Global: Monthly Climate Outlook
June to March

Issued: September 2020

Overview

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

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

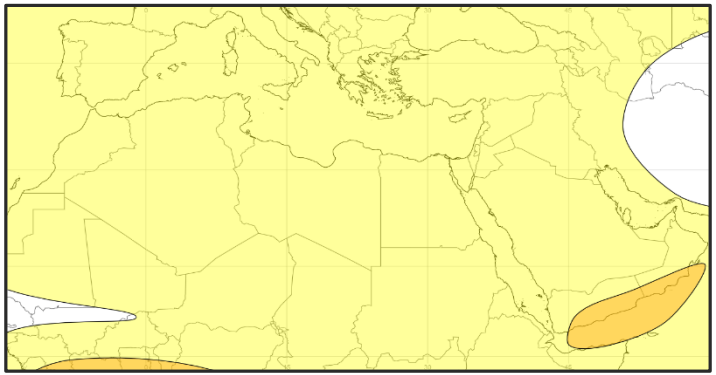
Global Seasonal Outlook – Temperature

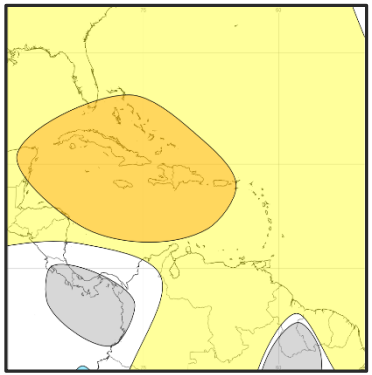
Global Seasonal Outlook – Rainfall

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

Current Status: Across the MENA region temperatures, during August, have been near to above normal. The main exception being Yemen which continued to be cooler than normal. Temperatures across the Caribbean were also above normal.

Outlook: Over the next three months, warmer than normal conditions are likely for much of this region. Across the Caribbean above normal temperatures are very likely.





3-Month Outlook October to December - Temperature

Below Normal		Near-Normal	Above Normal	
Very Likely	Likely		Likely	Very Likely

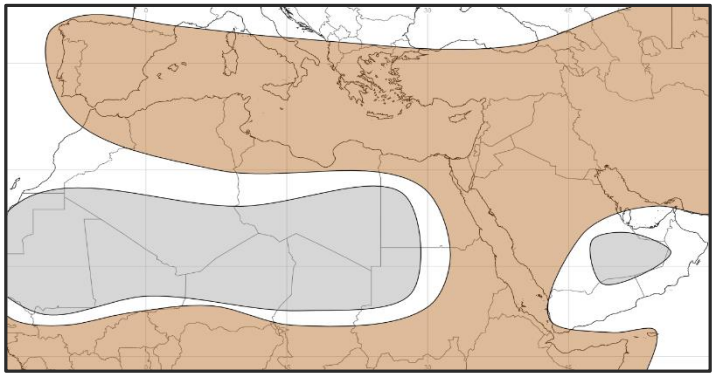
Left: Middle East and North Africa
Right: Caribbean region

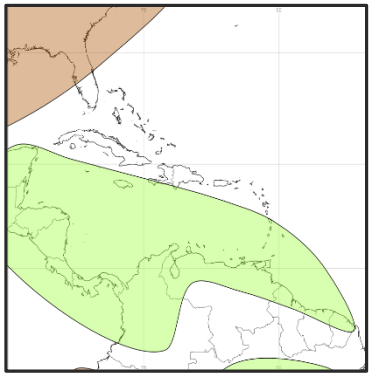
MENA, Caribbean and British Overseas Territories Current Status and Outlook - Rainfall

Current Status: Parts of Yemen have seen above normal rainfall over the two months. Elsewhere across the Middle East and North Africa rainfall has been near-normal (typically a predominantly dry period for much of the MENA area). After below normal rainfall during June and July, rainfall returned to near-normal during August for the Caribbean and British Overseas Territories.

Outlook: Across the MENA area rainfall tends to increase at this time of year (October-December), particularly for areas bordering the Mediterranean. For the next three months, rainfall amounts are likely be below normal for much of the area. The main exception for southern parts of the Arabian Peninsula where near-normal rainfall is most likely. Above normal rainfall is likely across the Caribbean Sea, though climatological odds (see note) are forecast for many of the Caribbean islands including the British Overseas Territories.

Tropical Cyclone outlook: Information can be found here.





3-Month Outlook October to December - Rainfall

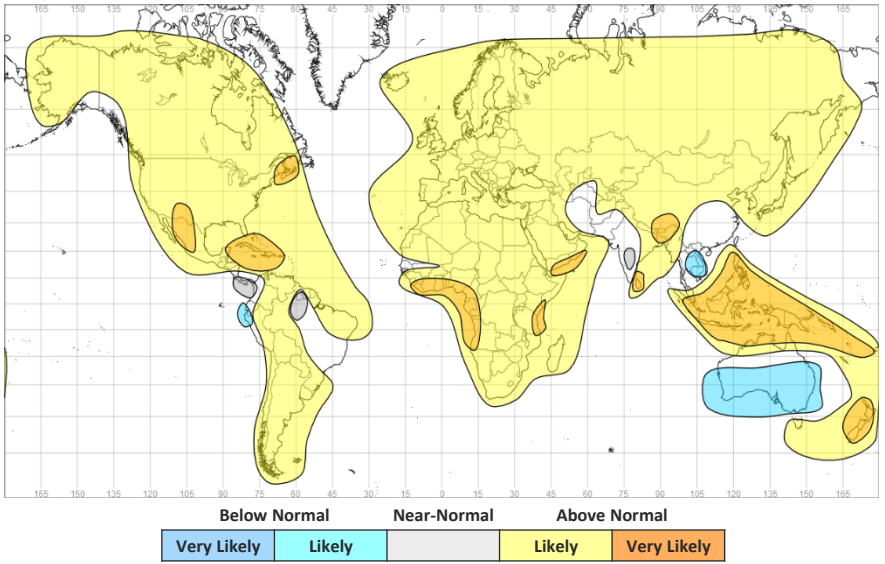
Below Normal		Near-Normal	Above Normal	
Very Likely	Likely		Likely	Very Likely

Left: Middle East and North Africa
Right: Caribbean region

Global Outlook - Temperature

Outlook: There is an increase in the likelihood of warmer than normal conditions across large parts of the world. The highest confidence in tropical regions including the Caribbean and Southeast Asia. This is consistent with the warming observed in the past decade. Below normal temperatures are likely for southern Australia, parts of mainland Southeast Asia and parts of Peru and Ecuador.

3-Month Outlook October to December - Temperature

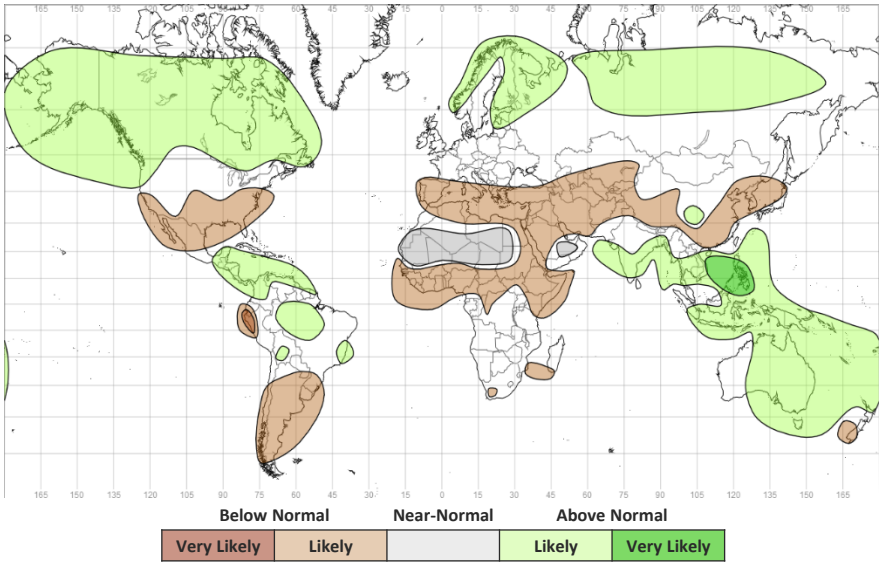


Global Outlook - Rainfall

Outlook: El Niño-Southern Oscillation (ENSO) – Analysis of sea surface temperatures (SSTs) show continued decline in central and eastern parts of the Pacific basin over recent weeks bringing them to La Niña levels. Atmospheric conditions over the tropical Pacific Ocean, trade wind strength and cloudiness near the Date Line are also consistent with La Niña. Long-range forecast models are in good agreement that this pattern is very likely (75%+) to persist over the coming months, most likely until early next year, with some strengthening of the pattern possible. The impacts of La Niña are expected to be far reaching and the latest output from long-range prediction models are consistent in replicating the La Niña state and some of its favoured impacts. With a couple of notable exceptions (e.g. 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

Indian Ocean Dipole (IOD) – In the Indian Ocean, sea-surface temperatures (SSTs) are above average across much of the basin. There is still the potential for cooling to occur in western parts of the basin and should this occur a negative IOD would be likely. This state of the IOD tends to be sympathetic to the La Niña pattern. There remains some uncertainty as to whether a negative IOD will form but there remains an increased chance of this compared to normal over the next couple of months. Should a negative IOD pattern form then wetter than normal conditions become likely across Australia and the Maritime Continent (Indonesia, Borneo, New Guinea, the Philippine Islands, the Malay Peninsula, and the surrounding seas); drier than normal conditions in East Africa would be likely for the Short Rains season (October-November-December).

3-Month Outlook October to December - Rainfall



Current Status

Current Status maps

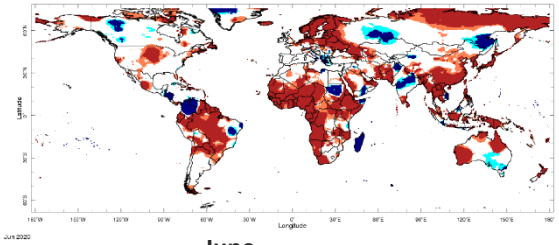
MENA – Middle East

MENA – North Africa

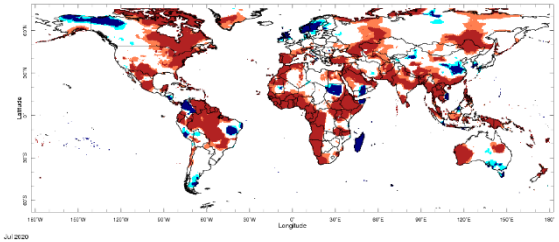
Caribbean

British Overseas Territories

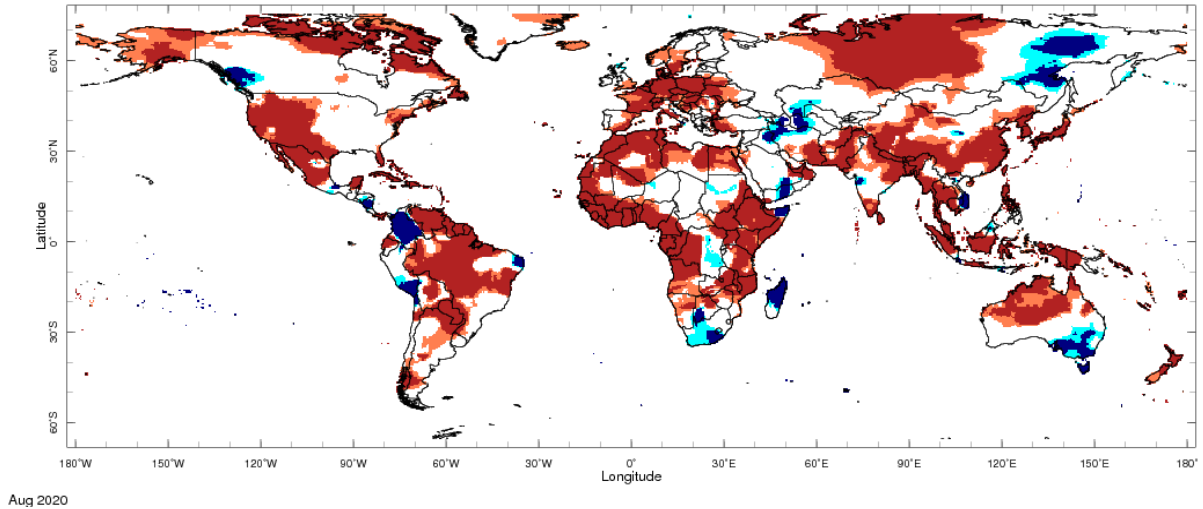
Current Status – Temperature percentiles



June



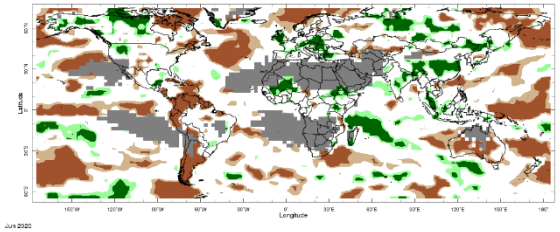
July



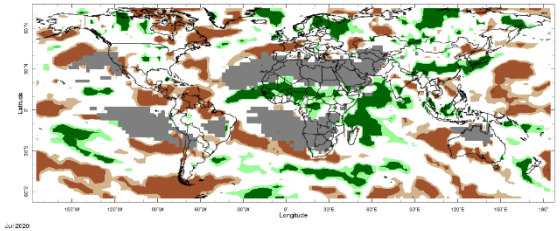
August

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.

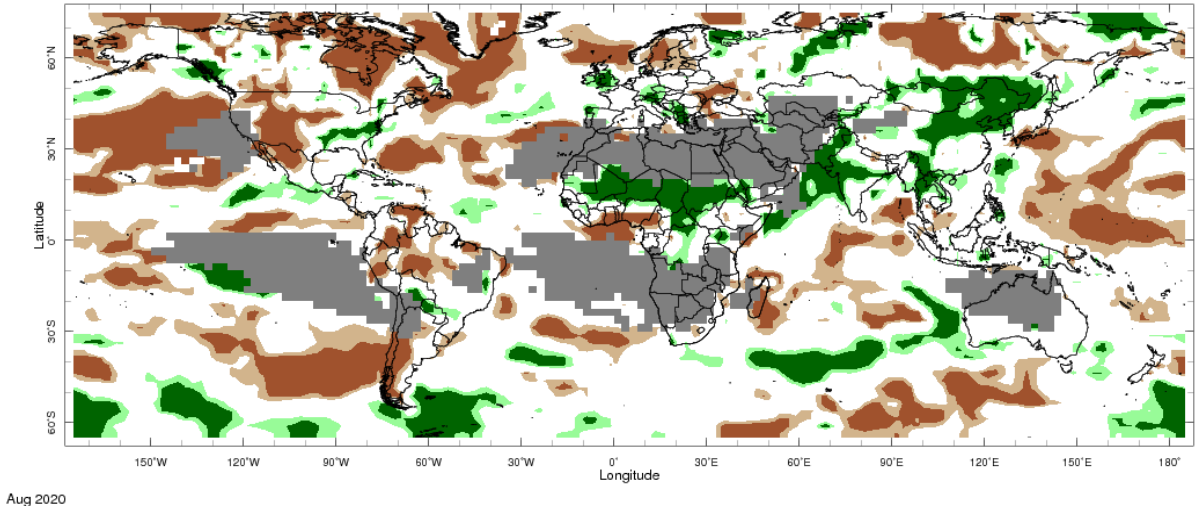
Current Status – Precipitation percentiles



June



July



August

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		
	June	July	August	June	July	August
Turkey	Normal	Hot	Hot	Normal	Normal	Normal
Palestine	Normal	Hot	Normal	Normal	Normal*	Normal*
Lebanon	Normal	Hot	Normal	Normal	Normal*	Normal*
Jordan	Normal	Hot	Normal	Normal	Normal*	Normal*
Syria	Normal	Hot	Normal	Normal	Normal*	Normal*
Iraq	Normal	Normal	Normal	Normal	Normal*	Normal*
Yemen	Cool	Cold	Cold	Wet	Very Wet	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: http://iridl.ldeo.columbia.edu/maproom/.

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

Additional Information:

Current Status – MENA – North Africa

	Current Status: Temperature			Current Status: Rainfall		
	June	July	August	June	July	August
Mauritania	Hot	Hot	Hot	Normal*	Normal*	Wet*
Morocco	Normal	Hot	Hot	Normal	Normal*	Normal*
Algeria	Normal	Normal	Hot	Normal^	Normal*	Normal*
Tunisia	Warm	Normal	Hot	Dry	Normal*	Normal*
Libya	Warm	Normal	Warm	Normal*	Normal*	Normal*
Egypt	Normal	Warm	Hot	Normal*	Normal*	Normal*
Eritrea	Hot	Hot	Hot	Very Wet	Normal	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: http://iridl.ldeo.columbia.edu/maproom/.

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

Additional Information:

^Note: the far south of Algeria was Hot in June

Current Status – Caribbean

	Current Status: Temperature			Current Status: Rainfall		
	June	July	August	June	July	August
Caribbean Region	Hot	Hot	Hot	Dry	Dry^	Normal
Haiti	Hot	Hot	Hot	Very Dry	Normal	Normal
Guyana	Hot	Hot	Hot	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:

^Note: The Windward Islands were Very Dry during July.

Current Status – British Overseas Territories

	Current Status: Temperature			Current Status: Rainfall		
	June	July	August	June	July	August
Southern Europe	Hot	Hot	Hot	Normal	Normal	Normal
Central Indian Ocean	Normal	Cold	Normal	Normal	Very Wet	Dry
Central Pacific	Normal	Hot	Normal	Normal	Wet	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

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: October to March – MENA – Middle East (1)

		Forecast summary		
		October	October to December	January to March
Turkey	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	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 - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note
Lebanon	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note
Jordan	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note

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: October to March – MENA – Middle East (2)

		Forecast summary		
		October	October to December	January to March
Syria	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note
Iraq	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note
Yemen	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Climatological odds - see note	Climatological odds - see note	Climatological odds - see note

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: October to March – MENA – North Africa(1)

		Forecast summary		
		October	October to December	January to March
Mauritania	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds - see note
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	Climatological odds - see note
Algeria	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be near-normal in the south, likely to be drier than normal in the north	Climatological odds - see note
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	Climatological odds - see note

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: October to March – MENA – North Africa(2)

		Forecast summary		
		October	October to December	January to March
Libya	*Temperature*	Climatological odds - see note	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be near-normal	Likely to be near-normal in the south, likely to be drier than normal in the north	Climatological odds - see note
Egypt	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be near-normal	Likely to be near-normal in the south, likely to be drier than normal in the north	Climatological odds - see note
Eritrea	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note

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: October to March – Caribbean

		Forecast summary		
		October	October to December	January to March
Caribbean Region	*Temperature*	**Much more likely to be warmer than normal**	**Much more likely to be warmer than normal**	Likely to be warmer than normal
	Rainfall	Climatological odds - see note	**Likely to be wetter than normal** south of Hispaniola. Climatological odds elsewhere - see note	Climatological odds - see note
Haiti	*Temperature*	**Much more likely to be warmer than normal**	**Much more likely to be warmer than normal**	Likely to be warmer than normal
	Rainfall	Climatological odds - see note	Climatological odds - see note	Climatological odds - see note
Guyana	*Temperature*	**Likely to be warmer than normal**	**Likely to be near-normal**	Climatological odds - see note
	Rainfall	Climatological odds - see note	Climatological odds - see note	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: October to March – British Overseas Territories

		Forecast summary		
		October	October to December	January to March
Southern Europe	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note
Central Indian Ocean	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Climatological odds - see note	Climatological odds - see note
Central Pacific	*Temperature*	Climatological odds - see note	Climatological odds - see note	Climatological odds - see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds - see note

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 October to March period:

The season normally continues during October and November although the frequency of storms tends to reduce. Above-average activity remains most likely during the latter part of the season. Sea surface temperatures remain above average across the western Topical Atlantic, Caribbean Sea and for much of the Gulf of Mexico which will help favour storm development here.

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

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 near-normal	When probability of upper tercile is 40-70%
Much more likely to be above normal	When probability of upper tercile > 70%
Climatological odds	When probabilities for all categories are roughly 33%

Global Producing Centres (GPC) forecasts used by WMO LC-LRFMME:

- GPC 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)

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