



## JOINT RAPID ASSESSMENTS OF MARKETS: WEST MOSUL

IRAQ

REPORT

AUGUST 2017

Cover Image: Mosul al Jadeeda, August 2017: © IMPACT Initiatives, 2017

### **About REACH**

REACH is a joint initiative of two international non-governmental organizations - ACTED and IMPACT Initiatives - and the UN Operational Satellite Applications Programme (UNOSAT). REACH's mission is to strengthen evidence-based decision making by aid actors through efficient data collection, management and analysis before, during and after an emergency. By doing so, REACH contributes to ensuring that communities affected by emergencies receive the support they need. All REACH activities are conducted in support to and within the framework of inter-agency aid coordination mechanisms. For more information please visit our website: [www.reach-initiative.org](http://www.reach-initiative.org).

## SUMMARY

After being held by the group known as the Islamic State of Iraq and the Levant (ISIL) since 2014, the city of Mosul in northern Iraq was declared under the control of the Iraqi Security Forces (ISF) in July 2017. Beginning in October 2016, the offensive to re-establish Iraqi government control over the city was accompanied by severe damage and mass displacement. Control of the east section of the city changed by January 2017, but the west – due to its narrow streets and dense population – took much longer to change control and suffered more severe damage.<sup>1</sup> Prior to the offensive, Mosul had been completely inaccessible to humanitarian actors for three years.

In order to provide comprehensive market information to inform humanitarian programming following the cessation of fighting and the return of many displaced persons to west Mosul, the Cash Working Group – Iraq (CWG) initiated a Joint Rapid Assessment of Markets (JRAM) in west Mosul<sup>2</sup>. Specifically, the JRAM aims to determine the impact of a protracted crisis on a market in terms of infrastructure, security and the supply chain; to gather information on the price and availability of goods; and to gauge the ability of traders to cope with a hypothetical surge in demand to help determine the feasibility of cash and market-based programming within the assessed market.

West Mosul was selected for assessment by the CWG due to there being acute humanitarian need and presence of newly recovering markets. Given the complete lack of humanitarian access since 2014, little was known about market health in the city. An initial assessment conducted by the World Food Programme (WFP) in June found that the supply chains and food stocks that traders depended on in west Mosul were insufficient to support a sudden increase in demand.<sup>3</sup> The JRAM was launched in the same area as a means to reassess the situation and determine if markets had recovered, as partners with cash and market-based programmes were eager to begin delivering aid to conflict-affected populations within west Mosul. The JRAM only assessed the parts of west Mosul that had seen some levels of return,<sup>4</sup> and had experienced some level of market recovery. The coverage was determined based on information gathered during several scoping exercises conducted by data-collection partners in the week prior to the assessment.

The assessment employed a qualitative research method adapted from the Rapid Assessment of Markets (RAM) developed by International Committee of the Red Cross (ICRC), and relied on a Kobo-based mobile data collection tool customised to each of the three respondent groups – retailers, wholesalers and consumers.<sup>5</sup> Data collection was carried out by members of the CWG, with REACH carrying out data cleaning and analysis. Between 25 July and 6 August, 11 participating partners conducted key informant (KI) interviews with 160 retailer KIs located in nine distinct market places and 65 consumer KIs located across 20 neighbourhoods in west Mosul.<sup>6</sup> In addition, enumerators interviewed 58 wholesaler KIs, who were either located inside one or more of the nine assessed market places, or who traded with retailers located inside those market places.

Due to the inherent limitations of qualitative research methods, the findings within this report should be considered indicative only. Many of the figures and percentages reported are based on estimates by respondents. Findings are only relevant to the assessed market and should not be generalised to other parts of Mosul city or elsewhere in northern Iraq.

Presented below, the main findings are structured around three research questions: what impact the crisis has had on the assessed market; what is the availability and price of goods; and, what is the response capacity of traders (i.e. retailers and wholesalers).

<sup>1</sup> BBC, "How the Battle for Mosul Unfolded", 10 July.

<sup>2</sup> The CWG was established to coordinate cash activities across Iraq and includes among its members a range of humanitarian organisations involved with cash and market-based programming.

<sup>3</sup> ICRC, Rapid Assessment of Markets, 2014.

<sup>4</sup> OCHA, Humanitarian Bulletin, Iraq – August, 1 September 2017: 3.

<sup>5</sup> Retailers are traders who deal mostly with consumers, wholesalers are traders who deal mostly with retailers and consumers are local residents who use the market to access goods.

<sup>6</sup> This built on a relationship initially developed with the CWG on the Joint Price Monitoring Initiative (JPMI), which started in November 2016.

## Key Findings

### 1. Impact of the crisis on the assessed area

#### Infrastructural damage

- **Damage to road<sup>7</sup>, water and electricity infrastructure was widely reported by retailer and wholesaler KIs.** A minority of consumer KIs also reported that infrastructural damage restricted market access.
- Of those trader KIs who reported infrastructure damage, **93% of retailer and 85% of wholesaler KIs said that damage to electricity infrastructure had a severe impact on their business, while 78% of retailer and 73% of wholesaler KIs reported that damage to water infrastructure had a severe impact on their business.**
- Although two-thirds of interviewed consumers reported that they faced no barriers to market access, **those that did most commonly reported damaged roads and a lack of transportation as factors that prevented them from accessing the market.<sup>8</sup>**
- In addition, **the overwhelming majority of retailer (93%) and wholesaler (73%) KIs reported a lack of funds as the primary barrier** to rebuilding their business, including their shops or storage facilities – suggesting a lack of liquidity in the market.

#### Security

- The majority of respondents for all groups – 60% for retailer, 59% for wholesaler and 68% for consumer KIs – reported that **security did not pose challenges to their business or market access.**
- Among those who did report security-related challenges, **checkpoints** were the most widely mentioned, followed by the **fear of violence, fear of harassment and curfews.**
- Perceptions of security varied widely across market places, demonstrating the importance of localised analysis. In **Yarmouk and al Maamoun market places security issues were widely reported** by all three respondent groups, especially the fear of violence.
- By contrast, **in Rahman market place, only one out of 17 consumer KI reported security issues.**

#### Shift in the location of suppliers

- In response to the infrastructural damage and security-related challenges outlined above, there has been a **marked shift in the location of suppliers** between mid-2014 (before the arrival of the group known as ISIL) and the period of assessment.
- For retailer KIs, this trend specifically showed that **many now purchase from wholesalers located in the east of the city, in particular Gogjali and al Jaza'ir neighbourhoods, rather than from wholesalers located in the west, in particular those located in Shifaa and Mosul al Qadima.** The greater distance now needed to transport goods leaves supply lines more vulnerable to the impact of infrastructural damage and heightened security.<sup>9</sup>

### 2. Availability and price of goods, and availability of cash and financial services:

#### Availability of assessed goods

- **Assessed goods were widely available** and shortages across market places were not widespread.
- Shortages of any of the 14 assessed items were never reported in more than three market places by either trader respondent group.<sup>10</sup> **Eggs were the item with the most frequently reported shortages**, followed by lentils, wheat flour and sugar. Across both trader respondent groups, **no shortage of any of the four fresh vegetable items – tomatoes, cucumbers, onions and potatoes – were reported.**

<sup>7</sup> This question referred to the general state of the roads rather than any particular routes or road types.

<sup>8</sup> The latter option referred to transport in general and did not make the distinction between public and private.

<sup>9</sup> Due to level of detail needed, the data does not specify whether these are the same suppliers who have moved to different locations or new suppliers.

<sup>10</sup> Due to the low level of trader KIs who actually sold the two fuel items butane and kerosene, those items are not included in the analysis of shortages.

- However, **market-place level analysis did reveal certain localized shortages**. For retailer KIs, Mosul al Jadeeda and al Maamoun both had reported shortages of 4 of 14 assessed items. For wholesalers, shortages of 5 of 14 items were reported in Ezdehar/Nedaa.
- **Consumer KIs reported that all goods were available in the market places in which they shopped.**

#### Prices of assessed goods

- **For both retailer and wholesaler KIs, prices were remarkably consistent across the nine assessed market places.**
- When triangulated against national price data for July 2017, **retailer prices in west Mosul were 6% lower than the national average, however comparable price data only exists for 13 of 16 items.**<sup>11</sup>
- **96% of consumer KIs reported that prices had decreased compared to the period following the retaking of the city by Iraqi Security Forces (ISF).**

#### Availability of financial services

- **Overall, 70% of retailer and 59% of wholesaler KIs reported that they offered their customers the opportunity to purchase on credit.** In addition, credit was reportedly used by an average of 28% of retailer customers and 37% of wholesaler customers.
- For consumer KIs, **77% reported that they faced barriers in accessing cash** – suggesting a possible lack of liquidity among consumers.

### 3. Ability to respond to a hypothetical increase in demand

- Across 14 assessed items, **retailer and wholesaler KIs were highly confident in their ability to increase supply in response to a significant rise in demand** (an average of 96% for both respondent groups for increasing supply by 50%; and an average of 94% for retailer and 96% for wholesaler KIs, for increasing supply by 100%).<sup>12</sup>
- When asked to identify the primary barrier that would prevent them from responding to increased demand, the most frequent response for both retailer (74%) and wholesaler (53%) KIs was a **lack of cash (either physical cash or savings) to be able to purchase additional stocks.**
- The other notable primary barrier for retailer and wholesaler respondents was difficulty of transportation, reported by 10% of retailers and 29% of wholesalers. For retailers, difficulty in transportation was also the most cited secondary (28%) and tertiary (26%) barrier to responding to an increase in demand.

Although the crisis in west Mosul has had a marked negative impact on market health, especially in terms of infrastructural damage, the findings of the JRAM indicate that the market was overall able to meet the needs of the population. Goods could be transported along the supply chain relatively uninterrupted and consumers could largely access the market places in which these goods were sold. However, the market context varied across the nine assessed market place and the findings show that location-specific information is critical when designing any kind of humanitarian response. Despite these variances, goods were widely available within the assessed area, and no widespread shortages were reported. Prices were largely consistent across market places and overall prices in west Mosul were slightly lower than the national average for July 2017<sup>13</sup>. The availability of goods and the improved supply and access channels has resulted in traders having a very high level of confidence in their ability to increase supply to meet a theoretical surge in demand. In addition, the main reported barriers that would prevent them from doing so is a lack of cash to purchase additional stocks – which is directly relevant for proposed cash and market-based programming in the market.

<sup>11</sup> The three items for which there is not comparable national-level data are cucumbers, tomatoes and potatoes.

<sup>12</sup> As with the analysis for shortages, due to the low number of retailer and wholesaler KIs actually selling the two fuel items, butane and kerosene, they are not included in the analysis here.

<sup>13</sup> Price data taken from REACH and the CWG Iraq, Joint Price Monitoring Initiative (JPMI) data set, July 2017.

## CONTENTS

<b>SUMMARY</b> .....	<b>2</b>
<b>CONTENTS</b> .....	<b>5</b>
List of Acronyms .....	7
Geographical Classification .....	7
List of Tables and Maps .....	7
<b>INTRODUCTION</b> .....	<b>8</b>
<b>METHODOLOGY</b> .....	<b>9</b>
Limitations .....	12
<b>FINDINGS</b> .....	<b>14</b>
Introduction .....	14
1. What impact has the crisis had on the market? .....	14
Infrastructural damage .....	14
Impact on Security .....	16
Impact on the Supply Chain .....	17
Analysis: The Impact of the crisis on the market .....	18
2. The Availability and Price of Goods, the Availability of Financial Services .....	20
The availability of goods .....	20
The Price of goods .....	22
The Availability of Financial Services and Cash .....	22
Analysis: The Availability and Price of Goods .....	23
3: The Response Capacity and Reported Barriers to Responding .....	24
Response Capacity .....	24
Reported Barriers to Responding .....	25
Analysis: response capacity and potential barriers .....	26
<b>CONCLUSION</b> .....	<b>27</b>
<b>ANNEXES</b> .....	<b>28</b>
Annex 1: KI interview questionnaire .....	28
Annex 2: List of assessed marketplaces .....	31

Annex 3: Shortages of items as reported per market place by retailers and wholesalers .....32

## List of Acronyms

<b>CWG</b>	Cash Working Group
<b>HNO</b>	Humanitarian Needs Overview
<b>HRP</b>	Humanitarian Response Plan
<b>IDPs</b>	Internally Displaced Persons
<b>ICRC</b>	International Committee of the Red Cross
<b>ISF</b>	Iraqi Security Forces
<b>ISIL</b>	Islamic State of Iraq and the Levant
<b>JRAM</b>	Joint Rapid Assessment of Markets
<b>RAM</b>	Rapid Assessment of Markets
<b>JPMI</b>	Joint Price Monitoring Initiative
<b>KIs</b>	Key Informants
<b>KIIs</b>	Key Informant Interviews
<b>MMTF</b>	Market Monitoring Task Force
<b>NFIs</b>	Non-Food Items
<b>SMEB</b>	Survival Minimum Expenditure Basket
<b>WFP</b>	World Food Programme

## Geographical Classification

<b>West Mosul Market</b>	The area of Mosul city located on the west bank of the Tigris River.
<b>Market</b>	The systematic structure within the geographic area of interest (west Mosul) that allows market actors to buy and sell goods.
<b>Market Place</b>	A specific location of economic activity within the market, such as a shop-lined street.

## List of Tables and Maps

<b>Table 1:</b> Retailer, wholesaler and consumer KIs per market place.....	11
<b>Table 2:</b> Items assessed by the JRAM .....	11
<b>Table 3:</b> Infrastructure damage in the market, as reported by retailer and wholesaler KIs.....	14
<b>Table 4:</b> Road infrastructure damage per market place, as reported by retailer KIs.....	15
<b>Table 5:</b> The impact of infrastructure damage (road, electricity, water and communication) on business, as reported by retailer and wholesaler KIs. ....	16
<b>Table 6:</b> Items available in the market place, as reported by consumer KIs.....	21
<b>Table 7:</b> Primary cash access methods, as reported by consumer KIs.....	23
<b>Table 8:</b> Cash access barriers, as reported by the consumer KIs that stated they faced barriers (77% of the total). KIs were able to provide more than one answer. ....	23
<b>Table 9:</b> The self-reported ability of wholesalers (W) and retailers (R) to respond to a 50% and 100% increase in demand .....	25
<b>Table 10:</b> Primary and secondary barriers to responding to an increase in demand, as reported by retailer (R) and wholesaler (W) KIs.....	25

## Maps

<b>Map 1:</b> Overall assessed area by the JRAM, including each of the nine assessed market places and the neighbourhoods of origin for consumer KIs:.....	13
<b>Map 2:</b> The extent of security issues by market place, as reported by retailer, wholesaler and consumer KIs:.....	17
<b>Map 3:</b> Location of wholesalers, both before the arrival of the group known as ISIL and at the time of the assessment, as reported by retailer KIs.....	19
<b>Map 4:</b> The extent of shortages by market place, as reported by retailer and wholesaler KIs.....	20

## INTRODUCTION

Situated on the Tigris River in northern Iraq, the city of Mosul was taken by the militant group known as the Islamic State of Iraq and the Levant (ISIL) in June 2014. The operation by the Iraqi Security Forces (ISF) to regain control of the city and its environs was launched in October 2016, and by January 2017 control over east Mosul changed. However, regaining control of west Mosul proved to be more challenging.<sup>14</sup> During the ISF operations in the western half of the city, the area suffered severe damage, and also saw large amounts of displacement out of, and then eventual returns back to, the area. By the end of August 2017, 100,000 displaced persons had returned to their areas of origin in the west.<sup>15</sup> Given the duration of the fighting, the level of destruction, the disruption to market functionality caused by displacement, reportedly low levels of food security and the lack of livelihood opportunities - combined with renewed humanitarian access after three years of inaccessibility - west Mosul was deemed a critical area for a market assessment.<sup>16</sup>

The Joint Rapid Assessment of Markets (JRAM) was developed and launched by the Cash Working Group (CWG)<sup>17</sup> in April of 2017 in order to establish a harmonized and collaborative mechanism for conducting market assessments in areas of Iraq newly accessible to humanitarian actors. The CWG serves as the mandating body for the assessment, with REACH Initiative acting as the technical partner and CWG partners carrying out all field-level data collection.

The JRAM was designed to provide comprehensive market place-level data related to the impact that protracted crises have on markets in order to inform humanitarian programming. Specifically, it aims to determine the impact of the protracted crisis on the market, in terms of infrastructure, security and suppliers; to find out the price and availability of key goods; and, to assess the response capacity of traders to help determine if cash and market-based programming is appropriate. The basis for the assessment is the assumption that injecting cash into the market will lead to an increase in demand as consumers will have more money to spend on items and retailers will – in turn – have more money to acquire a greater amount of stock from wholesalers. Although this hypothesis is predicated on secondary reading and the expert opinion of the CWG, it is important to note that it has not been proven within the context of the west Mosul market. Without information on the impact of the crisis and the current ability of traders to respond to an increase in demand, humanitarian actors cannot ensure that their cash and market-based programs adhere to the humanitarian principle to do no harm. To address this critical information gap, the CWG launched the JRAM to assess core indicators of market health in newly accessible areas of Iraq.

The inaugural JRAM was implemented in west Mosul between 25 July and 6 August 2017. The assessment utilized qualitative data collection methods centred on a Kobo-based mobile tool, with the coordination mechanisms built on other ongoing CWG-led collaborative projects, namely the Joint Price Monitoring Initiative (JPMI), which is a platform for monthly collection of price data by CWG partners across northern and central Iraq.

This report provides a detailed description of the methodology and an outline of the key assessment findings, structured based on the three research questions:

1. What impact has the protracted crisis had on the selected market?
  - The impact on infrastructure
  - The impact on security
  - The impact on the supply chain
2. What are the prices and availability of key food and non-food items (NFIs) within the selected market?
3. What is the response capacity of traders within the selected market to respond to increases in demand, and what factors have traders identified as being barriers to their response capacity?

<sup>14</sup> BBC, 'How the Battle for Mosul Unfolded' (11 July 2017).

<sup>15</sup> OCHA, Humanitarian Bulletin, Iraq – August, 1 September 2017: 3.

<sup>16</sup> Assessment Working Group Iraq, Mosul Multi-Cluster Rapid Needs Assessment: Round 2, (June 2017).

<sup>17</sup> The CWG was created to oversee cash programming across Iraq. It works closely with the relevant organisations and clusters – such as shelter, food and livelihoods – to ensure cash-based activities are better informed and coordinated. Initiatives, such as the JRAM, represent as key component of the group's mandate.

## METHODOLOGY

### Methodological Overview

The methodology for the JRAM was based on the Rapid Assessment of Markets (RAM) system as developed by the International Committee of the Red Cross (ICRC).<sup>18</sup> The RAM was selected because of its broad acceptance by the humanitarian community as a standard for market assessment, as well as its inherent contextual flexibility. The JRAM was tailored to the unique Iraqi context through extensive collaboration with the CWG and CWG partners, as well as a thorough review of available secondary data.

In terms of definitions, the *market* refers to a systematic structure that allows market actors to buy and sell commodities. For the purposes of the JRAM, the *market* refers to the entire system within the chosen geographical area, whereas the *market place* refers to a specific concentration of economic activity within the larger market. In the case of west Mosul, market places were largely represented by main market streets. These definitions were determined through collaboration with cash and market actors in-country.

For the purposes of this assessment, the population groups of interest are actors related to the market in the selected area, including those who rely on the market as a source of livelihoods and those who rely on the market to supply them with essential items for survival:

- **Traders:** individuals who sell food and non-food consumer items – as represented by the basket of items within the JRAM tool<sup>19</sup> – within the selected market. This category is broken down into two components:
  - **Retailers:** traders who primarily target their sales at consumers.
  - **Wholesalers:** traders who primarily target their sales at retailers.
- **Consumers:** individuals who rely on the market and the associated market places within it to purchase food and non-food items essential to the maintenance of a healthy and dignified life.

### Coverage Area Selection

The implementation of the JRAM began with the selection of an area for assessment – west Mosul – by the CWG, based on humanitarian priorities as laid out by the Humanitarian Response Plan (HRP) and the Humanitarian Needs Overview (HNO), feedback from operational CWG partners operating in the area selected for assessment, and the absence of a comprehensive market assessment in that market or an identified need to reassess a market based on changes in context.

### Scoping

After the selection of the assessment area, the CWG utilized its reporting mechanisms to identify operational partners within west Mosul. REACH then coordinated a scoping exercise with those operational partners with the capacity to participate in the assessment, with the goals of: identifying key areas of commerce (market places) within the selected market, and – based on the expertise of staff implementing cash and market-based programming – determine whether these market places are sufficiently functional for the assessment to be feasible; determining which areas – based on staffing capacity, organizational security assessments, and previous organizational scoping and operations in the area – are feasible for each organization to assess within the identified data collection timeframe; collecting basic planning data including potential key informant (KI) details for interviews from retailers, wholesalers and consumers; GPS points of key market place locations and/or locations of traders to be assessed; and key details concerning infrastructure and access that could affect data collection for all partners.

<sup>18</sup> ICRC, Rapid Assessment of Markets: Guidelines For Initial Emergency Market Assessments, (2014).

<sup>19</sup> The items within the JRAM tool are drawn from the Minimum Expenditure Basket (MEB) as defined by the Market Monitoring Task Force (MMTF) of the CWG. The MEB is defined as a culturally adjusted set of food and non-food items necessary for an Iraqi family to live in a dignified manner.

Based on the information collected during the scoping exercise, the CWG convened a workshop with all operational partners with the goal of discussing and triangulating all findings of the scoping conducted in west Mosul. To ensure the efficiency of the discussion, all operational partners were asked to share a summary of the findings with the CWG and REACH prior to the convening of the workshop, with REACH conducting an additional Secondary Data Review (SDR) – reviewing existing resources on Mosul relating to the market – to triangulate these findings. Ultimately, these operational partners identified 9 central functional market places within west Mosul. The CWG and REACH then facilitated the division of data collection responsibilities amongst the operational partners based on their capacity and levels of access.

### Field Data Collection

Following the completion of the scoping exercise and the planning workshop, REACH initiated the data collection period with a comprehensive training in both the Kobo-based mobile tool and the methodology for all operational partners. Field data collection took place between 25 July and 6 August 2017 and involved 11 participating partner agencies – Action Contre La Faim (ACF), ACTED, Danish Refugee Council (DRC), Human Appeal, the International Rescue Committee (IRC), Mercy Corps, Mission East, Norwegian Refugee Council (NRC), OXFAM, People in Need (PIN) and World Food Programme (WFP) – who carried out Key Informant Interviews (KIIs) with 160 retailer, 58 wholesaler and 65 consumer respondents related to nine market places. For each market place, data collection teams were instructed to collect forms from retailers, wholesalers, and consumers with the following parameters:

- **Retailers** were selected by data collection partners within the identified confines of the assigned market place. During training, partner organizations were instructed to show preference toward retailers who sold a wider variety of items, to ensure that data is captured for all key food and non-food items within the JRAM tool. To assist with this process, all enumerators were provided with paper checklists including all items and three check boxes, encouraging the enumerators to collect at least three data points for each item. Data collection partners were instructed to collect at least 15 retailer surveys per market place.
- **Wholesalers** were either directly identified and surveyed during field data collection within the market place or surveyed remotely by data collection partners. During the retailer surveys, all respondents were asked to provide contact details for their wholesalers, who were then contacted by phone or, if possible, visited by partner staff. This ensured that the collected data tracked the supply chain directly related to the assigned market place. Data collection partners were instructed to collect at least six wholesaler surveys per market place.
- **Consumers** were identified by data collection partners either within the assigned market place or through previous KI networks. Respondents were either surveyed in person, or had their details collected for assessment by phone at a later time. The interview method (in person or by phone) was determined by the preference of the consumer and partner security regulations. All data collection partners were instructed to employ both male and female enumerators during data collection, to ensure that contact details can be gathered for female consumers as well as male – with a strong preference for an even gender distribution among the consumer respondents. For the purposes of the JRAM in west Mosul, partners were overall requested to collect surveys from three consumer respondents for each neighbourhood adjacent to the target market places – with respondents from 20 neighbourhoods ultimately surveyed.

Table 1: Retailer, wholesaler and consumer KIs per market place. Retailer KIs are unique to each market place, but wholesaler and consumer KIs could be connected to multiple market places and are therefore not always unique:

Market Place	Number of retailer KIs	Number of wholesaler KIs connected to market place	Number of consumer KIs connected to market place
al Ezdehar Nedaa	15	16	4
al Maamoun	14	3	5
al Magharbe	15	3	3
Mansour	15	9	6
al Rahman	10	16	17
Islah Ziraee	23	9	10
Mosul al Jadeeda	36	29	42
Wadi Hagar	17	9	6
Yarmuk	15	9	3
<b>Total</b>	<b>160</b>	<b>103</b>	<b>96</b>

All interview respondents were selected through purposive sampling, with the minimum samples determined by the CWG, REACH and operational partners as being sufficient to triangulate findings for each identified market place, while allowing data collection to be conducted within a relatively short period of time – in line with the rapid component of the project.

The survey used for the KIs covered the following areas relating to market health:

- Infrastructural damage;
- The security situation;
- The suppliers;
- The availability of goods;
- The price of goods;
- The availability of financial services and cash;
- Trader's capacity to respond to an increase in demand;
  - Barriers that would prevent them from doing so.

For all respondent types, the survey focused on 16 items that were adapted from the items included in the Survival Minimum Expenditure Basket (SMEB) as defined by the Market Monitoring Task Force (MMTF) of the CWG. The SMEB is a group of non-fresh food and NFIs deemed essential to survival in the Iraq context. For the purposes of the JRAM, four fresh-food items were added to give a broader picture of market health and the accessibility to different foods.

Table 2: Items assessed by the JRAM:

Dry Food	Fresh Food	Non-Food Items (NFI)	Fuel
Lentils (1kg)	Tomatoes (1kg)	Bath soap 1 bar (125g)	Butane (1 canister)
Rice 1 (1kg)	Cucumbers (1kg)	Toothpaste (75ml)	Kerosene (1L)
Sugar (1kg)	Onions (1kg)	Disinfectant solution (1L)	
Vegetable oil (1L)	Potatoes(1kg)	Sanitary napkins (1 unit)	
Wheat flour (1kg)	Eggs (30)		

## Coordination and Data Management

All coordination during the data collection process was conducted by REACH, with support from the CWG. Each data collection partner identified a designated coordination focal point, who interacted with REACH staff on a daily basis to

provide updates on the data collection process, including clarifications about the methodology, issues of access to planned data collection areas, or technical issues with the JRAM tool.

Data cleaning was carried out by REACH staff on a daily basis as partner data was received. As with coordination, each data collection partner identified a designated data focal point, who was responsible for responding to all data cleaning inquiries. These inquiries were logged in a shared Google Spreadsheet (one per data collection partner) in which data focal points could provide responses, as well as through colour coded raw datasets that corresponded to the inquiries recorded on the spreadsheet. All changes were then made and logged by REACH staff.

### Data Analysis

All data was disaggregated by respondent type and by relevant market place. In the overall analysis, findings were therefore presented at both the market place and overall market level. For retailers, overall market findings were determined by taking the average of all the mean values for the nine assessed market places, to account for differing sample sizes across the market places. As individual wholesaler respondents could be related to multiple market places – in that they had customers in multiple of the nine assessed market places – market-level analysis for wholesalers was done by taking the mean value of the 58 wholesaler responses, to avoid duplicating wholesaler responses. Consumer responses were unique, in that the consumer survey was separated into two parts: one for consumer specific responses, and one for responses for specific market places in which the consumers shopped. The market place-level responses were assigned to their requisite market places, and analysed in the same way as retailer responses, whereas the consumer specific analysis was done by taking the mean of all 65 consumer responses.

### LIMITATIONS

Due to the inherent limitations of qualitative data collection, the findings within this report cannot be statistically generalized to the assessed area. Many of the figures and percentages reported are based on estimates by respondents. Thus, the report provides only indicative information about the health of the assessed market. Finally, findings are relevant only to the specified market and should not be regarded as indicative of market health in other parts of Mosul city or elsewhere in northern Iraq.

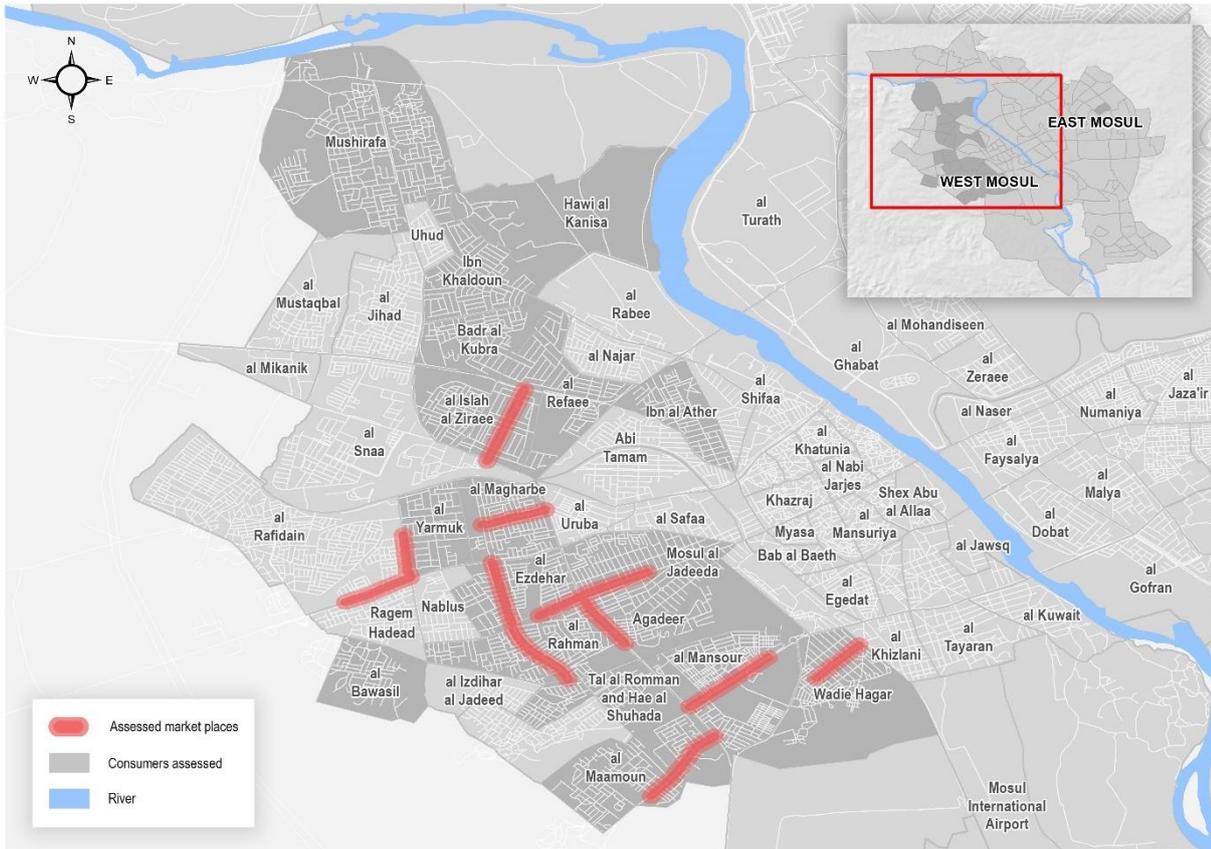
In terms of coverage, OCHA reported that by the time of the assessment in July-August 2017 residents of west Mosul had begun returning to all neighbourhoods, except for the Old City and adjacent areas that had seen the most intense fighting, and reportedly remain empty or sparsely populated.<sup>20</sup> The data collection coverage for the JRAM necessarily reflects this reality, and no market places in the Old City or the neighbourhoods directly surrounding it were covered, as none were identified as centres of market activity during the scoping phase of the project. As such, the JRAM only covers the parts of west Mosul that had seen returns, and had experienced some level of market recovery. It therefore cannot claim to provide an overview of the market situation for the entire western part of the city. In addition, although the scoping component of the process sought to locate all active market places in west Mosul, it cannot be assumed that all active market places within the western part of the city were in fact identified, and it is, therefore, possible that sites of economic activity were not captured by this assessment.

Some items proved difficult for partner enumerators to locate within the assessed market places, especially fuel and fresh produce. To supplement incomplete price data for fuel, partner enumerators were instructed to survey retailers in assessed market places to determine the local prices for both butane and kerosene. As both butane and kerosene prices are relatively stable within the localized context, this methodology returned results consistent with prices collected from butane and kerosene vendors. Given the low proportion of assessed retailers (4%) and wholesalers (0%) selling fuel items, they are excluded from much of the item specific-analysis concerning shortage of trader response capacity.

The number of retailers or wholesalers trading fresh produce was generally lower than those selling dry food goods or NFIs. Therefore, the findings for these items – onions, tomatoes, cucumbers and potatoes – are smaller and the items were not assessed in some market places.

<sup>20</sup> OCHA, Humanitarian Bulletin, Iraq – August, 1 September 2017: 3.

Map 1: Overall assessed area by the JRAM, including each of the nine assessed market places and the neighbourhoods of origin for consumer KIs:



## FINDINGS

### Introduction

The JRAM was set up by the CWG to assess market health in recently retaken areas of Iraq. The assessment in west Mosul sought to collect data on the impact the crisis was having as well as the capacity of the market to increase supply. The findings from all three respondent groups, presented below, are organised around the three research questions that guided the project. The first section looks at the impact the protracted crisis has had on the selected market, focusing on infrastructure, security and the supply chain. The second section builds on the first to look at the availability and price of goods, taking into consideration the impact of the crisis identified through the first section. The third and final section zooms in on trader capacity to respond to an increase in demand. This was identified by the CWG as the key indicator for testing the feasibility of cash-based programming. This report rests on the assumption that injecting cash into a market will result in an increase demand due to market actors having more liquid assets. However, this hypothesis – although based on secondary sources and the consensus of the CWG – has not been tested in the west Mosul context.

### 1. What impact has the crisis had on the market?

In order to determine the general impact that the crisis had on the market, survey questions focused on infrastructure damage, security and supply. These factors were identified due to their potential impact on the movement of items and the physical accessibility of market places in the west Mosul context.

#### Infrastructural damage

**More than 95% of retailer and wholesaler KIs said that electricity and water infrastructure in their area had been damaged. Damage to road infrastructure<sup>21</sup> was also frequently reported, with 81% of retailer and 76% of wholesaler KIs reporting this.** The figures for damage to communication infrastructure – such as telephone wires or cell towers – were much lower, reported by only 23% of retailer and 19% of wholesaler KIs.

As suggested by the high percentage of trader respondents who reported these types of damage, mentions of water and electricity infrastructural damage were consistently high across all assessed market places. However, reports of damaged road or communications infrastructure were more varied. For roads, in al Maamoun, al Mansour and al Rahman, 100% of retailer KIs reported damage to road infrastructure whereas in Wadi Hagar, only 29% of retailers did. For communications, in Mosul al Jadeeda 67% of retailer KIs reported damage to communication lines while in Islah al Ziraee and Yarmouk none did. Such variation in reported infrastructural damage indicates that some sections of west Mosul suffered much greater damage than others during the military operations in the city.<sup>22</sup> Despite this, damage to electricity and water infrastructure was consistently high across the assessed area – likely because damage to pumping stations, water mains and transformers has wide impact across multiple neighbourhoods.

Table 3: Infrastructure damage in the market, as reported by retailer and wholesaler KIs:

Infrastructure damaged	Retailer KIs: % reporting	Wholesaler KIs: % reporting
Roads	81%	76%
Electricity	99%	93%
Water	96%	95%
Communication	23%	19%
Other	2%	0%

<sup>21</sup> This question referred to the general state of the roads rather than any particular routes or road types.

<sup>22</sup> UNHRC, Iraq Situation Flash Update, 13 July 2017.

The trader KIs who reported infrastructural damage were then asked what degree of impact the damage had on their business. **The prevalence of damage to electricity and water infrastructure was matched by its reported severity: 94% of retailer KIs and 85% of wholesaler KIs said that damage to electricity had a severe impact on their business. In addition, 81% of retailer KIs and 73% of wholesaler KIs said damage to water infrastructure had a severe impact.** Notably, a higher percentage of wholesaler KIs reported that damage to road infrastructure had a severe impact, with 73% of wholesaler KIs reporting that the damage had a severe effect compared to just 55% of retailer KIs. This is likely due to wholesalers' businesses relying on the movement of goods over longer distances than retailers.

Table 4: Road infrastructure damage per market place, as reported by retailer KIs:

Market Place	% retailer KIs reporting road damage
Al Maamoun	100%
Al Mansour	100%
Al Rahman	100%
Al Ezdehar/Nedaa	93%
Al Yarmuk	87%
Mosul al Jadeeda	86%
Islah al Zirae	70%
Al Magharbe	67%
Wadi Hagar	29%

Damage to roads was also reported by consumer KIs. Although not directly asked about infrastructural damage, **consumer KIs were asked about barriers to market place access.** While only a third of consumer KIs reported barriers to access, for those that did **the most reported barrier was damaged roads.** The lack of transport was the second highest reported barrier, however this could be caused by a range of factors, including or excluding infrastructural damage. Road damage was reported by a particularly high proportion of consumer KIs who shopped in al Yarmouk, al Mansour, al Rahman and Mosul al Jadeeda market places. These market places also saw a high number of retailer and wholesaler KIs reporting damage to road infrastructure.

Trader KIs were also asked, in general, what barriers they faced to rebuilding their businesses, including their shops or storage facilities. **In response, the overwhelming majority of retailer (93%) and wholesaler (73%) KIs reported a lack of funds as the primary barrier.** This finding indicates a lack of liquidity among traders in the assessed area, which is significant for understanding market capacity: without cash resources, traders cannot invest in the materials or labour needed to make repairs to their business.

Overall, these findings indicate that a wide variety of infrastructural damage is affecting market health. For traders it affects their businesses, whereas for consumers it impacts on their ability to access market places. In addition, for trader respondents, the main barrier to rebuilding damaged property identified by both trader KIs was a lack of funds. This situation could slow down attempts to rebuild property and restore infrastructure. When considering overall market health, the impact of this damage on storage, due to the lack of electricity, and supply, due to damaged or blocked roads, needs to be taken into account.

Table 5: The impact of infrastructure damage (road, electricity, water and communication) on business, as reported by retailer and wholesaler KIs:

	Road		Electricity		Water		Communication	
	R	W	R	W	R	W	R	W
Severe	55%	73%	94%	85%	81%	73%	39%	27%
Moderate	36%	25%	6%	13%	14%	13%	36%	73%
Slight	9%	2%	0%	0%	5%	13%	24%	0%
No Impact	1%	0%	0%	2%	0%	2%	2%	0%

### Impact on Security

The security situation was another factor addressed by the assessment to determine the impact the crisis has had on the market. As with infrastructural damage, an uncertain security context has the potential to restrict the movement of goods and the accessibility of market places.

When asked about the impact the security situation had on their business, **60% of retailer and 59% of wholesaler KIs reported that security had no overall impact.** However, for those reporting security as a factor, certain issues were highlighted more frequently than others. **Out of the total number of respondents, 17% of retailer and 29% of wholesaler KIs reported checkpoints as a factor affecting their businesses.** This is presumably because checkpoints restrict movement and cause delays in the transportation of goods, particularly at heavily congested points created by the limited number of operational bridges crossing the Tigris river. Notably, almost double the percentage of wholesalers (29%) when compared to retailers (17%) felt that checkpoints had a negative impact on their business. This is in line with the finding that many wholesalers are located outside of the market places that they trade with – specifically in east Mosul – and, therefore, restrictions on movement will affect them to a greater extent than retailers. **Only 13% of consumer KIs reported that checkpoints had an impact on the accessibility of markets,** indicating that checkpoints may have a greater impact on the movement of goods rather than people or that wholesalers transport goods over a greater distance than consumers travel to the market and are therefore more likely to encounter difficulties. These findings also indicate that wholesalers may have a greater awareness of the obstacles to the movement of goods than retailers – which is key for understanding differences in the perceived health of supply chains between the two trader respondent groups.

For consumers, the majority of KIs – 66% – reported that the security context had no impact on market accessibility. **However, for those who did report that security impacted their access, fear of violence was the most widely cited (27%).** The fear of violence was also cited as a security issue by retailer (18%) and wholesaler (14%) KIs. Notably, trader KIs emphasised security issues relating to restricted movement (checkpoints), whereas consumer KIs emphasised security issues relating to personal safety. For example, the next most common reported issue by consumer KIs was fear of harassment (14%).

Security issues showed notable variation across the assessed market places. For retailer KIs, **reports of the fear of violence were especially high in al Yarmouk (62%) and al Maamoun (50%) market places.** For the same two market places, **all consumer respondents reported that the fear of violence impacted on market-place accessibility.** Consumers were also asked if any social group (e.g. women or children) faced difficulties in accessing market places. **The overwhelming majority of respondents – 90% – reported that this was not the case.** However, **in al Yarmouk and al Maamoun several respondents indicated that the market place was dangerous for women and children to access.** In the same two market places, consumers also reported that the security situation prevents or sometimes prevents them from accessing the market place - indicating a trend of insecurity within these particular market places and surrounding neighbourhoods. Notably, both of these market places are located on the periphery of the city, suggesting that security issues are heightened there. By contrast, in al Rahman market place, **100% of retailer KIs and all but one consumer KI reported that security had no impact, which illustrates that security is highly location-specific within the assessed market.**



However, retailer KIs did report a marked trend regarding the location of their wholesalers – whether inside the market place or outside of the market place – when compared to 2014. **This trend specifically showed that many now purchase from wholesalers located in the east of the city, in particular Gogjali and al Jaza'ir neighbourhoods, rather than from wholesalers located in the west, in particular those located in Shifaa and the Korniche area of Mosul al Qadima. Many wholesaler KIs also reported that their suppliers were now in east Mosul, and specifically Gogjali and al Jaza'ir neighbourhoods.**<sup>23</sup> Although the data does not directly support this, it can be assumed that the shift in location for suppliers is due to the protracted crisis, damage to infrastructure and the heightened security situation.

Although the impact of the crisis on the number of suppliers for both retailers and wholesalers has been mixed, there is a clear trend toward wholesalers being located further away from west Mosul market places than in 2014. This heightens the chances of supply routes being impacted by the issues with infrastructure and security identified above – particularly considering findings emphasizing checkpoints, damaged road infrastructure and difficulty of transportation as major barriers to both business functionality and consumer access to market places.

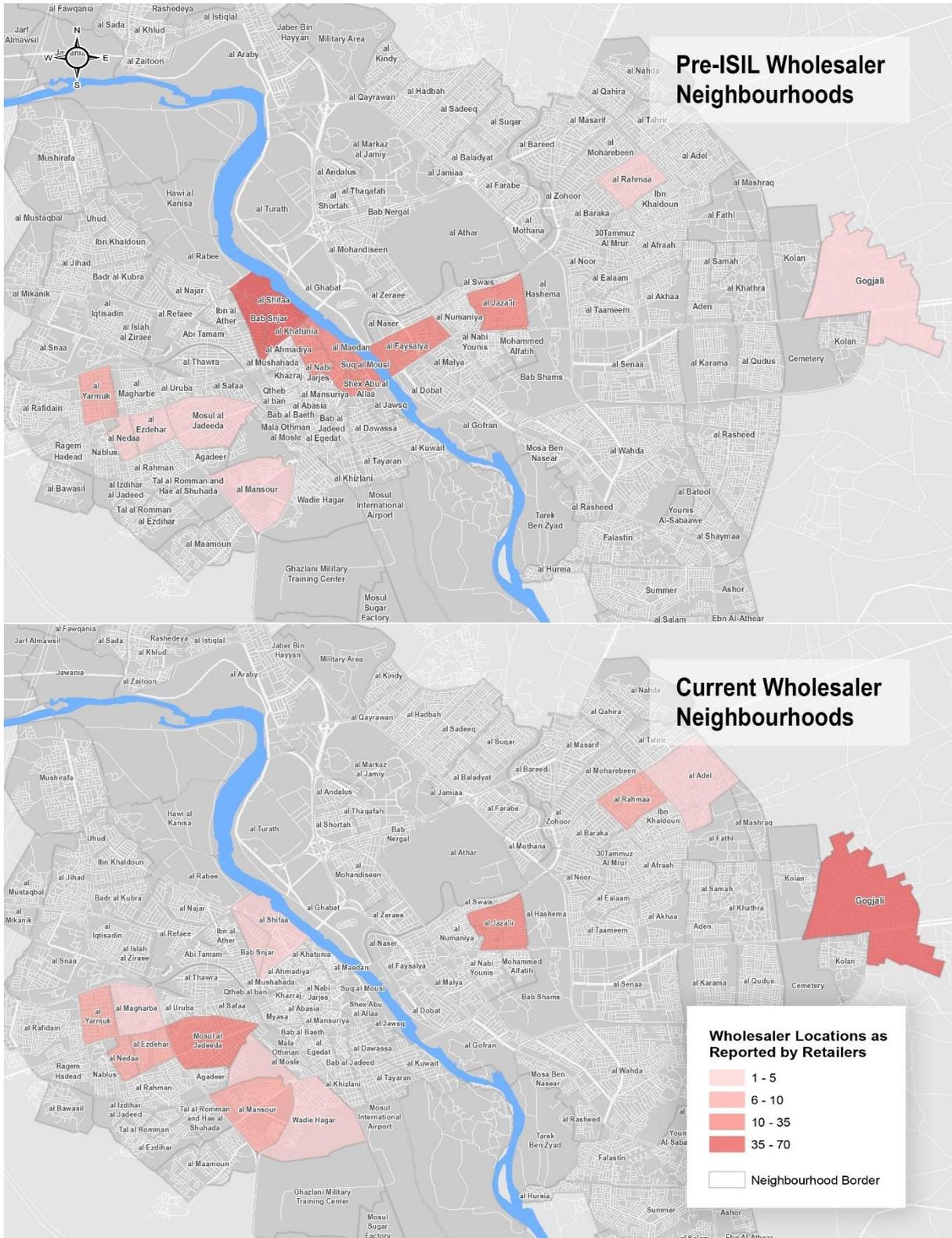
### Analysis: The Impact of the crisis on the market

The west Mosul JRAM looked at infrastructural damage, security and supply chains in order to understand the impact the protracted crisis has had on the market. The area has clearly experienced widespread infrastructural damage that is prevalent throughout the area and has had a significant impact on the businesses of retailers and wholesalers, especially in terms of damaged roads and the difficulties of transportation. The situation is further exacerbated by the security context, which also impacts business and affects market access. However, those reported security factors appear to be highly localized, emphasizing the importance of area-specific analysis in designing cash and market-based programmes in post-conflict contexts. Finally, although the protracted crisis does not appear to have had any consistent impact on the number of retailer and wholesaler suppliers, it does seem to have led to them being located further away from their customers than they were in 2014.

These issues do not appear to prevent the market from functioning, as will be explored further in the next section. However, the problems identified do appear to have an impact on the movement of goods and people as well as the ability to run a business and store goods. **This impact is demonstrated by consumers reporting that in mid-2014 and before, on average, they shopped in 3 to 4 different market places, whereas they reported currently shopping in an average of 1 to 2 market places.** It can be assumed that the impact of the crisis is responsible for this reduction in the number of markets accessed by consumers.

<sup>23</sup> The available data does not specify whether these are the same suppliers who have moved to different locations or new suppliers.

Map 3: Location of wholesalers, both before the arrival of the group known as ISIL and at the time of the assessment, as reported by retailer KIs

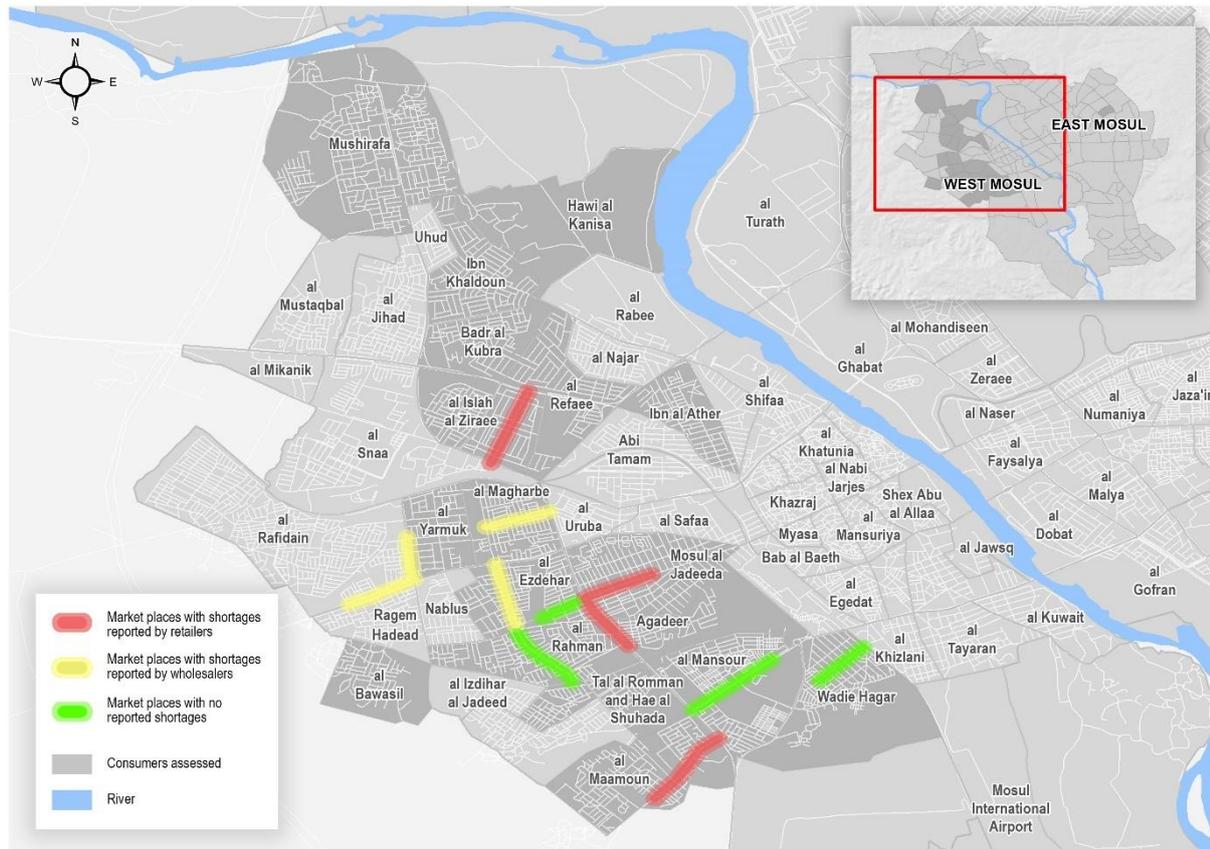


## 2. The Availability and Price of Goods, the Availability of Financial Services

The second research question examines the prices and availability of goods across the assessed market, as well as the state of financial services and cash access. Specifically, shortages or prohibitively high prices would prevent consumers from being able to access key commodities. Likewise, a lack of financial services or access to cash could also prevent traders and consumers from having liquid assets. As noted in the methodology section, due to the very limited number of retailers and no wholesalers selling the two assessed fuel items – butane and kerosene – they are not included in the trader analysis.

### The availability of goods

Map 4: The extent of shortages by market place, as reported by retailer and wholesaler KIs.



Trader KIs were asked if they had experienced a shortage of each assessed item that they stocked in the past 30 days. In the analysis, to be defined as a shortage 20% or more of KIs from either group had to report as such.

For retailer KIs, the only item with shortages reported across at least two assessed market places were eggs. Items with shortages reported in at least one market place were lentils, wheat flour, toothpaste, disinfectant solution and sanitary napkins. Notably, for no item were shortages reported in more than two market places.

For wholesalers, shortages were reported slightly more frequently. Items with shortages reported across at least three assessed market places were sugar and eggs. Items with shortages reported across at least two market places included lentils and wheat flour. Finally, items with shortages reported at one market place were rice and vegetable oil. For both respondent groups, eggs appear as the item for which there is most likely to be a shortage.

Notably, among wholesaler KIs no shortages of NFIs were reported. Moreover, across both trader KI groups no shortage of any of the four fresh vegetable items – tomatoes, cucumbers, onions and potatoes – were reported. Given that shortages were never reported by more than two market places for retailers and three market places for wholesalers, it is clear that shortages of the assessed items are not widespread in the assessed area.

However, the market-place specific findings reveal certain localized shortages. For retailer KIs, Mosul al Jadeeda (lentils, toothpaste and disinfectant solution) and al Maamoun (lentils, wheat flour and eggs) market places both reported shortages of 3 of 14 assessed items<sup>24</sup>, while Magharbe reported shortages of one item (eggs). For wholesaler KIs (either located in or trading with the market place), shortages for five items were reported at Ezdehar/Nedaa (rice, sugar, wheat flour, sanitary napkins and eggs), three items in Magharbe (lentils, sugar and eggs) and two items in Yarmuk (lentils and sugar). The findings indicate little connections between shortages reported by retailer and wholesaler KIs. Al Rahman and Islah Ziraaee market places stood out for having no reported shortages, while Wadi Hagar and Mansour had only one reported shortage of the 14 assessed items, both of which were reported by wholesaler KIs.

Shortages of any particular item were never reported in any more than three market places, by either trader or consumer KIs. In terms of the findings per market place, shortages of more than five items were never reported at any location. Thus, in the market there appear to be no widespread shortages of any particular item. The main cause for concern is shortages in particular market places, which as with security issues, demonstrates the importance of highly localized information when considering a market-based response.

Consumer KIs were also asked what goods were available in the market places in which they shopped. Overall, most goods were reported to be available across all assessed market places. The primary exceptions were disinfectant solution, sanitary napkins, butane and kerosene – as shown in Table 5. For all other items, more than 90% of respondents indicated that the goods were available at the market places they used. This finding indicates that despite shortage of food items being reported more frequently by traders KIs, consumers find it more difficult to access NFIs.

Table 6: Items available in the market place, as reported by consumer KIs:

Item	% of consumer KIs reporting item not available
Kerosene	36%
Sanitary napkins	17%
Disinfectant solution	15%
Butane	10%
Sugar	6%
Rice	5%
Lentils	4%
Vegetable oil	4%
Wheat flour	4%
Eggs	4%
Tomatoes	4%
Onions	4%
Cucumbers	2%
Potatoes	2%
Toothpaste	2%
Bath soap	2%

<sup>24</sup> Excluding butane and kerosene, as noted above.

Concerning the market places in which they purchased goods, consumer KIs reported on what proportion of shops were open and functional. On average, consumers reported that **70% of retailers within these market places were trading**. However, these figures varied significantly across market places: **in al Ezdehar/Nedaa a reported average of 95% of shops were trading, compared to just 40% in al Mansour**. Nevertheless, the findings indicate that **most market places have seen the majority of retailers reopen their shops for trade – with five of nine market places reported by consumers to have an average of at least 70% of shops trading**.

### The Price of goods

**For retailer KIs, prices were remarkably consistent across the assessed market places** (see Annex 3, Table 1). Al Mansour stood out for having generally lower prices, while the relatively centralized market places of al Rahman, al Ezdehar/Nedaa and al Magharbe had generally higher retailer prices - though this variation was limited. In terms of individual items, prices were consistent across the assessed market places, with the exception of rice prices, which saw a 112% difference between the highest price (1600 IQD/kg) in Rahman and the lowest price (756 IQD/kg) in Wadi Hagar, and toothpaste prices, which saw a 100% difference between the highest prices in Wadi Hagar and Rahman (1000 IQD/75 ml) and the lowest price in Mansour (500 IQD/75 ml).

**For wholesaler KIs, prices were also consistent across the assessed market places** (see Annex 3, Table 2). Mosul al Jadeeda stood out for having generally lower wholesale prices, while al Magharbe stood out for having generally higher wholesale prices – as was the case with the retailer prices noted above. In terms of wholesale prices for individual items, prices were generally consistent, with the exceptions of toothpaste, which saw a 75% difference between the highest price (4875 IQD/six 75ml tubes) in al Islah al Ziraae and lowest price (2786 IQD/six 75ml tubes) in al Ezdehar/Nedaa, and disinfectant solution, which saw a 111% difference between the highest price (52875 IQD/50L) in Mansour and the lowest price (25000 IQD/50L) in Islah Al Ziraae.

Consumer KIs were asked about changes in item prices and the quantity of goods they would purchase at one time. **Ninety-six percent of consumer respondents reported that prices had decreased compared to the period immediately following the retaking of the western part of the city by the ISF**.

Reports from consumer KIs about the fall of prices in west Mosul are supported when comparing the price data from the area to the average prices for July 2017 from central and northern Iraq as measured by the Joint Price Monitoring Initiative (JPMI). Comparable data only exists for retailer prices and for 13 of the assessed 16 items. Of those items, prices for seven (lentils, rice, sugar, wheat flour, bath soap, toothpaste and disinfectant solution) were lower than the national average, by 5% or more, and five item prices (vegetable oil, butane, sanitary napkins, eggs and onions) fell within 5% of the national average for July. **Overall, retailer prices in west Mosul were -6% lower than the national average** for the same month in which data was collected.<sup>25</sup> This finding illustrates that the protracted crisis in the city does not appear to have had a lasting effect on the price of goods.

### The Availability of Financial Services and Cash

Trader KIs were asked if they offered their customers the chance to make purchases on credit, what demand was like and whether it had increased or decreased. Connected to this, consumer KIs were asked in what ways they accessed cash as well as what barriers they faced when doing so.

**Overall, 70% of retailer and 59% of wholesaler KIs reported that they offered their customers the opportunity to purchase on credit**. However, the percentage of retailer and wholesaler KIs offering credit varied significantly at the market place level. For example, in al Magharbe market place 87% of retailer and 100% of wholesaler KIs reported that they offered their customers the chance to buy on credit, whereas in Mosul al Jadeeda market place, only 50% of retailer and 48% of wholesaler KIs reported this.

Of those reporting that they offered credit, retailer KIs answered that on average 28% of their customers purchased on credit, whereas wholesaler KIs reported a slightly higher figure – 37%. This indicates that purchasing on credit is more common further up the market supply chain, likely because purchases from wholesalers usually involve greater quantities than those from retailers and therefore require more financial resources – which those buying from

<sup>25</sup> Price data taken from REACH and the CWG Iraq, Joint Price Monitoring Initiative (JPMI) data set, July 2017.

wholesalers may not always have access to at the time of purchase. This again suggests that there is a lack of liquidity among retailers in the market.

In terms of change in demand for credit, the findings reveal a mixed picture, with a roughly equal proportion of retailer and wholesaler KIs reporting that demand had either increased or decreased. However, at the market place level there was a greater variation in the findings. For example, in al Rahman market place, 90% of retailer and 81% of wholesaler KIs reported that demand for credit had increased since the departure of ISIL. This stands in sharp contrast to the Islah al Ziraa market place, where 57% of retailer and 78% of wholesaler KIs reported that demand has decreased since the departure of SIL.

On a related finding, consumer KIs were asked about their means of accessing cash. **For the majority of consumer KIs, hawallas<sup>26</sup> were identified as the primary means of accessing cash resources – reported by 52%. This was followed by government salary offices (22%) and daily wages paid in cash (19%).**

Table 7: Primary cash access methods, as reported by consumer KIs:

Cash access method	% of consumer KIs reporting
Hawalla	52%
Gov't Salary Office	22%
Daily Wages (cash)	19%
Do Not Know	8%
Bank	0%

Notably, **77% of consumer KIs reported that they faced barriers in accessing cash.**<sup>27</sup> The most commonly reported barriers were that cash access facilities – such as hawallas – did not have cash available (76%), cash access facilities were not functional (62%) or that the respondent could not physically access cash distribution facilities (32%). The high percentage of consumer KIs reporting that they faced barriers to accessing cash suggests that they – like retailer KIs – have a lower level of liquidity.

Table 8: Cash access barriers, as reported by the consumer KIs that stated they faced barriers (77% of the total). KIs were able to provide more than one answer:

Cash Access Barriers	% of consumer KIs reporting
<b>Factors</b>	<b>%</b>
Cash access facilities do not have cash available	76%
Cash access facilities are not functional	62%
No access to cash distribution facilities	34%
Other	4%
Do not know	2%

## Analysis: The Availability and Price of Goods

The findings indicate that the assessed items are generally available in the market place. Shortages were not widely reported, though certain market places did report shortages of several items (see Map 4). Analysis of prices also reveal

<sup>26</sup> Money transfer agents.

<sup>27</sup> This question was asked of all consumers and did not differentiate between those who would normally be earning a living or receiving a pension.

a consistency across assessed market places. In general, prices in Mosul were lower than the average for central and northern Iraq for the month of July 2017 as measured by the JPMI.<sup>28</sup> Indeed, 96% of consumer KIs reported that overall prices had dropped since the retaking of the west of the city by the ISF. In addition, the majority of both retailer (70%) and consumer KIs (59%) offered credit to their customers, around a third of whom made use of it.

This shows that west Mosul has market places in which goods are generally available and prices are on the whole slightly cheaper than the national average. However, the findings also suggest a lack of cash or ability to access cash among consumers. Even if goods are available and affordably priced, if consumers do not have the cash to spend on them – which in turn also affects the liquidity of traders - then the market is still not serving its key function.

### 3: The Response Capacity and Reported Barriers to Responding

After looking at the impact the protracted crisis has had on the market, as well as what goods are available and at what price, the final component of the assessment focused on trader confidence in their capacity to meet a theoretical surge in demand. As previously noted, the assessment assumes that injecting cash into the market through humanitarian programming will lead to an increase in demand as consumers will have more money to spend on items and retailers will – in turn – have more money to acquire more stock from wholesalers. Although this hypothesis is based on secondary reading and the expert consensus of the CWG, it has not been tested in the west Mosul context. Thus, trader confidence in their ability to meet a surge in demand should be considered alongside the findings on supply, access, the availability and price of goods, and the availability of financial services, when drawing conclusions on market health.

#### Response Capacity

For all assessed items, retailer and wholesaler KIs were asked if they could respond to a 50% and 100% surge in demand.<sup>29</sup>

##### ***Responding to a 50% surge in demand:***

**For both retailer and wholesaler KIs, an average of 95% reported that they could respond to a 50% increase in demand across 14 assessed items.**<sup>30</sup> An average of 90% or above for both trader respondent groups felt confident in their ability to respond to a 50% increase in demand. Notably, for fresh food items (onions, tomatoes, cucumbers and potatoes), 100% of retailer and 100% wholesaler KIs reported that they could respond to a 50% surge in demand; however, it should be noted that the percentage of respondents selling these items was significantly lower when compared to other items. In the analysis above, no respondent reported a shortage of these items.

##### ***Responding to a 100% surge in demand:***

**For responding to a 100% increase in demand, KIs confidence was slightly lower for retailers and slightly higher for wholesalers – an average of 93% of retailers and 96% of wholesalers stated they had the capacity to respond to a 100% increase in demand across 14 of the assessed items.**<sup>31</sup> Broken down by item, the percentage was still above 90% for almost every item for retailers, excluding eggs (83%) and sanitary napkins (88%), and for every item for wholesalers.

As noted above, wholesaler KIs were generally more confident in their ability to respond to 100% increases in demand than retailers, but only by a slight margin. The central point conveyed by the findings is that across all assessed goods, the overwhelming majority of both retailer and wholesaler KIs reported an ability to respond to a sudden increase in demand – as shown in Table 8. This finding reveals a high level of confidence in the supply chain and the stocks of

<sup>28</sup> Price data taken from REACH and the CWG Iraq, Joint Price Monitoring Initiative (JPMI) data set, July 2017.

<sup>29</sup> Fuel items are excluded from this analysis due to the low number of respondents who sold them.

<sup>30</sup> These figures are the average for 14 of 16 assessed items. The two fuel items – butane and kerosene - were excluded because of the very low number of respondents who actually sold them. These figures were created by calculating the average response rate per each item and then calculating the average of those average response rates.

<sup>31</sup> Ibid.

suppliers. It also indicates that the market – in retailer and wholesaler’s estimations at least – will be able to respond to a surge in demand triggered by an injection of cash.

Table 9: The self-reported ability of wholesalers (W) and retailers (R) to respond to a 50% and 100% increase in demand<sup>32</sup>:

Item	% R: 50% response capacity	% R: 100% response capacity	% W: 50% response capacity	% W: 100% response capacity
Lentils	99%	93%	96%	92%
Rice	95%	93%	93%	91%
Sugar	96%	92%	94%	92%
Vegetable oil	95%	91%	96%	91%
Wheat flour	97%	92%	98%	96%
Eggs	98%	93%	100%	100%
Onions	100%	95%	100%	100%
Tomatoes	100%	95%	100%	100%
Cucumbers	100%	96%	100%	100%
Potatoes	100%	96%	100%	100%
Bath soap	95%	93%	98%	95%
Toothpaste	100%	97%	100%	96%
Disinfectant solution	100%	98%	96%	96%
Sanitary napkins	97%	85%	94%	90%

### Reported Barriers to Responding

Both retailers and wholesalers were asked to identify the primary, secondary and tertiary barriers that would hinder their capacity to respond to increases in demand. When questioned about barriers, trader responses referred to their general ability to respond rather than their specific ability to increase supply for any particular item. **For primary barriers, the most frequently reported for both retailer (74%) and wholesaler (53%) KIs was a lack of financial resources (either physical cash or savings) to purchase additional stocks.** The other notable primary barrier for retailer and wholesaler KIs was difficulty of transportation, reported by 10% of retailer and 29% of wholesaler KIs. For retailers, difficulty in transportation was also the most cited secondary (28%) and tertiary (26%) barrier to responding to an increase in demand. For wholesalers, the most frequently cited secondary barrier was damaged infrastructure in the market place and most frequently reported tertiary barrier was – as with retailers – difficulty of transportation (26%). Factors that generally featured less prominently in respondents’ answers were security, lack of storage capacity and suppliers having shortages of stocks.

Table 10: Primary and secondary barriers to responding to an increase in demand, as reported by retailer (R) and wholesaler (W) KIs:

Barrier	Primary		Secondary		Tertiary	
	R	W	R	W	R	W
Suppliers have shortages of stocks	7%	5%	11%	16%	9%	14%
Lack of resources to purchase additional stocks	74%	53%	11%	16%	5%	5%
Damaged infrastructure in the market place	5%	5%	21%	22%	8%	2%
Damaged infrastructure in the surrounding area	1%	0%	8%	9%	11%	11%

<sup>32</sup> KIs provided information on their ability to respond to an increase in demand for each assessed item.

Difficulty of transportation	10%	29%	28%	10%	26%	26%
Lack of storage capacity	4%	3%	12%	17%	13%	9%
Security	0%	0%	2%	2%	7%	7%
Other	0%	2%	3%	5%	2%	4%
None	0%	2%	4%	3%	16%	23%

### Analysis: response capacity and potential barriers

Although wholesaler KIs tended to emphasize problems with transportation to a greater extent, both respondent groups' answers were highly consistent, with the lack of resources to purchase additional stocks being the most frequently cited as the primary barrier to responding to increases in demand. This suggests a lack of liquidity in the market. Were there to be an increase in demand, the factor trader KIs consider most likely to restrict their response capacity is a lack of cash rather than a shortage of stocks. Assuming the hypothesis regarding the impact of injecting cash into the market is true, this finding demonstrates that the components for a healthy market are in place in the assessed area - what is lacking is liquidity among market actors. However, this point should not be overstated. Other barriers to responding to increased demand emphasised by wholesalers related to transport of goods and damaged infrastructure, supporting the findings from the first section that the protracted crisis has caused widespread infrastructural damage which impacted on business and the supply chain. Notably, neither respondent group reported in significant numbers that security would prevent them from accessing the market. Before designing any intervention, a holistic view of market health needs to be taken, which considers traders' confidence in their capacity to respond alongside the impact of the crisis and the current availability and price of goods.

## CONCLUSION

Launched by the CWG Iraq, the JRAM in west Mosul was designed to assess key aspects of market health in areas of Iraq where control had recently changed. Recognising that there was a gap in market knowledge, the CWG and REACH set up the mechanism to provide rapid information to inform market-based humanitarian programming. The assessment focused on three key areas: the impact of the crisis in terms of infrastructure, security and suppliers; the availability and price of goods and the availability of financial services; and, the theoretical capacity of traders to respond to an increase in demand. Data collection took place between 25 July and 6 August with three distinct respondent groups: retailers, wholesalers and consumers. Data was collected by CWG partners using a Kobo-based mobile tool, with cleaning and analysis being provided by REACH.

Overall, the west Mosul JRAM found that there was widespread infrastructural damage in the assessed area, particularly relating to electricity and water infrastructure. Although also widely reported, damage to road infrastructure varied significantly across market places. Of those who reported it, a high proportion of both trader respondent groups said that damage to electricity, water and road infrastructure had a severe impact on their business. Consumers also reported that infrastructural damage had an impact on market access, with damaged roads being the most widely reported issue.

The impact of the crisis also extended to security, which affected supply for traders and access for consumers. Security issues varied across market places to an even greater extent. The crisis appears to have caused a shift in the location of suppliers further away from their customers than they were in 2014, in many cases across the river in east Mosul. Longer travel times left traders vulnerable to the impact of interrupted supply lines caused by infrastructural damage or security issues.

In terms of shortages almost all assessed items were available across the market, with the exception of a few market places where a minority of retailer or wholesaler KIs reported shortages. This finding is significant as it reveals that the assessed area had a reliable supply of a wide range of goods. This is also supported by the findings on the price of assessed items, with very small variation across market places overall. Moreover, when triangulated against average national price data, retailer prices in west Mosul were 6% lower than the national average, although comparable price data only exists for 13 of 16 items.<sup>33</sup> Collectively, although the findings indicate that goods were generally available and affordable by Iraqi standards, 73% of consumer KIs indicated that they faced barriers in accessing cash. This suggests that despite goods being available at lower than national average prices, consumers may not have purchasing power to access them.

The final area of analysis sought to look at the capacity of retailers and wholesalers to respond to a hypothetical increase in demand. The findings reveal a high level of confidence among both groups: when asked if they could increase supply in response to a 100% increase in demand, an average of 93% of retailer and 96% of wholesaler KIs reported that they would be able to for the 14 assessed items. This finding indicates that despite the impact of the crisis, traders still had a high confidence in their ability to supply. However, analysis of the reported potential barriers revealed that traders' response capacity was restricted by both the impact of the crisis (issues with transportation) and a recurring theme running throughout the findings, namely a lack of liquidity, as reported by 74% of retailer and 53% of wholesaler KIs.

Overall, the assessment found that the market was largely functional in west Mosul, with a high number of shops open and goods available, and a strong reported ability to respond to an increase in demand. Barriers – primarily infrastructural damage and to a lesser extent, the security situation – inhibited supply and market access, but did not prevent the market places from serving their function. Nevertheless, the protracted crisis has had impact on supply and market access, often in a highly-localized manner. The findings highlighted the importance of area-specific information when designing humanitarian responses, with each market place treated as a separate context in which to design and plan an appropriate response. The main finding, found across all respondent groups, is the lack of cash that affected the ability to replace stocks, repair property and purchase goods.

<sup>33</sup> The three items for which there is not comparable national-level data are cucumbers, tomatoes and potatoes.

## ANNEXES

### Annex 1: KI interview questionnaire

#### Consent Statement

My name is XXXX and I am with XXXX humanitarian agency. We are conducting an assessment on behalf of the humanitarian community to better understand the key markets in West Mosul. I will ask you a series of questions about the market places in which you shop, and your ability to access those market places. We expect the interview to take approximately 20 minutes. No specific information about you will be shared publicly. The aim of this assessment is to assist the humanitarian community to better understand the current situation in market places across West Mosul. Following this initial interview, we may conduct follow-up calls with you to confirm certain information. Your participation is completely voluntary. Do you agree to participate in this assessment?

#### Consumer Survey

What is the name of the respondent?

What is the respondent's gender?

What is the respondent's age?

What is the respondent's phone number? (If possible)

What is the respondent's occupation?

In which neighbourhood does the respondent live?

Prior to the arrival of armed groups, in how many different market places did you shop?

How many market places can you currently access?

#### Questions per market place

What is the name of the market place?

In which neighbourhood is it located?

What percentage of shops in the market place are trading?

Are any of these commodities not available in the market place?

In general, how have prices in the market place changed since the departure of armed groups?

Do you currently face any barriers in accessing the market place?

What are those barriers?

Other

What impact does the current security situation have on your access the market place?

Which of these security factors affects your access the market place?

Other

Do any people not feel safe accessing the market place?

Which people?

#### Questions concerning overall consumer experience

Do you have any additional information concerning the market places in which you shop?

Overall, do you purchase commodities in larger or smaller quantities at one time since the departure of armed groups?

Why?

Why?

What is the most common way that you currently access cash?

Other

What is the second most common way that you currently access cash?

Other

Do you face any barriers to accessing cash?  
What are those barriers?

## **Retailer Survey**

What are the GPS coordinates of the shop?  
What is the name of the shop?  
What is the name of the respondent?  
What is the phone number of the respondent?(If possible)  
Which of these items have you had in stock in the past 30 days?  
Are any of these commodities not available in the market place?  
Approximately how many shops does this market place host?  
What percentage of shops in the market place are trading?  
What percent of shops in the market place are damaged, but are still trading?  
What percent of shops in the market place are too damaged to continue trading?

What is the primary barrier preventing shop owners from repairing or rebuilding their shops?

Other

What is the secondary barrier preventing shop owners from repairing or rebuilding their shops?

Other

Has any of the following infrastructure in the market place been damaged by the conflict?

If other, please specify

What level of impact does damaged road infrastructure have on your business?

What level of impact does damaged electricity infrastructure have on your business?

What level of impact does damaged water infrastructure have on your business?

What level of impact do damaged communication networks have on your business?

What level of impact does damage to other infrastructure have on your business?

Which cellular networks are functional in the area of the market place?

Do any of these security factors have a negative impact on your business?

Other

How has your number of suppliers for commodities changed since before the arrival of armed groups?

Are the wholesalers that you purchase your stocks from based in this market place?

Were they based in this market place prior to the arrival of armed groups?

For those wholesalers outside of this market place, where are they located?

Where were they located prior to the arrival of armed groups?

Where do you store your stocks?

Other

Over the past 2 weeks, how many customers have come to your shop per day (on average)?

In general, which neighbourhoods do your customers come from?

What is the primary barrier preventing you from responding to increased demand?

Other

What is the secondary barrier preventing you from responding to increased demand?

Other

What is the tertiary barrier preventing you from responding to increased demand?

Other

Do you currently offer your customers the opportunity to purchase on credit?

Why not?

What percentage of your customers currently purchase on credit?

On average, how many days before the credit is repaid?

How has demand for credit changed since the departure of armed groups?

## **Item-specific questions**

What is the cheapest price for [quantity] of [item] (in IQD)?

How many days ago did you update your prices for [item]?

How do you determine your [item] prices?  
Does this price change based on the time of year?  
In which season is the price highest?  
In which season is the price lowest?  
Is the good imported?  
From which country was this good imported into Iraq?  
Other  
From how many wholesalers do you currently purchase your [item]?  
How many days ago did you restock your [item]?  
In approximately how many days will you next restock your [item]?  
Has there been a shortage of [item] in the past 30 days?  
If demand for [item] were to increase by 50%, would you be able to respond to this increase?  
If demand for [item] were to increase by 100%, would you be able to respond to this increase?

## Wholesaler Survey

What are the GPS coordinates of the wholesaler?  
Where is the wholesaler located?  
What is the name of the wholesaler?  
What is the phone number of the respondent?(If possible)  
Which of these items have you had in stock in the past 30 days?  
Have your facilities been damaged by the conflict?  
What is the primary barrier preventing you from repairing or rebuilding your facilities?  
Other  
What is the secondary barrier preventing you from repairing or rebuilding your facilities?  
Other  
Has any of the following infrastructure in your area been damaged by the conflict?  
If other, please specify  
What level of impact does damaged road infrastructure have on your business?  
What level of impact does damaged electricity infrastructure have on your business?  
What level of impact does damaged water infrastructure have on your business?  
What level of impact do damaged communication networks have on your business?  
Which cellular networks are functional in the area of the market place?  
What level of impact does damage to other infrastructure have on your business?  
Do any of these security factors have a negative impact on your business?  
Other  
In general, how has damaged infrastructure affected your business?  
Other  
From approximately how many suppliers do you purchase your stocks?  
How has your number of suppliers for key commodities changed since before the arrival of armed groups?  
Where are your suppliers based?  
Where were your suppliers based prior to the arrival of armed groups?  
Do you have a secondary location where you store additional stock?  
Where?  
Has your storage capacity been negatively affected by the conflict?  
How?  
In which market places do you have customers who currently purchase from you?  
What is the primary barrier preventing you from responding to increased demand?  
Other  
What is the secondary barrier preventing you from responding to increased demand?  
Other  
What is the tertiary barrier preventing you from responding to increased demand?  
Other  
Do you currently offer your customers the opportunity to purchase on credit?  
Why not?

What percentage of your customers currently purchase on credit?  
On average, how many days before the credit is repaid?  
What are the criteria for a customer to be allowed to purchase on credit?  
Has demand for credit changed since the departure of armed groups?  
Are customers buying in larger or smaller quantities at one time since the departure of armed groups?

***Item-specific questions***

What is the cheapest price for [quantity] of [item] (in IQD)?  
How many days ago did you update your prices for [item]?  
How do you determine your [item] prices?  
Does this price change based on the time of year?  
In which season is the price highest?  
In which season is the price lowest?  
Is the good imported?  
From which country was this good imported into Iraq?  
Other  
From how many wholesalers do you currently purchase your [item]?  
How many days ago did you restock your [item]?  
In approximately how many days will you next restock your [item]?  
Has there been a shortage of [item] in the past 30 days?  
If demand for [item] were to increase by 50%, would you be able to respond to this increase?  
If demand for [item] were to increase by 100%, would you be able to respond to this increase?

**Annex 2: List of assessed marketplaces**

Maamoun

Mansour

Wadi Hagar

Rahman

Ezdehar/Nedaa

Magharbe

Mosul al Jadeeda

Islah al Ziraee

Yarmuk

### Annex 3: Shortages of items as reported per market place by retailers and wholesalers

Market Place	Shortages reported by 20% or more of retailers	Shortages reported by 20% or more of wholesalers
al Ezdehar Nedaa	No shortages reported	Rice, wheat flour, sugar, sanitary napkins, eggs
al Maamoun	Lentils, wheat flour, eggs	No shortages reported
al Magharbe	Eggs	Lentils, sugar, eggs
Mansour	No shortages reported	No shortage reported
al Rahman	No shortages reported	No shortages reported
Islah Ziraee	No shortages reported	No shortages reported
Mosul al Jadeeda	Lentils, toothpaste, disinfectant solution	Wheat flour
Wadi Hagar	No shortages reported	No shortages reported
Yarmuk	No shortages reported	Lentils and sugar

## Annex 4: Prices as reported by retailer and wholesaler respondents

Table 1: Prices as reported by retailer KIs. The table presents the mean price for each market as well as the overall mean price. In the table, empty cells are where no price data was collected for that item in that market place.

Retailers	Lentils	Rice	Sugar	Veg Oil	Wheat flour	Butane	Kerosene	Bath Soap	Toothpaste	Disinfectant	Sanitary napkins	Eggs	Onions	Tomatoes	Cucumbers	Potatoes
<b>Average</b>	1327	886	962	1430	521	7682	652	239	719	1045	158	3246	600	440	460	518
Maamoun	1313	775	983	1455	489	7864	675	202	700	917	167	3333				
Mansour	1344	806	969	1417	450	7033	661	317	500	833	219	2250	500	413	338	425
Wadi Hagar	1083	756	950	1417	450	7906	638	231	1000	1000		3000			500	500
Rahman	1250	1600	1000	1500	500	7850	600	250	1000	750		3500	750	400	500	750
Ezdehar/Nedaa	1500	1250	971	1396	550	7667	602	258	643	1313	117	2981	750	500	500	500
Magharbe	1406	1000	1000	1519	667	7833	600	250	583	964	100	3679	625	500	625	583
Mosul al Jadeeda	1206	775	961	1404	512	7667	690	219	688	1117	197	3143				
Islah al Ziraae	1364	903	917	1444	502	7750	703	245	667	1000	120	3250	650	350	500	500
Yarmuk	1475	871	950	1382	507	7625	571	240	861	1214	140	3500				

Table 2: Prices as reported by wholesaler KIs. The table presents the mean price for each market as well as the overall mean price. In the table, empty cells are where no price data was collected for that item in that market place.

Wholesalers	Lentils	Rice	Sugar	Veg Oil	Wheat flour	Butane	Kerosene	Bath Soap	Toothpaste	Disinfectant	Sanitary napkins	Eggs	Onions	Tomatoes	Cucumbers	Potatoes
<b>Average</b>	55234	37038	35200	1302	20750	7554	591	1767	4075	35704	2426	3166	21000	14250	17500	16500
Maamoun	60000	36500	35500	1250	20500	7667	500	1177	2500		1500					
Mansour	60000	37571	36800	1229	21667	7000	638	1035	3100	52875		2063	24000	14667	14500	15667
Wadi Hagar	60429	39667	36750	1225	21600	7278	630	937	3125	48625		2083	23500	14500	15500	16000
Rahman	53542	33688	30607	1252	19981	7594	632	1253	3671	42033	1855	3182	22000	14000	18500	17000
Ezdehar/Nedaa	60857	37000	37300	1321	21625	7700	517	1114	2786	29444	2036	2980				
Magharbe	56667	42000	39333	1500	22333	7750	575	1000	4125	30000		3583				
Mosul al Jadeeda	59000	34974	32688	1267	19750	7556	615	1189	3486	39982	2444	3250	19500	13500	18750	18000
Islah al Ziraae	57500	37500	39556	1372	21111	7667	540	1286	4875	25000	2500	3583	20000	15000	20000	15000
Yarmuk	57063	39625	37438	1314	21214	7833	550	1383	4296	30467	2317	3442				