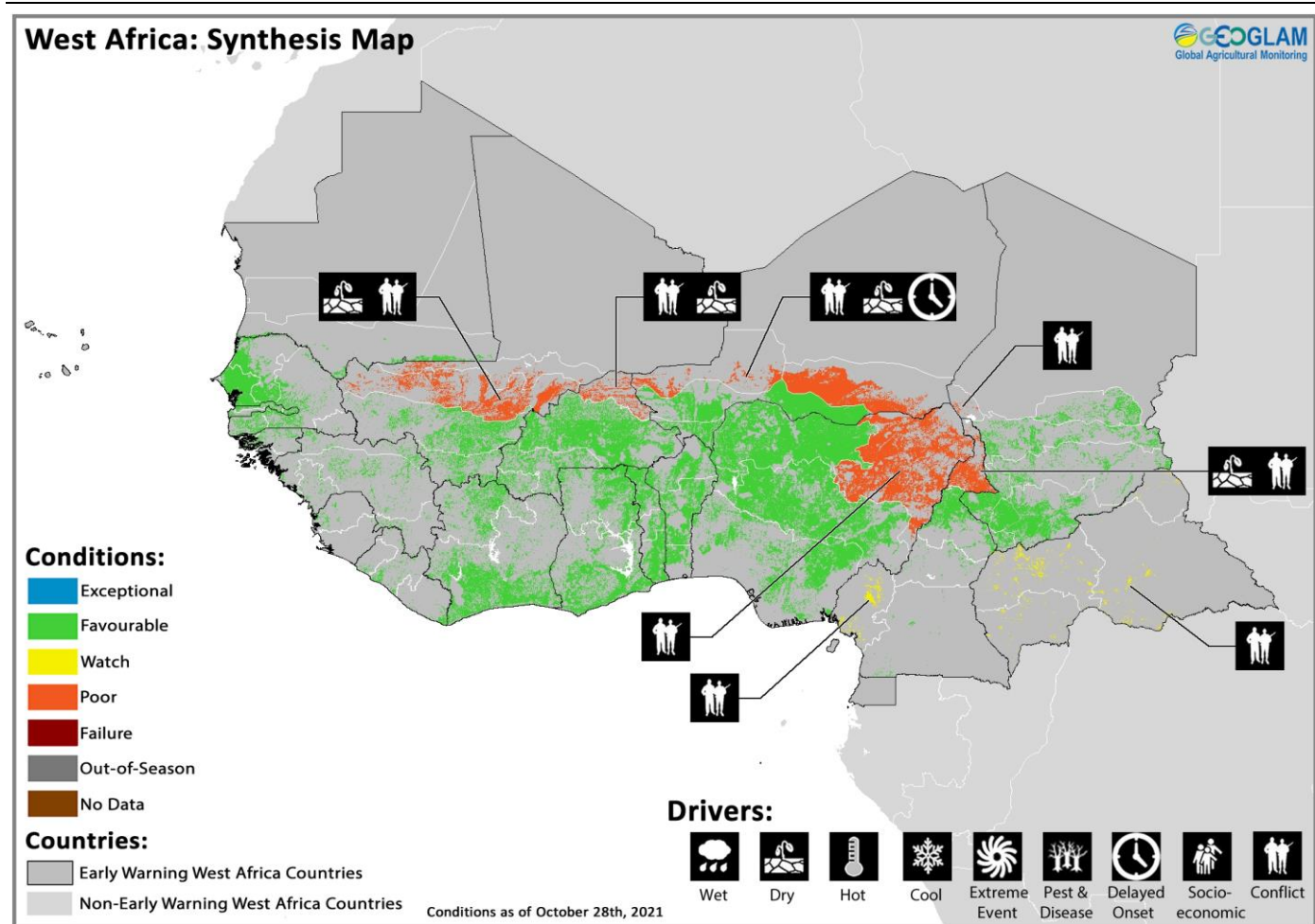


Figure 1. October-to-present rainfall anomaly, October-to-November 10th rainfall anomaly outlook, a 2-week rainfall forecast probability, and a 3-month rainfall forecast probability. The top two panels are CHC Early Estimates, which compare 2021 rainfall amounts to the 1981–2020 CHIRPS average. On the upper left is the rainfall anomaly for October 1st to 25th, expressed as a percent of average. The upper right panel indicates what the post-October 1st rainfall percent of average would be if the 15-day unbiased GEFS forecast from October 26th materializes. The bottom left panel shows the IRI SubX Precipitation Biweekly Probability Forecast for November 13th to 26th, issued on October 29th. The forecast is based on statistically-calibrated tercile category forecasts from three SubX models. Image from the [IRI Subseasonal Forecasts Maproom](#). The bottom right panel is a probabilistic forecast for most-likely November–December–January 2021–22 rainfall tercile from the [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](#), based on October conditions. White color indicates that there is no dominant category across the model forecasts. Source: UCSB Climate Hazards Center

West Africa

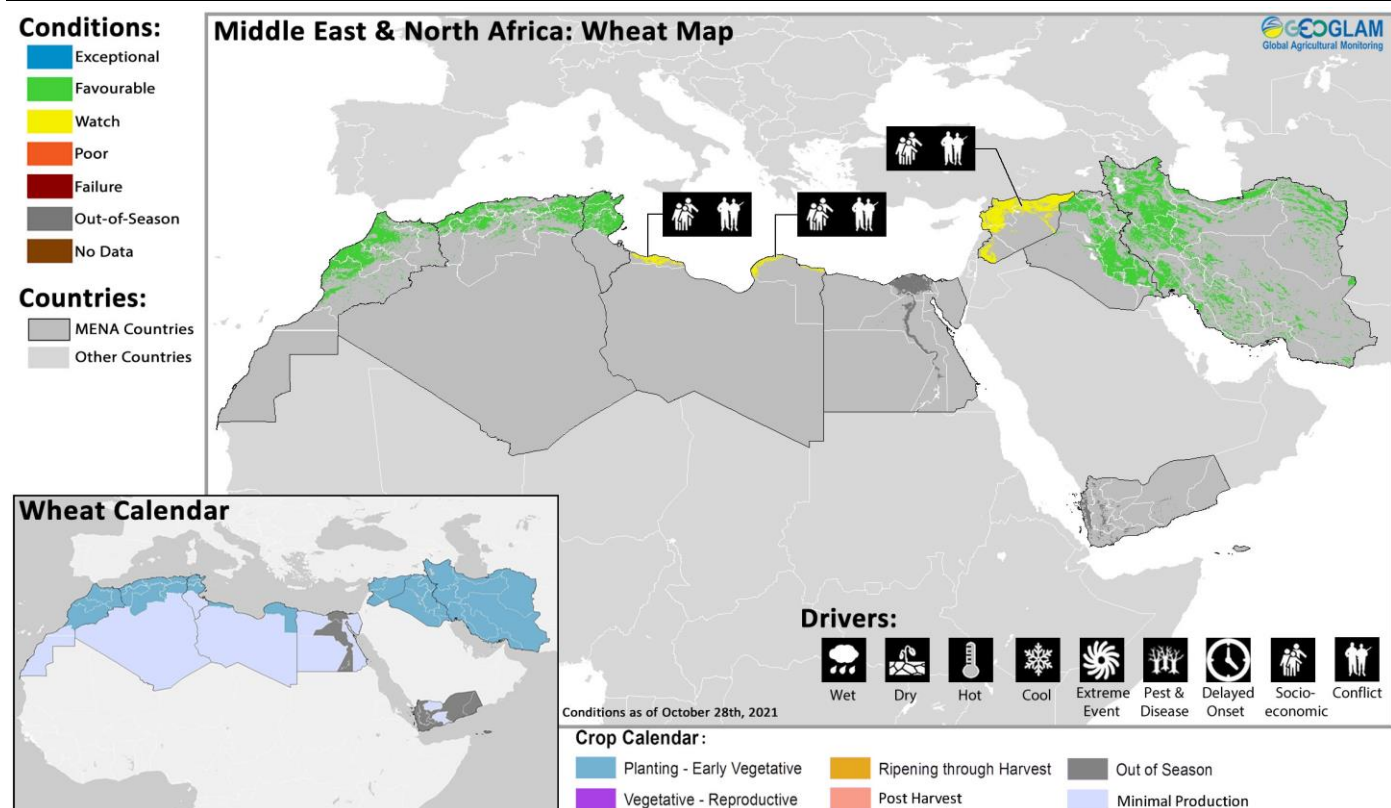


Crop condition map synthesizing information as of October 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are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

In the south of the subregion, harvesting of main season maize finalized in northern **Ghana**, northern **Togo**, northern **Benin**, and the Far North region in **Cameroon** while harvest continues in central **Cameroon**, southwestern **Chad**, and the **Central African Republic**. Harvesting of main season sorghum crops finalized in the Far North region of **Cameroon** and continues in **Cote d'Ivoire**, northern **Ghana**, **Togo**, **Benin**, central **Cameroon**, and southern **Chad**. Harvesting of second season cereals is underway in central **Cameroon** and northern **Nigeria** while crops continue to develop in **Cote d'Ivoire**, southern **Ghana**, southern **Togo**, southern **Benin**, and southern **Nigeria**. In the north of the subregion, harvesting of main season cereals is nearing completion in **Niger** and is underway in **Guinea-Bissau**, **Guinea**, **Mali**, **Mauritania**, **Senegal**, **Gambia**, and **Burkina Faso**. Throughout the subregion, conditions are generally favourable except in parts of northern **Burkina Faso**, central **Mali**, **Niger**, and the Far North region of **Cameroon** where dry conditions have further contributed to decreased yields and where conflict continues to disrupt agricultural activities. In these areas of **Burkina Faso**, **Mali**, and **Niger**, severe to very severe rainfall deficits in September were coupled with long dry spells of more than 14 days during the critical flowering to maturation stage of crop growth. In the Far North of **Cameroon**, rainfall deficits were categorized as slight to moderate with maximum dry spell periods of 14 days. Additionally, conflict continues to disrupt agricultural activities and result in below-average yields in the Southwest region of **Cameroon**, Lac region in **Chad**, the **Central African Republic**, and northeastern **Nigeria**. In **Burkina Faso**, generally favourable weather conditions since the beginning of the cropping season have benefitted planting and crop germination. The timely onset of seasonal rains in April was followed by well distributed and average to above-average precipitation through late September in most cropping areas. However, below-average July and August rainfall in parts of northwest and northern areas likely impacted local yields. While government support to access subsidized agricultural inputs increased plantings in main producing south and central regions, increased insecurity in the northeast has limited access to agricultural inputs and labour and led to field abandonment, particularly in the Sahel, Centre-Nord, Nord, and Est regions. Despite reduced cereal production prospects in the northeast, aggregate production is expected to be above-average due to favourable conditions in the south and centre. In **Mali**, adequate seasonal rainfall was conducive for crop development of coarse grains in the major growing regions in the south and west, supporting plantings and yields. However, adverse weather, reduced access to inputs, and a deterioration of the security situation in parts of important rice producing central and northern regions resulted in a significant contraction of plantings, and production of rice is expected at reduced levels. In the **Central African Republic**, weather conditions are overall favourable, though persisting conflict and displacements continue to impact agricultural activities and limit access to growing areas and inputs, with a likely negative impact on 2021 production. However, a ceasefire declaration by the president in

October could initiate a lessening of conflict. In **Benin**, heavy rains and the release of water from the Nagbeto dam in September and October resulted in flooding, causing localized agricultural losses. Reports from the country indicate disruption to agricultural activities due to widespread flooding in several municipalities in the south and northeast. However, at the aggregate level, cereal production in the country is expected at average levels.

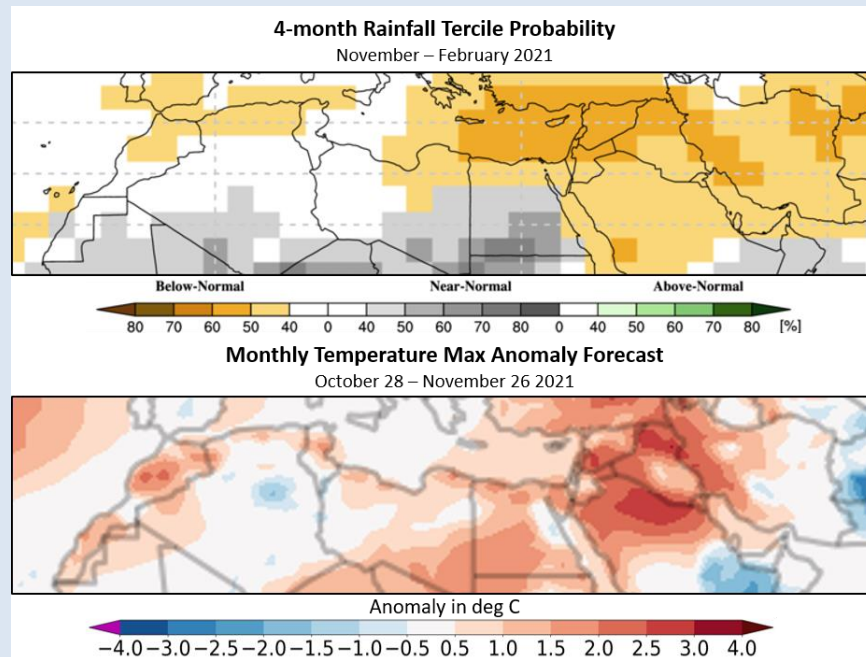
Middle East & North Africa



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, planting of winter wheat crops is starting in **Algeria, Iran, Iraq, Libya, Morocco, Syria, and Tunisia**, though the majority of planting will take place from November. While planting conditions are favourable, ongoing conflict and socio-economic challenges continue to impact agricultural activities throughout **Syria** and **Libya**. Additionally, winter season rainfall has been below-average in **Tunisia** and the eastern half of **Algeria**, and there are increased probabilities of drier than average conditions for much of the Middle East for the November to January period in accordance with the forecast La Niña event (See Regional Outlook Pg. 12). In **Egypt**, harvesting of summer planted rice and main season maize crops is wrapping up while *Nili* season (Nile Flood) rice crops continue to develop, and overall conditions are favourable. Land preparation is underway for winter wheat crops, and planting will begin in November.

Regional Outlook: Below-normal rainfall likely for many areas through February and above-normal temperatures through November

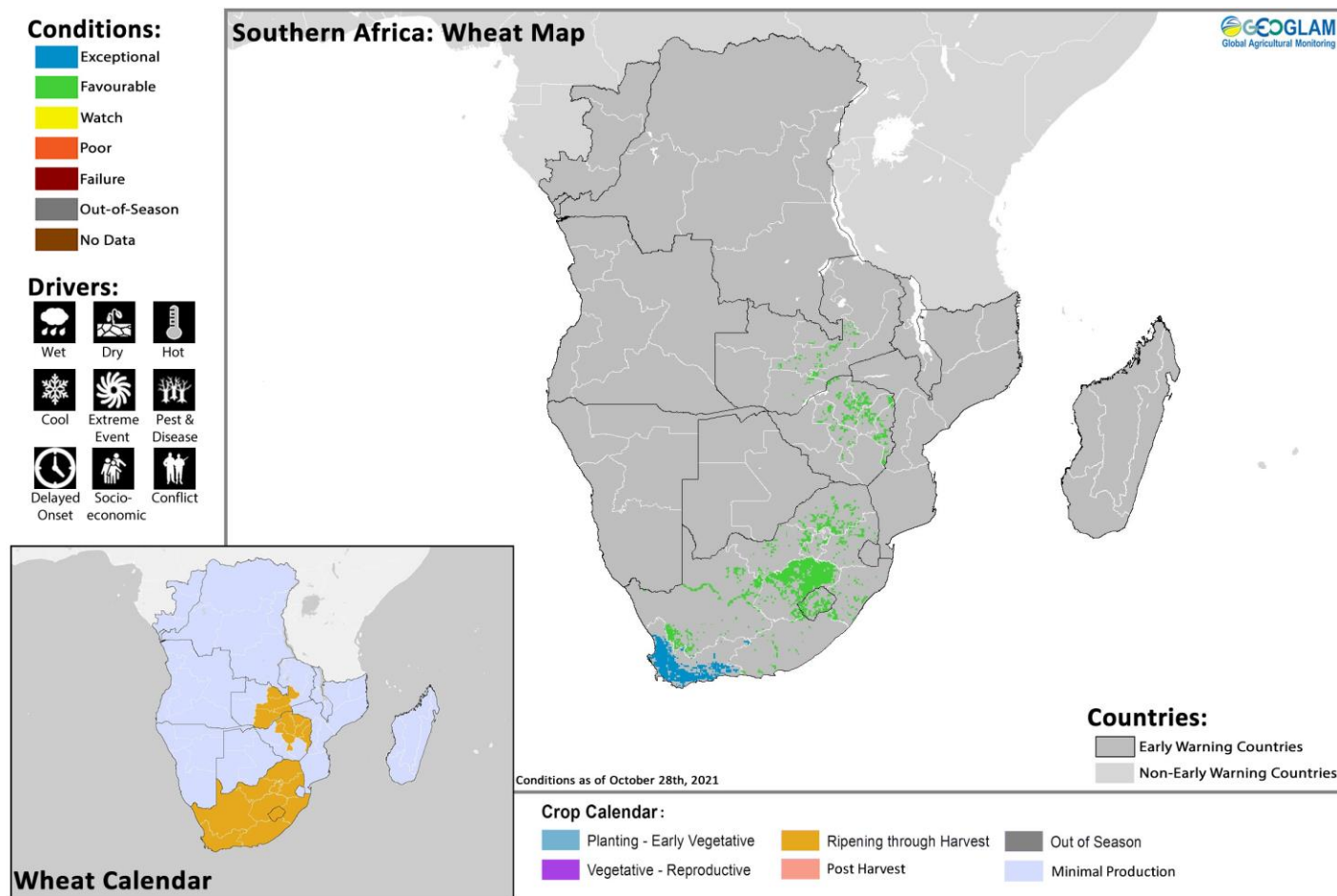


For many areas of the region, there are increased chances of below-normal rainfall during November to February. According to the WMO forecast from October (Figure 1-top), this outcome is most likely to occur in the eastern Mediterranean and in eastern and western Iran. Models indicate that seasonal temperatures are likely to be warmer-than-normal in the western Mediterranean and in North Africa.

During November, conditions are likely to be warmer than normal and with atypically high daytime maximum temperatures, particularly in the Middle East (Figure 1-bottom). SubX 30-day forecasts also indicate mainly average rainfall, with increased chances for below-average rains in northern Morocco and in portions of the Middle East.

Figure 1. A 4-month rainfall forecast probability, and a 1-month temperature max (T_{max}) anomaly forecast. The top panel is a probabilistic forecast for most-likely November-December-January-February 2021-22 rainfall tercile from the [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](#), based on October conditions. White color indicates that there is no dominant category across the model forecasts. The bottom panel is a SubX multi-model forecast for the average maximum temperature over the 30-day period beginning on October 28th, as compared to historical forecasts. Image from [UCSB CHC Experimental Subseasonal Forecasts](#) webpage. 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 winter wheat crops is underway in **Zimbabwe, Lesotho, South Africa, and Zambia** under generally favourable conditions. In **Lesotho**, near-average yields are expected despite the estimated reduction in planted area. Despite power cuts across **Zimbabwe** earlier in the season, a bumper crop is expected due to an expansion in planted area as well as increased government support to farmers. In **South Africa**, recent rains have improved soil moisture, particularly in the minor producing Eastern Cape where crop conditions have improved, and above-normal rainfall from the previous summer season is supporting irrigation water availability. In the major producing Western Cape, normal to above-normal rainfall during the winter season is supporting production, and conditions are exceptional.

Planting of main season cereals is underway across the region and will start in full in November, with crops to be harvested from February 2022, and overall conditions are favourable. However, parts of **Angola** have experienced rainfall delays up to two dekads, and forecasts indicate western areas may experience a second consecutive below-average rainfall season (See Regional Outlook Pg. 14). Also, forecasts indicate drier than normal conditions may be expected in **Zambia, eastern Angola, Zimbabwe, and portions of Mozambique and Madagascar** in the first two dekads of November, though rainfall improvements will likely emerge in central to southeastern areas of the subregion from December (See Regional Outlook Pg. 14). In the **Democratic Republic of Congo**, harvesting of mains season cereals is underway in the north and west while planting and development continues elsewhere under favourable conditions. In central regions, near-average precipitation has resulted in slight improvements to vegetation conditions despite uneven distribution. In **Malawi**, a timely onset of seasonal rains has been observed during October, leading to average to above-average soil moisture levels across the country. Planting operations are expected to begin as normal, and forecasts of average to above-average rainfall are likely to lead to favourable production.

Regional Outlook: Elevated chances of above-normal DJF rainfall in central to southeastern areas and below-average rainfall in western Angola

Between October 1st and October 25th, below-average rainfall was received in central and southern Madagascar, southern Mozambique, eastern South Africa, and portions of western Angola (Figure 1-left). Aside from in South Africa, these deficits are occurring prior to the critical rainfall period for crop development, which begins in November or December.

Drier-than-average conditions are likely during early-to-mid November in Zambia, eastern Angola, Zimbabwe, and portions of Mozambique and Madagascar (Figure 1-middle). Over the 30-day period from October 28th, SubX models forecast rainfall deficits to be around 25 to 50 mm in affected areas (See Global Climate Outlook Pg. 3)—amounts that could potentially limit early season planting. Warmer-than-average November temperatures are likely in many of these areas. ECMWF extended range forecasts show increased chances of wet conditions in northeastern Madagascar and northeastern Mozambique during late October to early November, and in-mid-to-late November in southern Botswana and central South Africa (not shown).

Some long-range model forecasts indicate elevated chances for above-normal December-January-February rainfall in some central to southeastern areas, including in Zimbabwe, Botswana, South Africa, and southern Mozambique (Figure 1-right). This is consistent with a historical tendency for La Niña-like conditions to enhance rainfall in this part of the region. La Niña conditions recently developed and are forecast to continue into early 2022. Last year during similar climate conditions, many of these areas experienced above-average rainfall, and some experienced damages from severe weather and flooding.

Western areas of Angola may experience a below-average rainfall season, based on indications from some models in the NMME, C3S, and WMO forecasts for the November-to-March period. In southwestern Angola, extremely dry conditions prevailed during the 2020-2021 season.

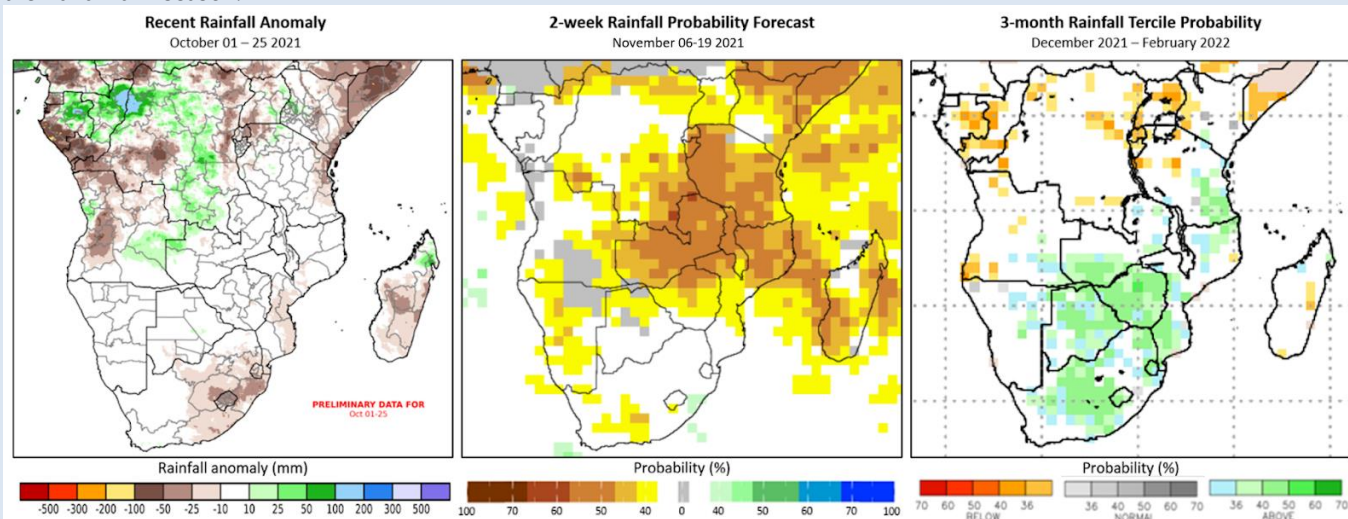
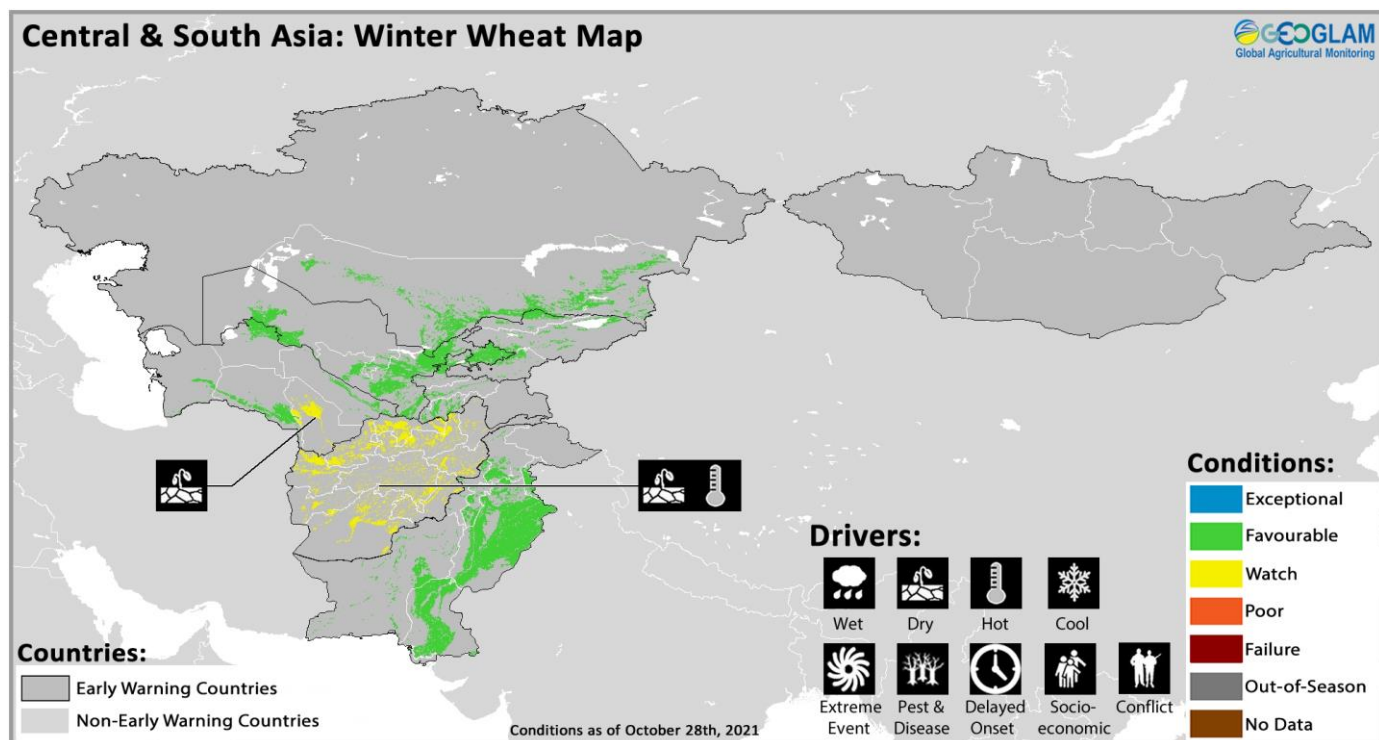


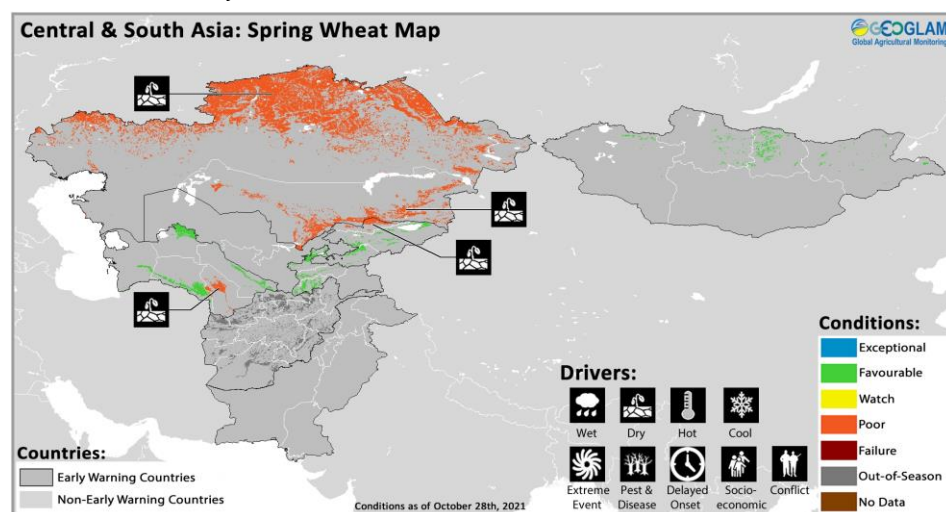
Figure 1. October-to-present rainfall anomaly, a 2-week rainfall probability forecast, and a 3-month rainfall probability forecast. The left panel is a CHC Early Estimate, which compares October 01-25 2021 rainfall amounts to the 1981-2020 CHIRPS average. The middle panel shows the IRI SubX Precipitation Biweekly Probability Forecast for November 6th to 19th, issued on October 29th. The forecast is based on statistically-calibrated tercile category forecasts from three SubX models. Image from the [IRI Subseasonal Forecasts Maproom](#). The right panel shows the NMME probabilistic forecast for December-January-February (OND) 2021 precipitation, based on October initial conditions. Colors indicate the dominant tercile category forecast across models; white indicates no dominant category. NMME image from [NOAA CPC](#). 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 crops is underway in southern **Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan, Pakistan, Turkmenistan, and Uzbekistan** under mixed conditions. Throughout **Afghanistan** and in southeastern **Turkmenistan**, there is concern as dry and hot conditions may impact crop development. Also, the lack of monetary fluidity in **Afghanistan** is preventing many farmers from accessing quality seeds for planting, which could have significant implications for final yields. In northern **Kyrgyzstan**, planting conditions are favourable despite lack of precipitation in the last six months and reduced irrigation water, leading to low soil moisture levels. Elsewhere, planting conditions are favourable; however, increased precipitation will be needed in **Kyrgyzstan**, southern **Kazakhstan**, southwestern **Tajikistan**, and **Uzbekistan** for crop germination and establishment. In **Pakistan**, planting activities have begun under generally favourable weather conditions, and irrigation water supplies and agricultural inputs are reportedly adequate. Planted area is forecast to surpass last year's above-average level, supported by high wheat flour (the main staple) prices. Additionally, harvesting of *Kharif* (summer) season rice crops began under favourable conditions, and harvesting will finalize in January.



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.**

tonnes, reflecting an increase in the area planted. Yields are expected to be near-average despite delays in rains at the start of the season and above-average rains that delayed harvesting in some areas.

Harvesting of spring wheat crops finalized in **Kazakhstan, Kyrgyzstan, Tajikistan, and Mongolia** under mixed conditions. In **Kazakhstan** and northern **Kyrgyzstan**, dry conditions throughout the season resulted in below-average yields. In northern **Kyrgyzstan**, cumulative rainfall levels were 70 percent below-average in the main producing Chuy province, which is responsible for about 50 percent of aggregate wheat output. Additionally, there has been a lack of irrigation water throughout the season as a result of the protracted 2020/2021 winter which resulted in late melting of snowpack. As a result, low soil moisture levels are expected to have a negative impact on crop yields. In **Mongolia**, the 2021 wheat output is estimated at around 500,000

Seasonal Forecast Alert: Second consecutive season of below-average precipitation likely to continue through early 2022

WMO Forecast for NDJF 2021-2022 Precipitation

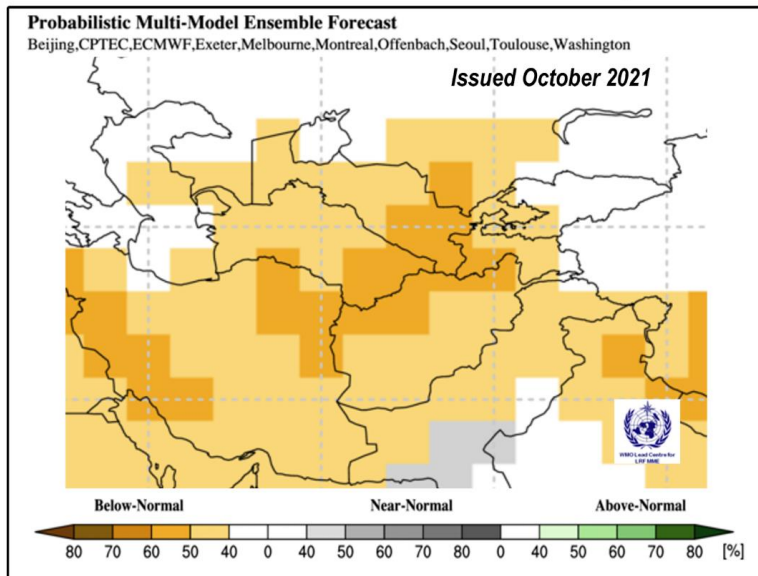
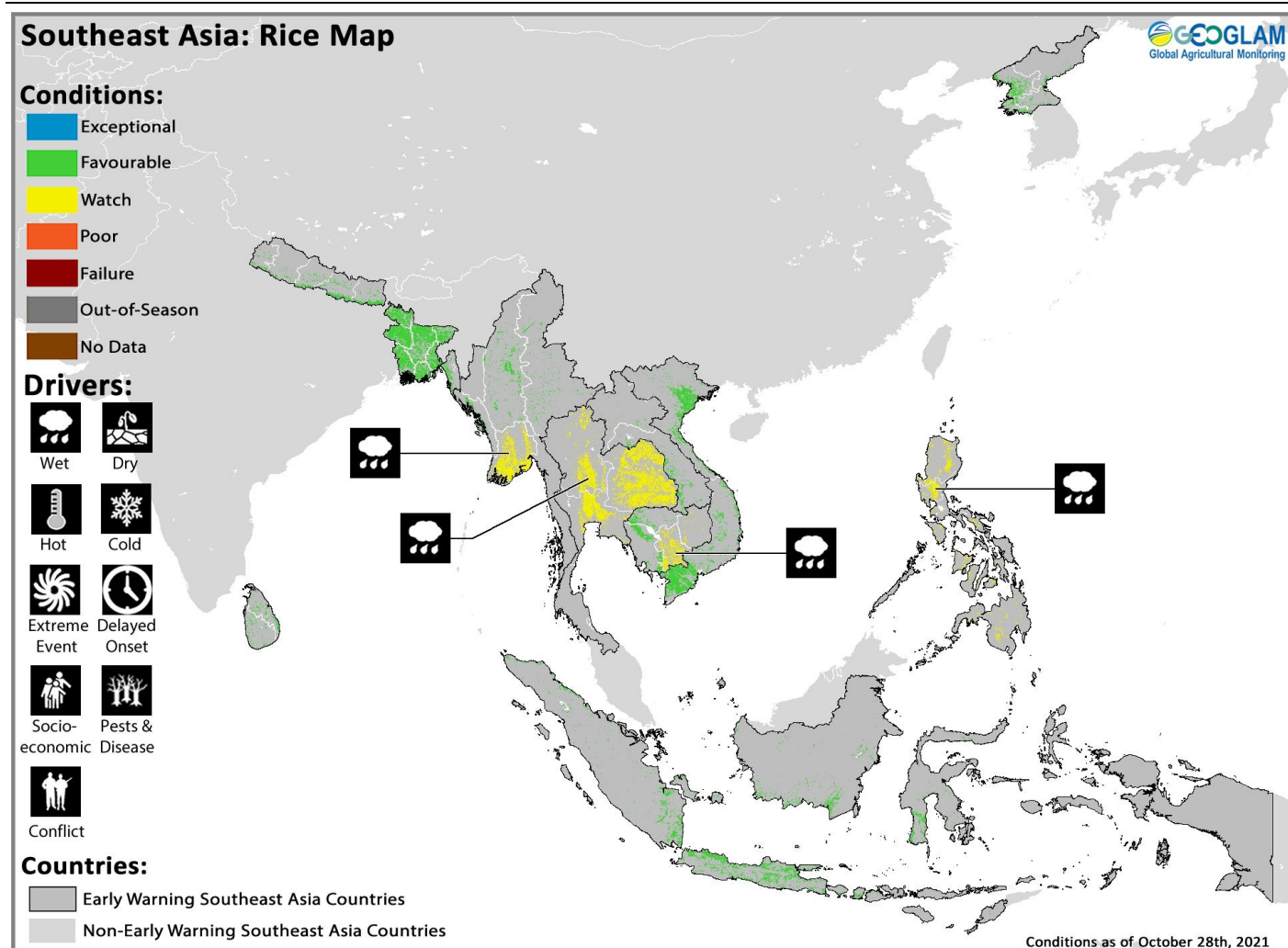


Figure 1. Forecast for 2021-2022 precipitation. WMO probabilistic forecast for November-to-February 2021-2022 precipitation, based on models initialized in October. From [WMO Lead Centre Long-Range Forecast Multi-Model Ensemble](#). Source: Climate Hazards Center

There is an increased risk of another season of below-average precipitation in Central and Southwest Asia during the Northern Hemisphere fall and winter of 2021-2022, according to multiple forecasting centers. This is consistent with the typical drying impacts of La Niña conditions, which are likely to continue through early 2022. According to the WMO forecast for November-to-February (Figure 1), the chances for below-normal precipitation are elevated across the region and are greater-than 50% in central and northern Afghanistan, southern Turkmenistan, southern Uzbekistan, and southern Tajikistan. During the next 30 days, SubX forecasts indicate atypically high daytime maximum temperatures in northeastern areas, while some southern areas may be cooler than normal. Below-average precipitation is forecast in western Kyrgyzstan, Tajikistan, eastern Afghanistan, and northern Pakistan.

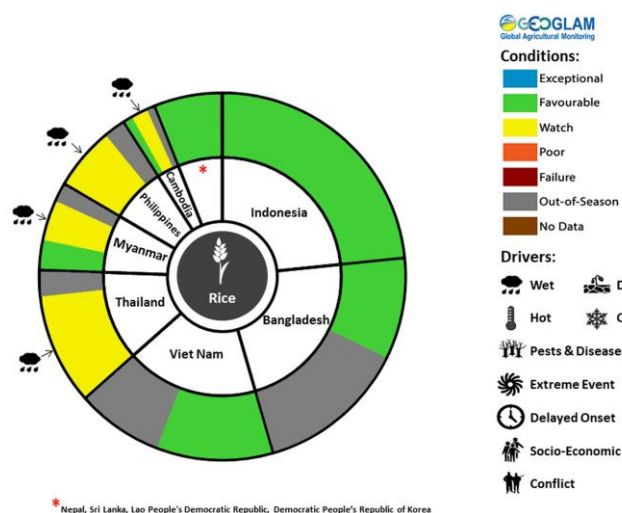
The possibility of below-normal precipitation during the upcoming season is highly concerning, especially given that October-to-May precipitation totals were very low last year. Dry weather conditions during the 2020-2021 winter wheat and spring wheat-growing seasons led to water deficits during key months of crop development and resulted in poor and failed crop conditions for winter wheat across parts of the region. Poor or mediocre early to mid-season precipitation performance this year could produce lasting negative impacts on crops, limited irrigation, and low snowpack and reservoir levels and could also prolong recovery from 2020-2021 drought impacts in affected areas of the region.

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.**

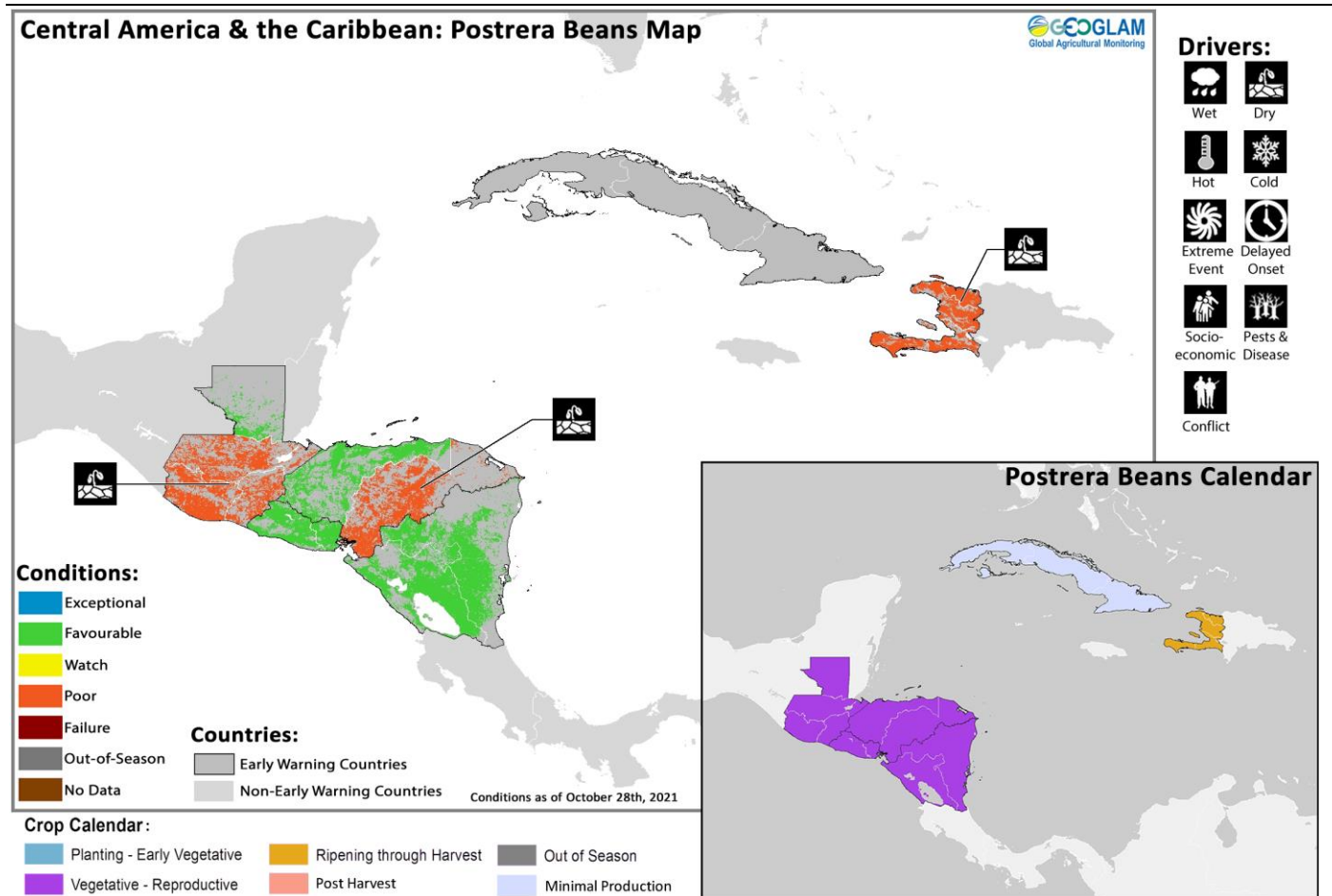
In northern Southeast Asia, wet-season rice is in grain filling to harvesting stage under mixed conditions. From late September to early October, the effects of developed tropical cyclones resulted in heavy rainfall and flood damage during the grain filling stage in large areas throughout **Cambodia, Myanmar, Thailand, and the Philippines**. While crop yields harvested prior to the heavy precipitation are expected to be near-average, final projection levels may be reduced due to flood damage. In **Indonesia**, harvesting of dry-season rice is continuing under favourable conditions with yields slightly higher than the previous year due to sufficient precipitation. Sowing of wet-season rice is beginning under favourable conditions, albeit slightly behind last year's pace. In the **Philippines**, wet-season rice sown in July and August is in heading to flowering stage under mixed conditions due to moderate to heavy rainfall from an enhanced Southwest monsoon that impacted most parts of Luzon and Western Visayas from September to the second week of October. Near to above-normal rainfall is expected for most parts of the country through the end of October. In **Thailand**, wet-season rice is in the grain filling stage under mixed conditions as a result of excess rainfall and widespread flooding from tropical cyclone Dianmu. Rice field damage is estimated to be 400,000 hectares and 4 percent of the total planted area, which could result in production declines. In northern **Viet Nam**, wet-season rice is in grain filling stage and is beginning to harvest in some provinces under favourable conditions. Yield is estimated to be the same as last year at 5.3 tons per hectare. In the South, harvesting of summer-autumn (main wet-season) rice is wrapping up with yields slightly higher



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

than the previous year at 5.65 tons per hectare due to sufficient rainfall received. Autumn-winter (wet-season) rice is in young panicle forming to harvesting stage also with increased yields expected compared to the previous year. In **Laos**, wet-season rice is in grain filling to early harvesting stage under favourable conditions. In lowland areas, planted area has reached 101 percent of the national plan, and 11 percent of the planted area has been harvested. Some areas in the North were affected by heavy rain in early October, but damaged area has not yet been reported. In upland areas, 23 percent of the planted area has been harvested, and final production is estimated to be higher than the national production plan. In **Myanmar**, planting of wet-season rice is now complete, and planted area has reached 98.6 percent of the national plan. Crops are mostly in tillering to panicle forming stage, and conditions are generally favourable except in areas impacted by recent flooding. In October, heavy rainfall and monsoon flooding occurred in most areas, particularly in the Delta, affecting 23,000 hectares of wet-season rice and damaging 12,000 hectares. In **Cambodia**, planted area of wet-season rice has reached 110 percent of the national plan, and crops are developing under mixed conditions due to recent heavy rainfall. In late September, the Northern region and lowland area of the Mekong basin were impacted by heavy rainfall and flooding. Close to 1.8 percent of the cultivated area was affected, and yield is estimated to decrease slightly. Around 57 percent of the cultivated area of early planted crops has been harvested, and yield is expected to be near-average at around 4 tons per hectare. In **Sri Lanka**, harvesting of *Yala* season rice and maize crops finalized with near-average yields expected. Planting of *Maha* season maize and rice crops commenced under favourable conditions for harvest from February 2022. In **Bangladesh**, *Aman* season rice crops are in vegetative to reproductive stage under favourable conditions, and harvesting activities will begin in mid-November. In **Nepal**, main season rice crops are in vegetative to reproductive stage under favourable conditions, and harvesting activities will begin in November. In the **Democratic People's Republic of Korea**, harvesting of main season rice crops finalized in October under favourable conditions with above-average biomass throughout the season. However, a short period of below-average rains in the first two dekads of July over most parts of the country as well as floods in the east in early August have resulted in localized crop losses.

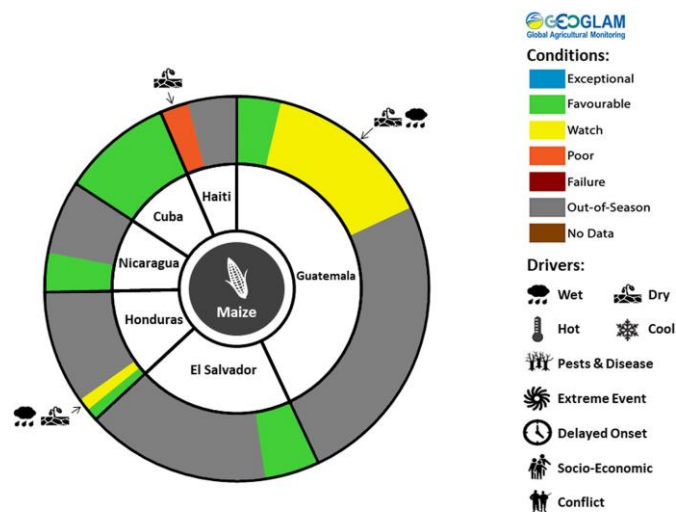
Central America & Caribbean



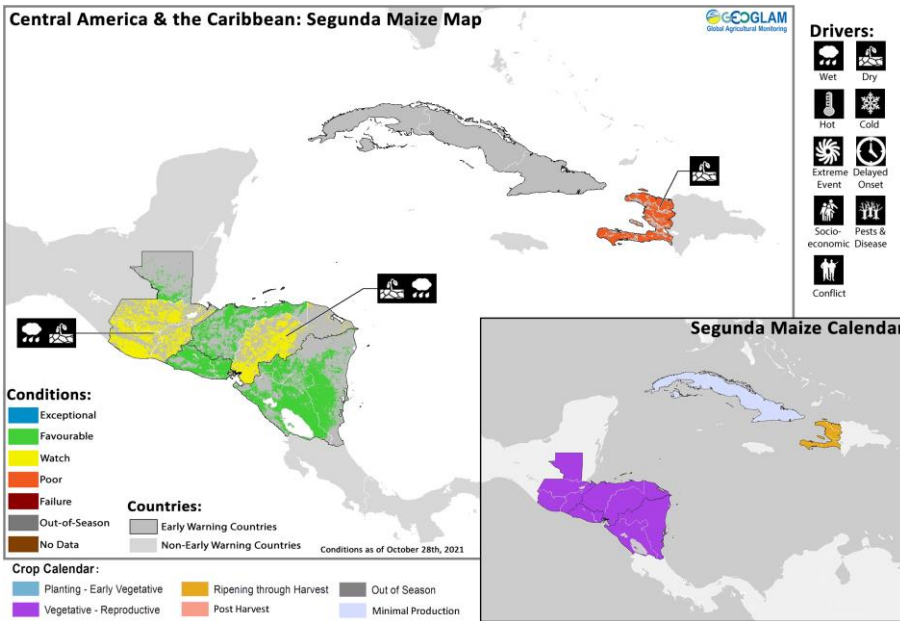
Crop condition map synthesizing Postrera season conditions as of October 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable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

In Central America, *Segunda/Postrema* season cereals are in vegetative to reproductive stage for harvest from December, and overall conditions are mixed. In parts of **Guatemala** and southern **Honduras**, *Postrema* season bean crops are unlikely to recover from highly erratic and below-average rains. Medium and subsistence farmers have reported losses of beans between 50 and 80 percent, and large producers have also reported yield reductions. Additionally, there is concern for *Segunda* season maize crops in southern **Guatemala** and southern **Honduras** as erratic rainfall distribution has affected production areas with both dry spells and flooding, and yield reductions are likely. Bean crops have generally fared worse than maize crops in these areas of **Guatemala** and **Honduras** due to differences in the start of the season and length of the growing season. Conversely, conditions remain favourable in **El Salvador**, northern **Guatemala**, northern **Honduras**, and **Nicaragua**. Forecasts indicate drier-than-normal conditions may continue in **Haiti**, central-southern **Honduras**, and northeastern **Nicaragua** through November (See Regional Outlook Pg. 20).

In **Guatemala**, reduced precipitation amounts from late September have resulted in reduced soil moisture levels and below-average crop conditions. Additionally, below-average precipitation amounts are forecast to continue in the northeast for the remainder of the year with a likely negative effect on crop yields (See Regional Outlook Pg. 20). In **El Salvador**, planted area of the minor *Segunda* season maize crop is expected to be above-average, supported by high prices and good soil moisture and despite localized flooding. In **Honduras**, harvesting of rice crops is underway and will finalize in November, and production is expected to be average. While rainfall was well below-average at planting between May and mid-June, replanting occurred in localized areas of the main producing central-east region. In mid-June, improved precipitation benefitted soil moisture and crop development.



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



Crop condition map synthesizing Segunda season 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 the Caribbean, harvesting of both main and second season cereals is underway in **Cuba** and **Haiti**, and overall conditions are mixed due to prevailing dryness in **Haiti**. In **Haiti**, harvesting of main season rice crops finalized under poor conditions as erratic and below-average rainfall did not supply sufficient irrigation water, and production is expected to remain below-average. Additionally, below-average yields are also likely for second season maize and bean crops as erratic and deficient rainfall has affected many cropping areas and resulted in yield reductions. Below-average precipitation between late August and early October has resulted in below-average cumulative rainfall amounts despite improvements in mid-October, resulting in soil moisture deficits and yield declines. In **Cuba**, harvesting of main season maize and second season rice crops is underway, and despite generally below-average precipitation in September through mid-October, especially in both tips of the island, crop conditions are favourable with near-average yields expected.

Regional Outlook: Dry conditions are forecast to continue in parts of Guatemala, Honduras, and Nicaragua through early November

Seasonal rainfall deficits are forecast to strengthen in central and northern Guatemala, central and eastern Honduras, and central and eastern Nicaragua during late October to early November. Figure 1-left shows rainfall amounts for August 1st to November 10th, including the two-week GEFS forecast from October 26th. During the forecast period, there are increased chances for above-average rainfall in portions of northern Honduras, Costa Rica, and Panama. Central and northern Guatemala have had below-average and erratic rainfall during the season and in recent weeks.

The probabilistic SubX forecast for November 13th to November 26th (Figure 1-right) indicates that drier-than-normal conditions may continue in Haiti, central-southern Honduras, and northeastern Nicaragua. This forecast would suggest a dry end to Haiti's poorly performing season. The next 30 days are forecast to be warmer than normal, with atypically high daytime maximum temperatures in Guatemala, Honduras, El Salvador, southern Belize, and northern Haiti.

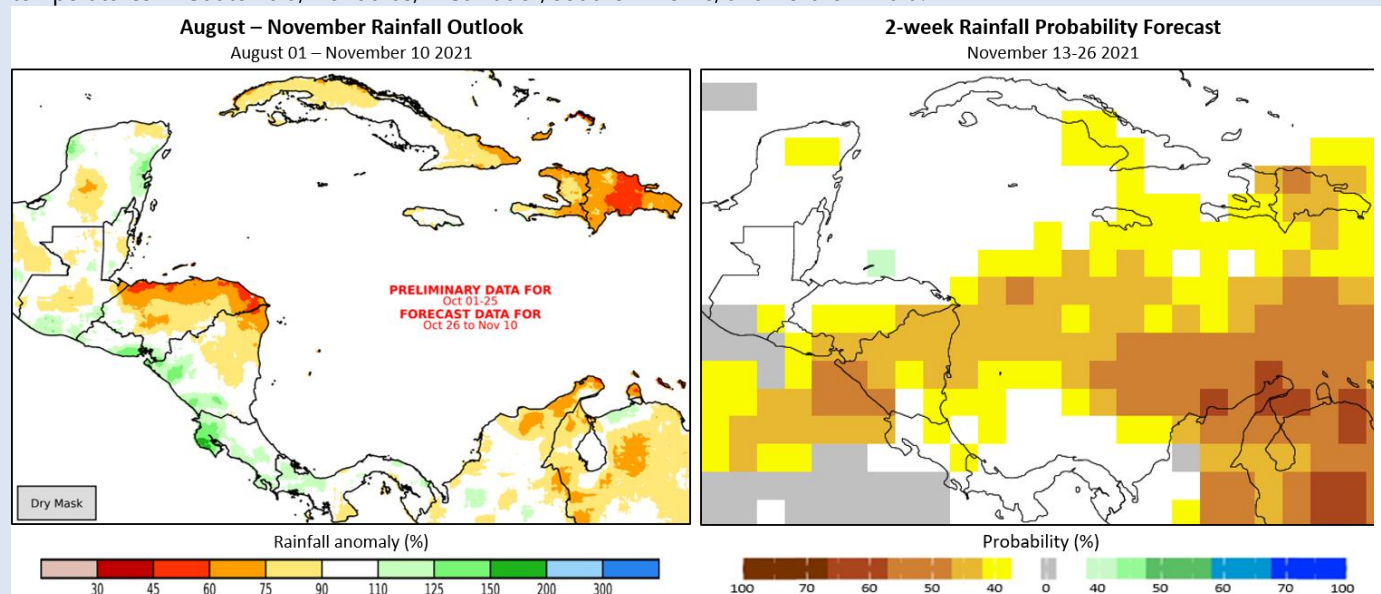


Figure 1. August-to-November 10th rainfall anomaly outlook, and a 2-week rainfall forecast probability. The left panel is a CHC Early Estimate, which compares 2021 rainfall amounts to the 1981-2020 CHIRPS average. It indicates what the post-August 1st rainfall percent of average would be if the 15-day unbiased GEFS forecast from October 26th materializes. The right panel shows the IRI SubX Precipitation Biweekly Probability Forecast for November 13th to 26th, issued on October 29th. The forecast is based on statistically-calibrated tercile category forecasts from three SubX models. Image from the IRI Subseasonal Forecasts Maproom. 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 November 4th, 2021.

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.

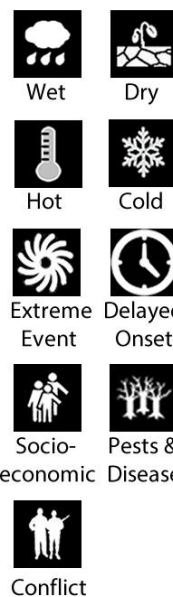
Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)

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

Cover Photo by Kara Mobley

Contributing partners



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