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GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: November 2026-January 2027

Prepared: 20 October 2026



HYDROMETEOROLOGICAL
CENTRE OF RUSSIA



Korea Meteorological
Administration



METEO
FRANCE



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This publication has been issued without formal editing.

Summary

(Prepared – 20 October 2026)

Observed Oceanic Drivers for the Previous Season

During the July–September (JAS) 2026 season, [warm sea surface temperature \(SST\) anomalies dominated the global oceans](#). An intensification of above-normal SST anomalies continued across the central and eastern equatorial Pacific. From July 2026 to September 2026, the monthly Niño 3.4 index increased from +2.0°C to +2.8°C. For the season as a whole, all Niño indices were firmly in above-normal territory, reflecting well-established El Niño conditions across the equatorial Pacific.

In other ocean basins, the positive Indian Ocean Dipole (IOD) intensified, driven by stronger relative warming in the western equatorial Indian Ocean. Meanwhile, positive SST anomalies persisted across the equatorial and subtropical Atlantic, with SST anomalies in the North Tropical Atlantic (NTA) and South Tropical Atlantic (STA) remaining above average. Concurrently, widespread positive SST anomalies continued to dominate the North Pacific.

Outlook for Oceanic Drivers for the Next Season

For the November 2026–January 2027 (NDJ 2026–27) season, multi-model ensemble forecasts indicate a further intensification toward stronger El Niño conditions. The seasonal average Niño 3.4 SST ensemble mean anomaly is forecast to reach approximately +3.8°C during NDJ 2026–27, with the warming trend peaking around December 2026. The spread among individual forecast systems generally remains narrow, reflecting high forecast confidence.

In the Indian Ocean, a positive IOD is predicted to decline toward climatology, yielding a seasonal mean anomaly for NDJ 2026–27 of +0.3°C. Meanwhile, the equatorial Atlantic basin is forecast to remain warm, with SSTs in both the North and South Tropical Atlantic staying above normal.

Surface Temperature Outlook for the Next Season

For the NDJ 2026–27 season, multi-model ensemble forecasts project a nearly universal global dominance in the enhancement of probabilities for above-normal temperatures over landmasses.

In the Northern Hemisphere, a large increase in probabilities for above-normal temperatures covers Africa, southern Europe, the Arabian Peninsula, the Indian Subcontinent, Eastern Asia, western coastal parts of North America south of 60°N, northeastern regions of North America, Central America, the Caribbean, and the Arctic Circle north of 60°N. Model consistency across these regions is moderate to strong. Conversely, a weaker enhancement in probabilities for above-normal temperatures is indicated over parts of northern Asia along 50°N, northwestern regions of North America, and interior regions of Greenland. Over southern parts of North America extending into northern parts of Central America, the predicted signal, and model consistency, are weak.

In the Southern Hemisphere, a strong enhancement in probabilities for above-normal temperatures is centered over Africa, and South America between the equator and 30°S, supported by strong model consistency. A moderate increase in the probability for above-normal temperatures is predicted over Australia. A weak enhancement in the probability for below-normal temperatures is predicted in the eastern coastal and adjacent interior regions of southern South America with low-to-moderate model consistency.

In the tropics, a large increase in probabilities for above-normal temperatures covers equatorial Africa, equatorial South America, and the Maritime Continent. Over the ocean basins, forecasts reflect the footprint of a strong El Niño event. Extreme probabilities (exceeding 80%) for above-normal temperatures dominate the equatorial Pacific east of the Date Line, extending eastward to the coast of South America while broadening in its latitudinal extent, with the core of the warm region displaying maximum model consistency.

A widespread tendency for an increase in probabilities for above-normal temperatures also covers the Indian Ocean and the tropical Atlantic. In contrast, a region of enhancement for below- to

near-normal temperature probabilities is predicted across the subpolar North Atlantic. Additionally, a distinct zone of enhanced probabilities for below-normal temperatures is centered in the South Pacific subtropical region (between 10°S and 30°S) situated directly south of the core El Niño region, supported by strong model consistency.

Rainfall Outlook for the Next Season

For the NDJ 2026–27 season, multi-model ensemble forecasts project well-structured, large shifts in rainfall probabilities, exhibiting a strong response to the Pacific El Niño. The most dominant feature of the outlook is a strong enhancement in the probability of above-normal rainfall stretching across the central and eastern equatorial Pacific east of the Date Line, backed by strong model consistency. The core of this rainfall signal is flanked by an extensive region of below-normal rainfall probabilities. This broad dry signal encompasses widespread marine zones, manifesting as strong enhancements in the probability for below-normal rainfall over both the western Pacific and the equatorial Atlantic Ocean, as well as a horseshoe pattern extending into the Northern and Southern Hemispheres starting at around 120°E. The southern lobe of enhancement in the below-normal rainfall probability stretches across the South Pacific to the southern tip of South America.

There is an enhancement in probabilities for above-normal rainfall extending from the Arabian Peninsula, through Central Asia, and continuing into Eastern Asia, particularly in the coastal and adjacent regions of Eastern Asia.

Across equatorial Africa, the Greater Horn of Africa shows an enhanced probability for above-normal rainfall. There is a weak enhancement in probabilities for below-normal rainfall south of 10°S across parts of southern Africa. The model consistency for shifts in forecast probabilities across Africa is low-to-moderate.

There is an enhancement in the probability for below-normal rainfall covering the southern parts of Central America and the Caribbean, supported by high model consistency. To their north, there is an enhancement in the probability for above-normal rainfall over North America south of 45°N. There is a weak enhancement in the probability of below-normal rainfall over the northwestern regions of North America, where model consistency is weak-to-moderate.

In South America, a robust enhancement in the probability of below-normal rainfall is centered over the northern regions and extends southward to about 15°S. Farther south, an enhanced probability for above-normal rainfall extends across southeastern South America, giving way to an enhanced probability for below-normal rainfall over the southern tip of the continent.

Across Europe, there is a weak enhancement in the probability for above-normal rainfall. The model consistency is low-to-moderate.

Over Australia, a weak signal for an enhancement in above-normal rainfall is confined to the interior and southern parts of the continent, where the model consistency is moderate.

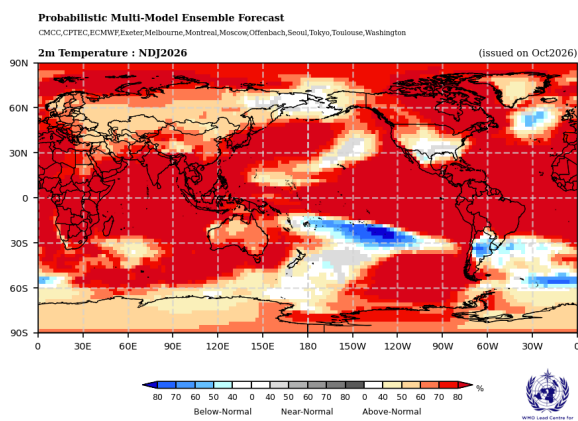
How to use the Global Seasonal Climate Update

Figure 1 displays the seasonal outlook maps, which illustrate the **probabilities** of seasonal mean surface temperature (left) and rainfall (right) falling into above-, near-, or below-normal categories relative to local climatology.

The colour coding identifies the category with the **highest forecast probability**. For example, red, blue, or grey regions indicate that the seasonal mean surface air temperature is most likely to be above-, below-, or near-normal, respectively. **Deeper shades** reflect a higher probability of the seasonal mean falling into that dominant category, while **white areas** denote equal chances (33.3% each) for all three categories.

Crucially, colours indicate **probability rather than certainty**; there remains a **non-zero chance** that the observed seasonal mean may fall into a category other than the one mapped as most likely.

Probability Forecast for Surface Air Temperature NDJ 2026-27



Probability Forecast for Rainfall NDJ 2026-27

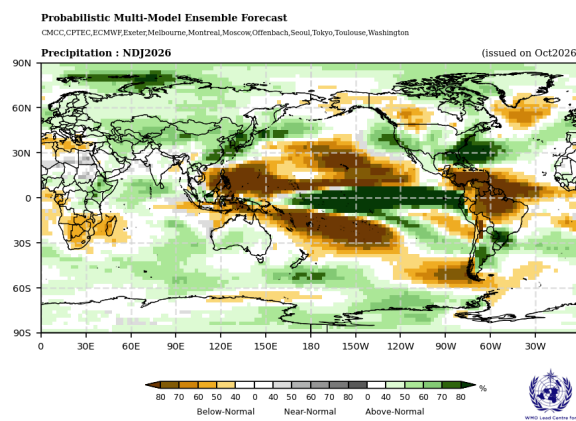


Figure 1. Probabilistic forecasts of surface air temperature and rainfall for the season November 2026-January 2027. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal, and near-normal is depicted in blue, red, and grey shadings respectively for temperature, and orange, green and grey shadings respectively for rainfall. White areas indicate equal chances for all categories in both cases. The baseline period is 1993–2009.

Source: Third-party map. This map was provided by [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

1. Observations: July-August-September 2026

1.1 Observed Sea-Surface Temperature Indices

Month and Season	Niño 1+2	Niño 3	Niño 4	Niño 3.4	IOD	NTA	STA
July 2026	3.6	2.3	1.1	2.0	0.3	0.4	0.2
August 2026	4.1	3.1	0.9	2.5	0.7	0.5	0.5
September 2026	4.7	3.6	1.0	2.8	0.9	0.6	0.7
July-September 2026	4.1	3.0	1.0	2.4	0.6	0.5	0.5

Table 1. Observed oceanic indices (°C) anomalies with respect to the 1991–2020 average.

(Source: NOAA's Climate Prediction Center)

1.2 Observed Surface Temperature

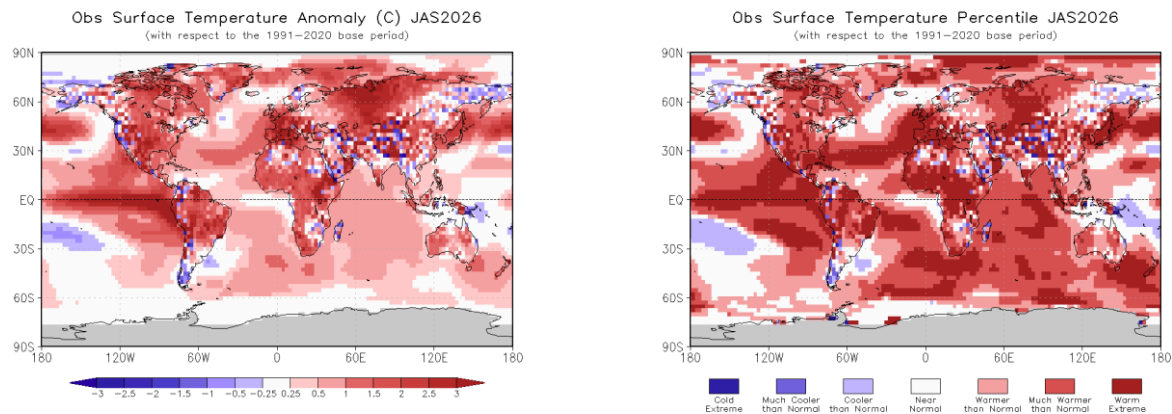


Figure 2. Observed July-September 2026 near-surface temperature anomalies relative to 1991–2020 (left). The Cooler than Normal, Near Normal, and Warmer than Normal shadings on the percentile map (right) indicate that seasonal mean anomalies were in the bottom, middle, and upper tercile of the 1991–2020 distribution, respectively. Regions with anomalies in the lowest and highest decile (or 10%) of the distribution are marked as Much Cooler than Normal and Much Warmer than Normal, respectively. The Cold Extreme and Warm Extreme shadings indicate that the anomalies exceeded the coldest and warmest temperature values of the 1991–2020 period for the season. Grey shading indicates areas where observational analysis was not available.

Source: Third-party map. This map was provided by the [NOAA's Climate Prediction Center](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

1.3 Observed Rainfall

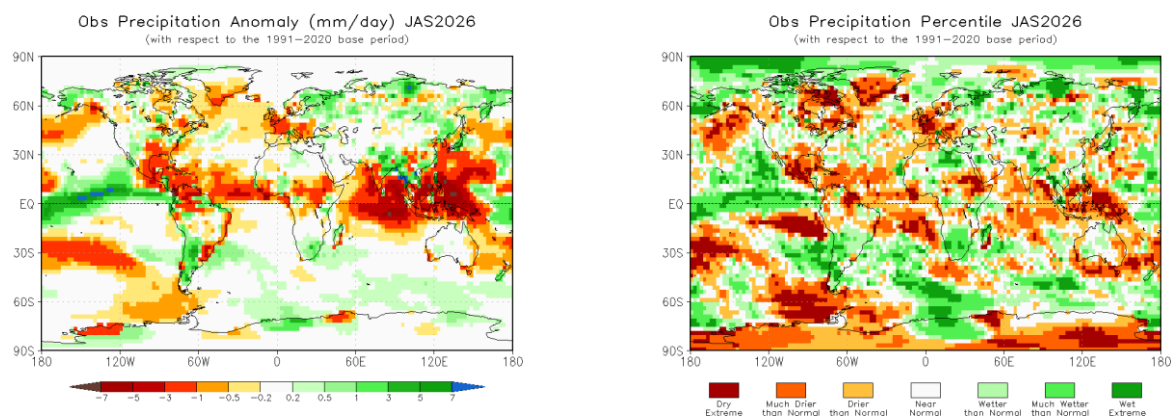


Figure 3. Observed rainfall anomalies for July-September 2026, relative to 1991–2020 base period (left). The Drier than Normal, Near Normal and Wetter than Normal shadings on the percentile map (right) indicate that seasonal mean anomalies were in the bottom, middle, and upper tercile of the 1991–2020 distribution, respectively. Regions with anomalies in the lowest and highest decile (or 10%) of the distribution are marked as Much Drier than Normal and Much Wetter than Normal, respectively. The Dry Extreme and Wet Extreme shadings indicate that the anomalies exceeded the driest and wettest values of the 1991–2020 period for the season.

Source: Third-party map. This map was provided by the [NOAA's Climate Prediction Center](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

2. Predicted Evolution of the State of the Climate Over the Next Three Months: November 2026-January 2027

2.1 Predicted Sea-Surface Temperature Indices

Month and Season	Nino 1+2	Nino 3	Nino 4	Nino3.4	IOD	NTA	STA
November 2026	4.4±0.8	4.2±0.5	1.7±0.4	3.7±0.4	0.6±0.3	0.8±0.3	0.9±0.2
December 2026	4.2±0.8	4.4±0.6	1.8±0.4	3.8±0.5	0.3±0.3	0.9±0.3	0.9±0.2
January 2027	3.8±0.8	4.2±0.6	1.7±0.5	3.7±0.6	0.1±0.2	1.0±0.2	1.0±0.3
November-January 2026-27	4.1±0.8	4.3±0.6	1.8±0.4	3.8±0.5	0.3±0.3	0.9±0.3	0.9±0.2

Table 2: Multi-model forecasts for oceanic indices (°C), with standard deviation.

Source: [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#)

2.2 Predicted Surface Temperature

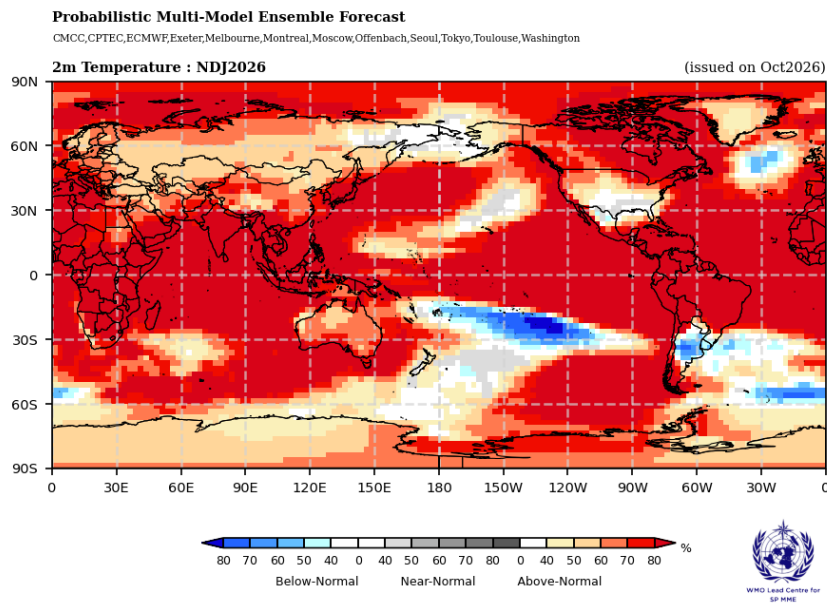


Figure 4. Probabilistic forecasts of surface air temperature for November 2026-January 2027.
 The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal, and near-normal is depicted in blue, red, and grey shadings, respectively. White areas indicate equal chances for all categories in both cases. The baseline period is 1993–2009.

Source: Third-party map. This map was provided by [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

2.3 Predicted rainfall

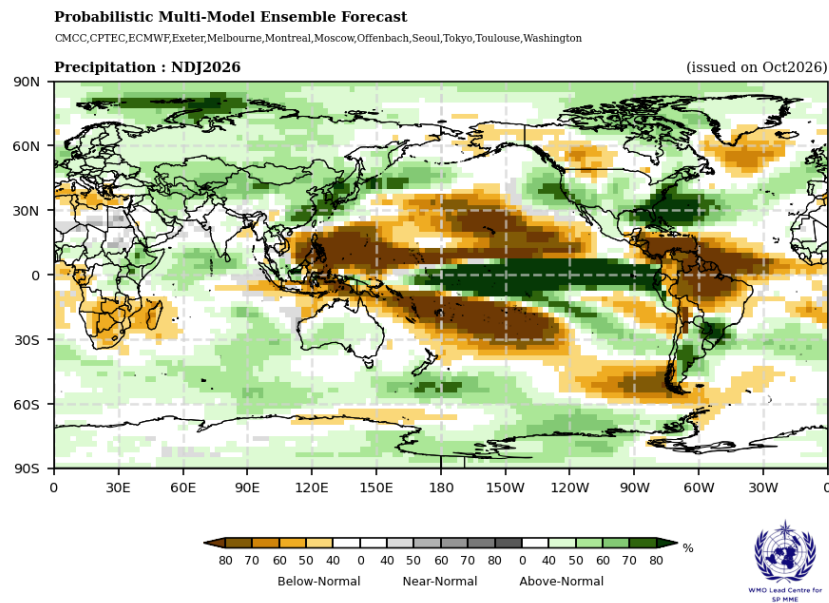


Figure 5. Probabilistic forecasts of rainfall for the season for November 2026-January 2027. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal, and near-normal is depicted in orange, green and grey shadings, respectively. White areas indicate equal chances for all categories in both cases. The baseline period is 1993–2009.

Source: Third-party map. This map was provided by [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

2.4 Supplementary Information

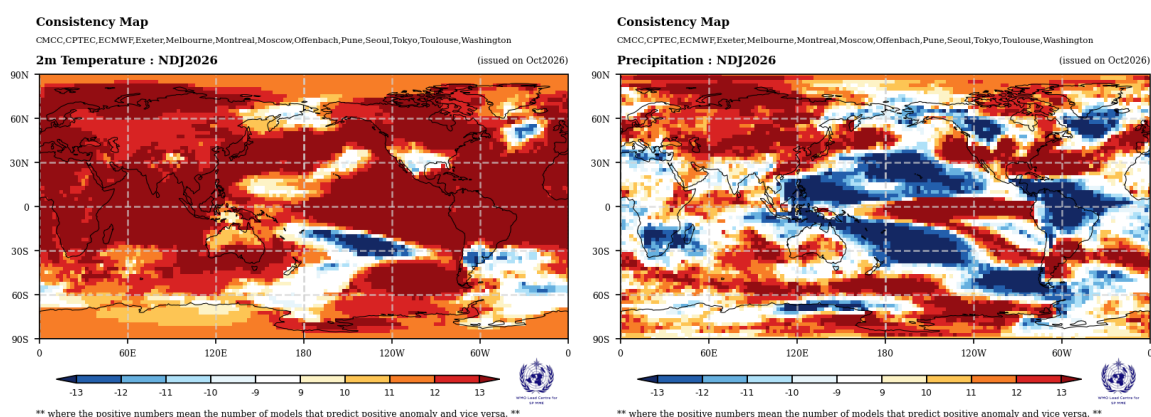


Figure 6. Consistency maps for the sign of ensemble mean anomalies of November 2026-January 2027 seasonal mean for (top) surface air temperature, and (bottom) rainfall (bottom) from different model forecasts. The consistency map is constructed using the following procedure: At each grid point the number of models with positive or negative anomaly are counted and the number that is larger is plotted on the map. For example, if the number of models with positive (negative) anomaly is larger than the respective count is plotted on the map using the red (blue) scale. Darker (lighter) colours imply that there is a higher (lower) consistency in the sign of anomalies between models.

Source: Third-party map. This map was provided by [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

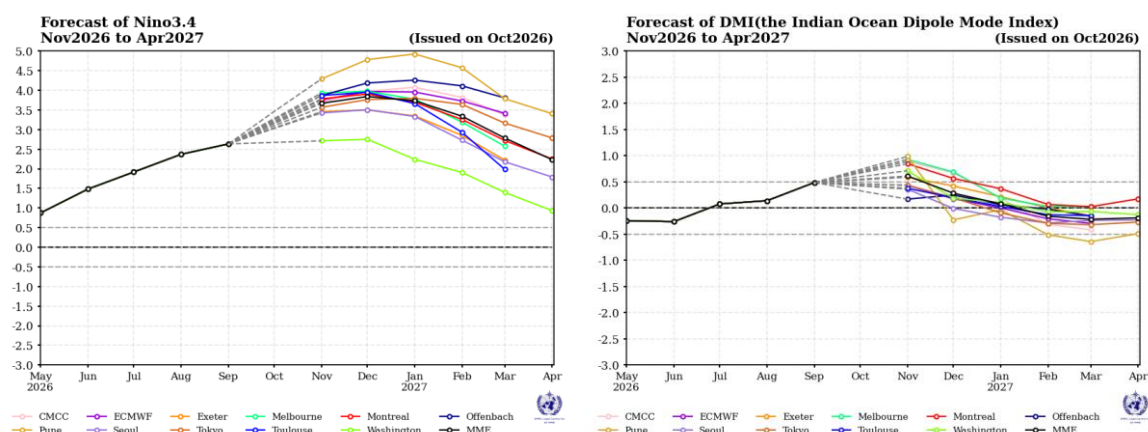


Figure 7. Evolution of Niño 3.4 (left) and Indian Ocean Dipole (IOD) (right) anomalies from October 2026 initial conditions. The solid black line represents the observed evolution, transitioning into the ensemble mean forecasts from various seasonal prediction systems (coloured lines). All anomalies are in °C relative to the 1993–2009 baseline period.

Source: [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#)

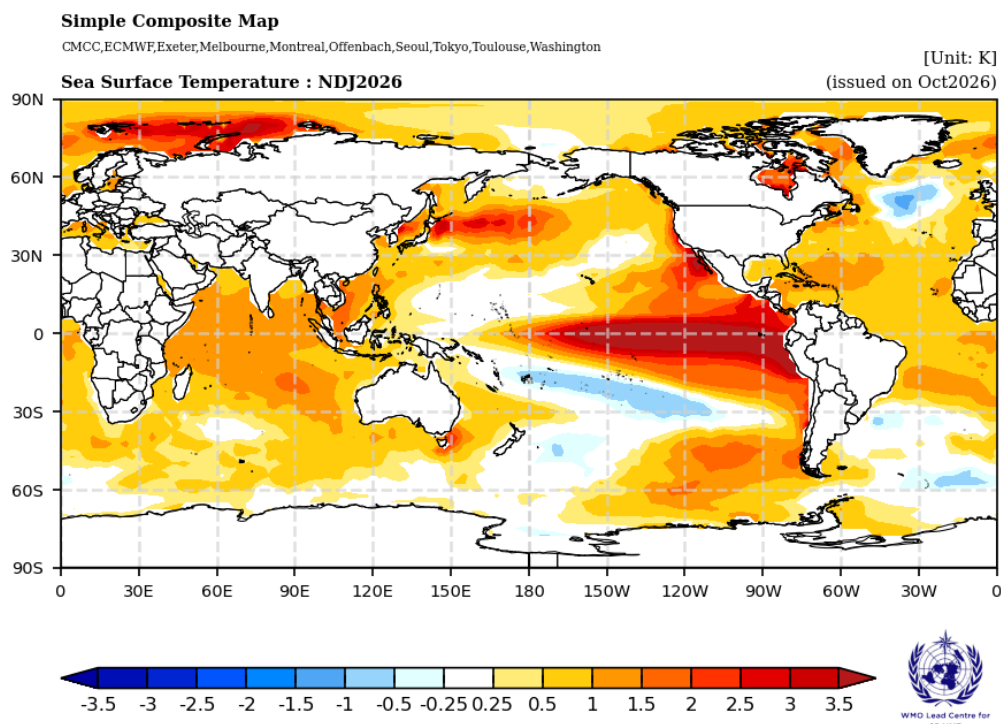


Figure 8: Multi-Model Ensemble forecast for sea surface temperature anomaly (°C) for November 2026-January 2027. The baseline period is 1993–2009.

Source: Third-party map. This map was provided by [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble](#) in October 2026. The boundaries and names shown and the designations used do not imply official endorsement or acceptance by WMO or the United Nations.

3. Global Seasonal Climate Update Archive

The archive of GSCU can be found at: <https://www.wmolc.org/gscuBoard/list>

4. How to use the Global Seasonal Climate Update

The GSCU is intended as guidance for RCCs, [Regional Climate Outlook Forums \(RCOFs\)](#) and National Meteorological and Hydrological Services (NMHSs). It does not constitute an official forecast for any region or nation. Seasonal outlooks for any region or nation should be obtained from the relevant RCCs or NMHS.

Figure 4 shows the spatial pattern of seasonal mean surface air temperature forecast probabilities. Probabilities are calculated for the temperature for the season being in the highest third (above-normal or warm), middle third (normal) or lowest third (below-normal or cold) ranges of the baseline record (1993-2009) at each location. Colour code is indicated only for the category that has the highest forecast probability. For example, for regions highlighted in red, the most likely forecast category for seasonal mean surface air temperature to occur is warmer than normal. Similarly, the blue colour highlights regions where the seasonal mean surface air temperature forecast indicates the colder than normal category as most likely, while grey colour highlights regions where the seasonal mean temperature forecast indicates the near normal category as most likely. Deeper shades of respective colours highlight increasing probability for the seasonal mean temperature to be in the indicated category. White areas indicate equal chances for all categories.

A particular colour does not assure that the seasonal mean temperature is “certain” to be observed in the most likely forecast category that is shown, but rather its probability of being in that category. Consequently, the observed seasonal mean temperatures have a non-zero probability to be observed in a category different from the category indicated on the map as most likely. Users need to take the probabilistic nature of seasonal forecasts into account when making decisions.

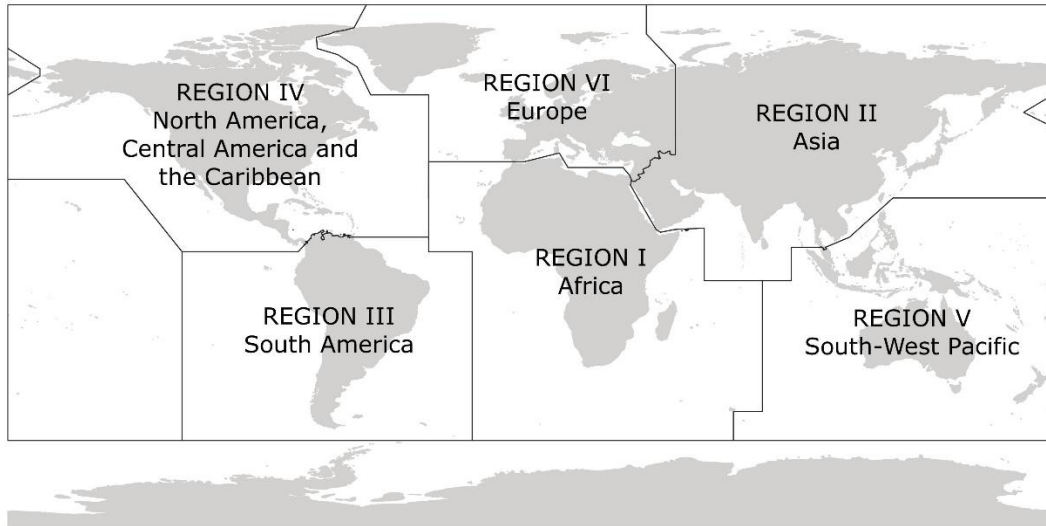
It should also be noted that the absolute values for the surface air temperature corresponding to the definitions of the above normal (warm), normal or below normal (cold) categories depend on the climatology (historical information) at the location, and therefore, is location dependent.

The interpretation of the probabilities for the rainfall forecast (Figure 5) is the same as that for the seasonal mean surface air temperature except that green and brown colours indicate whether the forecasted seasonal mean rainfall is most likely to be in the wet or dry category. As for surface temperature, grey colour highlights regions where the seasonal mean rainfall forecast indicates the near normal category as the most likely.

The skill of seasonal forecasts is substantially lower than that of weather timescales and skill varies considerably with region and season.

For further details on seasonal predictions see: [Guidance on Operational Practices for Objective Seasonal Forecasting](#).

For reference, the six WMO Regional Associations domains are depicted in the figure below.



5. Acknowledgements

This Global Seasonal Climate Update was jointly developed by the WMO Infrastructure (INFCOM) and Services (SERCOM) Commissions with contributions from:

- [WMO Lead Centre for Seasonal Prediction Multi-Model Ensemble \(LC-SPMME\)](#), Korea Meteorological Administration, NOAA National Centers for Environmental Prediction
- [WMO Global Producing Centres for Seasonal Prediction \(GPCs-SP\)](#)
 - GPC Beijing (China Meteorological Administration)
 - GPC CPTEC (Center for Weather Forecast and Climate Studies, Brazil)
 - GPC ECMWF (European Center for Medium-Range Forecast)
 - GPC Exeter (UK Met Office)
 - GPC Melbourne (Bureau of Meteorology)
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 - GPC Pretoria (South African Weather Services)
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 - GPC Toulouse (Météo-France)
 - GPC Washington (National Centers for Environmental Prediction)
 - GPC CMCC (Centro Euro-Mediterraneo sui Cambiamenti Climatici)
 - GPC Pune (India Meteorological Department)