Global: Monthly Climate Outlook
July to April

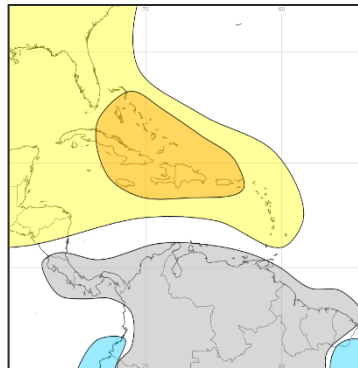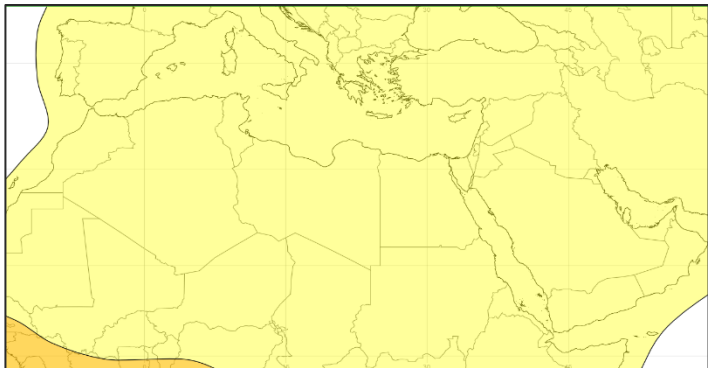**Issued: October 2021**

Overview

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

Current Status:

Normal to hot conditions have been observed across the MENA, Caribbean and British Overseas territories, for most of the July to September period. The main exceptions to this have been Yemen and the oceanic territories, which were often cold.

Outlook:

During November to January, it is likely to be warmer than normal across the MENA, southern Europe and the bulk of the Caribbean. Temperatures are likely to be normal across Guyana.

3-Month Outlook November to January - Temperature

Below Normal		Near-Normal	Above Normal	
Much More Likely	Likely		Likely	Much More Likely
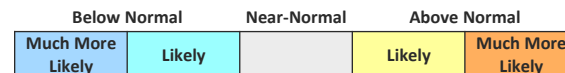
Left: Middle East and North Africa
Right: Caribbean region

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

Current Status: The dry season is coming to an end across the Middle East and southern Europe; little rainfall has been observed during July to September. The exception to this has been the Western Highlands of Yemen, where it has been wet. It has also been mainly dry across North Africa, apart from parts of Mauritania and Eritrea where the greatest northern extent of the West Africa Monsoon has generated areas of very wet conditions. Haiti and Guyana have also seen wet conditions through August.

Outlook: For the next three months, drier than normal conditions are likely across most of the MENA, southern Europe and northern Caribbean. Meanwhile, Guyana is likely to be wetter than normal.

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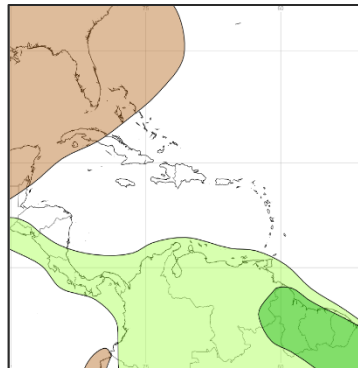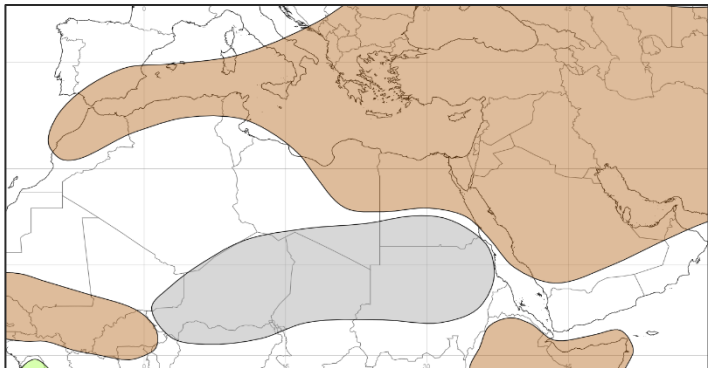
3-Month Outlook November to January - Rainfall

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

Left: Middle East and North Africa
Right: Caribbean region

Global Outlook - Temperature

Outlook:

The current La Niña event, which is likely to persist into the spring, will strongly influence global temperature variations in the coming months. Many parts of the globe are likely to see warmer than normal conditions through the next three months.

However, consistent with the effects of La Niña, parts of Australia, southern Africa, the northern half of South America, parts of Canada and northern USA are more likely to be colder than normal.

3-Month Outlook November to January - Temperature

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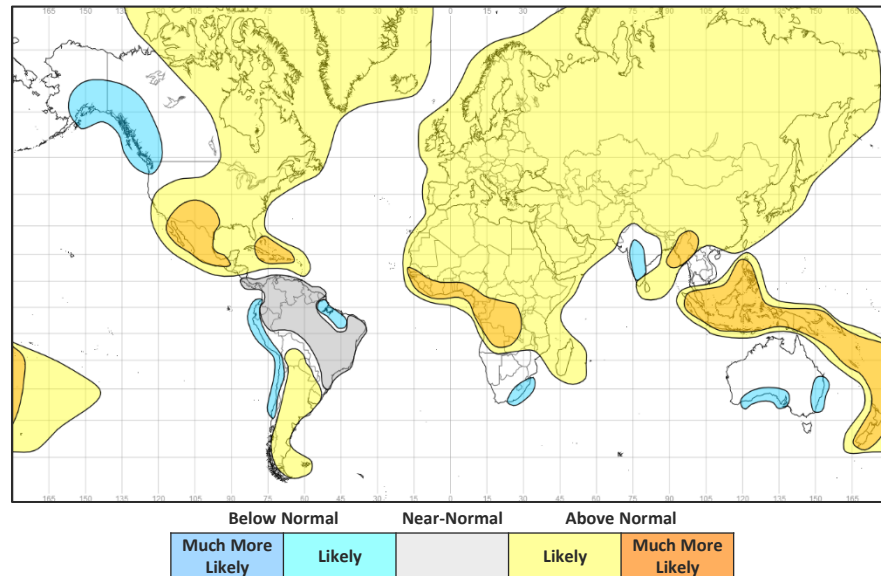
Global Outlook - Rainfall

Outlook:

"El Niño-Southern Oscillation (ENSO): Sea surface temperature patterns in the Pacific Ocean indicate a weak La Niña event is now occurring, with linked changes in atmospheric patterns also observed. These conditions are likely to continue into early 2022.

Many tropical land areas are likely to experience above-normal rainfall in November to January, especially Indonesia / Malaysia and northern / eastern Australia.
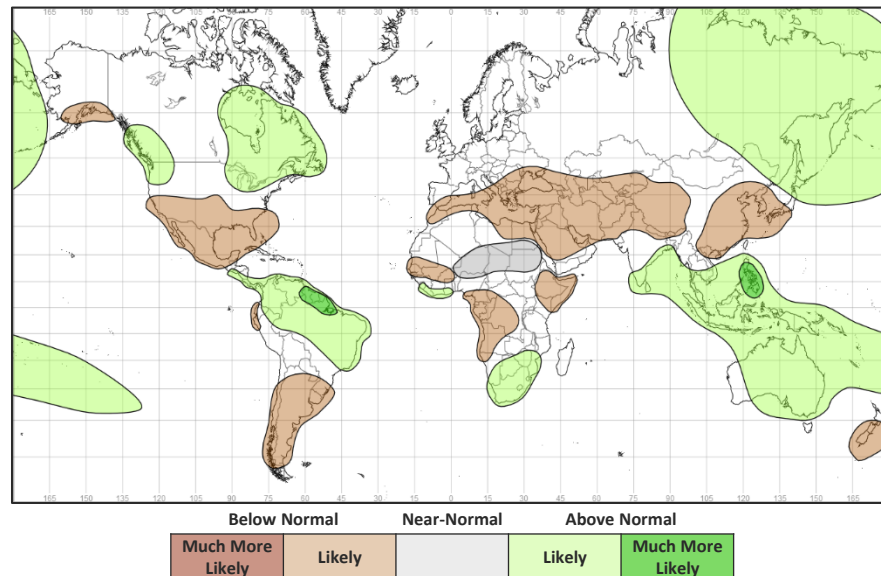
Seasonal forecast models are not consistently predicting typical La Nina seasonal anomalies beyond early 2022 and this is reflected in the 3-6 month outlook for many regions; the next Climate Outlooks issued in November will provide an update.

More information on typical impacts can be found here.

Indian Ocean Dipole (IOD) – A weak negative Indian Ocean Dipole (IOD) event is occurring in the Indian Ocean. This is expected to weaken rapidly in November, quickly limiting its effect on global weather patterns.

Until the IOD completely fades, the remaining negative signal increases the chance of wetter than normal conditions across Malaysia, Indonesia and much of southern and eastern Australia. Meanwhile, East Africa and southern parts of the Arabian Peninsula have an increased chance of drier than normal conditions.

3-Month Outlook November to January - Rainfall

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

Climate Outlook
Global: July to April

Current Status

Current Status maps

MENA – Middle East

MENA – North Africa

Caribbean

British Overseas Territories

Current Status – Temperature percentiles

July

August

Sep 2021

September

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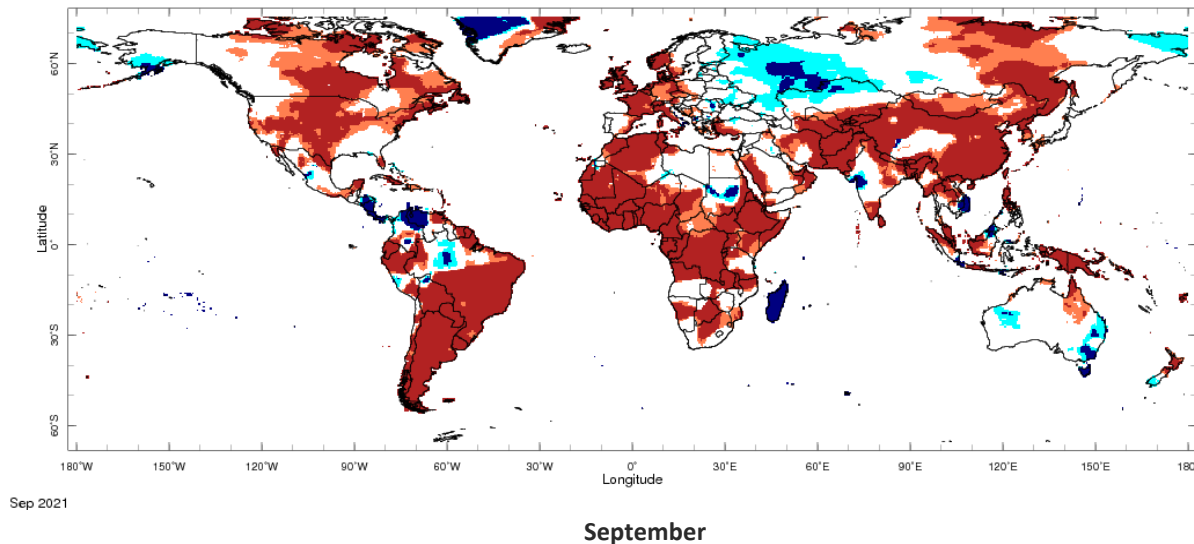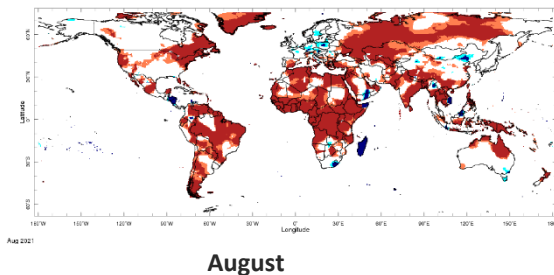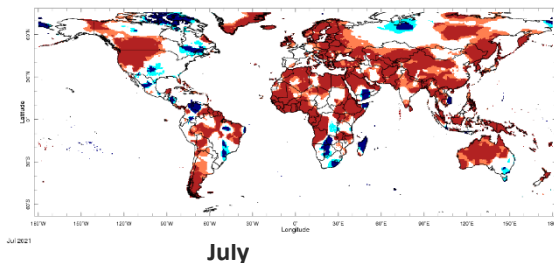
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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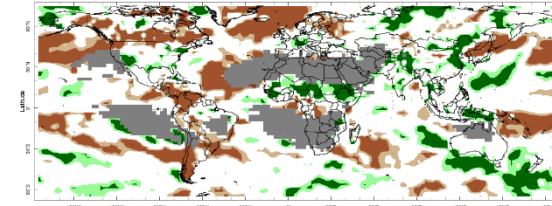
July

August

Sep 2021

September

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 |
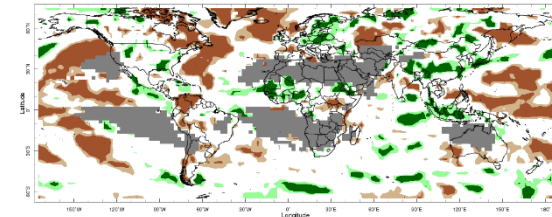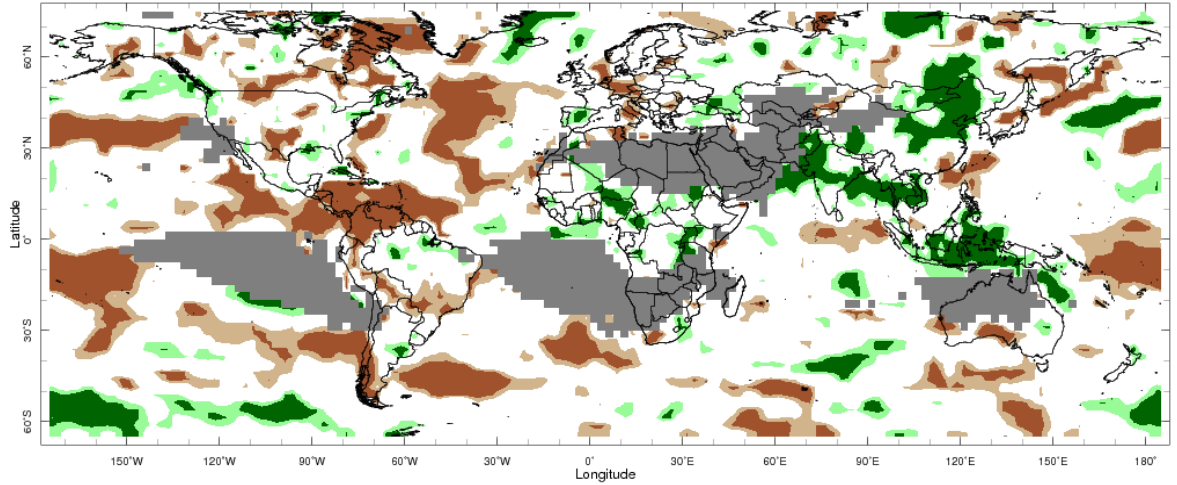
Notes: The percentiles shown in the map indicate a ranking of rainfall, with the 0th percentile being the driest and the 100th percentile being the wettest in the 1981-2010 climatology. Green and dark green shading represent values above the 80th (Wet) and 90th (Very Wet) percentile, respectively; regions 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		
	July	August	September	July	August	September
Turkey	Hot	Mixed (3)	Mixed (3)	Normal	Normal*	Normal
Palestine	Hot	Hot	Normal	Normal*	Normal*	Normal*
Lebanon	Hot	Hot	Normal	Normal*	Normal*	Normal*
Jordan	Hot	Hot	Normal	Normal*	Normal*	Normal*
Syria	Hot	Warm	Normal	Normal*	Normal*	Normal*
Iraq	Hot	Normal	Normal	Normal*	Normal*	Normal*
Yemen	Mixed (1)	Cool	Normal	Normal (2)	Normal (2)	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: Cool or cold in the east, hot in the far southwest, otherwise normal
(2) Note: Wet in the west.
(3) Note: Hot in the west

Current Status – MENA – North Africa

	Current Status: Temperature				Current Status: Rainfall		
	July	August	September		July	August	September
Mauritania	Hot	Mixed (2)	Hot		Normal*	Very Wet	Normal
Morocco	Hot	Mixed (3)	Hot		Normal*	Normal*	Normal
Algeria	Hot	Hot	Hot		Normal*	Normal*	Normal
Tunisia	Hot	Hot	Hot		Normal*	Normal*	Very Dry
Libya	Mixed (1)	Mixed (4)	Normal		Normal*	Normal*	Normal*
Egypt	Hot	Hot	Normal		Normal*	Normal*	Normal*
Eritrea	Hot	Hot	Hot		Very Wet	Very Wet	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; normal elsewhere
(2) Note: Hot in the west, normal elsewhere.
(3) Note: Hot in the north-east, normal elsewhere.
(4) Note: Hot in the north and east, normal elsewhere.

Current Status – Caribbean

	Current Status: Temperature				Current Status: Rainfall		
	July	August	September		July	August	September
Caribbean Region	Hot	Normal	Warm		Normal	Mixed (2)	Very Dry
Haiti	Warm	Normal	Warm		Dry	Wet	Normal
Guyana	Hot	Mixed (1)	Normal		Normal	Wet	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 north, normal in the south.
(**2**) **Note:** Locally Wet

Current Status – British Overseas Territories

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

Current Status: Rainfall			
	July	August	September
Southern Europe	Normal*	Dry*	Normal
Central Indian Ocean	Normal	Normal	Dry
Central Pacific	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:

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: November to April – MENA – Middle East (1)

		Forecast summary		
		November	November to January	February to April
Turkey	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Palestine	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be drier than 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	Climatological odds
	Rainfall	Likely to be drier than 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	Climatological odds
	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.

Outlooks

Climate Outlook
Global: July to April

Outlook: November to April – MENA – Middle East (2)

		Forecast summary		
		November	November to January	February to April
Syria	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Iraq	*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
Yemen	*Temperature*	Climatological odds	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be near-normal	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

Climate Outlook
Global: July to April

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Outlook: November to April – MENA – North Africa(1)

		Forecast summary		
		November	November to January	February to April
Mauritania	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be near-normal	Climatological odds	Likely to be drier than normal
Morocco	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Climatological odds	Likely to be drier than normal	Likely to be drier than normal
Algeria	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Climatological odds	Likely to be drier than normal in the north; Climatological odds elsewhere	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 drier than normal	Likely to be drier than normal	Likely to be drier than normal

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range **the 4-6-month outlook is less reliable than the 1-3 month outlook**. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Outlook: November to April – MENA – North Africa(2)

		Forecast summary		
		November	November to January	February to April
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 northeast; Climatological odds elsewhere	Likely to be drier than normal
Egypt	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be near-normal	Likely to be drier than normal in the north; Likely to be near-normal in the south	Likely to be drier than normal
Eritrea	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be near-normal	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: November to April – Caribbean

		Forecast summary		
		November	November to January	February to April
Caribbean Region	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be near-normal
	Rainfall	Likely to be drier than normal	Climatological odds	Climatological odds
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	Climatological odds	Likely to be drier than normal
Guyana	*Temperature*	Likely to be near-normal	Likely to be near-normal	Likely to be colder than normal
	Rainfall	Likely to be wetter than normal	**Much more 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: November to April – British Overseas Territories

		Forecast summary		
		November	November to January	February to April
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 drier than normal	Likely to be drier than normal	Likely to be drier than normal
Central Indian Ocean	*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	Climatological odds	Climatological odds
Central Pacific	*Temperature*	Likely to be near-normal	Likely to be near-normal	Likely to be near-normal
	Rainfall	**Much more 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

Tropical Storm Outlook for the North Atlantic Ocean basin

Tropical storm seasonal forecast for the November to April period:

There is typically a steep decline in North Atlantic tropical cyclone activity throughout October and November with the season "officially" ending on 30th November although activity can (and has done) continue beyond this time. Genesis in the tropical Atlantic becomes much less likely, with cyclones more likely to develop in the Caribbean Sea or Gulf of Mexico. Activity up until now has been above average in terms of named storms, and slightly above average in terms of Accumulated Cyclone Energy (ACE), and forecast models are not indicating futher above-average activity.

However, La Niña is likely to persist into the northern-hemisphere autumn, which may lead to a prolonged season and slightly above-average activity.

More information, and the full forecast can be found at https://www.metoffice.gov.uk/research/weather/tropical-cyclones/seasonal/northatlantic2020

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 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