Global: Monthly Climate Outlook October to July

Issued: January 2021

Overview

Current Status

Outlooks

Annex 1 – Supplemental Information

Overview

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

Current Status: Over the last three months, temperatures have been above normal across most of the area of interest. The exception to this has been near to below normal temperatures for parts of north Africa and southern Europe in October and December. The Caribbean was also somewhat colder than normal in December.

Outlook: Most areas are likely to be warmer, or very likely to be warmer than normal through the next three months. However, parts of Central America and northern South America are likely to be colder than normal.
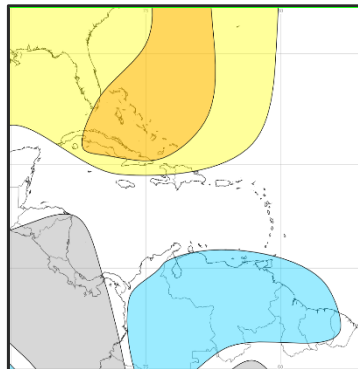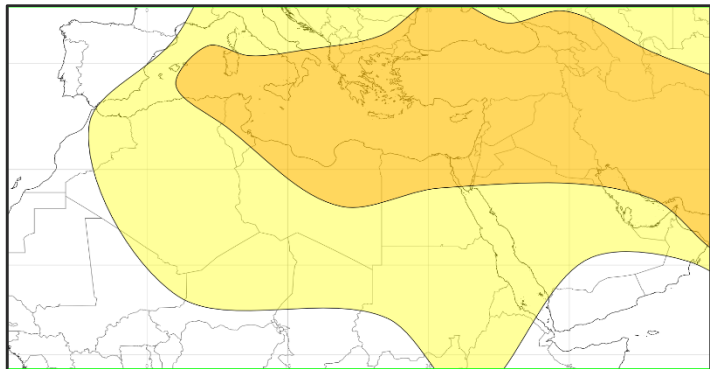
3-Month Outlook February to April - Temperature

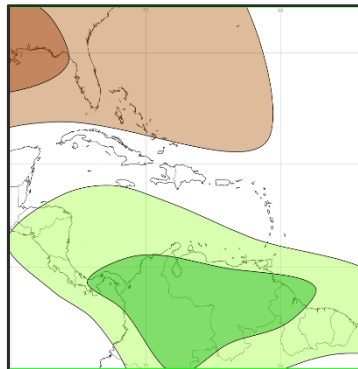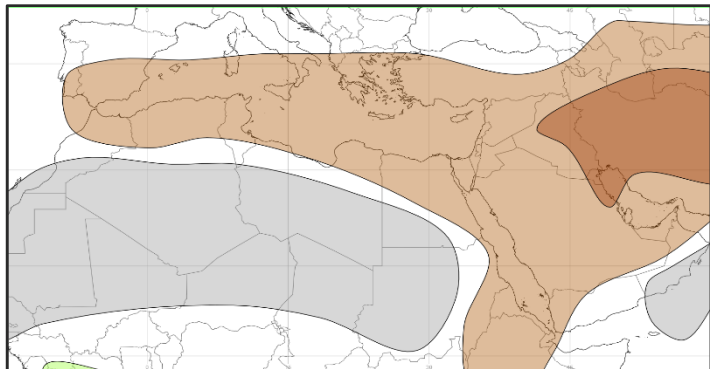| Below Normal		Near-Normal	Above Normal	
Very Likely	Likely		Likely	Very Likely

Left: Middle East and North Africa
Right: Caribbean region

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

Current Status: Many areas saw rainfall close to, or below normal over the last three months. Parts of southern Europe were wetter in December, whilst parts of the Levant saw above normal rainfall in November and December. The central Caribbean was wetter in November.

Outlook: Most parts are likely or very likely to be drier than normal over the next three months. The exceptions to this are inland parts of northwest Africa, which are likely to see near -normal rainfall amounts, and the southern Caribbean, which are likely to be wetter than normal.

3-Month Outlook February to April - Rainfall

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

Left: Middle East and North Africa
Right: Caribbean region

Climate Outlook
Global: October to July

Global Outlook - Temperature

Outlook:

La Niña tends to have an overall cooling effect across the world. However, many regions are likely to be warmer than normal over the next three months, consistent with the warming observed over the past decade. There are some notable exceptions to this, with an increased likelihood of colder than normal conditions across tropical regions of South America and small parts of southeastern Africa and southeast Asia. Parts of Australia, particularly the east, are likely to see temperatures below normal.

3-Month Outlook February to April - Temperature

	Below Normal		Near-Normal		Above Normal	
	Very Likely	Likely			Likely	Very Likely
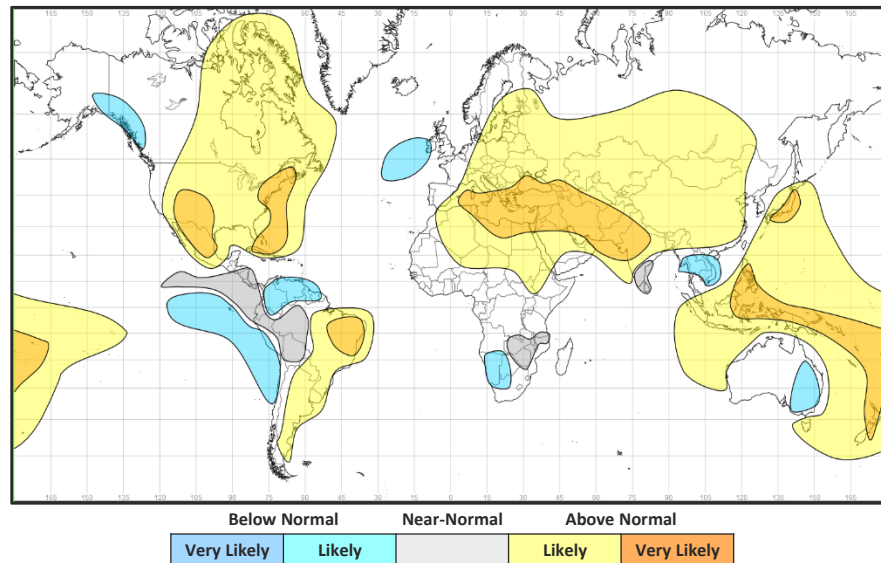
Global Outlook - Rainfall

Outlook:

El Niño-Southern Oscillation (ENSO) – La Niña conditions are now well established across the tropical Pacific, with SST anomalies, trade wind strength, atmospheric pressure pattern and cloudiness all consistent with this. The event has likely recently peaked and a gradual shift towards more neutral conditions should take place during the first half of next year. However, over the next few months there is ~95% chance of La Niña continuing.

The latest NOAA Climate Prediction Centre / NCEP statement (PDF) states that:
"La Niña is expected to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition to ENSO-neutral during the spring 2021 (55% chance during April-June)."

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

Large parts of southern Asia, Australasia, along with the south of India, Central America, northern parts of South America, along with southern parts of the Caribbean are likely to be wetter than normal. Much of Australia is also likely to be wetter.

Meanwhile, much of the Middle East, Mexico, southern USA, Ethiopia and parts of the Congo basin are likely to be drier than normal.

3-Month Outlook February to April - Rainfall

	Below Normal		Near-Normal	Above Normal	
	Very Likely	Likely		Likely	Very Likely
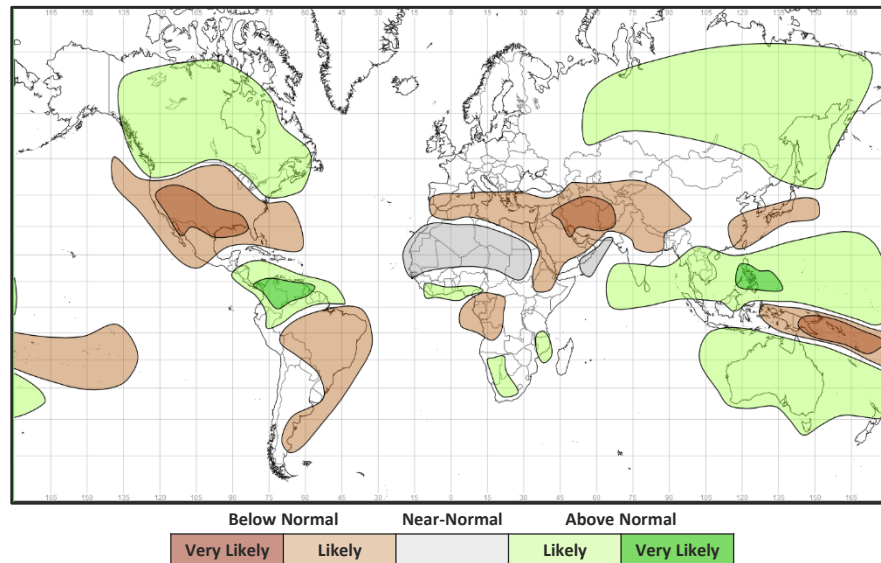
Current Status

Current Status – Temperature percentiles
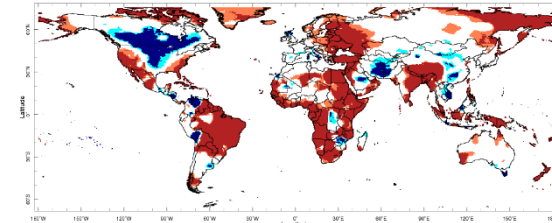
October

November

Dec 2020
December

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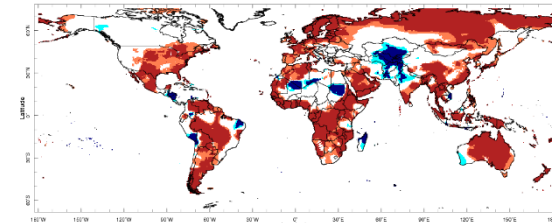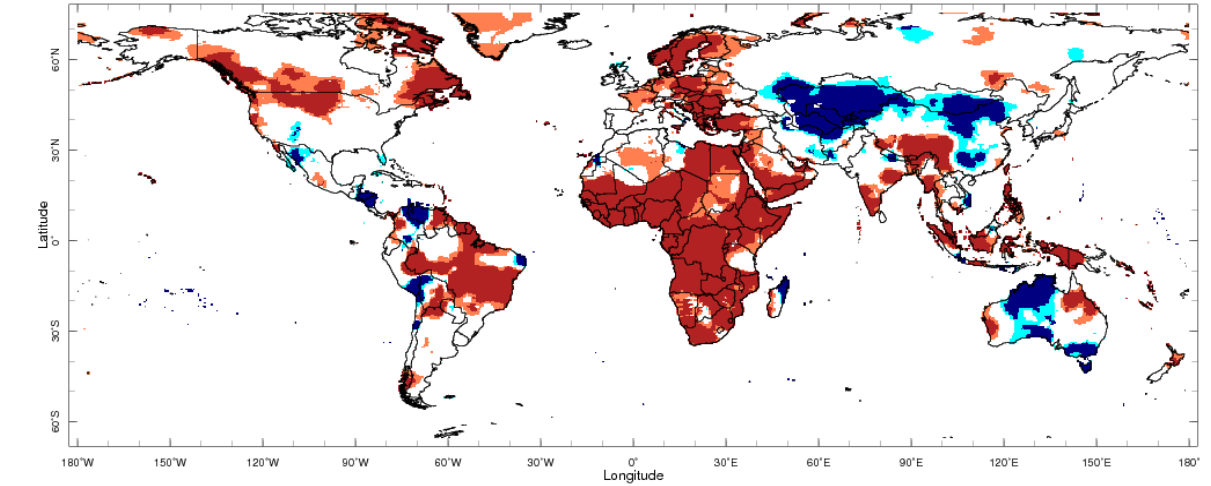
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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

October

November

Dec 2020

December

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 |
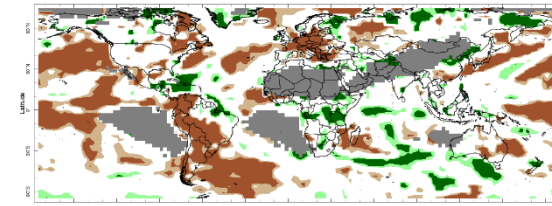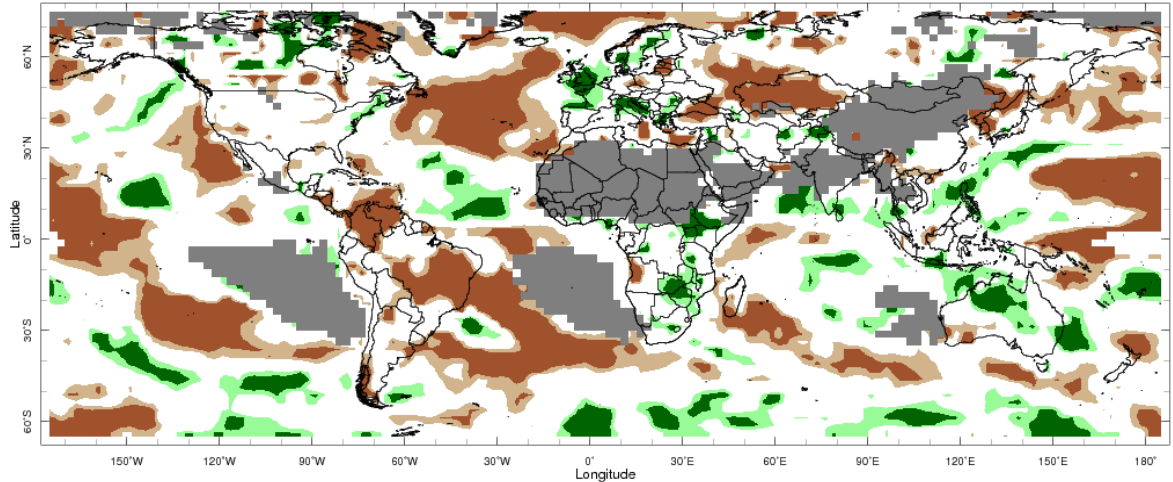
Notes: The percentiles shown in the map indicate a ranking of rainfall, with the 0th percentile being the driest and the 100th percentile being the wettest in the 1981-2010 climatology. Green and dark green shading represent values above the 80th (Wet) and 90th (Very Wet) percentile, respectiv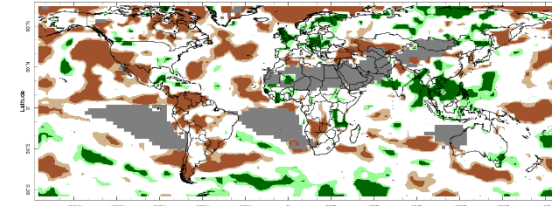ely; regions shaded in light and dark brown indicate rainfall below the 20th (Dry) and 10th (Very Dry) percentile, with respect to the 1981-2010 climatology. Grey areas on the map mask out regions that receive less than 10 mm/month of rainfall on normal in the 1981-2010 climatology for the month. The 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	Hot	Warm	Hot		Dry	Mixed^	Dry
Palestine	Hot	Normal	Hot		Dry	Wet	Normal
Lebanon	Hot	Normal	Hot		Dry	Wet	Normal
Jordan	Hot	Normal	Hot		Dry	Wet	Normal
Syria	Hot	Normal	Hot		Normal	Wet	Wet
Iraq	Warm	Warm	Normal		Normal	Normal	Normal
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:
^Note: Very Dry in western parts of the country with rainfall near normal in the east

Current Status – MENA – North Africa

Current Status: Temperature				Current Status: Rainfall		
	October	November	December	October	November	December
Mauritania	Normal^	Hot	Hot	Normal	Normal*	Normal
Morocco	Normal	Hot	Warm	Normal	Normal	Dry
Algeria	Hot^^	Hot	Normal	Dry	Normal	Normal
Tunisia	Normal	Hot	Normal	Normal	Normal	Normal
Libya	Hot	Normal	Normal	Normal*	Normal*	Normal
Egypt	Hot	Normal	Hot	Normal*	Very Wet*^^^	Normal
Eritrea	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:
^Note: Warm in the south.
^^Note: Temperatures normal along the coast.
^^^Note: Very Wet in the far north of the country, with rainfall near normal elsewhere

Current Status – Caribbean

	Current Status: Temperature		
	October	November	December
Caribbean Region	Hot	Hot	Normal
Haiti	Hot	Cool	Normal
Guyana	Hot	Warm	Hot

	Current Status: Rainfall		
	October	November	December
Caribbean Region	Wet	Normal	Dry
Haiti	Normal	Very Wet	Normal
Guyana	Dry	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:

Current Status – British Overseas Territories

	Current Status: Temperature			Current Status: Rainfall		
	October	November	December	October	November	December
Southern Europe	Hot^	Warm	Mixed^^	Very Wet^	Normal	Very Wet
Central Indian Ocean	Normal	Warm	Warm	Dry	Wet	Wet
Central Pacific	Normal	Cold	Cold	Dry	Normal	Very 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:
^Note: Temperatures and rainfall highly variable across the region in October, hottest and wettest in the south-east.
^^Note: Temperatures highly variable across the region in December, mainly normal with some hot areas.

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

		Forecast summary		
		February	February to April	May to July
Turkey	*Temperature*	Likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds – see note	Likely to be drier than normal	Likely to be drier than normal
Palestine	*Temperature*	Likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	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	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	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	Much more likely to be warmer than normal	Much more 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: February to July – MENA – Middle East (2)

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

		Forecast summary		
		February	February to April	May to July
Mauritania	*Temperature*	Likely to be warmer than normal	Climatological odds – see note	Likely to be warmer than normal
	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 in the north, likely to be near-normal elsewhere	Likely to be drier than normal except in Western Sahara, where likely to be near-normal	Climatological odds – see note
Algeria	*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 northern coastal region, likely to be near-normal elsewhere	Likely to be drier than normal in the north, likely to be near-normal elsewhere	Climatological odds – see note
Tunisia	*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 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.

Outlooks

Outlook: February to July – MENA – North Africa(2)

		Forecast summary		
		February	February to April	May to July
Libya	*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 Mediterranean coastal region, likely to be near-normal elsewhere	**Likely to be drier than normal** in Mediterranean coastal region, likely to be near-normal elsewhere	Climatological odds – see note
Egypt	*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 Mediterranean coastal region and Sinai, Likely to be near-normal elsewhere	**Likely to be drier than normal** in Mediterranean coastal region and Sinai, Likely to be near-normal elsewhere	Climatological odds – see note
Eritrea	*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 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.

Outlooks

Outlook: February to July – Caribbean

		Forecast summary		
		February	February to April	May to July
Caribbean Region	*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 Bahamas, mainly Climatological odds – see note elsewhere.	Likely to be drier than normal in the Bahamas, mainly Climatological odds – see note elsewhere.	Climatological odds – see note
Haiti	*Temperature*	Likely to be warmer than normal	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 colder than normal in the south, likely to be near-normal elsewhere	Likely to be colder than 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*	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more 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*	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	Likely to be wetter than normal
Central Pacific	*Temperature*	Much more likely to be colder than normal	Much more likely to be colder than normal	Likely to be colder 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.

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 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)

Enquiries

Email: internationaldevelopment@metoffice.gov.uk

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