Food and Agriculture Organization of the United Nations

SOUTH SUDAN

DEKADAL WEATHER UPDATE

11-20 FEBRUARY 2021

GHACOF 57 SPECIAL EDITION

KEY HIGHLIGHTS FROM GHACOF 57 STATEMENT (March to May 2021)

- The rainy season is expected to start 1-2 weeks early (*see Figure 8*) in most parts of the country, particularly in western South Sudan.
- A wetter than normal season (*see Figure 4*) is expected over eastern South Sudan, raising concerns of another year characterized by incidents of flooding.
- The temperature is expected to be cooler than usual over most of South Sudan, except for north-western South Sudan where the forecast is for warmer than usual temperatures (*see Figure 5*).

DEKADAL RAINFALL PROGRESSION (21 Jan - 20 Feb, 2021)

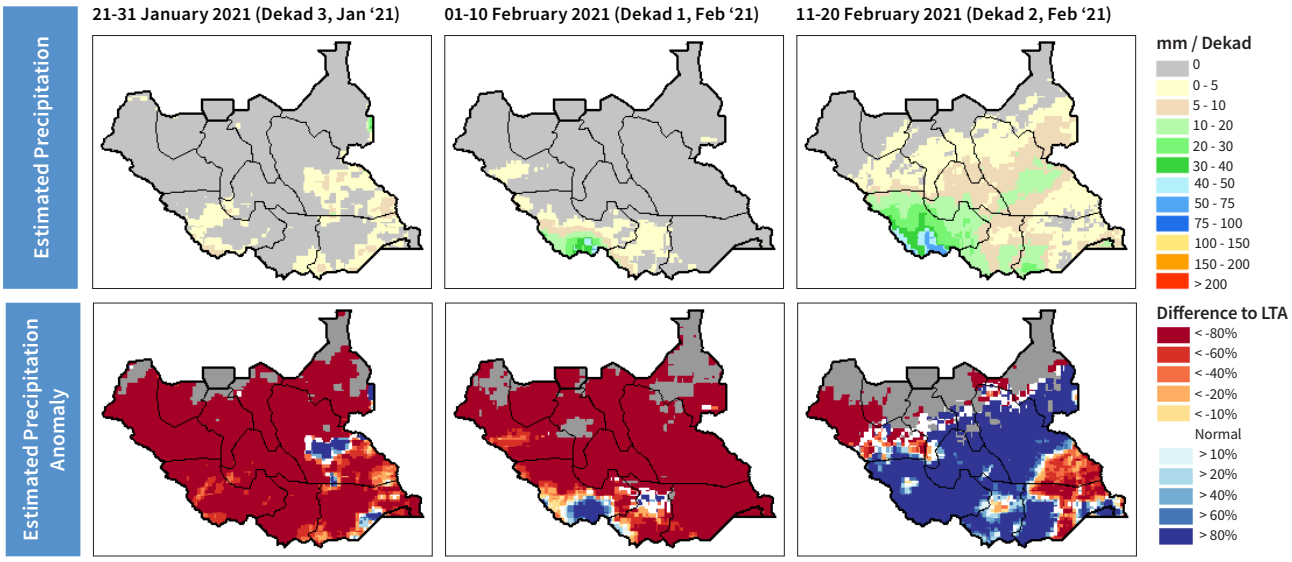

Figure 1 - Maps showing estimated rainfall progression from 21 January 2021 to 20 February 2021 (Source: FAO/GIEWS)

- In the second Dekad of February 2021, most of South Sudan experienced showers, except for the southern parts of Western Bahr el Ghazal State, Northern Bahr el Ghazal State, Warrap State, Unity State and Upper Nile State. Areas in Western Equatoria experienced the most amount of rainfall (about 30 mm[1]) compared to the rest of the country (*See the Estimated Precipitation maps in Figure 1 above, February 2021, Dekad 1*).

- Compared to the Long Term Average (LTA)[2], above average rainfall was experienced in the second Dekad of February 2021 in most of Western Equatoria State, Lakes State, Jonglei State (with the exception of Pibor where below average rainfall was experienced), Central Equatoria State, and the southeastern parts of Upper Nile State. Most of Western Bahr el Ghazal State experienced normal to below normal rainfall compared to the LTA (*See the Estimated Precipitation Anomaly maps in Figure 1 above*).

1 30 mm of rainfall over a 10-day period is considered light rainfall. Please note that in terms of volume, 1 mm of rainfall is equivalent to 1 litre of rainfall per square meter. (Source: FAO, http://www.fao.org/3/r4082e/r4082e05.htm)

2 To generate the estimated precipitation anomaly, rainfall levels are compared with the Long-Term Average (LTA), which refers to the period 1989-2015. Warmer colours (orange to maroon) identify areas which have received lower-than-average rainfall, while colder colours (light to dark blue) are given to areas where precipitation has been above average. (Source: FAO/GIEWS, http://www.fao.org/giews/earthobservation/country/index.jsp?lang=en&code=SSD)

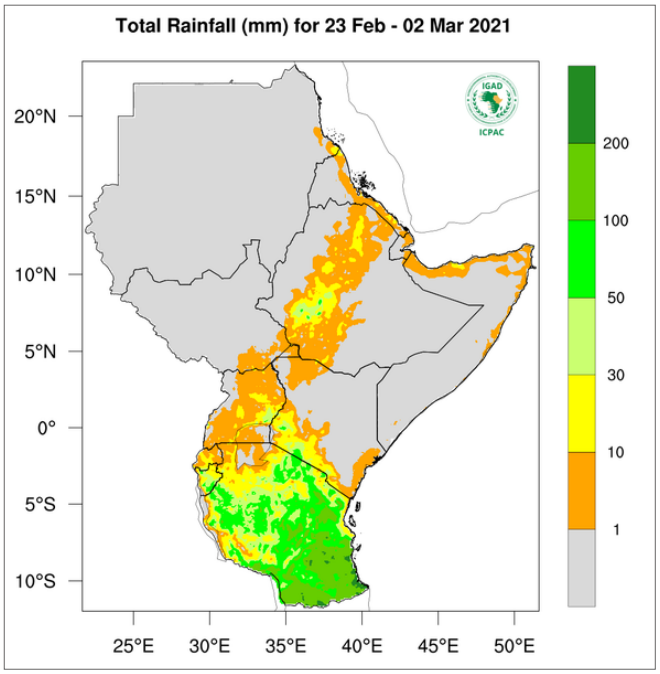

Figure 2 - Rainfall probabilistic forecast, 23 February - 02 March 2021 (Source: ICPAC)

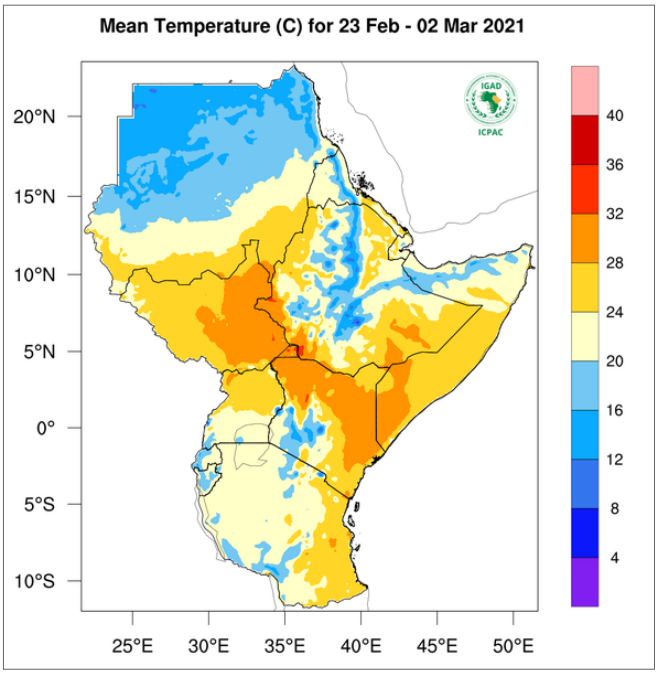

Figure 3 - Temperature probabilistic forecast, 23 February - 02 March 2021 (Source: ICPAC)

WEEKLY FORECAST (23 Feb - 02 Mar, 2021)

- **Rainfall Forecast**: According to ICPAC, between *23 February 2021* and *02 March 2021*, dry conditions are expected over most of South Sudan (*Figure 2*).

- **Temperature Forecast**: According to ICPAC, between *23 February 2021* and *02 March 2021*, warm temperatures above 28°C are expected in the eastern parts of South Sudan, whereas moderate temperatures in the range of 20-28°C are expected in the western parts of South Sudan (*Figure 3*).

SEASONAL FORECAST (BASED ON GHACOF 57 STATEMENT)

The **57th Greater Horn of Africa Climate Outlook Forum (GHACOF57)** was convened online on 17 February 2021 by the IGAD Climate Prediction and Applications Centre (ICPAC) in collaboration with the National Meteorological and Hydrological Services in the region and other partners to issue the **March to May 2021** rainy season forecast for the region.

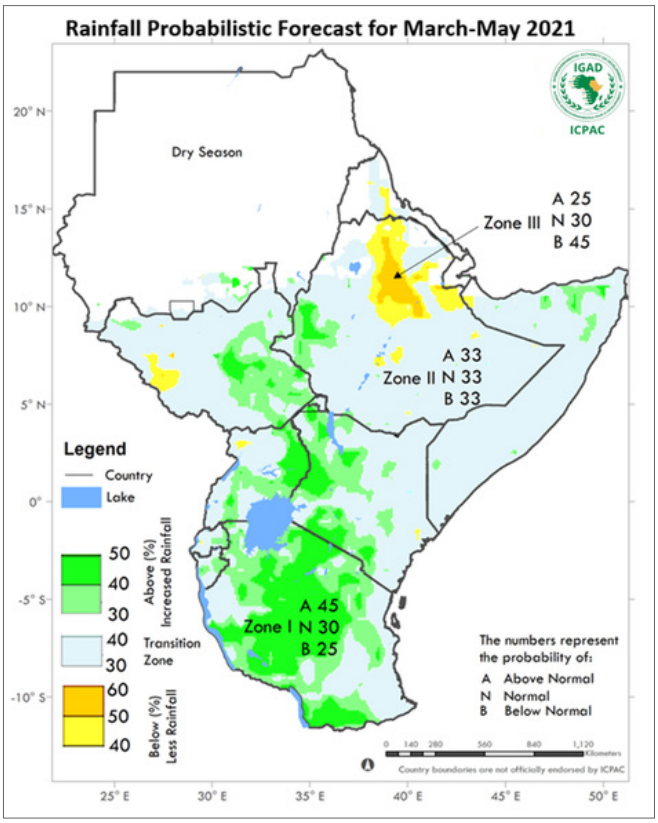

Figure 4 - Rainfall probabilistic forecast, March to May 2021 (Source: ICPAC, GHACOF 57)

The key findings of the GHACOF 57 for the March to May 2021 period include:

- A wetter than usual season is expected over eastern South Sudan, while drier than usual conditions are expected over western South Sudan (*Figure 4*). Note though that these comparisons are against the Long Term Average (LTA), whereby even if the western parts of the country have a forecast of drier than usual conditions, the actual amount of rainfall they will experience is highly likely to be higher than that recorded in the eastern parts of the country.

- The rainy season is expected to start 1-2 weeks early in most parts of South Sudan (*Figure 8*). The rainy season is expected to effectively start as early as 12 March 2021 in parts of Western Equatoria and in the beginning of May 2021 in the northern parts of the country (*Figure 7*).

- The season is also expected to be warmer than usual in north-eastern and north-western South Sudan, and cooler than usual in the southeastern part of the country, including the cross-border region between South Sudan and southwestern Ethiopia, northwestern Kenya and Uganda (*Figure 5*).

- There is a high probability (>50%) that southwestern South Sudan will receive more than 300 mm of rainfall during the March to May 2021 period (*Figure 6*).

- Most of South Sudan is likely to experience long continuous wet days (10 - 15 days) during the March to May 2021 period (*Figure 9*).

IMPLICATIONS AND RECOMMENDATIONS

- Farming households, particularly in the Equatorias, should finalize their land preparation and sowing activities so that they can take advantage of the high amount of rainfall forecast for the region.

- With the high number of shocks currently being experienced in the region e.g. the COVID-19 pandemic and desert locusts in the neighbouring countries, local authorities and other stakeholders need to develop contingency plans based on the March to May 2021 seasonal forecast.

- Authorities and stakeholders responsible for desert locust monitoring and control should scale up their surveillance and control systems as the rainy season, coupled with warm conditions, is creating a conducive environment for desert locusts to multiply in neighbouring countries, as well as South Sudan. Areas at risk of being invaded by the desert locust in the country include counties in Eastern Equatoria that border Kenya and Ethiopia - countries where the swarms have not matured or laid eggs, but are likely to as moderate rains are recorded in northern Kenya and southern Ethiopia[3].

- The start of the rainy season is likely to see a gradual increase in water-borne diseases such as diarrhoea, as well as illnesses such as malaria that are spread with the increase of mosquitoes during the wet season. Health facilities need to be supported to stock up on supplies, and pre-positioning of critical health supplies is necessary as majority of the logistics infrastructure will deteriorate during the rainy season, making physical movement difficult.

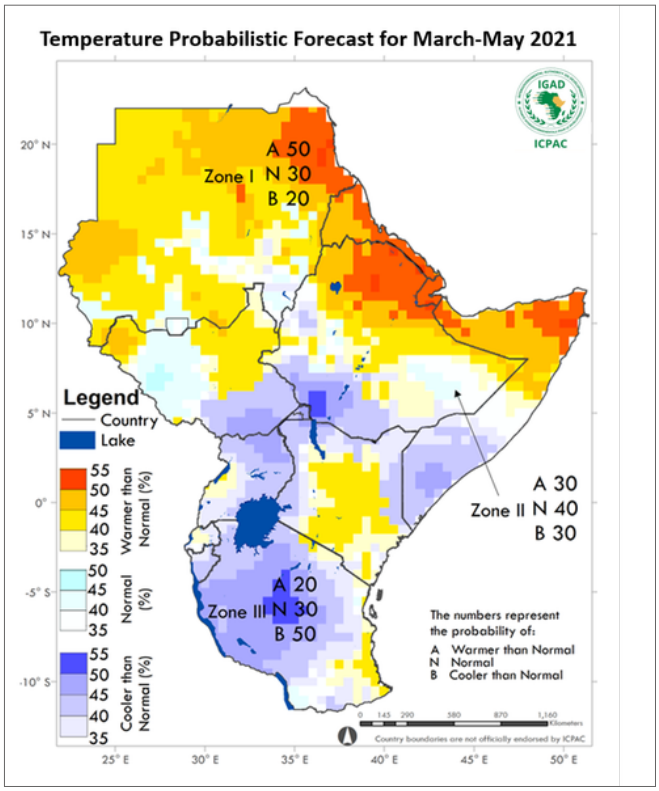

Figure 5 - Temperature probabilistic forecast, March to May 2021 (Source: ICPAC, GHACOF 57)

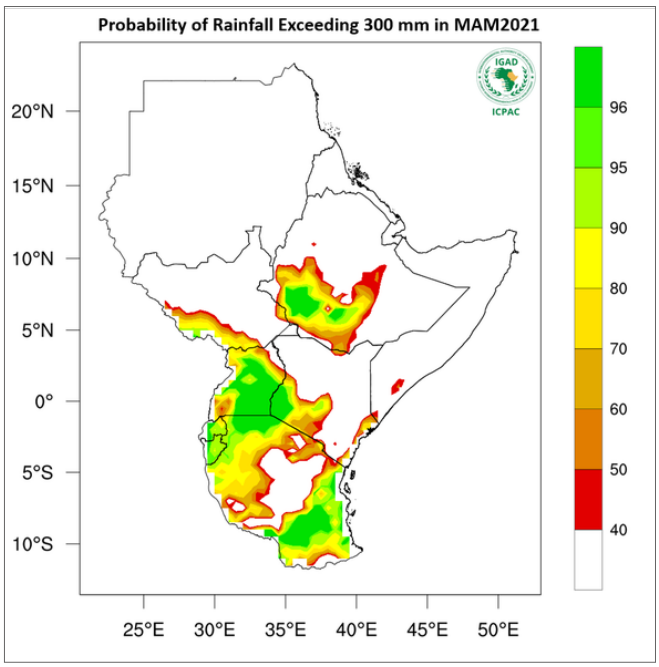

Figure 6 - Probability of rainfall exceeding 300 mm in March to May 2021 (Source: ICPAC, GHACOF 57)

- There is a risk of flooding in areas such as Jonglei State, Greater Pibor Administrative Area (GPAA) and Upper Nile State, particularly in the flood-prone lowlands. Consequently, there is need for communities living in these locations to be sensitized about the risk of flooding through dissemination of early warnings via various media, as well as ensuring infrastructure that controls river overflow is in good condition.

3 Visit http://www.fao.org/ag/locusts/en/info/info/index.html for more information on the current status of the desert locust infestation.

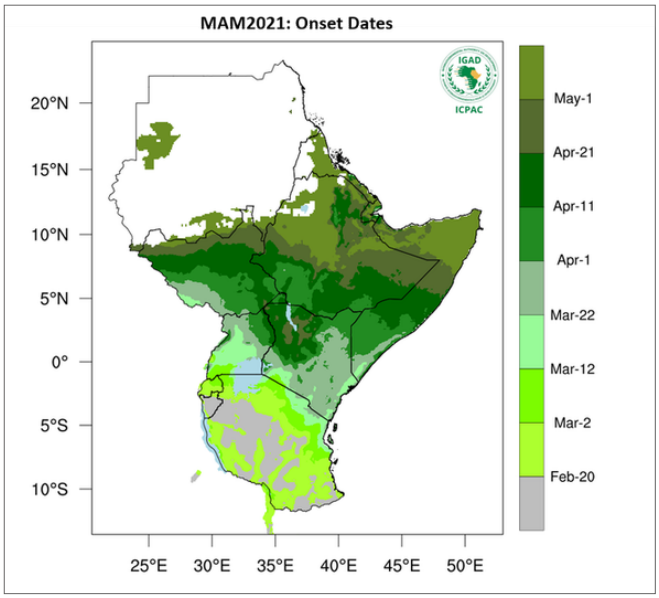

Figure 7 - Onset dates for rainfall in March to May 2021 (Source: ICPAC, GHACOF 57)

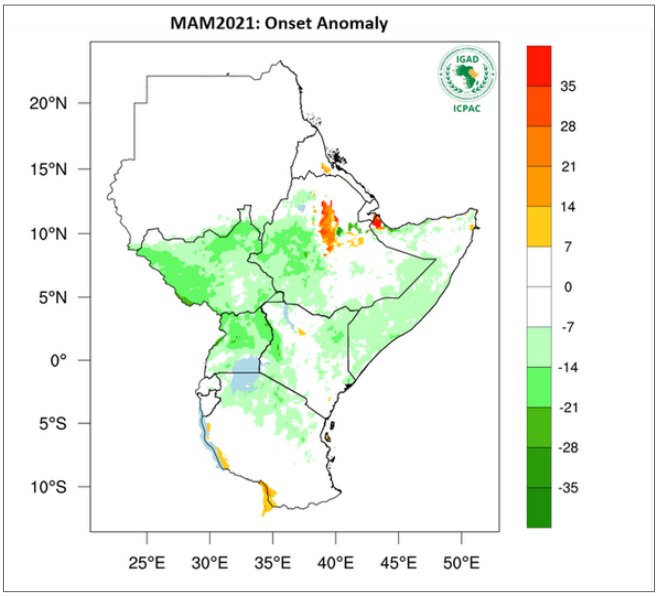

Figure 8 - Onset dates anomaly for rainfall in March to May 2021 (Source: ICPAC, GHACOF 57)

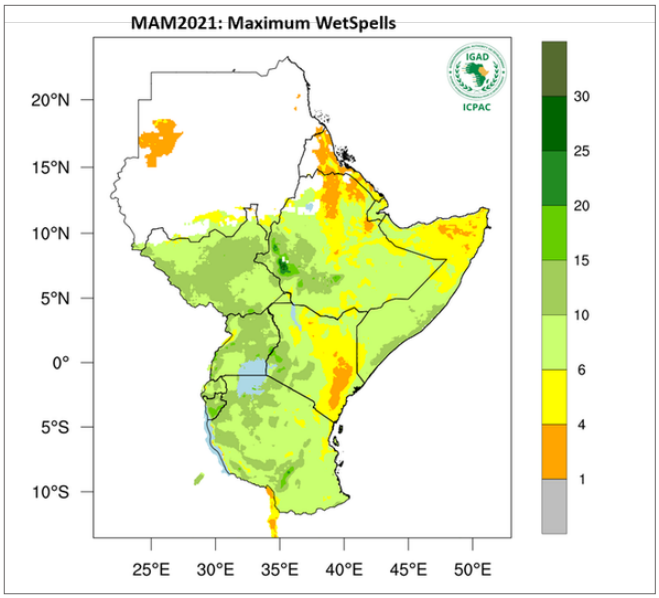

Figure 9 - Maximum wet spells in March to May 2021 (Source: ICPAC, GHACOF 57)

This report is produced by FAO South Sudan's project (*Strengthening the Livelihoods of Pastoral and Agropastoral Communities in South Sudan's Cross-border Areas with Sudan, Ethiopia, Kenya and Uganda*) which is funded by the European Union.

Project Website:
http://www.fao.org/in-action/south-sudan-cross-border-project/en/
CLIMIS Portal - Rainfall Data:
https://climis-southsudan.org/agromet/rainfall_data

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