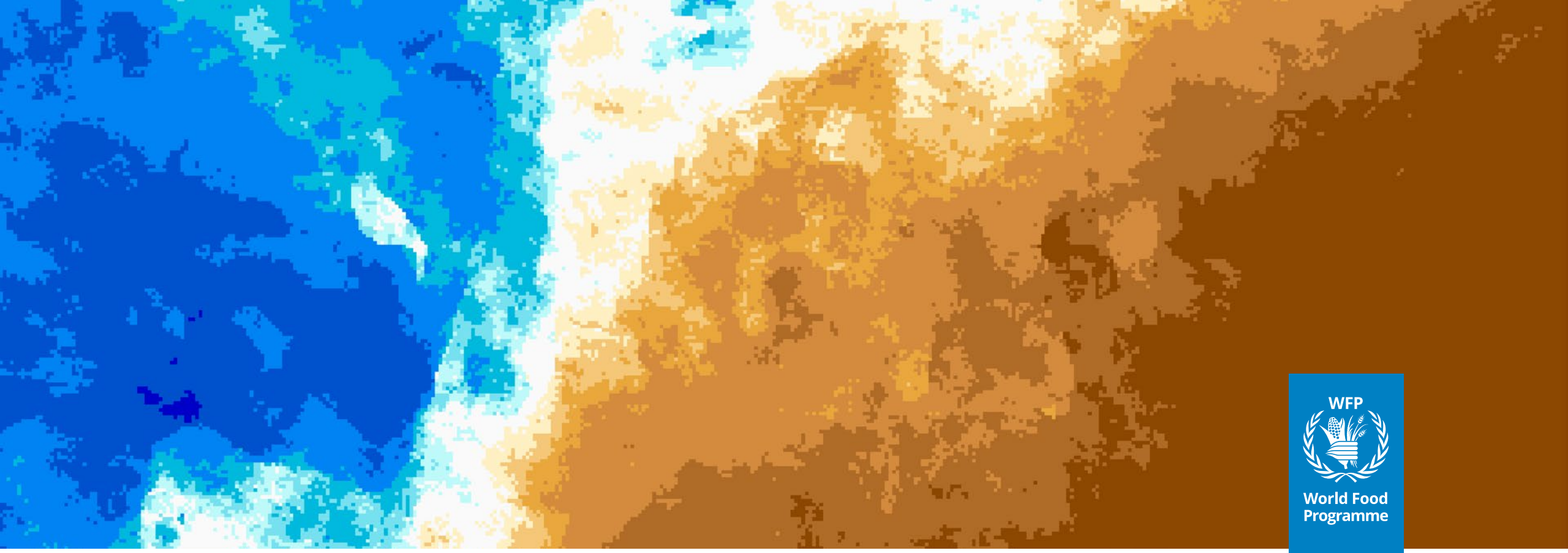

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Global Seasonal Outlook

March 2025

KEY HIGHLIGHTS

MENA REGION

Drought intensifies across the Maghreb, Syria, and Iraq, worsening water shortages and threatening crop production and water supply

CENTRAL ASIA

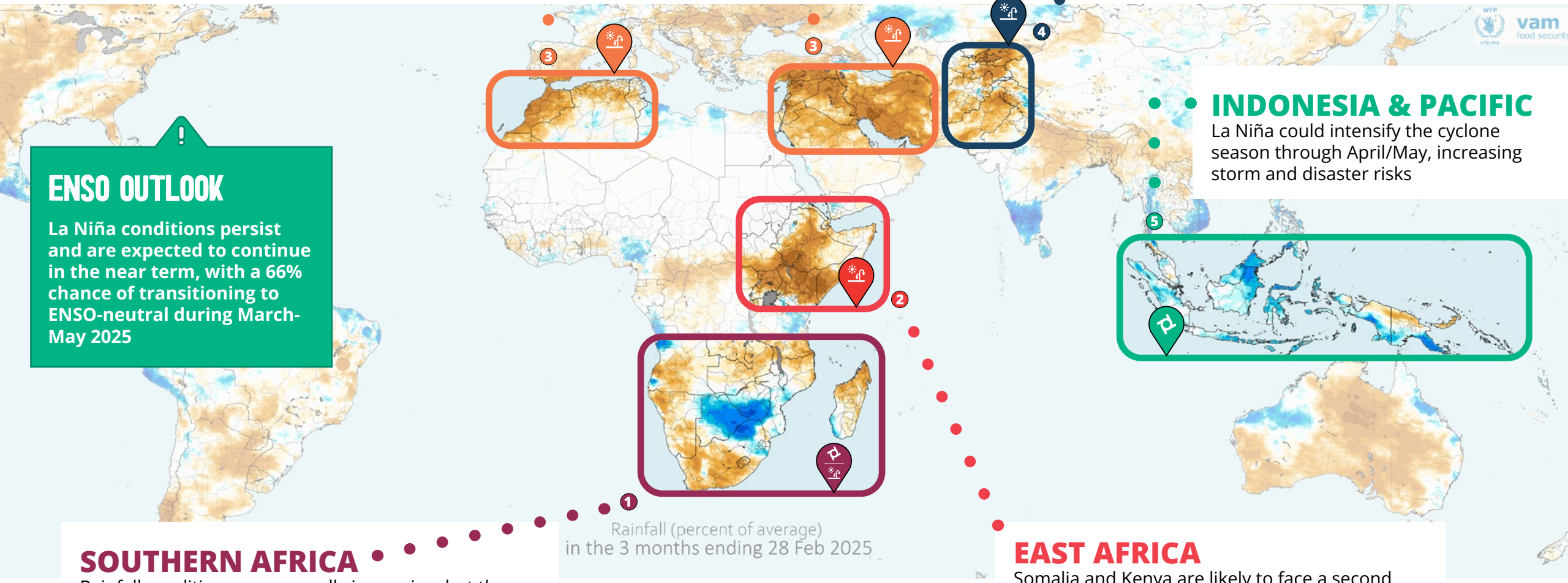
Afghanistan's prolonged drought worsens, depleting water resources and threatening crop production

ENSO OUTLOOK

La Niña conditions persist and are expected to continue in the near term, with a 66% chance of transitioning to ENSO-neutral during March-May 2025

INDONESIA & PACIFIC

La Niña could intensify the cyclone season through April/May, increasing storm and disaster risks



SOUTHERN AFRICA

Rainfall conditions are generally improving, but the risk of a second consecutive drought persists in parts of Angola, Namibia, Zambia, and Malawi. The tropical storm season remains active, with further events likely

EAST AFRICA

Somalia and Kenya are likely to face a second consecutive dry season, with below-average rainfall expected for March-May, threatening crops and pastures

SOUTHERN AFRICA

Seasonal Rainfall Calendar

Southern Africa	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Improving Rainfall Conditions

The 2023-2024 El Niño event severely impacted Southern Africa, leading to a severe and widespread drought across much of the region, major crop failures and national emergency declarations in Botswana, Lesotho, Namibia, Malawi, Zambia and Zimbabwe.

Under La Niña conditions like those in place since late 2024, the expectation was for a favourable rainfall season and a recovery in crop production after the disastrous previous season. Historical data shows that La Niña seasons are systematically associated with improvements in regional crop production.

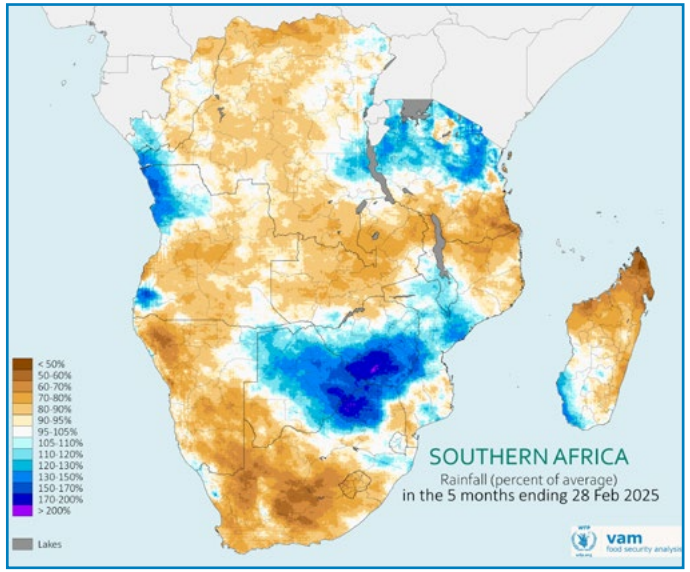
However, the current rainfall season is not unfolding as expected. In the early months, most of the region has experienced significantly below-average rainfall, except for part of Zimbabwe and Mozambique, northwestern South Africa, and western Botswana.

This has resulted in disruptions to the 2024-2025 agricultural season, resulting in low soil moisture, delayed planting, and poor early crop development.

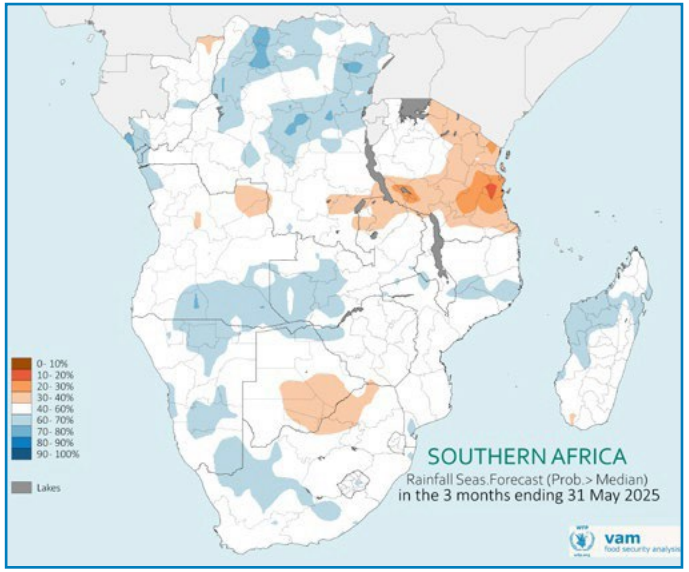
With much better rains observed since January and early March forecasts indicating significant rainfall across the region, some concerns have been alleviated. However, sustained rainfall throughout March remains crucial. Seasonal forecasts for **March to May 2025** suggests broadly close to slightly above average rainfall across the region – if these forecasts hold, a recovery in crop development and water resources will ensue, but the poor start to the season may leave an impact on crop production and pasture perspectives.

Long-term drought impacts continue to affect Angola and Namibia. The **Kariba and Cahora Bassa reservoirs** remain at **historical low levels**, posing considerable challenges to energy production and irrigation in Zambia and Zimbabwe.

For a deeper dive into the details, check out the Southern Africa Seasonal Monitor report from WFP Regional Bureau Johannesburg



Rainfall from **October 2024** to **February 2025**, as a proportion of the long-term average. Blue and purple (orange and brown) shades correspond to above (below) average rainfall



Rainfall forecast for the 3-month periods **March-May 2025** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions

SOUTHERN AFRICA

Tropical storms and Cyclones

A key feature of this rainy season in Southern Africa has been the impact of multiple tropical storms and cyclones, which have brought severe flooding, strong winds, and widespread damage since December 2024.

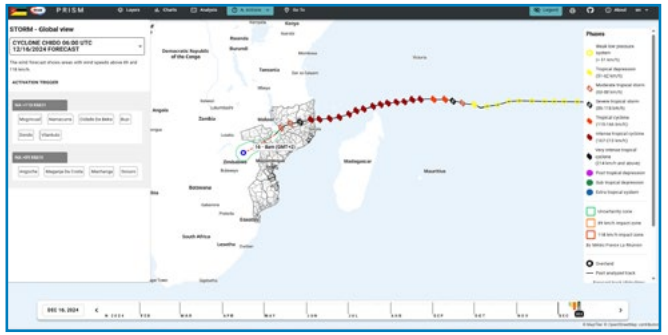
The region has already been affected by few tropical systems, impacting Madagascar, Mozambique, and parts of Malawi.

These storms have caused heavy rainfall and flooding, particularly in northern and eastern Madagascar, northeastern and central Mozambique.

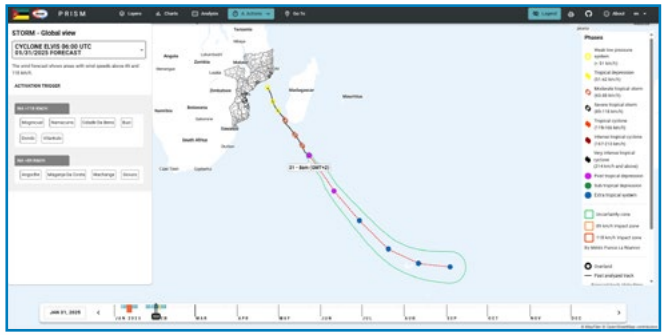
Intense rainfall brought by these storms affects mostly coastal regions and is less than useful for crop production as it is too concentrated and intense, and frequently destructive due to accompanying strong winds.

The Southwest Indian Ocean (SWIO) is a key tropical cyclone basin that influences rainfall patterns across Southern Africa. The SWIO cyclone season (November–April) coincides with the region's main rainy season, and tropical storms forming over the Mozambique Channel and western SWIO can significantly impact rainfall distribution. **Tropical cyclones** contribute to heavy rainfall and flooding, particularly in **Mozambique, Madagascar**, sometimes extending inland to Zimbabwe, Malawi, and Zambia. Cyclones that track southward or remain over the ocean can pull moisture away, reducing rainfall over mainland Southern Africa, worsening drought conditions. The positioning of tropical systems influences the strength of the monsoon flow key driver of seasonal rainfall.

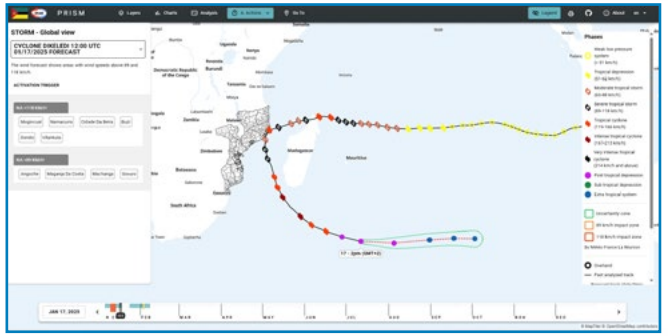
TROPICAL CYCLONE CHIDO



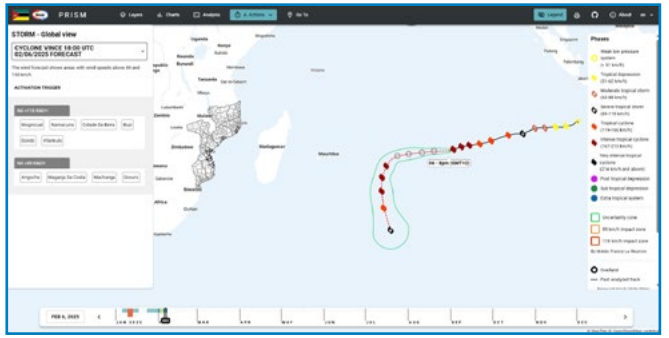
TROPICAL STORM ELVIS



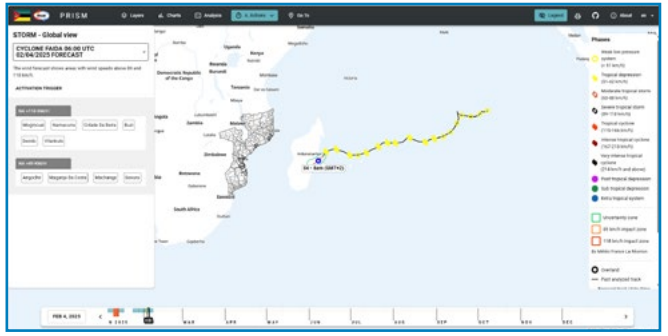
TROPICAL CYCLONE DIKELEDI



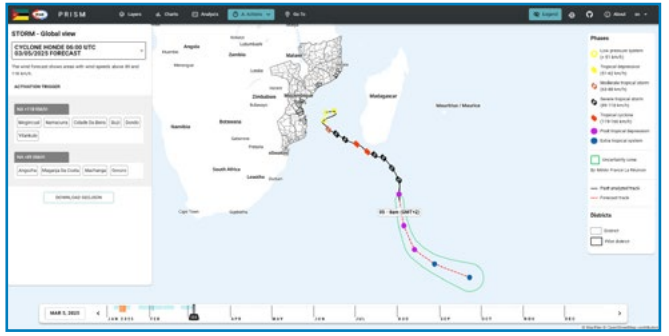
TROPICAL STORM VINCE



TROPICAL CYCLONE FAIDA



TROPICAL CYCLONE HONDE



CENTRAL ASIA

Seasonal Rainfall Calendar

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Central Asia												

Prolonged Drought Raises Concerns

Serious drought conditions are affecting vast areas of the Central Asia region. Very severe rainfall deficits have been recorded over the past five months (till end of February 2025) and seasonal forecasts indicate continued dryness for the coming three months (March to May 2025).

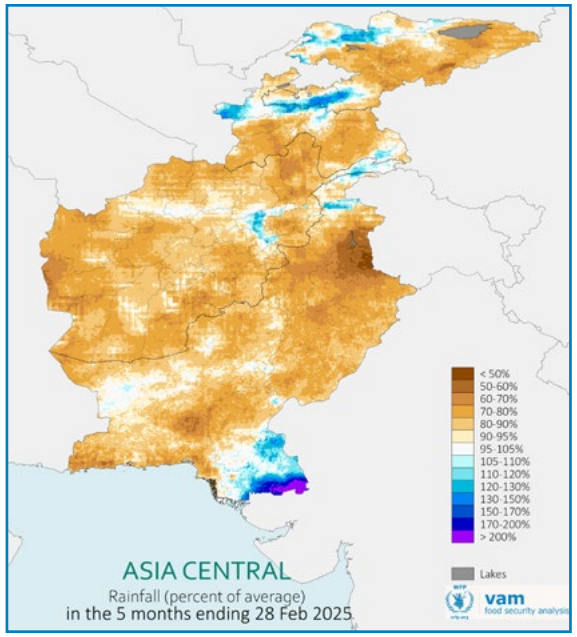
The worst affected areas include **Afghanistan** and **Pakistan**, which have received less than 50% of the usual rainfall over the past few months. These conditions extend across the region with **Tajikistan** and **Kyrgyzstan** also being affected, threatening irrigated crop production, water availability, and pastoral livelihoods across the region.

The **seasonal forecast** for the next three months (ending May 2025) shows a continued tendency for below-average rainfall, particularly affecting northwestern Afghanistan, eastern Kyrgyzstan and western Pakistan. While above-average rainfall is expected until mid-March, it won't be enough to fully offset existing deficits. This reinforces concerns over limited water availability, poor soil moisture, and deteriorating agricultural conditions, as critical snowmelt contributions are also expected to decline.

Expectations are now for severe impacts on smallholder crop production and large-scale irrigated wheat production in northwestern Afghanistan. Some impacts may be felt in Pakistan irrigated sector due to reduced river flow and snowmelt in northern highlands.

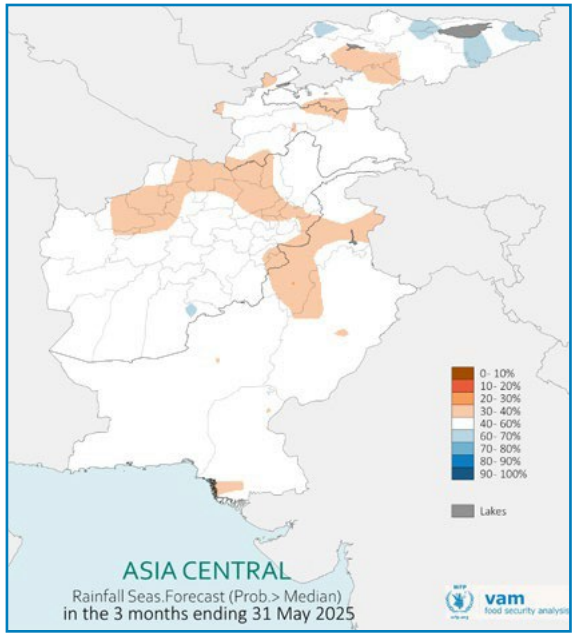
While these are typical **La Niña patterns**, the impacts that are playing out are quite severe even if the current La Nina event only has weak to moderate intensity. Furthermore, they follow a recent period of extremely dry and hot seasons from 2020 to 2023, that led to some of the worst droughts in decades and which resulted from a sequence of three consecutive La Nina events.

The impacts from the current season drought will build upon and be enhanced by the lingering impacts from these recent droughts.



Rainfall from **October 2024 to February 2025**, as a proportion of the long-term average.

Blue and purple (orange and brown) shades correspond to above (below) average rainfall



Rainfall forecast for the 3-month periods **March-May 2025**. as the likelihood of exceeding the long-term median.

Blue (orange) shades for likely wetter (drier) than usual conditions

MENA REGION

Seasonal Rainfall Calendar

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mena Region												

Widespread Dry Conditions

Throughout the MENA region from Morocco to Iraq, the past few months have been characterized by severe rainfall deficits. While below average rains are typical of La Niña years in these regions, conditions have been extremely dry. J**ordan**, **Syria**, **Morocco**, **Turkey**, and **Iraq**, have been particularly affected, resulting in negative im- pacts on crop production and low water availability.

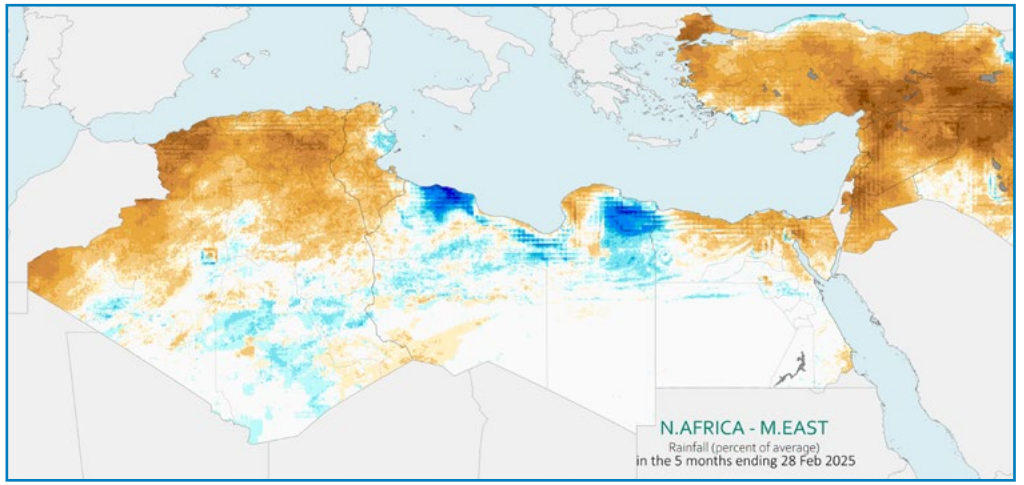
Iraq: Declining water levels in the Tigris and Euphrates, driven by climate patterns, management issues, and reduced inflows—worsened by below-average rainfall in Turkey's headwaters—are deepening Iraq's irrigation crisis and straining agriculture.

Syria: Drought conditions have persisted since 2021, worsening in late 2023 and early 2024. Persistent below-average rains during the cropping season of 2024-25 will further impact agriculture and water resources.

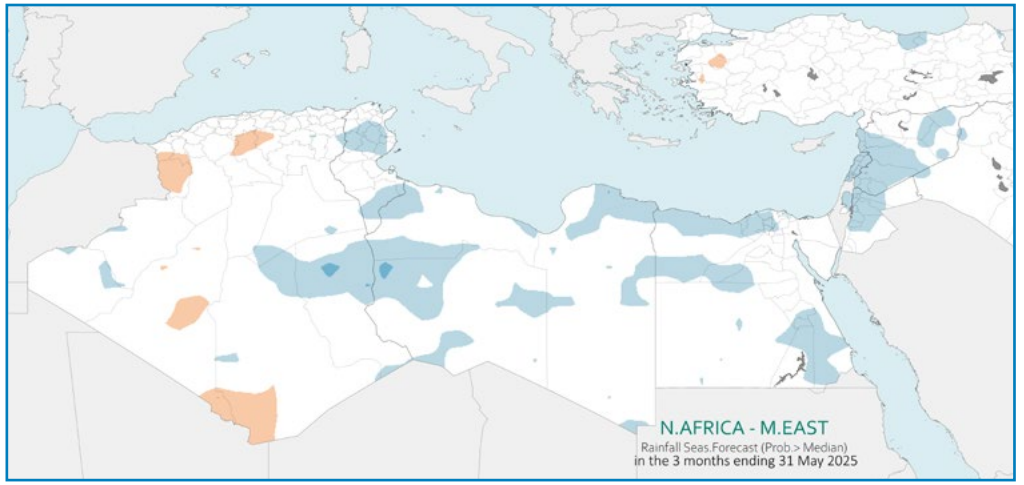
Morocco: Below-average rainfall in 2024, combined with high temperatures and ongoing dryness expected through mid-2025, is set to disrupt Morocco's main crop- ping cycle and deepen long-term drought impacts. Consecutive years of poor harvests since 2022, along with worsening water shortages are increasing pressure on food security and rural livelihoods.

Outlook

The short-term forecast for early March in North Africa and the Middle East suggests mixed conditions, with beneficial rains in Morocco, Iraq, Syria, and Jordan. However, sustained rainfall is needed to ease ongoing water stress. Forecast for March to May 2025 indicates broadly close to slightly above average rainfall across the region, a notable shift from previous dry conditions. If these forecasts hold, they could support recovery in crop development and water resources, alleviating drought concerns. However, the poor start to the season may still leave an impact on overall crop production and pasture conditions, and sustained rainfall through March will be critical for meaningful improvements.

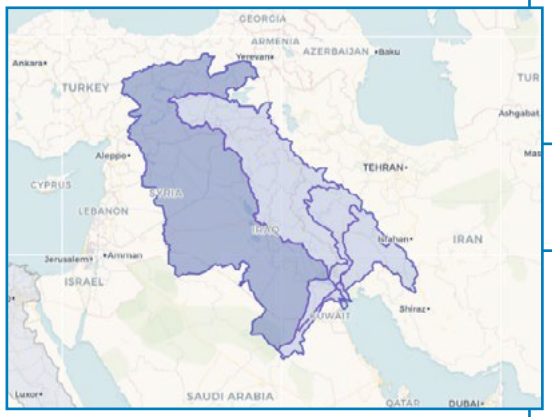


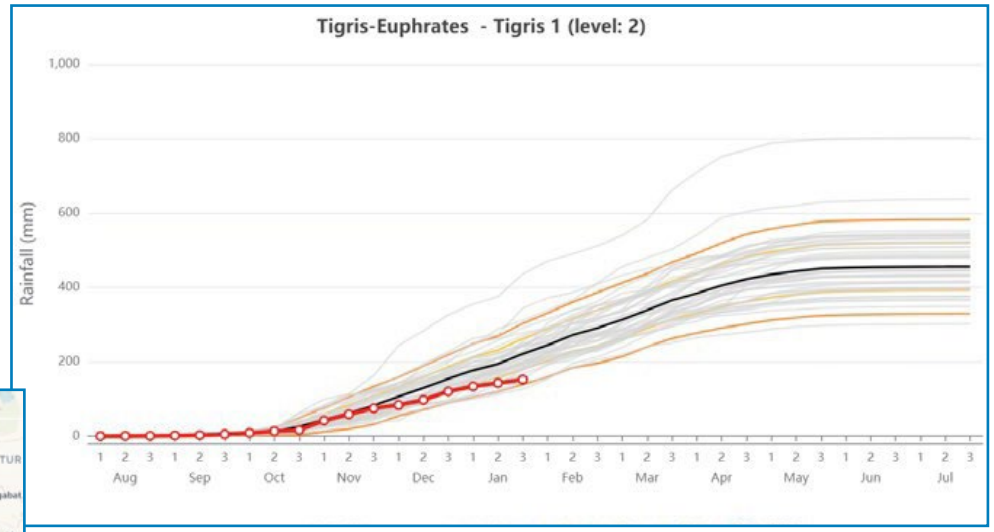
Rainfall from **October 2024** to **February 2025**, as a proportion of the long-term average. Blue and purple (orange and brown) shades correspond to above (below) average rainfall

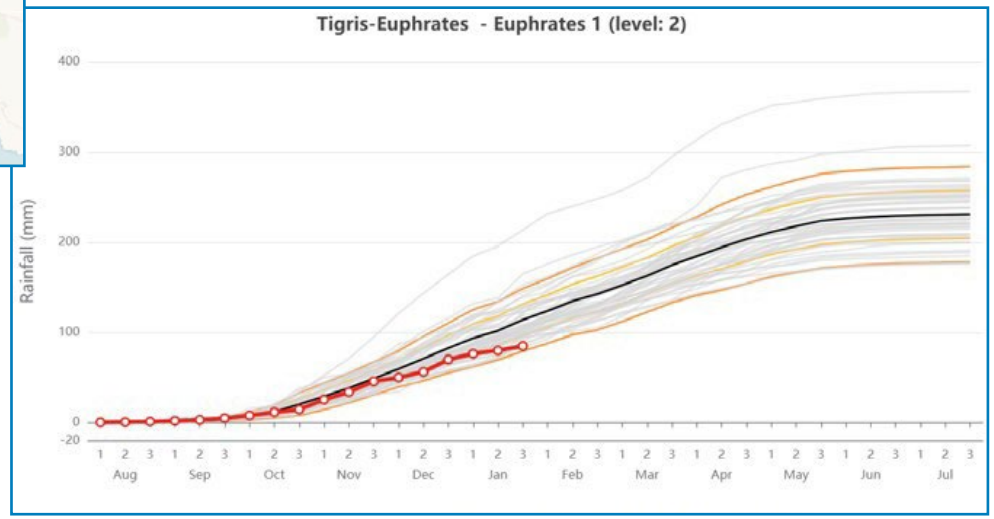


Rainfall forecast for the 3-month periods **Mar-May 2025** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions

MENA REGION







Low Levels in Major Rivers

The **Tigris** and **Euphrates Basin** supports extensive agricultural activities across **Turkey**, **Syria**, **Iraq**, and **Iran**. Current and long term data shows that cumulative basin rainfall is well below the historical average and tracking near 45 years historical lows.

Seasonal forecasts point to the continuation of significantly drier than average conditions across this basin for the coming months. As a result, key agricultural and food security concerns will emerge.

Reduced water availability for irrigation: Lower river discharge and declining reservoir levels may affect wheat, maize, and rice production, impacting both small-scale and commercial farming.

Crop stress and yield reductions: Insufficient rainfall, combined with limited irrigation, could lead to lower yields, reducing food supply.

Soil degradation and drought risks: Prolonged dry conditions may accelerate soil salinization, erosion, and desertification, threatening long-term agricultural productivity.

Food security concerns: Declining crop production may result in higher food prices, drinking water supply shortages, and increased vulnerability for rural communities reliant on agriculture for livelihoods.

EAST AFRICA

Seasonal Rainfall Calendar

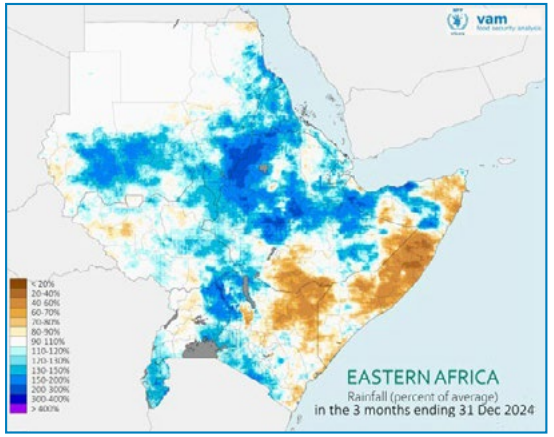
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		HOA Long Rains, Ethiopia (Belg)							HOA Short Rains		

Drought in the Horn

Rainfall Patterns in Late 2024 (Short Rains / Deyr)

During late 2024 (October–December), variable conditions were observed in the region: Burundi, Sudan and South Sudan received above-average rainfall while **below-average rainfall** was observed in **Somalia**, **Kenya** and **Southern Ethiopia,** aligning with La Niña conditions. Rainfall was late and below average, with some areas receiving less than 60% of the typical amounts, particularly in southern Somalia and eastern Kenya.

A brief surge in rainfall during late November provided short-lived relief, but December saw a sharp return to drier conditions, preventing crop maturation. Vegetation data shows stress conditions in rainfed agricultural zones of Kenya and Somalia, where poor soil moisture retention and high temperatures led to crop failures.

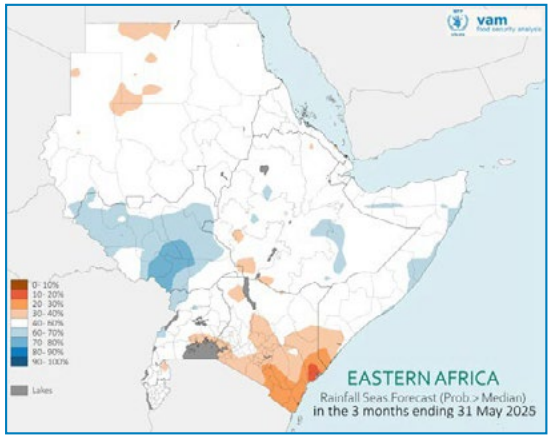


Rainfall from **October** to **December 2024**, as a proportion of the long-term average. Blue and purple (orange and brown) shades correspond to above (below) average rainfall

Outlook

Early March is expected to bring poor rainfall, marking a dry start to the season, especially in Somalia, eastern Kenya, and southern Ethiopia. The March-May 2025 forecast projects below-average rainfall in southern Kenya and Somalia, heightening concerns over worsening drought, strained agriculture, and water shortages.

While this forecast aligns with historical La Niña-driven dry conditions in Eastern Africa, this year's situation is unique. The late-developing La Niña event, coupled with unusually warm conditions in the western Pacific, introduces higher uncertainty into the seasonal forecast. These atypical climate drivers may enhance or prolong the impacts of La Niña, making predictability lower than in previous years.



Rainfall forecast for the 3-month periods **March-May 2025** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions

GREAT LAKES REGION

Lake Victoria and South Sudan Floods

Since late 2019, South Sudan has been in the grip of major annual floods along the Sudd wetlands. This was triggered by a major rise in Lake Victoria levels and resulting increased outflows of the White Nile. Lake Victoria levels broke their 100-year record in late May 2024, leading to renewed large scale flooding in South Sudan from September 2024. Here, some evidence is collected to inform some scenarios for the magnitude of the flood extent in 2025.

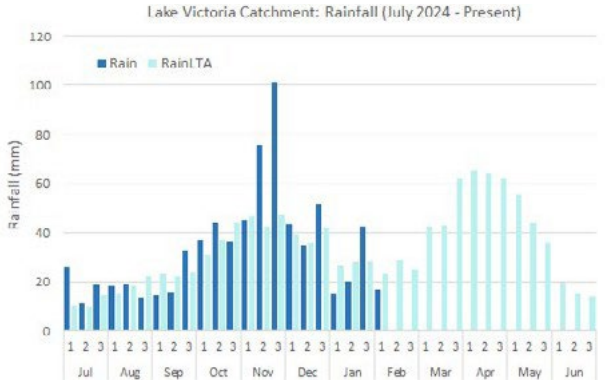
Flood waters are now in a receding phase towards their seasonal minimum usually between April and June 2025, before increasing towards the seasonal maximum which is expected between late September and mid November 2025.

The maximum flood extent in 2025 will depend on how period andria levels will reach, how large the flood baseline (minimum mid-2025 extent) will be and how wet the coming rainfall season will be across South Sudan and Uganda.

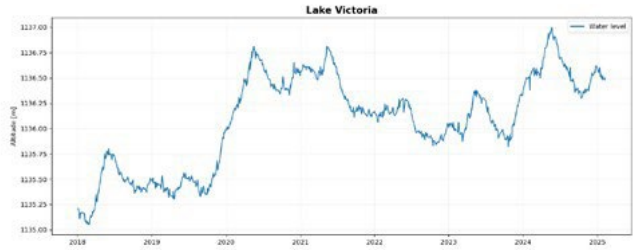
Lake Victoria water levels will remain elevated but may not reach last year's record since rainfall in the lake catchment area during the March-May 2025 peak is more likely to be lower than average. The flood baseline is currently tracking at 2022 levels (year of the widest flood extent) the highest during the enhanced flood period and may be sustained by the recent uptick in Lake levels. Preliminary indications from seasonal forecasts indicate a wetter than average season in South Sudan and parts of Uganda.

Hence, based on available evidence so far, South Sudan should see another year of major flooding extent, probably not too different from the situation during the 2024 season with a peak extent towards October 2025.

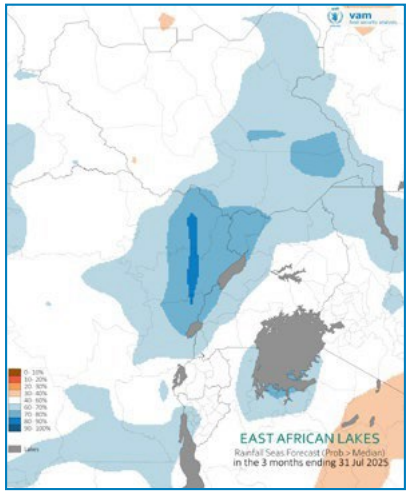
https://gis.wfp.org/portal/apps/dashboards/56868e42f5d14972ba9787c6c6b09a9e

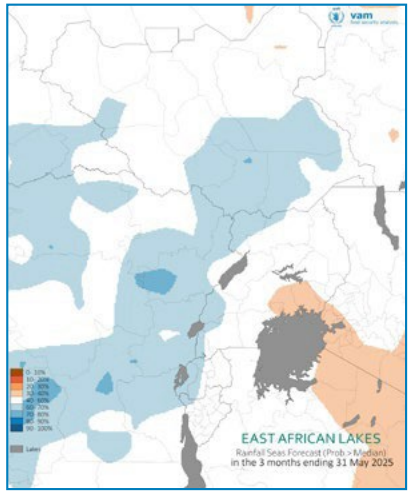


Lake Victoria catchment rainfall from **July 2024 to June 2025.** Note the two main rainfall peaks in Oct-Dec and Mar-May and the exceptional rainfall in November 2024 that led to a late increase in flood extent along the Sudd wetlands in late 2025.



Lake Victoria levels from 2018 to present.
Note the all-time record in the first half of 2024 and the recent peak from the November 2024 exceptional rainfall.

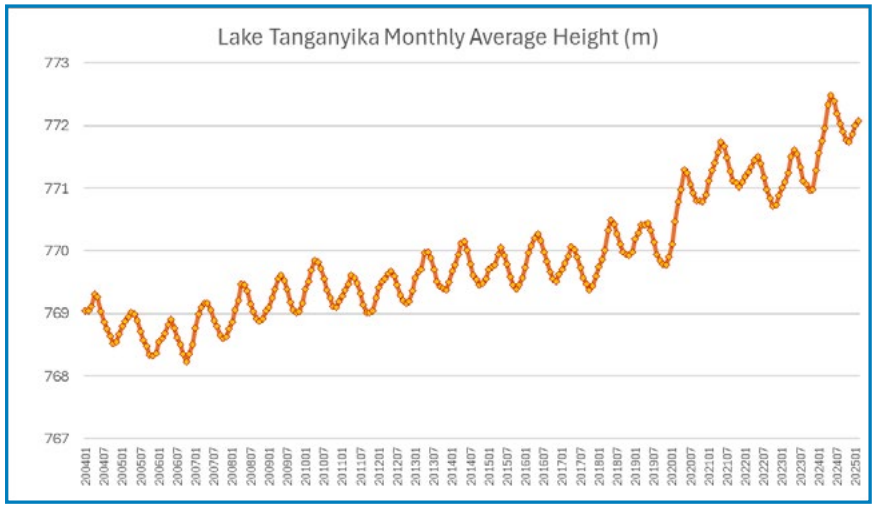




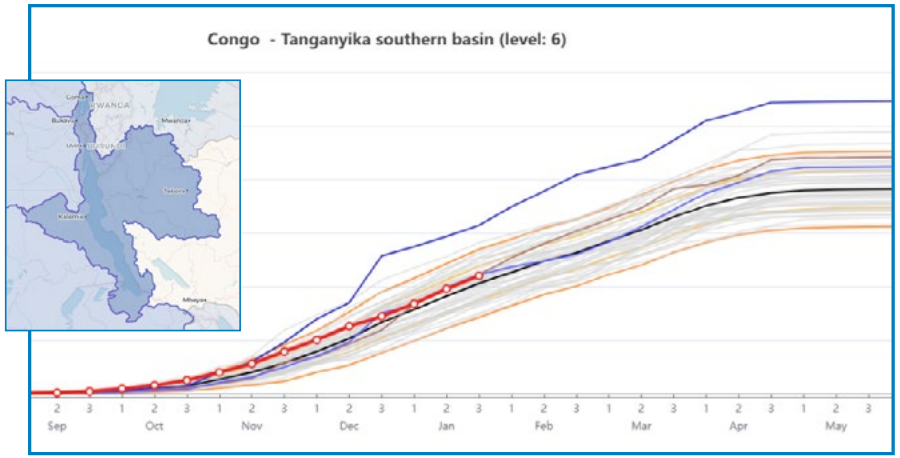
Rainfall seasonal forecasts for the 3-month periods **March to May 2025 (left)** and **May to July 2025 (right)** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions

LAKE TANGANYIKA

Lake Levels Remain Exceptionally High



Cumulative Lake Tanganyika basin rainfall for the season **2024-25 (red), 2023-24 (thin blue)** and **average (black)** seasons. Note record breaking rainfall on 2023-24 (blue line outside historical envelope) and well above average rainfall for the current season.

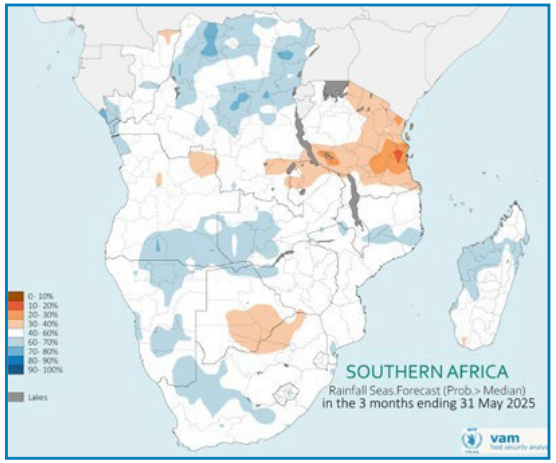


Lake Tanganyika levels (satellite altimetry) from **January 2004** (prior to the minimum in the data record). Note the steady increase in lake levels particularly since 2020, with clear seasonal fluctuations superposed.

Lake Tanganyika Floods

Lake Tanganyika levels have been rising steadily after reaching a minimum in 2006 and this tendency accelerated noticeably since late 2019 (see chart upper left). The May 2024 seasonal peak level was the highest in the available data record (public satellite altimeter data going back to 1992), 2.2m above the 2019 peak and 3.6m above the 2006 minimum. This was due to exceptionally high rains throughout the 2023-24 season, and it led to major flooding around the lake shores.

Rainfall has been above average during the current season (chart lower left) which will maintain the tendency for rising Lake levels (see charts above). However, the latest seasonal rainfall forecasts for the March-May period (corresponding to a second seasonal rainfall peak) indicate mostly on average rainfall for the lake basin – so while the May 2025 seasonal maximum level may not break last year's record, it will remain at historical high values, above all pre-2024 seasonal peak levels. Given long term climate projections of increasing seasonal rainfall, these tendencies will remain for the foreseeable future, leading to increased flooding events for coastal communities.



Rainfall forecast for the 3-month periods **March-May 2025** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions.

La Niña Impacts and Seasonal Outlook

Seasonal Rainfall Calendar

Indonesia and Pacific

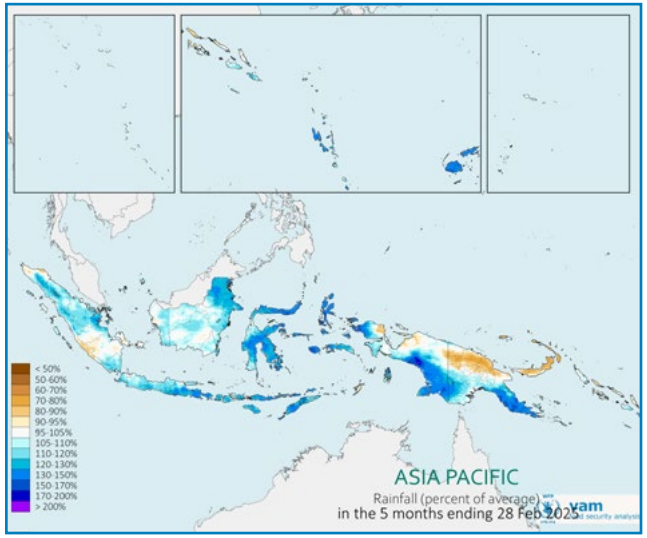
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
■	■	■	■	■					■	■	■

The rainfall anomalies observed from **October 2024 to January 2025** align with **La Niña-driven patterns**, reinforcing expectations of above-average rainfall across Indonesia and the Pacific during the early wet season.

These widespread wetter-than-normal conditions, particularly in **eastern Indonesia**, and parts of **Papua New Guinea**, have supported favorable agricultural conditions but also heightened the risk of flooding and waterlogging.

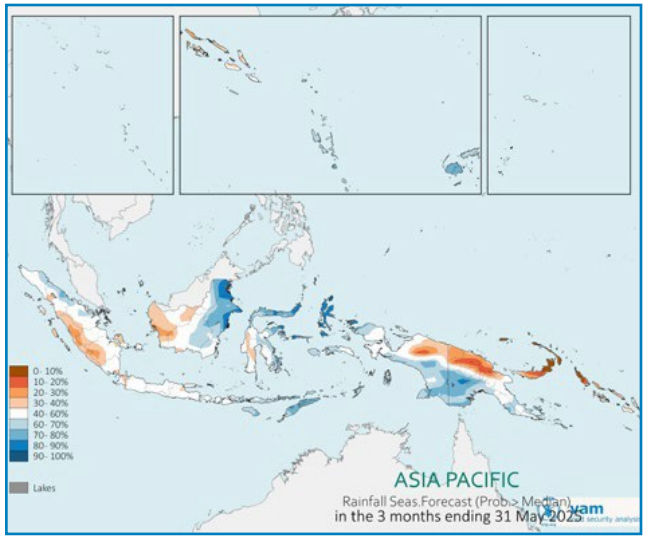
As the region transitions into the next phase of the 2025 wet season, the **Mar–May 2025** forecast indicates a shift in rainfall distribution. Drier-than-average conditions are expected to emerge in western Indonesia and parts of Papua New Guinea, while above-average rainfall is likely to persist in central and eastern Indonesia.

The **tropical cyclone season** remains active until **April/May,** with La Niña conditions potentially intensifying storm activity in the western Pacific.



Rainfall from **October 2024 to January 2025**, as a proportion of the long-term average.

Blue and purple (orange and brown) shades correspond to above (below) average rainfall.



Rainfall forecast for the **3-month periods Mar-May 2025**. as the likelihood of exceeding the long-term median.

Blue (orange) shades for likely wetter (drier) than usual conditions.

Seasonal Outlook

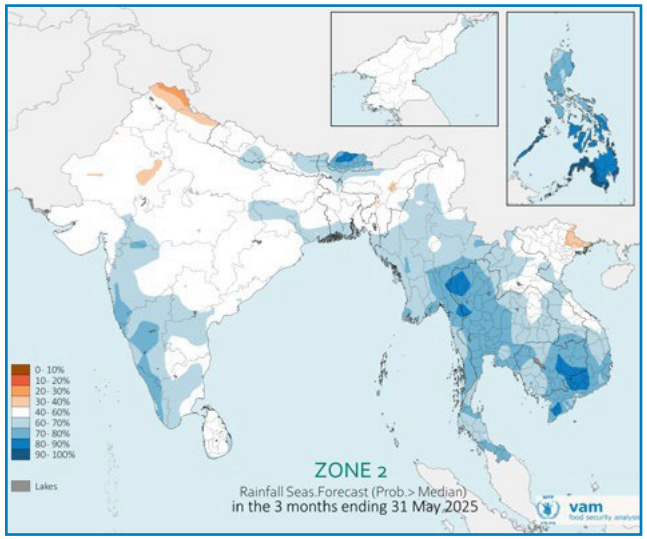
Seasonal Rainfall Calendar

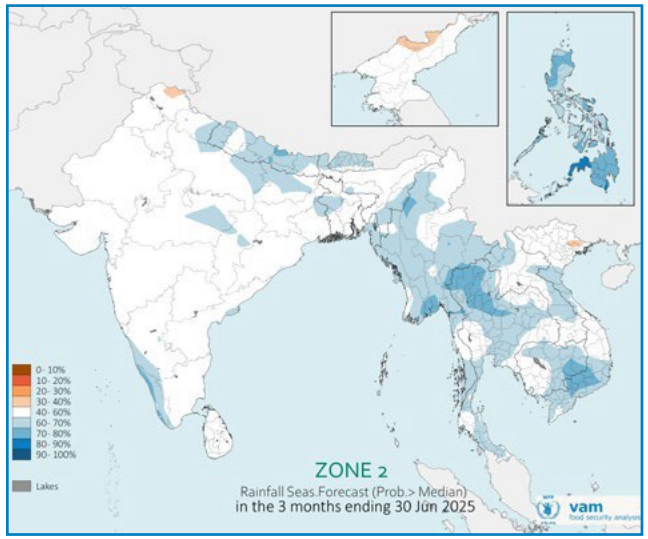
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
South Asia					■	■	■	■	■	■		
SE Asia				■	■	■	■	■	■	■	■	

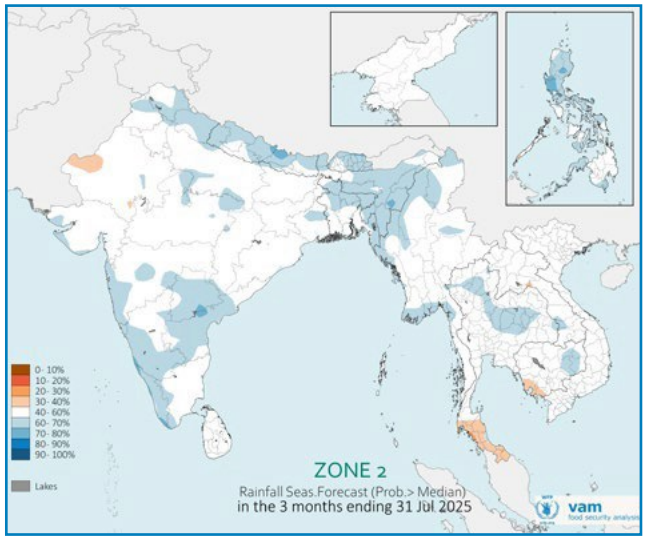
The **March–July 2025** rainfall outlook for South and Southeast Asia aligns with seasonal monsoon patterns and ongoing La Niña influences, driving distinct rainfall anomalies across the region. Forecasts indicate above-average rainfall in eastern **India**, **Bangladesh**, **Myanmar**, **Thailand**, and **the Philippines**, which could support early land preparation for Kharif planting.

In **April–June 2025**, the transition to the wet season accelerates, with strengthened above-average rainfall in Myanmar, Thailand, Laos, Cambodia, and Vietnam, supporting the main rice planting season in Southeast Asia. While beneficial for crop establishment, the risk of localized flooding and waterlogging remains high in low-lying and flood-prone regions. Meanwhile, drier-than-normal conditions in northern India and Nepal could pose challenges for early-season crop development.

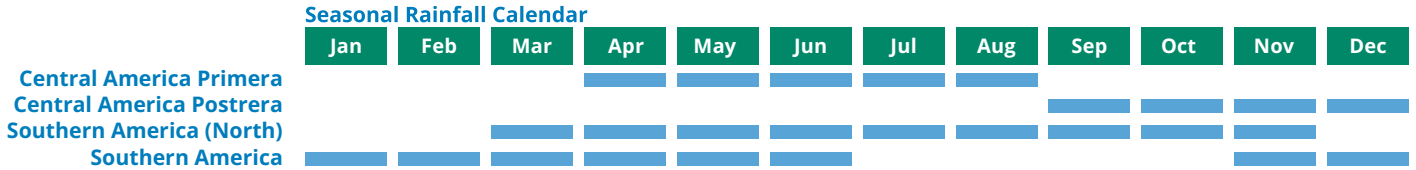
By **May–July 2025**, the monsoon becomes well-established, with widespread above-average rainfall forecast across India, Bangladesh, and much of Southeast Asia, marking the peak sowing period for Kharif crops. The tropical cyclone season remains active until May, with La Niña potentially enhancing storm activity, heightening risks for Vietnam and the Philippines. These evolving rainfall patterns, consistent with historical La Niña trends, underscore the importance of close monitoring of monsoon progression, flood risks, and agricultural conditions to ensure effective disaster preparedness across the region.

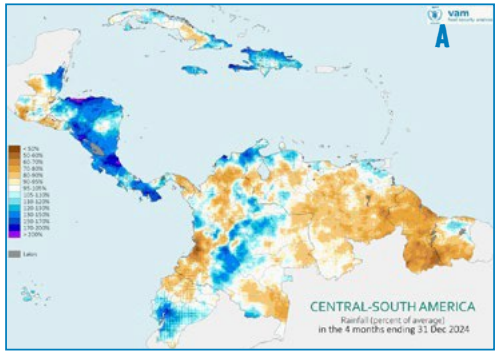


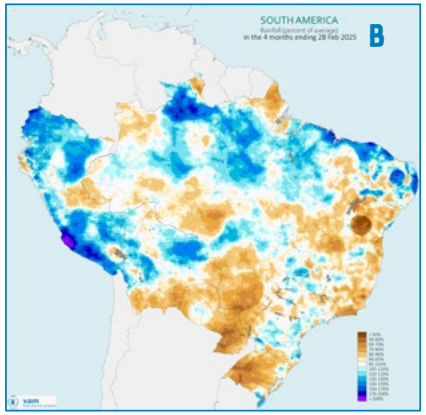




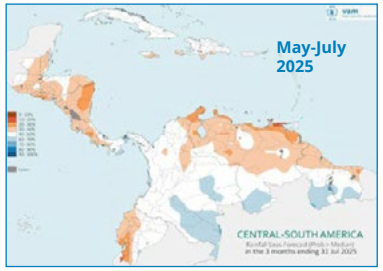
Rainfall forecast for the 3-month periods: **Mar-May 2025 (left), Apr-June 2025 (middle), May-Jul 2025(right)** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions

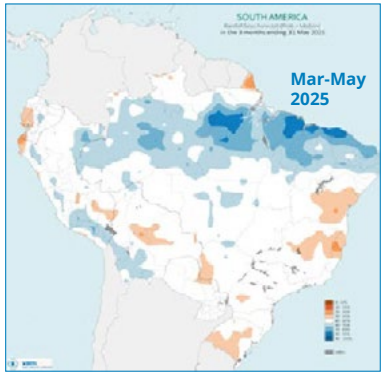






Rainfall from **September to December 2024 (a)**, **November to February (b)** as a proportion of the long-term average. Blue and purple (orange and brown) shades cor- respond to above (be- low) average rainfall





Rainfall forecast for the 3-month periods **Mar-May 2025 (left), May-Jul 2025 (right)** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual condition

La Niña Impact and Seasonal Outlook

Central America and the Caribbean: The Postrera rainy season (Sept–Dec 2024) followed typical La Niña patterns, resulting in above-average rainfall across much of the region, particularly in Haiti and mainland areas. Excessive rainfall in late November and December caused flooding in Haiti and parts of Nicaragua, while severe water deficits impacted 40% of cropland in central-western Honduras. However, rainfall distribution remained generally favorable across Central America.

Northern South America: The rainy season ended in November, but late-season pre- cipitation in December and January led to flooding in Colombia.

Central and Southern South America: The 2024–2025 rainy season is progressing un- der La Niña conditions, bringing above-average precipitation to northern South America, while northeastern and southern regions continue to experience below-average rainfall. In Bolivia, the season began with dry conditions, followed by heavy rains and flooding in January.

Central America and the Caribbean: Above-average rainfall is expected for March–May, except for southern Nicaragua, which remains drier. While beneficial for crops, heavy rains may increase flood risks in Colombia and Costa Rica. A stronger Canícula (Mid-Sum- mer Drought) by July could reduce soil moisture, impacting maize and beans.

Northern South America: Northern Colombia will see above-average rainfall, while eastern Venezuela and Suriname may face delayed planting due to dryness, which may intensify during June–July, straining water resources, while southern Colombia's heavy rainfall increases flooding risks.

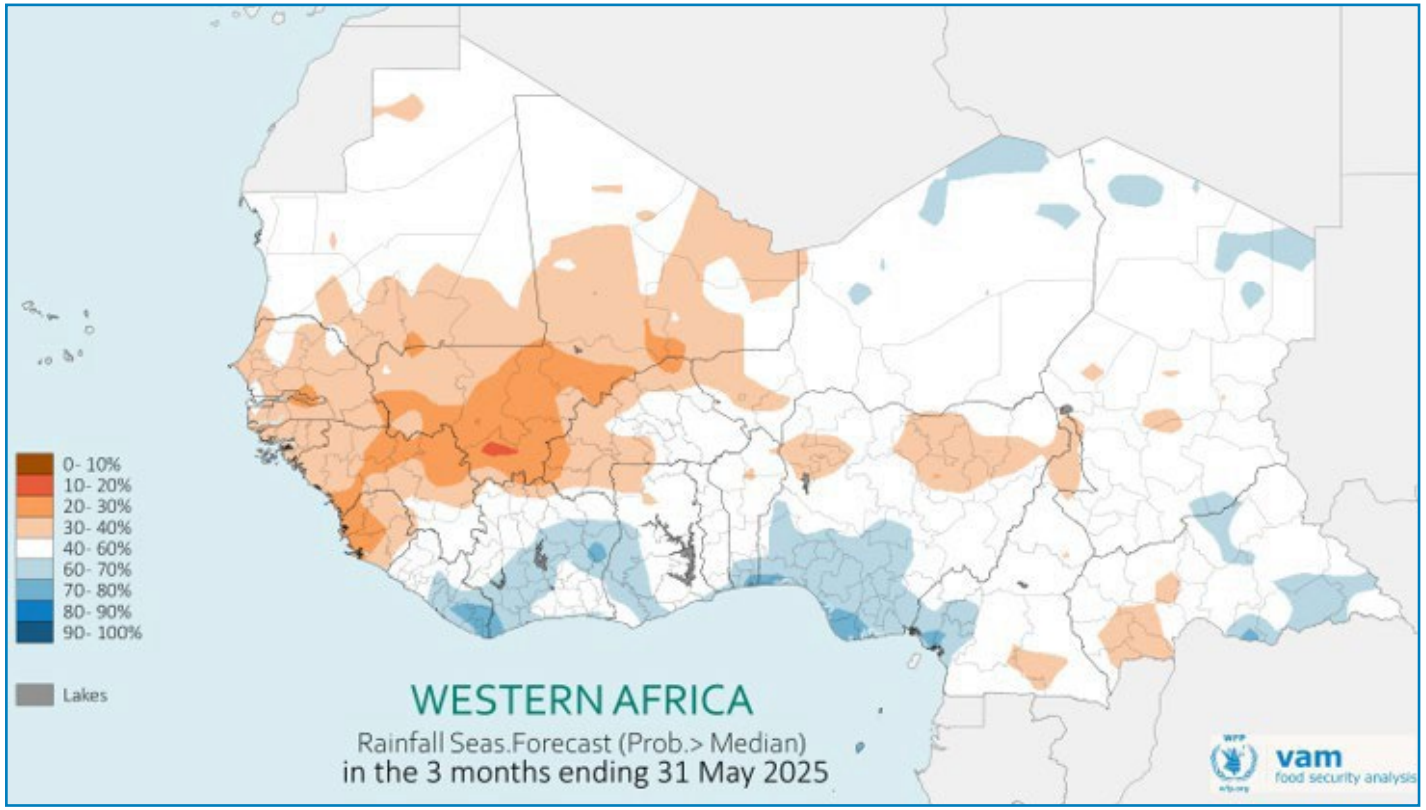
Southern South America: Above-average rainfall in northern Brazil, southern Peru, and western Bolivia may impact harvest and raise flood risks.

Seasonal Outlook

The forecast for the upcoming three months (March, April, and May) is not particularly relevant for the RBD countries in Sahelian band. Their crop season typically begins in June. Currently, the forecast indicates below-average rainfall, which is not yet a concern for crop production or other agricultural operations.

Regarding the Gulf of Guinea positive anomalies in the weather patterns could potentially lead to increased rainfall. In particular, this could result in higher-than-usual river accumulations in regions such as Nigeria's 'Port Harcourt' area or in Ghana, Ankobra river delta. This development should be monitored as the rainy season progresses. The key point of concern will be the weekly distribution of rainfall, especially if intense rain events occur. This could trigger floods in the delta regions, which are particularly exposed to this hazard.

Seasonal Rainfall Calendar



Rainfall forecast for the 3-month periods **Mar-May 2025** as the likelihood of exceeding the long-term median. Blue (orange) shades for likely wetter (drier) than usual conditions.

METHODOLOGY

All satellite data (rainfall, vegetation index and land surface temperature) both current and historical are stored and processed at the WFP-HQ Humanitarian Data Cube AWS cloud system.

Rainfall: Primary dekadal data (CHIRPS) from Univ California St Barbara Climate Hazards Centre (https://www.chc.ucsb.edu/data/chirps)
Various accumulations are computed on a dekadal basis and anomalies derived relative to a 25 year-long mean (1994-2018). Rainfall charts from WFP Seasonal Explorer (https://dataviz.vam.wfp.org/seasonal_explorer/rainfall_vegetation/visualizations)

Land Surface Temperature: Primary data from MODIS-AQUA (NASA), cloud cleared and gap-filled, both daytime and nighttime images. Thermal amplitude derived from difference between the two. Long term averages 2002-2018 used to derive anomalies

Vegetation Index: Primary data from MODIS-AQUA and TERRA (NASA), cloud cleared and gap-filled. Long term averages 2002-2018 used to derive anomalies

Seasonal Forecast: ECMWF seasonal forecasts (SEAS5) | The forecast anomalies are presented as the probability of exceeding the median, indicating the likelihood that seasonal precipitation will be above the median of the 24-year climatological distribution. These anomalies are derived from a 51-member forecast ensemble and are calculated relative to a 24-year model climatology (based on a 25-member ensemble reforecast) spanning 1993–2016

Prepared by: Irene Ferrari, Diego Oliveira De Souza, Giancarlo Pini

WFP World Food Programme

For further information please contact:

hq.geospatial@wfp.org