

AFRICA: Monthly Climate Outlook September to June

Issued: December 2020

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Overview

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Africa Current Status and Outlook - Temperature

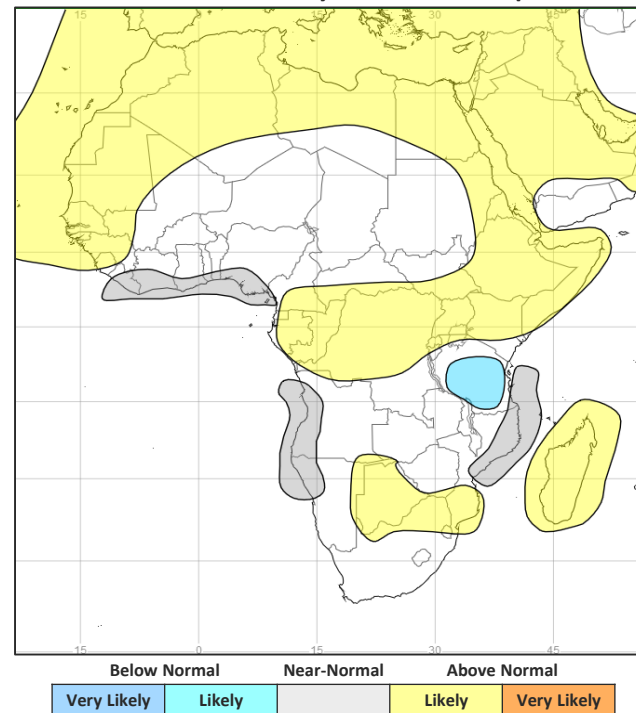
Current Status:

During September to November, large parts of the continent have been warmer than normal, with the exception of Zimbabwe, southern Mozambique and parts of the DRC during September and October, when conditions were colder than normal. Near normal temperatures were observed across much of the Sahel.

Outlook:

For the next three months, across much of the north and tropical regions of Africa warmer than normal conditions are likely; however, predictions across the Sahel and sub-Saharan regions are more finely balanced. Apart from Botswana, northern parts of South Africa and southern Mozambique, where warmer than normal conditions are likely, temperatures are likely to be near normal across the southern half of Africa. In Tanzania, colder than normal conditions are more probable.

3-Month Outlook January to March - Temperature



Africa Current Status and Outlook - Rainfall

Current Status:

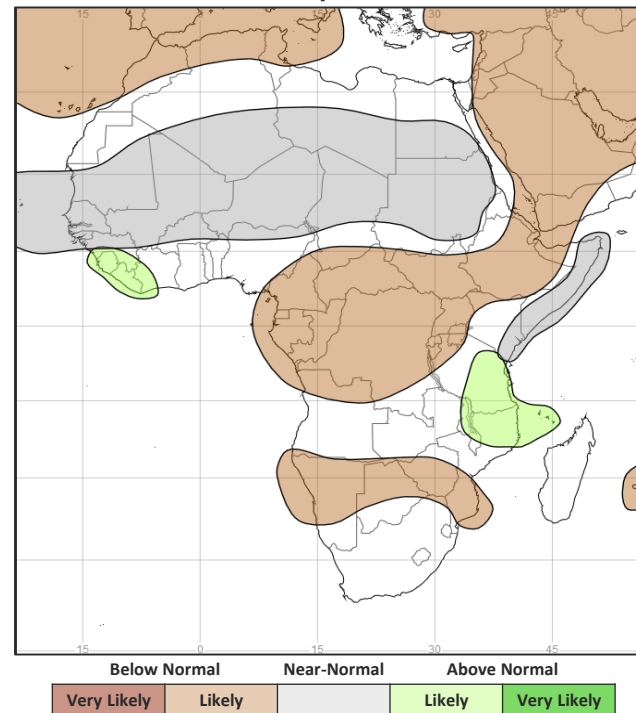
Large regions of sub-Sahara Africa stretching from Mali in the west to Ethiopia in the east were wetter than normal in September. These wetter than normal conditions moved further south to cover tropical regions of the continent and large portions of East Africa by November.

Angola and parts of Zambia were drier than normal in October. In November Sierra Leone, Liberia and northern parts of Mozambique were drier than normal.

Outlook:

Near normal or drier than normal conditions are likely outcome across large parts of Africa for the next three months. However, there are some exceptions, with wetter than normal conditions likely across Tanzania and northern Mozambique, along with some countries bordering the Gulf of Guinea (mainly Liberia and Sierra Leone). Meanwhile, predictions are less uncertain across large parts of southern Africa; drier than normal conditions are likely across Namibia, Botswana, Zimbabwe and southern Mozambique, but elsewhere there is no strong signal to deviate from climatological odds.

3-Month Outlook January to March - Rainfall

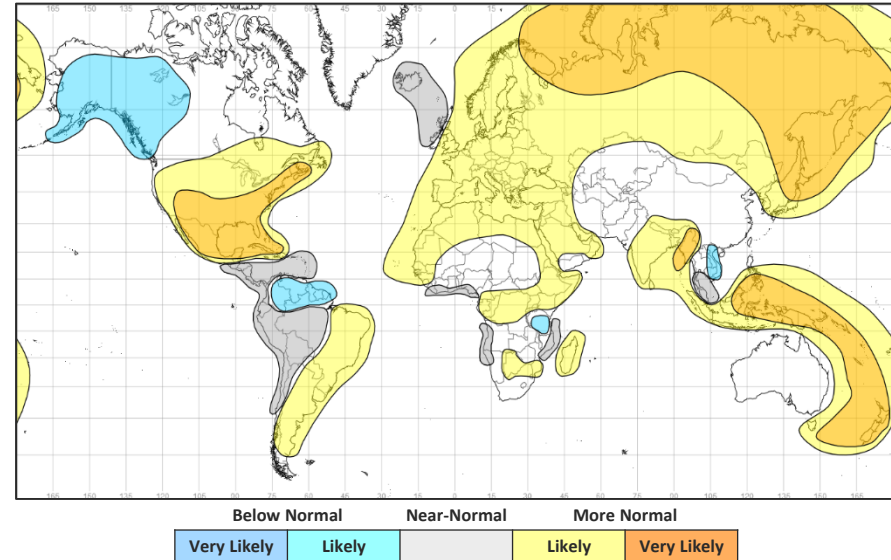


Global Outlook - Temperature

Outlook:

La Niña tends to have an overall cooling effect across the world. However, many regions are likely to be warmer than normal, 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 eastern Africa and southeast Asia.

3-Month Outlook January to March - Temperature



Global Outlook - Rainfall

Outlook:

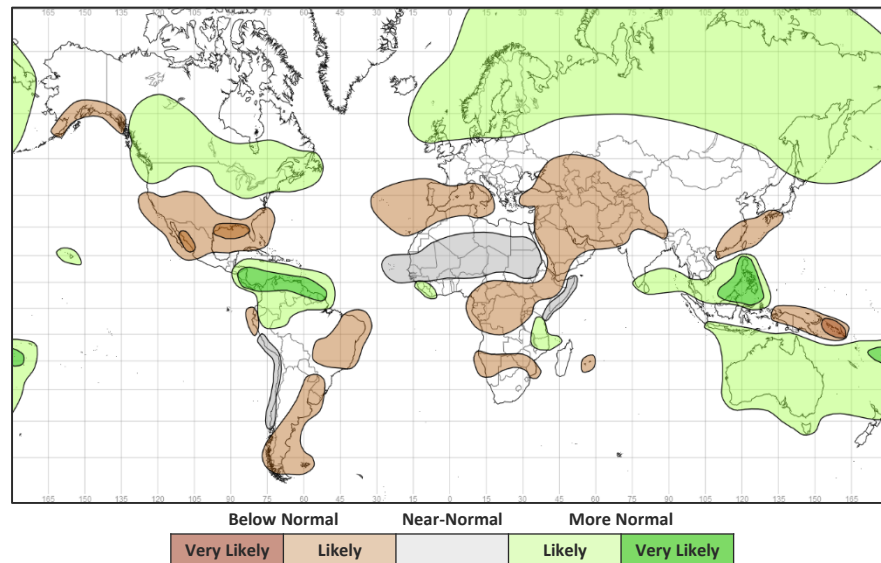
El Niño-Southern Oscillation (ENSO) – La Niña conditions are now well established across the tropical Pacific, with SST anomalies, trade wind strength, atmospheric pressure pattern and cloudiness all consistent with this. The event is probably close to its peak and a gradual shift towards more neutral conditions should take place during the first half of next year.

The latest [NOAA Climate Prediction Centre / NCEP statement](#) (PDF) states that: *“La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition during the spring 2021 (~50% chance of Neutral during April-June).”*

For the next three months, large parts of southern Asia, Australasia, Central America, northern parts of South America, along with southern parts of the Caribbean are likely to be wetter than normal.

Meanwhile, large swathes of Africa and the Middle East are likely to be drier than normal.

3-Month Outlook January to March - Rainfall



Current Status

[Current Status maps](#)

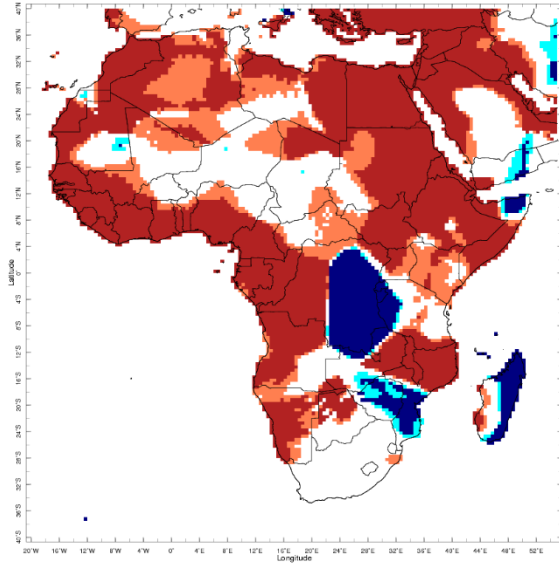
[Western Africa](#)

[Central Africa](#)

[Eastern Africa](#)

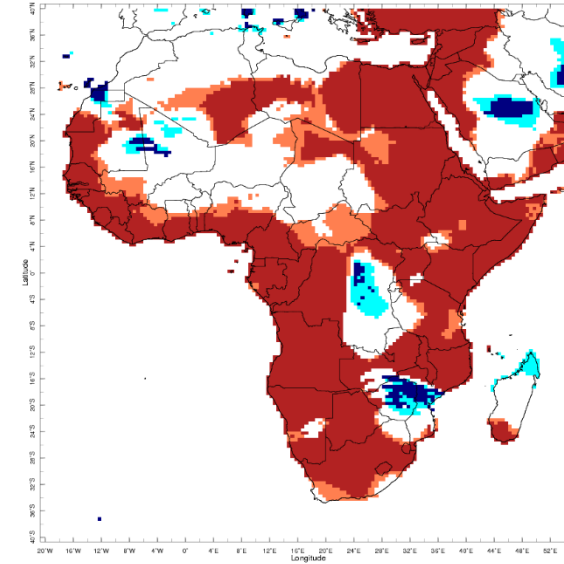
[Southern Africa](#)

Current Status – Temperature percentiles



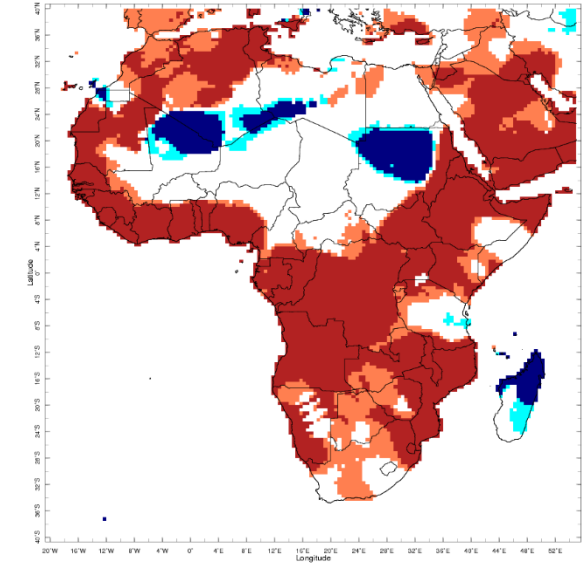
Sep 2020

September



Oct 2020

October



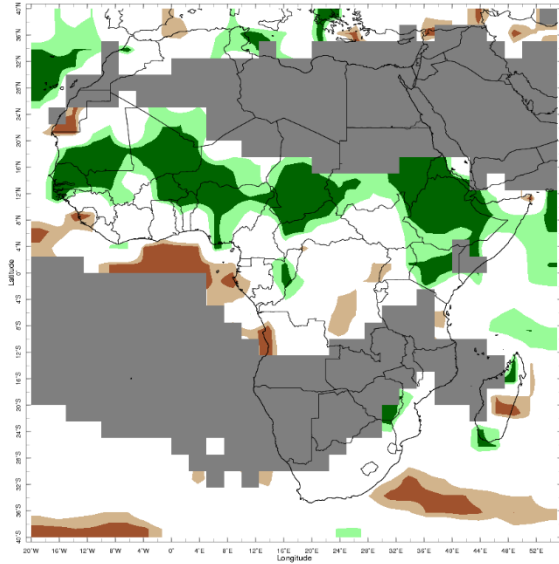
Nov 2020

November



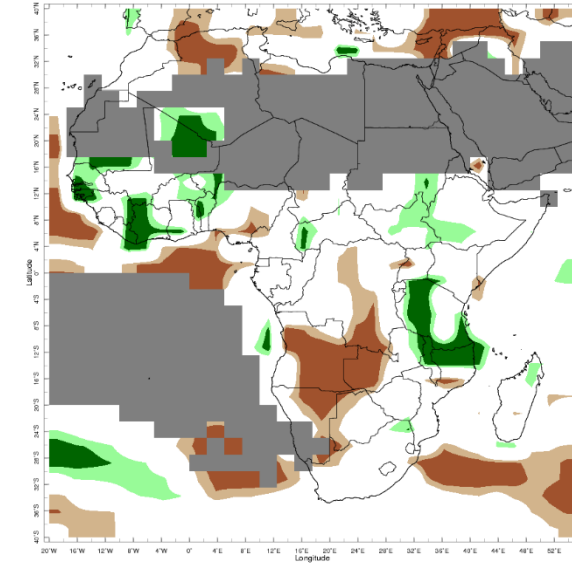
Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions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



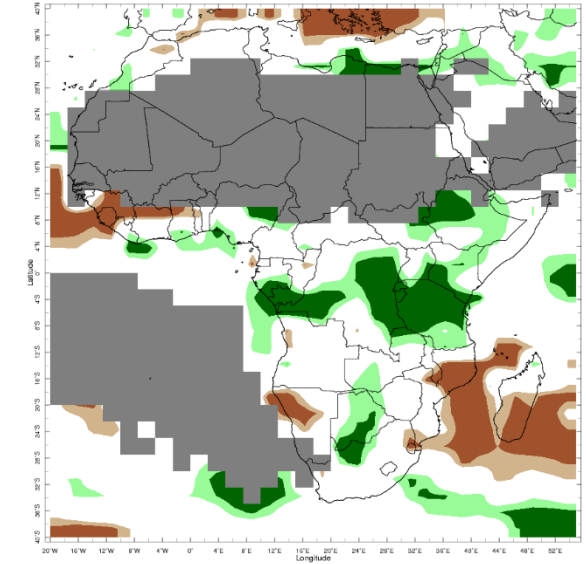
Sep 2020

September



Oct 2020

October



Nov 2020

November



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

	September	October	November
Sierra Leone	Hot	Hot	Hot
Liberia	Hot	Hot	Hot
Mali	Warm	Normal [^]	Normal [^]
Ghana	Hot	Hot	Hot
Nigeria	Hot	Hot	Hot
Cameroon	Hot	Hot	Normal

Current Status: Rainfall

	September	October	November
	Dry	Normal	Very Dry
	Normal	Normal	Normal
	Very Wet	Normal	Normal*
	Normal	Wet	Normal
	Wet	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: Warm in southern Mali during October and November.

Current Status – Central Africa

Current Status: Temperature

	September	October	November
Niger	Normal	Normal	Normal
Chad	Normal	Normal	Normal
DRC	Mixed [^]	Mixed [^]	Hot

Current Status: Rainfall

	September	October	November
	Wet	Normal*	Normal*
	Wet	Normal*	Normal*
	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:

[^] Note: Strong west/east differences in DRC; Hot in west and Cold in east.

Current Status – Eastern Africa (1)

	Current Status: Temperature		
	September	October	November
Sudan	Hot	Hot	Cold^^
South Sudan	Hot	Hot	Hot
Uganda	Warm	Hot	Hot
Rwanda	Cold	Normal	Hot

	Current Status: Rainfall		
	September	October	November
Sudan	Wet	Normal*^	Normal*
South Sudan	Normal	Normal	Normal*
Uganda	Normal	Normal	Normal
Rwanda	Normal	Normal	Very Wet

Notes:

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

<http://iridl.ldeo.columbia.edu/maproom/>.

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

Additional Information:

^Note: Northern Sudan usually experiences less than 10mm/month rainfall in October, however in the southeast of Sudan, conditions were wet.

^^Note: Temperatures in southern parts of Sudan were near normal in November.

Current Status – Eastern Africa (2)

	Current Status: Temperature		
	September	October	November
Tanzania	Normal	Hot	Normal
Ethiopia	Hot	Hot	Hot
Kenya	Warm	Hot	Hot
Somalia	Hot	Hot	Normal [^]

	Current Status: Rainfall		
	September	October	November
Tanzania	Normal	Mixed	Very Wet
Ethiopia	Very Wet	Normal	Wet
Kenya	Very Wet	Normal	Wet
Somalia	Wet	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: Hot in the north of Somalia in November

Current Status – Southern Africa

Current Status: Temperature

	September	October	November
South Africa	Normal	Hot	Warm
Zambia	Hot	Hot	Hot
Zimbabwe	Cool	Cool	Warm
Mozambique	Mixed [^]	Mixed [^]	Hot
Malawi	Hot	Hot	Hot
Madagascar	Cold	Normal	Cold

Current Status: Rainfall

	September	October	November
South Africa	Normal	Normal	Normal
Zambia	Normal*	Normal	Normal
Zimbabwe	Normal*	Normal	Normal
Mozambique	Dry	Normal ^{^^}	Normal ^{^^}
Malawi	Normal*	Normal	Normal
Madagascar	Very 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:

[^]Note: Hot in the north and Cool in the south.

^{^^}Note: In the north, wet in September and Dry in October.

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: January to June – Western Africa (1)

		Forecast summary		
		January	January to March	April to June
Sierra Leone	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be wetter than normal	Likely to be wetter than normal
Liberia	Temperature	Likely to be warmer than normal	Likely to be near-normal	Climatological odds – see note
	Rainfall	Climatological odds – see note	Likely to be wetter than normal	Likely to be wetter than normal
Mali	Temperature	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note
Ghana	Temperature	Likely to be warmer than normal	Likely to be near-normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Climatological odds – see note	Likely to be wetter than normal

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Outlook: January to June – Western Africa (2)

		Forecast summary		
		January	January to March	April to June
Nigeria	Temperature	Likely to be colder than normal	Climatological odds – see note	Climatological odds – see note
	Rainfall	Likely to be near-normal	Climatological odds – see note	Climatological odds – see note
Cameroon	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be drier than normal	Climatological odds – see note

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Outlook: January to June – Central Africa

		Forecast summary		
		January	January to March	April to June
Niger	Temperature	Climatological odds – see note	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
Chad	Temperature	Likely to be colder 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
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 drier than normal	Likely to be drier than normal	Climatological odds – see note

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Outlook: January to June – Eastern Africa (1)

		Forecast summary		
		January	January to March	April to June
Sudan	Temperature	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
	Rainfall	Likely to be near-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	Likely to be near-normal	Likely to be drier than normal	Likely to be wetter than normal
Uganda	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be colder than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Likely to be wetter than normal
Rwanda	Temperature	Likely to be warmer than normal	Likely to be warmer 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.

Outlook: January to June – Eastern Africa (2)

		Forecast summary		
		January	January to March	April to June
Tanzania	Temperature	Likely to be colder than normal	Likely to be colder than normal	Likely to be colder than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal but Likely to be drier than normal in the northwest	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 near-normal	Likely to be drier than normal	Climatological odds – see note
Kenya	Temperature	Much more likely to be warmer than normal	Likely to be warmer than normal	Likely to be colder than normal
	Rainfall	Likely to be near-normal	Likely to be near-normal in coastal regions; Likely to be wetter than normal in the Highlands; Climatological odds – see note elsewhere	Likely to be wetter than normal
Somalia	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds – see note
	Rainfall	Likely to be near-normal	Likely to be near-normal	Climatological odds – see note

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Outlook: January to June – Southern Africa (1)

		Forecast summary		
		January	January to March	April to June
South Africa	Temperature	Climatological odds – see note	Likely to be warmer than normal but Climatological odds – see note in the south	Climatological odds – see note
	Rainfall	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
Zambia	Temperature	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
	Rainfall	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
Zimbabwe	Temperature	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds – see note
Mozambique	Temperature	Climatological odds – see note	Likely to be near-normal, but Likely to be warmer than normal in the south	Climatological odds – see note
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal , but Likely to be drier than normal in the south	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: January to June – Southern Africa (1)

		Forecast summary		
		January	January to March	April to June
Malawi	Temperature	Climatological odds – see note	Climatological odds – see note	Climatological odds – see note
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Climatological odds – see note
Madagascar	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

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Annex 1 – Supplemental Information

Outlooks for March to May - Additional information:

Forecast uncertainty generally increases with longer range meaning that the 4-6-month outlook is less reliable than the 1-3 month outlook. In addition, the longer-range outlook utilises fewer models because not all seasonal models are available for the extended range.

The latest output from the WMO Long Range Forecast Multi Model Ensemble (right) for March to May, shows that the models are predicting similar likelihoods for above normal, near-normal and below-normal outcomes, with very few areas showing more than 50% likely.

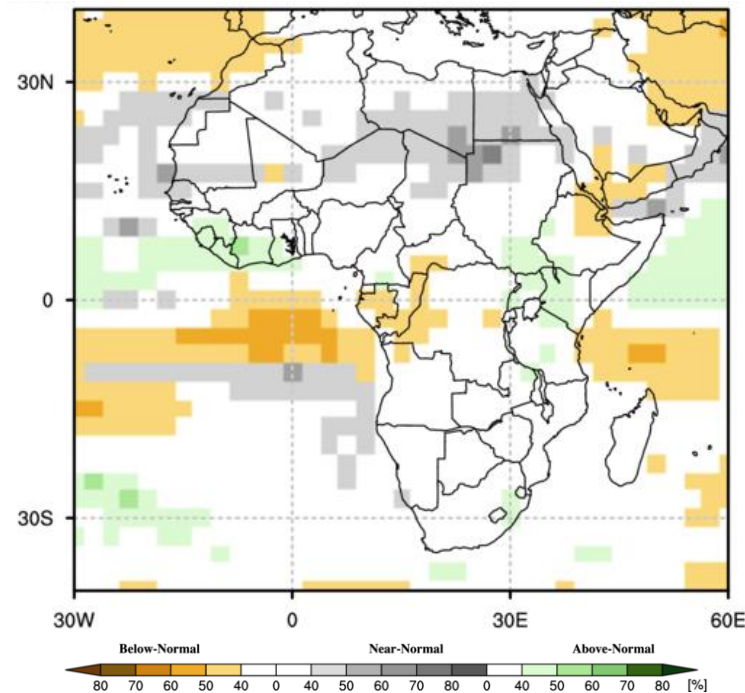
The latest [NOAA Climate Prediction Centre / NCEP statement](#) (PDF) states that: *“La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition during the spring 2021 (~50% chance of Neutral during April-June).”*

East Africa impacts March-May:

In East Africa, the ‘Long Rains’ occurs in March-April-May (MAM) and are predominantly controlled by the seasonal migration of the Intertropical Convergence Zone (ITCZ), rather than the influence of La Niña or the Indian Ocean Dipole (IOD). The ITCZ tracks the position of maximum solar irradiance across the continent and is accompanied by a band of rainfall. However, as La Niña events have often been linked to drier Short Rains during OND, if this is then followed by a drier or delayed Long Rains in MAM, there is the potential for widespread drought.

Southern Africa impacts March-May:

La Niña conditions increase the likelihood of weather systems tracking across southern Africa in April, bringing wetter than normal conditions.



WMO LFR-MME Forecast for precipitation Apr-Jun 2021, issued Dec 2020

Tropical Storm Outlook for the SW Indian Ocean

RMSC La Reunion Tropical Cyclone Centre Seasonal Forecast 2020-2021

Summary:

The 2020-2021 cyclone season is expected to be characterized by near to above-normal activity in the Southwest Indian Ocean cyclone basin. This season could therefore see a total of between 9 and 12 systems (tropical storms and cyclones), with slightly more than half of them (between 5 and 7) reaching the tropical cyclone stage. Although this year the genesis zones will be favored in the eastern half of the basin, we expect a return to a more climatological pattern of TC tracks, i.e. mainly oriented towards the west or southwest, which could lead cyclonic phenomena to threaten the inhabited lands of the western part of the basin.

Full statement here - [Statement of the Seasonal Forecast for 2020-2021 RSMC La Reunion EN](#)

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/wp-content/uploads/GHACOF55_Statement.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>