ACAPS - NPM ANALYSIS HUB
COX'S BAZAR - BANGLADESH

Technical note

BANGLADESH

CHALLENGES IN ANALYSING NEEDS OVER TIME USING MULTI SECTOR NEEDS ASSESSMENTS (MSNAS)

Experiences from the Rohingya response

23 November 2022

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OVERVIEW

In late 2021, ACAPS' Cox's Bazar Analysis Hub embarked on research to understand the development of humanitarian needs in the Rohingya refugee crisis. The research was mainly based on the comparison of findings from four consecutive years (2018–2021) of Multi Sector Needs Assessments (MSNAs). The report titled Needs and Priorities of Rohingya and Host Communities in Cox's Bazar since 2017 was published on 30 August 2022.

The 2019 Rohingya MSNA aimed to "provide an analysis of how refugees' population and host communities' needs have changed in 2019", while the 2020 and 2021 Rohingya MSNAs aimed "to facilitate an understanding of the evolution of needs and service gaps across time" (ISCG 05/2019, 06/05/2021, and 08/08/2022). Despite the similarity, direct comparisons of the yearly situations still proved challenging.

This technical note outlines the key challenges the ACAPS team faced while analysing and comparing data across multiple MSNAs. To develop an understanding of the Rohingya crisis over time, the team included other sources of information, such as the WFP Rohingya Influx Emergency Vulnerability Assessments (REVAs), especially for food and livelihood needs, and information supplied specifically from the sectors. On that note, similar comparability issues were also observed with these other assessments and information sources.

This note aims to highlight how assessment design, data collection, and results presentation enable (or prevent) trends analysis. It also aims to encourage assessment designers and coordinators to consider the future use of their data with the immediate requirements, even as they seek to improve data collection or overcome changes based on the context of the people in need.

KEY FINDINGS

- Assessment findings were not directly comparable because:
  - Indicators were inconsistent from year to year
  - Question design and response options varied from year to year
  - Sampling differed from year to year as the mode of data collection changed (from in-person to by phone during COVID-19)
  - The presentation of the analysis changed in each MSNA, preventing direct comparisons without access to the underlying data.
- Assessment findings for the Rohingya were not directly comparable with those for the host community because of differences in their situation and needs.

RECOMMENDATIONS

- Consistency and the manner questions are worded around key indicators are important. If necessary, other indicators may be added.
- When amending indicators, such as changing the timeline to which the indicator refers, ensure that they cover previous and current measuring methods.
- Ensure that the raw (cleaned) data behind regular assessments is easily accessible for further analysis and comparison over time based on approved data-sharing protocols.

METHODOLOGY

This document presents the reflections of the ACAPS Cox's Bazar team on the development of the Needs and Priorities of Rohingya and Host Communities in Cox's Bazar since 2017 report through a review of ACAPS' internal working documents to check comparisons over time. Based on these reflections, the team revisited previous challenges to ensure that key information was not missed. They also reviewed secondary data to inform the background of the study and expound on the importance of having comparable indicators from MSNAs (Okular Analytics 06/2021).

LIMITATIONS

The reflections presented here focused specifically on the MSNAs of the Rohingya response. All crises have their own unique characteristics, including time frame, context, and information landscape. Lessons identified from the Cox's Bazar analysis will require adaptation if used in other response contexts.

BACKGROUND

In 2018, the average length of a humanitarian crisis with a UN-coordinated response was more than nine years, an increase from the five-year average in 2014 (OCHA 04/12/2018). As the duration of crises increases globally, responses must remain relevant to people's needs to match evolving contexts and changing needs. Identifying trends and changes has become increasingly important to ensure the relevance of humanitarian response. Information enabling the comparison of situations over time is critical to understanding the evolution of needs in a protracted crisis and making strategic decisions accordingly (OCHA 31/07/2015).

MSNAs are a key tool for understanding needs and obtaining an overview of changes within a crisis, implying that comparability should be a key consideration in their design.

In a 2020 technical review of 12 MSNAs, comparability over time within a crisis was not a quality indicator assessed. Regardless, the authors still recommended better use of past information – including previous MSNAs – to show trends over time (Okular Analytics 06/2021). This recommendation can ultimately improve the information that multisector assessments are meant to provide to inform operational programming, strategy development, and the development of the appeal for funding of the Joint Response Plan (JRP), also known as the Humanitarian Response Plan in most crises.

MSNAs in the Rohingya context

It has been five years since Bangladesh received the largest of successive waves of Rohingya refugees fleeing Myanmar in August 2017. These refugees have stayed in 33 camps in Cox's Bazar, relying entirely on humanitarian assistance to meet their basic needs. Since 2018, MSNAs have been conducted annually under the mandate of the Inter Sector Coordination Group (ISCG), both for Rohingya refugees and the host communities living adjacent to the camp area in Teknaf and Ukhia upazilas. The ISCG conducted the assessment with advisory support from the Information Management and Assessment Working Group and an MSNA Technical Working Group comprising the IOM Needs and Population Monitoring unit, UNHCR, ACAPS, REACH, WFP VAM, and UNDP. The MSNAs are part of an overall response strategy, aligned with Grand Bargain commitments and intended to inform JRPs (ISCG 15/07/2019).

A particular feature of the Rohingya response is the need for two separate but linked assessments to understand the needs of Rohingya refugees and the host community. The objective is to produce key comparisons individually over time for each group and then between the two groups to understand similarities and differences in needs and concerns, as well as changes to these comparisons over time.

Comparison of needs over time based on MSNAs: lessons identified

The inconsistent use of indicators over time affected comparability and required additional secondary information for meaningful analysis.

In comparing needs over the four years, an indicator was considered "a measure of assistance supplied versus the needs expressed by the population (both Rohingya and host communities) at a certain moment in time" (ACAPS 30/08/2022).

An examination of the indicators across all Rohingya MSNAs revealed that the number of comparable indicators is limited, with very few present in all four years.

In total, there were 89 unique indicators in the MSNAs over the four years. The total number of indicators almost doubled from the first assessment in 2018 to the second assessment in 2019 and remained roughly the same in 2020. In 2021, the total number of indicators increased, likely linked to the measurement of the challenges the Rohingya faced because of COVID-19 restrictions. The additional indicators included the expected challenges or changes in the management of expenditures upon children's return to school after the lockdowns.

Table 1. Number of indicators in total and each year per sector

SECTOR	NUMBER OF UNIQUE INDICATORS USED IN ROHINGYA MSNAS IN TOTAL FROM 2018–2021	NUMBER OF INDICATORS USED IN 2018	NUMBER OF INDICATORS USED IN 2019	NUMBER OF INDICATORS USED IN 2020	NUMBER OF INDICATORS USED IN 202
Communication with Communities (CWC)	11	1	4	9	8
Education	10	1	3	6	8
Food security	4	1	2	2	3

SECTOR	NUMBER OF UNIQUE INDICATORS USED IN ROHINGYA MSNAS IN TOTAL FROM 2018– 2021	NUMBER OF INDICATORS USED IN 2018	NUMBER OF INDICATORS USED IN 2019	NUMBER OF INDICATORS USED IN 2020	NUMBER OF INDICATORS USED IN 202
Health	7	3	4	4	5
Livelihood	5	3	5	4	4
Nutrition	17	-	6	5	9
Protection and security	13	3	7	4	9
Shelter and NFIs	12	3	8	7	8
WASH[1]	10	8	5	4	7
TOTAL	89	23	44	45	61

The most notable changes observed in the number of indicators per sector in the MSNAs from 2018–2021 were:

- Only one indicator from each of the Education and CWC sectors was seen in 2018. Several indicators in each sector have been identified since.
- No indicators from the Nutrition sector appeared in 2018, but by 2021, it had 17 indicators, the highest of any sector.[2]

It is important to note that the overall increase in the number of indicators used in the MSNAs each year does not imply consistency in the use of indicators over the years.

The table below shows that only seven of the 89 indicators used in the MSNAs were used consistently in all four years. Of the Nutrition sector's 17 unique indicators, 15 were used only once. There is an indication that, for example, in 2020, some indicators did not work well and were no longer included in 2021 (KII 26/10/2022). In selecting indicators for the MSNAs yearly, we also considered whether sectors had already collected these indicators in their own assessments so they could measure other indicators in the MSNA to prevent respondent fatigue. WASH, Shelter and NFIs, and Health had various indicators used three or four times in the past four MSNAs, facilitating the direct comparison and detection of changes in needs.

Table 2. Number of times an indicator has been used per sector

SECTOR	NUMBER OF INDICATORS	NUMBER OF INDICATORS USED ONCE IN FOUR YEARS	NUMBER OF INDICATORS USED TWICE IN FOUR YEARS	NUMBER OF INDICATORS USED THRICE IN FOUR YEARS	NUMBER OF INDICATORS USED IN ALL FOUR YEARS
CWC	11	2	7	2	-
Education	10	3	6	1	-
Food security	4	2	-	2	-
Health	7	2	1	3	1
Livelihood	5	-	1	2	2
Nutrition	17	15	1	1	-
Protection and security	13	7	2	4	-
Shelter and NFIs	12	5	2	3	2
WASH[3]	10	2	4	2	2
TOTAL	89	39	24	20	7

In cases where indicators were discontinued in one or more years but considered necessary for identifying changes in needs over time in the comparison, the ACAPS Cox's Bazar team consulted, collated, and analysed other secondary data sources. This case was especially true for the Nutrition, Education, and Protection sectors.

1 Although the indicators in 2018 were not from the MSNA but from the report Water, Sanitation and Hygiene Baseline Assessment: Cox's Bazar, Rohingya Refugee Response, April 2018, they were similar to MSNA indicators.

2 In the Nutrition sector, ACAPS counted what we considered unique indicators. Some of these identified indicators could be collectively grouped as one indicator, but we considered them to be separate given that we did not appraise them as a variation of questions only. For example, blanket supplementary feeding supplies were mentioned only in 2021.

3 Although the indicators in 2018 were not from the MSNA but from the report Water, Sanitation and Hygiene Baseline Assessment: Cox's Bazar, Rohingya Refugee Response, April 2018, they were similar to MSNA indicators.

The team relied on the REVA to describe needs in the Food Security and Livelihood sectors in the four years. The REVA is another annual needs assessment that aims to monitor the food security situation and vulnerability levels of the Rohingya camp and host community populations. It looks specifically at these issues and is considered more relevant when analysing needs over time than the corresponding sections in the MSNA. As a monitoring product, it contains a core set of indicators that allows for the detection of changes over time. That said, for the most part, REVA indicators and questionnaires are adjusted to the changing nature of the context while keeping key indicators over time, as each edition of the REVA has a different objective, such as the Minimum Expenditure Basket, Local Economic Wide Impact Analysis, or Resilience Index Measurement and Analysis (KII 09/10/2022).

A full list of all indicators used in the MSNAs over the past four years and the additional indicators not included in the MSNAs but used in our comparison over the four years can be found in the Annex. The list provides the indicator name, the year(s) the indicator was included in the MSNA, and, in the case of non-MSNA indicators, the year(s) they were consistently used in that particular source (e.g. the REVA, SMART survey, or other secondary data as applicable).

Question design and response choices for indicators varied over time, influencing whether indicators could be compared directly.

Further analysis of the use of indicators over time in MSNAs showed that while some indicators were used more consistently across the years, the way the questions to the Rohingya survey respondents were framed around an indicator varied, affecting comparability. There were also cases where the use of indicators and the questions asked were consistent, but the response choices changed each year. For example, on the question about experiencing shelter issues, there were differences in the period respondents were asked to reflect on. The periods varied from the last six months, to the last 30 days, to currently.

Response options also varied according to the type of issue being asked about (e.g. damage versus more general issues), and possible answers became more detailed for a larger variety of issues, presumably as they had emerged or became known over time.

Figure 1. Variations in questions and responses around indicators and the comparability of questions each year

INDICATOR

In the last 30 days, has your shelter suffered from any of the following damage?

POSSIBLE RESPONSES

2018		
Roof structure (bamboo beams, rafters or other structure holding up the roof) has collapsed	Yes	No
Roof cover (tarpaulin, metal etc.) is damaged or lost and can no longer be used	Yes	No
Wall structure (columns or structural elements) has collapsed	Yes	No
Wall cover (tarpaulin, bamboo etc.) is damaged or lost and can no longer be used	Yes	No
Is your household sharing the shelter with another household?	Yes	No

INDICATOR

In the past 6 months did you face any issues with your shelter?

POSSIBLE RESPONSES

2019	
None	
Leaking roof	
Leaking walls	
Rotten/damaged bamboo	
Too small space (no cooking, no bathing, no latrine)	
Lack of privacy inside shelter	

2020	
No issues	
Yes, issues with the roof	
Yes, issues with the walls	
Yes, issues with the floor/plinth	
Yes, issues with damaged/rotting materials	
Yes, the space inside is not enough for the household	
Yes, can't lock the shelter from the inside and/or outside	
Yes, do not have enough privacy inside the shelter	
Yes, unable to conduct regular activities in the shelter (such as cooking, bathing, etc.)	
Yes, drainage is blocked and water floods in the shelter	
Yes, shelter is hard to access	
Yes, doors/windows are broken	
Don't know/prefer not to answer	
Other (specify)	

INDICATOR

Does your shelter currently have any of the following issues:

POSSIBLE RESPONSES

2021			
Leaks during rain	Yes	No	Don't know / prefer not to answer
Limited ventilation (no air circulation unless main entrance is open/heat is trapped)	Yes	No	Don't know / prefer not to answer
Presence of dirt or debris (unfinished floor)	Yes	No	Don't know / prefer not to answer
Lack of insulation from cold	Yes	No	Don't know / prefer not to answer
Shelter has severe structural damage, so that it is unsafe for living (household is still staying in shelter)	Yes	No	Don't know / prefer not to answer
Shelter has totally collapsed or has severe structural damage, so that it is unsafe for living (household is staying with other household or in temporary relocation center/communal shelter)	Yes	No	Don't know / prefer not to answer
Household is staying with other household due to lack of space/poor living conditions	Yes	No	Don't know / prefer not to answer
Shelter has totally collapsed or has severe structural damage, so that it is unsafe for living (household is sleeping in the open)	Yes	No	Don't know / prefer not to answer

Changes in population sampling and data collection methods occurred over the years. This change required checking the potential impacts of comparability of changes in needs and more secondary information to triangulate.

Assessments, through randomised sampling, collected representative data that provided a picture of the entire group. If randomised sampling for the same population is done consistently over time, then data can be compared. In the case of the MSNAs in the Rohingya response, the sampling showed variations in terms of the sample size, data collection method, time of data collection, and mode of data collection. Though there were noticeable differences over the four years, these differences did not affect the comparability of indicators but the comparability of changes in needs. The potential impacts of variations should be considered in assessment-planning so that, for example, a sample size does not become too small to be representative.

Table 3. Sample size and data collection approach in MSNAs 2018–2021

SECTOR	INDICATOR	2018	2019	2020	2021
Rohingya	Sample size and type	3,171 households	3,418 households	836 households 40 key informant interviews	3,683 households, 20 focus group discussions
	Data collection time frame	2–31 July	5 August to 15 September	27 July to 27 August	12–26 August, 21–29 September
	Data collection method	In person	In person	Phone interview	Phone interview and in person
Host community	Sample size and type	2,881 households, 22 focus group discussions	1,321 households	911 households 23 key informant interviews	1,118 households 20 focus group discussions
	Data collection time frame	11 November to 6 December 2018, 18–25 March 2019	7 August to 9 September	28 July to 30 August	12 July and 18 August, 21–29 September
	Data collection method	In person	In person	Phone interview	Phone interview and in person

- **Time of data collection:** all data collection for Rohingya MSNAs was conducted roughly between June–September of each year. This timing allowed the submission of MSNA results in time for the JRP planning in October–November each year. In the host community in 2019–2021, the MSNA data collection largely coincided with these periods. In the case of the 2018 MSNA, two data collection exercises were conducted in the host community. One took place in 2019, and neither took place between July–September. This assessment was the first MSNA for the host community after the Rohingya influx to Bangladesh in 2017, conducted as a baseline following the announcement of the inclusion of the host community in the 2019 JRP (ISCG et al. 15/02/2019). This JRP aimed to provide host community programming parallel to the Rohingya response (ISCG 31/03/2019). This outlier at the time of data collection did not affect ACAPS' analysis of the comparability of indicators.

  The time of collection for all other MSNAs coincided with the monsoon period. The consistent choice of data collection period also consistently captured the needs in sectors where the influence of the seasonality of weather played a role, such as in Shelter (damage of shelter through rain and flooding), NFIs (need for blankets and mosquito nets), WASH (drainage), and Health (occurrence of flu and dengue).

- **Mode of data collection:** the main factor that introduced variations in sampling for the Rohingya MSNA was the COVID-19 restrictions that affected data collection in camps. The MSNA team reached fewer respondents in 2020 as surveys were conducted entirely remotely by phone. In 2021, the survey sample size was comparable to pre-COVID-19 levels again but still occurred entirely through phone interviews. The focus group discussions (FGDs) in 2021 were conducted person to person.

  Sector analysts reported concerns about the quality of data collected remotely by phone in 2020–2021. Operational challenges affected the effectiveness of remote data collection. These challenges included patchy and unreliable networks resulting in calls dropping mid-interview, unreachable phone numbers, and the lack of a large representative phone database to produce the sample needed for a representative survey. High levels of distrust also resulted in the respondents' extreme reluctance to speak over the phone or share contact information. Because privacy during remote interviews could not be assured, some questions could not be asked remotely in a safe manner, and sensitive topics had to be removed or worded generally. Women and girls, older people, people with disabilities, and other people who are generally less vocal were also difficult to include (Holt et al. 23/11/2020).

Issues related to data collection over the phone, which potentially compromised the quality of sampling, were factors that needed to be considered in any other assessment carried out in the Rohingya response in 2020–2021 in general.

- **Type of data collection:** in recognition of the drawbacks of the survey data collection via phone, key informant interviews were conducted with the telephone surveys for the Rohingya MSNA in 2020. Although the interviews were also carried out over the phone, they allowed for a more in-depth insight into needs as the survey alone would not allow for such an analysis. Apart from the survey, FGDs were used in the MSNAs in 2021. These FGDs helped explore the reasons behind the identified needs over time. The additional analysis based on qualitative information also aided in a better understanding of the needs for comparison.

Reporting on findings was based on reports with different structures and styles over the years, requiring more evidence and triangulation with secondary data, as access to raw data was not available through all the years.

When raw data from the MSNA data collection was not publicly available, we based our analysis entirely on secondary data, mainly text-based MSNA reports, fact sheets, and graphs. The reports did not follow a fixed structure and writing style, and the focus of analysis presented on the same indicator varied from year to year over time. Notably, in 2020–2021, some efforts were made to perform a comparative analysis of the text of the MSNA reports for some indicators, referring to the previously stated objective of comparability.

Other secondary data sources used different wording to describe how indicators were analysed and evaluated. Different aggregation levels were sometimes used each year.

Access to clean raw MSNA data collected would have enabled specifically gearing analysis towards the comparison of needs over time.

The situation of the host community is different from that of the Rohingya, and needs arise on a different basis.

It is important to compare changes in the host community over time to see whether the situation has stayed the same or needs have changed. In most cases, the challenges in comparing information for the host community in MSNAs over time were similar to those encountered with the Rohingya.

The situation of the host community largely differs from the Rohingya community, limiting the comparability of indicators for the Rohingya and host communities based on their respective MSNAs. Host communities do not receive humanitarian assistance in the same way as the Rohingya in the camps, who have become entirely reliant on assistance. Needs described for the host community also arise from a different baseline situation given that facilities, such as schools and hospitals, property ownership, and livelihoods existed before the Rohingya influx. Other indicators, such as how the nutrition situation compares across both communities, are relevant.

Finding relevant secondary data sources for the host community was another challenge.

REASONS FOR CHANGES AFFECTING COMPARABILITY

Changes to indicators, questions in multiannual assessments, and how data is organised and processed should be expected. As discussed above, these changes may influence comparability. There are many reasons for such changes, including the following:

- Staff turnover results in a loss of institutional memory. As staff leave and enter the response, their understanding of what was done and why it was done diminishes. It takes a solid information and knowledge management structure to prevent this drawback.
- Constant effort to improve the assessment based on lessons identified can result in changes in the process, questions, and indicators. While changes in indicators or questions framing the indicators can result in a better snapshot of the situation at one point, they may limit direct comparability with previous assessments.
- Unavoidable changes will have to be introduced to adapt to external factors, as was the case in the 2020–2021 Rohingya MSNAs when COVID-19 restrictions required the remote collection of data through phone interviews – a significantly different approach, with different constraints than in previous years and new challenges to sampling.
- Crucial information gaps emerge over time, and the MSNA is adjusted to fill them. The MSNA structure used throughout humanitarian crises in the world has reached a certain maturity that can be considered comprehensive. Local contexts might include elements that determine the development of needs over time, but they are only understood after some time into the crisis. As a result, the MSNA might need to be adjusted to capture the changes in needs.

ANNEX. MSNA INDICATORS AND THEIR FREQUENCY OF USE

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Food security	Food consumption score		x	x	X		3	From the REVA, as in the MSNA, the information was not found for all the years for both Rohingya and host communities; for Food and Livelihood, the REVA was more reliable.	Yes
Food security	Challenges to accessing food assistance				x		1		
Food security	Food expenditure				x		1		
Food security	Food consumption difference between male- and female-headed households							This indicator was not quantifiable and comparable in all the years. Both the REVA and MSNA were used for comparison.	Yes
Food security	Challenges to accessing the market	x	x	x			3		
Livelihood	Main source of income	x	x	x	x	The question was asked differently each year, but there was not enough information in the analysis.	4	REVA, as this information was not available in MSNA reports	Yes
Livelihood	Presence of child labour	x	x				2		
Livelihood	Prevalence of adoption of coping strategies		x	x	x		3		
Livelihood	Type of coping strategies adopted by households	x	x	x	x	The indicator was assessed over time, but the questions were framed differently each year, and so was the analysis.	4		
Livelihood	Economic vulnerability							REVA	Yes
Livelihood	Overall vulnerability							REVA	Yes

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Liveliho-od	Reasons for adapting coping strategies		x	x	x	The indicator was assessed over time, but the questions were framed differently each year, and so was the analysis.	3		
Health	Wellbeing		x	x	x		3		
Health	Health-seeking behaviour		x	x	x		3	MSNA	Yes
Health	Accessing type of health facility	x	x	x	x		4	MSNA	Yes
Health	Barriers accessing healthcare	x	x	x	x	The questions and choices were framed differently, making them difficult to compare directly.	4	MSNA	Yes
Health	Health-related expenditure				x		1		
Health	Health conditions of children and pregnant and lactating women (PLW)	x					1		
Health	Health-related coping strategies		x	x			2		
Shelter and NFIs	Type of issues with shelter	x	x	x	x	The indicator was assessed over time, but the questions were framed differently each year, and so was the analysis.	4		
Shelter and NFIs	Shelter as a priority need		x	x	x	This indicator was not sector-specific; it was assessed as a general indication of priority need where shelter need was consistently high.	3	MSNA	Yes
Shelter and NFIs	Mobility challenges inside/outside the shelter		x	x		The indicator was assessed over time, but the questions were framed differently each year.	2		
Shelter and NFIs	Improvements made by households		x	x			2		
Shelter and NFIs	Households not making improvements		x	x	x		3		

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Shelter and NFIs	Reasons for not improving shelters when needed		x	x	x		3		
Shelter and NFIs	Shelter repair expenditure				x		1		
Shelter and NFIs	Rent payment		x	x	x		3		
Shelter and NFIs	Households having insufficient NFIs				x		1	MSNA	
Shelter and NFIs	Urgently needed NFIs	x					1		
Shelter and NFIs	Use of cooking fuel	x	x	x	x		4	MSNA	Yes
Shelter and NFIs	Cooking fuel expenditure				x		1		
Shelter and NFIs	Adequate light		x			This indicator was not directly assessed each year but was mentioned in all four years.	1	MSNA	Yes
WASH	Access to sufficient water supply		x	x	x	This indicator was assessed over time, but the questions were framed differently each year.	3	All indicators from 2018 were not from the MSNA but from the report Water, Sanitation and Hygiene Baseline Assessment: Cox's Bazar, Rohingya Refugee Response, April 2018. https://bit.ly/2SN3t5z. The indicators were similar to MSNA indicators.	
WASH	Source of drinking water	x	x	x	x		4	MSNA	Yes
WASH	Issues accessing water points	x	x	x	x	This indicator was not quantifiable and directly comparable in all the years.	4	MSNA, REVA, and other sources	Yes
WASH	Types of sanitation facilities used		x		x	This indicator was assessed in two years, but the choices were different.	2		

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
WASH	Issue accessing sanitation facilities	x		x	x	This indicator was assessed, but the questions were framed differently, and so was the analysis, making them difficult to compare directly.	3	MSNA, REVA, and other sources	Yes
WASH	Types of bathing facilities used	x		x			2		
WASH	Issue accessing bathing facilities	x		x	x	This indicator was assessed, but the questions were framed differently, and so was the analysis, making them difficult to compare directly.	3	MSNA, REVA, and other sources	Yes
WASH	Access to hygiene items	x	x	x	x		4	MSNA	Yes
WASH	Access to menstrual hygiene items	x			x		2	MSNA and other sources	Yes
WASH	Waste management	x	x		x	This indicator was assessed over time, but the questions were framed differently each year.	3		
Protection and security	General security issues	x		x	x	This indicator was assessed over time, but the questions were framed differently each year.	3		
Protection and security	Households in need of protection services/support				x		1		
Protection and security	Areas individuals considered unsafe	x	x		x	The indicator was assessed over time, but the questions were framed differently each year.	3		
Protection and security	Reasons for individuals feeling unsafe		x				1		
Protection and security	Issues accessing protection services				x		1		
Protection and security	Reasons for not accessing protection services				x		1		
Protection and security	Point of contact		x	x	x		3	MSNA	Yes

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Protection and security	Challenges after accessing protection services				x		1		
Protection and security	Unmet needs of children				x		1		
Protection and security	Child protection issues	x	x		x	This indicator was assessed differently.	3	Other	Yes
Protection and security	Gender-based violence issues							Other	Yes
Protection and security	Freedom of movement for individuals		x	x			2		
Protection and security	Reasons for individuals feeling unsafe in certain areas		x				1		
Protection and security	Reasons for tension between two communities		x	x			2		
Education	Proportion of individuals who attended school			x			1		
Education	Types of education facilities accessed	x	x				2		
Education	Quality of education							Other	Yes
Education	Barriers to accessing education facilities		x			The indicator was assessed over time, but the questions were framed differently each year.	1	MSNA	Yes
Education	Educational expenditure		x		x		2		
Education	Households/ individuals reporting at least one school-aged child that would not be sent back to learning facilities once they reopened			x	x		2		
Education	Challenges faced in remote studying			x	x	The indicator was assessed in 2020–2021, but the questions were framed differently each year, and so was the analysis.	2		Yes

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Education	Reasons for not studying remotely			x	x	The indicator was assessed in 2020–2021, but the questions were framed differently each year, and so was the analysis.	2		
Education	Main reasons for not sending children back to schools when they reopened			x	x		2		
Education	Expected challenges once children (girls) were sent back				x		1		
Education	Reasons for not attending education facilities				x		1	MSNA	Yes
Nutrition	Children enrolled in feeding programmes		x	x	x	The indicator was assessed over time, but the questions were framed differently each year.	3		
Nutrition	Global acute malnutrition rate							The SMART survey is a sector-specific Nutrition assessment in this response.	Yes
Nutrition	PLW receiving supplementary feeding supplies				x		1		
Nutrition	PLW screened for malnutrition				x		1		
Nutrition	Challenges when visiting the nutrition facility				x		1		
Nutrition	Children not receiving blanket supplementary feeding supplies				x		1		
Nutrition	Households with children aged 6–59 months reporting having received messages related to the mother-led mid-upper arm circumference programme				x		1		

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Nutrition	Households reporting mothers or caregivers having screened at least one of their children aged 6–59 months				x		1		
Nutrition	PLW to be enrolled in a feeding program			x			1		
Nutrition	Children 6–59 months reported being enrolled in a feeding program			x			1		
Nutrition	Children not being screened for malnutrition			x	x		2		
Nutrition	Of individuals aged 6–59 months, percentage reported as currently enrolled in any feeding programme, by type of programme		x				1		
Nutrition	Households reporting the presence of at least one mother with a child aged 0–2 years, percentage reported having received support on feeding young children		x				1		
Nutrition	Individuals aged 0–2 years at the time of data collection, percentage reporting to have been breastfed immediately/ within an hour of birth		x				1		
Nutrition	Households reporting the presence of a pregnant woman		x				1		

SECTOR	INDICATOR	MSNA-ROHINGYA 07/2018	MSNA-ROHINGYA 09/2019	MSNA-ROHINGYA 08/2020	MSNA-ROHINGYA 08/2021	REMARK	COUNT	SOURCE	USED IN 4YC
Nutrition	Of households reporting the presence of at least one pregnant woman, percentage indicating whether the pregnant woman is currently enrolled in an antenatal care programme		x				1		
Nutrition	Children not receiving treatment				x		1		
Nutrition	Key barriers to the enrolment of children/PLW into feeding programmes			x			1		
CWC	Households reporting having faced problems accessing information			x	x		2		Yes
CWC	Households reporting not having been able to access (receive and understand) enough clear information by type of service			x	x		2		
CWC	Information about cyclones			x	x		2		
CWC	Information about COVID-19			x	x		2		
CWC	Households feeling consulted				x		1	Ground Truth Solutions (GTS)	Yes
CWC	Households facing challenges and providing feedback/ complaints		x	x	x		3	MSNA	Yes
CWC	Households' perception of being well informed			x	x		2	MSNA	Yes
CWC	Priority needs		x	x	x		3	MSNA	Yes
CWC	Preferred aid modalities		x	x			2		
CWC	Households reporting what is and what is not going well with assistance		x	x			2		
CWC	Information source	x					1		