

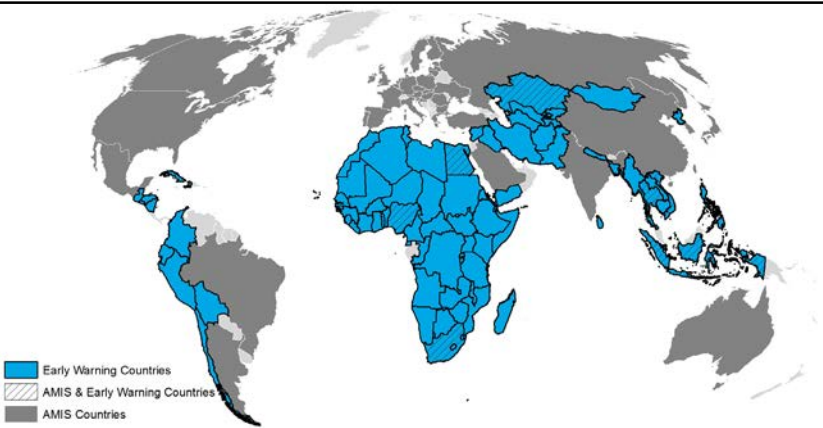



Crop Monitor

EARLY WARNING

Overview:

In **East Africa**, production prospects are poor for main season cereals in parts of Somalia and Kenya due to a delayed onset of rains and dry conditions. In **West Africa**, main season maize planting continues across the south of the region and conditions are favourable with good rains received. In the **Middle East** and **North Africa**, winter wheat crops are generally favourable due to good rains throughout the season except in parts of Morocco where poor production has resulted from dry conditions, and in Syria and Iraq due to ongoing conflict. In **Southern Africa**, winter wheat planted in May is favourable, except in Zambia, where dry conditions have carried over from the previous season. In **Central** and **South Asia**, winter cereals for harvest in August are favourable despite some dry conditions in May. In **Southeast Asia**, harvest of dry-season rice is complete in the north and favourable yields resulted except in parts of Thailand and Philippines. Planting of wet-season rice is underway and conditions are favourable with good rains at the start of the season. In **Central America** and the **Caribbean** *primera* season planting started in May and there is some concern due to irregular rainfall and dry conditions.



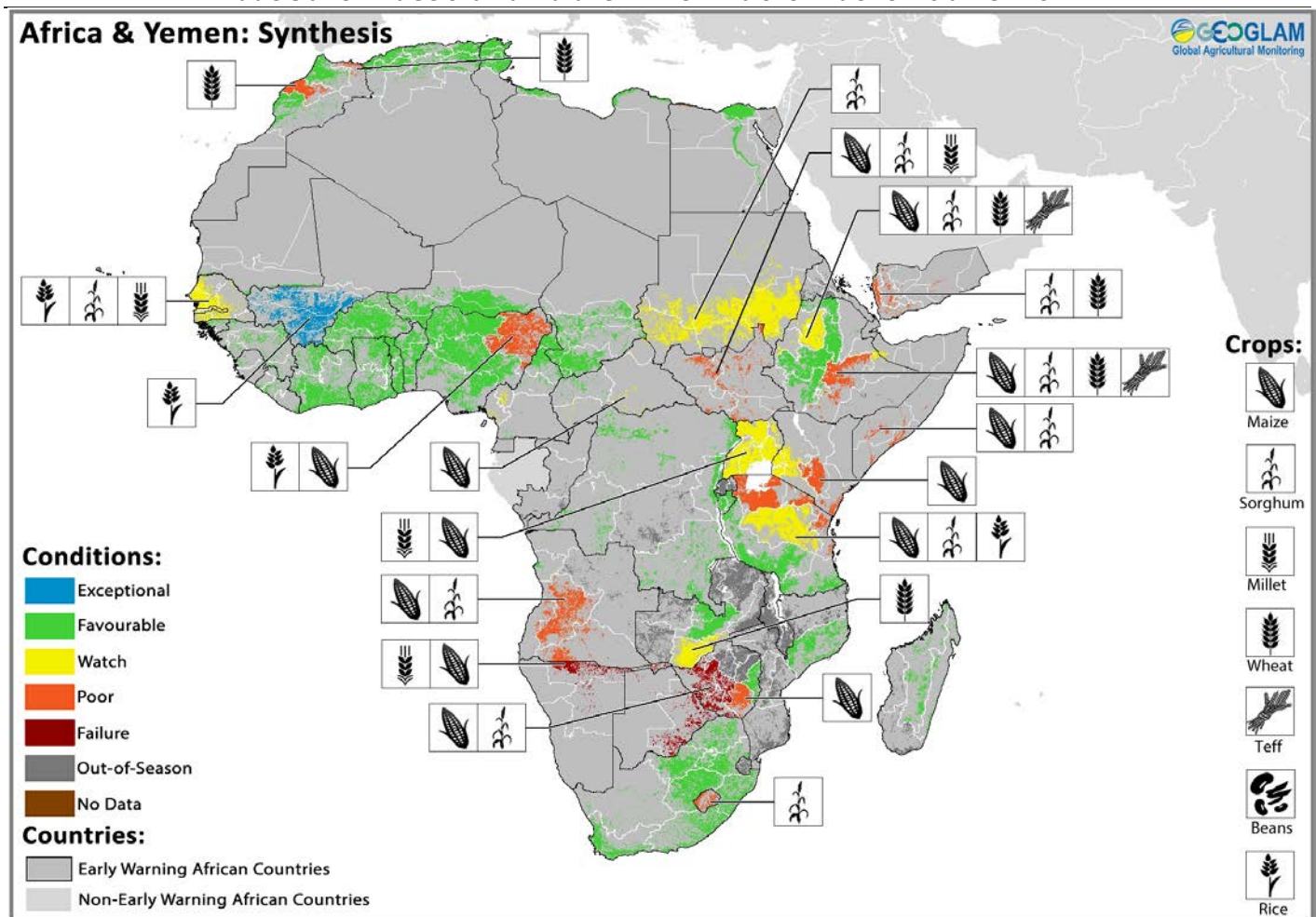
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GEOGLAM Crop Monitor for Early Warning

Crop Conditions at a Glance

based on best available information as of June 28th



Crop condition map synthesizing information for all Crop Monitor for Early Warning crops as of June 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: Despite above-average rains in late April and May, main season crops across Somalia, Kenya and central and eastern “Belg” cropping areas of Ethiopia have not recovered from severe dryness at the start of the March-May rainy season, which caused substantial planting delays and crop wilting.

WEST AFRICA: Planting operations for main season crops continue under favourable conditions due to timely onset of rains and ample rainfall, except in parts of Nigeria, Central African Republic and Nigeria, where civil unrest continues to disrupt agricultural operations.

MIDDLE EAST & NORTH AFRICA: In the Middle East, harvest for the 2018-2019 winter cereals will complete in July and weather conditions have been excellent with abundant rainfall since the start of the season. However, concern remains in Iraq and Syria due to ongoing conflict. In North Africa, production prospects are favourable except in marginal producing areas of Morocco.

SOUTHERN AFRICA: Planting started in May for winter wheat crops and conditions are favourable except in Zambia where

carryover dry conditions from the previous season are impacting planting.

CENTRAL & SOUTH ASIA: Harvest of the 2018-2019 winter wheat crop began in June and is expected to finish by mid-August with average yields expected due to adequate rainfall. Planting of spring wheat crop was completed in June under favourable conditions and harvesting is expected to begin in August.

SOUTHEAST ASIA: In the northern side of Southeast Asia, harvest of dry-season rice is complete and production is favourable except in northeastern Thailand and Philippines where final yield was below-average. Planting of wet-season rice is underway with favourable conditions.

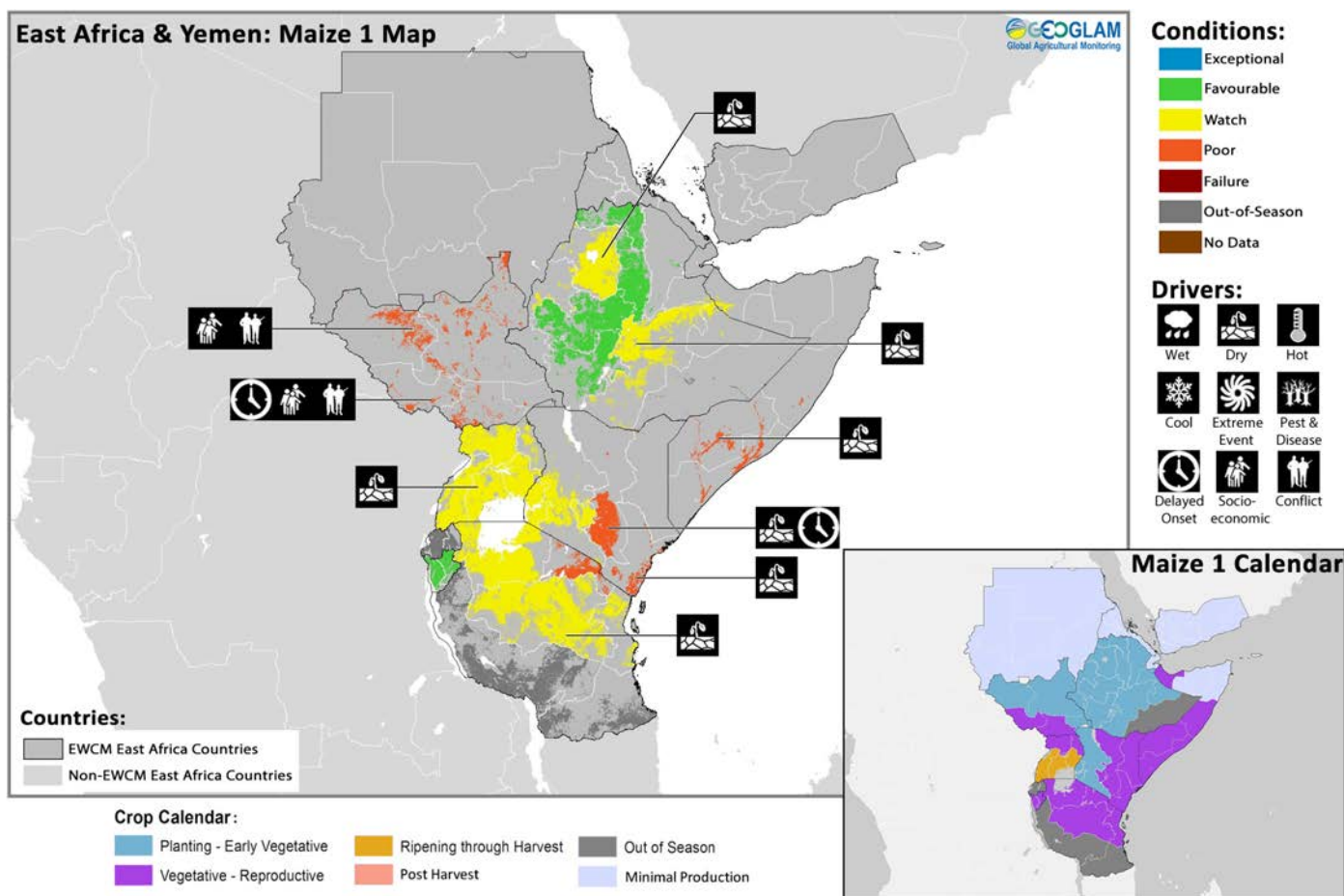
CENTRAL AMERICA & CARIBBEAN: The *primera* season began in May across the region and conditions remain generally favorable. However, there is concern due to dry conditions and irregular rainfall distribution in Haiti and much of mainland Central America. Delayed onset of rains has delayed planting of *primera* season bean crops.

Global Climate Outlook: Weak El Niño conditions are present and forecast to continue.

Weak El Niño conditions are present and are forecast to continue through the Northern Hemisphere summer (58% chance for July to September) and with lower odds for fall and winter (51–55% chance). Associated with this event are increased chances of below normal July to September rainfall in the Maritime Continent, eastern Australia, Central America, the Caribbean, and northern South America. The Indian Ocean Dipole is forecast to be positive during July to November. Such conditions tend to reduce the influence of El Niño on Indian summer monsoon rainfall, enhance rainfall in parts of East Africa, and suppress rainfall in southern and central Australia.

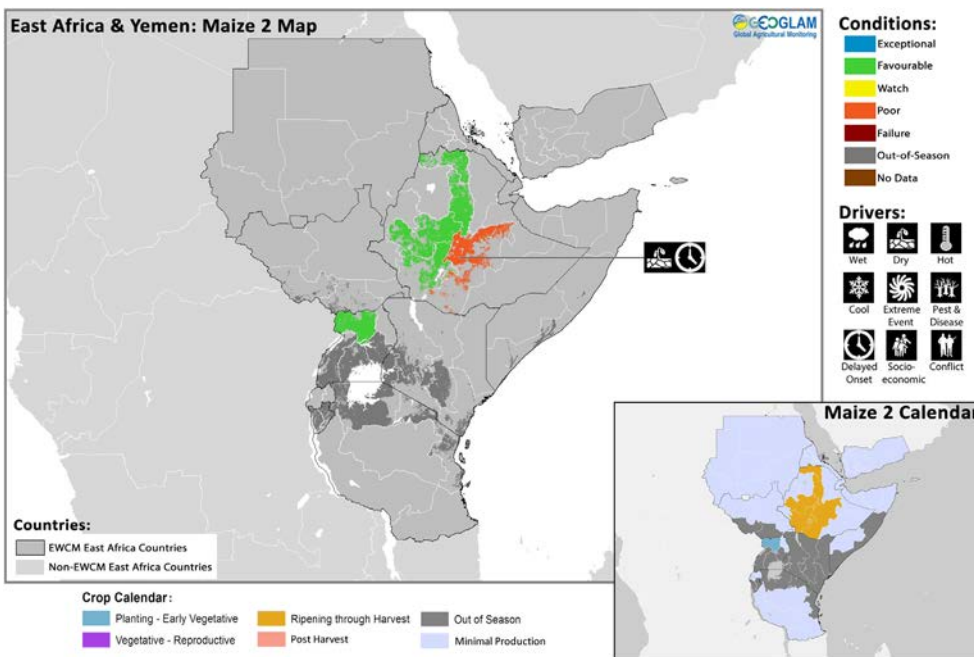
Source: UCSB Climate Hazards Center

East Africa & Yemen



Crop condition map synthesizing conditions as of June 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.**

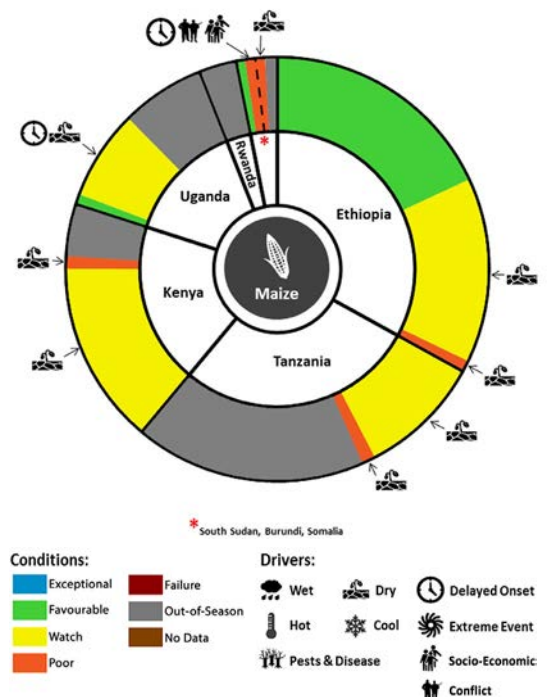
Central and southern parts of the subregion experienced weather conditions among the driest on record during the onset of the March-May rainy season up to mid-April and crop prospects are poor across Somalia, Kenya, Uganda and in “Belg” receiving areas in eastern Ethiopia. Despite above-average precipitation in early May in Kenya and in late April and early June in Somalia, main season crops across Somalia, Kenya, Uganda, and central and eastern Ethiopia have not recovered from severe dryness and above-average land surface temperatures at the start of the March-May rainy season, which caused substantial planting delays and crop wilting. In **Somalia**, the August “Gu” harvest, which accounts for about 60 percent of the country’s total annual cereal output, is expected to be 50 percent below-average due to severe early season dryness and below-average precipitation as the 2019 “Gu” season through mid-April was among the top three driest on record. Crop germination and establishment in key southern cereal producing areas was severely affected by a three week delayed onset of the “Gu” rains. Planting in Somalia’s northwest region was also delayed, though conditions have begun to improve. River levels throughout Somalia were relatively low due to limited rainfall in Ethiopia, which led to low planted areas of irrigated crops. Subsequently, above-average rains in the second and third dekad of May reduced the water deficits and resulted in marginal improvements of vegetation conditions but did not significantly improve crop prospects, as they occurred too late during the growing season, with seasonally dry conditions establishing in the first dekad of June. Light to moderate



rainfall was reported at the start of June in parts of the south and central areas and moderate to heavy rainfall in the north. Water levels have risen for both the Shabelle and Juba rivers and some flooding has been reported in riverine areas in Jowhar and Middle Shabelle (FEWSNET). In riverine areas, the “Gu off season” crops, to be harvested in September, may have benefited from increased river levels so late in the season. In **Kenya**, cumulative rainfall between February and mid-April in high potential cropping areas of the southwestern “maize basket” was up to 80 percent below-average. Improved rains between mid-April and late May partly offset the rainfall deficits and resulted in an improvement of

Crop condition map synthesizing information as of June 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.**

vegetation conditions. Seasonal rains were also delayed and well below-average in other cropping areas with the most severe rainfall deficits recorded in some central, medium potential cropping areas and in most southeastern and coastal marginal agriculture livelihood zones. In these areas, drought conditions prevailed in March and April, and despite localized heavy rains in May, cumulative seasonal precipitations were 30-65 percent below-average. In coastal areas, planting occurred later than other areas and the recent rains may have benefited crops. If July through September rains are above-average in major southwestern growing areas, a substantial recovery of water stressed crops is still possible, as crops are normally harvested from October. By contrast, in southeastern and coastal marginal agriculture areas where seasonal rains usually subside in early June, harvest, which normally starts in July, is expected to be delayed by at least a month. In these areas, damage to crops is irreversible and the harvest is forecast to be about 50 percent below-average. Similarly, in **Uganda**, exceptionally dry conditions prevailing in March and April delayed planting and severely affected crop germination and establishment. Abundant rains in May and early June mostly offset rainfall deficits, but vegetation conditions remained generally poor. In addition, heavy downpours triggered localized floods, likely resulting in some damage to standing crops. As a result, the harvest is expected to be 30-50 percent below-average. In the unimodal northeastern Karamoja region where rains occurred in May and continued into June, vegetation conditions have improved for short cycle crops, though maize and sorghum conditions vary and there have been some reports of flooding in the south of the region. In central and southern unimodal areas of the **United Republic of Tanzania**, the major “Msimu” harvest ended in June and final yield was generally favourable as seasonal rains were adequate over most cropping areas except in some central regions of Dodoma and Singida as well as neighboring regions of Tabora and Shinyanga where conditions are poor due to erratic and below average rains. In northeastern bimodal areas, the recently started “Masika” harvest is expected at below-average levels due to erratic and below-average rains. Above average rainfall at the end of April through May improved crop conditions over Tanga, Morogoro, Dar es Salaam and Pwani where farmers replanted short cycle bean crops however, this was followed by a dry spell and production prospects are below average. In **Ethiopia**, harvesting of secondary “Belg” season crops will finish in July and the production outlook is mixed. The February-to-May rainy season was characterized by adequate amounts of water in the highlands of eastern Amhara and southern Tigray regions and by early-season dryness followed by improved precipitations in the eastern SNNPR region.



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

In the eastern Oromia region, seasonal rains were 30-60 percent below-average and significant crop production shortfalls are expected.

In western **Ethiopia**, northern **South Sudan**, and the **Sudan**, planting of the June–September 2019 main season crops is underway under generally favourable weather conditions, except in parts of western Ethiopia where below-average rains in May and early June have delayed planting activities and affected the establishment of early planted crops. Since mid-May, rainfall has been above-average across the Horn of Africa with the highest rainfall recorded over southern Sudan, northern South Sudan, and southwestern Ethiopia. Heavy rainfall was received in the first week of June over South Sudan, southern Sudan, west-central Ethiopia, western Yemen, southwestern Kenya, and Uganda, causing flooding and in some cases landslides in parts of Uganda and northwestern Kenya. Forecasts show a potential for below-average rainfall at the start of July in eastern Sudan, northern Ethiopia, Eritrea, and Yemen (See Regional Outlook Pg. 5). In the **Sudan**, despite favourable weather conditions, reduced availability of fuel and currency shortages has affected farmers' ability to pay hired labour and hindered agricultural operations. In eastern Sudan, political unrest in the country makes it challenging to determine how the season is going to go. In southern bimodal rainfall areas of **South Sudan**, planting of first season crops began in April after a one-month delay due to late onset of seasonal rains. After adequate precipitations and an improved state of security bettered growing conditions in May and June, crop conditions have since drastically deteriorated across the country due to the effects of conflict and socio-economic concerns. Planted area remains well below the pre-conflict levels as conflict persists in several areas, constraining access to fields. Rainfall is not a major driver for this country; weather and crop conditions are favorable but due to conflict and other related issues one cannot be certain on the area cultivated. In **Burundi**, harvest of main "B season" maize crop is underway and crop production is expected to be above-average. In **Rwanda**, harvest of "B season" crop is expected to be above-average except over the marginal producing urban Kigali district and over some eastern parts. In **Yemen**, main season wheat and sorghum crops are in planting to early vegetative stages and conditions are poor due to ongoing conflict and socio-economic concerns, as well as some localized flooding on the country's western coast.

Regional Outlook: Mixed rainfall across the Horn of Africa in July

For the first half of July, higher than normal rainfall is forecast for large areas of the region including in eastern Chad, western Sudan, South Sudan, some of Ethiopia's highland areas, Uganda, western Kenya, and northern DRC. Most of the western sector received highly above-average rainfall in June. Heavy rains and saturated soils could increase flooding and landslide risks. If the current two-week forecast were to materialize, season-to-date (from July 1st to July 15th) rainfall totals could be higher than average by 50 mm to 200+ mm in Uganda, South Sudan, and western Kenya, southwestern Ethiopia, and parts of southern Sudan (Figure 1-left). Surpluses like these would rank this period in 2019 as being one of the wettest of 1981–2018 in southern South Sudan, Uganda, and western Kenya.

In some northeastern areas of East Africa and in Yemen, models are indicating the potential for below-normal rainfall in July. The CFSv2 model forecast for July 2019 shows rainfall deficits in eastern Sudan, northern Ethiopia (excluding highland areas), Eritrea, and also western Yemen (Figure 1-right). The GEFS forecast for the first two weeks of July, released July 2nd, also indicates potential for below-normal July rainfall in this general area. These forecasts diverge to some extent on specific locations and intensity. From July 3rd to July 9th is a high likelihood of below-normal rainfall in parts of eastern Sudan, in Ethiopia near the Sudan border, and northeastern Ethiopia. At present, the forecast for July 10th to July 16th is comparatively less pessimistic.

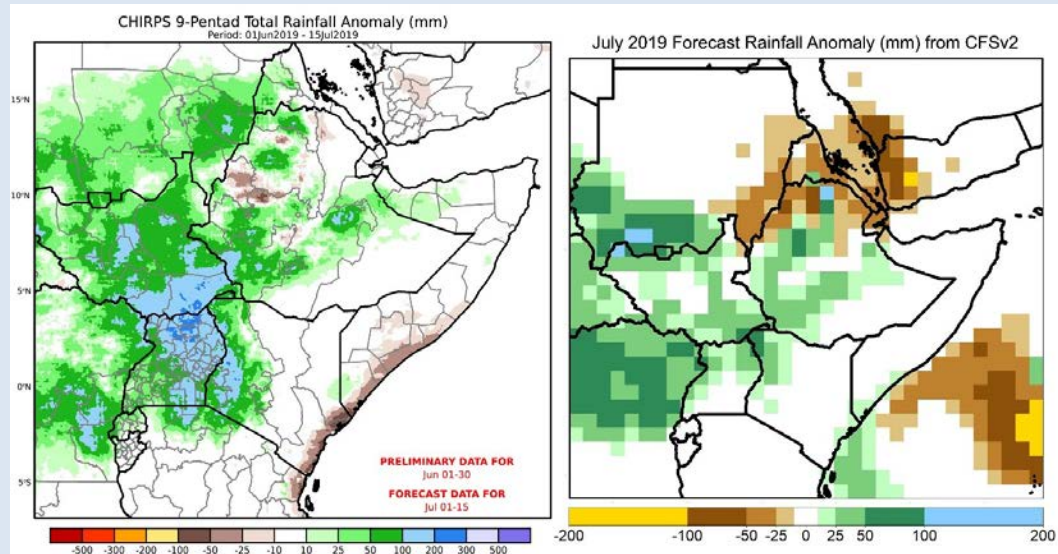
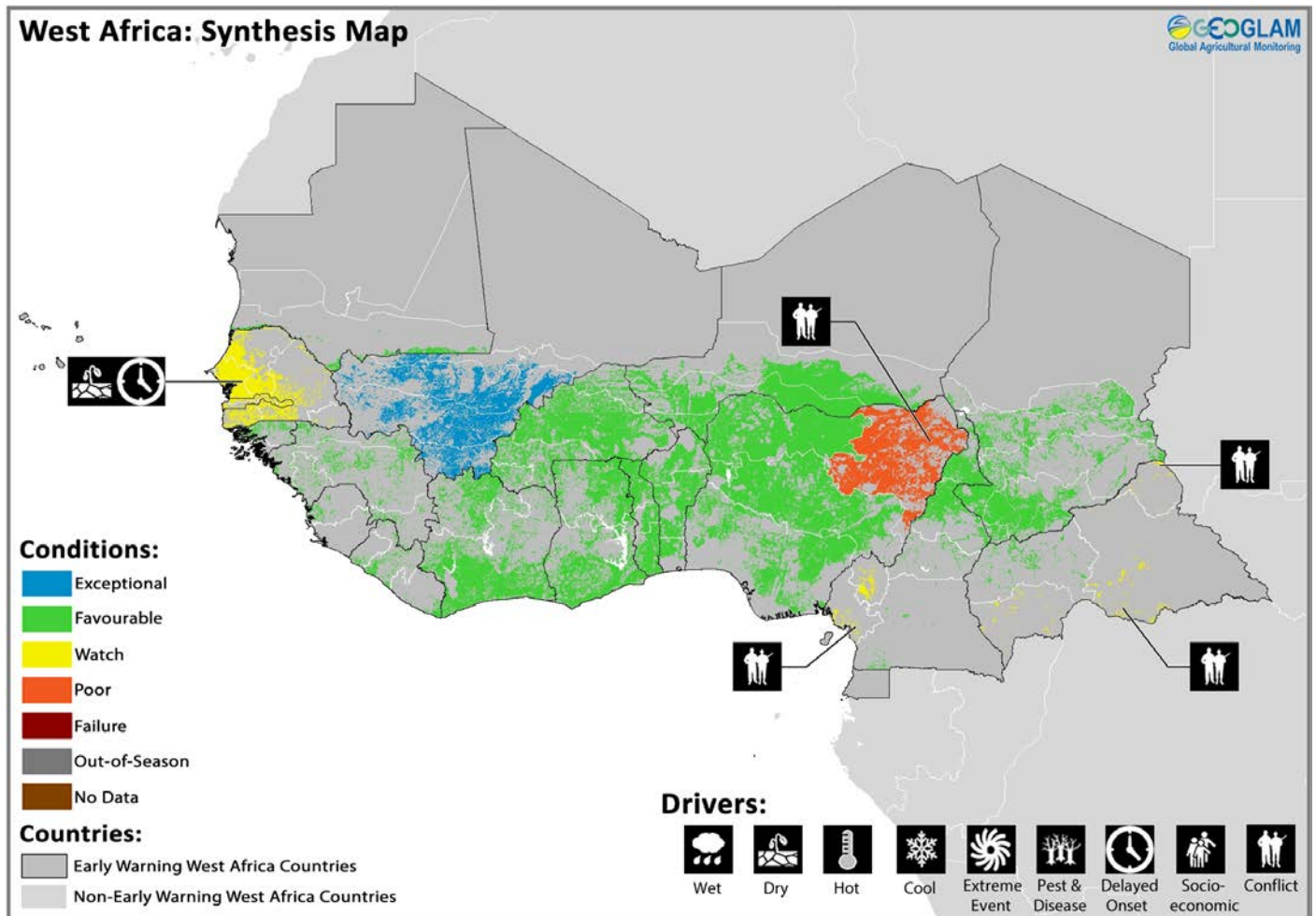


Figure 1. On the left, a preliminary estimate of June 1st through July 15th, 2019 rainfall in terms of the difference from the 1981 to 2018 average (Source: UCSB CHC). This Climate Hazards Center Early Estimate combines CHIRPS preliminary rainfall with an unbiased version of the 15-day GEFS ensemble mean forecast from July 1st. On the right, the July 2019 rainfall forecast issued on June 30th 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

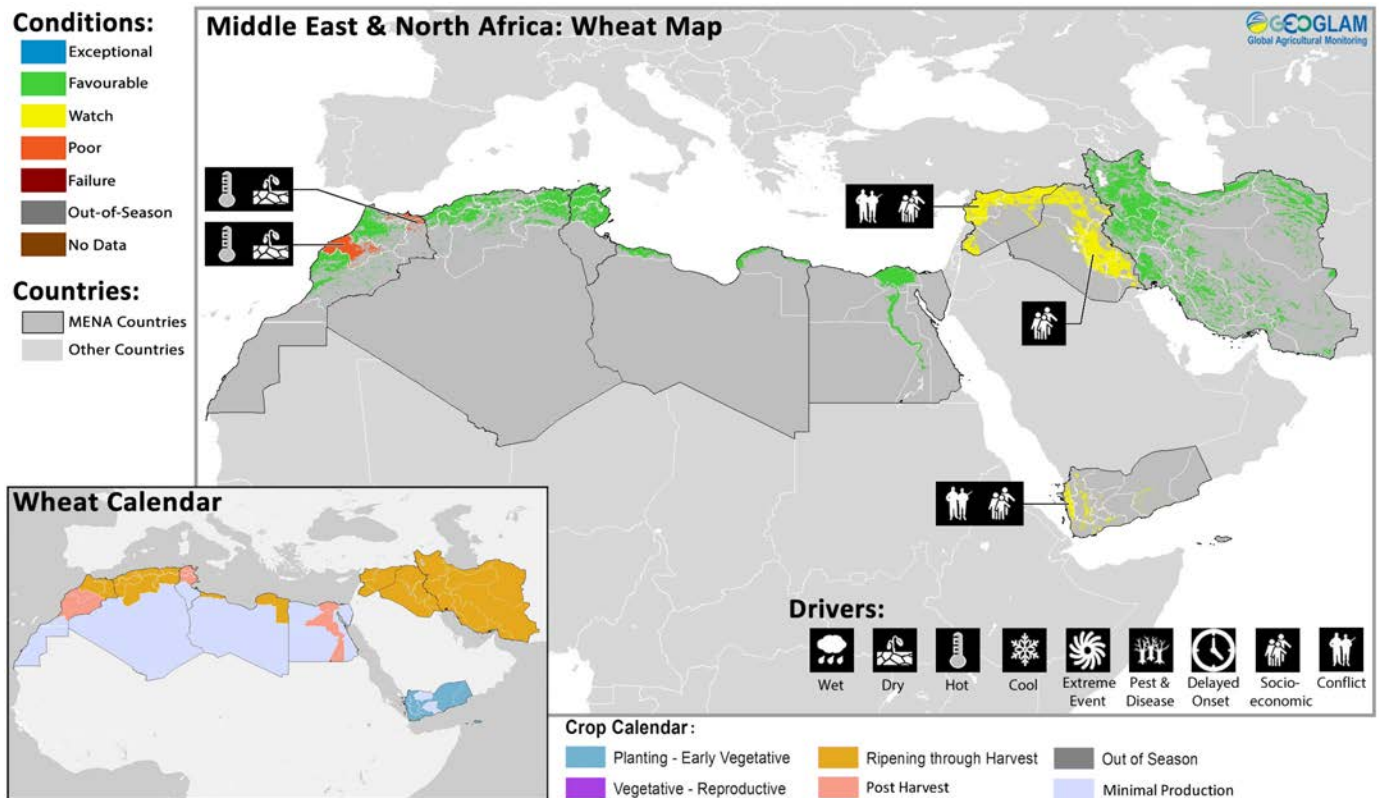
West Africa



Crop condition map synthesizing information as of June 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.**

Main season maize and sorghum across the south of the region is in vegetative to reproductive stages and conditions are favourable due to timely onset of rains in March and good rainfall continuing into June. In **Gambia** and **Senegal**, there is concern for main season millet and sorghum crop conditions due to delayed onset of rains. Sowing of main season rice is complete in **Sierra Leone**, **Ghana**, **Togo**, **Benin** and **Nigeria**. Planting is underway in Mali, Mauritania, and Senegal and growing conditions are favourable for all areas due to good weather supporting crop growth and no major crop infestation except in Senegal where rains have been delayed. Planting of main season sorghum and millet started this month across **Mali** and **Niger** and will begin in July in **Mauritania** and conditions are favourable with timely onset of rains. In **Nigeria**, heightened tensions and conflict in the northeast have increasingly limited access to farmland. Insurgencies in the northeastern states of Adamawa, Borno and Yobe account for 92 percent of the more than 1.9 million people currently displaced countrywide. In **Cameroon**, planting of main season maize finalized in June, while sowing of millet and sorghum started in May and is expected to be completed by the end of July. The Far North region continues to be affected by civil unrest, which spread from neighboring Nigeria in late 2014. Rain levels were below average until early-May but became near-average from the second dekad of the month onwards. Cumulative precipitation were close to average as of late June, except in the Logone-Et-Chari department, benefitting the emergence of early-planted sorghum crops. In the Northwest and Southwest Anglophone regions, agricultural operations continue to be severely affected by the persisting civil unrest that erupted in October 2016. In these areas, the rainy season started in April allowing the timely planting of crops such as beans, potatoes, maize and yams. However, cumulative rains as of late-June were below the average amounts, causing some localized dryness. In **Central African Republic**, in April, rainfall was below average in most croplands, which delayed planting in affected areas. However, cumulative rains were close to average as of late June across most of the country (except for some south-western parts), benefitting germination and development of crops. The delay in planting is expected to shift the harvest of green crops, which usually takes place in July, by a few weeks. Civil insecurity continues to hamper the access to fields, constraining production capacities as a substantial number of farms have been abandoned. As a result, 2019 cereal production levels are expected well below the pre-crisis levels.

Middle East & North Africa

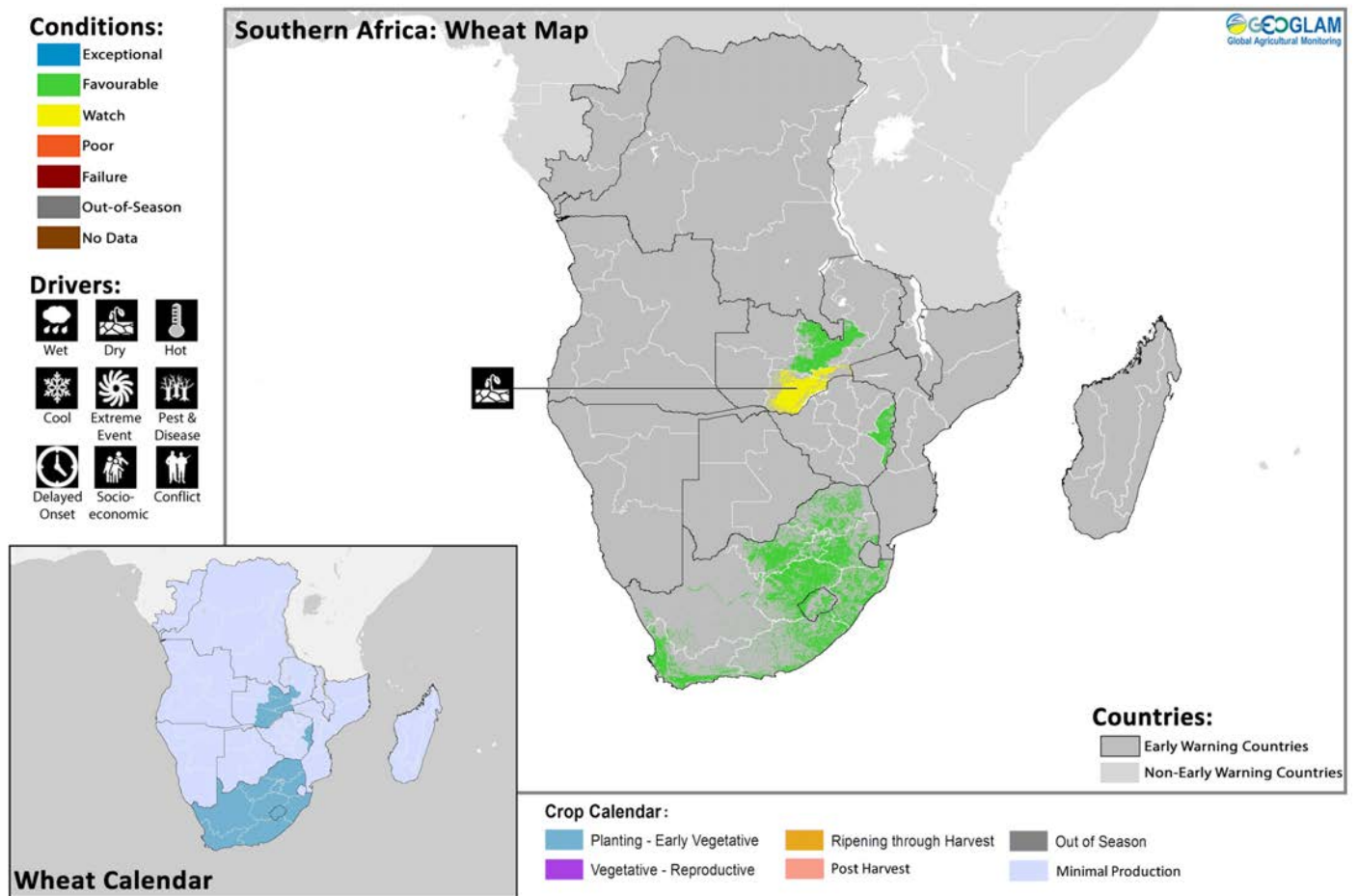


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In the Middle East, harvest is underway for the 2018-2019 winter wheat crop. Despite flooding across many parts of the subregion, above-average precipitation benefited crop development. Above-average yields are expected across Iran and Iraq. Production in **Syria** is likely to recover from last year's drought-stricken harvest. In **Iran**, heavy rain in the last two weeks of March after an already wet season led to flash flood events across the north of the country and in Khuzestan in the south, resulting in deaths and severe infrastructure damage. Production losses in flooded areas were offset by production gains elsewhere as a result of precipitation benefiting crop development. In **Iraq**, despite major flooding at the end of March across eastern and northern provinces, national authorities are expecting a bumper harvest due to above-average rains throughout the season. However, production potential across both Syria and Iraq remains constrained by ongoing or recently ceased conflict, which continues to impact availability of agricultural inputs and affect agricultural production.

In North Africa, wheat harvest will be completed in July and final production is favourable across all areas except Morocco where below-average rains from January through March led to below-average production. In **Egypt** and **Libya**, harvest of 2018-2019 irrigated wheat crop is complete and final yields were average to above-average. Above-average rains in **Algeria** from March through April and above-average growing conditions in northeastern regions have compensated for the drought-affect western regions of Algeria and yield prospects for the country are forecast to surpass the five-year average. In **Morocco**, winter wheat harvest is complete and final yields were below-average in the marginal producing areas of the northeast (Oriental) and Central regions due to below-average rainfall and above-average temperatures. The Moroccan government reports that total wheat production will total about one third of last year's total yield. In **Tunisia**, winter wheat harvest ended in June and final yield was average despite recent heavy rains and resulting water logging problems in the north and central regions.

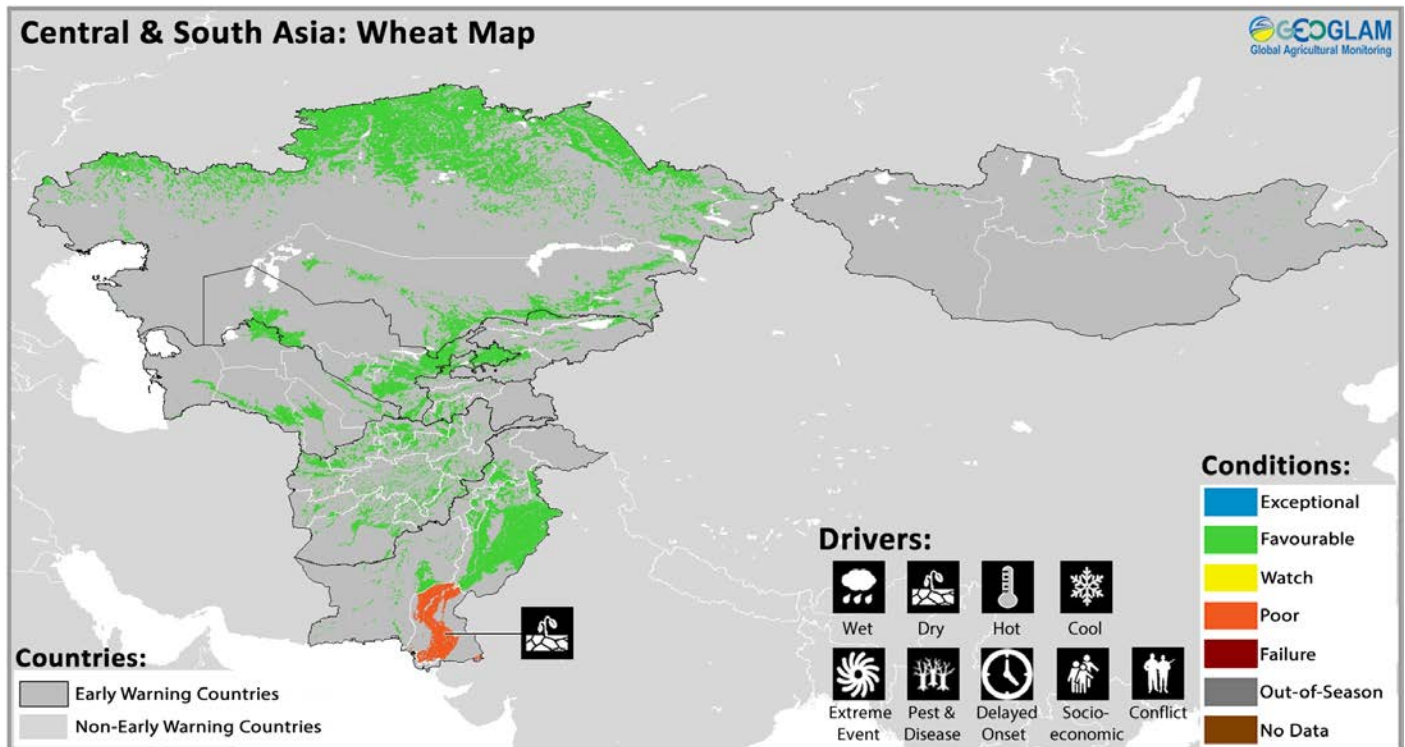
Southern Africa



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In Southern Africa, harvest completed last month for the 2018-2019 main summer cropping season and poor and in some cases failed production has resulted across Angola, Namibia, Botswana, Zimbabwe, Lesotho and southern parts of Zambia and Mozambique. Planting of winter wheat crops started in May over **South Africa, Zimbabwe and Zambia**. In **Zambia**, there is concern for wheat crops due to carryover dry conditions from the previous season. In **South Africa**, widespread rain over the central parts of the country resulted in favourable conditions to cultivate wheat over the summer rainfall region. Rainfall over the winter rainfall region since late May, together with more rain expected during the next few days, will have a positive impact.

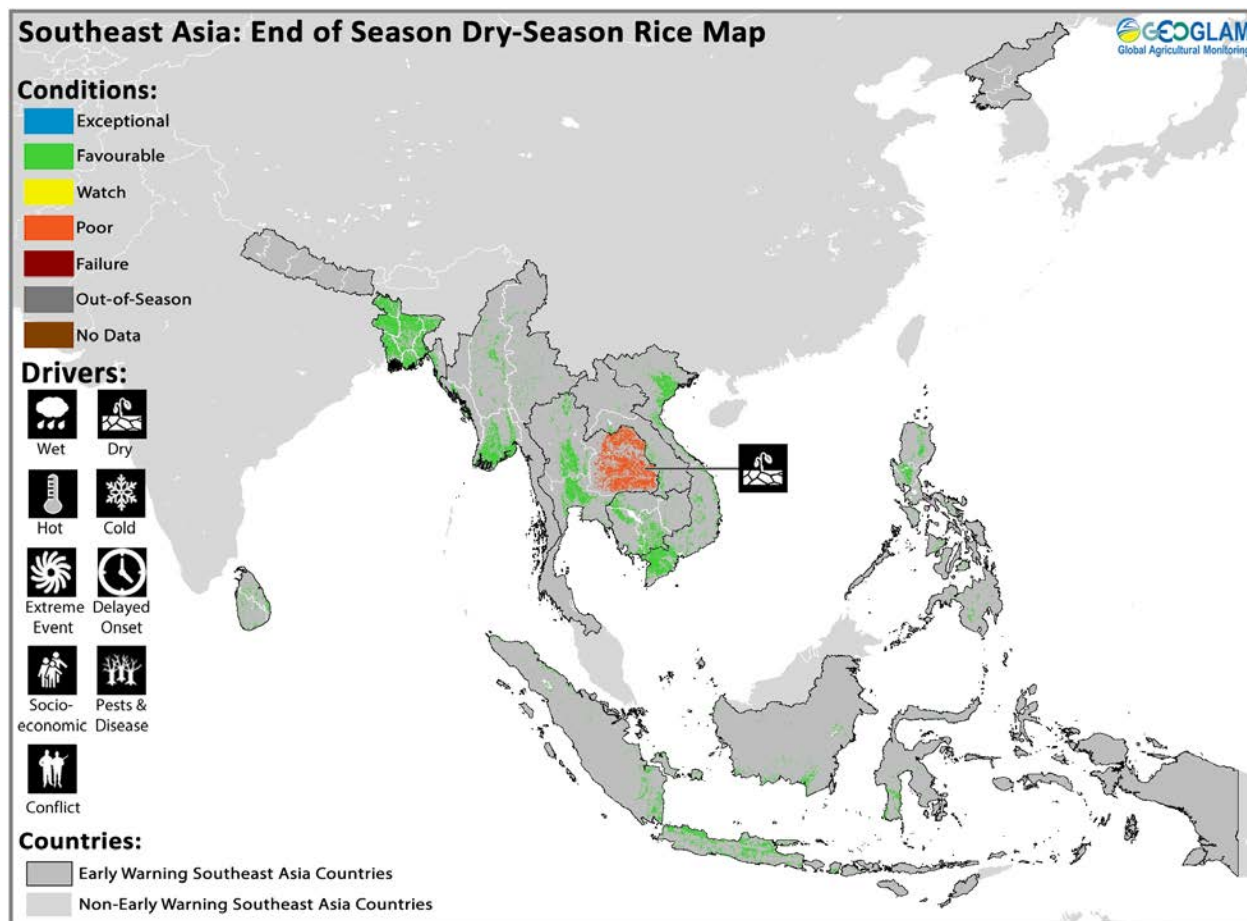
Central & South Asia



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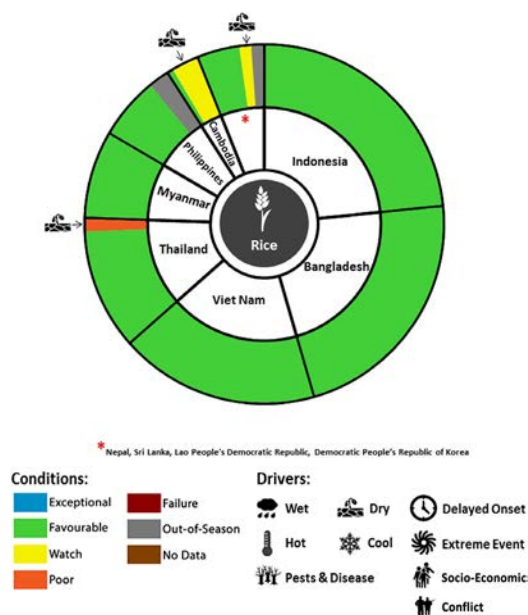
In Central Asia, harvesting of the 2018-2019 winter wheat crop began in June and is expected to finish by mid-August with average yields expected due to adequate rainfall. As of mid-June, accumulated precipitation was above-average in most croplands of **Tajikistan**, **Turkmenistan** and **Uzbekistan**, and in the main winter wheat producing southern Turkestan region of **Kazakhstan**. In **Kyrgyzstan**, precipitation was scarce throughout the spring and notably below-average in the southern Batken and Osh regions and in the northwestern Talas region, though winter wheat conditions remain favourable. Planting of spring wheat crop throughout Central Asia was completed in June under favourable conditions and harvesting is expected to begin in August. In the main spring wheat producing northern regions of **Kazakhstan** (Kostanay, Akmola, and north Kazakhstan), accumulated rains are slightly below-average but conditions remain favourable. Aggregate winter and spring wheat output is forecast to be at 14 million tonnes— in line with the 2018 average level and despite a slight reduction in plantings. However, since spring wheat crops account for more than 90 percent of total wheat output in the country, forecasts for the country' aggregate output will largely depend on the performance of the weather during the remainder of the season. In **Mongolia**, sowing of spring wheat crop is complete for harvest in September and conditions are favourable with some dryness in the northeastern provinces. In **Afghanistan**, harvest of the 2018-2019 winter wheat crop has ended and final yield was average despite some dry conditions early in the season. Conditions also remain favourable for spring wheat crops due to good rainfall since March. While weather conditions have been above-average, structural issues including lack of inputs are likely to constrain production potential. In **Pakistan**, harvest of the 2018-2019 *Rabi* winter wheat crop is complete and final yields were average. However, poor yields resulted in Sindh province due to below-average rainfall during key parts of the season and low availability of irrigation water. Sowing of main season rice has begun in Pakistan and conditions are favourable.

Southeast Asia

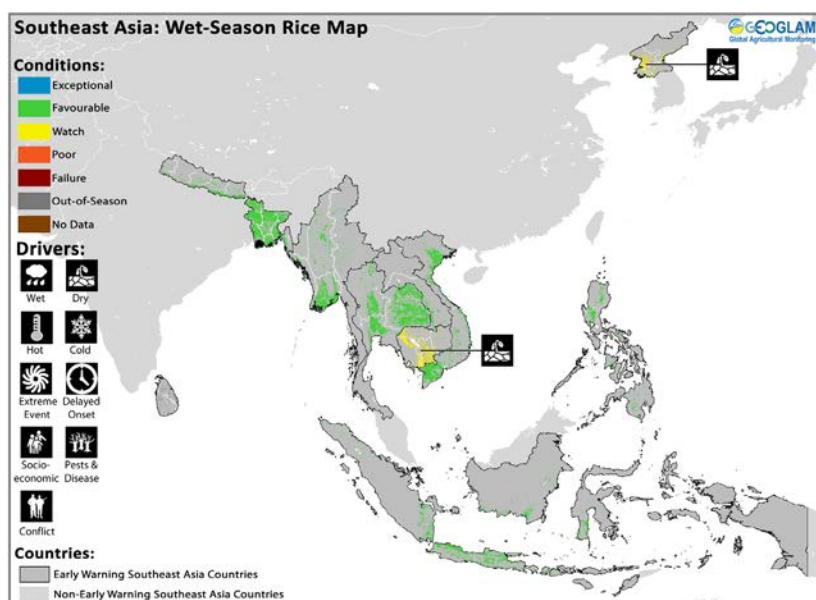


Crop condition map synthesizing post harvest information of dry season rice as of June 28th. All dry season rice crops are complete except in Indonesia where dry season rice sowing is underway. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, national, and regional experts. **Crops that are in other than favourable conditions are labeled on the map**

In the northern side of Southeast Asia, dry-season rice is complete and sowing of wet-season rice has started across the region, except in north Viet Nam, and growing conditions are favourable. Planted area is expected to increase due to adequate rainfall. In **Viet Nam**, conditions are favourable as harvest for winter-spring rice (dry-season rice) has begun in the north and is wrapping up in the south. Sowing of summer-autumn rice (wet-season rice) has also begun in the south under favourable conditions. In **Thailand**, harvest of the 2018-2019 dry-season rice crop is complete. Final production was lower than last year due to a decrease in total sown area, mainly in the Northeast region. Wet-season rice sowing is continuing under favourable conditions, with an expected increase in sown areas compared to last year. Recent rainfall has improved conditions in the northeast region. In **Laos**, harvest of 2018-2019 dry-season rice is complete and final yields were higher than the previous year. In the lowland rainfed areas, land preparation is underway for wet-season rice and conditions are favourable due to sufficient rainfall. In **Cambodia**, 2018-2019 dry-season rice harvest finished in April and yields were average and slightly higher than the previous year. Wet-season rice is in tillering to early young panicle forming stages and conditions are generally favourable, though there is concern because growing conditions are slower than last year due to rainfall shortages. Rainfall shortages have delayed the planting of maize crops, as well. In **Myanmar**, harvest is complete for 2018-2019 dry-season rice and final yields were average and similar to the previous year. Sowing of wet-season rice has begun and conditions are favourable. In the **Philippines**, harvest of dry-season rice is complete and with a slight reduction in final yield compared to last year. Wet-season rice is under favourable conditions in the early vegetative stage, with near normal rainfall easing previous dry conditions. In **Indonesia**, harvest of wet-season rice is almost complete with yields forecast to be close to average. Sowing of dry-season rice continues under favourable conditions with ample irrigation water. In the **Democratic People's Republic of Korea**, winter



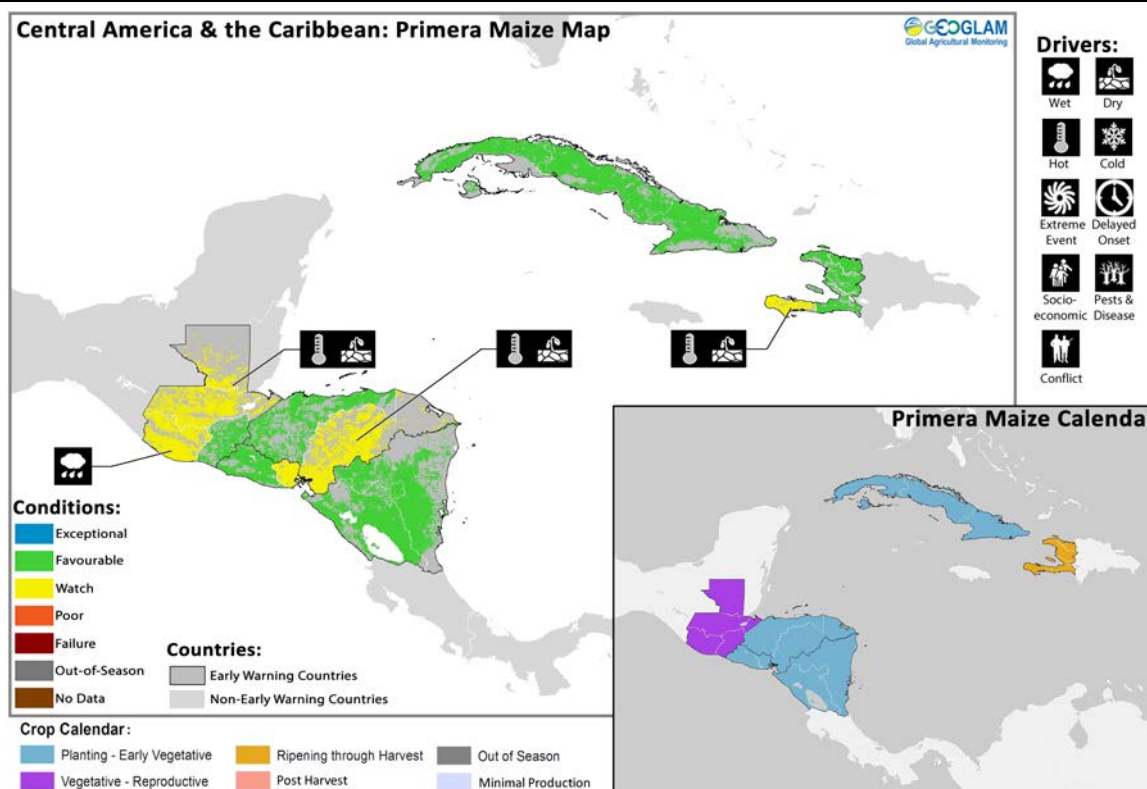
For detailed description of the pie chart please see box below.



Crop condition map synthesizing information as of June 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.**

favourable. In **Bangladesh**, harvest is complete for the *boro* rice crop planted in December and final yields were average due to sufficient rainfall. Sowing of *aman* rice crop is underway and conditions are favourable. In **Sri Lanka**, the *yala* maize and rice crop, planted in April, is in vegetative to reproductive stages and conditions are favourable.

Central America & Caribbean



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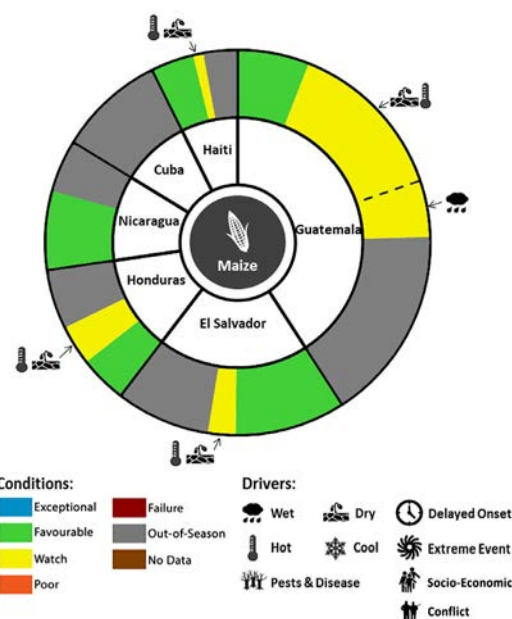
Planting of the primera season was well advanced in June across the region and in some areas, dry conditions, irregular rainfall distribution and high temperatures in June threaten to affect crops. In areas where rainfall increased in June, primera season beans

Sources and Disclaimers:

The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners FEWS NET, JRC, WFP, ARC, Asia RICE, MESA, ICPAC, FAO GIEWS, Applied Geosolutions and UMD. The findings and conclusions in this joint multi-agency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts.

More detailed information on the GEOGLAM crop assessments is available at www.cropmonitor.org

were planted with some delay, although planting was not during an optimal window. Below-average rainfall (associated typically with the occurrence of El Niño and a phenomenon referred to as "canicula" in the region) and high temperatures are forecast to continue through the start of July and may impact crop establishment and development, further monitoring will be needed (See Regional Outlook Pg. 12). In central and eastern **Guatemala, Honduras, El Salvador** and **Nicaragua**, rainfall has been erratic through the start of the season with patches of both above- and below-average rainfall. Dry conditions have affected soil moisture in some areas and below-average rains forecast through the start of July may further impact crop establishment and development. In **El Salvador**, rainfall has been erratic with patches of above-average rainfall in June causing focalized flooding in San Miguel department. In north **Guatemala**, recent rainfall in June helped to reduce the rainfall deficits while in south Guatemala, extreme amounts of rainfall in focalized areas has resulted in flooding. In **Honduras**, harvesting of the minor rice paddy, mostly irrigated, which accounts for 10 percent of total production, is complete and the final output is estimated at average levels. In **Haiti**, erratic and irregular rainfall has affected the development of main season maize and bean crops in the south and rainfall deficits were observed in June. In **Cuba**, harvest of the mostly irrigated rice crop is complete and yields are estimated to be above-average due to sufficient water availability during the crop development period. Wet and warm conditions in Cuba have favoured main season rice crop maturation, and have also favoured early development of primera maize crops.



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

Regional Outlook: Drier than average June-September rains forecast

Central America and the Caribbean will most likely receive below-normal rainfall during June to September (JAS), according to multiple forecasts released in June. The level of confidence in this outlook is generally low to moderate, with probabilities ranging from 40% to 60% across the region (Figure 1-left). Warmer than normal JAS air temperatures are forecast for most areas from southern Mexico and Nicaragua and in parts of Cuba, Haiti, the Dominican Republic, and in northern South America (40-50% chance). An elevated chance of below-normal JAS rainfall is associated with a weak El Niño. Its regional influence may be counteracted to some extent by forecast warmer than normal conditions in the tropical Atlantic Ocean and in the Gulf of Mexico. 2019 hurricane season predictions from the NOAA Climate Prediction Center are for a near-normal Atlantic hurricane season (40% chance) and a more active than normal Pacific basin season (70% chance). For the Atlantic season 9 to 15 named storms are anticipated, with 2 to 4 of them being major hurricanes. The eastern Pacific basin could see 15 to 22 named storms including 4 to 8 major hurricanes.

For the next two weeks, according to the July 1st rainfall forecast for July 1st to July 15th, there is a high likelihood for below-normal rainfall in much of Central America and for areas near the Caribbean basin. This forecast for a drier than normal first half of July includes areas where maize crops normally undergo vegetative and reproductive development in July, from southern Mexico to Nicaragua. The week 2 outlook is shown in Figure 1 (right).

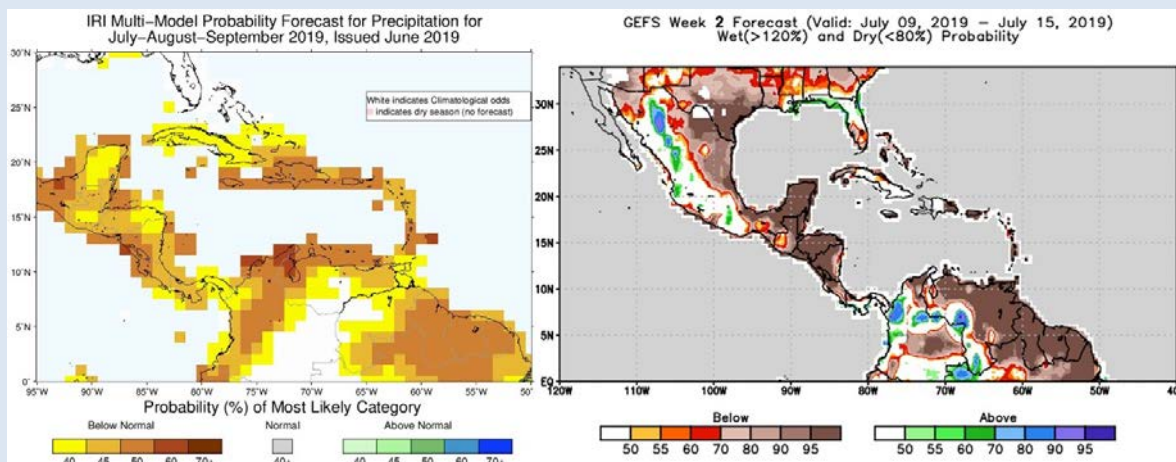


Figure 1. On the left, forecast July to September 2019 rainfall from the International Research Institute for Climate and Society (IRI). The probability of the most likely category is shown, which is based on from an ensemble of model forecasts produced in June 2019 (Source: IRI). On the right, the Global Ensemble Forecast System (GEFS) rainfall probability forecast for July 9th to July 15th that was released July 1st. (Source: NOAA/NCEP/CPC). Source: UCSB Climate Hazards Center

Sources and Disclaimers:

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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 AMIS Market Monitor, published July 4th 2019.

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.

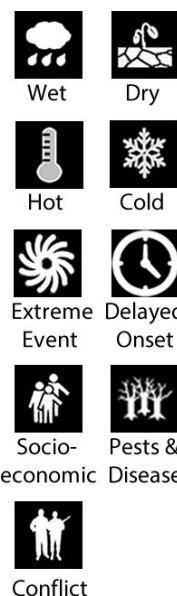
Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)

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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Crop Season Nomenclature:

In countries that contain multiple cropping seasons for the same crop, the following charts identifies the national season name associated with each crop season within the Crop Monitor for Early Warning.

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


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Early Warning partners



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