

# Global: Monthly Climate Outlook November to August

**Issued: February 2021**

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# Overview

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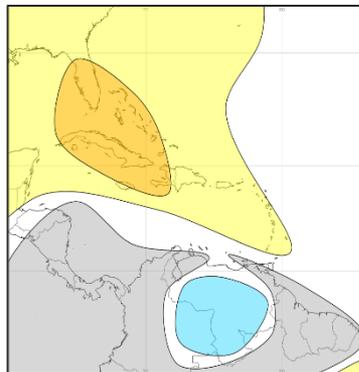
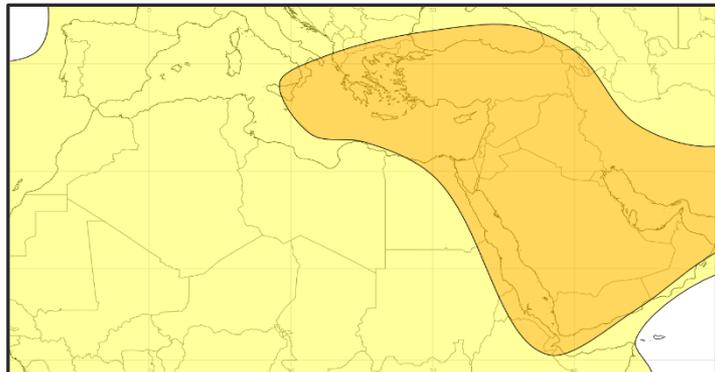
[Global Seasonal Outlook – Temperature](#)

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

**Current Status:** Over the last three months, temperatures have been above normal across many parts of the area, this is especially true for the MENA region. The main exception was some countries bordering the western Mediterranean where temperatures have been near-normal over the last couple of months.

**Outlook:** Most areas are likely or very likely to be warmer than normal during the next three months. However, southern parts of Central America and northern South America are likely to be near-normal.



## 3-Month Outlook March to May - Temperature

Below Normal		Near-Normal	Above Normal	
Very Likely	Likely		Likely	Very Likely

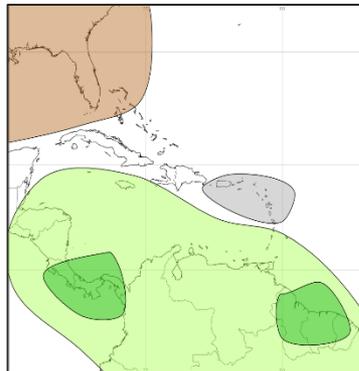
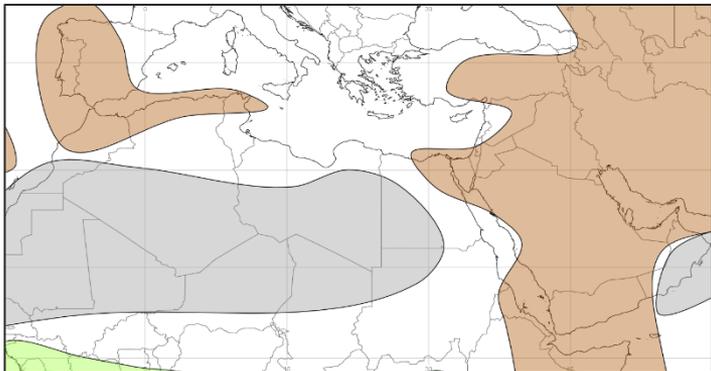
Left: Middle East and North Africa

Right: Caribbean region

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

**Current Status:** A varied picture across these regions over the last three months. For the MENA region most areas have experienced near-normal or below-average rainfall.

**Outlook:** Many parts of the MENA region are likely to have below-normal rainfall over the next three months. A more mixed picture for the Caribbean area with above average rainfall likely for parts of the Windward Islands, the far north of North America and southern parts of Central America.



## 3-Month Outlook March to May - Rainfall

Below Normal		Near-Normal	Above Normal	
Very Likely	Likely		Likely	Very Likely

Left: Middle East and North Africa

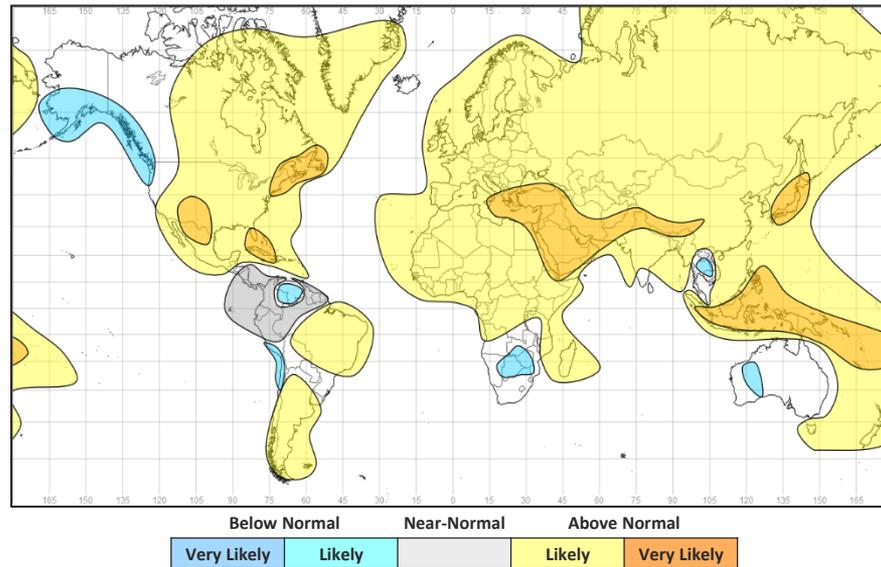
Right: Caribbean region

# Global Outlook - Temperature

## Outlook:

La Niña (see 'Global Outlook – Rainfall' slide for more information) tends to have an overall cooling effect across the world. Despite this, many regions are still likely to be warmer than normal over the next three months. This consistent with the warming observed over the past decade but it is noteworthy that the above normal temperature signal is less strong as it was at this time last year (when ENSO was in a neutral state). There are some notable exceptions with below normal temperatures likely for parts of southern Africa, a small part of Southeast Asia, parts of northern and western South America as well as northwest North America.

## 3-Month Outlook March to May - Temperature



# Global Outlook - Rainfall

## Outlook:

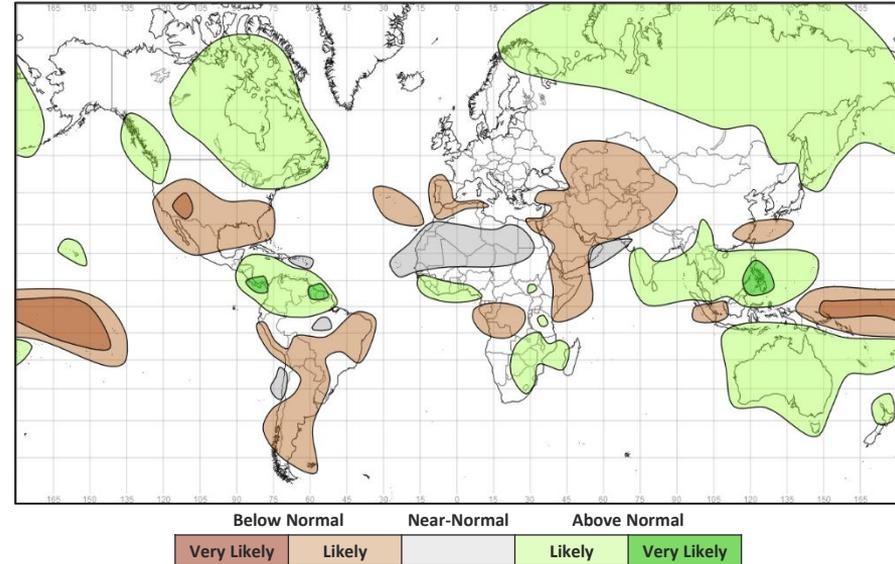
**El Niño-Southern Oscillation (ENSO)** – La Niña conditions remain well established across the tropical Pacific, with sea-surface temperature anomalies, trade wind strength, atmospheric pressure pattern and cloudiness all consistent with this. The event has likely recently peaked and a gradual shift into neutral conditions is likely (60% chance) during the next three months. Despite this trend La Niña will continue to be a dominant driver of rainfall patterns, especially in the tropics, for a large proportion of this forecast period.

Very generally, the suppression of rainfall over the tropical Pacific Ocean, that La Niña is associated with, leads to increases in rainfall across the tropical land areas.

Over the next three months, large parts of southern Asia, Australasia, southern and western Africa as well as northern South America are likely to be wetter than normal.

Meanwhile, much of the Middle East, Central Asia, the Horn of Africa, parts of the Congo basin, southern North America and a central and southern swathe of South America are likely to be drier than normal.

## 3-Month Outlook March to May - Rainfall



# Current Status

[Current Status maps](#)

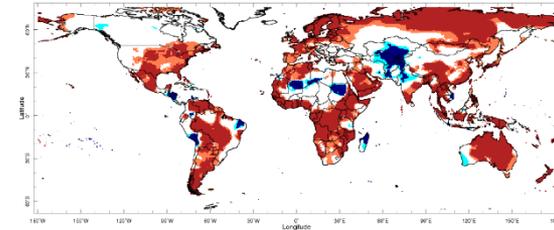
[MENA – Middle East](#)

[MENA – North Africa](#)

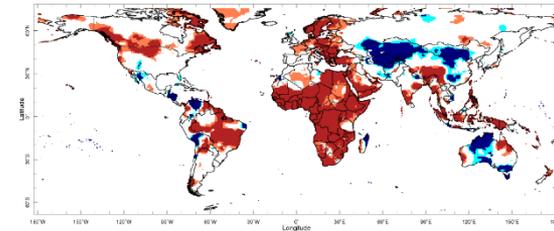
[Caribbean](#)

[British Overseas Territories](#)

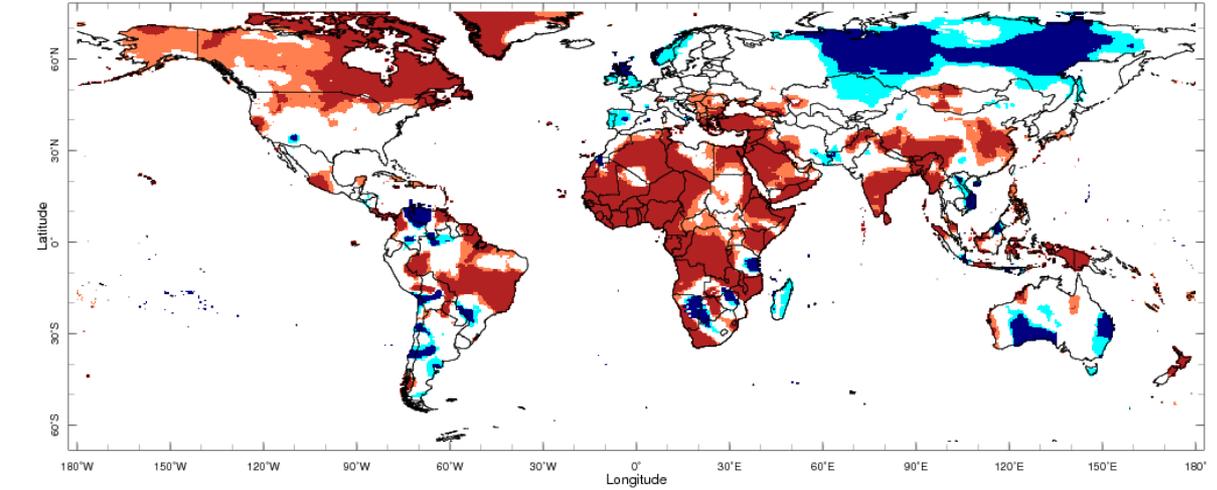
# Current Status – Temperature percentiles



Nov 2020



December



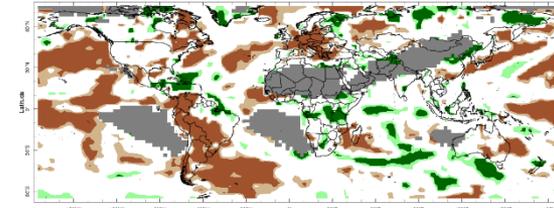
Jan 2021

January

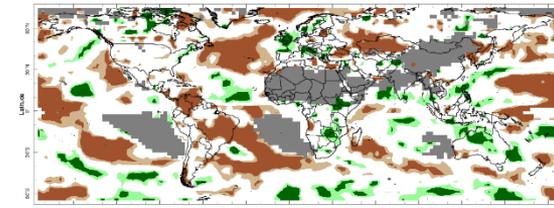


**Notes:** The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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

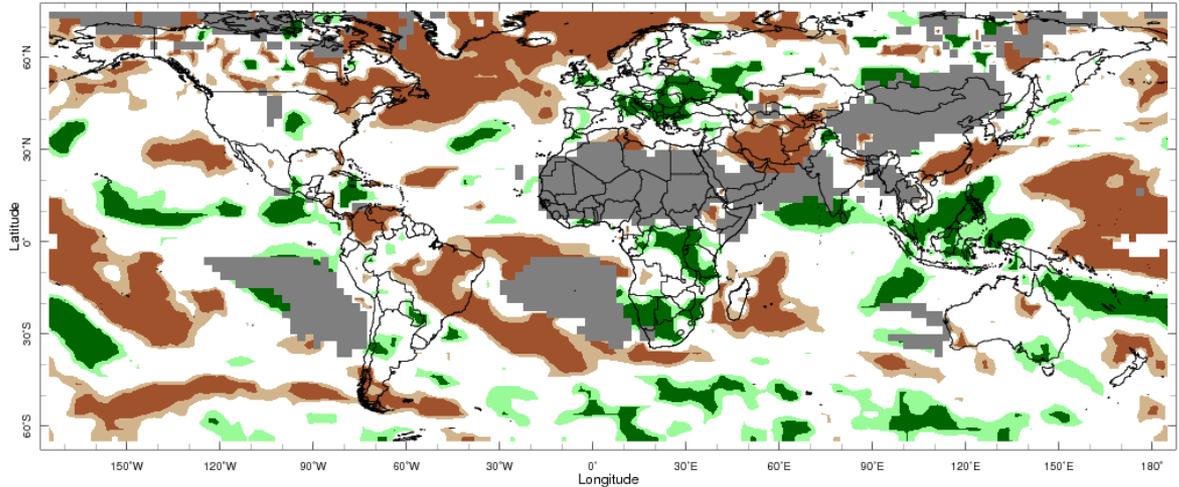
# Current Status – Precipitation percentiles



Nov 2020



Dec 2020



Jan 2021

January



**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

	November	December	January
Turkey	Warm	Hot	Hot
Palestine	Normal	Hot	Hot
Lebanon	Normal	Hot	Hot
Jordan	Normal	Hot	Hot
Syria	Normal	Hot	Hot
Iraq	Warm	Normal	Hot
Yemen	Hot	Hot	Hot

## Current Status: Rainfall

November	December	January
Mixed <sup>^</sup>	Dry	Mixed <sup>^^^^</sup>
Wet	Normal	Normal
Wet	Normal	Normal
Wet	Normal	Normal
Wet	Wet	Mixed <sup>^^^</sup>
Normal	Normal	Dry <sup>^^</sup>
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:

<sup>^</sup>Note: Very Dry in western parts of the country with rainfall near normal in the east

<sup>^^</sup>Note: Near normal in the north and west

<sup>^^^</sup>Note: Wet in central/northern/northwestern areas, near normal elsewhere

<sup>^^^^</sup>Note: Very wet in the far northwest, near normal or wet elsewhere

## Current Status – MENA – North Africa

### Current Status: Temperature

	November	December	January
Mauritania	Hot	Hot	Hot
Morocco	Hot	Warm	Normal
Algeria	Hot	Normal	Hot
Tunisia	Hot	Normal	Hot
Libya	Normal	Normal	Mixed <sup>^^^</sup>
Egypt	Normal	Hot	Hot
Eritrea	Hot	Hot	Hot

### Current Status: Rainfall

	November	December	January
	Normal*	Normal*	Normal*
	Normal	Dry	Mixed <sup>^^</sup>
	Normal	Normal	Dry <sup>^^^</sup>
	Normal	Normal	Dry
	Normal*	Normal*	Dry <sup>^^^</sup>
	Very Wet <sup>^^</sup>	Normal*	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:

<sup>^</sup>Note: Very Wet in the far north of the country, with rainfall near normal elsewhere

<sup>^^</sup>Note: Very Wet in the far north of the country, with rainfall near normal elsewhere

<sup>^^^</sup>Note: Dry across parts of the north

<sup>^^^</sup>Note: Hot in the west, normal or warm elsewhere

## Current Status – Caribbean

### Current Status: Temperature

	November	December	January
Caribbean Region	Hot	Normal	Warm
Haiti	Cool	Normal	Warm
Guyana	Warm	Hot	Normal

### Current Status: Rainfall

	November	December	January
Caribbean Region	Normal	Dry	Mixed <sup>^</sup>
Haiti	Very Wet	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:

<sup>^</sup>Note: Very Wet for Jamaica and eastern Cuba. Dry for western Cuba and Dominican Republic. Normal elsewhere.

## Current Status – British Overseas Territories

Current Status: Temperature

	November	December	January
Southern Europe	Warm	Mixed <sup>^</sup>	Mixed <sup>^</sup>
Central Indian Ocean	Warm	Warm	Warm
Central Pacific	Cold	Cold	Cold

Current Status: Rainfall

	November	December	January
	Normal	Very Wet	Mixed <sup>^^</sup>
	Wet	Wet	Normal
	Normal	Very Dry	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:

<sup>^</sup>**Note:** Temperatures highly variable across the region in December and January, mainly normal with some hot areas.

<sup>^^</sup>**Note:** Gibraltar wet. Cyprus 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		
		March	March to May	June to August
Turkey	Temperature	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 – <a href="#">see note</a>	Likely to be drier than normal	Likely to be drier than normal
Palestine	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 – <a href="#">see note</a>	Likely to be drier than normal	Climatological odds – <a href="#">see note</a>
Lebanon	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 – <a href="#">see note</a>	Likely to be drier than normal	Climatological odds – <a href="#">see note</a>
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	Climatological odds – <a href="#">see note</a>	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 – MENA – Middle East (2)

		Forecast summary		
		March	March to May	June to August
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	Climatological odds – <a href="#">see note</a>	Likely to be drier than normal	Likely to be drier than normal in north, otherwise Climatological odds – <a href="#">see note</a>
Iraq	Temperature	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 – <a href="#">see note</a>	Likely to be drier than normal	Likely to be drier than normal
Yemen	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	Likely to be wetter than normal in the far west, likely to be near-normal elsewhere

**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		
		March	March to May	June to August
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 – <a href="#">see note</a>
Morocco	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	Climatological odds – see note
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	Climatological odds – <a href="#">see note</a>	Climatological odds – <a href="#">see note</a>
Tunisia	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds – <a href="#">see note</a>	Climatological odds – <a href="#">see note</a>	Climatological odds – <a href="#">see note</a>

**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		
		March	March to May	June to August
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 – <a href="#">see note</a>	Likely to be near-normal
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	Likely to be drier than normal in the north, elsewhere Climatological odds – <a href="#">see note</a>	Likely to be near-normal
Eritrea	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 near-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 – Caribbean

		Forecast summary		
		March	March to May	June to August
Caribbean Region	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 far north, likely to be wetter than normal far south, otherwise Climatological odds – <a href="#">see note</a>	Likely to be drier than normal far north, likely to be wetter than normal far south, otherwise Climatological odds – <a href="#">see note</a>	Likely to be drier than normal far north, likely to be wetter than normal far south, otherwise likely to be near-normal
Haiti	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds – <a href="#">see note</a>	Climatological odds – <a href="#">see note</a>	Likely to be near-normal
Guyana	Temperature	Likely to be colder than normal	Likely to be colder than normal	Likely to be near normal
	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		
		March	March to May	June to August
Southern Europe	Temperature	Likely to be warmer than normal in the west, <b>much more likely to be warmer than normal</b> in the east	Likely to be warmer than normal in the west, <b>much more likely to be warmer than normal</b> in the east	Likely to be warmer than normal
	Rainfall	Climatological odds – <a href="#">see note</a> , but likely to be near-normal in Gibraltar	Likely to be drier than normal	Likely to be drier than normal in the west, Climatological odds – <a href="#">see note</a> in the east
Central Indian Ocean	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 – <a href="#">see note</a>
Central Pacific	Temperature	Likely to be colder than normal	Likely to be colder than normal	Likely to be colder 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.

# 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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