Global: Monthly Climate Outlook
October to July

Issued: January 2022

Overview

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

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

Global Seasonal Outlook – Temperature

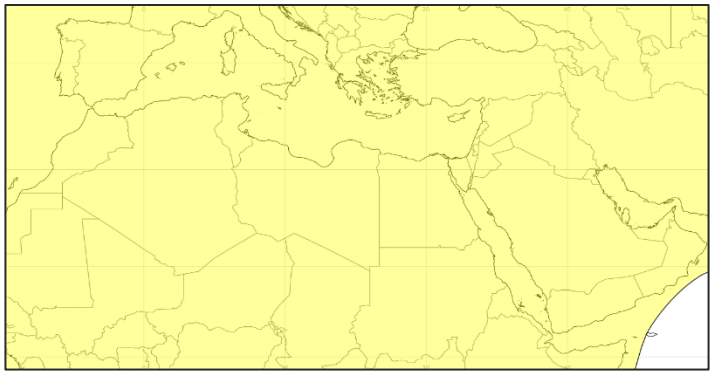
Global Seasonal Outlook – Rainfall

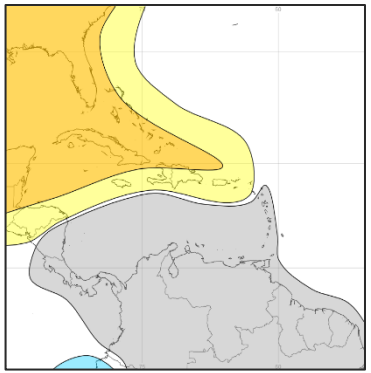
MENA, Caribbean and British Overseas Territories Current Status and Outlook - Temperature

Current Status: Across the Middle East and North Africa temperatures were mixed during October. In November, the region, except for western parts of North Africa, widely experienced hot conditions. By December, many areas in the MENA had near-normal temperatures. The Caribbean region was generally warm over the last three months.

Outlook:

For the next three months, it is likely to be warmer than normal most likely across the Middle East, North Africa as well as the Caribbean. Temperatures are likely to be near-normal across Guyana.





3-Month Outlook February to April - Temperature

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

Left: Middle East and North Africa
Right: Caribbean region

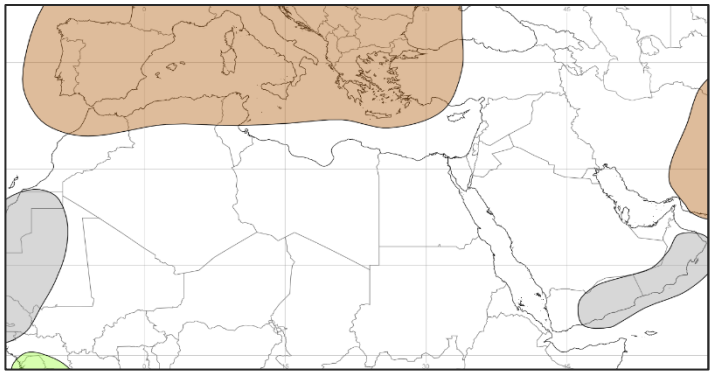
MENA, Caribbean and British Overseas Territories Current Status and Outlook - Rainfall

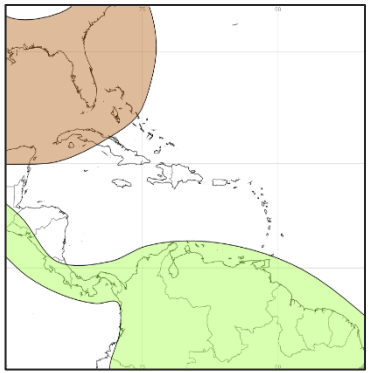
Current Status:

Over the past few months, which tends to be the beginning of the wetter season, near or below average normal rainfall was experienced across North Africa and northern parts of the Middle East. An exception to this was Libya and Egypt during December which both had wetter than normal conditions. Over the last 3 months much of the Caribbean region has been drier than normal although Haiti and Guyana experienced near- or above normal rainfall.

Outlook:

For the next three months, western parts of Turkey are likely to be drier than normal. Drier than normal conditions are likely across much of southern Europe and northwest Africa. Guyana is likely to be wetter than normal.





3-Month Outlook February to April - Rainfall

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

Left: Middle East and North Africa
Right: Caribbean region

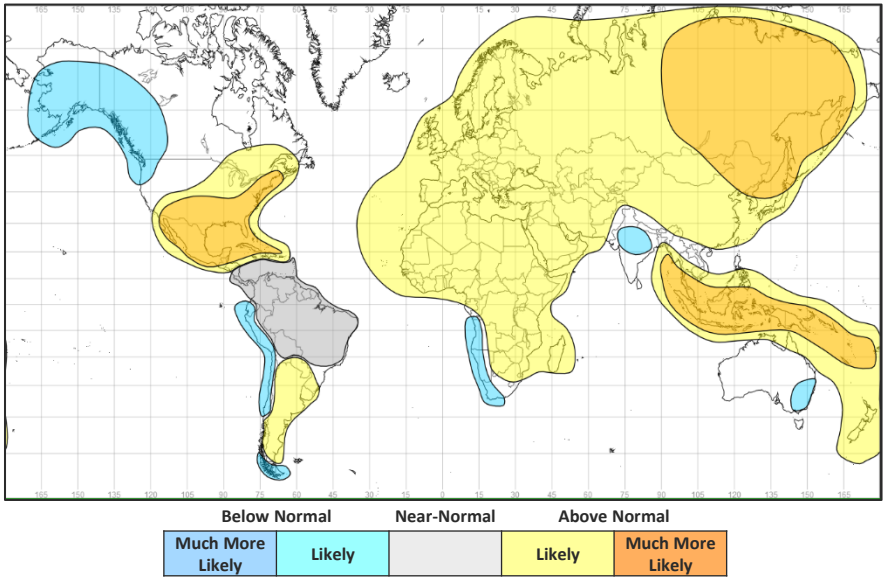
Global Outlook - Temperature

Outlook:

A moderate La Niña is ongoing across the tropical Pacific. La Niña will be the main driver of temperature and rainfall anomalies across the tropics over the next three months. La Niña's influence will also extend further north and south, mainly early in the period.

Consistent with long-term climate change, many parts of the globe are likely to see above normal temperatures over the next three months. However, one of the key characteristics of La Niña is a cooling of the surface seawaters of the central and eastern tropical Pacific Ocean. This means near or below normal temperatures are likely for northern and western parts South America, southeast Australia, parts of southern Africa and northwest North America.

3-Month Outlook February to April - Temperature



Global Outlook - Rainfall

Outlook:

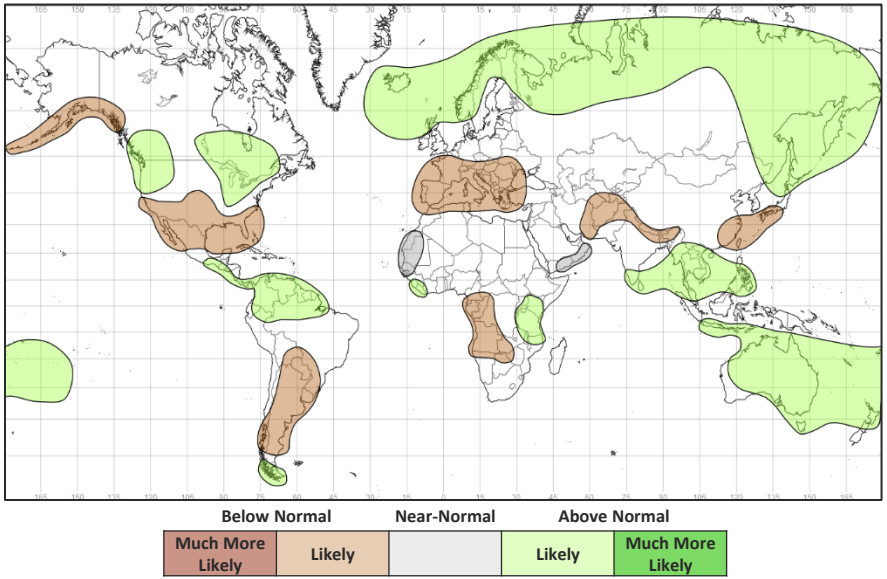
El Niño-Southern Oscillation (ENSO) – La Niña is ongoing with sea surface temperatures and atmospheric conditions across the Pacific basin indicative of a moderate event. The event has likely peaked and, according to NOAA, whilst La Niña is likely to continue into the Northern Hemisphere early spring (67% chance during March-May 2022) a transition to ENSO-neutral is more probable later in the season (51% chance during April-June 2022). The effects of La Niña are likely to remain wide-reaching for several months to come.

With a couple of notable exceptions (including East Africa) La Niña, very broadly speaking, tends to increase the likelihood of wetter than normal conditions across many land areas of the tropics. More information on typical impacts can be found here https://www.metoffice.gov.uk/research/climate/seasonal-to-decadal/gpc-outlooks/el-nino-la-nina/enso-impacts

For the next three months, the outlook for North America and Eurasia is also broadly consistent with the influence of La Niña with northern parts of both continents favoured to see wetter than normal conditions. However, as we move into the Northern Hemisphere spring, the influence of La Niña on weather patterns at higher latitudes tends to decline.

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

3-Month Outlook February to April - Rainfall



Current Status

Current Status maps

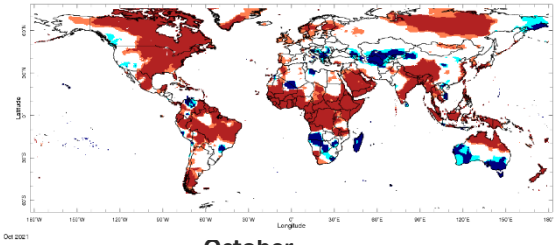
MENA – Middle East

MENA – North Africa

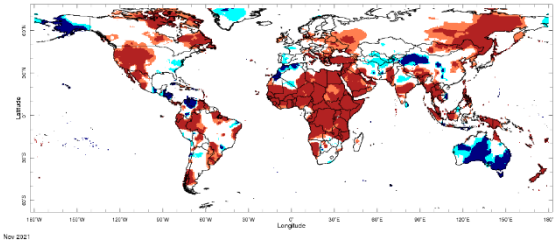
Caribbean

British Overseas Territories

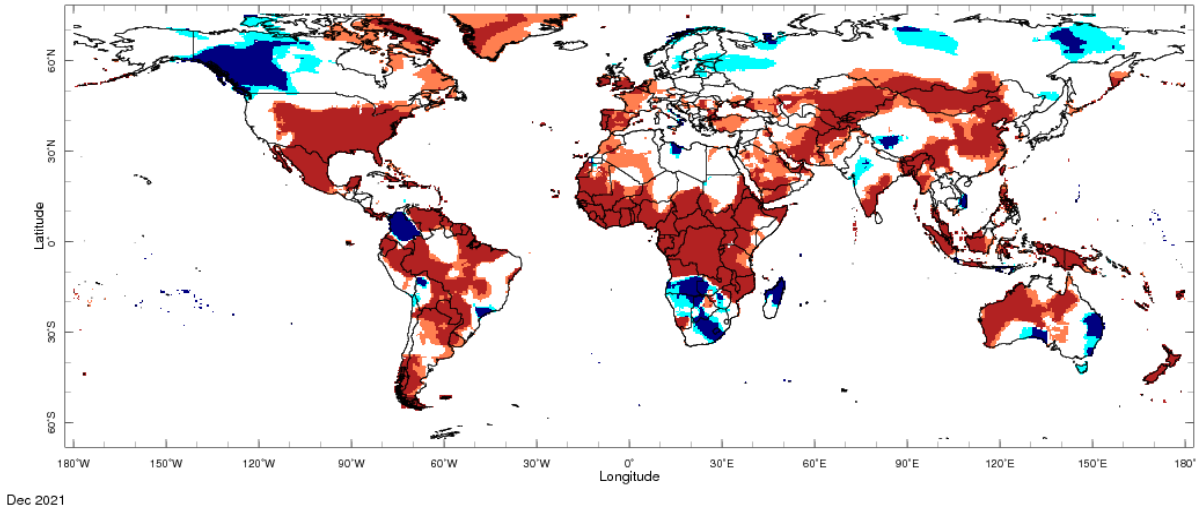
Current Status – Temperature percentiles



October



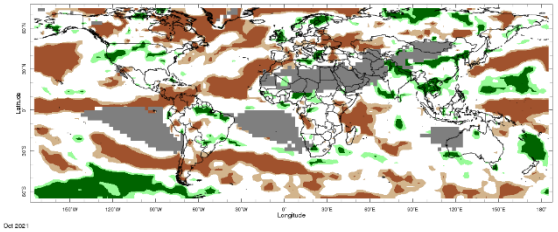
November



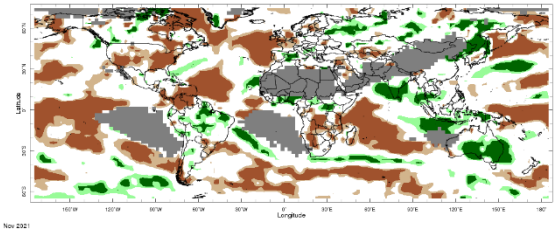
December

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.

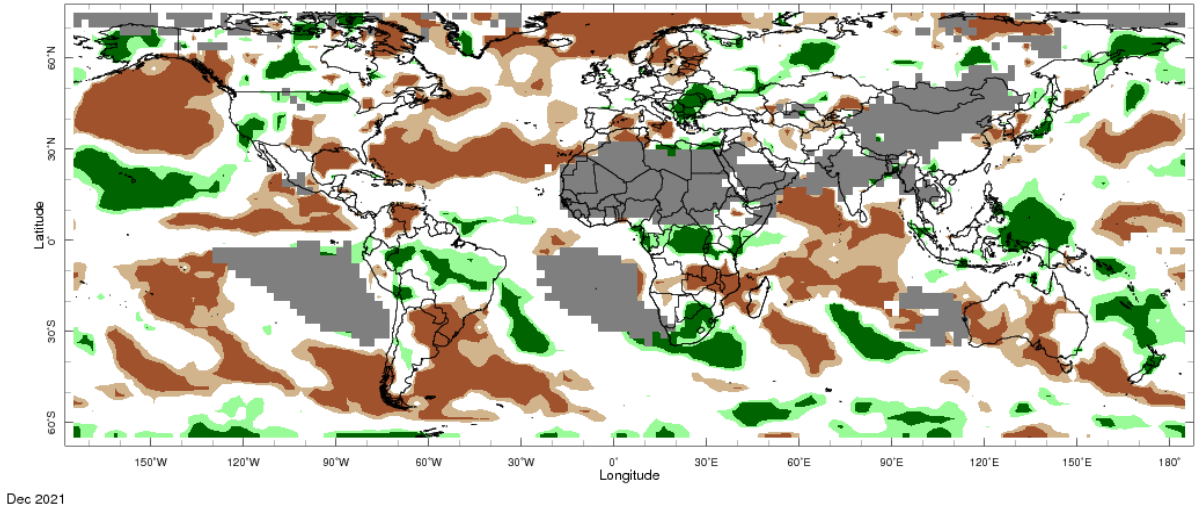
Current Status – Precipitation percentiles



October



November



Dec 2021

December

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		
	October	November	December	October	November	December
Turkey	Normal	Hot	Warm	Dry	Normal	Normal
Palestine	Normal	Hot	Normal	Normal	Normal	Normal
Lebanon	Normal	Hot	Normal	Normal*	Normal	Normal
Jordan	Warm	Hot	Normal	Normal*	Normal	Normal
Syria	Normal	Hot	Normal	Normal*	Dry	Normal
Iraq	Mixed (1)	Warm	Normal	Normal*	Dry	Dry
Yemen	Hot	Hot	Hot	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 south

Current Status – MENA – North Africa

	Current Status: Temperature			Current Status: Rainfall		
	October	November	December	October	November	December
Mauritania	Hot	Hot	Hot	Normal	Normal*	Normal*
Morocco	Hot	Hot	Warm	Very Dry	Normal	Dry
Algeria	Normal (1)	Hot	Normal	Normal	Normal	Dry
Tunisia	Normal	Hot	Normal	Mixed (3)	Normal	Dry
Libya	Normal (2)	Hot	Normal	Normal	Mixed (5)	Wet
Egypt	Warm	Hot	Normal	Normal	Mixed (6)	Wet
Eritrea	Hot	Hot	Hot	Mixed (4)	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 cold in the south
(2) Note: Very cold in the north
(3) Note: Wet in the north, mixed elsewhere
(4) Note: Wet in the south; Normal elsewhere
(5) Note: Dry in parts of the far north
(6) Note: Very wet in parts of the far north

Current Status – Caribbean

	Current Status: Temperature			Current Status: Rainfall		
	October	November	December	October	November	December
Caribbean Region	Warm	Warm	Hot	Very Dry	Very Dry	Normal
Haiti	Warm	Warm	Hot	Normal	Normal	Very Dry
Guyana	Hot	Normal (1)	Hot	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 far north

Current Status – British Overseas Territories

	Current Status: Temperature			Current Status: Rainfall		
	October	November	December	October	November	December
Southern Europe	Mixed (1)	Hot	Hot	Normal	Normal	Normal
Central Indian Ocean	Warm	Normal	Cold	Dry	Very Dry	Dry
Central Pacific	Cold	Cold	Cold	Very 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: Large regional variations apparent

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: February to July – MENA – Middle East (1)

		Forecast summary		
		February	February to April	May to July
Turkey	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal in the west; Climatological odds elsewhere	Likely to be drier than normal in the west; Climatological odds elsewhere	Likely to be drier than normal
Palestine	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Lebanon	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Jordan	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	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: February to July – MENA – Middle East (2)

		Forecast summary		
		February	February to April	May to July
Syria	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Iraq	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
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 near-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: February to July – MENA – North Africa(1)

		Forecast summary		
		February	February to April	May to July
Mauritania	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds
Morocco	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal in the north; Climatological odds elsewhere	Climatological odds
Algeria	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal in the north; Likely to be near-normal in the south	Likely to be drier than normal in the north; Climatological odds elsewhere	Climatological odds
Tunisia	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be drier than normal in the north; Climatological odds elsewhere	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: February to July – MENA – North Africa(2)

		Forecast summary		
		February	February to April	May to July
Libya	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Egypt	*Temperature*	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
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: February to July – Caribbean

		Forecast summary		
		February	February to April	May to July
Caribbean Region	*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
Haiti	*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
Guyana	*Temperature*	Likely to be near-normal	Likely to be near-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: February to July – British Overseas Territories

		Forecast summary		
		February	February to April	May to July
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 in the west; Climatological odds in the east	Likely to be drier than normal	Likely to be drier than normal
Central Indian Ocean	*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
Central Pacific	*Temperature*	Likely to be near-normal	Likely to be warmer than normal	Climatological odds
	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.

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 near-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