Research Terms of Reference

Food Security, Livelihoods, and WASH Settlement-Based Assessment

YEM2203

Yemen

December 2022

V1

REACH Informing more effective humanitarian action

1. Executive Summary

Country of intervention	Yemen					
Type of Emergency	x	Natural disaster	x	Conflict	□	Other *(specify)*
Type of Crisis	□	Sudden onset	□	Slow onset	x	Protracted
Mandating Body/ Agency	BHA					
IMPACT Project Code	13 FCF					
Overall Research Timeframe *(from research design to final outputs / M&E)*	01/06/2022 to 31/05/2023					
Research Timeframe	1. Pilot/ training: 28/02/2023			6. Preliminary presentation: 18/05/2023		
	2. Start of data collection: 15/03/2023			7. Outputs sent for validation: 20/05/2023		
	3. Data collected: 21/03/2023			8. Outputs published: 31/05/2023		
	4. Data analysed: 20/04/2023			9. Final presentation: 24/05/2023		
	5. Data sent for validation: 20/04/2023					
Number of assessments	x	Single assessment (one cycle)				
	□	Multi-assessment (more than one cycle)				
Humanitarian milestones	**Milestone**			**Deadline**		
	x	Programming partner plan/strategy		31/05/2023		

Audience Type & Dissemination	**Audience type** □ Strategic x Programmatic □ Operational	**Dissemination** **x** General Product Mailing (e.g. mail to partners, IMAWG members) **x** Cluster Mailing (WASH & FSAC), if possible **x** Presentation of findings (partners, Cluster & IMAWG meetings) **x** Website Dissemination (Relief Web & REACH Resource Centre)
Detailed dissemination plan required	□ Yes	x No
General Objective	To inform programmatic planning of localized Food Security and Livelihoods (FSL) and WASH interventions in Radfan district in Yemen by providing detailed information on demographics and displacement, critical FSL and WASH needs, the socio-economic situation of the territorial unit's populations, provision of and access to basic services, and capacity of key local stakeholders involved in service provision and infrastructural management and maintenance related to FSL and WASH.	
Specific Objective(s)	1. Understand core demographic data and displacement dynamics of the assessed territorial unit 2. Map community boundaries, areas of common livelihood activities, existing service points, and critical infrastructure for FSL and WASH across all population groups and assess their functionality 3. Understand local governance structure, as well as local and international key stakeholders in service delivery, maintenance, and assistance for FSL and WASH 4. Understand the severity of FSL, and WASH, and the linkages between these sectoral needs across population groups 5. Understand the main shocks affecting WASH and FSL needs in the territorial unit as well as coping mechanisms of the assessed population 6. Understand the territorial unit's ability to recover and improve conditions post-shocks or -stress.	
Research Questions	**1. What are the territorial unit's core demographic characteristics and key displacement dynamics?** **1.1** What are the key characteristics of populations in the assessed territorial units? **1.2** What is the current socio-economic situation of households in the assessed territorial units? What are the main livelihood opportunities for households in the territorial units? **1.3** What are the displacement and migration dynamics, if any, in the assessed territorial units?	

	2. What are the territorial unit's main community boundaries and livelihood zone boundaries, and what services and infrastructure is present? **2.1** What are the community boundaries? **2.2** What food and WASH services and critical infrastructure[1] are present in the territorial unit, what are they used for, and what is the status of functionality? Are they available and accessible for all population groups? If not, what are the barriers? **2.3** What are the common areas of livelihood activities, including shared water sources and agricultural lands used for livelihoods[2]? **3. How are service provision and infrastructural management organized in the territorial unit and who are the key stakeholders and actors in service provision?** **3.1** How is governance and service provision organized within the territorial unit? **3.2** Who are the actors mainly responsible for WASH and food supply and services in the territorial unit? **3.3** How well equipped are service providers to provide services to the population in the assessed territorial units? What would service providers need to be more efficient? **3.4** To what extent is the population satisfied with the services and infrastructures in the territorial unit? **4. What are the levels of FSL and WASH needs in the assessed territorial units?** **4.1** What are the main drivers of FSL and WASH needs in the assessed territorial units? **4.2** What are the key WASH, food, and livelihood needs of the assessed population? **5. What shocks impact FSL and WASH in the territorial unit, and how are service providers and the community coping with the shocks?** 5.1 What shocks[3] usually impact the availability and accessibility of livelihoods, food, and WASH in the territorial unit? 5.2 What are the main coping strategies employed by the assessed population to deal with limited food, WASH, and livelihood opportunities? 5.3 What capacities and possibilities do local communities and actors have to adapt and recover from shocks and stresses that impact FSL and WASH in the territorial unit?

[1] Public infrastructure may include water stations, networks, water trucking, public and private boreholes/wells, public pumps/taps, irrigation canals, reservoirs/dams, markets, roads for supply.

[2] Could be captured in the MGD through identifying agricultural lands/zones and wells, irrigation canals/systems.

[3] A shock represents an external event that the HH experienced which may have resulted in a loss or disruption of income, livelihoods, food, and/or other essential needs.

Geographic Coverage	This localized assessment will be piloted in 1 urban territorial unit, Al Habelien city, and 1 rural territorial unit, Al Jiblah, in the Radfan district in Lahj governorate, Yemen.

Secondary data sources	Various secondary data sources have been reviewed to inform the understanding of the context, develop the questionnaire design and sampling framework as well as triangulate findings. Main secondary data sources include the below: **Food Security & Livelihoods**: • FAO (2022) DIEM – Data in Emergencies Monitoring brief, round 4: Results and recommendations, August 2022 • FAO (2022) Quarterly Food Security Report: Global Events, Inflation, Erosion of Livelihoods Driving Food Insecurity in Yemen. • FEWSNET (2022) Food Security Outlook, March to September 2022 • FEWSNET (2010) Livelihoods zoning "plus" activity in Yemen • IPC (2022) Acute Food Insecurity Projection Update, October – December 2022 **WASH**: • Almas, A. A. M., Scholz, M. (2008), Agriculture and Water Resources Crisis in Yemen: Need for Sustainable Agriculture. Journal of Sustainable Agriculture • Food Security and Agriculture Cluster (2021), Food Security and Livelihoods Assessment Yemen, WASH data • REACH-Yemen Wash Cluster, WASH Needs Tracking System (WANTS), 2021-2022 • Yemen WASH Cluster (2022) Yemen – Humanitarian Dashboard (January-June 2022) • REACH Initiative, Danish Refugee Council & Yemen WASH Cluster (2021) Yemen WASH Needs Tracking System (WANTS), Radfan District, Lahj governorate, November 2021 **Displacement/Demographics:** • REACH Initiative & Yemen CCCM Cluster, Site Report data, 2023 • REACH Initiative & Yemen CCCM Cluster, Site Monitoring Tool data, 2023 **Cash & Markets:** • REACH-CMWG, Joint Market Monitoring Initiative (JMMI), 2020-2023 • FAO Market Data Dashboard, 2022 • Thomas, E. (2022) Food security in Yemen: the private sector and imported food. **Intersectoral:** • Al-Ammar, Dr. F.,Patchet, J.m Shamsan, Shams (2019) A Gendered Crisis: Understanding the Experiences of Yemen's War, Sana'a Center for strategic studies • CARE (2022) Multi-sectoral Need Assessment, Lahj governorate – Yemen, July 2022

	• MCLA TWG (2022) Yemen Multi-Cluster Location Assessment (MCLA) • REACH MSNA Question Bank, 2022 More detailed information can be found under Point 2.3 Secondary Data Review in the Methodology section.

Population(s)	□	IDPs in camps		x		IDPs in informal sites
	x	IDPs in host communities		□		IDPs [Other, Specify]
	x	Migrants in host communities		□		Refugees in informal sites
	x	Refugees in host communities		□		Refugees [Other, Specify]
	x	Host communities		□		[Other, Specify]
Stratification	x	**Geographical: 1 urban and 1 rural territorial unit** Population size per strata is known? x Yes □ No - Urban territorial unit: Al Habelien: Total residents 4,995 HH (split in A and B) - Rural territorial unit: Al Jiblah: Total residents 752 HH across 17 villages	□	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	Probability / Stratified / x simple random			x Household interview: Al Habelien (Urban)(Target #): 199 X Household Interview: Al Jiblah (Rural) (Target #): 164		

collection tool # 1 Household level survey		
Structured data collection tool (s) # 2 Mapping Group Discussion	x Purposive	x Mapping Group Discussion (Target #): **Al Habelien (Urban):** 1 MGDs **Al Jiblah (Rural):** 2 MGDs, divided North-South
Structured data collection tool (s) # 3 Key Informant Interview	x Purposive	x Key informant interview (Target #): **Al Habelien (Urban):** 1-2 KIs per relevant sector **Al Jiblah (Rural):** 1 KI per relevant sector per territorial unit Interview topics covering: WASH, displacement and demographics, livelihoods, markets, agriculture, and livestock

The target level of precision of probability sampling	- Urban territorial unit: Confidence Level 95%, Margin of Error 7% - Rural territorial units: Confidence level 95%, Margin of Error 7%

Data management platform(s)	x	IMPACT	x	ReliefWeb		
	x	HDX				
Expected ouput type(s)	□	Situation overview #:	x	Report #: 1	x	Area Profile: 1 area profile per territorial unit
	□	Presentation (Preliminary findings) #:	x	Presentation (Final) #: 1	□	Factsheet:
	□	Interactive dashboard #:_	□	Webmap #: _ _	x	Map #: One per territorial unit, one district map
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	**REACH**
	Donor: USAID
	Partners: CARE, FMF Yemen
	Coordination Framework: *None*

2. Rationale

2.2 Background

In 2022, Yemen entered its eighth year of conflict; a continued deteriorating situation characterized by civilian casualties, hunger, lack of water, mass displacement, and one of the world's worst humanitarian crises. Food insecurity has been in the public's eye for many years, with humanitarian actors stating a famine-near situation.[4] [5] With continued conflict and political disruptions, the Yemeni people face increased levels of poverty, driven by the devaluation of the Yemeni Rial (YER) as well as large-scale and recurring displacement.[6] According to the Integrated Food Security Phase Classification (IPC), an approximated 17 of 30.4 million people need food assistance, as of October 2022. [7] The Yemen WASH Cluster (YWC) estimates that 17 million people need assistance from humanitarian actors to meet basic WASH needs. In general, these numbers have increased since last year, while funding for the Yemen crisis has decreased.[8] [9] [10]

The humanitarian crisis has been compounded by war tactics on both sides. Civilians and civilian infrastructure, and aid for food and water have repeatedly been targeted, which has seen a surge in food insecurity and WASH needs.[11] [12] Blockades on ports and airspace have resulted in food availability issues due to Yemen's high reliance on imported goods and food.[13] Outbreaks of cholera and acute watery diarrhea (AWD) has been prevalent during the years of war, which has exacerbated malnutrition and food insecurity rates nationwide.[14] Climatic shocks aggravate the needs in Yemen with floods and droughts having a big impact on the most at-risk populations.[15] Yemen is one of the world's most water-scarce countries with a naturally dry climate and depletion of vital water sources due to unsustainable farming techniques.[16] Periods of drought have been more frequent in Yemen in the last couple of years and floods are a recurring seasonal problem for the Yemeni population.

Radfan district, the location of this assessment, is located in Lahj governorate in Yemen's Internationally Recognized Government (IRG) territory. Lahj is well-known for its fertile farmland and crop diversity, with around 50 percent of the population engaging in agricultural activities, including livestock rearing. In general, prices in Lahj are dependent on factors impacting internal trading, such as local currency depreciation, costs of transport, aid distribution, and local production.[17] According to scoping interview, the currency depreciation has hit Radfan district particularly hard.[18] The price of the Food Minimum Expenditure Basket (MEB) has increased by 148 percent and the price of petrol by over 300 percent since January 2021,[19] which is leaving the population vulnerable. Furthermore, REACH together with the CCCM cluster collected data on IDP sites in Radfan in October 2022. Four IDP sites are present in the district, with an estimated 16,238 people residing in these sites[20]. In addition, REACH collected WANTS data in Radfan district in August and November. For the November 2021 round KIs reported water was too expensive and that people in the community, in general, did not treat water

[4] FAO, UNICEF, WFP (2017) Yemen needs urgent assistance to prevent famine
[5] UN NEWS (2022) Yemen facing 'outright catastrophe' over rising hunger, warn UN humanitarians
[6] OCHA, Yemen Humanitarian Needs Overview (2022)
[7] IPC (2022) Yemen: IPC Acute Food Insecurity Snapshot | October - December 2022
[8] OCHA, Yemen Humanitarian Needs Overview (2022)
[9] World Food Program, Situation reports, all available reports between 2020-2022
[10] OCHA, Yemen Humanitarian Needs Overview (2022)
[11] Mwatana for Human Rights & Global Rights Compliance (2021), Starvation Makers: The use of starvation by warring parties in Yemen
[12] Douglas, C. (2016) A storm without rain: Yemen, Water, Climate Change, and Conflict. The center for Climate and Security
[13] Thomas, E. (2022), Food security in Yemen: the private sector and imported food.
[14] Yemen WASH Cluster (2022)
[15] FAO. (2022). Quarterly Food Security Report: Global Events, Inflation, Erosion of Livelihoods Driving Food Insecurity in Yemen.
[16] Suter, M. (2018) An update on Yemen's water crisis and the weaponization of water, Atlantic Council.
[17] FEWSNET (2022) Food Security Outlook, March to September 2022
[18] Scoping interview, NNGO, Yemen, 2022-12-05
[19] REACH-CMWG, Joint Market Monitoring Initiative (JMMI), 2022
[20] CCCM Cluster IDP Hosting Site Master List, October 2022

before drinking, with 2/3 KIs reporting issues related to taste, appearance, and smell of water as water-related issues.[21] Moreover, in the latest IPC projection for October – December 2022 Radfan is classified as Crisis (IPC 3), and FEWSNET has the Crisis classification on the whole of Lahj for the period between October 2022 – January 2023, with the possibility of Lahj being one phase worse off without humanitarian aid.[22]

Despite the above-mentioned data collection efforts, there is still a general lack of information and data focusing on the local FSL and WASH needs in Yemen. Many reports and datasets show needs either on the national, governorate, or district level, but not beyond and not from a holistic perspective. Beyond needs, there is also a limited understanding of how services and infrastructure function, who is responsible for the provision and maintenance, and what kinds of skills or capacities service providers in Yemen have related to FSL and WASH services and infrastructure.

2.2 Intended Impact

This assessment will aim to fill the gap of limited, localized information by holistically assessing FSL and WASH needs, access and availability of services, the status of local infrastructure as well as capacities of local actors' active in and infrastructural management and service provision connected to FSL and WASH. This will aim to contribute to an improved understanding of the local dynamics in relation to FSL and WASH, and how local needs and capacities could be understood in the wider Yemeni context. As such, this assessment aims to improve the understanding of the current situation in Radfan district to inform the programmatic planning and strategy of local and international actors.

3. Methodology

3.1 Methodology Overview

This SBA will use a **mixed-method approach**, employing both qualitative and quantitative tools. This assessment will be conducted in both 1 **urban** and 1 **rural** locations in Radfan district to allow for a better understanding of local needs and capacities involving these characteristics.

Overall, this assessment will consist of **three different tools implemented in both urban and rural territorial units**, as described below:

a. **Structured Mapping Group Discussions (MGD)**: The MGD activity will aim to locate and map vital, local FSL and WASH infrastructure (incl. water sources, important supply roads, markets) as well as common livelihood/agricultural zones. There will be one MGD conducted in Al Habelien and two in Al Jiblah divided by North and South. MGD participants will describe what the infrastructure is used for, by whom, and functionality-related questions to each infrastructure.

b. **Household (HH) level surveys:** HH surveys will be conducted to understand households' FSL and WASH needs, their coping strategies as well as barriers in accessing food, livelihoods, and water. HH surveys will employ sectoral standard indicators across all relevant sectors. Demographic and displacement data, on residence status and area of origin (inside and outside of Yemen) will also be collected.

c. **Structured Key Informant Interviews (KII) with FSL & WASH experts**: KIIs will be conducted with sectoral experts relating to local demographics and displacement, water sources for

[21] REACH (2022) WANTS, November 2021

[22] IPC (2022) Acute Food Insecurity Projection Update, October – December 2022

domestic use and consumption, agriculture and livestock/animal farming as well as general livelihoods and markets. Covering each territorial unit, the experts will be asked to answer questions related to their expertise. Only sectoral KIIs relevant to each territorial unit will be conducted. While HH surveys focus on the demand side of services, KIIs will aim to understand the supply side by focusing on the capacity of local service providers, barriers to service provision, and recent shocks impacting service provision. KIIs will provide a more nuanced understanding of overall functionalities and dynamics in the territorial unit in relation to water, food, and livelihood insecurities and needs.

Participants for the MGD, HH surveys and KIIs will be identified jointly between REACH Yemen and CARE International, utilizing local networks and contacts made with local partners in Radfan district.

3.2 Key Definitions

Territorial unit: A territorial unit is a geographical area that is based on community and shared identity, services, or economy, it can also be based on natural boundaries. The territorial unit can be, do not have to be, aligned with administrative boundaries. It is selected to be the most impactful scale for localized humanitarian or humanitarian development interventions and the findings of an assessment using a territorial unit need to be representative on this level. A territorial unit can be both an urban and rural setting, depending on the context of the assessment.

Settlement: The place where people live as a socially defined and spatially bound unit, which reflects the interaction of dynamic social, cultural, economic, political, and environmental features in space and time.[23]

Community: a group of people with common characteristics, share identity (cultural/social), and/or share resources (natural, economic) that unite in a larger society.

Internally Displaced Persons (IDPs): persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.[24]

Host-community: Urban refugees, migrants, refugees or IDPs live within and together with host communities, with or without legal status and recognition by the host community. In the context of IDP sites, the host community may encompass the site, or may simply neighbor the site but have interaction with, or otherwise be impacted by, the IDPs residing in the IDP site camp.[25] For this assessment, host-community refers to the population in a territorial unit that hosts IDPs, refugees, or migrants in a locality, i.e. the population present in a territorial unit before, during, and after IDPs have arrived in a territorial unit.

Returnee: HHs who had previously been displaced from their community of origin (the assessed location) for more than one month, regardless of the length of time since their return. Non-displaced residents may include those who were displaced for short periods (less than 1 month) and are not considered returnees under the above definition.

Agricultural zone: a zone in which agriculture is practiced – relating to livestock grazing, growing of food and cash crops, fruits, etc.

[23] The Settlements Approach Guidance Note, Urban Settlement Working Group of the Global Shelter Cluster, 2020 https://www.sheltercluster.org/sites/default/files/docs/guidance-settlements-hd.pdf

[24] OHCHR, Training manual on Human rights monitoring, Chapter XI: Monitoring and Protecting the Human Rights of Returnees and Internally Displaced Persons. https://www.ohchr.org/sites/default/files/training7part1112en.pdf

[25] UNHCR (2011) UNHCR-NGO Toolkit for Practical Cooperation on Resettlement. Community Outreach - Outreach to Host Communities: Definitions and FAQs

WASH definitions

Water Governance and Management: Water governance refers to the political, social, economic, and administrative systems in place that can influence water use and management. It determines the equity and efficiency in water resource and services allocation and distribution and balanced water use between socio-economic activities and ecosystems.

Water services and infrastructure: Water services and infrastructure relates to available services to make water accessible for the territorial unit population. This includes services for water supply such as water stations and water trucking initiatives, water treatment services, and water resource management. The term also includes water-based transportation systems such as canals, pipelines, etc. for irrigation.

Sanitation infrastructure: for this assessment, sanitation infrastructure is related to public latrines used by the community for defecation purposes.

Water Network: Water networks are a system of pipes and trenches providing the appropriate quality and quantity of water to a community.

Water point: The water point in this assessment refers to all waters of the state where people access water for agricultural, recreational, commercial, public, domestic, and consumption purposes. These could be surface water, in natural or artificial channels, lakes, reservoirs, rivers, public and private wells, public and private taps, public and private handpumps, and public boreholes.

Food security and livelihoods definitions

Agriculture: Agriculture is the activity of humankind to produce food, fiber, fuel, etc. by the optimum use of terrestrial resources, such as land and water. Livestock rearing (including fisheries) may also be included in this definition. According to the FAO constitution, the term «agriculture» and its derivatives include fisheries, marine products, forestry, and primary forestry products.[26]

Coping strategy index (CSI): A tool to measure behavior change: the things that people do to compensate for not having access to enough food. There are several fairly regular behavioral responses to food insecurity - or coping strategies - that people use to manage household food shortages.[27]

Food security: A situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Based on this definition, four food security dimensions can be identified: food availability, economic and physical access to food, food utilization, and stability over time.[28]

Food access: Access by individuals to adequate resources (entitlements) for producing or acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic, and social arrangements of the community in which they live (including traditional rights such as access to common resources).[29]

Food availability: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).[30]

Livelihoods: A combination of the resources used and the activities undertaken to live. The resources might consist of individual skills and abilities (human capital), land, savings, equipment (natural, financial, and physical capital, respectively), and formal support groups or informal networks that assist in the activities being undertaken (social capital).[31]

[26] Global Food Security Cluster (2017) Food Security Terminology, p. 6
[27] Ibid. p.8
[28] Ibid. p.12
[29] Ibid.p.11
[30] Ibid.
[31] Ibid. p.12

MGD definitions

This assessment will capture general information on important FSL and WASH infrastructure and services in the territorial units. This general understanding will be gathered through the MGD sessions in each territorial unit when identifying the water sources and markets. A series of questions will be asked, individual to the sector.

For **water points**, the following information will be gathered:

1. **Purpose of water point:**
- Drinking
- Domestic (cooking, cleaning, washing)
- Agriculture (irrigation for crops, watering livestock/animals)
2. **Availability:**

- Not available – The infrastructure is not available and does not operate or provide any service, no supply or meet any needs for the population. **For a water source relying on mechanics, such as pumps or taps**: This could relate to mechanical issues with the water source, making pumping water or using the source impossible and the water unavailable. Could also relate to water sources having dried up. **For open source (river, pond, dam**): the water source has dried up and cannot be used anymore.
- Partially available – The infrastructure is partially available, but is not fully available. There are issues regarding the availability and how people can use the infrastructure. **For a water source relying on mechanics (pump, tap, borehole, etc.)**: This could relate to mechanical issues with the water source, making pumping water or using the source harder and the water less available than it would be with a fully functional pump/tap. Could also relate to the water source having dried up previously but is now available again. For an open source (river, pond, dam): the water source had previously dried up but can be used again. The issues of availability could be fixed and the infrastructure could be made fully available with governance, management/maintenance, and/or service.
- Available - The infrastructure is fully available to use.

3. **Water safety:** is the water from the water point safe to drink?
- Yes
- Yes – after treatment
- No – why?

For **sanitation**, the following information will be gathered through the MGD:

1. **Usage**: what proportion of the population uses the infrastructure?
- No one
- 1-25%
- 26-50%
- 51-75%
- 76-100%
2. **Proximity to a water source**: Is the public latrine close to water sources used for consumption/drinking purposes?
- Yes, risk of pollution
- Yes, but no risk of pollution
- No
- Don't know
3. **Availability**: Is the public latrine available to use for the territorial unit population?

- Not available – The infrastructure is not available and does not operate or provide any service, not available to use for defecation purposes for anyone in the population. For a public latrine this could

mean: not possible to flush, the infrastructure is broken, and do not fill any purpose. No water is available at the station and there has been no maintenance to keep it available for usage. For a place of open defecation, this could mean: not possible to go, and not available to use for any purpose of sanitation.

- Partially available – The infrastructure is partially available, but is not fully available. There are issues regarding the availability and how people can use the infrastructure. For a public latrine: it can flush sometimes and it can be used sometimes but it depending on maintenance and service. For a place of open defecation it could mean: can be used sometime during the year for some purposes of sanitation.
- Fully available - The infrastructure is fully available to use.

For **markets,** the following information and criteria will be collected through the MGD:

1. **Infrastructural damages:**
   - Yes, there are infrastructural damages – *if yes*, what kind of damages?
   - No, there are no infrastructural damages
   - Don't know
2. **Market usage – what goods can be accessed through the market?**
   - Vegetables
   - Meat/dairy/poultry
   - Qat
   - Live animals
   - Non-fresh produce: wheat flour, lentils, rice, etc.
   - Fuel
   - Soap
   - Drinkable water: bottled and/or treated water. (excluding water trucking)
3. **Market availability – opening times**

- Every day
- 4-6 days a week
- 1-3 days a week

For the **Roads** part of the MGD, information will be collected on the main roads leading in and out of the territorial unit. To get a better understanding of the roads in the territorial unit, where efforts could be made to connect the district and who can access important district-wide infrastructure, the participants will be asked to identify the main roads of the territorial unit/district and how accessible they are to the population. With high prices of fuel, it is already expensive to travel by car in Yemen, understanding the road accessibility will assist in getting a better understanding of challenges and drivers of needs in Yemen. The accessibility of roads refers to how accessible it is for vehicles on four wheels.

Road importance and usage

- **Water supply** (water truckers, other water supply vehicles to/from/inside the territorial unit
- **Food supply** (food trucks, tractors, or other vehicles used for food transport to/from/inside the territorial unit
- **Human transport** (buses or other communal means of transport to/from the area, transport between territorial units/settlements

To understand what kind of vehicles can access the road and the accessibility of the road for the population the MGD participants will be asked to define the mapped-out main roads according to the following criteria:

- **Inaccessible:** The road is not accessible for vehicles, not cars, buses, trucks, tractors, or other types of vehicles on four wheels. – *if inaccessible*, why?
- **Partially accessible:** The road is partially accessible and might for example be used but does not meet the preferred level of accessibility. Cars can carefully access the road but larger vehicles such as trucks, buses, or tractors cannot. – *if partially accessible*, why?

- **Fully accessible:** The road is accessible to all types of vehicles.

For the **agricultural** part of the MGD, the participants will be asked to identify the main areas of agriculture in or around the territorial unit. This exercise will be to better understand the main livelihood activities related to agricultural activities such as growing crops and livestock herding or farming. What is mapped can relate to both

- **Livestock herding/grazing**: an area where livestock owners take their livestock/animals for grazing.
- **Fruit**: areas where the fruit is grown, such as bananas, apples, citrus, grapes, watermelon, or other types of fruit.
- **Grain/pulses**: area where nuts, chickpeas, lentils, beans, wheat, and barley are grown, as examples.
- **Vegetables**: area where potato, white sweet potato, beets, tomato, corn, okra, or other vegetables are grown.
- **Qat**: area where qat is grown.
- **Coffee**: area where coffee is grown.
- **Other**: this could relate to spices, cotton, or other Yemen-relevant crops for income or domestic use.

3.3 POPULATION OF INTEREST

Geographical territorial unit assessed: For the pilot phase of the assessment, primary data collection will be conducted in the district of Radfan, in Lahj governorate. One urban territorial unit in the district, the district capital, Al Habelien will be assessed, and compared with 1 rural territorial units in the district with pre-stated high FSL and WASH needs or with information gaps on needs and infrastructure. The main criteria for the selection of the territorial units were access and information needs in Radfan district for the data collection partners and all villages and neighbourhoods across the territorial units will be covered and sampled.
Through the Secondary Desk Review prior to the assessment, it has been identified that for the pilot it would be preferable to conduct in areas controlled by the Internationally Recognized Government (IRG) due to a generally shorter access and approval process compared to areas under the control of the Sana'a Based Authority (SBA). Once the areas were identified together with CARE, another SDR limited to the district was carried out as well as scoping interviews with local partners to better understand basic territorial unit characteristics relating to the objectives of this assessment. Conducting interviews with local partners creates a good basis for understanding ahead of the pilot assessment and also for enumerators to be able to collect the data independently in an area of interest for FSL and WASH actors in Yemen.

Population assessed: The population of interest will be the whole population within the territorial unit, including the following population groups 1) Host communities, 2) IDPs 3) Refugees 4) Migrants 5) Returnees.

This SBA includes a focus on the service provision related to FSL and WASH in the territorial unit, and to actors with responsibilities relating to important infrastructure, thus, related stakeholders will be mapped out. They should include at least the following:

- 1 Community leaders/members knowledgeable of demographics and community boundaries
- 1 IDP representative knowledge of the location of IDP sites/IDP communities and their characteristics (only for areas with IDP population): Community leader/community committee member from IDP sites, Muhammasheen leader/representative
- 1 Agriculture/Livestock representative knowledge of agricultural/livestock zones and characteristics: Agricultural practitioners, Co-op leader/member (crops and/or livestock)
- 1 Market representative knowledgeable of market location and characteristics: Market vendors or traders

- 1 WASH representative knowledgeable of location and functionality of water sources: Water/WASH committee members, Water suppliers, Water treatment/trucking business representative

3.4 Desk review

As part of this assessment, a variety of secondary sources have been reviewed to understand national, governorate, and district needs and drivers of such needs, including topics such as Yemen's import reliance, agriculture, food security, WASH needs, and vulnerability, livelihoods, effects of war on needs.

3.4.1 Secondary Desk Review

Below follows some of the national- to governorate-wide SDR sources that have important in the research design for this assessment, the list is not exhaustive:

Source	Relevance	Usage
Al-Ammar, Dr. F.,Patchet, J.m Shamsan, Shams (2019) A Gendered Crisis: Understanding the Experiences of Yemen's War, Sana'a Center for strategic studies	Information on how gendered dimensions impact groups differently in the Yemen crisis.	Tool design and contextual understanding
Almas, A. A. M., Scholz, M. (2008), Agriculture and Water Resources Crisis in Yemen: Need for Sustainable Agriculture. Journal of Sustainable Agriculture	Contributes to understanding the connection between agriculture and water resources in Yemen.	Inform research design and aid contextual understanding.
FAO Market Data Dashboard	Governorate-level data on prices of important commodities for WASH and FSL.	Inform research design and aid contextual understanding.
FAO (2022) Quarterly Food Security Report: Global Events, Inflation, Erosion of Livelihoods Driving Food Insecurity in Yemen.	Understanding of how intersectoral shocks impact livelihoods and drive food insecurity in Yemen in 2022.	Aid contextual understanding.
FEWSNET (2022) Food Security Outlook, March to September 2022	General information on Yemen's food security situation, with a special focus on Lahj governorate, highlighting what the main needs were projected to be during the fall of 2022.	Tool design and contextual understanding of the governorate.
FEWSNET (2010) Livelihoods zoning "plus" activity in Yemen	Information on livelihood zones, including main livelihood activities and	Tool design for livelihoods and agriculture, to be complemented with scoping interviews.

	common crops is grown.	
OCHA Population Estimates 2023	Population numbers in the district.	Tool design
IPC (2022) Acute Food Insecurity Projection Update, October – December 2022	The updated projection for food security in Radfan for October – December.	General contextual understanding of food insecurity in Radfan.
MCLA TWG (2022) Yemen Multi-Cluster Location Assessment (MCLA)	Multi-sectoral needs analysis of Yemen, covering most parts of the country.	Aid understanding of the context and aid understanding of key definitions
Thomas, E. (2022) Food security in Yemen: the private sector and imported food.	Information on the Yemen supply system and the role of private sectoral actors in the food supply. Insight into how Yemen has become a highly import-dependent country.	Contextual understanding.

Once the district of Radfan decided upon consultations with CARE, a brief SDR was conducted on the district with two scoping interviews with local partners to get a better understanding of local dynamics.

Sources identified with information on the district include:

- REACH Initiative & Medair WANTS: Radfan District, August 2021
- REACH Initiative & Danish Refugee Council, WANTS: Radfan District, November 2021
- REACH Yemen and CMWG, Joint Market Monitoring Initiative, January 2020 – March 2023
- REACH Yemen and Yemen CCCM Cluster, Site Report Data, October 2022
- REACH Initiative & Yemen CCCM Cluster, Site Monitoring Tool data, 2023
- IOM (2022) DTM: Area Assessment data

3.4.2 Preliminary Scoping Review

This review has also included scoping interviews with actors based in Yemen for contextualized understanding from the perspective of their respective programming. A total of seven interviews have been carried out with

International Non-governmental Organizations (INGO) and National Non-governmental Organizations (NNGO), both on a national level and on a district level. Due to the limited availability of sources on the local level, the majority of sources used for the SDR have been on the national, governorate, and district levels. While the majority of the scoping interviews have also been conducted on the national level; two scoping interviews have been also conducted specifically for Radfan district with one NNGO and one IINGO with strong connections and long-going engagement in Radfan. The scoping interviews have served as a way of informing research objectives and tool design and have provided valuable local perspectives on the sectors part of this assessment.

3.5 Primary Data Collection

3.5.1 Method

Data collection for this assessment will be conducted in Radfan district, Lahj governorate, Yemen from January 2023 to February 2023. Radfan district was selected as the area of assessment in consultation with the partner, CARE. Radfan is one of the districts where CARE is operational and where they need more up-to-date information on the sectors of this assessment for current and future programming. Furthermore, Lahj governorate and Radfan district are in high need according to the IPC and FEWSNET assessments.

Three data collection methods will be utilized, including MGDs, HH surveys, and KIIs (see below description). CARE will be responsible for data collection activities, with support from the local NGO Field Medical Foundation (FMF). REACH, CARE and FMF will purposively sample urban and rural territorial units based on population and household information contributed by FMF. The rural area has been identified by partners as a priority area for FSL and WASH needs in Radfan district. All population groups in selected territorial units in Radfan will be included in the assessment, covering and capturing differences in needs across demographic groups.

3.5.2 Sampling

Mapping Group Discussions (MGD)

For the MGDs, REACH and CARE will utilize a structured questioning route and reference maps, produced by REACH for a territorial unit mapping exercise with community members. The participants of the MGDs will be identified using the local knowledge, connections, and network of local data collection partners in the district. There will be one MGD for urban territorial units and two MGDs (north/south Al Jiblah) for rural territorial units with a total of 4-8 participants. The themes that will be covered through the sessions are city, village, and community boundaries, population residing in territorial units, status of roads, agriculture, water points, and sanitation, markets, and climate; floods and droughts.

HH survey

The survey will use a stratified random sampling approach with a 95% confidence interval and a 7% margin of error for each territorial unit. For rural territorial units (i.e. clusters of villages), the total sample size per stratum will be distributed within each village based on the approximate population size. An additional buffer of 5% will be included in the target sample size to account for non-response rates and potential deletion of entries during data cleaning. For the urban territorial unit of Al Habelien, the sample size will be 199 HHs, and for the rural territorial unit of Al Jiblah, the number sample size will be 164 HHs.

To select the respondents for the HH survey, systematic sampling with random selection on-site will be applied. Before heading to the field, CARE and FMF will be provided with GPS points of houses within the settlement

where the interviews are to be carried out. CARE and FMF are responsible to provide enumerators with information on what households to interview. The GPS locations have been randomly selected by REACH Yemen, using GIS and satellite imagery of the settlements to be assessed. The GPS points selected represent the number of interviews that need to be carried out in the territorial unit and to make the findings representative of the territorial unit. REACH will compare the 'sampled' GPS points with the 'actual' GPS points (where the HH interview was conducted in the end) to see whether the 'actual' GPS points are generally falling within the right sample frame and whether the interviews are admissible. If an enumerator collected information in the wrong location (due to an inadmissible reason), this interview will have to be retaken.

KI interviews

There will be one-two KIIs carried out per sector in urban territorial units, while at least 1 KII will be carried out in rural territorial units, with one expert per theme (if relevant): agriculture, markets, displacement, livestock, and WASH. Ideally, the KIIs would have different backgrounds and understanding of the territorial unit, with both the host community and IDP KII, as well as KIIs with a different gender to enhance the understanding of the territorial unit. Through this expert KII approach the aim is to capture the areas for improvement within the service provision and infrastructural maintenance and management of the territorial unit, as well as to try to understand what factors in the territorial unit might increase or decrease needs and insecurities.

3.5.3 Tools

Mapping Group Discussion:

The exercise aims to map out settlement/village/community boundaries, livelihood zones, and important FSL and WASH services and infrastructures. In preparation for the MGD sessions, the REACH GIS team will produce maps that include points of the territorial unit for familiarization of the MGD participants. These points or characteristics include landmarks such as mosques, schools, health centers, and roads, as well as geographical characteristics like rivers, lakes, and, mountain areas that are visible through satellite imagery to help the MGD participants situate themselves on the map. The maps will be on different scales and levels.

There will be one session conducted in Al Habelien, covering the whole urban territorial unit, and two sessions covering Al Jiblah to ensure good coverage and get participants to answer questions on villages close to their village of residence. The Al Jiblah sessions will be divided into North and South.

The sessions will cover the same sectors, all related to FSL and WASH but the urban and rural sessions will differ slightly in the mapping of the city, villages, and neighbourhoods, as well as how precise the participants will be asked to be in regards to the locations of infrastructures or services. In Al Habelien, the participants will be asked to provide *the approximate locations* of water points, sanitation facilities, and markets within the territorial unit. This will be possible due to the detail of the Al Habelien map used in the exercise. For the rural territorial unit of Al Jiblah, the participants will have the villages in Al Jiblah marked out on the map, and participants will be asked to answer *what infrastructures or services are present in each village*. Both sessions will cover the presence of relevant infrastructure or services in the territorial unit with differences in the detail of the location of each infrastructure or service on the map.

The MGD sessions will use three maps to cover all sections of the exercise:

Map 1 will cover:

- Map familiarization to help participants read the map.
- Territorial unit delineation, identifying the boundaries of the city, villages, and communities.
- Main roads in and out of the territorial unit and what the road is used for.

Map 2 will cover:

- Agricultural zones in the area and what types of agricultural activities are practiced within the zone.
- Water points – covering the type of water points that are present in the area, who is responsible for the maintenance or management of the water point, what households use the water point for (drinking, domestic, agriculture), how available the water point is to the population, and whether the water is safe to drink or not.
- Sanitation facilities – covering the type of latrine (public latrine or place for open defecation), what percentage of the population uses the latrine, who is responsible for the sanitation facility, whether it is close to a water point and it risks polluting the water, and how available it is to the population.
- Markets – covering the type of market that is present in the area, the percentage of male/female traders/retailers/shop owners in the market, if there are any damages to the market, what products can be purchased at the market, and market availability and how often the market is open.

Map 3 will cover:

- Climatic shocks – identifying whether the territorial unit has been impacted by droughts or floods, and if so where in the territorial unit this has had an impact.

Map 4 will be a reserve map for the enumerators to use as they see fit or if something happens to any of the other maps.

These MGD sessions will contribute to a baseline understanding of the territorial unit services and infrastructure. Questions around availability and access to food, water, sanitation facilities, and livelihood opportunities will be discussed along with the challenges the population face with infrastructure in the territorial unit. Participants' perceptions of ownership and responsibility for maintenance or management will be important aspects of this activity as well as perceived challenges in agriculture and to the lands for cultivation. For each of the sectors that will be covered, the enumerators can note down any disagreements or if consensus cannot be met on any topic.

One MGD will be carried out in the settlement/community/neighborhood with key informants potentially including service providers, municipal council members, and community representatives. The participants will be purposively sampled and identified using the network of CARE/FMF to identify relevant participants.

The Interviewer will use the questioning route as prepared by the REACH Yemen team, with one or two note-taker(s) using the matrix sheets prepared for each phase of the MGD session. Having two note-takers will enable more detail in the note-taking, with one note-taker focusing on the more quantitative side of the exercise, and one on the qualitative. After each session, the enumerator and note-takers will be asked to complete the debrief form for the purpose of refining the questioning route and tool. The debrief form will focus on whether the participants understood the questions, flagging any missed points and general group dynamics within the gender-separated sessions.

All data will be collected using the maps provided by REACH and Matrix sheets that have been designed for this exercise. The enumerators will be asked to transfer any potential notes from paper forms to an Excel file as the sessions have been concluded.

Key Informant Interview:

The KIIs will be structured interviews carried out with people with expert knowledge and understanding of the territorial unit's different dynamics and infrastructures. The KIIs will be conducted per territorial unit: 1) at least one KII per relevant sector (WASH, markets, livelihoods, displacement/demographics, livestock, agriculture) in rural locations and 2) at least 2 KII per relevant sector in urban locations selected for the assessment. The KII will aim to deepen the understanding of service provision dynamics in the territorial unit and how these might have

an impact on the needs of the population and the functionality of the services. The KIIs will include gendered aspects of availability and accessibility to services for water and food in the territorial unit.

Each of the KIIs will have a separate focus relevant to the specific topic with the overall aim to understand the presence of FSL and WASH infrastructure and services, who the main actors in provision and management are as well as their capacities to meet the demand as and how they manage to cope with shocks impacting the territorial unit. This activity will complement both the MGD sessions, where the functionality of infrastructure/services will be central, as well as the needs assessment of the household survey which will focus on household needs.

The data will be collected using Kobo, and enumerators will be trained prior to data collection in the use of the tool.

Household survey:

The household survey will cover the needs part of the assessment, focusing on food security, markets, livelihoods, WASH, and AAP. Within the scope of the assessment, standard sectoral and REACH indicators will be used. Through this survey, the aim is to understand the needs related to FSL and WASH of the assessed district, the general socioeconomic status and dynamics through common types of livelihoods and income, and the access to, availability to, and satisfaction with services and infrastructure vital to FSL and WASH in the territorial unit.

Data will be collected using the Kobo platform, and the enumerators will be trained prior to data collection in the use of the KoBo platform, as well as interview techniques. REACH will provide CARE and FMF with GPS coordinates of the territorial units and the sample size for each territorial unit. CARE and FMF will be responsible to provide enumerators with interview locations in the territorial unit.

3.5.4 Briefing/debriefing of Enumerators/Training

Due to REACH's lack of access to Yemen, the training on the tools will be held online from Amman. The REACH Yemen team will conduct a Training of Trainers in English with CARE (and FMF) staff members for the HH survey. CARE will be responsible for the training of enumerators in Yemen and Arabic as they will also be responsible for the collaboration in data collection. The training of the MGD and KII will be held in English by REACH staff to the enumerators that will carry out these data collection activities. The sessions will be recorded for CARE and FMF staff to later be able to refresh the sessions if needed.

REACH Yemen will hold three different pieces of training with CARE staff members on the tools, one for each tool.

- For the **KII** and **HH** survey REACH will train CARE on the use of the KOBO, interviewing techniques, and issues of protection of vulnerable populations.
- For the **MGD**, REACH Yemen will train CARE staff members in the questioning route, the matrix to be filled per sector, interviewing techniques, and how to keep good order in the MGD sessions.
- The tools will be tested before the data collection will begin to make sure the KOBO forms and matrixes are working correctly, that the indicators can capture the desired information, and incorporate any final adjustments necessary.

Enumerators will be asked to adhere to strict health and hygiene protocols to reduce the likelihood of disease transmission such as COVID-19, between staff members traveling to the field and to survey respondents. This information from REACH will be shared with CARE staff members during training.

In line with IMPACT Data Cleaning Guidelines, submitted data will be checked regularly for inconsistencies and outliers by an Assessment Officer using R to ensure data quality and to send follow-ups to enumerators where

needed. CARE will support the data cleaning process, by ensuring their field staff can support with answering questions around data quality. The dataset will then be cleaned using an R script which will also log deleted entries and value changes. Once all data is cleaned, the raw and cleaned dataset and the change log will be stored according to the Data Management Plan.

Table 1: Description of tools and sampling used for data collection

Label	Method	Objective	Structure	# of surveys	Population of interest	Sampling
Mapping Group Discussion	Mapping Group Discussion	Identify key infrastructure relating to WASH and FSL. Aim to understand the functionality of and potential damage to vital infrastructure.	Semi-structured/structured: participatory mapping and GD tool	- 4 in **urban** territorial units (1 female, 1 male MFGP per sector; a total of 2 sectors) - 2 in **rural** territorial units (1 male, 1 female)	Community members with good local knowledge of FSL & WASH infrastructure. Preferably from different livelihood backgrounds and population groups, as well as both men and women.	Purposive
Key Informant Interview	Structured interview	Deepening the understanding gathered from the MGDs/HHs on territorial unit needs, challenges, and possibilities. Focus on food, WASH, and livelihoods.	Semi-structured/structured	- At least 2 KIIs per theme in urban territorial units - At least 1 KII per theme in rural territorial units	Key informants: community leaders, service providers, local authorities, local experts	Purposive
Household survey	Structured interview	Contextualize and understand household needs relating to FSL and WASH.	Structured	Al Habelien – 199 interviews Al Jiblah – 164 interviews. Representative on the territorial unit level.	Households	Stratified simple random sampling

3.6 Data Processing & Analysis

3.6.1 Data entry and cleaning process

Mapping Group Discussions

All the data from the maps used in this exercise will be digitized into a database. CARE enumerators will photograph the maps produced during the respective sessions and send the photos to the REACH Yemen team, for the GIS officer to upload the data into GIS software. In the case of REACH, the GIS officer is not satisfied with the quality of the photos, CARE enumerators are expected to save the maps until confirmed by REACH. The GIS officer will compile the results from all MGDs, looking for overlapping boundaries. In the case of good saturation of data, the GIS officer will proceed with mapping out the territorial unit in GIS software. In the case of no data saturation, internal discussions with CARE staff will be held to further triangulate available data.

Once the MGD session is concluded, the enumerators from CARE are responsible to make sure that the data collected through the matrix sheets are not missing any inputs from the participants. With most information collected both through maps and the sectoral matrix sheets, the CARE enumerators will be responsible for cross-checking that the matrix inputs match what has been noted on the map and make sure that all information from the sheets is summarized per MGD. It is important to make sure that the synchronization between the matrix sheets and maps is concluded when the digitalization of the maps begins. This will result in more detailed GIS products for the project needs of humanitarian and local communities to inform and improve operational planning processes.

The household survey and KI interviews

Data from both household interviews and key informant interviews will be collected through mobile data collection tools by CARE and FMF enumerators. Data cleaning will be conducted by REACH's data analysis team which will check for consistency, outliers, and logic in the responses provided and will provide feedback to team leaders and enumerators for additional clarification. Data will be stored on IMPACT Kobo accounts and will be shared with CARE after the removal of personally identifiable information. The REACH Yemen data unit will share anonymized raw and cleaned data along with the value cleaning log with IMPACT HQ for validation. Clean data and data analysis will be conducted by REACH.

During primary data collection, the REACH Assessment Officer and Data Officer, with support from CARE will review data continuously to ensure collection methodology is being followed by enumerators and investigate any extreme outliers or other problematic data, including ensuring the sampling methodology is being carried out by the sampling plan. The Data Officer will share detailed data collection statistics, including the number and percentage of collected interviews for each geography and strata, with the Field and Assessment teams weekly. The Assessment Officer and Data Officer will keep a log of any changes, including cleaning of data. Data from household interviews and KII will be analysed in R. Data checking and cleaning will take place daily during the period of data collection, and will include the identification of outliers, correct categorization of "other" responses, and the removal and/or replacement of incomplete or inaccurate records. Hence, the data cleaning checks will be done in alignment with the IMPACT Data Cleaning Minimum Standards Checklist. Data cleaning and checking will also entail the deletion of surveys that contain discrepancies that cannot be corrected. All changes to the dataset will be documented in a data cleaning long maintained in Excel and published alongside the final clean dataset. Data checking will be systematized through a script produced in R.

3.6.2 Data analysis process

With the analysis, REACH aims to identify the main services and infrastructures in the territorial unit, the capacities, and potential coping strategies by service providers, including local businesses, sectoral committees, or local authorities on the territorial unit level. Combining these findings to understand WASH and FSL household-level needs in the territorial units will create a holistic understanding of both potential drivers of need

and needs. The findings will be disaggregated by demographic criteria such as age, gender, and different types of vulnerabilities. Using three different tools will allow the analysis to highlight different aspects of the same topics; community and service provider needs and their capacities and vulnerabilities as well as the perceived availability and accessibility to services relating to FSL and WASH in the territorial unit. While REACH will be responsible for the cleaning and analysis of the data, with consultations to be held with CARE on findings and co-writing of the report.

The MGD data will be analysed by the REACH Yemen GIS team and the Assessment officer, cross-checking the maps with available satellite imagery, and making sure that the data as submitted through the MGD matrix sheets align with the maps submitted by CARE enumerators. The analysis will aim to understand the level of accessibility and functionality or operability, and the main territorial unit of usage of the services and infrastructure. The map will be used to triangulate and contextualise the findings from the HH survey and KII.

The KII and the HH survey will both structured interviews, with the KII leaving some space for open responses. The aim will be to analyse and understand the levels of needs, and the potential drivers behind the needs. The KII will be divided per sector relevant to the assessment and the territorial unit. This will allow for expert KIIs to contribute with their knowledge and highlight issues in service provision and infrastructural deficiencies.

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 of 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, and ensuring accurate reporting of information provided*)?	Yes	
… Does not **expose data collectors to any risks as a direct result** of participation in data collection?	Yes	
… Does not **expose respondents / their communities to any risks as a direct result** of participation in data collection?	Yes	
… Does not involve **collecting information on specific topics which may be stressful and/ or re-traumatizing** 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.?	No	While we do not specifically target vulnerable groups (beyond IDPs) as part of this assessment, they might be randomly or purposively (IDPs only) sampled as part of the MGD, HH, or KI interviews. Enumerators will be trained to treat participants respectfully and with dignity no matter their group.
… 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	Assessment Officer, Intersectoral Team Lead	Intersectoral Team Lead	REACH Yemen SMT, IMPACT HQ, CARE	Yemen IMAWG, FSAC and WASH clusters
Supervising data collection	CARE Field Officer, Assessment Officer	Intersectoral Team Lead, CARE	IMPACT HQ, CARE	REACH Yemen SMT
Data processing (checking, cleaning)	Assessment officer, CARE Field Officer, Data officer,	Intersectoral Team Lead, CARE	IMPACT Research Design & Data Unit (RDDU)	REACH Yemen SMT
Data analysis	Assessment officer, Data officer	Intersectoral Team lead	REACH WASH/CCCM/C&M teams	REACH Yemen SMT
Output production	Assessment officer, CARE	Intersectoral Team Lead, CARE	REACH SMT, IMPACT Reporting Unit	
Dissemination	Assessment officer, Intersectoral Team Lead, CARE	Intersectoral Team Lead, CARE	REACH SMT, IMPACT Reporting Unit	Yemen FSA / WASH national and sub-national clusters, IMAWG
Monitoring & Evaluation	Assessment officer	Intersectoral Team lead	REACH SMT, IMPACT HQ	
Lessons learned	Assessment officer, CARE	Intersectoral Team Lead, CARE	REACH SMT, IMPACT HQ	Yemen FSA / WASH national and sub-national clusters, IMAWG

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

Accountable: *the person who validates the completion of the task and is accountable for 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

Available upon request.