

Global: Monthly Climate Outlook May 2021 to February 2022

Issued: August 2021

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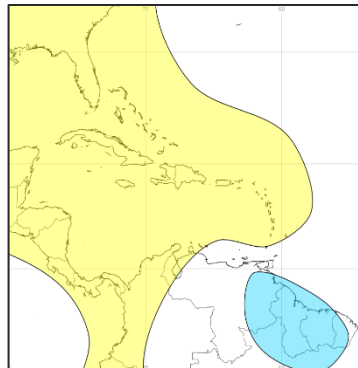
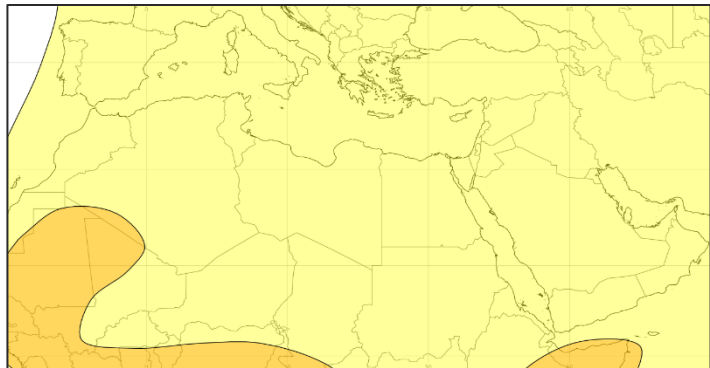
MENA, Caribbean and British Overseas Territories Current Status and Outlook - Temperature

Current Status:

Over the last three months, warmer than normal conditions have been observed across the MENA, Caribbean and Southern Europe. The exceptions to this are in Yemen, Central Indian Ocean and Central Pacific Ocean where conditions have been colder than normal.

Outlook:

For the next three months, warmer than normal conditions are likely across MENA and the Caribbean. However, colder than normal conditions more likely across Guyana.



3-Month Outlook September to November - Temperature



Left: Middle East and North Africa

Right: Caribbean region

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

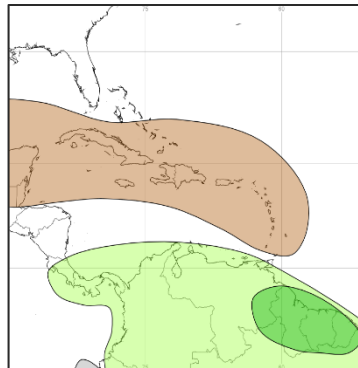
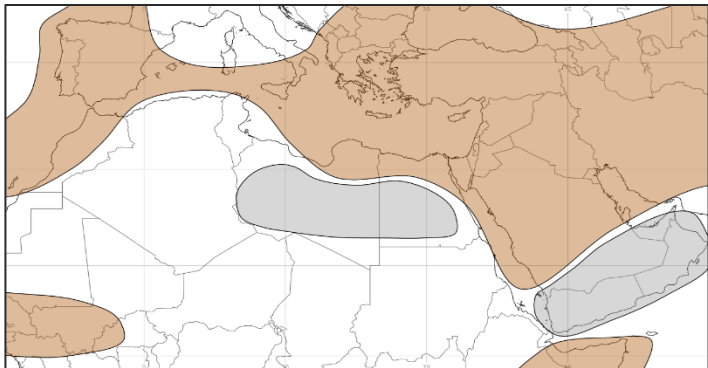
Current Status:

The last three months have been the dry season across much of the MENA with very little rainfall observed. The exception to this has been parts of Yemen and Oman which have been wetter than normal over the past few months. Near-normal or drier than normal conditions have continued across the Caribbean and Southern Europe.

Outlook:

For the next three months, near-normal precipitation is likely across Yemen and Oman. The rest of the MENA region is likely to be drier than normal. Drier than normal conditions are likely across the Caribbean and parts of eastern Mexico. Meanwhile, wetter than normal conditions are likely across most inland areas of South America including Guyana.

North Atlantic Tropical Cyclone outlook (Hurricanes): For the September to February period, near to slightly above average activity is the most probable outcome, with storms perhaps preferentially affecting the Gulf of Mexico where there are currently above-average sea surface temperatures. More information, and the full forecast can be found at <https://www.metoffice.gov.uk/research/weather/tropical-cyclones/seasonal/northatlantic2020>



3-Month Outlook September to November - Rainfall

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

Left: Middle East and North Africa

Right: Caribbean region

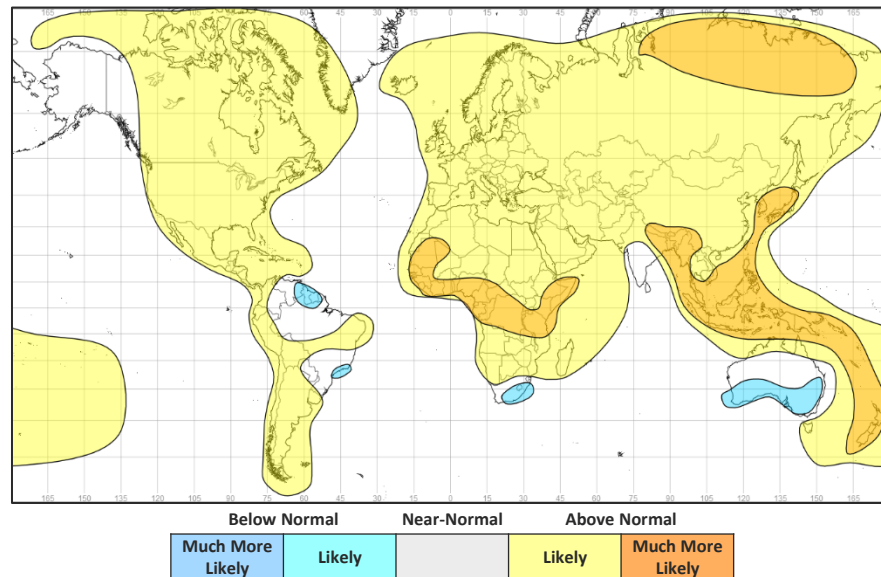
Global Outlook - Temperature

Outlook:

Over the next three months, many regions are likely to be warmer than normal, consistent with the warming observed over the past decade.

There are some notable exceptions to this with colder than normal conditions likely across tropical regions of South America, southern Australia and some parts of southern Africa.

3-Month Outlook September to November - Temperature



Global Outlook - Rainfall

Outlook:

Indian Ocean Dipole (IOD) – A negative IOD event is established and is expected to persist for the next three months, returning to neutral by December, as is typical of the usual IOD seasonal cycle. This means that the western Indian Ocean is currently cooler than usual, while the east is warmer. This affects meteorological patterns over wide areas of the globe: the negative IOD leads to wetter conditions in Indonesia and Australia and drier conditions in East Africa.

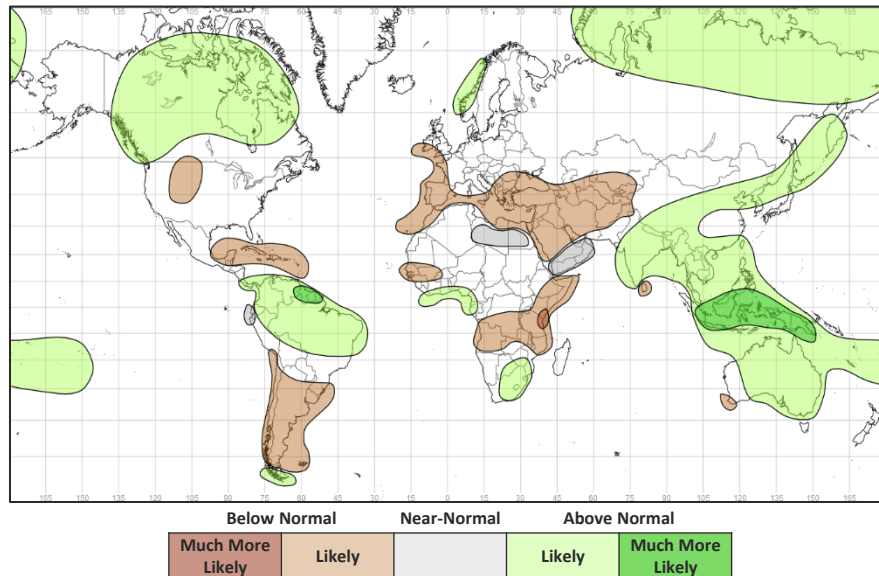
El Niño-Southern Oscillation (ENSO) – ENSO is currently neutral, however, a La Niña is expected to re-establish during the northern hemisphere winter. NOAA Climate Prediction Center / NCEP predictions give a small chance of La Niña emerging in September, rising to a 70% chance of emerging November to January – more than double the normal risk – and lasting through the 2021-22 Northern Hemisphere winter.

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

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

Meanwhile, parts of Central and East Africa and the Middle East are likely to be drier than normal.

3-Month Outlook September to November - Rainfall



Current Status

[Current Status maps](#)

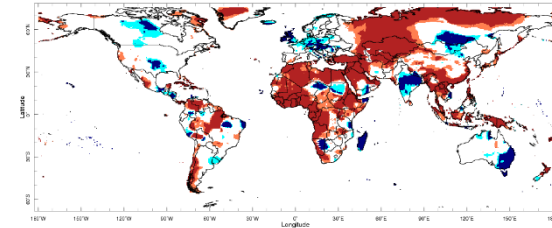
[MENA – Middle East](#)

[MENA – North Africa](#)

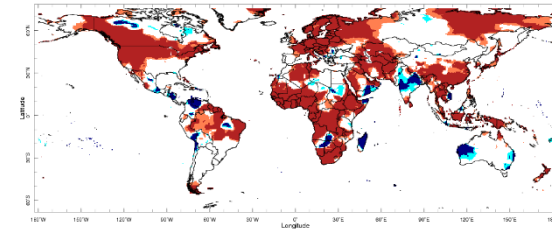
[Caribbean](#)

[British Overseas Territories](#)

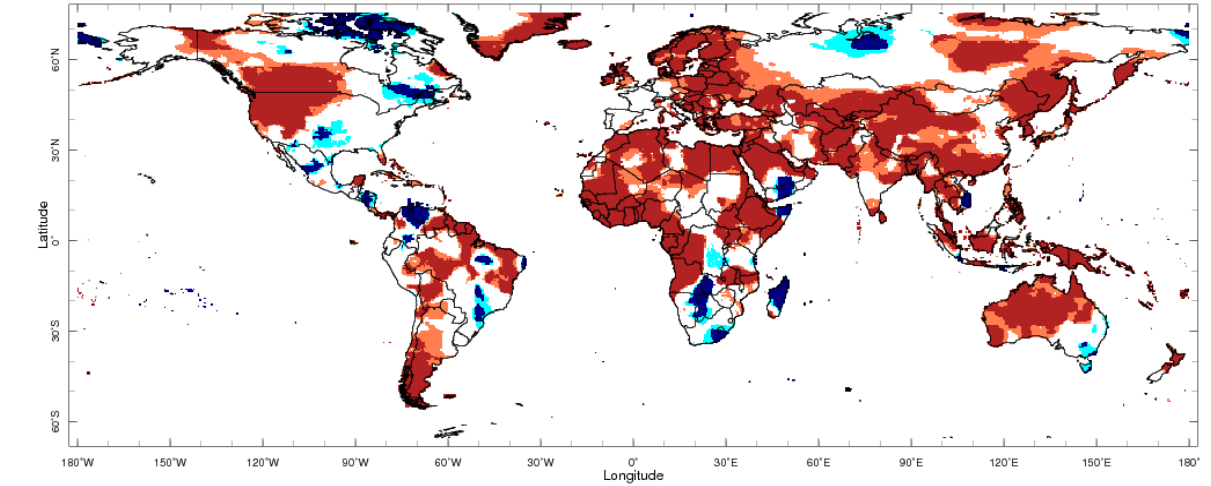
Current Status – Temperature percentiles



May



June

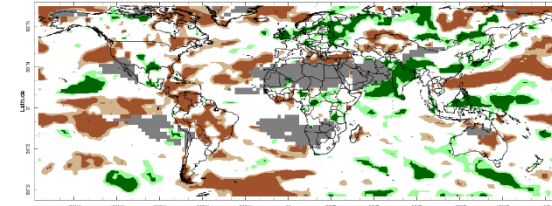


July

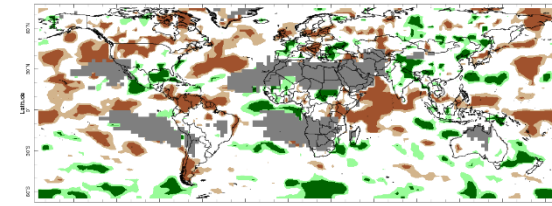


Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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

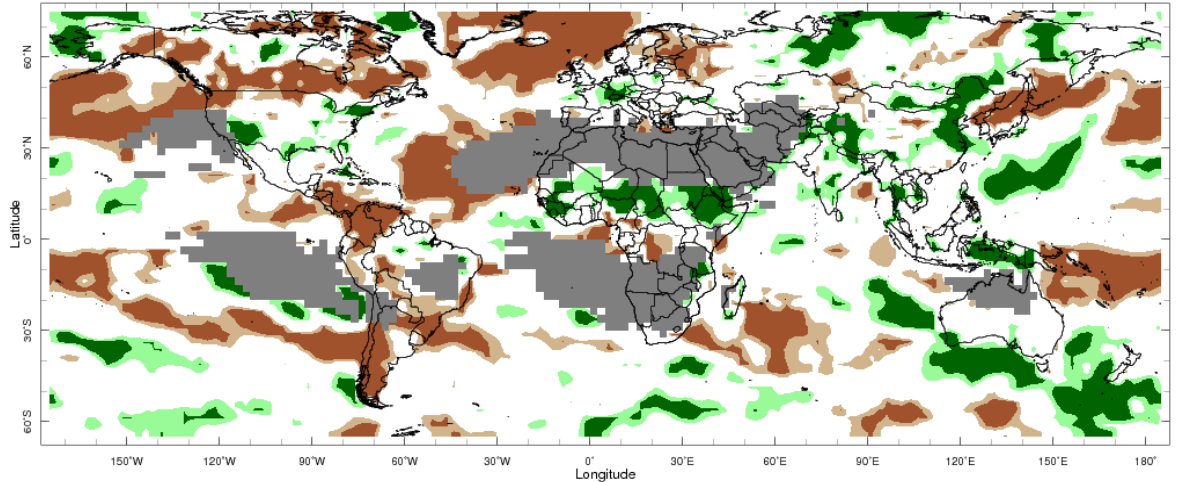
Current Status – Precipitation percentiles



May



June



July



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

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

Current Status: Rainfall

	May	June	July
	Dry	Mixed (2)	Normal
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Dry	Very Dry*	Normal*
	Normal*	Normal*	Normal*
	Normal	Normal*	Normal (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:

<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: Very Wet in the west, to Very Dry in the east.

(3) Note: Wet in the west.

Current Status – MENA – North Africa

	Current Status: Temperature		
	May	June	July
Mauritania	Hot	Hot	Hot
Morocco	Hot	Normal	Hot
Algeria	Hot	Hot	Hot
Tunisia	Warm	Hot	Hot
Libya	Hot	Mixed (1)	Mixed (3)
Egypt	Hot	Normal	Hot
Eritrea	Hot	Hot	Hot

	Current Status: Rainfall		
	May	June	July
	Normal*	Normal*	Normal*
	Normal	Dry*	Normal*
	Normal*	Mixed (2)*	Normal*
	Normal	Dry*	Normal*
	Normal*	Very Dry*	Normal*
	Normal*	Very Dry*	Normal*
	Normal	Dry*	Very Wet

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:** Mixed in the west, Normal in the east.
- (2) **Note:** Wet in the north, to Very Dry in the south
- (3) **Note:** Hot in the east; normal elsewhere

Current Status – Caribbean

Current Status: Temperature

	May	June	July
Caribbean Region	Hot	Normal	Hot
Haiti	Hot	Warm	Warm
Guyana	Normal	Hot	Hot

Current Status: Rainfall

	May	June	July
Caribbean Region	Mixed (1)	Normal (2)	Normal
Haiti	Dry	Normal	Dry
Guyana	Normal	Dry	Normal

Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

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

Additional Information:

(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		
	May	June	July
Southern Europe	Hot	Hot	Hot
Central Indian Ocean	Normal	Hot	Cold
Central Pacific	Cold	Cold	Cold

	Current Status: Rainfall		
	May	June	July
	Dry	Normal	Normal*
	Normal	Very Dry	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:

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

		Forecast summary		
		September	September to November	December to February
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	Climatological odds
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	Climatological odds
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	Climatological odds
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	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: September to February – MENA – Middle East (2)

		Forecast summary		
		September	September to November	December to February
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	Climatological odds
Iraq	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
Yemen	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than 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: September to February – MENA – North Africa(1)

		Forecast summary		
		September	September to November	December to February
Mauritania	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
Morocco	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
Algeria	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	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	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: September to February – MENA – North Africa(2)

		Forecast summary		
		September	September to November	December to February
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 north and likely to be near-normal in the south	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 north and likely to be near-normal in the south	Climatological odds
Eritrea	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than 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: September to February – Caribbean

		Forecast summary		
		September	September to November	December to February
Caribbean Region	Temperature	Likely to be near-normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Haiti	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Guyana	Temperature	Likely to be near-normal	Likely to be colder than normal	Climatological odds
	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: September to February – British Overseas Territories

		Forecast summary		
		September	September to November	December to February
Southern Europe	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 Indian Ocean	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	Climatological odds
Central Pacific	Temperature	Much more likely to be warmer than normal	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 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.

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 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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