



A rapid geospatial assessment was carried out to estimate the extent of cultivated cropland throughout Sudan for August 2023, compared to last 5-year (2018-2022) average by integrating data from satellite remote sensing, existing 2020 land cover map and digitized irrigation schemes.

Within the broader irrigation scheme boundaries, all agricultural land were classified as irrigated. Additionally, all the areas falling under individual land parcel-level irrigation boundaries in Al Jazirah state were also categorized as irrigated. All other agricultural areas from the 2020 national land cover map were classified as rainfed. A thresholding approach was followed to distinguish actively cultivated areas from the non-cultivated areas. The threshold for the dekadal WaPOR (remote sensing for water productivity) Net Primary Productivity (NPP) data was chosen through visual inspection, phenological observations, cross-referencing with cultivated area maps from previous years, and histogram analysis of the NPP values within the experiment test sites. Agricultural areas with NPP values equal to or exceeding the established threshold during any of the three dekad periods were classified as cultivated.

Key Findings

- The rainfed cultivated area in August 2023 was 22 million hectares which was 93% of 5-year average cultivated rainfed area (24 million hectares) and 73% of rainfed agricultural area (31 million hectares).
- In August 2023, West Kordofan (-2 %), Gedaref (-1 %) and Sennar (+0.5 %) have rainfed cultivation extent close to 5-year average. While, North Kordofan and North Darfur's rainfed cultivation extent showed reduction of 24% and 19%, respectively compared to 5-year average.
- The irrigated cultivated area in August 2023 was 1.2 million hectares which was 90.5% of 5-year average cultivated irrigated area (1.37 million hectares) and 78% of irrigated agricultural area (1.6 million hectares).
- The irrigated cultivated area in Al Jazira state in August 2023 was 1 million hectares, which was 8.5% lower to 5-year average (1.15 million hectares) in August and 15% lower to irrigated agriculture area (1.23 million hectare) of the state.
- The 5 localities (Al Hasahisa, Al Kamlin, Janub Al Jazirah, Al Manaqil, and Al Qurashi) in Al Jazirah state showed the highest reduction in between 10 to 21 thousand hectares among all the localities.

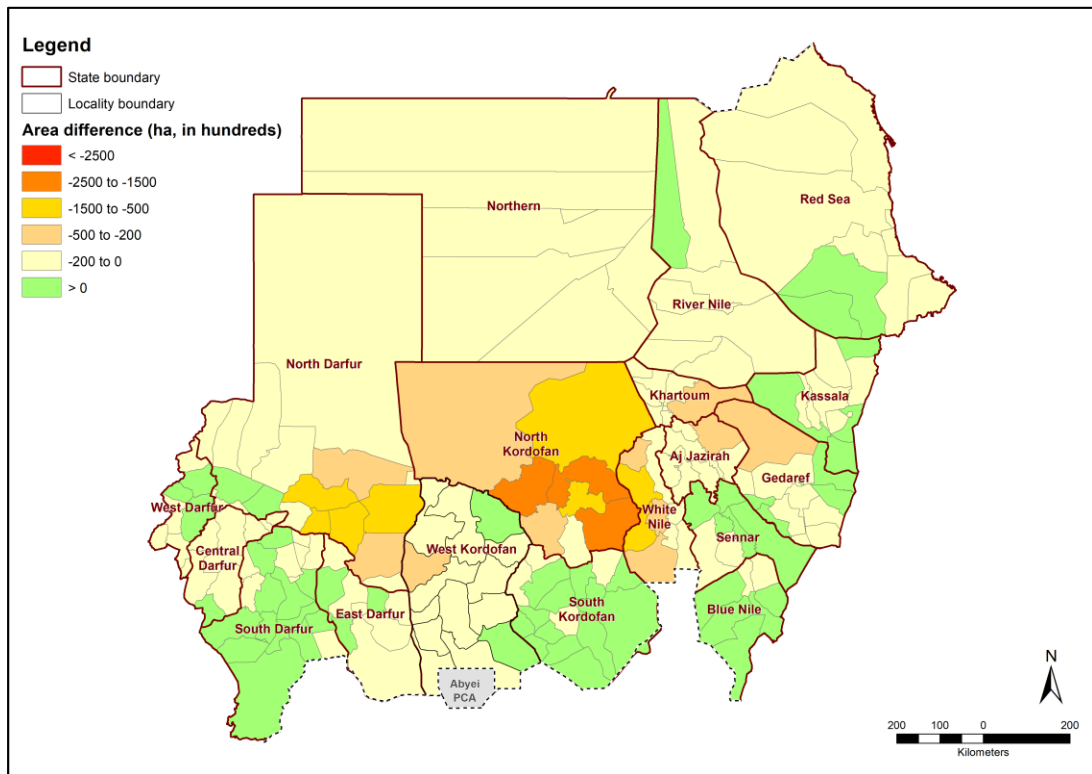


Figure 1: Difference in cultivated rainfed area between August 2023 and August average during 2018-2022¹

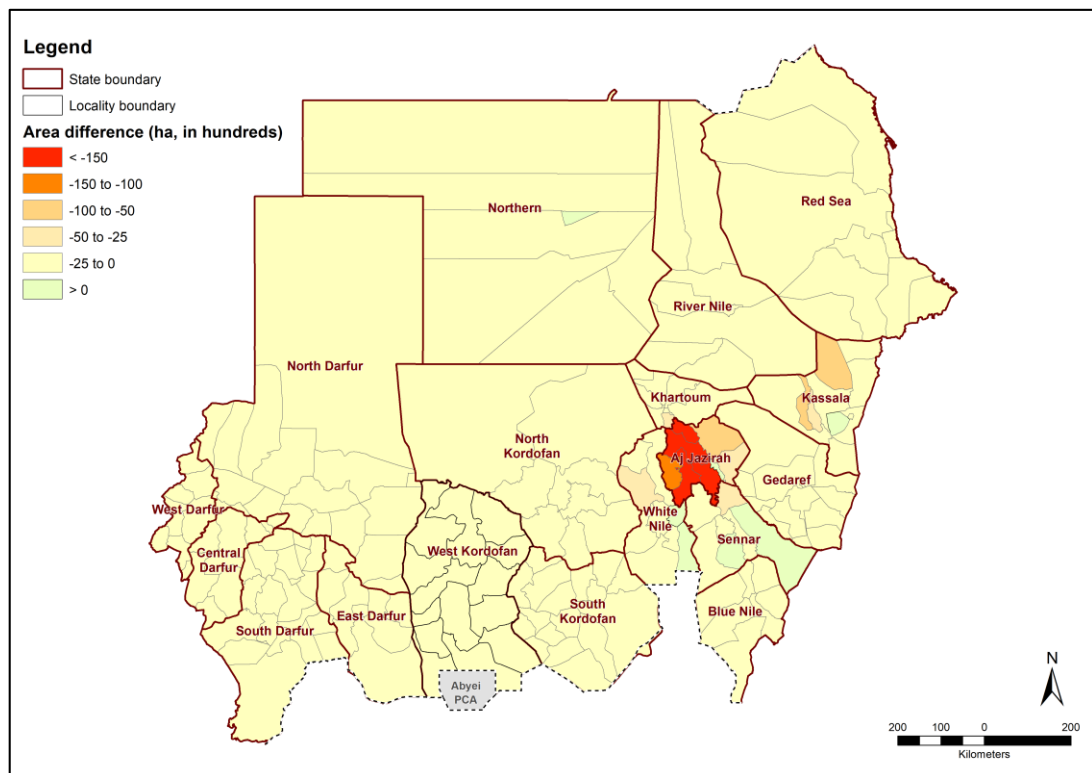


Figure 2: Difference in cultivated irrigated area between August 2023 and August average during 2018-2022¹

¹ Source: Administrative boundaries from HDX. 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. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei PCA area is not yet determined. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.



Table 1: State aggregated rainfed, irrigated and total area cultivation extent and percentage changes between August 2023 and August average (2018- 2022). (areas are in hundred hectares)

State	State area (ha, in hundreds)	*Agriculture area (ha, in hundreds)		Cultivated rainfed area (ha, in hundreds)				Cultivated irrigated area (ha, in hundreds)				Total cultivated area (ha, in hundreds)		
		Total	% of state area	Total	August (Avg)	August (2023)	August change (%)	Total	August (Avg)	August (2023)	August change (%)	August (Avg)	August (2023)	August change (%)
Aj Jazirah	27 443	18 392	67.02	6 028	3 669	2 669	-27.26	12 364	11 502	10 525	-8.50	15 171	13 194	-13.03
Blue Nile	38 732	11 865	30.63	11 865	10 902	10 910	0.07	0	0	0	0	10 902	10 910	0.07
Central Darfur	31 064	4 340	13.97	4 340	2 901	2 900	-0.05	0	0	0	0	2 901	2 900	-0.05
East Darfur	56 745	23 168	40.83	23 168	20 433	20 269	-0.80	0	0	0	0	20 433	20 269	-0.80
Gedaref	60 645	40 705	67.12	40 310	35 292	34 801	-1.39	395	301	292	-3.24	35 594	35 092	-1.41
Kassala	49 698	10 389	20.90	8 496	5 823	5 668	-2.65	1 893	1 254	1 087	-13.27	7 076	6 755	-4.54
Khartoum	21 416	1 701	7.94	1 570	377	68	-81.87	131	53	12	-77.29	430	80	-81.30
North Darfur	315 992	30 676	9.71	30 676	22 685	18 478	-18.55	0	0	0	0	22 685	18 478	-18.55
North Kordofan	187 523	50 430	26.89	50 405	32 280	24 642	-23.66	24	17	14	-18.72	32 297	24 656	-23.66
Northern	365 019	754	0.21	631	8	5	-42.35	123	9	5	-42.60	17	10	-42.48
Red Sea	219 921	513	0.23	464	86	99	14.59	49	0	0	-100.00	86	99	14.14
River Nile	131 802	1 321	1.00	1 130	115	24	-79.27	191	24	13	-46.24	139	37	-73.57
Sennar	39 802	26 368	66.25	25 878	22 824	22 952	0.56	489	374	337	-9.94	23 198	23 288	0.39
South Darfur	82 489	17 443	21.15	17 443	13 630	13 577	-0.39	0	0	0	0	13 630	13 577	-0.39
South Kordofan	78 902	21 258	26.94	21 258	18 095	18 030	-0.36	0	0	0	0	18 095	18 030	-0.36
West Darfur	22 374	5 951	26.60	5 951	4 660	4 658	-0.05	0	0	0	0	4 660	4 658	-0.05
West Kordofan	114 023	43 946	38.54	43 946	36 923	36 130	-2.15	0	0	0	0	36 923	36 130	-2.15
White Nile	38 294	21 640	56.51	21 281	16 376	12 978	-20.75	359	228	174	-23.40	16 604	13 152	-20.79
Total	1 881 884	330 856	17.58	314 839	247 080	228 854	-7.38	16 018	13 762	12 459	-9.47	260 843	241 313	-7.49

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