

Global: Monthly Climate Outlook

April to January

Issued: July 2024

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Overview

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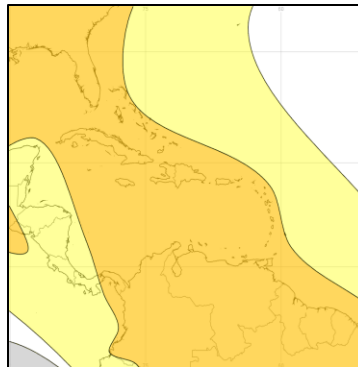
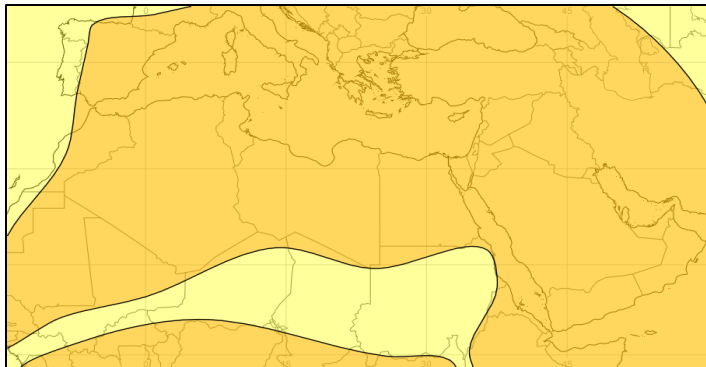
[Global Seasonal Outlook – Temperature](#)

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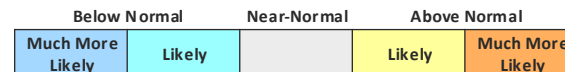
MENA, Caribbean and British Overseas Territories Current Status and Outlook - Temperature

Current Status: The Caribbean has been hot over the past three months. Most of MENA experienced hot conditions over the same period except for northwestern parts, which were consistently either normal or cold, and the Levant, which was normal in May.

Outlook: Both regions are likely or much more likely to be warmer than normal.



3-Month Outlook August to October - Temperature



Left: Middle East and North Africa

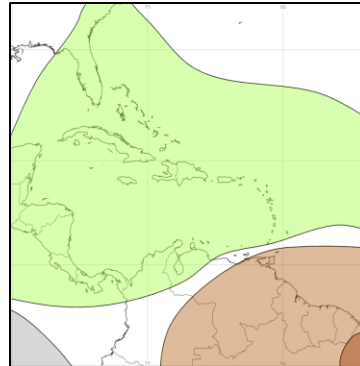
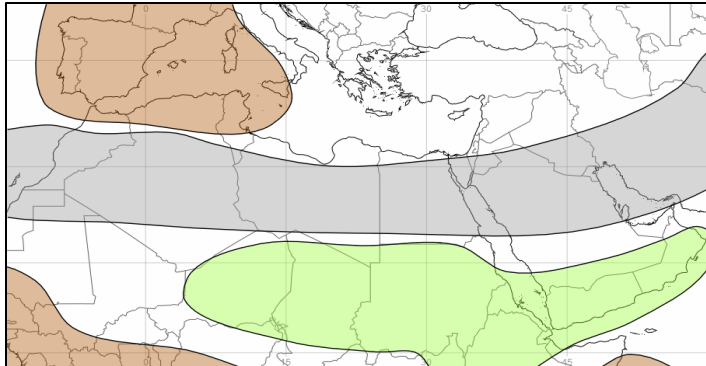
Right: Caribbean region

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

Current Status: The Middle East has been mixed over the last three months. Dry conditions over the Levant were experienced in April and June with a wet May in between. Further south it has been normal or wetter than normal. In April, a period of disturbed weather led to the UAE receiving its highest 24-hour rainfall total on record. Most of North Africa receives very little rainfall over April-June, however Morocco and northern parts of Algeria were normal or dry. A marked shift from very dry to very wet conditions occurred in central Caribbean in June, the start of the region's wet season. This came ahead of Hurricane Beryl, which impacted the region early July.

Outlook: Across the MENA region, near-normal rainfall is likely for much of the north, including much of the Levant and northern Africa. Gibraltar, as well as northern Morocco, northern Algeria and Tunisia are likely to be drier than normal. Further south, it is likely to be wetter than normal in Yemen. The Caribbean is much more likely to be wetter than normal.

Tropical Cyclone outlook: Information for the North Atlantic Hurricane season can be found at [North Atlantic tropical storm seasonal forecast 2024](#)



3-Month Outlook August to October - Rainfall

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

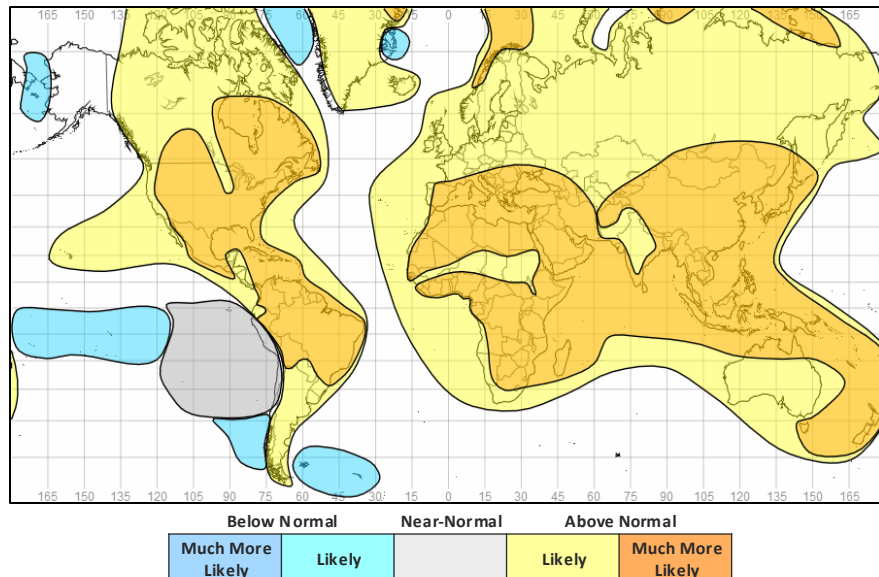
Left: Middle East and North Africa

Right: Caribbean region

Global Outlook - Temperature

Outlook: Consistent with a warming climate, warmer than normal conditions are very likely across large parts of the globe. There are limited exceptions, most notably western parts of South America and the central Pacific where near normal or colder than normal conditions are more likely. This linked to cooler sea surface temperatures in the Pacific.

3-Month Outlook August to October - Temperature



Global Outlook - Rainfall

Outlook: Outlook:

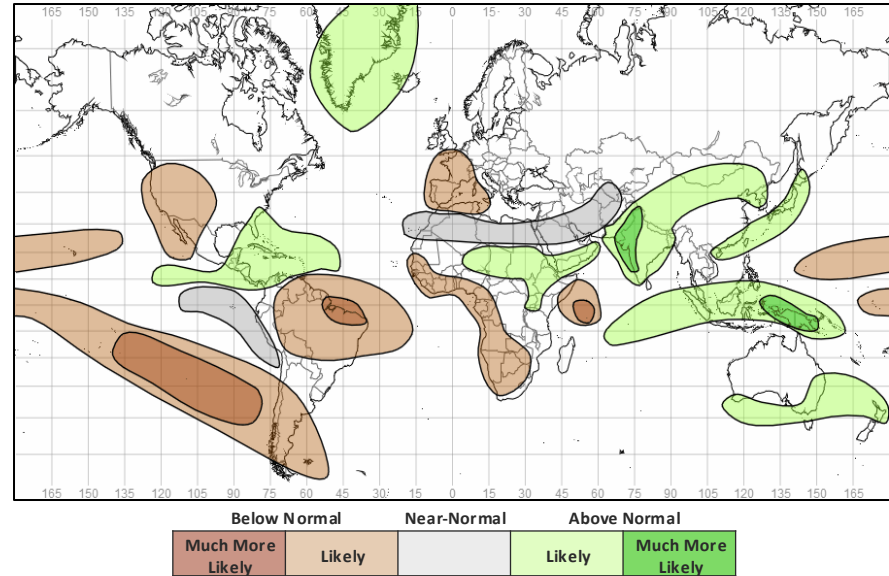
El Niño-Southern Oscillation (ENSO) – Both oceanic and atmospheric indicators are consistent with ENSO-neutral conditions. ENSO-neutral is expected to prevail over the next couple of months. There is an increasing chance of La Niña developing during August-October 2024

According to NOAA’s Climate Prediction Center (CPC), La Niña is likely (70% probability) to develop in the period August-October, persisting into the Northern Hemisphere winter 2024-25, this probability increases (79% probability) for November-January. However, other forecasts have differing probabilities suggesting there is uncertainty amongst the predictions. As such, predictability of weather patterns across many parts of the globe is likely to be lower than this time last year when an El Niño event was underway.

Indian Ocean Dipole (IOD) – The Indian Ocean Dipole (IOD) is currently neutral. Most long-range forecast models are predicting the IOD to remain neutral over the coming months.

It is worth noting that global sea surface temperatures (SSTs) have been the warmest on record for each month for over a year now. The global pattern of warmth is likely affecting the typical historical global pattern of sea surface temperatures associated with ENSO and IOD. As the current global ocean conditions have not been observed before, historical comparisons based on past ENSO or IOD events may not be reliable.

3-Month Outlook August to October - Rainfall



Current Status

[Current Status maps](#)

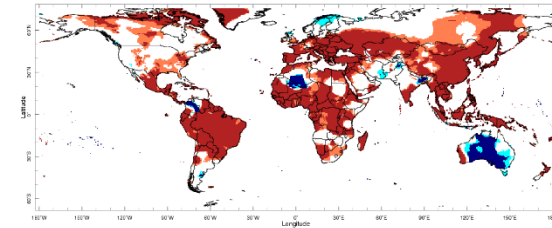
[MENA – Middle East](#)

[MENA – North Africa](#)

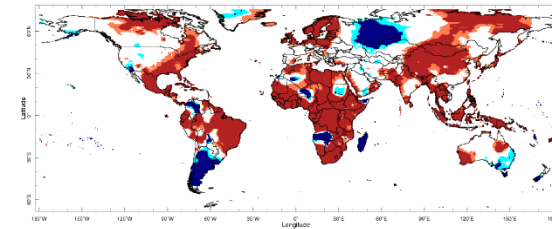
[Caribbean](#)

[British Overseas Territories](#)

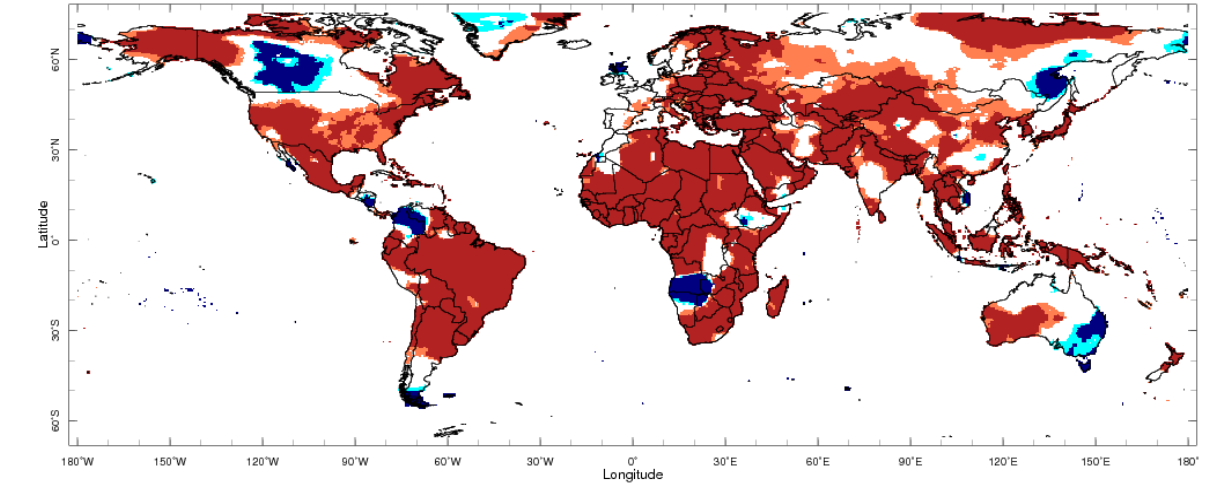
Current Status – Temperature percentiles



Apr 2024



May



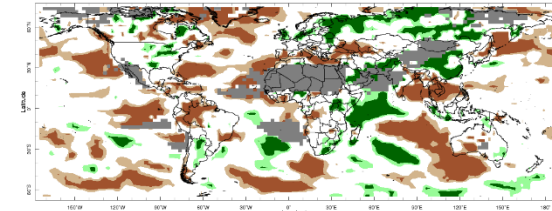
Jun 2024

June

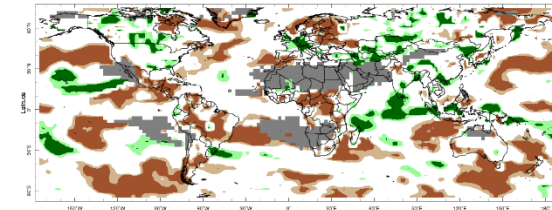


Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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

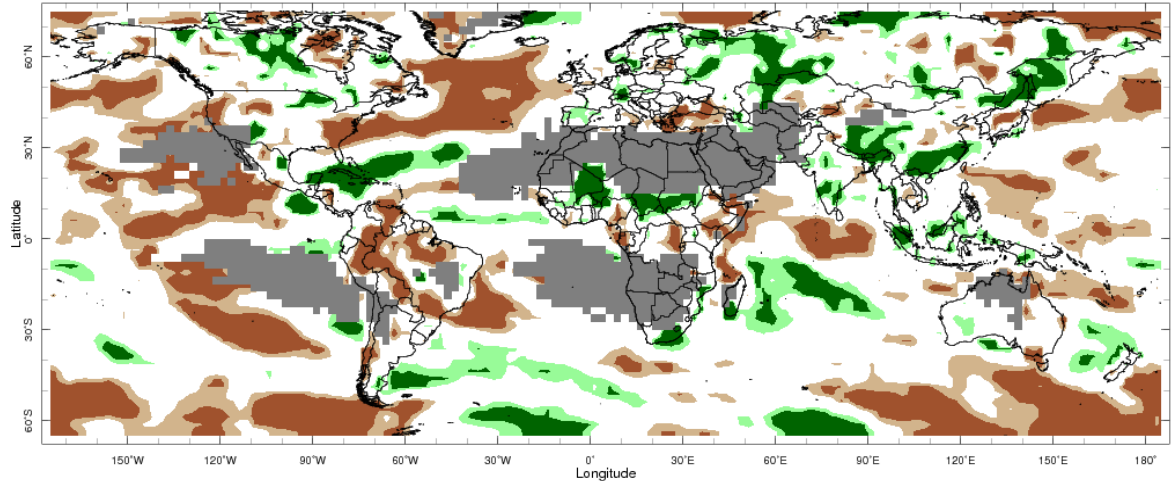
Current Status – Precipitation percentiles



Apr 2024
April



May



Jun 2024

June



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 10mm/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

	April	May	June
Turkey	Hot	Normal	Hot
Palestine	Hot	Normal	Hot
Lebanon	Hot	Normal	Hot
Jordan	Hot	Normal	Hot
Syria	Hot	Normal	Hot
Iraq	Hot	Normal	Hot
Yemen	Normal	Normal	Mixed (1)

Current Status: Rainfall

	April	May	June
	Dry	Wet	Dry
	Dry	Normal*	Normal*
	Dry	Normal*	Normal*
	Dry	Normal*	Normal*
	Normal	Wet	Normal*
	Normal	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:** Normal in central parts, Hot in the west and the east.

Current Status – MENA – North Africa

Current Status: Temperature

	April	May	June
Mauritania	Mixed (1)	Mixed (1)	Mixed (1)
Morocco	Warm	Normal	Normal
Algeria	Mixed (2)	Mixed (2)	Hot
Tunisia	Normal	Hot	Hot
Libya	Warm	Hot	Hot
Egypt	Hot	Warm	Hot
Eritrea	Hot	Hot	Hot

Current Status: Rainfall

	April	May	June
	Normal*	Normal*	Normal*
	Dry	Very Dry	Normal*
	Normal	Dry	Normal*
	Normal	Normal	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal	Normal	Mixed (3)

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:

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

Additional Information:

- (1) **Note:** Normal or Cold in the north, hot in the south
- (2) **Note:** Hot or warm in the north, cold in the south
- (3) **Note:** Normal in the north, very dry in the south

Current Status – Caribbean

Current Status: Temperature

	April	May	June
Caribbean Region	Hot	Hot	Hot
Haiti	Hot	Hot	Hot
Guyana	Hot	Normal	Hot

Current Status: Rainfall

	April	May	June
Caribbean Region	Very Dry	Normal	Mixed (1)
Haiti	Dry	Normal	Very Wet
Guyana	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:** Very Wet in the north, dry across the Lesser Antilles and normal elsewhere

Current Status – British Overseas Territories

	Current Status: Temperature			Current Status: Rainfall		
	April	May	June	April	May	June
Southern Europe	Warm	Normal	Warm	Very Dry	Mixed (1)	Normal*
Central Indian Ocean	Normal	Normal	Normal	Normal	Wet	Normal
Central Pacific	Normal	Normal	Cold	Dry	Very 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:

(1) **Note:** Dry in Gibraltar, normal in Cyprus

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: August to January – MENA – Middle East (1)

		Forecast summary		
		August	August to October	November to January
Turkey	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 drier than normal
Palestine	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	Climatological odds	Likely to be drier than normal
Lebanon	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	Climatological odds	Likely to be drier than normal
Jordan	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	Climatological odds	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: August to January – MENA – Middle East (2)

		Forecast summary		
		August	August to October	November to January
Syria	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	Climatological odds	Likely to be drier than normal
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 in the far south; Likely to be warmer than normal elsewhere
	Rainfall	Likely to be near-normal	Likely to be near-normal in the south; Climatological odds elsewhere	Likely to be drier than normal
Yemen	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 wetter than normal	Likely to be wetter than normal	Likely to be near-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: August to January – MENA – North Africa(1)

		Forecast summary		
		August	August to October	November to January
Mauritania	Temperature	Much more likely to be warmer than normal in the east; Likely to be warmer than normal elsewhere	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 in the far southwest; Climatological odds elsewhere	Climatological odds
Morocco	Temperature	Much more likely to be warmer than normal in the north; Climatological odds elsewhere	Likely to be warmer than normal in the southwest; Much more likely to be warmer than normal elsewhere	Likely to be warmer than normal
	Rainfall	Likely to be near-normal in the south; Likely to be drier than normal in the north	Likely to be drier than normal in the far north; Likely to be near-normal elsewhere	Likely to be drier than normal in the far north; Likely to be near-normal elsewhere
Algeria	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 drier than normal in the far north; Likely to be near-normal elsewhere	Likely to be drier than normal in the far north; Likely to be near-normal elsewhere
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	Likely to be near-normal	Likely to be drier than normal	Climatological odds

Outlook: August to January – MENA – North Africa(2)

		Forecast summary		
		August	August to October	November to January
Libya	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	Likely to be near-normal
Egypt	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	Likely to be near-normal
Eritrea	Temperature	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter 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.

Outlook: August to January – Caribbean

		Forecast summary		
		August	August to October	November to January
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 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: August to January – British Overseas Territories

		Forecast summary		
		August	August to October	November to January
Southern Europe	Temperature	Likely to be warmer than normal in Gibraltar; Much more likely to be warmer than normal in Cyprus.	Much more likely to be warmer than normal	Likely to be warmer than normal in Gibraltar; Much more likely to be warmer than normal in Cyprus.
	Rainfall	Likely to be near-normal	Likely to be drier than normal in Gibraltar; Climatological odds in Cyprus	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	Likely to be wetter than normal	Likely to be wetter than normal	Climatological odds
Central Pacific	Temperature	Likely to be colder than normal	Likely to be colder than normal	Likely to be near-normal
	Rainfall	Much more likely to be drier than normal	Much more 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.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 a 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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Web: <https://www.metoffice.gov.uk/services/government/international-development>