FAMINE EARLY WARNING SYSTEMS NETWORK

Mozambique

Monthly Climate and Weather

15 May 2025

Highlights

- El Niño Southern Oscillation (ENSO)-neutral conditions continued during April 2025. Near-average sea-surface-temperatures (SSTs) dominated across much of the equatorial Pacific Ocean. The ENSO outlooks anticipates ENSO-neutral to continue, with a 74% chance during June – August 2025 and persist, with over 50% chance, through August – October 2025.
- During April 2025, central Mozambique and many areas of the northern provinces received between 50-300 mm of rainfall, which was 100-500% above average. In contrast, areas in southern Mozambique recorded less than 50 mm of rainfall, which was 20-75% below average. During June – August 2025, rainfall forecasts indicate an increased chance for below-average rainfall over part of Inhambane.
- During April 2025, much of Mozambique experienced above-average maximum temperatures. Western, central, and southern Mozambique experienced above average minimum temperatures. During June – August 2025, temperature forecasts call for above average temperatures over much of Mozambique, with higher probabilities in the northern provinces and areas of the southern regions.
- During February – April 2025, northern Mozambique and pocket areas in the central and southeastern provinces experienced drier-than-average conditions, while the rest of the country experienced near-average to wetter-than-average conditions, based on the Standardized Precipitation Index (SPI). Forecasts suggest that the drier-than-average conditions should ease substantially in northern Mozambique, but may persist or even intensify in the southern provinces.
- In Mozambique, harvesting of main season cereals is nearing completion and will be finalized during May and June 2025. While maize conditions are *favourable* over areas of northwestern, western, central, and southeastern Mozambique, crop conditions are under *watch* across the north-central and northeastern provinces due to the recent passage of Tropical Cyclone JUDE and ongoing conflicts.

The FEWS NET Monthly Climate and Weather information bulletin is based on current weather and climate information and monthly and seasonal outlooks from the NOAA CPC. Information on crops, soil moisture, flooding, and evapotranspiration data were produced by FEWS NET, USGS, NASA and USDA. Various sources were used to assess impacts of extreme conditions. Questions or comments about this product may be directed to Dr. Wassila Thiaw, Head, International Desks/NOAA, wassila.thiaw@noaa.gov. Questions about the USAID FEWS NET activity may be directed to Dr. James Verdin, Program Manager, FEWS NET/USAID, jverdin@usaid.gov.

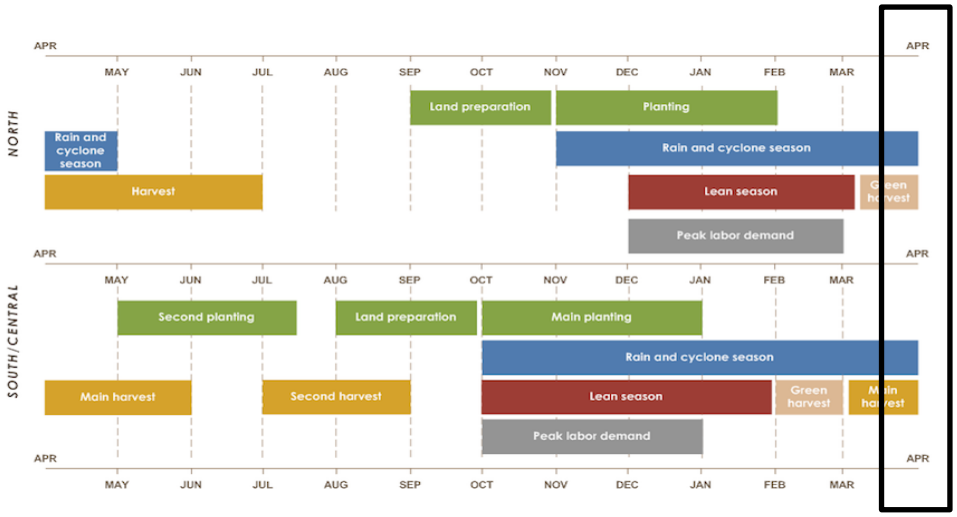


Figure 1: Seasonal calendar for Mozambique. **Source: FEWS NET**

Current Climate Modes and Teleconnections

- During April 2025, ENSO-neutral conditions continued, with near-average SSTs across much of the equatorial Pacific Ocean. Subsurface temperatures were mostly near-average in the central and eastern Pacific, but remained above-average at depth in the western Pacific.
- The ENSO outlook indicates that ENSO-neutral conditions will continue with a 74% chance during June – August 2025 and persist with more than 50% chance through August – October 2025 (**Fig. 2**). The latest update of the NOAA Climate Prediction Center's ENSO diagnostic discussion can be found here.

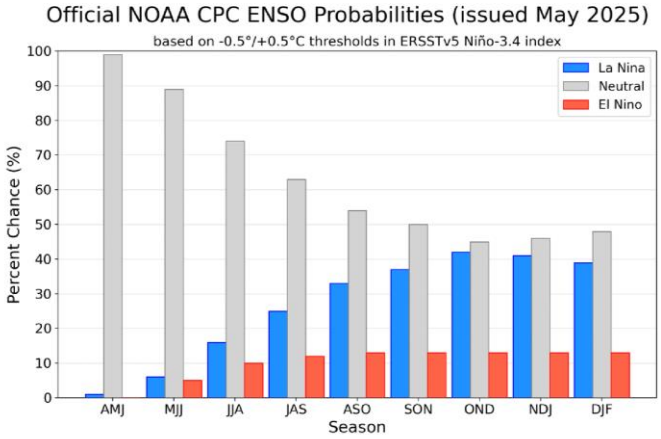


Figure 2: Official CPC ENSO probabilities outlook. **Source: NOAA/NCEP**

Extreme Events

- Over the past 30 days, an anomalous low-level cyclonic circulation, located over the southern part of the Channel of Mozambique, resulted in stronger-than-average southwesterly winds in southern Mozambique.

Rainfall/Precipitation

Past 3 months (February - April 2025):

- **Totals:** Central and northern Mozambique received between 100-750 mm of rainfall, while the southern and southeastern regions generally recorded less than 100 mm of rainfall (**Fig. 3a**).
- **Anomalies:** Most provinces of central, western, and northern Mozambique recorded rainfall accumulation between 20-300% above average, whereas Maputo, Gaza, and part of Inhambane received rainfall amounts 20-75% below average (**Fig. 3b**).

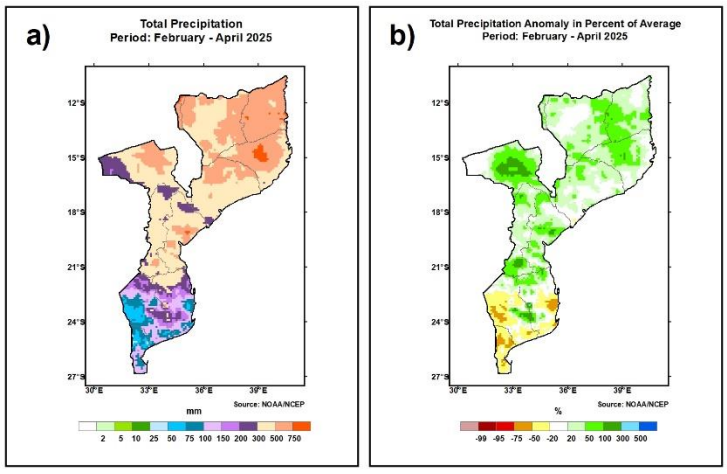


Figure 3: Spatial distribution for February - April 2025 (a) total precipitation and (b) total precipitation anomaly in percent of average. **Source: NOAA/NCEP**

Past 1 month (April 2025):

- **Totals:** Central Mozambique and many areas in the northern provinces registered rainfall between 50-300 mm (**Fig. 4a**). In contrast, many areas of Maputo, Gaza, Inhambane, Nampula, and Niassa in the southern regions received less than 50 mm of rainfall.
- **Anomalies:** Much of central and northern Mozambique experienced rainfall between 100-500% above average, while pocket areas of Maputo, Gaza, Inhambane, Nampula, and Niassa recorded rainfall 20-75% below average (**Fig. 4b**). Sofala saw rainfall totals of 352% above average (**Table 1**).

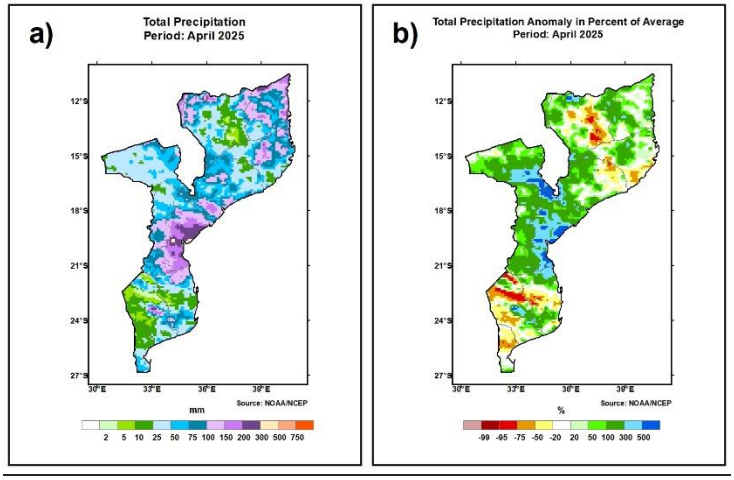


Figure 4: Spatial distribution for April 2025 (a) total precipitation and (b) total precipitation anomaly in percent of average. **Source: NOAA/NCEP**

Monthly and Seasonal Forecasts (June 2025 and June – August 2025):

- **Monthly:** Rainfall forecasts favor below-average rainfall over Manica and areas of Sofala during June 2025.
- **Seasonal:** Rainfall forecasts indicate that there is an increased chance for below-average rainfall over part of Inhambane during June – August 2025 (**Fig. 5**).

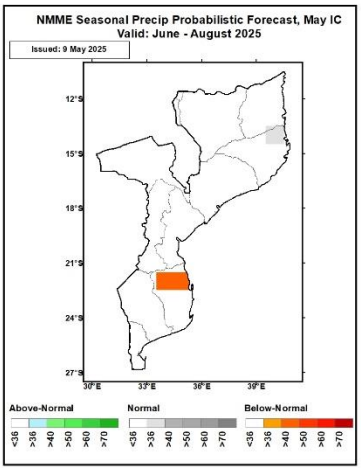


Figure 5: Rainfall forecast for June – August 2025. **Source: NOAA/NCEP**

Table 1: Total rainfall and anomalies for the past three months and one month and seasonal rainfall climatology and anomaly forecast over provinces of Mozambique.

Location	Past 3-Month		Past 1-Month		Seasonal Forecast	
	Total (mm)	Anomaly (%)	Total (mm)	Anomaly (%)	Climatology (mm)	Anomaly (mm)
Cabo Delgado province	614	45	105	81	72	1
Gaza province	134	-9	32	22	37	-1
Inhambane province	206	7	55	77	54	-6
Manica province	353	44	76	160	58	-5
Maputo province	98	-38	34	-12		
Nampula province	563	39	71	43	96	1
Niassa province	508	34	54	59	41	-3
Sofala province	425	40	157	352	63	-3
Tete province	402	52	47	188	31	-1
Zambézia province	450	27	73	98	106	3

Temperature

Past 3 months (February - April 2025):

- **Maximums:** Western, central, southeastern, and northwestern Mozambique experienced maximum temperatures between 1-3°C above average, while the rest of the country experienced near-average conditions (**Fig. 6a**).
- **Minimums:** Western and southern Mozambique experienced minimum temperatures 1-2°C above average, whereas part of Niassa experienced minimum temperatures 1-2°C below-average (**Fig. 6b**).

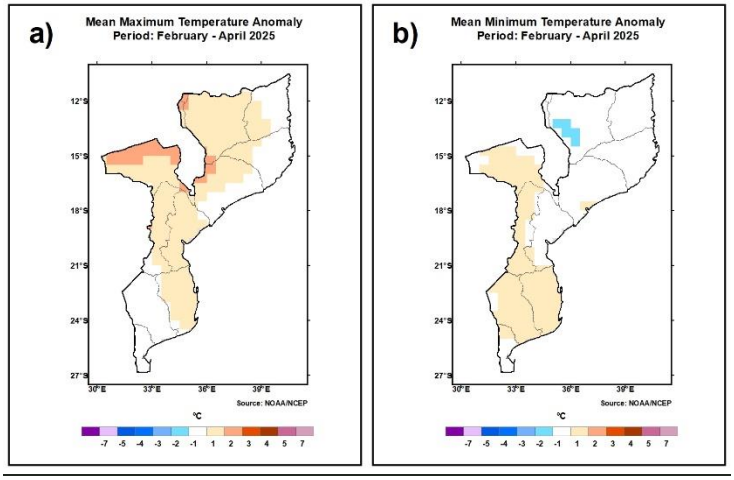


Figure 6: Spatial map for February - April 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Past 1 month (April 2025):

- **Maximums:** Much of Mozambique experienced maximum temperatures 1-3°C above average (**Fig. 7a**). Southernmost and northeastern Mozambique experienced near-average conditions.
- **Minimums:** Western, southern, and north-central Mozambique experienced minimum temperatures 1-3°C above average (**Fig. 7b**). Inhambane recorded minimum temperatures 2.3°C above average (**Table 2**).

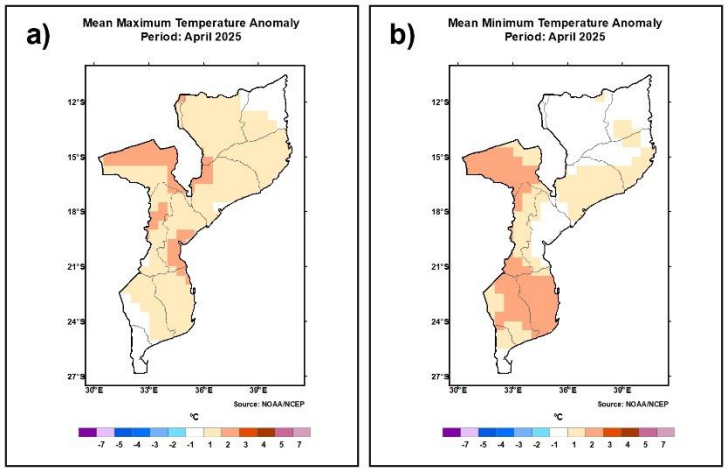


Figure 7: Spatial map for April 2025 (a) mean maximum temperature anomaly and (b) mean minimum temperature anomaly. **Source: NOAA/NCEP**

Monthly and Seasonal Forecasts (June 2025 and June – August 2025):

- **Monthly:** Temperature forecasts call for above-average temperatures across northern Mozambique and pocket areas of the southern provinces during June 2025.
- **Seasonal:** Temperature forecasts favor above-average temperatures across much of Mozambique during June – August 2025 (**Fig. 8**). Probabilities for above-average temperatures exceed 50% across northeastern Mozambique and parts of the central and southern regions.

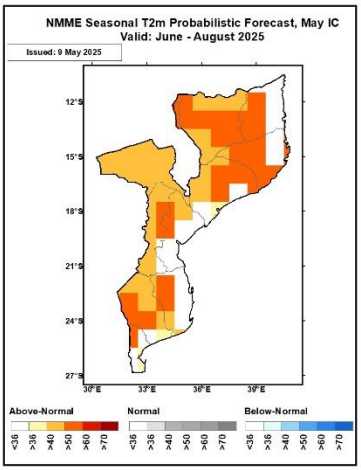


Figure 8: Spatial map for June – August 2025 mean temperatures forecast. **Source: NOAA/NCEP**

Table 2: Maximum temperature and minimum temperature and anomaly for the past three months and one month and seasonal mean temperatures and anomaly forecast over provinces of Mozambique.

Location	Past 3-Month		Past 1-Month		Seasonal Forecast	
	Max/Min Temp (°C)	Max/Min Anomaly (°C)	Max/Min Temp (°C)	Max/Min Anomaly (°C)	Temp (°C)	Above/Below-average (°C)
Cabo Delgado province	30/22	0.8/0.5	30/22	0.7/0.7	22	0.3
Gaza province	32/22	0.7/1.3	31/20	1.1/2	20	0.4
Inhambane province	31/23	1.2/1.7	30/22	1.8/2.3	21	0.4

Manica province	30/21	1.3/1.2	29/20	1.7/1.9	18	0.4
Maputo province	30/21	0/0.8	29/20	-0.1/1.2		
Nampula province	31/22	0.9/0.5	30/22	1.4/1	21	0.3
Niassa province	29/19	1.7/-0.4	29/19	1.6/0.1	19	0.4
Sofala province	31/22	1.5/0.5	31/21	1.9/0.9	21	0.4
Tete province	30/21	1.9/1	30/21	2.1/2	19	0.3
Zambézia province	31/22	1.2/0.7	30/21	1.5/1.2	20	0.3

Flooding and Areas of Inundation

- Currently, there is no major flooding in Mozambique.
- Over the next 30 days, the risks for flooding are minimal to non-existent for Mozambique.

Drought and Dryness

The Standardized Precipitation Index (SPI) is used to characterize meteorological drought. SPI compares the precipitation over a specific period of time with the climatology from that same period. Therefore, the SPI values can be thought of as the number of standard deviations that the observed anomaly deviates from the climatology. The 1-month SPI values are a good representation of the monthly precipitation anomaly as well as the soil moisture and vegetation health. The 3-month SPI values are a good representation of seasonal precipitation anomalies. The Standardized Precipitation Evapotranspiration Index (SPEI) is similar to the SPI, but it also takes evapotranspiration into account (and therefore the impact of temperatures on water demand).

Past 3 months (February – April 2025):

- Northern Mozambique and pocket areas of the central, north-central, and southeastern regions experienced drier-than-average conditions, while the remainders of the country experienced near-average to wetter-than-average conditions (**Fig. 9a**).

Past 1 month (April 2025):

- Local areas of Niassa, Zambézia, Inhambane, and Gaza experienced drier-than-average conditions, whereas most areas of Mozambique experienced wetter-than-average conditions (**Fig. 9b**).

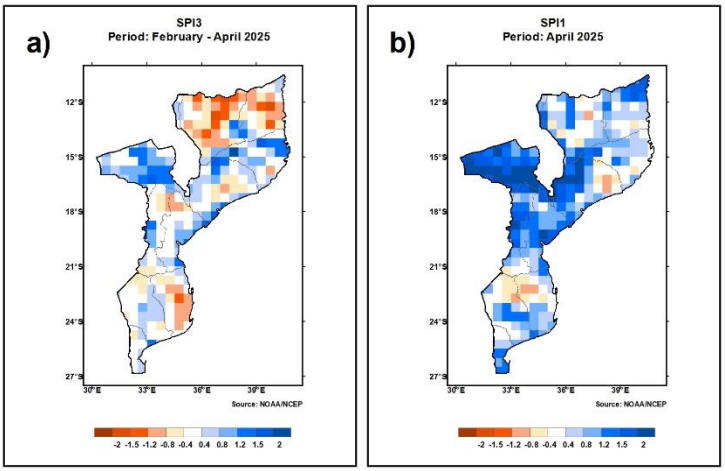


Figure 9: Spatial structure of (a) February - April 2025 Standardized Precipitation Index (SPI) and (b) April 2025 SPI. **Source: NOAA/NCEP**

Current/Forecast (28 February – 28 May 2025):

- SPI forecast, which is constructed from observed precipitation from 28 February to 30 April 2025 and forecasted rainfall data from 1 May to 28 May 2025 suggests that the drier-than-average conditions could ease substantially in northern Mozambique, but may persist or even intensify in the southern provinces (**Fig. 10**).

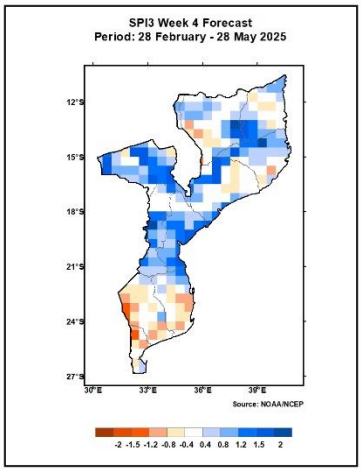


Figure 10: Spatial structure of SPI constructed from observations for 28 February to 30 April 2025 and 4 weeks forecast ending on 28 May 2025. **Source: NOAA/NCEP**

Normalized Difference Vegetation Index (NDVI)

NDVI is a measure of vegetation health, where high NDVI values are indicative of healthy, dense vegetation, and low NDVI values are indicative of less or no vegetation. Therefore, negative NDVI anomalies suggest deteriorated vegetation health relative to the long-term average.

Current (21 – 30 April 2025):

- NDVI values exceeded 110% of the long-term average values, indicating favorable vegetation conditions over western Mozambique and most areas of the southern provinces and Nampula (**Fig. 11**). In contrast, NDVI values varied between 70-90% of the average values, indicating stressed vegetation over isolated areas of Maputo, Gaza, Zambézia, Niassa, and Cabo Delgado.

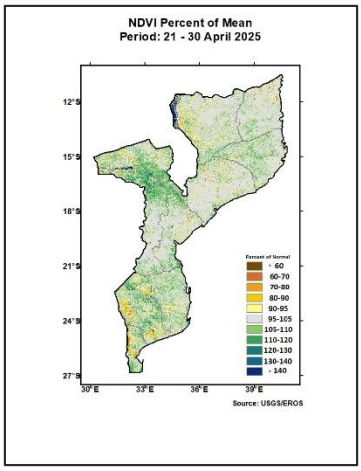


Figure 11: Spatial structure of NDVI anomaly for 21 – 30 April 2025. **Source: USGS/EROS**

Water Requirement Satisfaction Index (WRSI)

- As of late April 2025, WRSI values are expected to be over 130% above the median WRSI values in southwestern Mozambique, but are anticipated to range 70-90% of the median WRSI values over pocket areas of southern, southeastern, central, and western Mozambique by the end of the growing season.

GEOGLAM Crop Monitor

- Harvesting of main season cereals is nearing completion and will be finalized during May and June 2025 in Mozambique. While maize conditions are *favourable* over areas of western, central, southern, and northwestern Mozambique, crop conditions are under *watch* over many areas of Zambézia, Nampula, and Cabo Delgado due to the recent passage of Tropical Cyclone JUDE and ongoing conflicts.

Additional Resources

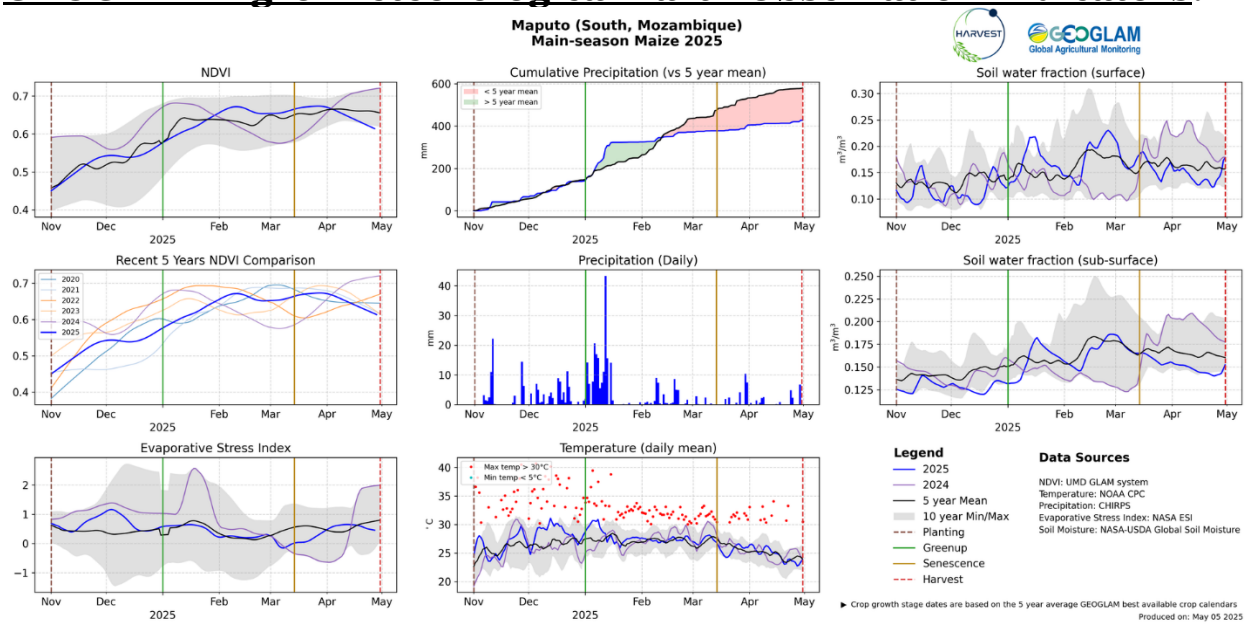
https://www.inam.gov.mz/index.php/pt/

https://www.sadc.int/pillars/meteorology

https://fews.net/southern-africa/mozambique

Annex

GEOGLAM Agro-meteorological Earth Observation Indicators:



[Crop Type] Maize
[Location]: Maputo