

AFRICA: Monthly Climate Outlook

May to February

Issued: August 2020

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Overview

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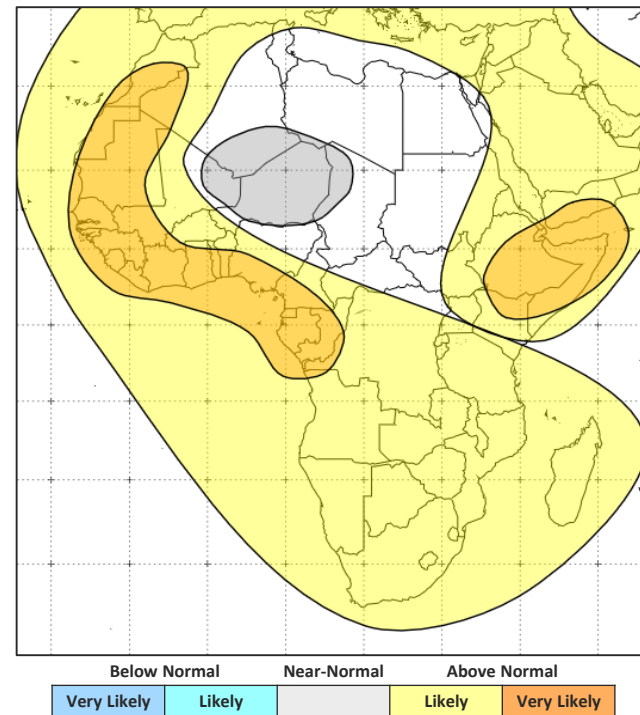
[Global Outlook – Rainfall](#)

Africa Current Status and Outlook - Temperature

Current Status: Conditions have been warmer than normal across the bulk of the continent over the past 3 months. The exception to this has been across parts of Southern and Eastern Africa where, overall, temperatures have been closer to normal. In Madagascar conditions have often been colder than normal.

Outlook: Warmer than normal conditions are likely across much of Africa, with the most likely areas to see much warmer than normal temperatures being across western Africa, as well as eastern coastal areas.

3-Month Outlook September to November 2020 - Temperature



Africa Current Status and Outlook - Rainfall

Current Status: The West African Monsoon has been active this year, with wetter than normal conditions observed in many countries in Western Africa and The Sahel. Elsewhere, rainfall has been near normal.

Outlook: Large scale drivers of predictability, such as the El Niño-Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) are still currently neutral. However, there is now strong evidence that La Niña is likely to develop in the coming months and there remains an increased risk of a negative IOD event.

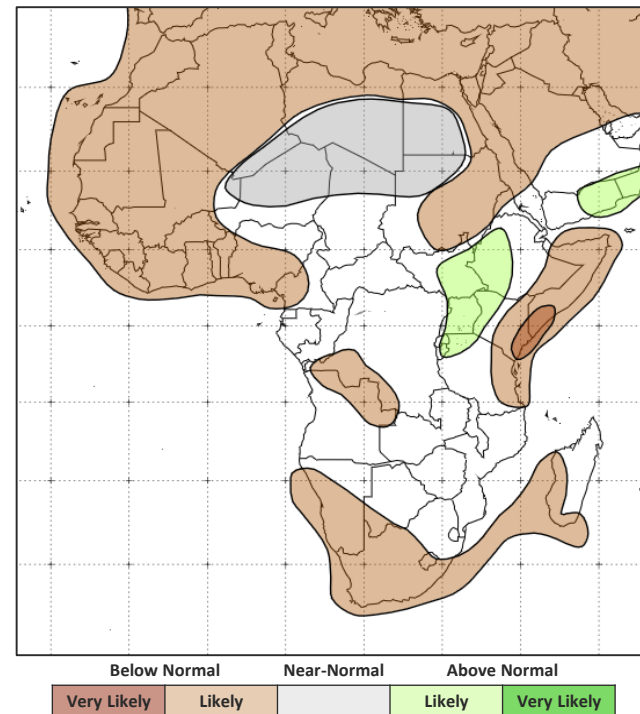
For more information on ENSO see **Global Outlook** ([page 6](#)). Should either develop, typically there is an increased likelihood of drier than normal conditions in East Africa during the Short Rains (October to December) and wetter than normal conditions in Southern Africa (November to April).

For the next three months, drier than normal conditions are most probable across much of Western Africa, including the Gulf of Guinea and western Sahel regions.

Further east the precipitation pattern is more complex. Drier than normal conditions are most probable across coastal regions of East Africa, including the Horn of Africa. Much drier than normal conditions are likely for some of this region. Conversely, there is an increase in the likelihood of wetter than normal conditions in the East African highlands, including regions such as west Kenya, large parts of Ethiopia, South Sudan, Uganda and Rwanda.

For Southern Africa, predictions are more finely balanced with the likelihood of above- and below-average rainfall similar – climatological odds. The exception is across large parts of South Africa and some regions of Angola and Namibia where drier than normal conditions are likely.

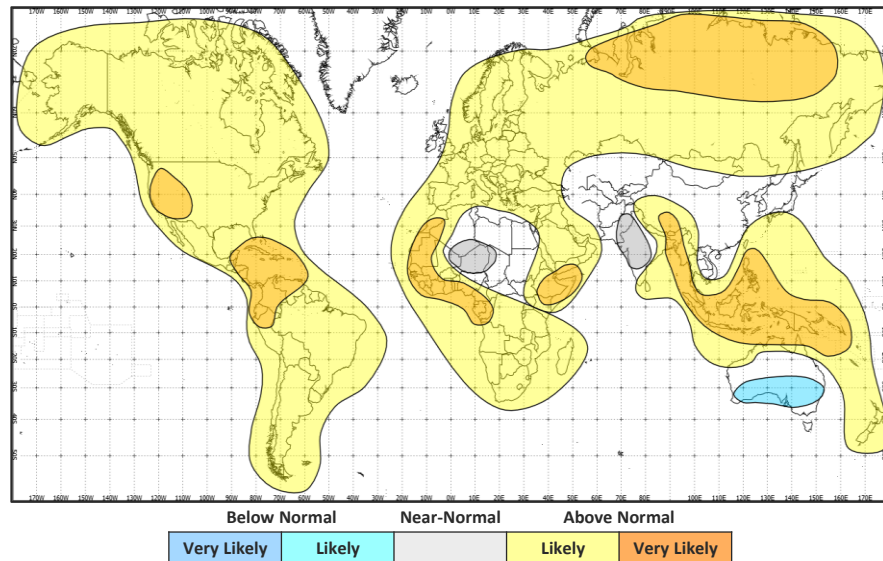
3-Month Outlook September to November 2020 - Rainfall



Global Outlook - Temperature

Outlook: For the next three months, there is an increase in the likelihood of warmer than normal conditions across large parts of the world, with the highest confidence in tropical regions. This is consistent with the warming observed in the past decade.

3-Month Outlook September to November 2020 - Temperature



Global Outlook - Rainfall

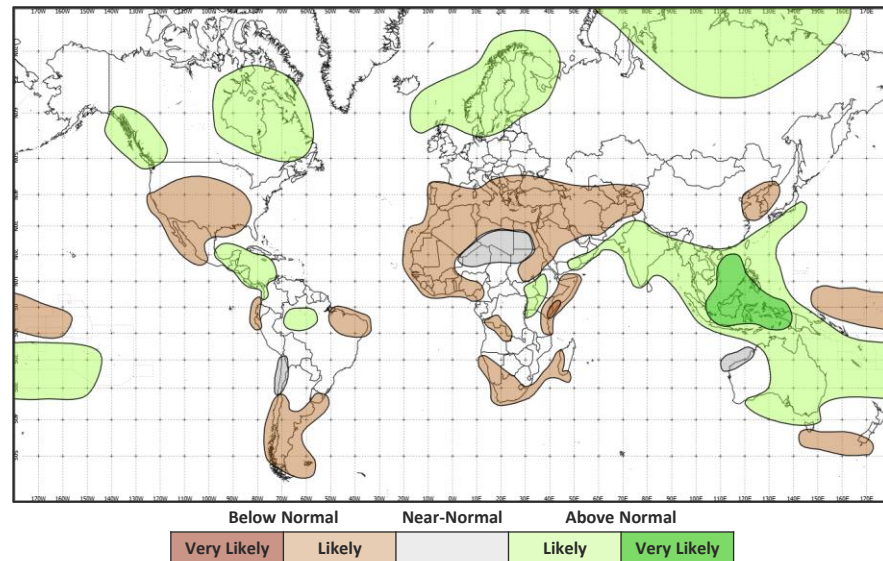
Outlook:

El Niño-Southern Oscillation (ENSO) – There is a 60% to 70% likelihood of La Niña developing over the next three months. ENSO indicators, such as sea-surface temperatures (SSTs) in the tropical Pacific Ocean, trade wind strength and cloudiness near the Date Line are consistent with the early stages of La Niña development. Long-range forecast models are in good agreement in predicting further cooling of the tropical Pacific Ocean to take place in the coming weeks and months. Should La Niña develop then impacts would be far reaching. 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 western Indian Ocean, particularly off the Horn of Africa, sea-surface temperatures (SSTs) are beginning to reduce more than normal. Further cooling of this part of the Indian Ocean is possible in the coming weeks and months, such that a negative Indian Ocean Dipole (IOD) develops; however, confidence of this pattern developing is lower than predictions for ENSO. Should a negative IOD establish then wetter than normal conditions become more likely across Australia and Southern Asia; drier than normal conditions in East Africa for the Short Rains season (October-November-December).

3-Month Outlook September to November 2020 - Rainfall



Current Status

[Current Status maps](#)

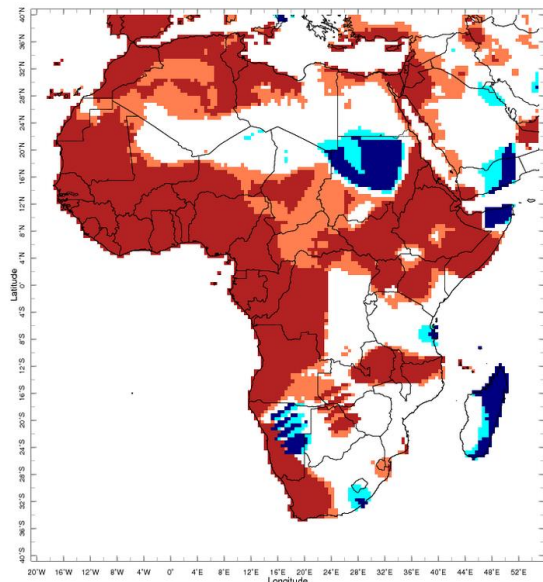
[Western Africa](#)

[Central Africa](#)

[Eastern Africa](#)

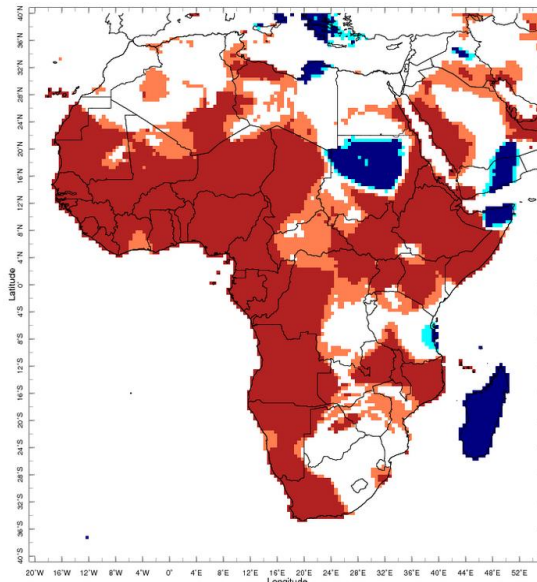
[Southern Africa](#)

Current Status – Temperature percentiles



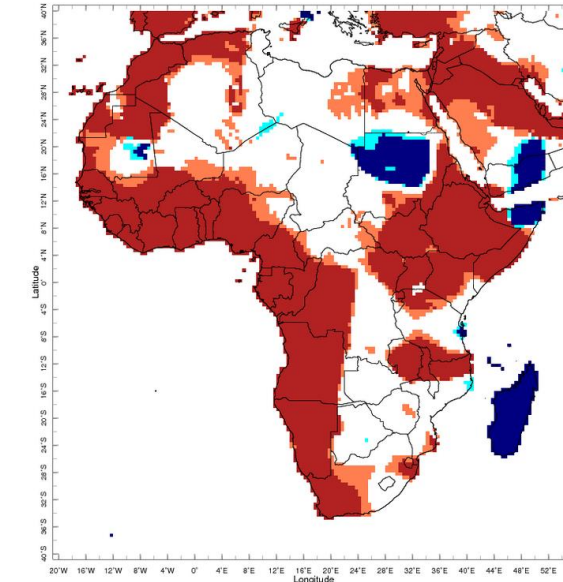
May 2020

May 2020



Jun 2020

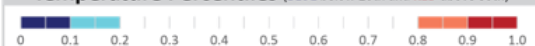
June 2020



Jul 2020

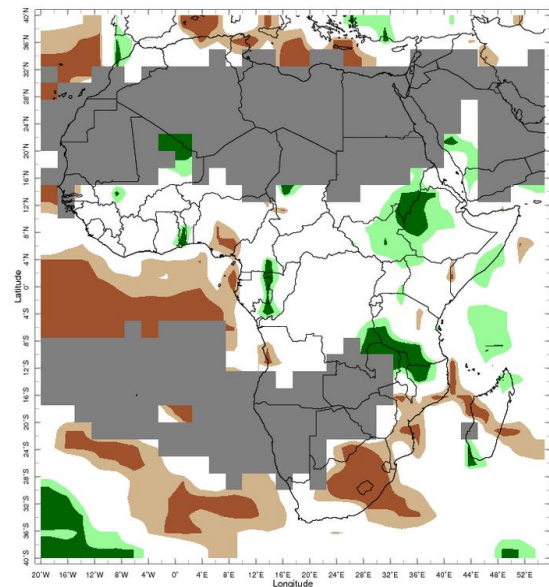
July 2020

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



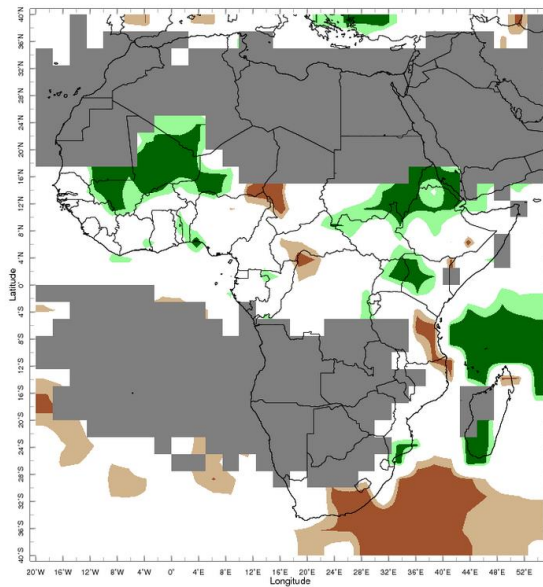
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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



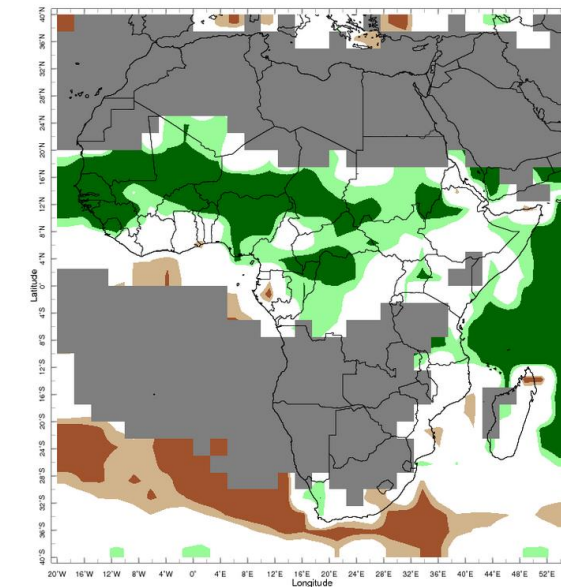
May 2020

May 2020



Jun 2020

June 2020



Jul 2020

July 2020



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

	May	June	July
Sierra Leone	Hot	Hot	Hot
Liberia	Hot	Hot	Hot
Mali	Hot	Hot	Hot
Ghana	Hot	Hot	Hot
Nigeria	Hot	Hot	Hot
Cameroon	Hot	Hot	Hot

Current Status: Rainfall

May	June	July
Normal	Normal	Very Wet
Normal	Normal	Normal
Normal*	Wet	Very Wet
Normal	Normal	Normal
Mixed	Normal	Very Wet
Mixed	Normal	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 – Central Africa

Current Status: Temperature

	May	June	July
Niger	Hot	Hot	Normal
Chad	Warm	Hot	Normal
DRC	Normal	Warm	Hot

Current Status: Rainfall

	May	June	July
Niger	Normal*	Wet	Very Wet
Chad	Normal*	Normal	Very Wet
DRC	Normal	Normal	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 – Eastern Africa (1)

Current Status: Temperature

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

Current Status: Rainfall

	May	June	July
	Normal*	Normal*	Wet
	Wet	Wet	Wet
	Normal	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

	May	June	July
Tanzania	Normal	Normal	Normal
Ethiopia	Hot	Hot	Hot
Kenya	Hot	Hot	Hot
Somalia	Hot [^]	Hot	Hot

Current Status: Rainfall

	May	June	July
	Normal ^{^^}	Normal	Normal
	Wet	Wet	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: North-east Somalia around the Horn of Africa was Cold in June.

^{^^}Note: Southwestern Tanzania was Very Wet in May

^{^^^}Note: Western Kenya was wet in June.

Current Status – Southern Africa

	Current Status: Temperature		
	May	June	July
South Africa	Mixed [^]	Mixed [^]	Normal [^]
Zambia	Warm	Warm	Normal
Zimbabwe	Normal	Normal	Normal
Mozambique	Mixed [^]	Mixed [^]	Normal [^]
Malawi	Hot	Hot	Hot
Madagascar	Cold	Cold	Cold

	Current Status: Rainfall		
	May	June	July
	Very Dry	Very Dry	Normal
	Normal*	Normal*	Normal*
	Normal*	Normal*	Normal*
	Normal	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: In May and June, western South Africa and northern Mozambique were Hot; southern Mozambique was Cold. In 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: September to November – Western Africa (1)

		Forecast summary		
		September	September to November	December to February
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	Climatological odds – see note	Likely to be drier than normal	Climatological odds – see note
Liberia	Temperature	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 drier than normal	Climatological odds – see note
Mali	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
Ghana	Temperature	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 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: September to November – Western Africa (2)

		Forecast summary		
		September	September to November	December to February
Nigeria	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
Cameroon	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Climatological odds – see note
	Rainfall	Climatological odds – see note	Likely to be drier than normal in the far southwest, elsewhere 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: September to November – Central Africa

		Forecast summary		
		September	September to November	December to February
Niger	Temperature	Climatological odds – see note	Likely to be near-normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note
Chad	Temperature	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note
Democratic Republic of Congo	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be wetter 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.

Outlook: September to November – Eastern Africa (1)

		Forecast summary		
		September	September to November	December to February
Sudan	Temperature	Likely to be colder than normal	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
South Sudan	Temperature	Likely to be colder than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Much more likely to be wetter than normal	Likely to be wetter than normal	Likely to be drier than normal
Uganda	Temperature	Likely to be colder than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Much more likely to be wetter than normal	Likely to be wetter than normal	Likely to be drier than normal
Rwanda	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be drier than normal

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Outlook: September to November – Eastern Africa (2)

		Forecast summary		
		September	September to November	December to February
Tanzania	Temperature	Much more likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds – see note	Likely to be drier than normal	Likely to be drier than normal
Ethiopia	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 wetter than normal	Likely to be wetter than normal in the west and likely to be drier than normal in the east	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 wetter than normal	Much more likely to be drier than normal in the Coastal Plain region and likely to be wetter than normal in the Highlands	Likely to be drier than normal
Somalia	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	Much more likely to be drier than normal	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: September to November – Southern Africa (1)

		Forecast summary		
		September	September to November	December to February
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	Likely to be drier than normal	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	Likely to be near-normal	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 near-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	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.

Outlook: September to November – Southern Africa (1)

		Forecast summary		
		September	September to November	December to February
Malawi	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 – 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	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

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 (August 2020) - https://mcusercontent.com/c0c3fc97a16d77359aa6419af/files/3fab48b9-e0ef-42b5-9805-82e37475ea07/GHACOF56_Statement.01.pdf

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>