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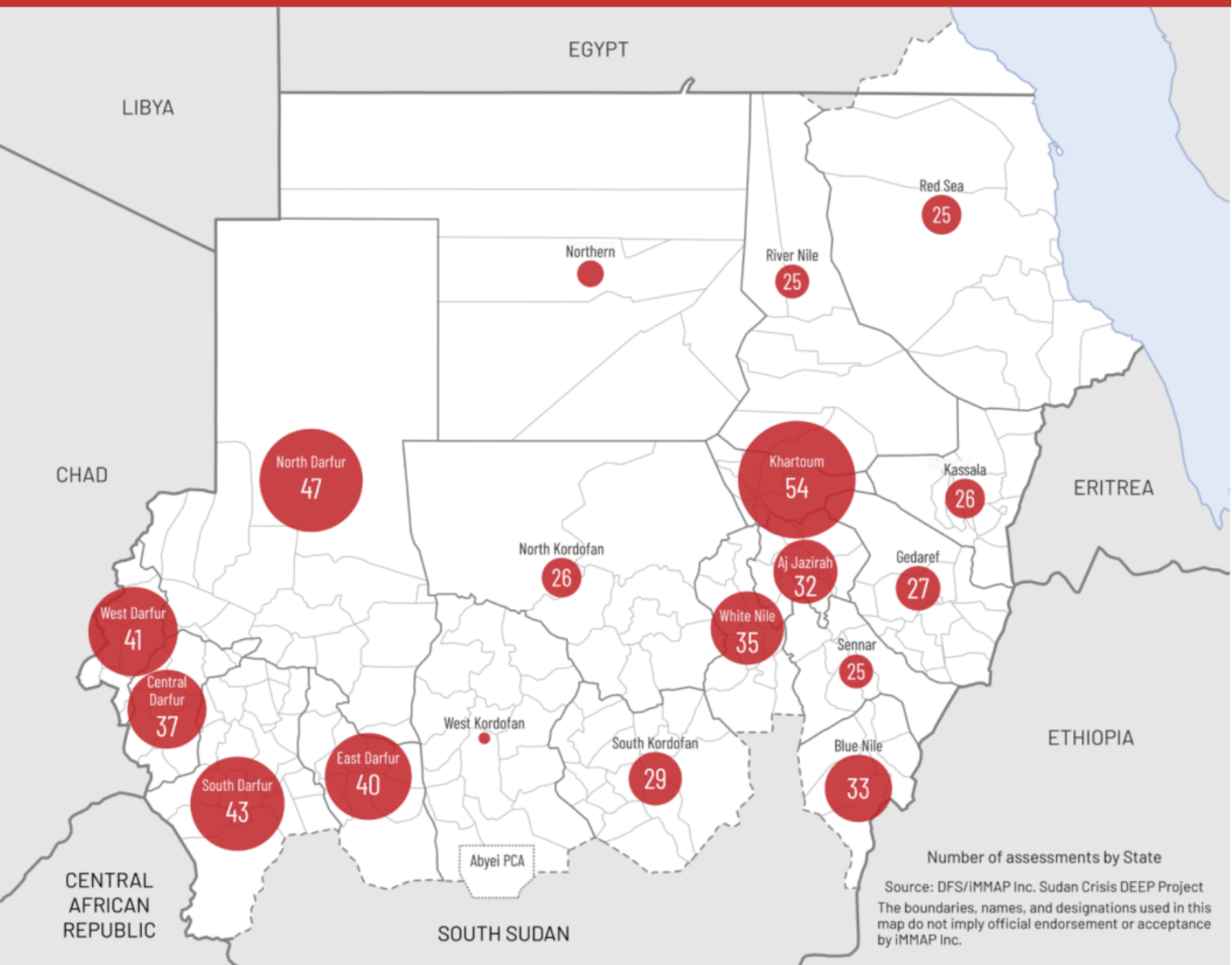
DATA FRIENDLY SPACE

SUDAN CRISIS

Information Landscape

19 January 2024



Acronyms

ACLED	The Armed Conflict Location & Event Data Project
CCCM	Camp Coordination and Camp Management
CP	Child Protection
CRSV	Conflict Related Sexual Violence
DRC	Danish Refugee Council
DTM	Displacement Tracking Matrix
ETC	Emergency Telecommunications Cluster
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
FEWSNET	he Famine Early Warning Systems Network
FMoH	Federal Ministry of Health
GAM	Global Acute Malnutrition
GBV	Gender-Based Violence
HDX	Humanitarian Data Exchange
HNO	Humanitarian Needs Overview
HNRP	Humanitarian Needs and Response Plan
HRP	Humanitarian Response Plan
IDP	Internally Displaced Person
INGO	International non-governmental organization
IOM	International Organization for Migration
IPC	Integrated Food Security Phase Classification
IRC	International Rescue Committee
KII	Key Informant Interview
MNO	Mobile Network Operators
MSNA	Multi-Sectoral Needs Assessment
NFI	Non-Food Item
NGO	Non-Governmental Organization
OTP	Outpatient Therapeutic Feeding Programs
PSEA	Protection from Sexual Exploitation and Abuse
RSF	Rapid Support Forces
SAF	Sudanese Armed Forces
SAM	Severe acute malnutrition
SCI	Save the Children
SEA	Sexual Exploitation and Abuse
SSA	Surveillance System for Attacks on Health Care
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNW	UN Women
USAID	United States Agency for Development
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

Sudan Information Landscape Report

Key Findings

- **Main drivers and barriers to data collection and availability:** Restrictions in humanitarian access are the primary barrier to data collection in Sudan. Violence, bureaucratic hurdles, logistical, and communication challenges force humanitarian partners to mostly depend on less reliable remote data collection methods. The challenges that government agencies face when engaging in data collection efforts due to political volatility and limited operational presence, along with constrained funding and economic instability, further detract from the country's information landscape. Additionally, the accuracy and reliability of data are compromised by the safety concerns of assessed populations, leading often to the withholding of information.
- **Limited quantitative and granular data:** The data landscape that informed Sudan's Humanitarian Needs and Response Plan (HNRP) 2024 starkly contrasts with previous exercises, which utilized a comprehensive Multi-Sector Needs Assessment (MSNA) covering over twenty thousand households. This year, the absence of such large-scale household assessments has forced the 2024 HNRP to rely on alternative sources, which tend to offer more qualitative than quantitative insights, leading to a gap in granular, quantified data. Current data collection efforts across various sectors, while extensive, lack the numerical specificity and severity scales that MSNA provided.
- **Sudan's operational environment:** The conflict situation is extensively monitored through Armed Conflict and Event Data Project (ACLED) reports, covering political and violent events, and augmented by in-depth insights from sources like the International Crisis Group. International media such as Al Jazeera, Reuters, and Washington Post, along with regional and local Sudanese media, provide both broad and on-the-ground perspectives. However, the rapidly evolving conflict presents challenges in capturing detailed security information, with social media underutilized due to verification difficulties while access remains scarce, increasing the potential bias of the available information. Displacement data confronts real-time collection difficulties, often resulting in non-definitive figures and accuracy issues due to the combined use of remote and field assessments.
- **Overview of existing needs assessments:** The 73 assessments documented in the Data Entry and Exploration Platform (DEEP) Assessment Registry predominantly focus on Humanitarian Conditions and Impact of the current crisis. Most of the assessments, mainly concentrated in Khartoum and Darfur, display weak analytical depth as organizations rely on rapid and remote methods due to the volatile context. Critical gaps are evident in underrepresented sub-sectors such as Gender-Based Violence (GBV) and Child Protection. Additionally, the registry also highlights a significant information gap regarding the non-displaced resident population. The reliance on key informant interviews and the absence of assessments in Arabic underscores the limitations in capturing comprehensive humanitarian needs across the country.

Sectoral overview

- **Protection: Severe humanitarian access constraints hinder granular assessment of protection needs**, particularly in regions like Greater Darfur, Greater Kordofan, and Khartoum. **Unstable communication systems** in conflict areas impede protection program implementation and disrupt communication between communities and humanitarian actors.
- **Food Security and Livelihoods:** There is a notable **gap in reliable data on non-agricultural livelihoods and income-generating activities**, as well as comprehensive household economic data, partly due to the lack of extensive governmental surveys.
- **Health:** Significant **gaps in epidemiological tracking and registration** persist, despite presence of the Sudan Outbreaks Dashboard. These gaps are further exacerbated by a shortage of medical personnel and damaged infrastructure, hindering the regular retrieval of data and health monitoring in Sudan's healthcare facilities.
- **Water, Sanitation and Hygiene (WASH):** Apart from baseline and localized assessments, data and analysis regarding the overall country situation and resident populations are lacking. This scarcity is particularly significant in assessing practices such as open defecation, which had high rates in Sudan before the conflict.
- **Education: Data on education losses are missing age or district level**, limiting the depth of **nuanced** analysis. A notable **deficiency exists in data regarding educational access for over 3 million internally displaced children**. The lack of data is compounded by the absence of regular and official reporting from the government, hindering a comprehensive understanding of the education system's status. Lastly, **inconsistencies in data regarding school closures and conversion of educational facilities continue to be a significant issue**.
- **Nutrition:** The sector faces significant data gaps due to limited access in conflict areas, staffing shortages, and outdated nutrition information systems. Challenges include **inadequate coordination across relevant sectors and bureaucratic hurdles** that hinder comprehensive data collection. This results in a dependence on **generalized estimates rather than detailed, location-specific analyses**, contributing to substantial uncertainty regarding the actual extent of Severe Acute Malnutrition (SAM) and the effectiveness of nutrition services in the region.
- **Shelter and Non-Food Items (NFI):** Rapid displacement of people due to conflict, coupled with the absence of regular national household surveys, results in **limited information on Non-Food Items and overall living conditions of non-displaced residents**, who are underrepresented in the data landscape of the sector.

Introduction

Purpose and goals of the report

As the conflict in Sudan reaches its nine-month mark, the escalation in civilian casualties, large waves of displacement, and widespread humanitarian needs have culminated in one of the gravest humanitarian crises worldwide. This rapidly changing situation, fueled by violent conflict and an expanding displacement crisis, is impacting the capacity of international and national actors to collect updated and reliable data. This report aims to provide an overview of the data landscape for the current humanitarian crisis in Sudan.

Effective response to this crisis requires a thorough understanding of the operational environment, living conditions, and needs of the affected populations. For a targeted and prioritized response, humanitarian organizations require reliable, timely data and robust analysis that offer insight into the context, key humanitarian needs, conditions, and identify the information gaps. Therefore, this report aims to detail the available information, highlight missing data, and explore the reasons for information gaps.

For more information and analysis on the humanitarian situation in Sudan, see other documents in this series here.

Defining the scope

This report provides a detailed overview of **secondary data collated on the DEEP** platform, covering various elements such as geographical distribution of sources, data availability over time, analytical framework pillars, sectors, affected and demographic groups, specific needs groups, and major organizations contributing to the information landscape. A key feature of this report is the up-to-date assessment registry on DEEP, which is particularly significant as it comprises the most robust and complete catalog of reports and assessments shared with the analysis team since May 2023. This registry plays a crucial role in enhancing the understanding of the data landscape and for informing more comprehensive and robust data collection efforts. It should be noted that this evaluation of assessments has been based on publicly available documents and others shared by humanitarian partners, and it may not encompass all existing assessments in Sudan. A static version of this dashboard can be found in **Annex III**.

Primary data was collected through an information landscape **survey** distributed among key humanitarian organizations at field and information management levels. The report also delves into the main barriers to data collection and availability. These include humanitarian access issues, lack of governmental presence, insecurity and protection concerns, challenges related to data accuracy and neutrality, economic and funding issues, and telecommunication and connectivity barriers.

Furthermore, the report is based on an in-depth review of the main topics, pillars, and sectors to assess the impact and needs of the population in Sudan amid the conflict and humanitarian crisis. It covers essential contextual topics such as **displacement** and the **conflict** itself, followed by a detailed examination of various humanitarian **sectors**. The approach incorporates identifying available sources, pinpointing information gaps, and challenges in data collection. This involves both qualitative analysis, through reports and assessments, and quantitative analysis using specific data from the DEEP platform.

Sudan information landscape: available data and gaps

Between September 1 and December 31, 2023, the analysis team collected and processed a total of **1,858** documents on the DEEP platform. From these documents, over **16,700** pieces of information or entries from **138** different organizations were extracted, highlighting the plurality of data collection efforts. An interactive DEEP Dashboard can be accessed publicly to evaluate and check the distribution of data and gaps within the project. The Data used to generate this report is available on the Humanitarian Data Exchange (HDX) webpage and can be accessed at this link: DEEP extracts related to the Sudan 2023 Situational Analyses - Humanitarian Data Exchange.

Operational Environment

6,527 DEEP entries on operational environment

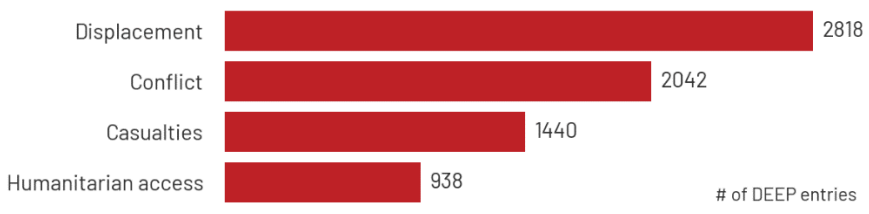


Figure 1: DEEP Entries – Operational Environment, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Conflict

Available data:

The information on the conflict in Sudan derives from ACLED reports, which primarily focus on political and violent events, providing data such as the numbers of fatalities, the type of event (e.g: protests, violence against civilians, battle and explosions/remote violence) and their location. The International Crisis Group provides conflict-specific insights, with an interactive timeline that succinctly summarizes alerts and trends. In addition, international media including Al Jazeera, Reuters and Washington Post provide major event updates, while the Sudan War Monitor serves as a reliable source for further insights into conflict developments. Ground-level perspectives are supplemented by regional and local Sudanese media such as Al Araby, Arab Weekly, Middle East Eye, Radio Dabanga, Sudan Tribune and Darfur24. Complimentary information is sourced from ICRC, OCHA, UNHCR. IMMAP Inc. has developed an interactive dashboard available to the humanitarian community, containing the most relevant information related to the conflict and its dynamics. A static version of it can be found in **Annex II**.

Gaps:

- The rapidly evolving conflict in Sudan leads to a notable gap in detailed, up-to-date information regarding the nuanced changes in the security situation. This lack of granular data hinders a comprehensive understanding of the evolving security dynamics.

Displacement

Available data:

Data on displacement is primarily sourced from updates and reports produced by humanitarian organizations including UN agencies and INGOs. Key information on Internally Displaced Persons (IDP) figures such as the total displacement by location, IDPs in Sudan, arrivals to neighboring countries, the number of IDP Households in Sudan, flow of IDPs between state of displacement to state of origin, IDP nationalities, and specific information on the main receiving countries such as Ethiopia, South Sudan and Libya are primarily obtained from DTM IOM through its Monthly Displacement Overview and its Weekly Snapshots. UNHCR is the principal data source for figures on refugees, asylum seekers and returnees. Additionally, it is also possible to give an overview of priority needs across the various population groups (IDPs, refugees in Sudan, host communities) and an indication on intentions and drivers of displacement/return. Verified international and national media sources were used (e.g: The Guardian 06/09/2023, New Arab 31/10/2023, Radio Dabanga 24/11/2023, Sudan Tribune 19/11/2023) to supplement this data. Incident data from ACLED was used to strengthen analysis on displacement trends and complement reporting from news agencies. IMMAP Inc.'s interactive dashboard mentioned earlier, includes a section on displacement, and a static version of it can be found in **Annex II**.

Gaps:

- **Secondary displacement**: This is significantly under-reported due to the inherent challenges in monitoring and the nature of secondary displacement. This gap leads to difficulties in accurately quantifying and analyzing this phenomenon, with the added risk of potential double counting.

- **Cross-country data:** There is an absence of reliable and up to date cross-country data, specifically disaggregated by nationalities.

Sectors

Protection

2,709 DEEP entries on protection

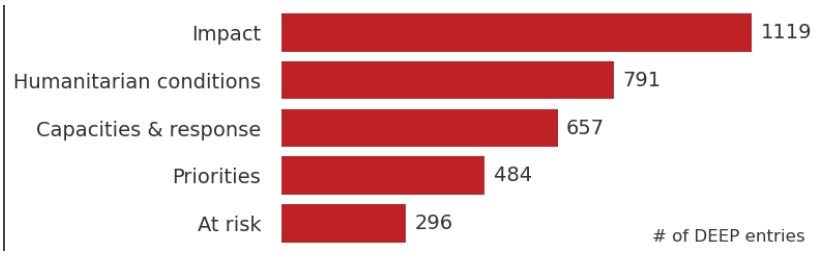


Figure 2: DEEP Entries - Protection, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

Data for the protection sector are periodically updated from the quantitative datasets (UNHCR data portal and IOM DTM), as well as conflict events from ACLED. Descriptions and immediate impacts of these clashes and surges of violence are documented by OCHA in several of its situation reports and operational updates (OCHA 07/09/2023, OCHA 02/11/2023; OCHA 12/11/2023). Additional information is sourced from national and international media outlets (Sudan Tribune, Radio Dabanga, BBC 08/11/2023, CNN 08/11/2023, Al Jazeera 08/11/2023). IOM and UNHCR track displacement and associated needs, while UNFPA provides a gender-focused approach to protection analysis.

Gaps:

- **Real-Time Severity Assessment:** Despite extensive international news coverage, **real-time assessment** of the severity of protection issues is challenging. For instance, a UNFTA report from November 2023 indicated communication difficulties and the impact of violence on GBV service providers, complicating crisis response and information gathering (UNFPA 29/11/2023). Similarly, the Unit for Combating Violence Against Women documented 108 cases of sexual violence across Khartoum, South Darfur, and West Darfur, with the Protection Cluster suggesting the actual incident numbers are likely higher due to ongoing security risks (Protection Cluster 06/08/2023).
- **Civil Documentation and Hazardous Living:** Limited data on individuals lacking civil documentation and those living in hazardous areas.
- **Risky Child Labor and Child Marriages:** Scarcity of specific statistics on children engaging in risky labor and child marriages.
- **Gender-Based Violence Services:** These services are often mentioned but lack detailed numerical data and local-level disaggregation.
- **Psychological Distress:** Data on households experiencing psychological distress is insufficient, with these impacts often mentioned but not quantified.

Food Security and Livelihoods

2,508 DEEP entries on food security and livelihoods

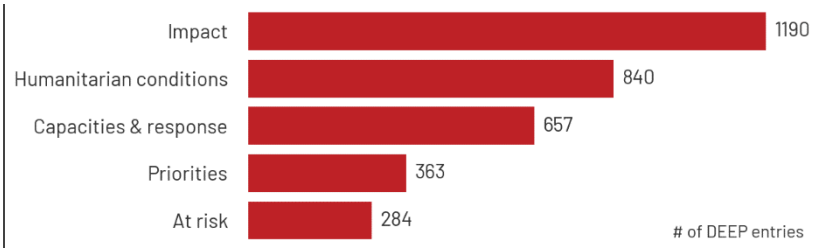


Figure 3: DEEP Entries - FSL, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

Key sources for these sectors are WFP, which provides Market Monitoring Reports (WFP 20/09/2023; WFP 18/10/2023, WFP 20/11/2023), the latest FEWS NET Food Security Outlook Update, and the latest FAO Emergency Livelihood Response Plan. The analysis of Sudan's food security situation is based on the latest IPC available (IPC 12/12/2023), complemented with updated information gathered from the minutes of the latest Food Security Sector meetings in Sudan (FSC 24/09/2023; FSL 06/10/2023). REACH and Islamic Relief assessments are also providing critical insights into the conditions and humanitarian needs of IDPs and Host Communities in Darfur, respectively. IMMAP Inc.'s interactive dashboard includes a section on food security that helps visualize the scope of the IPC projections at both national and regional levels. A static version of the dashboard can be found in **Annex III**.

Gaps:

- **Non-Agricultural Livelihoods Data:** There is a significant gap in reliable data on non-agricultural livelihoods and income-generating activities. Particularly, the local-level disaggregation of this information, including updates and particularly quantitative data for community-level understanding, is limited.
- **Household Economic Data:** Representative data on household economics, especially for the non-displaced population in Sudan, is lacking. This data could provide crucial insights into their current livelihood situation. Missing key livelihood indicators include median household income, the number of households facing cash liquidity issues, and those struggling to meet basic needs.
- **Quantification of Coping Mechanisms:** The discussion of livelihood coping mechanisms are present but they lack quantification through the Livelihood Coping Strategy Index, and the Reduced Coping Strategy Index.
- **Food Safety and Consumption Indicators:** There are gaps in indicators on households' safe food preparation, food consumption scores, and detailed data on food expenditure.

Health

3,414 DEEP entries on health

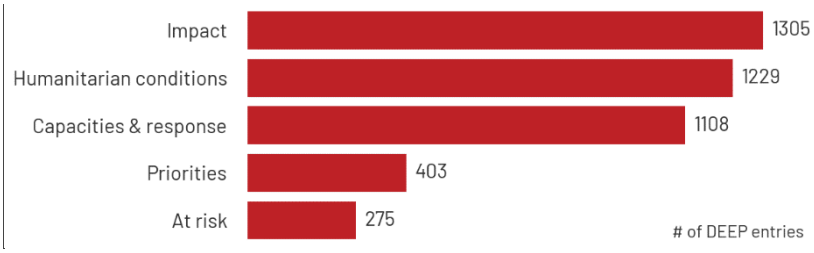


Figure 4: DEEP Entries - Health, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

The WHO and the Health Cluster are pivotal in providing broad-scale insights into Sudan's health sector. Their operational updates are crucial for monitoring aspects such as mental health, maternal and child health, and the distribution of medical supplies. However, there are gaps in epidemiological tracking and registration. The Federal Ministry of Health (FMoH) and WHO share the Sudan Outbreaks Dashboard that monitors different outbreaks, daily new cases and deaths, as well as geographical disaggregation. Additionally, attacks on health facilities across Sudan, along with associated fatalities and casualties are documented via the WHO's Surveillance System for Attacks on Health Care (SSA). Non-health-focused assessments like those published by REACH and Islamic Relief provide specific insights that prove the need for further data collection.

Gaps:

- **Access to Healthcare Facilities:** There is a lack of detailed data on distance to healthcare facilities and the average population served per primary healthcare centers in Sudan. While broad figures are available, regional details are limited. There are no indicators on unmet healthcare needs in the past three months, despite some data on access to healthcare for certain populations and locations.
- **Vaccination Coverage:** Data on DTC3 (DPT3/PENTA3) coverage for children under one year, particularly tetanus and pertussis vaccines, is insufficient. The coverage rate for measles vaccination is reported as a single figure for the entire country.
- **Health Center Functionality:** Many health centers are occupied, looted or destroyed, especially in the conflict areas, rendering them non-functional. While some tracking of disease outbreaks is available through different dashboards, it is mainly based on anecdotal and location-specific assessments. The actual number of affected people is very likely higher than reported (ACAPS 11/09/2023, Sudan News Agency 29/09/2023, UNICEF 18/10/2023). Statements such as "70% of hospitals in conflict-affected areas are not functioning" are frequently reported without further details or verification. Although these statements come from a reliable source such as WHO, more details and updates are needed.
- **Hospital Functionality Analysis:** The analysis of hospital functionality, including staff retention and restocking of supplies, is largely based on assumptions rather than concrete data. This approach stems from a significant lack of current, detailed information, highlighting notable gaps in real-time insights into the healthcare situation.

WASH

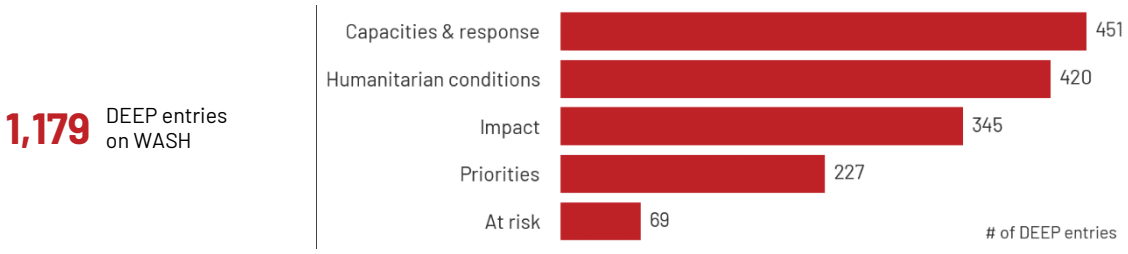


Figure 5: DEEP Entries - WASH, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

The data sources for the WASH sector are similar to those for the health section, with an increased reliance on IOM's Displacement Tracking Matrix (IOM 26/09/2023). A rapid gender analysis by CARE (CARE 01/10/2023) and ACAPS Analysis Hub thematic report on WASH Cluster needs (ACAPS 24/08/2023) were also published. Local media, primarily Dabanga Sudan (08/08/2023) provided brief information on water and sanitation access in key areas. The Protection Cluster and UN Women have offered insights into WASH-related protection risks, especially for women (Protection Cluster 10/08/2023, UN Women 26/09/2023). Moreover, OCHA factsheets and

statements (OCHA 19/10/2023, OCHA 25/10/2023), and USAID factsheets (USAID 27/10/2023), provided some updated statistics on water and sanitation access. Survey data from Islamic Relief (Islamic Relief 13/10/2023) and REACH (REACH 20/11/2023) provided information specific to the Darfur region.

Gaps:

- **Menstrual Protection Accessibility:** There is a lack of data on the accessibility of menstrual protection materials for women and girls.
- **Water Usage and Collection:** Information on the daily quantity of water use for essential activities or the time taken for water collection, including travel and queuing, is not available.
- **Solid Waste Management:** While details on solid waste campaigns are provided, comprehensive data on the solid waste management system is missing.
- **Governmental Household-Level Data:** There is a gap in governmental data at household level, affecting WASH services. Data on access to drinking water or sanitation facilities in resident households is not available.

Education

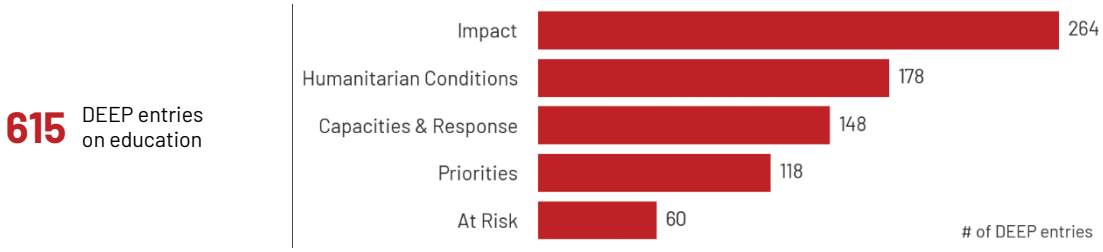


Figure 6: DEEP Entries - Education, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

The Education Cluster, together with several UN organizations are the primary sources of information in this sector. The Education Cluster provides key data on children's loss of educational access and school closures due to conflict. UNICEF occasionally offers insights specifically on educational initiatives, such as e-learning platforms. OCHA contributes broader contextual information about the use of schools as shelters and general school closure statistics. IOM DTM and REACH, mainly focusing on displacement, also shed light on the use of educational facilities as gathering sites. Media outlets supplement this with updates on school closures, the impact of displacement, and the lack of educational access amidst the conflict (BBC 14/09/2023, Asharq-Al-Awsat 10/08/2023, Dabanga Sudan 10/08/2023).

Gaps:

- **IDP Access to Education:** Post-conflict resurgence, detailed figures on the current status of Internally Displaced Persons (IDPs) and their access to education are scarce, representing a crucial information gap.
- **Geographic, Age, and Gender Disaggregation:** Data on access to education is not disaggregated geographically, by age, or gender.
- **Condition of Schools and Quality of Education:** Although displacement data provides information on schools being used as emergency shelters, detailed information on the condition of schools, which schools (if any) are operational, teacher availability, the regularity of teachers' salary payments, or the quality of education is lacking. Therefore, providing a comprehensive picture of how operational the education system is and the priority needs is challenging (OCHA 02/09/2023, UNHCR 10/10/2023, ACAPS 17/11/2023).

- **Safety and Infrastructure:** There is no data that analyzes the risks of child recruitment, data on safety at schools, attacks on education facilities or the state of the infrastructure.
- **Less Affected Regions:** Regions less affected by the conflict are not adequately covered, obscuring the understanding, in full extent of the region's needs (ACAPS 29/08/2023). In River Nile there is a need for a separate education assessment for children with disabilities (UNICEF, UNDP, WHO, FAO, Save The Children 27/11/2023).
- **Minimal Data from the Sudanese Ministry of Education:** There is little to no information coming from the Sudanese Ministry of Education (ACAPS 11/08/2023, UNICEF 20/10/2023, ACAPS 17/11/2023).

Nutrition

802 DEEP entries on nutrition

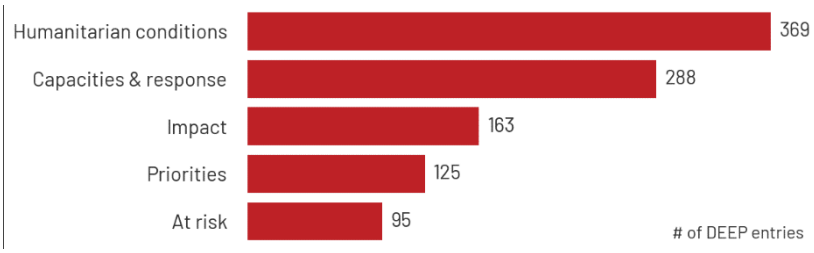


Figure 7: DEEP Entries - Nutrition, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

The primary sources for the Nutrition Sector are the Global Nutrition Cluster website and UNICEF Sudan web pages. Due to the lack of available data, the state level information was pieced together as much as possible from UN sources such as OCHA (OCHA 17/05/2023, OCHA 08/10/2023, OCHA 05/11/2023), WHO (UNICEF, WHO 18/10/2023), UNHCR (UNHCR 10/10/2023), and media and INGO sources (Save the Children 22/08/2023, Sudan Tribune 22/08/2023).

Gaps:

- **Functionality of Nutrition Centers:** While the reporting on the functionality of nutrition centers is somewhat more comprehensive compared to health centers, it still falls short of providing a clear picture. Consequently, there remains significant uncertainty regarding the actual number of children suffering from Severe Acute Malnutrition (SAM) and the extent to which children are accessing nutrition services.
- **Outdated Key Nutrition Indicators:** Key nutrition indicators like Global Acute Malnutrition or childhood stunting are not updated regularly nor cover the entire territory.
- **Malnutrition Analysis:** IPC Acute Malnutrition analysis is not available, due to data gaps.
- **Breastfeeding Information:** Information is missing on exclusive breastfeeding among infants aged 0-6 months.

Shelter & NFI

1,185 DEEP entries on shelter & NFI

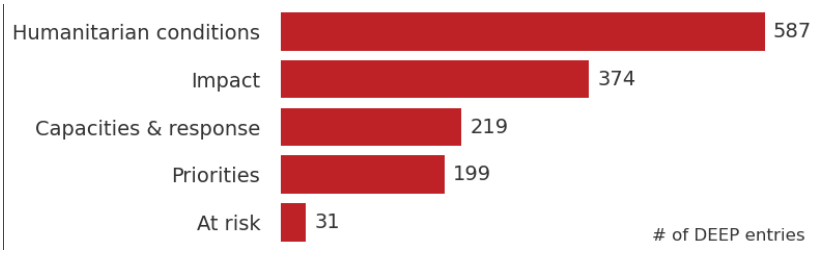


Figure 8: DEEP Entries - Shelter & NFI, as of 31 December 2023 (Source: DEEP accessed 31/12/2023)

Available data:

Information for the Shelter and NFI sector relies heavily on IOM, including the Displacement Tracking Matrix, which provides monthly updates on the priority needs of IDPs and IDP households, as well as information on living conditions (IOM 26/09/2023, IOM 06/10/2023, IOM 02/11/2023, IOM 11/10/2023, IOM 05/12/2023). OCHA's situation reports also (OCHA 05/11/2023) provided status information on shelters and information on access issues.

Gaps:

- **Security of Tenure:** There is a notable lack of specific information on the percentage of households without clear security of tenure in their community.
- **Inadequate Dwellings:** Information is also missing on the percentage of households with dwellings that provide adequate security, privacy, and protection of possessions.
- **NFIs and Living Conditions:** There is significantly less data related to NFIs, specifically what is most needed in which states/localities, and overall living conditions, aside from what can be extrapolated from data on other sectors (i.e., lack of electricity, lack of market access, etc.).

Main barriers/drivers to data collection and data availability

The 2023 Humanitarian Needs Overview (HNO) for Sudan (OCHA 07/11/2022) relied on a multi-sector needs assessment (MSNA) covering over twenty thousand households as the basis for the reports analysis. The MSNA was run for the third consecutive year and complemented by assessments from other agencies, as well as regular national assessments, such as the Integrated Food Security Phase Classification (IPC) and Displacement Tracking Matrix (DTM). However, given the ongoing conflict, the 2024 HNRP draws on data from other sources, as no MSNA has taken place. The following issues outline how various constraints impact both the quantity of data available and its quality.

Humanitarian access restrictions are limiting data collection

Violence against humanitarian assets and personnel continues to limit the ability of humanitarian agencies to operate effectively, restricting opportunities to conduct needs assessments or perform monitoring of activities. As outlined in the December Sudan Situation Analysis, since the beginning of the conflict, there have been 963 incidents impeding humanitarian access, out of which 63% are due to conflict or violence against humanitarian assets or personnel (OCHA 19/11/2023). Agencies like DTM continue to rely on remote data collection and face-to-face interviews (IOM 02/12/2023).

Physical and logistical barriers, including fuel shortages, logistics issues, and limitations of freedom of movement, along with difficulties passing through checkpoints, hinder organizations from collecting data and monitoring operations. For instance, the Rapid Support Forces (RSF) prevented water trucks and humanitarian workers from entering neighborhoods in Nyala (USAID 27/10/2023).

Agencies also report a **wide range of administrative and bureaucratic barriers** including **refusals to allow inter-agency and rapid assessments, suspension of partner organizations, demands for beneficiary lists, forced armed escorts and presence during loading processes, inspections of humanitarian trucks, attempted politicization of assistance**, and new bureaucratic requirements such as payments, and fees for hiring staff and government information (OCHA 30/10/2023). Assessments that do occur often have to compromise on coverage or methodology. For example, the Summary Report on Sudan's Comprehensive Food Security and Vulnerability Assessment published in June 2023 was unable to rely on data from several localities (At Tina - North Darfur; Al Buram, Um Durein, Heiban - South Kordofan; and Wad Al Mahi - Blue Nile) due to access issues and insecurity (WFP 29/06/2023)

In addition, I/NGOs face difficulties registering or acquiring **travel permits and visas**. This issue is exacerbated by a lack of uniformity and coordination between federal and state-level government entities. In July 2023, an open letter from over 50 NGOs urgently appealed for support in approving visas and travel notifications to facilitate their access, noting that several NGOs had not received new visas in over three months (Sudan INGO Forum 23/07/2023). As of 25 October, there were at least 215 visa applications pending, with at least 31 pending since July or longer. Instances have been reported where staff members with valid visas were refused entry by authorities upon arrival, with the reasoning behind this being unclear (OCHA 26/10/2023, OCHA 30/10/2023).

The lack of data available through Government sources

The outbreak of violence in April has further strained the already limited economic capacity of the government. This strain is most evident in the challenges faced in disbursing salaries to essential workers, including healthcare staff and teachers, highlighting broader issues affecting government services. As a result, less prominent entities like statistical offices are likely to face operational difficulties, resulting in a notable decline in their ability to collect and disseminate crucial data (FEWSNET 08/2023, OCHA 08/10/2023, Dabanga 10/10/2023, DFS 31/10/2023).

The OCHA 2023 HNO report (OCHA 07/11/2022) acknowledges that that reliance on government-provided data is limited, citing the latest census conducted in 2008. Instead, the report relies on national assessments conducted by other agencies such as the IPC, and DTM data. The lack of any regularly updated ministerial webpages suggests the limited functionality of those ministries under the present situation in Sudan in terms of data collection or making their data available (e.g: MoH, Ministry of Social Welfare, Women, and Child Affairs, Ministry of Higher Education and Scientific Research. Additionally, states webpages are also missing (e.g: River Nile State, Khartoum state, Red Sea State). The official President Palace Official Website was last updated in 2020 (Nation Online 12/2023).

Since April 2023, Sudan has seen a marked decrease in government-produced reports. Data from ReliefWeb shows a drop from 16 government-related publications in the first quarter to just six since 12 April 2023. Sudan's statistical capacity score stands at 54.4 out of 100, based on the World Bank's data. However, this indicator has not been updated since 2020, so a decline in this index is anticipated (World Bank 2020). Additionally, the Worldwide Governance Indicators for 2022 rank Sudan below 10.38 out of 100 across all metrics. Notably, the Government Effectiveness score, reflecting public service quality and policy credibility, declined from 6.19 in 2017 to 4.72 in 2022. This overall decline underscores severe **challenges in governance and information dissemination** (World Bank 19/10/2023).

Methodological limitations

Key Informant (KI) Interviews are being used as the primary data collection tool by REACH, DTM, CARE and other organizations (CARE 01/10/2023; REACH 07/08/2023; IOM 02/12/2023). Methodologically, however, qualitative accounts are often indicative despite being integral to providing first-hand information about specific events like attacks. The challenges in triangulating KI interviews can limit the accuracy of information, especially when questions involve the KI making estimations (such as how many members of their community are reliant on coping mechanisms, or how many have been displaced) or if such KIs report on the situation of a place they have already left.

Given the access restrictions, assessments often rely on **purposive or convenience sampling**. For example, in the case of Rapid Needs Assessment Report | Um Dukhun - Central Darfur, June 2023, had a small sample size (10 respondents) and used purposive selection, therefore results may be skewed by the personal judgment of the informants (Danish Refugee Council 01/06/2023). **Language barriers** between reporters and informants can challenge the accuracy of information provided without skilled professional translators. The Initial Rapid Gender Assessment (covering White Nile, Blue Nile, Darfur, Red Sea, Khartoum States) flagged that the lack of a translator meant information was potentially lost and mistranslated, resulting in a loss of meaning (UN Women 24/09/2023).

While organizations such as DTM have developed methodologies with multiple steps and methods of triangulation to mitigate some of the challenges in contexts such as Sudan, findings from KI-based assessments will not be on par with those that would be obtained from a representative household survey (IOM 02/12/2023).

Lack of verification

As a result of security challenges and staff movements' constraints, **data often comes from local news outlets rather than external partners and cannot always be verified by more than one reporting source.** In the absence of access to areas experiencing conflict, researchers and reporters often gather stories and data from informants who have fled conflict-ridden areas and who are either internally-displaced persons or refugees living in host countries (IOM 02/12/2023). Both **the time lapse and the difficulty in finding witnesses to the same events make corroborating evidence more problematic**, as acknowledged by IOM, whose Displacement Tracking Matrix (DTM) updates include a disclaimer specifying that "figures should be treated as preliminary findings only and are subject to change via future verification exercises" (IOM 05/12/2023). Despite these constraints, in the absence of more direct methods of data collection, relying on such testimonies remains one of the few viable options for gathering information in these contexts.

Response and selection biases

The **fear of reprisals** also plays a critical role in data collection. A Multi-sectoral Rapid Assessment carried out by Maarif (May 2023, confidential) found that insecurity and emotional distress led to the cancellation or postponement of several interviews and discussions. Informants often hesitate to share detailed information due to perceived or real security risks to themselves or their families, further complicating the reliability and depth of collected data.

With many studies reliant on key informants, **some (either by design or by accident) primarily use informants who belong to a specific demographic group**. For example, refugee informants are more likely to be women since men are being specifically targeted and killed as they flee (Reuters 15/12/2023). In another example, the Rapid Needs Assessment Report conducted in the Kulbus and Jebel Moon Localities in July 2023 relied on information from mostly male respondents because they interviewed only local authorities and leaders due to a lack of logistical support to travel to other areas. These findings could only present the situation partially, from the perspective of particular groups instead of the overall target population.

Moreover, some studies focus on only specific states or localities while others report on a national level - and many lack a detailed description of the methodology - **the extent to which findings can be generalized beyond the specific locations where the assessments are carried out is unclear**.

Connectivity Problems

With security challenges in Sudan significantly hindering the humanitarian response, **data collection often shifts to remote methods due to the absence of personal access**. However, since the conflict's outbreak in April 2023, Sudan's communication infrastructure has faced numerous setbacks. These include **direct damage to telecommunications towers, a deteriorating national power grid, and widespread looting of communication assets**. Such damages present a substantial challenge for humanitarian organizations attempting to assess the situation accurately and effectively (ETC 26/05/2023, ETC 01/12/2023, ETC 12/12/2023).

Poor internet connectivity and disrupted mobile networks are a major challenge. Most locations in Sudan still depend on Sudatel telecommunication and internet service providers, whose services are congested by the high numbers of people using them. In areas controlled by RSF, all Mobile Network Operators (MNOs) have lost their data centers and facilities. Conflict areas such as Great Darfur, Khartoum and parts of Kordofan remain hard-to-reach for providers setting up the necessary networks, which means that some of the people most in need are not being assessed in real time or even at all (OCHA 30/10/023). As reported by UN Women, one of the factors limiting the assessment was "delayed transmission of data due to poor internet connectivity" (UN Women 24/09/2023). The Multi-Sectoral Rapid Assessment on Khartoum South and East by Maarif Organization from May 2023 also noted challenges in "contacting the key informants due to the outage of telecommunication and internet networks" (Maarif 05/2023 Confidential).

Recommendations

- **Collaborative assessment and data collection effort**

Humanitarian organizations should consider conducting collaborative assessments, instead of individual assessments, to better utilize resources, reduce duplication, and obtain a more comprehensive view of people's needs. Collaborative assessments could also prevent interviewees' fatigue, which undermines data quality.

- **Developing standardized and tailored data collection tools**

Developing standardized and specific data collection tools can be useful in conducting assessments that can be compared over time. The presence of ready-to-use questions will also enable humanitarian organizations to be agile in the face of shocks, and to start data collection soon after an incident happens.

- **Widespread use of Area of knowledge methodology**

The Area of Knowledge methodology is used by REACH in many countries. In this methodology, key informants report on a settlement that they have latest knowledge of or have recently left (REACH 23/11/2023). Using this methodology would allow organizations to conduct assessments on conflict-affected areas without physically visiting those locations. These would result in greater coverage of hard-to-reach areas. However, it should be considered that KIs interviewed should not have left settlements too long ago as to ensure latest knowledge of the area. Such methodology, when used, should also be made explicit in the report.

- **Increase data sharing between organizations**

Government and humanitarian organizations should be encouraged to have their data publicly shared in designated platforms like HDX, ensuring accessibility for operational agencies and enabling effective response planning.

- **Core indicator-based information registry**

Developing an information registry that presents data availability and gaps on core indicators can help humanitarian organizations identify the types of data missing across the response. This will be useful for organizations in designing their future assessments accordingly and would allow better collaboration between organizations.

- **Utilizing of digital channels for real-time data collection**

Organizations could explore the possibility of broadening their existing tools to also capture local communities' concerns in real time, share their perspectives, and real-time updates about the incidents. They can also develop community-driven media initiatives like WhatsApp channels for this purpose and introduce toll-free numbers that would allow people to communicate directly about their needs and concerns.

Annex

ANNEX I - DEEP Entries Dashboard

ANNEX II - IMMAP Inc. Situation Overview Dashboard

ANNEX III - DEEP Assessment Registry Dashboard and evaluation of the existing assessments

Overall quality: DEEP's Assessment Registry evaluates the quality of the assessments identified through five criteria: fit for purpose, trustworthiness, analytical rigor, analytical writing, and analytical density. Each criterion is scored individually, contributing to the overall quality score. The overall score[1] for the assessments in Sudan is 10 out of 25. Compared to a similar project such as IMAC Ukraine, Sudan's assessments are below those carried out in Ukraine, where the score is 13 out of 25, although on a significantly larger number of documents (166). It's important to note that this rather low score is significantly influenced by the conflict context, which presents numerous barriers to data collection, including limited access, political instability, and logistical challenges. Further details can be found in the assessment dashboard below.

Approach and data collection techniques: Of the 73 assessments on DEEP, more than half are rapid evaluations. Since last April, there have been no in-depth assessments despite the shift in the country's humanitarian scenario. This gap in in-depth assessments is likely caused by the ongoing conflict, access constraints and reduced governmental presence, as governments often take the lead on these national household and representative surveys. Assessing the data collection techniques, over half of the assessments used key informant interviews (KIIs). Despite the limitations inherent in relying predominantly on KIIs, it is important to recognize the value and relevance of this approach, as, given the context, direct engagement with the population for individual and household assessments remains extremely challenging.

Methodology: Most assessments evaluated did not explicitly state the limitations in their data collection process, despite the evident challenges posed by the volatile and complex scenario. Understanding these limitations is crucial, as it provides context for the data collected and helps accurately interpreting the needs of the population and the organizations working on the ground. Interestingly, only 20% of the assessments explicitly described their sampling methodology. This lack of clarity in sampling approaches contributes to significant data gaps, as it obscures understanding of the soundness of the collected data.

Language: Having only one out of 73 assessments in Arabic, with the rest in English, limits accessibility for Sudan's predominantly Arabic-speaking population. This language barrier can impede the accurate assessment of humanitarian needs, as it restricts the participation and input of local communities, who are vital in providing nuanced, context-specific information essential for effective humanitarian response planning.

Geographical distribution: Geographically, most assessments identified in DEEP occurred in Khartoum, followed by the Darfur states, aligning with the overall data collection trend. Notably, despite its critical humanitarian situation, Kordofan has fewer assessments, the reasons for this discrepancy remain unclear.

Analytical framework pillars: This analysis offers an overview of the DEEP dashboard's main highlights since the project's inception in September 2023. The analysis team identified a total of 73 assessments from April to December 2023. A significant focus of these assessments was on Humanitarian Conditions and Impact, while

[1] The assessment quality score follows an objective methodology necessary to assess the country's data landscape in order to improve data collection, data analysis and to ultimately better provide aid. The tool and registry to obtain these scores can be made available to interested parties upon request, although it cannot be made public because it compromises data on the analyst team and the content of certain assessments that are considered confidential. The rating scale is from 1 (very poor) to 5 (very good), with "poor" in this case corresponding to 2 out of 5, and "fair" being 3 out of 5.

topics such as Shock/Event and Humanitarian Access were less frequent. In terms of stakeholder involvement, IOM was the most active organization with 20 assessments, followed by the European Community Humanitarian Aid Office (ECHO) with 15. The Norwegian Refugee Council (NRC) and the Sudan Humanitarian Aid Commission (HAC) also featured prominently. It's notable that half of these assessments were collaborative efforts by multiple organizations, and the other half were uncoordinated.

Sectors: The WASH sector is the most covered, followed by Health and Food. This apparent coverage, however, can be misleading, as over half of its 41 assessments are rated poor, and only a fifth are considered as fair. This limited quality could be explained due to the data originating from rapid multi-sector assessments that briefly address WASH, rather than in-depth, focused analyses. Consequently, while frequently mentioned, the WASH sector lacks robust and comprehensive coverage, with these assessments providing only a surface-level understanding of the sector's complexities. Sub-sectors like GBV and Child Protection are less covered, with Child Protection featured in 10 assessments and GBV in only 7, the least covered. The under-representation of these protection sub-sectors could be explained by the need to conduct in-depth and individual interviews with the population of concern, guaranteeing their protection and privacy and in a systematic way, which in the current context of Sudan seems to be extremely challenging.

Affected groups: While the groups most affected by displacement, either directly or indirectly, are prominently featured in assessments, the analysis reveals a significant information gap concerning Sudan's vulnerable resident population. These are individuals who haven't been displaced or haven't experienced a significant influx of IDPs. While organizations like IOM and UNHCR concentrate on highly vulnerable groups impacted by displacement, including IDPs, refugees, migrants, and returnees. The absence or limited capacity of the Sudanese government is reflected in the scarce information on the resident population. This underscores a critical gap in understanding the full scope of the humanitarian impact on all segments of Sudan's population.

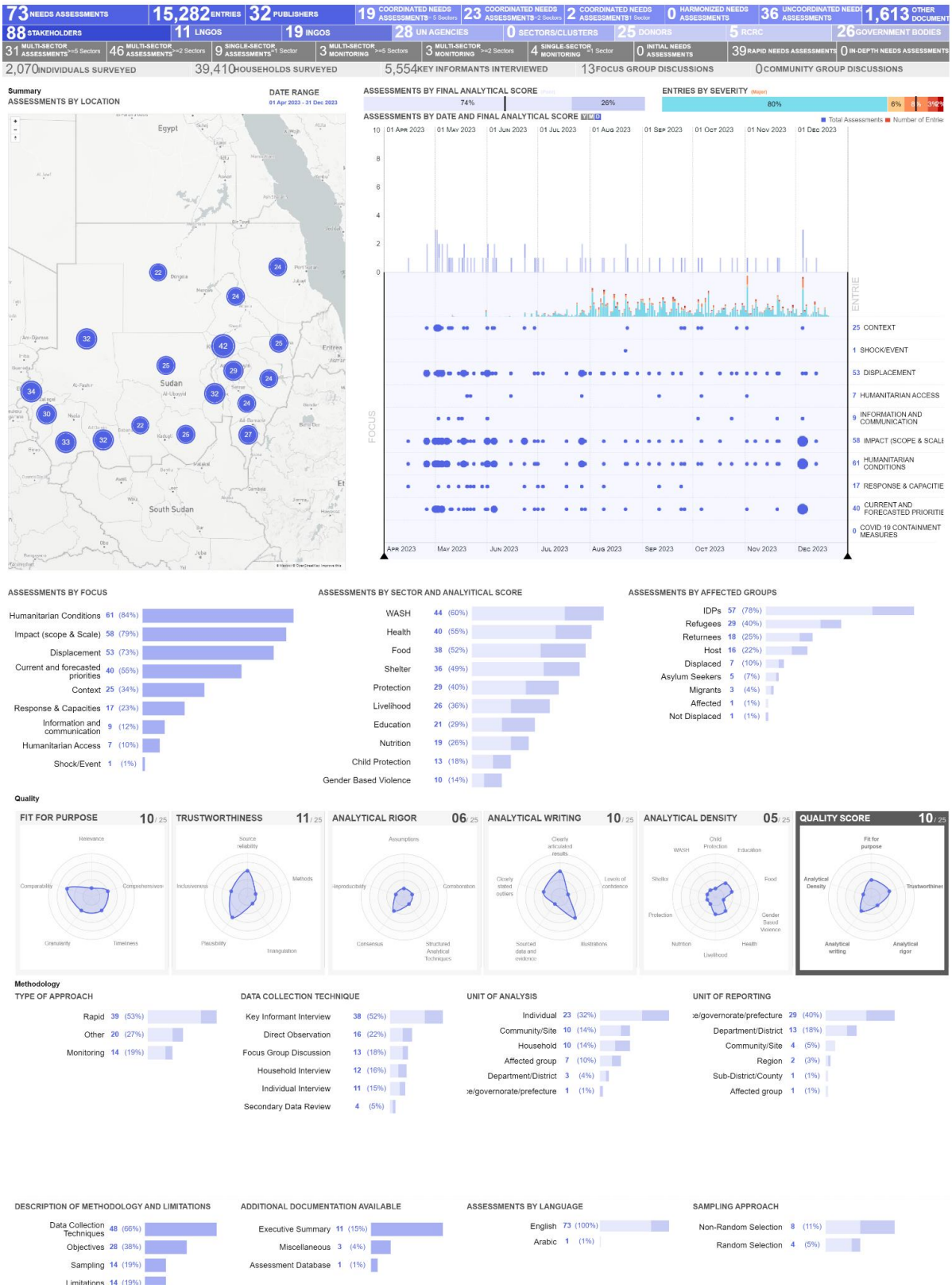


Figure 9: Assessment Registry Dashboard

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Sudan Crisis Information Landscape

Key Available Information

- The Sudan HNRP 2024, published on Dec. 2023 despite lacking inputs from an MSNA, is the main reference humanitarian document for 2024.
- IOM, through its Displacement Tracking Matrix and its Weekly Snapshots and Monthly Displacement Overview, serves as the main source of periodic, systematic, and multisectoral assessments in Sudan, although its focus is on IDP.
- Quantitatively, OCHA is the organization that contributes the most to Sudan's information landscape, thanks to its situation reports.
- Conflict data is mostly sourced from ACLED weekly reports, focusing on violent events, fatalities, and event types. Supplementing this, are CrisisWatch insights, Al Jazeera, Reuters, Radio Dabanga, Sudan Tribune, etc.
- IPC's comprehensive data is the gold standard resource for food insecurity analysis based at district-level.
- WHO and the Health Cluster updates cover key areas like mental health, maternal and child health, and medical supply distribution. Associated fatalities and casualties are documented via the WHO's Surveillance System for Attacks on Health Care.
- The gender perspective in assessments conducted remains limited, but organizations like CARE with their rapid gender analysis in Oct. 2023, and UNFPA, with their analysis of GBV trends and situational updates, provide a specific gender-based focus.
- Sporadic multisectoral assessments conducted by organizations such as REACH, Islamic Relief, or NRC help to understand the reality of specific populations and locations across Sudan.
- The active role of Clusters in collecting, analyzing, and publishing findings is key in a context of limited data availability, as can be seen with the Nutrition, Education, and Protection Clusters.

Main Challenges

- Issues related to **humanitarian access** (incl. freedom of movement limits, refusal for assessments and new bureaucratic demands) and **violence** (incl. violence against humanitarian assests and personnel) are the primary barriers to data collection and availability, having been the main reason for the disruption of MSNA 2023.
- Economic strains **negatively impact governmental services**, leading to operational challenges for data collection entities.
- **Heavy use of key informant interviews** can limit data accuracy, particularly when informants estimate or recall events from areas they have fled.
- Security risks and constraints on staff movements lead to reliance on local news and displaced persons for information, **affecting data verification and reliability**.
- Bias and limited generalizability of findings arise from reliance on **specific demographics** for key informat and focusing on **certain localities**.
- Local media and NGOs face **challenges maintaining neutrality** in politically or emotionally charged reporting.
- **Damaged infrastructure and unreliable networks**, esp. in conflict zones like Darfur and Kordofan, hinder effective remote data collection and communication.

Key Sectoral Information Gaps

Conflict

- Lack of an authoritative map of the areas of control

Displacement

- Under-reporting of secondary and/or multiple displacement
- Missing updated, nationality-specific cross-country data

Education

- Insufficient data on IDP education access
- Lack of detailed data on school conditions, operational status, education quality
- No data on education safety, including child recruitment risks

Food Security & Livelihood

- Data gap in non-agricultural livelihoods and income activities, particularly at the local-level
- Shortage of representative household economic data
- Missing quantification of livelihood coping mechanisms
- Absence of detailed indicators on food preparation, consumption, and expenditure

Health

- Limited data on the accessibility of healthcare facilities
- Insufficient data on vaccination coverage
- Shortfall in data on functional health centers in conflict areas
- Lack of concrete data on hospital functionality

Nutrition

- Limited clarity in nutrition center functionality reporting
- Failed regular updates of key nutrition indicators (such as Global Acute Malnutrition)
- Absence of data on exclusive breastfeeding for infants 0-6 months

Protection

- Lack of real-time severity assessment of protection issues
- Limited data on people without civil documentation
- Insufficient data on children at risk of exploitation and child marriages
- GBV services data lacks detail and local disaggregation
- Inadequate data on household psychological distress

Shelter & NFI

- Insufficient data on household tenure security and dwelling adequacy
- Limited information on NFIs and overall living conditions

WASH

- Gap in data on menstrual protection accessibility
- No detailed data on daily water usage and solid waste management
- Missing governmental household-level WASH data

Recommendations

- Increasing collaborative assessments and data collection efforts
- Developing standardized and tailored data collection tools
- Widespread use of area of knowledge methodology for covering hard-to-reach areas
- Increasing data sharing between organizations
- Developing core indicator-based information registry
- Utilizing of digital channels for real-time data collection

Read the full report here.

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