

SHELTER PERFORMANCE STANDARD ASSESSMENT REPORT 2023

Rohingya Refugee Response, Cox's Bazar, Bangladesh

Data Collection: February – April 2023



Image: Camp 14, © TOM

**Rohingya
Refugee
Response**
Bangladesh

**SHELTER & CCCM
SECTOR**
Cox's Bazar, Bangladesh



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List of Acronyms

- CCCM- Camp Coordination and Camp Management
- HH- Household
- ISCG- Inter-Sector Coordination Group
- IOM- International Organization for Migration
- JNA- Joint Needs Assessment
- KRC- Kutupalong Registered Camp
- MTS- Mid-term Shelters
- NFI- Non-Food Items
- NPM- Needs and Population Monitoring
- OSM- Open Street Map
- RRRC- Refugee Relief and Repatriation Commissioner
- SMS- Site Management Support
- SMSD- Site Management and Site Development
- SCCCCM Sector - Shelter and CCCM Sector*
- SUM- Shelter Upgrade Maintenance
- TSA- Transitional Shelter Assistance
- UNHCR- United Nations High Commissioner for Refugees

*SNFI (Shelter and NFI) sector and SMSD (Site Management and Site Development) were merged into the SCCCCM sector in January 2023.

1. Introduction

1.1 Overview:

The total number of Rohingya refugees in Cox's Bazar and and Bhasan char is around 961,729 individuals¹. A high majority of the Rohingya refugee population is concentrated in 33 extremely congested camps within Ukhiya and Teknaf Upazilas of Cox's Bazar district, Bangladesh. The refugees are dependent on the assistance provided by the humanitarian community and the government of Bangladesh. In the camps, shelters are exposed to cyclic monsoons and face risk of floods, landslides, fire and cyclones. Temporary materials such as bamboo and tarpaulin have a limited capacity to resist weather impacts, and thus require regular repairs and replacement. Use of adequate material (treated bamboo, good quality tarpaulin) along with the design, site plan, proper technical details for the materials connections, can improve lifespan of materials if properly followed. Training for the beneficiaries on how to repair and maintain their shelters is also one of the essential elements of shelter assistance to ensure less dependency on humanitarian support. The SCCCM sector and its partners established Shelter Performance Standards in 2019 to set up a standard for shelter quality and have consistent guidelines to be followed over time. In order to determine if the surveyed shelters fulfill the minimum or desired standards as well as HHs perceptions on other housing-related issues, since 2021 NPM (Needs and Population Monitoring) has been conducting Shelter Performance Standard Assessment and producing the report in collaboration with the SCCCM sector. The below document represents findings from the assessment conducted by NPM on the Shelter Performance Standards 2023 which reflect shelters conditions across 33 camps. NPM in coordination with the SCCCM sector conducted similar studies in 2022 and 2021. The reports can be found in the following links:

- 2022-<https://www.humanitarianresponse.info/en/operations/bangladesh/document/shelter-performance-standard-assessment>
- 2021-<https://reliefweb.int/report/bangladesh/shelter-sector-cox-s-bazar-shelter-standard-assessment-survey-analysis-september>

1.2 Population of Interest:

All Rohingya refugees residing in the camps recognized by the RRRC in Cox's Bazar, Bangladesh.

1.3 Background of Shelter Performance Standards:

The goal of the SCCCM sector is to ensure that every refugee household has access to protection-focused and culturally appropriate Shelter/NFI solutions that provide privacy, security, protection from the elements, reduce exposure to hazards, and space to store belongings and live in a dignified manner. The SCCCM sector partner's effort is also dedicated to ensuring tenure assessment and HLP case management. To set a benchmark for shelter quality and have unified standards to be followed across the years, the SCCCM sector and partners developed [Shelter Performance Standards](#) in 2019. The Shelter Performance Standards were approved by the RRRC on 6 January 2020 and consist of two tiers:

1) The first tier is defined as Minimum Performance Standards. There are 19 minimum performance standards, applicable for all shelter upgrades, repairs, maintenance, and shelter replacements in the areas that are not re-developed or newly developed (TSA I, TSA II, SUM, repairs and maintenance, and other shelter responses).

2) The second tier is defined as Desired Performance Standards. To meet the Desired Performance Standards, all Minimum Performance Standards should also be met. Whenever possible, Desired Performance Standards should be met and are applicable for all shelter construction in re-developed and newly developed areas.

- All the shelters developed in those areas need to follow RRRC-approved designs and site planning provided by the AOR focal organization.
- Only shelters built in safe site with adequate materials (properly treated bamboo, footings made of concrete or metal, RCC columns, good quality tarpaulins), fire safety cooking wall plaster with non-flammable materials in accordance with the Desired Performance Standards, approved RRRC designs and in accordance with SCCCM sector guideline can be considered mid-term shelters (MTS).

¹<https://data.unhcr.org/en/country/bgd>

Given the focus on Sector-driven Minimum Performance Standards and Desired Performance Standards, the measurement approach for each minimum standard was jointly discussed and refined between the assessment teams and shelter experts to ensure feasibility and accuracy. If certain standards are either subjective, seasonal, or require specialized expertise, the SCCCM sector proposed proxies for the standard or, if the standard is deemed not possible to be measured through this exercise, SCCCM sector partners agreed on a reweighted scale for analysis purposes.

2. Methodology and Data Collection

2.1 Research Method:

The assessment adopted a mixed method approach which included direct observations and measurements of shelter structures followed by a short quantitative questionnaire. The NPM carried out the data collection from February to April 2023.

2.2 Sampling:

To ensure that produced results are generalizable at the camp level, a stratified simple random sampling approach was used with a 95% confidence level and a 10% margin of error. The RRRC and UNHCR population counts were utilized to generate samples for each camp, ensuring representativeness at the camp level with the aim that every shelter in the 33 camps in Ukhiya and Teknaf have an equal chance to get selected for the survey. In total, 3,059 surveys were administered in 33 camps.

The ISCG and RRRC recognized camp boundaries were laid on NPM-IOM 2023 Camp Shelter Addressing Shelter footprints to generate random sample points for administering surveys. Fire-affected blocks (A, B, D) in Camp 11 were not assessed since many shelters (around 2,165) in these three blocks were damaged by the fire that occurred in March 2023.

2.3 Tool Development and Data Collection

The SCCCM sector reviewed the tool used in last year's shelter performance standard assessment and finalized it with a few adjustments. NPM provided technical support to transform the tool into a format supported for digital data collection. The Kobo collect platform was used for data collection. Due to the technical nature of the assessment, three-days training was held for enumerators. Enumerators were trained by SCCCM sector partners on the standards and methodology of the assessment. The objectives and questionnaire were discussed in detail, followed by a practical field test and pilot. The enumerators were supervised by the SCCCM sector team and partners.



Image: NPM Enumerators were Assessing Shelters During the Study: (From left to right) the First Image Demonstrates an Enumerator Measuring Garenja Height (Camp 17), the Second Image Shows a Male Enumerator Interviewing a Male Respondent alongside a female enumerator entering information into Kobo (Camp 18), and the third Image Illustrate an Enumerator Measuring Tarpaulin Covering the Wall (Camp 18).

2.4 Data Processing, Analysis and Reporting:

The NPM data unit was responsible for data cleaning such as inconsistencies, outliers along with translations and recording of other options. The operations team and the survey enumerators were consulted regarding any problems before changes were made. Due to the sensitive nature of the data, all personally identifying information from the survey was removed. The clean dataset was shared with the SCCCM sector for validation. NPM also developed the data analysis plan in consultation with the SCCCM sector and executed analysis for the assessment. NPM prepared the report and shared it with SCCCM sector for their review before finalization.

3. Limitations, Caveats and Mitigation Measures:

3.1 Limitation of the Study:

Accuracy of Responses:

- Some of the questions were answered by enumerators through direct observation and measurements. Hence the accuracy of these answers depends on the perception and interpretation of the enumerators. In addition, technical aspects of the shelter construction were observed and assessed by the enumerators, acknowledging that family members present in the shelter may not have technical knowledge. Enumerators were trained by the SCCCM sector and partners on the technical assessment.

Sampling Frame:

- Results can be considered representative of the population included in the sample frame because the sampling frame did not comprise the entire camp population. The sampling frame represents the camp population as a whole.

Limitation of Perception-based Questions:

- Answers to perception-based questions are subject to biases. Some indicators may be over or under-reported based on the perceptions of respondents. Hence, it is necessary to take these biases into consideration while interpreting the data.
- It was also documented in the different assessments that the perception-based questions are not responded in the same way when the enumerators are Bangladeshi nationals. There is more easiness for Rohingya to speak to Rohingya enumerators and the results are more accurate.

Rohingya Refugees Do Not Show Dissatisfaction with Humanitarian Assistance in Some Cases:

- It was also observed that Rohingya refugees do not show dissatisfaction with humanitarian assistance as they are afraid to be excluded from more assistance.

Limitation of Household Survey:

- One respondent represented one household and may not reflect the opinions of every household member.

Not Providing In-depth Analysis:

- It does not cover an in-depth explanation of complex issues since no qualitative data was collected.

3.2 Mitigation Measures:

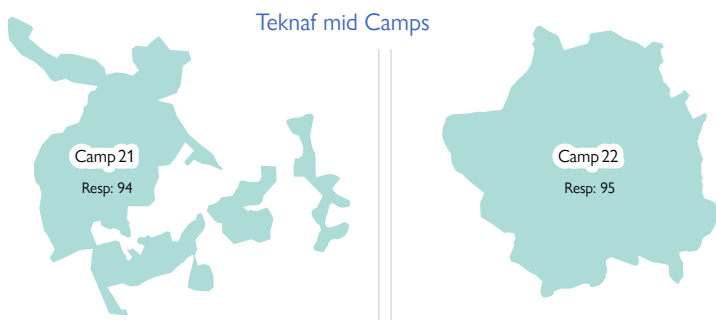
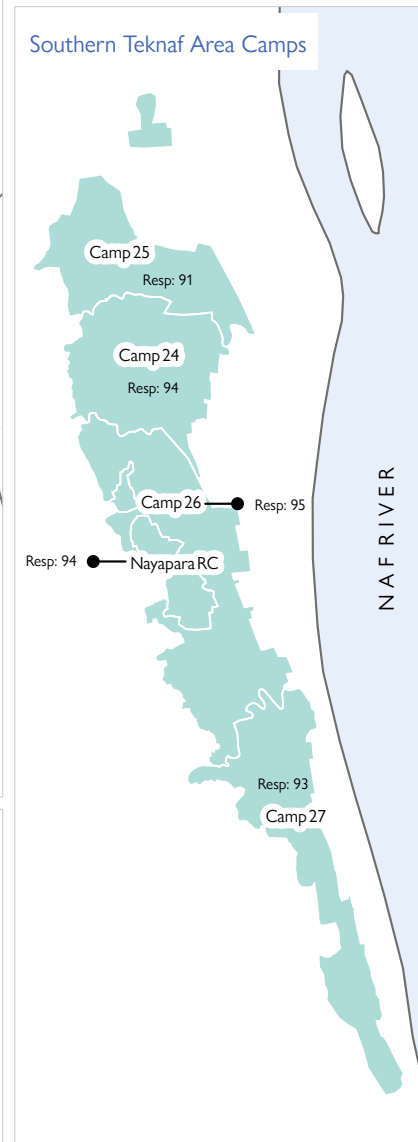
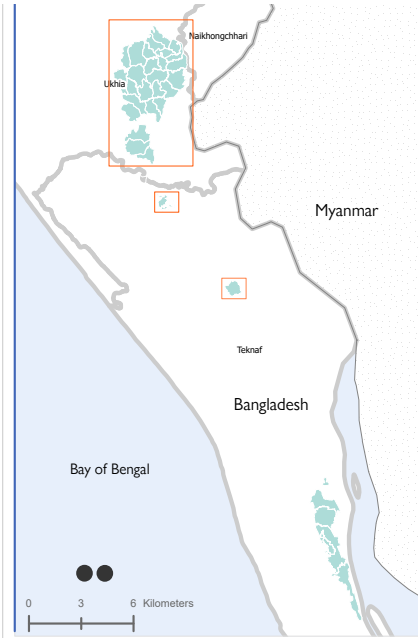
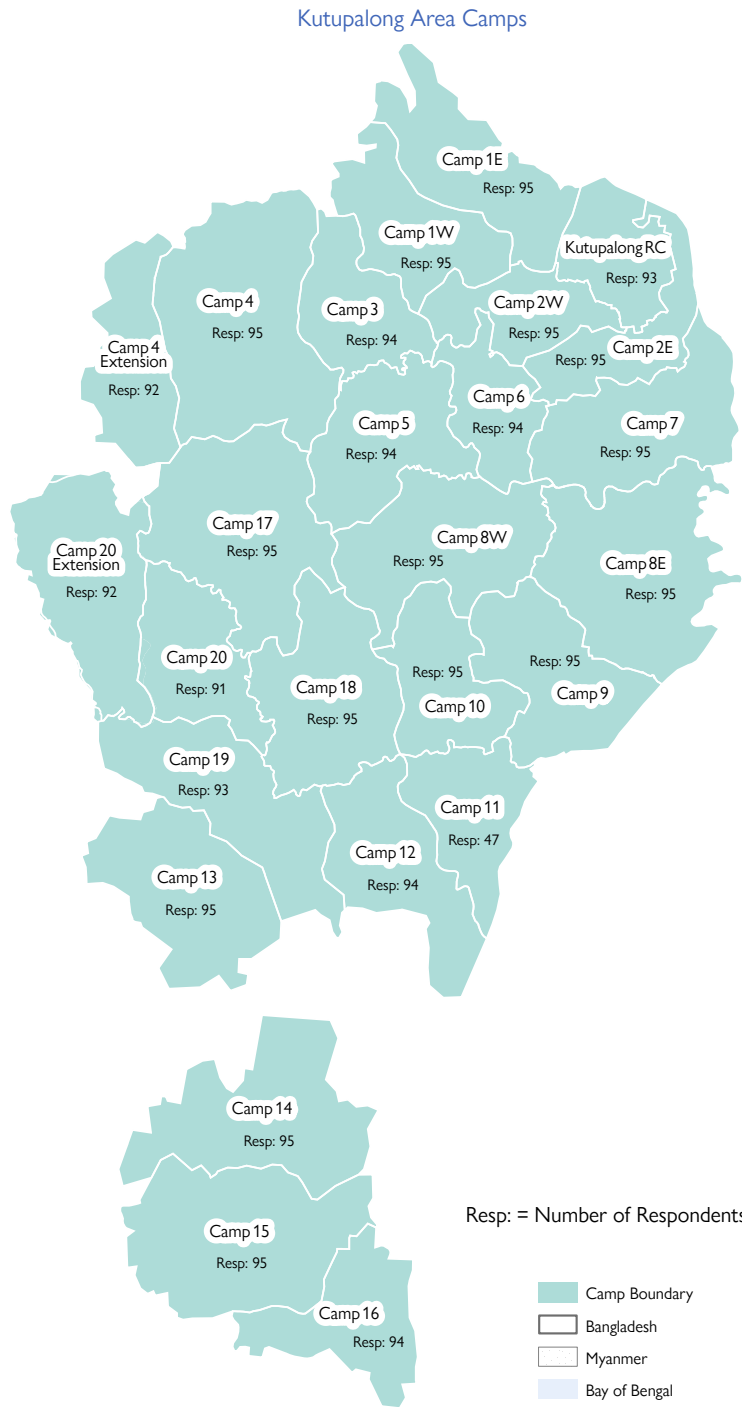
Utilization of Best-skilled Enumerators: For data collection, NPM deployed the most experienced enumerators who were involved with shelter performance standards assessment in the previous two rounds.

Daily Data Checking and Cleaning: NPM carried out the data checking and data cleaning on a daily basis and followed up with enumerators for clarification on any discrepancies and provided them feedback immediately to prevent repeating the same error. In addition, NPM shared the data with the SCCCM sector team regularly in order to find any error in the data from the technical perspective.

Post-verification: NPM jointly with the SCCCM sector also carried out post-verification of one few elements as data were of an outlier considering the standard.

Consideration of Previous Lesson Learned: All the lessons learned identified in the previous rounds were taken into consideration, e.g., during this round training duration was extended, and technical parts of the questionnaire were prioritized exclusively through involving different shelter partners. NPM enumerators were provided copies of the training presentation slide as a 'guide' during data collection.

4. Map: Assessed Camps



5. Key Highlights

5.1 Shelter Assistance:

63% of the respondents informed that they received shelter assistance last year, while 37% didn't. Out of 33 camps, in 22 camps the percentage of receiving shelter assistance is more than 50%. The camp level findings can be found on page no 5 (see the map 2).

5.2 Minimum Performance Standards:

Minimum Standards Met (between 60%-100%)	
Shelter has not been affected by flood water	100%
There is no water logging around the shelter	98%
Shelter has means to be locked from inside and out	94%
Plinth height is a minimum of 6 inches (15 cm)	86%
Gutters are installed between shelters where roofs meet	81% ²
Rainwater does not enter the shelter through the wall	81%
Shelter is safe from soil erosion and landslides	72%
Distance between small bamboo rafters is max 1 foot	70%
Distance between purlins is max 1 foot	68%
Floor has cement finish without excessive holes	68%
Distance between bamboo columns is max 5 feet	66%
Distance between big bamboo rafters is max 1 foot	61%
Shelter has openings for cross ventilation	60%
Minimum Standards Met (between 31%-59%)	
All footings are concrete or metal	40%
Footings are 2 feet under the ground	38%
Structural bamboo does not show sign of infestation	31%
Minimum Standards Met (Less than 30%)	
There are fire-resistant materials protecting the cooking space wall	27%
Internal wall to provide privacy	24%
Rainwater does not enter the shelter through the roof	22%
Shelter has been tied down in accordance with sector guidance	15%
Adequate and functioning drainage on external shelter sides	12%
There is adequate bracing in all corner bays	9%

5.3 Desired Performance Standards:

65% of shelters did not meet this standard for treated bamboo and visible signs of infestation, 20% met partially and 15% shelter constructed with the treated bamboo.

(Note: If all used borak/big bamboo in the columns, rafters, and wall plates are treated and no sign of infestation then "Yes", if treated bamboo is used in some of the columns only, then "partial", if treated bamboo has not been used/has sign of infestation, then "No")

5.4 Minimum/Desired Standards: Comparison

Standards that Remained the Same/Not Improved	2023	2022	2021
Internal wall to provide privacy	24%	18%	57%
There are fire-resistant materials protecting the cooking space wall	27%	30%	22%
Rainwater does not enter the shelter through the roof	22% ³	44%	45%
Shelter has been tied down in accordance with sector guidance	15%	8%	9%
Adequate and functioning drainage on external shelter sides	12%	8%	8%
All the big bamboo used to construct the shelter are treated	15%	15%	9%
Structural bamboo does not show sign of infestation	31%	24%	14%
There is adequate bracing in all corner bays of the shelter	9%	9%	8%
Standards that Improved Exclusively			
Rainwater does not enter the shelter through the wall	81% ⁴	43%	44%
Shelter has openings for cross ventilation	60%	21%	15%

5.5 Household Perception:

- Flood was perceived as the lowest threat and fire was perceived as the highest threat by respondents. 14% of the respondents were found not happy with privacy in their shelters.
- Improvements Suggested by HHs for Shelter Privacy-size of shelter (64%), changing walling material (14%), internal partition (11%), etc.

5.6 Housing Land and Property:

- A very few respondents (5%) reported they provided goods/labor in exchange for the use of the land or shelter they occupy. 95% of HHs stated that it was not needed.
- 23% of respondents reported that they pay cash in exchange for the use of the land or shelter with Camp 25 (100%) and Camp 27 (99%) being higher. Out of them who pay, 92% of the respondents (376 HHs) struggled to pay rent in the last 12 months.
- Ukhiya upazila (384 HHs) had a higher number of households that paid rent in cash compared to Teknaf upazila (321 HHs).

²N=216

³N=1,724

⁴N=1,724

6. Meta Data

6.1 Demographic Information:

3,059
Total number of respondents



53%
of respondents' age was between 25-40



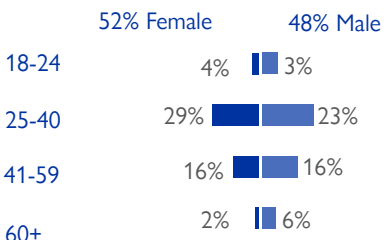
64% of respondents were head of households



164⁵
Total number of persons with disabilities



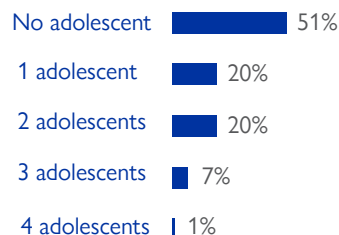
Graph 1: Respondents by Age and Gender



Graph 2: Size of the Surveyed HH



Graph 3: Percentage of HHs Reporting Having Adolescent



6.2 Washington Group Question:⁶

2% of respondents reported having household members who have difficulty (a lot/some) seeing, even if wearing glasses, compared to the rest 98% who reported no difficulty.

1% of respondents reported having household members who have difficulty (a lot/some) hearing, even if using an aid, compared to the rest 99% who reported no difficulty.

3% of respondents reported having household members who have difficulty (a lot/some) walking or climbing steps, compared to 97% who reported no difficulty.

2% of respondents reported having household members who have difficulty (a lot/some) remembering or concentrating, compared to 98% who reported no difficulty.

3% of respondents reported having household members who have difficulty (a lot/some) with self-care, such as washing or dressing, compared to 97% who reported no difficulty.

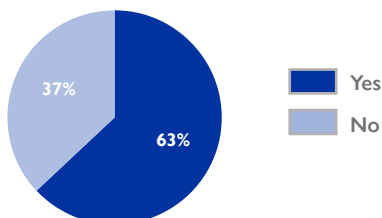
2% of respondents reported having household members over the age of 5 who have difficulty (a lot/some) communicating, compared to 98% who reported no difficulty.

7. Shelter Assistance

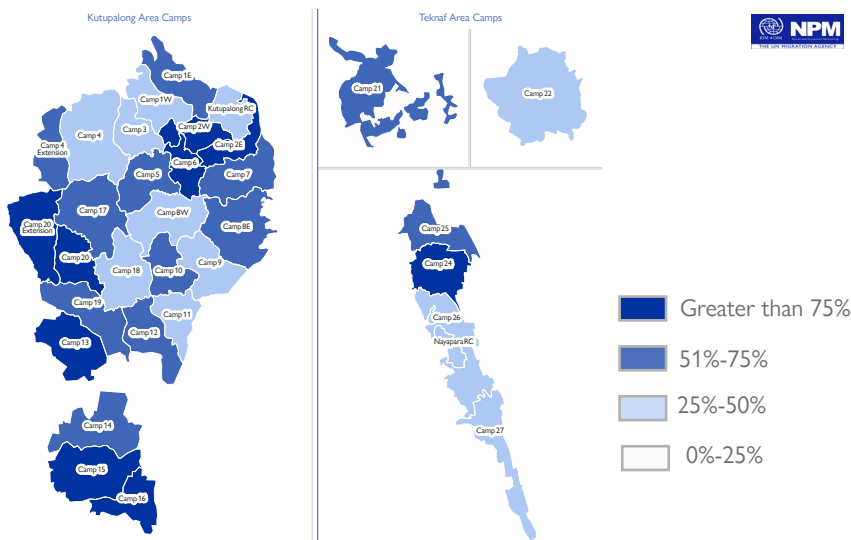
63% of surveyed respondents reported they received shelter assistance last year, while 37% didn't.

Camp 16 had the highest percentage (98%) who received shelter assistance in the last year and Camp 11 (36%) had the lowest percentage.

Graph 4: Percentage of HHs Receives Shelter Assistance in the Last Year



Map 2 : Percentage of HHs Received Shelter Assistance in the Last Year by Camps



⁵If one person has multiple disabilities, he/she was counted as 1 person.

⁶Numbers are rounded and may not sum to 100%

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

8.1 Overview:

The SCCCM sector initiated the assessment to assess the state of the shelters in all camps against the agreed Shelter Performance standards, approved by the RRRC in January 2020 and to reflect the conditions of shelters across the camps⁷. Below are the findings for all questions related to the minimum performance standard.

Height of Plinth:

63% of shelters assessed had shelters standing on a plinth. Camp 4Ext had the highest percentage (91%) and Camp 8W, 21 (19%) had the lowest percentage.

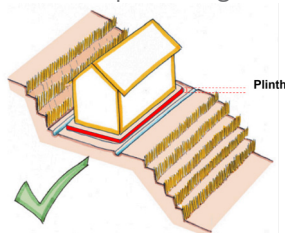
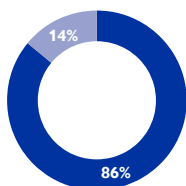
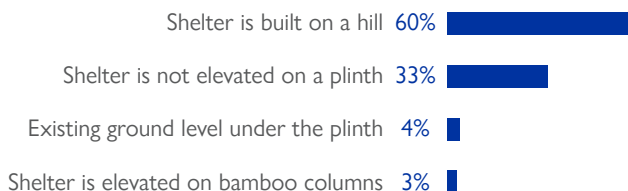


Image: Shelter standing on a plinth

(Graph 5) Out of 37% of shelters that were not standing on a plinth 60% of shelters were found built on a hill followed by 33% of shelters that were not elevated on a plinth, 4% of shelter’s existing ground level were under the plinth and others were elevated on bamboo columns (3%).

Graph 5: Main Reasons Shelters Were Not Standing on a Plinth



Graph 6: 86% met minimum standard

86% (out of 63% shelters standing on plinth) total shelters met the minimum standard of plinth above 15 cm (6”). The plinth was measured on all four corners of the shelter and the average value was recorded.

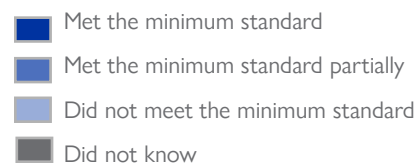
Out of 86 % of shelters standing on a plinth, there is 2.5% of shelters on average in each camp met the minimum standard of having a plinth of a minimum height of 15 cm (6”), and only three camps (11, 21 and 8W) shelter had less than 1.5% in average met the standard.



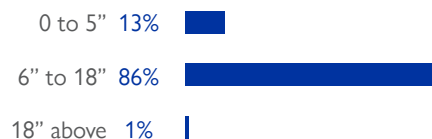
Image: Minimum 6”

Image: Measurement of the plinth

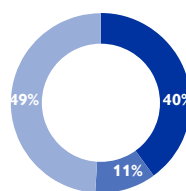
⁷Shelter Performance Standards: <https://www.humanitarianresponse.info/en/operations/bangladesh/document/performance-standard-weighting>



Graph 7: Height of Plinth (in inches)



Use of Concrete or Metal Footings:



Graph 8: 40% met minimum standard

40% of shelters met the minimum standard with all footings being concrete or metal. 49% of shelters did not meet the standard by having less than four footings in concrete or metal, and 11% of shelters met the standard partially with only four corner columns having concrete or metal footings.

Camp 9 (78%) had the highest proportion of shelters that met the minimum standards for footings being concrete or metal. Camps 1E, 3, and 26 (3%) had the lowest percentage that met this standard.



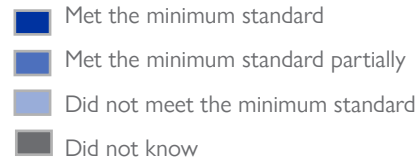
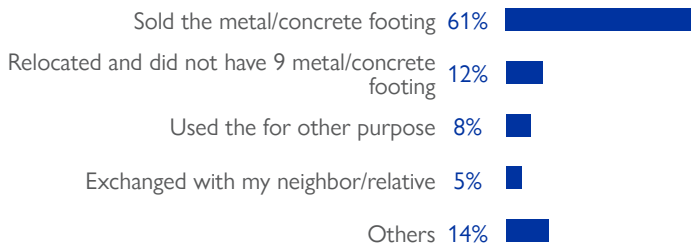
Image: Footings made of concrete or metal to keep bamboo structure out of the ground

(Graph 9) For those households that met the standard partially or did not meet the standard, the most common reason for not using metal or concrete footings were- 61% of households sold the metal or concrete footing for food and medical, 12% of HH mentioned they were relocated and did not have 9 metal or concrete footing.

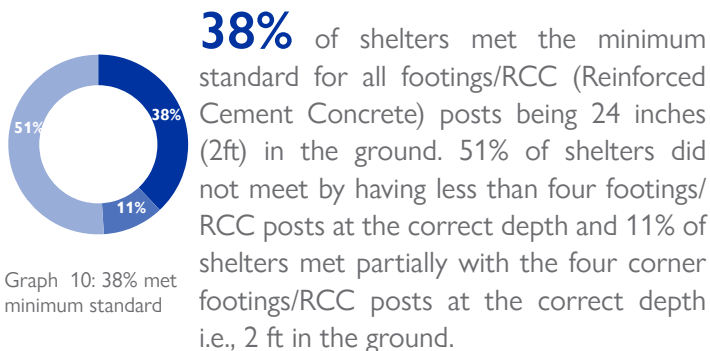
Under other options (14%) many households reported the metal footing was damaged or stolen, there were more than 4 metal footings but at the four corners or there was no metal footing in four corners, metal footings remains under the ground because of landslides, organization did not provide and there is no metal footing in the four corners, etc.

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

Graph 9: Main Reasons for Not Meeting the Standards

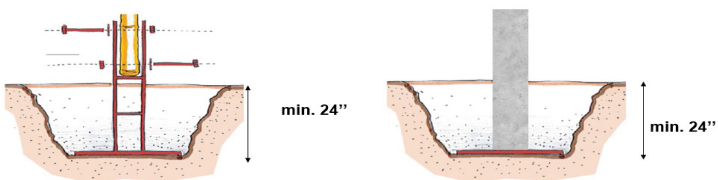


Footings and RCC Posts:



Graph 10: 38% met minimum standard

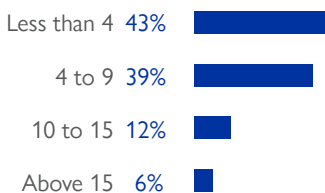
Camp 9, 4Ext (75%) had the highest proportion that met the minimum standard for having footings/RCC posts securely anchored and Camp 1E, 3, and 26 (3%) had the lowest proportion that met this standard.



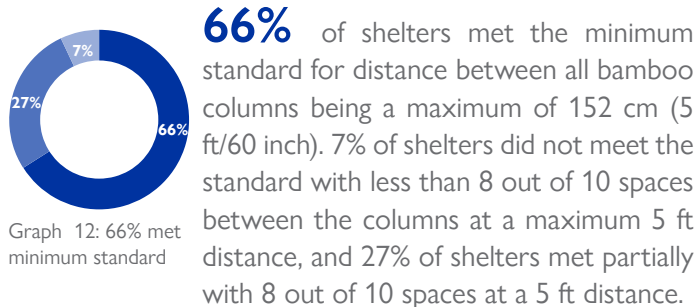
Left: Metal footing 2' under the ground; Right: concrete post 2' under the ground

(Graph 11) 43% of shelters had less than 4 metal footings installed 24 inches in the ground, while 39% of shelters had 4 to 9 metal footings and 12% had 10 to 15 metal footings and 6% had above 15 metal/concrete footings 24 inches in the ground.

Graph 11 : Metal/Concrete Footings 2 ft. in the Ground

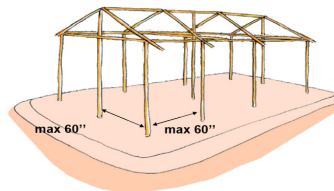


Distance Between Bamboo Columns:



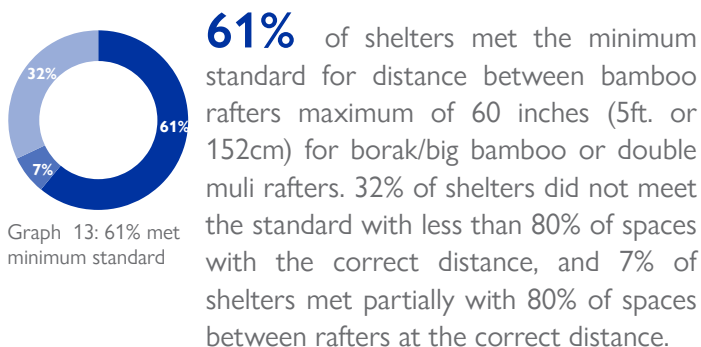
Graph 12: 66% met minimum standard

Camp 4Ext (96%) had the highest proportion of shelters that met the minimum standard for having a distance between bamboo column maximum of 5ft. and NRC (23%) had the lowest proportion that met this standard.



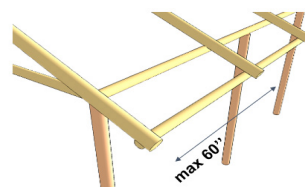
Distance between bamboo column- max 60 inches (152cm)

Distance Between Big Bamboo Rafters:



Graph 13: 61% met minimum standard

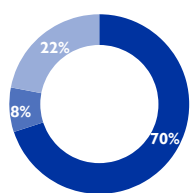
Camp 12 (95%) had the highest proportion of shelters that met the minimum standard for the distance between bamboo rafters maximum being 5ft. for borak/big bamboo and Camp 25 (10%) had the lowest proportion that met this standard.



Distance between big bamboo column- max 60 inches

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

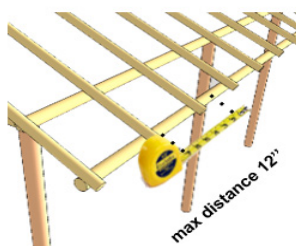
Distance Between Small Bamboo Rafters:



Graph 14: 70% met minimum standard

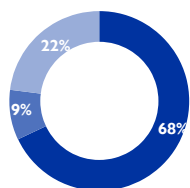
70% of shelters met the minimum standard for distance between small bamboo rafters being a maximum of 1ft. (12 inches). 22% of shelters did not meet the standard with less than 80% of spaces with the correct distance, and 8% of shelters met partially with 80% of spaces between rafters at the correct distance.

Camp 9 (95%) had the highest proportion of shelters that met the minimum standard for the distance between small bamboo rafters and NRC (46%) had the lowest proportion that met this standard.



Distance between small bamboo column- max 12 inches

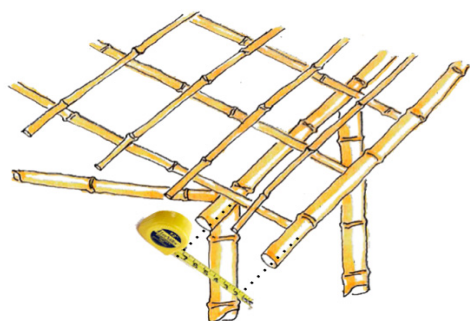
Distance Between Bamboo Purlins:



Graph 15: 68% met minimum standard

68% of shelters met the minimum standard for distance between all purlins as a maximum of 12 inches (1 ft.). 22% of shelters did not meet the standard with less than 80% spaces between purlins at a maximum of 1 ft. and 9% of shelters met the standard partially, with 80% purlins at a maximum of 1 ft.

Camp 9 (92%) had the highest proportion of shelters that met the minimum standard for distance between purlins and NRC (29%) had the lowest proportion that met this standard.

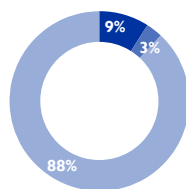


max distance between purlins 12"

Distance between purlins

- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

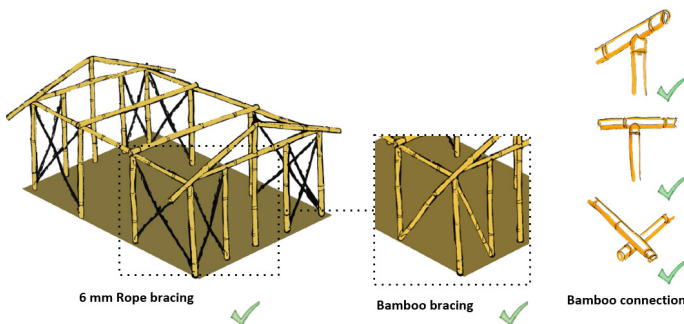
Having Adequate Bracing:



Graph 16: 9% met minimum standard

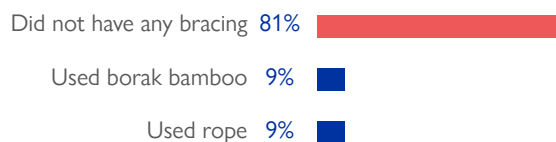
9% of shelters met the minimum standard for having adequate bracing in all corner bays of the shelter with all corners of the shelter consisting of bracing. 88% of shelters did not meet the standard, with less than three corners having adequate bracing. 8% of shelters met the standard partially with three corners having bracing.

Camp 4Ext (51%) had the highest proportion of shelters that met the minimum standard for having adequate bracing and in Camp 2W, 11, 22, 24, 25, 26, KRC, and NRC none of the shelters met the standard.



Households that met the standard partially or did not meet the standard, 98% of them reported they did not receive materials for bracing.

Graph 17: Materials Used for Bracing

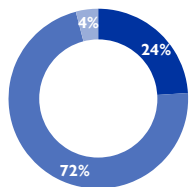


Out of the households who had used rope (9%), 40% of them had rope bracings that were cut by the household.

Respondents were asked reasons behind cutting the rope bracings, to which 80% reported that the rope was cut to be used for other purposes, 8% cut for storage, 6% mentioned it was for access to the shelter extension, and 5% cut the rope bracings as they used the corner bay for cooking.

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

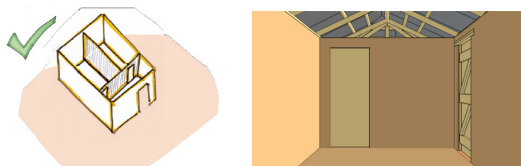
Internal Partition within the Shelter:



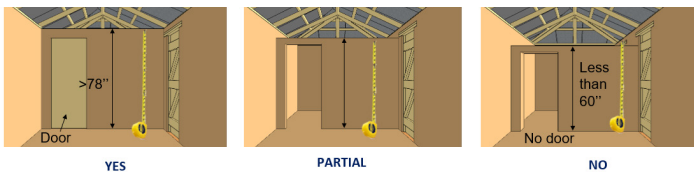
Graph 18: 24% met minimum standard

24% of shelters met the minimum standard for at least one internal partition wall with a door to provide privacy. 4% of shelters did not and 72% of shelters met partially with wall height up to 78 inches or without a door).

Camp 18 (20%) had the highest proportion of shelters that met the minimum standard for having at least one internal partition and Camp 25 (8%) had the lowest proportion that met this standard.

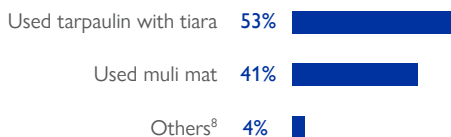


View of internal partition wall with door to provide privacy



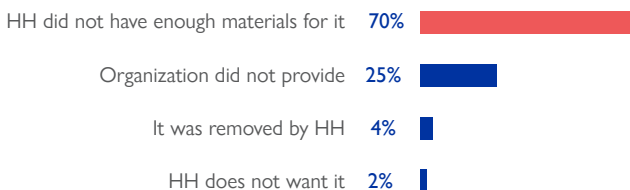
(Graph 19) Out of those households that met the standard fully or partially used tarpaulin with tiara for partitions stated by 53% of respondents. 41% of households mentioned they used muli mat, 4% informed they used a board, CGI sheet, mud wall, etc. under other options.

Graph 19: Materials Used for Partitions*

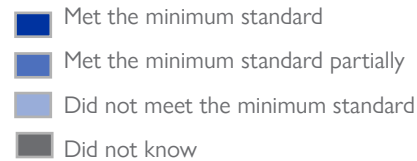


(Graph 20) For 4% of households that did not meet the standard for internal partition, the most common reason for not having a partition was that the HHs did not have enough materials for it (70%), and it was not provided by the organization (25%).

Graph 20: Reasons for not Having Internal Partition

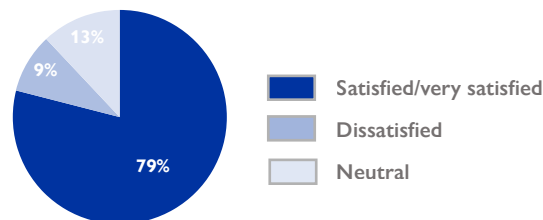


⁸Others option included board, CGI sheet, mud wall, etc.



(Graph 21) Out of HHs that had at least one internal partition, the majority of (79%) of HHs were satisfied/very satisfied with the privacy, and only 9% were dissatisfied with the privacy in their shelters.

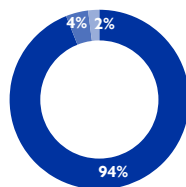
Graph 21 : Percentage of HHs Reporting Level of Satisfaction who had at least one internal partition



Out of the HHs who did not have an internal partition, 41% were dissatisfied or very dissatisfied with the privacy in their shelters.

98% of the respondents who were satisfied or very satisfied with the privacy in their shelters had responded partial or yes for having internal partitions in their shelters.

Lock Inside and Outside of the Shelter:



Graph 22: 94% met minimum standard

94% of shelters met the minimum standard to be lockable from inside and outside using a padlock and chain. 2% of shelters did not meet the standard by not being lockable from the inside and outside and 4% of shelters met the standard partially by being lockable only from the inside with a latch.

Camp 8E, KRC, and NRC (100%) had the highest proportion of shelters that met the minimum standard for the shelters to be lockable from inside and outside and Camp 3 (73%) had the lowest proportion that met this standard.

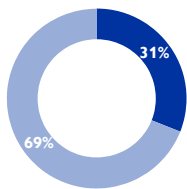


Image: Shelter is lockable from inside and outside using padlock and chain

Image: If only inside latch then partially locked

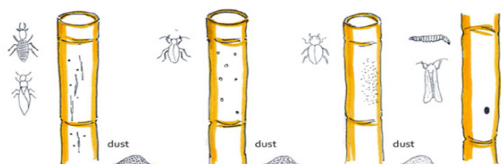
8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

Sign of Insect Infestation in Structural Bamboo:



31% met the minimum standard. Out of the shelters assessed, 69% of shelters had signs of insect infestation in the structural bamboo (borak bamboo posts/beams/bracing), while 31% of shelters did not.

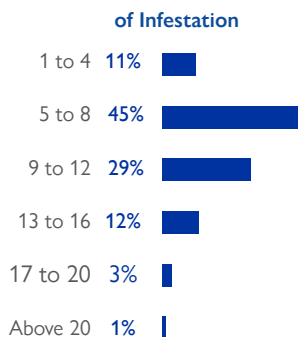
Graph 23: 31% met minimum standard



Signs of bamboo infestation: big holes, a group of small holes and/or bamboo dust

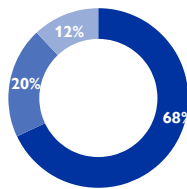
Camp 1E (93%) had the highest proportion of shelters in which the structural bamboo showed signs of insect infestation. Camp 24, NRC (30%) had the lowest proportion of shelters in which the structural bamboo showed signs of insect infestation.

Graph 24: Percentage of HHs Reporting Structural Bamboo Showing Signs of Infestation



On average, 9 structural bamboo (borak) members showed signs of infestation. The signs of infestation observed were small holes (38%), dust (33%), and big holes (29%).

Floor with or without Damage:

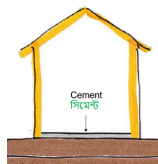


Graph 25: 68% met minimum standard

68% of shelters met the minimum standard of having a floor with a top layer finished with cement that does not have holes or excessive damage. 12% of shelters did not meet the standard with less than 3/4th of the floor with a cement top layer. 20% of shelters met the standard partially (some parts of the floor were finished with a top layer of cement but there were small holes).

Camp 9 (93%) had the highest proportion of shelters that met the minimum standard for having cement floor finishing without holes or excessive damage and Camp 22 (37%) had the lowest proportion that met this standard.

- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know



Floor with cement top layer without holes or excessive damage



- If floor is 100% covered with cement top layer – Yes
- If floor is at least 75% covered with a cement top layer – Partial
- If floor less than 75% covered with a cement top layer - No

Shelter Affected by Flood:

100% of shelters were not affected by flood water in the previous year.

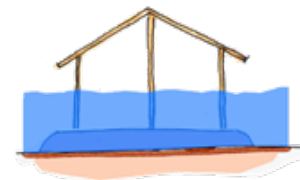
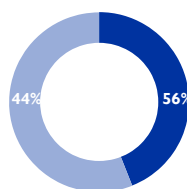


Image: Shelter affected by flood water

Rainwater entering through the Shelter:



Graph 26: 44% met minimum standard

56% of shelters reported that rainwater could enter the shelter while 44% reported it did not.

Camp 26 (84%) had the highest proportion of shelters where rainwater could enter, and Camp 24 (19%) had the lowest proportion.

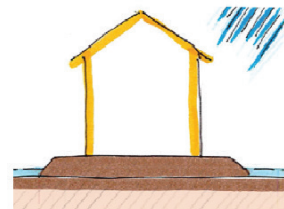
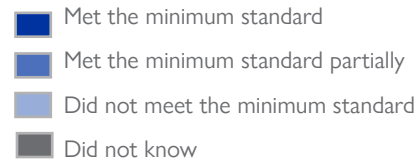
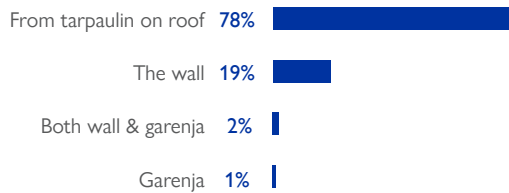


Image: Rain water enters into the shelter

(Graph 27) Out of those shelters (56%) where rainwater could enter, 78% of households reported rainwater could enter from tarpaulin on the roof, and 19% mentioned it through the wall.

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

Graph 27: Percentage of HHs Reporting Different Ways Rainwater Enter to the Shelter Showing Signs of Infestation

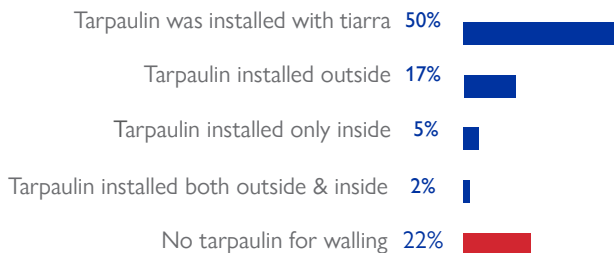


Rainwater entering from tarpaulin on the roof was found quite higher in KRC (99%), NRC (96%), and Camp 8E (91%). In addition, A high majority of the households (92%) out of those households who experienced leakage from tarpaulin reported having 1 to 4 leakage points while 8% informed there were 5 and above leakage points.

According to 64% of households, rainwater does enter the shelter through one side of the wall, and 31% of households mentioned from 2 sides of the wall.

(Graph 28) In half of the households (50%) surveyed tarpaulin was installed with tiarra. Out of the remaining, 22% had no tarpaulin for walling, 17% of shelters had tarpaulin installed outside, 5% had tarpaulin installed only inside and 2% of shelters had tarpaulin installed both outside and inside.

Graph 28: Percentage of HHs Reporting Different Ways of Installing Tarpaulin



Height of inner tarpaulin in inches

The majority of the households (84%) reported the height of the inner tarpaulin was above 60 inches, followed by 37 to 60 inches (14%) and 12 to 36 inches (2%).

Height of outer tarpaulin in inches

42% of households reported the height of the outer tarpaulin was above 60 inches, followed by 37 to 60 inches (26%) and 12 to 36 inches (32%).

- “For those shelters that have tarpaulin on the inner wall, the average height was found to be 65 inches.”
- “For those shelters that have tarpaulin on the outer wall, the average height was found to be 53 inches.”

Households Cooking Space:

72% of households reported cooking inside the shelter, and 27% cooked in their shelter extension. 73% of households reported the cooking space is not protected from fire, while 27% said it is protected.

The percentage of having unprotected cooking space was higher in Camp 19, 25 (85%) and lowest in Camp 8E, 9 (53%).

Is the cooking space protected from fire?



Out of the households that had protected cooking spaces (27%), 82% of them mentioned that there was no window/ garenja adjacent to the cooking space while only 18% had.

96% of households informed there are fire-resistant materials protecting the walls in the cooking area and 4% didn't.

Are there fire-resistant materials protecting the walls in the cooking area?

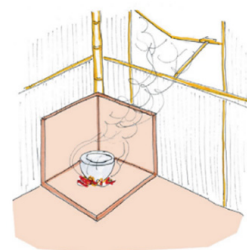
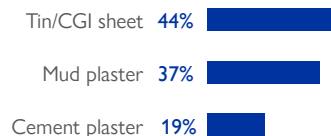


Image: Having non-flammable materials protecting the walls in the cooking area

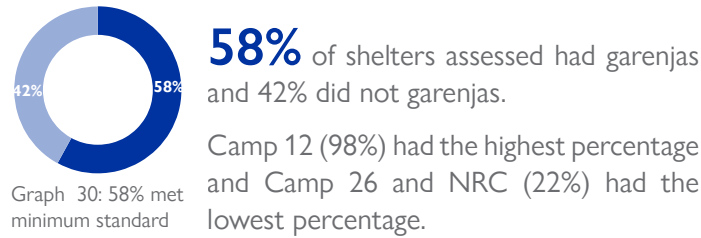
Out of 96% with fire resistant materials protecting wall are presented in graph 28, 44% had tin/CGI sheets around the cooking space, 37% had mud plaster installed, and 19% had cement plaster installed.

Graph 29: Type of Fire-resistant

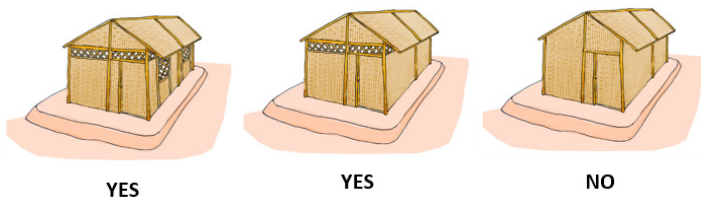


8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

Shelter with Garenja:



Out of the HHs who had garenja, 34% had a garenja only on one side of the shelter and 65% had garenjas on two or more sides of the shelter. The assessment found that out of those HHs who had garenjas, only 9% had covered the garenja with tarpaulin, so it no longer served as a source of light or ventilation.



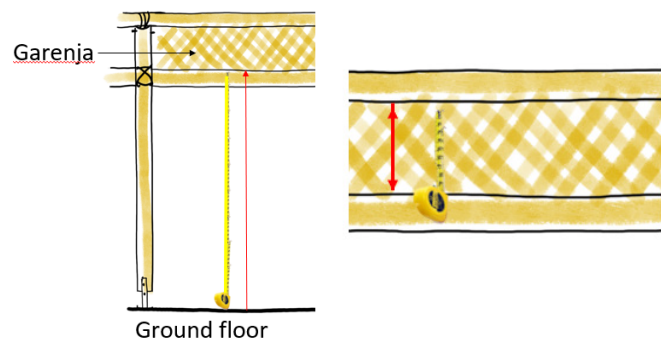
(Graph 31) 83% of shelters assessed had garenja starting more than 5 feet above the plinth level, while 17% had garenja starting at a height between 3 and 5 feet from the plinth level. The SCCCM sector recommends that the garenja should start at least 5 feet above plinth level and the height of the garenja should be 8 to 10 inches.

Graph 31: Height from the Plinth Level where Garenja Starts



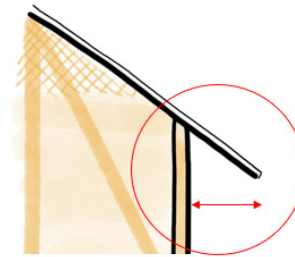
The overall average height from the plinth level was reported 66.4 inches.

The average height of garenja from the assessment was found to be 14 inches, which is 4 inches higher than the standard recommended by the SCCCM sector.

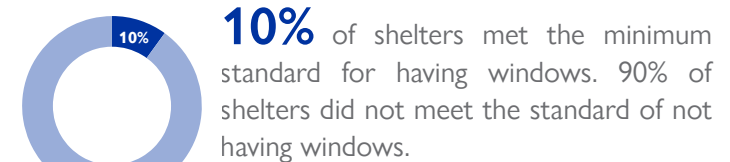


- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

Overall, for 79% of the shelters assessed the size of the roof overhang was 13 to 24 inches, 15% had up to 12 inches, and 6% had more than 24 inches. The average size of the roof overhang was reported 17.3 inches.

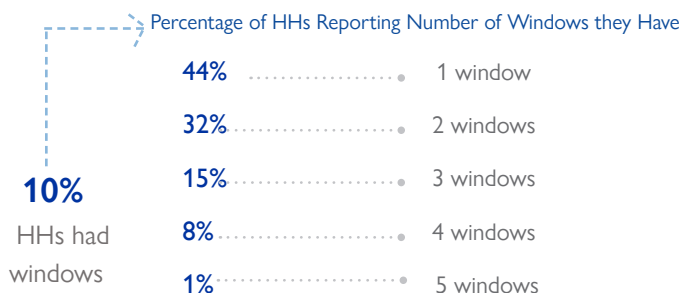
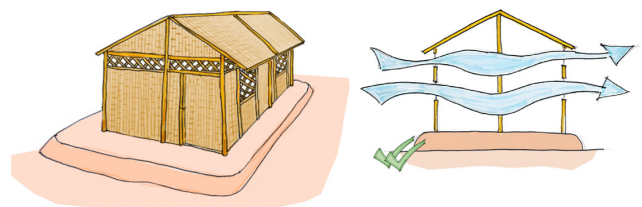


Shelter with Window:



Camp 4Ext (65%) had the highest proportion of shelters with windows and Camp 2w, 7, 15, 26 (1%) had the lowest proportion of shelters with windows.

Out of 10% of respondents who had windows in their shelters 44% of shelters had 1 window followed by 32% had 2 windows, 15% had 3 windows, 8% had 4 windows and 1% had 5 windows.

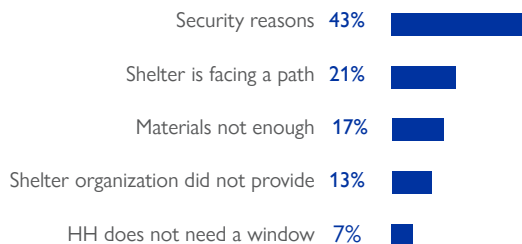


Out of the households (56%) that had 2 or more windows/garenja 60% had cross-ventilation in their shelter.

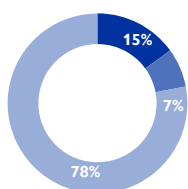
8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

(Graph 33) For those shelters that do not have windows, the main reasons mentioned were security reasons (43%), shelters facing a path (21%), not provided by shelter organization (13%), HH does not need a window (7%), and materials not enough (17%).

Graph 33: Percentage of HHs Reporting Reasons for Not Having Windows



Shelter Tie Down:



Graph 34: 15% met minimum standard

15% of shelters met the minimum standard for tying down the roofs according to the sector guidance, with a minimum of six anchor points properly fixed to the shelter and ground. 78% of shelters did not meet the standard with less than four anchor points fixed to the shelter and ground. 7% of shelters met partially with at least four anchor points properly fixed to the shelter and ground.

Camp 20 Ext (40%) had the highest proportion of shelters that were tied down according to sector guidance and NRC had the lowest proportion (1%) that met the standard, with less than four points anchored to the ground.

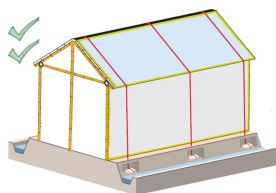
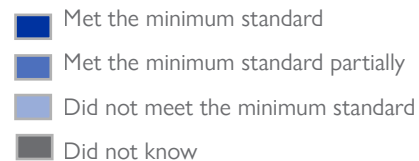


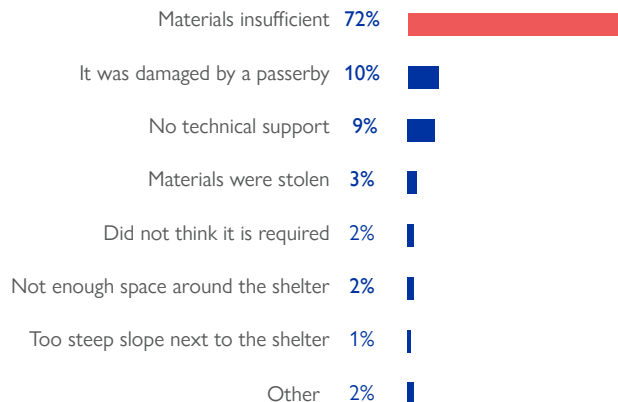
Image: Tying the shelter to the metal footing

For shelters that had their roofs completely or partially tied down, 73% were tied to the roof, 16% were anchored using steel pegs, 5% used bamboo pegs, and 5% were tied to metal footing inside the shelter. Also, timber peg is used for tie-down rope anchored.

From the 85% of respondents who did not meet the standards for tying down roofs or met them partially, (Graph 35) 72% stated that the materials for tying down roofs were insufficient, 10% said the ropes were damaged by a passerby, 9% received no technical support, 3% said their materials were stolen, 2% did not think it was required to tie down shelter roofs, and 2% stated not having enough space around the shelter.

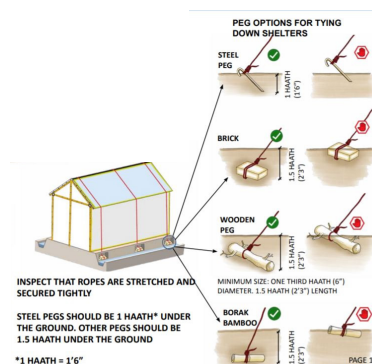


Graph 35: Reasons for Not Meeting the Standards

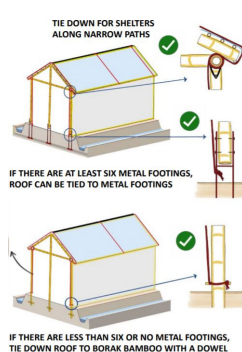


9% received no technical support, 3% said their materials were stolen, 2% did not think it was required to tie down shelter roofs, and 2% stated not having enough space around the shelter.

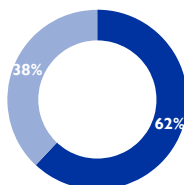
Types of Pegs



Tying the shelter to the metal footing



Shelter Plan Type:



Graph 36: 62% met minimum standard

62% of shelters assessed were part of a row of shelters and another 38% were standalone shelters.

NRC (93%) had the highest proportion of shelters in a row and Camp 20 (22%) had the lowest proportion of shelters that were part of a row.

8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

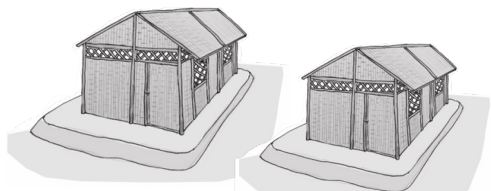


Image: Standalone shelters



Image: Continuous roof

Image: Zig-zag roof



Yes, Gutter all the way to the ground

Yes, but not until the ground

No, there is no downtake pipe

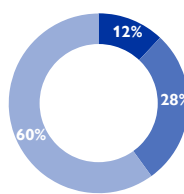
Of the 62% of shelters in a row, 89% of shelters had a continuous common roof for the row and 11% had roof valleys meeting to form “zigzag” roof profiles.

Out of the shelters that had gutters, 49% had gutters evacuated water to the drainage, while 51% did not.

Of those shelters with zig-zag roofs, 81% had gutters installed.

(Graph 37) Out of these, 43% had tarpaulin gutters, 41% had tarpaulin gutters with muli, 6% had UPVC gutters and 10% had other types of gutters like tin sheet, plastic sheet, CGI, and PVC gutter.

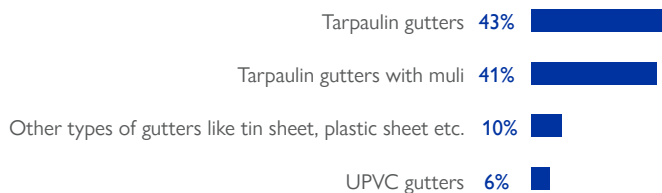
Adequate and Functioning Drainage:



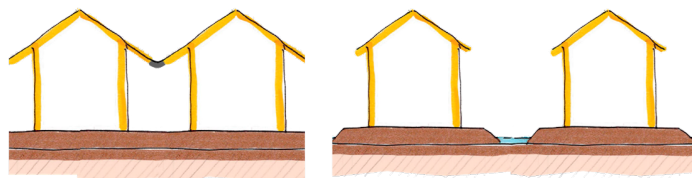
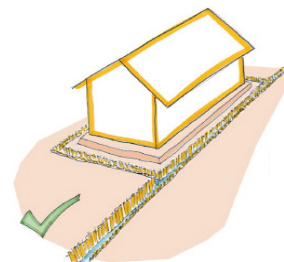
Graph 38: 12% met minimum standard

12% of shelters met the minimum standard for having adequate and functioning drainage. 60% of shelters did not, and 28% of shelters met this standard partially, with three out of four adequate and functional drainages.

Graph 37: Percentage of HHs Reporting Type of Gutters



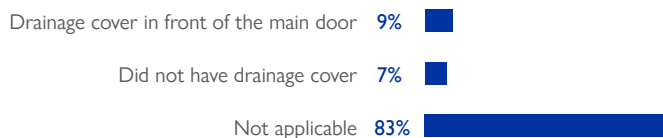
Camp 4Ext (38%) had the highest proportion of shelters with adequate and functioning drainage and in Camp 11 none of the shelters assessed had adequate and functioning drainage.



Yes
No
Gutters installed between adjoining shelters

(Graph 39) Out of the households (12%) that had adequate and functioning drainage on all external sides of the shelter 9% had drainage cover in front of the main door, while 7% did not and for the other 83% it was not applicable.

Graph 39: Percentage of HHs Reporting who Having Drainage Cover

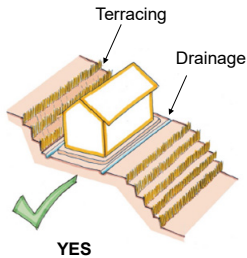


In addition, 92% of shelters had no down-take pipe for the gutter, 6% had a down-take pipe but not until the ground and 2% had a down-take pipe all the way to the ground.

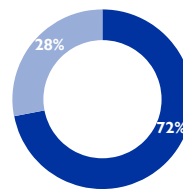
8. Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards

Out of the households (368 HHs) that met the standard fully or partially with having adequate and functioning drainage on all external sides of the shelter 95% of households' HHs level or tertiary drains were connected to a functioning secondary or primary drain.

- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know



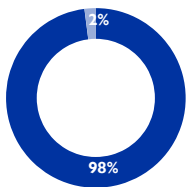
Shelter Site Safe from Soil erosion/Landslides:



Graph 41: 12% met minimum standard

72% of shelters assessed met the minimum standard for site safety from soil erosion and landslides, while 28% of shelters were not on safe sites. Site safety from soil erosion and landslides was measured on the basis of whether the slopes along shelters were protected (by terracing, bamboo/sandbag retaining walls, planting to stabilize the soil, and drainage to prevent erosion).

Standing Water around the Shelter:



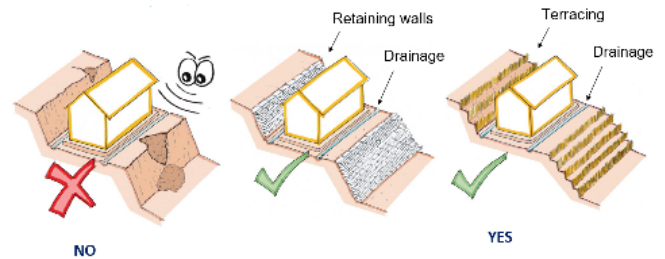
Graph 40: 98% met minimum standard

2% of shelters had standing water in the surrounding area of the shelter which created water logging during the time of data collection. 98% did not have water logging in the surrounding area.



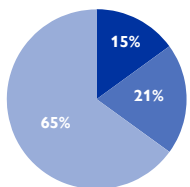
Image: Standing water in the surrounding area of the shelter that creates water

Camp NRC (100%) had the highest proportion of shelters located on safe sites and Camp 8W (31%) had the lowest proportion of shelters located on safe sites.



9. Desired Performance Standards that were Met/Unmet and Findings Related to the Standards

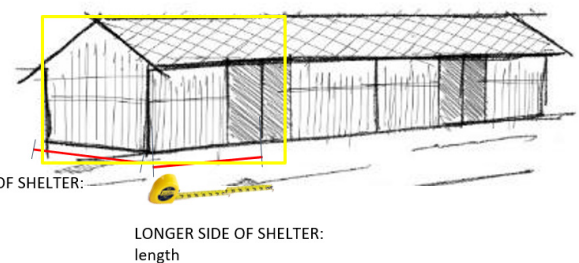
Used of Treated Bamboo with no Visible Sign of Insect Infestation:



Graph 42: 15% met minimum standard

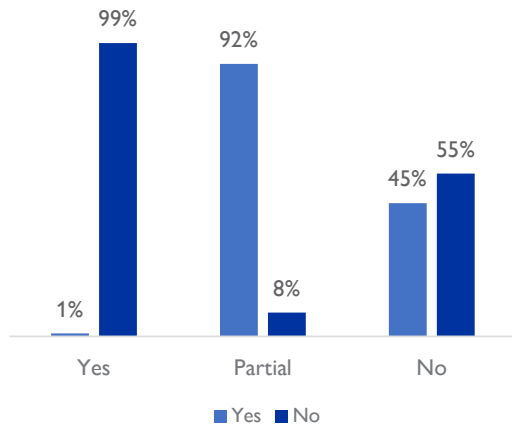
15% of shelters met the desired standard of using all treated bamboo for their shelter construction, with no visible sign of insect infestation. 65% of shelters did not meet this standard for treated bamboo and visible signs of infestation. 21% reported that treated bamboo was used only for the columns, thus partially meeting the standard.

Camp 9 (42%) had the highest proportion of shelters with all bamboo being treated and in Camp 27 none of the shelters had treated bamboo.



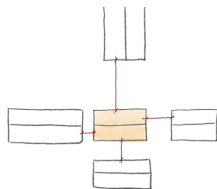
In graph 43, it can be seen that where shelters are constructed using only treated bamboo as structural members, 99% of shelters did not show any signs of insect infestation. 92% of untreated bamboo shows signs of insect infestation. On the other hand, in 45% of cases where the bamboo is partially treated there are signs of insect infestation.

Graph 43: Bamboo Treatment vs Visible Infestation



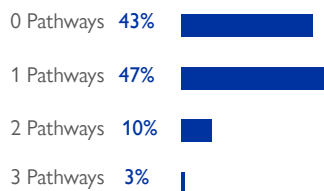
Pathway Width:

The pathways widths between shelters were measured, and pathways on the main door side were assessed separately. The average width of pathways on the main door side was 44.7 inches. The desired shelter performance standard is that the minor pathways (pathways alongside shelters) should be at least 7' wide. The assessment showed that the average width of pathways on all four sides of the shelters was found to be 4'7".



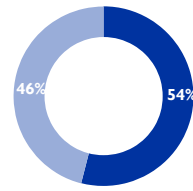
(Graph 44) 47% had 1 pathway, 10% had 2 sides and only 1% had 3 pathways around the shelter. Other 43% had no pathways around the shelter.

Graph 44: Percentage of HHs Reporting Number of Sides around the Shelter



10. Other Findings

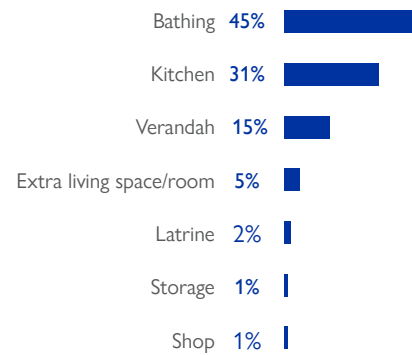
Shelter Extension:



Graph 45: 54% of HHs Extended their Shelters

54% of shelters were extended by households and 46% of shelters were not extended. Camp 17 (81%) had the highest proportion of shelters that were extended and Camp 1E, 2W (25%) had the lowest proportion of shelters with extension. 82% of households had 1 extension, whereas 17% of households had 2 and 1% had 3 extensions.

Graph 46: Percentage of HHs Reporting Purpose of Shelter Extensions



Bathing Space within the Shelter:

55% of shelters assessed had bathing space within the shelter and 45% did not.

Camp 2W (79%) had the highest proportion of shelters having bathing space within the shelter and Camp 21 (32%) had the lowest proportion.

Latrine within the Shelter:

2% of occupants reportedly had a latrine within the shelter and 98% didn't.

Camp 9 (11%) had the highest proportion of shelters having latrine out of total 2% within the shelter and in the majority number of camps shelters did not have latrines within the shelter.

Table 1: Percentage of Minimum Performance Standards Met and Other Findings Presented by Camps 0%-25% 26%-50% >50%

Standards	Camp name																
	1E	1W	2E	2W	3	4	4Ext	5	6	7	8E	8W	9	10	11	12	13
1) Plinth height is minimum 6 inches	85%	77%	88%	79%	78%	82%	74%	85%	73%	80%	100%	78%	80%	87%	96%	77%	94%
2) Concrete or metal footings are used	3%	12%	21%	11%	3%	46%	76%	43%	54%	19%	52%	71%	78%	39%	21%	54%	59%
3) Footings/RCC posts are 24 inches in the ground	3%	13%	16%	11%	3%	42%	75%	39%	46%	19%	52%	64%	75%	35%	21%	53%	57%
4) Distance between bamboo columns is max 60 inches	38%	57%	59%	54%	47%	69%	96%	55%	63%	61%	77%	73%	79%	55%	70%	72%	67%
5) Distance between big bamboo rafters is max 60 inches	37%	57%	61%	52%	53%	57%	76%	56%	76%	68%	82%	68%	87%	41%	68%	95%	55%
6) Distance between small bamboo rafters is max 1 foot	56%	68%	66%	75%	52%	64%	51%	71%	63%	73%	76%	82%	95%	62%	79%	51%	75%
7) Distance between purlins is less than 12 inches	47%	67%	63%	67%	51%	60%	48%	71%	65%	76%	84%	80%	92%	58%	77%	66%	75%
8) There is adequate bracing in all corner bays of the shelter	1%	1%	7%	0%	1%	9%	51%	11%	2%	8%	25%	20%	45%	6%	0%	16%	5%
9) Shelter has at least one internal partition wall with one door to provide privacy	14%	14%	25%	24%	32%	17%	36%	31%	14%	25%	18%	22%	35%	28%	21%	28%	22%
10) Shelter has means to be locked from inside and out	88%	82%	93%	95%	73%	89%	93%	97%	93%	94%	100%	97%	99%	94%	87%	97%	96%
11) Structural bamboo does not show sign of infestation that will impact the structure	93%	92%	83%	91%	91%	89%	65%	90%	89%	77%	59%	69%	43%	60%	72%	78%	67%
12) Floor has cement finish without excessive holes or damage	57%	64%	58%	59%	66%	57%	87%	80%	47%	67%	73%	78%	93%	72%	64%	78%	65%
13) Shelter has been affected by flood water	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
14) Rain water enter the shelter	52%	63%	46%	51%	57%	60%	39%	48%	63%	49%	37%	59%	31%	38%	81%	39%	56%
15) Cooking space protected from fire	24%	20%	21%	26%	21%	18%	35%	32%	24%	26%	47%	28%	47%	25%	32%	27%	19%
16) Occupants have bathing space within the shelter	60%	64%	75%	79%	57%	40%	34%	36%	51%	64%	73%	40%	63%	66%	62%	35%	56%
17) Occupants have latrine within the shelter	1%	1%	4%	8%	0%	0%	0%	0%	1%	5%	3%	0%	11%	8%	4%	5%	5%
18) Shelter has been extended by HHS	25%	33%	35%	25%	37%	67%	52%	78%	56%	42%	58%	69%	55%	51%	47%	63%	54%
19) Shelter has windows	4%	3%	8%	1%	4%	7%	65%	11%	5%	1%	8%	9%	11%	7%	2%	6%	3%
20) Shelter has been tied down in accordance with sector guidance	17%	14%	16%	7%	7%	18%	15%	16%	3%	4%	23%	19%	34%	13%	4%	19%	12%
21) Adequate and functioning drainage on all external sides of the shelter	9%	11%	7%	20%	15%	26%	38%	14%	13%	23%	17%	5%	22%	12%	0%	3%	14%
22) Standing water around the shelter that remains one day or more after it rains	7%	4%	7%	1%	6%	2%	1%	2%	1%	3%	1%	0%	2%	3%	2%	2%	1%
23) Shelter site safe from soil erosion/ landslides	83%	78%	75%	76%	77%	58%	99%	69%	54%	65%	56%	31%	80%	60%	51%	76%	71%

Table 2: Percentage of Minimum Performance Standards Met and Other Findings Presented by Camps 0%-25% 26%-50% >50%

Standards	Camp name																
	14	15	16	17	18	19	20	20Ext	21	22	24	25	26	27	KRC	NRC	
1) Plinth height is minimum 6 inches	93%	87%	90%	92%	85%	94%	90%	90%	94%	92%	89%	79%	88%	88%	94%	87%	
2) Concrete or metal footings are used	75%	46%	55%	73%	48%	33%	31%	65%	33%	65%	14%	22%	3%	14%	30%	29%	
3) Footings/RCC posts are 24 inches in the ground	69%	36%	51%	68%	47%	33%	26%	64%	32%	64%	17%	21%	3%	14%	30%	30%	
4) Distance between bamboo columns is max 60 inches	65%	62%	79%	71%	68%	70%	80%	78%	82%	60%	62%	74%	77%	72%	67%	23%	
5) Distance between big bamboo rafters is max 60 inches	77%	71%	73%	65%	60%	68%	43%	60%	79%	31%	74%	10%	34%	47%	65%	57%	
6) Distance between small bamboo rafters is max 1 foot	75%	84%	87%	86%	76%	83%	74%	72%	52%	52%	81%	63%	79%	77%	56%	46%	
7) Distance between purlins is less than 12 inches	80%	83%	87%	82%	76%	86%	75%	64%	60%	55%	89%	54%	65%	73%	51%	29%	
8) There is adequate bracing in all corner bays of the shelter	4%	6%	3%	21%	18%	6%	1%	18%	2%	0%	0%	0%	0%	1%	0%	0%	
9) Shelter has at least one internal partition wall with one door to provide privacy	25%	21%	20%	18%	20%	20%	27%	22%	11%	14%	20%	8%	21%	41%	52%	45%	
10) Shelter has means to be locked from inside and out	98%	95%	98%	99%	94%	96%	97%	99%	93%	94%	99%	91%	93%	98%	100%	100%	
11) Structural bamboo does not show sign of infestation that will impact the structure	58%	58%	57%	82%	78%	85%	64%	55%	67%	56%	30%	36%	85%	88%	32%	30%	
12) Floor has cement finish without excessive holes or damage	66%	73%	69%	74%	65%	76%	73%	67%	49%	37%	89%	45%	64%	68%	73%	78%	
13) Shelter has not been affected by flood water	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	
14) Rain water enter the shelter	46%	60%	30%	51%	81%	65%	63%	59%	76%	71%	19%	73%	84%	76%	80%	73%	
15) Cooking space protected from fire	24%	33%	31%	43%	22%	15%	19%	16%	20%	18%	30%	15%	34%	29%	35%	33%	
16) Occupants have bathing space within the shelter	65%	51%	50%	49%	42%	47%	41%	52%	32%	65%	68%	59%	60%	55%	57%	59%	
17) Occupants have latrine within the shelter	6%	0%	0%	0%	0%	0%	0%	0%	2%	1%	1%	0%	1%	2%	3%	1%	
18) Shelter has been extended by the HHs	58%	59%	51%	81%	78%	49%	73%	71%	64%	48%	31%	30%	47%	42%	68%	76%	
19) Shelter has windows	7%	1%	9%	12%	4%	9%	9%	39%	32%	3%	3%	4%	1%	2%	13%	15%	
20) Shelter has been tied down in accordance with sector guidance	15%	15%	30%	34%	15%	11%	11%	40%	10%	18%	30%	13%	7%	4%	5%	1%	
21) Adequate and functioning drainage on all external sides of the shelter	23%	5%	5%	17%	12%	2%	12%	10%	10%	17%	5%	3%	9%	3%	5%	2%	
22) Standing water around the shelter that remains one day or more after it rains	0%	1%	1%	0%	3%	0%	0%	4%	0%	1%	6%	1%	3%	4%	3%	1%	
23) Shelter site safe from soil erosion/ landslides	46%	75%	77%	55%	62%	66%	37%	95%	54%	72%	99%	98%	94%	92%	91%	100%	

11. Comparison Between 2023, 2022 and 2021

Standards	Image	2023	2022	2021	Standards	Image	2023	2022	2021
1) Plinth height is minimum 6 inches		86%	86%	56%	13) Shelter has not been affected by flood water		100%	86%	84%
2) Concrete or metal footings are used		40%	26%	53%	14) Rainwater does not enter the shelter through the roof		22% ⁹	44%	45%
3) Footings/RCC posts are 24 inches in the ground		38%	21%	44%	15) Rainwater does not enter the shelter through the wall		81% ¹⁰	43%	44%
4) Distance between bamboo columns is max 60 inches		66%	57%	54%	16) Cooking space protected from fire		27%	30%	22%
5) Distance between big bamboo rafters is max 60 inches		61%	51%	62%	17) Shelter has openings for cross ventilation		60% ¹¹	21%	15%
6) Distance between small bamboo rafters is max 1 foot		70%	71%	62%	18) Shelter has windows		10%	N/A	N/A
7) Distance between purlins is less than 12 inches		68%	66%	51%	19) Shelter has been tied down in accordance with sector guidance		15%	8%	9%
8) There is adequate bracing in all corner bays of the shelter		9%	9%	8%	20) Adequate and functioning drainage on all external sides of the shelter		12%	8%	8%
9) Shelter has at least one internal partition wall with one door to provide privacy		24%	18%	57%	21) Standing water around the shelter that remains one day or more after it rains		2%	11%	19%
10) Shelter has means to be locked from inside and out		94%	81%	79%	22) Shelter site safe from soil erosion/ landslides		72%	60%	59%
11) Structural bamboo does not show sign of infestation that will impact the structure		31%	24%	14%	23) Gutters are installed between shelters where roofs meet		81% ¹²	56%	9%
12) Floor has cement finish without excessive holes or damage		68%	60%	48%	24) Pathway width on main door side of the shelter is at least 7 feet.		3%	7%	44%

⁹N=1,724

¹⁰N=1,724

¹¹N=1,724

¹²N=216

12. Household Perception

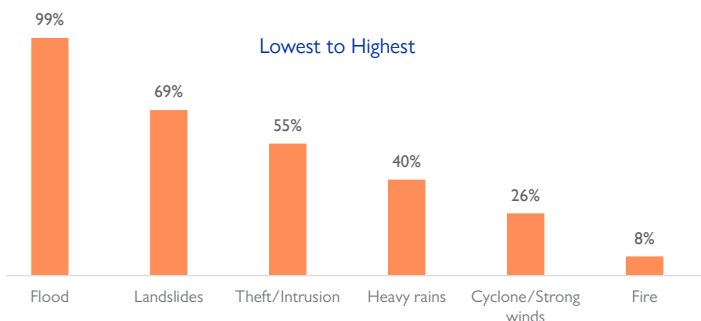
Overview

Households were asked to report on their perceptions of safety in shelters from weather-related events and their security concerns. These sections are proxies for certain standards that were subjective and seasonal.

How well do you feel the shelter and site protects the household from the following threats:

(Graph 47) Flood was perceived as lowest threat and fire was perceived as highest threat by respondents.

Graph 47: Lowest and Highest threats Perceived by Respondents:¹³



Cyclones/Strong Winds:

(Graph 48) Out of 3,059 surveyed HHs, only 13 HHs (26%) reported that their shelters and sites were 'very protected or protected' from cyclones and strong winds. Camp 6 (76%) had the highest proportion of HHs that reported their shelters were 'somewhat protected' and Camp 16 (49%) had the highest proportion of households who reported that their shelters were 'protected' from cyclones/strong winds. Camp 4 (22%) had the highest proportion that reported the shelters were 'not protected' from cyclones or strong winds at all.

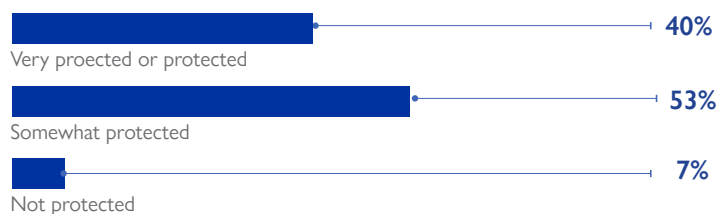
Graph 48: Percentage of HHs Reporting Protection of their Shelter and Site from Cyclones/Strong Winds



Heavy rains:

(Graph 49) Out of 3,059 surveyed HHs, 40% reported that their shelters and sites were 'very protected or protected' from heavy rains. Camp 26 (79%) had the highest proportion of households that reported their shelters were 'somewhat protected' and Camp 24 (80%) had the highest proportion of households that reported their shelters were 'protected' from heavy rains. Camp 4 (15%) had the highest proportion that reported the shelters were 'not protected' from heavy rains at all.

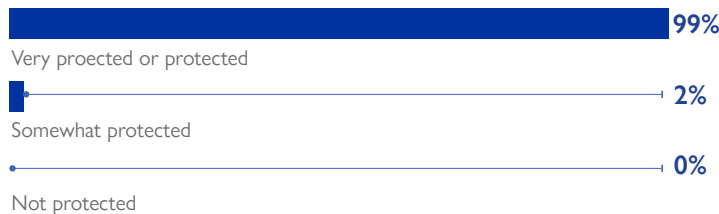
Graph 49: Percentage of HHs Reporting Protection of their Shelter and Site from Heavy Rains



Flooding:

(Graph 50) Out of 3,059 surveyed HHs, 99% reported that their shelters and sites were 'very protected or protected' from flooding, and Camp 8E, 14 (67%) had the highest proportion. Camp 25 (9%) had the highest proportion of HHs reporting that shelters were 'somewhat protected' and Camp 27 (89%) had the highest proportion of households that reported shelters were 'protected' from flooding. Camp 18 (3%) had the highest proportion that reported their shelters were 'not protected' from flooding at all.

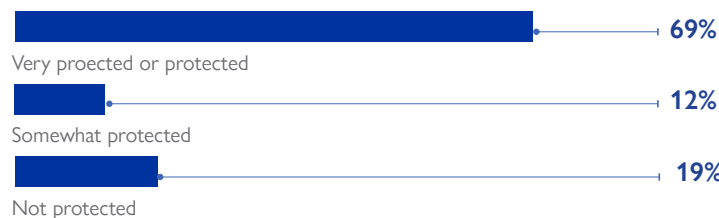
Graph 50: Percentage of HHs Reporting Protection of their Shelter and Site from Flood



Landslides:

(Graph 51) Out of 3,059 surveyed HHs, 69% reported that their shelters and sites were 'very protected or protected' from landslides, and NRC (89%) had the highest proportion. Camp 21 (29%) had the highest proportion of households that reported their shelters were 'somewhat protected' and Camp 20Ext (75%) had the highest proportion of households that reported their shelters were 'protected' from landslides. Camp 8W (44%) had the highest proportion that reported their shelters were 'not protected' from landslides at all.

Graph 51: Percentage of HHs Reporting Protection of their Shelter and Site from Landslides



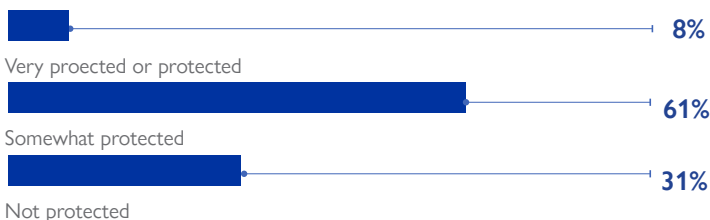
¹³These percentages are sum of 'very protected and protected' reported by respondents

12. Household Perception

Fire:

(Graph 52) Out of 3,059 surveyed HHs, 8% reported that their shelter and site were ‘very protected or protected’ from fire. Camp 26 (86%) had the highest proportion of households that reported their shelters were ‘somewhat protected’ and Camp 1W (25%) had the highest proportion of households that reported their shelters were ‘protected’ from fire. Camp 12 (50%) had the highest proportion that reported the shelter/sites are ‘not protected’ from fire at all.

Graph 52: Percentage of HHs Reporting Protection of their Shelter and Site from Fire

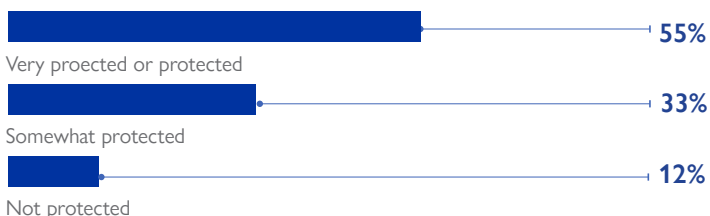


13% of HHs who have fire-resistant material protecting the walls around the cooking space feel protected from fire compared to 3% HHs who do not have fire-resistant materials.

Theft/Intrusion

(Graph 53) Out of 3,059 surveyed households, 55% reported that their shelters were ‘very protected or protected’ from theft/intrusion. Camp 15 (74%) had the highest proportion of households that reported their shelters were ‘somewhat protected’ and Camp 1W (58%) had the highest proportion of households that reported their shelters were ‘protected’ from theft/intrusion. NRC (28%) had the highest proportion of HHs that reported their shelter was ‘not protected’ from theft/intrusion at all.

Graph 53: Percentage of HHs Reporting Protection of their Shelter and Site from Theft / Intrusion

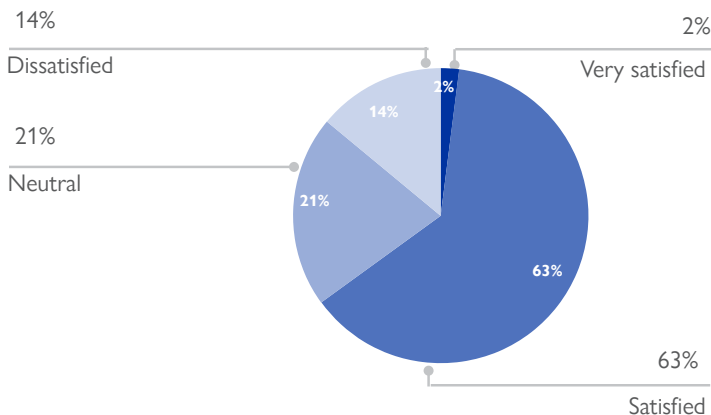


Households were asked if their shelters were victims of any of the above-mentioned in the past year. “Overall, 11% of the households reported that they faced the above threats and 89% reported they did not face threats”. Camp 2E, 2W, and 4 (22% each) had the highest proportion of households that reported facing threats and Camp 8E (99%) had the highest proportion that did not face threats.

HH’s Level of Satisfaction with Regard to the Privacy in their Shelters:

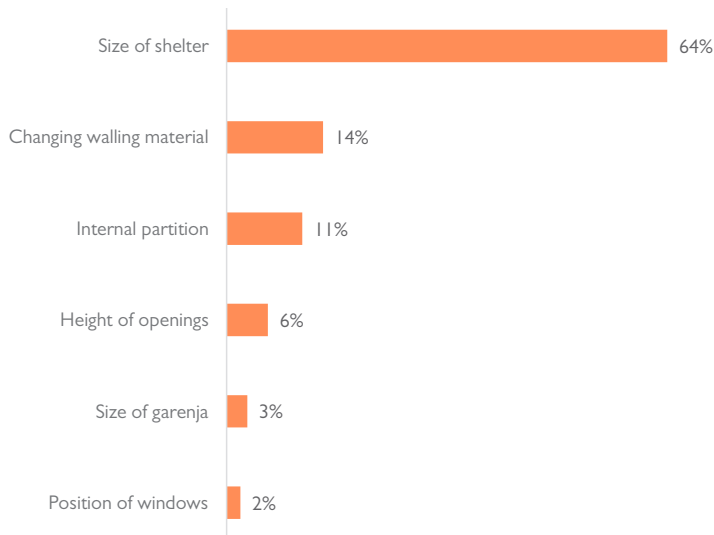
(Graph 54) Households reported their level of satisfaction regarding privacy in their shelters. 2% were very satisfied, 63% of respondents were satisfied, 21% felt neutral, and 14% were dissatisfied.

Graph 54: Percentage of HHs Reporting Level of Satisfaction



(Graph 55) HHs who were dissatisfied or very dissatisfied were asked how they would like to improve their shelter privacy. 64% of respondents suggested increasing the shelter size, 11% suggested the provision of internal partition, 14% suggested changing the walling material, 6% asked to change the height of openings, 3% asked to change the size of the window, and 2% suggested changing the position of windows.

Graph 55: Improvements Suggested by HHs for Shelter Privacy



13. Housing Land and Property

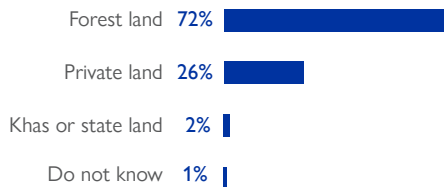
Overview

The majority of the refugee population now resides in designated camps; however, a proportion of refugees continue to live with host communities or on the host community lands. Over the years, host communities renting land, shelter/houses, and shops to refugees have come out as a prominent engagement the two communities have with each other.

Type of land HHs Residing:

(Graph 56) 72% of respondents reported they lived on forest land, 26% on private land, 2% on Khas or state land.

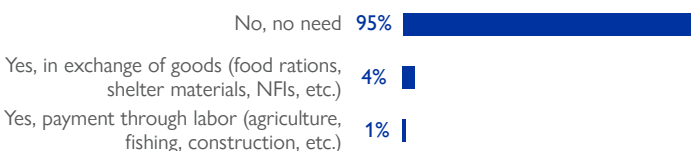
Graph 56: Type of Land



Goods/Labor Exchange for Using Land or Shelter:

(Graph 57) Respondents were asked if they provide goods/labor in exchange for the use of the land or shelter they occupy. 95% of HHs stated that it was not needed. 4% HHs provided goods (food rations, shelter materials, NFIs, etc.) in exchange for the use of land/shelter and 1% did through labor (agriculture, fishing, construction, etc.).

Graph 57: Provide Goods/Labor for the Use of Land/Shelter



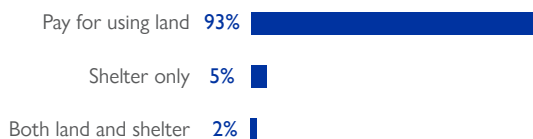
Payment for Using Land or Shelter:

23% of respondents reported that they pay cash in exchange for use of the land or shelter, while 77% did not.

Camp 25 (100%) had the highest proportion of households that reported paying rent in cash followed by Camp 27 (99%), camp 26 (74%). In camps 4Ext, 5, 8W, and 20Ext none of the shelters had to pay rent.

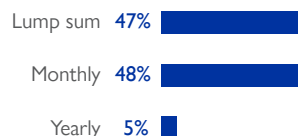
(Graph 58) Out of the households who pay cash in exchange for the use of land/shelter, the majority of the respondents (93%) reported they pay for using land, 5% said for shelter only, and 2 reported for both land and shelter.

Graph 58: Pay Cash for the Use of Land/Shelter



(Graph 59) When respondents were asked how frequently they pay 48% reported monthly, 47% said lump-sum, and 5% mentioned yearly.

Graph 59: Frequency of Paying Cash as Rent



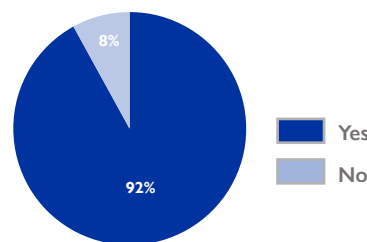
Of respondents who pay monthly overall, 28% pay less than 300 taka, 57% of respondents pay between 300 to 500 taka and 17% pay above 500 taka (500-2000) taka.

Of respondents who pay lump-sum 23% paid 500-2000, 34% paid 2100-5000, and 43% paid above 5000 taka (5100-80,000).

99% of respondents mentioned the rent is fixed, and 1% said no.

(Graph 60) 92% of respondents (376 HHs) struggled to pay rent in the last 12 months, particularly the percentage was high in Camp 25, 17, and NRC.

Graph 60: Percentage of HHs Reporting Struggled to Pay Rent



Of all the HHs that pay rent, 72% reported that there was a grace period if the rent was not paid on time, while 28% did not have a grace period.

Furthermore, it was checked whether it was possible to pay the debt rent in installments. 67% HHs responded that they were not permitted to pay the debt rent in instalments, and 33% were permitted.

13. Housing Land and Property

(Table: 3) Ukhiya upazila (384 HHs) had a higher number of households that paid rent in cash compared to Teknaf upazila (321 HHs). However, Ukhiya upazila (128 HHs) had a higher number of households that paid through goods compared to Teknaf upazila (23 HHs).

Table 3: Paid Rent in Cash (Per Month) by Upazila

Camp	<200 BDT	200-400 BDT	400-600 BDT	601-800 BDT	801-1000 BDT	>1000 BDT
Teknaf						
Camp 22	6 HH	0 HH	0 HH	3 HH	0 HH	0 HH
Camp 24	0 HH	16 HH	6 HH	8 HH	4 HH	0 HH
Camp 25	0 HH	44 HH	35 HH	12 HH	6 HH	0 HH
Camp 26	5 HH	45 HH	18 HH	4 HH	1 HH	0 HH
Camp 27	13 HH	48 HH	24 HH	5 HH	1 HH	1 HH
NRC	0 HH	2 HH	0 HH	0 HH	0 HH	0 HH
Ukhiya						
Camp 1E	27 HH	8 HH	1 HH	1 HH	0 HH	0 HH
Camp 1W	2 HH	4 HH	0 HH	0 HH	0 HH	0 HH
Camp 2E	0 HH	2 HH	0 HH	0 HH	0 HH	0 HH
Camp 3	0 HH	2 HH	0 HH	0 HH	0 HH	0 HH
Camp 8E	2 HH	0 HH	0 HH	1 HH	0 HH	0 HH
Camp 9	0 HH	1 HH	2 HH	1 HH	0 HH	0 HH
Camp 12	1 HH	4 HH	0 HH	0 HH	0 HH	0 HH
Camp 13	1 HH	1 HH	0 HH	0 HH	0 HH	0 HH
Camp 15	1 HH	1 HH	0 HH	0 HH	1 HH	0 HH
Camp 16	3 HH	0 HH	4 HH	0 HH	0 HH	0 HH
Camp 19	3 HH	5 HH	0 HH	0 HH	0 HH	0 HH
KRC	3 HH	0 HH	3 HH	0 HH	1 HH	1 HH

Lease agreements:

Out of those who had lease agreements, 16% HHs had a verbal lease agreement, no one had a written one, and 84% did not have any kind of lease agreement. Regarding the verbal lease agreements, 51% reported that there were no witnesses to the agreement, 48% had a witness to the agreement, and 1% did not know.

Eviction:

99% of households reported not facing any threat of eviction in the past 12 months and only 1% reported facing threat either because they faced debt (15 HHs), or the landlord needed shelter (4HHs).

99% of respondents said that they were not worried about possible eviction in the next 3 months. Out of the 9 respondents who were worried about possible eviction

in the next 3 months, 44% of them, the host community needed the land back, and 55% of respondents mentioned that they could not pay rent.

Dispute (disagreements):

99% of households reported that they were not involved in any shelter, land, or water disputes (disagreements) with the host community and 1% reported issues over housing or property-related disputes with the host community such as accumulation of rent debt, disputes over eviction, lease agreement, or shelter improvement.

14. Conclusion

The comparison between 2023, 2022, and 2021 highlights the progress and challenges in meeting the established standards. Overall, there have been some improvements in certain aspects of shelter performance standards between 2021 and 2023, an increase in shelters protected from floodwater, and a higher percentage of shelters tied down according to sector guidance. However, there are still areas that require attention, as seen in the low percentage of shelters with provision of privacy, infestation in bamboo, protection against fire, rainwater entering through roof and wall, roof leakage and adequate drainage

The household perception section indicates that while the majority of respondents feel protected from flooding and landslides, there are concerns about protection from cyclones/strong winds, heavy rains, and fire. Additionally, some households express dissatisfaction with the privacy in their shelters, suggesting potential areas for improvement. The data on housing land and property reveal that a significant number of refugees live on forest and private lands, with rent being paid mostly in cash. While the majority of respondents reported not facing eviction threats, there are still some households experiencing challenges related to rent payments and possible eviction.

In conclusion, the Shelter Performance Standard Assessment provides valuable data to assess the overall conditions of shelters and housing in the surveyed areas. While progress has been made in certain areas, there are still challenges to address to ensure that shelters meet the necessary standards and provide adequate protection and privacy for the residents. Efforts should be directed toward improving ventilation, drainage, and fire protection, as well as addressing concerns related to eviction and privacy. By addressing these issues, the living conditions and safety of residents can be enhanced, leading to more resilient and sustainable shelter solutions for the future.

ABOUT NPM

NPM is part of IOM's global Displacement Tracking Matrix (DTM) programming. DTM is IOM's information management system used to track and monitor displacement and population mobility. It is designed to regularly and systematically capture, process, and disseminate information to provide a better understanding of the evolving needs of displaced populations. At Cox's Bazar, NPM was first launched in early 2017 and has been a key data provider in the Rohingya humanitarian response.

Needs and Population Monitoring (NPM) unit works to support evidence-based humanitarian decision-making and prioritization by tracking needs and vulnerabilities in Cox's Bazar, among both Rohingya and the host communities. Through NPM's broad information management framework, service providers are able to access and make use of comprehensive data and analysis on the needs and vulnerabilities of affected populations, promoting more informed and nuanced humanitarian programming. NPM works closely with the Inter-Sector Coordination Group (ISCG), the Sectors, other IOM units, and various organizations, especially through designing and conducting a wide range of assessments and by providing technical mapping capacity.



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