

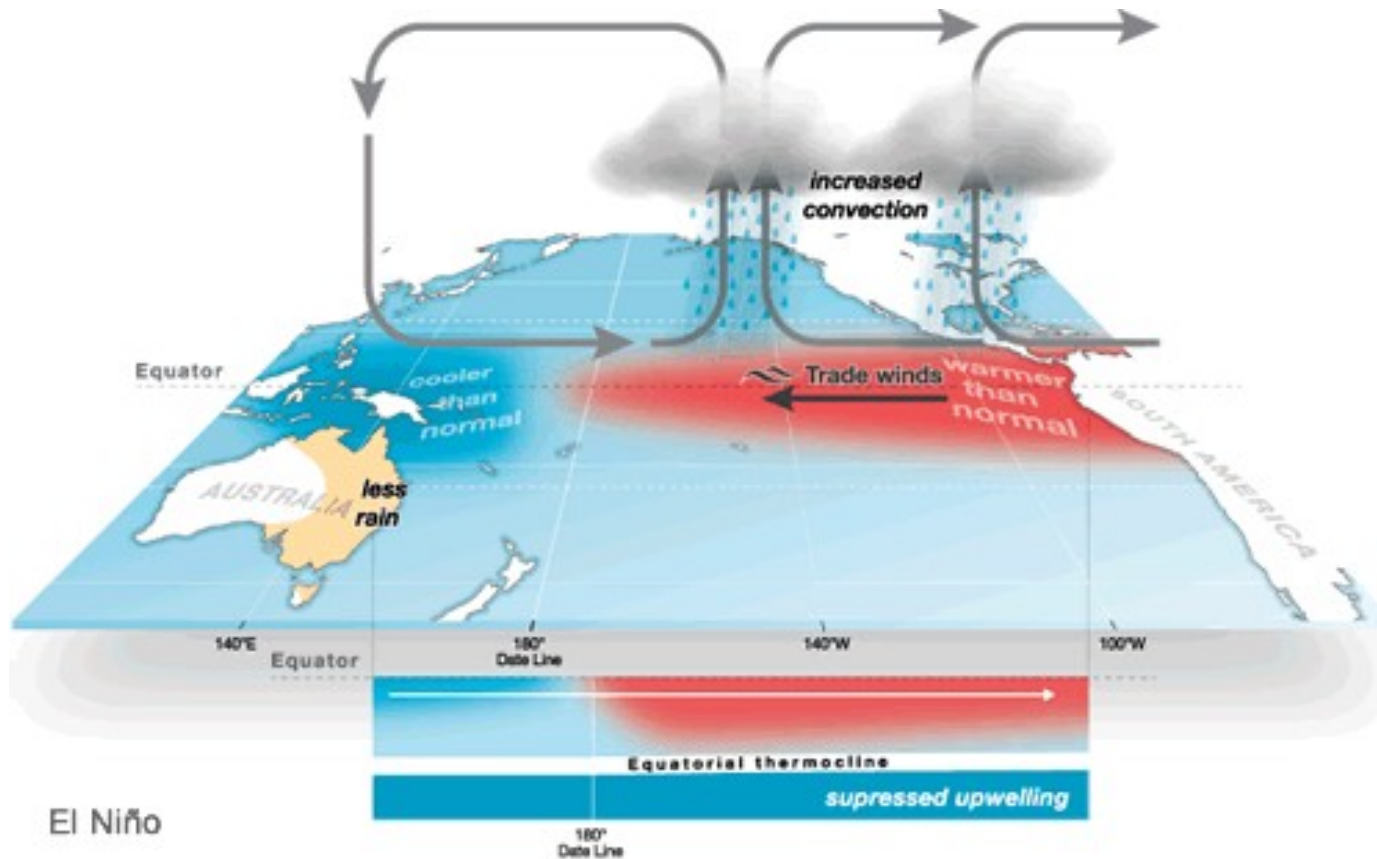
El Nino 2026-27

East Africa Regional Cash Working Group – September 2026

Dr Christopher Jack

Science Lead, Red Cross Red Crescent Climate Centre

El Niño and Southern Oscillation

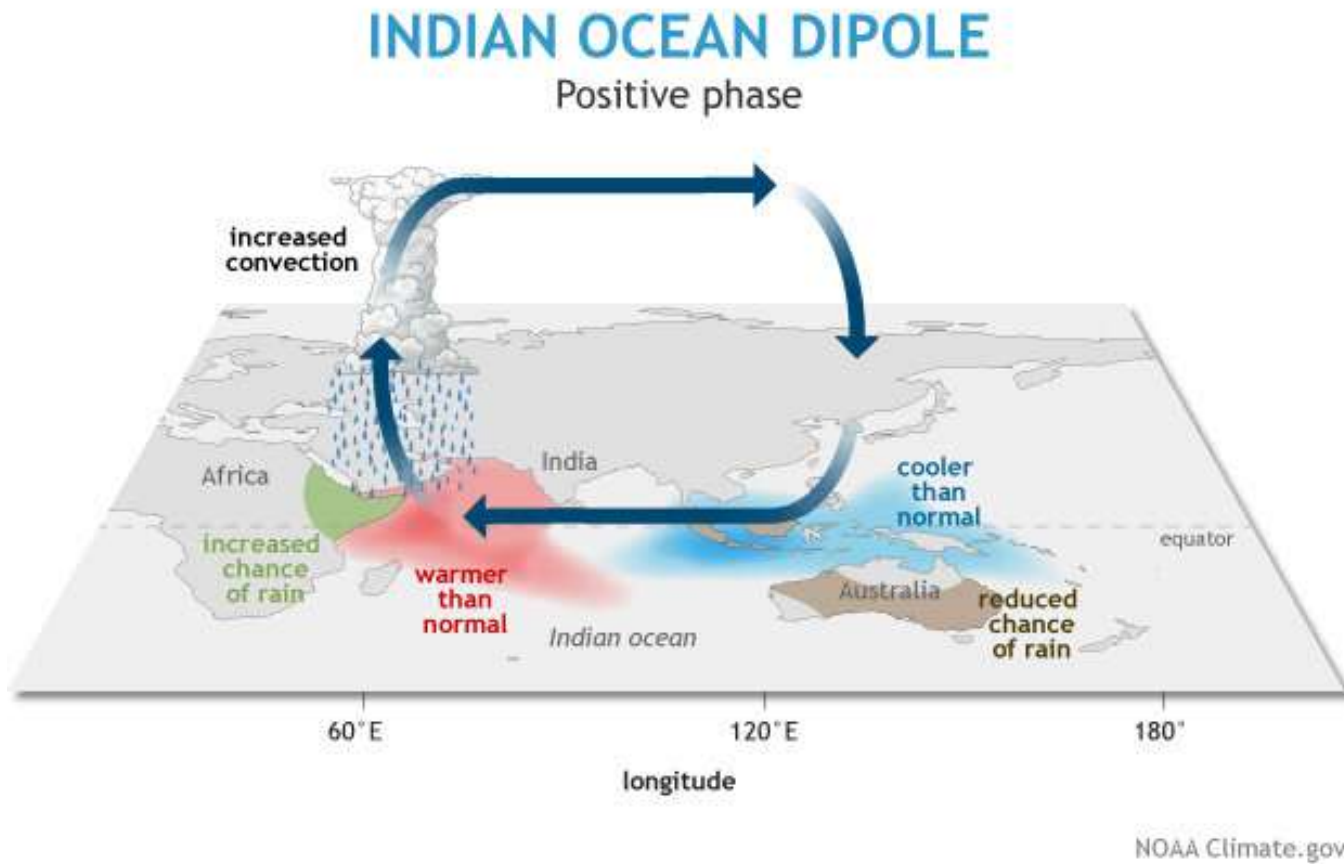


ENSO is the El Nino Southern Oscillation

Under **El Nino conditions** the easterly trade winds weaken, and the flow of warm water is reduced. The western tropical Pacific is cooler and the central and eastern Pacific is warmer than normal.

<http://www.bom.gov.au/climate/enso/history/ln-2010-12/three-phases-of-ENSO.shtml>

Indian Ocean Dipole

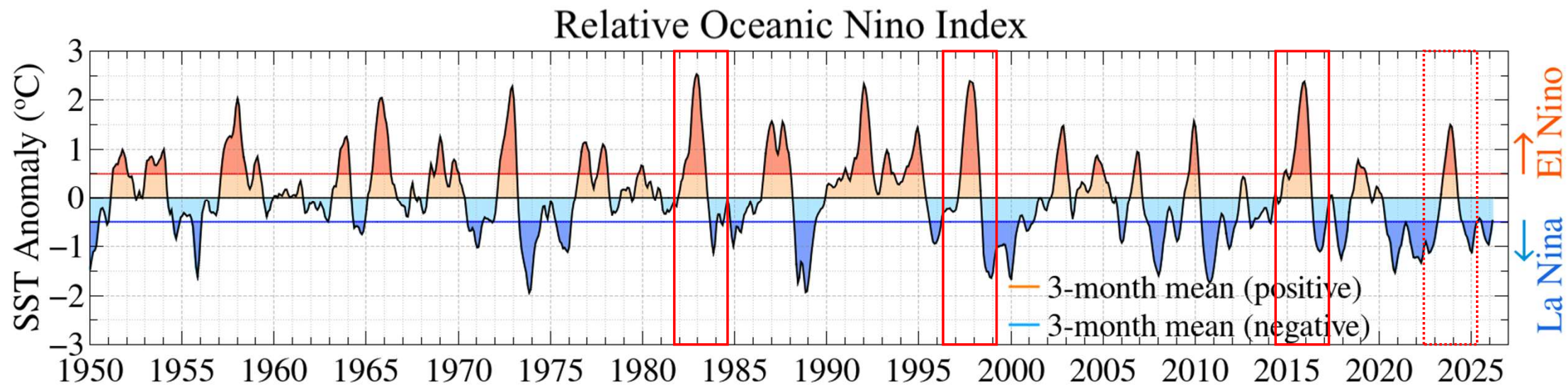


Indian Ocean Dipole

Often works in tandem with El Nino, so they often occur at the same time, but the strength of the connection varies

The IOD is an important driver of heavy rainfall in East Africa

What is a super El Nino?

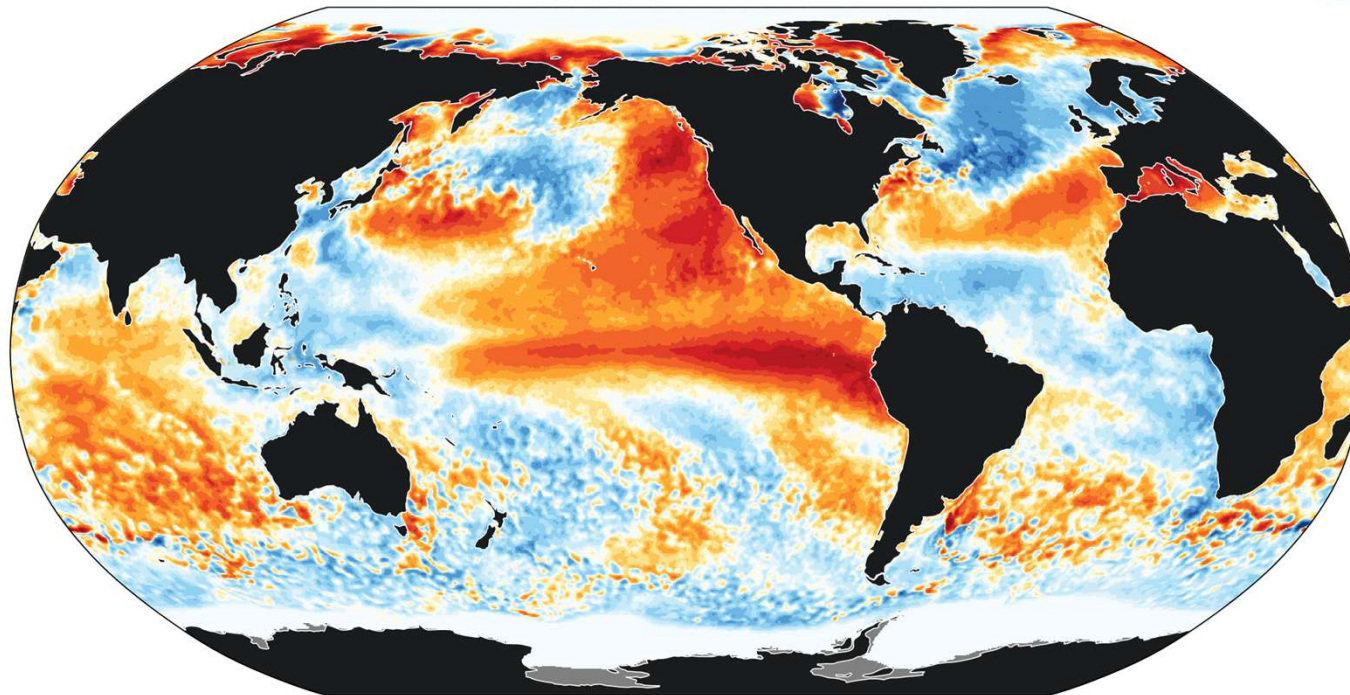


https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso/roni/

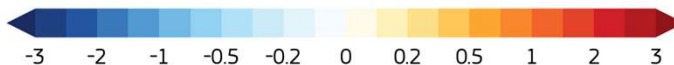
The El Niño of 2015/2016

SEA SURFACE TEMPERATURE ANOMALY • JULY 2015

Data: ERA5 • Reference period: 1991–2020 • Credit: C3S/ECMWF



Temperature anomaly (°C)



The 2015/2016 El Niño peaked in intensity around Dec 2015

Both 2015/16 and 1997/98 reached large anomalies (more than 2.3°C)



PROGRAMME OF
THE EUROPEAN UNION

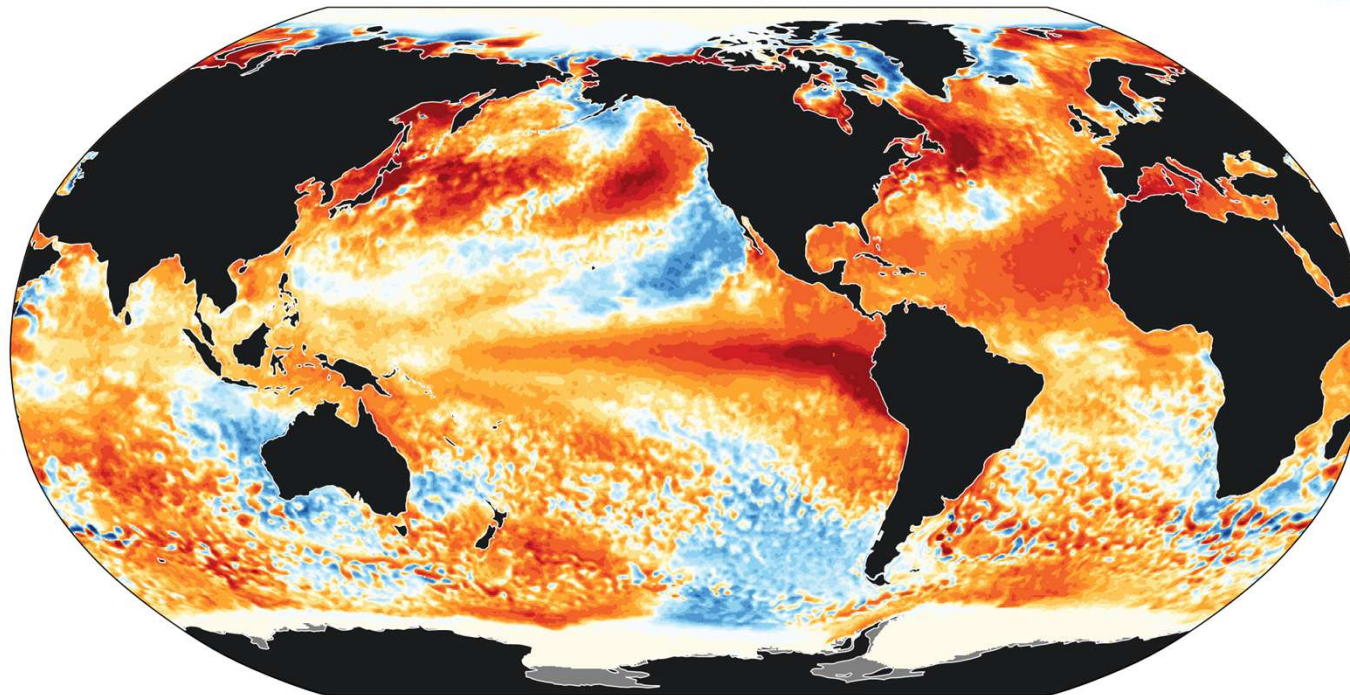


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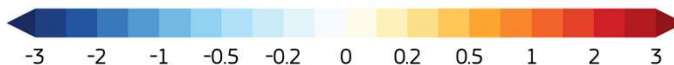
The El Niño of 2023/2024

SEA SURFACE TEMPERATURE ANOMALY • JULY 2023

Data: ERA5 • Reference period: 1991–2020 • Credit: C3S/ECMWF



Temperature anomaly (°C)



The 2023/2024 El Niño peaked in intensity around Dec 2023

It was not an extremely strong El-Niño only reaching anomalies of 2°C

Both 2015/16 and 1997/98 reached larger anomalies (more than 2.3°C)

However, **combined with ongoing global warming**, there have been **significant impacts**



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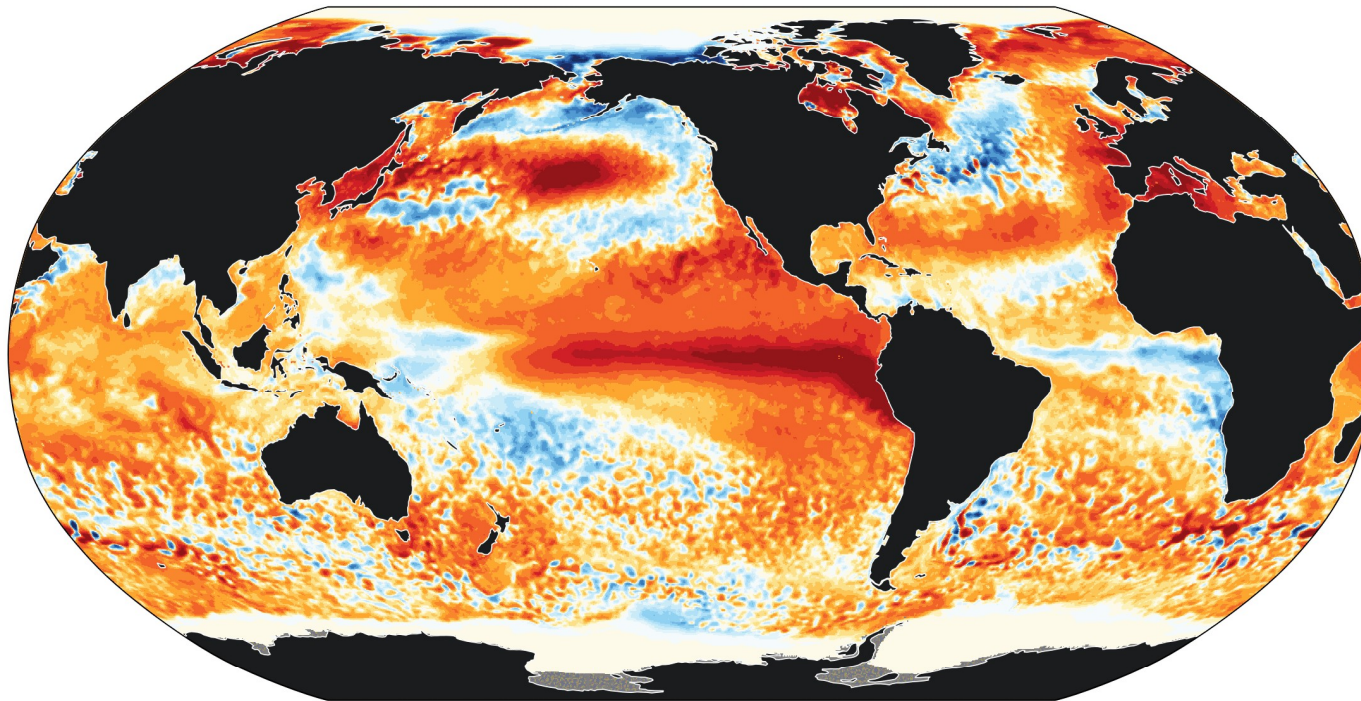
End of La Nina 2025

Sea surface temperature anomaly • July 2026

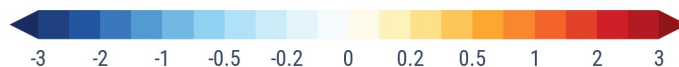
Data: ERA5 • Reference period: 1991–2020 • Credit: C3S/ECMWF



The end of 2025 and into the start of 2026 has seen the ending of the previous La Nina phase of ENSO with a return to neutral SST patterns across the tropical pacific



Temperature anomaly (°C)



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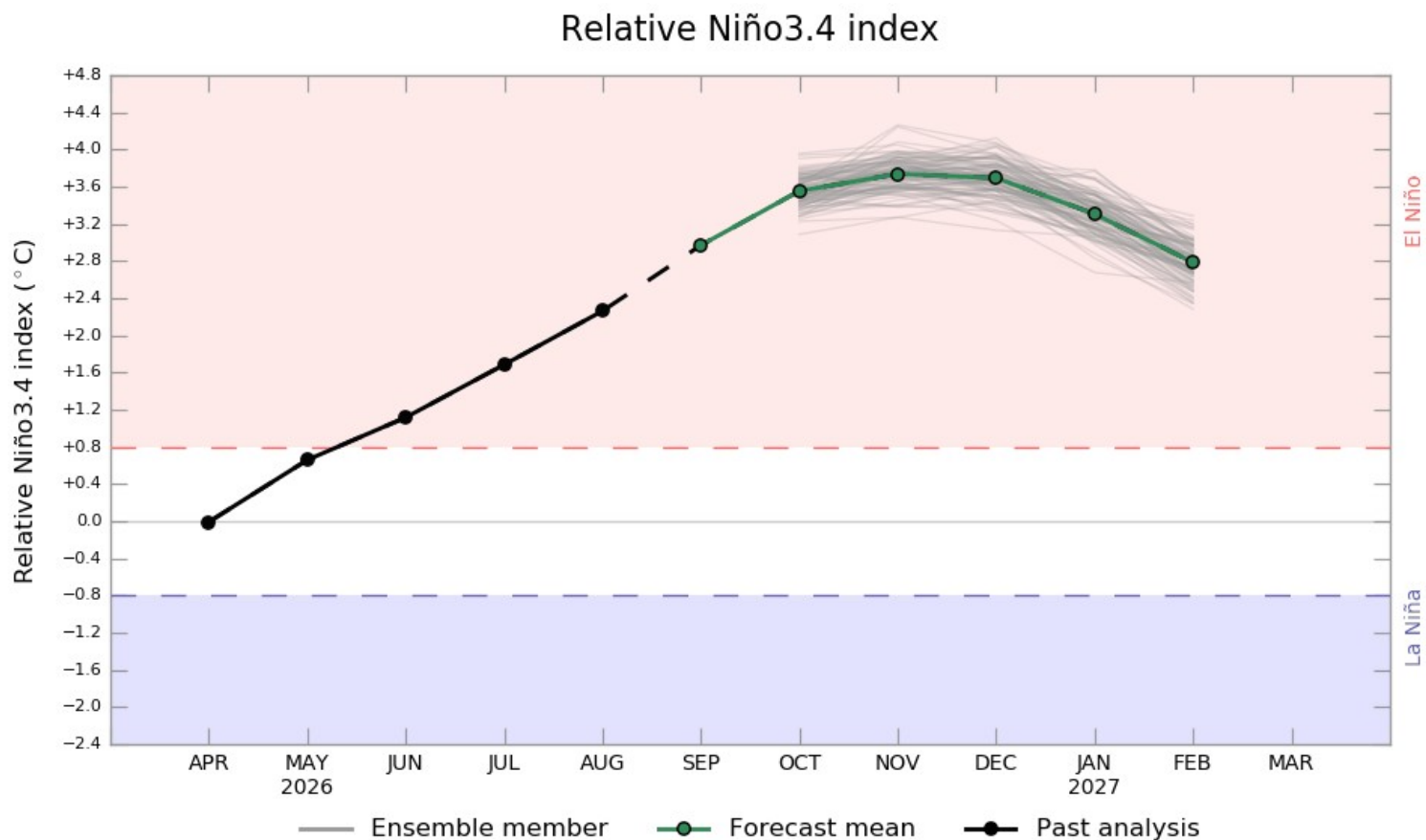


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ENSO forecasts



www.bom.gov.au/climate
Commonwealth of Australia 2026, Australian Bureau of Meteorology

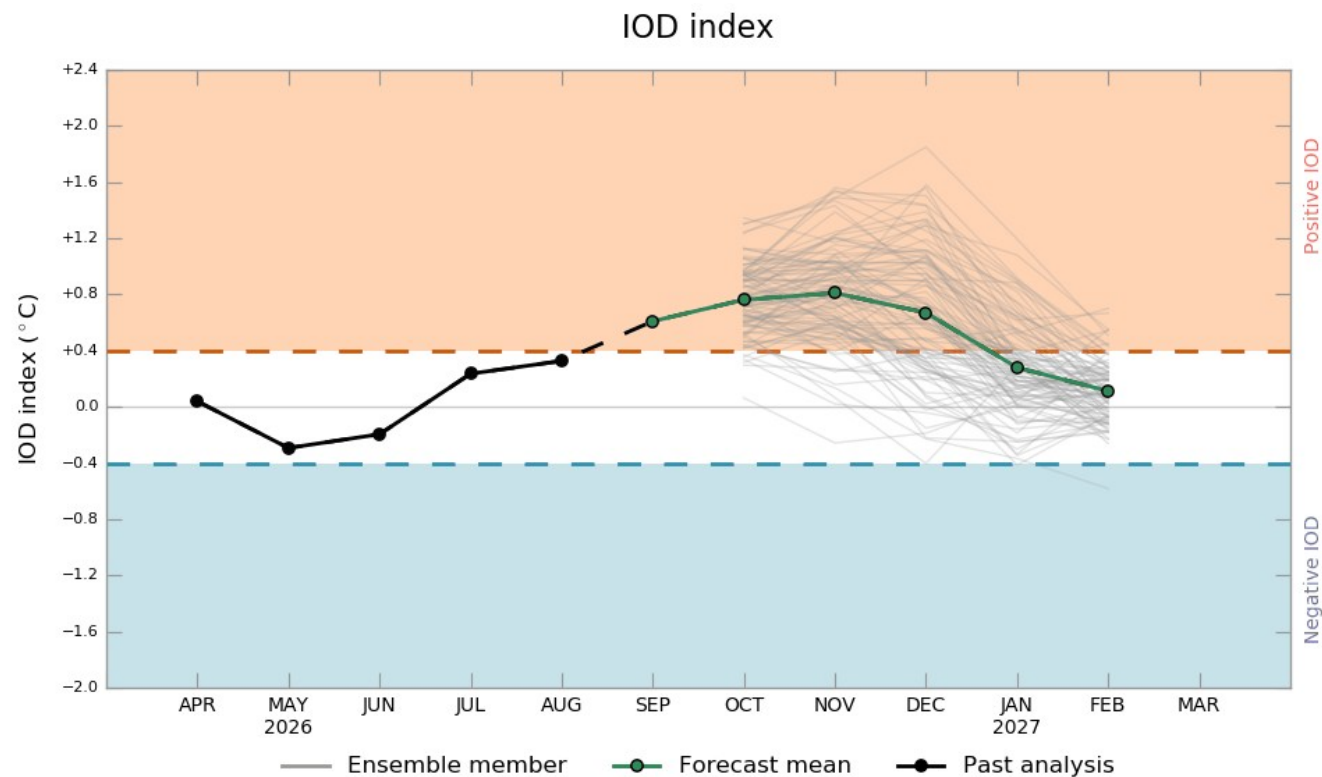
Past analysis base period: 1991-2020
Forecast base period: 1981-2018

Model: ACCESS-S2
Model run: 5 Sep 2026



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IOD forecasts



www.bom.gov.au/climate
Commonwealth of Australia 2026, Australian Bureau of Meteorology

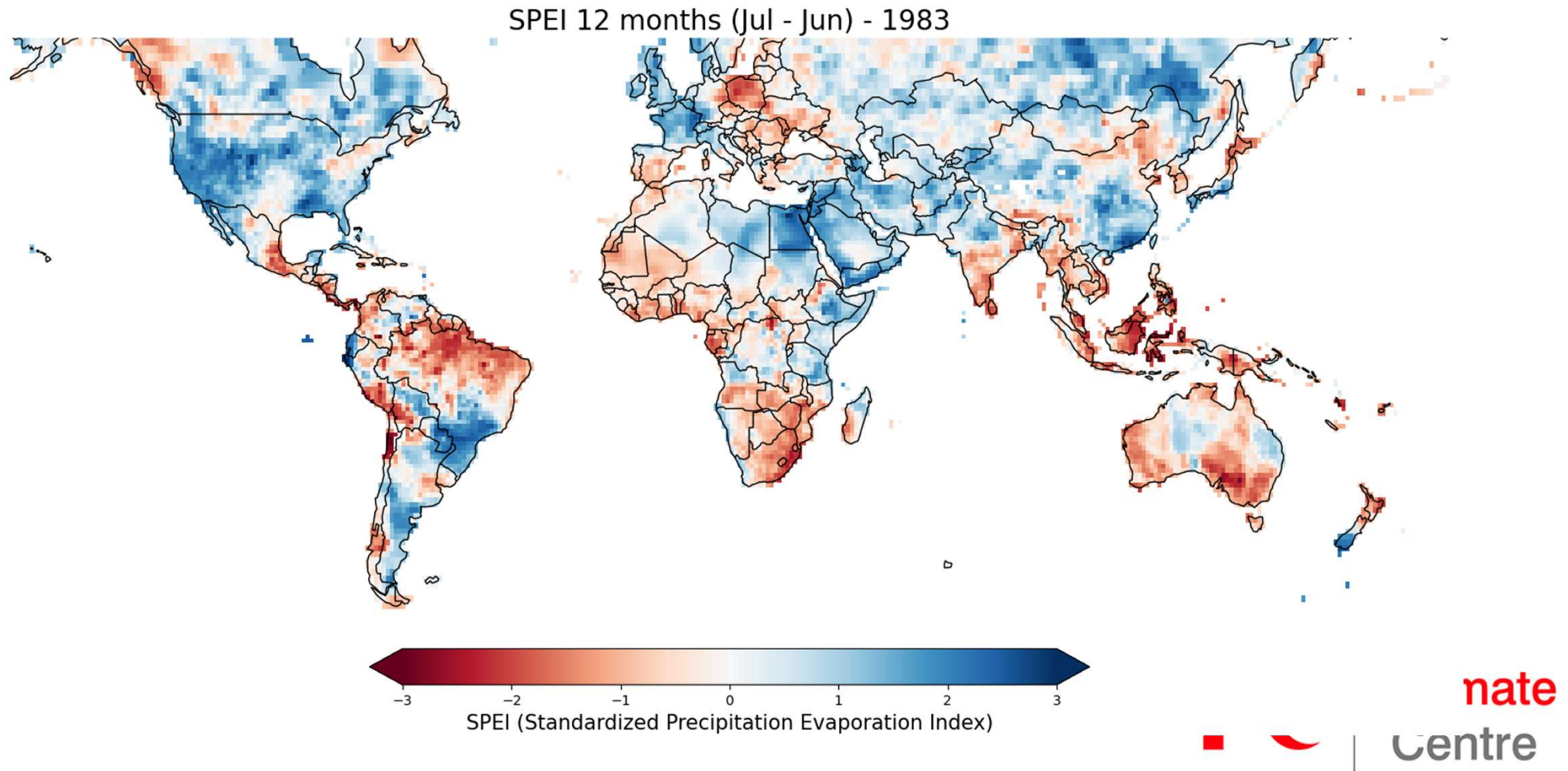
Past analysis base period: 1991-2020
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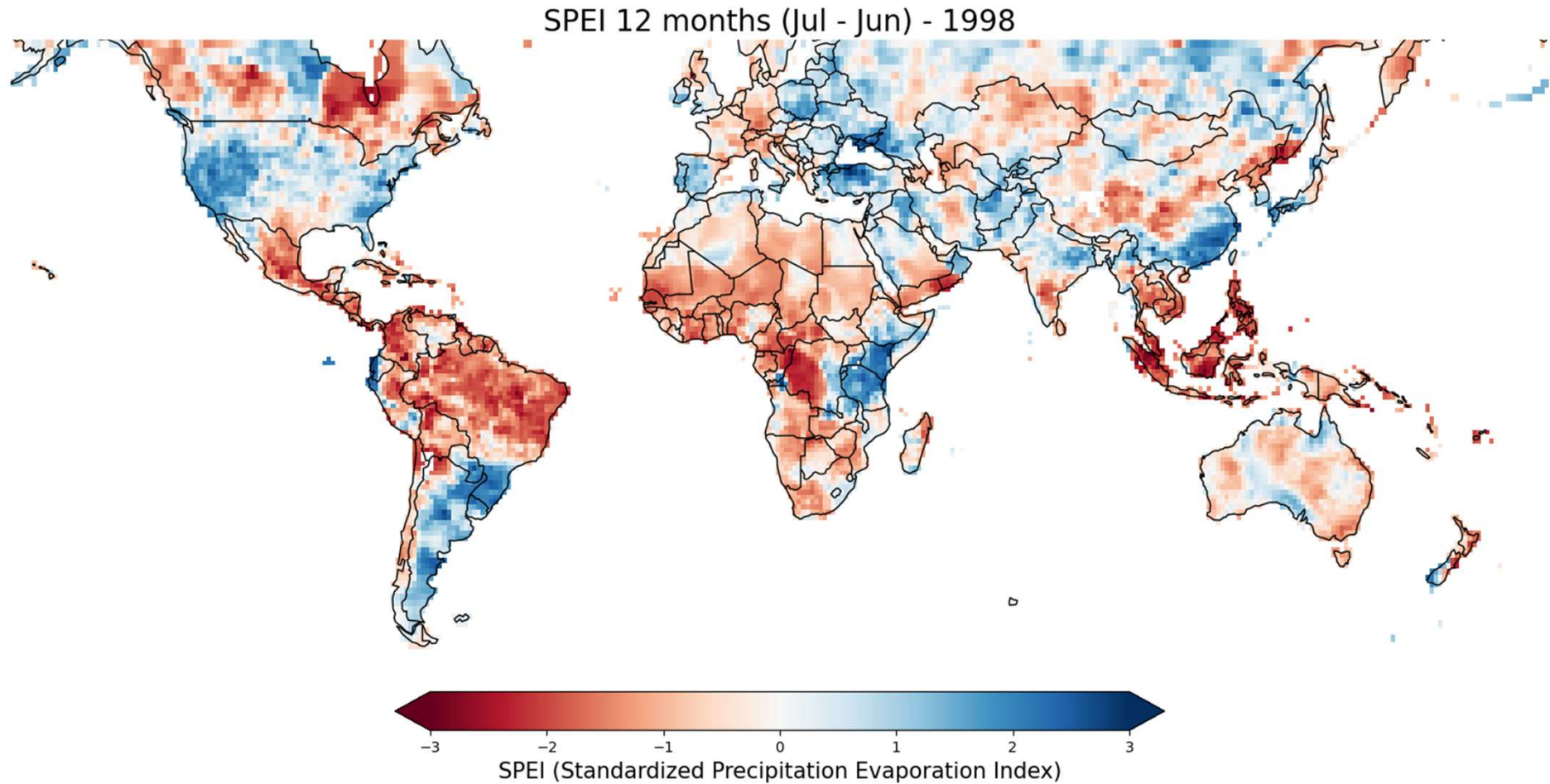


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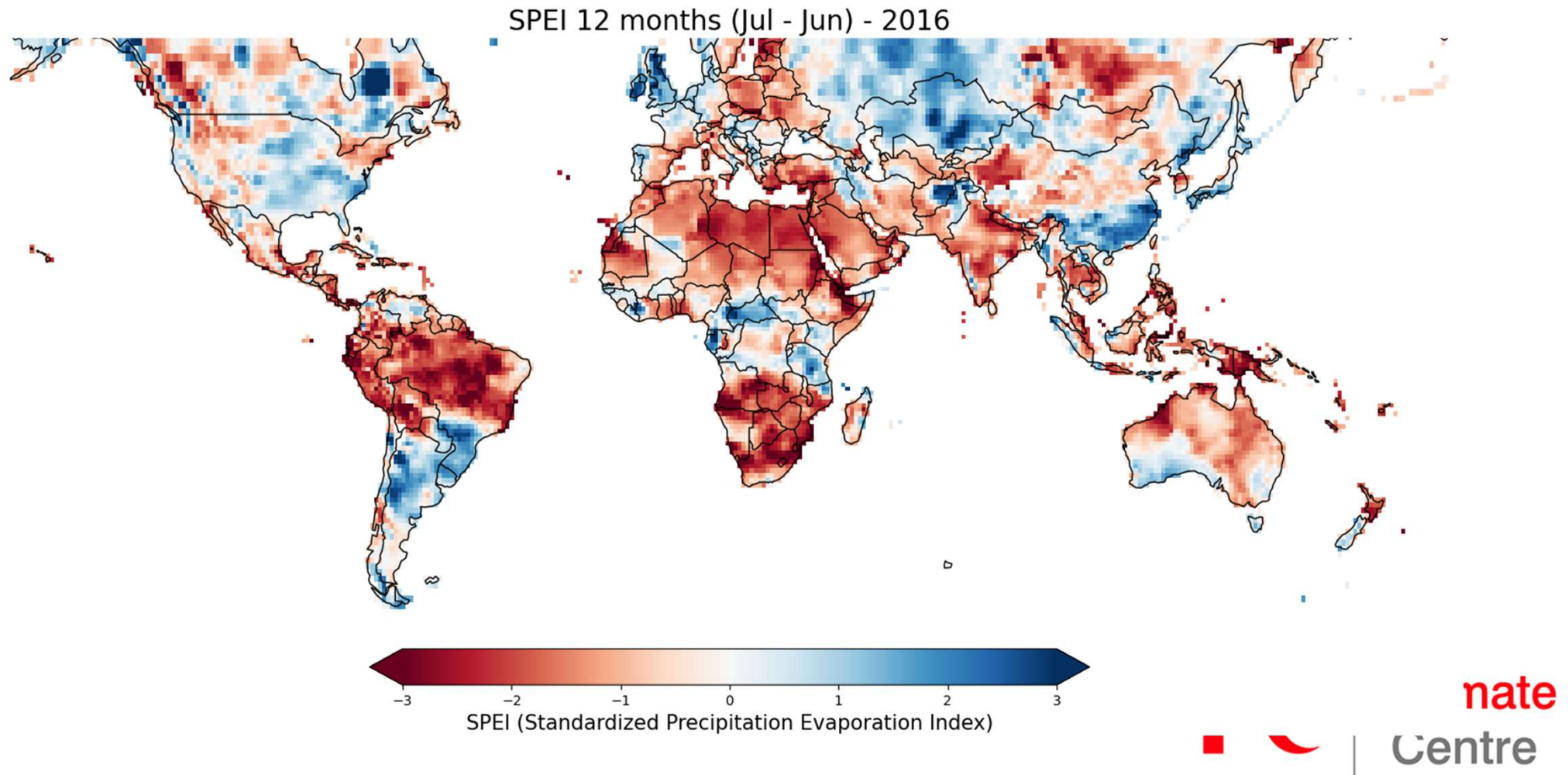
Past El Nino events – 1982 / 83



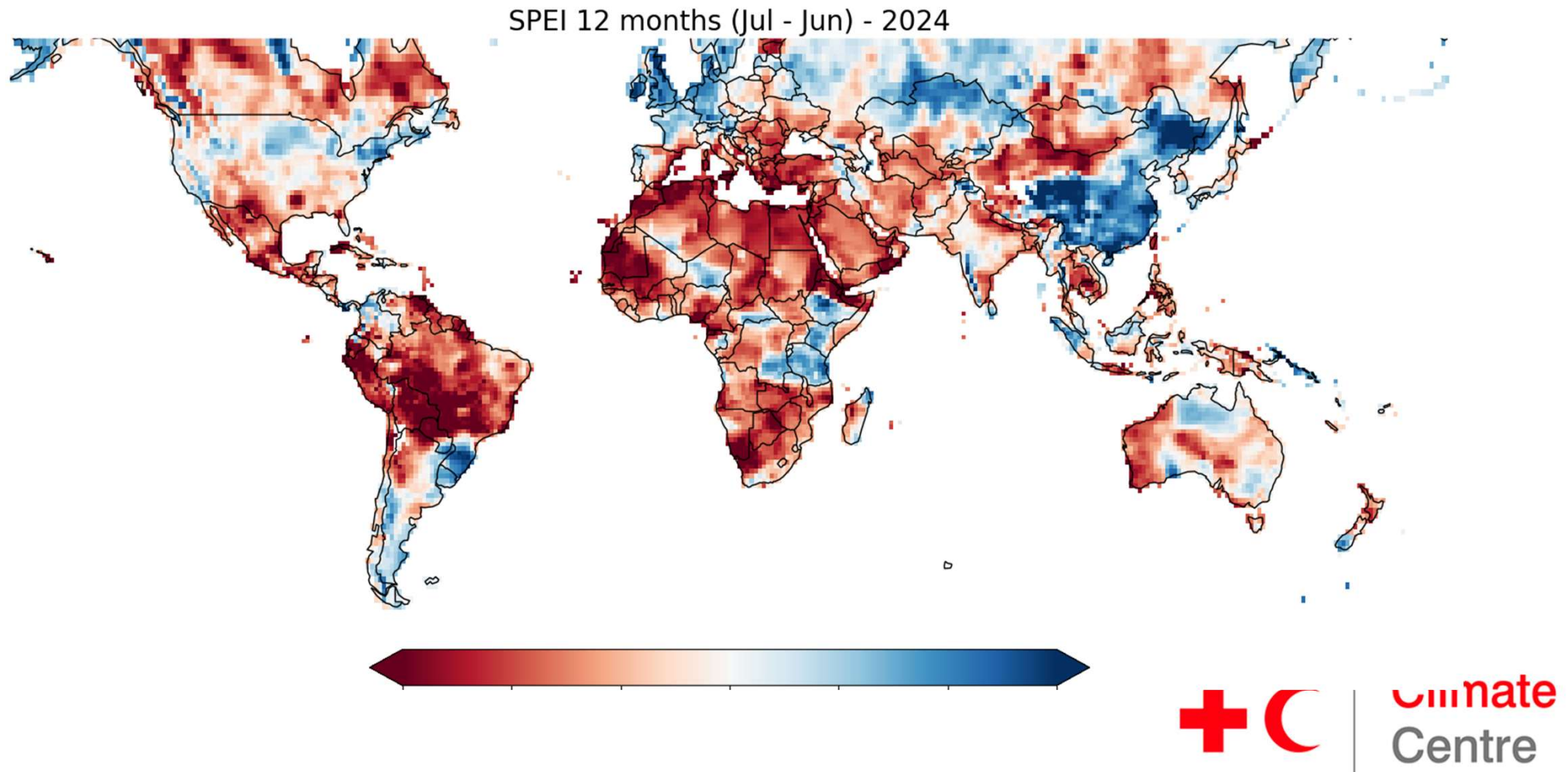
Past El Nino events – 1997 / 98



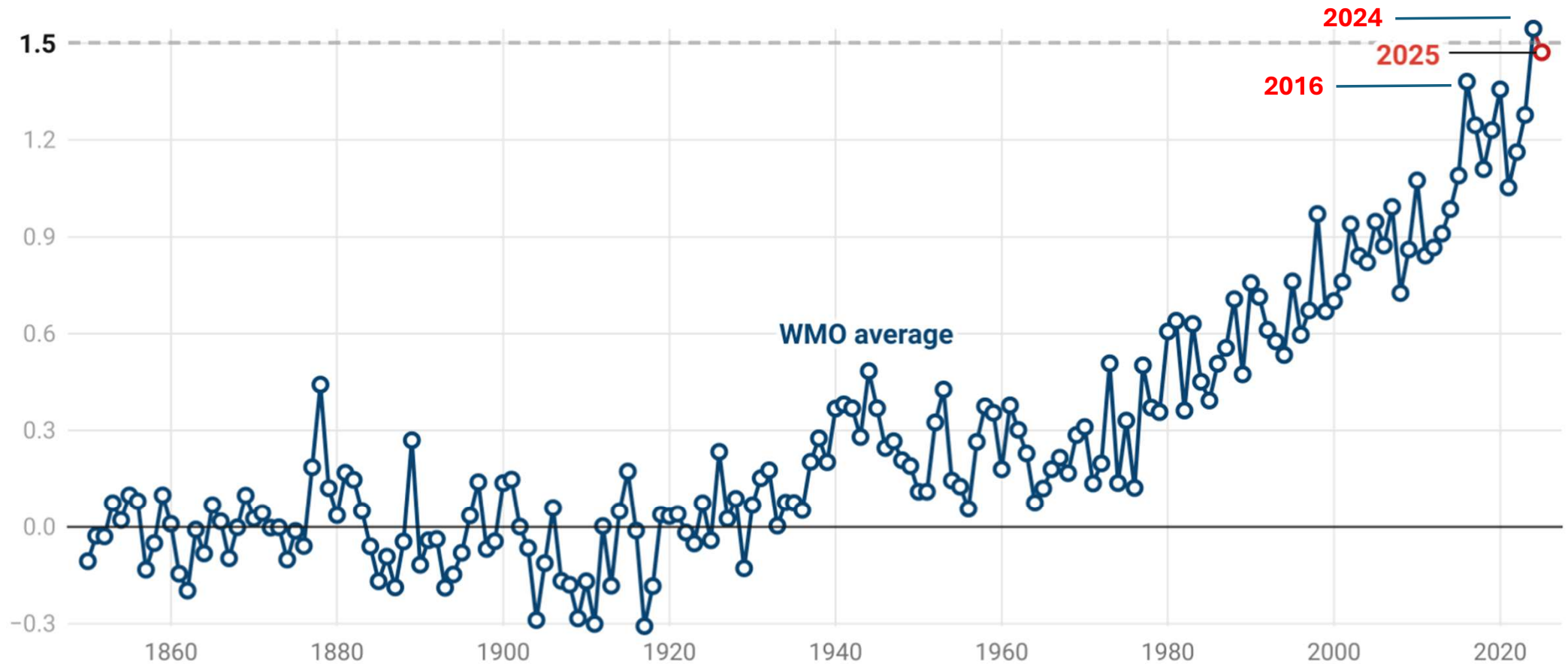
Past El Nino events – 2015 / 16



Past El Nino events – 2023 / 24

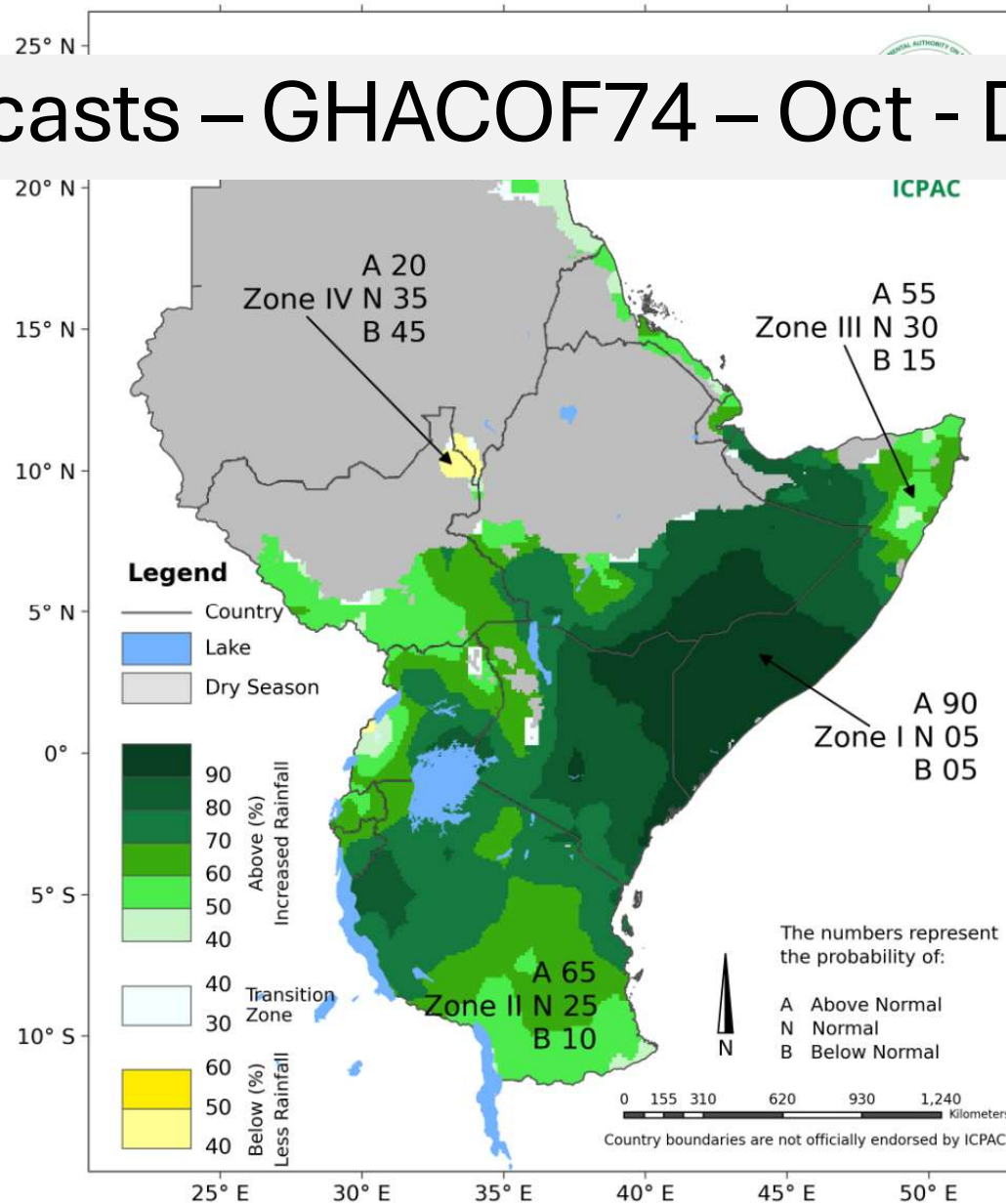


Global warming and ENSO



Source: Berkeley Earth, GISTEMP, NOAA GlobalTemp, HadCRUT5, and ERA5

Latest forecasts – GHACOF74 – Oct - Dec



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Latest forecasts – ECMWF Seas5

ECMWF Seasonal Forecast

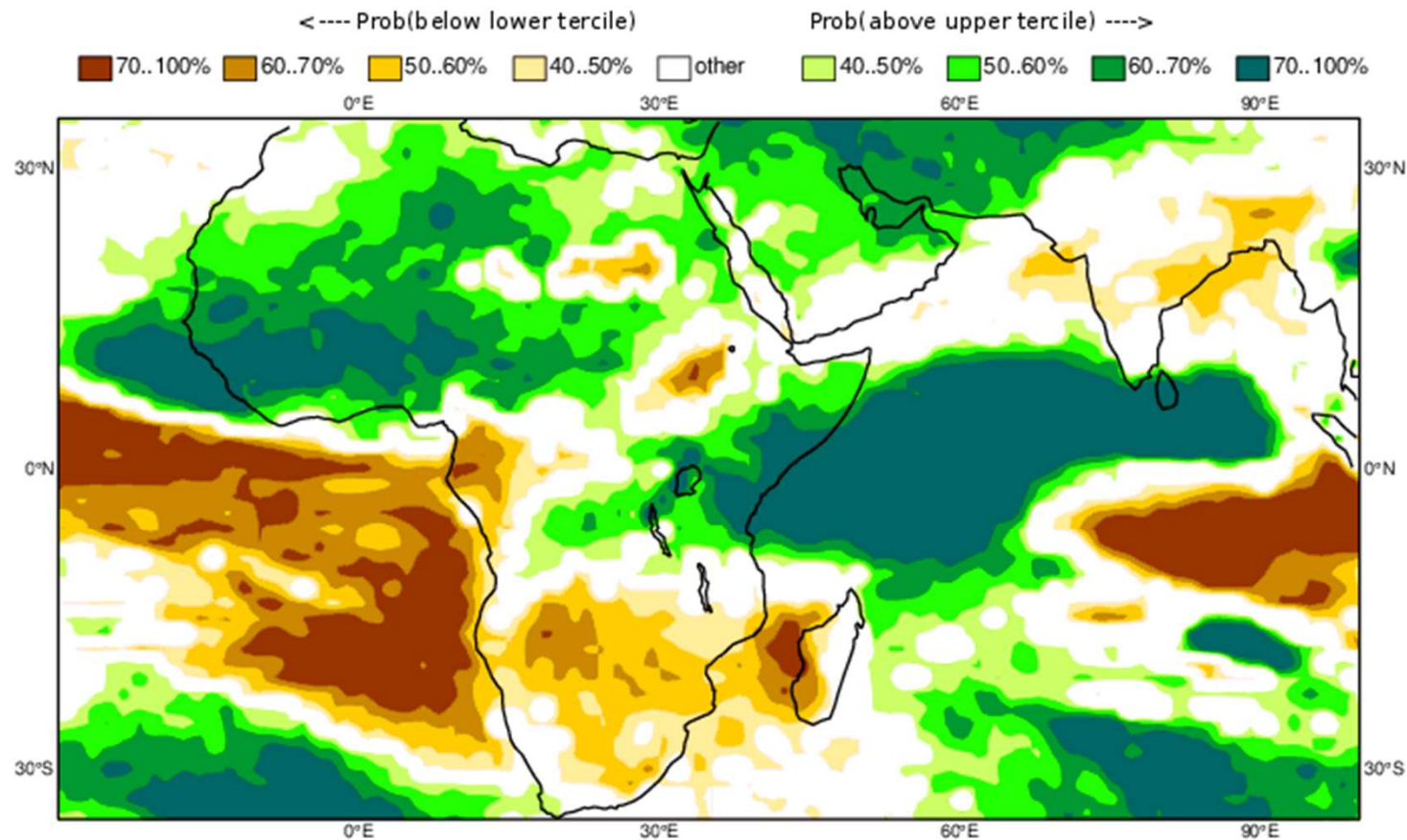
Prob(most likely category of precipitation)

Forecast start is 01/09/26, climate period is 1993-2016

Ensemble size = 51, climate size = 600

System 5

OND 2026



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Latest forecasts – ECMWF Seas5

ECMWF Seasonal Forecast

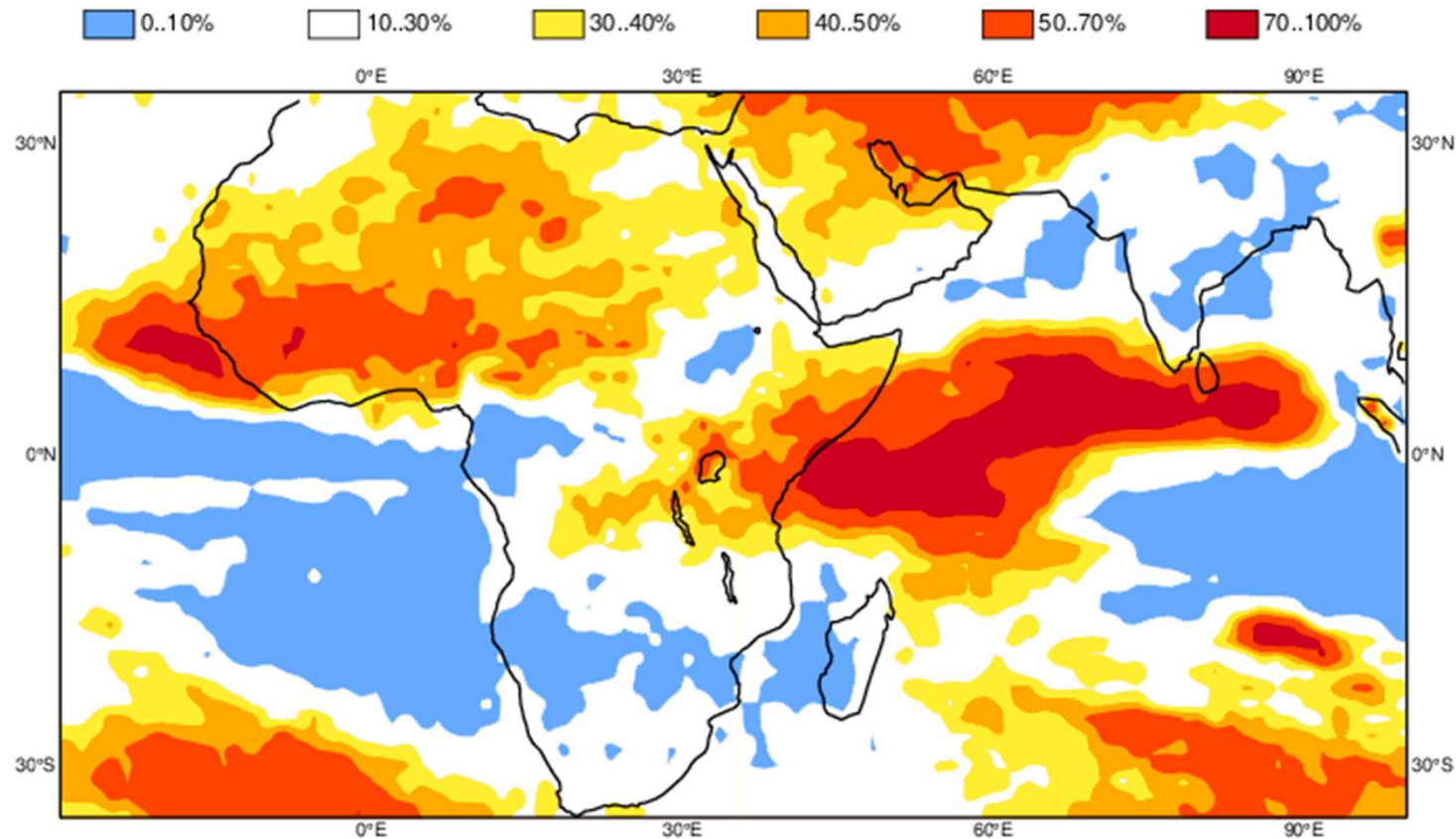
Prob(highest 20% of climatology) - precipitation

Forecast start is 01/09/26, climate period is 1993-2016

Ensemble size = 51, climate size = 600

System 5

OND 2026



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Latest forecasts – ECMWF Seas5

ECMWF Seasonal Forecast

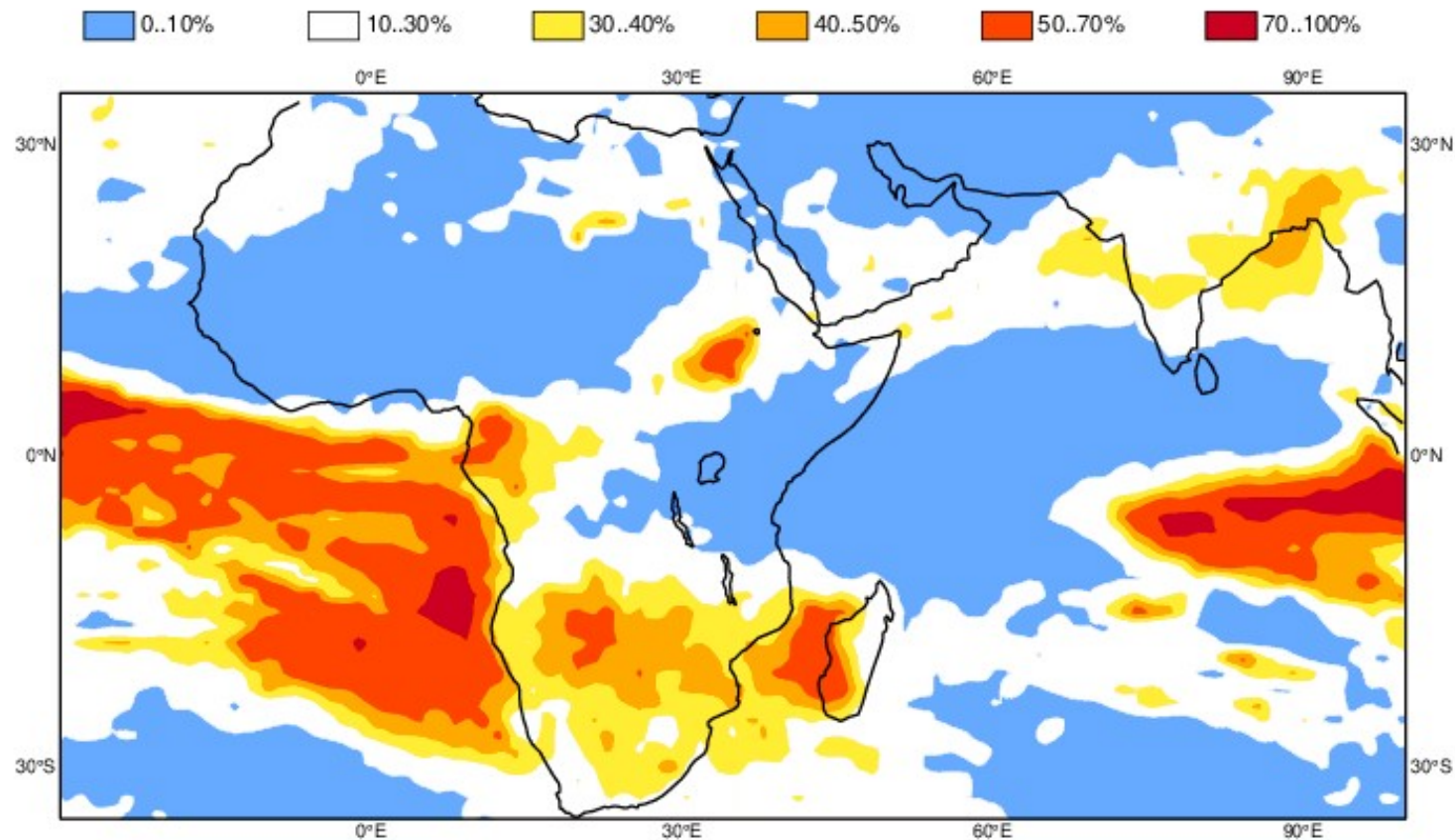
Prob(lowest 20% of climatology) - precipitation

Forecast start is 01/09/26, climate period is 1993-2016

Ensemble size = 51, climate size = 600

System 5

OND 2026



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Latest forecasts – ECMWF Seas5

ECMWF Seasonal Forecast

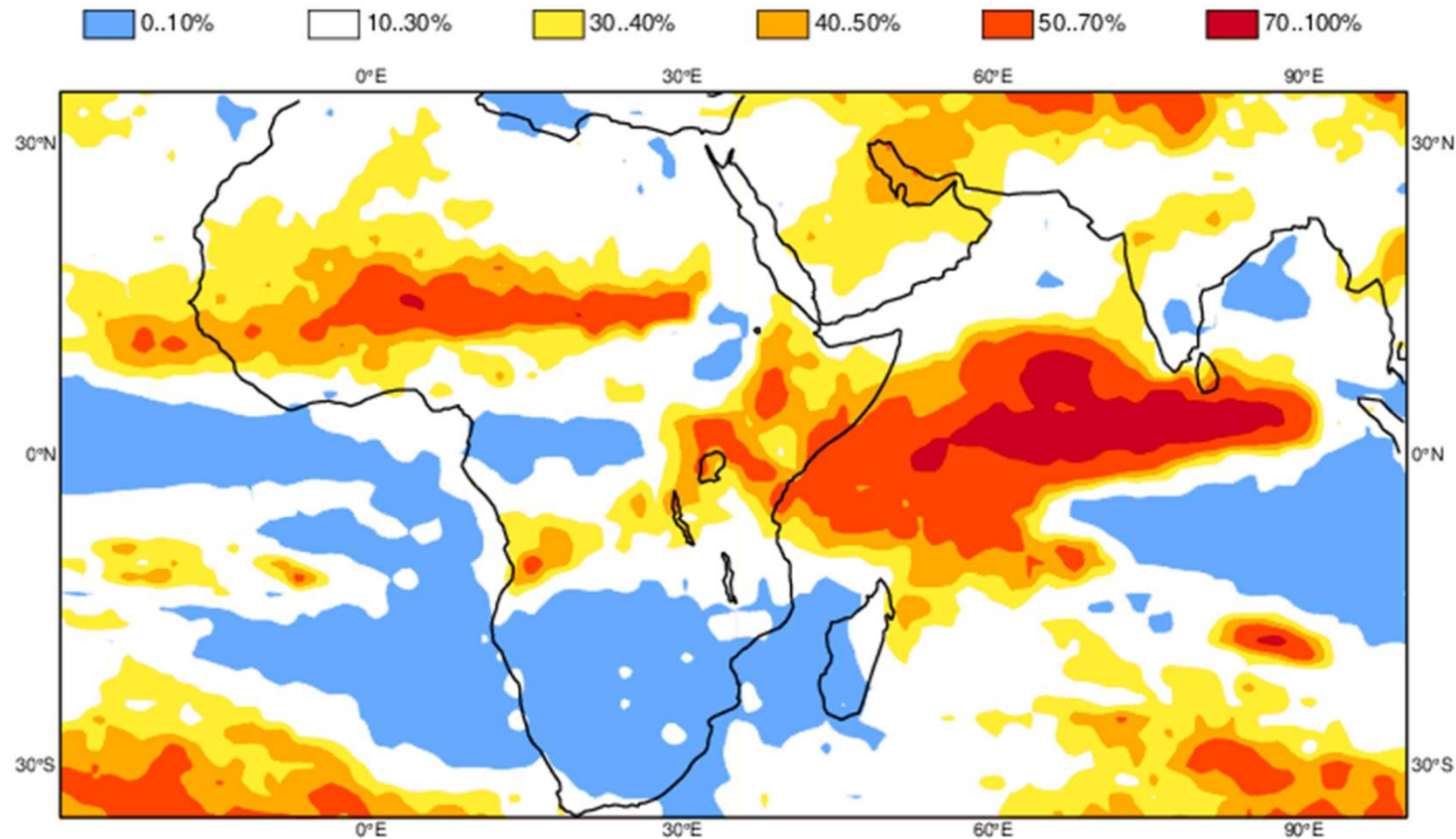
Prob(highest 20% of climatology) - precipitation

Forecast start is 01/09/26, climate period is 1993-2016

Ensemble size = 51, climate size = 600

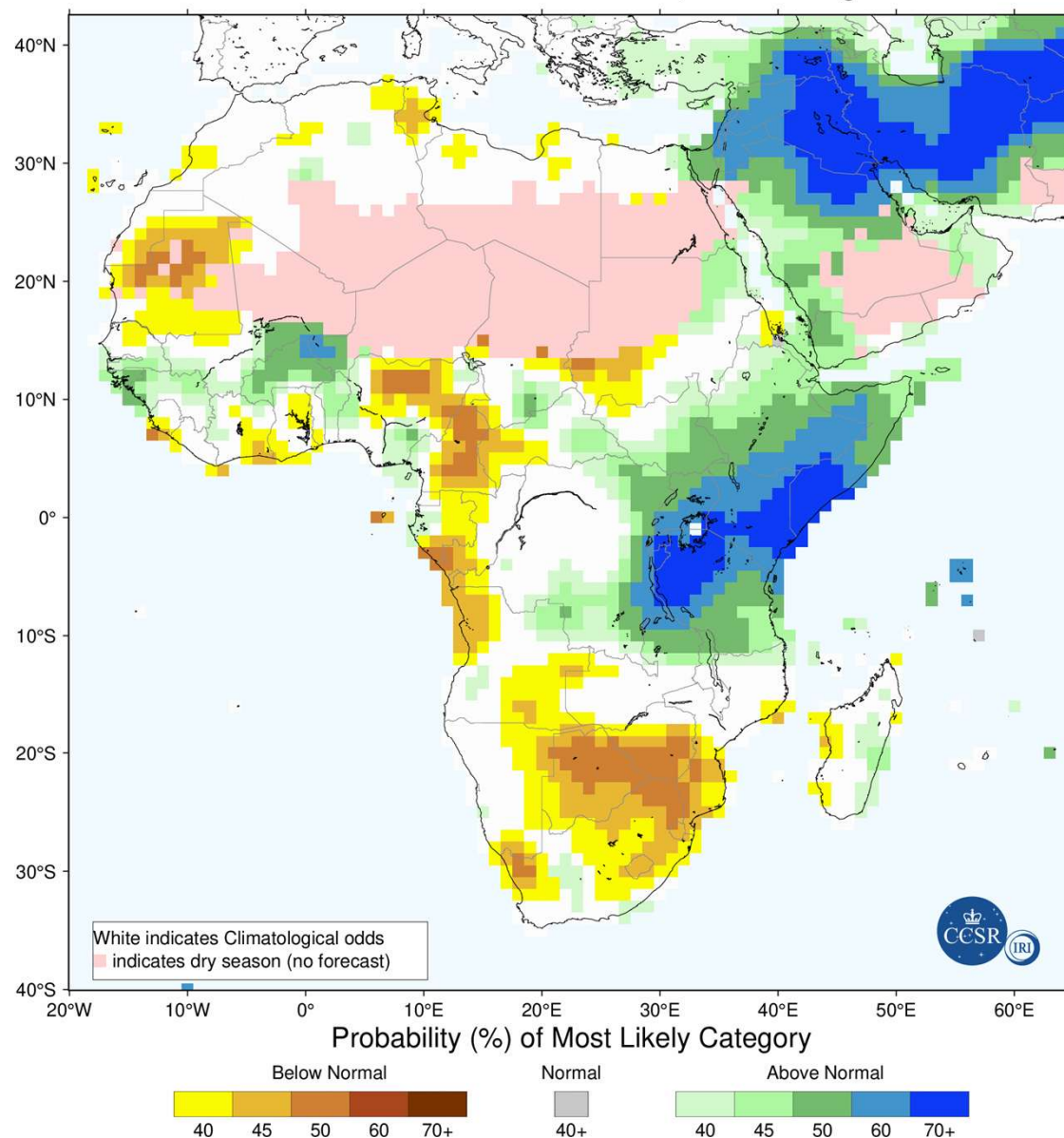
System 5

NDJ 2026/27



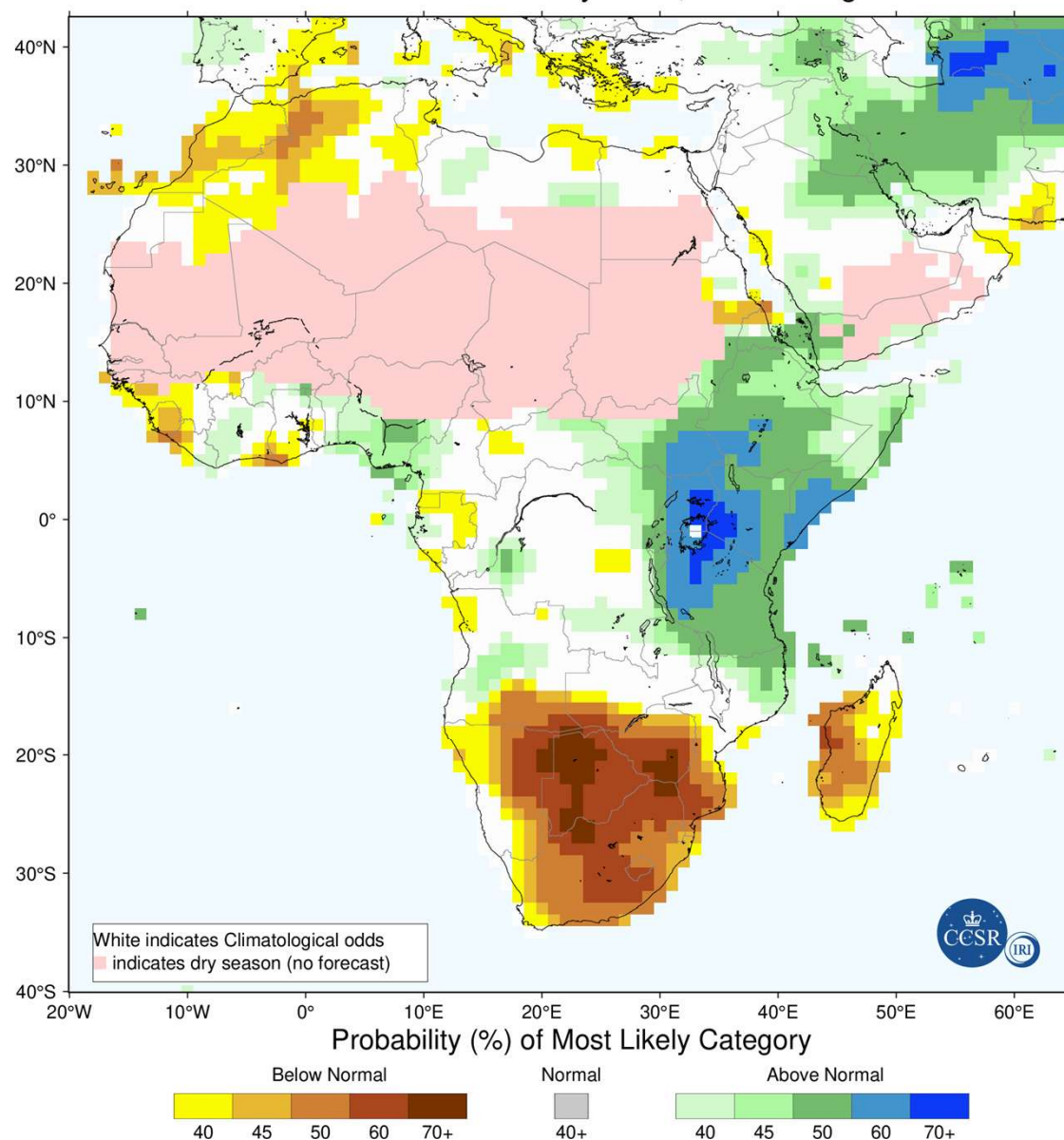
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CCSR/IRI Multi-Model Probability Forecast for Precipitation for
October-November-December 2026, Issued August 2026



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CCSR/IRI Multi-Model Probability Forecast for Precipitation for
November-December-January 2027, Issued August 2026



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Thank-you

Very happy to support further

jack@climatecentre.org