

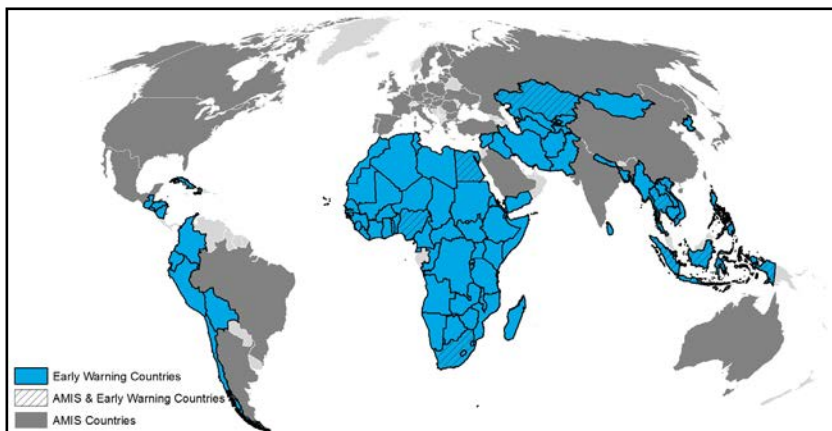


Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, harvest is complete for main season cereals across central and southern parts of the subregion and crop outputs were below-average in several countries due to severe early-season dryness. In **West Africa**, harvest of main season maize is complete and sowing of second season maize has begun under favourable conditions. Sorghum and millet crops in the Sahel region are in vegetative to reproductive stages and conditions are generally favourable except in parts of Gambia, Mauritania and Senegal. In the **Middle East and North Africa**, winter cereal harvest completed last month and crops are now out of season. In **Southern Africa**, there is concern for winter wheat production due to the effects of rolling power cuts on irrigation activities, and below-average water levels in irrigation reservoirs. In **Central and South Asia**, harvest of winter cereals is complete and final yields were generally favourable. In **Southeast Asia**, planting of main wet-season rice is underway with concern due to below-average rainfall in parts of Cambodia, Laos, Thailand and Vietnam. In **Central America and the Caribbean**, "Primera" season harvest is underway and concern remains due to irregular and below-average rainfall across Central America's Dry Corridor and Haiti.



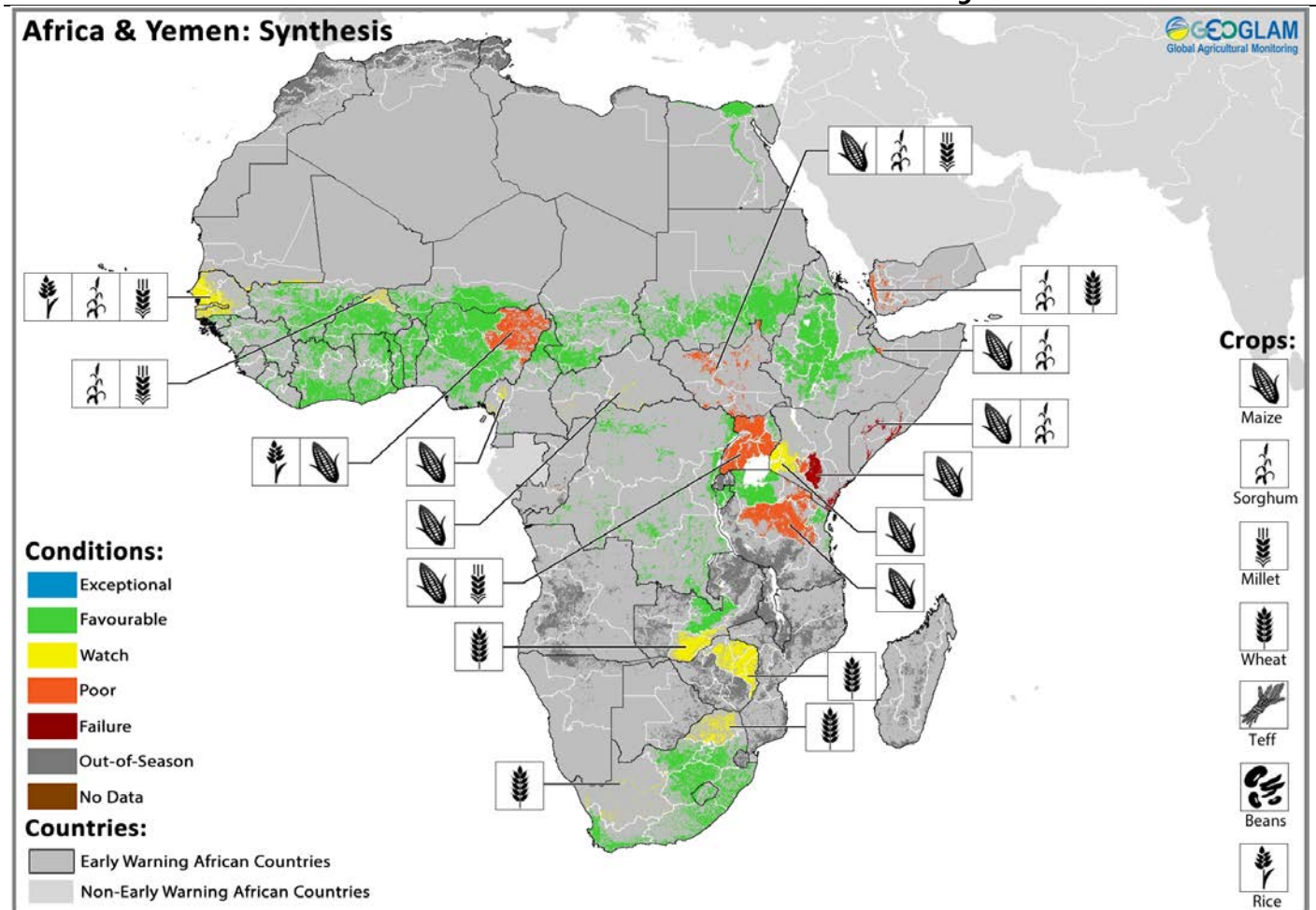
Contents:

- Conditions at a Glance.....2
- Global Climate Outlook.....3
- East Africa & Yemen.....3
- West Africa.....5
- Middle East & North Africa; Special Highlight.....6
- Southern Africa.....7
- Central & South Asia8
- Southeast Asia; Regional Climate Outlook9
- Central America & Caribbean; Regional Climate Outlook11
- Appendix – Terminology & Definitions..... 14

GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of August 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of August 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Regions that are in other than favourable conditions are labeled on the map with a symbol representing the crop(s) affected.**

EAST AFRICA: Harvest of first main season cereal crops is complete across central and southern parts of the subregion and failure and poor conditions have resulted across many areas due to exceptionally dry conditions in March and most of April.

WEST AFRICA: Across the south of the region, the harvest of main season maize is complete and planting of second season maize has begun under favourable conditions. Throughout the Sahel region, sorghum and millet crops are in vegetative to reproductive stages and conditions are generally favourable due to good rainfall except in parts of Gambia, Mauritania, and Senegal.

MIDDLE EAST & NORTH AFRICA: In the Middle East, the 2018-2019 winter wheat season completed last month and crops are now out of season.

SOUTHERN AFRICA: Planting of the 2019 winter wheat crop finished in July across Zambia, Zimbabwe and South Africa and there is increasing concern due to dry conditions, power cuts, and a shortage of reservoir water for irrigation.

CENTRAL & SOUTH ASIA: Harvest of winter wheat is complete and favourable weather conditions during the cropping season have positively affected yields of winter crops, which are estimated close to or above the average levels except in Kyrgyzstan where the output is expected at five percent below average.

SOUTHEAST ASIA: There is increasing concern for wet-season rice across parts of Laos, Viet Nam, northern Thailand and Cambodia due to below-average rainfall throughout the season which continued through much of August. In Indonesia, the harvesting of early dry-season rice has begun and yields are in line with last year.

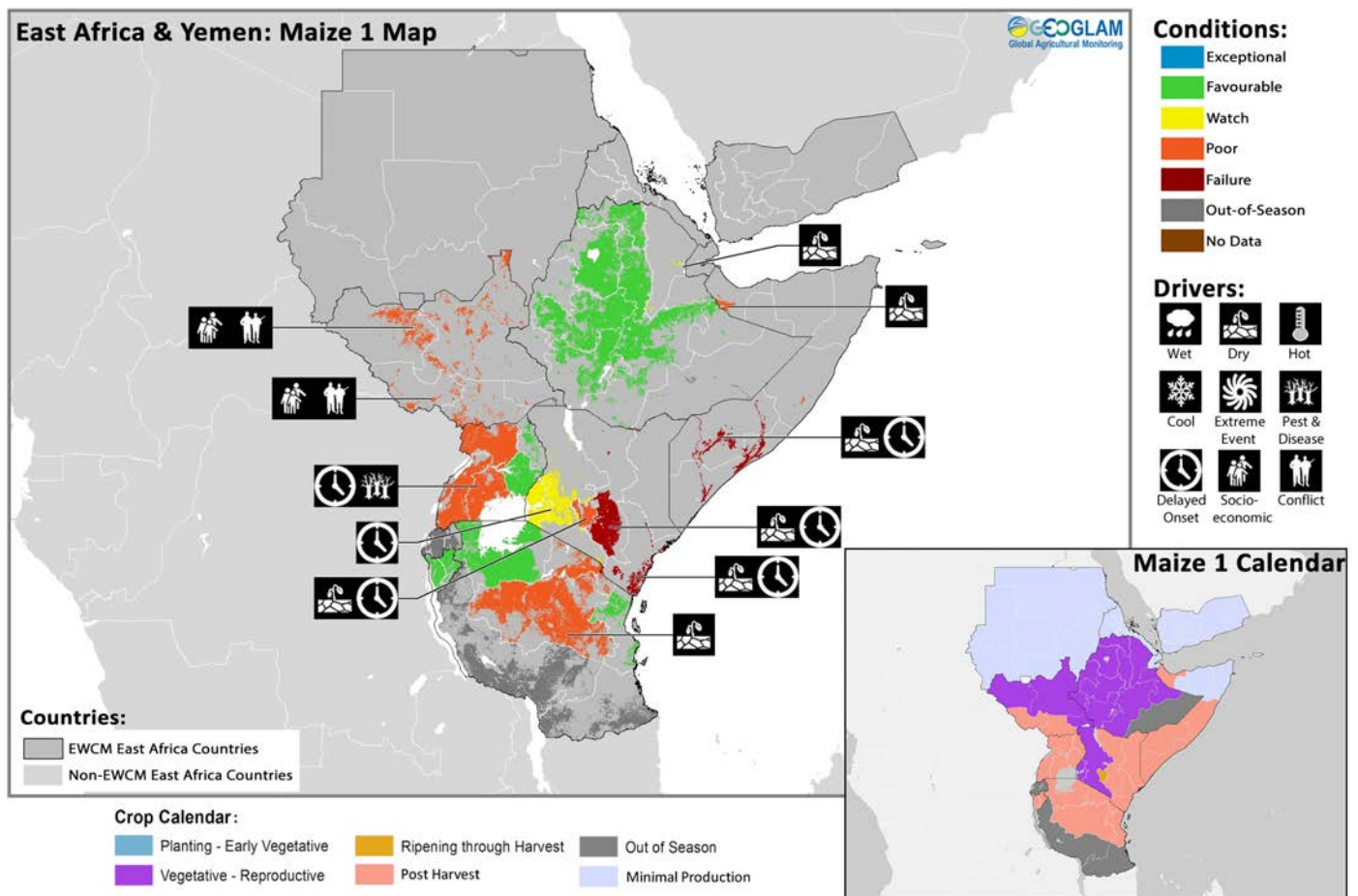
CENTRAL AMERICA & CARIBBEAN: "Primera" season harvest is underway and concern remains due to irregular and below-average rainfall across Central America's Dry Corridor and Haiti.

Global Climate Outlook: ENSO neutral conditions likely to continue through Spring 2020

El Niño-Southern Oscillation (ENSO) transitioned from a weak El Niño to ENSO-neutral in July and are most likely to remain neutral through May 2020. The Indian Ocean Dipole is in a positive state and is forecast to remain so through the rest of 2019. A positive IOD tends to enhance rainfall in parts of East Africa and suppress rainfall in southern and central Australia.

Source: UCSB Climate Hazards Center

East Africa & Yemen

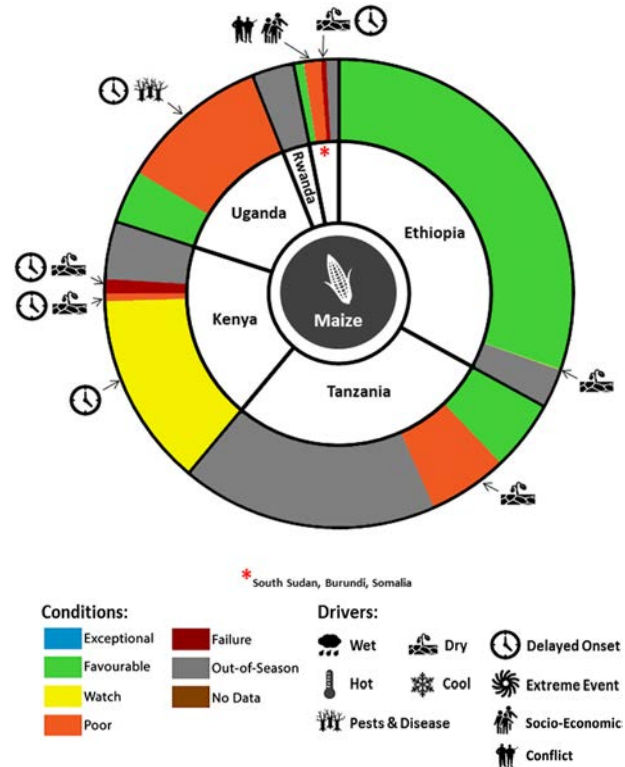


Crop condition map synthesizing conditions as of August 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Conditions that are other than favourable are labeled on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

The main season harvest is complete across central and southern parts of East Africa where severe early-season dryness resulted in poor harvests and, in some cases, crop failure. Despite improved precipitation in April, May and June, main season crops across Somalia, Kenya, Uganda, northern Tanzania and “Belg” rain receiving regions of central and eastern Ethiopia did not recover from severe dryness and above-average land surface temperatures at the start of the March-May rainy season. In **Somalia**, the 2019 “Gu” season through April was among the driest on record and resulted in poor crop yields in the Northwest region and crop failure throughout the rest of the country. Subsequent above-average rains in May and June marginally improved vegetation conditions but crops were unable to recover. As a result, the output of the “Gu” harvest was the lowest on record since 1995 and was estimated at about 60 percent below the average of the previous five years. In riverine areas, harvest of “Gu off-season” crop is underway and crops may have benefited from increased river levels late in the season. In northwestern areas, the “Gu/Karan” harvest, to be gathered in late 2019, has also been affected by poor rains and is expected at below-average levels. In agropastoral and marginal agricultural areas of central, southeastern and coastal **Kenya**, “long rains” maize production is estimated at about 50-60 percent below-average, with a near failure of the harvest reported in southeastern areas. By contrast, in key growing areas of Rift Valley and Western provinces, where the “long rains” season, which normally extends from March to August, improved rains from May onwards, mostly offset rainfall deficits and resulted in a partial recovery of water stressed and late-planted crops. As a result, the maize harvest will begin in November with about a month of delay and is forecast at about 25 percent below-average. Similarly, in bimodal rainfall areas of

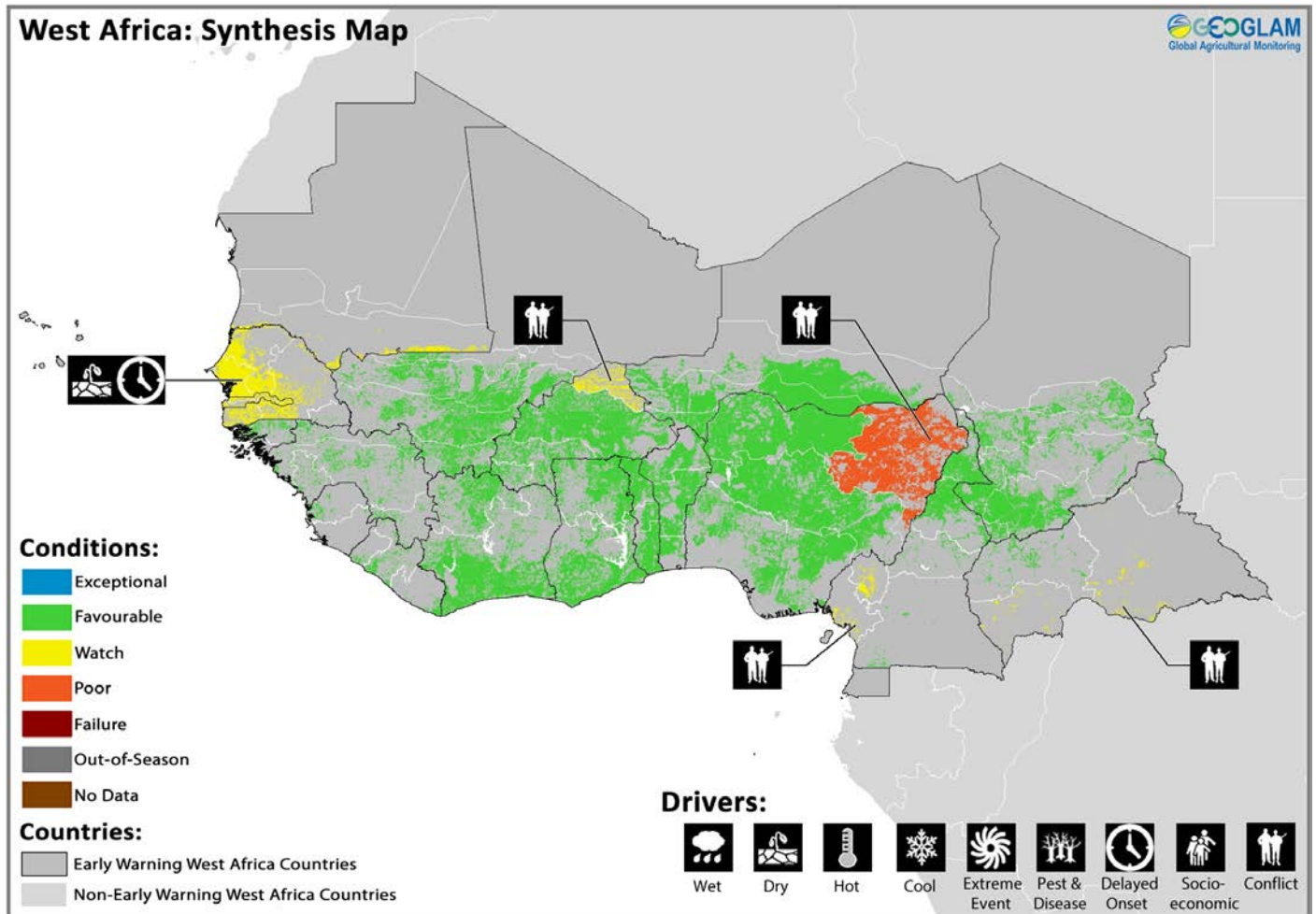
Uganda, where planting and germination of 2019 “first season” crops were severely affected by the severe dryness during March and most of April, abundant mid- and late-season rains allowed a partial crop recovery, and the crop output harvest is estimated at about 30 percent below-average. In the unimodal rainfall Karamoja Region the cereal harvest is currently underway, and adequate rains during most of the cropping season led to generally favourable yields. However, output of sorghum, the main cereal grown in the area, is estimated at about 30 percent below-average as planted area was reduced due to seed shortages.

In the **United Republic of Tanzania**, in northern, northeastern and coastal bi-modal rainfall areas, the March-May rainy season was characterized by below-average rainfall and a poor harvest resulted. In particular, significant crop production shortfalls were observed in northeastern Arusha, Kilimanjaro and Tanga regions, where cumulative seasonal rains were about 40 percent below-average. In **Ethiopia**, harvesting of secondary “Belg” season crop finished last month and final yields were poor after delayed onset of seasonal rains and dry conditions over most “Belg” receiving areas of Eastern Oromia, Southern Tigray, eastern SNNPR and eastern Amhara regions. In particular, substantial crop production shortfalls were observed in the eastern Oromia region, where seasonal rains were 30 to 60 percent below-average. In southern bi-modal rainfall areas of **South Sudan**, planting operations, usually beginning in March, started in April due to a late onset of seasonal rains. Above-average precipitations during the remainder of the growing period benefited crop establishment and development and had a favourable impact on yields. Improvements of the security situation resulted in better access to fields and the voluntary return of some displaced farmers, thus leading to increased plantings. However, planted area remained below the pre-conflict levels due to the lingering impact of the prolonged conflict, including damage and destruction of productive assets and large numbers of farming households still displaced and unable to farm. In addition, soaring prices of inputs continue to severely affect agricultural activities. In **Rwanda** and **Burundi**, harvest of “B season” crop is complete and final yields were favourable. Above-average seasonal rains have triggered localized flooding in **South Sudan** (lowland cropping areas of former Northern Bahr el Ghazal, Warrap and Abyei states) and in the **Sudan** (parts of North Darfur, South Darfur, Sennar, and Kassala state). In Sudan, above-average rainfall from June to August resulted in flood events, however, this has not severely impacted cropping areas and main season millet and sorghum crops are favourable. However, crops production is likely to be impacted by fuel shortages and high price of inputs. In central and northern unimodal areas of South Sudan, crop growing conditions are generally favourable due to average to above-average rainfall throughout much of the growing season, but agricultural operations continue to be affected by the lingering impact of the prolonged conflict. In **Ethiopia**, the main “Meher” crops in Ethiopia, are generally favourable except for in the East Oromia and North Somali regions bordering South Sudan, due to continuing below-average rainfall, however these areas produce only a small percentage of the country’s crop production. In **Eritrea**, the 2019 “kiremti” rainy season, which normally extends from late June to September, has been characterized by an early onset in early June which benefited land preparation and planting operations. Rains continued at average to above-average levels over most cropping areas, resulting in above-average vegetation conditions. In **Yemen**, main season wheat and sorghum crops are in vegetative to reproductive stages and conditions are poor due to ongoing conflict and socio-economic concerns, as well as localized flooding in July on the country’s western coast.



For detailed description of the pie chart please see box below.

West Africa



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

Across the south of the region, the harvest of main season maize is complete and planting of second season maize has begun under favourable conditions. Main season maize yields are expected to be average- to above-average, except in parts of Central African Republic, Cameroon and Nigeria where ongoing civil unrest has resulted in reduced harvests. In **Central African Republic**, harvesting of maize is expected to be complete by the end of September. As of the second dekad of August, according to satellite-based data, cumulative rain amounts were near-average across croplands, except for the central prefectures of Kemo and Ouaka and the eastern Haut-Mbomou where they were about 10 percent below the average level. Household access to food remains highly constrained in eastern and southeastern Central African Republic, particularly in the prefectures of Mbomou, Haut-Mbomou, and Haute-Kotto. Despite the conflict, however, access to agricultural production activities and humanitarian food assistance is reportedly better than in 2018 and so the 2019 cereal production is expected to be higher than last year but still well below the pre-crisis levels. In **Cameroon**, harvesting of main season maize is expected to finalize by the end of October, while harvesting of millet and sorghum is expected to begin in October. In the Far North region, precipitation was below-average between late-July and mid-August, however cumulative rainfall amounts have been above-average, except for small deficits in the southern part of the region, benefiting crops. The West and Plateau regions continue to be affected by civil unrest, which spread from neighboring Nigeria in late 2014. In the northwest and most of the southwest Anglophone regions, where insecurity continues to limit household access to fields, abundant rains since early-July have been beneficial for crop development. Part of the southwest region experienced dryness with cumulative rainfall about 15% below average as of late August; however, given the slight deficit and favourable temporal distribution crops have also been developing normally. In **Nigeria**, harvesting of main season maize and rice is expected to be complete by the end of September. Final yields are expected to be average, except in the northeast region where the ongoing conflict has resulted in below-average yields due to limited access to farmland and lack of inputs. Throughout the Sahel region, sorghum and millet crops are in vegetative to reproductive stages and conditions are generally favourable due to good rainfall except in parts of Gambia, Mauritania, Senegal, and Burkina Faso. There is concern for millet and sorghum in **Gambia's** South and Zone 1 regions and in east and southwestern parts of **Senegal** due to delayed rains at the start of the season, though improved rainfall since the first dekad of July improved crop prospects. In **Mauritania**, there is concern due to below-average cumulative rainfall and uneven rainfall distribution. In northern **Burkina Faso**, increasing flows of internally displaced persons and limited population movements are negatively affecting agricultural activities,

which are down by between 20 and 70 percent in most communes in the low producing northern areas. In addition, delayed crop development and poor spatial and temporal distribution of rainfall could reduce yields locally.

Middle East & North Africa

In the Middle East and North Africa, the 2018-2019 winter wheat season completed last month and crops are now out of season throughout most of the region, except in **Egypt** where main season maize and rice crops are in vegetative to reproductive stages. While Egypt is experiencing an exceptional heatwave with temperatures between one and five degrees Celsius above average since May, crops have not shown any visible negative effects and conditions remain favourable. Localized outbreaks of fall armyworm have been reported, which may impact final yields.

Special Highlight: Improved security and good rains increased wheat and barley production in Syria.

Wheat harvest completed in July in the Syrian Arab Republic where conflict related constraints have been the main driver of crop condition since the start of the crisis some nine years ago. A recent Crop and Food Security Assessment Mission (CFSAM) to Syria fielded jointly by the UN FAO and UN WFP assessed the 2019 cereal production and overall food security situation. The assessment found that while pockets of active conflict remain prevalent, security has increased compared to the past several years and there has been a significant increase of Internally Displaced Persons returning to their farms. During the 2018/19 cropping season, wheat crops benefited from ample and well-distributed rainfall in addition to the improved security resulting in a significant increase in planted area. 2019 harvest area was estimated at 1.26 million hectares, double that of 2018 levels yet still 25 percent below the pre-crisis level. The Mission estimated the 2019 wheat production at 2.2 million metric tonnes, almost double that of last year's record low of 1.2 million tonnes, but still below the pre-crisis average of 4.1 million tonnes (2002-2011). Barley production is estimated at 2 million metric tonnes, five times higher than 2018 levels and more than 150 percent higher than pre conflict average production. Despite this improvement, food prices have been increasing over the past months due to an increase in domestic fuel prices, and food insecurity remains high.



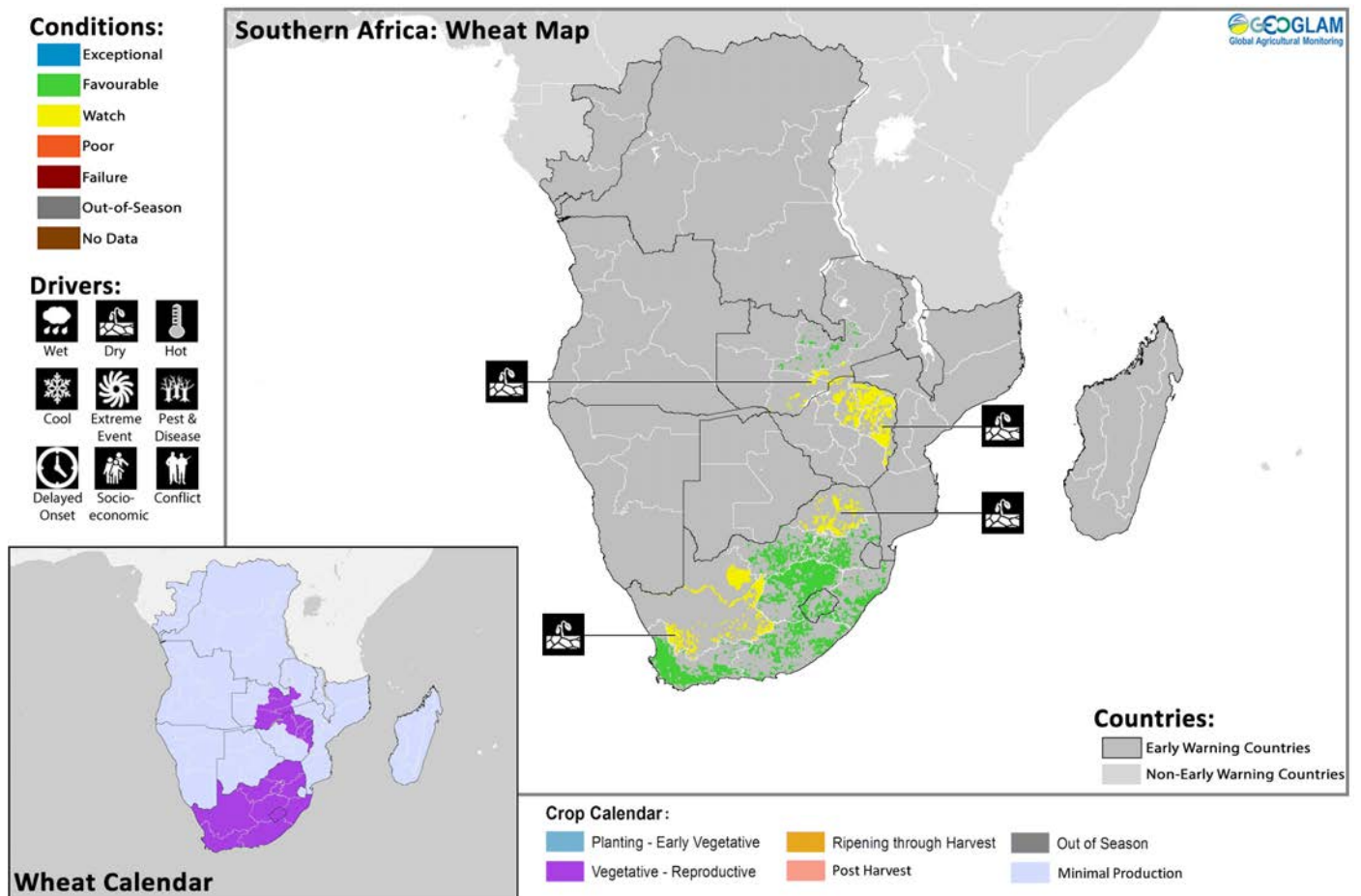
Harvesting field awaiting threshing in Rural Damascus
(Photograph credit: © Cinzia Monetta)



Farmers delivering barley in Aleppo (Photograph credit: © Swithun Goodbody)

Source: FAO/WFP CFSAM report

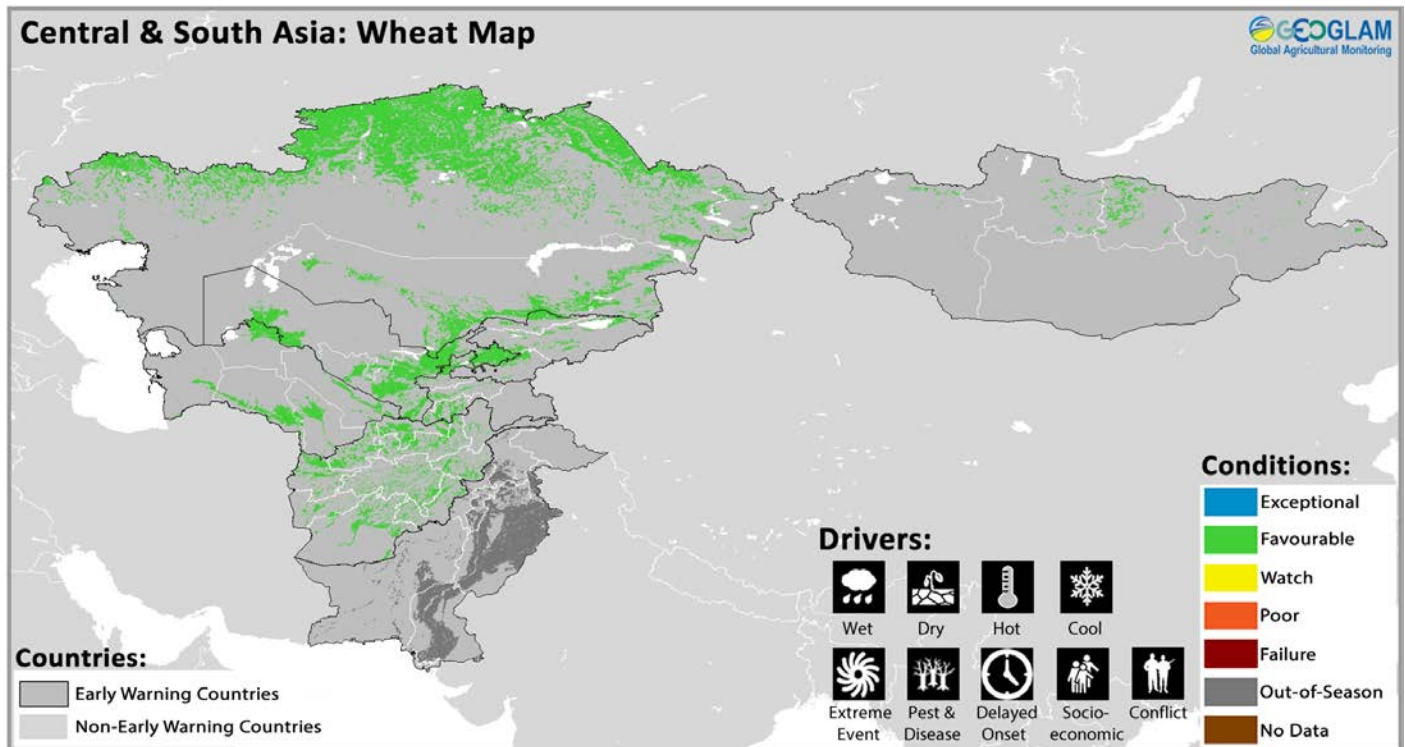
Southern Africa



Crop condition map synthesizing information as of August 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.**

Planting of winter wheat finished in July in **South Africa, Zimbabwe** and **Zambia** and crops are now in vegetative to reproductive stages. In **Zambia**, below-average reservoir water levels resulting from the 2018/19 drought continue to raise concerns for availability of irrigation water for wheat production in south-western parts of the country. There are also concerns due to the potential impact of rolling power cuts on irrigation. In **Zimbabwe**, there is increasing concern of the impacts that rolling power cuts of up to 18 hours per day continue to have on irrigation of winter wheat in many areas. In **South Africa**, widespread rain over the central parts of the country in April resulted in favourable conditions to cultivate wheat over the summer rainfall region, which accounts for 30 percent of production. Rainfall since late May over the winter rainfall region, where about 70 percent of production occurs, together with normal rainfall in June and above-normal rainfall in July has had a positive impact. In the **Democratic Republic of the Congo**, crop conditions remain favourable, however rainfall in the past two dekads has been slightly below-average in the Central region except for in northern areas. The North region also experienced patches of below-average rainfall over some southwestern and eastern areas.

Central & South Asia

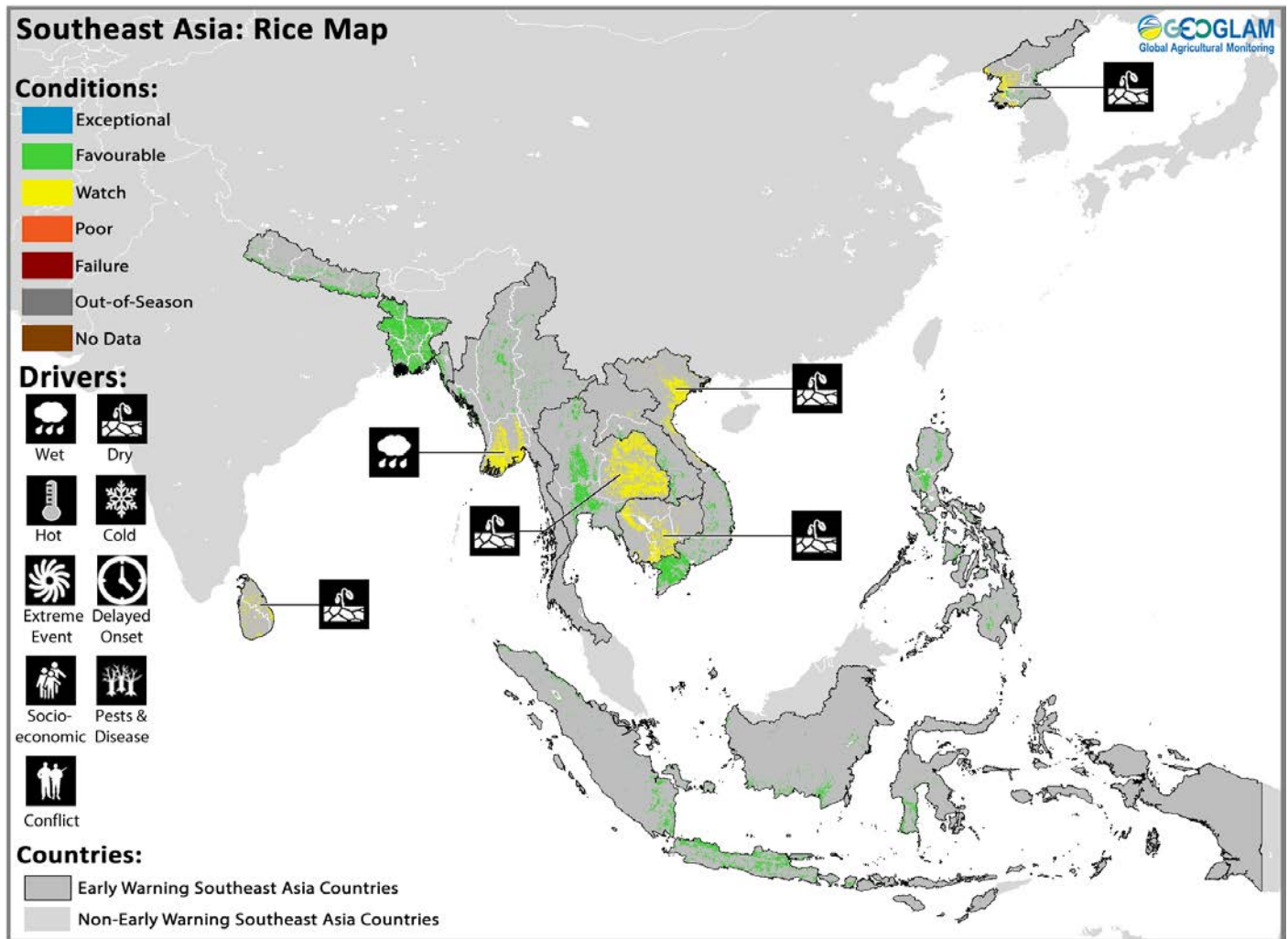


Crop condition map synthesizing information as of August 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are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

In Central Asia, harvesting of the 2019 winter cereals completed at the end of August. Favourable weather conditions during the cropping season in **Tajikistan, Turkmenistan** and **Uzbekistan** have positively affected yields of winter crops, which are estimated close to or above the average levels. In south **Kazakhstan**, winter wheat crops, which generally amount to about six percent of the country's wheat production, have been harvested and the output is reported to be good. In **Kyrgyzstan**, below-average precipitations since May had negative impact on winter cereals, the output of which is expected to be about five percent below-average.

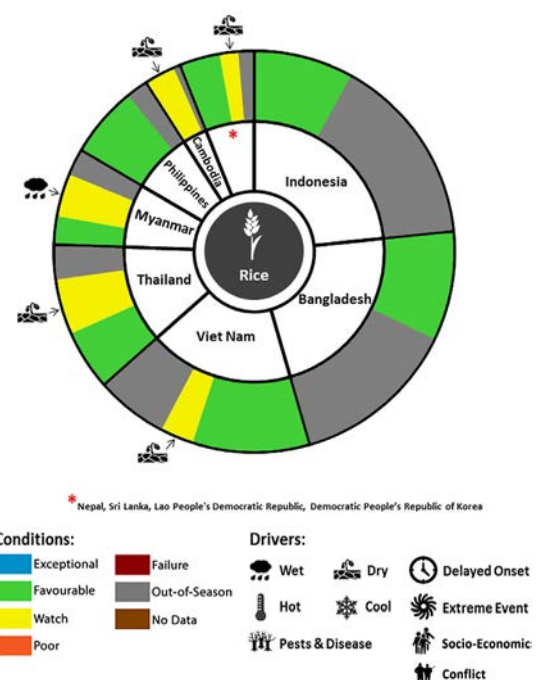
Spring cereals are currently being harvested. In **Kazakhstan**, as of the end of August, about 10 percent of the spring crops planted in the key producing southern provinces of Kostanay, North Kazakhstan and Akmola had been harvested. During the growing season, precipitations were near-average in North Kazakhstan and Akmola provinces while they were below-average in Kostanay. In this area, scarce rains might have affected yields in some croplands, therefore the 2019 aggregate output of wheat is forecast slightly below the average level. In **Afghanistan**, harvest of spring-planted wheat is complete and final yield was average. In **Mongolia**, harvest of spring wheat has begun under favourable conditions and a favourable output is expected. In **Pakistan**, main season rice is in vegetative to reproductive stages and conditions are favourable.

Southeast Asia



Crop condition map synthesizing rice conditions as of August 28th. All dry season rice crops are complete except in Indonesia where dry season rice sowing is underway. 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 growing stage and the harvesting of early planted areas has begun in **Philippines, Cambodia** and south **Viet Nam**. Rainfall was generally below average in August and growing conditions are fair to poor with concern over many areas due to below-average precipitation throughout the season, especially in drought-damaged northwestern **Cambodia** and northeastern **Thailand** where in some areas rainfall totals from May through August are ranking as the lowest or close to lowest levels since 1981 (See Regional Outlook Pg.10). Thailand and Vietnams' deficit areas are forecast to receive close to average rainfall for September but rainfall may be unevenly distributed throughout the month (See Regional Outlook). Further south in **Indonesia**, the harvesting of early dry-season rice has begun and yields are in line with last year. August is the fifth month of dry-season rice planting but the planted area is still low due to the concerns about the lack of rainfall. In the **Philippines**, wet-season rice is under favourable conditions with harvest to begin soon. In **Thailand** wet-season rice conditions are mixed in the northeast due to several months of less-than-normal rainfall. In **Viet Nam** conditions are mixed for summer-autumn rice (wet-season rice), particularly in the north due to dry conditions. In **Laos**, lowland rainfed rice is in transplanting to tillering stages and there is a shortage of irrigation water from the Mekong River tributaries following poor rainfall and dry conditions in the Upper Mekong River Basin. In **Myanmar**, planting of wet-season



For detailed description of the pie chart please see box below.

rice continues this month at a pace slightly slower than last year. Planting delays resulted from monsoon flooding and landslides, especially in lower Myanmar. Across the country, over 4,500 hectares of the wet season rice were damaged by flooding and approximately 1,000 hectares have been replanted. In **Cambodia**, the planting of wet-season rice is continuing at a pace slower than last year due to rainfall shortages. In the northwest region, 13 percent of planted area has been affected by drought damage. On the other hand, some provinces along the sea and Mekong Lowlands area are concerned about flood damage due to heavy rains expected this month. The early wet-season rice is in maturing stage and about 11 percent of early wet-season rice has already been harvested. In the **Democratic People's Republic of Korea**, harvest will begin in October for main season maize and rice. Dry conditions continue in the southern provinces however, there has been some indication from the government that crops are improving. In **Bangladesh**, harvesting of minor *aus* paddy crops is underway and second season *aman* rice paddy crops are in vegetative to reproductive stages. The planted area of the both season is estimated below previous year's high level, reflecting a shift away from paddy fields to more profitable crops, amid low rice market prices. Overall, growing conditions are generally favourable for both *aus* and *aman* rice crops. In **Nepal**, growing conditions of the main season crops is good supported by generally favourable weather conditions. In **Sri Lanka** growing conditions of the 2019 secondary season maize and paddy are mixed. Below-average rains in the Eastern, North Central, Northern and Uva provinces has affected crops, resulting in yield losses. Growing conditions of crops in the Central, Southern and Western provinces are close to normal, supported by average precipitations.

Regional Outlook: Rainfall deficits for wet season rice hit records across parts of Northern Thailand and Vietnam

Drier than normal rainfall conditions have resulted in historically extreme low rainfall in the past several months in northeastern and northwestern Thailand and in parts of Vietnam and Indonesia. In some of these areas rainfall totals from May 1st to August 31st rank as the lowest, or close to lowest, since at least 1981 (Figure 1, left). This substantial deviation from normal rainfall mainly took place during the early stages of Thailand and Vietnam's primary rice growing season, however, deficits continued into mid to late August in some areas. According to the CFSv2 model, Thailand and Vietnam's deficit areas are forecast to receive close to average rainfall for September overall (Figure 1-right) but rainfall may be unevenly distributed throughout the month. Some southern mainland and coastal areas are forecast to receive higher than average rainfall in the next two weeks. In Indonesia, below average rainfall is forecast during the next two weeks and for September overall (Figure 1-right). Rainfall has been consistently lower than average in much of the country since July, when secondary season rice typically enters vegetative to reproductive growth.

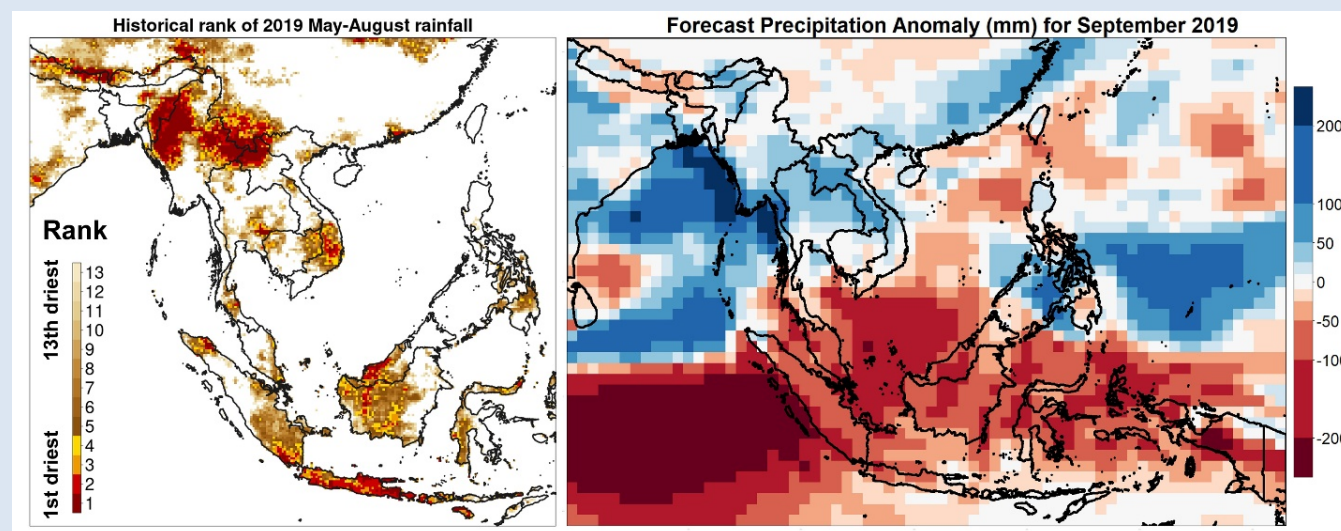


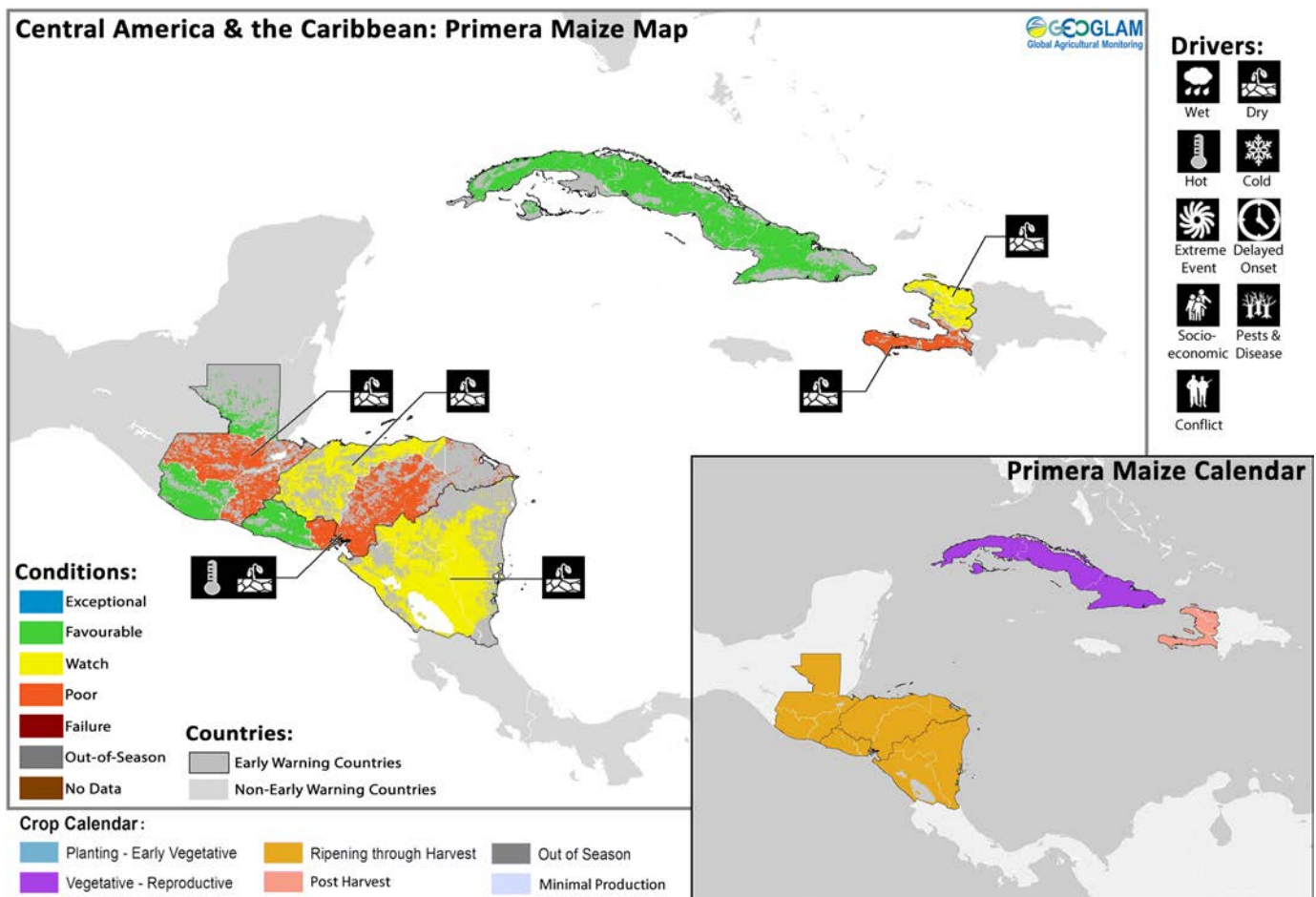
Figure 1. On the left, the rank of May 1st through August 31st 2019 rainfall total (a preliminary estimate) compared to historical 1981-2018 rainfall totals. This preliminary estimate is based on CHIRPS final for May 1st to July 31st, CHIRPS preliminary for August 1st to 25th, and an unbiased GEFS forecast for August 26th-31st. Colors from red to light brown indicate below normal rainfall, and variations correspond to historical rank. Red (rank = 1) indicates 2019 as having potentially the driest May to August since 1981. On the right, the September 2019 rainfall forecast issued on August 29th from the National Centers for Environmental Prediction (NCEP) coupled forecast system model version 2 (Source: NWS/NOAA/CPC). It shows the forecast monthly total in terms of the difference from the 1982 to 2010 average.

Source: UCSB Climate Hazards Center

Sources and Disclaimers:

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Central America & Caribbean



Crop condition map synthesizing information as of August 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.**

Harvesting of “Primera” season maize and bean crops is underway across **Guatemala, El Salvador, Honduras** and **Nicaragua** and is expected to complete in September. During the April-September “Primera” season, the region experienced below-average and irregular rainfall, high temperatures and extended periods of dry spells. These irregularities will affect yields of large farmers and produce significant losses for subsistence farmers across the region. Major farmers with access to irrigation systems are expected to have normal yields, while reduction of yields and crop losses has been observed in extensive production areas without irrigation or away from riverine areas. In **El Salvador**, improved rainfall in August increased soil moisture across the country, however, poor harvests are expected in the east due to irregular rainfall distribution, higher-than-average temperatures and consecutive days without rain throughout the growing season. These conditions reduced the availability of water for crops and reduced water levels in rivers and water bodies. Crop losses have been reported in Morazán and La Unión departments. In western El Salvador, high rainfall in July over a short amount of time may have affected crops due to excess moisture and localized flooding. However, national production is expected to reach average levels as subsistence and medium farmers are likely to be most affected by these irregular weather conditions. The main season output at the national level is expected at average-level, according to the Ministry of Agriculture as well as the Chamber of Small and Medium Agri-producers (Campo). In **Guatemala**, despite below-average rains and prolonged periods without rainfall, conditions have improved in parts of the country. In Central Guatemala, while dry spells affected the normal development of crops primarily in areas of subsistence farming and in some large production areas of Peten department, crop conditions in the coastal main producing region look favourable due to good rainfall amounts. In the south, coastal areas were affected by dryness, but also affected by floods due to high precipitation in a short time. For the moment, overall national production is not expected to decrease in Guatemala. However, food security should be carefully monitored, notably across the East-Central “dry corridor.” In **Honduras**, poor harvests are expected due to dry conditions throughout the season. Since early-June, rainfall amounts were below-average across the country, including the main producing El Paraiso, Olancho, Comayagua, Yoro and Santa Barbara departments. The moisture deficit continued through August in southeastern Honduras, which encompasses major maize producing Olancho, Choluteca and El Paraiso departments, with vegetation conditions are below average. It is estimated that 30 percent of maize crops may have been affected by the prevailing dry conditions. In southern **Nicaragua**, poor harvests are expected due to irregular



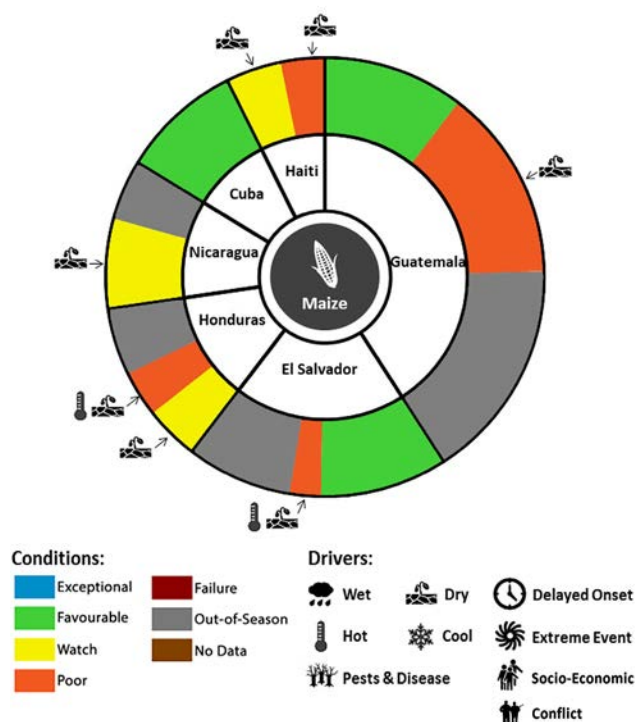
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distribution of rainfall and high temperatures. Losses have already been reported in the Matriz, Nueva Segovia and Estelí departments and below-average yields are expected. In the western part of the country, below average precipitation and decreased soil moisture continue to impact crops however, these dry conditions may have been favourable for harvesting operations that took place in August.

In **Haiti**, the main season harvest is complete and final yields were poor across the country due to irregular distribution of rainfall, dryness and high temperatures throughout the season. Improved rainfall in August was not able to overcome deficits in Grande-Anse, Nippes, Sud, Sud-Est and Nord-Ouest departments. In Transversale, the effects of dryness were not as severe, with some areas showing normal rainfall distribution notably over the main maize producing Artibonite, Ouest and Centre departments that account for 60 percent of the national production. Rice harvest is underway and dry conditions in the Nord, Sud and West regions could affect yields of rice crop. However, about 80 percent of the national production is obtained in Artibonite department, where crop conditions have improved due to recent rains. Therefore, its impact on the national production could be limited to a minimum level, while access to food could indeed be worsening due to high inflationary pressures and the weaker currency, which could sustain the price of rice, mostly imported, at a high level. High temperatures and low rainfall have delayed the sowing of secondary second season beans. Nevertheless, improved rainfall in August should have been beneficial for the land preparation for the second season. In **Cuba**, while rainfall received in the main maize producing La Habana and Matanzas departments in western Cuba in July was slightly below-average, crop conditions are estimated to be favourable. Due to good sunlight and high temperatures in the main rice-producing Granma, Matanzas and Holguin departments, rice growing conditions are favourable.



For detailed description of the pie chart please see box below.

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Regional Outlook: Primera season rainfall deficits worsen in August and are expected to continue into September

Following drier than average conditions earlier in the season in some of Central America, rainfall in August was less than 80 percent of average in much of the northeast, including in Belize and in parts of northern Guatemala, eastern El Salvador, eastern Honduras, and northern Nicaragua. Amounts were less than 50 percent of average in some localized areas. More mixed conditions, a range of above, near, and below average rainfall, occurred elsewhere. For some of the August deficit areas, in Honduras and Nicaragua, there is a moderate to high chance of below average rainfall continuing through the first half of September. Figure 1 shows a preliminary estimate of August 1st to September 15th percent of average rainfall which includes the September 1st two week forecast. August to September rainfall deficits could mean a lack of relief for some late-planted Primera season crops.

In August NOAA's Climate Prediction Center increased the likelihood of an above normal 2019 Atlantic hurricane season in their mid-season forecast update, in part due to the transition from El Niño to neutral ENSO conditions. Chances of an above normal June 1st to November 30th hurricane season are now slightly higher than a near normal one, at 45% versus 35%. At present there have been four named storms, with the strong Hurricane Dorian being most recent.

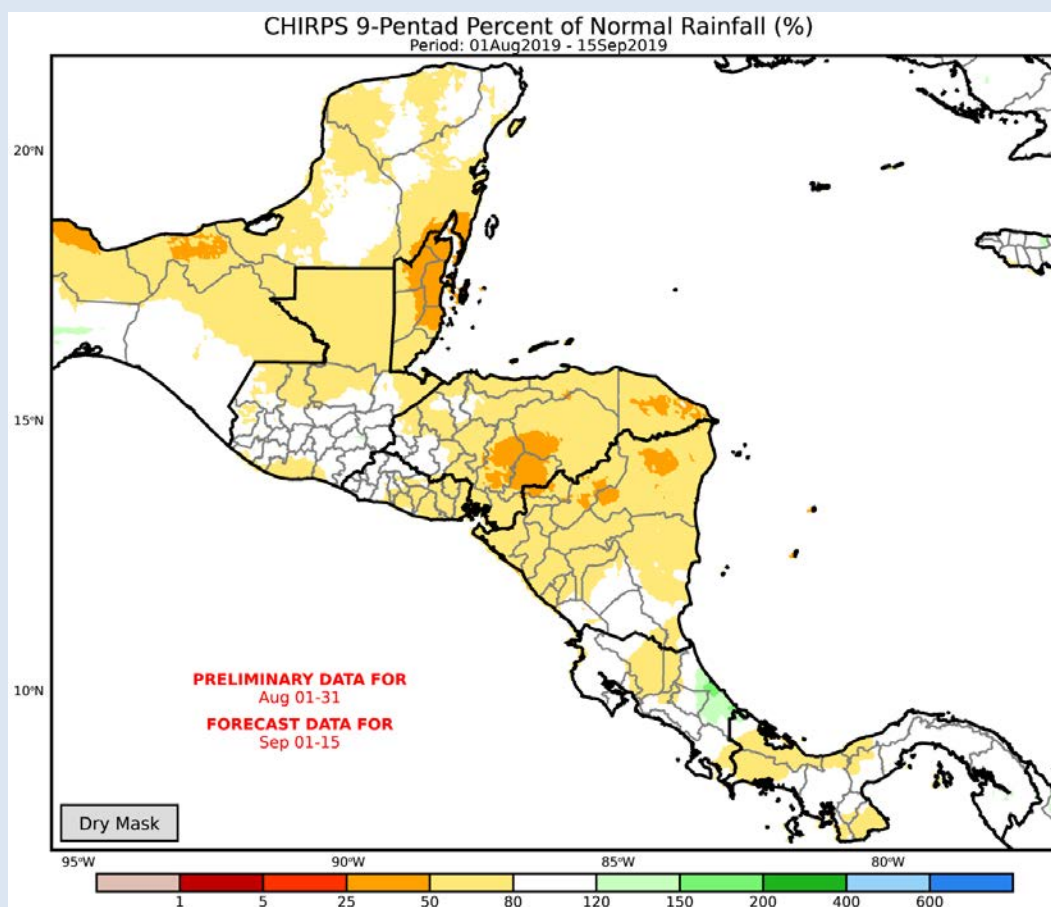


Figure 1. A preliminary estimate of August 1st through September 15th, 2019 rainfall in terms of the percent of average (1981 to 2018 baseline). This Climate Hazards Center Early Estimate combines CHIRPS preliminary rainfall for August 1st-31st with an unbiased version of the 15-day GEFS ensemble mean forecast for September 1st-15th.

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 September 5th 2019.

i Sources and Disclaimers:

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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.



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.



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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	

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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

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Cover Photo by: Christina Justice

Early Warning partners



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