

# Global: Monthly Climate Outlook November to August

**Issued: March 2022**

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# Overview

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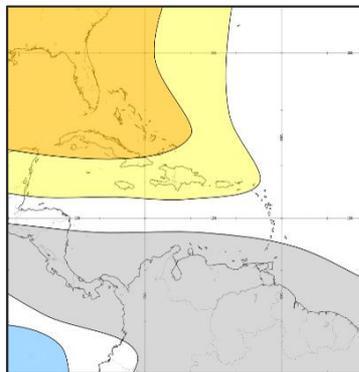
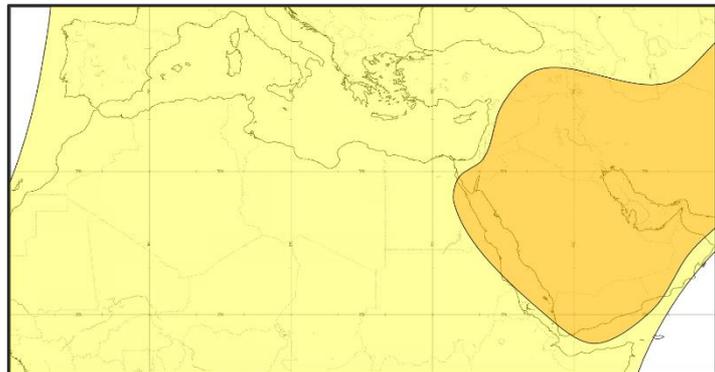
[Global Seasonal Outlook – Temperature](#)

[Global Seasonal Outlook – Rainfall](#)

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

**Current Status:** During December and January much of the MENA region experienced near-normal temperatures. In February, much of northwest Africa was warm or hot, with warm conditions also experienced across parts of the Middle East and Southeast Europe. Temperatures across the Caribbean were generally above normal through December and January. By February temperatures fell below normal in places, with cold or very cold conditions for parts of Central America, as well as northwest South America. Guyana saw near-normal temperatures away from the warm north.

**Outlook:** For most of the MENA and Caribbean region, warmer than normal conditions are likely over the next three months. The main exception is for parts of northern South America including Guyana, as well as the south of Central America, where near-normal conditions are likely.



## 3-Month Outlook April to June - Temperature

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

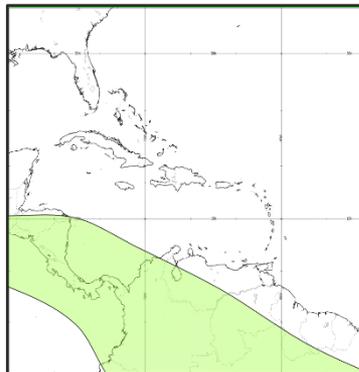
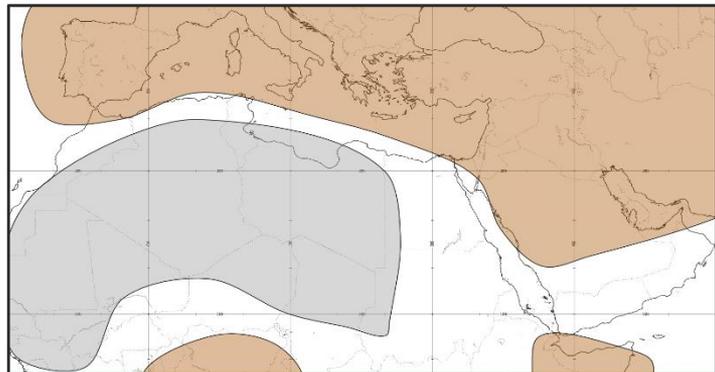
Left: Middle East and North Africa

Right: Caribbean region

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

**Current Status:** Winter tends to be the wettest part of the year for many parts of North Africa and the Middle East. Mixed conditions have been observed through December and January, although some areas were wetter than normal during January including Turkey, Palestine, Libya and Egypt. In February, most of the region experienced normal to dry conditions, with exceptions along the coast of Libya and in western Turkey. Across the Caribbean rainfall has been near- or below normal throughout.

**Outlook:** Near-normal or drier than normal conditions are likely across much of North Africa and the Middle East over the next 3 months. Northern parts of South America are likely to be wetter than normal.



## 3-Month Outlook April to June - Rainfall

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

Left: Middle East and North Africa

Right: Caribbean region

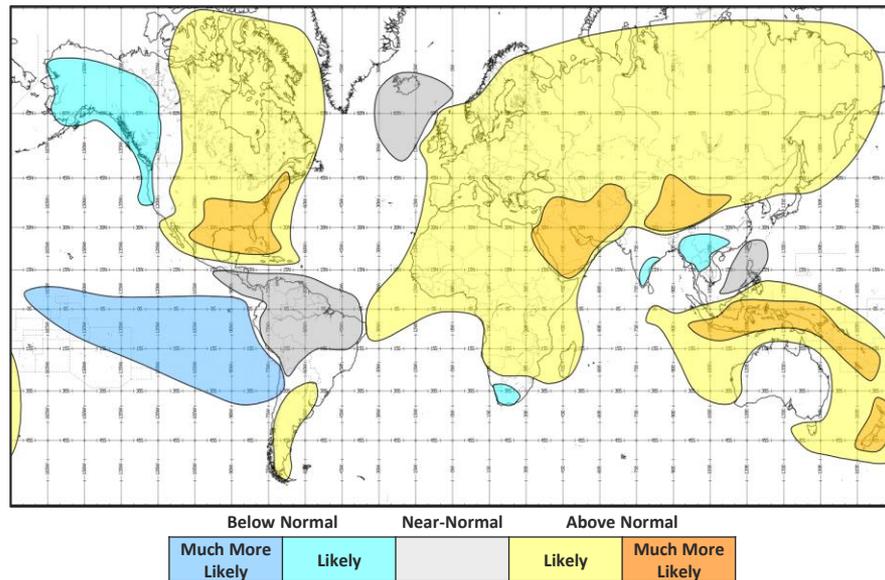
# Global Outlook - Temperature

## Outlook:

La Niña is ongoing across the tropical Pacific, persisting longer than originally anticipated. La Niña will remain the main driver of temperature anomalies across the tropics over the next three months, this despite La Niña's expected weakening through this period.

As is typical due to climate change, many parts of the globe are likely to see above normal temperatures. However, there are some notable exceptions. Consistent with La Niña, near- to below normal temperatures are most likely for some northern and western parts of South America, Australia and northwest North America. Near- to below normal temperatures are also likely for parts of southern and southeast Asia.

## 3-Month Outlook April to June - Temperature



# Global Outlook - Rainfall

## Outlook:

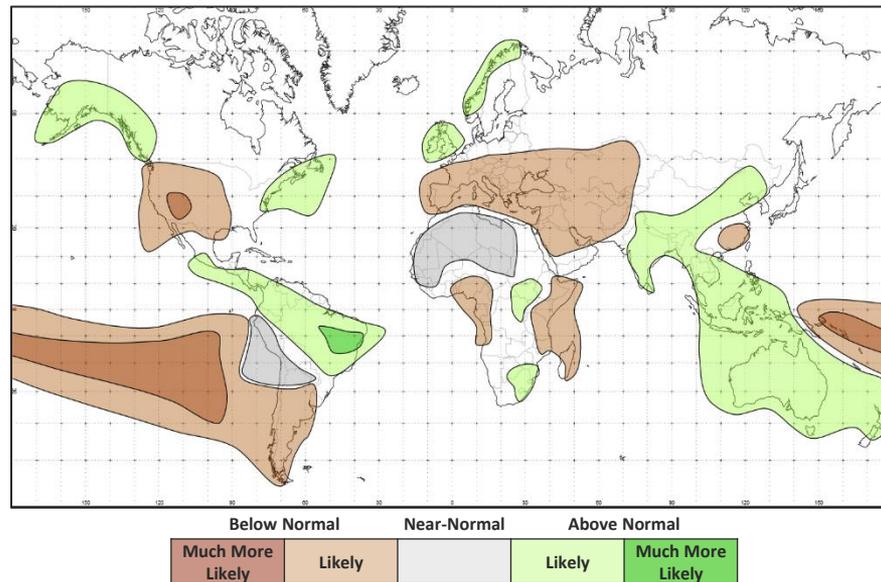
**El Niño-Southern Oscillation (ENSO)** – La Niña persists with sea surface temperatures and atmospheric conditions across the Pacific basin indicative of a weak ongoing event. The event has peaked and, according to NOAA, whilst La Niña is likely to continue into the Northern Hemisphere early summer (53% chance of lasting June-August 2022, and a 40-50% chance of La Niña or ENSO-neutral thereafter). The effects of La Niña are likely to remain wide-reaching during the rest of the Boreal spring and into the summer.

With a couple of notable exceptions (including 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>

For the next three months, wetter than normal conditions are likely across much of south and southeast Asia, as well as Australia. Wetter than normal conditions are also likely for parts of southeast Africa, as well as central Africa (northeast DRC and South Sudan in particular), as well as the western and eastern coastal areas of North America. Parts of the north of South America are also likely to be wetter than normal. Drier than normal conditions are likely in large parts of Europe, the Middle East and Central Asia.

**Indian Ocean Dipole (IOD)** – The IOD returned to a neutral state during early November and is expected to remain neutral throughout April to June. It will therefore have little effect on global climate during this period.

## 3-Month Outlook April to June - Rainfall



# Current Status

[Current Status maps](#)

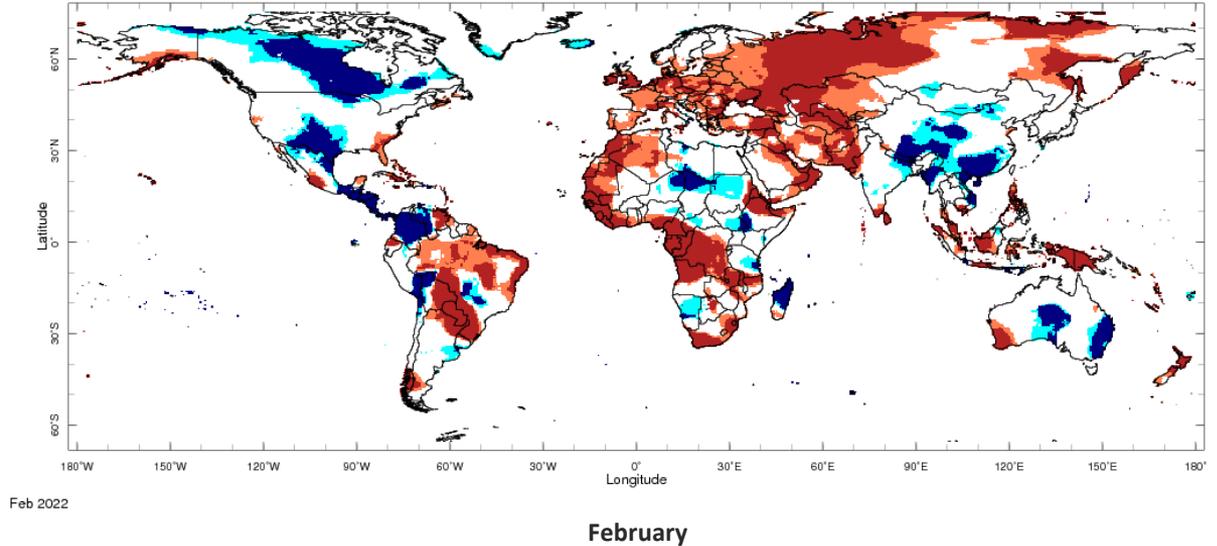
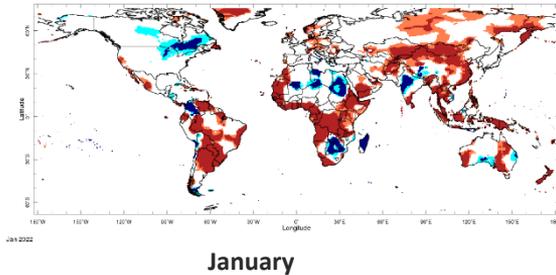
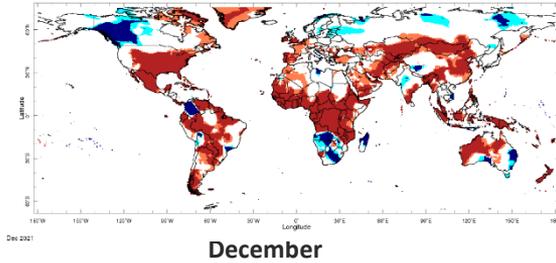
[MENA – Middle East](#)

[MENA – North Africa](#)

[Caribbean](#)

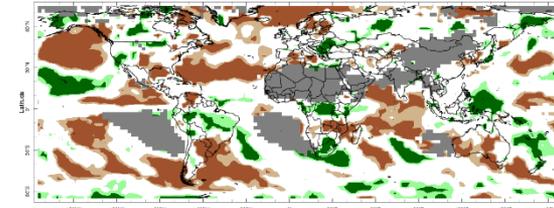
[British Overseas Territories](#)

# Current Status – Temperature percentiles

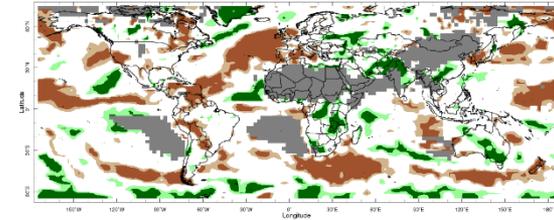


**Notes:** The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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

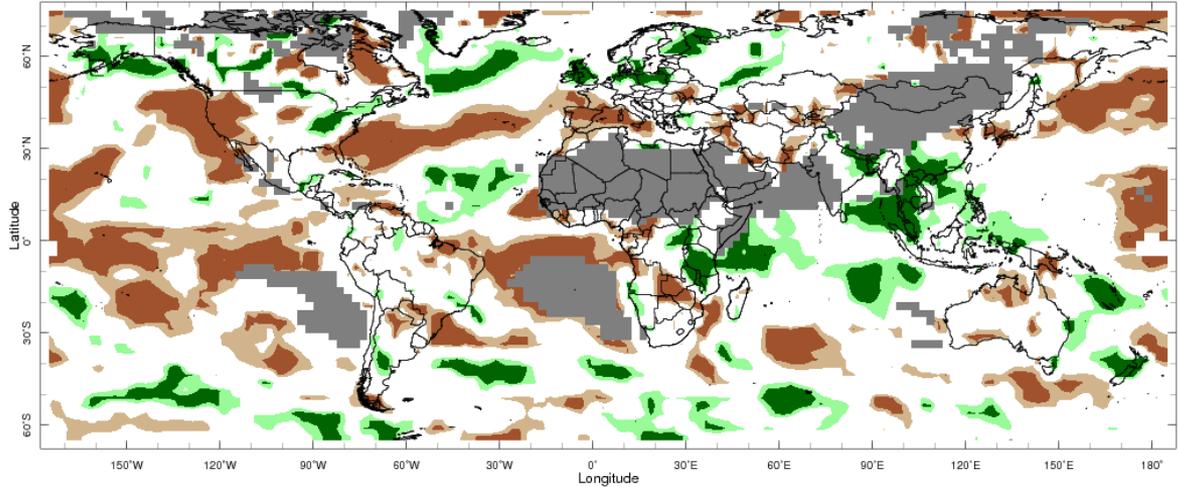
# Current Status – Precipitation percentiles



December



January



Feb 2022

February



**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

	December	January	February
Turkey	Warm	Normal	Warm
Palestine	Normal	Normal	Normal
Lebanon	Normal	Normal	Normal
Jordan	Normal	Normal	Normal
Syria	Normal	Normal	Mixed (1)
Iraq	Normal	Normal	Hot
Yemen	Hot	Hot	Warm

## Current Status: Rainfall

	December	January	February
	Normal	Wet	Mixed (3)
	Normal	Wet	Normal
	Normal	Normal	Normal
	Normal	Normal	Normal
	Normal	Normal	Mixed (4)
	Dry	Mixed (1)	Very Dry
	Normal*	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:** Hot in the northeast. Normal elsewhere.
- (2) **Note:** Very wet in the north, normal in the south
- (3) **Note:** Large variations across the country
- (4) **Note:** Dry in the northeast. Normal elsewhere.

## Current Status – MENA – North Africa

	Current Status: Temperature		
	December	January	February
Mauritania	Hot	Hot	Hot
Morocco	Warm	Mixed (1)	Hot
Algeria	Normal	Normal	Warm
Tunisia	Normal	Normal	Normal
Libya	Normal	Mixed (2)	Mixed (2)
Egypt	Normal	Mixed (3)	Normal
Eritrea	Hot	Hot	Hot

	Current Status: Rainfall		
	December	January	February
	Normal*	Normal*	Normal*
	Dry	Dry	Dry
	Dry	Dry	Normal
	Dry	Normal	Normal
	Wet	Wet	Mixed (4)
	Wet	Wet	Normal
	Normal*	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:** Hot in the southwest, normal the northeast
- (2) **Note:** Cold in parts of the west, otherwise normal
- (3) **Note:** Cold in the south, normal in the north
- (4) **Note:** Wet in the north, normal elsewhere

## Current Status – Caribbean

	Current Status: Temperature		
	December	January	February
Caribbean Region	Hot	Hot	Warm
Haiti	Hot	Hot	Warm
Guyana	Hot	Hot	Hot

	Current Status: Rainfall		
	December	January	February
Caribbean Region	Normal	Very Dry	Dry
Haiti	Very Dry	Normal	Normal
Guyana	Normal	Dry	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:

## Current Status – British Overseas Territories

	Current Status: Temperature			Current Status: Rainfall		
	December	January	February	December	January	February
Southern Europe	Hot	Normal	Warm	Normal	Normal	Mixed (1)
Central Indian Ocean	Cold	Normal	Normal	Dry	Normal	Normal
Central Pacific	Cold	Cold	Cold	Normal	Mixed (1)	Mixed (1)

### 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: Large variations across the regions

# 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		
		April	April to June	July to September
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	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 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	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 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		
		April	April to June	July to September
Syria	Temperature	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 drier than normal	Climatological odds
Iraq	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 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	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(1)

		Forecast summary		
		April	April to June	July to September
Mauritania	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 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 near-normal	Climatological odds
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 near-normal	Likely to be drier than normal
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	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.

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

		Forecast summary		
		April	April to June	July to September
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	Likely to be near-normal	Climatological odds
Egypt	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
Eritrea	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

**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		
		April	April to June	July to September
Caribbean Region	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be drier than normal or likely to be near-normal for most areas; Likely to be wetter than normal for southern Central America and northern South America	Likely to be drier than normal or likely to be near-normal for most areas; Likely to be wetter than normal for southern Central America and northern South America	Likely to be drier than normal or likely to be near-normal for most areas; Likely to be wetter than normal for southern Central America and northern South America
Haiti	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Guyana	Temperature	Likely to be near-normal	Likely to be near-normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal in the south; Climatological odds elsewhere	Likely to be wetter than normal in the south; Climatological odds elsewhere	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		
		April	April to June	July to September
Southern Europe	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Much more 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
Central Indian Ocean	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Much more likely to be drier than normal	Likely to be drier than normal	Climatological odds
Central Pacific	Temperature	Much more likely to be colder than normal	Much more likely to be colder than normal	Much more likely to be colder than normal
	Rainfall	Much more likely to be drier than normal	Much more likely to be drier than normal	Much more 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

<https://www.ncdc.noaa.gov/teleconnections/enso/indicators/sst.php>

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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