



SHELTER/NFI SECTOR, COX'S BAZAR  
SHELTER PERFORMANCE STANDARD ASSESSMENT  
SURVEY ANALYSIS: SEPTEMBER 2022

## Table of Contents

1. Introduction.....	3
2. Methodology.....	3-4
3. Limitations and Caveats.....	4
4. Map (Number of Respondents Per Camp).....	5
5. Meta Data.....	6
6. Minimum Performance Standards.....	7-20
7. Desired Performance Standards.....	21
8. Other Findings.....	21
9. Comparison Between 2021 and 2022.....	22-23
10. Household Perception.....	24-26
11. Housing Land and Property.....	27-28

## List of Acronyms

1. ISCG	-	Inter Sector Coordination Group
2. IOM	-	International Organization for Migration
3. NPM	-	Needs and Population Monitoring
4. JNA	-	Joint Needs Assessment
5. SMS	-	Site Management Support
6. SMSD	-	Site Management and Site Development
7. NFI	-	Non-Food Items
8. UNHCR	-	United Nations High Commissioner for Refugees
9. RRRRC	-	Refugee Relief and Repatriation Commissioner
10. KRC	-	Kutupalong Registered Camp
11. HH	-	Household
12. TSA	-	Transitional Shelter Assistance
13. SUM	-	Shelter Upgrade Maintenance

## 1. INTRODUCTION

### 1.1 Overview:

The total number of Rohingya refugees in Cox's Bazar is around 936,733 individuals<sup>1</sup>. The Rohingya refugee population is concentrated in 33 extremely congested camps within Ukhiya and Teknaf Upazilas of Cox's Bazar district, Bangladesh. The refugees living in the camps are dependent on the assistance provided by the humanitarian community and the government of Bangladesh. 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 below document represents findings from the joint assessment of the SNFI Sector and NPM on the Shelter Performance Standards which reflect shelters conditions across 33 camps.

### 1.2 Population of Interest:

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

### 1.3 Assessment Design:

The goal of the Shelter/NFI 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, space to store belongings and live in a dignified manner. The SNFI Sector partner's effort is also dedicated to ensure tenure assessment and HLP (Housing Land and Property) case management. To set a benchmark for shelter quality and have unified standards to be followed across the years, the SNFI 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 those apply to 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, 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.

- a. All the shelters developed in those areas need to follow RRRC approved designs and site planning provided by the AOR focal organization.
- b. Only shelters built with the adequate materials (treated bamboo, RCC columns, good quality tarpaulins) in accordance with the Desired Performance Standards and approved RRRC designs can be considered as mid-term shelters (MTS).

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. In the event that certain standards are either subjective, seasonal, or require specialized expertise, the SNFI Sector proposed proxies for the standard or, if the standard is deemed not possible to be measured through this exercise, SNFI Sector partners agreed on a reweighted scale for analysis purposes.

## 2. METHODOLOGY

### 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. Data collection took place during March-April 2022 and it was conducted by IOM-NPM.

### 2.2 Sampling:

A stratified simple random sampling approach was adopted for this assessment to provide results generalizable at camp level with a 95% confidence level and 10% margin of error. To achieve representativeness at camp level, the population count conducted by RRRC and UNHCR was used to create samples for each camp. Overall, 3107 surveys were administered in 33 camps.

<sup>1</sup>UNHCR-Government of Bangladesh Population Breakdown, July 2022

As aforementioned, the assessment consisted of a stratified random sample, with the aim that every shelter in 33 camps in Ukhiya and Teknaf have an equal chance to get selected for the survey. The ISCG and RRRC recognized camp boundaries were laid on Open Street Map (OSM) with the shelter footprints to generate random sample points for administering surveys. An estimated buffer was added to the sample points to cover for non-eligible geo-points, non-eligible households/shelter/facilities, and non-consenting households or households without eligible respondents (i.e. HHs only consisting of respondents below 18 years old).

### 2.3 Tool Development and Data Collection

The tool for data collection was developed by the Shelter/NFI Sector. NPM provided technical support to transform the tool into a format supported for digital data collection. Kobo collect platform was used for data collection. The tool was also translated into Rohingya/Bengali by Shelter/NFI Sector partners and verified by NPM.

Due to the technical nature of the assessment, a one-day training was held for Bangladeshi enumerators. Enumerators were trained by Shelter/NFI Sector partners on 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 SNFI Sector team and partners.

### 2.4 Data Processing and Analysis

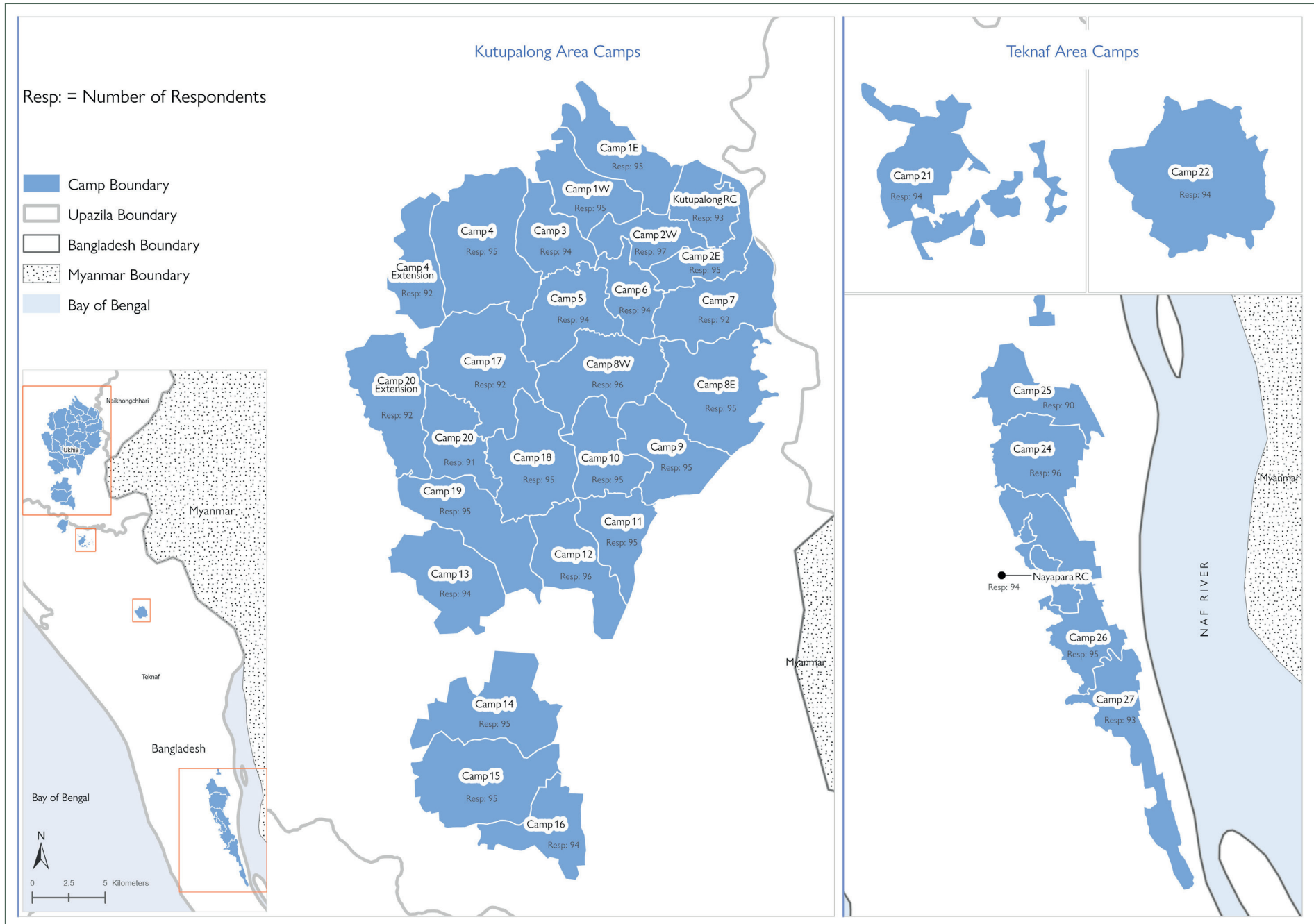
IOM-NPM data unit was responsible for data cleaning such as inconsistencies, outliers along with translations and recording of other options. Changes were made after consultation of issues with the operation teams and enumerators conducting the surveys. All personal identifiers in the surveys were removed due to the sensitive nature of the data. The clean dataset was shared with the Shelter/NFI Sector for validation. IOM-NPM also developed the data analysis plan in consultation with the SNFI Sector and executed analysis for the assessment.

## 3. LIMITATIONS AND CAVEATS

- The majority (61%) of the respondents were female. This is because the surveys were conducted during the day when more women are available at home, as men are most likely engaged in income-generating activities. Hence, a 50:50 ratio could not be achieved.
- 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.
- Answers on 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<sup>2</sup> that the perception-based questions are not responded in the same way when the enumerators are a Bangladeshi national. There is more easiness for Rohingya to speak to Rohingya enumerators and the results are more accurate. This assessment was done by Bangladeshi enumerators.
- It was also observed that Rohingya refugees do not show dissatisfaction with the humanitarian assistance as they are afraid to be excluded from more assistance.
- One respondent represented one household and may not reflect the opinions of every household member.
- 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 SNFI Sector team and partners on the technical assessment.

<sup>2</sup><https://reliefweb.int/report/bangladesh/people-living-disabilities-cox-s-bazar-understanding-perceptions-aid-equity-and>

4. MAP: NUMBER OF RESPONDENTS PER CAMP




5. META DATA

5.1 Demographics of Respondents:


**39%**  
of respondents  
were male



**53%**  
of respondents  
age was between  
25-40




**61%**  
of respondents  
were female




**57%** of  
respondents were  
head of households



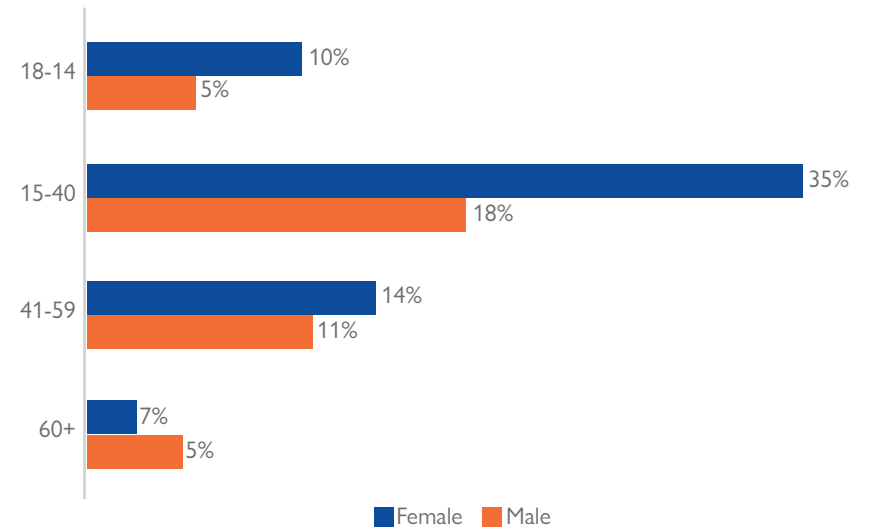
Average  
household size  
**5.76**



**85%** of  
household heads  
were married



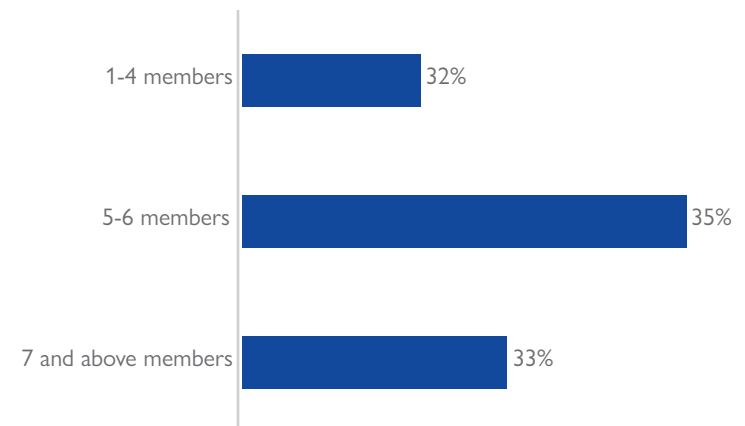
Graph 1: Respondents by Age and Gender



5.2 Washington Group Question:<sup>3</sup>

- 17% of respondents reported having household members who have difficulty seeing, even if wearing glasses, compared to the rest 83% who reported no difficulty.
- 10% of respondents reported having household members who have difficulty hearing, even if using an aid, compared to the rest 90% who reported no difficulty.
- 23% of respondents reported having household members who have difficulty walking or climbing steps, compared to 77% who reported no difficulty.
- 13% of respondents reported having household members who have difficulty remembering or concentrating, compared to 87% who reported no difficulty.
- 10% of respondents reported having household members who have difficulty with self-care, such as washing or dressing, compared to 90% who reported no difficulty.
- 4% of respondents reported having household members over the age of 5 who have difficulty communicating, compared to 96% who reported no difficulty.

Graph 2: Size of the Surveyed HH



<sup>3</sup>The short Washington Group Question (WGQ) set was used in this assessment that consists of five questions. Respondents were asked to report on household members over the age of 5 years for the WGQ. Please note that these percentages are based on self-reporting and likely to be underreported.

6. MINIMUM PERFORMANCE STANDARDS

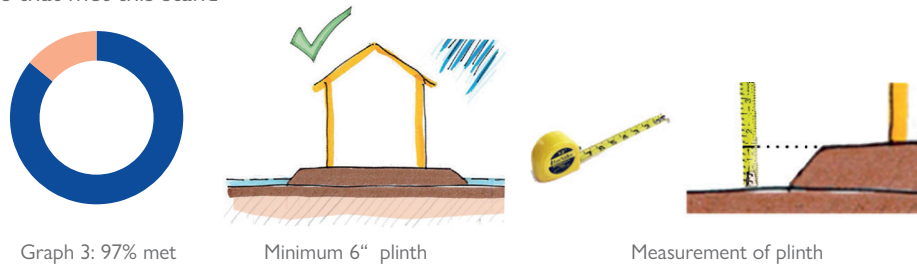
6.1 Overview:

The Shelter/NFI 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 camps<sup>4</sup>. Below are the findings for all questions related to the minimum performance standard.

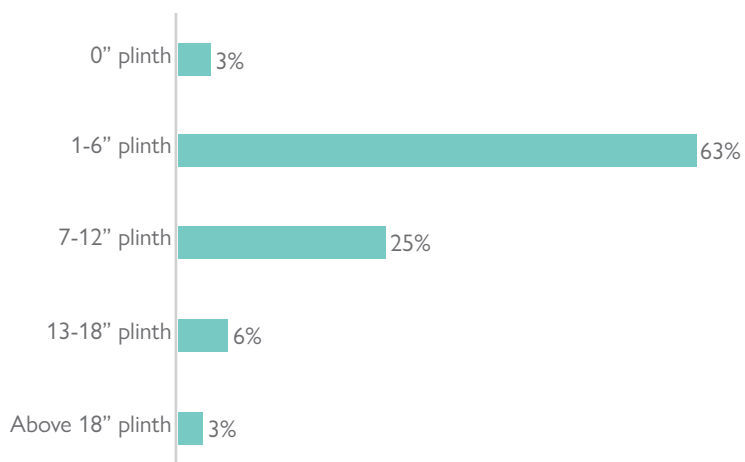
6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

**97%** of shelters had height of plinth above ground level. Further, 86% of 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. The average height of plinth was 7.35 cm reported across overall households.

Camp 17, 21 (96%) had the highest proportion of shelters that met the minimum standard of having plinth above 15 cm (6") ground level and camp 09 (63%) had the lowest proportion of shelters that met this standard.



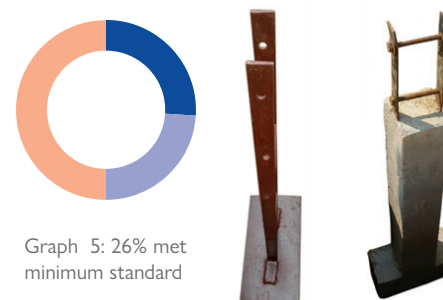
Graph 4: Height of Plinth



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

**26%** of shelters met the minimum standard with all footings being concrete or metal. 50% of shelters did not meet the standard by having less than four footings in concrete or metal, and 24% shelters met the standard partially with only four corner columns having concrete or metal footings.

Camp 9 (79%) had the highest proportion of shelters that met the minimum standards for footings being concrete or metal and camps 3 and 26 none of the shelters met this standard.



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

<sup>4</sup> Shelter Performance Standards: <https://www.humanitarianresponse.info/en/operations/bangladesh/document/performance-standard-weighting>

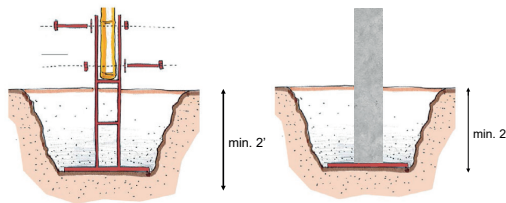
6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

**21%** of shelters met the minimum standard for all **footings/RCC (Reinforced Cement Concrete) posts being 60 cm (2ft.) in the ground**. 57% of shelters did not meet by having less than four footings/RCC posts at the correct depth and 22% shelters met partially with the four corner footings/RCC posts at the correct depth i.e. 2' in the ground.

Camp 12 (57%) had the highest proportion that met the minimum standard for having footings/RCC posts securely anchored. In camps 3 and 26, none of the shelters met this standard.

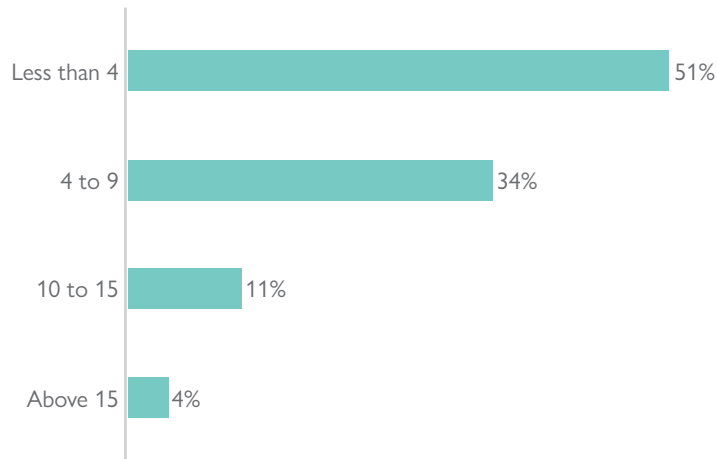


Graph 6: 21% met minimum standard



Left: metal footing 2' under the ground; right: concrete post 2' under the ground

Graph 7: Metal/Concrete Footings 2 ft in the Ground



51% shelters have less than 4 metal footings installed 2' in the ground, while 49% shelters have more than 4 metal footings 2' in the ground.

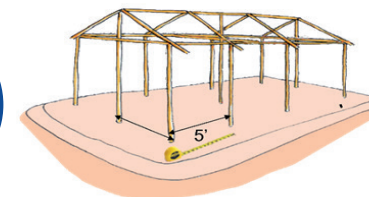
- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

**57%** of shelters met the minimum standard for **distance between all bamboo columns being maximum 152 cm (5ft./60 inch)**. 13% of shelters did not meet the standard with less than 8 out of 10 spaces between the columns at maximum 5' distance, and 30% shelters met partially with 8 out of 10 spaces at 5' distance.

Camp 6 (76%) had the highest proportion of shelters that met the minimum standard for having the distance between bamboo columns maximum 5' and KRC (23%) had the lowest proportion that met this standard.



Graph 8: 57% met minimum standard



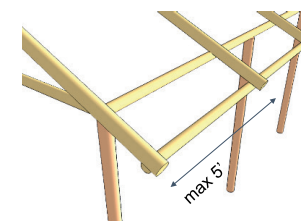
Distance between bamboo column- max 5ft. (152cm)

**51%** of shelters met the minimum standard for **distance between bamboo rafters maximum being 5ft. (152cm) for big bamboo**. 40% of shelters did not meet the standard with less than 80% of spaces with the correct distance, and 9% shelters met partially with 80% spaces between rafters at the correct distance.

Camp 12 (89%) had the highest proportion of shelters that met the minimum standard for the distance between bamboo rafters being maximum 5' for big bamboo and camp 25 (9%) had the lowest proportion that met this standard.



Graph 9: 51% met minimum standard



Distance between bamboo rafter- max 5ft. (152cm) for big bamboo/1ft. (30cm) for small bamboo



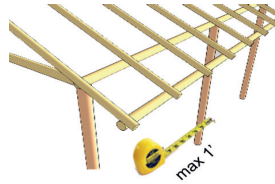
6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

**71%** of shelters met the minimum standard for **distance between small bamboo rafter being 1ft. (12 inch)**. 21% of shelters did not meet the standard with less than 80% of spaces with the correct distance, and 8% shelters met partially with 80% 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 KRC (38%) had the lowest proportion that met this standard.



Graph 10: 71% met minimum standard



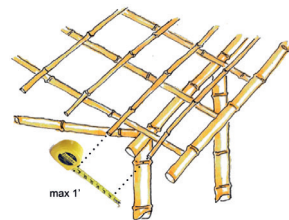
Distance between small bamboo rafters

**66%** of shelters met the minimum standard for **distance between all purlins as maximum 1ft.** 21% of shelters did not meet the standard with less than 80% spaces between purlins as maximum 1' and 13% shelters met the standard partially, with 80% purlins at maximum 1'.

Camp 9 (94%) had the highest proportion of shelters that met the minimum standard for distance between purlins and NRC (26%) had the lowest proportion that met this standard.



Graph 11: 66% met minimum standard

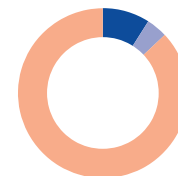


Distance between purlins

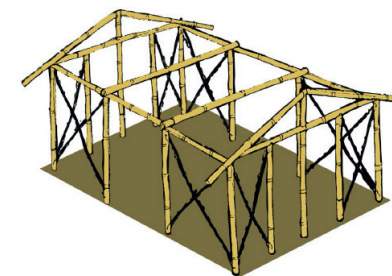
- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

**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. 87% of shelters did not meet the standard, with less than three corners having adequate bracing. 4% shelters met the standard partially with three corners having bracing.

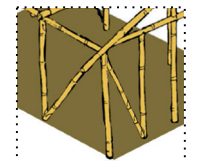
Camp 4 Ext (62%) had the highest proportion of shelters that met the minimum standard for having adequate bracing. In camp 3, camp 11, camp 24, camp 25, camp 26, camp 27 and NRC, none of the shelters met this standard, which indicates that all shelters surveyed in the listed camps had bracing in less than 3 corner bays of the shelter.



Graph 12: 9% met minimum standard



Rope bracing ✓



Bamboo bracing ✓

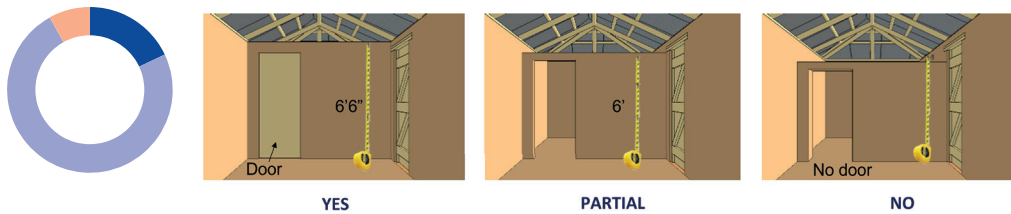
90% responded 'No' or 'Partial' on having adequate bracing in all corner bays of the shelter, 13% respondents informed that rope bracings were cut by the household. Respondents were asked reasons behind cutting the rope bracings, to which 80% reported that the rope was cut to be used for other purposes, 8% mentioned it was for access to the shelter extension, and 2% cut the rope bracings as they used the corner bay for cooking.

6.2 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

**18%** of shelters met the minimum standard for at least one internal partition wall to provide privacy (at least 6'6" partition with door). 8% of shelters did not meet the standard (if there is no partition or if the partition is less than 5' with or without door) and 74% shelters met partially (if partition is equal to or more than 6'6" but without a door, or if the partition is between 5' and 6'6" with or without door).

KRC (48%) had the highest proportion of shelters that met the minimum standard for having at least one internal partition and camp 17 (1%) had the lowest proportion that met this standard.

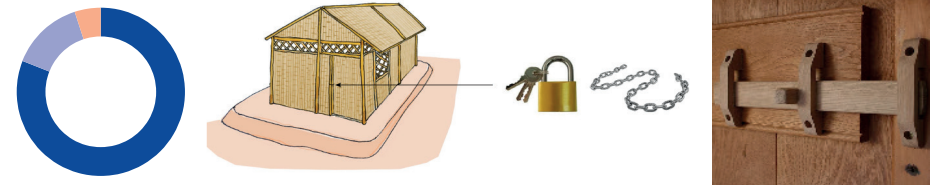


Graph 13: 18% met minimum standard

Having at least one partition wall to provide privacy

**81%** of shelters met the minimum standard **to be lockable from inside and outside using a padlock and chain.** 5% of shelters did not meet the standard by not having shelter lockable from inside and outside and 14% shelters met the standard partially by having shelter lockable only from the inside with a latch.

Camp 4Ext (98%) had the highest proportion of shelters that met the minimum standard for the shelters to be lockable from inside and outside and camp 6 (54%) had the lowest proportion that met this standard.



Graph 14: 81% met minimum standard

Shelter is lockable from inside and outside using padlock and chain

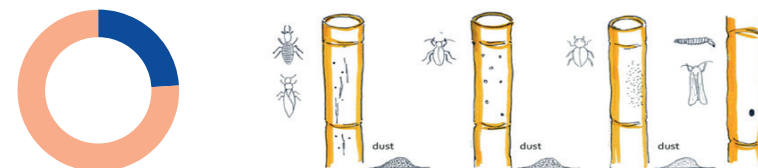
If only inside latch then partially locked

Out of HHs who had at least one internal partition, 96% of HHs were satisfied with the privacy and only 4% were dissatisfied with the privacy in their shelters. Out of the HHs who did not have an internal partition, 33% were dissatisfied or very dissatisfied with the privacy in their shelters. 99% of respondents who were very satisfied with the privacy in their shelters had responded partial or yes for having internal partitions in their shelters.

For 8% HHs who 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 and/or it was not provided by the organization.

Out of the shelters assessed, 76% shelters had signs of insect infestation in the structural bamboo, while 24% of shelters did not.

Camp 27 (97%) had the highest proportion of shelters in which the structural bamboo showed signs of insect infestation. Camp 9 (20%) had the lowest proportion of shelters in which the structural bamboo showed signs of insect infestation.



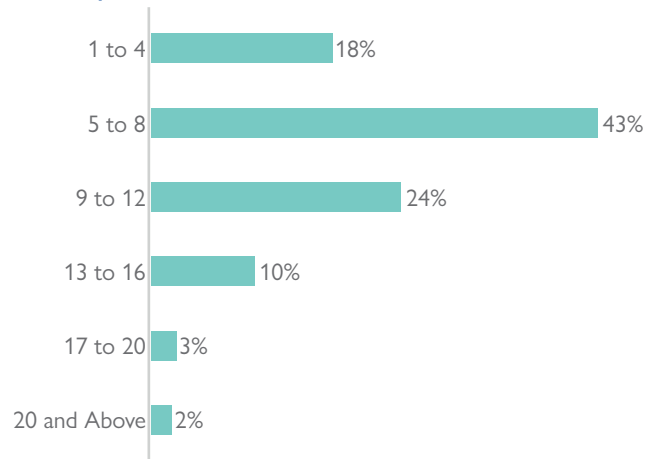
Graph 15: 24% met the minimum standard

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

**6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:**

On average, 8 structural bamboo (borak) members showed signs of infestation. The signs of infestation observed were small holes (45%), big holes (22%) and dust (34%).

**Graph 16: HHs Reported Structural Bamboo Showing Signs of Infestation**



**60%** 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. 14% of shelters did not meet the standard with less than 3/4th of the floor with a cement top layer. 26% of shelters met the standard partially (some parts of floor are finished/floor are finished with a top layer of cement but there are small holes).

Camp 4 Ext (97%) had the highest proportion of shelters that met the minimum standard for having cement floor finishing without holes or excessive damage and camp 21 (28%) had the lowest proportion that met this standard.



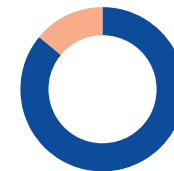
Graph 17: 60% met minimum standard

Floor with cement top layer without holes or excessive damage

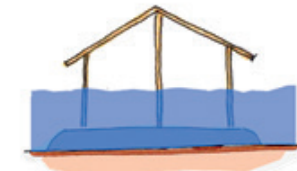
- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

**86%** of shelters were not affected by flood water in the previous year while 14% of shelters were affected.

Camp 9 (35%) had the highest proportion of shelters affected by flood water in monsoon 2021. In camp 4Ext none of the shelters were affected by flood water in monsoon 2021.



Graph 18: 86% met minimum standard



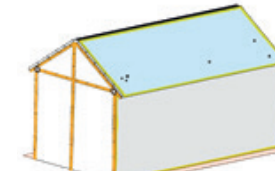
Shelter affected by flood water

**56%** of shelters reported that rain water could enter through the roof covering. 44% reported that water did not enter the shelter through the roof covering.

Camp 27 (83%) had the highest proportion of shelters where rain water seeped through the roof and camp 9 (16%) had the lowest proportion of shelters which had water seeping through the roof.



Graph 19: 44% met minimum standard

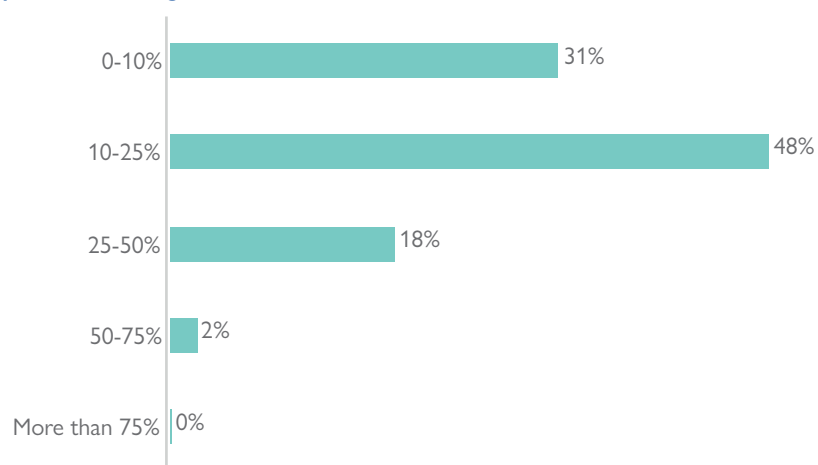


Rain water enters into the shelter through roof covering

Out of those shelters where rain water seeped through the roof, a significant area of leakage, 51-75% was reported by only 2% HHs whose roof leaked and almost half (48%) of the respondents faced smaller roof surface area leakage (11- 25%).

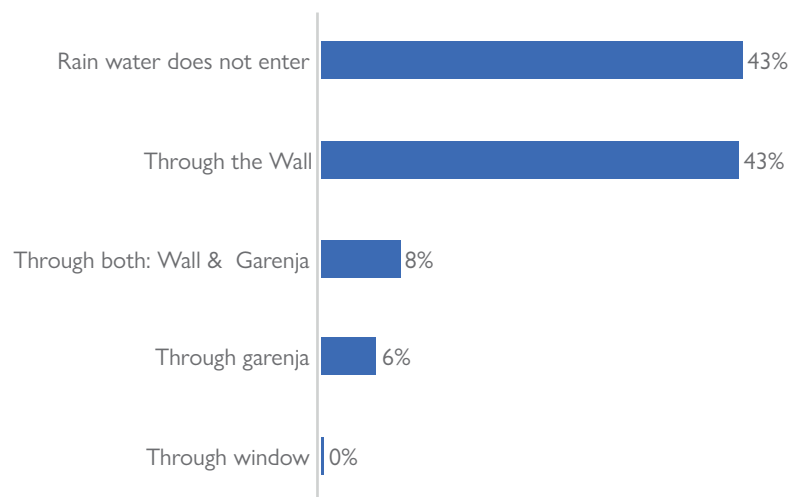
6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

Graph 20: Percentage of the Surface of the Roof Area where the Roof Leaks



43% HH reported that rain water does not enter their shelter through the wall at all, and 57% HHs reported rain water entering through the wall. Out of those HHs that reported leakage through the wall surface, 76% had leakage through the wall surface alone. 14% HHs shelters faced leakage through both wall and garenja, and 10% faced leakage through the garenja alone. Five HHs reported faced leakage through the windows.

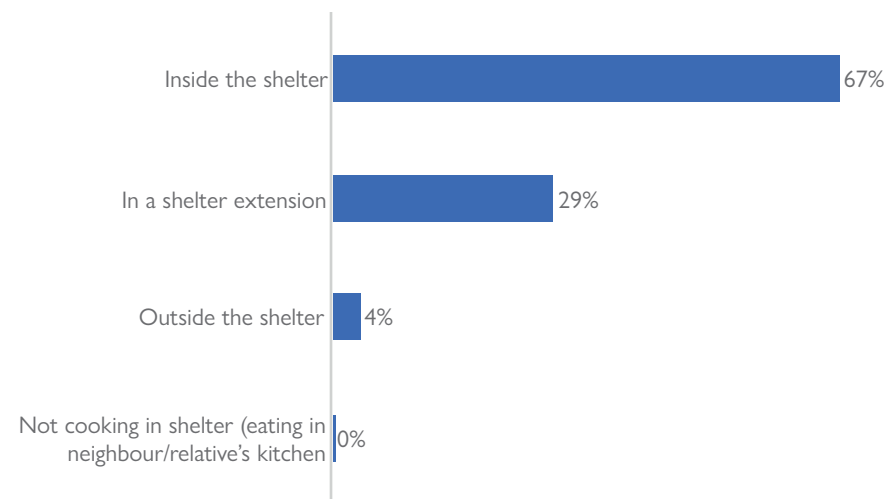
Graph 21: HHs Reported Different Ways Rain Water Enter to the Shelter



50% of shelters surveyed have no tarpaulin for walling. Out of the remaining 50% who reported having tarpaulin for walling, 65% of shelters had tarpaulin installed outside, 28% had tarpaulin installed only inside and 7% of shelters had tarpaulin installed both outside and inside.

- 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 **61 inches**.

Graph 22: HHs Reported Different Cooking Space Locations



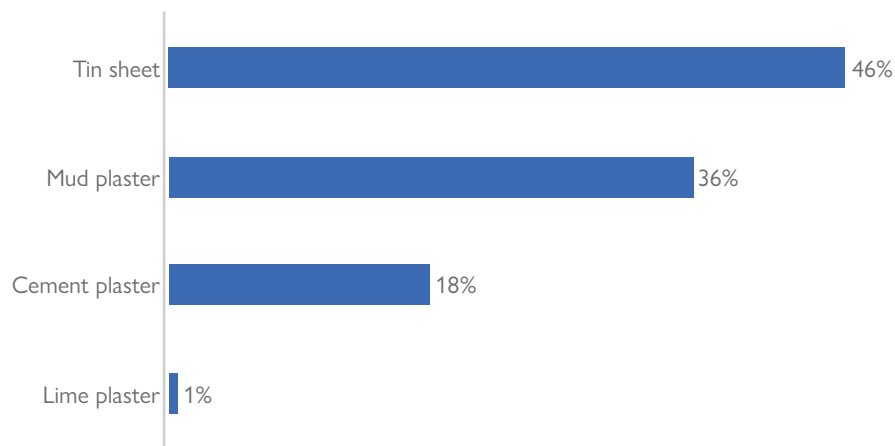
67% of HHs reported cooking inside the shelter, 29% cooked in their shelter extension, and 4% cooked outside their shelters. Fifteen HHs reported not cooking in shelter (eating in neighbor or relative's kitchen).

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

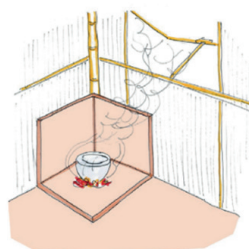
Table 1: Type of cooking space arrangement

Questions	Yes	No
B15.1 Are there walls on two or more sides of the cooking space?	73%	27%
B15.2 Is there a window/garenja or door adjacent to the cooking space?	46%	54%
B15.3 Are there fire-resistant materials protecting the walls in the cooking area?	30%	70%

Graph 23: Percentage of Different Fire-resistant Materials Used by HHs to Protect Cooking



Out of 30% respondents that have a fire-resistant plaster in the cooking space, 46% have tin sheet around the cooking space, 36% have mud plaster installed, 18% have cement plaster installed, and 1% have lime plaster installed.



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

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

**57%** of shelters had garenjas and 43% did not have garenjas. Out of the HHs who had garenjas, 32% had a garenja only on one side of the shelter and 68% had garenjas on two or more sides of the shelters. The assessment found that out of those HHs who had garenjas, 16% had covered the garenja with tarpaulin, so it no longer served as a source of light or ventilation.



Graph 24: 57% met minimum standard



Having means of ventilation to maintain air quality

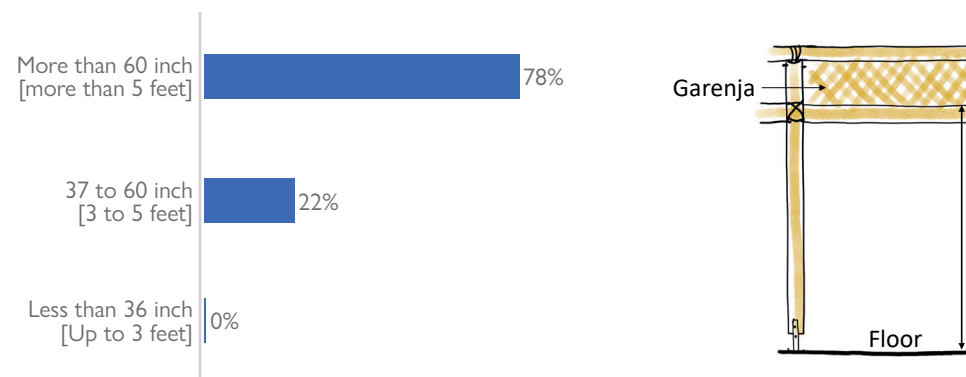
Graph 25: If Garenja was Covered with Tarpaulin or any Other Covering



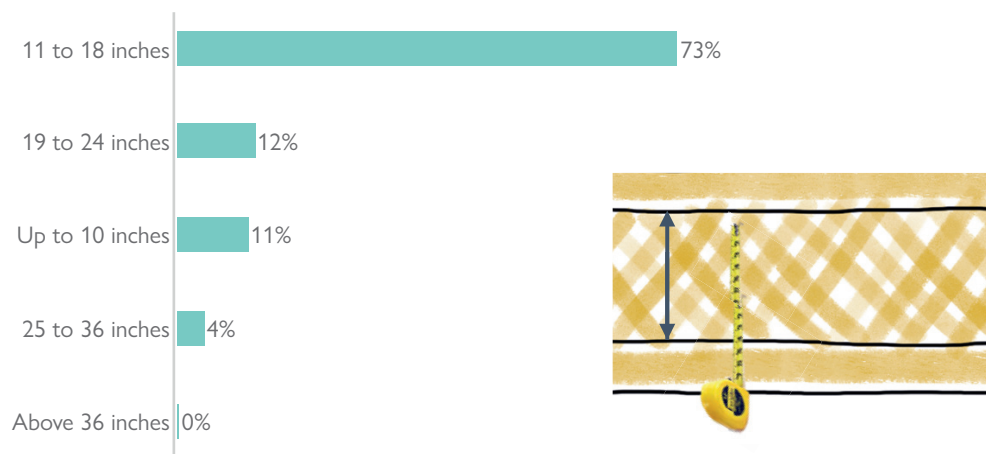
**6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:**

78% of shelters had garenja starting more than 5 feet above plinth level, while 22% had garenjas starting at a height between 3 and 5 feet from plinth level. The SNFI 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 26: Height from the Plinth Level where Garenja Starts**



**Graph 27: Height of the Garenja**

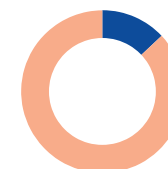


The average height of garenja from the assessment was found to be 15 inches, which is 5 inches higher than the standard recommended by the SNFI Sector.

<sup>5</sup>(Graph 29) Others included: shortage of bamboo, shelter materials not available, shelter materials not enough, small house, did not want as rain would enter through the window, didn't have ability to install.

**13%** of shelters met the minimum standard **for having windows**. 87% of shelters did not meet the standard- do not have windows.

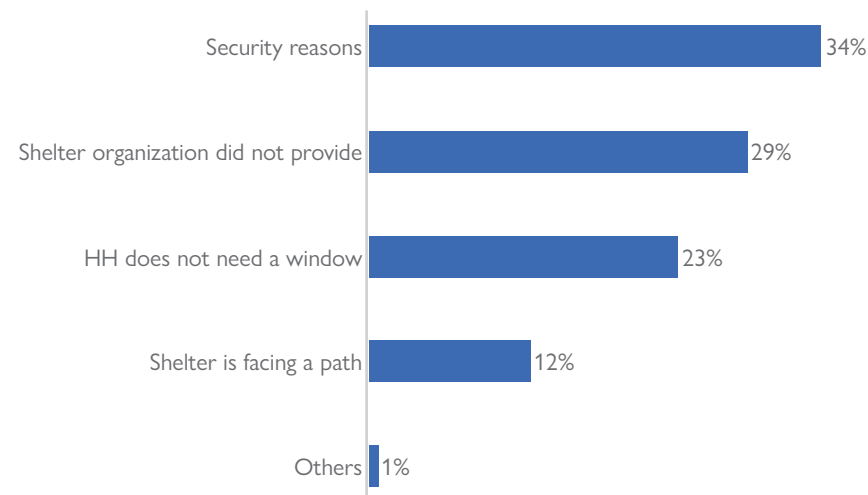
Camp 4Ext (93%) had the highest proportion of shelters with windows and camp 1E (1%) had the lowest proportion of shelters with windows.



Graph 28: 13% met minimum standard

For those shelters who do not have windows, the main reasons mentioned were:

**Graph 29: Reasons of not Having Windows<sup>5</sup>**

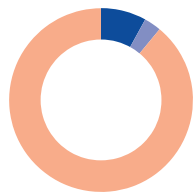


Out of 13% respondents who had windows in their shelters 49% shelters had 1 window followed by 23% having 2 windows, 20% 3 windows, 6% 4 windows and 2 % 5 windows.

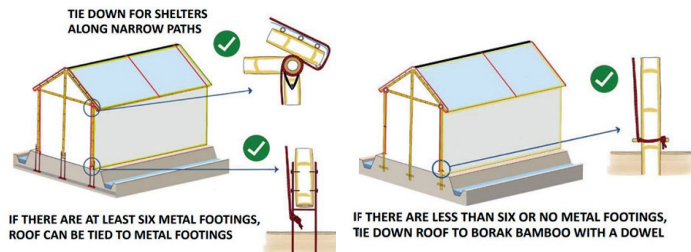
6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:

**8%** 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 shelter footing/post and/or to the ground. 89% of shelters did not meet the standard with less than four anchor points fixed to the shelter and/or to the ground. 3% shelters met partially with at least four anchor points properly fixed to shelter and/or to the ground.

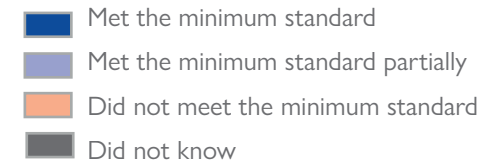
Camp 9 (32%) had the highest proportion of shelters that were tied down according to sector guidance and in camp 16 and 25, none of the shelters met the standard, with less than four points anchored to the shelter and/or to the ground.



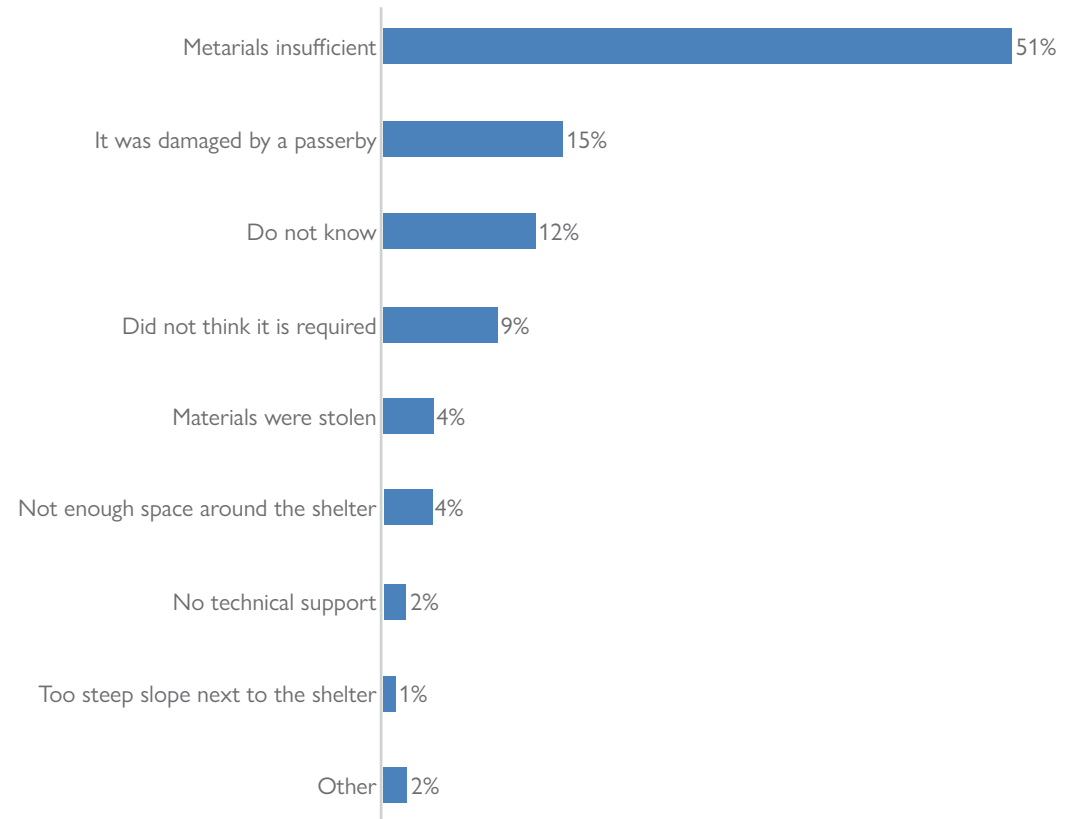
Graph 30: 8% met minimum standard



From the 92% of respondents who did not meet the standards for tying down of roofs or met them partially, 51% stated that the materials for tying down roofs was insufficient, 15% said the ropes were damaged by a passerby, and 12% did not know the reason, 9% did not think it was required to tie down shelter roofs, 4% said their materials were stolen, 2% received no technical support, and 1% stated the slope next to their shelter was too steep to tie down shelters. Other reasons included having damaged rope and damaged anchors.



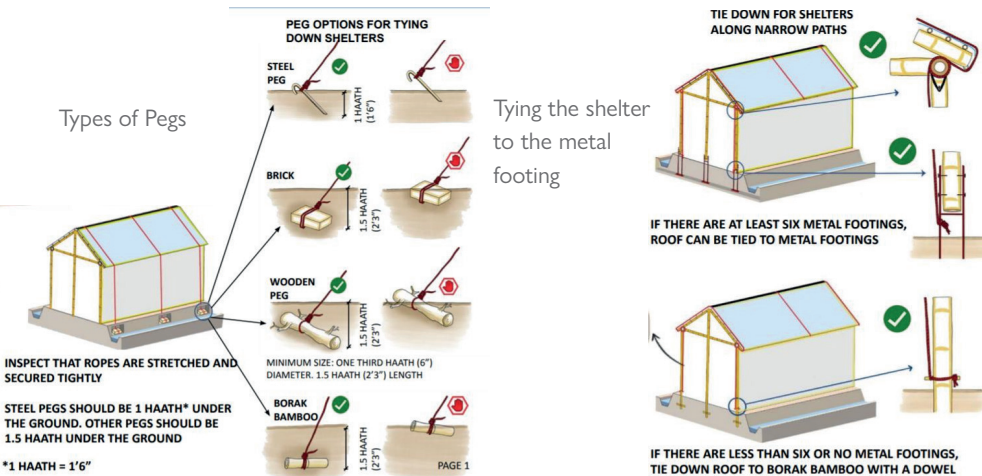
Graph 31: Reasons Shelters were 'Not' or 'Partially' Tied Down in accordance with Sector guidance?



6.2 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

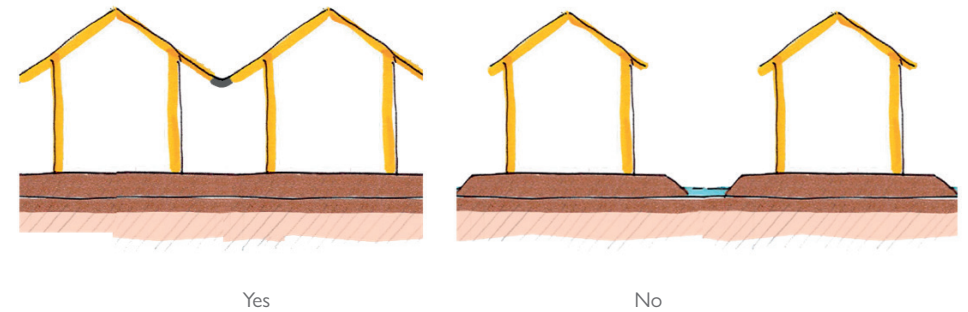
For shelters which had their roofs completely or partially tied down, 57% were anchored using steel pegs, 22% using bamboo pegs, 13% were tied to metal footing inside the shelter. Furthermore, 52% of the tie-down ropes were tightly fixed and 42% ropes were loose.



From 58% shelters in a row, 85% shelters had a continuous common roof for the row and 15% had roof valleys meeting to form "zig-zag" roof profiles.

From those shelters with zig-zag roofs, 56% had gutters installed. Out of these, 57% had tarpaulin gutters, 24% had tarpaulin gutters with muli, 12% had UPVC gutter and 7% had other types of gutters. In addition, 95% shelters had no down take pipe for the gutter, 4% had a down take pipe but not until the ground and 1% had a down take pipe all the way to the ground.

Gutters installed between adjoining shelters



**58%** of assessed shelters were **part of a row of shelters**<sup>6</sup>. 42% of shelters were standalone shelters.

NRC (93%) had the highest proportion of shelters in a row and camp 20 (14%) had the lowest proportion of shelters which were part of a row.



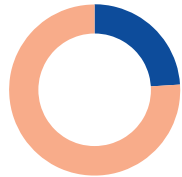
Yes, Gutter all the way to the ground      Yes, but not until the ground      No, there is no downtake pipe

<sup>6</sup>Note: Two or more shelters adjacent to each other and sharing common roof and partition wall were considered as shelters in a row



**6.2 Minimum Performance Standards that were Met/Unmet and Findings Related to the Standards:**

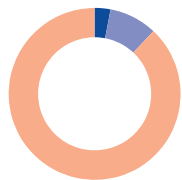
Out of the shelters that had gutters, 24% gutters evacuated water to the drainage, while 76% did not.



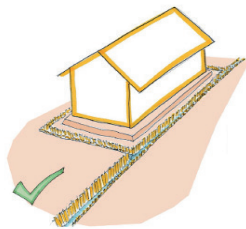
Graph 33: 24% met minimum standard

**3%** of shelters met the minimum standard **for having adequate and functioning drainage**. 88% of shelters did not, and 9% of shelters met this standard partially, with three out of four adequate and functional drainages.

Camp 1W (24%) had the highest proportion of shelters with adequate and functioning drainage and in camps 4, 7, 8E, 26, KRC and NRC none of shelters had adequate and functioning drainage.



Graph 34: 3% met minimum standard

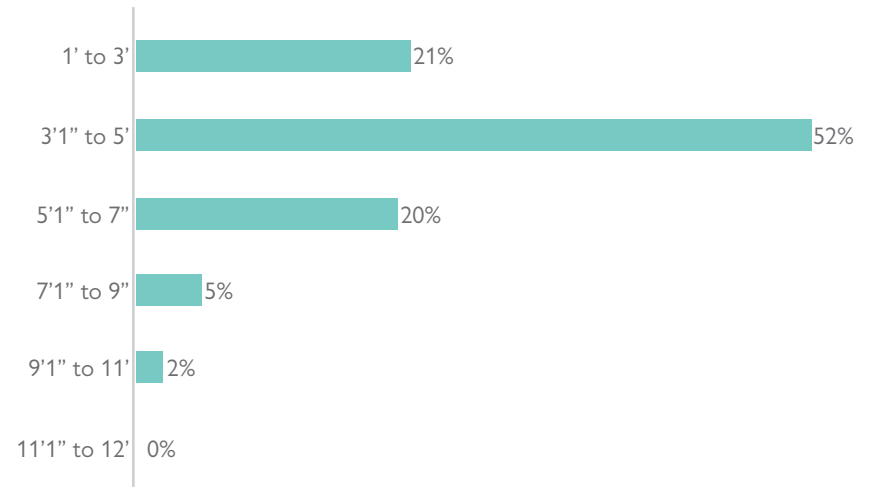


The pathways widths between shelters were measured, and pathways on the main door side were assessed separately<sup>7</sup>. The average width of pathways on the main door side was 4'9". The pathway widths recorded can be seen in the graph (35).

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

The pathways on the remaining three sides of the shelters were measured (only for pathways within 10' distance) and the average was found to be 5'1". The minimum 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 4'6". Camp 7 and KRC had the lowest average width of pathways (4'3") and camp 4Ext. had the highest average width of pathways (9'2").

**Graph 35: HHs Had Pathway vs Pathway Width**



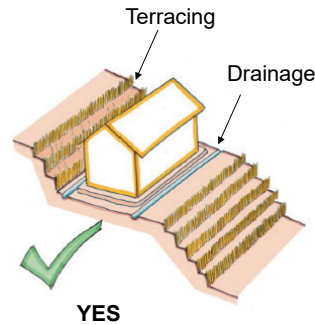
<sup>7</sup>Considering the feasibility of taking measurements in the field, only pathways falling within 10 feet width were measured.

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

Out of the 3% shelters which had adequate drains (100 HHs), 53% of shelters had all existing drains connected to a functioning secondary/primary drain. 42% had at least 50% existing drains connected, and 5% had less than 50% existing drains connected to a functioning secondary/primary drain.



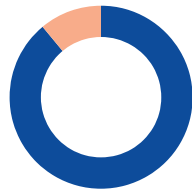
Graph 36: 53% met minimum standard



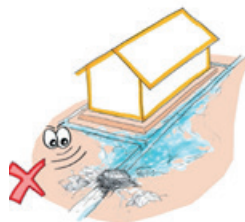
- Met the minimum standard
- Met the minimum standard partially
- Did not meet the minimum standard
- Did not know

11% of shelters had standing water in the surrounding area of the shelter that created water logging during the time of data collection. 89% did not have water logging in the surrounding area.

Camp 9 (29%) had the highest proportion of shelters that had standing water in the surrounding area and camp 4 Ext (1%) had the lowest proportion of shelters with standing water in the surrounding area.



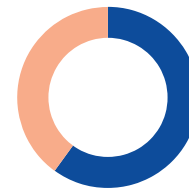
Graph 37: 89% met minimum standard



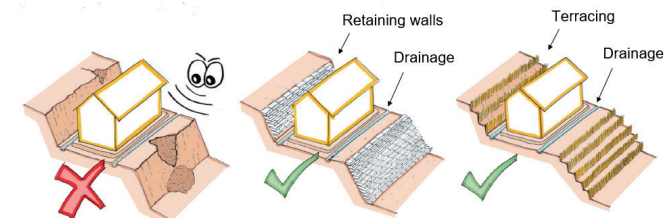
Standing water in the surrounding area of the shelter that creates water logging

60% of shelters met the minimum standard for site safety from soil erosion and landslides, while 40% shelter were not on safe sites.

Camp 24 (94%) had the highest proportion of shelters located on safe sites and camp 20 (27%) had the lowest proportion of shelters located on safe sites.



Graph 38: 60% met minimum standard



Site safety from soil erosion and landslides was measured on the basis of whether the slopes along shelters were protected (by terracing, bamboo/sand bag retaining walls, planting stabilization and/or drainage to prevent erosion).

From the table below it can be seen that most camps have met the minimum standards for height of plinth, floor finishing, lockable shelter, protection from flood water, water logging and a safe shelter site. On the other hand, almost all the camps have less than 25% shelters meeting standards for rain protection through the roof and walls, having bamboo posts isolating from the ground, adequate bracing, tying down of roofs, drainage, and cross ventilation.

**Table: 2 Percentage of Minimum Performance Standards Met and Other Findings Presented by Camps**

Questions	>50%	26% - 50%	0 -25%	Camp 1E	Camp 1W	Camp 2E	Camp 2W	Camp 3	Camp 4	Camp 4Ext	Camp 5	Camp 6	Camp 7	Camp 8E	Camp 8W	Camp 9	Camp 10	Camp 11	Camp 12
1) B1. Plinth in Range (up to 18 inches)	98%	87%	95%	100%	97%	96%	100%	97%	100%	97%	100%	99%	96%	99%	97%	94%	98%	100%	100%
2) Are the footings concrete or metal to keep the bamboo structure out of the ground?	14%	8%	26%	20%	0%	32%	27%	41%	59%	13%	52%	49%	79%	22%	3%	54%			
3) Are the footings/RCC posts 2ft. above in the ground so that they are securely anchored?	7%	7%	26%	14%	0%	27%	28%	36%	41%	12%	49%	47%	40%	12%	5%	57%			
4) Is the distance between bamboo columns maximum 5ft. (152 cm)?	69%	53%	61%	56%	51%	67%	74%	34%	76%	65%	61%	61%	65%	57%	66%	55%			
5) Is the distance between bamboo rafters maximum 5ft. for big bamboo or 1ft. for small bamboo?	53%	53%	55%	51%	45%	60%	66%	56%	67%	55%	48%	44%	78%	45%	69%	89%			
6) Is the distance between purlins less than 1ft.?	73%	67%	68%	58%	51%	69%	32%	73%	81%	68%	80%	70%	94%	75%	85%	79%			
7) Is there adequate bracing in all corner bays of the shelter?	8%	5%	19%	1%	0%	13%	62%	18%	1%	5%	32%	13%	24%	5%	0%	17%			
8) Has the shelter at least one partition wall to provide privacy?	17%	11%	23%	45%	15%	15%	26%	4%	14%	16%	15%	21%	33%	14%	7%	7%			
9) Has the shelter means to be locked from inside and out?	83%	80%	92%	73%	83%	88%	98%	93%	54%	76%	79%	79%	75%	73%	76%	75%			
10) Does the structural bamboo have signs of insect infestation?	91%	96%	76%	90%	83%	82%	65%	87%	90%	93%	74%	77%	20%	81%	93%	82%			
11) Has the floor a cement finishing top layer that is complete and without holes or excessive damage?	62%	33%	61%	53%	78%	62%	97%	74%	41%	49%	73%	67%	89%	40%	66%	82%			
12) Has the shelter been affected by the flood water within the past year?	8%	23%	9%	6%	24%	28%	0%	3%	17%	18%	8%	4%	35%	18%	7%	4%			
13) Does the rain water enter into the shelter through roof covering?	56%	74%	58%	71%	66%	60%	22%	51%	62%	75%	32%	53%	16%	67%	66%	19%			
14) Does the rain water enter into the shelter through wall covering?	23%	53%	47%	55%	18%	56%	47%	46%	51%	38%	31%	44%	18%	60%	44%	22%			
15) Has the shelter being tied down in accordance with the sector guidance?	7%	3%	14%	5%	14%	6%	8%	16%	1%	4%	13%	9%	32%	2%	2%	11%			
16) Is there non-inflammable materials protecting the walls in the cooking area?	48%	25%	26%	40%	27%	10%	4%	35%	21%	26%	54%	43%	86%	19%	6%	14%			
17) Do the occupants have bathing space within the shelter?	37%	57%	40%	74%	47%	18%	22%	7%	62%	36%	20%	16%	21%	37%	38%	13%			
18) Do the occupants have latrine within the shelter?	2%	4%	1%	2%	0%	0%	0%	0%	7%	49%	1%	0%	5%	3%	0%	0%			
19) Are there any gutters installed that join the roofs of the shelter?	31%	100%	50%	50%	100%	25%	0%	58%	70%	75%	80%	50%	33%	43%	54%	73%			
20) Is there adequate and functioning drainage around the shelter?	2%	24%	1%	7%	3%	0%	8%	1%	2%	0%	0%	5%	3%	3%	1%	3%			
21) Is there any standing water in the surrounding area of the shelter that creates water logging?	11%	6%	14%	11%	6%	13%	1%	6%	11%	4%	6%	2%	29%	5%	8%	6%			
22) Is the shelter site safe from soil erosion/landslides?	79%	55%	71%	28%	65%	34%	85%	57%	48%	42%	48%	49%	65%	36%	52%	56%			

**Table 3: Percentage of Minimum Performance Standards Met and Other Findings/Presented by Camps**

Questions	>50%	26% - 50%	0 -25%	Camp 13	Camp 14	Camp 15	Camp 16	Camp 17	Camp 18	Camp 19	Camp 20	Camp 20 Ext	Camp 21	Camp 22	Camp 24	Camp 25	Camp 26	Camp 27	KRC	NRC
1) Is the height of the plinth minimum 6" (15cm)?	95%	95%	98%	98%	100%	98%	94%	100%	100%	97%	100%	99%	99%	98%	100%	98%	98%	98%	98%	98%
2) Are the footings concrete or metal to keep the bamboo structure out of the ground?	63%	23%	2%	31%	28%	31%	38%	35%	21%	4%	33%	17%	11%	0%	3%	5%	9%	9%	9%	9%
3)B3 Are the footings/RCC posts 2ft. above in the ground so that they are securely anchored?	36%	19%	3%	31%	24%	22%	37%	23%	18%	7%	26%	16%	11%	0%	2%	8%	9%	9%	9%	9%
4) Is the distance between bamboo columns maximum 5ft. (152 cm)?	32%	65%	51%	69%	63%	71%	47%	49%	70%	72%	63%	44%	52%	54%	59%	23%	26%	26%	26%	26%
5) Is the distance between bamboo rafters maximum 5ft. for big bamboo or 1ft. for small bamboo?	29%	71%	33%	65%	51%	57%	60%	15%	51%	61%	34%	60%	9%	26%	33%	42%	50%	50%	50%	50%
6) Is the distance between purlins less than 1ft.?	62%	88%	64%	81%	76%	75%	83%	56%	54%	47%	70%	57%	54%	62%	56%	40%	26%	26%	26%	26%
7) Is there adequate bracing in all corner bays of the shelter?	9%	2%	6%	7%	13%	5%	15%	2%	14%	7%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8) Has the shelter at least one partition wall to provide privacy?	14%	9%	23%	19%	1%	15%	22%	21%	28%	12%	19%	11%	10%	18%	14%	48%	26%	26%	26%	26%
9) Has the shelter means to be locked from inside and out?	82%	76%	83%	67%	78%	85%	87%	88%	91%	73%	82%	92%	74%	80%	75%	97%	81%	81%	81%	81%
10) Does the structural bamboo have signs of insect infestation?	80%	76%	82%	84%	80%	88%	63%	80%	62%	81%	51%	69%	51%	94%	97%	37%	49%	49%	49%	49%
11) Has the floor a cement finishing top layer that is complete and without holes or excessive damage?	84%	56%	54%	55%	63%	74%	84%	37%	64%	28%	46%	64%	59%	43%	48%	51%	53%	53%	53%	53%
12) Has the shelter been affected by the flood water within the past year?	4%	11%	4%	16%	12%	25%	28%	5%	21%	6%	17%	14%	22%	27%	22%	8%	17%	17%	17%	17%
13) Does the rain water enter into the shelter through roof covering?	52%	33%	46%	57%	53%	63%	38%	74%	60%	78%	31%	52%	44%	82%	83%	73%	73%	73%	73%	73%
14) Does the rain water enter into the shelter through wall covering?	46%	43%	61%	53%	64%	35%	16%	64%	48%	59%	35%	49%	30%	51%	46%	17%	48%	48%	48%	48%
15) Has the shelter being tied down in accordance with the sector guidance?	2%	1%	11%	0%	21%	6%	15%	15%	15%	7%	5%	3%	0%	8%	3%	2%	1%	1%	1%	1%
16) Is there non-inflammable materials protecting the walls in the cooking area?	14%	28%	23%	36%	19%	35%	16%	9%	16%	20%	22%	33%	43%	17%	26%	51%	40%	40%	40%	40%
17) Do the occupants have bathing space within the shelter?	48%	38%	31%	32%	10%	11%	36%	18%	26%	11%	32%	54%	32%	34%	32%	15%	23%	23%	23%	23%
18) Do the occupants have latrine within the shelter?	3%	3%	0%	2%	0%	0%	1%	0%	0%	0%	2%	1%	0%	0%	2%	0%	2%	2%	2%	2%
19) Are there any gutters installed that join the roofs of the shelter?	70%	33%	100%	50%	67%	33%	71%	100%	0%	33%	88%	17%	75%	67%	71%	40%	100%	100%	100%	100%
20) Is there adequate and functioning drainage around the shelter?	1%	1%	1%	4%	1%	1%	16%	2%	1%	1%	2%	7%	1%	0%	1%	0%	0%	0%	0%	0%
21) Is there any standing water in the surrounding area of the shelter that creates water logging?	3%	9%	8%	11%	8%	21%	15%	9%	14%	4%	3%	15%	19%	22%	20%	10%	19%	19%	19%	19%
22) Is the shelter site safe from soil erosion/landslides?	70%	46%	56%	51%	42%	42%	48%	27%	78%	44%	80%	94%	92%	87%	92%	83%	91%	91%	91%	91%

7. DESIRED PERFORMANCE STANDARDS

7.1 Overview:

This section assessed shelters to highlight the desired performance standards which should be met and the extent to which they are fully met, partially met, or not met at all.

7.2 Desired Performance Standards that were Met/Unmet and Findings Related to the Standards:

**15%** of shelters met the desired standard of using all treated bamboo for their shelter construction, with no visible sign of insect infestation. 71% shelters did not meet this standard for treated bamboo and visible signs of infestation. 15% reported that treated bamboo was used only for the columns, thus partially meeting the standard.

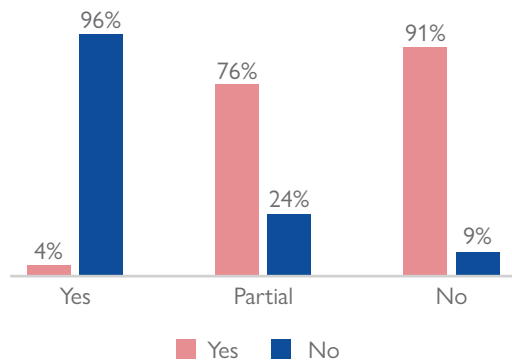


Graph 39: 15% met desired standard

Camp 9 (77%) had the highest proportion of shelters with all bamboo being treated and camp 3 (0%) had the lowest proportion of shelters with treated bamboo.

In the graph (38) it can be seen that 91% of untreated bamboo shows signs of insect infestation. In 76% cases where treated bamboo was used partially (only columns) there are signs of insect infestation. On the other hand, where shelters are constructed using only treated bamboo as structural members, 96% shelters did not show any signs of insect infestation.

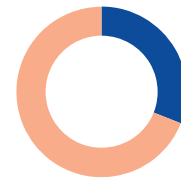
Graph 40: Bamboo Treatment vs Visible Infestation



**76%** of shelters met the desired performance standard of minimum 188 sq.ft. covered living space. 24% shelters did not meet this standard. Camp 25 (73%) had the highest proportion of shelters that met the desired performance standard, and camp 2W (68%) had the lowest proportion that met this standard.

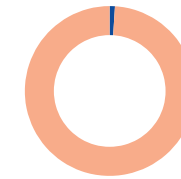
The measurement of covered living space did not distinguish between the shelter and the extension. Hence this average also includes the covered extensions built in the HHs plot area. The average size of shelter found to be 193 sq.ft. for HHs with 1-4 members, 245 sq.ft. for 5-6 members; 378 sq.ft. for 7 and above members.

8. OTHER FINDINGS



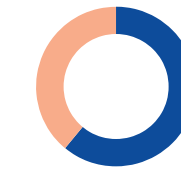
Graph 41

**31%** of shelters assessed had **bathing space within the shelter** and 69% did not. Camp 2W(74%) had the highest proportion of shelters having bathing space within shelter and camp 5 (7%) had the lowest proportion.



Graph 42

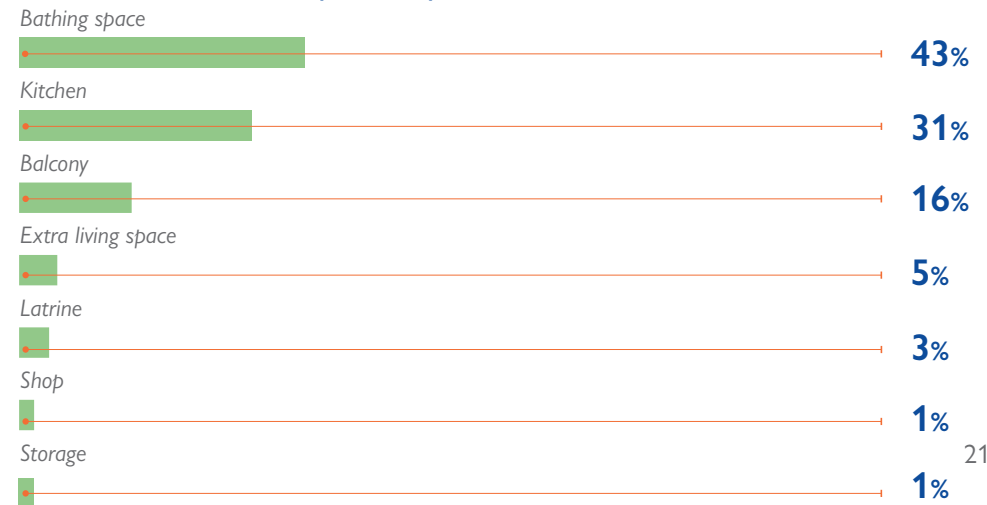
**1%** of occupants reported having a **latrine within the shelter**. Camp 9(5%) had the highest proportion of shelters having latrine within shelter and in majority number of camps shelters did not have latrine within shelter.



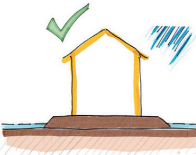

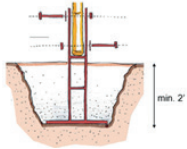
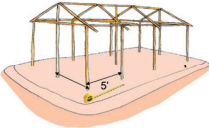
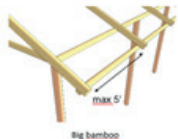
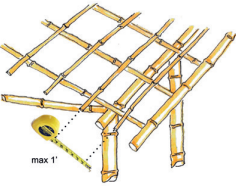
Graph 43

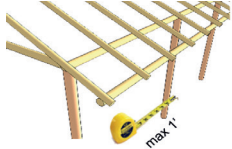
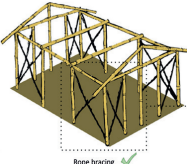
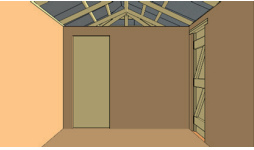



**61%** of shelters were extended by households and 39% of shelters were not extended. Camp 20 (87%) had the highest proportion of shelters that were extended and camp 2W (31%) had the lowest proportion of shelters with extension.

Graph 44: Purpose of Extension

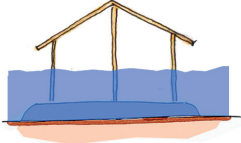
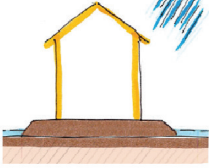
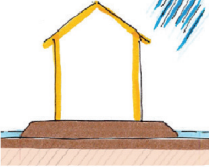
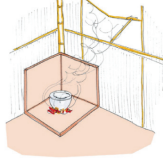
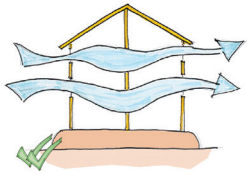
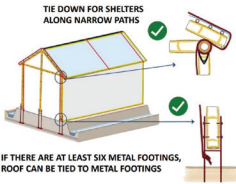


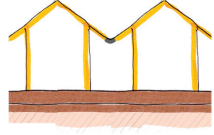
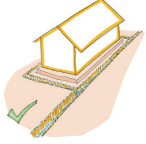

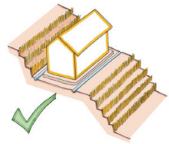
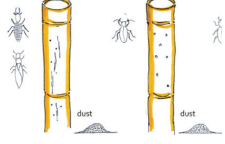
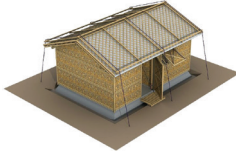
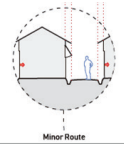
9. COMPARISON BETWEEN 2021 AND 2022 FINDINGS

	Standard	2021	2022
1	Plinth height is minimum 6 inches (6 cm) 	56%	86%
2	All footings are concrete or metal 	32%	26%
3	Footings are 2 feet under the ground 	44%	21%
4	Distance between bamboo columns is max 5 feet 	54%	57%
5	Distance between big bamboo rafters is max 1 foot 	62%	51%
6	Distance between small bamboo rafters is max 1 foot 	62%	71%

	Standard	2021	2022
7	Distance between purlins is max 1 foot 	51%	66%
8	There is adequate bracing in all corner bays 	8%	9%
9	Internal wall to provide privacy 	57%	18%
10	Shelter has means to be locked from inside and out 	79%	81%
11	Structural bamboo does not show sign of infestation 	14%	24%
12	Floor has cement finish without excessive holes 	48%	60%

9. COMPARISON BETWEEN 2021 AND 2022 FINDINGS

	Standard	2021	2022
13	Shelter has not been affected by flood water 	84%	86%
14	Rainwater does not enter the shelter through roof 	45%	44%
15	Rainwater does not enter the shelter through wall 	44%	43%
16	There are fire resistant materials protecting cooking space wall 	22%	30%
17	Shelter has openings for cross ventilation 	15%	21%
18	Shelter has been tied down in accordance with sector guidance  TIE DOWN FOR SHELTERS ALONG NARROW PATHS IF THERE ARE AT LEAST SIX METAL FOOTINGS, ROOF CAN BE TIED TO METAL FOOTINGS	9%	8%

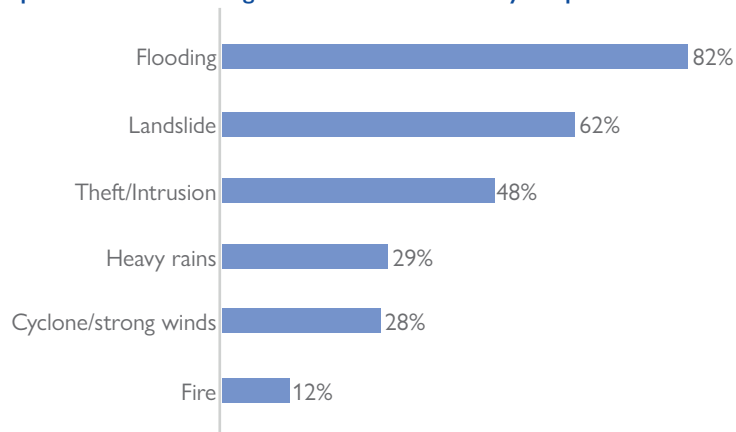
	Standard	2021	2022
19	Gutters are installed between shelters where roofs meet 	9%	56%
20	Adequate and functioning drainage on external shelter sides 	8%	3%
21	There is no water logging around the shelter 	81%	89%
22	Shelter is safe from soil erosion and landslides 	59%	60%
23	All the big bamboo used to construct the shelter are treated 	9%	15%
24	Shelters having minimum 188 Sq.ft. covered living space 	81%	76%
25	Pathway width on main door side of the shelter is at least 7 feet.  Minor Route	44%	7%

10. HOUSEHOLD PERCEPTION

10.1 Overview

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

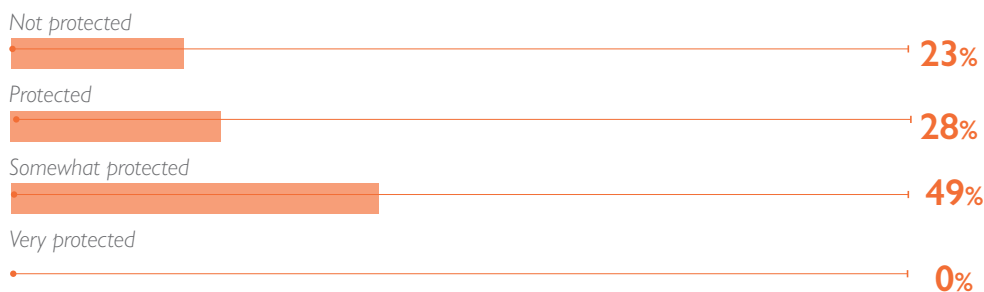
Graph 45: Lowest and Highest threats Perceived by Respondents:<sup>8</sup>



Flood was perceived as highest threat and fire was perceived as lowest threat by respondents.

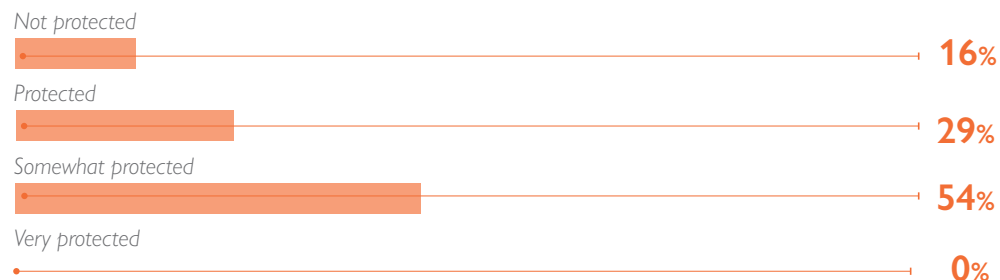
How well do you feel the shelter and site protects the household from the following threats:

Cyclones/Strong Winds



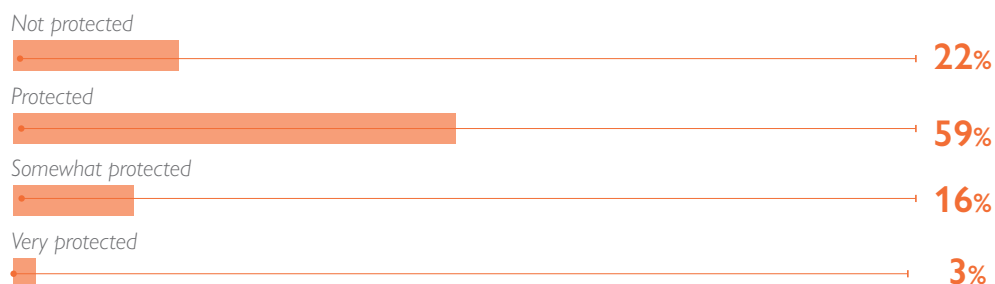
Out of 3107 surveyed HHs only 6 (0%) HHs reported that their shelters and sites were 'very protected' from cyclones and strong winds. Camp 11 (75%) had the highest proportion of HHs that reported their shelters were 'somewhat protected' and camp 9 (75%) had the highest proportion of households who reported that their shelters were 'protected' from cyclones/strong winds. Camp 1W (59%) had the highest proportion that reported the shelters were 'not protected' from cyclones or strong winds at all.

Heavy Rains



Out of 3107 surveyed HHs, only 12 (0%) HHs reported that their shelters and sites were 'very protected' from heavy rains. Camp 10 (80%) had the highest proportion of households that reported their shelters were 'somewhat protected' and camp 12 (64%) had the highest proportion of households that reported their shelters were 'protected' from heavy rains. Camp 16 (49%) had the highest proportion that reported the shelters were 'not protected' from heavy rains at all.

Landslides



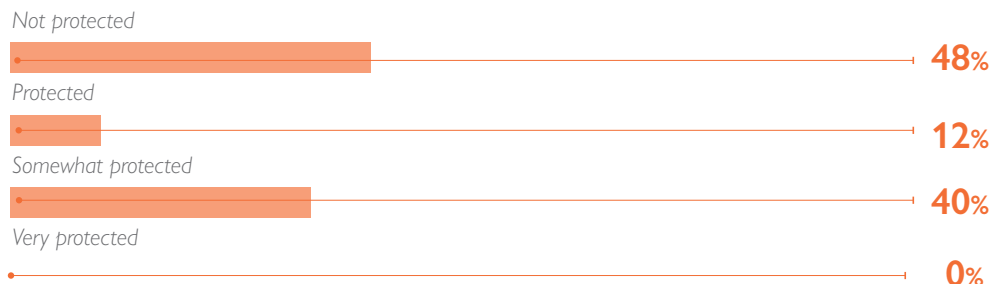
Out of 3107 surveyed HHs, 96 HHs (3%) reported that their shelters and sites were 'very protected' from landslides and camp 4Ext (24%) had the highest proportion. Camp 4 (45%) had the highest proportion of households that reported their shelters were 'somewhat protected' and camp 27 (89%) had the highest proportion of households that reported their shelters were 'protected' from landslides. Camp 2W (68%) had the highest proportion that reported their shelters were 'not protected' from landslides at all.

<sup>8</sup>These percentages are sum of 'very protected and protected' reported by respondents



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

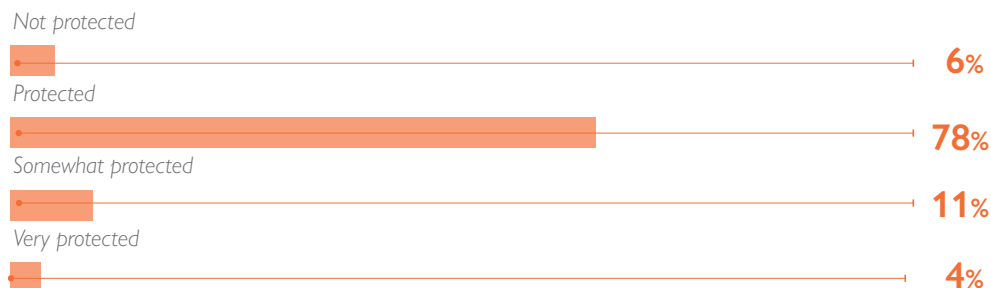
### Fire



Out of 3107 surveyed HHs only 1 HH (0%) reported that their shelter and site was 'very protected' from fire. Camp 3 (72%) had the highest proportion of households that reported their shelters were 'somewhat protected' and camp 4 (46%) had the highest proportion of households that reported their shelters were 'protected' from fire. Camp 11 (95%) had the highest proportion that reported the shelter/sites are 'not protected' from fire at all.

21% of HHs who have fire-resistant material plastered around the cooking space feel protected from fire compared to 11% HHs who do not have fire-resistant material plaster. No HHs feel "very protected" from fire irrespectively of having cooking space with plastering protection or not.

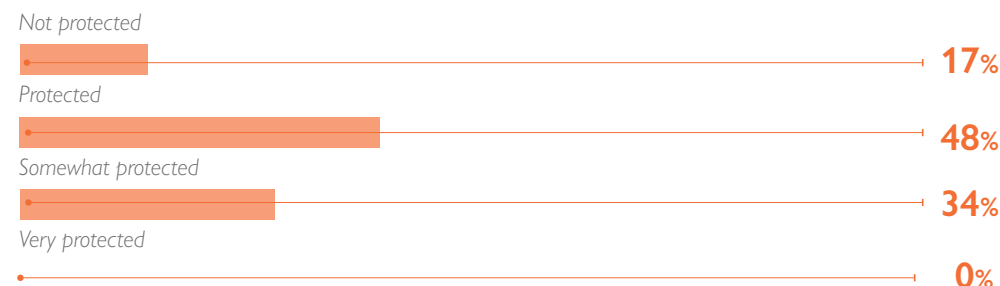
### Flooding



Out of 3107 surveyed HHs, 128 HHs (4%) reported that their shelters and sites were 'very protected' from flooding and camp 1E (15%) had the highest proportion. Camp 9 (38%) had the highest proportion of HHs reporting that shelters were 'somewhat protected' and camp 8E (95%) had the highest proportion of households that reported shelters were 'protected' from flooding. In camps 6, 26 (17%) had the highest proportion that reported their shelters were 'not protected' from flooding at all.

5% of those HHs with plinth higher than ground do not feel protected from the flood, compared to 25% HHs with plinth at/lower than ground level who do not feel protected from floods.

### Theft/Intrusion

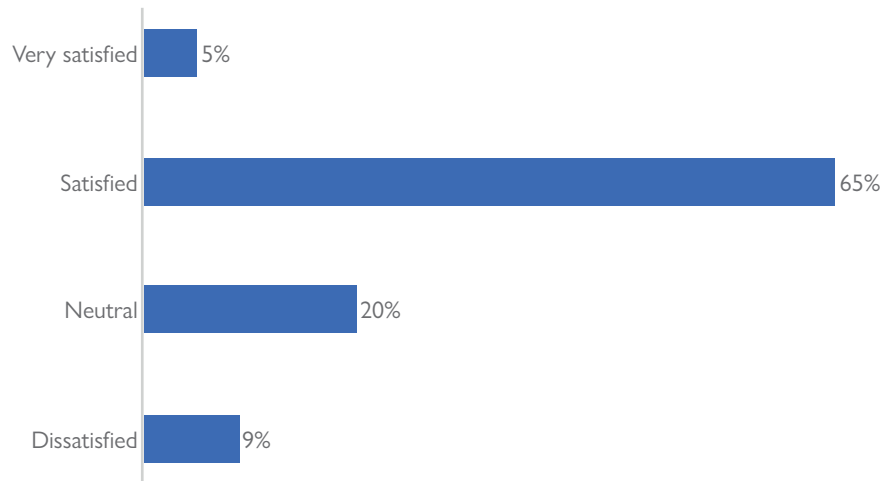


Out of 3107 surveyed HHs only 9 HHs (0%) reported that their shelters were 'very protected' from theft/intrusion. Camp 2W (66%) had the highest proportion of households that reported their shelters were 'somewhat protected' and camp 4Ext (85%) had the highest proportion of households that reported their shelters were 'protected' from theft/intrusion. Camp 24 (36%) had the highest proportion of HHs that reported their shelters were 'not protected' from theft/intrusion at all.

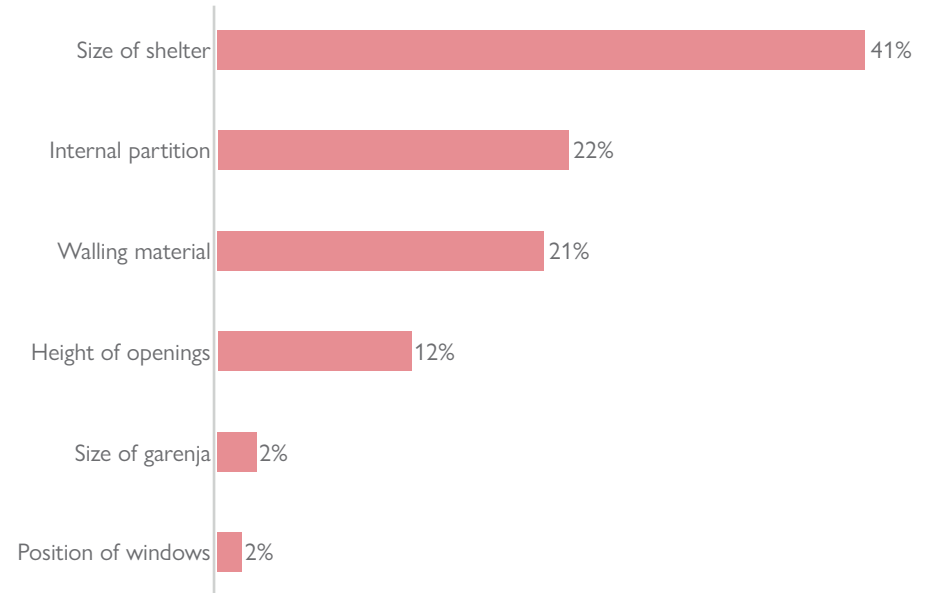
Households were asked if their **shelters were affected by any of the above mentioned threats in the past year**. Overall, 55% of the households reported that they faced the above threats and 45% reported they did not face threats. Camp 9 (92% each) had the highest proportion of households that reported facing threats and camp 8E (8%) had the highest proportion that did not face threats.

Households reported their level of satisfaction with regards to the privacy in their shelters. 5% were very satisfied, 65% respondents were satisfied, 20% felt neutral, and 9% were dissatisfied.

**Graph 46: Respondents Reported Level of Satisfaction Regarding Shelter Privacy**



**Graph 47: Improvements Suggested by HHs for Shelter Privacy**



HHs who were dissatisfied or very dissatisfied were asked how they would like to improve their shelter privacy. 41% respondents suggested increasing the shelter size, 22% suggested provision of internal partition, 21% suggested changing the walling material, 21% asked to change the height of openings, 2% asked to change the size of the garenja, and 2% suggested changing the position of windows.

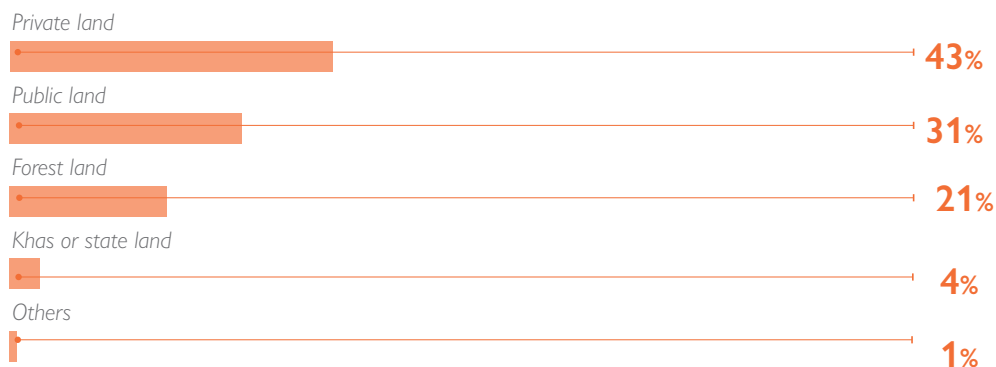
11. HOUSING LAND AND PROPERTY

11.1 Overview

Majority of the refugee population now reside in designated camps, however, a proportion of refugees continue to live on the host community lands. Over the years, host communities renting land, shelter/house and shops to refugees has come out as a prominent engagement the two communities have with each other. In the Joint Multi Sector Needs Assessment (J-MSNA) of 2021, 12% of refugee respondents reported having had to make rent payments to live in their shelter in the 6 months prior to data collection. It is already an increase comparing to 2020 (10%). In this section of the assessment, households were asked to report on rent paid, issues of eviction, lease agreements and disputes.

**68%** of respondents knew which type of land they were residing at. Out of the 68% who were aware of the type of land for their shelter site, 43% respondents reported they lived on private land, 31% on public land, 21% on forest land, 4% on Khas or state land, and 1% reported other: which included community Land, Waqf Land<sup>9</sup>, and agricultural Khas Land.

Graph 48: Type of Land



Respondents were asked if there was an agreement in the last 3 months to provide goods/labor in exchange for use of land on which their shelter was located. 97% HHs stated that there was no such agreement and 3% HHs had an agreement to provide goods (food rations, shelter materials, NFIs etc.) in exchange for use of land.

11.2 Rent Agreements:

10% respondents reported that there was an agreement to pay cash in exchange for use of the land on which their shelter was located, in the last 3 months.

Out of the 10% (315 HHs) who pay rent in exchange for use of land, almost all respondents reported that the rent is fixed, and only 1 reported that the rent was not fixed and changed on a yearly basis.

92% of respondents struggled to pay rent in last 12 months. From all the HHs that paid rent in exchange of land, 73% reported that there was a grace period if the rent was not paid on time, while 27% did not have a grace period. From those respondents who were granted a grace period, 44% stated that there was no specific grace period and it depended on negotiation, 30% had a grace period of a week and 26% had a grace period of a month.

Furthermore, it was checked whether it was possible to pay the debt rent in instalments. 76% HHs responded that they were not permitted to pay the debt rent in instalments, 21% were permitted, and 3% did not know. Out of the 21% who were permitted to pay the debt rent in instalments, 64% had no agreement for the debt rent payment, 18% paid weekly instalments separate from the current month's rent payment, 16% added the total amount to current month's rent payment, 1% paid monthly instalments separate from regular rent payment.

Camp 25 (99%) had the highest proportion of households that reported paying rent in cash followed by camp 27 (88%), camp 26 (66%) and camp 24 (34%).

3% of respondents reported providing goods or labour in exchange for rent.

Camp 1E and 1W both had the highest proportion of households that reported paying rent through goods (31% each camp) followed by camp 12 (16%). Camp 25 (3%) had the highest proportion of HHs that reported paying rent through labour.

<sup>9</sup>Land dedicated for the religious purpose (Muslim)

**Table 4: Proportion of HH who Paid Rent in Cash by Amount<sup>10</sup>**

Rent in BDT (Bangladeshi Taka)	Proportion of HH
Less than 200 BDT	10%
200 - 400 BDT	56%
401 - 600 BDT	25%
601 - 1000 BDT	7%
> 1,001 BDT	2%

Teknaf upazila (273 HHs) had a higher number of households that paid rent in cash compared to Ukhiya upazila (39 HHs). However, Ukhiya upazila (94 HH) had a higher number of households that paid through goods compared to Teknaf upazila (1 HH).

**Table 5: Paid Rent in Cash (Per Month) by Upazilla**

Teknaf	<200 BDT	200-400 BDT	400-600 BDT	600-800 BDT	800-1000 BDT	>1000 BDT
Camp 22	3 HH	1 HH	0 HH	0 HH	0 HH	0 HH
Camp 24	0 HH	16 HH	12 HH	2 HH	3 HH	0 HH
Camp 25	0 HH	52 HH	28 HH	7 HH	1 HH	1 HH
Camp 26	1 HH	47 HH	11 HH	2 HH	1 HH	1 HH
Camp 27	1 HH	49 HH	25 HH	3 HH	0 HH	4 HH
NRC	0 HH	2 HH	0 HH	0 HH	0 HH	0 HH
Ukhiya						
Camp 1E	26 HH	0 HH	1 HH	0 HH	0 HH	0 HH
Camp 2E	1 HH	1 HH	0 HH	0 HH	0 HH	0 HH
Camp 8E	0 HH	6 HH	0 HH	1 HH	0 HH	0 HH
Camp 9	0 HH	1 HH	2 HH	0 HH	0 HH	0 HH
Camp 11	0 HH	0 HH	0 HH	0 HH	1 HH	0 HH
Camp 12	0 HH	1 HH	0 HH	0 HH	0 HH	0 HH
KRC	0 HH	1 HH	0 HH	0 HH	0 HH	0 HH

<sup>10</sup> n=315

### 11.3 Lease Agreements:

**14%** of HHs reported they were having lease agreement, while 86% did not have a lease agreement. Out of those who had lease agreements, 97% HHs had a verbal lease agreement and 3% had a written one. Regarding the verbal lease agreements, 65% reported that there were no witnesses to the agreement, 33% had a witness to the agreement, and 2% did not know. Overall, 97% respondents mentioned their lease agreement was open-ended. The remaining 3% had a time bound agreement or did not know the conditions of the agreement.

### 11.4 Eviction

**98%** of households reported not facing any threat of eviction in the past 12 months, and only 2% reported facing threat either because they faced debt rent (55%), or host community claimed the land with the shelter back (20%), or due to increase in rent (14%), or had inability to pay rent in goods/labour (12%). 99% of respondents said that they were not worried about possible eviction in the next 3 months. Out of the 40 respondents who were worried about possible eviction in the next 3 months, for 75% of them, the host community needed the land back, 12.5% respondents mentioned that they could not pay rent, and the remaining 12.5% stated other reasons including security threats from neighbours and fear of relocation to Bhasan Char.

### 11.5 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 63% respondents reported the dispute was resolved, while 37% reported that the disputes were unresolved.

In cases where the dispute was resolved, 40% were resolved by majhis, 30% through mediation by family members, 10% through verbal negotiation, 5% mediated by NGO, 5% where the HH agreed to pay the increased rent, and 10% responded other means of resolution.

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