Research Terms of Reference

Situation Overview of Polio Outbreak and WASH Needs

YEM2103

Yemen

March 2021
Version 1

REACH Informing more effective humanitarian action

1. Executive Summary

Country of intervention	Yemen					
Type of Emergency	□	Natural disaster	□	Conflict	X	Other *(Disease Outbreak)*
Type of Crisis	X	Sudden onset	□	Slow onset	□	Protracted
Mandating Body/ Agency	*WASH*					
IMPACT Project Code	*15AMK*					
Overall Research Timeframe	February 15, 2021 to March 31, 2021					
Research Timeframe[1]	1. Pilot/ training: N/A		6. Preliminary presentation: N/A			
	2. Start collect data: N/A		7. Outputs sent for validation: 04/03/2021			
	3. Data collected: N/A		8. Outputs published: 07/03/2021			
	4. Data analysed: 25/02/2021		9. Final presentation: N/A			
	5. Data sent for validation: 01/03/2021					
Number of assessments	X	Single assessment (one cycle) *Secondary analysis of previously published WASH needs severity scores, and unpublished poliovirus prevalence and innoculation data*				
	□	Multi assessment (more than one cycle)				
Humanitarian milestones	**Milestone**		**Deadline**			
	□	Donor plan/strategy	_ _/_ _/_ _ _ _			
	□	Inter-cluster plan/strategy	_ _/_ _/_ _ _ _			
	X	Cluster plan/strategy	15/03/2021			
	□	NGO platform plan/strategy	_ _/_ _/_ _ _ _			
	□	Other (Specify):	_ _/_ _/_ _ _ _			
	Audience type		**Dissemination**			

[1] No primary data collection will be conducted for this project.

Audience Type & Dissemination	X Strategic □ Programmatic □ Operational			□ General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors) □ Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting X Presentation of findings (e.g. at HCT meeting; Cluster meeting) □ Website Dissemination (Relief Web & REACH Resource Centre) □ Publicy available dashboard	
Detailed dissemination plan required	□	Yes		X	No
General Objective	The objective of this report is to provide an updated WASH needs overview in Sa'ada governorate in order to inform the circulating vaccine-dependent poliovirus (cVDPV) outbreak response in Yemen. This rapid secondary desk review (SDR) aims to consolidate WASH data from the 2021 Humanitarian Needs Overview and poliovirus case and vaccine coverage data to provide an update on the current situation in Sa'ada governorate.				
Specific Objective(s)	1. *To identify the WASH accessibility and needs in Sa'ada governorate.* 2. *To provide an overview of the current cVDPV outbreak in Sa'ada governorate, using secondary epidemiological and vaccine coverage data.* 3. *To identify priority districts and highlight the most important needs for an integrated response to the cVDPV in Sa'ada governorate.*				
Research Questions	1. *What are the current WASH needs experienced across the districts of Sa'ada governorate?* 2. *What does the most recent data tell us about the cVDP outbreak situtation in Sa'ada governorate?* 3. *Which districts of Sa'ada governorate should be prioritized for an integrated cVDPV response, and what are there most urgent needs?*				
Geographic Coverage	*Sa'ada Governorate, at the district level.*				
Secondary data sources	2021 HNO WASH Severity Scores and PiN estimates (WASH Cluster) Surveillance data for acute flaccid paralysis (WHO) Coverage data for oral polio vaccine (WHO) Polio outbreak surveillance data (WHO)				
Population(s)	□	IDPs in camp		□	IDPs in informal sites
	X	IDPs in host communities		□	IDPs [Other, Specify]
	□	Refugees in camp		□	Refugees in informal sites
	X	Refugees in host communities		□	Refugees [Other, Specify]
	X	Host communities		□	[Other, Specify]
Stratification	X	Geographical #: All 15 Districts in Sa'ada Governorate Population size per strata is known? X Yes □ No	□	Group #: _ _ _ Population size per strata is known? □ Yes □ No	□ *[Other Specify]* #: _ _ Population size per strata is known? □ Yes □ No

Data collection tool(s)[2]	□	Structured (Quantitative)			□	Semi-structured (Qualitative)
Data management platform(s)	X	IMPACT			□	UNHCR
Expected ouput type(s)	X	Situation overview #: Single situation overview comprising rapid SDR	□	Report #: _ _	□	Profile #: _ _
	□	Presentation (Preliminary findings) #: _ _	□	Presentation (Final) #: _ _	□	Factsheet #: _ _
	□	Interactive dashboard #:	□	Webmap #: _ _	□	Map #: _ _
Access	□	Public (available on REACH resource center and other humanitarian platforms)				
	X	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms)				
Visibility	***REACH***					
	Donor: *N/A*					
	Coordination Framework: *N/A*					
	Partners: WASH Cluster Water Sanitation Hygiene					

2. Rationale

2.1 Background

Poliovirus has reemerged in Yemen, with the first cases identified in June and July 2020. Since January 2020, 30 circulating vaccine-derived poliovirus (cVDPV) cases have been reported[3], spreading among a few select districts in Sa'ada governorate. Sa'ada governorate is located in north-western Yemen and was estimated to have a population of 934,000 as of the 2021 Humaniatian Needs Overview (HNO)[4]. It is one of the governorates most affected by both current and previous conflicts in Yemen, with the current conflict originating in the mountainous Houthi strongholds in Sa'ada governorate. According to the 2021 HNO[4], Sa'ada governorate is home to an estimated 691,000 people in need of humanitarian assistance, with 20% of those people classified as being in catastrophic need. Sa'ada governorate also has one of the largest populations of internally displaced persons (IDPs) out of all governorates in Yemen, with an estimated 306,000 people displaced (33% of total population). Since January 2020, 30 cVDPV cases have been reported, spreading among a few select districts in Sa'ada governorate. Since January 2020, 73 cases of Acute Flaccid Paralysis (AFP) have been identified in Sa'ada governorate, making the governorate's AFP rate four times higher (0.16 cases/100,000 children under 15) than Yemen's national average (0.04 cases/100,000).

2.2 Intended impact

The World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) have proposed an integrated response to the poliovirus outbreak. The integrated response will address advocacy, communication and social mobilization and robust immunization (as per global polio response SOPs). The

[2] No primary data collection will be conducted for this project. All results will be based on secondary desk review.
[3] GPEI, "Yemen – GPEI," 2020. https://polioeradication.org/where-we-work/polio-outbreak-countries/yemen/
[4] OCHA, "Yemen : Humanitarian Needs Overview 2021" Humanitarian Data Exchange, 2021.https://data.humdata.org/dataset/yemen-humanitarian-needs-overview

response will consist of a poliovirus vaccination campaign integrated with: measles vaccination in Sa'ada, Hajja and Amran districts; as well as WASH (hygiene items and water treatment), and micronutrient interventions and maternal health services in Sa'ada, Amran, Al Jawf and Hajjah districts. Communication and community engagement will also be an integral component of the interventions. The objective of this report is to provide an updated needs overview in Sa'ada governorate in order to inform the WASH component of the first round of the integrated cVDPV outbreak response in Yemen. Along with vaccine coverage, poor sanitation and hygiene are major risk factors related to transmission of poliovirus, due to the importance of the fecal-oral transmission route. Until the recent Integrated Food Security Phase Classification (IPC) data collection was conducted in October-December 2020, there have been no representative, household-level WASH assessments carried out in Sa'ada governorate since 2018. This assessment will provide critical information to the polio response to ensure that the most vulnerable are targeted for the proper WASH and polio interventions.

3. Methodology

3.1 Methodology overview

REACH will conduct a rapid secondary desk review (SDR) at the district level in the Sa'ada governorate in March 2021. The SDR will draw from four data sources: WASH severity score and PiN estimates based on the IPC data collected October-December 2020, and all Yemen WASH Cluster partner assessments conducted in 2020; epidemiological data on the cVDPV cases reported in Sa'ada governorate from January to September 2020; AFP surveillance data from September 2019; and oral poliovirus vaccine (OPV3) coverage data from 2019 and 2020. These four datasets will be mapped in ArcGIS Pro and the mapped data will be compared to determine which districts within Sa'ada governorate are at highest risk of cVDPV transmission, and which WASH needs are most severe to inform the integrated polio and WASH response in Sa'ada governorate in 2021.

3.2 Population of interest

This project will cover all population groups living in the Sa'ada governorate, at the district level.

3.3 Secondary data review

Only secondary data will be used for this project. The Yemen Wash Cluster (YWC) and WHO will provide data on WASH needs and poliovirus outbreak, respectively. Each dataset will be mapped individually in ArcGIS Pro, and then the data will be consolidated into a single map which aims to identify the districts at highest risk for polio. Finally, REACH will identify the districts most at risk and the most important needs to address to reduce the spread of poliovirus and other related communicable diseases. The datasets (and their respective sources) to be included are listed below:

- 2021 HNO WASH Severity Scores and PiN estimates (WASH Cluster)
- Surveillance data for acute flaccid paralysis (WHO)
- Coverage data for oral polio vaccine (WHO)
- Polio outbreak surveillance data (WHO)

3.4 Data Processing & Analysis

The WASH needs data included in this SDR will be taken directly from the 2021 HNO severity score and PiN calculations. During the HNO calculations, every district was assigned an overall WASH severity score based on a weighted average of five WASH indicators (see Appendix A for indicators and thresholds). These district-level severity scores will be mapped to visualize the WASH needs across Sa'ada governorate (RQ1). No additional data cleaning will be performed.

The analysis will consist of a secondary review of publicly available data. No new analysis will be conducted, but the datasets will be summarized at the district level and consolidated to develop a holistic overview, and thusly

inform an integrated poliovirus response. For the AFP and cVDPV surveillance data, no additional cleaning will be conducted. The number of cases per district within Sa'ada governorate will be totalled, and the cases per district will be mapped to identify which have the highest risk of poliovirus spread. No additional data cleaning will be conducted on the OPV3 coverage data. This data is already presented as a rate per district, with high rates representing a protective factor against the spread of poliovirus. The consolidation of these three datasets will be used to address RQ2.

Finally, the WASH needs and poliovirus risk maps will be compared to identify districts that have the largest numbers of AFP and cVDPV cases, and the lowest rates of OPV3 and WASH coverage. These districts will be considered the highest priority for the planned 2021 interventions (RQ3).

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*	*WASH Cluster Coordinator, IMPACT Research Design and Data Unit (RDDU)*	
Data processing (checking, cleaning)	*Assessment Officer*	*Research Manager*	*IMPACT Research Data Unit (RDU)*	*WASH Cluster Coordinator*
Data analysis	*Assessment Officer*	*Research Manager*	*IMPACT Research Data Unit (RDU)*	*WASH Cluster Coordinator*
Output production	*Assessment Officer*	*Research Manager*	*IMPACT Research Reporting Unit (RRU)*	*WASH Cluster Coordinator*
Dissemination	*Assessment Officer*	*Research Manager*	*WASH Cluster Coordinator*	
Monitoring & Evaluation	*Assessment Officer*	*Research Manager*		*WASH Cluster Coordinator*
Lessons learned	*Assessment Officer*	*Research Manager*		*WASH Cluster Coordinator*

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

Research questions	Sub-research questions	IN #	Secondary Data Source	Indicator group / sector	Indicator / Variable	Data collection level	Maps planned?
What programs/interventions should be deployed in Sa'ada governorate to reduce the spread of diseases, including cVDPV and WASH-related communicable diseases?	*What are the current WASH needs experienced across the districts of Sa'ada governorate?*	***W.1***	*HNO 2021*	*WASH Needs*	*Access to an improved water source*	*District*	*No*
		W.2	*HNO 2021*	*WASH Needs*	*Access to minimum water quantities needed*	*District*	*No*
		W.3	*HNO 2021*	*WASH Needs*	*Access to functional and improved sanitation*	*District*	*No*
		W.4	*HNO 2021*	*WASH Needs*	*Access to adequate environmental sanitation*	*District*	*No*
		W.5	*HNO 2021*	*WASH Needs*	*Access to functional handwashing facilities and soap*	*District*	*No*

		W.6	*HNO 2021*	*WASH Needs*	*Composite WASH Severity Score*	*District*	*Yes*
	Which districts of Sa'ada governorate should be prioritized for an integrated cVDPV response?	***P.1***	*WHO*	*Polio Epidemiology*	*# of Acute Flaccid Paralysis cases*	*District*	*Yes*
		P.2	*WHO*	*Polio Epidemiology*	*# of circulating Vaccine-Dependent Poliovirus (cVDPV) cases*	*District*	*Yes*
		P.3	*WHO*	*Polio Epidemiology*	*# of Non-polio Enterovirus (NPEV) cases*	*District*	*Yes*
		P.4	*WHO*	*Polio Epidemiology*	*# of Wild Poliovirus (WPV) cases*	*District*	*Yes*
		P.5	*WHO*	*Polio Epidemiology*	*Oral Poliovirus Vaccine (OPV3) Rate*	*District*	*Yes*

7. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	Tool	Will indicator be tracked?
Humanitarian stakeholders are accessing IMPACT products	Number of humanitarian organisations accessing IMPACT services/products Number of individuals accessing IMPACT services/products	# of downloads of x product from Resource Center	Country request to HQ	User_log	□ Yes
		# of downloads of x product from Relief Web	Country request to HQ		□ Yes
		# of downloads of x product from Country level platforms	Country team		□ Yes
		# of page clicks on x product from REACH global newsletter	Country request to HQ		□ Yes
		# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		□ Yes
		# of visits to x webmap/x dashboard	Country request to HQ		□ Yes
IMPACT activities contribute to better program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_log	*N/A*
		# references in single agency documents			*N/A*
Humanitarian stakeholders are using IMPACT products	Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery Number of humanitarian documents (HNO, HRP,	Perceived relevance of IMPACT country-programs	Country team	Usage_Feedback *and* Usage_Survey template	*To be incorporated into annual usage survey targeting all partner clusters and their organizations*
		Perceived usefulness and influence of IMPACT outputs			
		Recommendations to strengthen IMPACT programs			
		Perceived capacity of IMPACT staff			
		Perceived quality of outputs/programs			

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

Appendix A : WASH Severity Score Calculation

Table 1 All WASH indicators included in WASH needs assessment section, with thresholds define: analysis carried out for 2021 HNO

INDICATOR 1: ACCESS TO AN IMPROVED WATER SOURCE

1	2	3	4	5
More than 75% of households have access	More than half (≥51%, 75%) of households have access	Less than half (≥26%, 50%) of households have access	Less than a quarter (≥11%, 25%) of households have access	Very few (≤10%) households have access

INDICATOR 2: ACCESS TO MINIMUM WATER QUANTITIES NEEDED

1	2	3	4	5
More than 75% of households have access	More than half (≥51%, 75%) of households have access	Less than half (≥26%, 50%) of households have access	Less than a quarter (≥11%, 25%) of households have access	Very few (≤10%) households have access

INDICATOR 3: ACCESS TO FUNCTIONAL AND IMPROVED SANITATION

1	2	3	4	5
More than 75% of households have access	More than half (≥51%, 75%) of households have access	Less than half (≥26%, 50%) of households have access	Less than a quarter (≥11%, 25%) of households have access	Very few (≤10%) households have access

INDICATOR 4: ACCESS TO ADEQUATE ENVIRONMENTAL SANITATION

1	2	3	4	5
More than 75% of households have access	More than half (≥51%, 75%) of households have access	Less than half (≥26%, 50%) of households have access	Less than a quarter (≥11%, 25%) of households have access	Very few (≤10%) households have access

INDICATOR 5: ACCESS TO FUNCTIONAL HANDWASHING FACILITIES AND SOAP

1	2	3	4	5
More than 75% of households have access	More than half (≥51%, 75%) of households have access	Less than half (≥26%, 50%) of households have access	Less than a quarter (≥11%, 25%) of households have access	Very few (≤10%) households have access