Research Terms of Reference

WASH and Shelter Third Party Monitoring: WASH Infrastructure Functionality Monitoring
BGD2201c
Bangladesh

October 2022
Version 1

IMPACT Shaping practices
Influencing policies
Impacting lives

1. Executive Summary

Country of intervention	Bangladesh					
Type of Emergency	□	Natural disaster	X	Conflict	□	Other *(specify)*
Type of Crisis	□	Sudden onset	□	Slow onset	X	Protracted
Mandating Body/ Agency	*UNHCR*					
IMPACT Project Code	*70AVJ*					
Overall Research Timeframe	1/10/2022 to 30/1/2023					

Research Timeframe	1. Pilot/ training: 1/10/2022	5. Preliminary presentation: 22/12/2022
	2. Start collect data: 03/10/2022	6. Outputs sent for validation: 18/01/203
	3. Data collected: 27/10/2022	7. Outputs published: 31/1/2023
	4. Analysis sent for validation: 7/12/2022	

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

Humanitarian milestones	**Milestone**		**Deadline**
	X	Donor plan/strategy	31/12/2022
	□	Inter-cluster plan/strategy	_ _/_ _/_ _ _ _
	□	Cluster plan/strategy	_ _/_ _/_ _ _ _
	□	NGO platform plan/strategy	_ _/_ _/_ _ _ _
	□	Other (Specify):	_ _/_ _/_ _ _ _

Audience Type & Dissemination	**Audience type**	**Dissemination**
	X Strategic: UNHCR WASH Strategy	□ General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors)
	X Programmatic: UNHCR WASH programming, WASH implementing partners.	□ Cluster Mailing (WASH) and presentation of findings at next cluster meeting
	□ Operational	X Presentation of findings (e.g. at HCT meeting; Cluster meeting): To UNHCR WASH and IM units
	□ [Other, Specify]	□ Website Dissemination (Relief Web & REACH Resource Centre)

			□ [Other, Specify]	
Detailed dissemination plan required	□	Yes	X	No

General Objective	Inform improved strategic analysis and decision-making by WASH partners concerning the monitoring, maintenance and development of key WASH infrastructure in UNHCR managed Rohingya refugee camps in Cox's Bazar District, Bangladesh.
Specific Objective(s)	- Routine monitoring of the WASH response through assessing the functionality, accessibility and quality of current WASH services delivered in UNHCR area of responsibility; - To provide timely information on the quality and functionality of water sources, latrines, bathing cubicles and solid waste points;

Research Questions	1. What proportion of latrines are functional versus non-functional?
	  1.1. What are the most common functionality issues?
	  1.2. What portion of latrine facilities are communal versus household shared?
	  1.3. What proportion of the latrines have privacy issues?
	  1.4. What proportion of latrines have functional handwashing devices at facility?
	2. What proportion of bathing cubicles are functional versus non-functional?
	  2.1. What are the most common functionality issues?
	  2.2. What proportion of bathing facilities have privacy issues?
	  2.3. What proportion of bathing facilities have drainage channels that lead to a soak pit or open drainage?
	  2.4. What proportion of bathing facilities have stagnant water nearby?
	3. What proportion of solid waste points are made of concrete, bamboo or CGI sheet metal?
	  3.1. What proportion of solid waste points are segregated by type of waste?
	  3.2. What proportion of solid waste infrastructure have segregated waste in the bins?
	4. What proportion of water points assessed are handpumps and what proportion are tapstands?
	  4.1. What proportion of tapstand water outlets are functional?
	    4.1.1. What proportion of tapstand water outlets have taps?
	  4.2. What proportion of handpumps are functional?
	    4.2.1. What proportion of handpumps have platforms in need of repair?
	  4.3. What proportion of water points have stagnant water nearby?
	5. Are there differences in WASH infrastructure quality and functionality in camps based in Teknaf and Ukhia?

Geographic Coverage	14 UNHCR administered camps in Ukhia and Teknaf Upazilas of Cox's Bazar.
Secondary data sources	- Sustainable WASH for Rohingya Crisis, 2020, BRAC - WASH KAP Survey, 2021, UNHCR - WASH Severity Classification, 2022, REACH, UNICEF

	• Drinking Water Security Challenges in Rohingya Refugee Camps of Cox's Bazar, Bangladesh, 2020 • UNHCR WASH Factsheet, 2021 • Joint Assessment Mission Report Cox's Bazar, Bangladesh, July 2021 • UNHCR WASH Infrastructure Sweep, July 2022			

Population(s)	□	IDPs in camp	□	IDPs in informal sites
	□	IDPs in host communities	□	IDPs [Other, Specify]
	X	Refugees in camp	□	Refugees in informal sites
	□	Refugees in host communities	□	Refugees [Other, Specify]
	□	Host communities	□	[Other, Specify]

Stratification	X	Geographical #:14 Camps, across 2 upazilas Population size per strata is known? XYes □ No	□	Group #: _ _ _ Population size per strata is known? □ Yes □ No	□	*[Other Specify]* #: _ _ Population size per strata is known? □ Yes □ No

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

	Sampling method	Data collection method
Structured data collection tool # 1 *WASH Infrastructure Functionality Monitoring Survey*	□ Purposive □ Probability / Simple random X Probability / Stratified simple random □ Probability / Cluster sampling □ Probability / Stratified cluster sampling □ [Other, Specify]	□ Key informant interview (Target #):_ _ _ _ _ □ Group discussion (Target #):_ _ _ _ _ □ Household interview (Target #)_ _ _ _ _ □ Individual interview (Target #):_ _ _ _ _ X Direct observations (Target #): 4053 □ [Other, Specify] (Target #):_ _ _ _ _
Structured data collection tool # 2	□ Purposive □ Probability / Simple random □ Probability / Stratified simple random □ Probability / Cluster sampling □ Probability / Stratified cluster sampling □ [Other, Specify]	□ Key informant interview (Target #):_ _ _ _ _ □ Group discussion (Target #):_ _ _ _ _ □ Household interview (Target #:_ _ _ _ _ □ Individual interview (Target #):_ _ _ _ _ □ Direct observations (Target #): _ _ _ _ _ □ [Other, Specify] (Target #):_ _ _ _ _
Semi-structured data collection tool (s) # 1	□ Purposive □ Snowballing □ [Other, Specify]	□ Key informant interview (Target #): 5 to 10 □ Individual interview (Target #):_ _ _ _ _ □ Focus group discussion (Target #): 5 to 10 □ [Other, Specify] (Target #):_ _ _ _ _

Target level of precision if probability sampling	95% level of confidence	10 +/- % margin of error (camp level) 3 +/- % margin of error (aggregated)

Data management platform(s)	□	IMPACT	X	UNHCR
	□	[Other, Specify]		

Expected ouput type(s)	□	Situation overview #: _ _	□	Report #: _ _	□	Profile #: _ _
	X	Presentation (Preliminary findings) #: 1	□	Presentation (Final) #: _ _	X	Factsheet #: 1

X	Datasets #:1	□	Webmap #: _ _	□	Map #: _ _
□	Transcripts of qualitative data #: _ _				

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	*IMPACT*	
	Donor: UNHCR	
	Coordination Framework: N/A	
	Partners: Prottyashi, Helvetas, ACTED	

2. Rationale

2.1 Background

During the last four decades, Rohingya refugees have been fleeing in successive waves to Bangladesh, seeking safety from periodic outbreaks of violence in Rakhine State, Myanmar. Since August 2017, over 710,000 Rohingya refugees have arrived in Bangladesh's Cox's Bazar District, increasing the total number of Rohingya refugees to more than 860,000.[1] In response, humanitarian actors, in coordination with the government, have implemented a wide range of programs aimed at meeting the needs of refugees; however, given the large scale of the crisis some challenges related to access, functionality and quality of the services and infrastructure persist.[2]

One of the key challenges faced by refugees living in Cox's Bazar is access to WASH services that meet the minimum standards of the sector as the crisis transitions from an emergency to a post-emergency context. Routine monitoring of the WASH services provided is paramount for quality assurance, tracking that set standards are met within stipulated timelines, identifying challenges in a timely manner and seeking solutions. With that goal, a WASH infrastructure functionality monitoring survey was requested by UNHCR.

2.2 Intended impact

This study aims to inform strategic analysis and decision-making by the UNHCR WASH unit and its implementing partners concerning the monitoring, maintenance, and development of key WASH services in Rohingya refugee camps. The outputs will help deepen the understanding of WASH interventions implemented in UNHCR administered camps. The WASH infrastructure functionality monitoring survey will assess water points, latrines, bathing cubicles, and solid waste points.

3. Methodology

Methodology overview

The assessment will include one round of sample-based quantitative data collection to assess WASH infrastructure functionality across the 14 camps. The sample-based infrastructure monitoring survey will use a questionnaire developed by UNHCR. The WASH Infrastructure functionality monitoring survey will use a representative sample, calculated for each WASH infrastructure type, stratified at camp level. This sample will achieve a 95% confidence level and 10% margin of error, at camp level. A margin of error below 3% will be achieved at the aggregate level across all camps (see Table 1 below for details).

Population of interest

UNHCR WASH infrastructure monitoring and infrastructure sweep will be conducted in 14 UNHCR managed camps in Teknaf and Ukhia Upazilas. Water points, solid waste points, bathing cubicles and latrines will be assessed in each

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[1] Situation Refugee Response Report UNHCR 2022
[2] Refugee Influx Emergency Vulnerability Assessment (REVA5) – Cox's Bazar, Bangladesh WFP 2022

camp. Enumerators will use the partner provided GPS coordinates to navigate to the sampled WASH facilities and will record data on ArcGIS Field Maps.

Table 1: WASH Infrastructure Monitoring Sample

Bathing Cubicles	Bathing Cubicles Sample	Latrines	Latrines Sample	Solid Waste	Solid Waste Sample	Water Points	Water Points Sample	Margin of Error per Infrastructure Type
9167	1156	13723	1207	1212	593	8852	1097	<3%

3.1 Secondary Data Review

Final reports for UNHCR WASH KAP Survey 2020 and 2021, as well as the 2021 UNHCR WASH Infrastructure Sweep, will be reviewed to identify previously recorded WASH infrastructure functionality in UNHCR administered camps. This review will highlight improvements, stagnation, and degradation of WASH facilities functionality at camp level by infrastructure type. This will allow UNHCR WASH implementing partners to better understand the needs of refugees and the efficiency of WASH interventions in camps.

3.2 Primary Data Collection

The WASH infrastructure monitoring assessment will focus on water points, latrines, bathing cubicles, and solid waste points. Before primary data collection begins, the UNHCR GIS team will use GPS points of all known WASH infrastructure to create a census from which a random distribution of sample points will be generated. Each point will indicate a WASH facility to be surveyed. This sample will attain a 95% confidence level and 10% margin of error, at camp level; a margin of error below 3% will be realised when all camp data is aggregated. These points will be uploaded to tablets which will be provided to enumerators.

The quantitative survey tool is designed by UNHCR, validated tools will be translated into the Bangla language and uploaded to ArcGIS Field Maps for administration by local enumerators. Enumerators will participate in a one-day training to understand how to use the tools and how to properly administer the surveys. Enumerators will fill in the questionnaire based on observations made at the WASH infrastructure points. The tools will be piloted by enumerators prior to data collection, with the final version incorporating changes based on the advice of the field team. WASH infrastructure monitoring survey will be administered all UNHCR WASH managed camps in Teknaf and Ukhia Upazilas. The WASH Infrastructure monitoring survey will consist of a minimum of 4,053 infrastructure surveys.

Table 2: WASH Infrastructure Monitoring Minimum Sample at Camp Level

Camps	Blocks of Bathing Cubicles	Bathing Cubicles Sample	Blocks of Latrines	Latrines Sample	Blocks of Solid Waste	Solid Waste Sample	Water Points	Water Points Sample
Camp 1E	952	88	1250	90	71	42	822	87
Camp 1W	853	87	1166	89	57	37	776	86
Camp 2E	609	84	731	85	80	44	815	87

Camp 2W	378	77	793	86	74	43	711	85
Camp 3	954	88	1030	88	59	37	933	88
Camp 4	962	88	2032	92	137	57	1485	91
Camp 4 X	554	82	593	83	22	19	148	59
Camp 5	644	84	971	88	155	60	878	87
Camp 17	553	82	1129	89	84	46	943	88
Camp 21	443	80	802	86	13	12	385	78
Camp 26	1235	90	1628	91	226	68	281	72
Camp 27	424	79	862	87	52	34	152	60
Kutupalong RC	282	72	316	74	79	44	421	79
Nayapara RC	324	75	420	79	103	50	102	50
Total	**9167**	**1156**	**13723**	**1207**	**1212**	**593**	**8852**	**1097**

3.3 Data Processing & Analysis

After each day of data collection, REACH team leaders will ensure that all collected forms are uploaded to the UNHCR server. UNHCR will export data to share with REACH GIS and Data Unit. Checks on these incoming results will be performed to minimize irregularities or errors and to ensure the highest data quality possible. These checks and initial data cleaning take place after each day of data collection to avoid backlogging and delays in delivering final outputs. An automated R script will flag irregularities and unexpected values.

3 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	Country Focal Point	UNHCR, IMPACT HQ	UNHCR, IMPACT HQ, Field Team, GIS Officer, Data Officer, Project Officer
Supervising data collection	Field Coordinator	Field Manager	UNHCR, Prottyashi	Assessment Officer, Project Officer, Country Focal Point, Data Officer, GIS Officer
Data processing (checking, cleaning)	Project Officer, Data Officer	Assessment Officer	Country Focal Point, IMPACT HQ	UNHCR, IMPACT HQ
Data analysis	Data Officer	Assessment Officer	UNHCR, Country Focal Point, IMPACT HQ	Project Officer, IMPACT HQ
Output production	Assessment Officer, GIS Officer	Country Focal Point	Project Officer, Data Officer, UNHCR, IMPACT HQ	UNHCR, IMPACT HQ, Field Team
Dissemination	Assessment Officer	Country Focal Point	UNHCR	IMPACT HQ
Monitoring & Evaluation	Project Officer	Assessment Officer	UNHCR, Prottyashi,	Country Focal Point, IMPACT HQ
Lessons learned	Project Officer	Assessment Officer	UNHCR, Prottyashi, Country Focal Point, Data Officer, GIS	IMPACT HQ

Officer, Field
Team

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*

1. Data Analysis Plan

Research questions	Indicator Group	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses
1. What proportion of latrine chambers are functional versus non-functional?	Latrine Functionality	Observation	% of Latrine chambers functional	a.1 How many chambers/doors?	Integer
	Latrine Functionality	Observation	% of Latrine chambers functional	a. 2. How many chambers are functional?	Integer
	Latrine Functionality	Observation	% of Latrine chambers functional	a. 3. How many chambers are non-functional?	Integer
1.1. What are the most common functionality issues?	Latrine Functionality	Observation	% of Latrine facilities by functionality issue	a. 4. Why non-functional?	a. Pit / tank full b. Pan full c. Broken pan d. Broken platform e. Broken / damaged door / wall f. Leakage in pit g. Access road is not in usable condition h. Privacy concerns due to lack of inside lock i. Too dirty j. Other
1.2. What proportion of latrine facilities are communal?	Latrine Functionality	Observation	% of Latrine facilities by type of user	a. 5. What is the user type?	a. Household shared b. Communal shared
1.3. What proportion of the latrines have privacy issues?	Latrine Privacy	Observation	% of latrines with privacy concerns	5. Privacy Consideration	a. Door does not close properly b. Can be seen inside through wall/door/roof c. Non-functional inside lock d. Other privacy concerns

Research questions	Indicator Group	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses
1.5. What proportion of latrines have all elements of the handwashing devices at facility?	Latrine Functionality	Observation	% of latrines with functional handwashing devices	6. Handwashing	a. handwashing device in place b. drum/container is in place c. water in the drum/container d. soap is present
2. What proportion of bathing cubicles are functional versus non-functional?	Bathing Functionality	Observation	% of functional bathing cubicles	a. 1. How many chambers/doors?	Integer
	Bathing Functionality	Observation	% of functional bathing cubicles	a. 2. How many chambers are functional?	Integer
	Bathing Functionality	Observation	% of functional bathing cubicles	a. 2. How many chambers are non-functional?	Integer
2.1. What are the most common functionality issues?	Bathing Functionality	Observation	% bathing cubicles by functionality issue	a. 3. Why non-functional?	a. Broken platform b. broken/ damage wall/door c. Access road is not in usable condition d. Privacy concern e. too dirty f. Other
2.2. What proportion of bathing facilities have privacy issues?	Bathing Privacy	Observation	% of bathing cubicles with privacy concerns	5. Privacy Consideration	a. Door does not close properly b. Can be seen inside through wall/door/roof c. Non-functional inside lock d. Other privacy concerns

Research questions	Indicator Group	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses
2.3. What proportion of bathing facilities have drainage channels that lead to a soak pit or open drainage?	Bathing Functionality	Observation	% of bathing cubicles connecting to a drainage pipe	a.9 Does the bathing cubicle have a drainage channel?	Yes/NO
	Bathing Functionality	Observation	% of bathing cubicles connecting to a drainage pipe	a. 10 What does the drainage channel connect to?	a. Primary drainage pipe b. A soak pit c. Open d. Other
2.4 What proportion of bathing facilities have stagnant water nearby?	Bathing Functionality	Observation	% of bathing cubicles with stagnant water nearby	Is there are stagnant water nearby	Yes/NO
3. What proportion of solid waste points are made of concrete, bamboo or CGI sheet metal?	Solid Waste Functionality	Observation	% of solid waste points by type of building material	Facility Type	a. concrete made b. bamboo made c. CGI sheet
3.1 What proportion of solid waste points are segregated by type of waste?	Solid Waste Functionality	Observation	% of solid waste points are segregated by type of waste	a.1 How many chambers/doors?	Integer
	Solid Waste Functionality	Observation	% of solid waste points are segregated by type of waste	b.1 Color segregation	a. Red/ green b. No color
3.2. What proportion of solid waste infrastructure have segregated waste in the bins?	Solid Waste Functionality	Observation	% of solid waste points which are being used	4. Is this facility used by refugees/ beneficiary?	Yes/No

Research questions	Indicator Group	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses
	Solid Waste Functionality	Observation	% of solid waste points are segregated by type of waste	b.2 Is waste dumped in a segregated manner?	Yes/No
4. What proportion of water points assessed are handpumps and what proportion are tapstands?	Water Point Functionality	Observation	% of water points by type	3.1. Facility Sub-type	a. Handpump d. Tapstand
4.1. What proportion of tapstand water outlets are functional?	Water Point Functionality	Observation	% of tapstand with functional outlets	c.1 How many outlets are attached in this tapstand?	Integer
	Water Point Functionality	Observation	% of tapstand with functional outlets	c.1.1 How many outlets are supplying water ?	Integer
	Water Point Functionality	Observation	% of tapstand with functional outlets	c.1.2 How many outlets are not supplying water?	Integer
4.2. What proportion of tapstand water outlets have taps?	Water Point Functionality	Observation	% of outlets with tap	c.2 How many outlets have taps?	Integer
4.3 What proportion of handpumps are functional?	Water Point Functionality	Observation	% of functional handpump	d.1 Is the handpump functional?	Yes/NO

Research questions	Indicator Group	Data collection method	Indicator / Variable	Questionnaire Question	Questionnaire Responses
4.4. What proportion of handpumps have platforms in need of repair?	Water Point Functionality	Observation	% of handpumps by condition of platform	d.2 Condition of the platform	a. Good b. need repair c. completely missing or damaged
4.5 What proportion of water points have stagnant water nearby?	Water Point Functionality	Observation	% of handpump with stagnant water nearby	is there are stagnant water nearby	Yes/NO

ANNEX 1: METHODOLOGY NOTES (IF RELEVANT)

ANNEX 2: [OTHER SPECIFY]