Global: Monthly Climate Outlook April to January

**Issued: July 2021**

Overview

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

Current Status:

Temperatures across the MENA region have generally fallen back to near-normal in the past month, although some places remain hot. The Caribbean also has been near-normal, with only a few exceptions. Overseas territories in Southern Europe remain hot, whilst those in the Indian Ocean have become hot. Central Pacific Ocean territories remain cold.

Outlook:

For the next three months, temperatures are likely to be above normal, with the exception of Guyana where temperatures are likely to be below normal. Temperatures in the Central Pacific are also likely to be above normal.
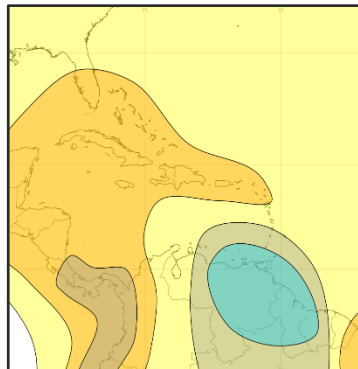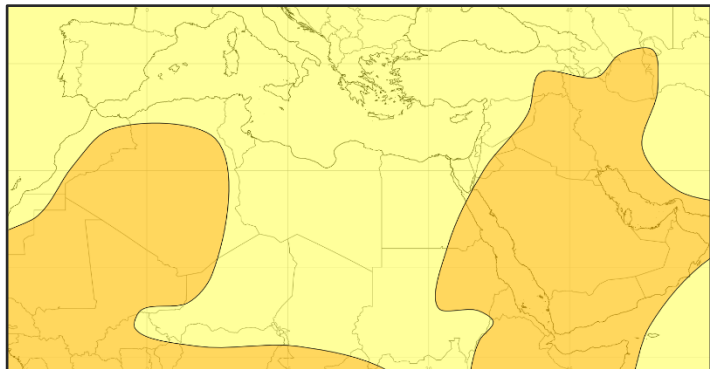
3-Month Outlook August to October - Temperature

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

Left: Middle East and North Africa
Right: Caribbean region

Climate Outlook
Global: April to January

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

Current Status:

Most places have recorded near-normal, or below normal rainfall over the past 3 months, although for MENA in particular this is the peak of the dry season.

Outlook:

For the next three months, below normal rainfall is likely across the MENA region, and large parts of the Caribbean. Above normal rainfall is likely across northern parts of South America, including Guyana.

Tropical Cyclone outlook: Information can be found here.
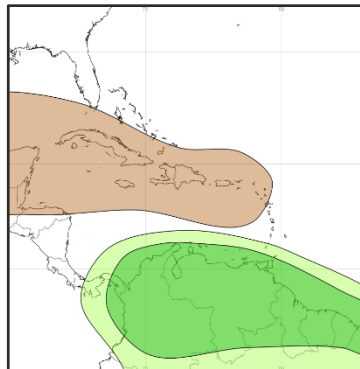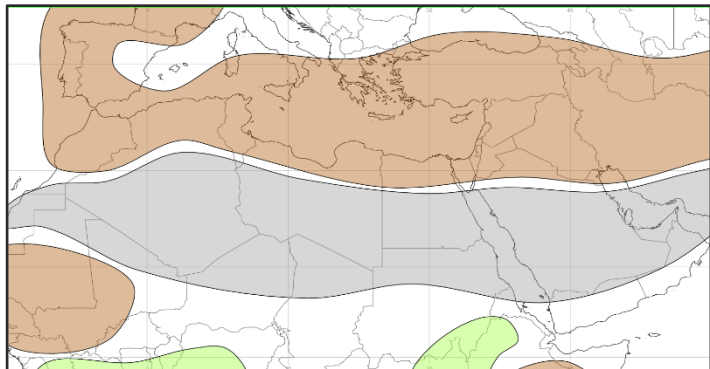
3-Month Outlook August to October - Rainfall

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

Left: Middle East and North Africa
Right: Caribbean region

Overview

Global Outlook - Temperature

Outlook:

Whilst the El-Nino Southern Oscillation (ENSO) remains neutral and will have little impact on global weather patterns, the recent development and establishment of a negative Indian Ocean Dipole (IOD) improves forecast predictability for areas around the Indian Ocean Basin. NOAA CPC forecast a 66% chance of a return to La Niña in the period November to January. Should this develop, confidence in forecasts for the boreal (Northern Hemisphere) winter should increase.

For the next three months, above normal temperatures are likely across much of the world's land areas, which is consistent with our current warming climate. The strongest exception to warm conditions is in northern South America, where increased rainfall means it is likely to be cooler than normal.

3-Month Outlook August to October - Temperature

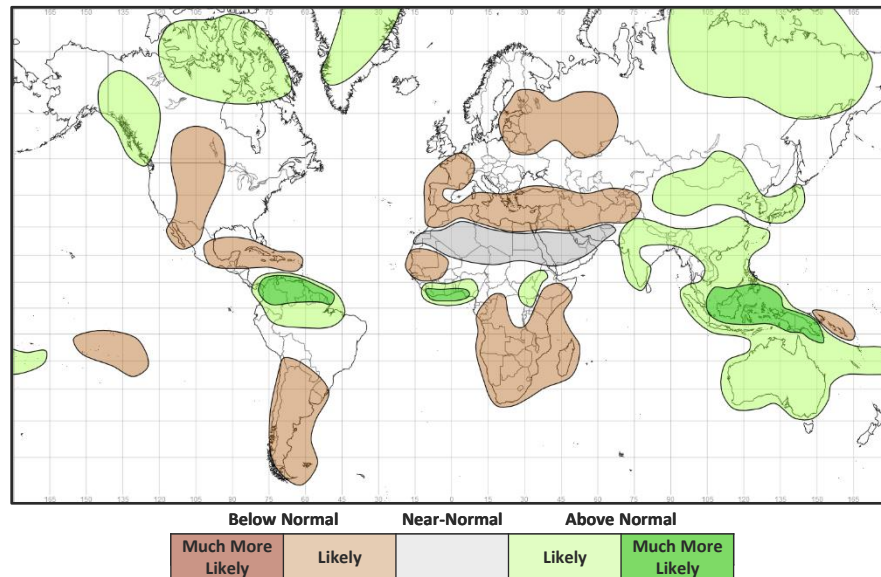|	Below Normal		Near-Normal	Above Normal	
	Much More Likely	**Likely**		**Likely**	**Much More Likely**
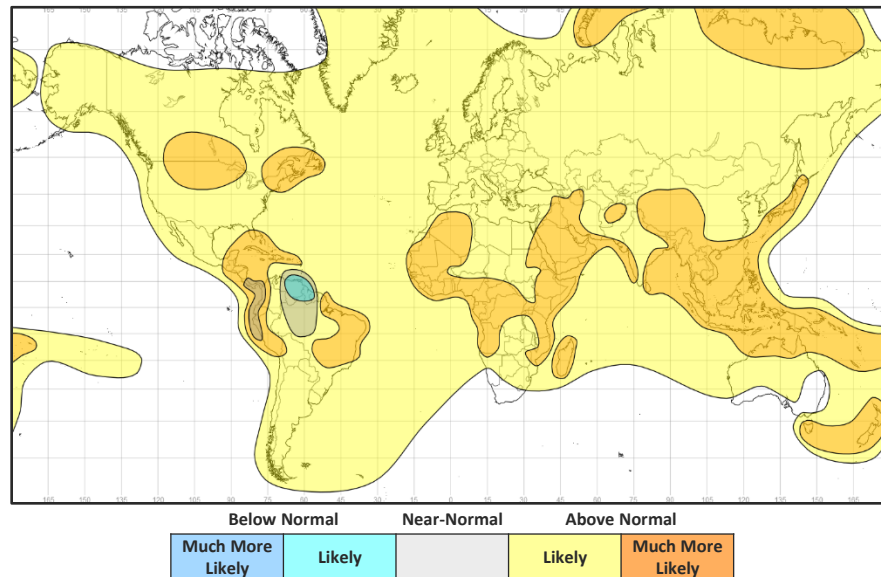
Global Outlook - Rainfall

Outlook:

Over the next three months, with ENSO neutral, the IOD will be the dominant global driver of rainfall patterns – though this influence is mainly limited to countries around the Indian Ocean Basin. Above normal rainfall is much more likely for northern Australasia in particular, and the Indian Summer Monsoon is likely to be more active than usual. Much of Southern Africa is likely to be drier than normal, with reduced rainfall as the seasonal rains return southwards.

Warmer than normal sea-surface temperatures (SST) adjacent to the Gulf of Guinea coastline result in above normal rainfall being likely, at the expense of some of the areas further north.   These areas, which would usually see their peak rainfall over the next month or two due to the West African Monsoon, are likely to be drier than normal. The south-shifted Intertropical Convergence Zone (ITCZ) resulting from this SST pattern is expected to be the driver for above normal rainfall being much more likely across northern South America.

Rainfall across southern parts of south America, and large tracts of southern Europe, is likely be below normal, along with the Caribbean and parts of Mexico and the USA. Above normal precipitation is likely for some high-latitude parts of the Northern Hemisphere.

3-Month Outlook August to October - Rainfall

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

Current Status

Current Status – Temperature percentiles

April

May

June

Jun 2021

Temperature Percentiles (BLUE below 20th and RED above 80th)

| 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
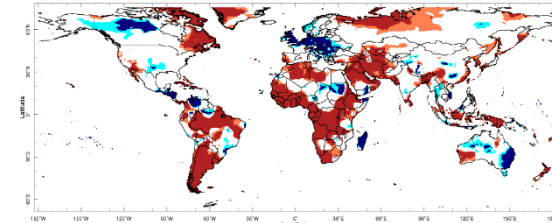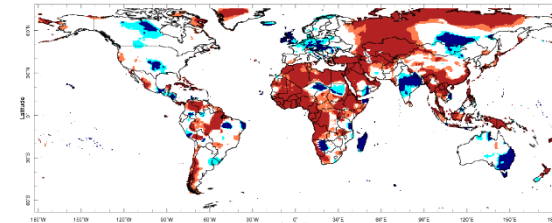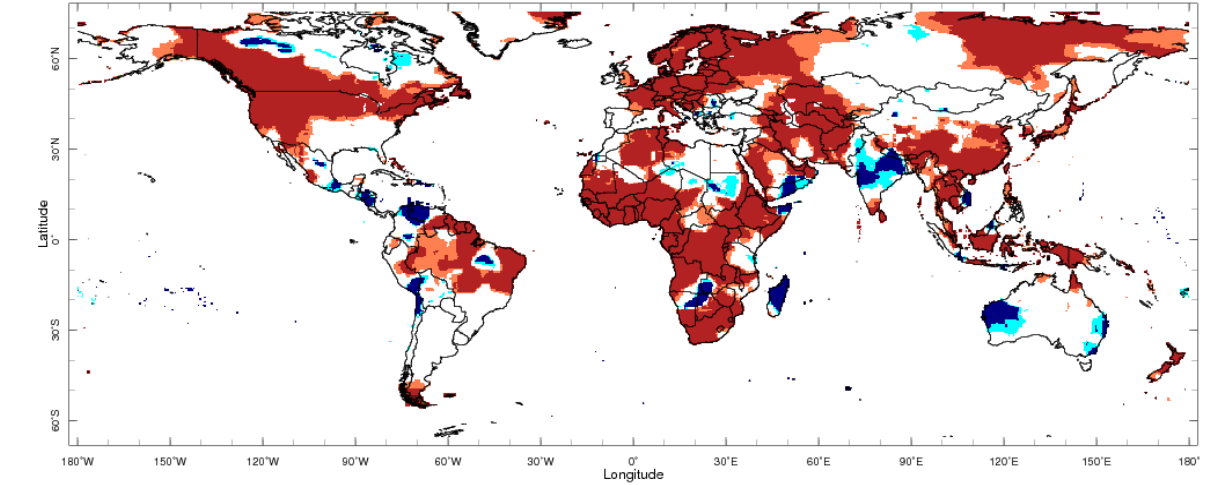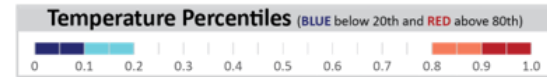
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions 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

April

May
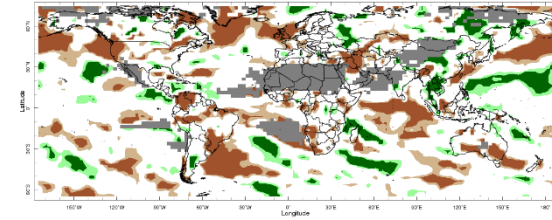
June

Apr 2021

May 2021

Jun 2021

Rainfall Percentiles (BROWN below 20th and GREEN above 80th)

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1.0
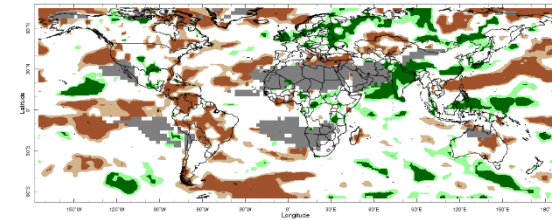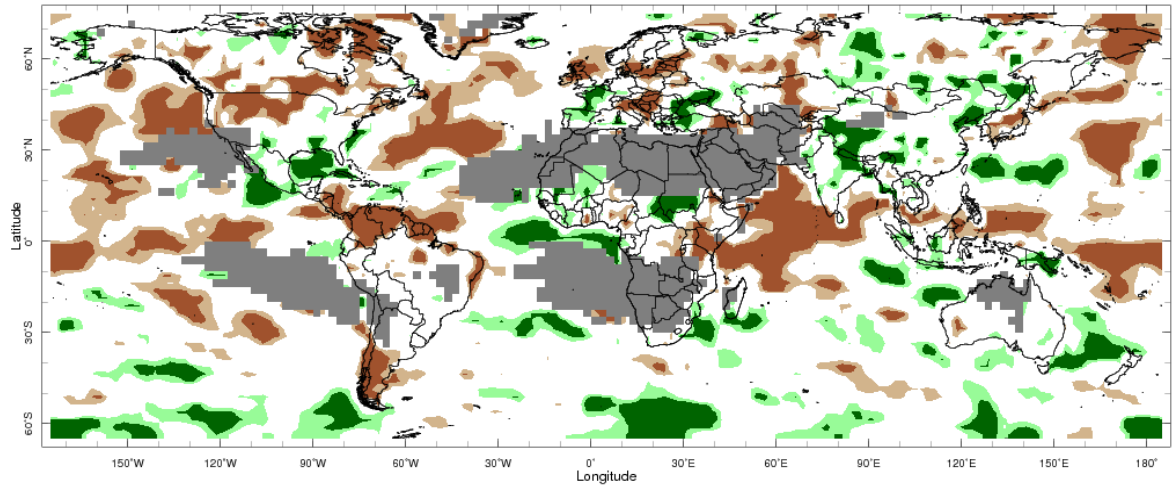
Notes: The percentiles shown in the map indicate a ranking of rainfall, with the 0th percentile being the driest and the 100th percentile being the wettest in the 1981-2010 climatology. Green and dark green shading represent values above the 80th (Wet) and 90th (Very Wet) percentile, respectively; regions 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				Current Status: Rainfall		
	April	**May**	**June**	**April**	**May**	**June**
Turkey	Normal (1)	Hot	Normal	Normal (3)	Dry	Mixed (4)
Palestine	Hot	Hot	Normal	Normal	Normal*	Normal*
Lebanon	Hot	Hot	Normal	Normal	Normal*	Normal*
Jordan	Hot	Hot	Normal	Normal	Normal*	Normal*
Syria	Warm	Hot	Normal	Dry	Dry	Very Dry*
Iraq	Hot	Hot	Hot	Very Dry	Normal*	Normal*
Yemen	Normal	Mixed (2)	Cool	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 east
(2) Note: Cool or cold in the east, hot in the far southwest, otherwise normal
(3) Note: Very Dry in the east
(4) Note: Very Wet in the west, to Very Dry in the east.

Current Status – MENA – North Africa

	Current Status: Temperature				Current Status: Rainfall		
	April	May	June		April	May	June
Mauritania	Mixed (1)	Hot	Hot		Normal*	Normal*	Normal*
Morocco	Warm	Hot	Normal		Normal	Normal	Dry*
Algeria	Hot	Hot	Hot		Normal*	Normal*	Mixed (3)*
Tunisia	Warm	Warm	Hot		Normal*	Normal	Dry*
Libya	Hot	Hot	Mixed (2)		Normal*	Normal*	Very Dry*
Egypt	Normal	Hot	Normal		Normal*	Normal*	Very Dry*
Eritrea	Hot	Hot	Hot		Normal	Normal	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: Cold in the north and Hot in the south.
(2) Note: Mixed in the west, Normal in the east.
(3) Note: Wet in the north, to Very Dry in the south

Current Status – Caribbean

Current Status: Temperature				Current Status: Rainfall		
	April	May	June	April	May	June
Caribbean Region	Hot	Hot	Normal	Wet	Mixed (1)	Normal (2)
Haiti	Hot	Hot	Warm	Normal	Dry	Normal
Guyana	Normal	Normal	Hot	Normal	Normal	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:** Dry for Hispaniola, Jamaica, Cayman Islands, Puerto Rico and Turks and Caicos. Mostly normal elsewhere.
(2) **Note:** Very Wet Cuba and parts of Lesser Antilles. Otherwise Normal or Dry – Normal overall.

Current Status – British Overseas Territories

	Current Status: Temperature				Current Status: Rainfall		
	April	**May**	**June**		**April**	**May**	**June**
Southern Europe	Hot	Hot	Hot		Mixed (1)	Dry	Normal
Central Indian Ocean	Cold	Normal	Hot		Dry	Normal	Very Dry
Central Pacific	Cold	Cold	Cold		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: Gibraltar Normal, Cyprus Very Dry.

Outlooks

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*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be drier than normal	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 near-normal	Likely to be drier than normal	Likely to be drier than normal
Lebanon	*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 drier than normal
Jordan	*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 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*	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 drier than normal
Iraq	*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	Likely to be near-normal
Yemen	*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	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 – MENA – North Africa(1)

Forecast summary			
		August	August to October	November to January

		August	August to October	November to January
Mauritania	*Temperature*	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be drier than normal	Climatological odds
Morocco	*Temperature*	Likely to be warmer than normal in coastal districts. Much more likely to be warmer than normal inland.	Likely to be warmer than normal in coastal districts. Much more likely to be warmer than normal inland.	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be drier than normal	Climatological odds
Algeria	*Temperature*	Likely to be warmer than normal in the north. Much more likely to be warmer than normal in the south.	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.	Climatological odds
Tunisia	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	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 – MENA – North Africa(2)

		Forecast summary		
		August	August to October	November to January
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 drier than normal in the far north. Likely to be near-normal elsewhere.	Climatological odds
Egypt	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be drier than normal in the far north. Likely to be near-normal elsewhere.	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	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.

Outlooks

Outlook: August to January – Caribbean

Forecast summary			
	August	**August to October**	**November to January**
Caribbean Region — *Temperature*	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
Caribbean Region — *Rainfall*	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Haiti — *Temperature*	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
Haiti — *Rainfall*	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Guyana — *Temperature*	Climatological odds	Much more likely to be colder than normal	Climatological odds
Guyana — *Rainfall*	Likely to be wetter than normal	Much more likely to be wetter 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	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 drier than normal
Central Indian Ocean	*Temperature*	Much more 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
Central Pacific	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be drier than normal	Climatological odds

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

Tropical Storm Outlook for the North Atlantic Ocean basin

Tropical storm seasonal forecast for the August to January period:

There have been 5 named storms (4 tropical storms and 1 hurricane) so far this season (up to 29th July), the last storm being Hurricane Elsa which had maximum wind speeds of 75 mph. The forecast for the remainder of the season is for slightly above-, to above-average activity being most likely. There is a very weak signal for the favoured tracks of tropical cyclones to be across the Caribbean and curving up towards southeast US (very similar to Hurricane Elsa), but confidence in this aspect is very low.

In the sub-seasonal range, an increase in activity seems most probable by early to mid August.

More information, and the full forecast can be found at https://www.metoffice.gov.uk/research/weather/tropical-cyclones/seasonal/northatlantic2021

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 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 CPTEC (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

Email: internationaldevelopment@metoffice.gov.uk

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