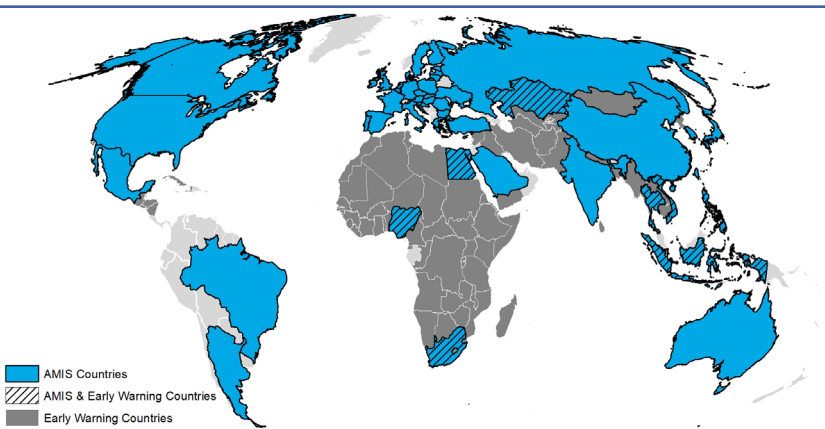




# Crop Monitor for AMIS

## Overview:

At the end of April, conditions are favourable for wheat, maize, and rice, while mixed for soybeans. For wheat, conditions are generally favourable in the northern hemisphere except in parts of Europe, Ukraine, and the US. Maize is harvesting in the southern hemisphere as sowing picks up speed in the Northern Hemisphere. Rice conditions are favourable across Asia as China begins sowing the single-season crop. Soybeans as harvesting continues in the southern Hemisphere are mixed with exceptional conditions in Brazil and poor in Argentina.

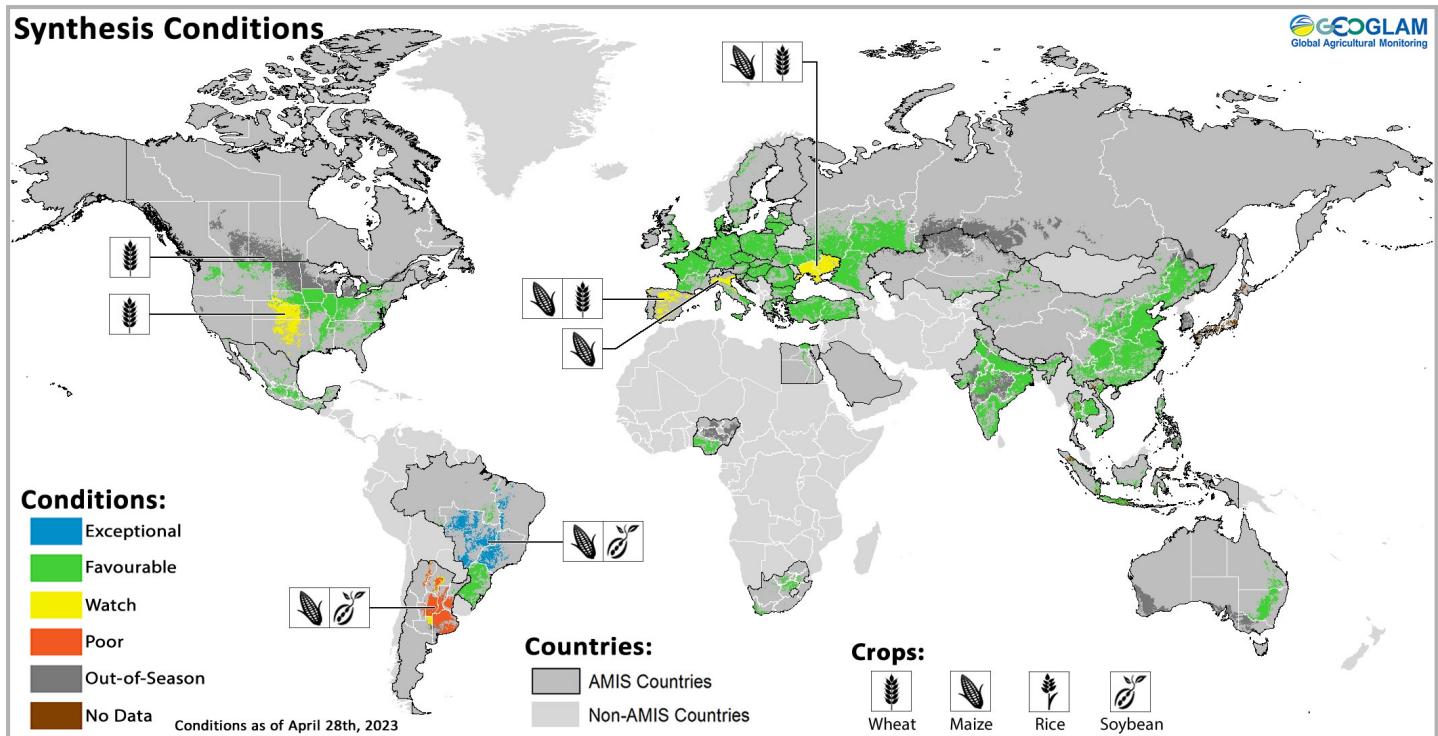


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*Assessment based on information as of April 28<sup>th</sup>*

## At a glance for AMIS countries (as of April 28th)



Global crop condition map synthesizing information for all four AMIS crops as of April 28th. Crop conditions over the main growing areas for wheat, maize, rice, and soybean are based on a combination of national and regional crop analyst inputs along with earth observation data from all Crop Monitors. **Crops that are in other than favourable conditions are displayed on the map with their crop symbol.**

### Crop Conditions at a Glance

**Wheat** - In the northern hemisphere, winter wheat is under favourable conditions except for in parts of Ukraine, Spain, and the US. In the southern hemisphere, sowing is beginning in eastern Australia.

**Maize** - In the southern hemisphere, harvest is wrapping up in Brazil for the spring-planted crop (smaller season) under exceptional conditions. In Argentina, harvesting continues on a poor crop. In the northern hemisphere, sowing is beginning under generally favourable conditions.

### Forecasts at a Glance

**Climate Influences** – The El Niño-Southern Oscillation (ENSO) is currently in a neutral state. There is a 62 percent chance of El Niño developing during May-June-July rising to 86% chance during October-November-December, according to the IRI/CPC forecast.

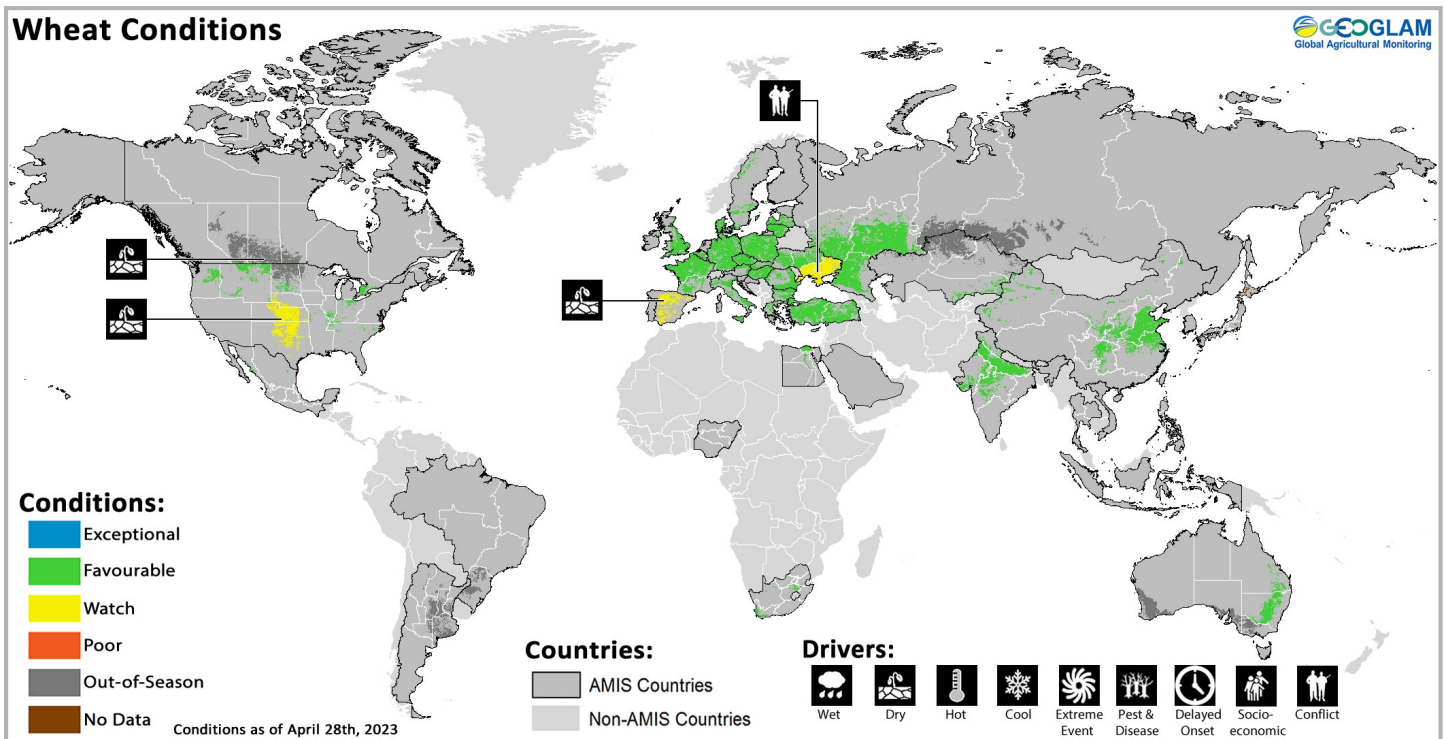
**Rice** - In China, early-planted rice enters the vegetative stage while single-season rice sowing begins. Conditions are favourable for the Rabi crop in India as harvesting begins. In Southeast Asia, harvesting is progressing for wet-season rice in Indonesia and dry-season rice in the northern countries.

**Soybeans** - In the southern hemisphere, harvest is wrapping up in Brazil under exceptional conditions, while in Argentina, harvesting is ongoing for both the early-planted and the late-planted crops with poor yields. In the northern hemisphere, sowing is beginning in the US.

**The United States** – The short-term (two weeks) forecast indicates likely above-average precipitation in most of the country, while the long-term (May-June-July) forecast indicates equal chances of below-average or above-average precipitation across most of the country.

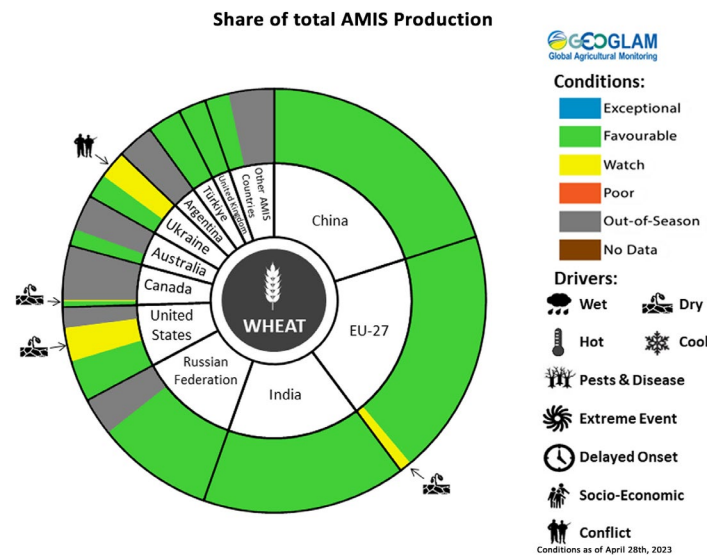
*While the Crop Monitor for AMIS is primarily focused on documenting crop conditions based on environmental factors, the war in Ukraine and in other conflict areas will very likely negatively impact the ability of the crop to be harvested.*

## Wheat Conditions for AMIS Countries



Wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28<sup>th</sup>. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

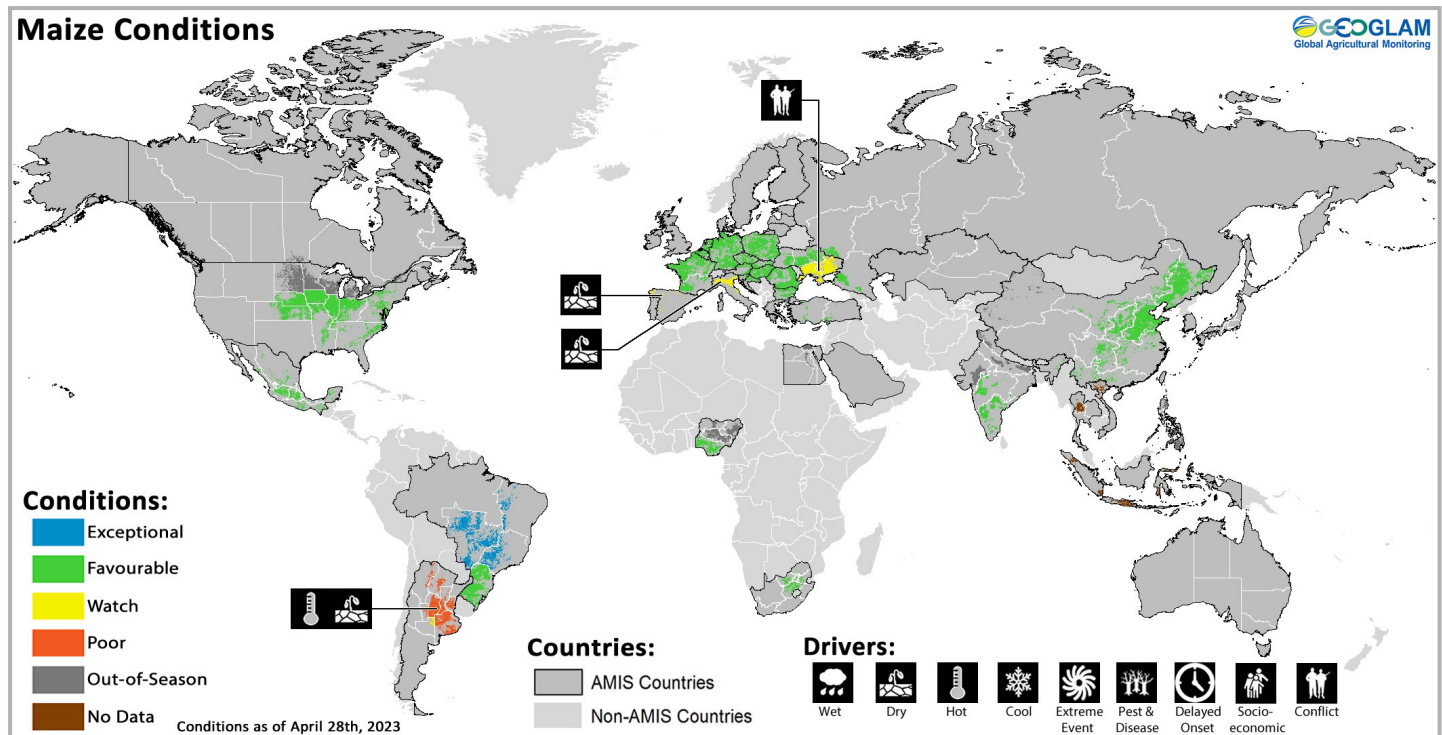
**Wheat:** In the **EU**, conditions are generally favourable except for Spain, where the crop could reach failure if rainfall does not return by the end of May. In the **UK**, conditions are favourable. In **Türkiye**, conditions are generally favourable, with recent above-average temperatures and abundant rainfall supporting the crop. In **Ukraine**, recent rainfall has improved soil moisture conditions and removed areas of drought. However, the ongoing war continues to impact the east and south regions. In the **Russian Federation**, conditions are favourable for winter wheat and the beginning of spring wheat sowing in the Volga district. In **China**, conditions are favourable as winter wheat enters the reproductive stage and sowing of the spring wheat begins. In **India**, harvesting is wrapping up under favourable conditions. In the **US**, the prolonged drought in the central and southern Great Plains continues to impact winter wheat. Sowing of spring wheat is beginning in the Pacific Northwest. In **Canada**, winter wheat conditions are generally favourable. In **Australia**, sowing is beginning under favourable conditions in Queensland and New South Wales.



For detailed description of the pie chart please see box on page 6.

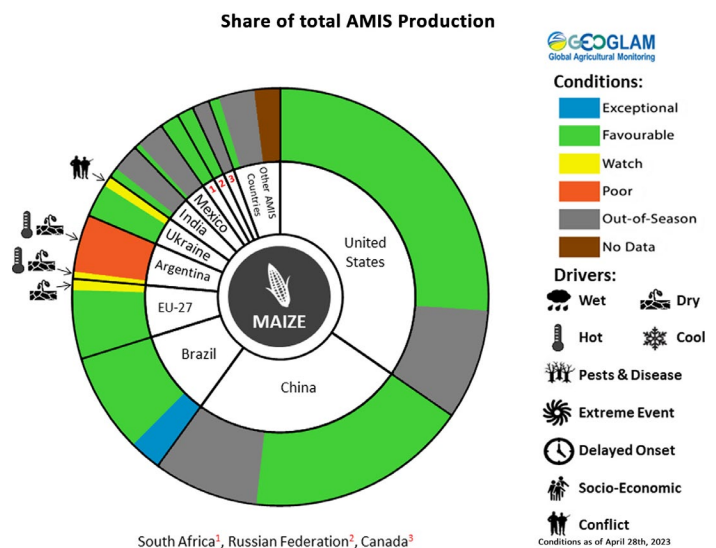
\* Assessment based on information as of April 28<sup>th</sup>

## Maize Conditions for AMIS Countries



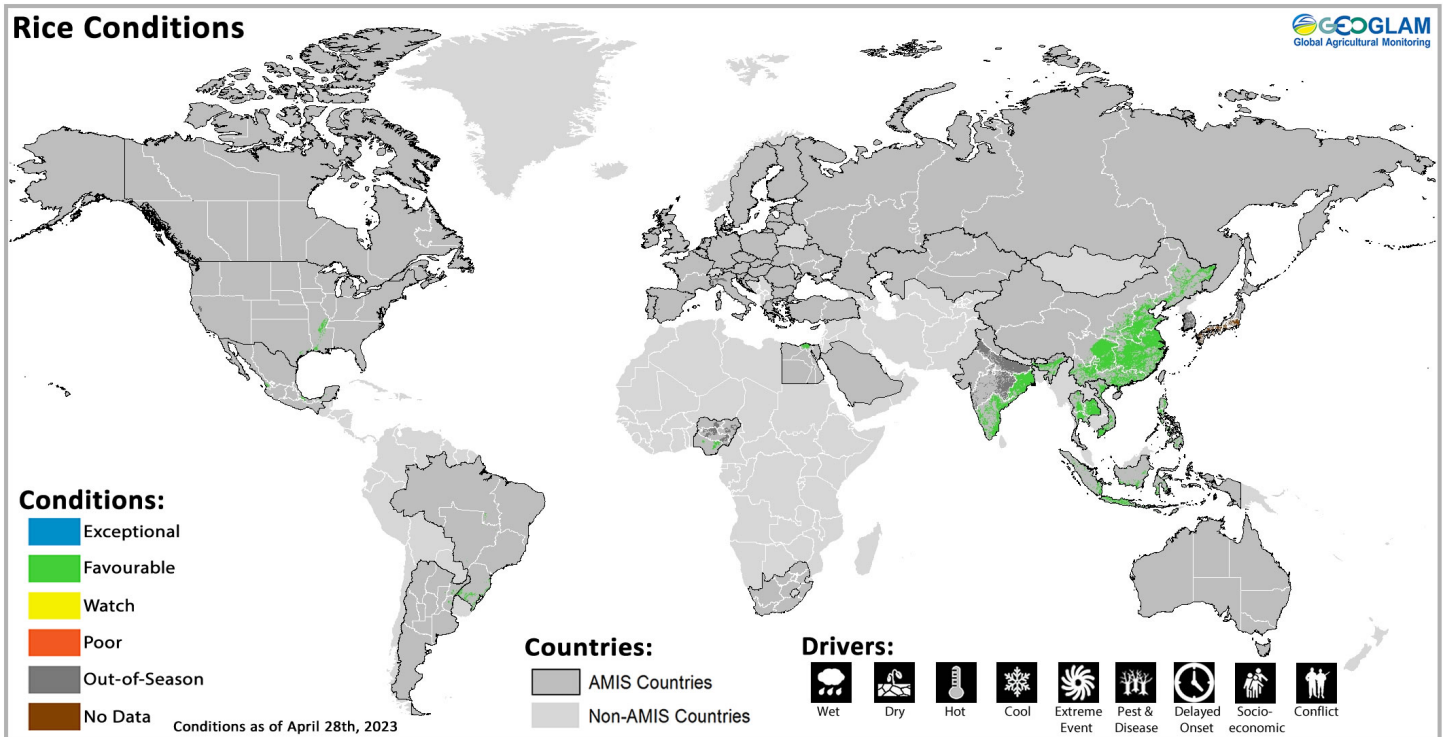
Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28<sup>th</sup>. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

**Maize:** In **Brazil**, harvesting for the spring-planted crop (smaller season) is progressing with primarily exceptional conditions. The summer-planted crop (larger season) is currently in the vegetative to reproductive stages under favourable conditions. In **Argentina**, harvest is ongoing with significantly reduced yields for both the early-planted crop (typically larger season) and the late-planted crop (typically smaller season), albeit at a slower pace than last year due to a higher proportion of the late-planted crop. In **India**, harvesting of the Rabi crop is wrapping up under favourable conditions. In **China**, conditions are favourable for the spring-planted crop. In **South Africa**, recent dry conditions are supporting crop ripening and harvesting. In **Mexico**, harvesting of the Autumn-Winter crop (smaller season) is ongoing under favourable conditions. In the **US**, sowing is picking up speed and expanding northwards into the central Corn Belt under favourable conditions. In the **EU**, sowing is ongoing under generally favourable conditions, except for drought issues in Spain and northern Italy. In **Ukraine**, sowing is beginning under favourable conditions away from the war zones. In the **Russian Federation**, sowing is beginning under favourable conditions.



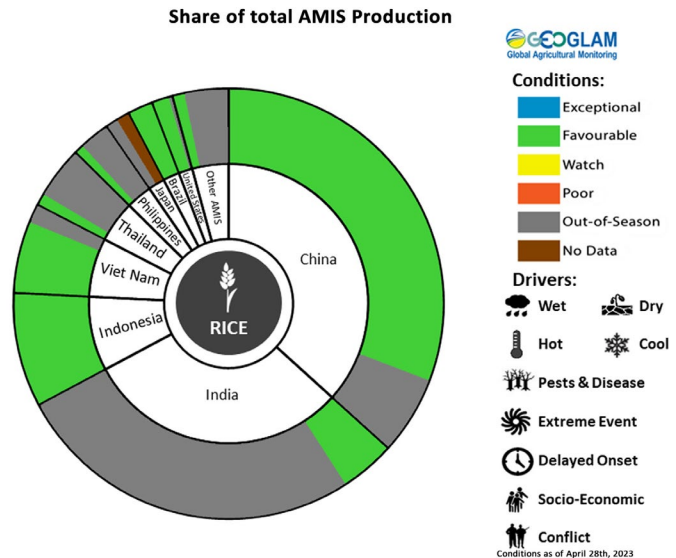
For detailed description of the pie chart please see box on page 6.

## Rice Conditions for AMIS Countries



Rice crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28<sup>th</sup>. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

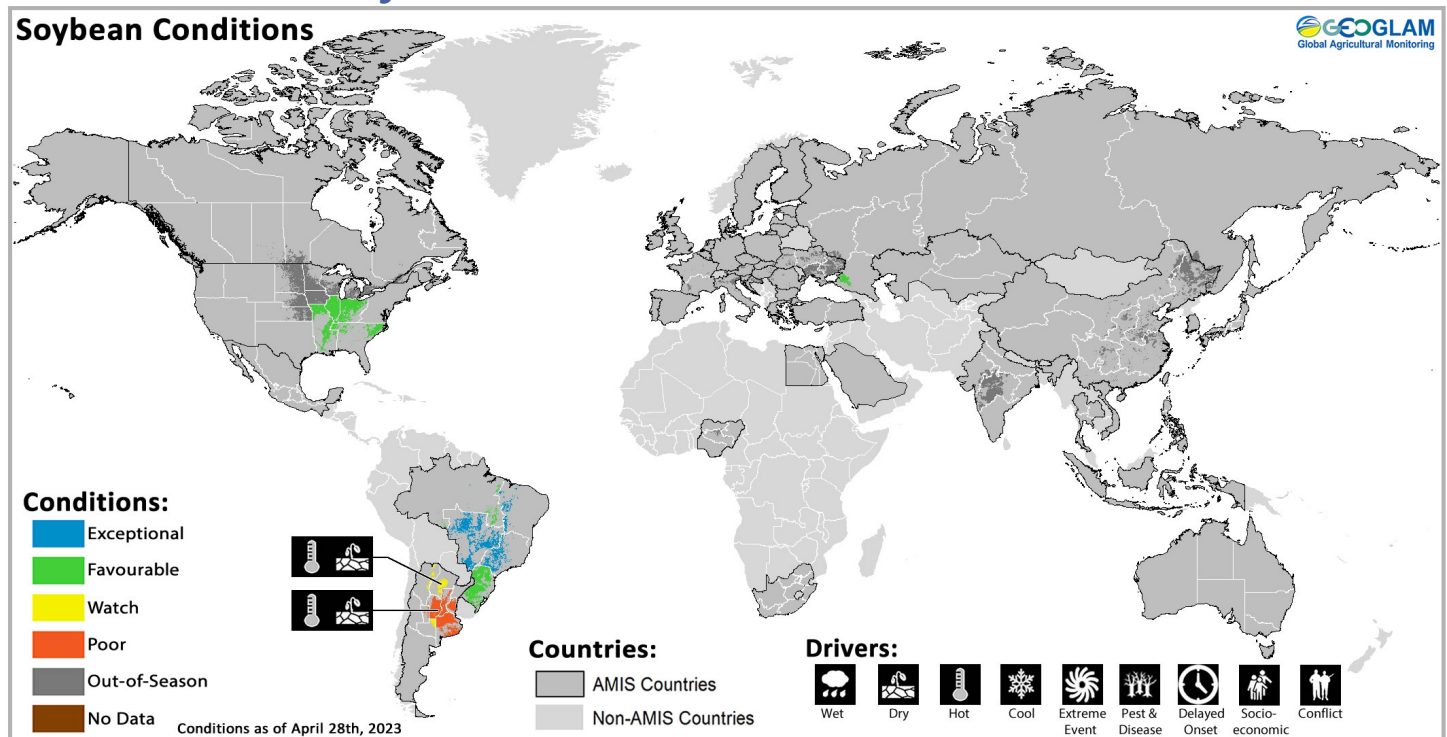
**Rice:** In **China**, conditions are favourable as early-planted rice is in the vegetative stage and sowing of single-season rice is beginning. In **India**, conditions are favourable for the Rabi crop as transplanting is wrapping up and harvesting is beginning in some southern states. In **Indonesia**, harvesting of wet-season rice is continuing under favourable conditions, albeit at a slower pace than last year. Sowing of dry-season rice is beginning with good irrigation water levels. In **Viet Nam**, conditions are favourable for dry-season rice (winter-spring rice) across the country as harvesting continues in the South with yields slightly above last year’s level due to good weather and lower fertilizer costs. Sowing of wet-season (summer-autumn rice) is beginning in the Mekong River Delta earlier than last year. In **Thailand**, harvesting of dry-season rice is progressing with good yields due to sufficient water and favourable weather. In the **Philippines**, dry-season rice harvesting is more than halfway complete under favourable conditions due to average to above-average rainfall. In **Brazil**, harvest is wrapping up under favourable conditions. In the **US**, sowing is progressing under favourable conditions.



For detailed description of the pie chart please see box on page 6.

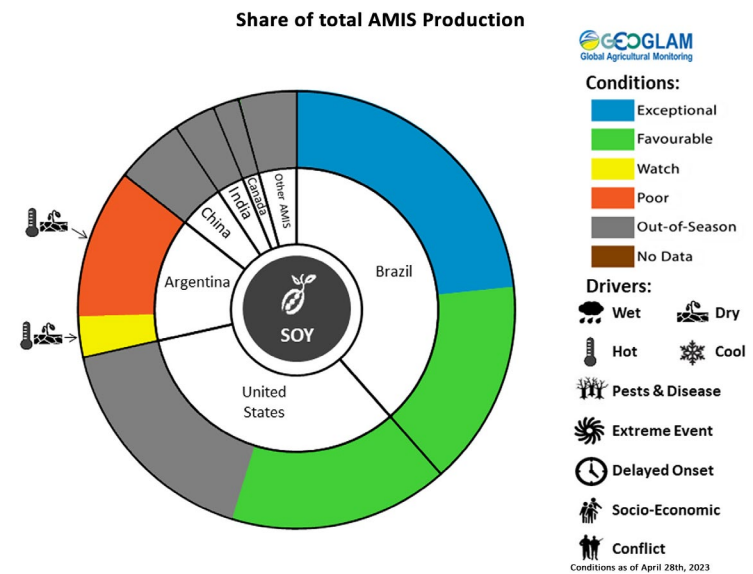
\* Assessment based on information as of April 28<sup>th</sup>

## Soybean Conditions for AMIS Countries



Soybean crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28<sup>th</sup>. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

**Soybeans:** In **Brazil**, harvesting is wrapping up with exceptional yields in the Central-West, Southeast, and Northeast regions. In the South region, despite the lack of rain and high temperatures in Rio Grande do Sul, the favourable conditions in the other states were enough to result in a regional yield close to the 5-year average. In **Argentina**, harvesting is progressing for both the early-planted crop (larger season) and the late-planted crop (smaller season) with low yields so far. The poor crop conditions are a result of water deficits and extreme heat throughout the season, which also occurred at critical moments of yield development. Many affected crops were abandoned or used as fodder. In the **US**, conditions are favourable as sowing begins in the southeast and the lower reaches of the Corn Belt.



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

**Information on crop conditions in non-AMIS countries can be found in the [GEOGLAM Crop Monitor for Early Warning](#), published May 4<sup>th</sup>**

**Pie chart description:** Each slice represents a country's share of total AMIS production (5-year average). Main producing countries (representing 95 percent of production) are shown individually, with the remaining 5 percent grouped into the "Other AMIS Countries" category. The proportion within each national slice is coloured 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). When conditions are other than 'favourable', icons are added that provide information on the key climatic drivers affecting conditions.

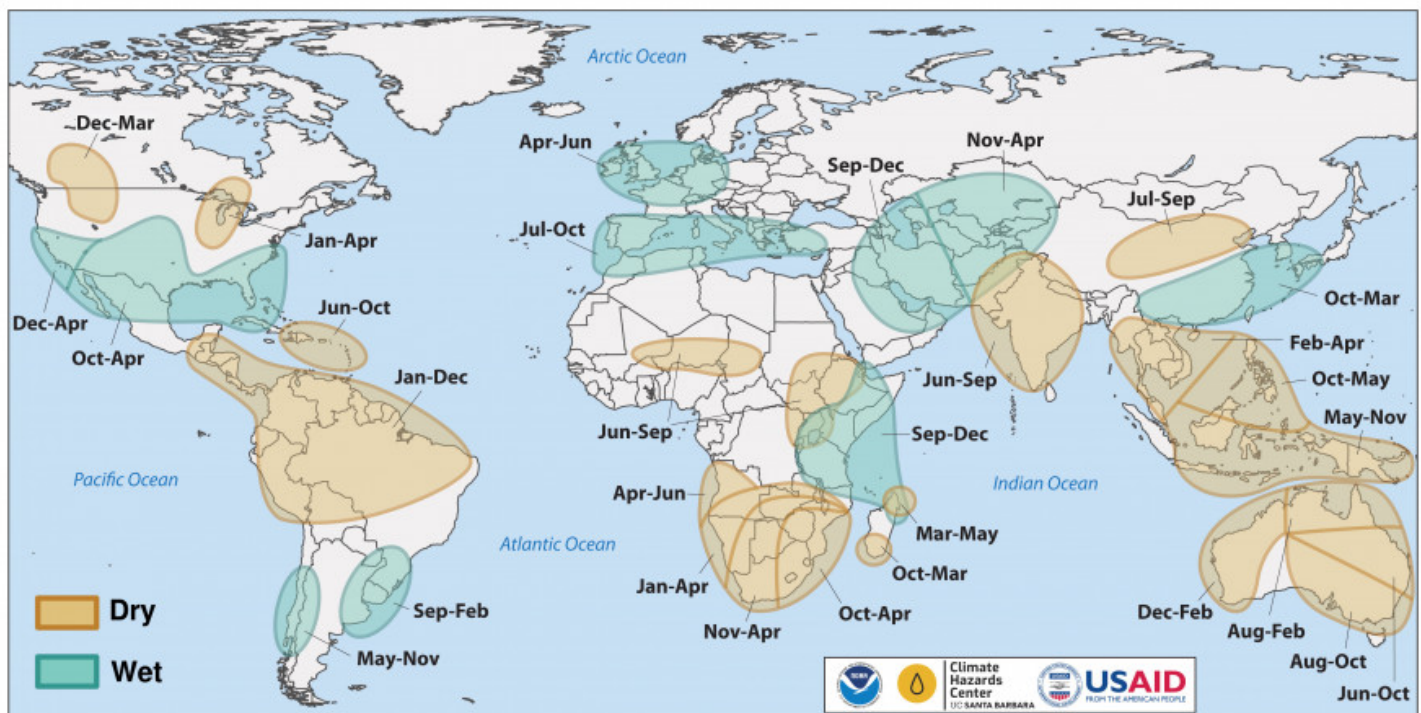
## Climate Influences: El Niño Watch

The El Niño-Southern Oscillation (ENSO) is currently in a neutral state. El Niño conditions are forecast to develop during the next several months. There is a 62 percent chance of El Niño during May-June-July with increasing chances afterwards until an 86 percent chance during October-November-December, according to the IRI/CPC forecast.

El Niño events can have widespread, global impacts. These tend to enhance rainfall in Central Asia, southern North America, south-eastern South America, southern Europe, eastern and southern East Africa, and southern and eastern China. Drier-than-average conditions tend to occur in Central America, the Caribbean, northern South America, parts of western and northern East Africa, Southern Africa, India, Northern China, the Maritime Continent, and Australia.

Positive Indian Ocean Dipole (IOD) conditions may also develop during June to September, according to the Australian Bureau of Meteorology forecast. Positive IOD conditions can enhance El Niño-related drying influences in Australia and the Maritime Continent, and wetting influences during the East Africa short rains.

Source: UCSB Climate Hazards Center

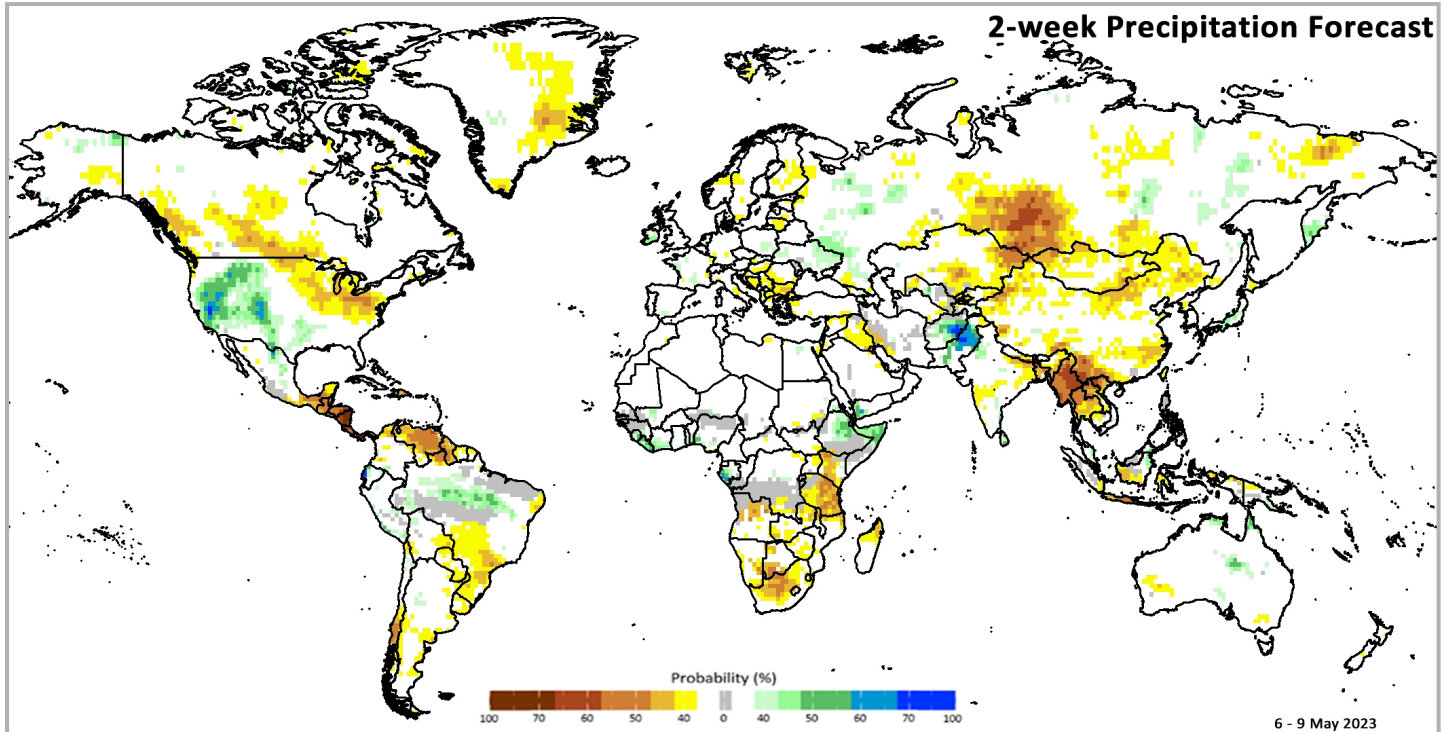


Location and timing of likely above- and below-average precipitation related to El Niño events. Based upon observed precipitation during 22 El Niño events since 1950, wet and dry correspond to a statistically significant increase in the frequency of precipitation in the upper and lower thirds of historical values, respectively. Statistical significance at the 95% level is based on the resampling of precipitation during neutral El Niño-Southern Oscillation conditions. Source: [FEWS NET & NOAA & CHC](#)

## Global Two-week Forecast of Areas with Above or Below-Average Precipitation

The two-week forecast (Figure 1) indicates a likelihood of above-average rainfall over the western US, northeast Mexico, central Brazil, northeast Ukraine, southcentral in the Russian Federation, Sierra Leone, Liberia, southern Côte d'Ivoire, western Gabon, Eritrea, Djibouti, eastern Ethiopia, northern Somalia, western Yemen, Afghanistan, and central Pakistan.

There is also a likelihood of below-average rainfall over the Prairies in Canada, the northern Great Plains and the Midwest in the US, southern Mexico, Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, the Dominican Republic, northern Columbia, Venezuela, Guyana, central and southern Brazil, southern Chile, Serbia, Bulgaria, North Macedonia, Iraq, Kenya, Tanzania, central Angola, northern Zambia, northern Madagascar, southern Botswana, central South Africa, southern and eastern Kazakhstan, Siberia in the Russian Federation, Mongolia, China, eastern India, Bangladesh, Myanmar, Thailand, Laos, northern Viet Nam, and Java in Indonesia.



IRI SubX Precipitation Biweekly Probability Forecast for 6 – 19 May 2023, issued on 28 April 2023. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

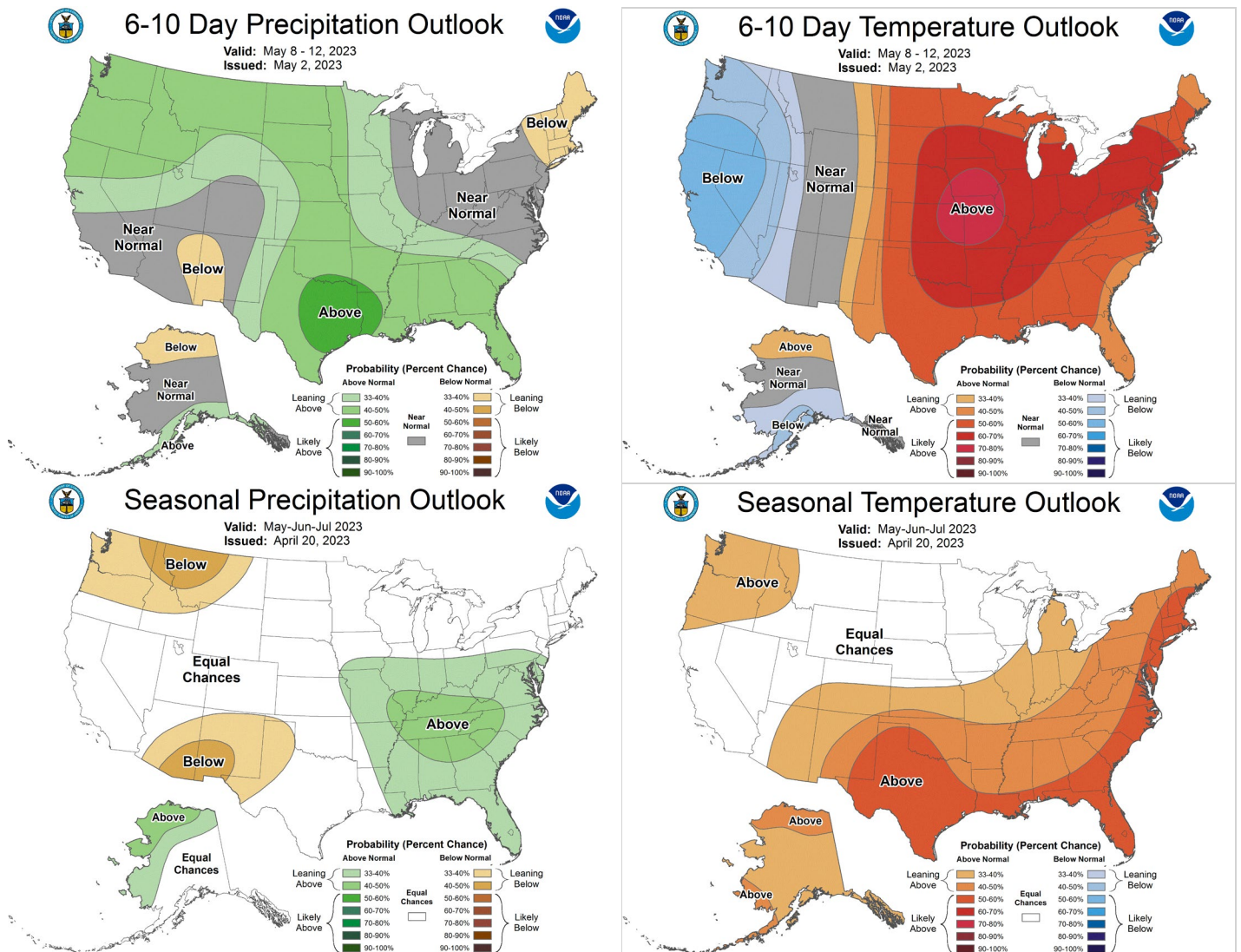


## United States Outlook

The 8 - 12 May 2023 outlook indicates there is a leaning to above-average precipitation across the Pacific Northwest, the Great Plains, and the Southeast with the highest likelihood over east Texas and Louisiana. There is also a leaning to below-average precipitation over northern New England and along the Arizona/New Mexico border. During the same time, temperatures are likely to be above-average from the Great Plain across the Eastern US, while likely below-average temperatures across the West Coast.

For the long-term seasonal May-June-July (MJJ) 2023 outlook, there is a leaning toward below-average precipitation in the Pacific Northwest and the Southwest, while leaning toward above-average precipitation across the Southeast and the Ohio River Valley. During the same period, temperatures are likely to be above-average along the Eastern US, Gulf Coast, and the Pacific Northwest.

### Short-term and Seasonal 2023 Outlooks



**Upper Left:** 6 - 10 precipitation outlook issued on 2 May 2023. **Upper Right:** 6 - 10 precipitation outlook issued on 2 May 2023. **Lower Left:** Extended May-June-July precipitation outlook issued on 20 April 2023. **Lower Right:** Extended May-June-July temperature outlook issued on 20 April 2023. Maps from NOAA/National Weather Service, National Centers for Environmental Predictions, and Climate Prediction Center <https://www.cpc.ncep.noaa.gov/products/forecasts/>.

Source: NOAA Climate Prediction Center

\* Assessment based on information as of April 28<sup>th</sup>

## Appendix 1: Terminology & Definitions

### Crop Conditions:

**Exceptional:** Conditions are much better than average\* at the 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 close to 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 more than 5% below average. This is only used when conditions are not likely to be able to recover, and an impact on production is likely.

**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.

### Conditions:

	Exceptional
	Favourable
	Watch
	Poor
	Out-of-Season
	No Data

### Drivers:

These represent the key climatic drivers that are having an impact on crop condition status. They result in production impacts and can function as either positive or negative drivers of crop conditions.

**Wet:** Wetter than average (includes water logging and floods).

**Dry:** Drier than average.

**Hot:** Hotter than average.

**Cool:** Cooler than average or risk of frost damage.

**Extreme Events:** Catch-all for all other climate risks (i.e., hurricane, typhoon, frost, hail, winter kill, wind damage, etc.). When this category is used, the analyst will also specify the type of extreme event in the text.

**Delayed-Onset:** Late start of the season.

	Wet
	Dry
	Hot
	Cool
	Extreme Event
	Delayed-Onset

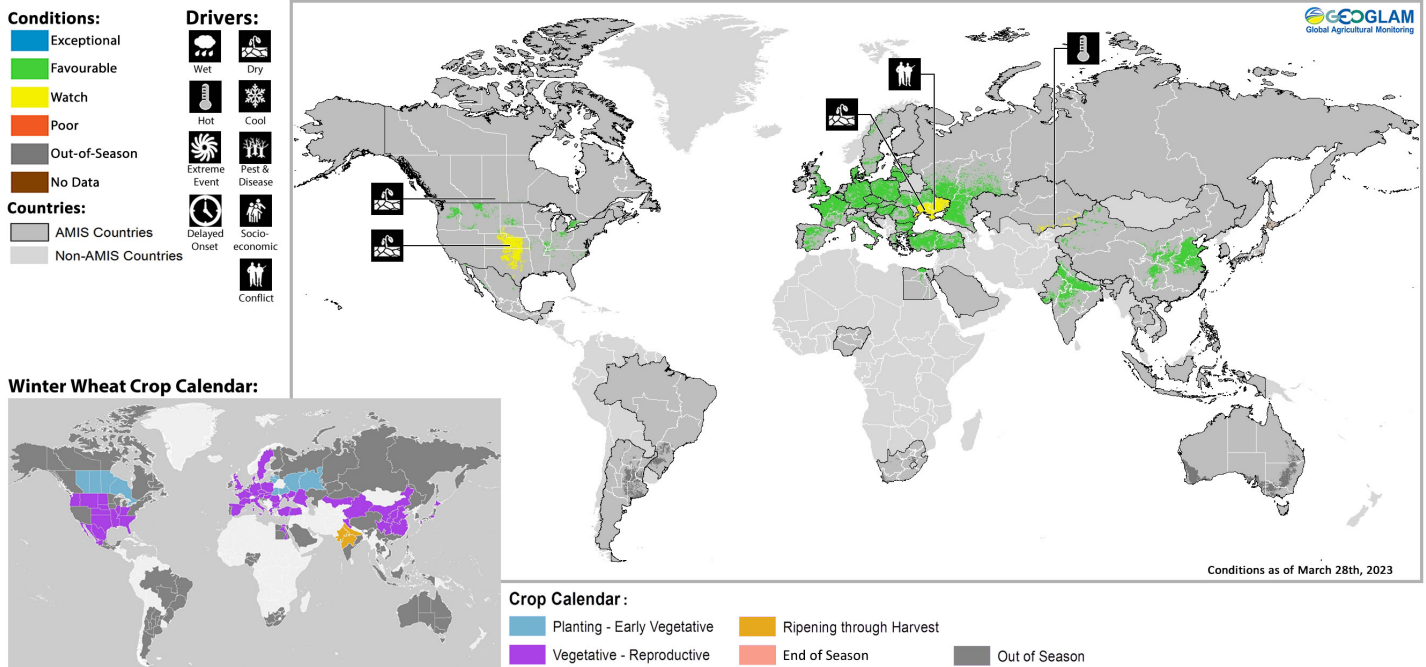
### Crop Season Nomenclature:

In countries that contain multiple cropping seasons for the same crop, the following chart identifies the national season name associated with each crop season within the Crop Monitor. Within the Crop Monitor for AMIS countries, the larger producing season (most recent 5 years) has been assigned to the first season.

Crop Season Nomenclature				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Argentina	Soybean	Spring-planted	Summer-planted	
Brazil	Maize	Summer-planted (larger producing season)	Spring-planted (smaller producing season)	
Canada	Wheat	Winter-planted	Spring-planted	
China	Maize	Spring-planted	Summer-planted	
China	Rice	Single-season	Late-season	Early-season
China	Wheat	Winter-planted	Spring-planted	
Egypt	Rice	Summer-planted	Nili season (Nile Flood)	
India	Maize	Kharif	Rabi	
India	Rice	Kharif	Rabi	
Indonesia	Rice	Wet-season	Dry-season	
Mexico	Maize	Spring-planted	Autumn-planted	
Nigeria	Maize	Main-season	Short-season	
Nigeria	Rice	Main-season	Off-season	
Philippines	Rice	Wet-season	Dry-season	
Russian Federation	Wheat	Winter-planted	Spring-planted	
Thailand	Rice	Wet-season	Dry-season	
United States	Wheat	Winter-planted	Spring-planted	
Viet Nam	Rice	Wet-season	Dry-season	

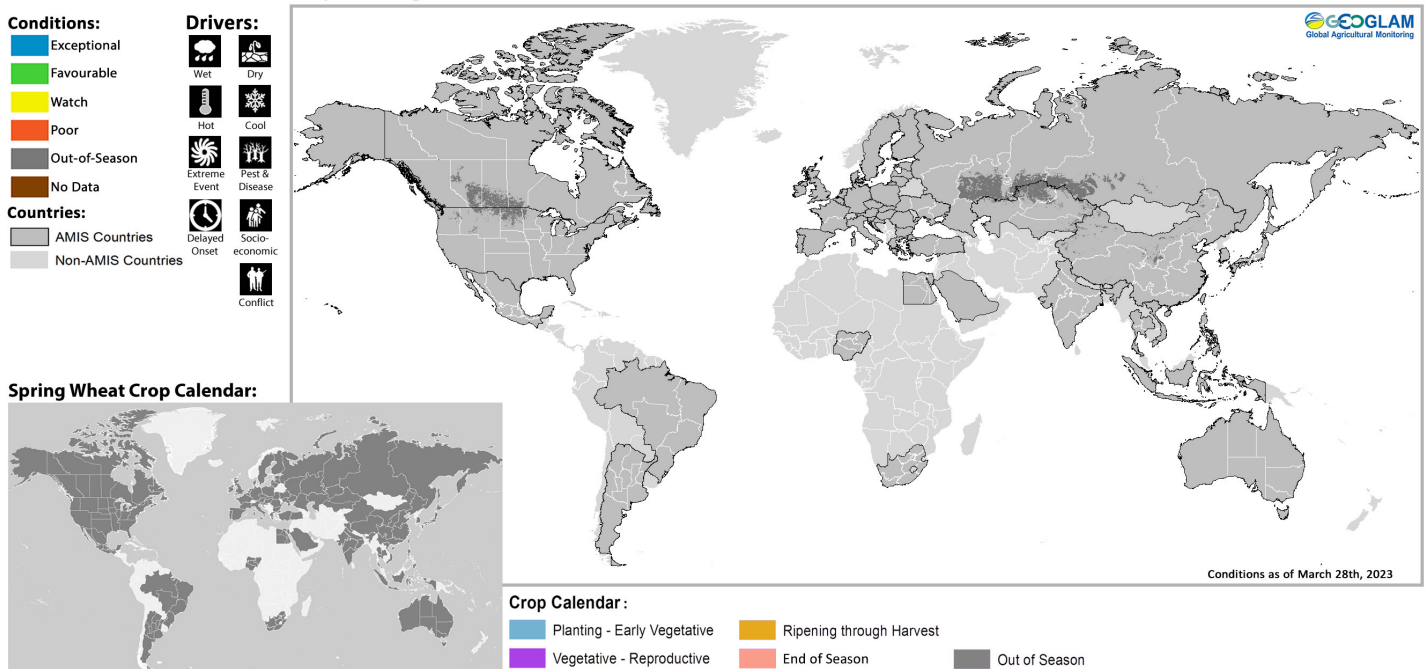
## Appendix 2: Crop Season-Specific Maps

### Winter Planted Wheat Conditions for AMIS Countries



Winter wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

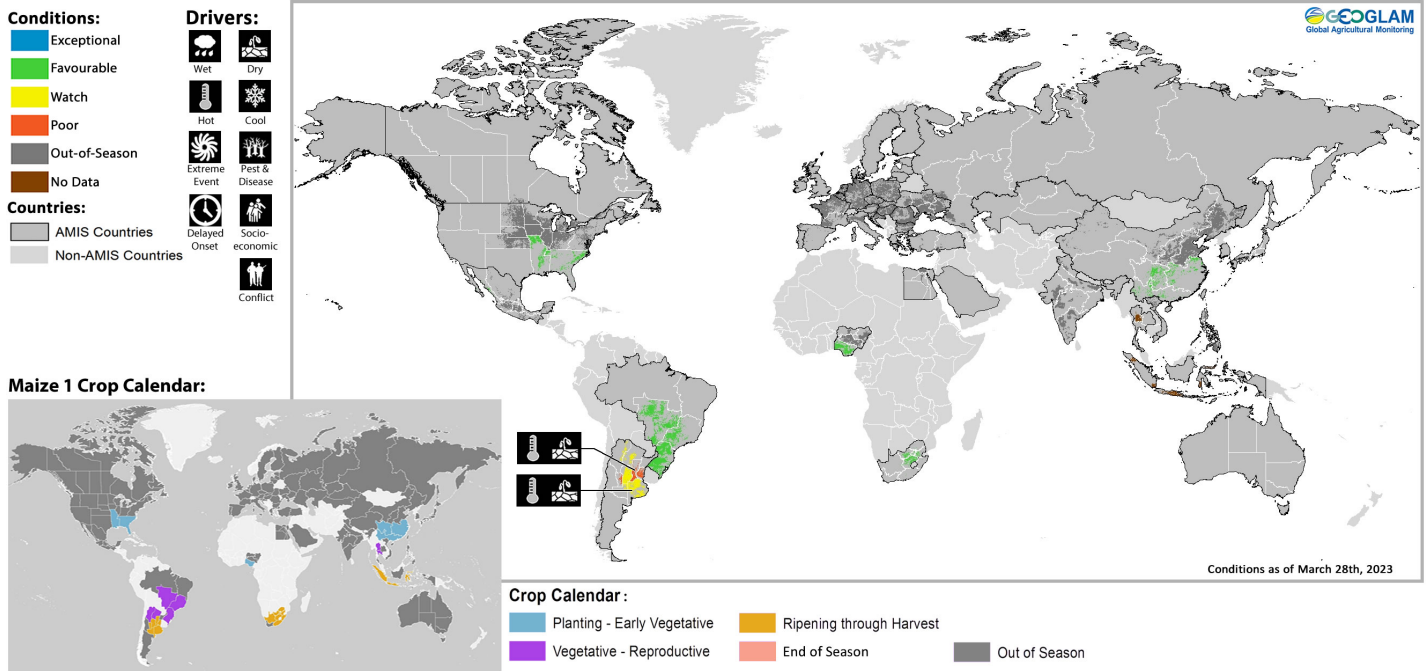
### Spring Planted Wheat Conditions for AMIS Countries



Spring wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

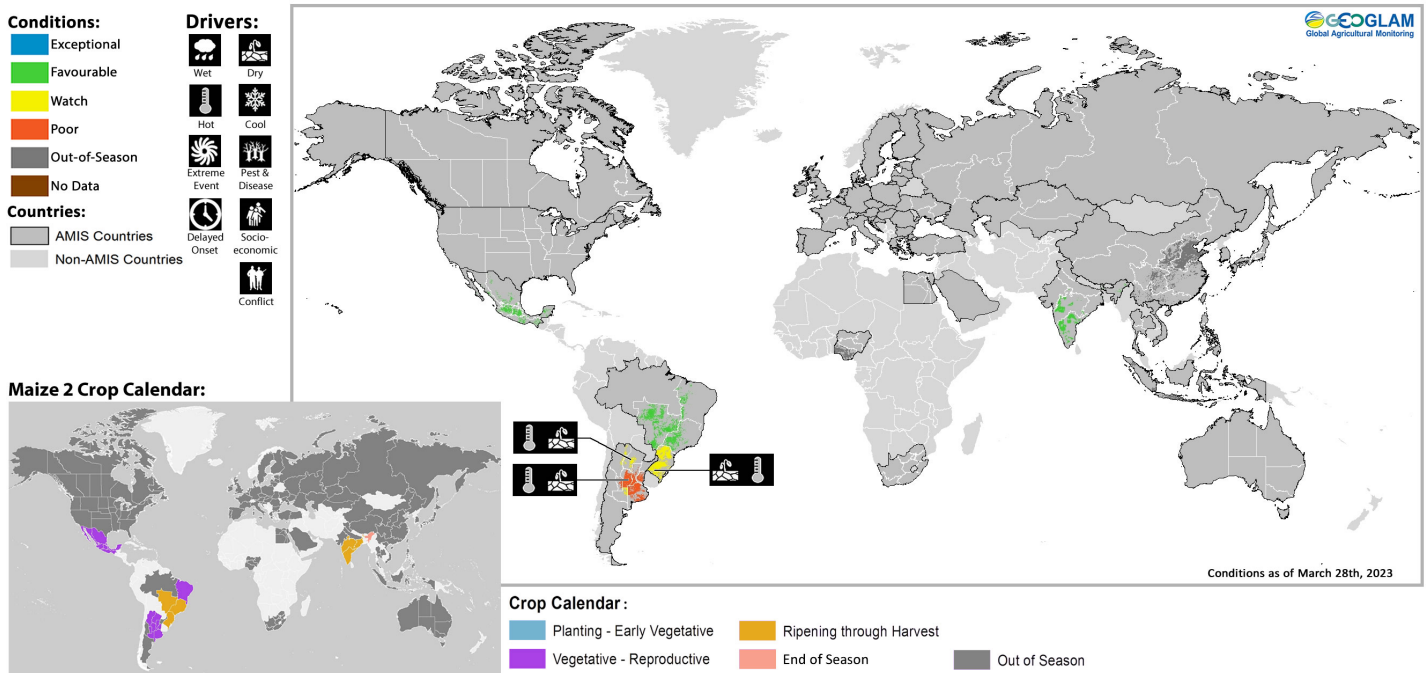
\* Assessment based on information as of April 28<sup>th</sup>

## Maize 1 Conditions for AMIS Countries



Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

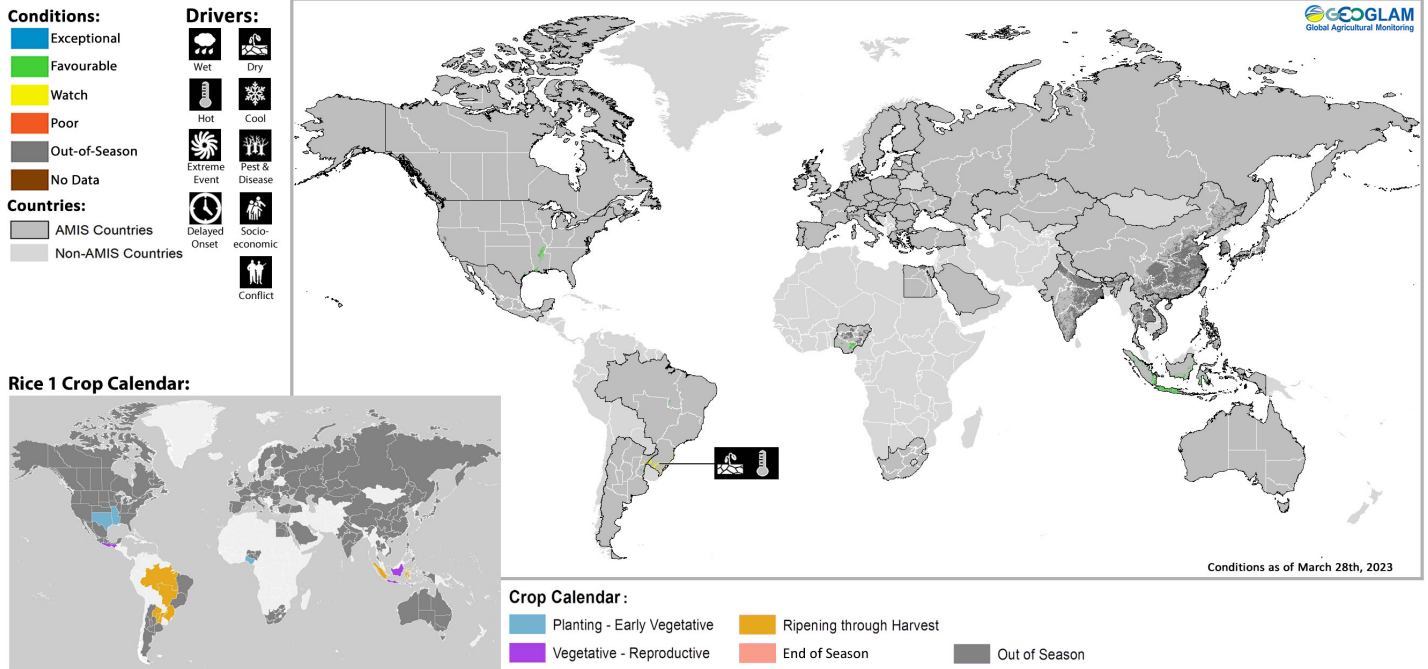
## Maize 2 Conditions for AMIS Countries



Maize 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

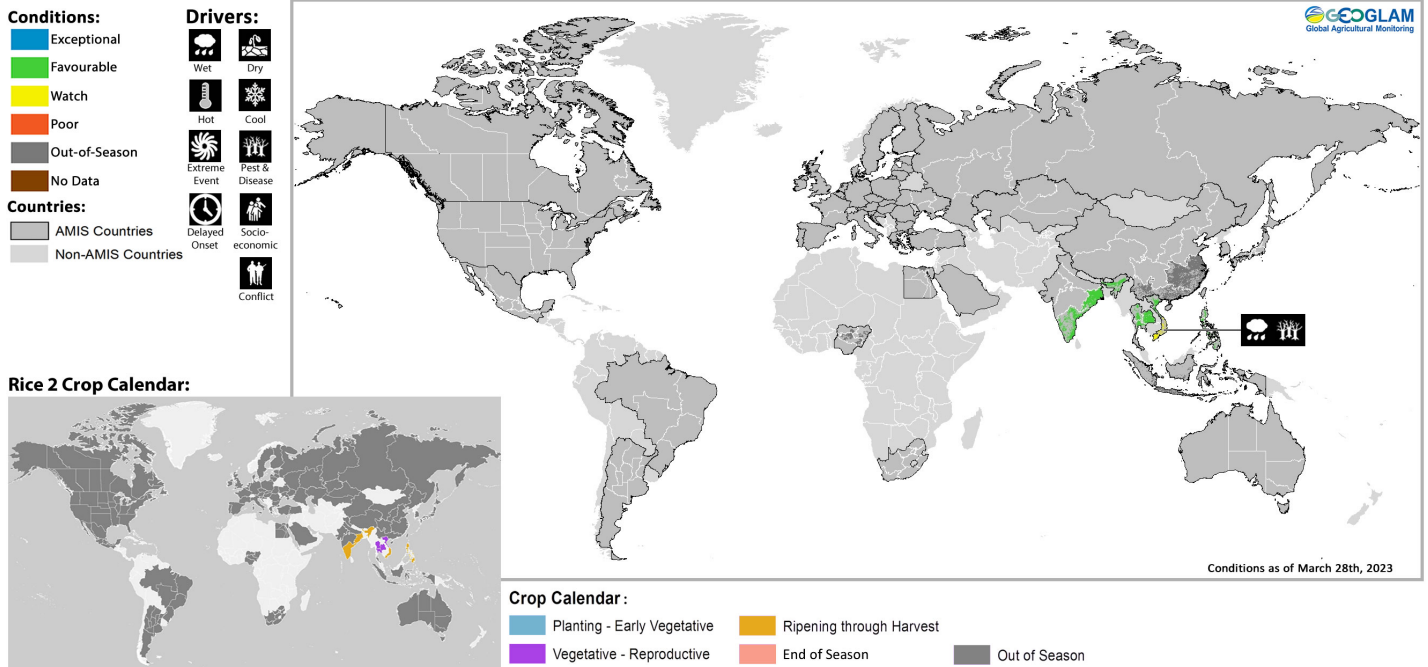
\* Assessment based on information as of April 28th

## Rice 1 Conditions for AMIS Countries



Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

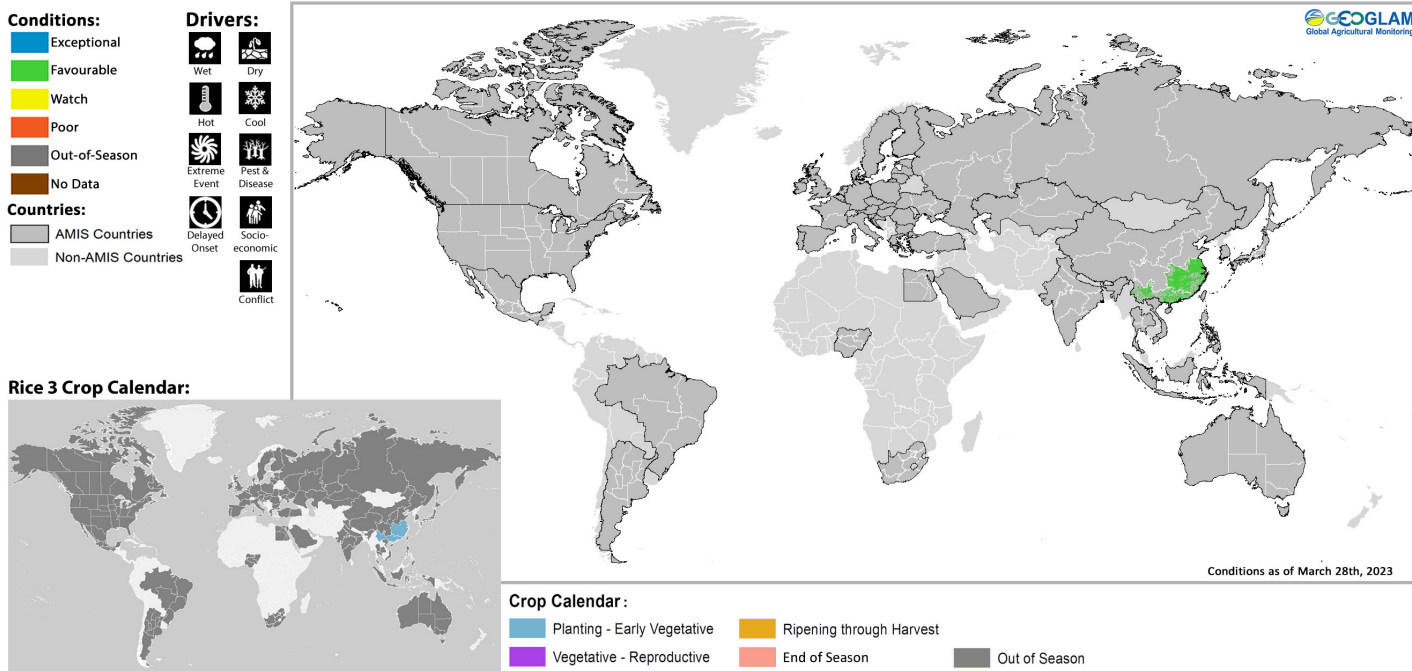
## Rice 2 Conditions for AMIS Countries



Rice 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

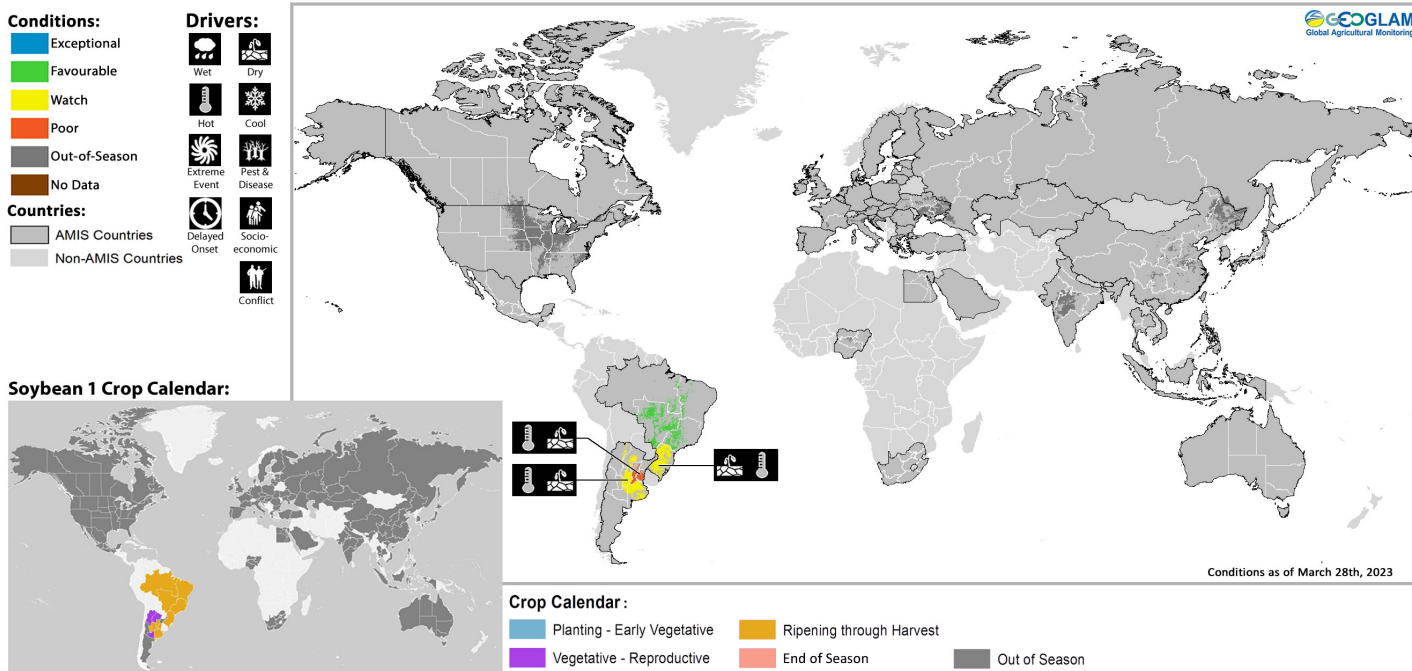
\* Assessment based on information as of April 28<sup>th</sup>

## Rice 3 Conditions for AMIS Countries



Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

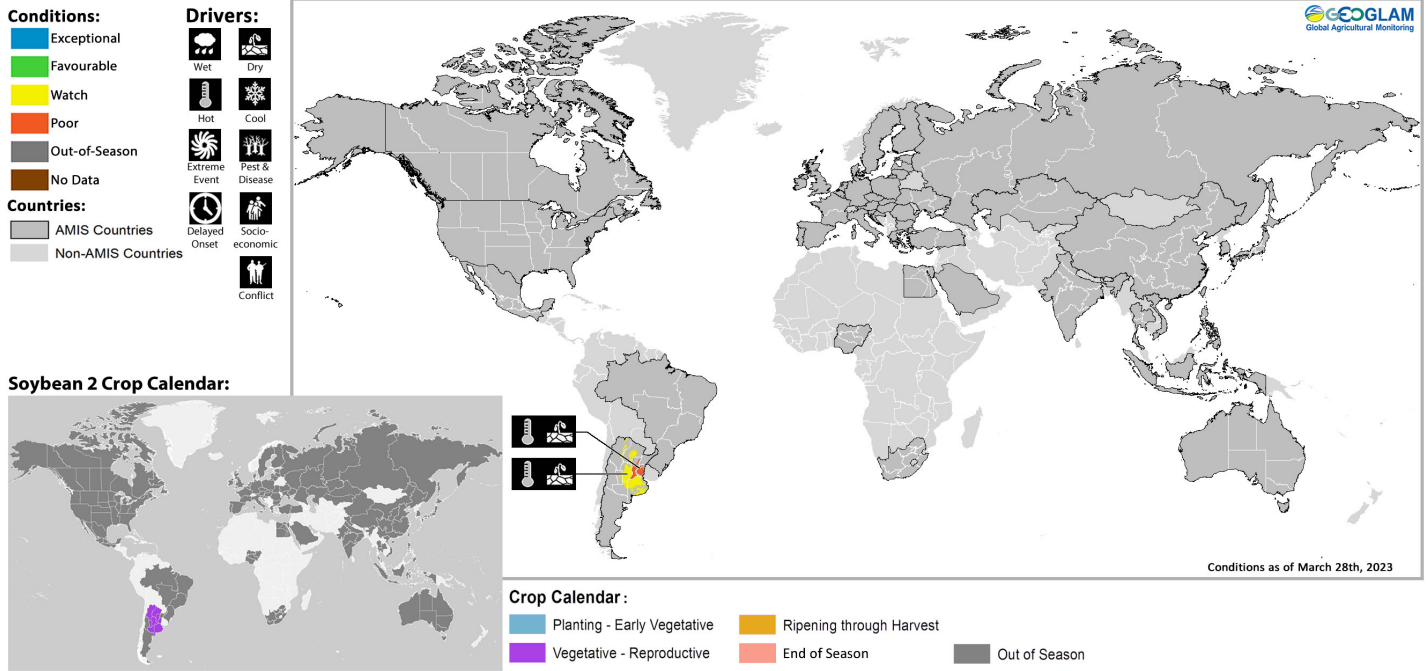
## Soybean 1 Conditions for AMIS Countries



Soybean 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

\* Assessment based on information as of April 28th

## Soybean 2 Conditions for AMIS Countries



Soybean 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

\* Assessment based on information as of April 28<sup>th</sup>



Prepared by members of the GEOGLAM Community of Practice  
Coordinated by the University of Maryland with funding from NASA Harvest  
Climatic Influences by Climate Hazards Center of UC Santa Barbara

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

*Photo courtesy of Brian Barker*

<https://cropmonitor.org/>

[@GEOCropMonitor](#)

#### Sources & Disclaimer

Sources and Disclaimers: The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners (in alphabetical order): Argentina (Buenos Aires Grains Exchange, MAGyP), Asia Rice Countries (AFSIS, ASEAN+3 & Asia RiCE), Australia (ABARES & CSIRO), Brazil (CONAB & INPE), Canada (AAFC), China (CAS), EU (EC JRC MARS), Gro Intelligence, India (NCFC), Indonesia (LAPAN & MOA), International (CIMMYT, FAO GIEWS, IFPRI & IRRI), Japan (JAXA, MAFF), Mexico (SIAP), Russian Federation (IKI), South Africa (ARC & CSIR & GeoTerraImage & SANSA), Thailand (GISTDA & OAE), Ukraine (NASU-NSAU & UHMC), USA (NASA, UMD, USGS – FEWS NET, USDA (FAS, NASS)), Viet Nam (VAST & VIMHE-MARD). The findings and conclusions in this joint multiagency 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 <https://cropmonitor.org>