

AFRICA: Monthly Climate Outlook

June to March

Issued: September 2020

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Overview

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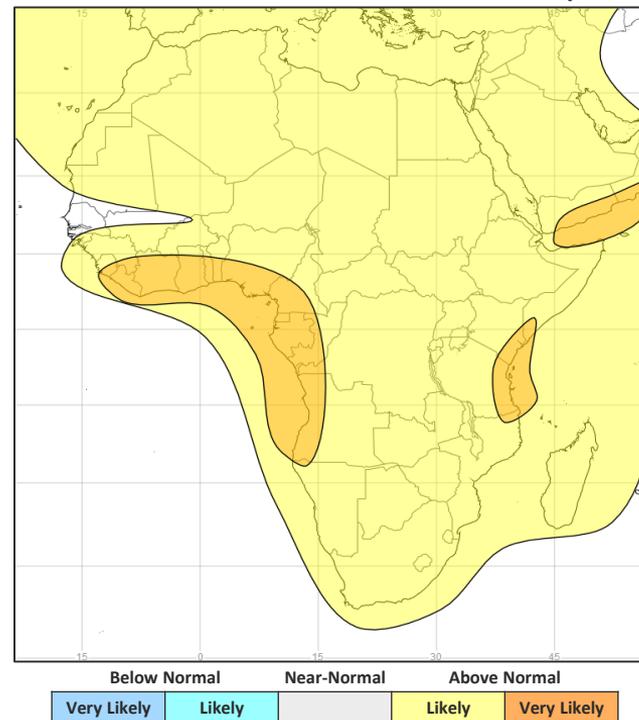
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Africa Current Status and Outlook - Temperature

Current Status: Most of the continent has continued to experience warmer than normal conditions. The main exception has been across parts of the far south of Africa where temperature, in August, was near or below normal. Many parts of the Sahara and Sahel regions have also been temperatures near normal during July and August.

Outlook: For the next three months, warmer than normal conditions are likely for most of the continent. Above normal temperatures are very likely for parts of East Africa and Gulf of Guinea coastal areas.

3-Month Outlook October to December - Temperature



Africa Current Status and Outlook - Rainfall

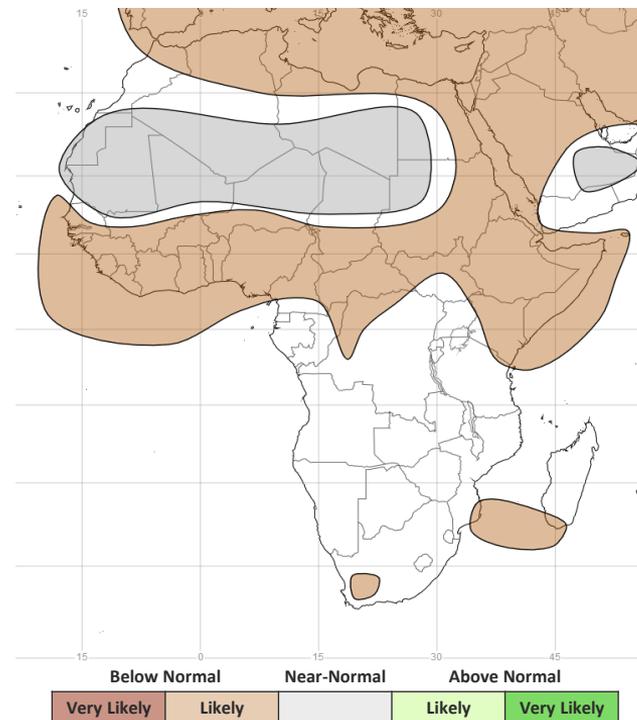
Current Status: While at its northern limit during August the West African Monsoon remained very active, bringing above normal rainfall across a wide area with very wet conditions observed in Niger, Mali, Chad and Sudan. Nearer the Gulf of Guinea coast in West Africa rainfall was below normal.

Outlook: A La Nina phase of the El Niño-Southern Oscillation (ENSO) is developing, with many atmospheric variables now consistent with this global driver. La Nina conditions are likely to persist through the next few months and potentially strengthen. This is likely to be the main driver for rainfall patterns over Africa over the next three months. The Indian Ocean Dipole (IOD) remains neutral, though there is an increased chance compared to normal of a negative IOD event developing over the next couple of months. The combined influence of La Niña and the potential negative IOD typically bring an increased likelihood of drier than normal conditions in East Africa and wetter than normal conditions in southern Africa.

For the next three months, below normal rainfall is likely across many parts of East Africa with a weakened 'Short Rains' season here. Signals are more mixed further west although below normal rainfall is likely for West Africa too.

For southern Africa, even with La Nina taken into account, predictions are also finely balanced with the likelihood of above- and below-normal rainfall similar.

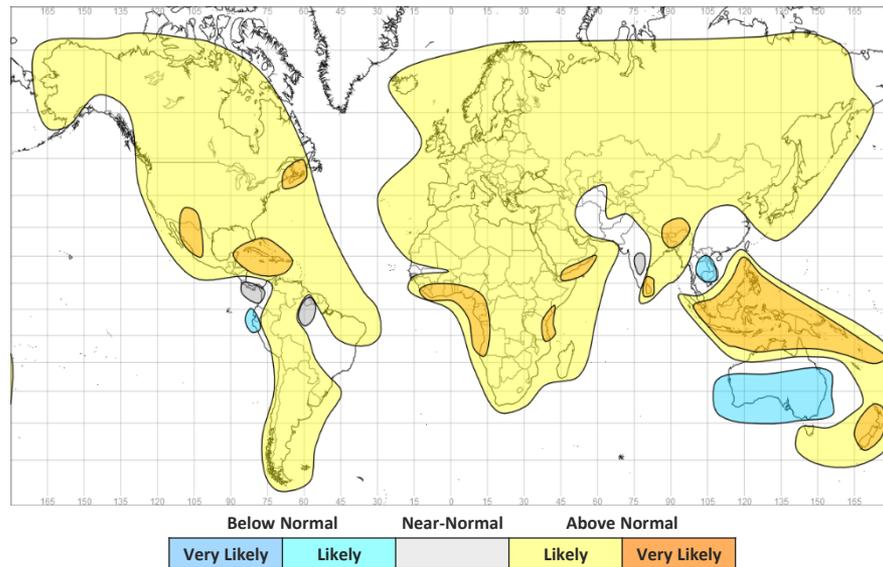
3-Month Outlook October to December - Rainfall



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

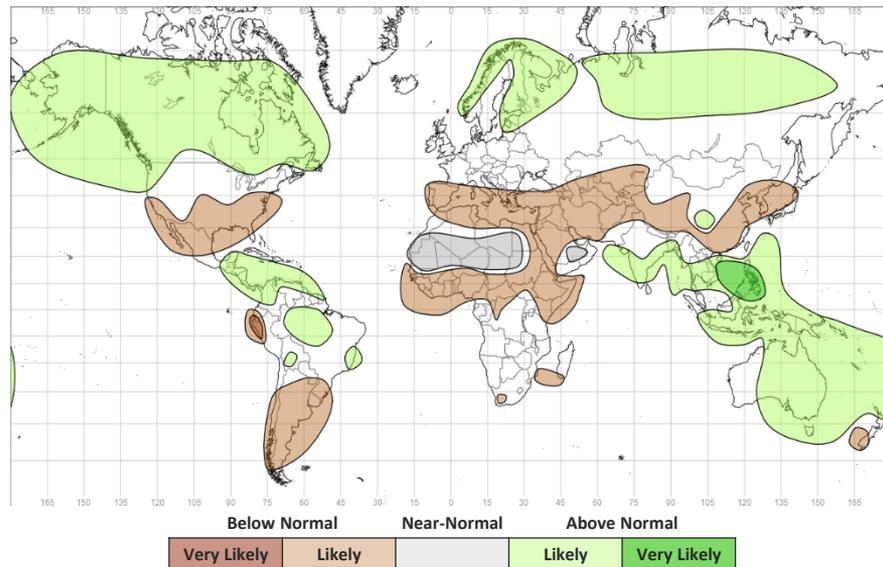


Global Outlook - Rainfall

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](#)

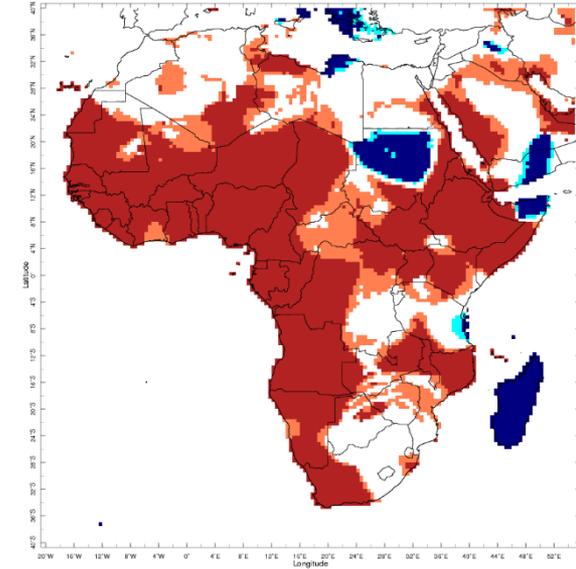
[Western Africa](#)

[Central Africa](#)

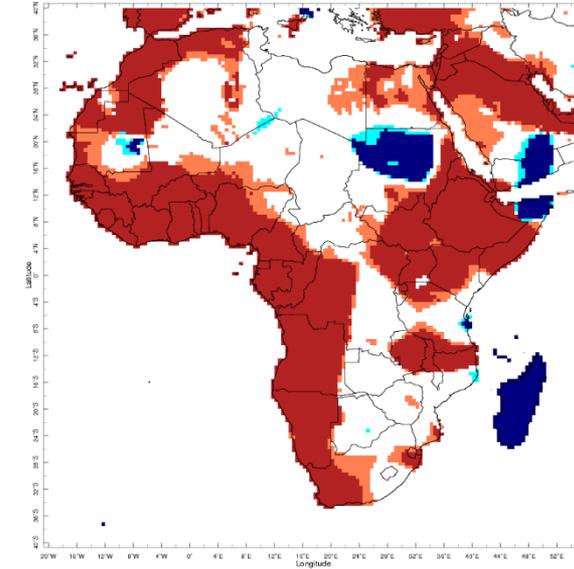
[Eastern Africa](#)

[Southern Africa](#)

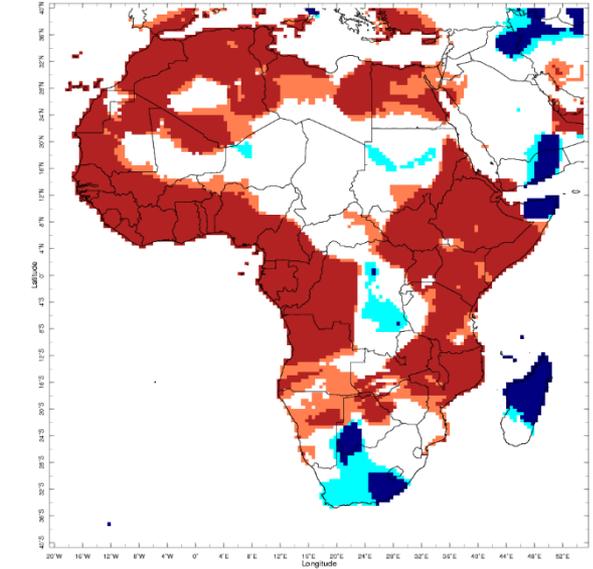
Current Status – Temperature percentiles



June



July



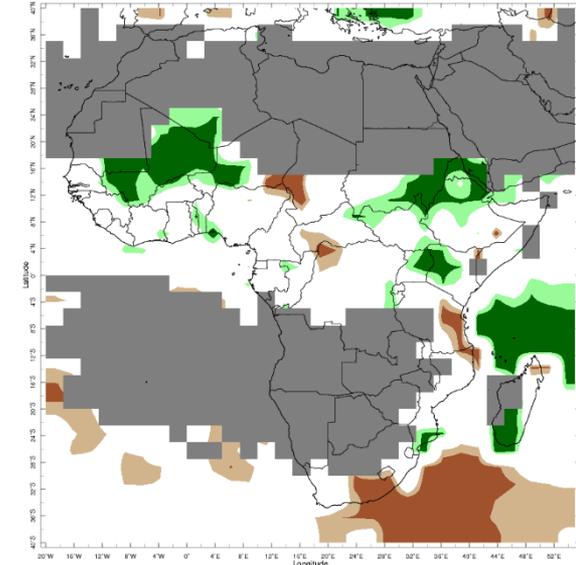
August

Temperature Percentiles (BLUE below 20th and RED above 80th)



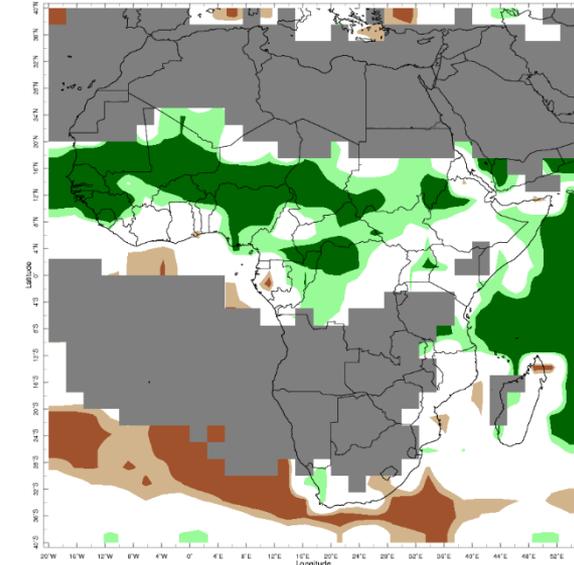
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981–2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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



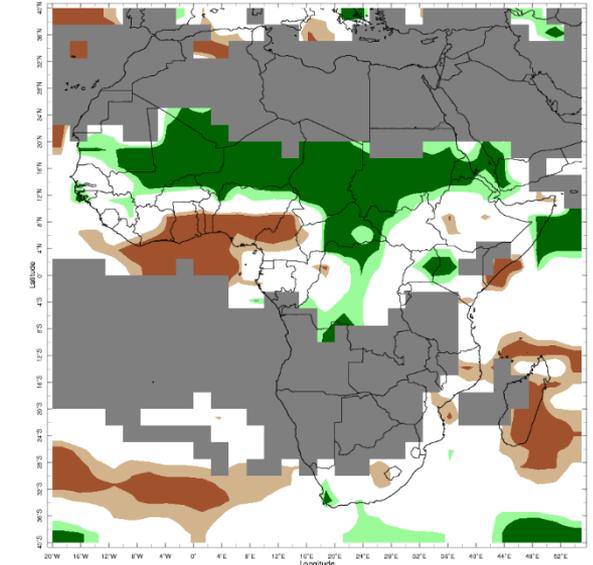
Jun 2020

June



Jul 2020

July



Aug 2020

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 – Western Africa

Current Status: Temperature

	June	July	August
Sierra Leone	Hot	Hot	Hot
Liberia	Hot	Hot	Hot
Mali	Hot	Hot	Warm
Ghana	Hot	Hot	Hot
Nigeria	Hot	Hot	Hot
Cameroon	Hot	Hot	Hot

Current Status: Rainfall

	June	July	August
	Normal	Very Wet	Normal
	Normal	Normal	Normal
	Wet	Very Wet	Very Wet
	Normal	Normal	Very Dry
	Normal	Very Wet	Normal [^]
	Normal	Wet	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: During August Nigeria was wet in the north and very dry in the south.

Current Status – Central Africa

	Current Status: Temperature		
	June	July	August
Niger	Hot	Normal	Normal
Chad	Hot	Normal	Normal
DRC	Warm	Hot	Hot [^]

	Current Status: Rainfall		
	June	July	August
Niger	Wet	Very Wet	Very Wet
Chad	Normal	Very Wet	Very Wet
DRC	Normal	Wet	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: Parts of eastern DRC were cool during August.

Current Status – Eastern Africa (1)

Current Status: Temperature

	June	July	August
Sudan	Cold	Cold	Normal
South Sudan	Hot	Hot	Hot
Uganda	Hot	Hot	Hot
Rwanda	Normal	Hot	Normal

Current Status: Rainfall

	June	July	August
	Normal*	Wet	Very Wet
	Wet	Wet	Wet
	Wet	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:

Current Status – Eastern Africa (2)

Current Status: Temperature

	June	July	August
Tanzania	Normal	Normal	Hot
Ethiopia	Hot	Hot	Hot
Kenya	Hot	Hot	Hot
Somalia	Hot	Hot	Hot

Current Status: Rainfall

	June	July	August
	Normal	Normal	Normal
	Wet	Normal	Normal^^
	Normal^	Normal	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:

^Note: Western Kenya was wet in June and August.

^^Note: Northern Ethiopia was wet in August.

Current Status – Southern Africa

Current Status: Temperature

	June	July	August
South Africa	Mixed [^]	Normal [^]	Cool
Zambia	Warm	Normal	Hot
Zimbabwe	Normal	Normal	Warm
Mozambique	Mixed [^]	Normal [^]	Hot
Malawi	Hot	Hot	Hot
Madagascar	Cold	Cold	Cold

Current Status: Rainfall

June	July	August
Very Dry	Normal	Normal
Normal*	Normal*	Normal*
Normal*	Normal*	Normal*
Normal	Normal	Dry
Normal	Normal	Normal
Normal	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: In June and July, western South Africa and northern Mozambique were Hot.

Outlooks

[Notes for use](#)

[Western Africa](#)

[Central Africa](#)

[Eastern Africa](#)

[Southern Africa](#)

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: June to November – Western Africa (1)

		Forecast summary		
		October	October to December	January to March
Sierra Leone	Temperature	Much more 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
Liberia	Temperature	Much more 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
Mali	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
Ghana	Temperature	Much more 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

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Outlook: June to November – Western Africa (2)

		Forecast summary		
		October	October to December	January to March
Nigeria	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 drier than normal	Likely to be drier than normal	Climatological odds – see note
Cameroon	Temperature	Much more 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

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Outlook: June to November – Central Africa

		Forecast summary		
		October	October to December	January to March
Niger	Temperature	Climatological odds – see note	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note
Chad	Temperature	Climatological odds – see note	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be near-normal in the north, Likely to be drier than normal in the south	Likely to be near-normal in the north, Likely to be drier than normal in the south	Climatological odds – see note
Democratic Republic of Congo	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	Likely to be drier 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: June to November – Eastern Africa (1)

		Forecast summary		
		October	October to December	January to March
Sudan	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	Climatological odds – see note
South Sudan	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Climatological odds – see note	Likely to be drier than normal	Climatological odds – see note
Uganda	Temperature	Climatological odds – see note	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal in the north, likely to be drier than normal in the south.	Climatological odds – see note
Rwanda	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

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Outlook: June to November – Eastern Africa (2)

		Forecast summary		
		October	October to December	January to March
Tanzania	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
Ethiopia	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
Kenya	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 drier than normal	Likely to be drier than normal	Climatological odds – see note
Somalia	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 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: June to November – Southern Africa (1)

		Forecast summary		
		October	October to December	January to March
South Africa	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	Climatological odds – see note	Climatological odds – see note
Zambia	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
Zimbabwe	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	Climatological odds – see note	Climatological odds – see note
Mozambique	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

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Outlook: June to November – Southern Africa (1)

		Forecast summary		
		October	October to December	January to March
Malawi	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
Madagascar	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	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.

Annex 1 – Supplemental Information

Regional Climate Outlook Forums (RCOF)

Climate Outlook Fora (<https://public.wmo.int/en/our-mandate/climate/regional-climate-outlook-products>):

Greater Horn of Africa Climate Outlook Forum (GHACOF)

Latest Output - <https://www.icpac.net/ghacof56/>

PRÉvisions climatiques Saisonnières en Afrique Soudano-Sahélienne (PRESASS)

Latest Output – English - <https://urlz.fr/cuFo> ; French - <https://urlz.fr/cuFm>

For further information

WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME)

https://www.wmolc.org/seasonPmmeUI/plot_PMME

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>), including:

Greater Horn of Africa Climate Outlook Forum (GHACOF)

PRÉvisions climatiques Saisonnières en Afrique Soudano-Sahélienne (PRESASS)

Southern African Regional Climate Outlook Forum (SARCOF)

PRÉvisions climatiques Saisonnières en Afrique, pays du Golfe de Guinée (PRESAGG)

PRÉvisions climatiques Saisonnières en Afrique centrale (PRESAC)

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 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)

Enquiries

Email: internationaldevelopment@metoffice.gov.uk

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