



Global: Monthly Climate Outlook November to August

Issued: February 2022

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Overview

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

<u>Global Seasonal Outlook – Temperature</u>

<u>Global Seasonal Outlook – Rainfall</u>

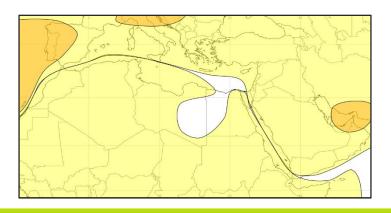


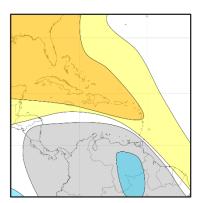


MENA, Caribbean and British Overseas Territories Current Status and Outlook - Temperature

Current Status: Across the Middle East and North Africa mainly hot conditions were experienced during November. During December and January much of the region experienced near-normal temperatures. Temperatures across the Caribbean were generally above normal from throughout November to January.

Outlook: For most of the MENA region and the Caribbean it is like to be warmer than normal over the next three months. The main exception is for parts of northern South America, including Guyana, where near-normal temperatures are likely.





3-Month Outlook March to May - Temperature

В	elow I	Normal	Near-Normal	Above	Normal
Much I		Likely		Likely	Much More Likely

Left: Middle East and North Africa

Right: Caribbean region

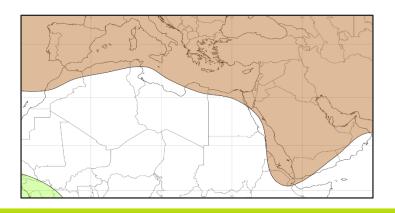


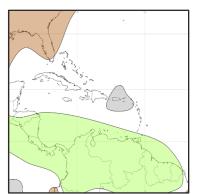


MENA, Caribbean and British Overseas Territories Current Status and Outlook - Rainfall

Current Status: Winter tends to be the wettest part of the year for many parts of North Africa and the Middle East. Over the last three months, conditions have been mixed, with some areas being wetter than normal during January including Turkey, Palestine, Libya and Egypt. Across the Caribbean rainfall has been near- or below normal.

Outlook: Drier than normal conditions are likely across much of North Africa and the Middle East in the next 3 months. Northern parts of South America are likely to be wetter than normal.





3-Month Outlook March to May - Rainfall

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

Left: Middle East and North Africa

Right: Caribbean region





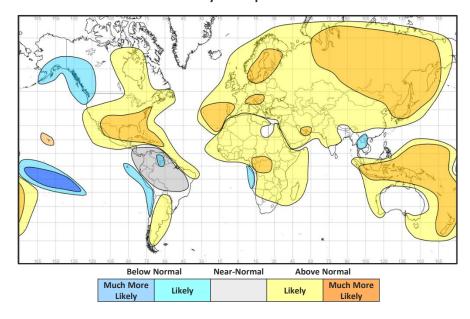
Global Outlook - Temperature

Outlook:

A weak 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 northern hemisphere spring.

As is typical due to climate change, many parts of the globe are likely to see above normal temperatures. However, there are some notable exceptions. Consistent with La Niña, below normal temperatures are most likely for some northern and western parts of South America, mainland Southeast Asia Australia and northwest North America.

3-Month Outlook March to May - 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 weak event. The event has likely peaked and, according to NOAA, whilst La Niña is likely to continue into the Northern Hemisphere early spring (77% chance during March-May 2022), a transition to ENSO-neutral is more probable later in the season (56% chance during May-July 2022). The effects of La Niña are likely to remain wide-reaching during the northern hemisphere spring.

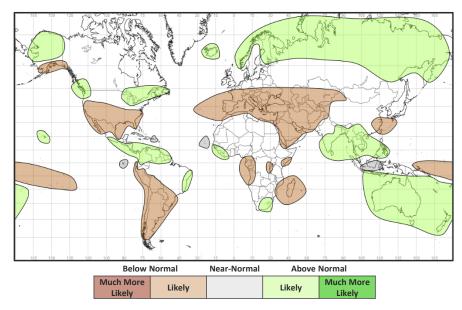
With a couple of notable exceptions (including East Africa) La Niña, very broadly speaking, tends to increase the likelihood of wetter than normal conditions across many land areas of the tropics. More information on typical impacts can be found here

 $\underline{\text{https://www.metoffice.gov.uk/research/climate/seasonal-to-decadal/gpc-outlooks/el-ninola-nina/enso-impacts}}$

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. With progression 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 March to May. It will therefore have little effect on global climate during this period.

3-Month Outlook March to May - Rainfall







Current Status

Current Status maps

MENA – Middle East

MENA – North Africa

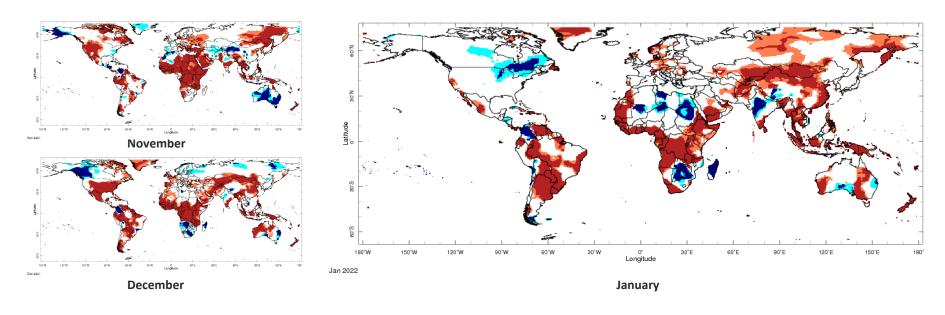
Caribbean

British Overseas Territories





Current Status – Temperature percentiles



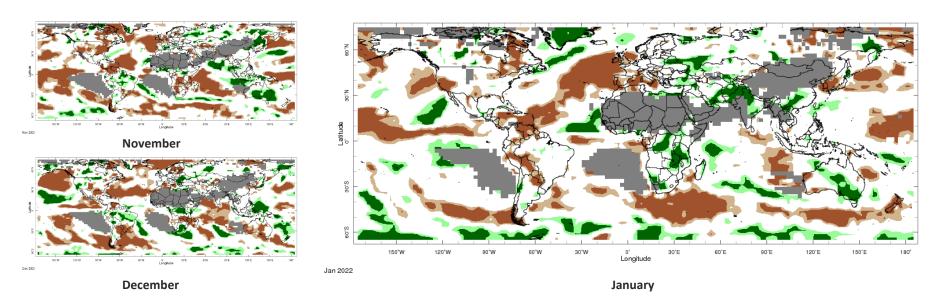


Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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





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

	Currer	Current Status: Temperature			
	November	December	January		
Turkey	Hot	Warm	Normal		
Palestine	Hot	Normal	Normal		
Lebanon	Hot	Normal	Normal		
Jordan	Hot	Normal	Normal		
Syria	Hot	Normal	Normal		
Iraq	Warm	Normal	Normal		
Yemen	Hot	Hot	Hot		

Current Status: Rainfall					
November	December	January			
Normal	Normal	Wet			
Normal	Normal	Wet			
Normal	Normal	Normal			
Normal	Normal	Normal			
Dry	Normal	Normal			
Dry	Dry	Mixed (1)			
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:

 $\underline{\text{http://iridl.ldeo.columbia.edu/maproom/}}.$

Additional Information:

(1) Note: Very wet in the north, normal in the south

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





Current Status – MENA – North Africa

	Currei	Current Status: Temperature		
	November	December	January	
Mauritania	Hot	Hot	Hot	
Morocco	Hot	Warm	Mixed (3)	
Algeria	Hot	Normal	Normal	
Tunisia	Hot	Normal	Normal	
Libya	Hot	Normal	Mixed (4)	
Egypt	Hot	Normal	Mixed (5)	
Eritrea	Hot	Hot	Hot	

Cur	Current Status: Rainfall					
November	December	January				
Normal*	Normal*	Normal*				
Normal	Dry	Dry				
Normal	Dry	Dry				
Normal	Dry	Normal				
Mixed (1)	Wet	Wet				
Mixed (2)	Wet	Wet				
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: Dry in parts of the far north
- (2) Note: Very wet in parts of the far north
- (3) Note: Hot in the southwest, normal in the northeast
- (4) Note: Cold in parts of the west, otherwise normal
- (5) Note: Cold in the south, normal in the north





Current Status – Caribbean

	Current Status: Temperature			
	November	December	January	
Caribbean Region	Warm	Hot	Hot	
Haiti	Warm	Hot	Hot	
Guyana	Normal (1)	Hot	Hot	

Cur	Current Status: Rainfall					
November	December	January				
Very Dry	Normal	Very Dry				
Normal	Very Dry	Normal				
Normal	Normal	Dry				

Notes:

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

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

Additional Information:

(1) Note: Hot in the far north





Current Status – British Overseas Territories

	Current Status: Temperature			
	November	December	January	
Southern Europe	Hot	Hot	Normal	
Central Indian Ocean	Normal	Cold	Normal	
Central Pacific	Cold	Cold	Cold	

Cur	Current Status: Rainfall					
November	December	January				
Normal	Normal	Normal				
Very Dry	Dry	Normal				
Very Dry	Normal	Mixed (1)				

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.ideo.columbia.edu/maproom/.

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

Additional Information:

(1) Note: Large variations apparent





Outlooks

<u>Outlooks – Notes for use</u>

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

		Forecast summary		
		March	March to May	June to August
Turkey	Temperature	Likely to be colder than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Palestine	Temperature	Likely to be colder 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
Lebanon	Temperature	Likely to be colder 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
Jordan	Temperature	Likely to be colder 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





Outlook: March to August – MENA – Middle East (2)

			Forecast summary	
		March	March to May	June to August
Syria	Temperature	Climatological odds	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
Iraq	Temperature	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	1		l	
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds
Yemen	Rainfall Temperature	Likely to be drier than normal Likely to be warmer than normal	Likely to be drier than normal Likely to be warmer than normal	Climatological odds Likely to be warmer than normal





Outlook: March to August – MENA – North Africa(1)

		Forecast summary		
		March	March to May	June to August
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	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	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal in the north; Climatological odds in the south
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	Likely to be drier than normal in the far north; Climatological odds elsewhere	Likely to be drier than normal in the far north; Climatological odds elsewhere
Tunisia	Temperature	Climatological odds	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 in the south	Likely to be drier than normal





Outlook: March to August – MENA – North Africa(2)

		Forecast summary		
		March	March to May	June to August
Libya	Temperature	Likely to be colder than normal	Likely to be warmer than normal in the west; Climatological odds in the east	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Climatological odds
Egypt	Temperature	Likely to be colder than normal	Likely to be warmer than normal in the east; Climatological odds in the west	Likely to be warmer than normal
Egypt	Temperature Rainfall	Likely to be colder than normal Likely to be near-normal	•	Likely to be warmer than normal Climatological odds
Eritrea			Climatological odds in the west Likely to be drier than normal in the far	

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.

Global: November to August





Outlook: March to August – Caribbean

		Forecast summary		
		March	March to May	June to August
Caribbean	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
Region	Rainfall	Likely to be wetter than normal	Climatological odds	Climatological odds
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	Climatological odds	Climatological odds
Guyana	Temperature	Likely to be near-normal	Likely to be near-normal	Climatological odds
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal





Outlook: March to August – British Overseas Territories

		Forecast summary		
		March	March to May	June to August
Southern Europe	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be drier than normal
Central Indian Ocean	Temperature	Likely to be warmer than normal	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
Central Pacific	Temperature	Climatological odds	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds





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 probabilisty 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)





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