Research Terms of Reference NES Sanitation Systems Assessment SYR1909 Syria

November 2022 Version 1

REACH Informing more effective humanitarian action

1. Executive Summary

Country of	Syria								
intervention									
Type of Emergency		Natural disaster	Х	Conf	lict		Other (specify)		
Type of Crisis		Sudden onset		Slow onset		X	Protracted		
Mandating Body/	RE/	REACH							
Agency									
IMPACT Project Code	16A	16AXF							
Overall Research									
Timeframe (from	31/10/2022 to 30/12/2022								
research design to final									
outputs / M&E)									
Research Timeframe	1. F	Pilot/ training: 17/11/2022			6. Preliminary p	reser	tation: NA		
Add planned deadlines	2. S	Start collect data: 20/11/2022			7. Outputs sent	for va	alidation:		
(for first cycle if more than					Dataset, Maps	by 11	12/2022		
1)					Report by 20/12/2022				
	3. E	3. Data collected: 30/11/2022			8. Outputs published:				
					Dataset, Maps by 20/12/2022				
	Report by 30/12/2022					2			
	4. C	4. Data analysed: 06/12/2022 9. Final presentation: NA					NA		
	5. Data sent for validation: NA (see								
	out	outputs)							
Number of	X	X Single assessment (one cycle)							
assessments		Multi assessment (more than one cycle)							
Humanitarian	Milestone Deadline								
milestones		Donor plan/strategy			NA				
Specify what will the		Inter-cluster plan/strategy			NA				
when	х	Cluster plan/strategy			TBD ~01/2023				
e.g. The shelter cluster		NGO platform plan/strategy			NA				
will use this data to draft its Revised Flash Appeal:		Other (Specify):	NA NA						
Audience Type &	Auc	Audience type Dissemination							
Dissemination Specify	□ S	Strategic			X General Produ	uct Ma	iling (e.g. mail to NGO		
who will the assessment					consortium; HC	T part	icipants; Donors)		
inform and how you will	хр	rogrammatic			X Cluster Mailin	g (Edı	ucation, Shelter and		
disseminate to inform the					WASH) and pres	sentat	ion of findings at next		
	Operational Cluster meeting								

	□ [(Other, Specify]			X Presentation of meeting; Cluster			findings (e.g. at HCT neeting)		
					X Website Dissem REACH Resource			ination (Relief Web & Centre)		
Detailed		Yes			Х	No				
dissemination plan										
required										
General Objective	Toi	identify the severity of sewage	mar	nagen	nent	problems in ho	ost o	communities in		
	Nor	Northeast Syria in order to inform humanitarian partners in the prioritization of areas of					pritization of areas of			
	inte	rvention.								
Specific Objective(s)	1.	Identify the methods common	ly u	sed b	y ho	useholds in the	e co	mmunities to dispose of		
		sewage and the problems that	t oc	cur w	ith th	nese.				
	2.	Identify the community-level s	ewa	ige m	iana	gement, with a	foc	us on any issues with		
		the sewage network, on the tr	eatr	nenti	the s	sewage underg	oes	, and where it is		
		subsequently discharged.								
Research Questions	1.	What type of household sanit	atior	n facil	ities	are present in	the	community and how		
	_	prevalent are these?					,			
	2.	How is the household sewage	e rer	noveo	d froi	m the sanitation	n fa	cilities in communities?		
	3.	Is sewage from the communit	y tre	ated	and	where is the ra	aw s	ewage, partially treated		
	4	sewage, or tresh water discha	arge	0? Votom	. : 1		n			
Coorrentie Coverence	4. Nor	what is the state of the seway	je s	ysterr		the Autonomy	{ 	Administration)		
Geographic Coverage	Northeast Syna (defined as the de facto AOC of the Autonomous Administration),									
	1000	focusing on nost communities with a population of more than 1,000 people (large								
Secondary data		communities).								
Secondary data	1. 2		on C oto	vervi	ew II	n Syna				
Donulation(e)	Z.					IDPs in inform	al e	itos		
r opulation(s)	X	IDPs in bost communities				IDPs [Other_Sr	ai 3			
		Refugees in camp				Refugees in in	forr	nal sites		
		Refugees in bost communitie	20			Refugees [Oth	or S	Snecifyl		
	X	Host communities				□ [Other, Specify]				
Data collection tool(s)	X	Structured (Quantitative)				□ Semi-structured (Qualitative)				
	Sar	npling method			Data collection method					
Structured data	VD				VI	Kov informant i	ntor	view (Terget #)		
collection tool # 1					^ r		iller	view (Target #).		
Select sampling and data		robability / Simple random			3x	number of sam	pled	communities		
collection method and		Probability / Stratified simple rando	m		□ Group discussion (Target #):					
specify target # interviews	οF	Probability / Cluster sampling			□ Household interview (Target #):					
	n F	Probability / Stratified cluster samp	oling		□ Individual interview (Target #):			Target #):		
	□ [(Other, Specify]			□ [Direct observatio	ns (Target #):		
	□ [Other, Specify] (Target #):					get #):				
Data management	X IMPACT									
platform(s)										
Expected ouput	X	Situation overview #: 1		Rep	ort #	t:		Profile #:		
type(s)				ľ						
		Presentation (Preliminary		Pres	senta	ation (Final)		Factsheet #:		
		findings) #:		#:		. ,				

		Interactive dashboard #:_		Webmap #:	X	Map #: 1		
	X	Dataset #: 1						
Access	X	Public (available on REACH resource center and other humanitarian platforms)						
		Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)						
Visibility Specify which	RE	СН						
logos should be on	Dor	nor:	r:					
outputs	Coc	ordination Framework: rtners:						
	Par							

2. Rationale

2.1 Background

Due to the ongoing conflict in Syria, the water and sanitation infrastructure has been widely damaged or destroyed, with at least half of sewage systems in the whole of Syria not functioning.¹ This bares the risk of people coming in contact with faecal matter, either directly, through insects, or through contaminated food and water. This increases their risk of contracting diseases.² In addition, systematic reviews indicate that improved sanitation can decrease the rates of diarrhoeal disease by 32-37%.³ Hence, the weak state of sanitation infrastructure is likely contributing to the prevalence of diarrhoea and waterborne diseases across Northeast Syria. Specifically, key informants (KIs) in 76% of communities in which health KIs were interviewed reported problems with diarrhoea in September 2022, and in 27% KIs reported waterborne diseases.⁴ With the onset of the cholera outbreak in late August/ early September,⁵ this situation has become more difficult and the need to improve the sanitation infrastructure has become even more urgent.

Given that cholera rates are currently highest in Northeast Syria,⁶ and that the geographic spread of both diarrhoea and waterborne diseases as reported by KIs were substantially lower in Greater Idleb in September (Northwest Syria),⁴ it was decided to restrict the assessment to the northeast. In conversation with the Northeast Syria WASH working group, it was established that a comprehensive assessment of the sanitation systems used in the community, specifically focusing on how sewage is managed and where environmental contamination with raw sewage exists, is currently lacking. While REACH's Humanitarian Situation Overview in Syria (HSOS) provides some information on this, it does not provide sufficient detail to establish severity of needs or priority areas for intervention.

2.2 Intended impact

This research is intended to support the coordination of the WASH sector response in northeast Syria by providing up-todate information that allows for comparisons of sanitation gaps between geographic areas. A secondary benefit is the contribution to ongoing advocacy efforts for increased WASH investments. These are necessary due to the severe funding

⁵ United Nations News (2022). Syria: Cholera outbreak is 'serious threat' to whole Middle East. <u>https://news.un.org/en/story/2022/09/1126531</u>

¹ United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2022). Humanitarian Needs Overview. <u>https://www.humanitarianresponse.info/en/operations/whole-of-syria/document/2022-humanitarian-needs-overview-syrian-arab-</u> republic

² Reed, B. (2017). Faecal-oral diseases: Preventing transmission. WEDC Loughborough University. <u>https://wedc-knowledge.lboro.ac.uk/resources/e/mn/018-Preventing-the-transmission-of-faecal-oral-diseases.pdf</u>

³ Mara, D., Lane, J., Scott, B., Trouba, D. (2010). Sanitation and Health. PLoS Med 7(11). <u>https://doi.org/10.1371/journal.pmed.1000363</u> ⁴ REACH (2022). Humanitarian Situation Overview in Syria (HSOS). <u>https://www.impact-repository.org/document/reach/567eef86/REACH_SYR_HSOS_Dataset_September2022_NES.xlsx</u>

⁶ World Health Organization (WHO) (2022). Health Sector Syria Weekly Situation Report, AWD/ Cholera, 19-25 October 2022. <u>https://www.humanitarianresponse.info/en/operations/syria/document/health-sector-syria-awdcholera-weekly-situation-report-26-october-2022</u>

gaps in the WASH sector,⁷ while the current international attention on the cholera outbreak^{8,9,10} provides a good opportunity for REACH's research to contribute to these advocacy efforts.

3. Methodology

3.1 Methodology overview

This assessment uses the community as the unit of observation. Communities are selected based on their size, following the WASH WG indication that faulty sanitation systems are of greater concern in areas with larger populations. Within selected communities, data are collected using a structured interview approach with key informants (KIs). Three KIs will be interviewed in each community. These KIs should be sector experts (see Annex 1) with extensive knowledge on the local sanitation system. It is acceptable to interview fewer KIs if no three suitable KIs can be identified (for instance in smaller communities), with the aim of ensuring higher quality responses rather than a larger number of responses. The data collection tool focuses on yes/no, multiple choice questions, and numeric questions, which will be designed in such a way that the responses of different KIs can be aggregated. In cases in which two KIs are interviewed and give contradictory responses (e.g. yes and no), this will be reported as "no consensus". The community-level data will be used for the creation of maps. The data analysis will further aggregate the community-level responses to the subdistrict, governorate, and region levels.

3.2 Population of interest

The assessment focuses on Northeast Syria as this area of influence has seen the highest rates of cholera⁶ and waterborne diseases.⁴ Within this region, the focus is on communities (admin 4), while camps for displaced people are omitted. This decision was made as camps in Northeast Syria are serviced by NGOs and therefore have relatively good service provision, as evidenced by the low rates of cholera currently recorded (68 suspected cases in the whole of Syria compared to a total of ~25,000 suspected cases as of 22nd of October 2022).⁶ Of the communities in Northeast Syria, the focus will be on communities with more than 1,000 people, as field capacity does not allow for full coverage of the region. Within these communities, no distinction is made between internally displaced people living in the host community and host populations. Therefore, communities form the unit of observation.

3.3 Secondary data review (outline key bibliography/sources you will use and for what).

Secondary Datasets

This assessment serves as an extension of the monthly multi-sectoral Humanitarian Situation Overview in Syria (HSOS). Thus, datasets can be merged as necessary to include data from sectors which are not assessed here. Furthermore, the Humanitarian Needs Assessment Programme provides regular population data at the community (admin 4) level, which can be used to pair information of the sanitation situation with data on population size.

Humanitarian Reports

⁷ United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2022). 2022-2023 Syria Humanitarian Response Plan Funding Overview (As of 22 September 2022). <u>https://reliefweb.int/report/syrian-arab-republic/2022-2023-syria-humanitarian-response-plan-funding-overview-22-september-2022</u>

⁸ Saad, H., Arraf, J. (2022). Water Problems in Syria Give Rise to Deadly Cholera Outbreak. The New York Times. https://www.nytimes.com/2022/09/22/world/middleeast/syria-cholera-outbreak.html

⁹ Gritten, D. (2022). Syria cholera outbreak serios threat to the region – UN. BBC. <u>https://www.bbc.com/news/world-middle-east-62889885</u>

¹⁰ Al Jazeera (2022). Cholera death toll rises to 29 in Syria as outbreak spreads. <u>https://www.aljazeera.com/news/2022/9/26/syrian-health-ministry-says-cholera-death-toll-rises-to-29</u>

While few reports including sanitation assessments could be identified, available reports from humanitarian organisations^{1,11,12} were referred to in order to better understand the context and adapt the assessment tool to local conditions. They will also be used to informally verify assessment findings.

Existing Assessment Tools and Technical Documents

The questionnaire used for REACH's Multisectoral Area Bases Assessments was used as a basis for the current assessment tool. Further technical documents^{13,14} were used as a basis to draft the questions and answer options.

3.4 Primary Data Collection

The data will be collected by REACH's field team between the 20th and 30th of November 2022, with a training and pilot day on the 17th of November. Data collection will be in-person unless security restrictions prevent enumerators from accessing a community. The aim is to cover all communities with more than 1,000 people in the area of interest. In these communities, enumerators will contact three experts in the sanitation sector who will know about sewage management in the community.

This assessment relies only on information provided by key informants (KIs), with no additional measures in place to evaluate the quality of KI responses. Therefore, particular attention will be paid to KI selection to ensure higher data quality. Sector experts are considered to be local council representatives from technical committees, specialised personnel from local or international NGOs working on sanitation in the area, and the management of the local sewerage system or wastewater treatment plant. In the absence of these, local council members or community leaders with knowledge of the local sanitation system can be interviewed. If no individuals with extensive knowledge on the matter can be identified, this should be noted by the enumerator and the community should be omitted from data collection. Given that no statistical sampling is done, communities can be omitted without causing further problems.

The questionnaire will be designed in Kobo so that enumerators can enter data on KoboCollect while interviewing the KI. This tool will be structured, so that response options will be primarily multiple choice (select_one or select_multiple) or an integer/ interval. "Other" options will be translated to English and checked by the assessment officer for validity. Data submissions will be checked for duplicate submissions, ensuring that enumerators did not submit the same data twice. In cases where only two KIs were interviewed and responses contradict each other (e.g. reported yes and no), follow-ups may be considered; if follow-ups are not possible (e.g. due to low field capacity or time constraints), these responses will be deleted.

3.5 Data Processing & Analysis

Data is submitted through enumerators via the KoboCollect App. This data will be downloaded to Excel and cleaned in Excel and R after data collection is finalised. This will focus on identifying duplicate questionnaire submissions, checking that "other" options are valid, simple logical checks, and identifying submissions for which the enumerators indicated low confidence in the KI's responses. Follow-ups with the fields team are possible, which may be particularly relevant in cases where enumerators indicated low confidence in KIs.

¹¹ WASH Cluster (2022). WoS – WASH Assessment 2022 – January/ February. <u>https://unicef-my.sharepoint.com/personal/udaraz_unicef_org/Documents/z_HRInfo_website_Docs/Syria%20WASH%20Atlas%2022%20I%20Winter%20Round.pdf?ga=1</u>

¹² Daher, J. (2022). Water Scarcity, Mismanagement and Pollution in Syria. European University Institute. <u>https://cadmus.eui.eu/bitstream/handle/1814/74678/QM-09-22-308-EN-N.pdf</u>

¹³ Tilley, E., Ulrich, L., Lüthi, C., Reymond, P., Zurbrugg, C. (2014). Compendium of Sanitation Systems and Technologies. 2nd Revised Edition. Swiss Federal Institute of Aquatic Science and Technology (Eawag). Dübendorf, Switzerland. https://www.susana.org/en/knowledge-hub/resources-and-publications/library/details/454

¹⁴ Mills, F., Johnston, R., Slaymaker, T., Bica, J. (2022). Guidance for monitoring safely managed on-site sanitation (SMOSS) – Draft prepared for Phase 2 pilots. WHO, UNICEF. <u>https://washdata.org/monitoring/sanitation/safely-managed-on-site-sanitation</u>

The data analysis will be conducted in R. This will focus first on consolidating responses from the three KIs at the community level, and then aggregating to higher administrative levels (subdistrict, governorate, and region). Consolidating responses will focus on: options selected by the majority of KIs (for select one questions); options selected by any KIs (for select multiple questions); and medians (for integer questions). For questions for which no consensus is achieved at the community level, the responses will not be reported but rather will be recorded as "no consensus" in that community in order to identify questions which may have been more difficult for KIs to answer. After this stage of consolidation, aggregation will focus on the percentage of communities for which KIs reported a certain characteristic (e.g. the majority of KIs in X% assessed communities reporting that none of the wastewater is treated).

While this data will be published, together with clear guidance on how consolidation and aggregation was achieved, the main output will be a set of maps using information at the community level. The aim of these maps is to combine data on sanitation severity and population size in order to identify areas with greater need for intervention. As no single indicator can stand in as a "severity" indicator, and since it was decided that an index would limit how easily understandable the product would be, a set of complementary maps will be provided. If time permits, a dashboard may also be created. To make these maps more widely useable, and additionally suitable to advocacy efforts, a short situation overview (~3 pages) providing context for the data will be published.

4. Key ethical considerations and related risks

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

The proposed research design	Yes/ No	Details if no (including mitigation)
Has been coordinated with relevant stakeholders to avoid unnecessary duplication of data collection efforts?	Yes	
Respects respondents, their rights and dignity (specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants' time, ensuring accurate reporting of information provided)?	Yes	
Does not expose data collectors to any risks as a direct result of participation in data collection?	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-traumatising for research participants (both respondents and data collectors)?	Yes	
Does not involve data collection with minors i.e. anyone less than 18 years old?	Yes	
Does not involve data collection with other vulnerable groups e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	Yes	
Follows IMPACT SOPs for management of personally identifiable information?	Yes	

5. Roles and responsibilities

Table 3: Description of roles and responsibilities

Task Description	Responsible	Accountable	Consulted	Informed
Research design	Assessment Officer	Research Manager	HQ, Senior Assessment Officer, Senior Field Manager	1
Supervising data collection	Field Officers	Field Manager	Assessment Officer	Head of Operations, Research Manager
Data processing (checking, cleaning)	Data Officer, Assessment Officer	Data Officer, Assessment Officer	Field Team	Research Manager
Data analysis	Data Officer	Data Officer	Assessment Officer	Research Manager
Output production	Assessment Officer, GIS Officer, Data Officer	Research Manager	HQ	1
Dissemination	Research Manager	Research Manager	Project Development Officer	HQ
Monitoring & Evaluation	Project Development Officer	Project Development Officer	1	HQ
Lessons learned	Assessment Officer	Research Manager	1	1

Responsible: the person(s) who executes the task

Accountable: the person who validates the completion of the task and is accountable of the final output or milestone Consulted: the person(s) who must be consulted when the task is implemented Informed: the person(s) who need to be informed when the task is completed

5. Data Analysis Plan

Available upon request.

6. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	ТооІ	Will indicator be tracked?
	Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products	# of downloads of x product from Resource Centre	Country request to HQ		X Yes
		# of downloads of x product from Relief Web	Country request to HQ		□ Yes
Humanitarian stakeholders are		# of downloads of x product from Country level platforms	Country team		□ Yes
accessing IMPACT products		# of page clicks on x product from REACH global newsletter	Country request to HQ	User_log	X Yes
		# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		X Yes
		# of visits to x webmap/x dashboard	Country request to HQ		□ Yes
IMPACT activities contribute to better		# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_I og	X Yes
program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in single agency documents			X Yes
Humanitarian stakeholders are	Humanitarian actors use	Perceived relevance of IMPACT country-programs Perceived usefulness and influence of IMPACT		Usage Feed	NA
	evidence/products as a basis for decision making, aid planning and delivery	outputs	Country	back and Usage_Surv ey template	NA
products		Perceived capacity of IMPACT staff	leam		NA
		Perceived quality of outputs/programs			

	Number of humanitarian documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by IMPACT products	Recommendations to strengthen IMPACT programs			
Humanitarian stakeholders are	Number and/or percentage of humanitarian organizations directly	# of organisations providing resources (i.e.staff, vehicles, meeting space, budget, etc.) for activity implementation			□ Yes
engaged in IMPACT programs throughout the	contributing to IMPACT programs (providing	# of organisations/clusters inputting in research design and joint analysis	Country team	Engagement _log	□ Yes
research cycle	resources, participating to presentations, etc.)	# of organisations/clusters attending briefings on findings;			X Yes