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# **Rainy Season Monitoring**

World Food Programme Angola





## **Highlights**

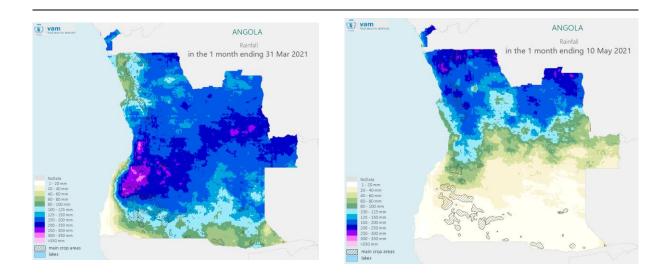
- Significant reduction in rainfall registered in April 2021 in the provinces of Namibe, Huíla, Cunene and Cuando Cubango compared to March 2021.
- Northern provinces continued to experience heavy rains between April and early May.
- After a long period of drought, provinces that were earlier considered critical now close the rainy season with the vegetation cover equal to or above average.

# Methodology

The analysis is based on the data from remote rainfall monitoring and Normalized Difference Vegetation Index (NDVI) available at WFP-VAM DataViz Platform (dataviz.vam.wfp.org). NDVI is an indicator of vegetation cover and, therefore, can be used to predict agricultural production and pasture conditions, as well as to monitor drought. For each geographical region, the rainfall and NDVI data are analysed comparing the values of the normal situation (average values) with the values observed at the present time. The analysis assumes that there is no other phenomenon, such as fires, which can affect vegetation in addition to the climate.

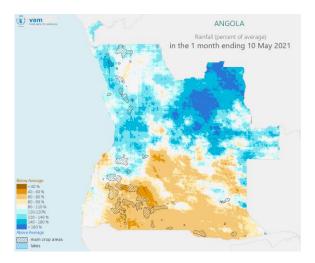
## **Rainy Season Perfomance**

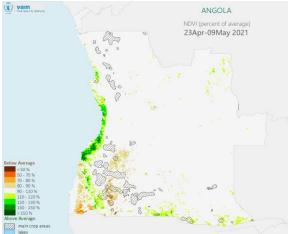
The period from April to the first half of May 2021 was characterized by a drastic reduction in rainfall compared to March 2021 in the provinces of Namibe, Huíla, Cunene and Cuando Cubango. In the provinces of Benguela, Huambo, Bié and Moxico, the precipitation remained above average despite some reduction. The remaining provinces received rains above average, with the emphasis on Zaire, Uíge and Lunda Norte with regions that received more than 200 mm in thirty days.



The rainfall of the last two months, March and April 2021, increased the availability of water for livestock and improved grazing conditions. By early May, vegetation coverage exceeded the average in the provinces of Cuanza Sul, Benguela and Namibe. In the provinces of Huambo and Cunene, the vegetation cover reached the average, while in the province of Huíla it remained slightly below the average.

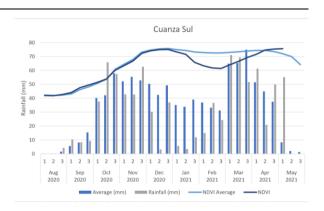


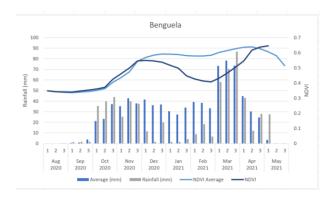




The following briefly describes the trends of precipitation and vegetation cover (NDVI) in the provinces of Cuanza Sul, Benguela, Huambo, Namibe, Huíla and Cunene as they are the most affected by drought.

The province of Cuanza Sul saw a significant increase in precipitation resulting in improved vegetation cover which, from April 2021, has been above average. This way, improvements in nutrition and health of the cattle can be expected. Precipitation over the past two months may also allow the planting of vegetables in low-lying areas.

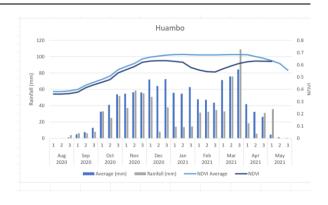


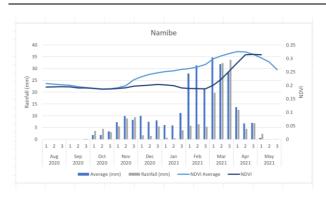


In the province of Benguela, the increase in precipitation from March 2021 created conditions for improved vegetation cover that exceeded the average levels at the end of April. The rainy season ends here leaving better grazing conditions for cattle.



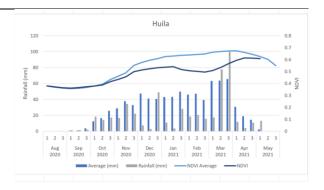
Huambo province received above average rainfall from the end of April to early May 2021, which should improve vegetation cover in the coming weeks. After a long period with below-average vegetation cover, the province closes the rainy season with average vegetation cover.

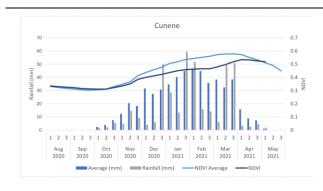




After several months of low precipitation and poor vegetation cover, the province of Namibe registered increased rainfall from mid-March to the beginning of May 2021. The vegetation cover improved considerably surpassing the average levels in early May 2021.

The province of Huíla, in contrast to the others described above, continued to have below-average vegetation cover until early May, the end of the rainy season. With the exception of the last two thirds of March 2021, Huíla was receiving precipitation reaching 60% to 70% of the average level from January to April 2021.





The province of Cunene, after a long period with below-average vegetation cover, registered significant improvements in March and April 2021 and ends the rainy season with average vegetation cover. As of May 2021, vegetation cover is expected to follow the normal average trend.



## **Implications for Food and Nutritional Security**

The increase in precipitation observed from March 2021 until the end of the rainy season improved the availability of water for cattle and pasture conditions with vegetation cover exceeding the average levels in the provinces of Cuanza Sul, Benguela and Namibe. Therefore, migration of families in the search of these two resources, water and pasture, may have ended or reduced considerably in the southern provinces of Angola.

The performance of the 2020/21 agricultural campaign remains compromised, as the rains of the past two months have not helped to recover the crops already lost due to the long period without precipitation. Historical rainfall data shows that the rainy season ends in early May, so no substantial rain is expected from May 10, 2021. Families with access to low-lying areas will be able to harvest vegetables sown from March 2021.

## Recommendations

The end of the rainy season is the crucial moment to assess the impact of drought in the provinces that were earlier considered to be in critical condition but have not yet been the target of any food and nutritional security survey, namely Cuanza Sul, Benguela, Huambo and Cuando Cubango. The provinces of Namibe, Huíla and Cunene recently benefited from a food and nutritional security assessment under the FRESAN project financed by the European Union, the results of which are expected in July 2021.

There remains a need for organizations with a focus on food security and nutrition to start designing interventions to mitigate the effects of drought, including technical assistance actions to the Government, at central and provincial level, on monitoring and formulation of programs.

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