AFRICA: Monthly Climate Outlook
May to February

Issued: August 2022

Overview

Current Status

Outlooks

Annex 1 – Supplemental Information

Overview

Africa Current Status and Outlook – Temperature

Africa Current Status and Outlook – Rainfall

Global Outlook – Temperature

Global Outlook – Rainfall

Africa Current Status and Outlook - Temperature

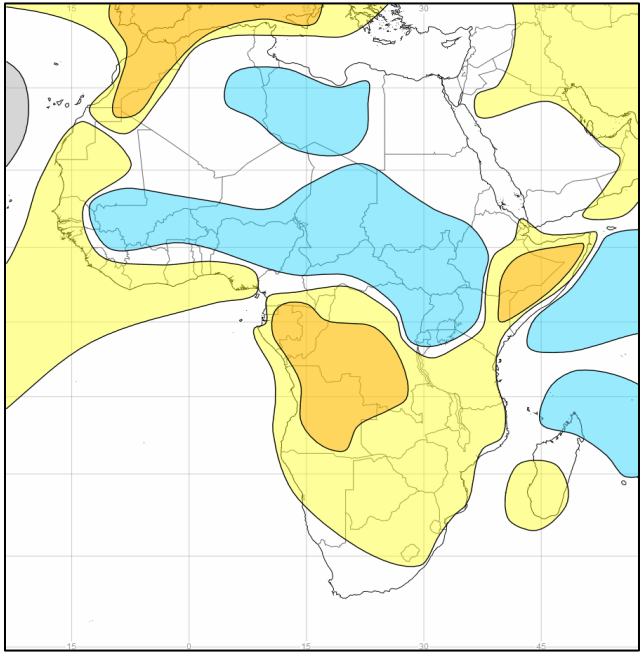
Current Status:

Most of sub-Saharan Africa has experienced normal to hot conditions through May and June. After a near-normal May, much of southern Africa, including South Africa, has been hot through June and July. Conversely, Madagascar has been cold throughout.

Outlook:

For the next three months, above normal temperatures are likely across much of central and southern Africa, as well as the Horn of Africa. Below normal temperatures are likely widely over the Sahel and northern Madagascar.

3-Month Outlook September to November - Temperature



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

Africa Current Status and Outlook - Rainfall

Current Status:
During May to July, many parts of east Africa continued to experience below normal rainfall. On 30 May 2022, the Food and Agriculture Agency of the United Nations (FAO) released a joint statement from meteorological agencies, including the UK Met Office, and humanitarian partners – "*The latest long-lead seasonal forecasts, supported by a broad consensus from meteorological experts, indicate that there is now a concrete risk that the* ***October-December (OND) rainy season could also fail.***" The full statement can be seen here.

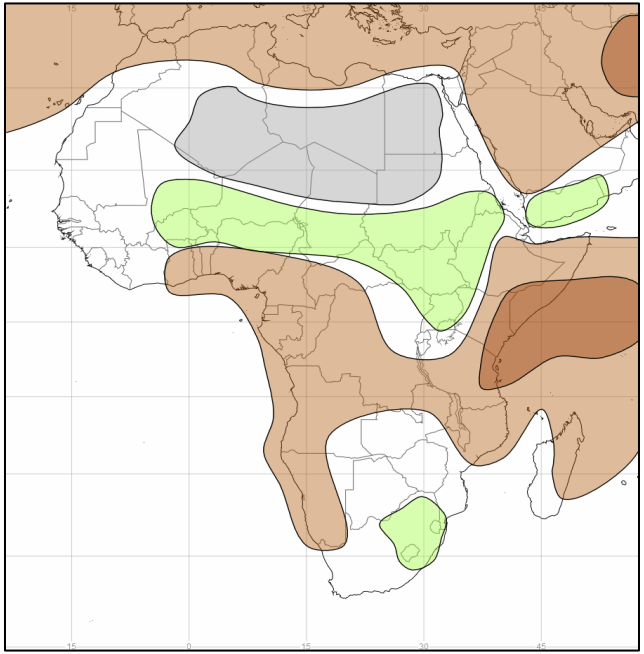
During June and July, a more active than normal west African monsoon has resulted in wet or very wet conditions in parts of western Africa. Southeast Africa was wetter than normal in May, though wetter than normal conditions became confined to parts of Mozambique and South Africa into June, before drier conditions developed generally in July.

Outlook:

Over the next three months, below normal rainfall is likely or much more likely in many areas of East Africa, extending into the Short Rains season. Forecasts for concurrent La Niña and negative Indian Ocean Dipole, along with high-level agreement from long-range models support this outlook. This would be the fifth consecutive poor or failed rainy season, further exacerbating the already severe humanitarian emergency in the region.

Across the Sahel, above normal rainfall is likely, associated with the more active West African monsoon (mainly in September); South Sudan and southern Sudan are also likely to be wetter than normal.

3-Month Outlook September to November - Rainfall



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

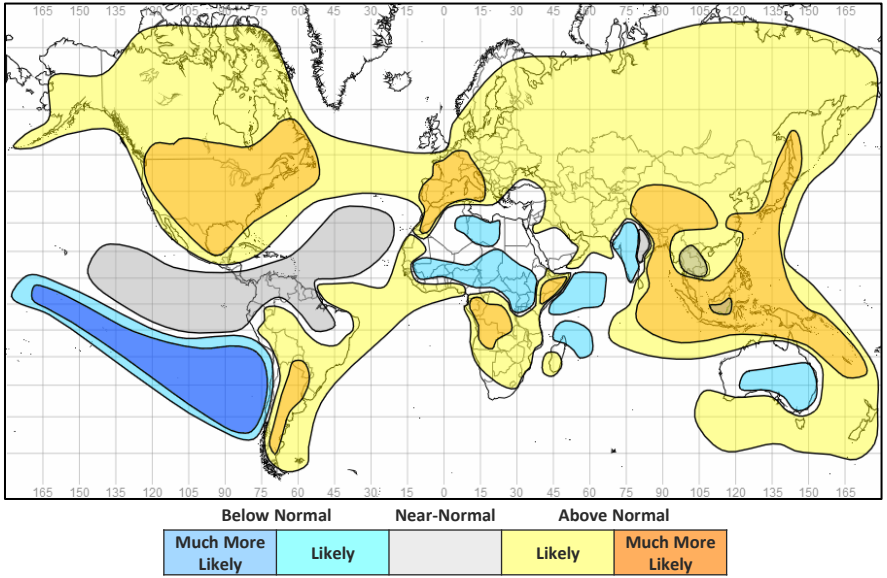
Global Outlook - Temperature

Outlook:

La Niña is likely to persist into the Northern hemisphere autumn, and perhaps into the winter. More details can be found in the precipitation section.

Consistent with background global warming, many parts of the globe are likely to be warmer than normal in the next three months. However, consistent with La Niña, parts of Australia, northern and western South America, the Indian sub-continent, and the Sahel region in Africa are likely to see temperatures near- to below normal.

3-Month Outlook September to November - Temperature



Global Outlook - Rainfall

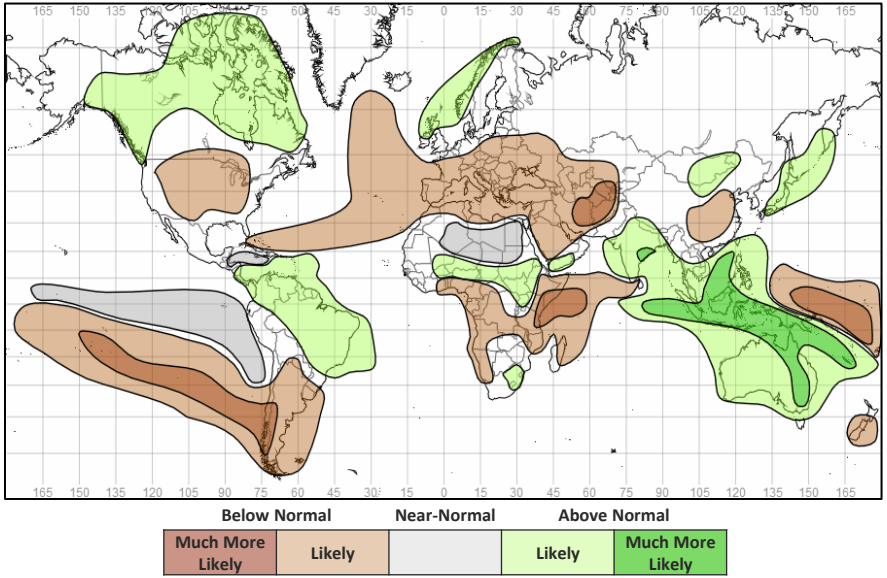
Outlook:
El Niño-Southern Oscillation (ENSO) – La Niña event continues in the tropical Pacific Ocean. Both oceanic and atmospheric indicators have changed little over the past month.

The latest ENSO outlook issued by NOAA (22nd August) states that La Niña is active, with an 86% chance that it will continue through the northern hemisphere autumn, and 60% chance that La Niña will last into the northern hemisphere winter. These probabilities have increased since last month, largely due to observed cooling in the tropical Pacific.

La Niña will remain a dominant driver of global weather patterns over the next few months at least, more especially for tropical regions. 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) – The IOD index is negative and is expected to remain so into next year. When concurrent with a La Niña, a negative IOD can increase the effects of a La Niña, enhancing wetter than normal conditions in parts of Australia and Asia, and drier than normal conditions in East Africa - of particular concern given the current drought conditions in the Horn of Africa.

3-Month Outlook September to November - Rainfall



Current Status

Current Status maps

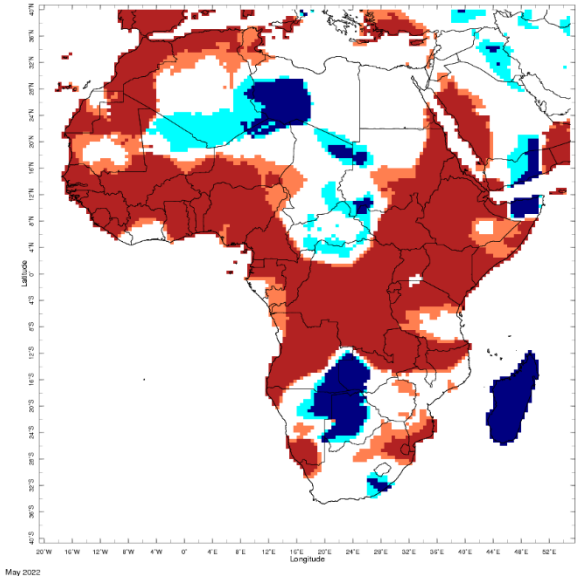
Western Africa

Central Africa

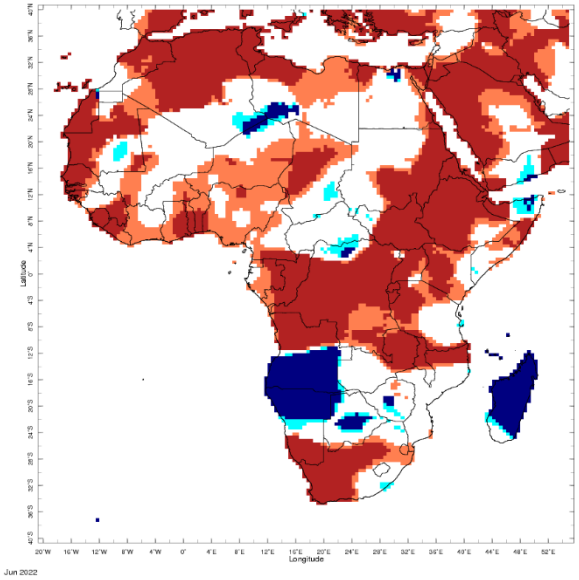
Eastern Africa

Southern Africa

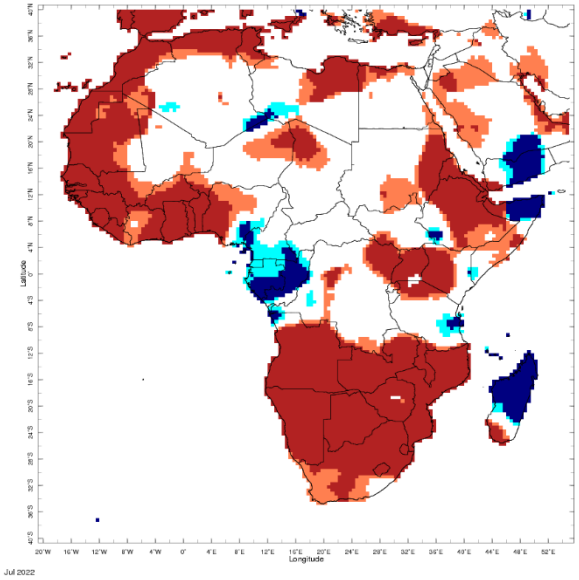
Current Status – Temperature percentiles



May



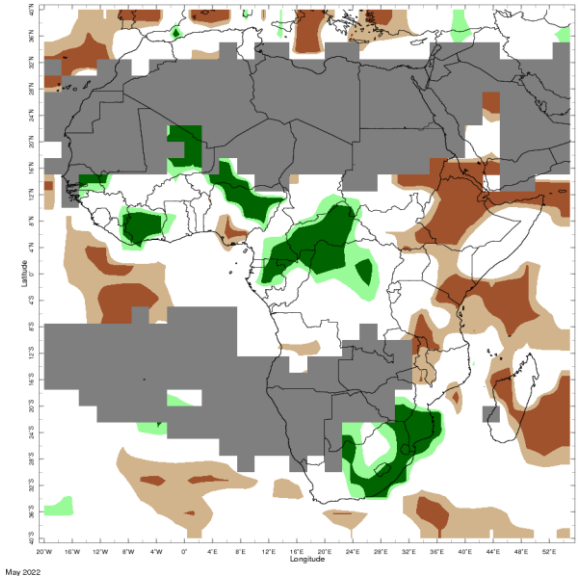
June

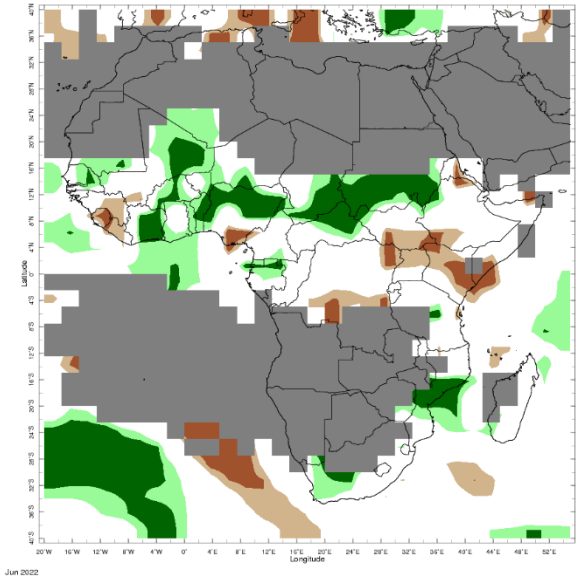


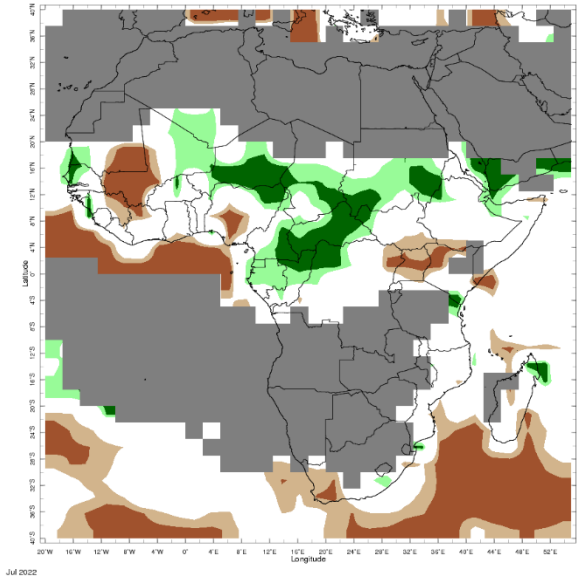
July

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 **June** **July**

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			Current Status: Rainfall		
	May	June	July	May	June	July
Sierra Leone	Hot	Hot	Hot	Normal	Very Dry	Normal
Liberia	Mixed (1)	Warm	Hot	Normal	Dry	Normal
Mali	Mixed (3)	Normal	Normal (2)	Normal	Mixed (6)	Mixed (9)
Ghana	Hot	Warm	Hot	Normal	Normal	Normal
Nigeria	Hot	Warm	Mixed (2)	Normal (4)	Mixed (7)	Mixed (8)
Cameroon	Hot	Normal	Normal	Normal (5)	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:
(1) Note: Cool in far north, hot elsewhere.
(2) Note: Hot in the west, normal elsewhere.
(3) Note: Hot in the south, cold in the north.
(4) Note: Very wet in the northeast.
(5) Note: Wet in the far southeast.
(6) Note: Very wet in north, normal in south.
(7) Note: Very wet in north, very dry in parts of the south.
(8) Note: Wet in the northeast, dry in the southwest.

Current Status – Central Africa

	Current Status: Temperature			Current Status: Rainfall		
	May	June	July	May	June	July
Niger	Mixed (1)	Mixed (3)	Mixed (3)	Normal*	Normal*	Wet
Chad	Mixed (2)	Warm	Normal (4)	Normal*	Normal* (6)	Normal* (6)
DRC	Hot	Hot	Normal	Mixed (5)	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: Hot southwest, normal elsewhere.
(2) Note: Cool/cold In the southeast; normal or warm elsewhere.
(3) Note: Warm in the south. Normal in the north.
(4) Note: Hot in the far northwest; normal elsewhere.
(5) Note: Wet in the far northeast.
(6) Note: Very wet in south.

Current Status – Eastern Africa (1)

	Current Status: Temperature			Current Status: Rainfall		
	May	June	July	May	June	July
Sudan	Mixed (1)	Mixed (2)	Mixed (2)	Normal*	Mixed (3)	Mixed (3)
South Sudan	Mixed (1)	Hot	Normal	Normal*	Mixed (4)	Normal
Uganda	Hot	Hot	Hot	Normal*	Dry	Dry
Rwanda	Hot	Hot	Hot	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.ldeo.columbia.edu/maproom/.

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

Additional Information:

(1) Note: Cool in the west, hot elsewhere.
(2) Note: Hot in the east. Normal in the west.
(3) Note: Normal* in the north, very wet in the south.
(4) Note: Normal* in the north, dry in the south.

Current Status – Eastern Africa (2)

	Current Status: Temperature			Current Status: Rainfall		
	May	June	July	May	June	July
Tanzania	Mixed (1)	Mixed (1)	Normal	Mixed (5)	Normal	Normal
Ethiopia	Hot	Hot	Hot	Dry	Normal	Normal
Kenya	Hot	Warm	Hot	Dry	Dry	Dry
Somalia	Mixed (2)	Mixed (3)	Mixed (4)	Normal (6)	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: Normal in the southeast. Hot elsewhere.
(2) Note: Hot in the west, very cold in the east.
(3) Note: Large variations across the country.
(4) Note: Cold in the north, normal or hot elsewhere.
(5) Note: Very wet in the south; dry in the north; Normal elsewhere.
(6) Note: Dry in the far north.

Current Status – Southern Africa

	Current Status: Temperature			Current Status: Rainfall		
	May	June	July	May	June	July
South Africa	Mixed (2)	Mixed (4)	Hot	Mixed (6)	Normal	Normal
Zambia	Mixed (3)	Mixed (5)	Hot	Normal	Normal*	Normal
Zimbabwe	Normal	Normal	Hot	Wet	Normal*	Normal
Mozambique	Mixed (1)	Normal	Cold	Wet	Wet	Normal
Malawi	Hot	Hot	Hot	Dry	Normal*	Normal
Madagascar	Cold	Cold	Cold	Dry	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: Hot in the northeast, normal elsewhere.
(2) Note: Cold in the far southeast, hot in the northeast, normal elsewhere.
(3) Note: Very cold southwest, hot northeast.
(4) Note: Hot in the west, more variable elsewhere.
(5) Note: Hot in east, normal in west.
(6) Note: Very dry to normal in the west, very wet in the east.

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 February – Western Africa (1)

		Forecast summary		
		September	September to November	December to February
Sierra Leone	*Temperature*	Likely to be near-normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Likely to be wetter than normal
Liberia	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
Mali	*Temperature*	Likely to be colder than normal in the south; Climatological odds elsewhere	Likely to be colder than normal in the south; Climatological odds elsewhere	Climatological odds
	Rainfall	Likely to be wetter than normal in the east; Climatological odds elsewhere	Likely to be wetter than normal in the east; Climatological odds elsewhere	Climatological odds
Ghana	*Temperature*	Likely to be colder than normal in the north; Climatological odds elsewhere	Likely to be colder than normal in the north; Climatological odds elsewhere	Climatological odds
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds

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 February – Western Africa (2)

		Forecast summary		
		September	September to November	December to February
Nigeria	*Temperature*	Widely Likely to be colder than normal; Likely to be near-normal in the far south	Widely Likely to be colder than normal; Likely to be near-normal in the far south	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal in the north; Likely to be drier than normal in the south	Likely to be wetter than normal in the north; Likely to be drier than normal in the south	Climatological odds
Cameroon	*Temperature*	Likely to be colder than normal in the north; Climatological odds elsewhere	Likely to be colder than normal in the north; Climatological odds elsewhere	Climatological odds
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds

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 February – Central Africa

		Forecast summary		
		September	September to November	December to February
Niger	*Temperature*	Likely to be colder than normal in the south; Climatological odds elsewhere	Likely to be colder than normal in the south; Climatological odds elsewhere	Climatological odds
	Rainfall	Likely to be near-normal in the north; Likely to be wetter than normal in the south	Likely to be near-normal in the north, Likely to be wetter than normal in the south	Likely to be wetter than normal
Chad	*Temperature*	Likely to be colder than normal	Likely to be colder than normal	Climatological odds
	Rainfall	Likely to be near-normal in the north, Likely to be wetter than normal in the south	Likely to be near-normal in the north; Likely to be wetter than normal in the south	Likely to be wetter than normal
Democratic Republic of Congo	*Temperature*	Much more likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Climatological odds

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 February – Eastern Africa (1)

		Forecast summary		
		September	September to November	December to February
Sudan	*Temperature*	Likely to be colder than normal in the south and west; Climatological odds elsewhere	Likely to be colder than normal in the south and west; Climatological odds elsewhere	Likely to be warmer than normal
	Rainfall	Likely to be near-normal in the north; Likely to be wetter than normal in the south	Likely to be near-normal in the north; Likely to be wetter than normal in the south	Climatological odds
South Sudan	*Temperature*	Likely to be colder than normal	Likely to be colder than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Climatological odds
Uganda	*Temperature*	Likely to be colder than normal	Likely to be colder 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
Rwanda	*Temperature*	Likely to be colder than normal	Likely to be colder 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

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 February – Eastern Africa (2)

		Forecast summary		
		September	September to November	December to February
Tanzania	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	**Much more likely to be drier than normal**	Likely to be drier than normal	Likely to be drier than normal
Ethiopia	*Temperature*	Likely to be warmer than normal or **Much more likely to be warmer than normal** in the east; Likely to be colder than normal in the west	Likely to be warmer than normal or **Much more likely to be warmer than normal** in the east; Likely to be colder than normal in the west	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal in the northwest; Likely to be drier than normal in the southeast	Likely to be wetter than normal in the northwest; Likely to be drier than normal in the southeast	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 February – Eastern Africa (3)

		Forecast summary		
		September	September to November	December to February
Kenya	*Temperature*	Likely to be warmer than normal or **Much more likely to be warmer than normal** in the east; Likely to be colder than normal in the west	Likely to be warmer than normal or **Much more likely to be warmer than normal** in the east; Likely to be colder than normal in the west	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal in the far northwest; **Much more likely to be drier than normal** or Likely to be drier than normal in the southeast	Likely to be wetter than normal in the far northwest; **Much more likely to be drier than normal** or Likely to be drier than normal in the southeast	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	Likely to be drier than normal	Climatological odds

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 February – Southern Africa (1)

		Forecast summary		
		September	September to November	December to February
South Africa	*Temperature*	Likely to be warmer than normal in the north and east; Climatological odds elsewhere	Likely to be warmer than normal in the north and east, Climatological odds elsewhere	Likely to be colder than normal
	Rainfall	Likely to be wetter than normal in the east; Climatological odds elsewhere	Likely to be wetter than normal in the east; Climatological odds elsewhere	Likely to be wetter than normal
Zambia	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Climatological odds	Climatological odds	Likely to be wetter than normal
Zimbabwe	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	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	Likely to be wetter than normal
Mozambique	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be drier than normal in the north; Climatological odds elsewhere	Likely to be drier than normal in the north; Climatological odds elsewhere	Climatological odds

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 February – 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 drier than normal	Likely to be drier than normal	Climatological odds
Madagascar	*Temperature*	Likely to be colder than normal in the north; Likely to be warmer than normal in the south	Likely to be colder than normal in the north; Likely to be warmer than normal in the south	Climatological odds
	Rainfall	Likely to be drier than normal in the north; Climatological odds elsewhere	Likely to be drier than normal in the north; Climatological odds elsewhere	Climatological odds

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range **the 4-6-month outlook is less reliable than the 1-3 month outlook**. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Annex 1 – Supplemental Information

For further information

WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME)
https://www.wmolc.org/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): GHACOF 62 Statement (Aug 2022 – Google drive)
PRÉvisions climatiques Saisonnières en Afrique Soudano-Sahélienne (PRESASS): http://acmad.net/rcc/presassS.php (April 2021)
Southern African Regional Climate Outlook Forum (SARCOF): http://csc.sadc.int/en/news-and-events/326-climate-outlook-forum-2021-sarcof-25 (August 2021)
PRÉvisions climatiques Saisonnières en Afrique, pays du Golfe de Guinée (PRESAGG): http://acmad.net/rcc/presagg.php (February 2021)
South-West Indian Ocean Climate Outlook Forum (SWIOCOF) - http://www.acmad.net/new/NEWSITEACMAD/wp-content/uploads/2021/10/SWIOCOF-10_Statement-EN.pdf (October 2021)

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 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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