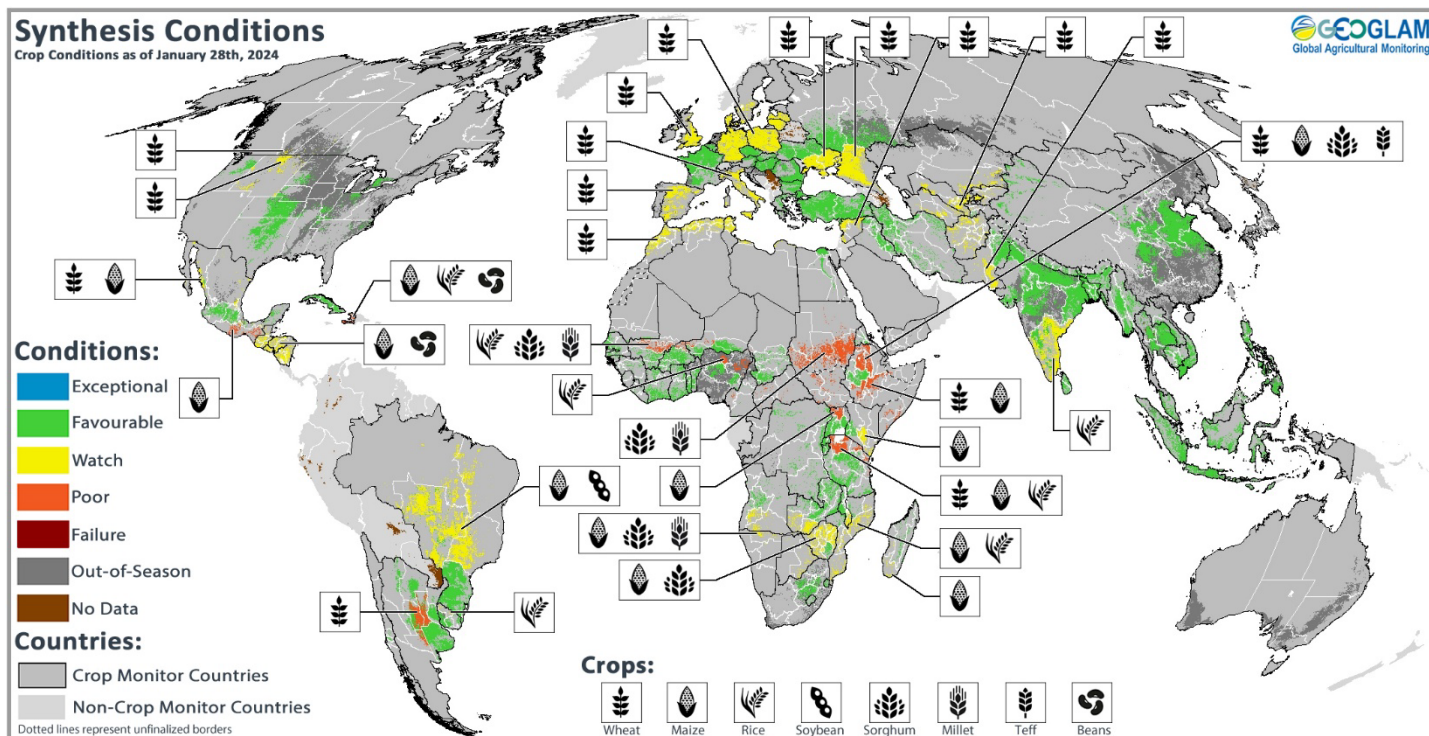


GEOGLAM Global Crop Monitor

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 labelled 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					Mixed
					Negative
					Similar
					Worse

See Appendix I for detailed methodology description

Global Crop Overview

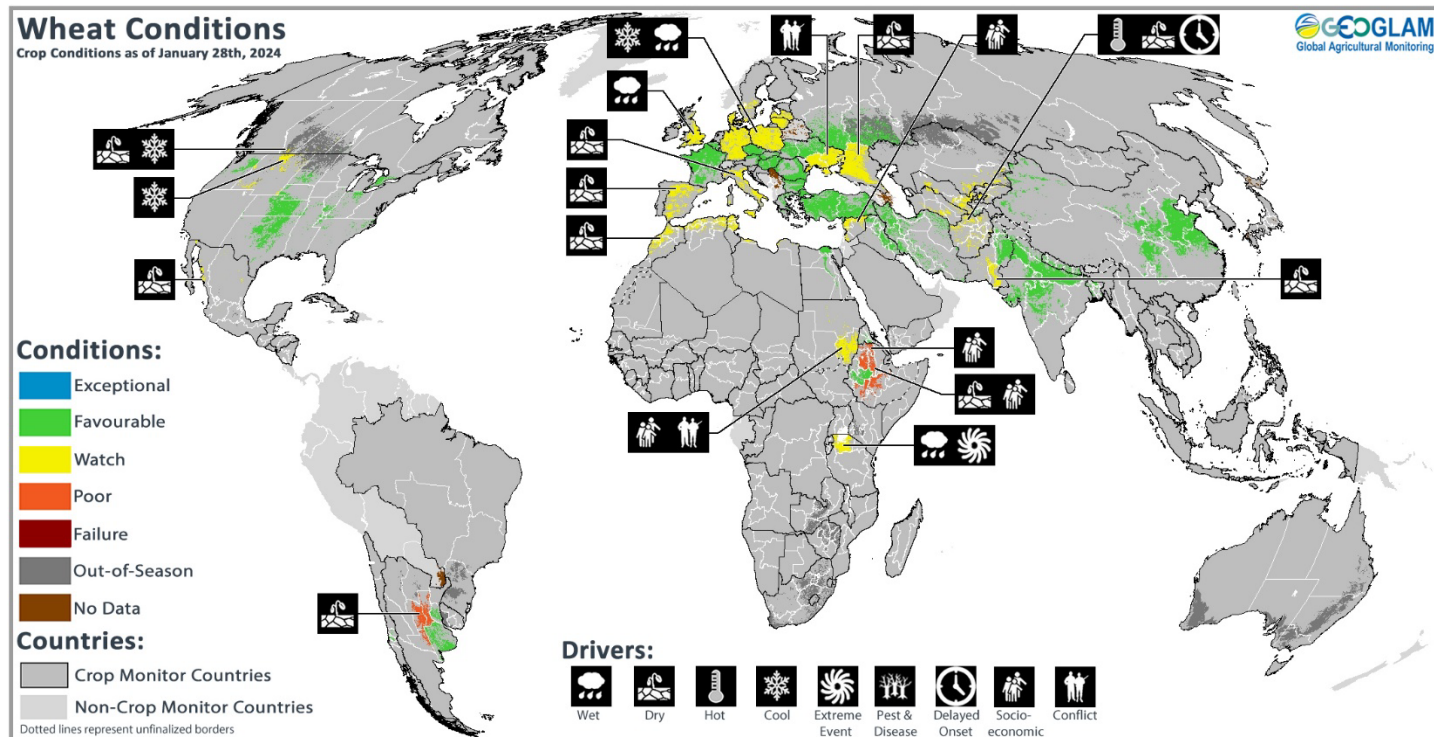
Global crop conditions at the end of January are positive for maize and rice, mixed for wheat, and negative for soybeans. For **wheat**, areas of concern are in Europe, Ukraine, the Russian Federation, and Central Asia. For **maize**, conditions are mostly favourable in South America as dry conditions develop in Central America and Southern Africa. For **rice**, conditions are generally favourable except for a delay in transplanting in southern India. For **soybeans**, conditions are favourable in Argentina, however, hot and dry weather has impacted crops in Brazil. The remaining crops are covered in the [CM4EW](#) publication.

Global Climate Influences

The ongoing strong El Niño event is forecast to weaken during the next several months. ENSO-neutral conditions are likely from April to June (73% chance). Long-range outlooks indicate a possible return to La Niña conditions later this year, with a 64% chance of a La Niña event by August to October 2024, based on the CPC/IRI forecast. Positive Indian Ocean Dipole (IOD) conditions continue to weaken and will likely return to neutral during February 2024. For further details see [page 6](#).

Source: UCSB Climate Hazards Center

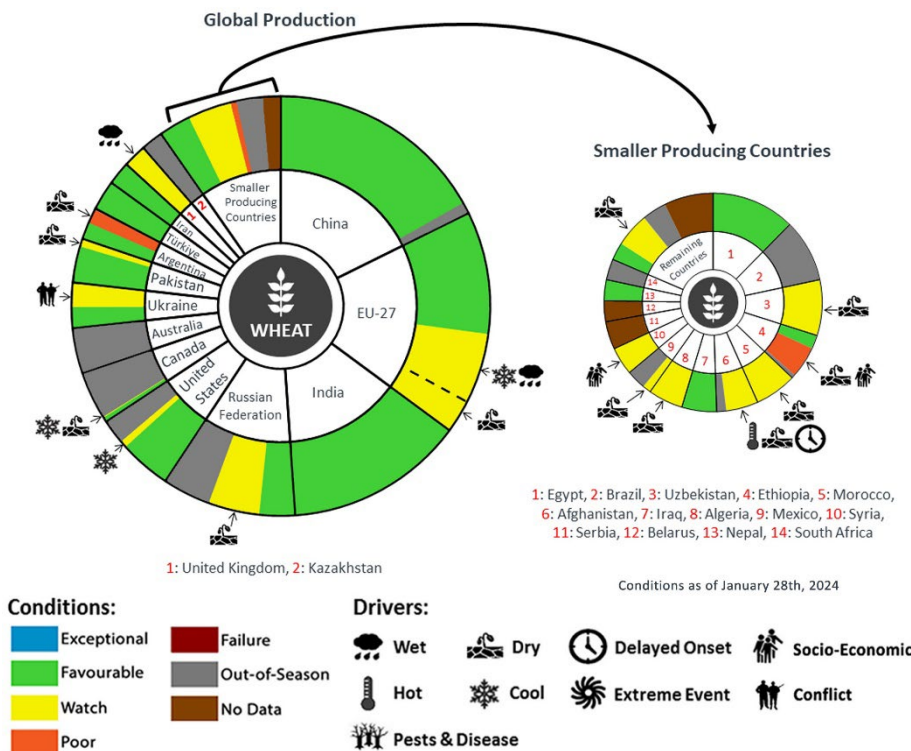
WHEAT



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**, conditions are generally favourable in the US albeit with recent extreme cold temperatures combined with little or no snow cover increasing the potential for winterkill in the Northern High Plains. There is a reduction in the total sown area compared to last year. In Canada, winter wheat conditions are favourable in the main producing provinces of Ontario and Manitoba, however, a lack of adequate snow cover combined with extremely low temperatures is potentially impacting crops in the Prairies. In Mexico, conditions are mixed for winter wheat. In **South America**, harvesting is wrapping up in Argentina under mixed conditions due to the earlier severe drought that affected much of the country. In Chile, conditions are favourable. In **Europe**, conditions are mixed in the EU due to a cold spell in the north, excessive rainfall in central Europe, and dryness along the Mediterranean. In the UK, conditions are mixed due to excessive rainfall. In Türkiye, conditions are favourable. In Ukraine, conditions are favourable away from the active warzone with adequate snow cover and an increase in soil moisture. In the Russian Federation, conditions are favourable as soil moisture improves due to ample precipitation, however, dry conditions remain in some areas of the Caucasus. In **Central Asia**, winter wheat is in the vegetative to reproductive stage across southern Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, and Afghanistan. Conditions have been downgraded to watch in most regions due to prevailing dry

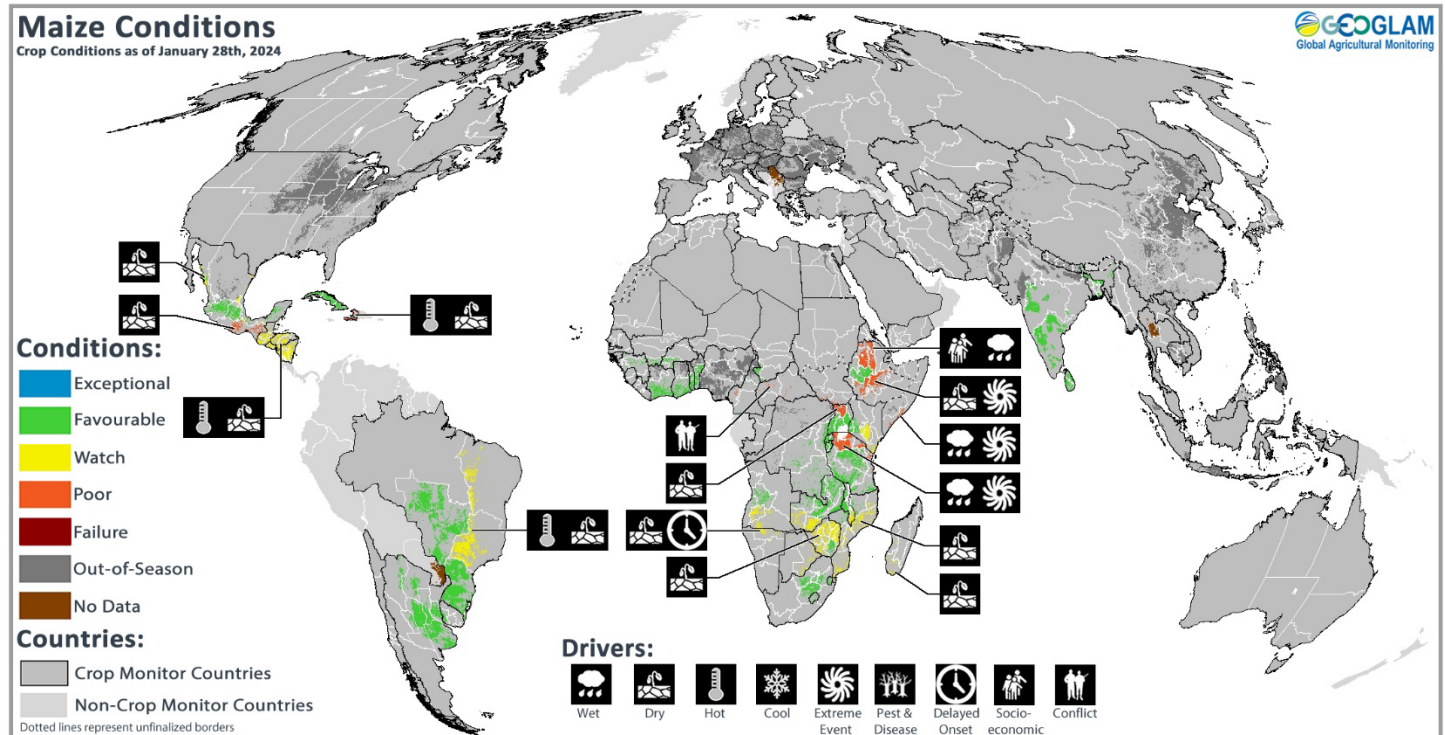
conditions and despite El Niño typically being associated with above-average precipitation for the region. Conversely, conditions remain favourable in northwestern Tajikistan. In **South Asia**, sowing is wrapping up under favourable conditions in India with an increase in total sown area compared to last year. In Pakistan, sowing is continuing under dry conditions. In Nepal and Bangladesh, conditions are favourable. In **East Asia**, winter wheat in China is under favourable conditions. In **MENA**, dry concerns remain in most western and central areas, including in Morocco, Algeria, Tunisia, and Libya despite limited precipitation received in early January. Vegetation conditions in Morocco and western Algeria have been particularly impacted by the deficit rains. In Egypt, conditions remain favourable. In Iran, below-average rainfall in the northeast may impact crops as the season progresses. In Libya and Syria, socio-economic challenges relating to insecurity continue to impact agricultural production. In **East Africa**, harvesting is wrapping up in Ethiopia under poor conditions due to combined impacts of prior seasonal rainfall deficits, a switch to above-average rains and flooding in October that disrupted harvest activities in most areas, and ongoing socio-economic issues.



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

* Assessment based on information as of January 28th, 2024

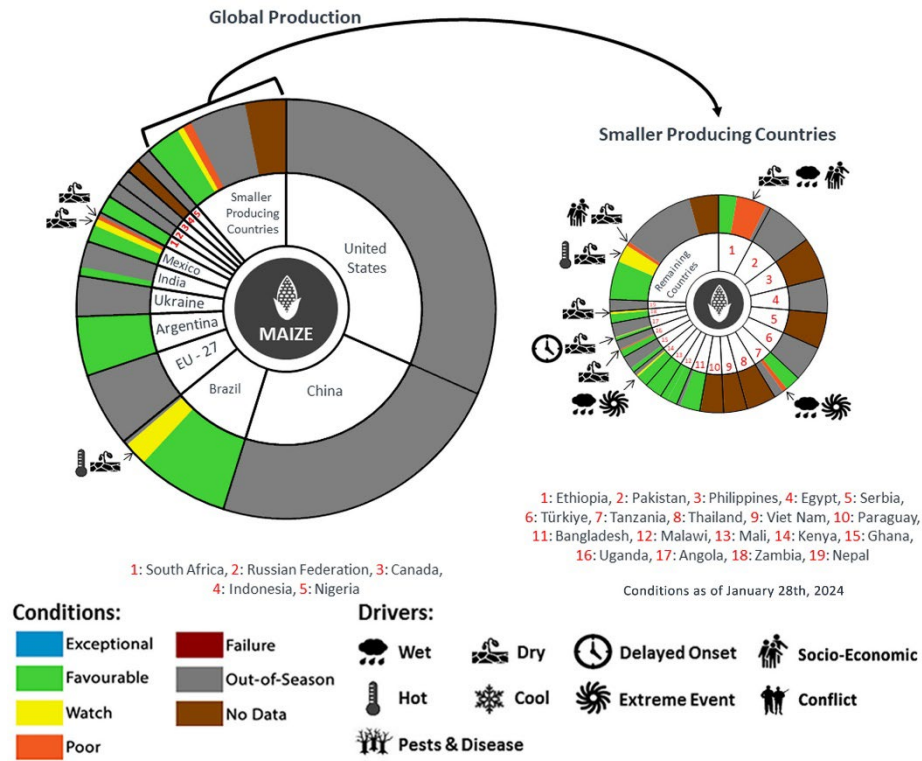
MAIZE



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**, harvesting is wrapping up in Mexico for the Spring–Summer season (larger season) as the sowing of the Autumn–winter season (smaller season) continues under dry conditions. The harvesting of *Segunda* season crops is complete or nearing completion in El Salvador, Guatemala, Honduras, and Nicaragua under mixed conditions as crops were impacted by erratic rainfall distribution and high temperatures that affected the normal development of crops in some areas. In Cuba, the sowing of second-season crops continues. In **South America**, harvesting is beginning in Brazil for the spring-planted crop (smaller season) under mixed conditions due to a lack of rain and high temperatures earlier in the season, however, a recent return of rains is expected to facilitate the recovery of the crop. A reduction in the total sown area is expected compared to last year. Sowing of the summer-planted crop (larger season) is beginning under favourable conditions. In Argentina, conditions are favourable for both the early-planted crop (larger season), which is in the flowering and grain-filling stage, and the late-planted crop (smaller season), which is in the early-vegetative stage. In Uruguay, conditions are favourable. In **South Asia**, sowing of the *Rabi* (smaller season) crop in India is wrapping up. In Bangladesh, conditions are favourable for the winter crop (larger season). In Sri Lanka, the *Maha* season crops are under favourable conditions. In **East Africa**, harvesting continues under

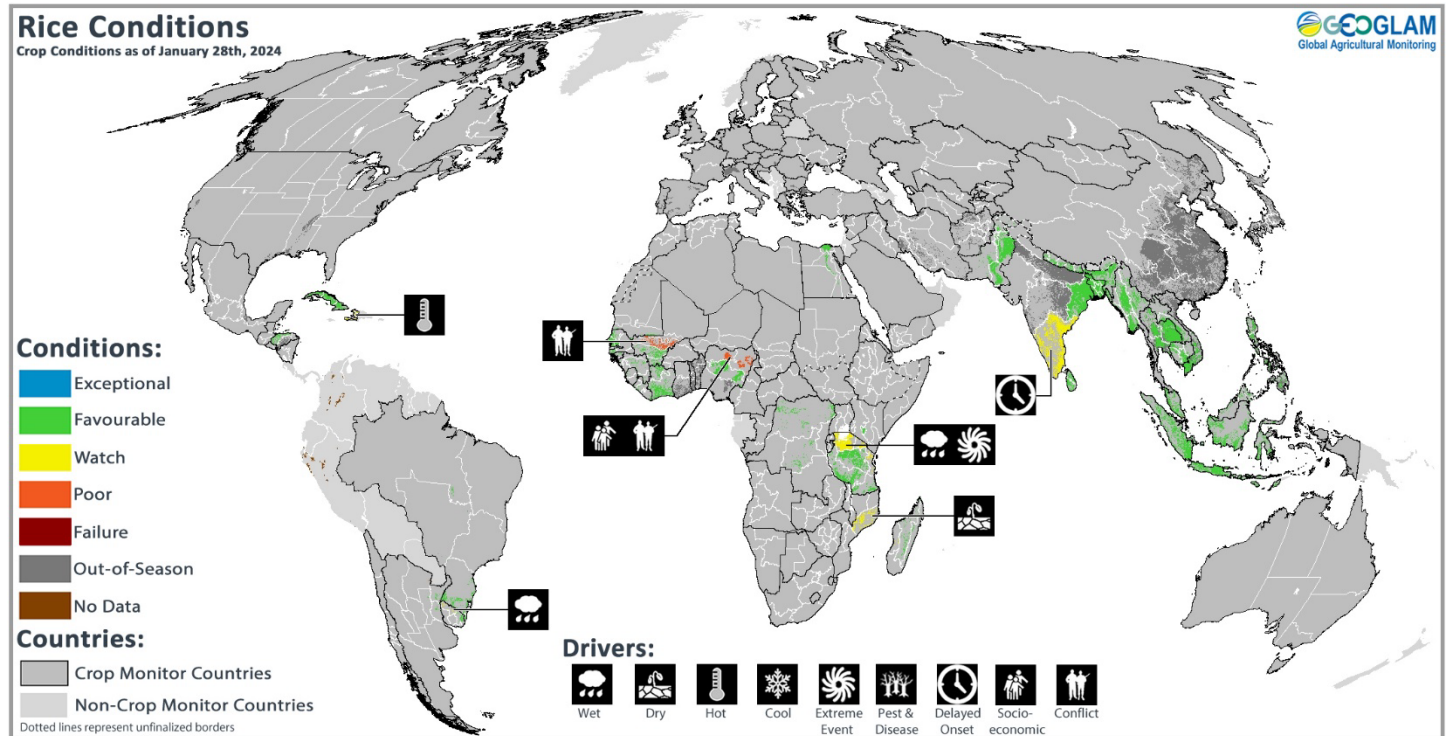
generally poor conditions due to a combination of prior seasonal rainfall deficits, subsequent enhanced rains and resultant flooding, and ongoing conflict and socio-economic challenges in affected areas. In the south, previous heavy rains and flooding have impacted crops in parts of Somalia, Kenya, and the United Republic of Tanzania. In **West Africa**, harvesting of both main and second season crops is complete with final yields expected to be near-average in most countries, except for conflict-affected areas of northern Burkina Faso, the Southwestern region of Cameroon, the Central African Republic, central Mali, and northern Nigeria. In **Southern Africa**, crops are mostly in the vegetative to reproductive stage across Angola, Namibia, Botswana, Zambia, Zimbabwe, Malawi, Mozambique, Lesotho, eSwatini, and Madagascar under mixed conditions with expanding areas of dryness. In South Africa, conditions are favourable following widespread rain since early December, however, temperatures and rainfall during February will be critical.



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

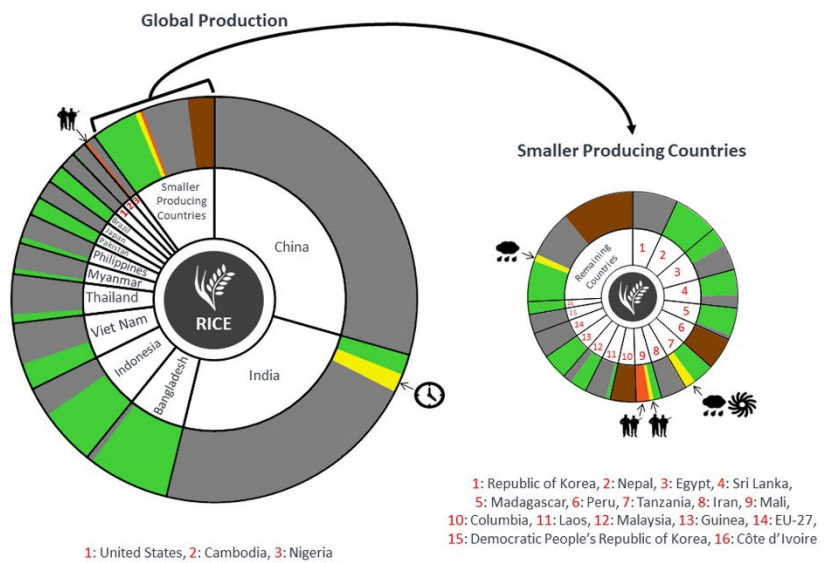
* Assessment based on information as of January 28th, 2024

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 *Rabi* rice is ongoing in India under favourable conditions in the eastern states and with a delay in the southern states, especially in Karnataka due to lingering dryness from the previous season. In Pakistan, harvesting of *Kharif* season rice wrapped up under favourable conditions. In Bangladesh, conditions are favourable as both the harvesting of the *Aus* season rice (smallest season) and sowing of the *Boro* season rice (largest season) wrap up. In Nepal, harvesting wrapped up with near-average yields. In Sri Lanka, *Maha* season rice, which is mostly irrigated and accounts for about 70 percent of annual rice production, is under favourable conditions. In **Southeast Asia**, conditions are favourable in Indonesia as wet-season rice sowing continues and the harvesting of earlier sown crops begins. In Viet Nam, the sowing of dry-season rice (winter-spring rice) is beginning in the Mekong River Delta under favourable conditions. In Thailand, dry-season rice conditions have improved, although the dry weather during sowing is expected to result in a reduction in the total sown area compared to last year. In the Philippines, dry-season rice is under favourable conditions due to ample rainfall during sowing and support from the government with high-yield seeds. In Myanmar, conditions are favourable as harvesting of wet-season rice continues and the sowing of dry-season rice expands. In Cambodia, dry season rice is developing under favourable conditions and an increase in total sown area compared to last year. In Laos, the sowing of dry-season rice is beginning under favourable conditions. In Malaysia, January marks the sixth month of wet-season rice planting and the first month of harvesting, and conditions are favourable. In Brunei, growing conditions are currently favourable for irrigated areas, but there is a concern in the rainfed areas as high temperatures and low rainfall are impacting crop development. In the **Americas**, the sowing of main-season rice continues in Cuba under favourable conditions. In Brazil, conditions are favourable with an increase in sown area compared to last year. In Uruguay, earlier excess rainfall made agronomic management difficult. In Argentina, conditions are favourable. In **Sub-Saharan Africa**, conflict continues to be an issue in northern Nigeria and Mali.



1: United States, 2: Cambodia, 3: Nigeria

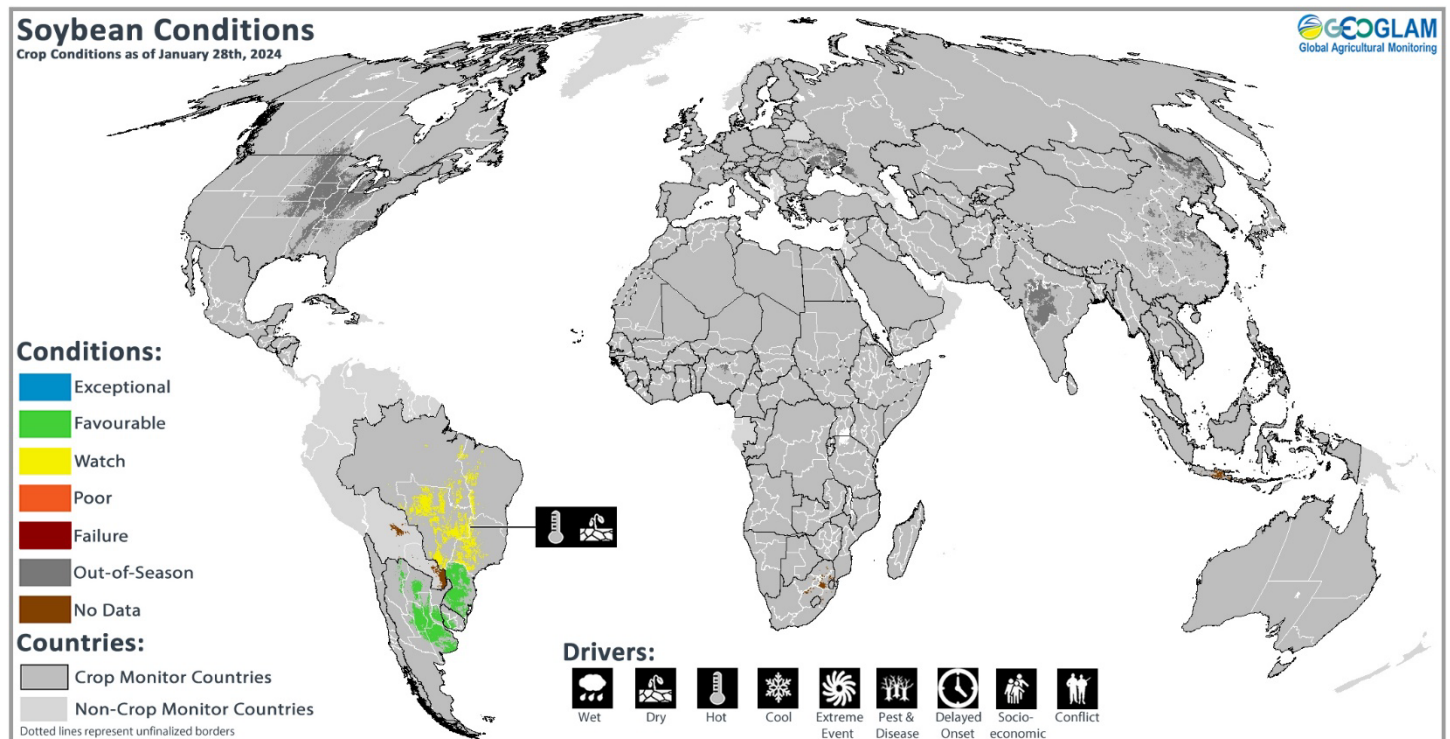
Conditions as of January 28th, 2024



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

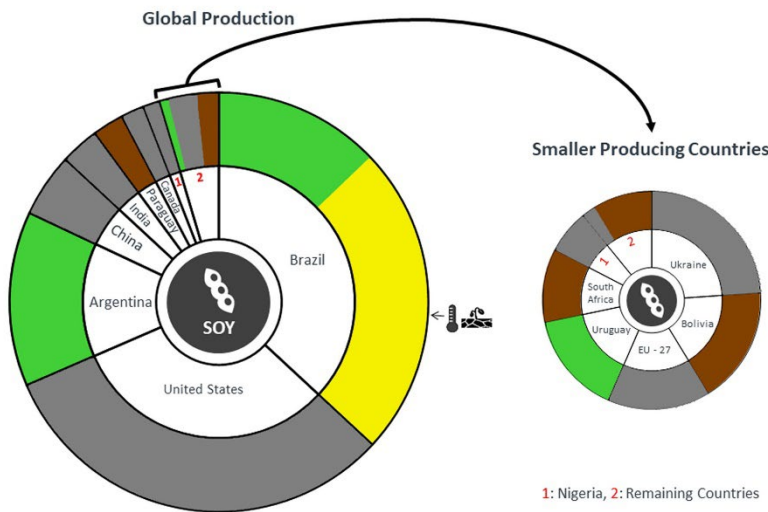
* Assessment based on information as of January 28th, 2024

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 begins in Brazil under mixed conditions across most of the country due to a lack of rain and high temperatures from September to mid-December. However, regular rains have returned, and conditions are likely to improve before harvest. In the South, conditions are favourable despite excessive rainfall. In Argentina, sowing is wrapping up under favourable conditions across the country. The early-planting crop (typically larger season) is in the reproductive stages and the late-planted crop (typically smaller season) is emerging. In Uruguay, conditions are favourable, however, crops in the north have some variability in development, some with replanting required.



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

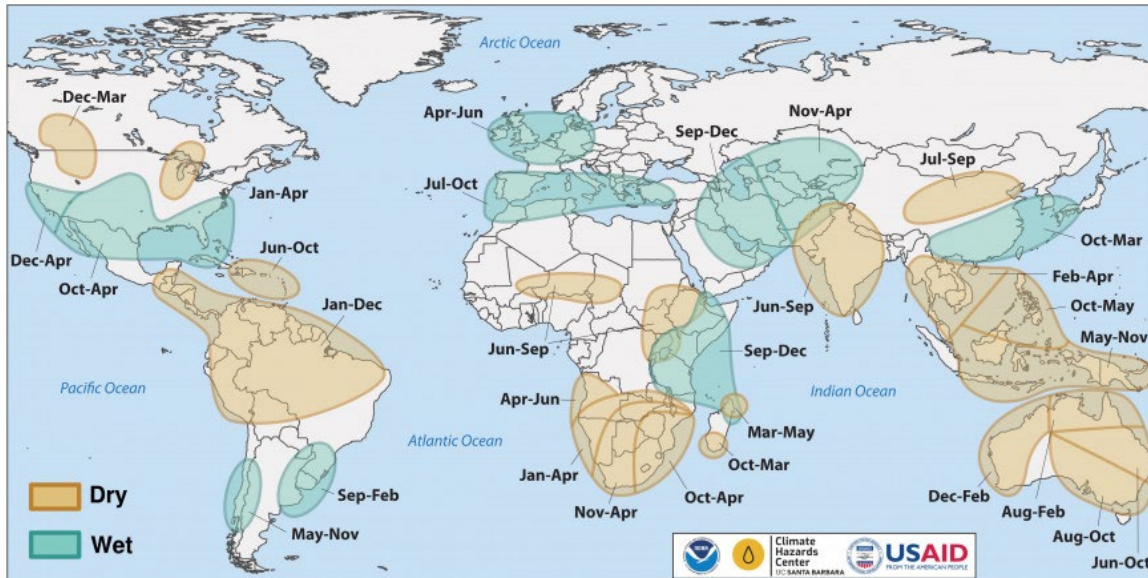
The ongoing strong El Niño event is forecast to weaken during the next several months. ENSO-neutral conditions are likely from April to June (73% chance). Long-range outlooks indicate a possible return to La Niña conditions later this year, with a 64% chance of a La Niña event by August to October 2024, based on the CPC/IRI forecast.

El Niño events tend to enhance precipitation in Central Asia, southern North America, south-eastern South America, and south-eastern China. Drier-than-average conditions tend to occur in northern South America, parts of the northern U.S. and Canada, Southern Africa, the Maritime Continent, and northern Australia.

Positive Indian Ocean Dipole (IOD) conditions continue to weaken and will likely return to neutral during February 2024.

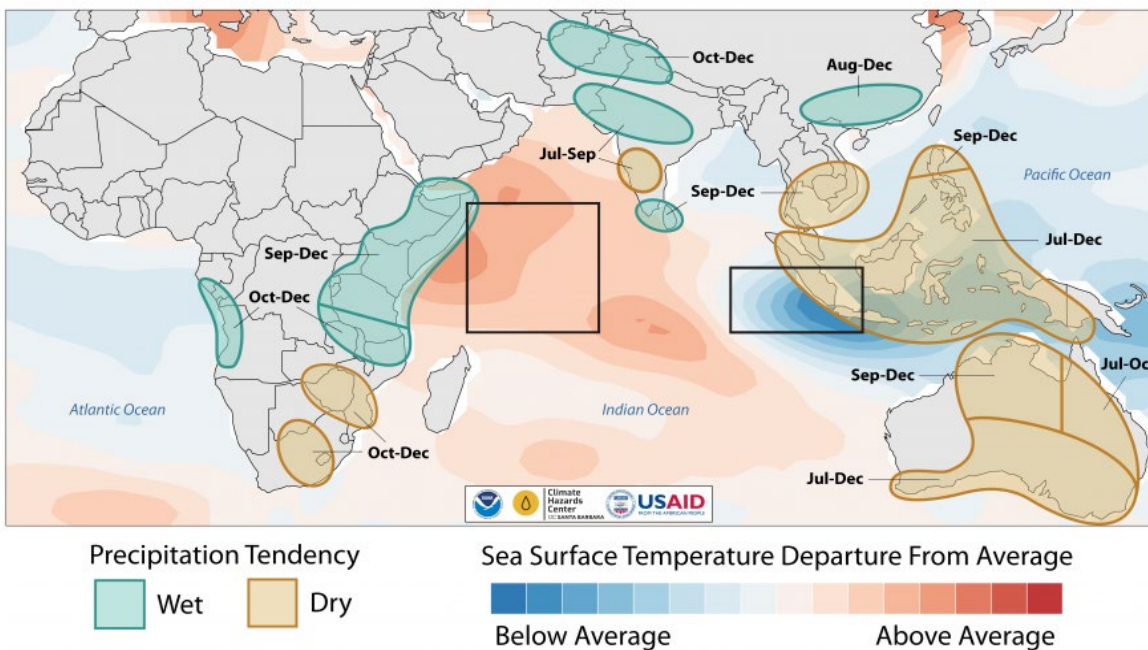
Globally, 2023 was the warmest year on record, and the warming influence of El Niño will likely continue this upward trend into 2024. Warmer temperatures will exacerbate rainfall deficits due to higher evaporation.

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, Source: [FEWS NET & NOAA & CHC](#)

Positive Indian Ocean Dipole



Location and timing of likely above- and below-average precipitation based on precipitation during positive IOD events during 1960–2020. The IOD-related sea surface temperatures are based on a linear regression between the Dipole Mode Index and sea surface temperature for July to September. Source: [FEWS NET & NOAA & CHC](#)

Regional Outlooks

Both the short-term (two-week) and the long-term February–March–April 2024 forecast (Figures 3 & 4) are influenced by the currently ongoing strong El Niño and positive Indian Ocean Dipole (IOD) events along with a warming global climate.

In **North America**, the two-week forecast (Figures 1 & 2) indicates potential areas of below-average precipitation in western and eastern Canada, the Pacific Northwest, and the central east coast in the US, while potential areas of above-average precipitation over the southern Prairies in Canada, and across the entire Great Plains and the Southwest in the US. During the same time, temperatures are likely to be above-average over most of the eastern and central US and Canada with below-average temperatures in the US Southwest. The long-term February–March–April 2024 forecast (Figures 3 & 4) shows a leaning toward above-average precipitation over the Southeast and northern Great Plains in the US. During the same time, temperatures are likely to be above-average across Canada, and the western and northern US. For further details, see the [CM4AMIS](#) Regional Outlook for Mexico.

In **Central America & the Caribbean**, the two-week forecast (Figures 1 & 2) indicates likely above-average precipitation over northwestern Mexico, while below-average precipitation over southern Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, and the Dominican Republic. During the same period, temperatures are likely to be below-average over western Mexico, while above-average across eastern and southern Mexico, Guatemala, El Salvador, southern Honduras, Nicaragua, and Costa Rica. The long-term February–March–April 2024 forecast (Figures 3 & 4) suggests below-average precipitation over southern Mexico and Nicaragua. During this time, temperatures are highly likely to be above-average across the entire region except for northeastern Mexico.

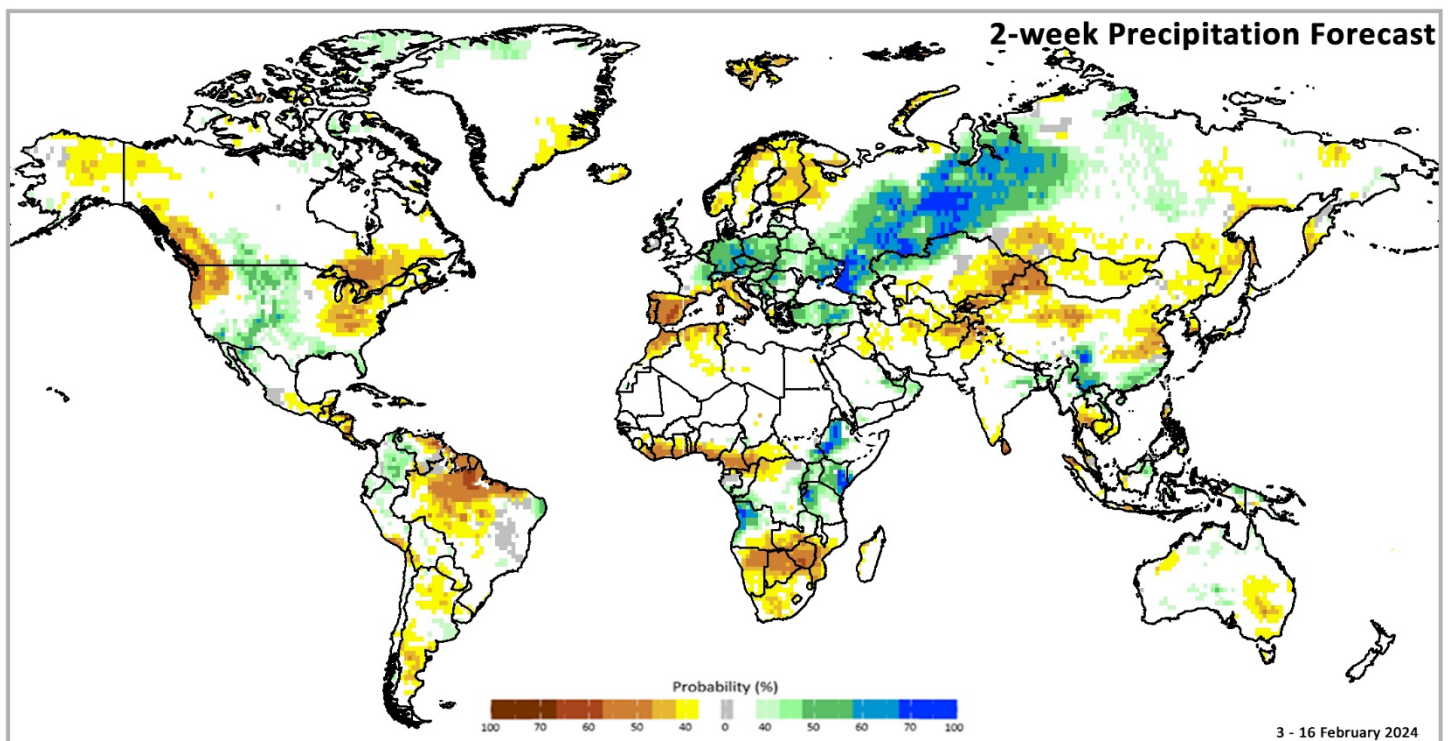


Figure 1: IRI SubX Precipitation Biweekly Probability Forecast for 3 – 16 February 2024, issued on 26 January 2024. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

In **South America**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation over northeastern Venezuela, Guyana, Suriname, French Guiana, northern Brazil, southern Peru, northern Chile, and central and southern Argentina, while above-average over Columbia. During this time, temperatures are likely to be above-average across most of the continent except for Paraguay. The long-term February–March–April 2024 forecast (Figures 3 & 4) suggests likely below-average precipitation across eastern Venezuela, Guyana, Suriname, French Guiana, northern Brazil, southern Peru, western Bolivia, and Chile, while above-average over eastern Columbia. During that time, temperatures will highly likely be above-average over most of the continent except for southern Brazil, Uruguay, Argentina, and southern Chile. For further details, see the [CM4AMIS](#) Regional Outlook for Argentina and Brazil.

In **Europe**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation over Portugal, Spain, southern France, Italy, Finland, and southern Norway, while above-average over eastern France, Belgium, the Netherlands, Germany, Poland, Czechia, Austria, Hungary, Serbia, eastern Romania, Ukraine, western Belarus, Lithuania, Türkiye, and most of the Russian Federation. During this time, temperatures are leaning to be above-average over Portugal, Spain, France, Switzerland, southern Germany, Italy, Czechia, Slovakia, Hungary, Romania, Serbia, Bulgaria, Albania, North Macedonia, Greece, Türkiye, Ukraine, and the southern Russian Federation, while below-average over Norway, Sweden, Finland, and the northwestern Russian Federation. The long-term February-March-April 2024 forecast (Figures 3 & 4) indicates a slight leaning towards above-average precipitation across most of Europe except for Spain, Portugal, Italy, and southern France. During the same period, temperatures are leaning above-average across most of Europe, with a higher likelihood over the countries bordering the Mediterranean Sea.

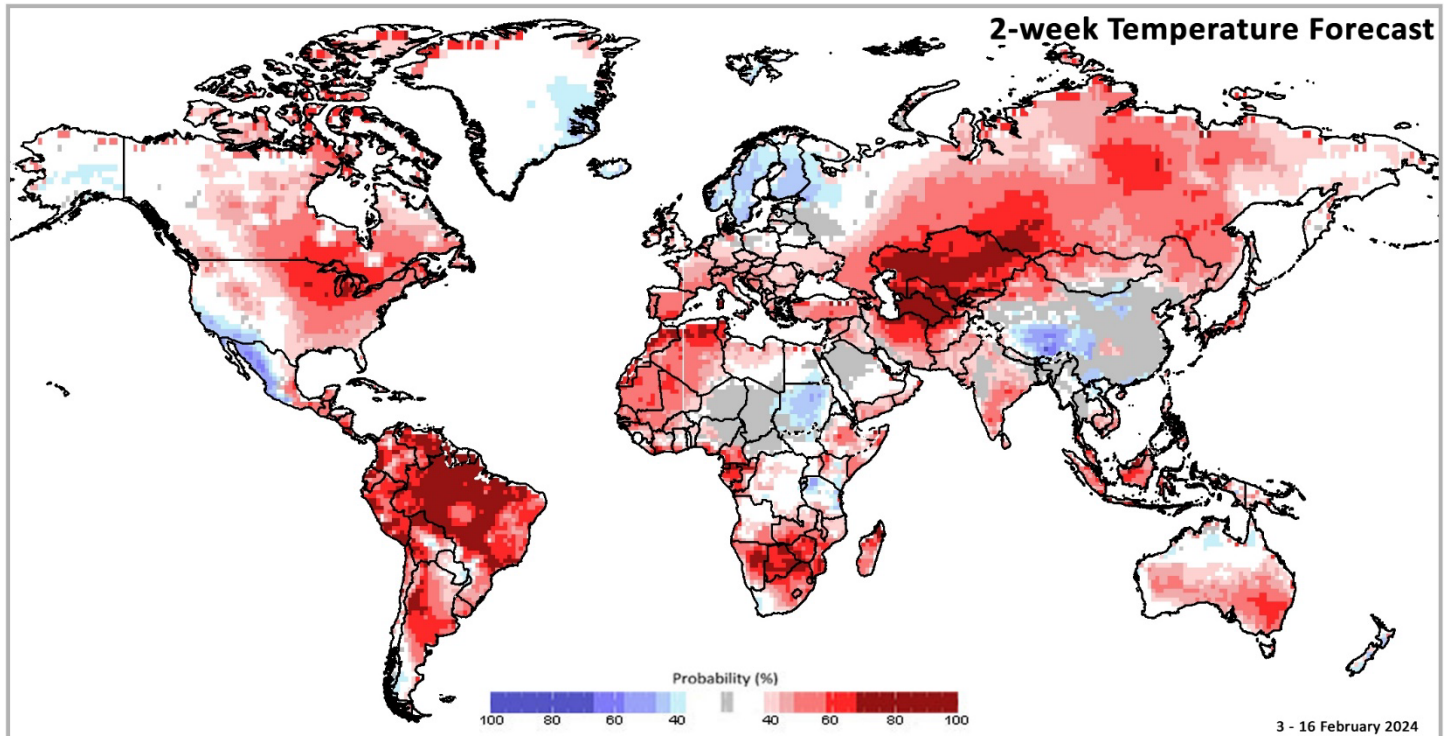


Figure 2: IRI SubX Temperature Biweekly Probability Forecast for 3 – 16 February 2024, issued on 26 January 2024. The forecast is based on statistically calibrated tercile category forecasts from three SubX models. Source: [IRI Subseasonal Forecasts Maproom](#)

In **MENA**, the two-week forecast (Figures 1 & 2) indicates a likelihood of below-average precipitation over Morocco, northern Algeria, Tunisia, and northeastern Iran, while above-average over the United Arab Emirates and Oman. During this time, temperatures are likely to be above-average over most of the region except Libya, Egypt, Jordan, and Saudi Arabia. The long-term February-March-April 2024 forecast (Figures 3 & 4) indicates slightly leaning toward below-average precipitation over Iraq, and Saudi Arabia. During this time, temperatures are highly likely to be above-average across the entire region. 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 Liberia, Côte d'Ivoire, Ghana, southern Togo, southern Benin, southern Nigeria, southern Cameroon, the Central Republic of Africa, northern Republic of Congo, northwest Democratic Republic of the Congo, southeast Angola, western Zambia, Zimbabwe, southern and central Mozambique, Botswana, Namibia, western South Africa, while above-average over northern and western Ethiopia, southeastern South Sudan, Kenya, southern Somalia, Rwanda, Burundi, western Tanzania, western Angola. At the same time, temperatures are likely to be above-average over Mauritania, Senegal, the Gambia, Guinea-Bissau, northern Guinea, Mali, Burkina Faso, southern Côte d'Ivoire, southern Ghana, southern Nigeria, southern Cameroon, Equatorial Guinea, Gabon, Republic of the Congo, central Ethiopia, southern Somalia, northwestern Kenya, Zambia, southeast Angola, Namibia, Botswana, Zimbabwe, Mozambique, northern and central South Africa, and Madagascar, while below-average over Sudan and northern Tanzania. For the long-term February-March-April 2024 forecast (Figures 3 & 4), precipitation is likely to be above-average across southern South Sudan, southwestern Ethiopia, Uganda, Kenya, Tanzania, Rwanda, and Burundi, while below-average over southern Angola, Zambia, Namibia, Botswana, Zimbabwe, South Africa, Mozambique, and southwest Madagascar. During this time, temperatures are highly likely to be above-average across all of Sub-Saharan Africa. For further details, see the [CM4EW](#) regional outlooks for Southern Africa.

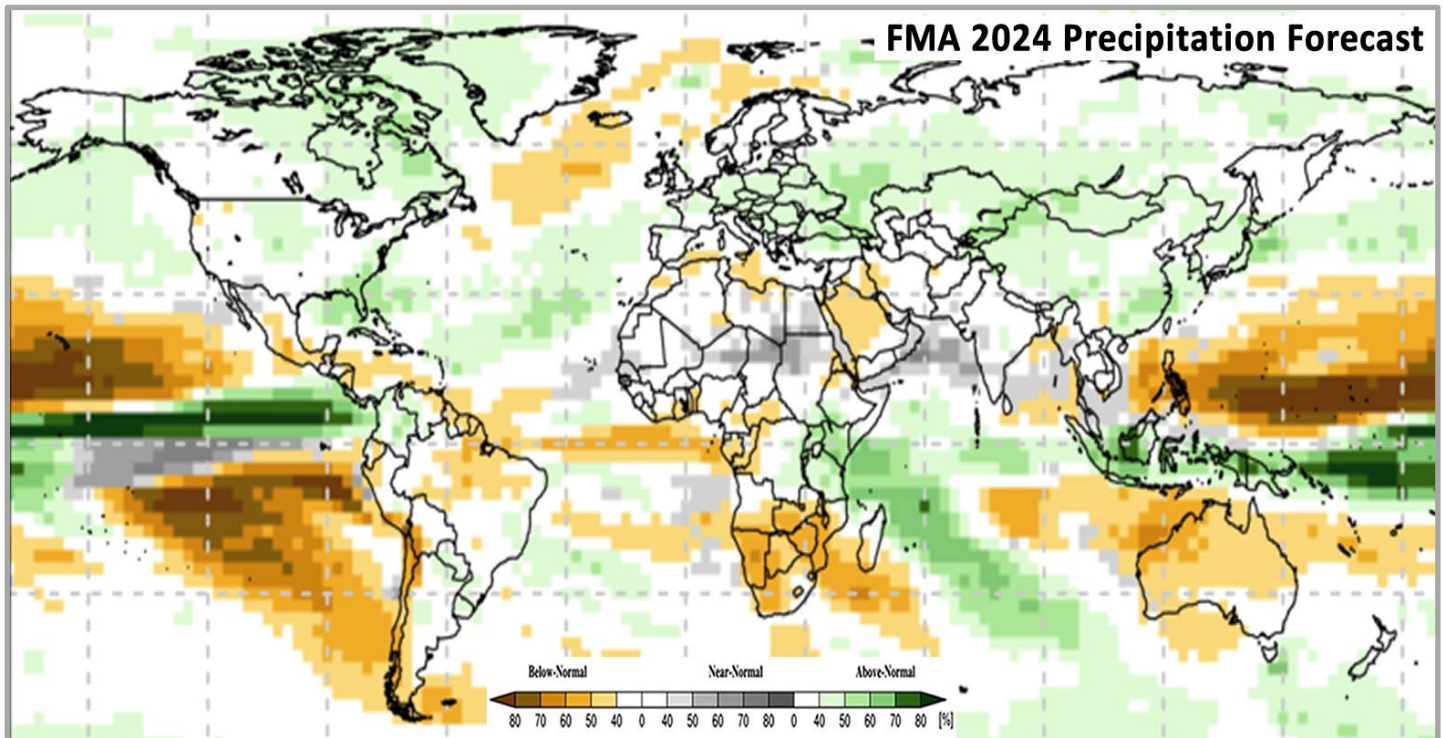


Figure 3: Probabilistic forecast for most likely February–March–April (FMA) 2024 rainfall tercile, based on January conditions. The white colour indicates that there is no dominant category across the model forecasts. Source: [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](#)

In **Central Asia**, the two-week forecast (Figures 1 & 2) indicates likely below-average precipitation over eastern Kazakhstan, Kyrgyzstan, Tajikistan, and northern Afghanistan while above-average over northwestern Kazakhstan. During this time, temperatures are likely to be above-average across the entire region. The long-term February–March–April 2024 forecast (Figures 3 & 4) indicates a leaning toward above-average precipitation over northern and western Kazakhstan, Kyrgyzstan, and Tajikistan. At the same time, temperatures are likely to be above-average across the entire region except for northern Kazakhstan. 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 over northern Pakistan, northeastern India, and Sri Lanka, while above-average over eastern India and central Bangladesh. During this time, temperatures are likely to be above-average over Pakistan, eastern and central India, and southern Sri Lanka. The long-term February–March–April 2024 forecast indicates no dominant tercile for precipitation across the region. At the same time, temperatures are highly likely to be above-average across the entire region. 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 over parts of central and western China, northern Mongolia, eastern Russian Federation, and the southern Republic of Korea, while above-average over southern China. During this time, temperatures are likely to be above-average over northeast and northwest China, Mongolia, the Democratic Republic of Korea, the Republic of Korea, and Japan, while below-average over southwestern China. The long-term February–March–April 2024 forecast (Figures 3 & 4) indicates a leaning to above-average precipitation over most of China, Mongolia, the Republic of Korea, and Japan. During that time, temperatures are highly likely to be above-average over central and western China and Japan.

In **Southeast Asia & Oceania**, the two-week forecast (Figures 1 & 2) indicates potential above-average precipitation over northern Myanmar, northern Laos, and parts of northern Indonesia, while below-average over central Thailand, Cambodia, the Philippines, and eastern Australia. During this time, temperatures are likely to be above-average over Cambodia, Vietnam, the Philippines, Malaysia, Indonesia, Papua New Guinea, and Australia. The long-term February–March–April 2024 forecast (Figures 3 & 4) indicates likely above-average precipitation over Indonesia, Malaysia, and Papua New Guinea, while below-average over the Philippines, and northwestern Australia. During the same time, temperatures are highly likely to be above-average across the entire region except for southern Australia.

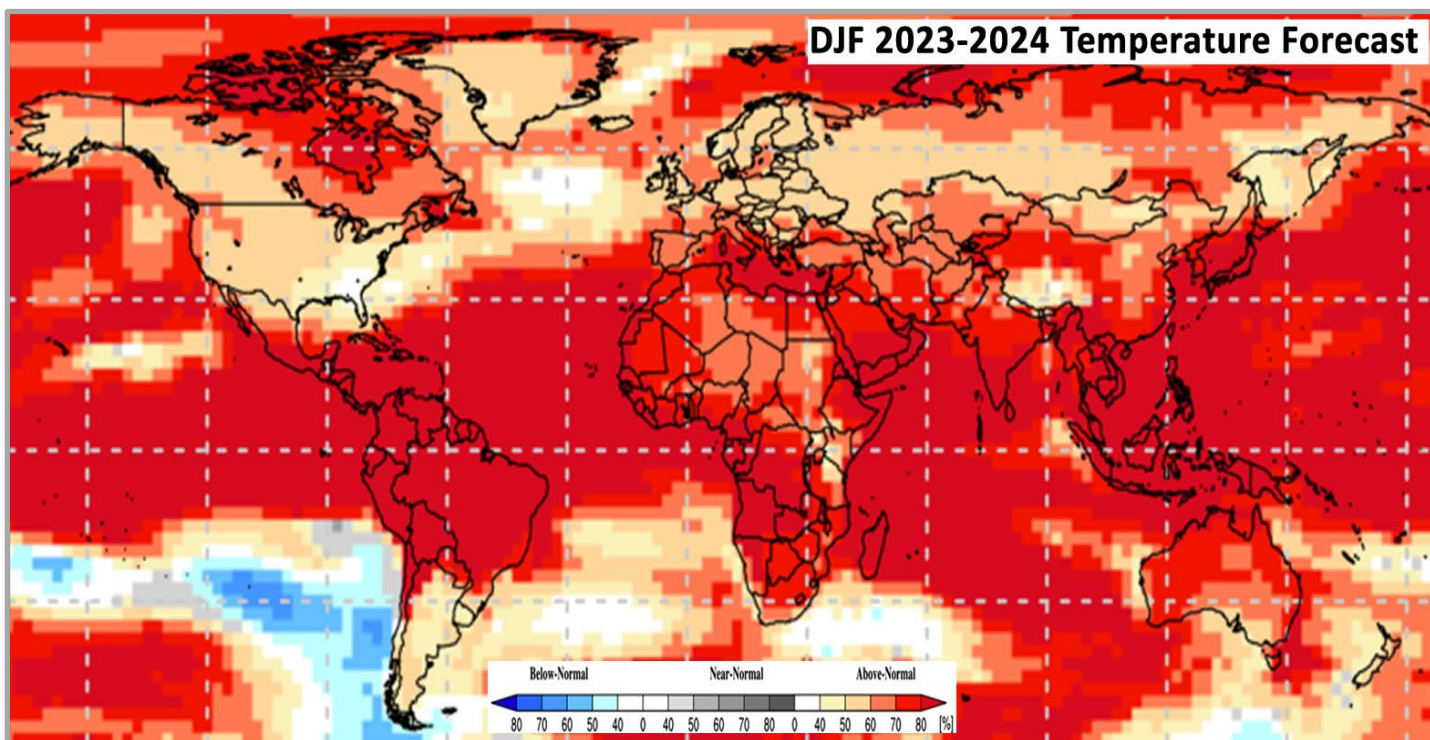


Figure 4: Probabilistic forecast for most likely February-March-April (FMA) 2024 temperature tercile, based on January conditions. The white colour indicates that there is no dominant category across the model forecasts. Source: [WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble](https://www.wmo.int/en/lead-centre-for-long-range-forecast-multi-model-ensemble)



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).