

# Global: Monthly Climate Outlook July to April

**Issued: October 2022**

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# Overview

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

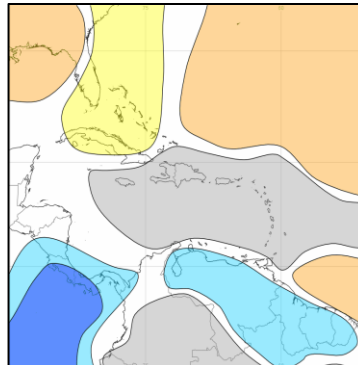
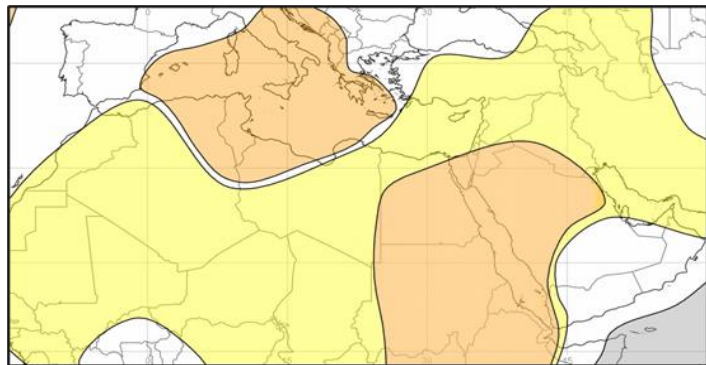
## Current Status:

Over the last three months, most parts of the MENA region have had above normal temperatures. The main exception is Yemen which has seen more mixed temperatures. Conditions have been mixed across the Caribbean, but temperatures were generally normal to hot. Hot conditions were most prevalent for the Overseas Territories over the last three months except for the Central Pacific which remained cold.

## Outlook:

For much of the MENA region, hotter than normal conditions are likely or much more likely. Again, the exception is Yemen, where the influence of the negative Indian Ocean Dipole (i.e. colder than average sea surface temperatures) means temperatures are likely to be near-normal.

For the Caribbean it is likely to be hotter than normal in the north of the region, likely to be colder than normal in the south, and likely to be near-normal elsewhere.



## 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

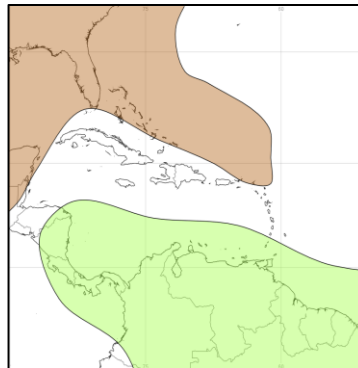
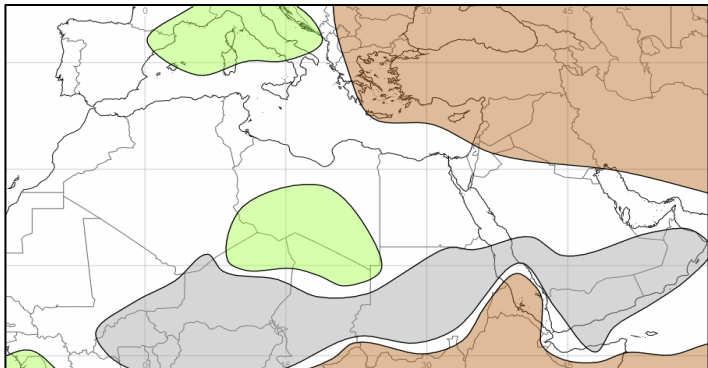
Right: Caribbean region

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

**Current Status:** Rainfall across much of MENA was near-normal over the last three months, though there is typically little rainfall at this time of year. The main exception was western Yemen which was wet during July and August, but normal in September. Much of the Caribbean region was dry during July and August. More mixed conditions were present in September, with the north of the region wetter than normal. There have been mixed conditions for the British Overseas Territories over the last three months.

**Outlook:** Over the next three months normal to below normal rainfall is likely across much of the MENA region. The exceptions to this are for parts of southern Europe, as well as southern Libya, which are likely to be wetter than normal. For the Caribbean, below normal rainfall is likely for northern parts of the region, whilst the south, including Guyana is likely to experience above normal rainfall

**Tropical Cyclone outlook:** To date (27<sup>th</sup> October) there have been eleven named storms and five hurricanes in the Atlantic basin. The season is coming to a close across the region, though further storms cannot be ruled out in November. However, most forecasts suggest any further storms should remain away from land. The full forecast is available [here](#).



## 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

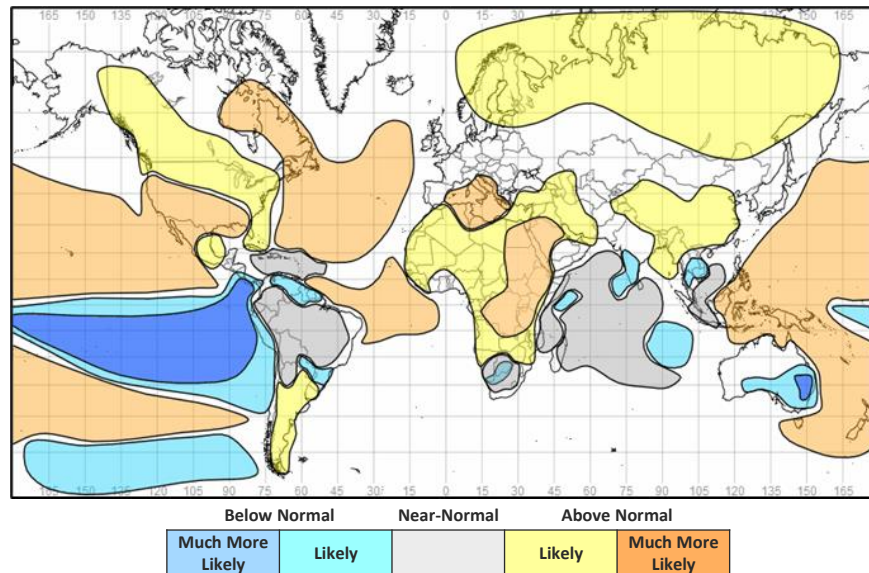
## Outlook:

The ongoing La Niña will be the dominant driver of conditions over the next three months and is likely to persist through the Northern Hemisphere winter, albeit within the context of background warming trend. A negative Indian Ocean Dipole will probably have more limited influence but will help to reinforce the effects of La Niña on temperatures around the Indian Ocean and western Pacific.

For many areas above average temperatures are most likely. However, there are exceptions as a result of La Niña and the negative IOD, including northern South America, Australia, mainland Southeast Asia and southwest India where near- or below normal temperatures are more likely.

Northern Hemisphere winter temperatures are likely, or much more likely to be above normal for North America and northern parts of Europe.

## 3-Month Outlook November to January - Temperature



# Global Outlook - Rainfall

## Outlook:

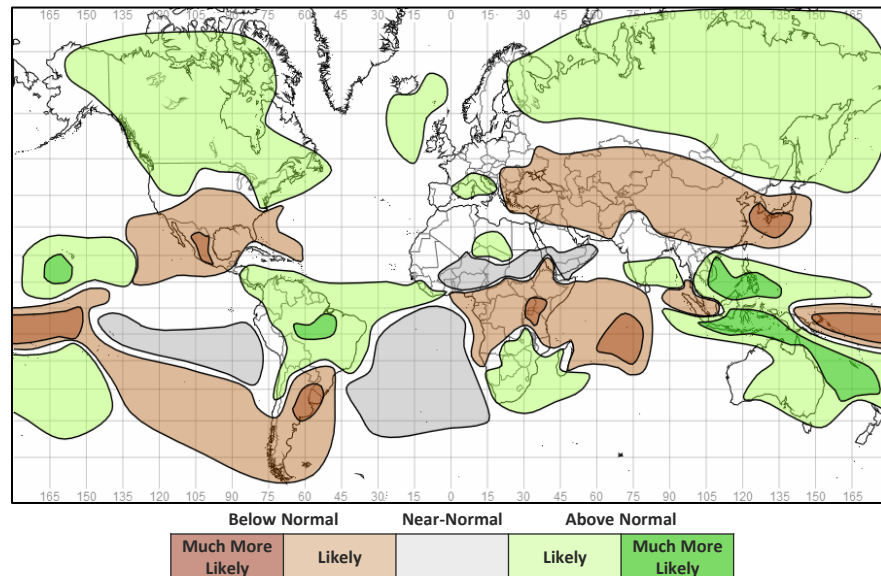
**El Niño-Southern Oscillation (ENSO)** – The current La Niña event continues in the tropical Pacific Ocean with oceanic and atmospheric indicators showing it has strengthened further over the last month.

Whilst La Niña is present and likely to last through the Northern Hemisphere winter, there is some uncertainty with respect to its longevity; The latest [ENSO outlook](#) issued by NOAA states that there is a 75% chance of La Niña persisting during the Northern Hemisphere winter (December-February) 2022-23, with a 54% chance for a change to ENSO-neutral in February-April 2023.

La Niña will remain the most dominant driver of global weather patterns over the next few months at least, more especially for tropical regions. With a couple of notable exceptions (e.g. East Africa) La Niña, very broadly speaking, tends to increase the likelihood of wetter than normal conditions across many land areas of the tropics. More information on typical impacts can be found here <https://www.metoffice.gov.uk/research/climate/seasonal-to-decadal/gpc-outlooks/el-nino-la-nina/enso-impacts>

**Indian Ocean Dipole (IOD)** – The IOD index is negative and is expected to remain so for at least the next two months before returning to neutral around the turn of the year. When concurrent with a La Niña, a negative IOD can enhance wetter than normal conditions in parts of Australia and Asia, and drier than normal conditions in East Africa.

## 3-Month Outlook November to January - Rainfall



# Current Status

[Current Status maps](#)

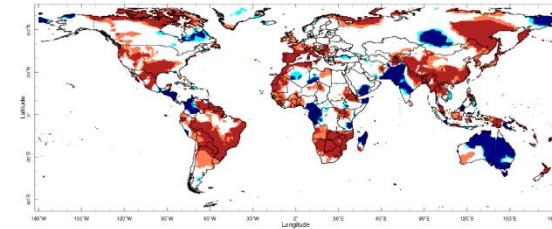
[MENA – Middle East](#)

[MENA – North Africa](#)

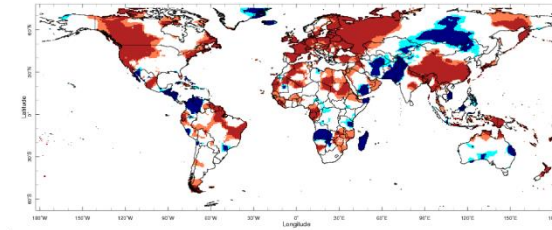
[Caribbean](#)

[British Overseas Territories](#)

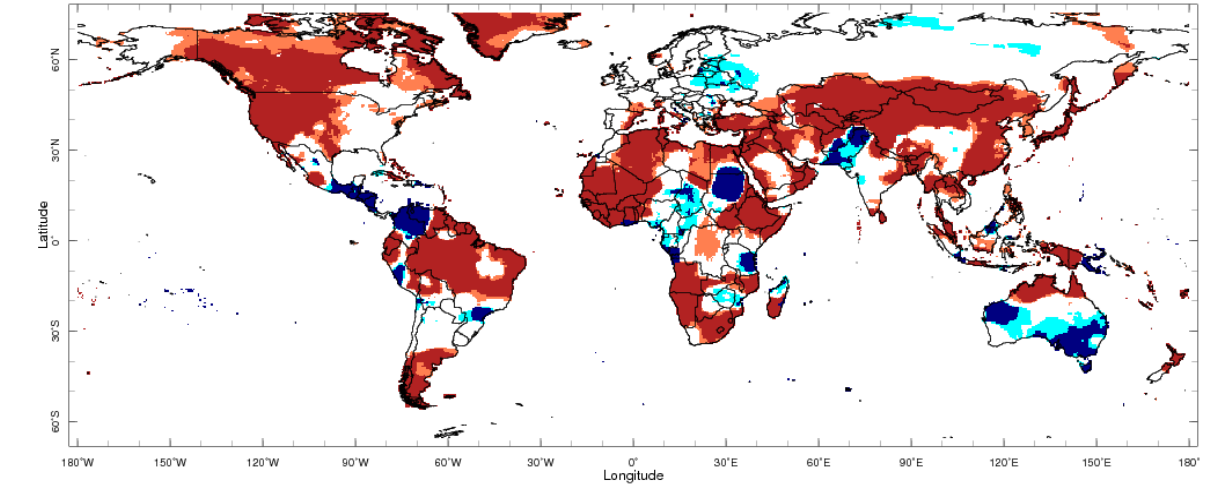
# Current Status – Temperature percentiles



July



August



Sep 2022

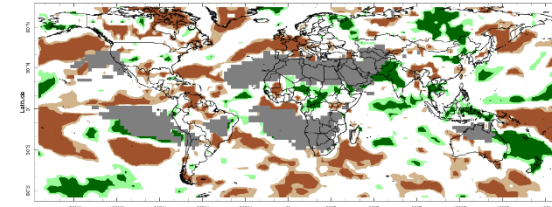
September



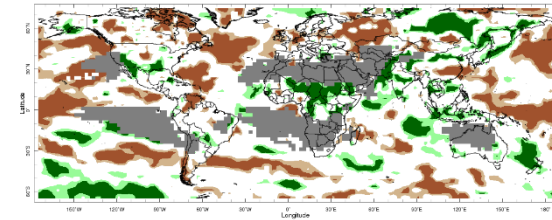
**Notes:** The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions 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.



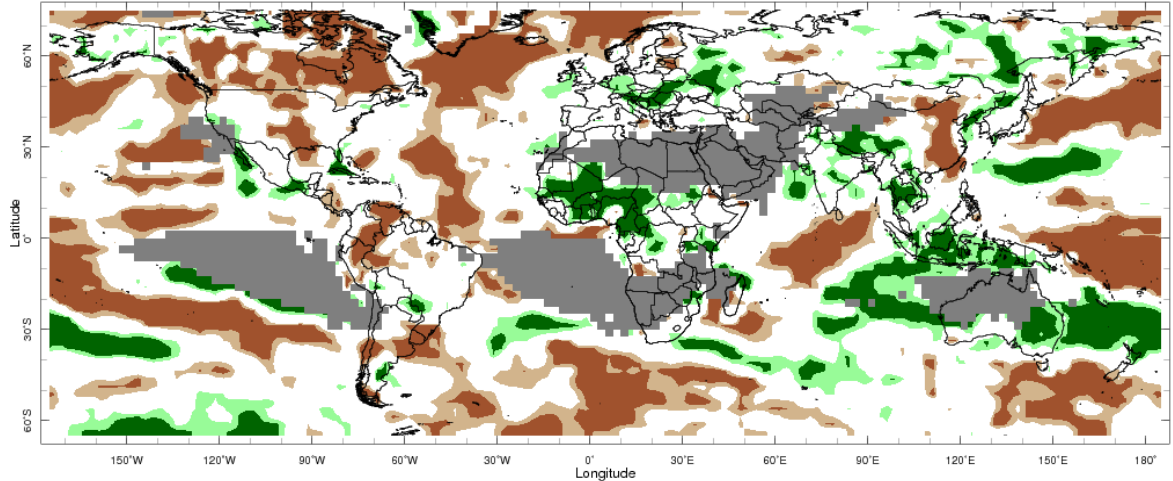
# Current Status – Precipitation percentiles



July



August



September

Sep 2022



**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	Mixed (1)	Hot	Hot
Palestine	Warm	Hot	Hot
Lebanon	Normal	Hot	Hot
Jordan	Normal	Hot	Hot
Syria	Normal	Normal	Hot
Iraq	Normal	Hot	Hot
Yemen	Cold	Cold	Mixed (4)

## Current Status: Rainfall

	July	August	September
	Mixed (2)	Mixed (3)	Normal
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Mixed (5)	Mixed (6)	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:** Hot in the south west, cold in the north. Normal elsewhere.

**(2) Note:** Dry in the west, normal elsewhere

**(3) Note:** Wet in the west and normal elsewhere

**(4) Note:** Hot in east and west, normal in central Yemen

**(5) Note:** Wet in the east and west, normal elsewhere

**(6) Note:** Wet in the west, normal elsewhere

## Current Status – MENA – North Africa

### Current Status: Temperature

	July	August	September
Mauritania	Hot	Mixed (1)	Hot
Morocco	Hot	Normal	Normal
Algeria	Mixed (2)	Hot	Hot
Tunisia	Hot	Hot	Hot
Libya	Mixed (3)	Mixed (3)	Mixed (3)
Egypt	Normal	Hot	Mixed (4)
Eritrea	Hot	Hot	Hot

### Current Status: Rainfall

	July	August	September
	Normal*	Normal*	Mixed (5)
	Normal*	Normal*	Normal*
	Normal*	Normal*	Mixed (5)
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal	Very Wet	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:** Hot in the north and west.
- (2) **Note:** Hot in the north and far west, cold in central Algeria. Normal elsewhere.
- (3) **Note:** Large variations across the country.
- (4) **Note:** Hot in the north, cold in the south.
- (5) **Note:** Very wet in the south, normal elsewhere.

## Current Status – Caribbean

### Current Status: Temperature

	July	August	September
Caribbean Region	Mixed (1)	Mixed	Mixed
Haiti	Cold	Cold	Normal
Guyana	Hot	Hot	Hot

### Current Status: Rainfall

	July	August	September
	Dry	Dry	Mixed (2)
	Dry	Normal	Normal
	Dry	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:** Ranging from cold in the west to hot in the east.

**(2) Note:** Mostly normal/dry, but very wet in the north.

## Current Status – British Overseas Territories

	Current Status: Temperature		
	July	August	September
Southern Europe	Hot	Hot	Hot
Central Indian Ocean	Hot	Normal	Normal
Central Pacific	Cold	Cold	Cold

	Current Status: Rainfall		
	July	August	September
	Normal*	Normal*	Normal*
	Wet	Dry	Dry
	Dry	Wet	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:

# 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	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Palestine	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
Lebanon	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
Jordan	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	Likely to be drier than normal	Likely to be drier 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 – 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	<b>Much more likely to be warmer than normal</b>	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
Yemen	Temperature	Climatological odds	Climatological odds	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be near-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 – North Africa(1)

		Forecast summary		
		November	November to January	February to April
Mauritania	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Likely to be wetter than normal
Morocco	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Algeria	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Likely to be wetter than normal
Tunisia	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	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 – MENA – North Africa(2)

		Forecast summary		
		November	November to January	February to April
Libya	Temperature	Likely to be warmer than normal; <b>Much more likely to be warmer than normal</b> in the north	Likely to be warmer than normal; <b>Much more likely to be warmer than normal</b> in the north	Climatological odds
	Rainfall	Likely to be wetter than normal in the south, otherwise Climatological odds	Likely to be wetter than normal in the south, otherwise Climatological odds	Likely to be wetter than normal
Egypt	Temperature	<b>Much more likely to be warmer than normal</b>	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Eritrea	Temperature	<b>Much more likely to be warmer than normal</b>	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	Likely to be drier 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

		Forecast summary		
		November	November to January	February to April
Caribbean Region	Temperature	Likely to be warmer than normal in the north; Likely to be colder than normal in the south; Likely to be near-normal elsewhere	Likely to be warmer than normal in the north; Likely to be colder than normal in the south; Likely to be near-normal elsewhere	Likely to be warmer than normal in the north; Likely to be colder than normal in the south; Likely to be near-normal elsewhere
	Rainfall	Likely to be drier than normal in the north; Likely to be wetter than normal in the south; Likely to be near-normal elsewhere	Likely to be drier than normal in the north; Likely to be wetter than normal in the south; Likely to be near-normal elsewhere	Likely to be drier than normal in the north; Likely to be wetter than normal in the south; Likely to be near-normal elsewhere
Haiti	Temperature	Likely to be near-normal	Likely to be near-normal	Likely to be near-normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Guyana	Temperature	Likely to be colder than normal	Likely to be colder than normal	Climatological odds
	Rainfall	Likely to be wetter than normal	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	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 wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal
Central Indian Ocean	Temperature	Likely to be near-normal	Likely to be near-normal	Climatological odds
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Central Pacific	Temperature	Much more likely to be colder than normal	Much more likely to be colder than normal	Likely to be colder than normal
	Rainfall	Likely to be drier than normal	Likely to be near-normal	Likely to be drier 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.

# 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

[El Niño/Southern Oscillation \(ENSO\) | National Centers for Environmental Information \(NCEI\) \(noaa.gov\)](#)

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)



# Enquiries

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