Food and Agriculture Organization of the United Nations

Assessment of agricultural drought severity in Afghanistan for 2023

Assessing agricultural drought severity is critical for food security. Remote sensing data, particularly the Vegetation Condition Index (VCI) from MODIS product[1], helps evaluate drought extent. Monthly VCI maps from January to April are merged to create a comprehensive growing season map, categorized into five drought severity classes. This map is then visualized using a hexagon grid with cells of approximately 350 square kilometers. The 2023 drought severity assessment reveals that numerous provinces in Afghanistan experienced higher levels of drought, especially in the extreme and severe classes. These findings are important for the Afghanistan Emergency Food Security Project (OSRO/AFG/213/WBK), providing essential information to address food security challenges and implement appropriate interventions.

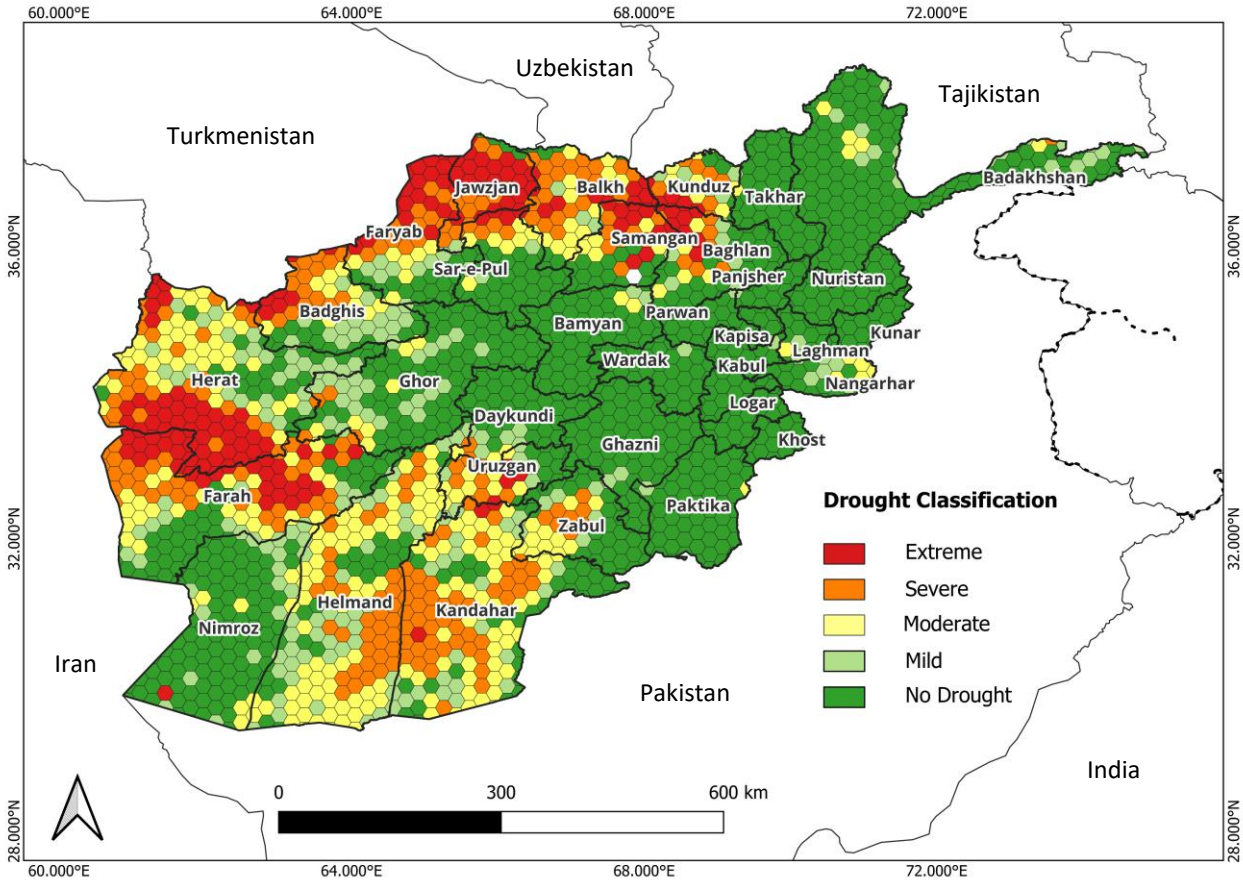

Figure 1: Spatial distribution of drought classification in 2023 in Afghanistan.[2]

Key Finding:

The results indicate that significant drought conditions were observed in the northern and western regions, with some impact also seen in the southern region. These conditions were classified into five classes, including extreme (11 percent), severe (15 percent), moderate (14 percent), mild (13 percent), and no drought (47 percent). Table 1 shows the provinces that were most affected by extreme and severe drought.

Table 1: Example of five top most provinces affected by extreme and severe drought (percentage of the province and extent in km^2) in 2023.

Province	Extreme		Province	Severe	
	km^2	(%)		km^2	(%)
Herat	17 405	20	Helmand	18 742	16
Farah	14 261	17	Kandahar	18 356	16
Jawzjan	8 473	10	Herat	13 266	11
Faryab	7 935	9	Farah	12 825	11
Balkh	5 956	7	Faryab	5 720	5

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[1] K. Didan. 2021. MOD13Q1 MODIS/Terra Vegetation Indices 16-Day L3 Global 250m SIN Grid V061. NASA EOSDIS Land Processes DAAC. https://doi.org/10.5067/MODIS/MOD13Q1.061

[2] GAUL, 2015 Disclaimer: The boundaries and names shown, and the designations used on these map(s) do not express any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.