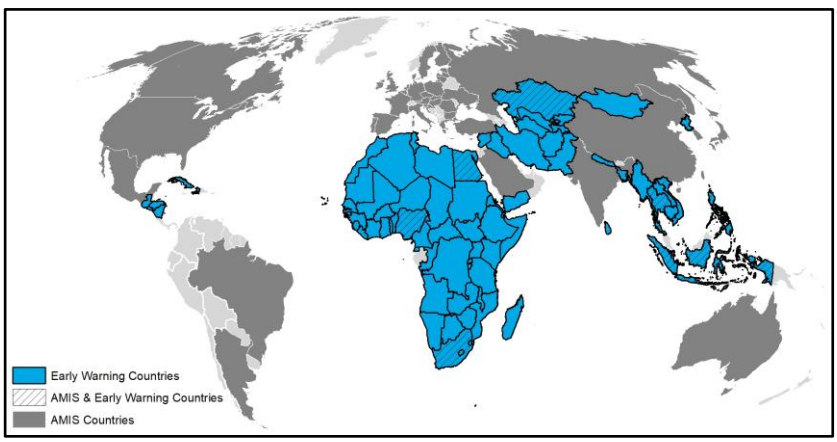
GEOGLAM
Global Agricultural Monitoring

Crop Monitor EARLY WARNING

Overview:

In **East Africa**, harvesting of main season cereals is underway in the north with mixed conditions due to recent flooding, desert locust concerns, ongoing conflict, and socio-economic challenges. Planting of second season cereals is underway in the equatorial sector under favourable conditions. In **West Africa**, harvesting of main season cereal crops and second season maize crops finalized in parts of the south while harvesting of main season cereal crops continues across the Sahel, and overall conditions are favourable except in areas affected by flooding and conflict. In the **Middle East** and **North Africa**, harvesting of summer-planted maize and rice crops in Egypt continued under favourable conditions. Planting of winter wheat crops is expected to start in October throughout the subregion. In **Southern Africa**, harvesting of winter wheat is underway and will finalize in November, and overall conditions are favourable. Land preparation and planting of main season crops is expected to start in October to November. In **Central and South Asia**, harvesting of spring wheat will finalize in October while planting of winter wheat began in September, and overall conditions are favourable. In **Southeast Asia**, above-average rainfall in the north benefitted development of wet-season rice crops while dry conditions in Indonesia have affected dry-season rice yields. In **Central America and the Caribbean**, harvesting of *Primera* season crops finalized in September under favourable conditions except in Haiti, and above-average rainfall was beneficial for *Postrera/Segunda* season crop planting and development.



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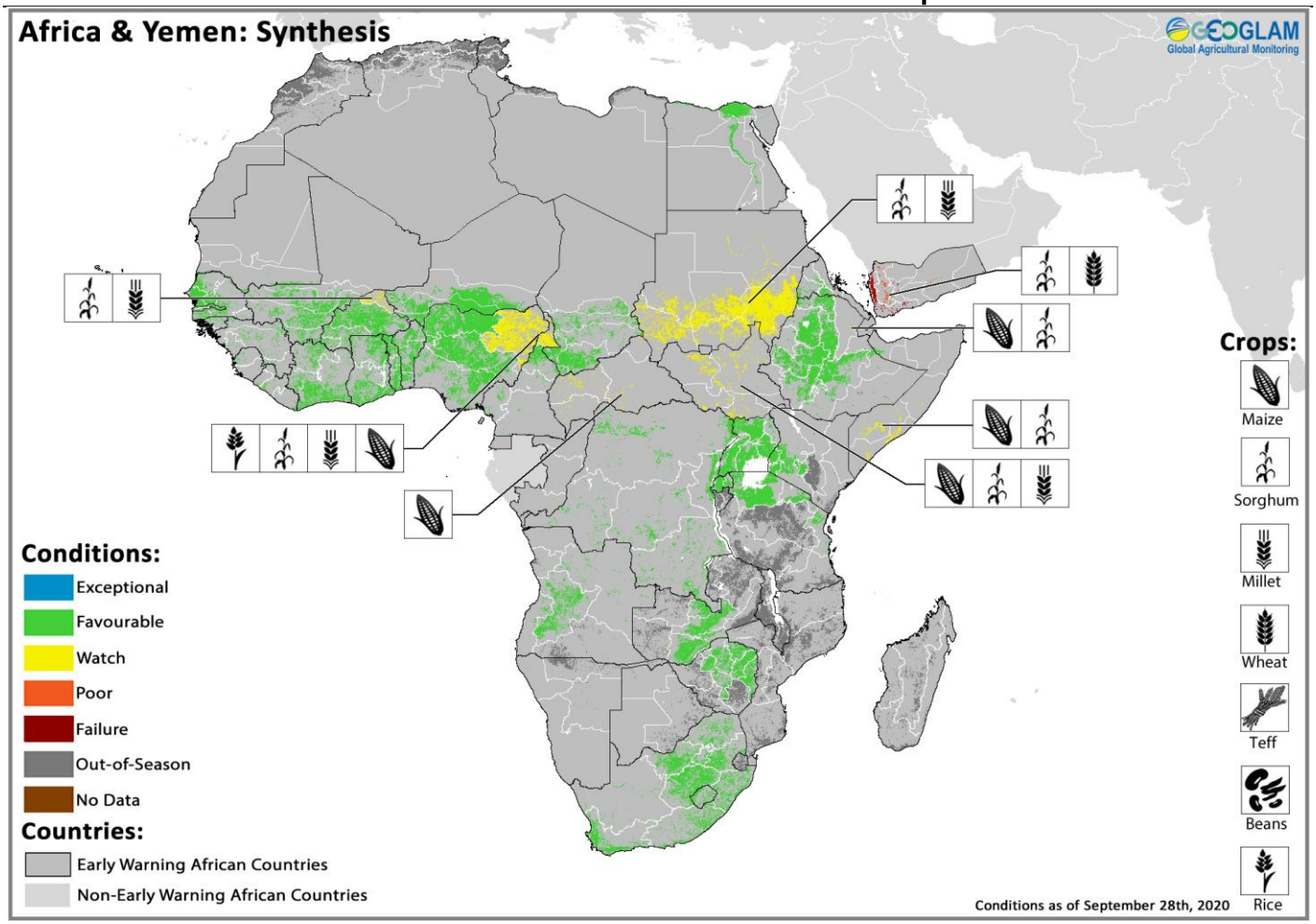
GEO GROUP ON EARTH OBSERVATIONS

GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of September 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of September 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 due to recent flooding, desert locust concerns, and socio-economic challenges. Planting of second season cereals is underway throughout the equatorial sector under favourable conditions. However, there is concern due to the forecast below-average October-December rainfall (See Seasonal Forecast Alert pg. 5), especially over the eastern Horn.

WEST AFRICA: In the south, harvesting of main season cereals and second season maize crops finalized in some regions while harvesting of main season cereals is underway in the north. Overall conditions are favourable except in areas affected by flooding and conflict.

MIDDLE EAST & NORTH AFRICA: In Egypt, harvesting of summer-planted maize and rice crops began in September, and overall conditions are favourable. Throughout the subregion, planting of winter wheat crops is expected to take place from October if there is sufficient soil moisture.

SOUTHERN AFRICA: Harvesting of winter wheat crops began in September and will finalize in November, and production prospects are favourable. Land preparation and planting of main season crops will begin across the region in October to November. Forecasts indicate normal to above-normal rains are likely in October, and near average-rainfall is expected through the December 2020 to February 2021 period which is likely to benefit planting activities and crop development (See Regional Outlook pg. 13).

CENTRAL & SOUTH ASIA: Harvesting of spring wheat will finalize in October while planting started in September for winter wheat crops, and overall conditions are favourable.

SOUTHEAST ASIA: In the north, conditions are favourable for the ongoing wet-season rice harvest as above-average rainfall throughout the June to September monsoon season benefitted crop development despite localized flood damage. In Indonesia, dry-season rice yields are slightly below-average as dry conditions affected the early development stage.

CENTRAL AMERICA & CARIBBEAN: Harvesting of *Primera* season crops finalized in September under favourable conditions except in Haiti where dry conditions negatively impacted yields. Conditions are favourable for the planting and development of *Postrera/Segunda* season crops as Hurricane Nana and subsequent rains benefitted crop development, particularly in the Dry Corridor, despite some localized crop losses.

Global Climate Outlook: Global 30 day Subseasonal Rainfall Forecast Anomaly for October 2020

The 30-day Subseasonal (SubX) forecast indicates a likelihood of above-average rainfall over Central America, parts of western and northern Europe, southern West Africa, southeast Cameroon, western Central African Republic, South Sudan, Uganda, western Ethiopia, the eastern Democratic Republic of the Congo, eastern Madagascar, central-east India, southern Myanmar, Thailand, Laos, Cambodia, Vietnam, Central and southern China, the Philippines, Indonesia, and southeast Australia. There is also a likelihood of below-average rainfall across central United States, Mexico, central Peru, Bolivia, Paraguay, central Brazil, southern Uruguay, southern Chile, Southern Italy, Sri Lanka, northern Sumatra in Indonesia, and southern Japan.

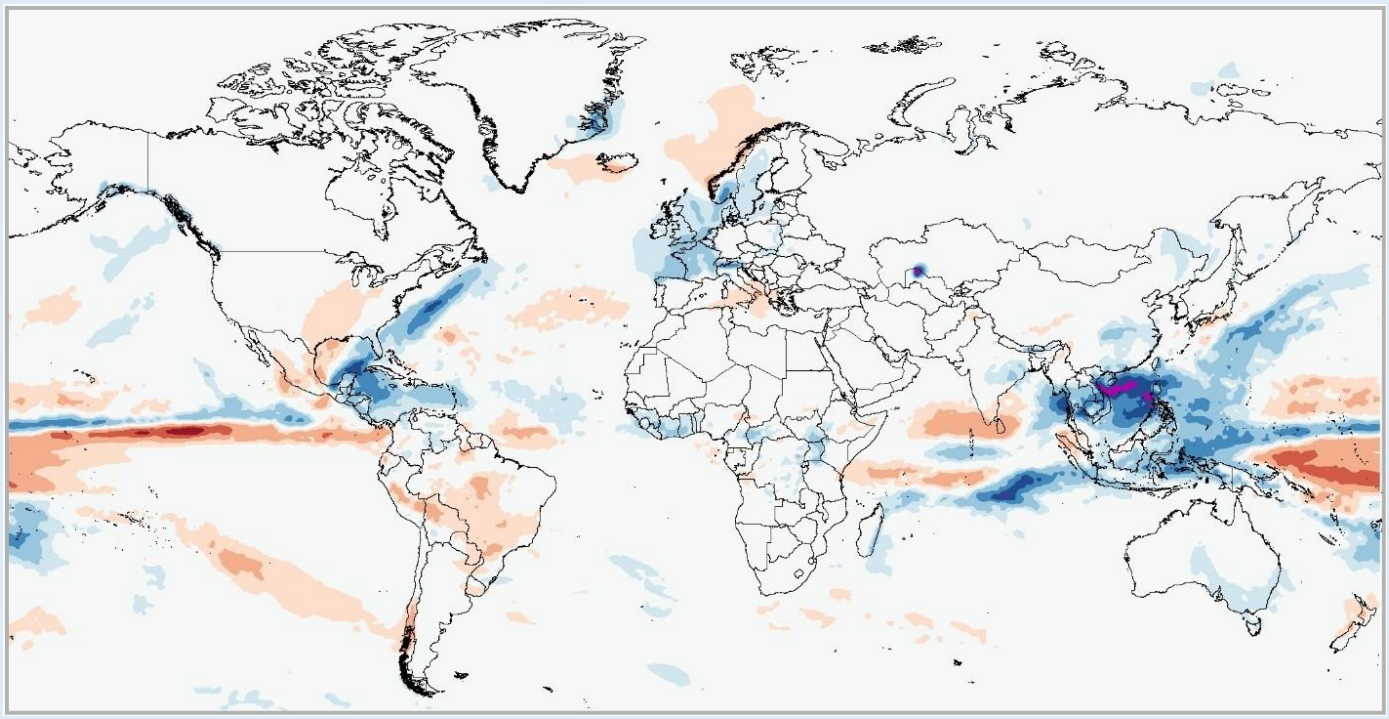


Figure 1. Multimodel mean subseasonal forecast of global rainfall anomaly for the 30-days starting from October 1st showing areas of above or below-average rainfall. The image shows the average of four Subseasonal Experiment (SubX) model forecasts from that day. The anomaly is based on the 1999 to 2016 model average. Skill assessments of SubX can be accessed here.
Source: UCSB Climate Hazards Center

Climate Influences: La Niña is present and expected to continue through early 2021

El-Niño-Southern Oscillation in La Niña phase

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase. La Niña conditions are expected to continue during the northern hemisphere fall and winter (~85% chance for October to February) and potentially into the spring (~60% chance for February to April).

La Niña conditions typically reduce October to February/May rainfall in East Africa, the southern United States, the northern Middle East, southern Central Asia, Afghanistan, Pakistan, and India. Southern Brazil, northern Argentina, eastern China, the Korean Peninsula, and southern Japan typically see reduced rainfall into January.

La Niña conditions typically increase October to February/May rainfall in Southeast Asia, Southern Africa, southern Central America, northern South America, northern Brazil, and in southernmost India and Sri Lanka. Australia and Indonesia typically see increased rainfall into December.

Indian Ocean Dipole trending toward negative

The sea surface temperature gradient across the tropical Indian Ocean recently strengthened to a level that may be the beginning stage of negative Indian Ocean Dipole mode. Models indicate persistence of these conditions into October or November. A negative Indian Ocean Dipole typically reduces rainfall in East Africa and increases rainfall in parts of southern and central Australia.
Source: UCSB Climate Hazards Center

Desert Locust Alert: Threat to cropping areas remains in the Horn of Africa and the Arabian Peninsula

The ongoing desert locust outbreak continues to cause concern in central and northwestern **Somalia**, northwestern **Kenya**, eastern and northeastern **Ethiopia**, and western **Yemen**, and locusts are still present in northeastern **Uganda**, southeastern **South Sudan**, and **Eritrea**. While there are initial signs of improvement throughout East Africa as a result of ongoing control operations, the situation is deteriorating in parts of the Central Region due to swarm breeding in **Eritrea**, **Ethiopia**, **Sudan**, **Yemen**, and **Saudi Arabia**. Destruction to pastures and crops continues to be reported in **Ethiopia** and **Somalia**, increasing the risk of significant damage to seasonal crops in agro-pastoral areas as swarms multiply and migrate. Above-average rainfall in **Sudan**, northern **Ethiopia**, and northern **Somalia** is benefitting vegetation regrowth and creating favourable ecological conditions for continued locust breeding and development. Large numbers of swarms are persisting in northern **Somalia** and norther **Ethiopia** despite ongoing control operations. Locusts from northeastern **Ethiopia** and northern **Somalia** are projected to migrate across the Red Sea to **Yemen**, and there is concern as early swarm breeding is likely to begin on the Red Sea coastal plains several months earlier than normal where good rains fell in August and September in parts of **Yemen**, **Eritrea**, **Saudi Arabia**, and **Sudan**. This could allow an extra generation of breeding and cause a substantial increase in locust numbers. The forecast below-average October to November (OND) rainfall season (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5) could reduce available green vegetation and reduce the number of swarms across East Africa. Southerly and south-easterly wind movement constitutes a low risk of invasion for southern and equatorial parts of the subregion and a higher risk for northern countries. The threat to large scale migration from **Kenya** to the summer breeding areas of **Sudan** and West Africa has largely diminished as a result of weather conditions and control operations. Despite good rainfall in some areas of the northern Sahel in September (See Regional Outlook pg. 11), there are only a few isolated adults and small-scale breeding in **Chad**, and locust numbers are expected to decline in summer areas with small-scale breeding forecast in northwest **Mauritania**. Similarly, the situation continues to improve in Southwest Asia, and the situation is expected to return to normal with small residual populations in Lasbela Valley, **Pakistan** and possibly Rajasthan, **India**.

East Africa Update

In **Kenya**, only a few immature swarms remain in the northwest. A third generation of breeding is likely to begin in October but may be limited as a result of the forecast below-average OND rainfall (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5). Climatic conditions are favourable for locust development in the northwest, and locusts are projected to move from Samburu areas to Turkana and West Pokot and from Turkana and West Pokot areas to eastern Uganda areas of Moroto, Kotido, Pader, and Kigum. In **Ethiopia**, late instar hopper bands are present between Dire Dawa and Aysha and in Afar region where an increasing number of immature swarms are forming from breeding. Some swarms have moved into Amhara region, and there is cross-border movement between Ethiopia and northwest Somalia. Climatic conditions are suitable for locust development in the northwest, and locusts are projected to move from Afar and Debubawi regions to Misraqawi, Mehak Elegnaw, Semien Mirabaw, and Wag Himra. In **Somalia**, immature swarms remain on the northern plateau in Somaliland and Puntland, and adult groups were reported in the south in central Galguduud. Climatic conditions are suitable for locust development in the northwest. Swarm breeding in **Eritrea** is causing hopper groups and bands to form in western lowlands and on Red Sea coastal plains. Additional hatching and band formation are expected, and additional swarms could arrive from Ethiopia. In **Sudan**, locusts have been reported in Red Sea, Kassala, Northern, River Nile, and White Nile states. Climatic conditions are suitable for locust development in the south and east, and locusts are projected to move from Kassala and Red Seas to River Nile states. In **South Sudan**, locusts are projected to move from Eastern Equatoria and Central Equatoria areas to Jonglei state, and climatic conditions are favourable for locust development in the south. In **Uganda**, climatic conditions are suitable for locust development in the east.

Arabian Peninsula Update

In **Yemen**, hopper bands and swarms remain in the interior and are spreading to southern coastal areas and along the Red Sea and extending northwards to coastal areas near Jizan, Saudi Arabia. Mature breeding swarms were seen in the Asir Mountains south of Al Baha, and mature breeding groups are present along the coast near Lith. In **Saudi Arabia**, swarms arrived in the southwest and hopper bands formed along the coast.

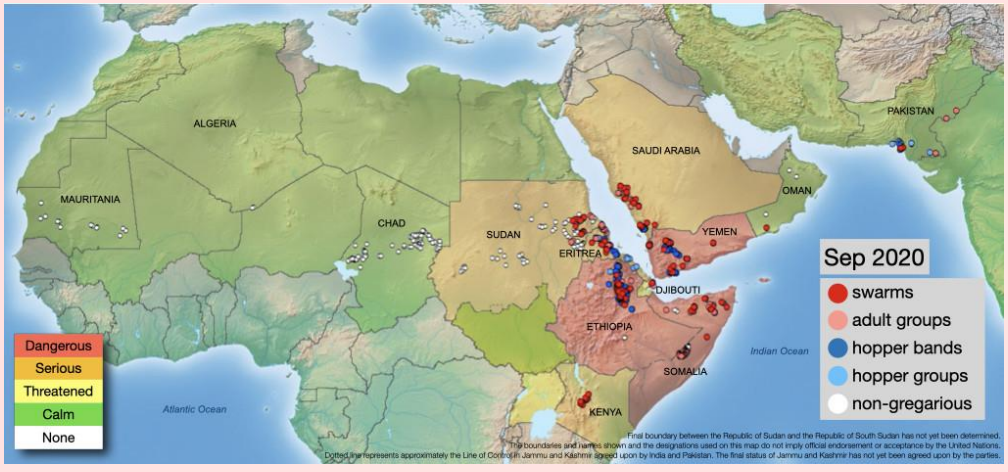


Figure 1. Desert Locust Situation September 2020. *Source: FAO DLIS*

Seasonal Forecast Alert: Below-average seasonal rains forecast for the East Africa 2020 OND season followed by the potential for a below-average MAM rainfall season

The October-November-December (OND) eastern East African rains are strongly influenced by tropical Indo-Pacific sea surface temperature gradients. Cooler temperatures in the western Indian and eastern Pacific Ocean and warmer temperatures in the eastern Indian Ocean and western Pacific typically result in dry conditions over central-eastern Kenya, central south-eastern Ethiopia, and Somalia. Present conditions appear very consistent with below-normal OND rains. A well-developed La Niña is present, and the equatorial west Pacific is exceptionally warm. In the Indian Ocean, warming in the east in the past month helped procure a west-east Indian Ocean temperature gradient that may be the beginning stage of negative Indian Ocean Dipole mode lasting through October or November. Winds and moisture anomalies over the Indian Ocean indicate moisture movement away from East Africa. In the past, this has been a robust indicator of poor OND rainfall.

Current 2020 OND sea surface temperature and rainfall forecasts indicate conditions conducive to below-normal OND East African rains as shown in recent analysis by the Climate Hazards Center (CHC). The overall structure of the predicted 2020 OND sea surface temperatures resembles recent dry years and is most closely associated with the poor conditions experienced in 1998, 2010, and 2016 (Figure 1).

Further statistical analysis indicates that 2021 March-April-May (MAM) rains may also be poor. Eastern East Africa rains have been declining (here, here), and the current long-range sea surface temperature forecasts for this MAM period appear similar to the patterns thought to be driving these declines (here). It should be noted, however, that limited sample sizes and the long lead time of such an outlook create substantial uncertainty. So far out, however, these results should not be interpreted as a forecast, but rather a caution, initiating the first step in a staged drought early warning sequence. Analysis of the MAM 2021 SST forecasts from September indicate that concerns are warranted, as a similar east-west Pacific sea surface temperature gradient occurred during previous poor rainfall seasons (1999, 2008, 2011, 2009, and 2014). Climate models anticipate that the La Niña will fade by MAM, but west Pacific sea surface temperatures are still expected to be exceptionally warm and similar to the pattern associated with the 2017 dry MAM season (here).

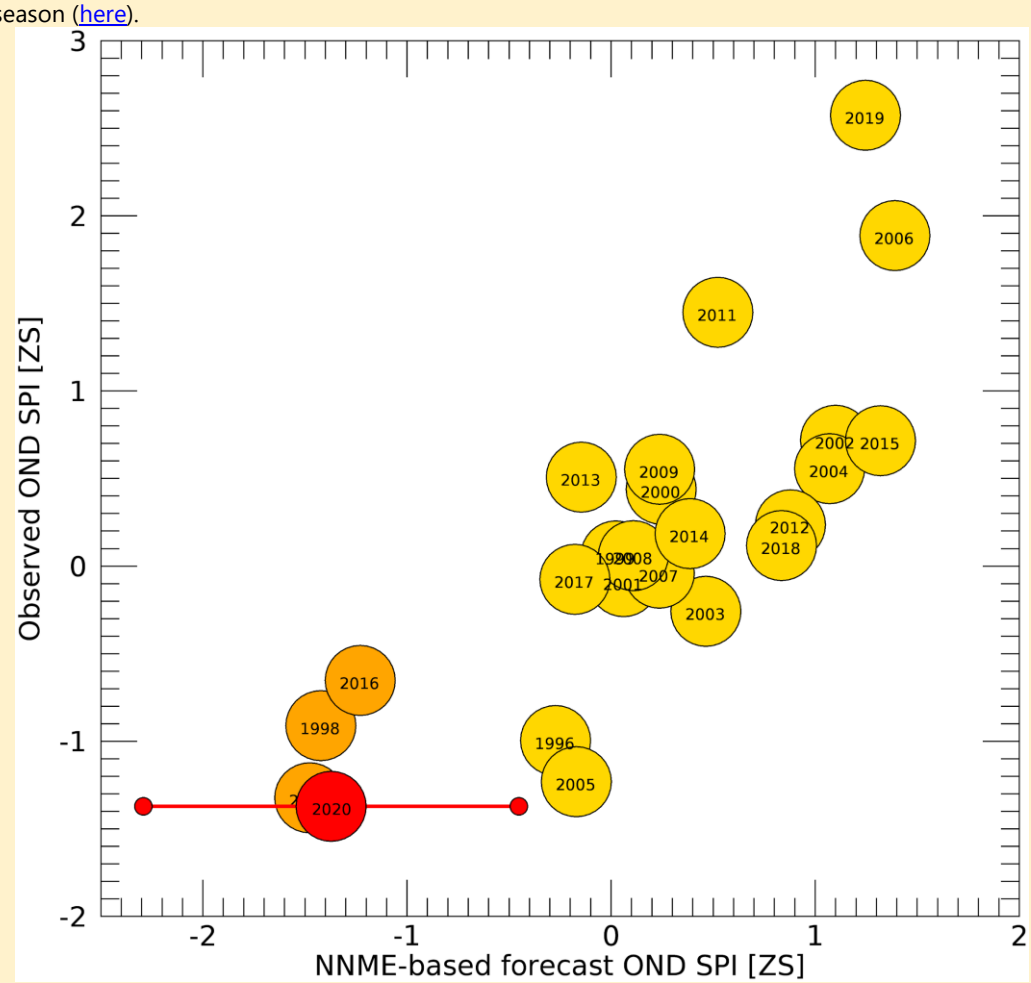
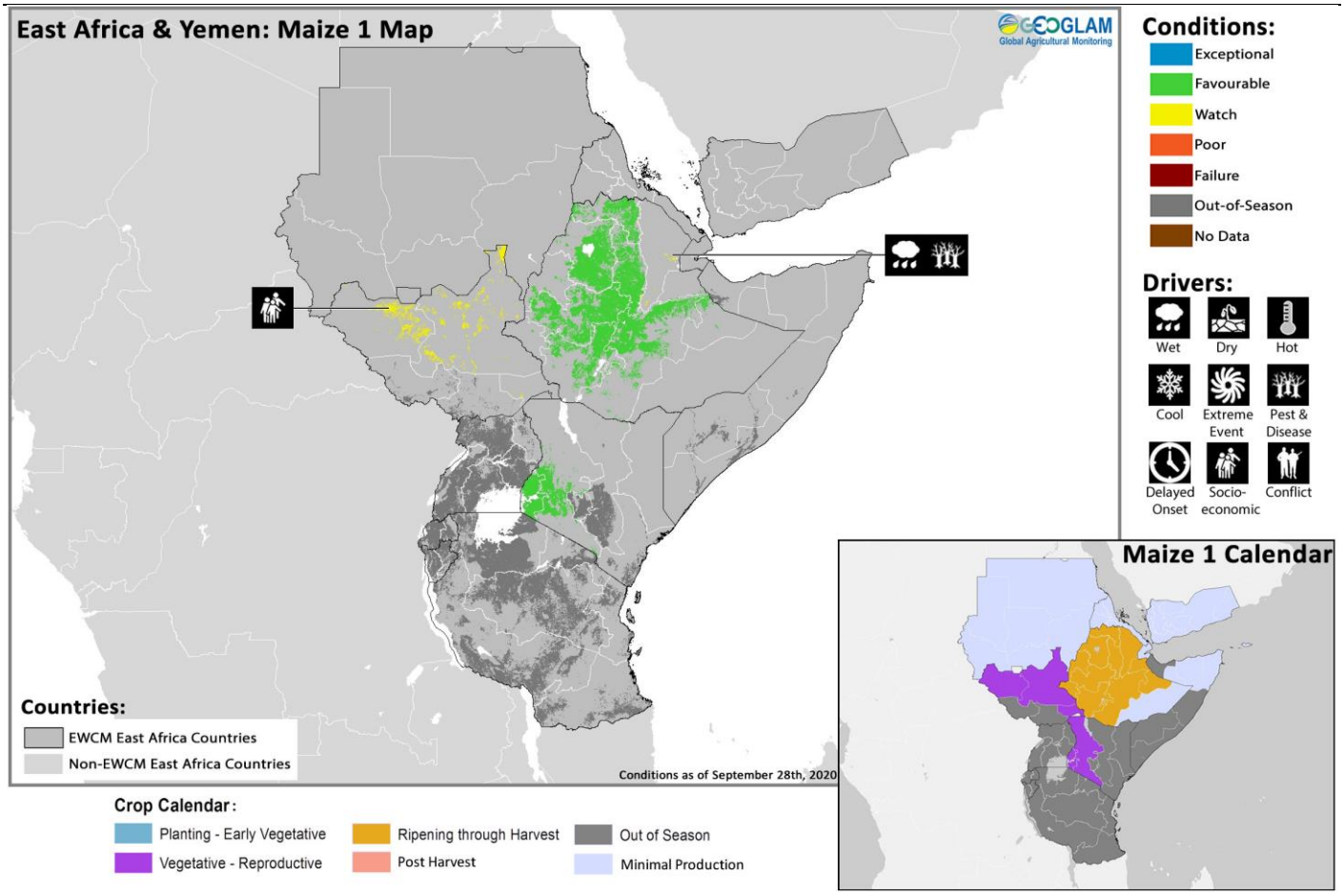


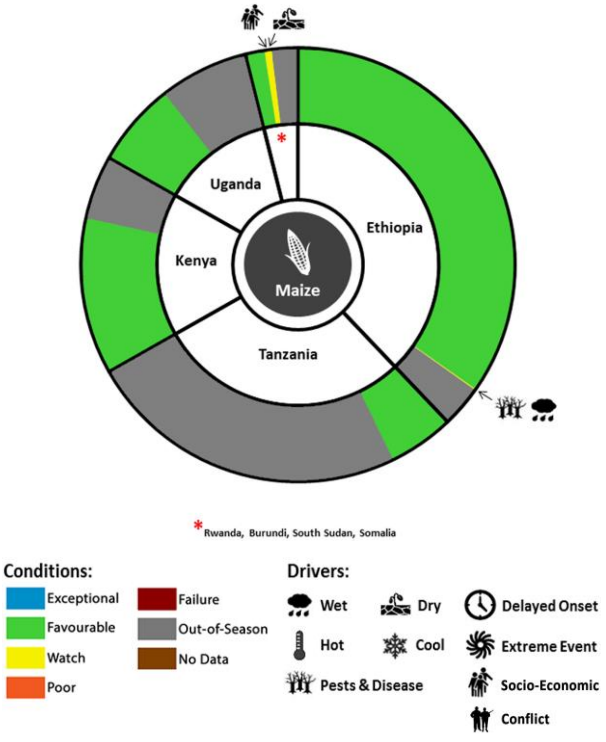
Figure 1. (left) A scatterplot showing predicted (3 month lead) OND eastern East Africa Standard Precipitation Index values (SPI) and observed OND SPI values (circles). As described here the forecast is based on a regression between predicted OND Indo-Pacific sea surface temperatures and East African OND rainfall. Orange circles identify OND analog seasons. The associated rainfall outcomes range from slightly below-normal to very poor. 1998, 2010 and 2016 stand out as the closest analog.
Source: UCSB Climate Hazards Center

East Africa & Yemen



Crop condition map synthesizing Maize 1 conditions as of September 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 East Africa, harvest is underway for 2020 main season cereals in **Ethiopia**, west and central **Kenya**, and **Yemen**, while in **Sudan** and parts of **South Sudan**, harvest will begin in November. There is concern throughout many parts of the subregion due to impacts from widespread flooding, the continued presence of desert locusts, and ongoing conflict and socio-economic challenges. In mid-September, above-average seasonal rainfall fell over the Horn of Africa, maintaining wetter-than-average conditions in several areas and resulting in widespread flooding across **Ethiopia**, **Sudan**, **South Sudan**, **Uganda**, and **Yemen** with **Sudan** being the most affected (See Sudan Flooding Highlight pg. 7). While the rains have been generally favourable for agricultural activities and are expected to benefit yields in the **United Republic of Tanzania** and **Kenya** despite localized crop losses from flooding, excessive rainfall and flooding could have a significant impact on production in worst affected areas and may result in average to below-average production in **Sudan** and **South Sudan**. The rains have affected over a million people across the subregion as the Nile River reached its highest level in half a century in parts of **Sudan**, **Ethiopia**, and **South Sudan**. Additionally, entire villages in countries bordering Lake Victoria have been flooded as the lake level reached a record high of 13.4 meters above-average. Across the south of the subregion, harvesting of main season crops finalized last month, and planting is underway for second season cereals in parts of **Somalia**, **Uganda**, and **Tanzania** for the October-November-December (OND) rainfall period. The OND rains are forecast to be below-average and delayed by up to one month over the majority of the subregion (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5). Dry conditions could impact



For detailed description of the pie chart please see description box on pg. 19.

second season yields and production but are also likely to diminish desert locust reproduction. Control operations have lessened the impact of desert locusts, though concern remains in parts of **Somalia**, **Kenya**, **Ethiopia**, and **Yemen** that are most affected.

Northern East Africa & Yemen

In **Ethiopia**, harvesting of *Meher* season (long rains) crops began in September and will finalize in January. Overall crop conditions are favourable as the timely and above-average *Kiremt* rains (June to September) replenished irrigation water supplies and benefitted agricultural activities except in Afar region and other areas where flooding resulted in crop damage and where damage from desert locusts is expected to impact overall crop production. *Kiremt* rainfall has been unusually heavy and triggered flooding from late July, displacing 292,863 people countrywide, primarily in Afar, Gambella, Oromia, SNNP, and Amhara regions. In several areas, *Kiremt* rains are estimated at more than 50 percent above the long-term average. In early September, heavy rains caused the Awash River to burst its banks in Afar Region, damaging 41,000 hectares of cropland and 21,000 hectares of maize crops. As of September 8th, an estimated 16,000 hectares of large farms in Amibara and Nahurka woredas were underwater according to a press release by the Ethiopian Government, and 14,000 hectares of crops were damaged in Amibora Naharuka woreda. In June, desert locusts migrated from southern areas to summer breeding areas in northern Afar, Amhara, and Tigray regions, posing a significant threat to *Meher* season crops and resulting in crop losses in Oromia, Somali, and Tigray. Overall, crop losses due to floods and locusts in combination with inhibited access to agricultural inputs as a result of COVID-19 related restrictions are expected to result in localized cereal production shortfalls. In **Eritrea**, winter wheat and main season sorghum crops are developing under favourable conditions to be harvested from November. The June to September *Kiremt* rainy season started with an early-onset followed by below-average rainfall from late June to late July with negative impacts on crop development. However, heavy rainfall from August onward improved vegetation conditions, particularly in Gash Barka region which accounts for more than half of domestic cereal production. Desert locusts in the

Sudan Flooding Highlight: Widespread flooding caused significant displacement and damage to cropping areas

From mid-July to mid-September, well-above-average rainfall resulted in widespread flooding throughout East and West Africa with west and eastern Sudan being amongst the worst affected. Since early August, heavy rainfall intensified and resulted in additional flooding, displacement, and destruction of infrastructure, homes, and croplands, provoking the Government to declare a state of emergency in early September for the following three months. The floods have displaced close to 860,000 people since mid-July in all 18 states according to the October 1st estimate from UN OCHA. The most affected states include North Darfur, Khartoum, Blue Nile, West Darfur, and Sennar where 52 percent of all affected people are located and large areas of cropland have been affected. This year's flooding compounds the impacts of torrential rains and flash floods that affected 426,300 people in 2019 across the country, particularly in Khartoum state.

In early September, the River Nile reportedly reached the highest level in a century at 17.43 meters according to the Sudanese Irrigation Ministry, and the river burst its banks in several localities in the River Nile and Northern states. Water levels of the White Nile and Jebel Awlia dam reservoir and Blue Nile also reached record highs. As depicted in satellite imagery, over 500 km^2 of land appears to be flooded in Khartoum, Al Gezira, and White Nile states alone. During the flooding, production activities have been severely disrupted; the Government of Northern state reported that 7,110 hectares of crops including sorghum and maize have been destroyed, the Ministry of Agriculture and Irrigation in Khartoum reported that 42,000 hectares of crops have been affected by floods, and UN OCHA reported that floods damaged large swaths of agricultural land across the country.

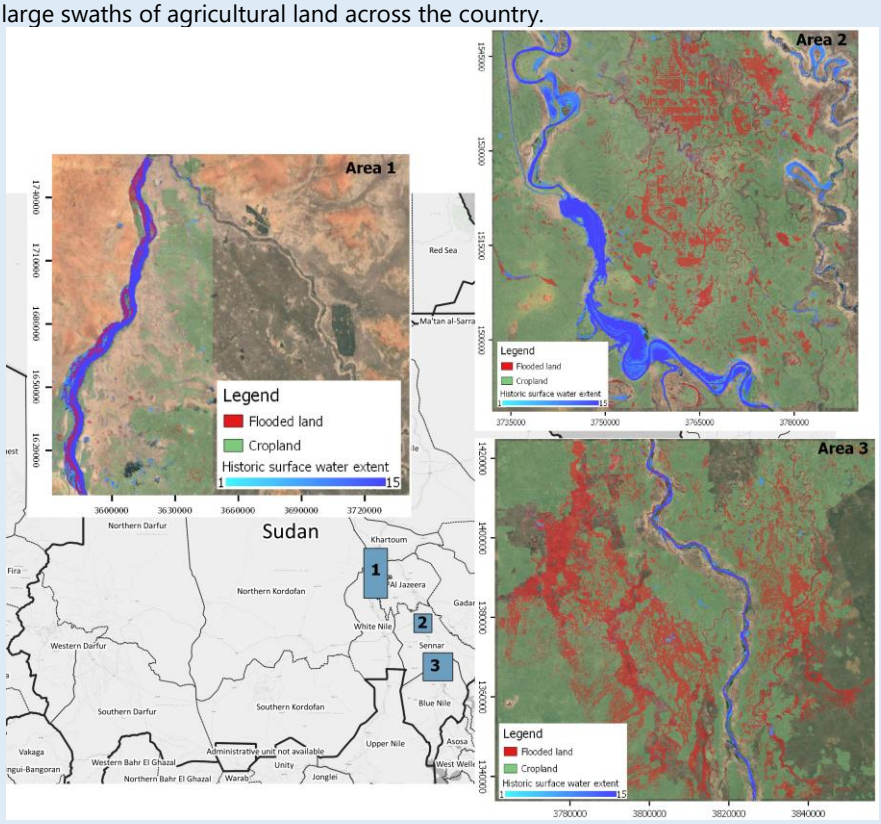
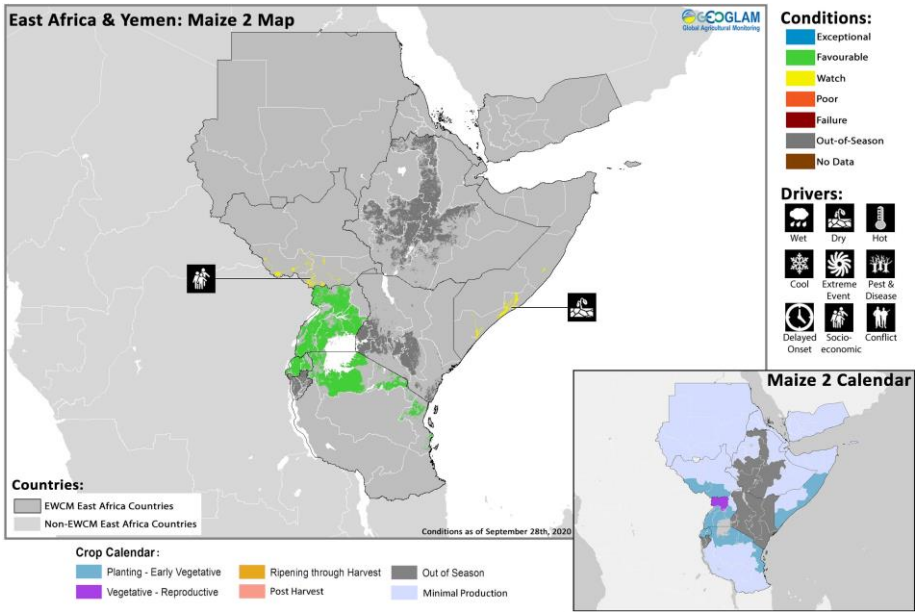


*Figure 1. Flood water extent and cropland layers overlaid to a Google Satellite background layer. **Top left (Area 1):** An area close to Khartoum, along the White Nile river, Sudan. Flood extent derived from S1 data (S1 date "Before" the flood: 13/07, S1 date "After" the flood: 30/08), Flooded land: 35,329 ha, flooded cropland: 8,660 ha. (Note: magenta colour indicates flooded land that is overlapping with the Historic surface water extent). **Top right (Area 2):** Close to Sennar town, in Sennar State, Sudan. Flood extent derived from S2 mosaic for the period 20-31/08. Flooded land: 33,406 ha, flooded cropland: 26,687 ha. **Bottom left:** Overview map of Sudan, where blue rectangles indicate areas with zoomed-in maps included in this report. **Bottom right (Area 3):** An area between the borders of Sennar and Blue Nile states, Sudan. Flood extent derived from S2 mosaic for the period 01-14/09. Flooded land: 172,073 ha, flooded cropland: 112,299 ha.*
Source: EC JRC

Northern Red Sea region have caused some damage to crops and pasture. In **Sudan**, main season millet and sorghum crops are in vegetative to reproductive stage to be harvested from November, and there is concern due to significant flooding throughout the country and ongoing socio-economic challenges. Heavy rainfall from mid-July through September has resulted in widespread flooding across west and eastern Sudan, displacing more than 860,000 people in all 18 states, particularly in North Darfur, Khartoum, Blue Nile, West Darfur, and Sennar, and resulting in damage to large swaths of agricultural land throughout the country (See Sudan Flooding Highlight pg. 7). Since late 2019, the country has been affected by a desert locust outbreak. According to an August 2020 impact assessment jointly carried out by FAO and the Sudan Government, control operations successfully contained crop and pasture losses, which have been assessed as insignificant. However, current rainy season conditions are conducive for desert locust breeding, and the number of solitarious locusts is likely to increase in the coming weeks. Risk of desert locust damage to the main crop is high, particularly in the summer breeding belt from Kassala to Darfur and green areas of the Nile Valley. Also, COVID-19 restrictions are compounding Sudan's macro-economic crisis as the Sudanese Pound continues to depreciate, further inflating prices of agricultural inputs and production costs. In **South Sudan**, main season cereal crops are in vegetative to reproductive stage to be harvested from October while planting of second season maize and sorghum crops continued in September. While above-average seasonal rains have benefitted the soil moisture and planting conditions for second season crops in Central Equatoria and Western Equatoria, there is concern throughout the country due to widespread flooding and ongoing socio-economic issues. More than 800,000 people have been affected by flooding since July along the White Nile in the centre of the country with 366,000 people displaced, and six states have been affected with Jonglei and Lakes states being the worst affected. Forecasts indicate wetter-than-average conditions in parts of South Sudan for the next several weeks, while OND rainfall is likely to be below-normal in southern parts of the country (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5). Improvements in the security situation resulted in increased planted area in northern and central unimodal rainfall areas; however, the increase in inter-communal violence since early 2020 in Warrap, Lakes, and Jonglei states disrupted agricultural activities. In **Yemen**, there is significant concern for the ongoing harvesting of spring wheat and main season sorghum which will finalize in October and November. In September, heavy rainfall resulted in flooding across several governates, resulting in limited crop damage. The rains also benefited vegetation conditions for desert locust breeding, and control operations are constrained by ongoing conflict. Ongoing conflict also continues to limit availability of agricultural inputs and constrain access to fields.

Southern East Africa

In **Somalia**, harvesting of *Gu* season cereals finalized in August, and final production was poor. Planting of *Deyr* season maize and sorghum crops commenced in mid-September to be harvested from December. While current soil moisture and planting conditions are favourable, particularly in the northwest where good rains fell in September, forecasts indicate the 2020 *Deyr* rainfall season from October to December is likely to be below-average in the south (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5) and could lead to poor crop development. Desert locust damage to crops and pastures have been limited and localized. In **Uganda**, harvesting of main season crops finalized in August under favourable conditions. However, in the Karamoja region, harvesting of main season sorghum crops began one month late in September, and sorghum output is forecast to be below-average due to earlier than normal seasonal rains, waterlogging, and seed shortages which resulted in delayed and reduced plantings. Planting of second season maize crops continued in September, and current conditions are favourable, although dry conditions may delay planting in some areas. In northeastern **Kenya**, harvesting of main season sorghum crops finalized in September under favourable conditions except in the northeast where prolonged dry spells throughout the season and desert locust presence impacted crop development. In the major producing regions of the West and Rift Valley, *Long Rains* crops are developing under favourable conditions to be harvested from October. Despite early-onset and heavy rains in February that disrupted planting activities in the Rift Valley and Western provinces, abundant rains throughout the growing period were favourable for *Long Rains* maize and winter wheat crop development, and maize production is expected to be 10 to 15 percent above-average. In **Burundi**, harvesting of main season rice crops finalized in the northeast under favourable conditions, and planting of *Season A* maize crops will begin next month to be harvested from January 2021. In **Rwanda**, while soil moisture is sufficient for the planting of *Season A* maize crops that began in September, forecast dry conditions throughout the country may impact further planting and crop development (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5). In northern bimodal areas of the **United Republic of Tanzania**, harvesting



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

of *Masika* crops finalized in August under favourable conditions. Planting of *Vuli* season maize began in September to be harvested from mid-December under favourable conditions, though forecast dry conditions in the north may impact further planting and crop development (See Regional Outlook pg. 9 and Seasonal Forecast Alert pg. 5).

Regional Outlook: Below-normal rainfall expected for the October to December rainfall period across much of the region

The East Africa long rains season consists of a tropical rain-band that generally presides over the southern half of the region in March-April-May (MAM) before gradually moving to the north for June-July-August-September (JJAS). This year, record rainfall throughout the long rains season (Figure 1-middle) saturated soils and brought rivers, lakes, and dams to unprecedented levels, which resulted in widespread flooding and provided favourable conditions for desert locusts. Most recently, September rainfall exceeding 120% of average resulted in flooding in South Sudan, southwestern and the Afar region of northern Ethiopia, Uganda, and the Democratic Republic of the Congo (Figure 1-left).

Below-normal rainfall conditions are anticipated in much of the region for the October-November-December (OND) short rains and Somalia's September to November *Deyr* season. Seasonal forecasts from NMME (Figure 1-right) and the Greater Horn of Africa 56th Climate Outlook Forum indicate an increased likelihood of below-normal OND rainfall throughout the region (See Seasonal Forecast Alert pg. 5). According to SubX 30-day forecasts, eastern areas will see drier-than-average conditions beginning in October, while parts of Uganda and South Sudan will see wetter-than-average conditions continue for the next several weeks.

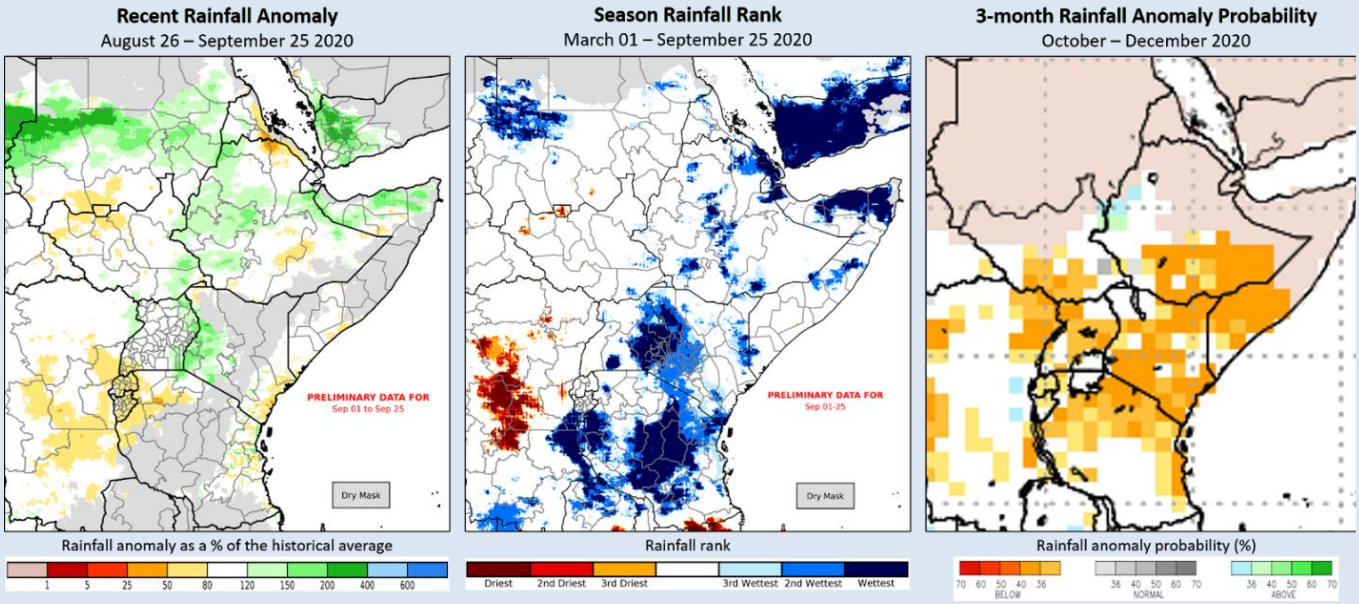
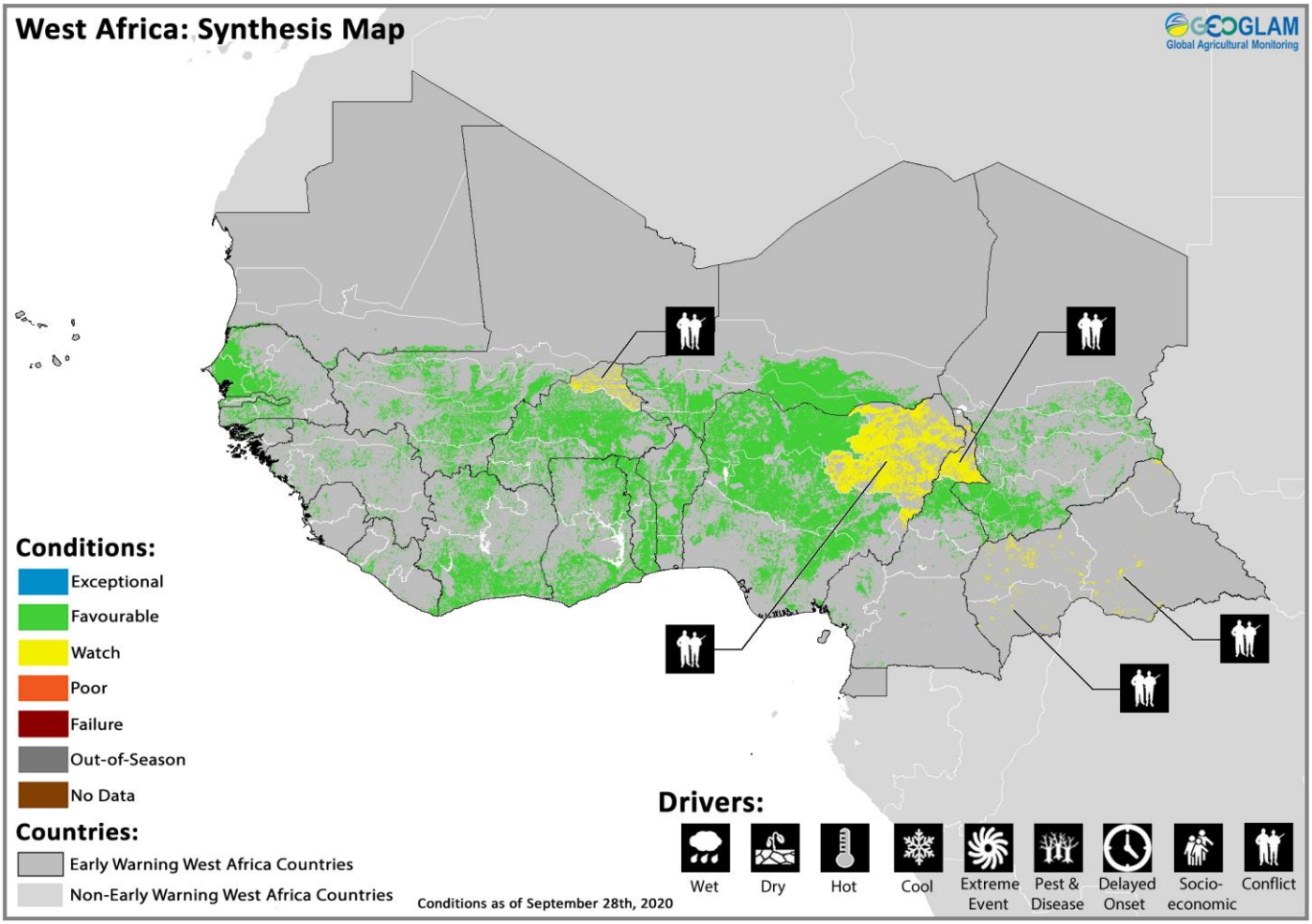


Figure 1. Estimated percent-of-average anomaly for August 26th to September 25th, estimated rainfall rank since March 1st, and a 3-month probabilistic rainfall forecast for October to December. The left and middle panels are UCSB Climate Hazards Center Early Estimates, which compare 2020 rainfall amounts to the CHIRPS historical record (1981-2019). The left panel indicates the estimated percent-of-average anomaly for August 26th to September 25th. The middle panel ranks the March 1st to September 25th, 2020, total relative to historical totals for the same period, and indicates where the current season is within the three wettest or three driest years on record. The right panel is a 3-month NMME probabilistic forecast for October to December based on September 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).
Source: UCSB Climate Hazards Center.

West Africa



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

Across the southern half of the subregion, harvesting of main season crops finalized in **Liberia**, **Cote d'Ivoire**, southern **Ghana**, southern **Togo**, **Benin**, and central **Cameroon**, and favourable yields resulted while crops are still developing in **Guinea**, northern **Cameroon**, **Guinea-Bissau**, **Togo**, and northern **Nigeria** under generally favourable conditions. Planting of second season crops is now underway in southern **Cote d'Ivoire**, southern **Ghana**, southern **Togo**, and southern **Benin**. Across the north of the subregion and the Sahel, harvest has started for main season millet and sorghum crops in southern **Mali**, **Burkina Faso**, southern **Niger**, and eastern **Senegal** while elsewhere, main season cereal crops are in vegetative to reproductive stage. Despite localized flood impacts in the Sahel and drier-than-average conditions along the Gulf of Guinea countries, overall conditions are favourable except in conflict-affected northern **Burkina Faso**, the **Central African Republic**, and northeast **Nigeria** along with the conflict and flood-affected Far North region of **Cameroon.** Throughout the subregion, COVID-19 mitigation measures reduced agricultural inputs and labour in several countries and are likely to decrease yields. Above-average seasonal rainfall since July in most countries, particularly in the Sahel where seasonal rainfall was 150-400 percent of the average, in combination with above-average rainfall in September has resulted in normal crop development and is expected to benefit yields. However, localized flooding in July and August resulted in livelihood losses and crop damage. Additional rainfall in September led to oversaturation, flooding, fatalities, and submerged farmland over several areas, including parts of **Senegal**, **Mauritania**, **Guinea**, **Mali**, **Burkina Faso**, **Ghana**, **Niger**, **Nigeria**, **Cameroon**, and **Chad**. Specifically, since July, heavy rains have continued to trigger flash floods across **Niger**, affecting more than 329,958 people and damaging 5,768 hectares of farmland. In **Cameroon**, torrential rains in early September in the Far North Region resulted in flooding, damage to fields, and displacement of 200,000 people. In northern **Nigeria**, heavy rainfall in early September resulted in flooding across Jigawa, Kano, Kebbi, and Sokoto States and caused damage to crop fields. In **Mauritania**, heavy rainfall since the beginning of September improved areas affected by early-season dryness but also led to widespread flooding and damage to water supply infrastructure in southern and eastern regions, particularly Assaba and Hodh Ech Chargui. In **Senegal**, all regions recorded excess rainfall in early September, and 11 regions were affected by flooding. Conversely, moisture deficits in June and July affected crops in **Cote d'Ivoire** and **Ghana**, and seasonal rainfall totals were below-average in **Guinea**, **Sierra Leone**, and **Liberia**. In September, poor rainfall distribution resulted in drier-than-average conditions across the **Gulf of Guinea** countries, notably over **Ghana**, **Togo**, **Benin**, and **Nigeria** (See Regional Outlook pg. 11). However, overall conditions remain favourable for agricultural activities. October rainfall is forecast to be average in the north, while above-average rainfall is expected in the south that could help mitigate dry conditions

(See Regional Outlook pg. 11). In **Cameroon**, COVID-19 restriction measures and conflict have hindered agricultural production as they are limiting farmers' access to crop fields and agricultural inputs. Also, increasing violence such as military confrontations and forced displacements in areas of **Burkina Faso** and **Niger** are increasingly limiting access to agricultural fields. Reports of Fall Armyworm in most countries and small-scale breeding of desert locusts in **Chad**, **Mali**, **Mauritania**, and **Niger** are likely to cause some localized crop losses.

Regional Outlook: Average to above-average rainfall forecast through October

Late-August to late-September rainfall levels were overall above-average throughout much of the region (Figure 1-left). This further contributed to the average to above-average rainfall totals seen since June over the Sahelian and Sudanian-Guinean zones (Figure 1-middle). While this produced generally favourable conditions for cropping and pastoral practices, above-average rainfall resulted in localized flooding, particularly in Chad, Nigeria, Niger, Senegal, Burkina Faso, and Ghana. Conversely, the bimodal zone—which consists of the southern coastal portions of Liberia, Côte d'Ivoire, Ghana, Togo, Benin, and Nigeria—was affected by a prolonged spell from July to August. These dry conditions continued through September for much of the bimodal zone with rainfall less than 80% of average in Ghana, Togo, Benin, and Nigeria. In contrast, September rains were above-average in Liberia and Côte d'Ivoire.

The 30-day forecast indicates rainfall is expected to be average in the north, and above-average in the south (Figure 1-right). The above-average rainfall predicted in the bimodal zone indicates a late but likely favourable start to the minor season.

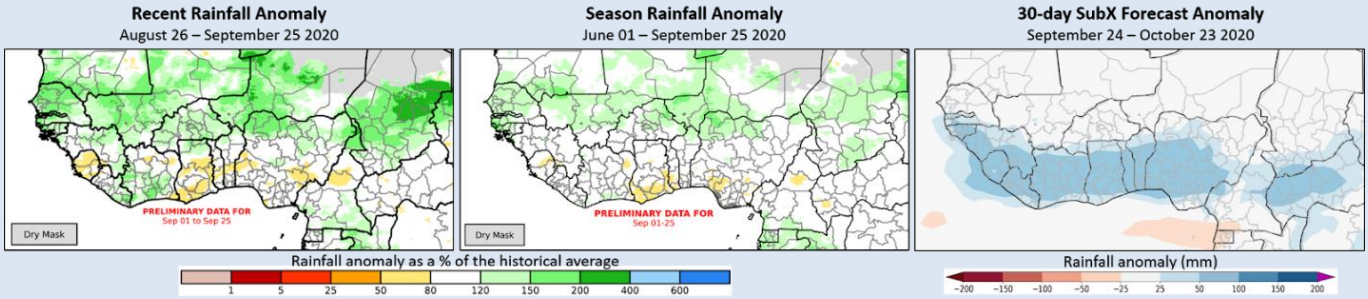
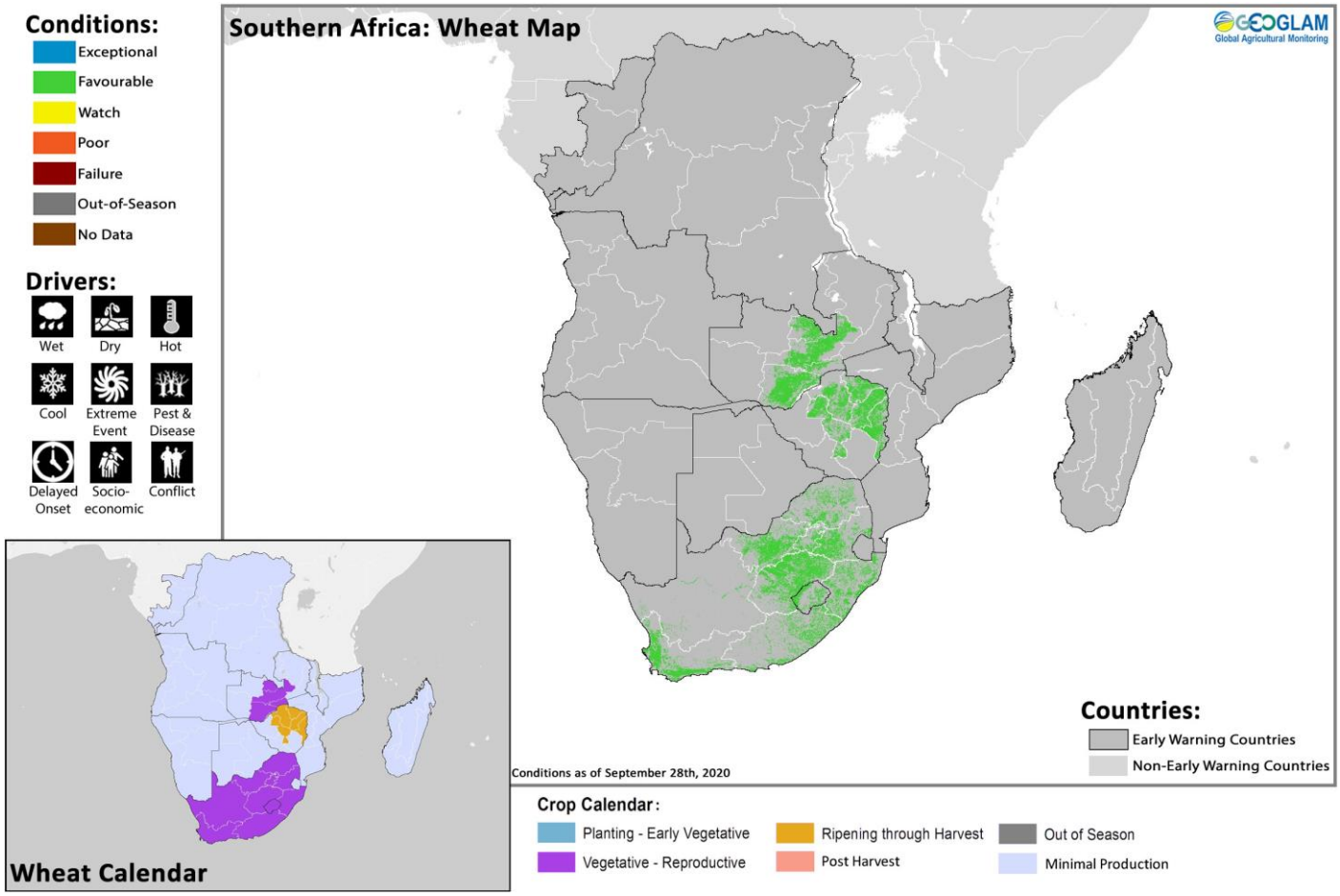


Figure 1. Estimated percent-of-average anomaly for August 26th to September 25th, estimated percent-of-average anomaly since June 1st, and a 30-day rainfall anomaly forecast from September 24th. The left and middle panels are UCSB Climate Hazards Center Early Estimates. They compare 2020 rainfall amounts to the 1981-2019 CHIRPS average. The right panel is a 30-day forecast from September 24th. The image shows the average of five Subseasonal Experiment (SubX) model forecasts from 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.

Middle East & North Africa

In the Middle East and North Africa, planting of winter wheat will take place from October throughout the subregion, though the majority of planting will take place in November and December depending on soil moisture availability, and crops will be harvested from April 2021. In **Egypt**, harvesting of summer-planted rice crops will finalize in October while harvesting of main season maize crops will begin in October. Overall conditions are favourable, and 2020 cereal production is expected to be slightly above-average due to an increase in planted area of rice.

Southern Africa



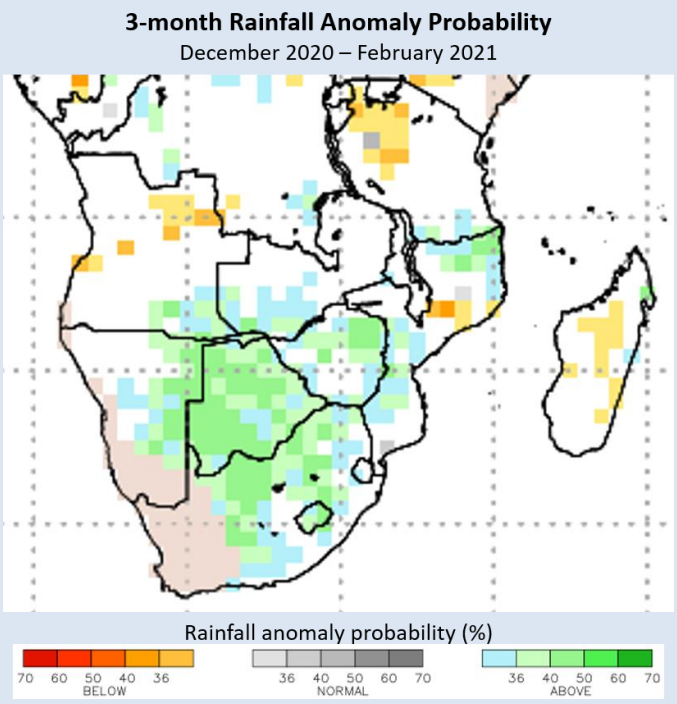
Crop condition map synthesizing information as of September 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. ***Crops that are in other than favourable conditions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

In Southern Africa, harvest is underway for winter wheat crops in **South Africa**, **Zambia**, **Zimbabwe**, and **Lesotho**, and production prospects are favourable. Land preparation and planting of main season crops started in some areas in mid-September and will begin across the rest of the subregion in October to November, and forecasts indicate normal to above-normal rains are likely in October with near average-rainfall expected through November, followed by above-average rainfall for the December 2020 to February 2021 period across the majority of the subregion which is likely to benefit planting activities and crop development (See Regional Outlook pg. 13). COVID-19 restriction measures remain a concern and may impede access to inputs, primarily due to income losses and disruption in the supply of agricultural inputs and labour, which would negatively impact planting activities of main season crops. Recent outbreaks of African Migratory Locusts (AMLs) across Southern Africa are threatening 2021 production and compounding the existing challenges caused by floods, drought, and impacts of COVID-19. Both AMLs and red locust hoppers were reported in **Angola**, **Botswana**, **Namibia**, **Zambia**, and **Zimbabwe**.

In **South Africa**, winter wheat crops are developing under favourable conditions due to well distributed and average to above-average rainfall since May. Above-average production is expected and likely to be the largest crop since 2008 as favourable weather conditions in recent months improved yields. In **Zambia**, conditions are favourable for the development of winter wheat with average production expected. In **Zimbabwe**, conditions are favourable for the harvesting of winter wheat which began in September and will finalize in November. Dam levels are below-normal; however, water supply for irrigation is sufficient as demand has decreased as crops approach maturity (See Regional Outlook pg. 13). In **Lesotho**, winter wheat is developing under favourable conditions to be harvested in October and November.

In northern **Democratic Republic of Congo**, harvesting of main season sorghum is underway while planting and development of main season crops continue throughout the country, and overall conditions are favourable. In the east, harvesting of second season maize crops finalized in mid-September, and heavy rains resulted in flooding and disrupted land preparation and planting activities; however, well-distributed seasonal rainfall along with good September rains have largely benefitted crop development. Conflict in eastern provinces in combination with COVID-19 restriction measures have limited farmers' access to crop fields and agricultural inputs.

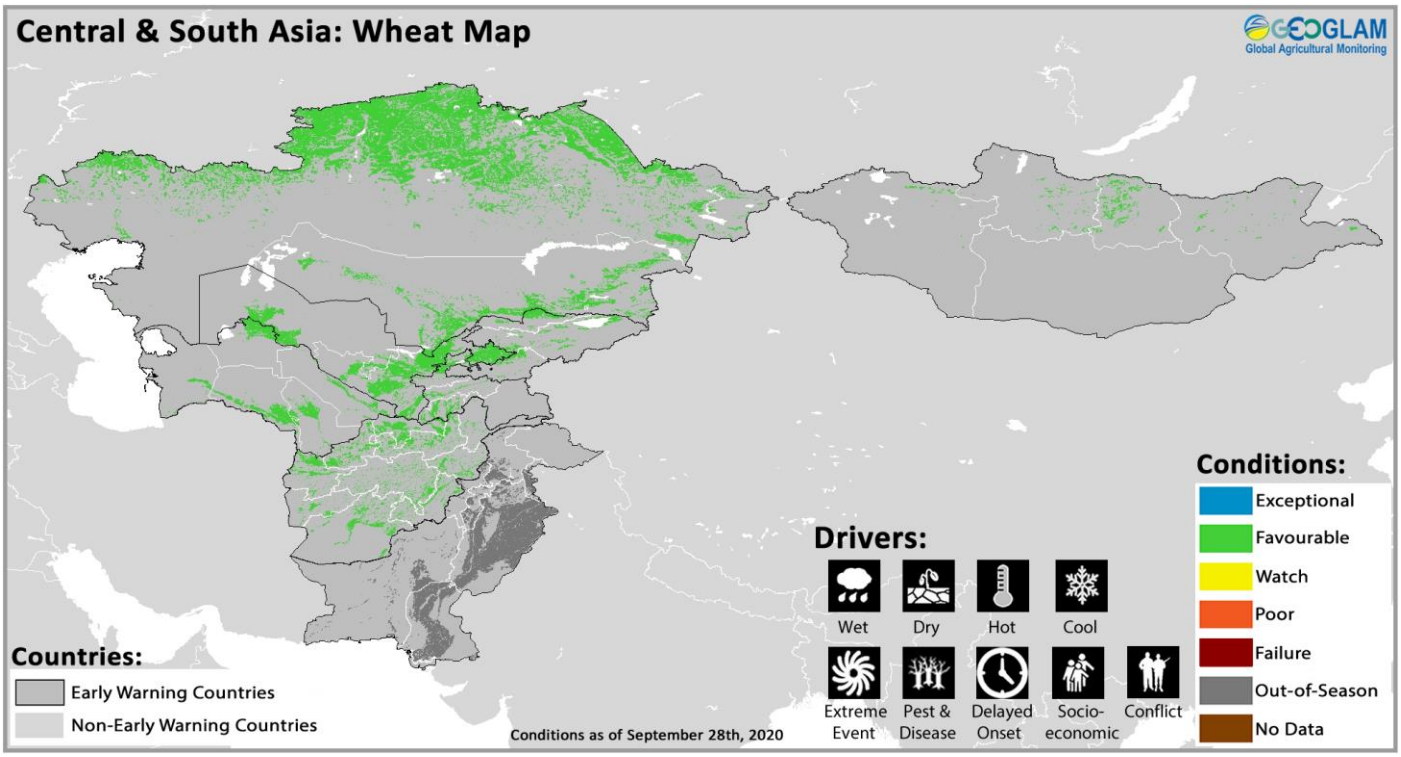
Regional Outlook: October through February rainfall is likely to be average to above-average across Southern Africa



Based on recent forecast products, the start of the 2020-2021 rainfall season in Southern Africa is likely to be normal with near-average rainfall likely throughout the region in October. Seasonal forecasts, based on September conditions, indicate near-normal cumulative rainfall for most areas during October to December and increased chances for above-normal December-to-February rainfall—the critical rainfall period for cereal crops in much of Southern Africa (Figure 1). La Niña conditions are currently present and likely to remain through the start of 2021. Historically, La Niña conditions typically result in above-normal precipitation between October and April in Southern Africa, although regional factors such as the phase of the Subtropical Indian Ocean Dipole (SIOD) can moderate the influence of La Niña in the region. As such, it would be prudent to continue to monitor seasonal progress for this region.

Figure 1. 3-month NMME probabilistic forecast for December to February, based on September 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 NOAA CPC.
Source: UCSB Climate Hazards Center.

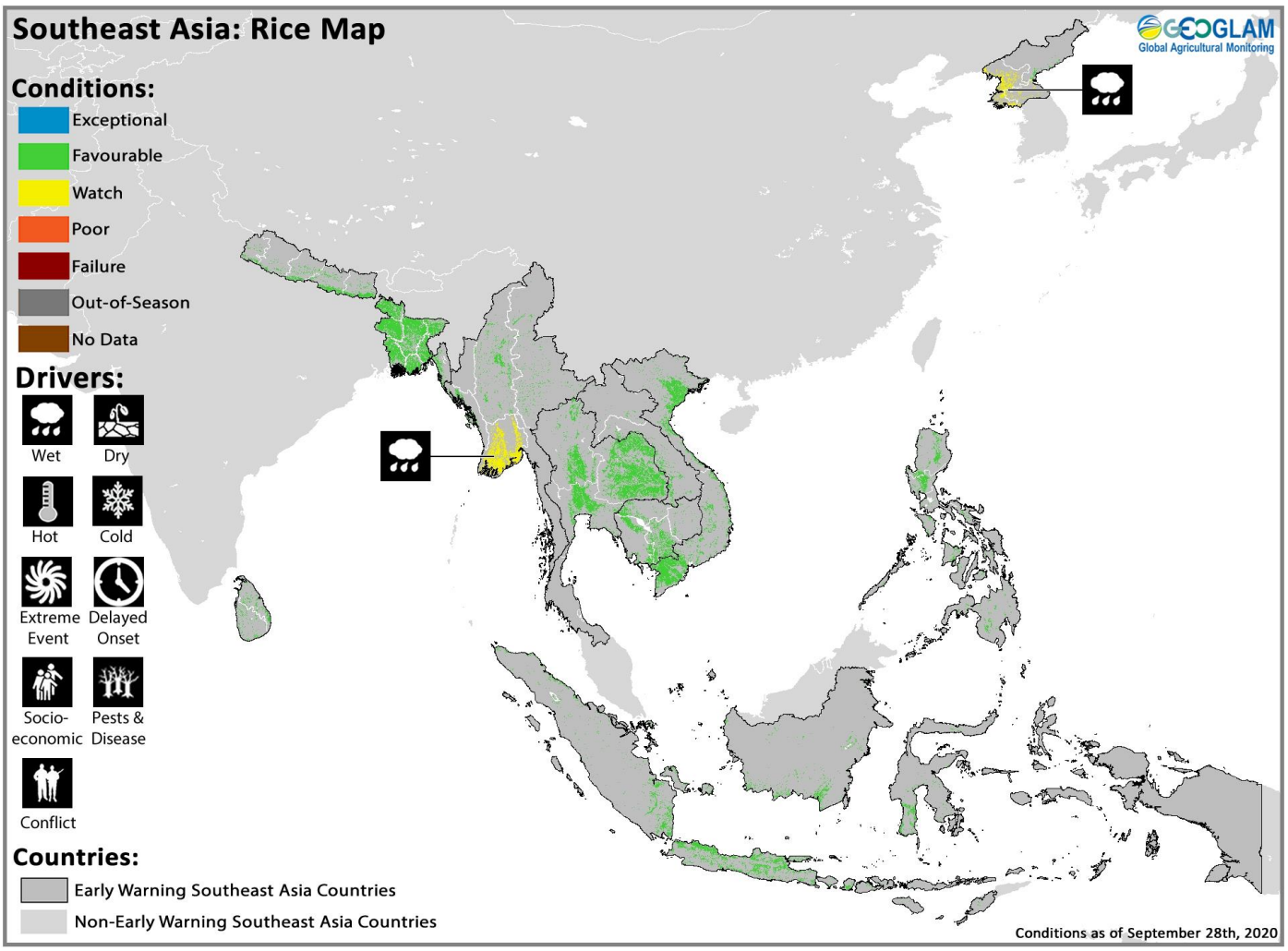
Central & South Asia



Crop condition map synthesizing information as of September 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.***

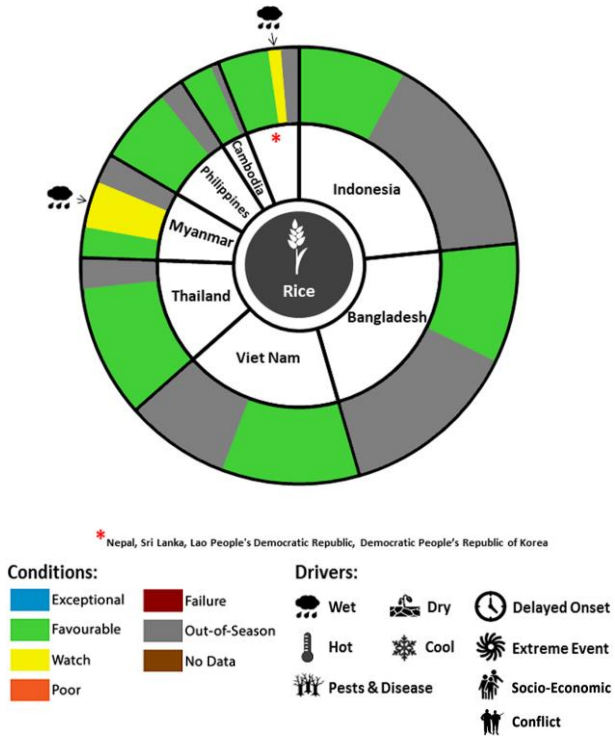
Harvesting of spring wheat and barley will be finalized in October in **Afghanistan**, **Kazakhstan**, **Kyrgyzstan**, **Mongolia**, **Tajikistan**, **Turkmenistan**, and **Uzbekistan**, and overall conditions are favourable. Planting of winter wheat for harvest in 2021 began in September in **Kazakhstan**, **Kyrgyzstan**, **Turkmenistan**, and **Uzbekistan** and will begin next month in **Afghanistan**, **Pakistan**, and **Tajikistan**, and overall conditions are favourable. In **Uzbekistan**, spring wheat plantings and yields declined from the previous year's bumper harvest but are still near-average. In **Turkmenistan**, aggregate 2020 wheat production is projected to be above-average due to the use of high yield seeds and favourable weather conditions throughout the season. In **Kazakhstan**, harvesting of spring wheat, which accounts for over 90 percent of wheat production, began in mid-August and will finalize in October. In September, precipitation in the main grain-growing areas slowed the pace of harvesting, but conditions remain favourable. Despite the above-average planted area, the 2020 aggregate wheat output is estimated at 13 million tonnes, five percent below the five-year average as drier and warmer-than-average conditions in May and June negatively affected crops in some regions. Field preparation and sowing of the 2021 winter wheat began in southeastern regions under favourable conditions. In **Afghanistan**, favourable weather conditions throughout the season are likely to result in normal yields and slightly above-average 2020 cereal production of 5.7 million tonnes, albeit still below the 2019 bumper harvest. Flash floods occurred in late August across 11 provinces with Logar, Wardak, Kapisa, Parwan, Kabul, Nuristan, Kunar, Laghman, and Nangarhar provinces being the worst affected as the floods caused widespread damage to agricultural land and general infrastructure. In addition, structural issues continue to limit access to agricultural inputs and constrain production in some areas. In **Mongolia**, wheat planted area is estimated to be well above-average due to Government provided incentives amid concerns of shortage due to COVID-19. Heavy rains in late August and the beginning of September resulted in damage to crops ready to be harvested in parts of Zavxan, Arxangai, and Xentii aimags. In **Pakistan**, main season rice crops are in vegetative to reproductive stage to be harvested from October, and overall conditions are favourable as good rains benefitted crop development, and irrigation water supply is above-average. Planting of winter wheat will take place in October to be harvested from March 2021.

Southeast Asia



Crop condition map synthesizing rice conditions as of September 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 developing under mostly favourable conditions as the June to September monsoon season resulted in above-average seasonal rainfall that benefitted crop yields. Despite localized flood damage in parts of **Cambodia**, **Myanmar**, **Philippines**, and South **Viet Nam**, early-planted rice was harvested with average yields as favourable rainfall benefitted crop development. Flooding also resulted in localized crop losses in **Bangladesh**, the **Democratic People's Republic of Korea**, and **Nepal**. While rainfall was average to slightly below-average across much of the northern parts of the region in September, above-average rainfall is likely to return for the October to December rainfall period (See Regional Outlook pg. 17). In **Indonesia**, harvesting of dry-season rice is underway, and yields are forecast to be slightly lower than the previous year and below the five-year average as dry conditions affected the early development stage; however, conditions are now favourable with the recent recovery of irrigation waters. Sowing of dry-season rice continued in September, and planted area is below-average due to low rainfall and the delayed planting schedule as a result of the protracted wet-season. Forecasts indicate above-average rainfall is likely for the October to December rainfall period (See Regional Outlook pg. 17). In the **Philippines**, wet-season rice is under favourable conditions with crops sown from April to May now fully harvested at a production level higher than last year due to fewer pests and diseases, and crops sown from July to August are now in the tillering stage under favourable conditions. In **Thailand**, conditions are favourable for wet-season rice in the vegetative to reproductive stage with abundant rainfall from July to August supporting growth. In **Viet Nam**, conditions are favourable in the south for the harvesting of summer-autumn (wet-season) rice which reached 1.01 million hectares of 1.78 million hectares planted, and conditions are favourable for the continued development of autumn-winter (wet-season) crops. In the north, summer-autumn (wet-season) rice is under favourable conditions with ample rainfall in August for irrigation supply. In **Laos**, wet-season rice is in young panicle forming to grain filling stage under generally favourable conditions except in some upland provinces in the North and Central region where drought conditions damaged two thousand hectares of agricultural land, and pests damaged 800 hectares. In **Myanmar**, planted area of wet-season rice, which accounts for more than 80 percent of annual paddy production, has reached 87.5 percent of the national plan of 5.3 million hectares and is consistent with last year's progress. Crops are in tillering to young panicle forming stage, and monsoon rain favoured planting and crop development but resulted in minor localized flooding countrywide. The floods affected 20,000 hectares of planted wet-season rice, of which 10,000 hectares were damaged, and 5,600 hectares were replanted. An additional 4,000 hectares have been damaged from a combination of strong wind, drought, and pests, of which 1,400 hectares have been replanted. In **Cambodia**, planted area of wet-season rice reached 2.64 million hectares and



For detailed description of the pie chart please see description box on pg. 19.

102 percent of the national plan. While rainfall has been below-average, growing conditions remain favourable. 38 percent of early planted crops have been harvested with an estimated yield of four tonnes per hectare. In **Sri Lanka**, harvesting of *Yala* season rice and second season maize crops continued in September and will finalize in October, and overall conditions are favourable due to good moisture conditions and sufficient irrigation water supply. *Yala* rice production is expected to be well above-average due to an increase in planted area and despite localized crop damages in Troncomalee and Ampara due to pests and flood damage. Second season maize production is also expected to be well above-average as planted area and yields are both high. Planting of *Maha* season rice crops will begin next month to be harvested from February 2021. In **Bangladesh**, *Aman* season rice crops, which account for more than 35 percent of total rice output, are in the final growing stages to be harvested from mid-November under favourable conditions due to good moisture conditions. Widespread flooding in July and August affected one-third of the country, and damage to the *Aman* crops has been reported as floods left agricultural lands underwater. Recent monsoon floods in northern, northeastern, and southeastern regions have inundated farmlands and infrastructure. In **Nepal**, harvesting of main season maize crops finalized in September, main season rice crops are in vegetative to reproductive stage to be harvested from November, and overall conditions are favourable as abundant rains are expected to benefit yields. While parts of Tarai belt where the bulk of main crops, rice, and maize are grown were affected by floods, the waters receded quickly, and the impact is expected to be limited. Output of main season maize and rice is expected to decrease slightly compared to the previous year due to delays in planting and limited availability of agricultural inputs, mainly fertilizer, as a result of the COVID-19 related border closure with India. In the **Democratic People's Republic of Korea**, harvesting of main season maize finalized in September while harvesting of main season rice will finalize next month. The April to September main cropping season has been one of the wettest on record since 1981, causing flooding across parts of the southwest and northeast and primarily affecting the main cereal producing provinces of North Hwanghae, South Hwanghae, South Pyongan, North Pyongan, as well as Kangwon Province and damaging standing crops. In early September, Typhoons Maysak and Haishen brought additional rainfall and damage to eastern coastal areas. While exceptional rainfall in August and September was beneficial for crop development, there is concern in south and western areas as severe but localized flooding may impact yields in worst-affected riverine areas.

Regional Outlook: Likelihood of above-average rainfall through the October to December rainfall period

Rainfall from late-August to late-September was average to slightly below-average across much of the northern parts of the region with rainfall totals ranging from 40-80% of average in western Myanmar, north-central Thailand, central Laos, Vietnam, and the Philippines. In contrast, rainfall was average to above-average in the southern half of the region, including rainfall totals exceeding 200% of average in southern Thailand, Malaysia, and Indonesia (Figure 1-left). This spatial pattern of slightly below-average rainfall in the north and above-average rainfall in the south is consistent with the seasonal rainfall anomaly since April 1st (Figure 1-middle). However, given the sufficient rainfall experienced in this region over the course of a growing season, these slight deficits in the north are unlikely to have adverse effects on production in the area which is about halfway through its primary rice season.

The 3-month forecast indicates an increased likelihood of above-normal rainfall in Thailand, Laos, Vietnam, the Philippines, and Indonesia, providing favourable growing conditions throughout the region (Figure 1-right).

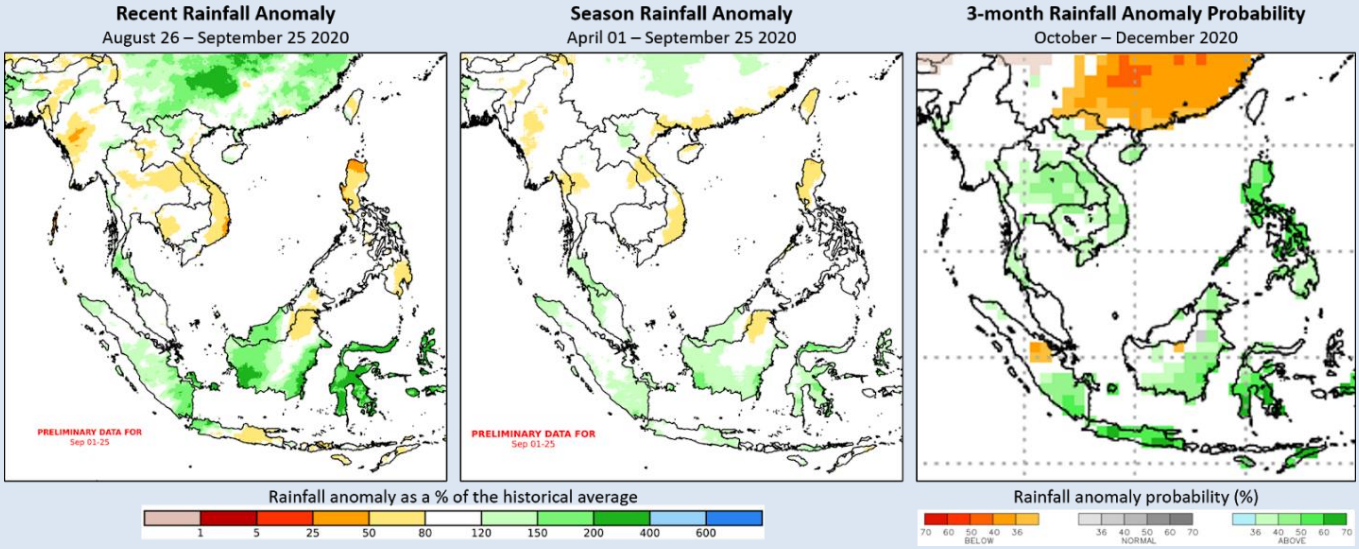
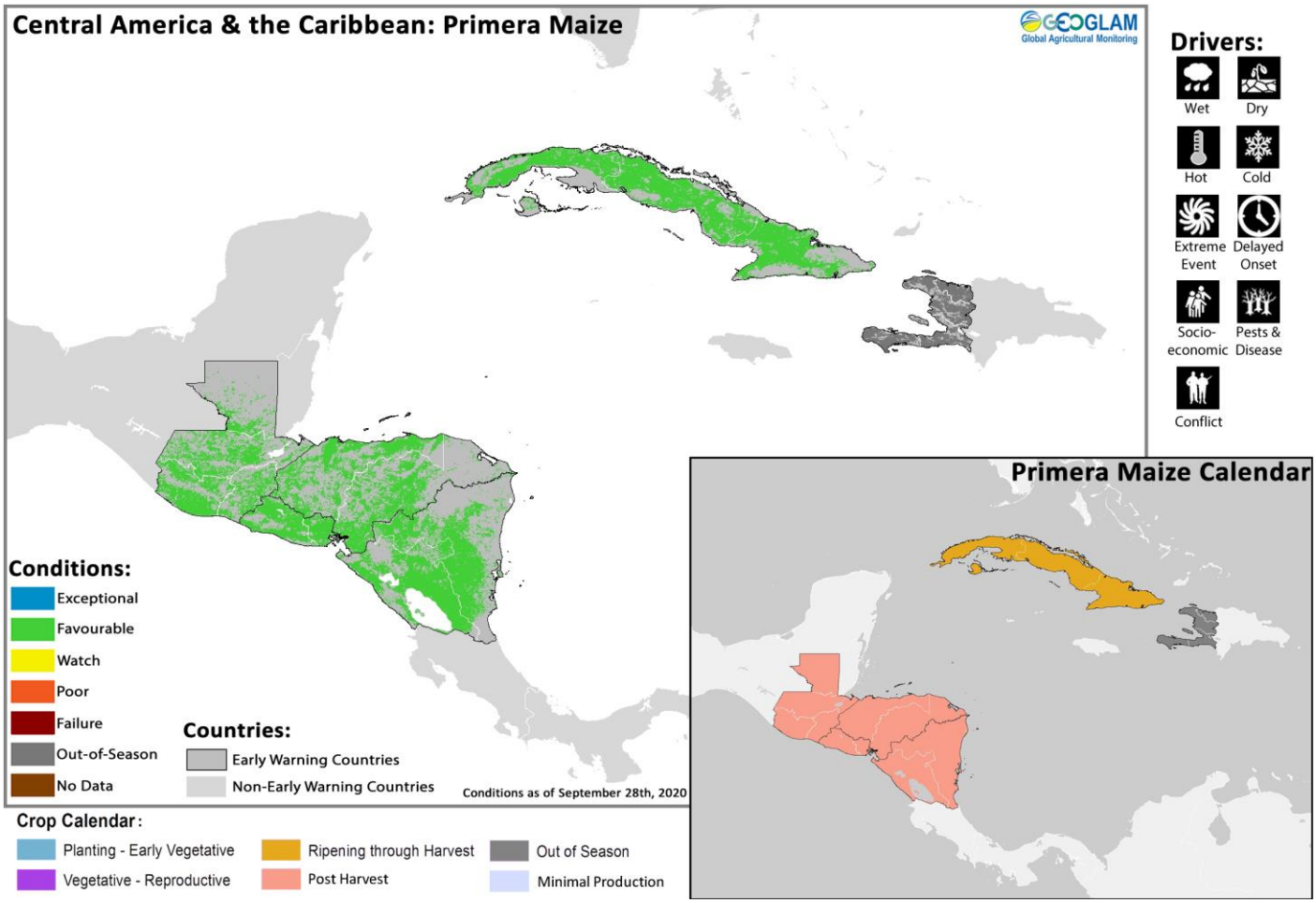


Figure 1. Estimated percent-of-average anomaly for August 26th to September 25th, estimated percent-of-average anomaly since April 1st, and a 3-month probability forecast. The left and middle panels are UCSB Climate Hazards Center Early Estimates. They compare 2020 rainfall amounts to the 1981-2019 CHIRPS average. On the right is the 3-month NMME experimental probabilistic forecast for October to December, 2020, based on September 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).

Source: UCSB Climate Hazards Center.

Central America & Caribbean



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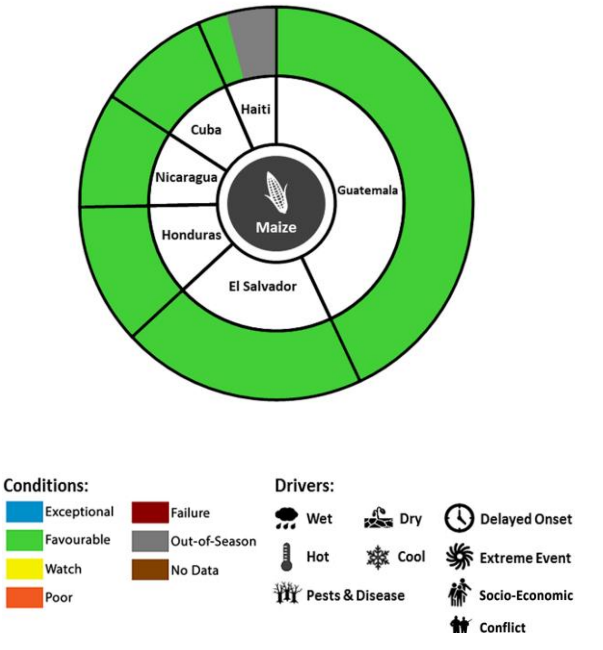
In Central America and the Caribbean, harvesting of *Primera* season maize and rice crops finalized in September under favourable conditions in **El Salvador**, **Guatemala**, **Honduras**, and **Nicaragua**, and production is expected to be above-average as good rainfall distribution resulted in an increase in sown area and average yields despite some localized losses in **Guatemala**. Conversely, below-average yields of *Primera* season crops resulted in **Haiti** as dry conditions and irregular rainfall distribution affected crop development. Planting continued in September for *Postrera/Segunda* season beans and maize crops in **El Salvador**, **Guatemala**, **Honduras**, and **Nicaragua** to be harvested from November, and overall conditions are favourable. In early September, Hurricane Nana brought heavy rains and moderate to strong winds to **Honduras'** northern coasts and Bay Islands department and northern **Guatemala** in Petén and Izabal departments, but damage was minimal. In September, average to above-average rainfall resulted in above-average vegetation health conditions, particularly in the Dry Corridor, benefitting the yields of *Primera* season crops and planting activities for the *Segunda/Postrera* season. Localized crop losses occurred in areas along river valleys of the subregion that received significant accumulations of rainfall in a short amount of time, but the losses did not negatively impact national production levels. Above-average rainfall forecast for the upcoming *Postrera/Segunda* cultivation period from October onward is likely to benefit crop development (See Regional Outlook pg. 19). However, the humid conditions may favour fungal diseases in *Postrera/Segunda* season crops, and the expected above-average Atlantic hurricane activity through November could result in negative production impacts.



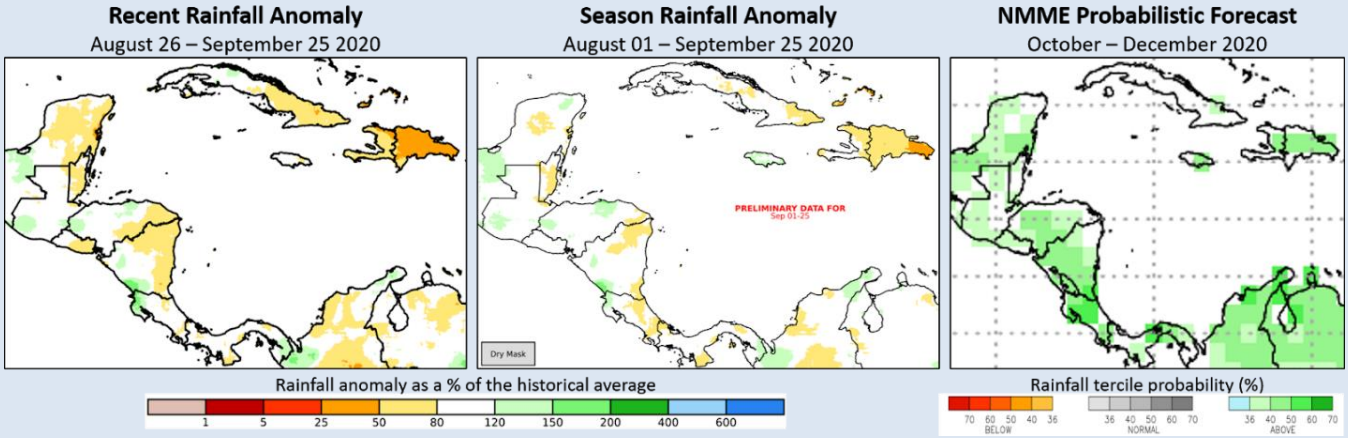
For detailed description of the pie chart please see description box on pg. 19.

In **Honduras**, harvesting of *Primera* season maize, which accounts for 70 percent of total maize production, finalized in September. Production is expected to recover from the previous year's drought-affected production at an above-average level due to favourable weather conditions and good rains at the beginning of the season that triggered farmers to increase planted area and improved yields. In September, above-average rainfall was received across the Dry Corridor including parts of Olancho, Atlántida, La Paz, Intibucá, Lempira, and Francisco Morazán departments, benefitting crop development. The Government is providing vouchers to 150,000 farmers to purchase agricultural inputs for *Primera* season beans and *Segunda* season maize and rice crops. In **Nicaragua**, above-average rainfall occurred in September in Rivas, Carazo, Masaya, Granada, León, and Estelí departments, while rainfall 50 to 80 percent of average was observed in the RAAN, RAAS, and Jinotega; however, the below-average levels have not had any negative impacts on crops as overall seasonal rainfall has been abundant. In **Haiti**, second season crops are in vegetative to reproductive stage, and despite irregular distribution of rainfall, crop development in southern areas of the country is normal as irrigation systems helped to make up for periods of poor rainfall. While average rainfall in September improved soil conditions, the area planted of second season crops is expected to remain below-average due to high production costs and low seed availability. In **Cuba**, harvesting began for main season maize crops and will finalize in December while minor season rice crops are developing under favourable conditions to be harvested from October. Hurricane Delta is currently crossing the Caribbean Sea and is likely to bring tropical storm conditions and additional rainfall over western Cuba on October 6th and 7th (See Regional Outlook pg. 19).

Regional Outlook: Above-average rainfall expected to continue across the region through October to December

Seasonal rainfall totals since the start of August have been near-average (Figure 1-middle), despite sporadic rainfall from late-August to late-September, with rainfall totals less than 80% of average in Belize, eastern El Salvador, eastern Honduras, eastern Nicaragua, Cuba, and Haiti (Figure 1-left).

The 3-month forecast indicates an increased likelihood of above-normal precipitation throughout Central America and Haiti and is inconclusive for Cuba. The prevailing La Niña ENSO conditions suggest a likelihood of an above-normal hurricane season in the Caribbean. Hurricane Delta formed in the Caribbean Sea on October 5th and passed by the west coast of Cuba, bringing heavy rains and winds before moving towards the Gulf Coast of the United States.



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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 slide 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 October 8th, 2020.

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 & Carribean				
Country	**Crop**	**Season 1 Name**	**Season 2 Name**	**Season 3 Name**
Cuba	Rice	Main season	Second season	
El Salvador	Beans	Primera	Postrera	
El Salvador	Maize	Primera	Segunda	
Guatemala	Beans	Primera	Postrera	Apante
Guatemala	Maize	Primera	Segunda	
Haiti	Maize	Main season	Second season	
Honduras	Beans	Primera	Postrera	
Honduras	Maize	Primera	Segunda	
Nicaragua	Beans	Primera	Postrera	Apante

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Contributing partners

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