Research Terms of Reference

Joint Market Monitoring Initiative (JMMI)
SDN2303
Sudan

July 2023
V3

REACH Informing
more effective
humanitarian action

1. Executive Summary

Country of intervention	Sudan					
Type of Emergency	□	Natural disaster	X	Conflict	□	Other *(specify)*
Type of Crisis	□	Sudden onset	□	Slow onset	X	Protracted
Mandating Body/ Agency	*Sudan Cash Working Group*					
IMPACT Project Code	SDN2303					
Overall Research Timeframe *(from research design to final outputs / M&E)*	Monthly (ongoing), starting in October 2023 and ongoing until September 2024					

Research Timeframe *Add planned deadlines (for first cycle if more than 1)*	1. Pilot/training: Sept. 25-26th 2023	6. Preliminary presentation: N/A
	2. Start collecting data: Oct. 8 2023	7. Outputs sent for validation: Nov. 2nd 2023 (contingent on WFP sharing data from the previous month)
	3. Data collected: Oct. 16th 2023	8. Outputs published: Nov. 9th 2023
	4. Data analysed: Oct. 25th 2023	9. Final presentation: Nov 16th 2023
	5. Data sent for validation: Oct. 25th 2023	

Number of assessments	□	Single assessment (one cycle)
	X	Multi assessment (more than one cycle) *Monthly cycle*

Humanitarian milestones *Specify **what** will the assessment inform and **when*** *e.g. The shelter cluster will use this data to draft its Revised Flash Appeal;*	**Milestone**		**Deadline**
	□	Donor plan/strategy	_ _/_ _/_ _ _ _
	X	Inter-cluster plan/strategy	TBD
	X	Cluster plan/strategy	Ongoing
	X	NGO platform plan/strategy	Ongoing
	□	Other (Specify):	_ _/_ _/_ _ _ _
	Audience type		**Dissemination**

Audience Type & Dissemination *Specify **who** will the assessment inform and **how** you will disseminate to inform the audience*	□ Strategic X Programmatic X Operational		X General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)
			X Cluster Mailing (CWG) and presentation of findings at next cluster meeting
			X Presentation of findings (e.g. at HCT meeting; Cluster meeting)
			X Website Dissemination (Relief Web & REACH Resource Centre)
Detailed dissemination plan required	□	Yes	x	No
General Objective	To inform the Sudan Cash Working Group and other cash actors on evolutions in prices and market functionality across Sudan in the face of renewed conflict on April 15th 2023, so as to provide an evidence base to inform the design, implementation and appropriate adjustments in cash and voucher assistance (CVA).		
Specific Objective(s)	1. Track prices and availability of basic commodities in Sudan, with a particuar focus on NFI items[1] 2. Assess the impact of conflict, seasonality, and inflation on the functionality and accessibility of key market systems 3. Contibute to a broader understanding of the market environment		

Research Questions	1. What are the prices and availability of basic food and non-food items in markets throughout Sudan, and how do these vary over time?
	    a. What are the costs associated with the Minimum Expenditure Basket (MEB) for Sudan?
	    b. What are the geographical price variations and trends for these basic items over time?
	2. To what extent can assessed markets currently be considered functional, based on the five dimensions (accessibility, availability, affordability, resilience, and infrastructure) of the REACH Market Functionality Score?[2]
	    a. Do all market actors, including customers, have physical/social/ access to markets?
	    b. Are the prices for core items stable in this market?
	    c. Can vendors reliably provide all core items that local households need to purchase on a regular basis?
	    d. Do customers have financial access to markets?[3]
	    e. Do supply chains for core items market function reliably?
	    f. Is the physical infrastructure in and around markets (buildings, roads, etc.) in sufficiently good condition to support normal livelihood and trading activities? Do vendors have access to locked, secure storage facilities where they can keep their stock?
	3. What are the main supply chain pathways for basic food and non-food items in different regions of Sudan and how have these been impacted by the conflict?
	    a. How resilient are these supply chains to shocks such as conflict, seasonality, and inflation?		

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[1] Whilst food prices of commodities included in the Sudan MEB are monitored systematically on a regular basis, this is not the case for NFI items.

[2] Further guidance on how the MFS is calculated can be found in the Methodology section (*Data Processing & Analysis*)

[3] Indicative insights into financial access for customers will be ascertained from the perspective of vendors, through questions on whether their customers face any financial challenges in travelling to market places or in paying for the goods they need.

	b. How does the functionality of these supply chains affect the availability and price of basic food and non-food items in local markets?				
Geographic Coverage	XXX – specific areas to be determined based on partner support and capacity				
Secondary data sources	[WFP food price data](#) - Famine Early Warning Systems Network (FEWS NET) [price and market data](#) - Documents shared by the CWG, including assessments and analysis conducted by partners. These include: - Sudan Rapid Market Access Survey conducted by Mercy Corps in nine locations across Sudan, May 2023 - Rapid Needs Assessment conducted by NRC, Wad Madani, Aljazira State, April 2023 [Revised Humanitarian Response Plan](#), May, 2023				

Population(s) *Select all that apply*	□	IDPs in camps	X	IDPs in informal sites
	X	IDPs in host communities	□	IDPs [Other, Specify]
	□	Refugees in camps	□	Refugees in informal sites
	□	Refugees in host communities	□	Refugees [Other, Specify]
	X	Host communities		

Stratification *Select type(s) and enter number of strata*	X	Geographical #: **TBD** based on partner coverage Population size per strata is known? □ Yes X No[4]	□	Group #: _ _ _ Population size per strata is known? □ Yes □ No	□	*[Other Specify]* #: _ _ Population size per strata is known? □ Yes □ No

Data collection tool(s)	X	Structured (Quantitative)	□	Semi-structured (Qualitative)

	Sampling method	**Data collection method**
Structured data collection tool # 1 *Select sampling and data collection method and specify target # interviews*	X Purposive □ Probability / Simple random □ Probability / Stratified simple random □ Probability / Cluster sampling □ Probability / Stratified cluster sampling X Snowball sampling	X Key informant interview (Target #): 4-5 vendors per assessed area per monitored item (dependent on partner capacity and resources) □ Group discussion (Target #):_ _ _ _ _ □ Household interview (Target #):_ _ _ _ _ □ Individual interview (Target #):_ _ _ _ _ □ Direct observations (Target #):_ _ _ _ _ □ [Other, Specify] (Target #):_ _ _ _ _
Target level of precision if probability sampling	N/A	N/A

Data management platform(s)	X	IMPACT	□	UNHCR		
Expected ouput type(s)	□	Situation overview #: _ _	□	Report #: _ _	□	Profile #: _ _

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[4] The full extent of vendors in a given district is unknown. In the JMMI, the sampling pool is not the population but the vendors themselves. Even though the population of vendors is unknown, indicative comparisons can still be made among strata.

	□	Presentation (Preliminary findings) #: _ _	X	Presentation (Final) #: 1 per round or as requested	X	Factsheet #: 1 per round
	□	Interactive dashboard #:_	□	Webmap #: _ _	□	Map #: _ _
	X	Dataset #: 1 per round				
Access	X	Public (available on REACH resource center and other humanitarian platforms)				
	□	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)				
Visibility *Specify which logos should be on outputs*	*REACH*					
	Donor: BHA					
	Coordination Framework: CWG					
	Partners: Partners participating in data collection will be listed on factsheets, but partner logos will not be included.					

2. Rationale

2.1 Background

On 15 April 2023, conflict ignited between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF) across the country. As of June 12th, 2023, the latest Displacement Tracking Matrix (DTM) report from the International Organisation of Migration (IOM)[5] indicated that over 2,600,000 people had been internally displaced since the outbreak of armed clashes on April 15th, as well as over 750,000 cross-border movements. The death toll had risen to over 1100 and 12,000 injuries as of July 14th, with the actual death toll expected to be much higher, as access has not been possible to many of the conflict-affected locations, and current figures include only deaths reported to health facilities.[6]

Initial assessments from partners suggest variable impacts on markets, largely dependent on regional stability and proximity to areas of intense conflict such as Khartoum. While the exact extent and nature of these impacts remain uncertain, it is evident that markets and the liquidity of cash have been significantly impacted by the conflict. The Famine Early Warning System Network's (FEWS Net) Sudan Food Security Outlook for February to September 2023 underlines the critical dependency of Sudan's population on markets, particularly in the face of mounting challenges[7]. As the lean season approaches, household stocks are expected to dwindle, intensifying the population's reliance on markets. This dependence is expected to surge even further, leading to an increased demand for food assistance during the peak months of August and September. Compounding these issues are concerns about the resupply of goods. Once local stocks are depleted, the replenishment of goods becomes a major challenge due to limited in-country supplies and disrupted transport networks. The upcoming rainy season, typically running between June and October, threatens to exacerbate these problems, potentially impeding access to markets and further worsening the food security situation. In light of these challenges, it is crucial to monitor market dynamics closely and enrich the evidence base for partners to adapt interventions accordingly. The markets, despite adversities, remain a critical lifeline for the people of Sudan and ensuring their resilience and functionality is integral to meeting people's needs in this complex context.

Whilst humanitarian actors have been responding with cash and voucher (CVA) based interventions to support crisis-affected populations, with plans to scale up CVA operations where possible, there is currently no systematic monitoring of the MEB (Minimum Expenditure Basket) across Sudan, and gaps remain in the coverage of all existing market monitoring initiatives accessible to humanitarian actors, both geographically and thematically. Some members of the Sudan Cash Working Group (CWG) conduct *ad hoc* price monitoring in their own geographical areas of operation, but these exist as silos

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[5] DTM Sudan - Situation Report 13 | Displacement Tracking Matrix (iom.int)
[6] OCHA. Sudan Situation Report. 14th July 2023.
[7] FEWS Net Sudan Food Security Outlook for February to September 2023

across which indicators and item specifications are not harmonised, making it harder to cross-compare prices among implementing partners and geographies.

The World Food Programme (WFP) has successfully managed to restart its price monitoring of the MEB food items in several localities[8]. While this is focused on a select group of essential food items from the MEB, it nevertheless provides valuable data to help address the country's pressing needs. Recognising the broader gaps in current information, particularly in NFI price monitoring, it appears that an opportunity exists for a more comprehensive, multi-sectoral market monitoring initiative. Such a collaborative endeavour, involving all relevant humanitarian partners operating across different markets and geographies, would harmonise data collection and optimize shared resources. In turn, this joint effort would enhance coverage, effectiveness, and operational applicability of market monitoring systems for cash actors in Sudan, ultimately strengthening our collective response to the challenges at hand.

To address the OUTLINED information gaps and consolidate existing data collection efforts, REACH will work in close collaboration with the CWG to launch and coordinate a Joint Market Monitoring Initiative (JMMI) monitoring all relevant NFI commodities in the Sudan Minimum Expenditure Basket (MEB). Where coverage is limited by current WFP monitoring and where the JMMI Taskforce has coverage, it is hoped that the JMMI will also collect food commodities in the MEB to complement price monitoring efforts and ensure as full as geographical coverage as possible.

2.2 Intended impact

To consolidate existing data collection efforts and address outlined information gaps, REACH will collaborate closely with the CWG to launch the Joint Market Monitoring Initiative (JMMI). This initiative aims to supplement existing efforts by focusing on areas currently underrepresented in the data, such as the prices of NFI commodities, providing a more holistic evidence base for the potential expansion of CVA and future changes to CVA programming.

In generating thorough price monitoring insights into NFI commodities, the JMMI will significantly enhance the strategic decision-making processes of humanitarian actors. In the context of ongoing conflict and inflation in Sudan, these insights will provide valuable understanding of the market dynamics. This, in turn, will inform adaptations and potential expansion of CVA programming, allowing for more responsive and effective interventions that align with the evolving market conditions.

3. Methodology

3.1 Methodology overview

The activity outlined in these terms of reference (ToR) is designed to provide longitudinal market and price data using REACH's JMMI methodology, which has been rolled out in 20 countries to date. The initiative, to be conducted in partnership with the Sudan CWG, will be coordinated through a JMMI Taskforce established for this purpose, which will be co-led by REACH and the CWG. On behalf of the taskforce, REACH will develop the research design, data collection tools, guidance documents, training materials, analysis, and outputs for the JMMI, as well as drafting the ToR for the taskforce itself, all with iterative input from taskforce members. The taskforce members, in turn, will work to develop their own key informant (KI) networks, coordinate the coverage of the assessment, collect data, and review or endorse all aspects of the research design, as well as potentially taking on some aspects of the training and data cleaning if capacity allows. REACH will aim to complete data collection in sites not covered by other JMMI members as its own capacity allows.

Data collection will be a joint, partner-led exercise carried out by CWG members using a harmonised questionnaire. The methodology centres on quantitative, structured interviews with purposively sampled traders who will act as KIs for their respective markets. Partners will focus on interviewing retailers, rather than wholesalers or distributors, as these are the market actors most likely to sell to the vulnerable populations that humanitarian actors generally target. Tentatively, data

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[8] Kassala, Red Sea, Blue Nile, White Nile, North Darfur

collection will be launched in August 2023, and data collected and analysed on a monthly basis. Outputs will include a brief narrative summarising key findings on a monthly basis.

3.2 Population of interest

The aim of the JMMI is to provide rapid information on prices and market functionality to humanitarian actors working throughout Sudan, both in areas directly affected by conflict and in those affected by the IDP influx. The geographical coverage of the exercise, will depend on the access of JMMI taskforce members to markets and their ability to collect data from these areas consistently.

The unit of analysis for this assessment will be at the admin 2, or district, level. This is informed by the fact that admin 3 level data is currently unavailable, hence limiting the feasible granularity of the analysis. Furthermore, districts are the standard unit of analysis in Sudan according to OCHA and the Integrated Food Security Phase Classification (IPC). Districts serve as crucial nodes for trade and commerce, typically embody areas of high population density, including displaced populations, and are administrative units where policy and programme interventions can be effectively implemented and monitored. Adopting the district level for analysis allows for the differentiation of market dynamics within and between districts. This level of granularity is crucial for understanding how to tailor CVA strategies in diverse contexts, ensuring alignment with existing administrative and data structures, thereby promoting the harmonization and effectiveness of the assessment.

3.3 Secondary data review

Source	Use
REACH Assessments (other JMMIs – South Sudan & Syria for example, Supply Chain Analysis,	Broader contextual understanding, including use of regional products to inform cross-border dynamics relevant to aspects of market functionality.
WFP's Food Security Analysis (VAM)	Provides updated data and analysis on food security and markets in Sudan, aiding in understanding the context, identifying information gaps, and triangulating primary data.
IOM Displacement Tracking Matrix (DTM) & UNHCR Population Statistics Reference Database	Offer detailed information on displacement in Sudan, informing the sampling design and contextualizing the assessment.
Sudan Cash Working Group (SCWG) reports, meeting notes, etc	Provides updates and insights into any gaps in knowledge or implementation.
Sudan Revised Humanitarian Response Plan (Humanitarian Programme Cycle 2023, Revision issued on 17 May 2023)	Provides the most recent overview of the humanitarian situation in Sudan, including information on priority needs and response strategies.
Rapid Assessments from partners/NGOs operating in Sudan	These sources provide valuable context and help identify information gaps. Helps to avoid duplication.

3.4 Primary Data Collection

Coordination

The JMMI is a joint exercise led by REACH and the CWG and in close collaboration with the JMMI Taskforce members, who collect data from their respective areas of operation on a voluntary basis. As such, the scope and coverage of the JMMI will largely depend on the interest and capacity of JMMI Taskforce members. The JMMI Taskforce will serve as the decision-making body guiding the initiative. The objective of this taskforce is to support the design and successful implementation of the JMMI, as well as to build technical consensus among participating members.

The JMMI Taskforce will be co-led by REACH and the CWG, and all partner organisations contributing to the initiative are counted as members. The taskforce agrees to adopt a common approach toward the key pillars of the initiative, such as methodology, data collection tools, item list, coverage, visibility, ownership of data, etc.

Methods

All data for the JMMI will be collected by member organizations of the JMMI Taskforce on a monthly basis using a structured quantitative tool. Data will be collected in the form of key informant interviews (KIIs), with retailers in target markets serving as the KIs. In accordance with the "joint" methodology of the JMMI:

- All partners will commit to supporting one joint monitoring process.
- All partners will use the same data collection tools.
- All partners will use the same data collection methodology.
- All partners will collect data during the same period of time.
- All partners will upload their data to the same KoBo server.

Collectively, taskforce members will aim to cover as broad a selection of markets in districts across Sudan as possible, with a focus on urban markets and those that serve the greatest numbers of persons of concern. In practice, maximally broad coverage will need to be achieved via a process of "deconfliction":

1. Each participating organization begins by proposing all districts/markets from which it could commit to collect data based on the locations of its field bases.
2. REACH and CWG, as the co-leads of the JMMI taskforce, compare the organizations' potential areas of coverage, resolve any overlaps, and suggest modifications to ensure that organizations are not duplicating each other's work.

In some cases, REACH and CWG may propose that these organisations cover neighbouring localities instead that would otherwise not be incorporated.

Pilot Phase

The JMMI Taskforce will initiate a one-week pilot phase aimed at testing the structured quantitative tool and evaluating the proposed data collection process. This is of particular importance due to the inaugural implementation of the JMMI in Sudan. The pilot phase aims to: assess the tool's performance under field conditions; troubleshoot potential issues in the data collection process; and, crucially, ensure that our methods align with the realities and constraints on the ground in Sudan.

Upon completion of the pilot phase, a structured half-day debriefing workshop will be conducted. Here, field teams will be given the platform to share their experiences, report any challenges encountered, and provide feedback on the tool and methodology. The feedback received will be a crucial factor in refining our approach. This will be systematically collated and integrated as appropriate, ensuring the data collection process is effectively tailored to the unique conditions in Sudan.

Sampling

Sampling Frame

Given the collaborative nature of this assessment, where coverage depends on the interest of the partner organisations and their field teams' capacities to regularly collect market data, the number of markets to be included in the assessment may differ between months. However, the following minimum standard will be used to ensure diversity of coverage, indicative representation, and the assessment conforms to prevailing statistical benchmarks.

Considering the complexity and diversity of marketplaces in Sudan, will aim to survey a minimum of 50 marketplaces each month to ensure the representation of various economic realities. This number offers a balance between statistical rigour, representation of diverse marketplaces, and practicality concerning partners' capacities. However, due to the sampling appproach it is important to note that findings for this assessment are indicative only.

In each surveyed marketplace, a minimum of four retailers per assessed item category (food, non-food, etc.) should be interviewed monthly. This will help with data triangulation, ensuring multiple data sources for reliable results and aids in mitigating the impact of potential outliers.

Overall, this culminates in a minimum of 200 retailers surveyed each month. These figures, however, remain flexible to accommodate partners' capacities and evolving ground realities. The final sampling frame will be subject to continual reviews and adjustments as per the interests, commitment, and capacities of our partner organisations and their field teams.

Marketplace selection:

The JMMI will initially prioritise marketplaces in locations directly and indirectly affected by the conflict. For the purposes of the JMMI, a **marketplace** is defined as an area with a relatively sizable concentration of traders in close proximity to each other. These traders can be located in a devoted market area, in a central business district, along a commercial corridor, or similar areas. This vague definition is designed to encompass a wide variety of marketplaces that enumerators may encounter in the field and to enable each organisation to make judgments about the most valuable ones to monitor based on local realities. Field teams within each participating organisation are responsible for identifying the main markets in each targeted garrison district that meet this definition.

Taskforce members who have committed to collect data from a particular locality should, in general, target traders from the locality's **largest marketplaces devoted to retail** (i.e., no markets solely devoted to wholesalers, etc.). In locations where markets are relatively well-integrated, and where the same goods tend to flow from central markets outwards to peripheral areas, simply interviewing traders from the district's main marketplaces should provide a sufficiently indicative overview of market conditions throughout the target area.

Only one partner should contribute data from each monitored area per round. For smaller localities, one partner will be assigned to cover the area. For larger localities, the JMMI taskforce will determine the best way to divide the area into smaller sections that will each be assigned to one partner.

Trader selection:

Within each targeted marketplace, field teams within each participating organisation are responsible for identifying a sufficient number of traders to interview that match the following criteria:

- Traders must be **retailers** selling directly to consumers. Wholesalers should be avoided unless they commonly also sell directly to consumers, in which case only their consumer retail operations should be assessed.
- Traders must sell at least one item monitored as part of the JMMI survey; preferably, they will sell as many of these items as possible.

- Enumerators should aim to monitor the same traders or types of traders patronised by average consumers in the area. Traders selling upmarket goods and expensive brands that are not purchased by most households should be avoided.
- Traders with weight scales should be prioritised for food items. However, traders without weight scales may be interviewed as well if there are not enough traders with scales in the marketplace.
- To the extent possible, traders should be located in different parts of the marketplace. There are no restrictions on the size of the surveyed traders, as consumers typically buy from small as well as large traders.

Field teams must aim to collect a minimum of 4 prices per assessed item per assessed locality, ideally all from the district's largest and most central marketplace. There is no set number of traders that field teams are required to interview in order to finish data collection; **field teams should continue interviewing traders until they have collected the minimum number of prices for every assessed item.** If an enumerator is able to collect every required price via visits to 4 large general stores, then they will only need to interview 4 traders in that market; if they collect prices primarily from small-scale traders that sell only a few items each, the number of interviews will be higher (but each individual interview will be much shorter). If an item is only sold by 1-3 traders in the location, field teams may collect data only from these traders and inform their field coordinators of the situation. If an item is never sold in a specific location or if it is seasonally or otherwise unavailable across the entire area, no price data for this item needs to be collected, but the enumerator should note these dynamics in the comments section of the data collection tool.

When approaching a given trader for the first time, the enumerator should begin by introducing themselves and their organisation, clearly explaining the purpose and nature of the assessment and the amount of time they expect the survey to take to complete, and should confirm whether the vendor is willing to contribute information to the assessment every month. If the vendor agrees, the enumerator should seek to collect data from that vendor every round as far as possible, and should continue to confirm at the beginning of every survey that the vendor consents to continue participating. However, if a particular trader is consistently reporting prices that are far out of step with other vendors in the same marketplace, whether because they are generally expensive or because they are potentially inflating reported prices in the hope of benefiting from humanitarian programming, this trader should be avoided in future rounds and replaced with another.

Items to monitor

As part of the JMMI, all participating organisations will monitor the prices of an agreed list of items. Members of the JMMI taskforce will negotiate the contents of this basket among themselves, but they will be based largely on the contents of the MEB for Sudan. The JMMI taskforce may choose to include additional items of interest to Food Security and Livelihoods (FSL), Shelter and Non-Food Items (SNFIs), Nutrition, Water, Sanitation and Hygiene (WASH), Protection, Health, and other clusters.

In instances where items in the basket are commonly sold in several different varieties, data will be collected on only the cheapest commonly consumed variety available in the marketplace, in line with the purpose of the Minimum Expenditure Basket. While this is a straightforward process for most food items, non-food items (NFIs) tend to be more complicated to standardise, as they can vary significantly in terms of types and specifications. For consumable NFIs (i.e. those that are continually used up and need to be repurchased, such as soap, toothpaste, cleaning products, etc.), enumerators should follow the procedure of only collecting the price of the cheapest variety. For non-consumable NFIs, such as plastic sheets or buckets, the JMMI taskforce will need to agree on a list of loose specifications for each item to ensure that all partners are monitoring comparable commodities.

Data Collection Tool

All data collection for the JMMI will centre on the KoBo platform. Once the basket of monitored items has been finalised, REACH will develop a common quantitative data collection tool in KoBo for use in the JMMI, to be hosted on a centralised KoBo server owned by REACH. All data must be uploaded to the JMMI Taskforce's central KoBo server using one of two Android apps (KoBoCollect or ODKCollect) or, alternatively, using a link that can be filled out in one's internet browser.

Enumerators using either Android app will be able to complete surveys without an internet connection and save them for later submission once they return from the field. Partner organizations are responsible for providing their enumerators with all necessary equipment (smartphone/tablet, laptop, internet connection) to enable them to undertake data collection.

All taskforce members participating in the initiative are asked to submit their data using this common KoBo tool unless circumstances wholly prevent them from doing so, in which case an individualised plan can be worked out with each participating organisation.

PDF versions of the questionnaire can be provided on an *ad hoc* basis for enumerators that feel more comfortable collecting data on paper in the field. The enumerators will be responsible for printing and transporting these questionnaires themselves. However, filling out a paper form is not a substitute for submitting data to the central KoBo server. All data collected on paper must subsequently be uploaded to KoBo by the enumerator themselves by the end of each day of data collection, or at latest by the end of the data collection window, just as if they were collecting data using an Android app. No extensions to the data collection window will be provided for this purpose, and partners and enumerators must plan ahead for the extra time needed for data entry.

Unit Standardisation

If the trader owns a scale, the price per kilogram is recorded. Traders with weight scales should be prioritised and traders without scales avoided if others in the marketplace own one. To accommodate contextualised measurement of certain goods (if relevant), prior to data collection, the JMMI Taskforce will request measurement conversions between these measurements and the standard measurements that will be used for analysis purposes.

3.5 Data Processing & Analysis

Data cleaning

Following each round of data collection, REACH will compile the centralised, raw data, remove outliers, and follow up with field teams if needed. Data cleaning will be an ongoing process, conducted daily during the data collection phase, enabling proactive adjustments and minimising the replication of errors. For further information, see IMPACT's Data Cleaning guidelines and Data Cleaning Checklist.

In particular, the data will be checked for the following:

- Number of prices per item collected per location (to check if the minimum threshold of 4 prices per item has been met)
- Median price per item per location (to check for variation across locations)
- Minimum and maximum price per item per location (to check for variation within locations)
- Outliers (i.e. an item price that is substantially different from others collected in the same month and location)
- Monthly changes in the median price per location (to check for month-on-month variation)
  - Significant price changes (exceeding 50% since previous month) and sudden shortages are further investigated by following up with field teams. Whenever possible, information about the local context is gathered to support the analysis.
- GPS coordinates of entries (to check legitimacy of submitted data)
- Duration of surveys per location (to check legitimacy of submitted data)

Following each round of data collection, REACH assessment staff triangulates the obtained data through three different steps:

1. Comparison of most recently collected data with previous rounds of data to identify inconsistencies;
2. Review of secondary data covering the same location(s), if any;
3. Consultation of field teams and partners to cross-check data quality and contextualize results.

Data analysis

The primary software used for performing the data analysis will be Microsoft Excel, due to its versatility and ease of use for tasks such as calculating medians, filtering data, creating charts, and calculating the Market Functionality Score. Additionally, R programming might be employed for more complex statistical analysis and data visualizations, ensuring robustness and accuracy in data interpretation. The use of R would be contingent on the team's capacity, resources, and timeframe.

As the data is collected on the key informant level, the following steps are undertaken to aggregate the trader level data on to the different location levels (that is, district and state levels):

- *Availability*: Availability is defined categorically (available, limited, unavailable) for each item based on the following logic:
  - ○ If an item is available as normal from at least one surveyed trader, it is considered available in the district.
  - ○ *Else:* If an item is not available as normal from any surveyed trader, but is available on a limited basis from at least one trader, it is considered to have limited availability in the district.
  - ○ *Else:* If an item is not available either on a normal or a limited basis from any surveyed trader, it is considered to be unavailable in the district.
- *Prices*: Using prices collected from individual traders, median prices are calculated for each item within each assessed district. State medians are then calculated using a "median of medians" approach, i.e. by taking a second median across all of the district-level medians in a particular state.[9]
- *Stock levels*: For each item, the median stock level is calculated across all surveyed traders in the district. State medians are then calculated using a "median of medians" approach, as above.
- *Ability to restock:* If at least one trader is able to restock an item, the district-level aggregate will be "yes", else "no" (if the item is normally not sold at all).
- *Restocked in the last month:* If at least one trader restocked an item in the last month, the district-level aggregate will be "yes", else "no".
- *Restock duration:* The median restock duration across all traders in the district is calculated for food and non-food items.
- *Location of food/NFI supplier:* The most commonly named location is taken as the location of the district's main suppliers for each category of monitored items. If no clear location is commonly reported, all locations that were equally commonly reported will be presented.

A second aspect of the data analysis process will involve the integration of an internally developed Market Functionality Score (MFS). The MFS is a method under development by REACH, intended to classify markets based on their functionality levels. This classification facilitates comparisons both within and among countries, providing invaluable insights for aid actors. The knowledge gleaned from these comparisons helps determine which markets are viable for Cash and Voucher Assistance (CVA) and which markets necessitate alternative forms of Market-Based Programming (MBP) to achieve self-sufficiency.

The MFS comprises a suite of indicators drawn from a singular, vendor-focused assessment. This design simplifies the analysis process while capturing various dimensions of market functionality. The indicators cover a range of dimensions, including:

- Physical, financial, and social accessibility for all groups, including security aspects.
- Availability and affordability of essential market commodities.
- Resilience of key supply chains to disruptions.
- Infrastructure issues, including those affecting the transportation of goods.

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[9] The state-level median will be calculated as the median of all district-level medians across the respective state.

Each dimension and indicator are assigned specific weights and thresholds, reflecting their influence on the market's overall capacity to meet customer demand. Thus, the integration of the MFS into the methodology of this assessment will enhance the understanding of market dynamics, and the feasibility of CVA as an appropriate response for crisis-affected communities.

Weighting the Indicators

Each indicator that forms the MFS will be weighted by setting a maximum score for each based on its relative importance within its dimension. To do this, the team will first identify the specific values or answer options for each indicator that reflect the best and worst situations with regard to market functionality, following a discussion of what each indicator and potential response might mean given the current socioeconomic context in Sudan. A set of suggested standard indicators and thresholds is provided as part of REACH's internal MFS guidance.

In general, and in line with MFS guidance, the best outcome should receive the maximum score, the worst should receive a score of 0, and intermediate thresholds along the way should receive scores between the minimum and maximum (except in the case of yes/no questions and other binary variables). The cumulative score for each dimension is then weighted based on the table below.

Weighting the Dimensions

Although all five dimensions of market functionality are relevant to markets worldwide, they have varying weights within the MFS to reflect their assumed relative importance and interdependence. For example, because a market's most basic function is to make goods available to local populations, the core availability of these goods is among the most heavily weighted dimensions of the MFS.

On the other hand, the affordability of goods is often tightly linked to their availability, as shortages and unstable supplies are one of the major drivers of price rises in most contexts; as a result, affordability receives a lower weight to avoid having a single underlying dynamic (absence of core goods) dominate the MFS via multiple dimensions.

Table 1: MFS Dimension Weights

MFS Dimension	Suggested Weighting
Accessibility	25/100
Availability	30/100
Affordability	15/100
Resilience	20/100
Infrastructure	10/100

The table above shows the weights that have been assigned to each dimension of the MFS, which represent the maximum score that each of these dimensions can receive. These weights are standard across countries to enable cross-crisis comparison of MFS values.

Calculating the MFS Score

Overall, the MFS is calculated out of a total maximum score of 100, which would reflect a market with no concerns whatsoever about accessibility, availability, affordability, resilience, or infrastructure. The following classification framework

is used to assess whether a market has full, limited or functionality, severe issues, or that there is insufficient data to calculate a full MFS.

Functionality	Threshold/Criteria
Full Functionality	(1) total MFS is > 80% of the maximum total score and (2) no dimension falls beneath 50% of its maximum score
Limited Functionality	(1) total MFS is > 70% of the maximum total score or (2) no more than one dimension falls beneath 50% of its maximum score
Poor Functionality	(1) total MFS is < 50% of the maximum total score or (2) at least two dimensions fall beneath 50% of their maximum scores
Severe Issues	(1) total MFS is < 25% of the maximum total score or (2) at least three dimensions fall beneath 50% of their maximum scores
Insufficient Data	One or more entire dimensions could not be collected in this market, making it impossible to calculate a full MFS

3.6 Limitations, Potential Challenges and Mitigation Measures

The methodology adopted for the JMMI offers valuable insights into market dynamics and functionality. However, following limitations should be considered when interpretating the findings:

Temporal Limitations: The price data is only indicative for the time frame within which it was collected. Prices may vary between data collection rounds due to a variety of external factors, such as changes in supply, demand, or market shocks. This temporal variability requires cautious interpretation of data trends. It also highlights the importance of regular data collection to capture evolving market dynamics.

Variations in Product Types: The JMMI data collection tool requests the cheapest available type of each item to be recorded, as availability varies across regions. Consequently, price comparisons across regions may be based on slightly varying products. While this approach enables the inclusion of diverse products available in different markets, it may lead to potential discrepancies in product quality and type across regions.

Measurement Challenges: In Sudan, standardising unit sizes of some food items could be difficult, as many traders sell commodities by volume rather than weight. This could potentially lead to measurement errors, affecting the accuracy of price data and complicating comparisons across different markets and timeframes.

Coverage Bias: Predominantly, data is collected from main markets, which may not be fully representative of rural areas where market dynamics can differ significantly. This urban bias may limit the scope of understanding market conditions and potentially exclude crucial insights from more remote, underserved communities.

Shifts in Coverage: As the JMMI continues to expand and adapt to additional locations, reported changes in overall median prices may be driven more by shifts in coverage rather than actual price changes. This reflects the challenges in disentangling the effects of evolving data collection operations from genuine market fluctuations.

To address these limitations, several measures could be considered:

Regular and Consistent Data Collection: Regular data collection rounds could help capture evolving market dynamics and mitigate temporal limitations.

Product Harmonisation: Where possible, efforts could be made to harmonise the types and qualities of products being compared to reduce potential discrepancies.

Inclusion of Rural Markets: To address coverage bias, consideration could be given to incorporating more rural markets within the data collection process. This is contingent, however, upon partner capacity to collect data in rural markets.

Tracking Coverage Changes: Careful tracking and transparent reporting of changes in coverage can help in the interpretation of trends, distinguishing genuine price changes from shifts in coverage.

4. Key ethical considerations and related risks

The proposed research design meets / does not meet the following criteria:

The proposed research design…	*Yes/ No*	*Details if no (including mitigation)*
… Has been coordinated with relevant stakeholders to **avoid unnecessary duplication** of data collection efforts?	Yes	
… **Respects respondents, their rights and dignity** (*specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants' time, ensuring accurate reporting of information provided*)?	Yes	
… Does not **expose data collectors to any risks as a direct result** of participation in data collection?	No	Considering the uncertain security situation in Sudan currently, we will need to prioritise safety by reducing unnecessary travel. Our plan is to hire enumerators already residing in the localities planned for data collection. This approach minimises travel risks, while also allowing for reliable data collection. We will advise our partners to adopt a similar strategy to ensure both safety and effectiveness of operations.
… Does not **expose respondents / their communities to any risks as a direct result** of participation in data collection?	No	To minimise potential risks to respondents and their communities during data collection and given the current security situation, extra emphasis during training of enumerators will be made. In line with standard protocol when conducting surveys participants will be adequately informed about the purpose of the survey, their right to refuse participation at any point, and reassurance to them about the non-disclosure of their personal information

		to unauthorised parties, thus fostering a secure and trusting environment.
… Does not involve **collecting information on specific topics which may be stressful and/or re-traumatising** for research participants (both respondents and data collectors)?	Yes	
… Does not involve **data collection with minors** i.e. anyone less than 18 years old?	Yes	
… Does not involve **data collection with other vulnerable groups** e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	Yes	
… Follows IMPACT SOPs for management of **personally identifiable information**?	Yes	

5. Roles and responsibilities

Table 3: Description of roles and responsibilities

Task Description	*Responsible*	*Accountable*	*Consulted*	*Informed*
Research design	REACH Assessment Specialist (AS)	*REACH Research Manager*	*JMMI Taskforce,* IMPACT HQ Research Design and Data (RDD) Unit	JMMI Taskforce, CWG
External engagement	REACH AS	REACH RM	REACH CC	CWG
Data collection tools	REACH AS	REACH RM	JMMI Taskforce, IMPACT HQ RDD Unit	CWG
Training of partners	REACH AS and REACH Field Manager	REACH RM	JMMI Taskforce	CWG
Coordination of Coverage	JMMI Taskforce	REACH AS	REACH SAS	REACH CC
Supervising data collection	Participating Organisations	JMMI Taskforce	REACH AS	REACH Coountry Coordinator (CC)
Data processing (checking, cleaning)	REACH Database Officer (DBO); REACH AS	REACH RM	JMMI Taskforce, IMPACT HQ RDD Unit, REACH SAO	REACH CC

Data analysis	REACH DBO	REACH RM	IMPACT HQ RDD Unit, REACH SAO	JMMI Taskforce, REACH CC
Output production	REACH AS REACH GIS (for maps)	REACH RM	REACH CC, IMPACT HQ Research Reporting (RR) unit	JMMI Taskforce
Dissemination	REACH AS, CWG	REACH RM	JMMI Taskforce, REACH CC, REACH Comms & Advocacy Unit	REACH CC
Monitoring & Evaluation	REACH AS	REACH RM	JMMI Taskforce, REACH CC, REACH MEL Unit	IMPACT HQ RDD Unit
Lessons learned	REACH AS, JMMI Taskforce	REACH RM	JMMI Taskforce, REACH CC, REACH MEL Unit	IMPACT HQ RDD Unit

Responsible: *the person(s) who executes the task*

Accountable: *the person who validates the completion of the task and is accountable of the final output or milestone*

Consulted: *the person(s) who must be consulted when the task is implemented*

Informed: *the person(s) who need to be informed when the task is completed*

6. Data Analysis Plan (DAP)

IN #	DC Method	Indicator / Variable	Question	Type	Responses	DC Level
MD.1	KII	Date of data collection	Date of data collection	date		KI
MD.2	KII	Name of partner organisation	Name of partner organisation	select_one	[full list of JMMI partner organisations + 'Other (please specify)']	KI
MD.3	KII	Name of partner organisation	Please specify:	text	Free text	KI
MD.4	KII	Enumerator ID	Enumerator ID	text		KI
MD.5	KII	Type of data collection	Type of data collection	select_one	"Face-to-face Remote"	KI
MD.6	KII	Name of state	Name of state	select_one	[list of Sudan states]	KI
MD.7	KII	Name of district	Name of district	select_one	[list of Sudan districts]	KI
MD.8	KII	Name of marketplace	Name of marketplace	text		KI
MD.9	KII	Type of vendor	Type of vendor	select_multiple	"General store for food and NFIs Specialised store Permanent market stall Open-air vendor Currency exchange shop Other (please specify)"	KI
MD.10	KII	Consent script	Hello, my name is _ _ _ _. I am working on behalf of [organization] and the Sudan Cash Working Group. I am conducting interviews with traders to better understand how markets in your area are currently functioning. I would like to ask you some questions about the prices and supplies of certain items you sell. Any information you provide will not be used to identify you.	select_one	"Yes No"	KI

			Responses are voluntary and you can choose to stop the interview, not answer questions, or ask questions of your own at any time. However, we hope you will participate since your views are important. Do you agree to start the interview?			
MD.11	KII	Name of shop	Name of shop	text		KI
MD.12	KII	Gender of trader	Gender of trader	select_one	"Male Female"	KI
OP.1	KII	Size of marketplace	Can you estimate how many vendors are usually present in this marketplace on an average day (market day)?	integer	Integer	KI
OP.2	KII	% of markets open per day	How many days a week is this market open?	select_one		KI
OP.3	KII	% of assessed vendors and marketplaces that have closed since the outbreak of fighting	Has your business or your entire marketplace closed at any point since the start of the current crisis?	select_one	"- Yes, my business was closed - Yes, the entire marketplace was closed - No, my business remained operational - Prefer not to answer"	KI
OP.4	KII	Number of customers	Can you estimate how many customers used to visit your business on an average day?	integer	Integer	KI
AV.1	KII	Availability of core MEB items in monitored marketplaces	"How would you describe the current availability of each of the following food items in this marketplace? - Sorghum - Onions - Vegetable oil - Milk - Cow meat (beef) - Goat meat - Dried tomatoes - Sugar"	select_one	"For each item in the list: Widely available Limited availability (only sold in small quantities or by a small number of traders) Completely unavailable Don't know Prefer not to answer"	KI
AV.2	KII	MEB items sold by assessed vendors	Which of the following food items are you selling this week, if any?	select_one	[list of all items in the list + "This trader does not sell any of the listed items"]	KI

AV.3	KII		"How would you describe the current availability of each of the following household items in this marketplace? - Gas Cylinder - Gas Refill - Charcoal - Firewood - Water container - Drinking water"	select_one	"For each item in the list: Widely available Limited availability (only sold in small quantities or by a small number of traders) Completely unavailable Don't know Prefer not to answer"	KI
AV.4	KII		Which of the following household items are you selling this week, if any?	select_one	[list of all items in the list + "This trader does not sell any of the listed items"]	KI
AV.5	KII		"How would you describe the current availability of each of the following hygiene items in this marketplace? - Soap - Toothpaste - Toothbrushes - Laundry powder - Liquid dish detergent - Sanitary pads"	select_one	"For each item in the list: Widely available Limited availability (only sold in small quantities or by a small number of traders) Completely unavailable Don't know Prefer not to answer"	KI
AV.6	KII		Which of the following hygiene items are you selling this week, if any?	select_one	[list of all items in the list + "This trader does not sell any of the listed items"]	KI
PR.1	KII		"To be asked separately about each monitored item: Do you sell [this item] in units of [standard unit]?"	select_one	"Yes No"	KI
PR.2	KII		"To be asked separately about each monitored item where relevant: If not, what is the standard unit you use to sell [this item]?"	integer		KI
PR.3	KII		"To be asked separately about each monitored item: What is the current price of the above unit of [this item] in Sudanese pounds?"	float		KI
PR.5	KII		"To be asked separately about each monitored item: For how many days, not including today, do you	integer		KI

			estimate your stock of [this item] will last under current conditions? Please include stock that you may have in accessible storage elsewhere."			
PR.6	KII		"To be asked separately about each monitored item: How many days, not including today, would it take you to fully restock [this item] if you were to place an order with your supplier today?"	integer		KI
SC.1	KII	% of interviewed vendors who maintain relationships with multiple suppliers per category of goods assessed	Does your business mostly rely on a single supplier for food items?		"Yes No Don't know Prefer not to answer"	KI
SC.2	KII	Path of supply chains leading to this market	Is your main supplier of food items located in this district?	select_one	"Yes No Other (please specify) Prefer not to answer"	KI
SC.3	KII	Path of supply chains leading to this market	If so, where does your main supplier of food items get the majority of their goods from?	select_one	"- From within Sudan - From another country - Don't know - Prefer not to answer"	KI
SC.4	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.5	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI
SC.6	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI
SC.7	KII	Path of supply chains leading to this market	If not, where is your main supplier of food items located?	select_one	"- In Sudan - In another country - Don't know - Prefer not to answer"	KI

SC.8	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.9	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI
SC.10	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI
SC.11	KII	% of interviewed vendors who maintain relationships with multiple suppliers per category of goods assessed	Does your business mostly rely on a single supplier for household items?		"Yes No Don't know Prefer not to answer"	KI
SC.12	KII	Path of supply chains leading to this market	Is your main supplier of household items located in this district?	select_one	"Yes No Other (please specify) Prefer not to answer"	KI
SC.13	KII	Path of supply chains leading to this market	If so, where does your main supplier of household items get the majority of their goods from?	select_one	"- From within Sudan - From another country - Don't know - Prefer not to answer"	KI
SC.14	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.15	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI
SC.16	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI
SC.17	KII	Path of supply chains leading to this market	If not, where is your main supplier of household items located?	select_one	"- In Sudan - In another country - Don't know - Prefer not to answer"	KI
SC.18	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.19	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI

SC.20	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI
SC.21	KII	% of interviewed vendors who maintain relationships with multiple suppliers per category of goods assessed	Does your business mostly rely on a single supplier for hygiene items?		"Yes No Don't know Prefer not to answer"	KI
SC.22	KII	Path of supply chains leading to this market	Is your main supplier of hygiene items located in this district?	select_one	"Yes No Other (please specify) Prefer not to answer"	KI
SC.23	KII	Path of supply chains leading to this market	If so, where does your main supplier of hygiene items get the majority of their goods from?	select_one	"- From within Sudan - From another country - Don't know - Prefer not to answer"	KI
SC.24	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.25	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI
SC.26	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI
SC.27	KII	Path of supply chains leading to this market	If not, where is your main supplier of hygiene items located?	select_one	"- In Sudan - In another country - Don't know - Prefer not to answer"	KI
SC.28	KII	Path of supply chains leading to this market	State	select_one	[list of Sudan Admin 1 divisions]	KI
SC.29	KII	Path of supply chains leading to this market	District	select_one	[list of Sudan Admin 2 divisions]	KI
SC.30	KII	Path of supply chains leading to this market	Country	select_one	"- Central African Republic - Chad - Egypt - Eritrea - Ethiopia - Libya - South Sudan - Other (please specify) - Don't know - Prefer not to answer"	KI

SC.31	KII	% of interviewed vendors unable to meet customer demand	Over the last month, have you had any difficulty obtaining enough of any items you sell to meet your customers' demand?	select_one	"Yes No Prefer not to answer"	KI
SC.32	KII	Supply chain dysfunction	Which items have been most difficult to obtain?	select_multiple	[list of all monitored items + "Other (please specify)"]	KI
SC.33	KII	Supply chain dysfunction	Why have these items been particularly difficult to obtain?	select_multiple	"- I do not have enough money to purchase these items in the amounts I need - My supplier will no longer give me credit to purchase these items in the amounts I need - Producers have been producing less of these items Demand for these items has increased - The suppliers I usually deal with have been unable to meet my customers' demand - Domestic transport restrictions have cut off supply routes for these commodities - International border closures have cut off supply routes for these commodities - There is a shortage of carriers who can transport the goods I need - Other (please specify) - Prefer not to answer"	KI
SC.34	KII		Please specify:	text	Free text	KI
MF.1	KII	% of interviewed vendors reporting that some customers have faced physical barriers to accessing marketplaces over the last month	Over the last month, have there been problems that prevented any customers or traders from physically travelling to, working at, or shopping at this marketplace?	select_multiple	"- No issues with physical access to the marketplace - Curfew or movement restrictions - Ongoing conflict in the area - Inadequate facilities make it difficult for businesses to operate - Hazardous, damaged, or unsafe buildings in the marketplace - Hazards or damage on roads leading to the marketplace - Limited transportation options / lack of transportation -	KI

					Retailers are difficult to access for people with disabilities or mobility issues - Marketplace only operates at limited times - Customers do not feel safe around some people in the marketplace - Other (please specify) - Don't know - Prefer not to answer"	
MF.2	KII		Please specify:	text	Free text	KI
MF.3	KII	Presence of interviewed vendors reporting that some customers have faced social barriers to accessing marketplaces over the last month	Over the last month, have there been any groups of people that sometimes avoided coming to this marketplace due to discrimination, exclusion, or feeling unwelcome?	select_one	"- Yes (please explain further) - No, no groups have difficulty with this - Don't know - Prefer not to answer"	KI
MF.4	KII	Presence of interviewed vendors reporting that some customers have faced social barriers to accessing marketplaces over the last month	Which specific groups are affected and in what ways?	text	Free text	KI
MF.5	KII	% of interviewed vendors reporting concerns about lack of safety and/or insecurity in their marketplaces over the last month	Over the last month, have any of the following security factors had a negative impact on your business, your customers, or you personally while doing your work? (select all that apply)	select_multiple	"- No issues with security in or near the marketplace - Curfew or movement restrictions. - Fear of insecurities - Fear of discrimination - Fear of physical harassment or violence - Feat of sexual abuse, exploitation or harassment [Sexual exploitation is abuse of a position of vulnerability, differential power or trust for sexual purposes It	KI

					includes sex for something e.g profiting monetarily, socially or even politically from the sexual exploitation of another] - Fear of arbitrary detention - Fear of criminality - Fear of being injured/killed by an explosive hazard/mines/UXOs - Other (please specify) - Don't know - Prefer not to answer"	
MF.6	KII		Please specify:	text	Free text	KI
MF.7	KII	% of interviewed vendors reporting that some customers have faced financial barriers to accessing marketplaces over the last month	Do customers of your business face any financial challenges in travelling to you or in paying for the goods they need?	select_multiple	"- Most customers have no issues with financial access - Many customers cannot afford the items available - Many customers cannot pay for their items in a way you can accept (f. ex. not enough cash, no mobile money account, etc.) - Many customers do not come due to their inabiity to pay for outstanding purchases on credit. - Public transportation is too expensive for many customers - Fuel is too expensive for many customers - Other (please specify) - Don't know - Prefer not to answer"	KI
MF.8	KII		Please specify:	text	Free text	KI
MF.9	KII	% of interviewed vendors unable to predict price changes over the next month	Think of the most popular items you sell. If we were to ask you what prices your suppliers will charge you for those items one month from now, do you think you would get it right?	select_one	"- Yes - No - Don't know - Prefer not to answer"	KI
MF.10	KII	% of interviewed vendors reporting	What are, if any, the difficulties you are currently facing to keep	select_multiple	"- No difficulties - Difficulties with availability of core goods - Difficulties	KI

		difficulties keeping their business operational and well-stocked over the last month	your business operational and well-stocked?		with prices charged by suppliers - Difficulties accessing money and/or cash to pay suppliers - Difficulties fully staffing your store - Difficulties related to movement restrictions - Difficulties related to physically dangerous conditions in this area - Other (please specify) - Don't know - Prefer not to answer"	
MF.11	KII		Please specify:	text	Free text	KI
MF.12	KII	% of interviewed vendors reporting that they lacked access to a locked, secure storage facility for their stock within their marketplaces over the last month	Over the last month, have you had access to a locked, secure storage facility within your business facility or marketplace?	select_multiple	"- Yes, within my own business facilities - Yes, elsewhere within the marketplace - No, I store goods at another facility outside this marketplace - No, I store goods at my home - Other (please specify) - Prefer not to answer"	KI
MF.13	KII		Please specify:	text	Free text	KI
MF.14	KII	% of interviewed vendors reporting that they accepted payment modalities other than cash or informal credit over the last month	Over the last month, which of the following types of payment have you accepted from your customers?	select_multiple	"- Cash (Sudanese pounds) - Cash (foreign currencies) - Mobile money - Credit/debit cards - Money or bank transfers - Hawala - Cheques - Vouchers - Informal credit (customers can buy now and pay later) - Barter (customers can pay for goods with other goods) - Other (please specify) - Prefer not to answer"	KI
MF.15	KII		Please specify:	text	Free text	KI
MD.13	KII	Further context	Do you have any further comments about your business or your marketplace that you would like to share?	text	Free text	KI

| MD.14 | KII | Vendor location | Please ask the vendor for consent to take a GPS point just outside their shop. Please make sure you have a clear view of the sky before taking the GPS point. | gps | GPS point | KI |
| MD.15 | KII | Further context | [To enumerator] Do you have any observations about this business or this marketplace that you would like to share? | text | Free text | KI |

7. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	Tool	Will indicator be tracked?
Humanitarian stakeholders are accessing IMPACT products	Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products	# of downloads of x product from Resource Center	Country request to HQ	User_log	X Yes
		# of downloads of x product from Relief Web	Country request to HQ		X Yes
		# of downloads of x product from Country level platforms	Country team		□ Yes
		# of page clicks on x product from REACH global newsletter	Country request to HQ		X Yes
		# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		X Yes
		# of visits to x webmap/x dashboard	Country request to HQ		□ Yes
IMPACT activities contribute to better		# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_log	

program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in single agency documents			CWG strategy
Humanitarian stakeholders are using IMPACT products	Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery Number of humanitarian documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by IMPACT products	Perceived relevance of IMPACT country-programs Perceived usefulness and influence of IMPACT outputs Recommendations to strengthen IMPACT programs Perceived capacity of IMPACT staff Perceived quality of outputs/programs Recommendations to strengthen IMPACT programs	Country team	Usage_Feedback *and* Usage_Survey template	Usage survey to be sent out to 10 targeted partners after two months of data collection
Humanitarian stakeholders are engaged in IMPACT programs throughout the research cycle	Number and/or percentage of humanitarian organizations directly contributing to IMPACT programs *(providing resources, participating to presentations, etc.)*	# of organisations providing resources (i.e.staff, vehicles, meeting space, budget, etc.) for activity implementation # of organisations/clusters inputting in research design and joint analysis # of organisations/clusters attending briefings on findings;	Country team	Engagement_log	X Yes X Yes X Yes

Sudan CASH WORKING GROUP

Joint Market Monitoring Initiative (JMMI) Taskforce Terms of Reference
v1, June 2023

Justification

On 15 April 2023, conflict ignited between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF) in key regions of Sudan, including Khartoum, Omdurman district, and Merowe city in the Northern state. As of June 4th, 2023, the latest Displacement Tracking Matrix (DTM) report from the International Organisation of Migration (IOM)[10] indicated that over 1,400,000 people had been internally displaced since the outbreak of armed clashes on April 15th, as well as over 475,000 cross-border movements. The death toll had risen to over 700, with almost 5,300 injuries as of May 16th, with the actual death toll expected to be much higher, as access has not been possible to many of the conflict-affected locations, and current figures include only deaths reported to health facilities.[11]

Initial assessments from partners suggest variable impacts on markets, largely dependent on regional stability and proximity to areas of intense conflict such as Khartoum. While the exact extent and nature of these impacts remain uncertain, it is evident that markets and the liquidity of cash have been significantly impacted by the conflict. The Famine Early Warning System Network's (FEWS Net) Sudan Food Security Outlook for February to September 2023 underlines the critical dependency of Sudan's population on markets, particularly in the face of mounting challenges[12]. As the lean season approaches, household stocks are expected to dwindle, intensifying the population's reliance on markets. This dependence is expected to surge even further, leading to an increased demand for food assistance during the peak months of August and September. Compounding these issues are concerns about the resupply of goods. Once local stocks are depleted, the replenishment of goods becomes a major challenge due to limited in-country supplies and disrupted transport networks. The upcoming rainy season, typically running between June and October, threatens to exacerbate these problems, potentially impeding access to markets and further worsening the food security situation. In light of these challenges, it is crucial to monitor market dynamics closely and enrich the evidence base for partners to adapt interventions accordingly. The markets, despite adversities, remain a critical lifeline for the people of Sudan and ensuring their resilience and functionality is integral to meeting people's needs in this complex context.

Whilst humanitarian actors have been responding with cash and voucher (CVA) based interventions to support crisis-affected populations, with plans to scale up CVA operations where possible, there is currently no systematic monitoring of the MEB (Minimum Expenditure Basket) across Sudan, and gaps remain in the coverage of all existing market monitoring initiatives accessible to humanitarian actors, both geographically and thematically. Some members of the Sudan Cash Working Group (CWG) conduct *ad hoc* price monitoring in their own geographical areas of operation, but these exist as silos across which indicators and item specifications are not harmonised, making it harder to cross-compare prices among implementing partners and geographies.

The World Food Programme (WFP) has successfully managed to restart its price monitoring of the MEB food items in several localities[13]. While this is focused on a select group of essential food items from the MEB, it nevertheless provides valuable data to help address the country's pressing needs. Recognising the broader gaps in current information, particularly in NFI price monitoring, it appears that an opportunity exists for a more comprehensive, multi-sectoral market monitoring initiative.

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[10] DTM Sudan - Situation Report 4 | Displacement Tracking Matrix (iom.int)
[11] OCHA. Sudan Situation Report. 28th May 2023.
[12] FEWS Net Sudan Food Security Outlook for February to September 2023
[13] Kassala, Red Sea, Blue Nile, White Nile, North Darfur

Such a collaborative endeavour, involving all relevant humanitarian partners operating across different markets and geographies, would harmonise data collection and optimize shared resources. In turn, this joint effort would enhance coverage, effectiveness, and operational applicability of market monitoring systems for cash actors in Sudan, ultimately strengthening our collective response to the challenges at hand.

To address the outlined information gaps and consolidate existing data collection efforts, REACH will work in close collaboration with the CWG to launch and coordinate a Joint Market Monitoring Initiative (JMMI) monitoring all relevant NFI commodities in the [Sudan Minimum Expenditure Basket (MEB)](#). Where coverage is limited by current WFP monitoring and where the JMMI Taskforce has coverage, it is hoped that the JMMI will also collect food commodities in the MEB to complement price monitoring efforts and ensure as full as geographical coverage as possible.

This initiative will help to develop an evidence base for the potential expansion of CVA and future changes to CVA programming. Furthermore, the additional information on markets and prices will help to inform other strategic decision-making processes and groups.

Composition and membership

The JMMI Taskforce will be composed of the Sudan CWG member organizations that wish to contribute to data collection for the JMMI, and will be co-led by REACH and the CWG leadership. Each participating organization will select its own **taskforce representative(s)** based on technical skills, interest, and capacity, which includes the capacity to:

- attend all relevant meetings;
- contribute technical and contextual knowledge on cash and markets in Sudan, as well as in their organization's areas of operation, to support in decision making about the JMMI;
- provide substantive input into key documents drafted by the taskforce.

CWG member organizations wishing to be part of the taskforce must be willing to **contribute actively to the initiative by collecting JMMI data on a monthly basis from at least one location, strictly respecting all deadlines and details of the methodology**. Furthermore, taskforce members will need to actively engage in the activities listed in section 3 of this document (*Role of the JMMI Taskforce*). In particular, the taskforce member organizations will need to be represented at the taskforce kick-off meeting, which will be conducted remotely, and should also endeavour to be present at any other taskforce meetings following the launch of the initiative.[14]

Figure 1: JMMI Taskforce membership

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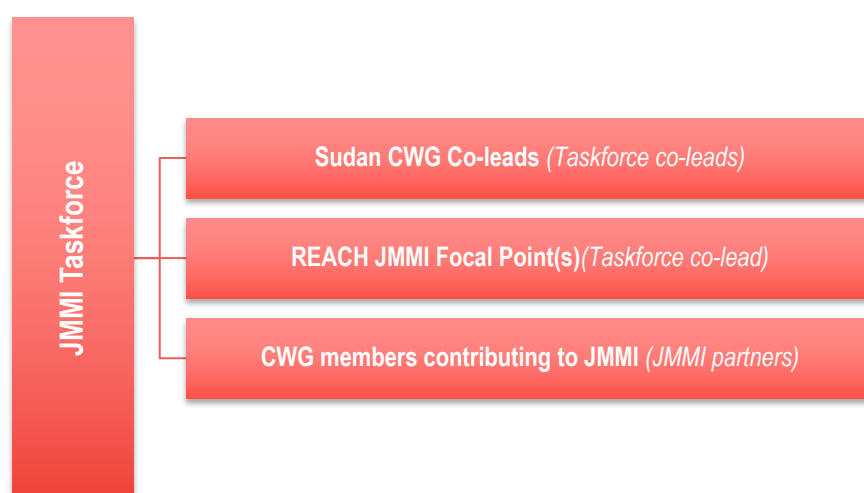
[14] Meetings should be held according to 'Chatham House Rules' (i.e. comments are incorporated but are not attributable to any particular organization). Decisions on key issues should be achieved by consensus and aligned with the views of the majority of its members.

Role of the JMMI Taskforce

The JMMI Taskforce is the decision-making body governing the Sudan JMMI. Its **objective is to support the design and successful implementation of the initiative, ensuring the activities are implemented with full consultation and buy-in and are actively benefiting all Sudan cash actors.** As CWG members are jointly undertaking the JMMI, the taskforce's activities will be enriched through all members' ongoing contributions to the design, implementation, and contextualization of this initiative. This will ensure the assessment is maximally valuable to Sudan cash actors and will contribute to a more effective humanitarian response.

In particular, taskforce members will engage in the following activities:

Process review

- Review both this document and the Terms of Reference (ToR) for the JMMI itself to identify any concerns and suggest specific amendments to address them
- Determine level of engagement with the larger CWG, the clusters, and any other relevant stakeholders
- Develop a workplan for the taskforce centring on the implementation of the JMMI itself

JMMI inception

- Define JMMI methodology and agree on overall research approach:
    o Decide on criteria for marketplace and trader selection
    o Agree on basket of monitored items and specifications to use for each item
    o Determine administrative units for which prices will be reported
    o Establish frequency and timing of data collection rounds
    o Develop a methodology for building robust vendor KI networks and collecting data over the phone using remote methods
- Review and endorse tools to be used for data collection
- Coordinate coverage to ensure that key marketplaces are monitored continuously while reducing duplication of efforts
- Define the dates of each data collection round
- Agree on logos and visibility to be used on product outputs
- Define key elements to be included in JMMI factsheets
- Coordinate with JMMI teams within each organization:
    - Communicate rationale, scope, and approach of market monitoring to all enumerators
    - Choose a program officer or field coordinator to serve as the organization's designated JMMI focal point through which all communications about the JMMI will run
    - Support the taskforce co-leads in establishing direct communication with each JMMI focal point
    - Supervise field teams in building networks of vendor KIs across assessed markets
    - Allocate time for JMMI focal points to participate in dedicated remote market monitoring training and to train enumerators within their organizations afterwards

JMMI data collection

- Build robust vendor KI networks within each organization's assessed area through which data can be collected either in-person or over the phone using remote data collection methods
- Collect regular market data, strictly respecting all deadlines and methodological details
- Remain available between data collection periods to respond promptly to follow-up connected with the data cleaning process
- Propose and decide on changes to methodology and list of monitored items when needed

Feedback and product dissemination

- Incorporate feedback from REACH and the taskforce co-leads throughout all steps of the process
- Support REACH to produce final products through active, timely review and endorsement of output drafts
- Actively promote dissemination of final products and findings to the wider humanitarian community, including sharing within their own organizations and with implementing partners

Role of REACH

REACH has received support from the Sudan CWG leadership to co-lead the JMMI on behalf of all CWG members, building on its past experience leading market monitoring initiatives in other contexts. While the initiative will be guided by the JMMI Taskforce, REACH will coordinate the full research cycle in its capacity as taskforce co-lead.

Specifically, REACH will engage in the following activities:

Coordination

- Co-lead the JMMI Taskforce in close collaboration with CWG leadership

JMMI inception

- Seek guidance from JMMI Taskforce members to ensure that lessons learned from any other price monitoring efforts, previous or existing, are incorporated into the initiative
- Consolidate and codify the JMMI methodology for review by the taskforce
- Develop mobile data collection tools (using the KoBo mobile data collection platform), guidance documents (e.g. enumerator and field coordinator guidelines), and assessment training materials based on this agreed common methodology
- Provide training to all JMMI Taskforce members to ensure the common methodology and overall approach are adhered to by all partners

JMMI data collection

- Prior to each round of data collection, communicate the dates to all participating members and update them on any changes to the methodology or data collection tools
- Adjust data collection tools as needed and seek endorsement from the taskforce for major changes
- Create a central KoBo account to house JMMI data from all partners
- Clean data and follow up with partners to investigate outliers, solicit missing data, and collect contextual information if needed
- Analyze all data on behalf of the JMMI Taskforce and create official JMMI products (factsheets, cleaned datasets)

Feedback and product dissemination

- Following endorsement by the JMMI Taskforce, publish JMMI outputs on behalf of the taskforce and disseminate them to partners engaged in the humanitarian response in Sudan
- Regularly present findings from the JMMI to appropriate coordinating bodies

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Box 1: Background on REACH

IMPACT Initiatives is a leading Geneva-based think-and-do-tank created in Switzerland in 2010 and operationalised in 2012. REACH was formed in 2010 as a joint initiative of IMPACT, its partner organisation ACTED, and UNOSAT to promote and facilitate the development of information products that enhance the humanitarian community's decision-making and planning capacity. REACH is responsible for supporting humanitarian coordination mechanisms through non-proprietary information that can be shared across organizations.

For this research, REACH builds on its extensive cash and markets research experience in diverse humanitarian contexts. Since 2015, REACH has developed both full-scale and specialized Joint Market Monitoring Initiatives in 15 countries in partnership with inter-agency working groups, including a reduced COVID-19 Rapid Market Monitoring Initiative in Sudan that collected data from Maiduguri markets between May and July 2020. Links to some key products can be found below:

- Sudan Crisis: Cross-Border Assessment, June 2023: link
- Sudan Crisis Thread, June 2023: link
- South Sudan JMMI factsheet, May 2023: link

- Iraq JMMI interactive dashboard: [link](#)

Reporting and approvals

- The taskforce co-leads are responsible for updating the other taskforce members on the status of any work in progress.
- Any major changes to the methodology or data collection tools, i.e. those that require retraining or that may have a significant impact on partners' data collection burdens, will be submitted to the taskforce for approval prior to implementation. Minor changes (for example, rewording questions or adding follow-ups in response to specific answers) will be reported to the taskforce by REACH prior to each round, but will not need to go through the formal approval process.
- Final JMMI factsheets will be submitted to the taskforce for review and approval before release. In order to ensure that these products are shared with humanitarian stakeholders in a timely fashion, and acknowledging that each successive factsheet is unlikely to change much in format or presentation, REACH will allow 2 working days for JMMI Taskforce members to comment on outputs. Once all taskforce comments are incorporated, REACH will release the outputs.
- REACH will publish all JMMI outputs on its website, and the CWG and REACH co-leads of the JMMI Taskforce will disseminate them further through the CWG and REACH mailing lists.
- Findings from the Sudan JMMI will be presented in regular coordination meetings for feedback and comment.

Visibility

The following visibility measures will be put in place:

- The branding will be designed around the 'joint' element of the taskforce-led process
- All participating organizations will be individually named and their contributions acknowledged on the first page of the monthly factsheet. No organizational logos will be used, with the exception of those of REACH and the Sudan CWG (as co-leads of the JMMI Taskforce) and those of any donors supporting the JMMI.

Data ownership

All clean and anonymized data from the Sudan JMMI will be made publicly available. Following each round, REACH will disseminate a cleaned and anonymized dataset, which will compile data submitted by all participating JMMI Taskforce members, together with the monthly factsheet. Taskforce members are welcome to use these full datasets for their own analysis. By default, they also give permission for REACH and other taskforce members to use the cleaned, anonymized data they have collected in the same way.

All data will be collected using the KoBo mobile data collection platform. Due to data protection protocols, while all participating partners will be able to upload data to the KoBo form, only designated REACH project managers will have permission to modify the form and download raw data, in order to guarantee the safety of the KoBo account, the collected data, the field teams, and the JMMI's key informants. While the clean data will be disseminated publicly, all raw data will be co-owned by REACH and the individual taskforce member that has submitted the data. If requested, REACH can share raw, non-anonymized records with the specific partner that collected them. Beyond that, no raw, non-anonymized data will be shared with any other partner.
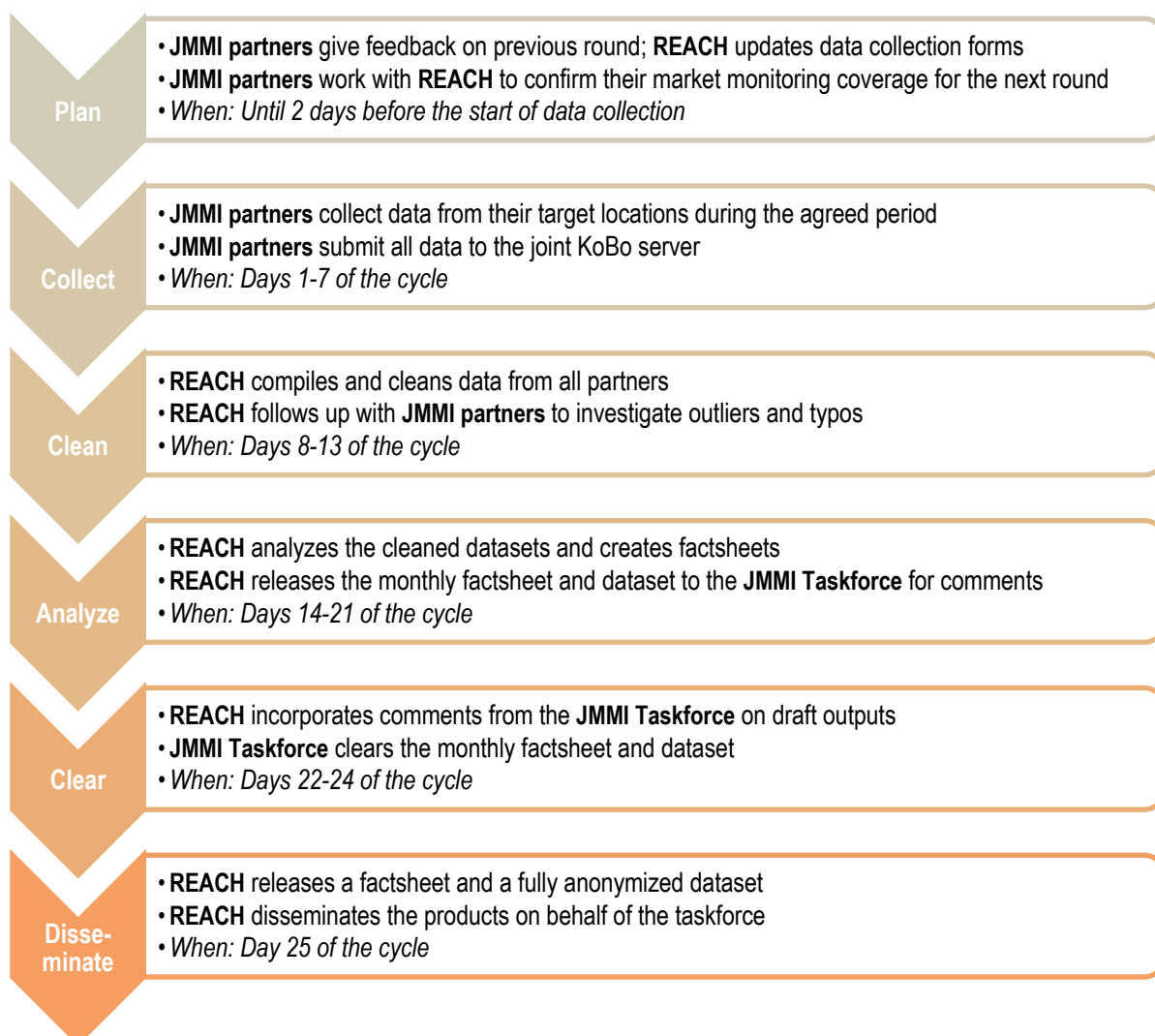
Annex A 1.0: The JMMI cycle

The JMMI Taskforce will determine the priority geographical locations for the Sudan JMMI based on a combination of the locations with the greatest number of persons of concern and those with the greatest presence of humanitarian actors. Coverage will be dependent on the security situation and the availability of partners with capacity to contribute.

After field teams have been identified to contribute to the exercise, REACH will train them on the common JMMI framework and methodology. Afterwards, once per month, field teams will collect price and stock levels from traders in the identified marketplaces, based on the questionnaire and guidelines on which they have been trained.

Data is collected via the KoBo mobile data collection platform. REACH and the CWG will set up a devoted JMMI KoBo account for the use of enumerators participating in the Sudan JMMI. A new set of forms will be uploaded to this account for each round. Field teams will receive the login details for this account to download the new KoBo forms to their phones for each round and upload all completed surveys.

Each month, after JMMI Taskforce members have collected all price data, REACH will clean and analyze this data and disseminate the findings to the taskforce and the broader Sudan humanitarian response. Taskforce members and stakeholders may then freely use the JMMI dataset and findings to inform their humanitarian programming and can provide feedback on the process if desired.

Figure 2: The monthly JMMI cycle

Plan
- **JMMI partners** give feedback on previous round; **REACH** updates data collection forms
- **JMMI partners** work with **REACH** to confirm their market monitoring coverage for the next round
- *When: Until 2 days before the start of data collection*

Collect
- **JMMI partners** collect data from their target locations during the agreed period
- **JMMI partners** submit all data to the joint KoBo server
- *When: Days 1-7 of the cycle*

Clean
- **REACH** compiles and cleans data from all partners
- **REACH** follows up with **JMMI partners** to investigate outliers and typos
- *When: Days 8-13 of the cycle*

Analyze
- **REACH** analyzes the cleaned datasets and creates factsheets
- **REACH** releases the monthly factsheet and dataset to the **JMMI Taskforce** for comments
- *When: Days 14-21 of the cycle*

Clear
- **REACH** incorporates comments from the **JMMI Taskforce** on draft outputs
- **JMMI Taskforce** clears the monthly factsheet and dataset
- *When: Days 22-24 of the cycle*

Disseminate
- **REACH** releases a factsheet and a fully anonymized dataset
- **REACH** disseminates the products on behalf of the taskforce
- *When: Day 25 of the cycle*

Annex A 1.1: Partner commitment

The Sudan JMMI will be enriched through the full commitment of all partners to the initiative, which includes the ongoing input of JMMI Taskforce members into the design, implementation and analysis of the JMMI. This collaborative process may slow the pace towards the delivery of final products, but will ensure each phase is benefiting taskforce members and contributing to a more effective response. In summary, *partner commitment* means:

- All partners commit to supporting one joint monitoring process.
- All partners use the same data collection tools.
- All partners use the same data collection methodology.
- All partners collect data during the same period of time.
- All partners upload their data to the same KoBo server.

Staff

The enumerators in charge of data collection in each area should be fully familiar with that area's local context, languages, customs, and market structure. Participating organizations must commit to assign enough enumerators to the JMMI to enable each enumerator to easily finish collecting all of their required data within the data collection window.

Furthermore, each partner will identify a JMMI focal point within their organization to serve as a liaison between the JMMI Taskforce co-leads and their own field teams. This JMMI focal point should be someone in close contact with the field team, ideally the person who manages that team. The JMMI focal point will be responsible for all direct communication with REACH and the CWG, including conveying REACH's requests for follow-up to relevant enumerators and returning complete, accurate responses in a timely manner. They should be fluent in English to ease inter-organizational communication.

In each area where partner organizations implement market monitoring activities, field teams should aim to dedicate between 3 and 5 days per month to data collection, coordination, and follow-up. Rapid, timely data collection is key to any successful humanitarian response, and partners should strive to plan ahead, build robust KI networks ahead of time, and devote enough staff to the exercise to enable them to wrap up data collection as quickly as possible.

Scope of work for staff

- Attend a 4-hour introductory JMMI training-of-trainers (TOT) to be delivered in English; required for JMMI focal points, enumerators welcome to attend
- Following this TOT, ensure that every enumerator assigned to the JMMI receives full internal training on the assessment's methodology, procedures, and data collection tools
- Identify marketplaces and traders to monitor based on criteria defined in the JMMI guideline documents
- Collect all required data in a timely manner using KoBo forms
- Remain available after the data collection period for follow-up and clarifications to explain outliers, typos, and missing data, as well as to provide local context and perspectives
- Be prepared to repeat data collection if needed: for example, if there are serious concerns about data quality or representativeness, or if not enough vendors have been interviewed to provide reliable analysis
- Provide feedback on tools and overall JMMI process and methodology

Training

The JMMI focal points from each participating organization (and key members of their field teams if possible) are expected to attend a 4-hour introductory JMMI training with REACH. Due to current logistical constraints, this will be planned as an online training session, meaning that attendees will need access to a strong internet connection and a computer with all required virtual meeting software installed. In this session, attendees will be introduced to the JMMI methodology and trained on the KoBo tools. The training will be conducted in English.

Immediately following this introductory JMMI training, attendees are expected to fully train all members of the field team within their organizations who were unable to attend the initial training. Partner organizations are expected to fully cover any costs associated with the training of their staff, including the provision of necessary hardware and data packages.

Dates

Data collection will take place on a regular schedule once per month. The general schedule will be agreed by the JMMI Taskforce, and the exact dates will be communicated by REACH prior to the start of each data collection cycle.

The data collection window will be open for seven days per round, and all data must be collected and uploaded by the end of those seven days. In the days following data collection, JMMI focal points and field enumerators are expected to remain available for, and respond quickly to, any follow-up queries from REACH.

In case an enumerator or JMMI focal point is unable to contribute to the JMMI or respond to follow-up queries during the scheduled data collection window, the partner organization is expected either to find a suitable temporary replacement for this enumerator/JMMI focal point or to coordinate with the JMMI Taskforce and REACH to find alternate coverage for the area this staff member would have covered. The exception to this is in situations of insecurity, where collecting data in one's assigned areas during the assigned period may prove unsafe. If at any point your organization becomes unable to cover a location to which it has previously committed, due to security issues or other reasons, please inform REACH and the JMMI Taskforce as soon as possible.

Technology and equipment

All data collection for the Sudan JMMI will center on the KoBo platform. All data must be uploaded to the JMMI Taskforce's central KoBo server using one of two Android apps (KoBoCollect or ODKCollect) or, alternatively, using a link that can be filled out in one's internet browser. Enumerators using either Android app will be able to complete surveys without an internet connection and save them for later submission once they return from the field. Partner organizations are responsible for providing their enumerators with all necessary equipment (smartphone/tablet, laptop, internet connection) to enable them to undertake data collection.

PDF versions of the questionnaire can be provided on an *ad hoc* basis for enumerators that feel more comfortable collecting data on paper in the field. The enumerators will be responsible for printing and transporting these questionnaires themselves. However, filling out a paper form is not a substitute for submitting data to the central KoBo server. All data collected on paper must subsequently be uploaded to KoBo by the enumerator themselves prior to the end of the data collection window, just as if they were collecting data using an Android app. No extensions to the data collection window will be provided for this purpose, and partners and enumerators must plan ahead for the extra time needed for data entry.

In the event that it is wholly impossible for a participating organization to commit to collecting data using the KoBo platform, the taskforce leadership will work with that organization to determine whether alternate technological solutions are possible. If the organization is unable to align its data collection practices sufficiently with those of the rest of the taskforce, the taskforce leadership will determine whether it makes sense for them to continue participating in the joint initiative.

Expansion

The common JMMI questionnaire, including the list of items monitored on a monthly basis, may be adjusted or expanded depending on the interest of JMMI Taskforce member organizations and relevant decisions made by the taskforce co-leads. Partner organizations should be aware that any large-scale expansions requested would likely increase the number of hours the field teams would have to dedicate to data collection.

Taskforce members may also on occasion be asked whether they might have capacity to collect data from additional cities or districts within their areas of operation, either permanently or on a temporary basis to fill in for other participants who ordinarily collect data from those areas. Such expansion requests will always be fully voluntary, but have the potential to help the JMMI greatly by ensuring that key areas are covered and that humanitarian actors can continue to draw on unbroken historical data to understand how market prices have evolved in Sudan's humanitarian context.

Application & feedback

The Sudan JMMI will only be useful if its findings are actively applied by taskforce members and stakeholders. JMMI Taskforce members are therefore encouraged to:

- Support REACH to produce final products, through reviewing and commenting on factsheet drafts.
- Actively incorporate the JMMI's findings into organizational response planning, proposals, situation reports, etc.

- Disseminate the JMMI's monthly products and findings to the wider humanitarian community, including to others within their own organizations.
- Provide feedback through the JMMI Taskforce and directly to REACH on the data collection process and the usefulness of the findings.