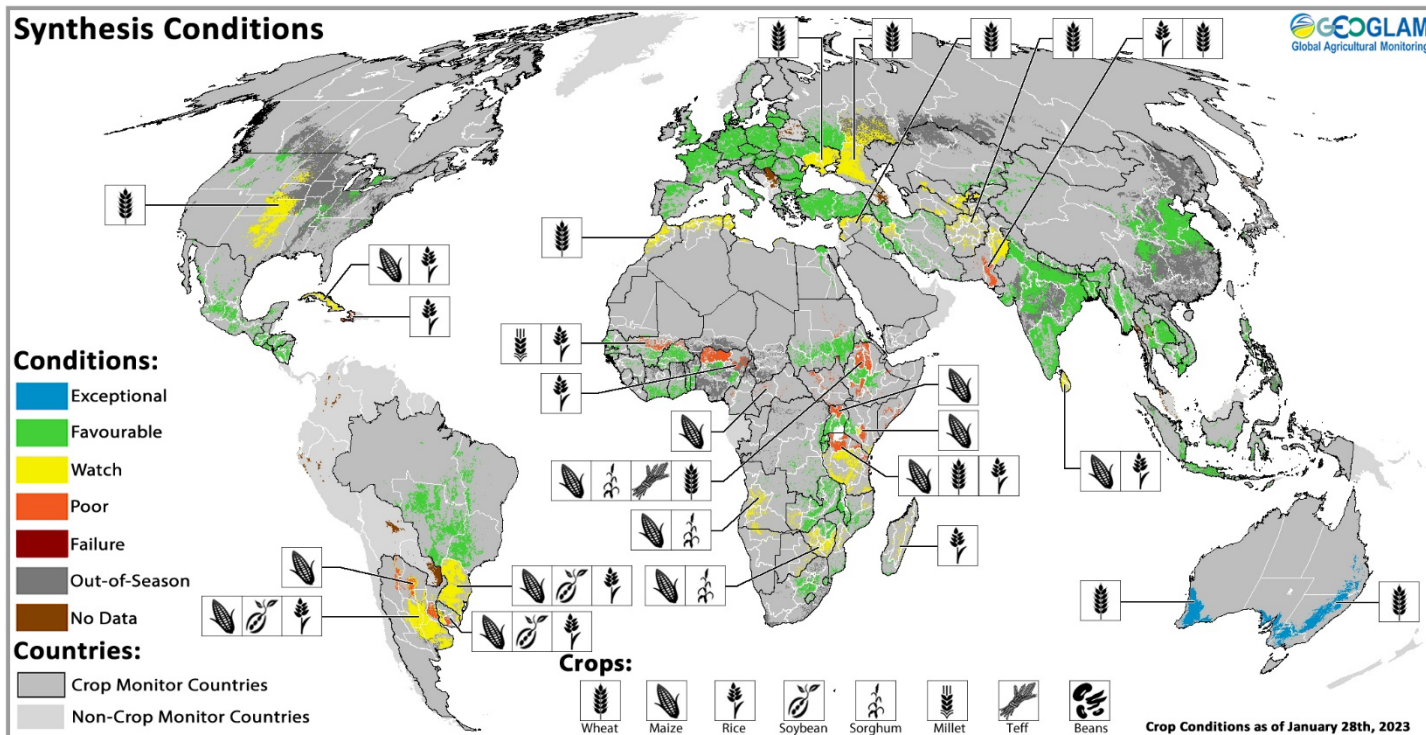


GEOGLAM Global Crop Monitor

Synthesized from the Crop Monitor for AMIS, the Crop Monitor for Early Warning, and direct submissions from individual countries



Crop condition map synthesizing information for all Crop Monitor crops as of January 28th. Crop conditions over the main growing areas are based on a combination of inputs including remotely sensed data, ground observations, field reports, and 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.**

	Wheat	Maize	Rice	Soybean	Legend:
Current Conditions					Positive
Compared to last month					Better
Compared to last year					Worse
					Mixed
					Negative

See Appendix I for detailed methodology description

Global Crop Overview

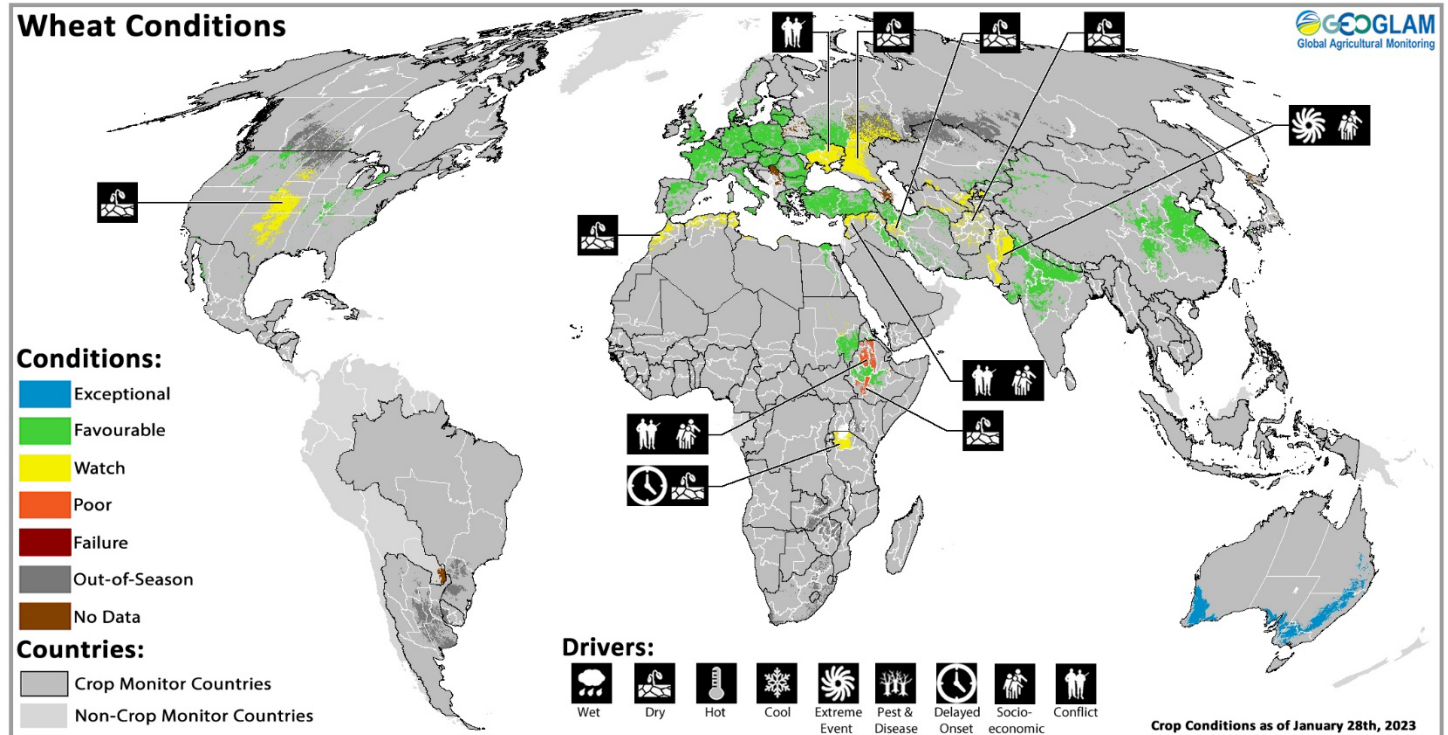
Global crop conditions at the end of January are overall mixed for wheat, maize, and soybeans, while positive for rice. For **wheat**, there are areas of concern in Ukraine, the Russian Federation, the US, MENA, and Central Asia. For **maize**, conditions are mixed in southern South America, East Africa, and parts of Southern Africa. For **rice**, overall conditions are generally favourable except for a few areas of concern in South America, Pakistan, the Caribbean, and Sub-Saharan Africa. For **soybeans**, hot and dry conditions persist in southern South America. The remaining crops are covered in the [CM4EW](#) publication.

Global Climate Influences

La Niña conditions are currently present. A transition to a neutral ENSO state is likely, with a 73% chance of ENSO neutral conditions in February-March-April, according to the IRI/CPC. ENSO neutral conditions are expected through July, after which El Niño conditions may develop, with a 51% chance of El Niño in August-September-October. While long-range forecasts made at this time of year can be unreliable, El Niño events can have widespread, global impacts. For further details see page 6.

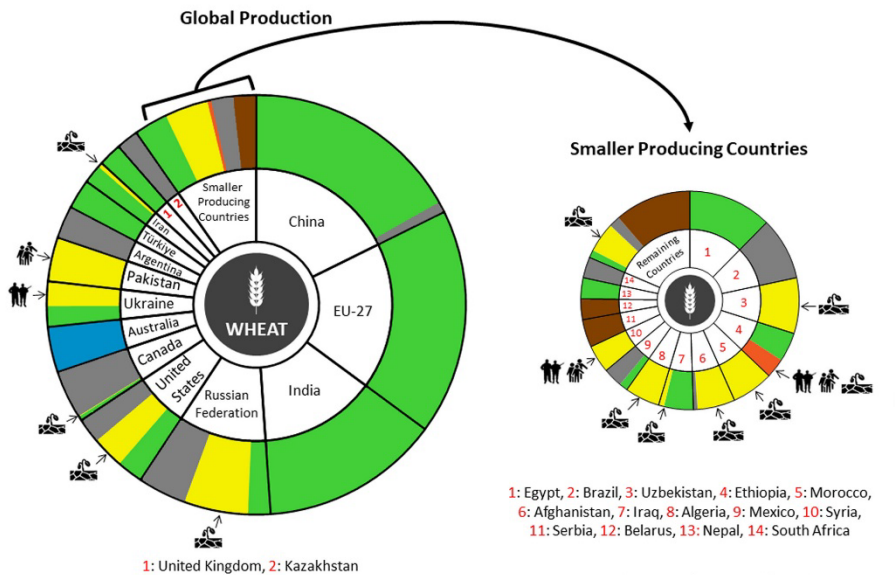
Source: UCSB Climate Hazards Center

WHEAT



Wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Conditions are based upon information as of January 28th.

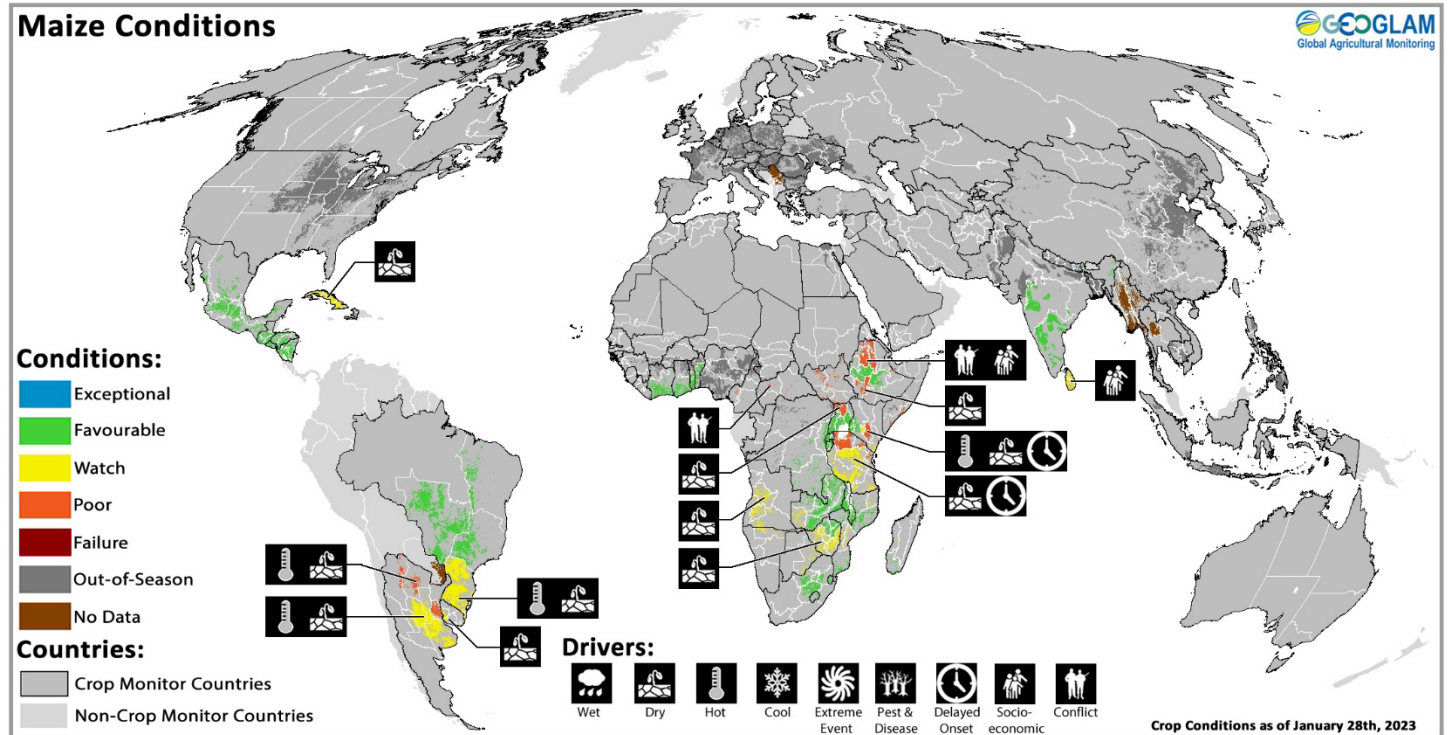
In **North America**, dry soil conditions persist across the US in the Great Plains from South Dakota to Texas. In Canada, winter wheat conditions are generally favourable except for dryness in Saskatchewan. In Mexico, sowing continues under favourable conditions. In **Europe**, the hardening process of winter wheat in the EU is partially completed in most of the regions, except for the very southern areas. Conditions at this point are favourable. In the UK, conditions are favourable. In Türkiye conditions are generally favourable despite recent drier-than-average conditions. In Ukraine, conditions are generally favourable, albeit with the ongoing disruptions/security concerns in the southern and eastern regions due to the war. In the Russian Federation, drier-than-average conditions are present over much of the winter wheat growing areas except in the westernmost regions. In **Central Asia**, there are expanding areas of concern across Afghanistan, Tajikistan, Turkmenistan, and Uzbekistan due to persistent dryness. In Kazakhstan, winter wheat is under favourable conditions. In **South Asia**, sowing is wrapping up in India under favourable conditions. There is an increase in the total sown area compared to the average. In Pakistan, impacts from the earlier flooding are delaying sowing operations and limiting access to inputs. In Nepal, conditions are favourable. In **East Asia**, winter wheat is under favourable conditions in China. In **Oceania**, harvesting is wrapping up in Australia with exceptional conditions across all growing regions despite excessive rainfall and flooding in the eastern states. In **MENA**, dry conditions continue to cause concern for wheat in Morocco, Algeria, and Tunisia while crops in Libya have improved from previous dry conditions. Conditions have been downgraded in northern Iraq and northwestern Iran due to low rainfall received while recent rainfall has improved vegetation conditions in Syria, albeit still dealing with the ongoing conflict. In **Sub-Saharan Africa**, harvesting is wrapping up in Ethiopia under mixed conditions due to dryness in the south and the conflict in the north. Eritrea's harvest wraps up under favourable conditions. Dryness persists in Tanzania.



For detailed description of the pie chart, please see box on page 5.

* Assessment based on information as of January 28th

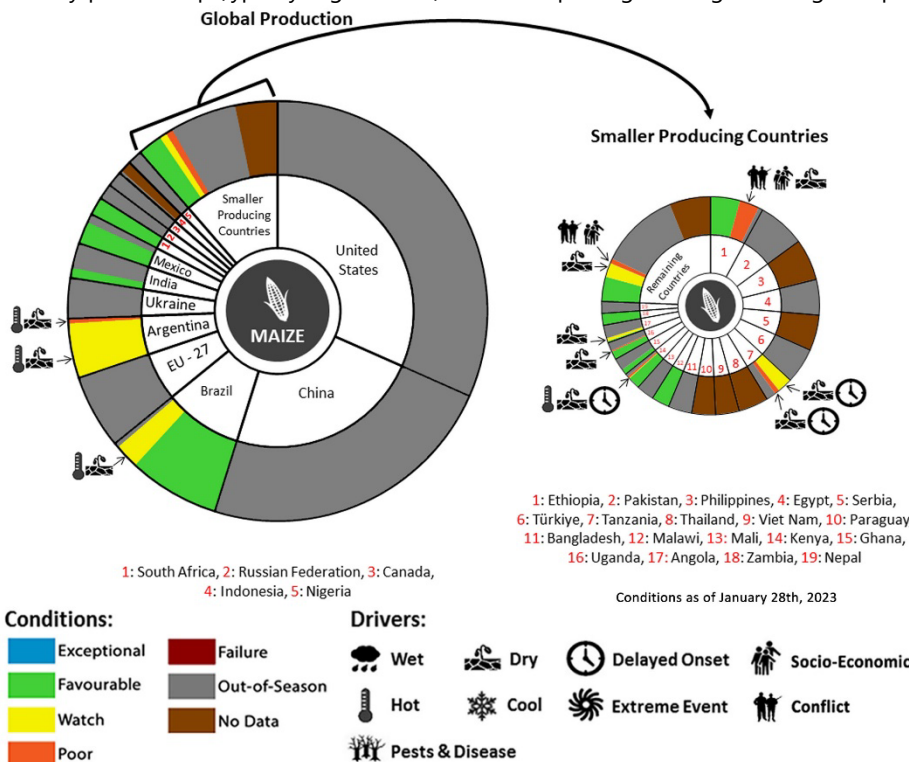
MAIZE



Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Conditions are based upon information as of January 28th.

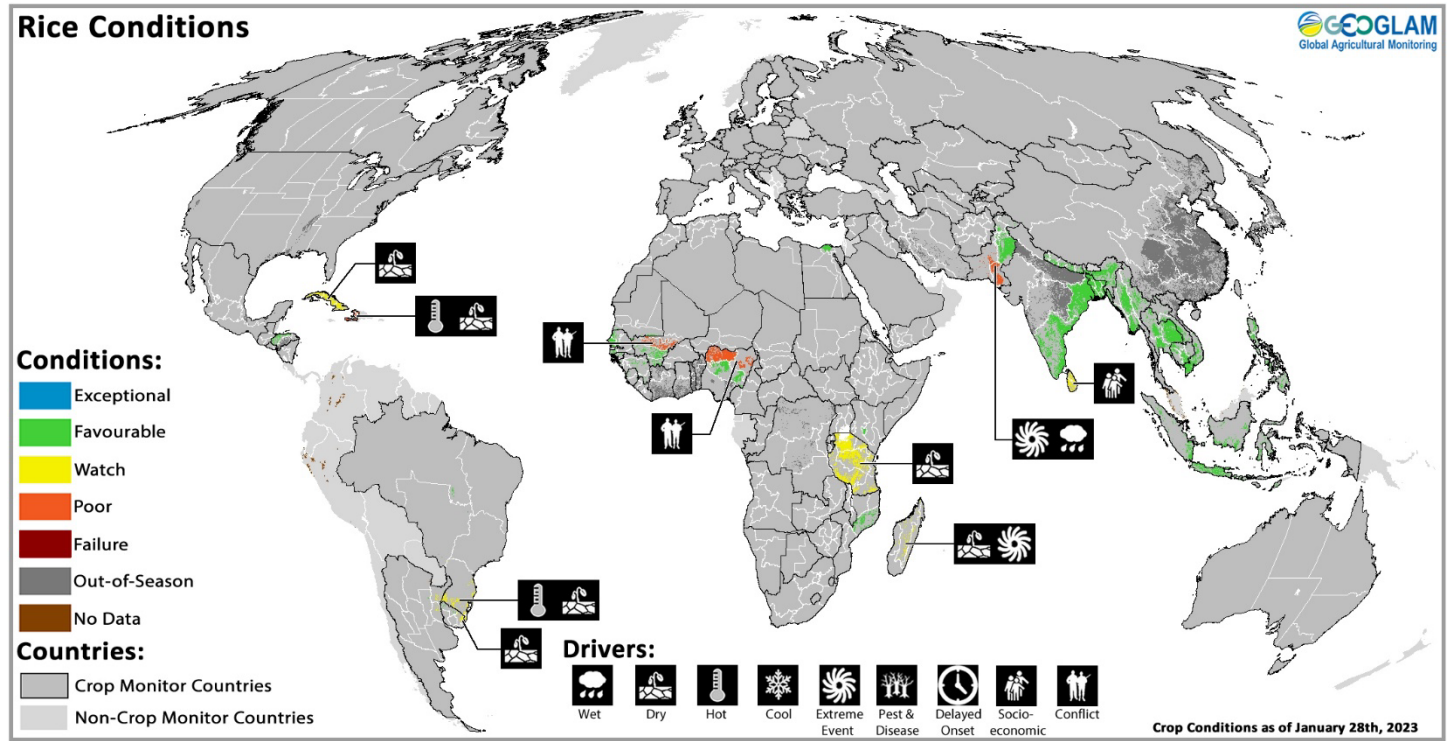
In **Central America & the Caribbean**, conditions are favourable in Mexico as the harvesting of the spring-summer crop (larger season) is wrapping up and the sowing of the autumn-winter crop (smaller season) is beginning. Harvesting of *Segunda/Postre* season cereals is complete or nearing completion in Nicaragua, El Salvador, Guatemala, and Honduras under favourable conditions despite previous storm damage in El Salvador and Guatemala, below-average rains in Nicaragua and Guatemala, and localized areas of dryness in El Salvador. In Cuba, sowing of the main season crop is ongoing with concerns for developing dry conditions. In **South America**, harvesting is beginning in Brazil for the spring-planted crop (smaller season) under favourable conditions, except in Rio Grande do Sul due to a lack of rain and high temperatures. Sowing is beginning for the summer-planted crop (larger season) under favourable conditions. In Argentina, conditions have worsened for the early-planted crop (typically larger season) due to the prolonged drought and high temperatures throughout December and January, which have

occurred during the key reproductive stage. The late-planted crop (typically smaller season) will require rainfall over the next few weeks to avoid yield losses. In Uruguay, conditions are dry and likely to lead to yield losses. In **South Asia**, sowing of the *Rabi* crop is wrapping up in India under favourable conditions. In Sri Lanka, input availability concerns continue for the *Maha* season crops. In **West Africa**, harvesting of second-season cereals is wrapping up in Cote d'Ivoire, southern Ghana, southern Togo, and southern Benin. In **East Africa**, harvesting of the *Meher* season in Ethiopia is wrapping up with below-average yields in the south due to persistent dryness and in the north due to the protracted conflict. In the south of the subregion, harvesting of second-season cereals finalized under mostly poor conditions in Somalia, Kenya, parts of Uganda, and the United Republic of Tanzania due to the impacts of a fifth consecutive dry season. In **Southern Africa**, conditions are mixed due to expanding areas of dryness over central and western parts of the subregion. In South Africa, recent rains have helped to support favourable conditions despite a mostly dry January.



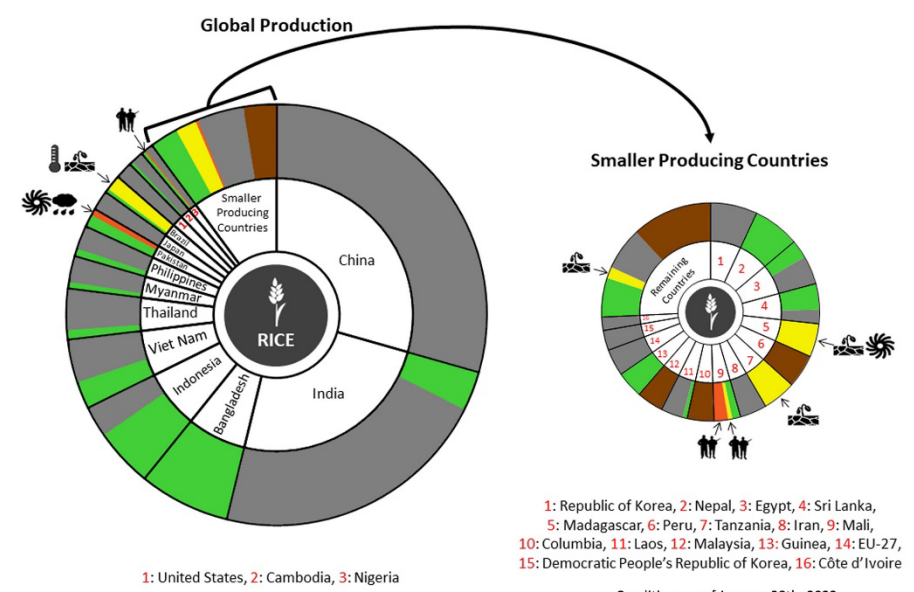
For detailed description of the pie chart, please see box on page 5.

RICE



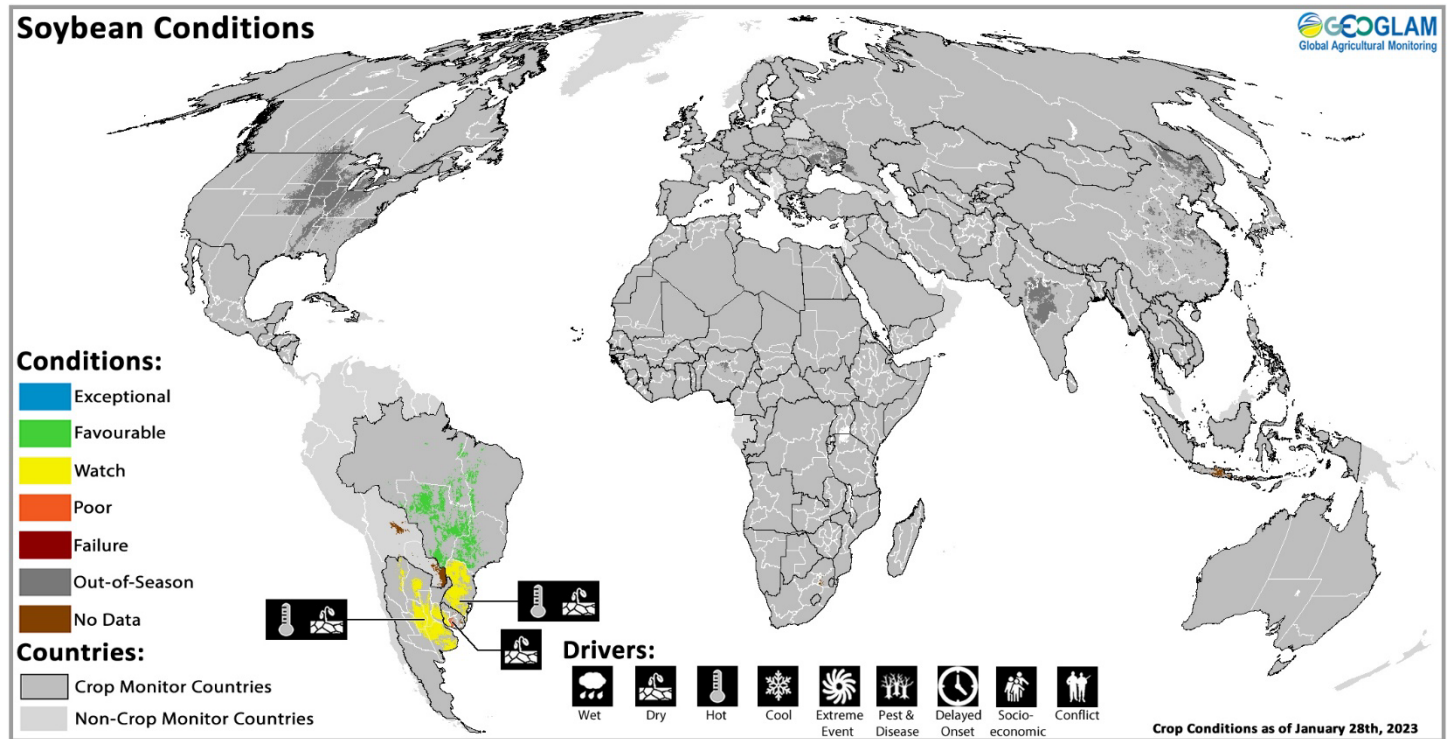
Rice crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Conditions are based upon information as of January 28th.

In **South Asia**, transplanting of the *Rabi* crop in India is progressing in the eastern parts of the country whereas, in the southern part, transplanting is wrapping up. In Pakistan, harvesting of *Kharif* season crops is wrapping up under mixed conditions due to flood water damages, the most affected areas were in Sindh and Balochistan. In Bangladesh, harvesting of rainfed *Aman* season crops is wrapping up under favourable conditions with a bumper crop expected. Sowing of the *Boro* season crops is ongoing under favourable conditions. In Nepal, harvesting is wrapping up under favourable conditions. In Sri Lanka, concern remains for the Maha crop due to agrochemical access constraints which are expected to negatively impact yields. In **Southeast Asia**, sowing of dry-season crops has begun in Viet Nam, Thailand, Myanmar, the Philippines, Cambodia, and Laos under favourable conditions. In Indonesia, sowing of wet-season rice continues into the fourth month with an increase in total sown area compared to last year due to plentiful rainfall. Harvesting of earlier sown wet-season rice is beginning under favourable conditions. In the **Americas**, harvesting of the spring-summer crop is wrapping up in Mexico. In Cuba, sowing of the main season crop is ongoing under dry conditions. In Haiti, conditions are poor for the second-season crops. In Brazil, conditions are mixed due to a lack of rain and high temperatures. In Uruguay, conditions are mixed due to limited irrigation water. In Argentina, conditions are mixed due to hot and dry conditions. In **MENA**, harvesting of the *Nili* season (Nile Flood) crop is wrapping up in Egypt under favourable conditions. In **Sub-Saharan Africa**, Mali and northern Nigeria continue to deal with the impacts of their internal conflicts, while there are dry conditions in Tanzania. Damage from Tropical Storm Cheneso in late January impacted areas between northeast and central-western Madagascar.



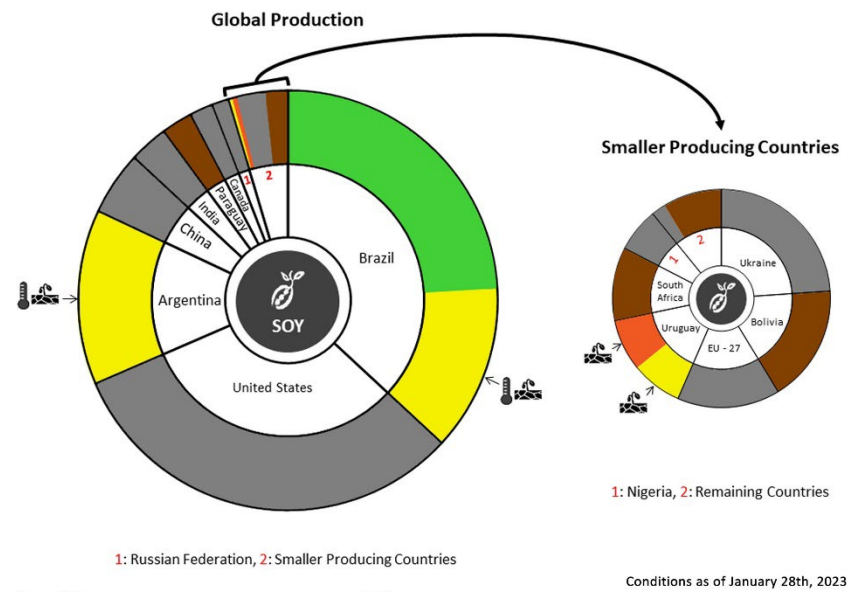
1: United States, 2: Cambodia, 3: Nigeria
 1: Republic of Korea, 2: Nepal, 3: Egypt, 4: Sri Lanka, 5: Madagascar, 6: Peru, 7: Tanzania, 8: Iran, 9: Mali, 10: Columbia, 11: Laos, 12: Malaysia, 13: Guinea, 14: EU-27, 15: Democratic People's Republic of Korea, 16: Côte d'Ivoire
 Conditions as of January 28th, 2023

SOYBEAN



Soybean crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Conditions are based upon information as of January 28th.

In **South America**, harvesting is beginning in Brazil under generally favourable conditions except for in the southern region due to high temperatures and prolonged dryness. There is an increase in the total sown area compared to last year. In Argentina, the early-planted crop (larger season) reached flowering during prolonged drought and hot conditions, which caused flowers and pods to drop, reducing yields. The late-planted crop (smaller season) has better prospects, but further rainfall and lower temperatures are needed to reverse yield reductions. The total sown area for both seasons is likely to have also been reduced as a result of a lack of rainfall during the sowing window. In Uruguay, a lack of rainfall and soil moisture is affecting crops and will possibly lead to reduced yields.



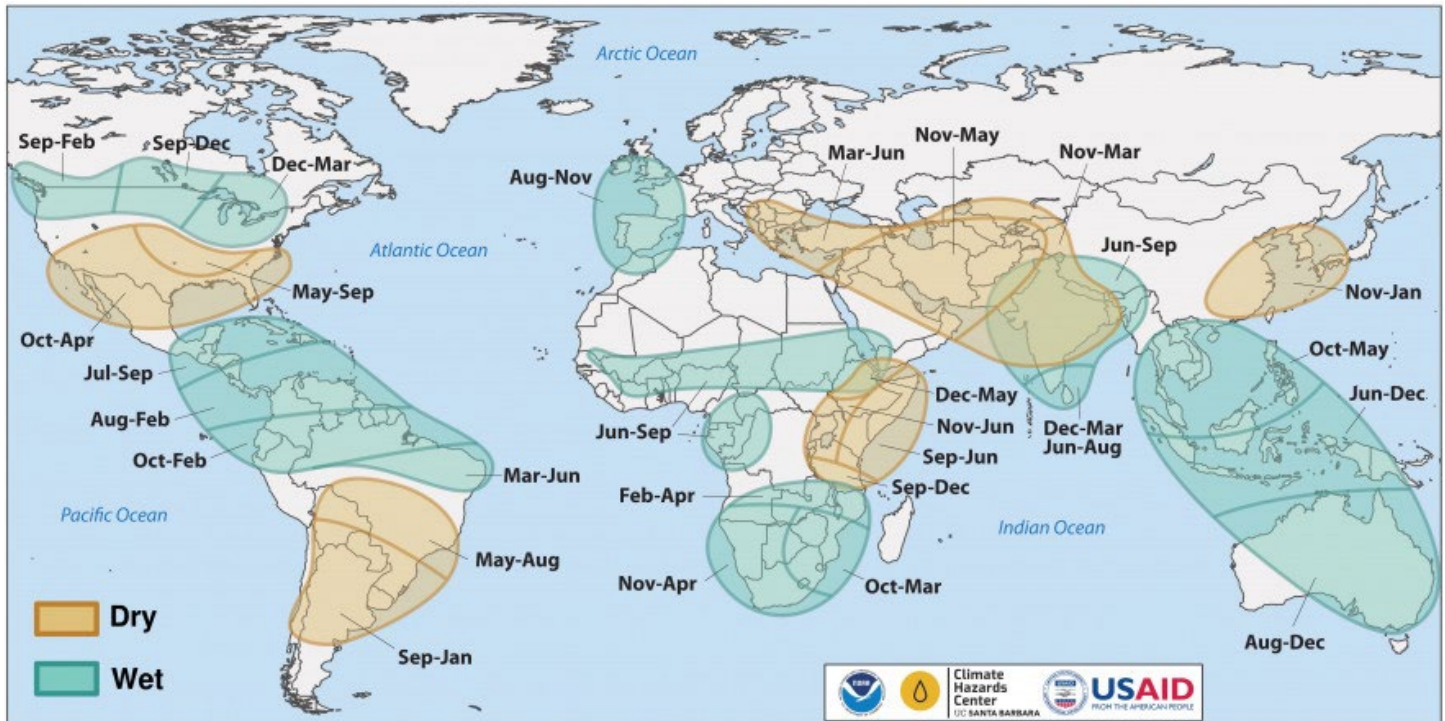
Pie Chart Description: Each slice represents a country's share of total Global production (5-year average). Main producing countries (representing 90-95 percent of production) are shown individually, with the remaining 5-10 percent grouped into the "Smaller Producing Countries" category. The proportion 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 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 (e.g., spring and winter wheat). When conditions are other than 'favourable', icons are added that provide information on the key climatic drivers affecting conditions.

Global Climate Influences

The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase. A transition to a neutral ENSO state is likely, with a 73% chance of ENSO neutral conditions in February-March-April, according to the IRI/CPC. ENSO neutral conditions are expected through July, after which El Niño conditions may develop, with a 51% chance of El Niño in August-September-October. While long-range forecasts made at this time of year can be unreliable, El Niño events can have widespread, global impacts.

Seasonal forecasts indicate La Niña precipitation impacts may continue through the next several months. While a transition to ENSO-neutral is anticipated during this time, atmospheric responses to La Niña can linger. For eastern East Africa, where multi-year drought continues to severely impact food security, yet another below-normal rainy season is likely, based on forecast La Niña-like sea surface temperature gradients during spring.

Source: UCSB Climate Hazards Center



Location and timing of likely above- and below-average precipitation related to La Niña events. Based upon observed precipitation during 21 La Niña 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](#)

Regional Outlooks

Both the two-week forecast (Figures 1 & 2) and the long-term February-March-April 2023 forecast (Figures 3 & 4) are influenced by the current La Niña phase.

In **North America**, the two-week forecast (Figures 1 & 2) indicates potential areas of below-average precipitation in Canada over parts of Saskatchewan, Manitoba, and Quebec. Areas of above-average precipitation are possible over the Pacific Northwest in the US and British Columbia in Canada. During the same time, temperatures are likely to be below-average across most of the central regions of the US and Canada along with the Northeast. Above-average temperatures are possible in the southeast of the US. The long-term February-March-April 2023 forecast (Figures 3 & 4) shows possible below-average precipitation across the majority of southwest and central US, while above-average precipitation in the Pacific Northwest and around the Great Lakes. During the same time, temperatures are likely to be above-average across much of the southern US. For further details, see the [CM4AMIS Regional Outlook for the United States](#).

In **Central America & the Caribbean**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation across central and western Mexico. During the same period, temperatures are potentially above-average in Mexico. The long-term February-March-April 2023 forecast (Figures 3 & 4) suggests likely below-average precipitation across central and northern Mexico. During this time, temperatures are likely to be above-average across Mexico, Cuba, Haiti, and the Dominican Republic.

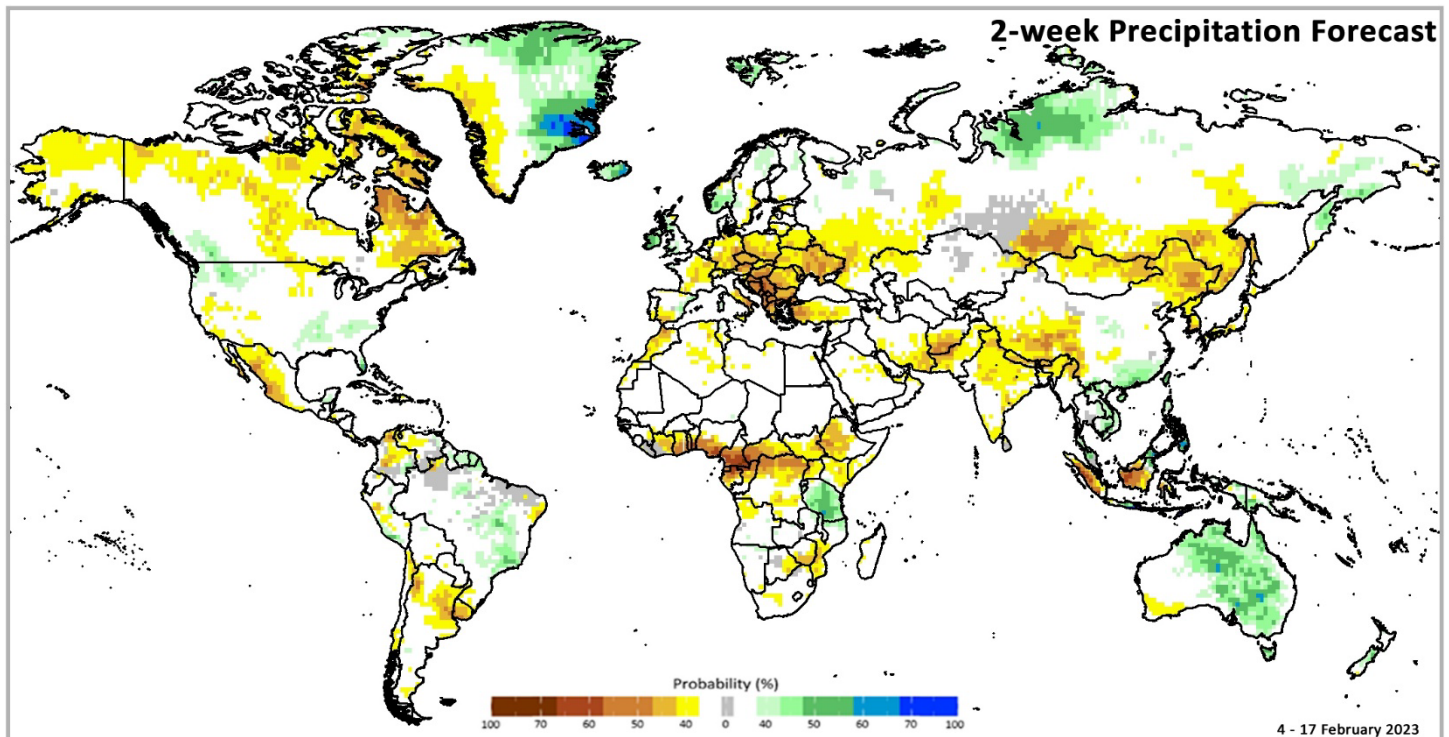


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 4 – 17 February 2023, issued on 27 January 2023. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

In **South America**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in central Columbia, central Peru, northern and southern Chile, central and eastern Argentina, and Uruguay. Above-average precipitation is likely over eastern Brazil. During this time, temperatures are likely to be above-average in eastern Brazil and southern Argentina, while below-average in eastern Venezuela, Guyana, Suriname, French Guiana, Bolivia, Paraguay, southern Brazil, and central Argentina. The long-term February-March-April 2023 forecast (Figures 3 & 4) suggests likely above-average precipitation across northern Brazil, while below-average precipitation in eastern Columbia and western Venezuela. During that time, temperatures will likely be above-average across Argentina, Uruguay, Paraguay, and southern Bolivia. For further details, see the [CM4AMIS Regional Outlooks for Argentina and Brazil](#).

In **Europe**, the two-week forecast (Figures 1 & 2) indicates likely below-average rainfall over southern Portugal, southern Spain, central France, southern Italy, Switzerland, Germany, Poland, Czechia, Austria, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Romania, Montenegro, Kosovo, Albania, North Macedonia, Bulgaria, Greece, western and central Türkiye, Ukraine, Moldova, Belarus, central and eastern Russian Federation. Above-average precipitation is likely in Iceland, Ireland, and southern Norway. During this time temperatures are likely to be above-average across most of Europe, while below-average across Türkiye, Georgia, and Armenia. The long-term February-March-April 2023 forecast (Figures 3 & 4) predicts possible below-average precipitation in western Türkiye. During the long-term forecast, temperatures will potentially be above-average across all of Europe.

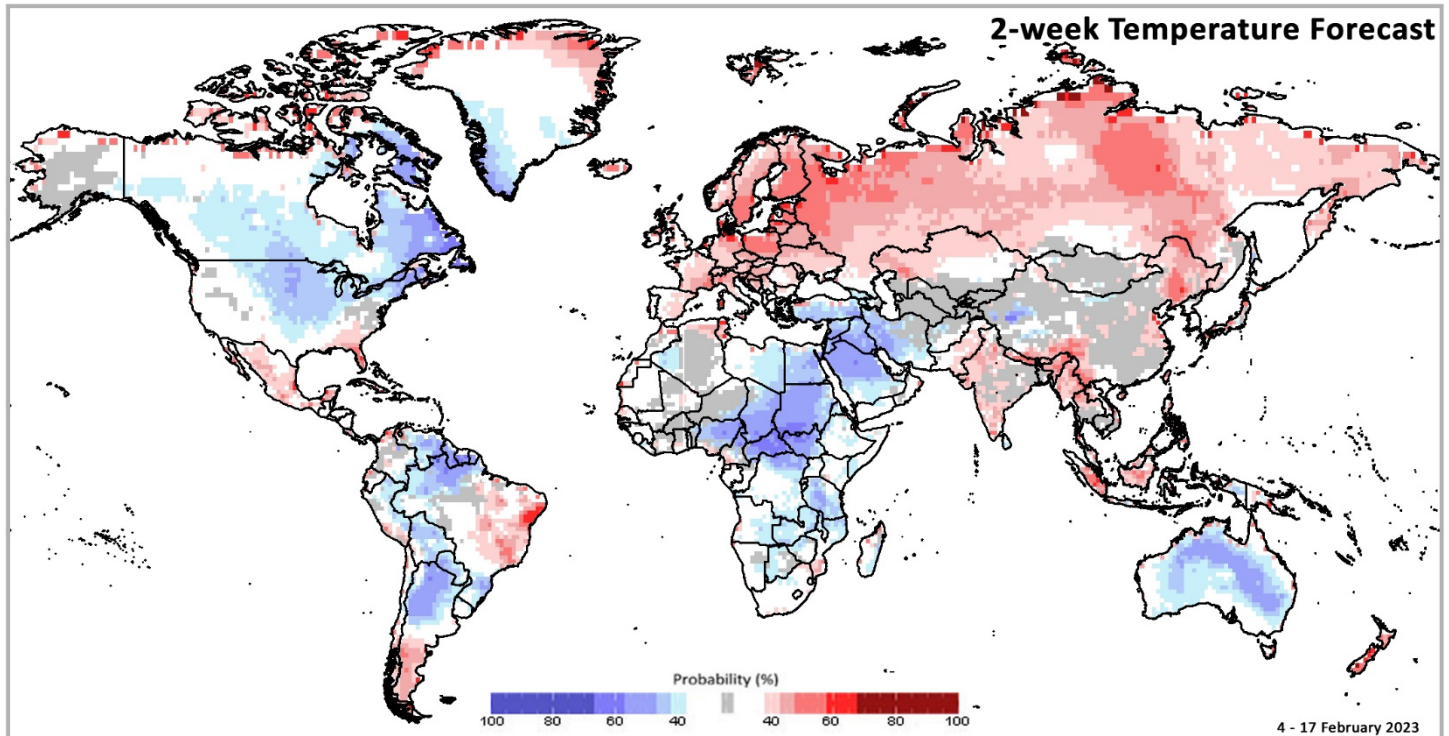


Figure 2: IRI SubX Temperature Biweekly Probability Forecast for 4 – 17 February 2023, issued on 27 January 2023. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

In **MENA**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in Morocco and southeast Iran. During this time, temperatures are likely to be below-average across Egypt, Syria, Lebanon, Jordan, northern Saudi Arabia, Iraq, and western Iran. The long-term February-March-April 2023 forecast (Figures 3 & 4) predicts likely near-average precipitation across the region. During this time temperatures are possibly to be above-average across most of the region, especially along the Mediterranean coasts. For further details, see the [CM4EW](#) regional outlook for MENA.

In **Sub-Saharan Africa**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation over Côte d'Ivoire, Ghana, Togo, southern Benin, southern Nigeria, southern Cameroon, Equatorial Guinea, Gabon, the northern Republic of Congo, the Central African Republic, the northern Democratic Republic of Congo, South Sudan, Ethiopia, Uganda, Kenya, southern Zimbabwe, and central Mozambique, while above-average in Tanzania and northern Mozambique. At the same time, temperatures are likely to be below-average in Nigeria, Chad, northern Cameroon, the Central African Republic, Sudan, South Sudan, the northern Democratic Republic of Congo, and Tanzania. For the long-term February-March-April 2023 forecast (Figures 3 & 4), precipitation is likely to be below-average over Guinea, Sierra Leone, Liberia, Côte d'Ivoire, and Tanzania, while above-average over Namibia, Botswana, South Africa, and Madagascar. During this time, temperatures are likely to be above-average across most countries except for in southern Africa. For further details, see the [CM4EW](#) regional outlooks for Southern Africa.

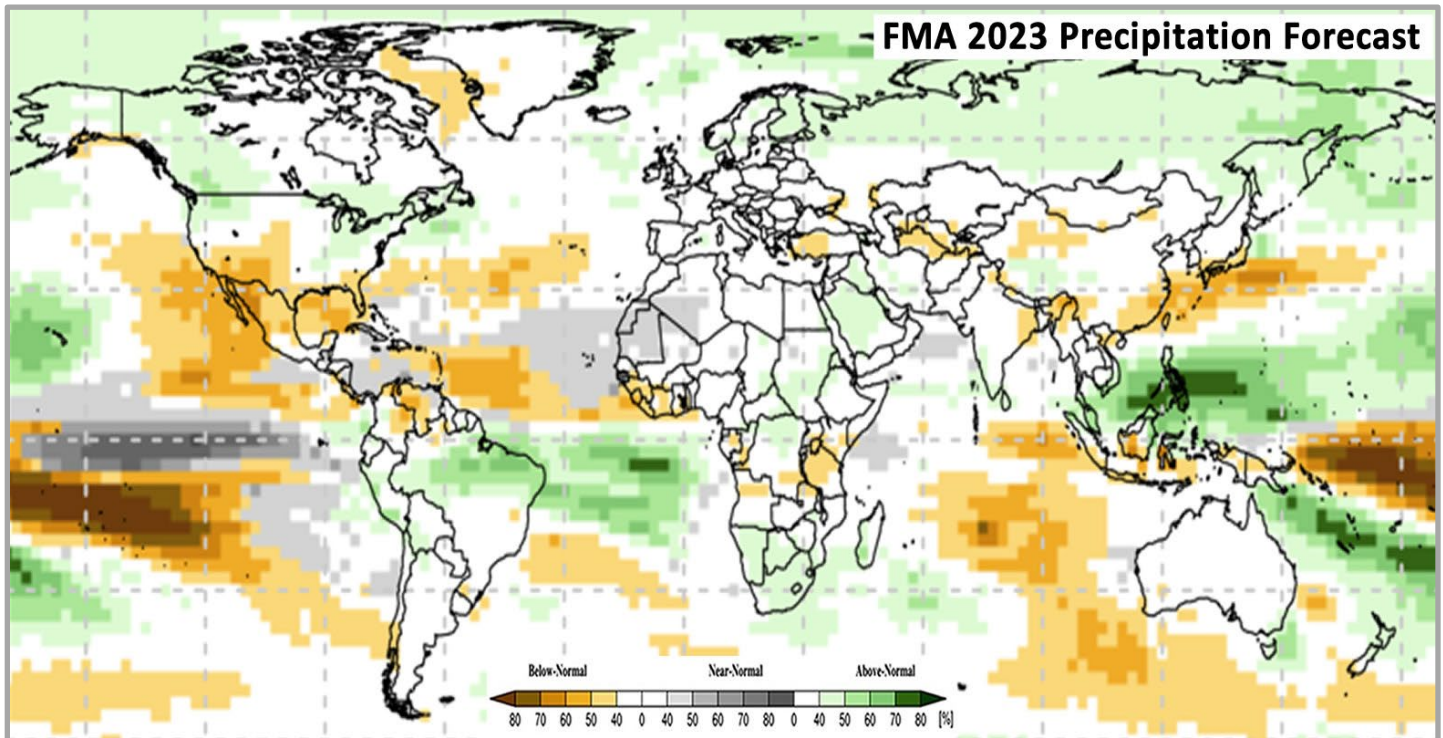


Figure 3: Probabilistic forecast for most-likely February-March-April (FMA) 2023 rainfall tercile, based on January conditions. The white colour indicates that there is no dominant category across the model forecasts. Source: [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](https://www.wmo.int/en/forecasting/lead-centre-for-long-range-forecast-multi-model-ensemble)

In **Central Asia**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in the northeast and northwest Kazakhstan, and southern Afghanistan. During this time, temperatures are likely to be below-average in northern Kazakhstan. The long-term February-March-April 2023 forecast (Figures 3 & 4) predicts likely below-average precipitation in Turkmenistan. At the same time, temperatures have a low chance of being above-average across the entire region. For further details see the [CM4EW](#) regional outlook for Central and Southern Asia.

In **South Asia**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in central and western Pakistan, northern and central India, Nepal, and Bhutan. During this time, temperatures are likely to be above-average in central Pakistan, western and southern India, Nepal, Bhutan, and Bangladesh. The long-term February-March-April 2023 forecast (Figures 3 & 4) indicates likely below-average precipitation in eastern India. During this time, temperatures are likely to be above-average across the region, particularly in northeast India. For further details see the [CM4EW](#) regional outlook for Central and Southern Asia.

In **East Asia**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in parts of western and northeast China, the Democratic Republic of Korea, the Republic of Korea, southern Japan, northern Mongolia, and the eastern Russian Federation. During this time, temperatures are likely to be above-average in southwest and northeast China and parts of Japan. The long-term February-March-April 2023 forecast (Figures 3 & 4) suggests likely below-average precipitation over southern China and southern Japan. During that time, temperatures are likely to be above-average across the entire region, particularly in central China and northern Japan.

In **Southeast Asia & Oceania**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation in northern Myanmar and Indonesia, while above-average over northern Laos, Cambodia, Viet Nam, the Philippines, southern Indonesia, southern Papua New Guinea, central and eastern Australia, and central New Zealand. During this time, temperatures are likely to be above-average in Myanmar, northern Thailand, western Laos, the Philippines, Indonesia, and New Zealand, while below-average across much of Australia. The long-term February-March-April 2023 forecast (Figures 3 & 4) precipitation is predicted to be above-average across southern Viet Nam, the Philippines, and Malaysia, while below-average in northern Myanmar, Indonesia, and Papua New Guinea. During the same time, temperatures are likely to be above-average in Myanmar, eastern Indonesia, Papua New Guinea, Tasmania in Australia, and New Zealand, while below-average in southern Viet Nam and Cambodia.

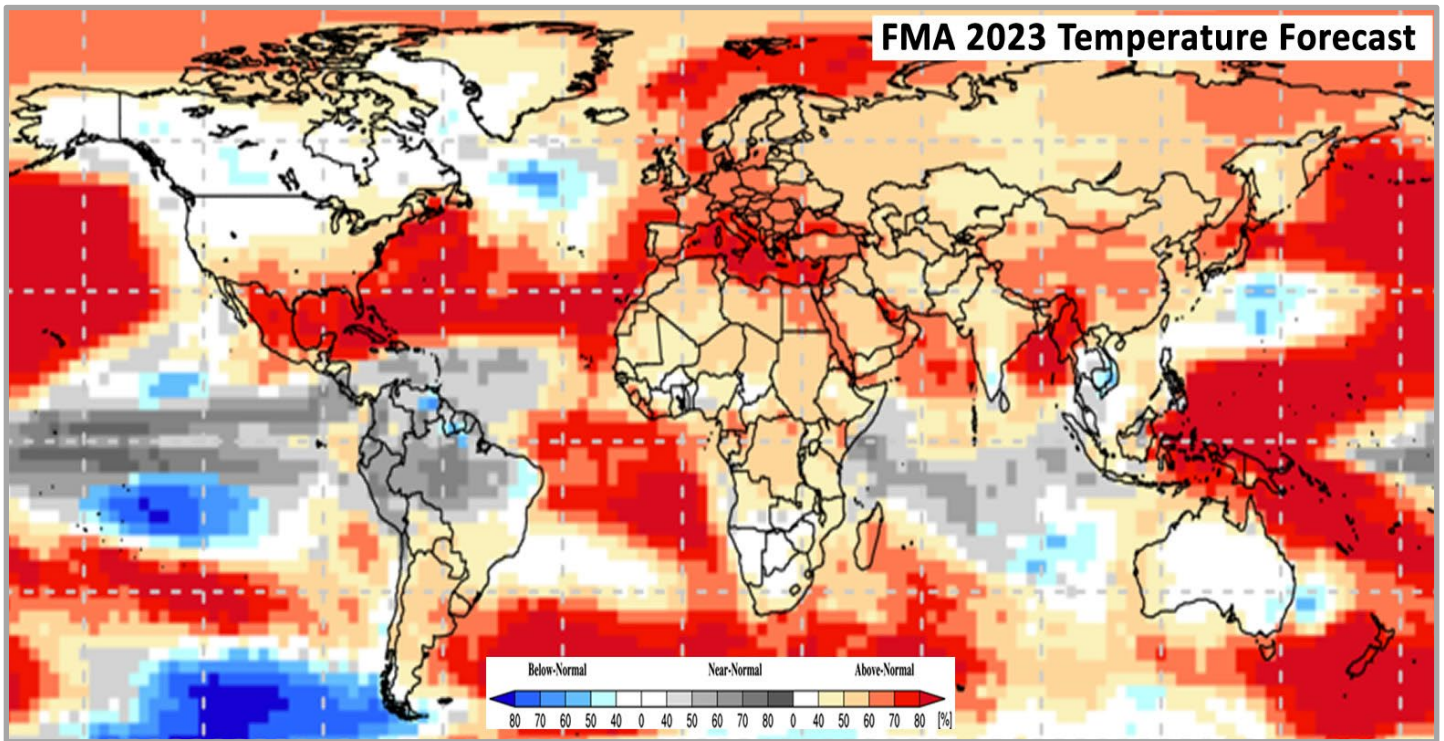


Figure 4: Probabilistic forecast for most-likely February–March–April (FMA) 2023 temperature tercile, based on January conditions. The white colour indicates that there is no dominant category across the model forecasts. Source: [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](https://www.wmo.int/en/lead-centre-for-long-range-forecast-multi-model-ensemble)



The Crop Monitor is a part of GEOGLAM, a GEO global initiative.
Prepared by members of the GEOGLAM Community of Practice
Coordinated by the University of Maryland with funding from NASA Harvest
Synthesized from the Crop Monitor for AMIS, the Crop Monitor for Early Warning, and direct submissions from individual countries

<https://cropmonitor.org/>

@GEOCropMonitor

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 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 more than 5-25% below-average. This is only used when conditions are not likely to be able to recover, and an 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, environmental, and anthropomorphic 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: 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

Pest & Disease: Destructive insects, birds, animals, or plant disease.

Socio-economic: Social or economic factors that impact crop conditions (i.e., policy changes, agricultural subsidies, government intervention, etc.)

Conflict: Armed conflict or civil unrest that is preventing the planting, working, or harvesting of the fields by the farmers.



Crop Condition Indicators:

Current Crop Conditions: The current crop condition indicators are based on only the crops that are currently in season. Crops with "No Data" are not counted. The crop condition is considered "Positive", with a green-coloured crop symbol, when 85-100% of active crops are currently under favourable to exceptional conditions. The crop conditions are considered "Mixed", with an orange-coloured crop symbol, when only 70-85% of active crops are under favourable to exceptional conditions. The crop conditions are considered "Negative", with a dark red-coloured crop symbol, when only 0-70% of active crops are under favourable to exceptional conditions.

Crop Condition Comparisons: Crop condition changes are measured between the current month's conditions compared to the previous month and exactly one year ago. Only active crops are considered. If there is a -5% change in global crop conditions, then the crop conditions are considered "Deteriorating" (indicated by a down arrow). If there is a +5% change in global crop conditions, then the crop conditions are considered "Improving" (indicated by an up arrow). Otherwise, crop conditions are considered "Stable" (indicated by a dash).