

# Global: Monthly Climate Outlook July to April

**Issued: October 2024**

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# Overview

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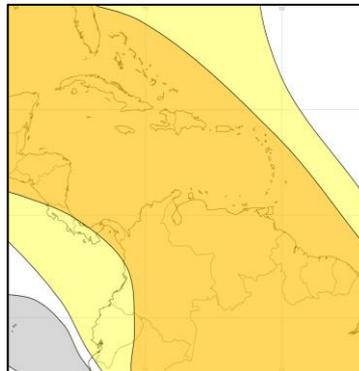
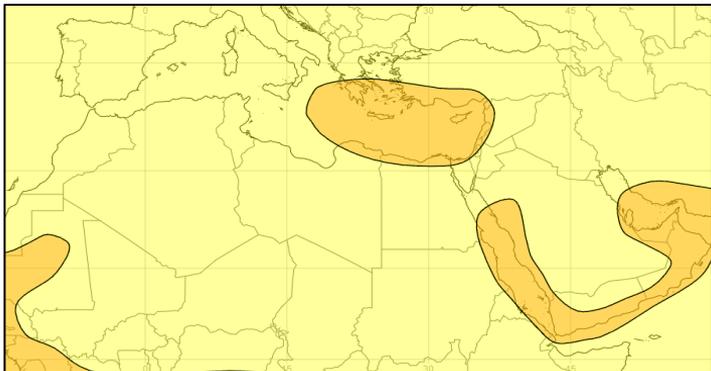
[Global Seasonal Outlook – Temperature](#)

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# MENA, Caribbean and British Overseas Territories Current Status and Outlook - Temperature

**Current Status:** The Caribbean Region has been hot over the past three months, while more mixed conditions were observed over South America with cool conditions for Colombia and western Venezuela. Warm or hot conditions have prevailed over MENA for much of the July to September period although temperatures in Syria, Iraq, Morocco and Algeria were normal in September.

**Outlook:** Warmer than normal conditions are likely across all areas.



## 3-Month Outlook November to January - Temperature

Below Normal		Near-Normal	Above Normal	
Much More Likely	Likely		Likely	Much More Likely

Left: Middle East and North Africa

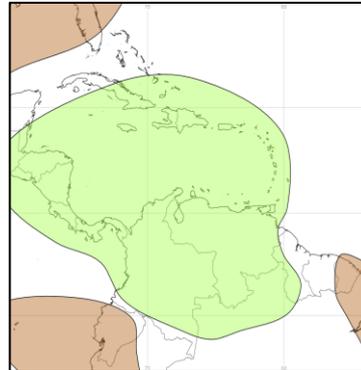
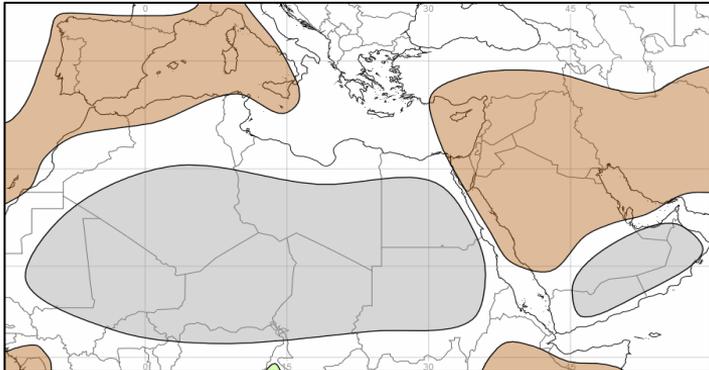
Right: Caribbean region

# MENA, Caribbean and British Overseas Territories Current Status and Outlook - Rainfall

**Current Status:** Normal conditions were mostly observed across much of MENA between July and September. The main exceptions were for Eritrea and some western parts of Yemen which were very wet during August. Parts of the Caribbean Region were wet during July and August before widely dry conditions were observed in September. Very dry conditions have prevailed across Venezuela, Guyana and much of Colombia.

**Outlook:** During late autumn and into winter, rainfall amounts tend to increase across northern parts of MENA. For the November to January period, most areas are likely to experience drier than normal conditions. Normal conditions are likely across southern portions of MENA which are typically dry during this period. Across the Caribbean Region and into South America including Colombia, Venezuela and Guyana, wetter than normal conditions are likely.

**Tropical Cyclone outlook:** The North Atlantic season officially finishes at the end of November though on rare occasions systems can form beyond this. Late season forecasts suggest above average activity during November. Whilst the frequency of tropical cyclones tends to be much lower in November, when compared to the climatological peak during and around September, this suggests impactful landfalls for the Caribbean, Central America and southeast USA remain a possibility.



### 3-Month Outlook November to January - Rainfall

Below Normal		Near-Normal	Above Normal	
Much More Likely	Likely		Likely	Much More Likely

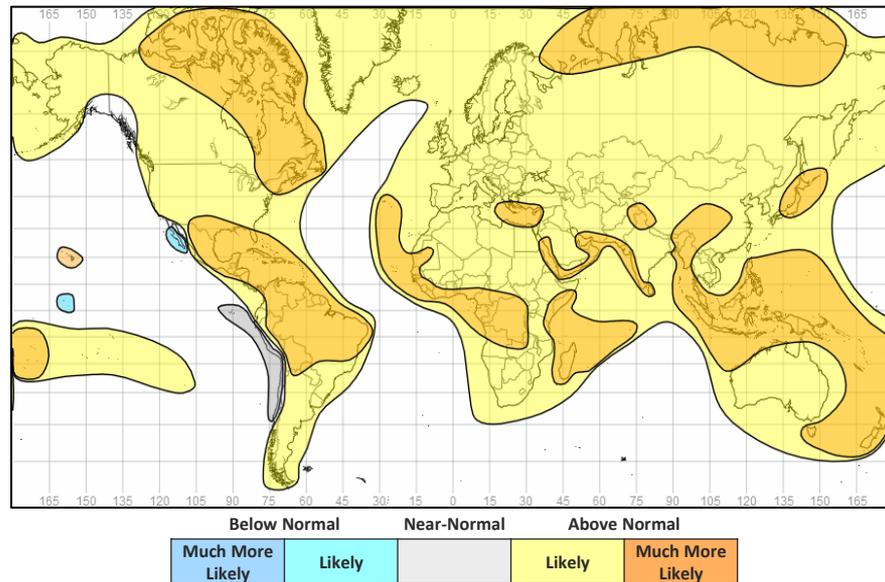
Left: Middle East and North Africa

Right: Caribbean region

# Global Outlook - Temperature

**Outlook:** Consistent with a warming climate, warmer than normal conditions are likely across most land areas. There are only very limited exceptions, most notably some Pacific coastal districts in the Americas where near normal or colder than normal conditions are more likely – this linked to cooler sea surface temperatures associated with the developing La Niña.

## 3-Month Outlook November to January - Temperature



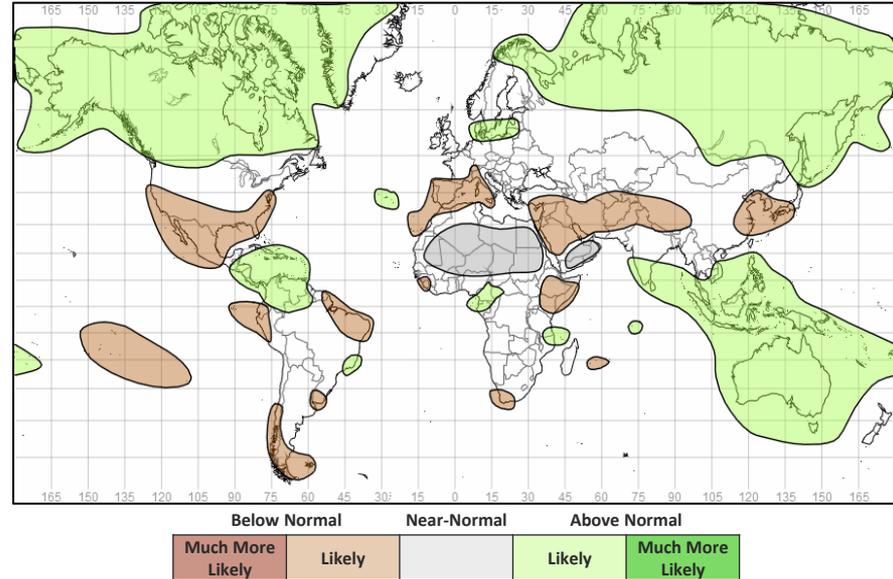
# Global Outlook - Rainfall

## Outlook:

**El Niño-Southern Oscillation (ENSO)** – ENSO is currently neutral. Equatorial sea surface temperatures across the central and eastern Pacific are around or below average. Atmospheric indicators have been largely consistent with ENSO neutral. Over the last few weeks, the likelihood of La Niña emerging has declined with a moderate chance (40-60%) of La Niña over the next couple of months. Should La Niña emerge, it would most likely be a weak event. A transition to La Niña would improve the predictability of global weather patterns on seasonal timescales, particularly in the tropics, though its influence may not be as strong as some La Niña events over recent years.

**Indian Ocean Dipole (IOD)** – The IOD is currently neutral. Recent sea surface temperature patterns across the Indian Ocean are suggestive of a negative IOD but haven't been prolonged enough to meet the threshold for an event to be declared. Most forecasts suggest the IOD will remain neutral or weakly negative over the next couple of months thus providing only limited signals for seasonal predictions. Skilful prediction of the IOD at this time of year tends to be limited beyond a couple of months ahead.

## 3-Month Outlook November to January - Rainfall



# Current Status

[Current Status maps](#)

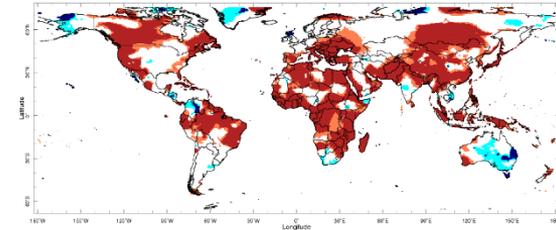
[MENA – Middle East](#)

[MENA – North Africa](#)

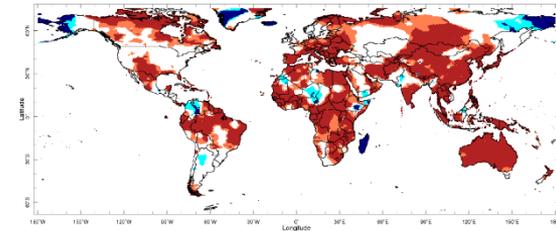
[Caribbean](#)

[British Overseas Territories](#)

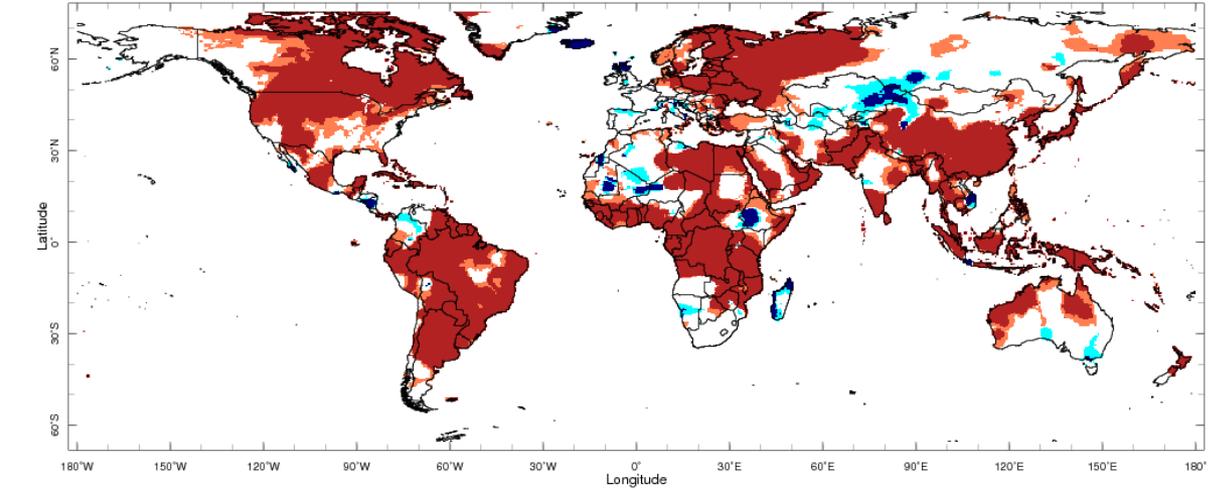
# Current Status – Temperature percentiles



July



August



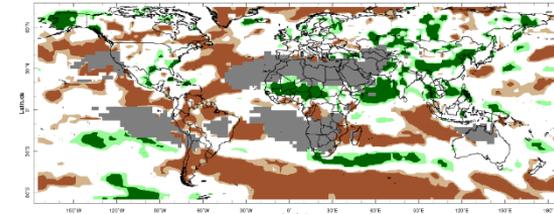
Sep 2024

September

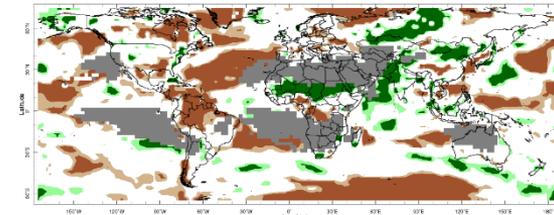


**Notes:** The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions shaded in light and dark blue indicate values below the 20th (Cool) and 10th (Cold) percentile, with respect to the 1981-2010 climatology. The data used in this map are from the NOAA Climate Prediction Center.

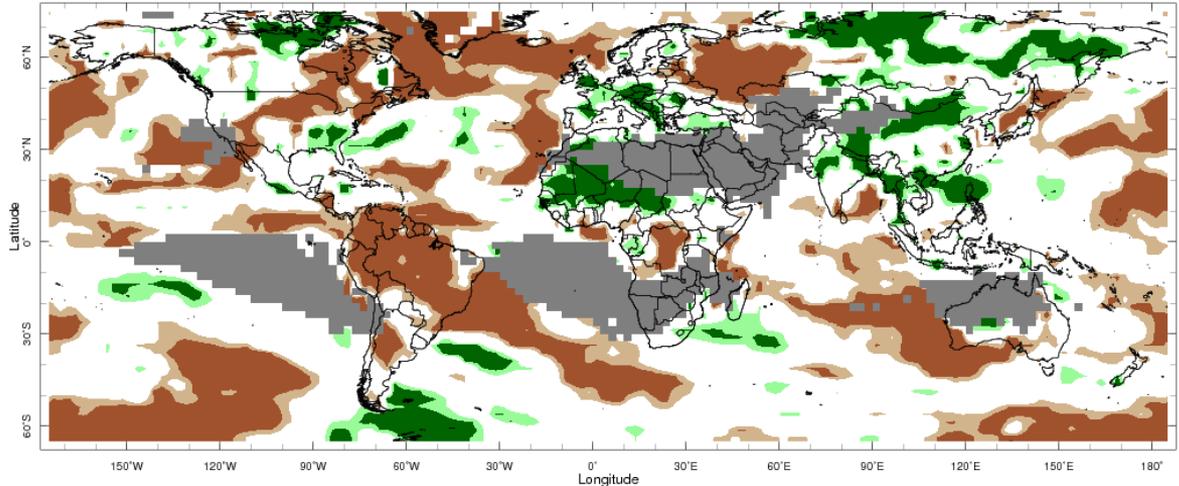
# Current Status – Precipitation percentiles



July



August



Sep 2024

September



**Notes:** The percentiles shown in the map indicate a ranking of rainfall, with the 0th percentile being the driest and the 100th percentile being the wettest in the 1981-2010 climatology. Green and dark green shading represent values above the 80th (Wet) and 90th (Very Wet) percentile, respectively; regions shaded in light and dark brown indicate rainfall below the 20th (Dry) and 10th (Very Dry) percentile, with respect to the 1981-2010 climatology. Grey areas on the map mask out regions that receive less than 10 mm/month of rainfall on normal in the 1981-2010 climatology for the month. The data used in this map are from the NOAA Climate Prediction Center.

# Current Status – MENA – Middle East

## Current Status: Temperature

	July	August	September
Turkey	Hot (1)	Hot (1)	Hot (1)
Palestine	Hot	Warm	Warm
Lebanon	Hot	Warm	Warm
Jordan	Hot	Warm	Warm
Syria	Hot	Normal	Normal
Iraq	Warm	Normal	Normal
Yemen	Mixed	Mixed (2)	Warm

## Current Status: Rainfall

	July	August	September
	Wet	Normal	Wet
	Normal*	Normal*	Normal*
	Normal	Mixed (3)	Normal*

### Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

\* Region usually experiences less than 10mm/month rainfall during the month (dry season).

### Additional Information:

**(1) Note:** Normal in the east

**(2) Note:** Cool in central areas, warm in the southwest, elsewhere normal

**(3) Note:** Very wet in the far west, normal elsewhere

# Current Status – MENA – North Africa

## Current Status: Temperature

	July	August	September
Morocco	Hot	Hot (2)	Normal
Algeria	Hot	Hot	Normal
Tunisia	Hot	Warm	Warm
Libya	Hot	Mixed (3)	Hot (4)
Egypt	Hot	Hot	Hot
Eritrea	Hot	Warm	Warm

## Current Status: Rainfall

	July	August	September
	Normal*	Normal*	Normal
	Mixed (1)	Normal*	Normal
	Normal*	Normal*	Normal
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal	Very Wet	Normal

### Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

\* Region usually experiences less than 10mm/month rainfall during the month (dry season).

### Additional Information:

**(1) Note:** Wet in the far south, otherwise normal.

**(2) Note:** Cool in the far south

**(3) Note:** Normal in west, hot in east

**(4) Note:** Cool in northwest

# Current Status – Caribbean and Central America

### Current Status: Temperature

	July	August	September
Caribbean Region	Hot	Hot	Hot
Haiti	Hot	Hot	Hot
Guyana	Hot	Hot	Hot
Venezuela	Mixed (2)	Mixed (2)	Mixed (2)
Columbia	Cool	Cool	Cool

### Current Status: Rainfall

July	August	September
Mixed (1)	Mixed (3)	Dry
Very Wet	Normal	Dry
Very Dry	Very Dry	Very Dry
Very Dry	Very Dry	Very Dry
Mixed (4)	Mixed (4)	Very Dry

#### Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

\* Region usually experiences less than 10mm/month rainfall during the month (dry season).

#### Additional Information:

**(1) Note:** Very Wet across Hispaniola, western Cuba and Jamaica. Very Dry across the Windward Islands. Normal elsewhere

**(2) Note:** Hot in the east and cool in the west

**(3) Note:** Very wet in Cuba, dry for much of the Lesser Antilles, elsewhere normal.

**(4) Note:** Normal in the west, dry or very dry in the east

## Current Status – British Overseas Territories

Current Status: Temperature

	July	August	September
Southern Europe	Hot	Hot	Mixed
Central Indian Ocean	Normal	Normal	Normal
Central Pacific	Cold	Normal	Normal

Current Status: Rainfall

	July	August	September
	Normal*	Normal*	Normal
	Wet	Very Wet	Normal
	Very Wet	Normal	Normal

### Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

\* Region usually experiences less than 10mm/month rainfall during the month (dry season).

### Additional Information:

**(1) Note:** Cyprus hot, Gibraltar normal

# Outlooks

[Outlooks – Notes for use](#)

[MENA – Middle East](#)

[MENA – North Africa](#)

[Caribbean](#)

[British Overseas Territories](#)

# Outlooks: Notes for use

## Outlooks for months 4 to 6:

As forecast uncertainty generally increases with longer range **the 4-6-month outlook is less reliable than the 1-3 month outlook**. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range.

Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

## Climatological odds:

A forecast is only provided in the outlooks where there is information in the model data about likely outcomes. Therefore, where the likelihoods for above-, near- and below- normal conditions are evenly balanced the phrase 'climatological odds' will be used. This means the outcome could fall anywhere within the possible climatological range. Near-normal conditions should not necessarily be assumed, and users should update with shorter-term forecasts when available.

# Outlook: March to August – MENA – Middle East (1)

		Forecast summary		
		November	November to January	February to April
Turkey	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds north, Likely to be drier than normal south	Climatological odds
Palestine	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Lebanon	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Jordan	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

## Outlook: March to August – MENA – Middle East (2)

		Forecast summary		
		November	November to January	February to April
Syria	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Iraq	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be drier than normal	Climatological odds
Yemen	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

# Outlook: March to August – MENA – North Africa(1)

		Forecast summary		
		November	November to January	February to April
Mauritania	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds
Morocco	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Algeria	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be drier than normal far north, else Likely to be near-normal	Climatological odds
Tunisia	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

## Outlook: March to August – MENA – North Africa(2)

		Forecast summary		
		November	November to January	February to April
Libya	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Egypt	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Eritrea	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

# Outlook: March to August – Caribbean and Central America (1)

		Forecast summary		
		November	November to January	February to April
Caribbean Region	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal
Haiti	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal
Guyana	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be wetter than normal in the south, Climatological odds in the north	Likely to be wetter than normal

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

# Outlook: March to August – Caribbean and Central America (2)

		Forecast summary		
		November	November to January	February to April
Venezuela	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be wetter than normal	Likely to be wetter than normal
Columbia	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be wetter than normal	Likely to be wetter than normal

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

# Outlook: March to August – British Overseas Territories

		Forecast summary		
		November	November to January	February to April
Southern Europe	Temperature	Gibraltar: <b>Likely to be warmer than normal</b> , Cyprus: <b>Much more likely to be warmer than normal</b>	Gibraltar: <b>Likely to be warmer than normal</b> , Cyprus: <b>Much more likely to be warmer than normal</b>	Gibraltar: Likely to be warmer than normal, Cyprus: Much more likely to be warmer than normal
	Rainfall	<b>Likely to be drier than normal</b>	<b>Likely to be drier than normal</b>	Climatological odds
Central Indian Ocean	Temperature	<b>Much more likely to be warmer than normal</b>	<b>Much more likely to be warmer than normal</b>	Much more likely to be warmer than normal
	Rainfall	<b>Likely to be wetter than normal</b>	<b>Likely to be wetter than normal</b>	Climatological odds
Central Pacific	Temperature	<b>Likely to be warmer than normal</b>	<b>Likely to be warmer than normal</b>	Likely to be warmer than normal
	Rainfall	<b>Likely to be drier than normal</b>	<b>Likely to be drier than normal</b>	Climatological odds

**Outlooks for months 4 to 6:** As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

# Annex 1 – Supplemental Information

## For further information

WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME)

<https://www.wmolc.org/>

International Research Institute for Climate and Society (IRI)

<http://iridl.ldeo.columbia.edu/maproom/>

NOAA El Niño technical info

<https://www.ncei.noaa.gov/access/monitoring/enso/>

Met Office

<https://www.metoffice.gov.uk/services/government/international-development>

Climate Outlook Fora (<https://public.wmo.int/en/our-mandate/climate/regional-climate-outlook-products>)

# Technical notes

The [WMO lead centre for long-range forecast multi-model ensemble \(LC-LRFMME\)](#) produce a probabilistic multi-model mean forecast product in which the multi-model mean is based on uncalibrated model output with a model weighting system that accounts for errors in both the forecast probability and ensemble mean. The method used by LC-LRFMME separately computes a probabilistic forecast and calculates tercile probabilities with respect to climatology for each individual model, before creating the weighted multi-model mean. In seasonal prediction, shifts in the tercile probabilities are always closely associated with the shifts in the probability of extremes, and we can use the probability of terciles to provide information on the likelihood of above- or below- normal conditions. The thresholds used in the forecast summaries are defined below.

Seasonal forecasts rely on the aspects of the global weather and climate system that are more predictable, such as tropical sea-surface temperatures or the El Niño–Southern Oscillation (ENSO). However, whilst such forecasts may be able to show what is more or less likely to occur, they acknowledge that other outcomes are possible.

In addition, forecast uncertainty generally increases with longer range so the 6-month outlook is less reliable. It is also based on less information, because not all models are available to this range. Therefore the information presented here should be used to raise early awareness of potential hazards, and should be updated with the 3-month outlook when available.

In the report and tables precipitation is referred to as rainfall but in fact encompasses any form of water, liquid or solid, falling from the sky. Temperatures are the (2 metre) near-surface temperature.

Description	Definition
Much more likely to be below normal	When probability of lower tercile > 70%
More likely to be below normal	When probability of lower tercile is 40-70%
Likely to be normal	When probability of middle tercile is 40-70%
Much more likely to be near-normal	When probability of middle tercile > 70%
Likely to be above near-normal	When probability of upper tercile is 40-70%
Much more likely to be above normal	When probability of upper tercile > 70%
Climatological odds	When probabilities for all categories are roughly 33%

### Global Producing Centres (GPC) forecasts used by WMO LC-LRFMME:

- GPC CPTC (INPE),
- GPC ECMWF,
- GPC Exeter (Met Office),
- GPC Melbourne (BOM),
- GPC Montreal (CMC),
- GPC Moscow (Hydromet Centre of Russia),
- GPC Offenbach (DWD),
- GPC Pretoria (SAWS),
- GPC Seoul (KMA),
- GPC Tokyo (JMA),
- GPC Toulouse (Meteo France),
- GPC Washington (NCEP)

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