ISCG INTER SECTOR COORDINATION GROUP | Rohingya Refugee Response Bangladesh

SHELTER & CCCM SECTOR
Cox's Bazar, Bangladesh

SHELTER PERFORMANCE STANDARD ASSESSMENT REPORT 2024

Rohingya Refugee Response, Cox's Bazar, Bangladesh

Data Collection: April – June 2024

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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
- SCCCM Sector - Shelter and CCCM Sector*
- UNHCR- United Nations High Commissioner for Refugees
- MPS- Minimum Performance Standards
- DPS- Desired Performance Standards
- WGQ- Washington Group Question
- RCC- Reinforced Cement Concrete
- SAG- Strategic Advisory Group
- CGI- Corrugated Galvanized Iron
- KRC- Kutupalong Registered Camp
- NRC- Nayapara Registered Camp
- Ext-Extension
- Sqft- square feet
- cm- centimeter
- ft- feet

*SNFI (Shelter and NFI) sector and SMSD (Site Management and Site Development) were merged into the SCCCM 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 989,585 individuals[1]. 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 shelter up-grade, repairs,maintenance and shelter 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. 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 2024 which reflect shelters conditions across 33 camps. NPM in coordination with the SCCCM sector conducted similar studies previously in 2021, 2022 and 2023. The reports can be found in the following links:

- 2023- https://rohingyaresponse.org/wp-content/uploads/2023/09/Shelter-Performance-Standard-Assessment_2023-Final-report.pdf
- 2022- https://rohingyaresponse.org/wp-content/uploads/2023/05/SNFI_Shelter_Performance_Standard_Assessment_September_2022.pdf
- 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, site development, camp coordination and camp management 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. To set a benchmark for shelter quality and have unified standards to be followed across the years, the SCCCM sector and its 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. UNHCR 15/08/2024

1) The first tier is defined as Minimum Performance Standards (MPS). 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.

2) The second tier is defined as Desired Performance Standards (DPS). There are 5 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.

3) Please remember the following criteria for shelter construction to be considered:

   a. All the shelters developed in those areas need to follow RRRC and SCCCM Sector approved design and site planning provided by the AOR focal organization.

   b. Shelters must be built in safe locations using appropriate materials such as properly treated bamboo, concrete or metal footings, RCC columns, and highquality tarpaulins.

   c. The cooking wall must be fire-safe and plastered with non-flammable materials according to the Desired Performance Standards and approved RRRC designs.

   d. Shelters must adhere to the SCCCM sector guidelines for all shelter construction in re-developed and newly developed areas.

Given the focus on SCCCM sector-driven Minimum Performance Standards and Desired Performance Standard, 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

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 between April and June 2024.

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, 3,125 surveys were administered in 33 camps.

The ISCG and RRRC recognized camp boundaries were laid on NPM-IOM 2024 Camp Shelter Addressing Shelter footprints to generate random sample points for administering surveys. Fire-affected sub- blocks (B3, D1) in Camp 13 were not assessed since around 200 shelters in these two sub-blocks were damaged by the fire that occurred in May 2024.

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.

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 making changes. 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 their Strategic Advisory Group (SAG) partners and executed analysis for the assessment. NPM prepared the report and shared it with SCCCM sector and their SAG partners for their review before finalization.

Image 1: NPM Enumerators were Assessing Shelters During the Study:

3. LIMITATIONS AND MITIGATION MEASURES

3.1 Limitation of the Study:

- 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.

- 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. Rohingya respondents find it easier to communicate with Rohingya enumerators, leading to more accurate results.

- It was also observed that Rohingya refugees do not show dissatisfaction with 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.

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

3.2 Mitigation Measures:

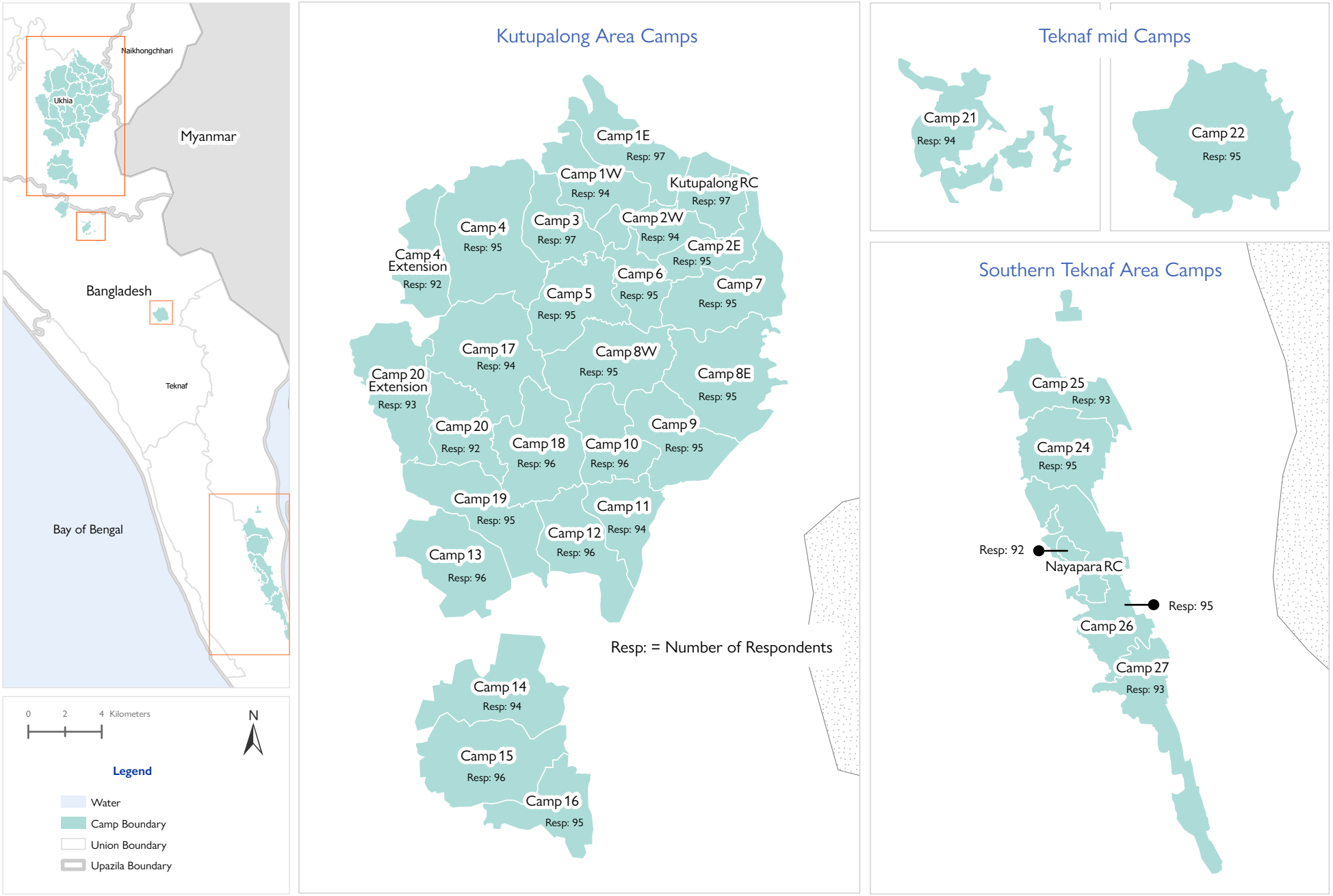
- For data collection, NPM deployed the most experienced enumerators who were involved with shelter performance standards assessment in the previous two rounds.

- 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.

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

- All the lessons learned from previous rounds were taken into account in this round. For example, the training duration was extended, and technical aspects of the questionnaire were refined with correlations and alignment with upgraded shelter approaches. These were prioritized exclusively through the involvement of the SCCCM sector team and sector partners. NPM enumerators were also given copies of the training presentation slides as a 'guide' during data collection.

4. NUMBER OF RESPONDENTS PER CAMP



Map 1: Number of respondents per camp

5. RESULT OF SHELTER PERFORMANCE STANDARD ASSESSMENT

5.1 Key Highlights

Minimum Performance Standards:

Sr. No	The result of achieving more than 50%	
1	The shelter does not flood	**99.7%**
2	The shelter is lockable from inside and out	**98.2%**
3	The shelter does not get waterlogged	**96.9%**
4	Atleast one internal partition	**96%**
5	The shelter has drainage	**84%**
6	Muli purlins (maximum spacing 1 ft)	**82%**
7	Rafters (maximum spacing for small bampoo 1 ft)	**77%**
8	The floor is finished with a top layer of cement	**73%**
9	Rafters (maximum spacing for big bampoo 5 ft)	**72%**
10	Shelter site is safe from soil erosion/landslides/slope protection provided	**70%**
11	Bamboo columns (maximum spacing 5 ft)	**61%**
	The result of achieving less than 50%	
12	Minimum height of plinth (.5ft)	**46%**
13	Footings are concrete or metal with bamboo structure out of the ground	**41%**
14	Minimum depth of foothing/posts (2 ft)	**38%**
15	There is no sign of insect infestation in structural bamboo	**30%**
16	The cooking space is protected from fire (n= 3107)	**29%**
17	The shelter is tied down in accordance with SCCCM sector guidance	**23%**
18	No gutters between adjacent shelters	**21%**
19	The roof does not leak	**16%**
20	The shelter has bracing in all corner bays or at least at three corners	**14%**

Desired Performance Standards:

Sr. No	Indicators	
1	Minimum internal floor area (150sq ft or more) *Shelter Size (Area of shelter/living floor area)*	**96.3%**
2	Meeting other site planning standards - 1 - The shelter has tertiary drains connected to secondary/primary drains	**83%**
3	Meeting other site planning standards - 2 - The shelter is part of a row that are collective shelter	**61%**
4	Meeting other site planning standards - 3 - Shelter pathway width - 4ft or more	**38%**
5	All internal bamboo is treated	**15%**

Shelter programming assistance:

71% of the respondents informed that they received shelter assistance last year (Jan 2023–Dec 2023), while 29% did not. 30 camps had more than 50% of the residents receiving shelter assistance, while the remaining 3 camps had less than 50% of the residents receiving shelter assistance.

Household Perception:

- Flood was perceived as the lowest threat and fire was perceived as the highest threat by respondents.
- 19% of the respondents were found not happy with privacy in their shelters. Improvements Suggested by HHs for Shelter Privacy- size of shelter (72%), changing walling material (37%), internal partition (29%), etc.

5.2 Meta Data

5.2.1 Demographics of Respondents:

3,125
Total number of respondents

48%
of respndents were female

Average Household Size
6

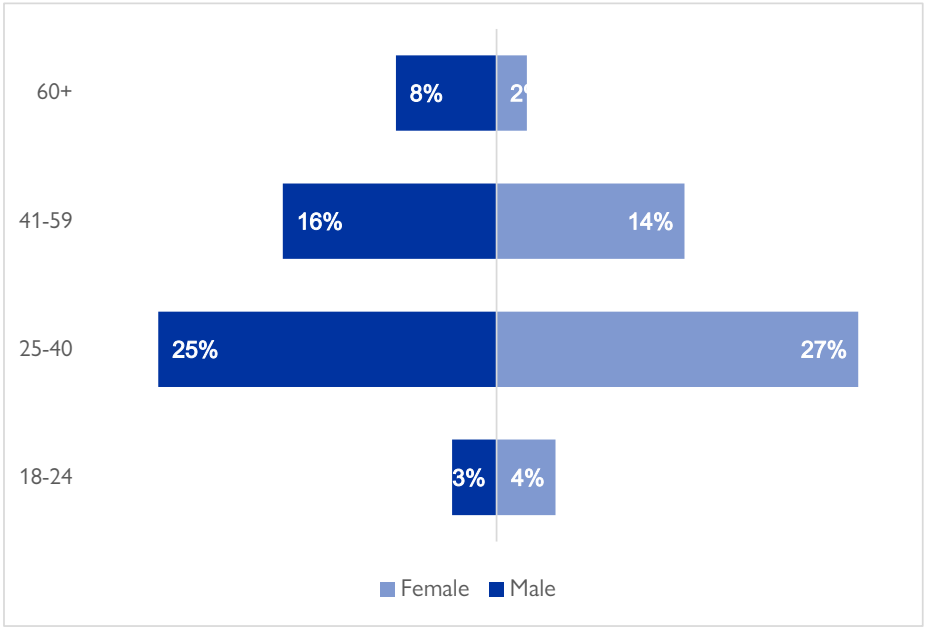
67%
of respndents were head of households

52%
of respondents aged between 25-40

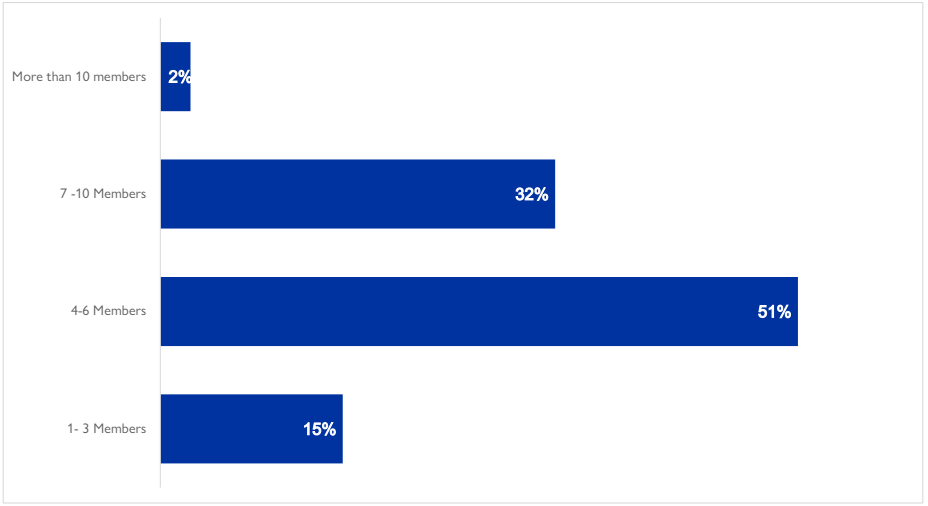
52%
of respndents were male

83%
of household heads were married

14%
of household had persons with disabilities[2]



Graph 1: Respondents by Age and Gender



Graph 2: Size of the Surveyed HH

5.2.2 Washington Group Question[3]:

- **4%** of respondents reported having household members who have difficulty (a lot/some) seeing, even if wearing glasses, compared to the rest 96% who reported no difficulty.

- **3%** of respondents reported having household members who have difficulty (a lot/some) hearing, even if using an aid, compared to the rest 97% who reported no difficulty.

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

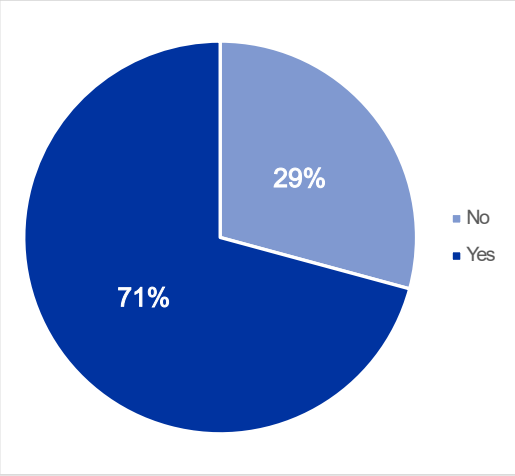
3. The short Washington Group Question (WGQ) set was used in this assessment that consists of five questions. Respondents were asked to report on household members over the age of 5 years for the WGQ. Please note that these percentages are based on self-reporting and likely to be underreported. If one person has multiple disabilities, he/she was counted as 1 person.

- **8%** of respondents reported having household members who have difficulty (a lot/some) walking or climbing steps, compared to 92% who reported no difficulty.
- **5%** of respondents reported having household members who have difficulty (a lot/some) remembering or concentrating, compared to 95% who reported no difficulty.
- **6%** of respondents reported having household members who have difficulty (a lot/some) with self-care, such as washing or dressing, compared to 94% who reported no difficulty.
- **3%** of respondents reported having household members over the age of 5 who have difficulty (a lot/some) communicating, compared to 97% who reported no difficulty.

5.3 Shelter programming assistance

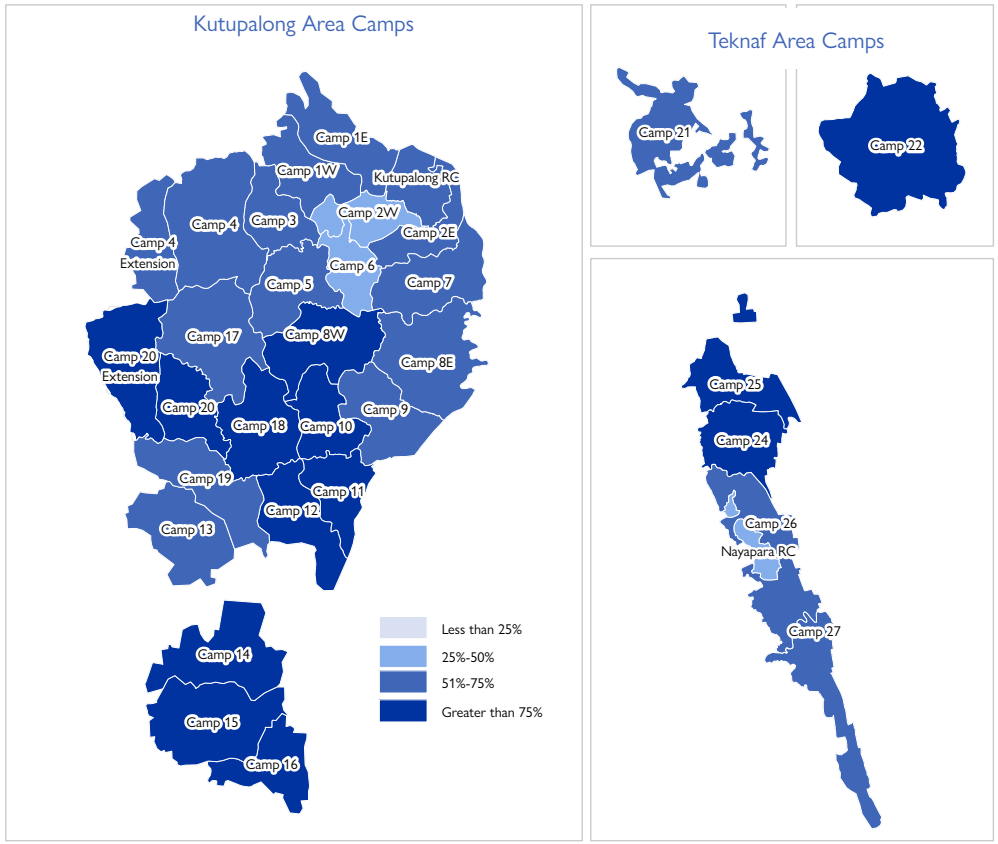
71% of the respondents informed that they received shelter assistance last year, while 29% didn't. In 30 out of 33 camps, over 50% of respondents reported receiving shelter assistance in the last year (Jan 2023–Dec 2023).

The highest percentage of respondents who received shelter assistance in the last year (Jan 2023–Dec 2023) was reported in Camp 16 (95%), while the lowest was reported in Camp Nayapara RC (45%) (map 2).



Graph 3: Percentage of HHs Receives Shelter Assistance in the Last Year

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



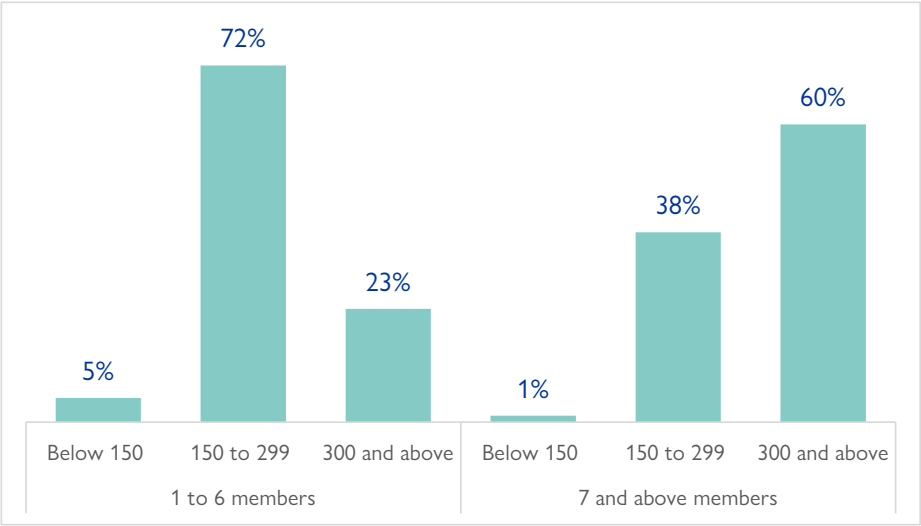
5.4 Minimum Shelter Construction Performance Standards:

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 camps[4] . Below are the findings for all questions related to the minimum performance standard.

5.4.1 Site conditions and site preparation

1. Shelter Size (Area of shelter/living floor area)

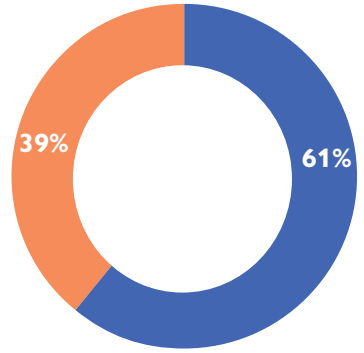
96.3% household maintained a floor area of 150 and above sq ft. For HH size with 1-6 members, 95% of them had shelter sized 150 sq ft or above. For HH with members 7 and above, 60% of HH maintained the shelter size that was 300sqft or above. The average size of the shelter with 1-6 members was 227 sq ft while this size was 334 sq ft for HH with member 7 and more (graph 4).



Graph 4: HH size and corresponding shelter size

2. Shelter settlement plan:

61% of of shelters assessed were part of a row that are collective shelters and another 39% were standalone shelters settlement plan (graph 5). Camp 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.



Graph 5: Shelter settlement plan type distribution

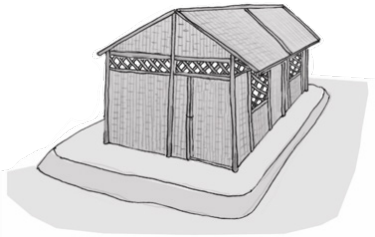


Image 2: Standlone shelters

Out of those shelters standing in a row as collective shelters, 89% of shelters had a continuous common roof for the row and 11% had roof valleys meeting to form "zigzag" roof profiles.

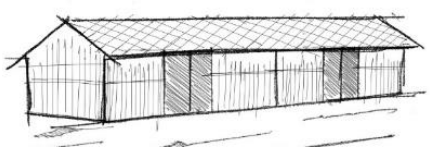


Image 3: Continuous roof

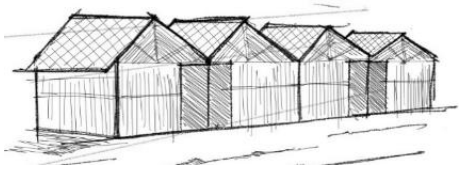


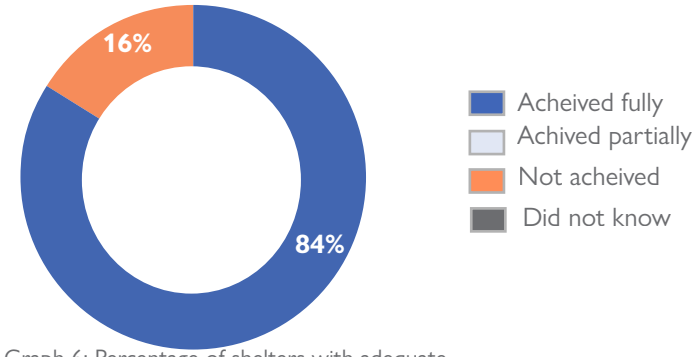
Image 4: Zig-zag roof

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

3. Adequate and functioning drainage (around the shelter):

84% of of shelters met the minimum standard fully or partially for having adequate and functioning drainage. 16% of shelters did not met the standard (graph 6).

Camp 13 (79%) had the highest proportion of shelters with adequate and functioning drainage and in Camp 01E (54%) had the lowest proportion of the shelters with adequate and functioning drainage.



Graph 6: Percentage of shelters with adequate and functioning drainage

Overall, 83% of households' tertiary drains or HH level drains were fully or partially connected to a functioning secondary or primary drain. Among these, Camp 08W (95%) had the highest proportion of shelters and in Camp 02W (70%) had the lowest proportion of the shelters that had tertiary drains connected to primary or secondary drains.

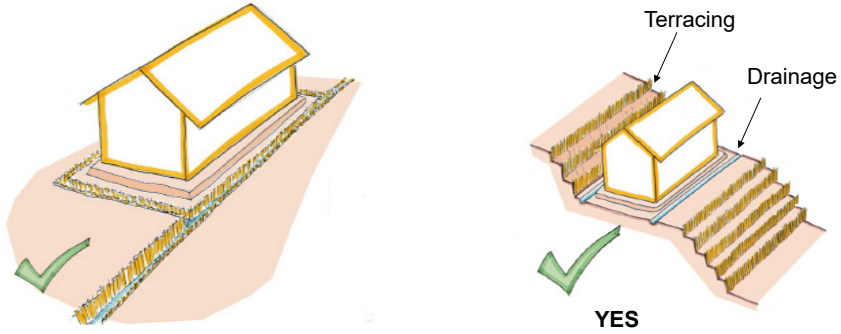
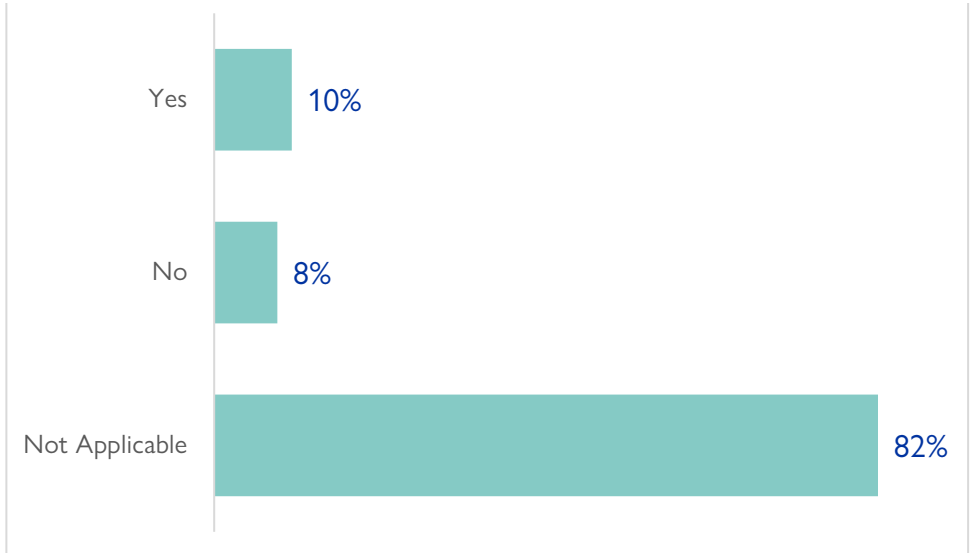


Image 5: Sheletrs with adequate drainage

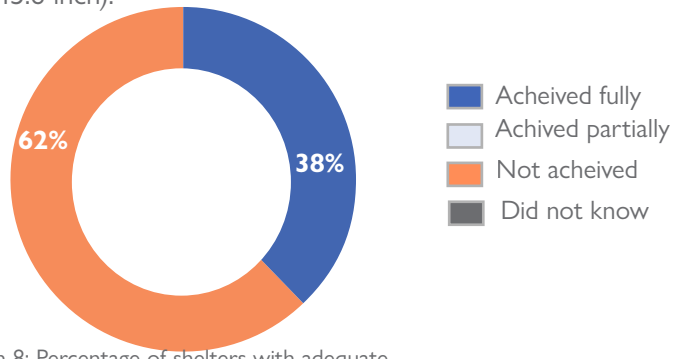
Out of those households that reported having adequate and functioning drainage on all external sides of the shelter, 10% had drainage cover in front of the main door, while 8% did not. For the remaining 82% HHs, it was not applicable (graph 7).



Graph 7: Percentage of HHs reported having drainage cover

4. Shelter pathway width:

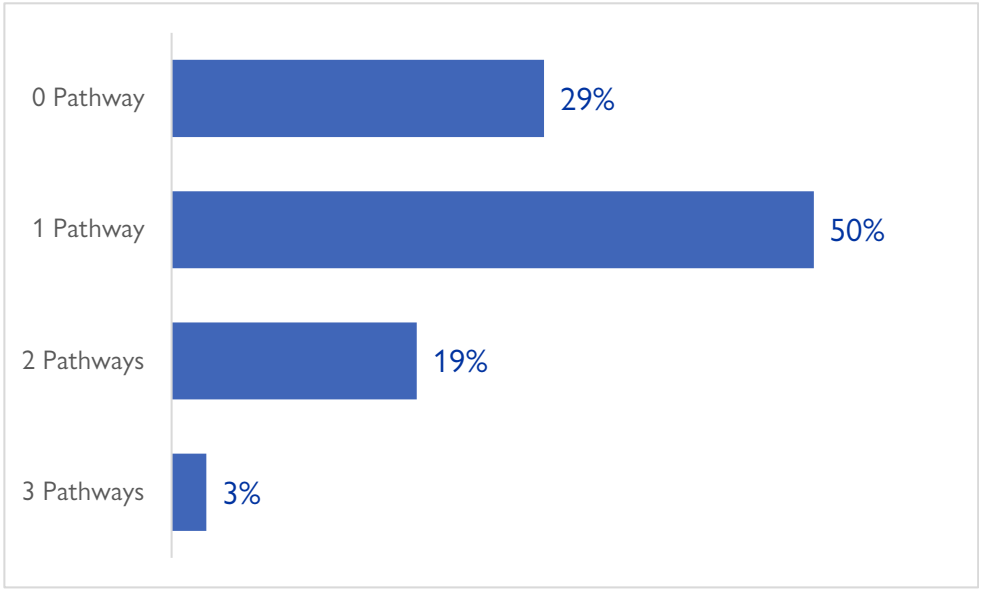
38% of the shelter met the minimum standard of having a pathway in the main door side with a width of 4ft or more (graph 8). The pathways width on the main door side was assessed. The average width of pathways on the main door side was 3'10" (45.6 inch).



Graph 8: Percentage of shelters with adequate pathway width on main door side

Other than main side, 50% HH reported having pathways another side of the shelter while 19% reported having pathways in two more side of the shelter and 3% reported having pathways in three other side of the shelter (graph 9).

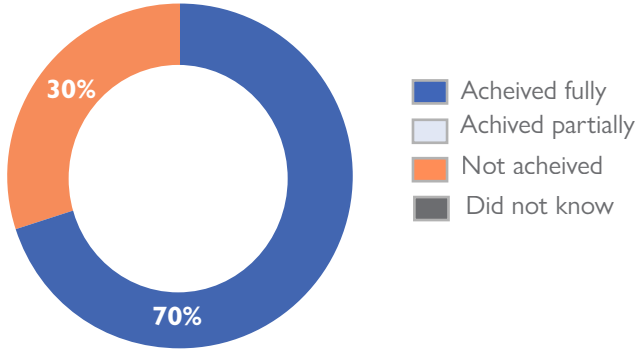
Image 6: Pathway width between shelters



Graph 9: Percentage of HHs Reporting Number of Sides around the Shelter have Pathways

5. Shelter site is safe from soil erosion/landslides/slope protection provided:

70% of shelters having site safety from soil erosion and landslides, while 30% of shelters were not on safe sites (graph 10). Site safety from soil erosion and landslides was measured based on whether the slopes along shelters were protected (by terracing, bamboo/sandbag retaining walls, planting to stabilize the soil, and drainage to prevent erosion).



Graph 10: Percentage of shelters on safe site

Camp 4 Ext (99%) had the highest proportion of shelters located on safe sites and Camp 8W (38%) had the lowest proportion of shelters located on safe sites.

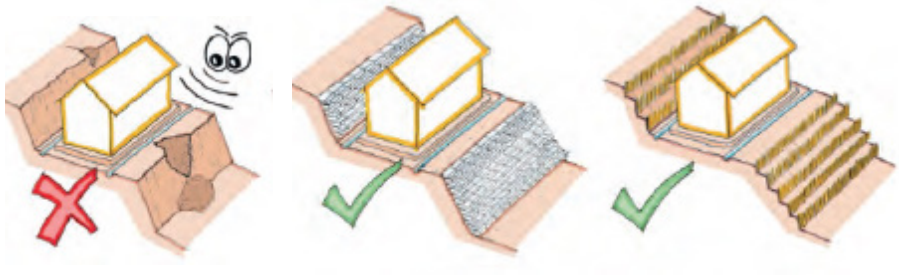


Image: 7 Site safety of shelters

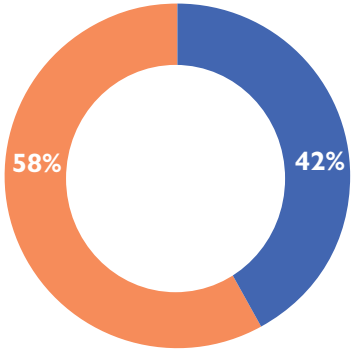
6. Impact of floodwaters on the shelter:

99.7% of the assessed shelters remained unaffected by flood water in the last year (Jan 2023 - Dec 2023). Less than 1% of HHs reported shelter being affected by flood.

Image 8: Shelter affected by flood water

7. Impact of rainwater on the shelter:

42% of shelters reported that rainwater could not enter the shelter while 58% reported that rainwater entered through the shelter (graph 11).



Graph 11: Percentage of shelters with and without rainwater intrusion

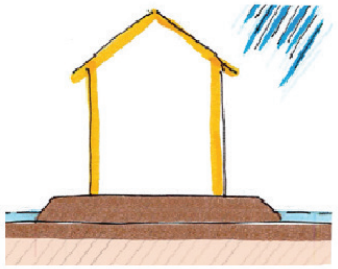
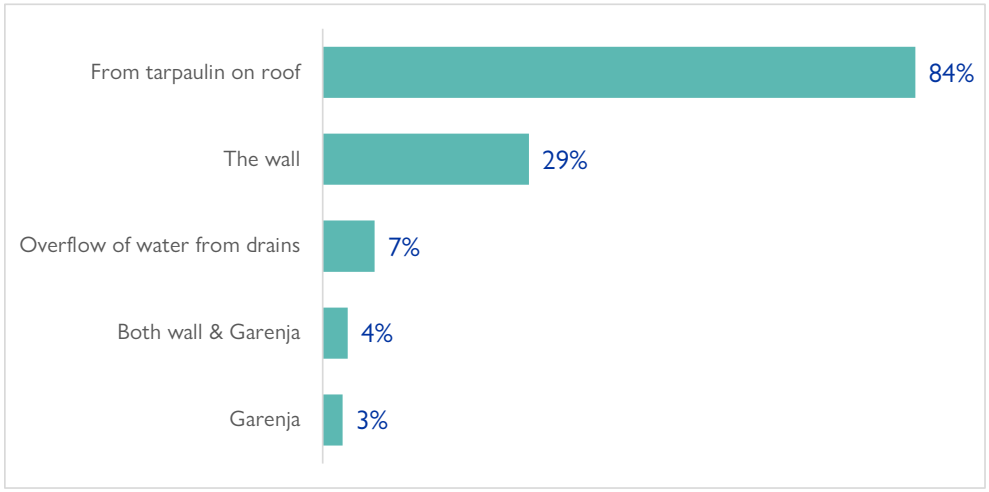


Image 9: Rain water enters into the shelter

Camp 21 (81%) had the highest proportion of shelters where rainwater could enter, and Camp 20 Extension (25%) had the lowest proportion.

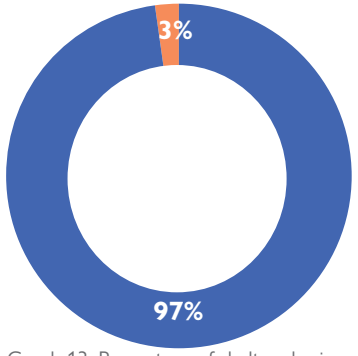
Out of those shelters where rainwater could enter, 84% of households reported rainwater could enter from tarpaulin on the roof, and 29% mentioned it through the wall (graph 12).



Graph 12: Percentage of HHs reporting different ways rainwater enter to the shelter

8. Impact of Waterlogging around the shelter:

96.9% of shelters did not have standing water in the surrounding area of the shelter which created water logging during the time of data collection. 3.1% had water logging in the surrounding area (graph 13).



Graph 13: Percentage of shelters having standing water in surrounding area

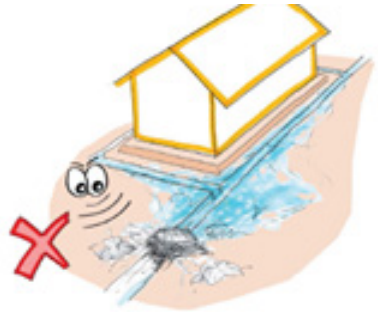


Image 10: Standing water in the surrounding area of the shelter that creates water logging

5.4.2 Excavation and foundation

9. Height of plinth - 0.5ft (6")

46% of the shelter were observed to be standing on a plinth with minimum height of 15cm (6") and 53% were not (graph 14). Camp 4Ext and NRC had the highest percentage (77%) and Camp 21 (11%) had the lowest percentage of shelters standing on a plinth.

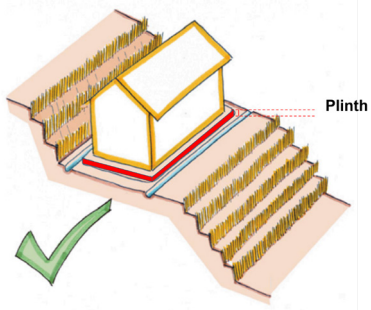
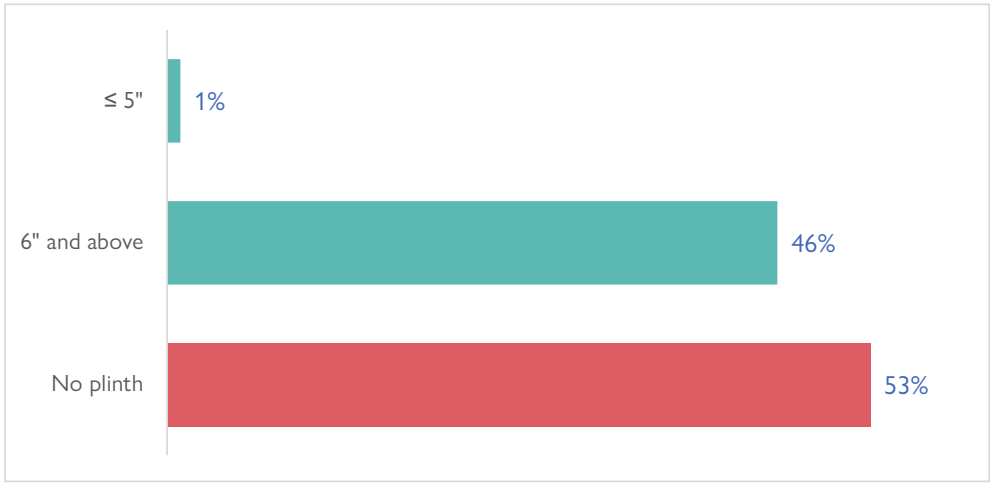


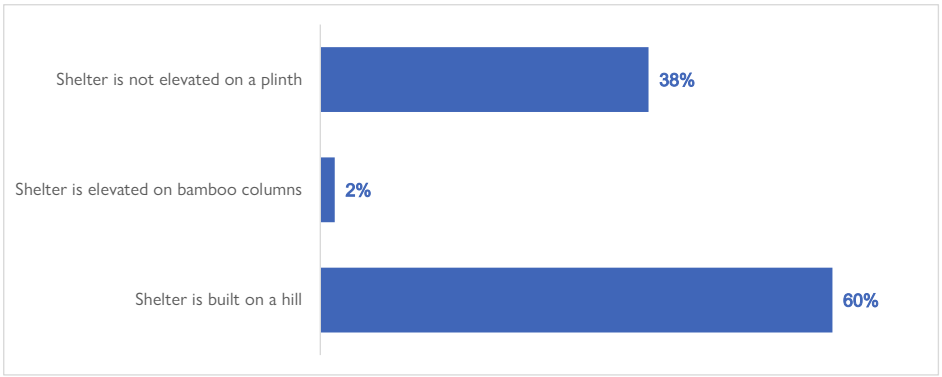
Image 11: Shelter standing on a plinth

The plinth was measured on all four corners of the shelter and the average value was recorded.



Graph 14: Height of Plinth (in inches)

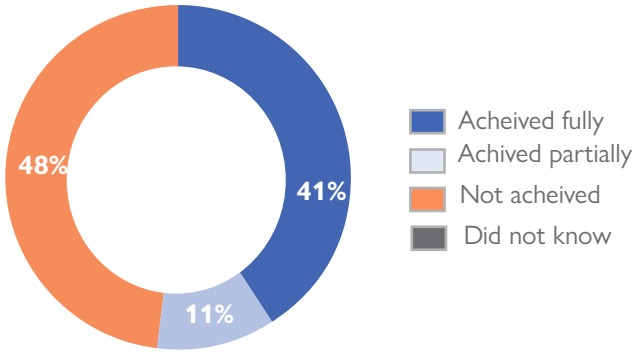
Out of 53% shelters that were not standing on a plinth, 60% of them were built on a hill followed by 38% of shelters that were not elevated on a plinth. The remaining 2% of the shelters were elevated on bamboo columns (graph 15).



Graph 15: Main reasons of shelters not standing on a Plinth

10. Use of concrete or metal footings:

41% of shelters having all footings being concrete or metal. 48% shelters did not meet the standard by having less than four footings in concrete or metal, and 11% shelters met the standard partially with only four corner columns having concrete or metal footings (graph 16).

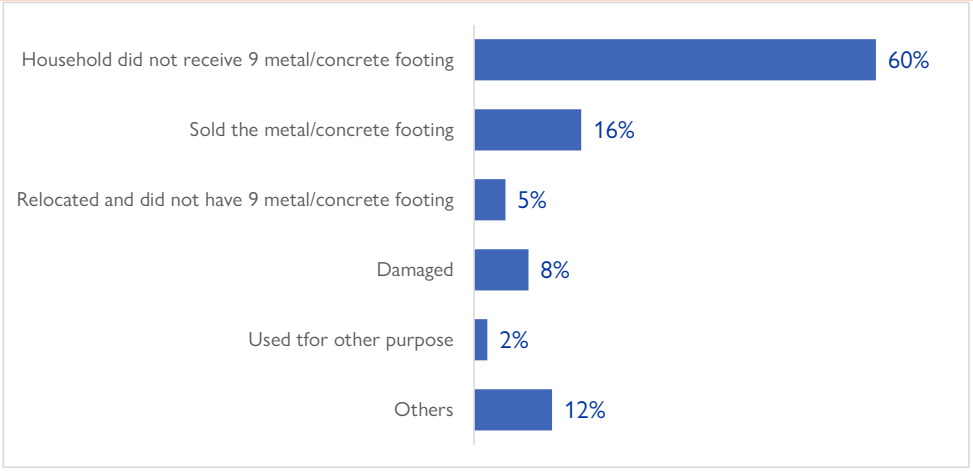


Graph 16: Percentage of shelters using concrete or metal footings

Camp 11 (80%) had the highest proportion of shelters that met the minimum standards for footings being concrete or metal. Camp 3 (9%) had the lowest percentage of shelters that met this standard.

Image 12: Footings made of concrete or metal to keep bamboo structure out of the ground

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- 60% of the households reported they did not receive 9 metal/concrete footing, 16% of households sold the metal or concrete footing, mostly for food and medical, and 8% of HH reported that the footings have been damaged (graph 17).

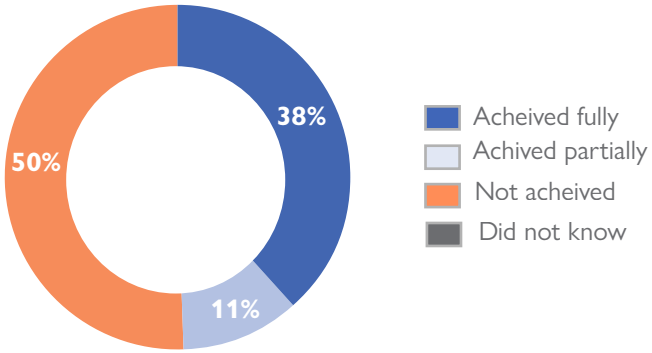


Graph 17: Main reasons for not meeting the standards

Among other reasons for not meeting the standard, most of the HHs reported the footings were not in four corners, even though they have four or more footings in the shelter.

11. Depth of the concrete or metal footings

38% of shelters met the minimum standard for all footings/RCC (Reinforced Cement Concrete) posts being 60 cm (2ft.) in the ground. 50% of shelters did not meet by having less than four footings/RCC posts at the correct depth and 11% shelters met partially with the four corner footings/RCC posts at the correct depth i.e. 2' in the ground (graph 18).



Graph 18: Percentage of shelters that maintained standard depth of concrete or metal footings

Camp 11 (90%) had the highest proportion that met the minimum standard for having footings/ RCC posts securely anchored. In camps 20 (29%) had the lowest proportion of shelters that met this standard.

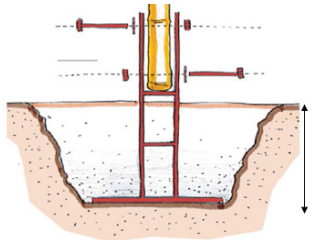


Image 13: Left: Metal footing 2' under the ground

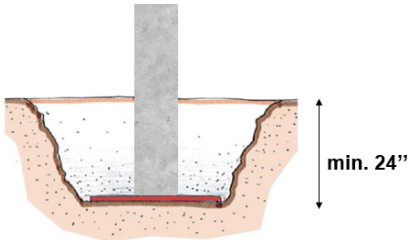
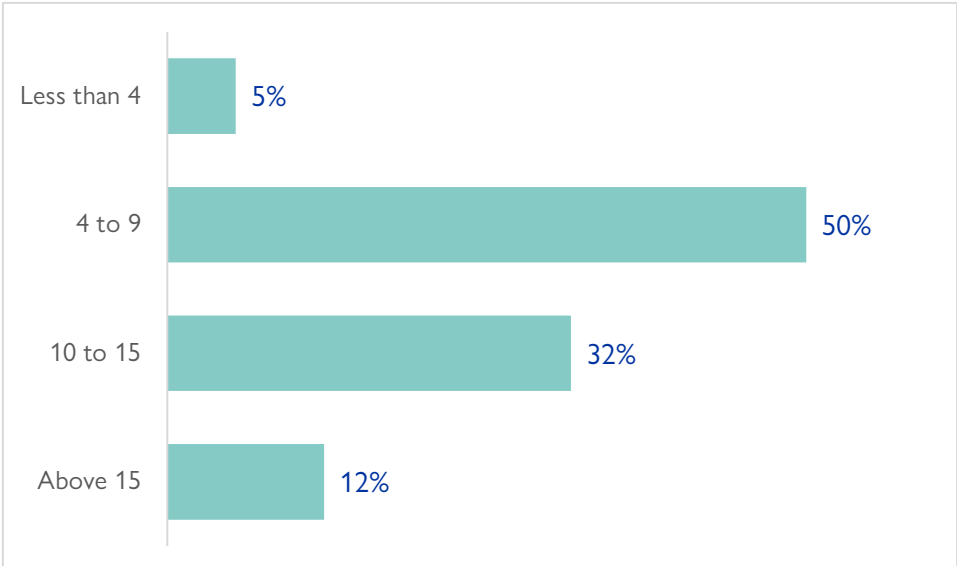


Image 14: Right: concrete post 2' under the ground

Only 5% shelters had less than 4 metal footings installed 2' in the ground, while 50% of shelters had 4 to 9 metal footings, 32% had 10 to 15 metal footings and 12% had above 15 metal/concrete footings 2' in the ground (graph 19).

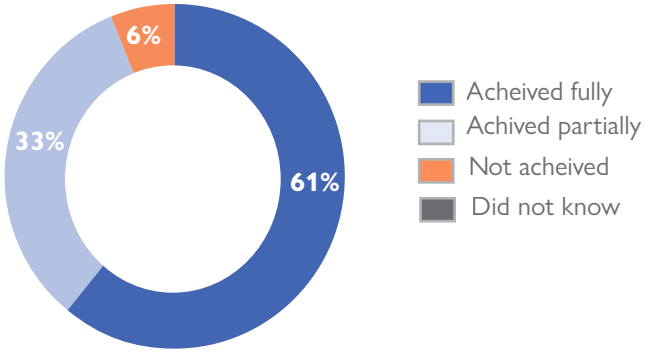


Graph 19: Metal/Concrete Footings 2 ft. in the Ground

5.4.3 Superstructure work

12. Distance between bamboo columns:

61% of shelters have a 152cm (5ft/60inch) maximum distance between all bamboo column. and. 6% of shelters did not meet the standard with less than 8 out of 10 spaces between the columns at a maximum 5 ft distance, and 33% of shelters met the standard partially with 8 out of 10 spaces at a 5 ft distance (graph 20).



Graph 20: Percentage of shelters that maintained standard distance between bamboo columns

Camp 9 (83%) had the highest proportion of shelters that met the minimum standard for having a distance between bamboo column maximum of 5ft. And NRC (18%) had the lowest proportion that met this standard.

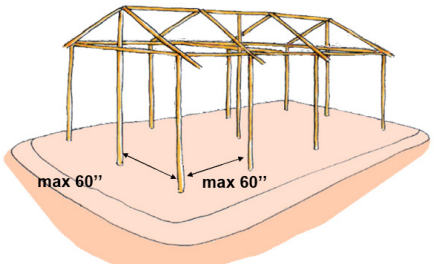
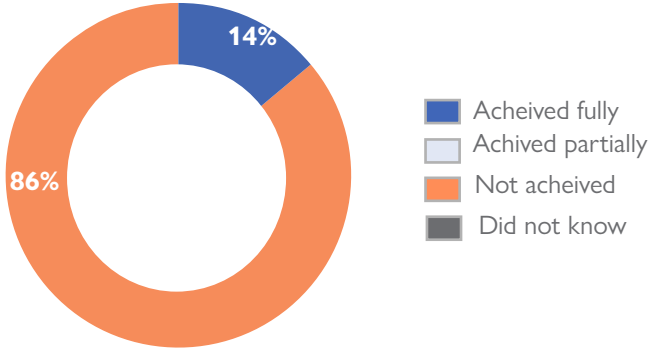


Image 15: Distance between bamboo column- max 60 inches (152cm)

13 Bracing and joint works for structure binding:

14% of of shelters met the minimum standard fully or partially for having adequate bracing in all corner bays of the shelter or at least having bracing at three corners. 86% of shelters did not meet the standard, with less than three corners having adequate bracing (graph 21).



Graph 21: Percentage of shelters that maintained standard bracing

Camp 11 (50%) had the highest proportion of shelters that met the minimum standard for having adequate bracing while in Camp 25 and NRC, none of the shelters met the standard, which indicates that all shelters surveyed in the listed camps had bracing in less than 3 corner bays of the shelter. Among the households that met the standard partially or did not meet the standard at all, 92% of them reported they did not receive materials for bracing.

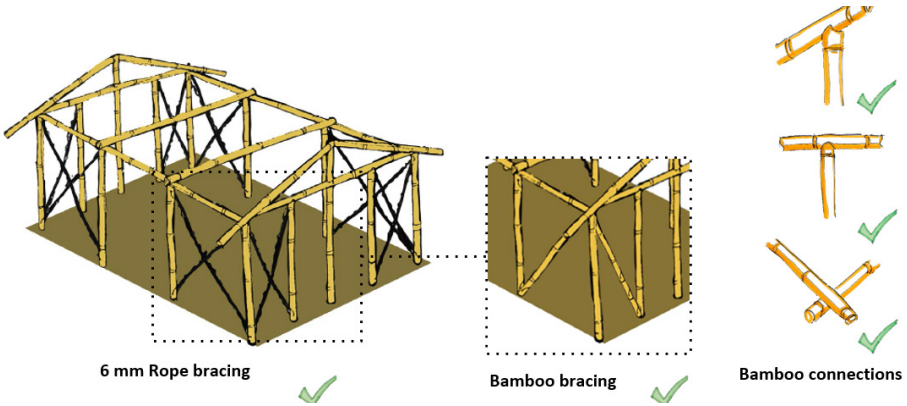
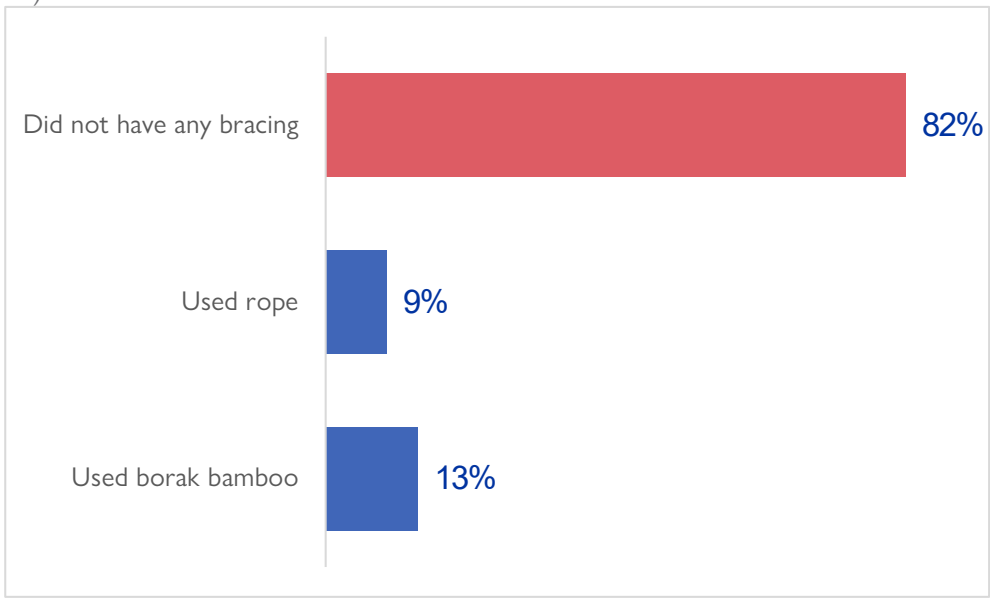


Image 16: Different types of bracing

When asked about the materials used for bracing, the majority (82%) of households reported not having any bracing, 9% used ropes and 13% used borak bamboo (graph 22).



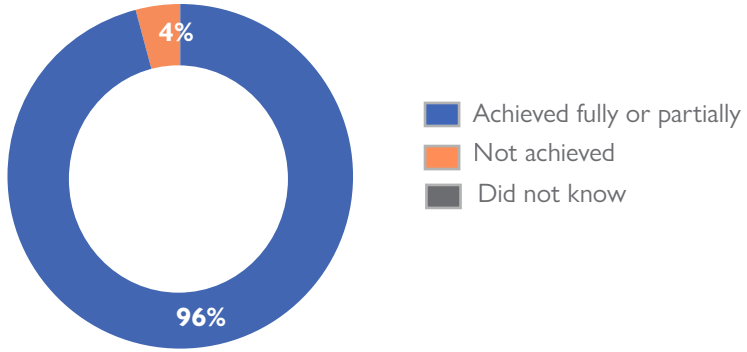
Graph 22: Materials used for bracing

Out of the households who had used rope (9%), 13% of them had rope bracings that were cut by the household.

Respondents were asked reasons behind cutting the rope bracings, to which 83% reported that the rope was cut to be used for other purposes, 11% mentioned it was for access to the shelter extension, and 3% of the HHs cut the rope bracings as they used the corner bay for storage.

14. Internal Partition wall within the shelter:

96% of shelters fully and partly had at least one internal partition wall to provide privacy (at least 78" partition with door, or if partition is equal to or more than 78" but without a door, or if the partition is between 60" and 78" with or without door). 4% of shelters did not meet the standard (if there is no partition or if the partition is less than 60" with or without door (graph 23).



Graph 23: Percentage of shelters that maintained standard for **internal** partition wall

KRC (58%) had the highest proportion of shelters that met the minimum standard for having at least one internal partition and camp 1E (15%) had the lowest proportion that met this standard.

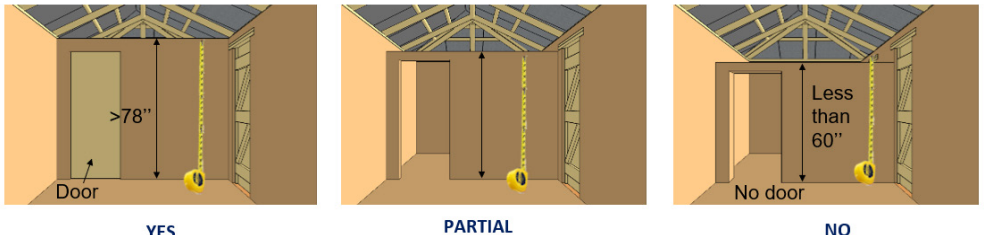
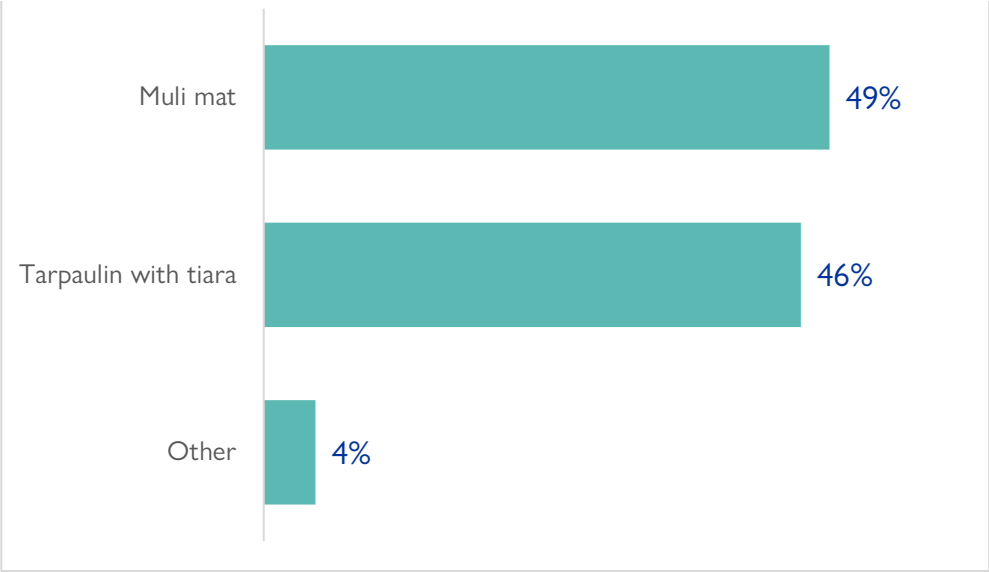


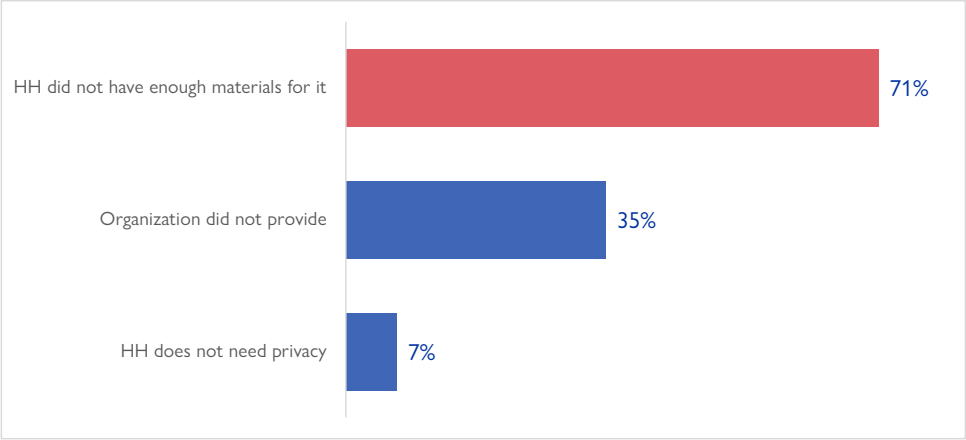
Image 17: Having at least one partition wall to provide privacy

Out of those households that met the standard fully or partially, 49% used muli mat. 46% of households mentioned they used tarpaulin with tiara, 4% informed they used a board, CGI sheet, tin, wood etc. under other options (graph 24).



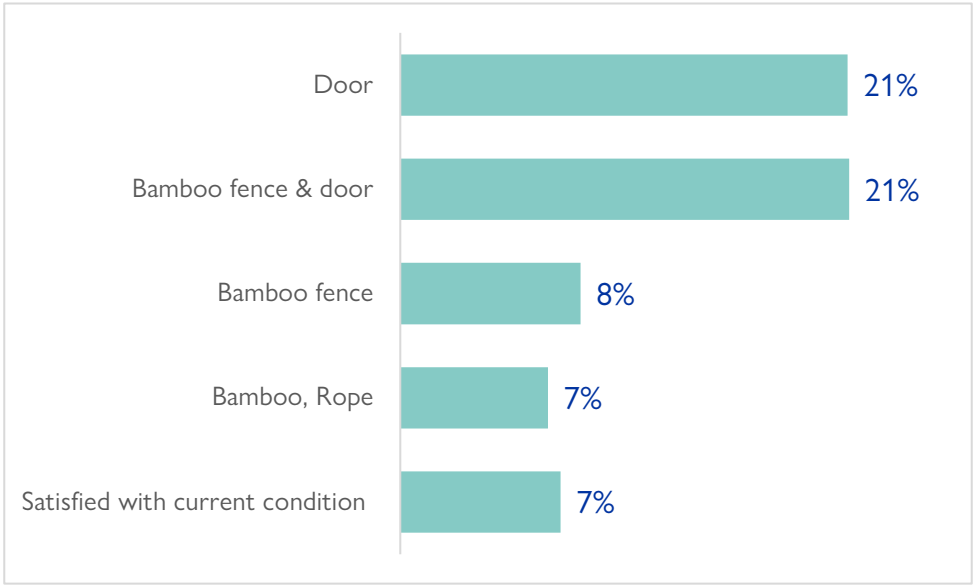
Graph 24: Materials used for partitions[5]

Among the HHs that didn't meet the standard for internal partition, the most common reason reported were- HHs did not have enough materials for it (71%), and organisations did not provide materials (35%) (graph 25).



Graph 25: Reasons for not having internal partition

When asked which materials would better ensure privacy in shelters with partition walls, 21% of households indicated a preference for a door and bamboo fence, 8% suggested a bamboo fence, and 7% mentioned that a combination of bamboo and rope will enhance privacy. Furthermore, 7% of households reported satisfaction with the current partition conditions (graph 26).

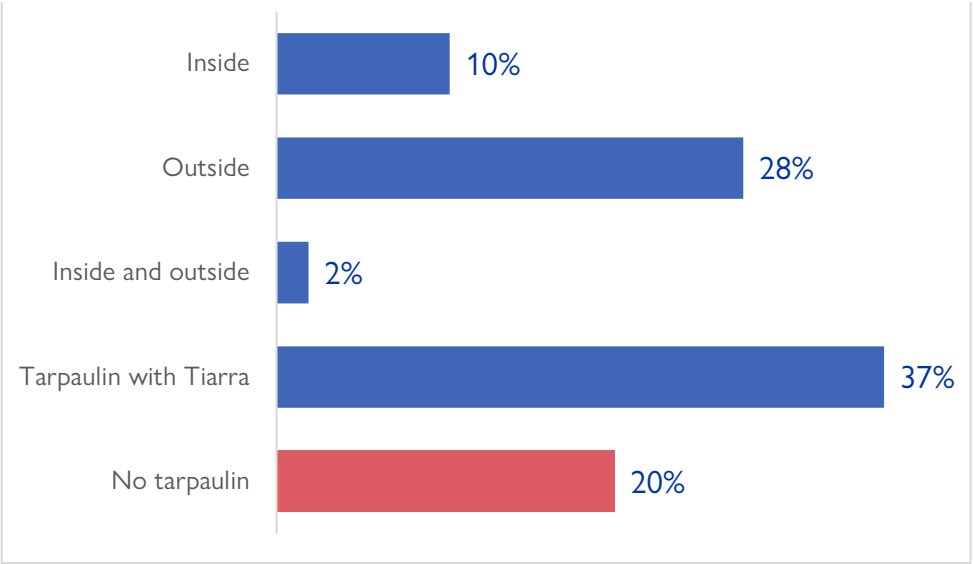


Graph 26: Top 5 materials suggested for partition to improve privacy in the shelter

15. Different ways of installing tarpaulin:

In the surveyed shelters, 20% have no tarpaulin for walling. Among those with tarpaulin, 37% reported it is installed with Tiarra, 10% reported it is installed inside the wall, and 28% reported it is installed outside the wall. Additionally, 2% of households reported tarpaulin being installed both inside and outside the wall (graph 27).

5 Others option included board, CGI sheet, tin, wood etc.



Graph 27: Percentage of HHs reporting different ways of installing tarpaulin

16. Height of inner tarpaulin (in inches):

Among the households that reported having tarpaulin installed inside the shelter, the majority (84%) indicated that the height of the inner tarpaulin was above 60 inches. This was followed by 11% who reported the height is between 37 to 60 inches, and 4% who indicated the height is between 12 to 36 inches.

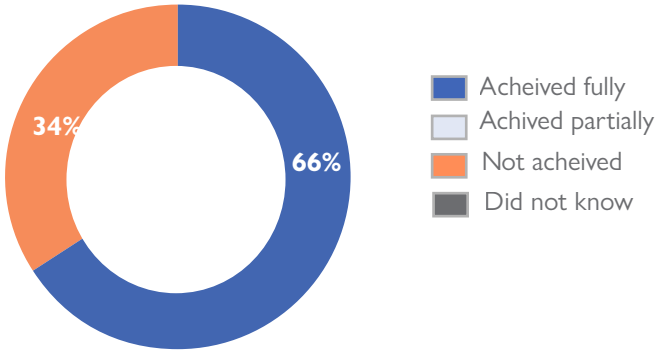
17. Height of outer tarpaulin (in inches):

Among the households that reported having tarpaulin installed outside the shelter, 55% indicated that the height of the outer tarpaulin was above 60 inches. This was followed by 20% who reported the height is between 37 and 60 inches, and 25% who indicated the height is between 12 and 36 inches.

- For those shelters that have tarpaulin on the inner wall, the average height was found to be **64 inches.**
- For those shelters that have tarpaulin on the outer wall, the average height was found to be **57 inches.**

18. Shelter with Garenja (Louvers):

66% of shelters assessed had garenjas (louvers) while 34% did not (graph 28). Among those HHs that reported having garenjas (louvers), Camp 12 (98%) had the highest percentage of shelters and Camp NRC (23%) had the lowest percentage.



Graph 28: Percentage of shelters that had garenjas

Out of the HHs who had garenjas, 36% had a garenja only on one side of the shelter and 64% had garenjas on two or more sides of the shelters. The assessment found that out of those HHs who had garenjas, 9% had covered the garenja with tarpaulin, so it no longer served as a source of light or ventilation.

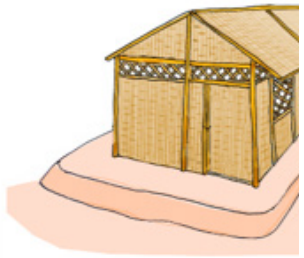
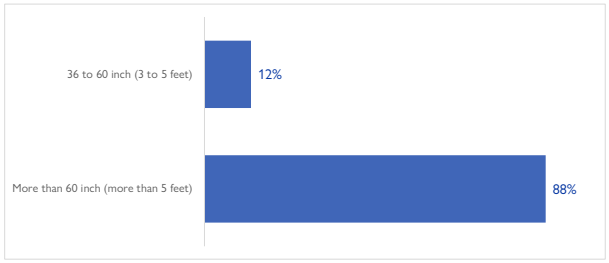


Image 18: Shelter with garenja

Among HHs reported having garenjas, 88% had garenja starting more than 5 feet above the plinth level, while 12% had garenja starting at a height between 3 and 5 feet from the plinth level (graph 29). 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. The overall average height from the plinth level was reported 5 feet 8 inches.



Graph 29: Height from the plinth level to where garenja starts

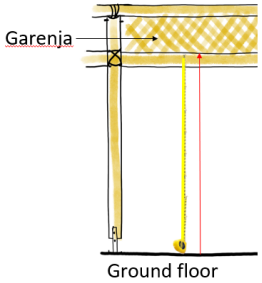
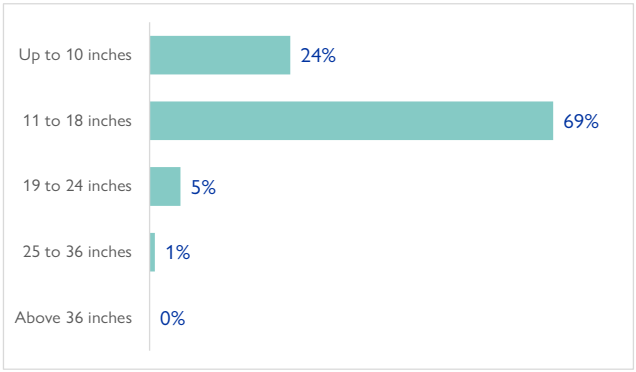


Image 19: Height from the plinth level where garenja starts

Overall, for 69 % of the shelters assessed the size of the roof overhang (eave) was 11 to 18 inches, 24% had up to 10 inches, 5% had 19 to 24 inches and 1% had more than 24 inches (graph 30).

The average height of garenja from the assessment was found to be 13 inches, which is 3 inches higher than the standard recommended by the SCCCM sector.



Graph 30: Height of garenja

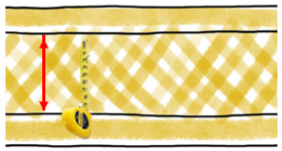


Image 20: Height of garenja

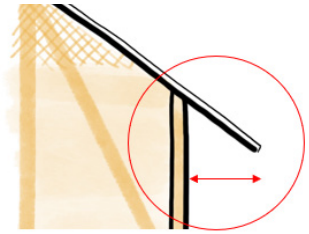
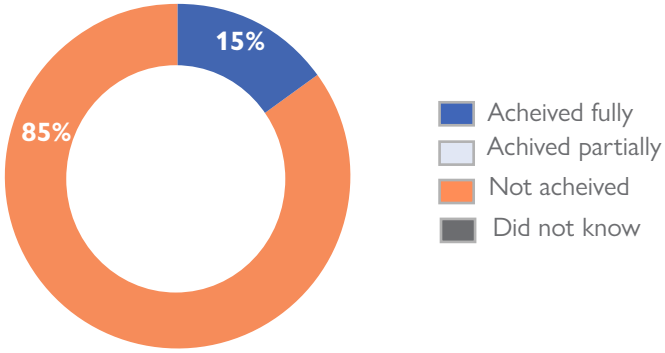


Image 21: Roof overhang

The average size of the roof overhang (eave) was reported 17 inches.

19. Shelter with Window:

15% of shelters had windows and 85% of shelters did not meet the standard of not having windows (graph 31). Camp 4Ext (53%) had the highest proportion of shelters with windows and Camp 1W (2%) had the lowest proportion of shelters with windows.



Graph 31: Percentage of shelters that had windows

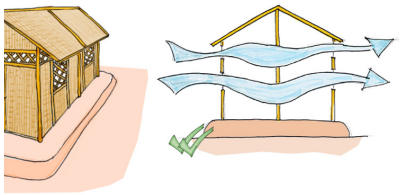
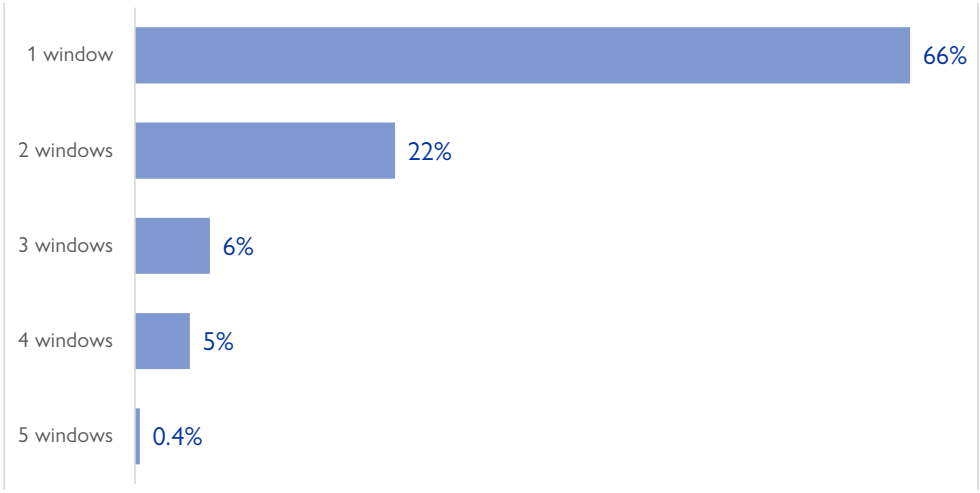


Image 22: Shelter with windows

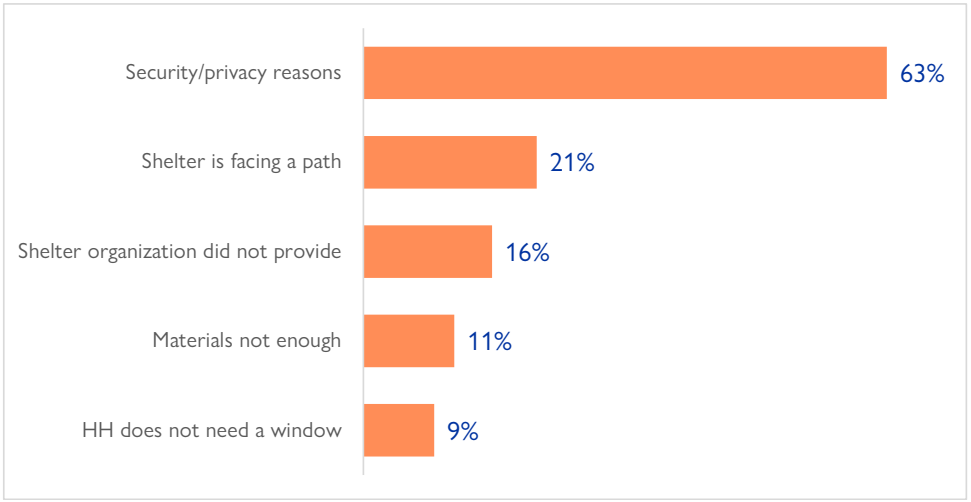
Out of the respondents who had windows in their shelters 66% of shelters had 1 window followed by 22% had 2 windows, 6% had 3 windows, 5% had 4 windows and less than 1% had 5 windows (graph 32).



Graph 32: HHs reporting number of windows they have

Among the households (34%) that had 2 or more windows/garenja, 58% had cross-ventilation in their shelter.

For those shelters that do not have windows, the main reasons mentioned were – 63% HHs mentioned security reasons, 21% HH mentioned shelters facing a path, 16% reported windows were not provided by shelter organization, 11% mentioned materials not enough, and 9% HH reported they do not need a window (graph 33).

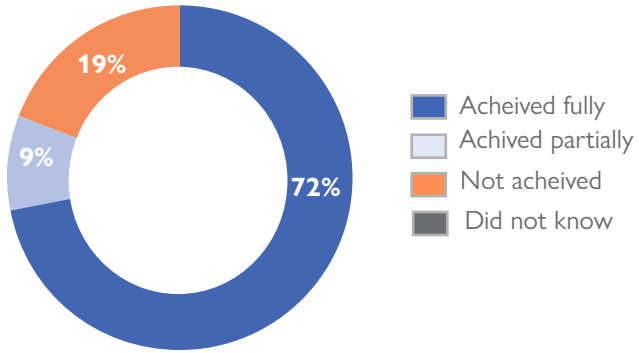


Graph 33: Percentage of HHs reporting reasons for not having windows

5.4.4 Roofing

20. Distance between Big bamboo Rafters (load-bearing rafters):

72% of shelters had maximum of 60 inches (5ft. or 152cm) distance between bamboo rafters for borak/big bamboo or double muli rafters. 19% of shelters did not meet the standard with less than 80% of spaces with the correct distance, and 9% of shelters met partially with 80% of spaces between rafters at the correct distance (graph 34).



Graph 34: Percentage of shelters that maintained standard distance between big bamboo rafers

Camp 12 (94%) 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 (27%) had the lowest proportion that met this standard.

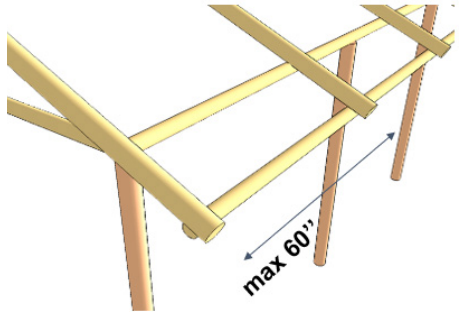
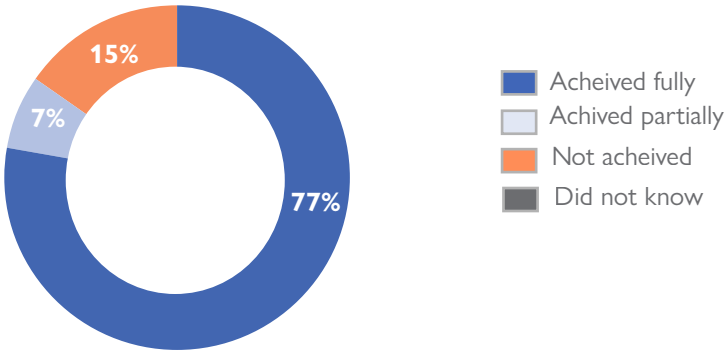


Image 23: Distance between big bamboo column- max 60 inches (152cm)

21. Distance between Smal bamboo Rafters (load-distribution rafters):

77% of shelters had maximum 1ft(12 inches) distance between small bamboo rafters. 15% of shelters did not meet the standard with less than 80% of spaces with the correct distance, a, and 7% of shelters met partially with 80% of spaces between rafters at the correct distance (graph 35).



Graph 35: Percentage of shelters that maintained standard distance between small bamboo rafers

Camp 12 (94%) 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 (27%) had the lowest proportion that met this standard.

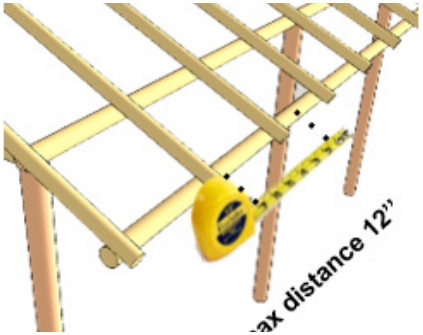
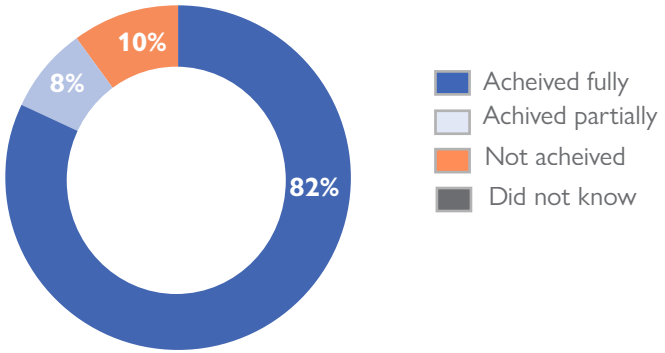


Image 24: Distance between small bamboo column- max 12 inches (152cm)

22. Distance Between Bamboo Purlins:

82% of shelters had maximum 12 inches (1ft) distance between all purlins and 10% of shelters did not meet the standard with less than 80% spaces between purlins at a maximum of 1 ft. and 8% of shelters met the standard partially, with 80% purlins at a maximum of 1 ft (graph 36).



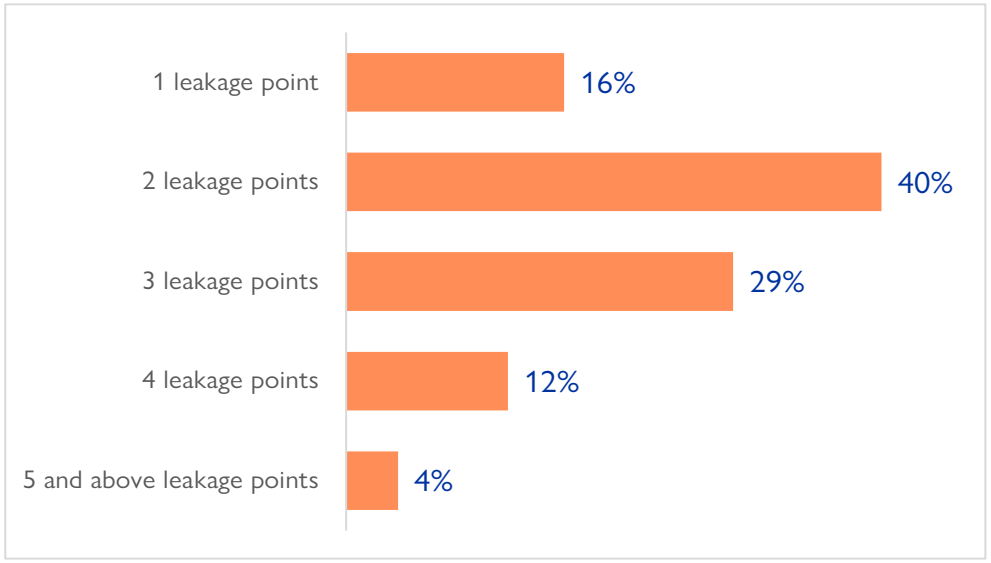
Graph 36: Percentage of shelters that maintained standard distance between bamboo purlins

Camp 8E (95%) had the highest proportion of shelters that met the minimum standard for distance between purlins and Camp 4 Extension (52%) had the lowest proportion that met this standard.

Image 25: Distance between bamboo purlins

23. Water leakage from tarpaulin on the roof

16% of the households reported rainwater not entering through tarpaulin on the roof while 84% stating it entered through the roof (n= 1,811). Of those reporting roof leaks (n=1,515), 96% had 1-4 leakage points, while 4% had 5 or more (graph 37).



Graph 37: Number of Water Leakage Points Identified from tarpaulins on the roof

Rainwater entering from tarpaulin on the roof was found quite higher in Camp 7 (97%), Camp 4 (96%), and Camp 27 (95%).

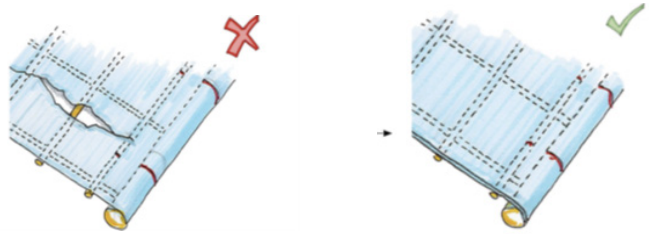


Image 26: Roof of the shelter with and without leakage points

24. Gutters between adjacent shelters:

21% of shelters with zig-zag roofs had no gutters installed, while 79% did (n= 210). Out of these, 55% had tarpaulin gutters, 24% had tarpaulin gutters with muli, 11% CGI had sheet or plain sheet gutter and 10% had UPVC gutter (graph 38).

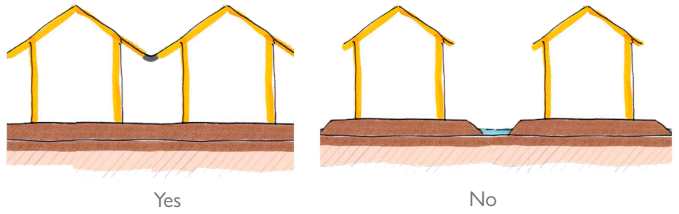
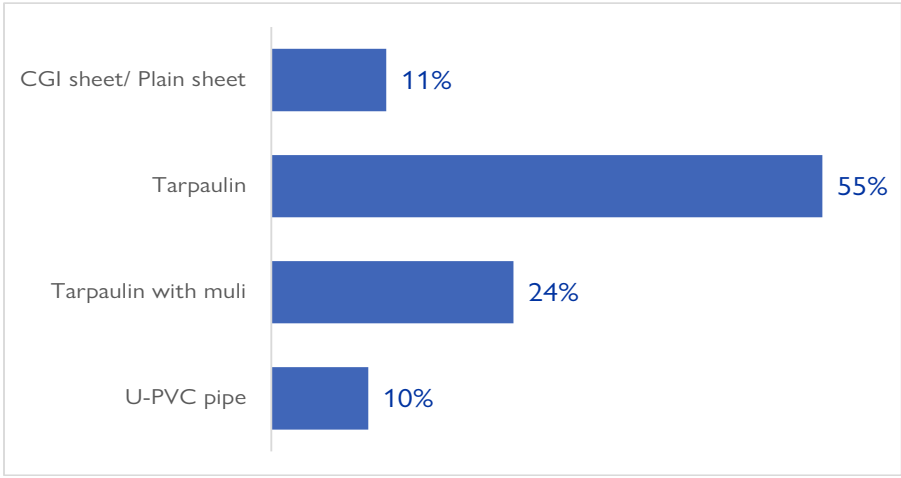


Image 27: Gutters installed between adjoining shelters



Graph 38: Type of Gutters

Out of those which had gutters installed, 4% had the downtake pipe all the way to the ground, 4% had the pipe but not till the ground. 92% of those shelters did not have any downtake pipe.

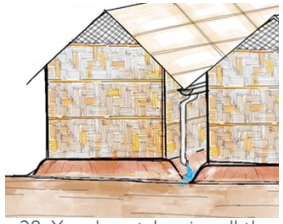


Image 28: Yes, downtake pipe all the way to the ground

Image: 29Yes, but not until the ground

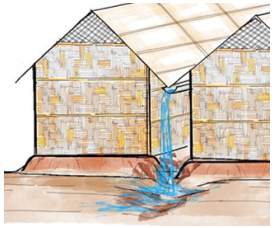
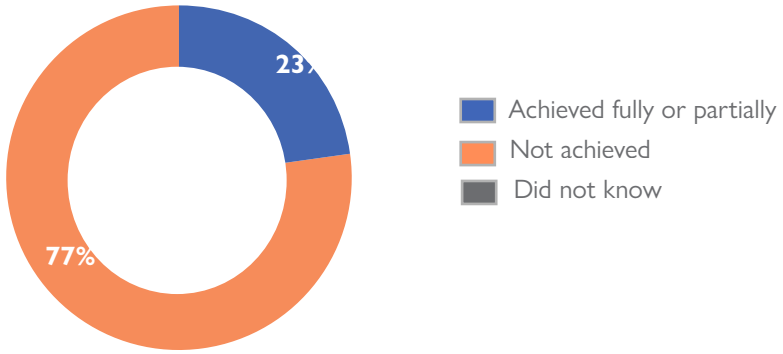


Image 30: No, there is no downtake pipe

5.4.5 Finishers

25. Shelter Tie Down:

23% of shelters had fully or partially tied down the roofs according to the sector guidance, with a minimum of six anchor points properly fixed to the shelter and ground or with at least four anchor points properly fixed to the shelter and ground. 77% of shelters did not meet the standard with less than four anchor points fixed to the shelter and ground (graph 39).



Graph 39: Percentage of shelters that maintained standard in tying down shelters

Camp 11 (48%) had the highest proportion of shelters that were tied down according to sector guidance and Camp 3 had the lowest proportion (6%) of shelters that met the standard.

Image 31: Tying the shelter to the metal footing

For shelters that had their roofs completely or partially tied down, 74% tied the rope to roof beam, 10% HH tied the rope to metal footing while 5% reported they tied the rope with the post.

Among those tying the shelter down, 75% HH reported that the tie-down rope was tightly fixed.

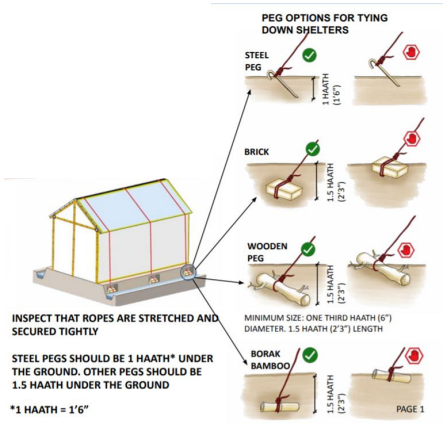


Image 32: Types of Pegs

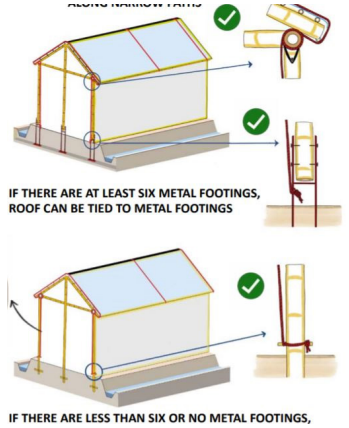
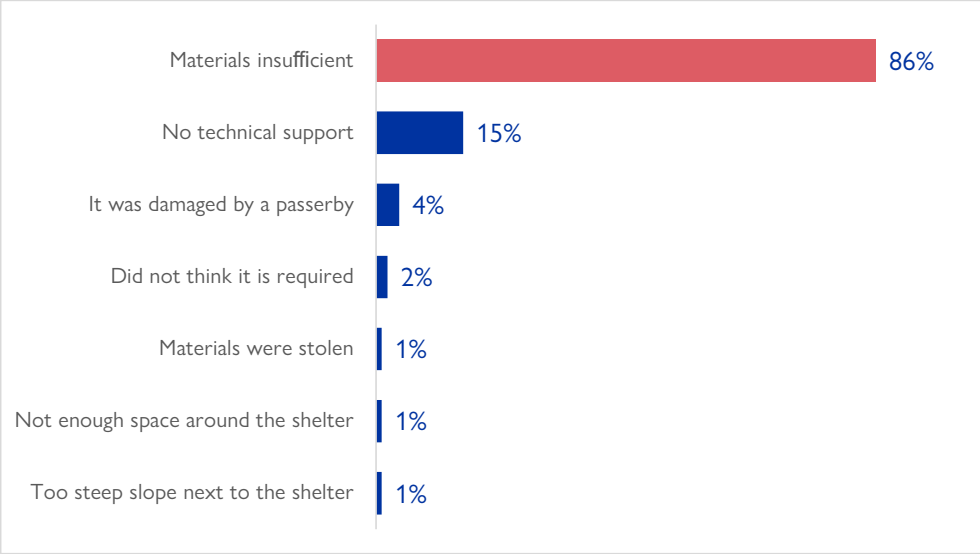


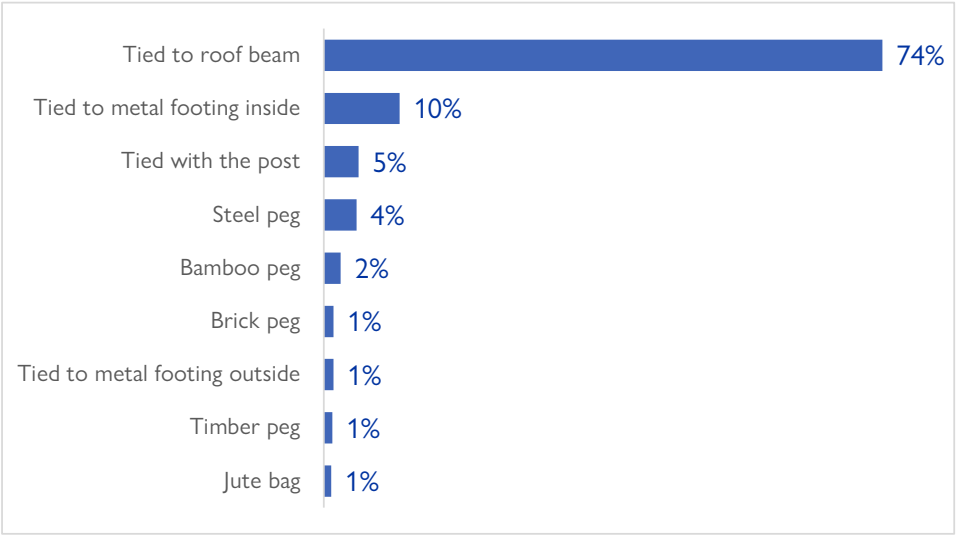
Image 33: Tying the shelter to the metal footing

From the respondents who did not meet the standards for tying down of roofs or met them partially (n= 2,557), 86% HHs stated that the materials for tying down roofs was insufficient, 15% said they did not receive any technical support, and 4% reported the ropes were damaged by a passerby, 2% did not think it was required to tie down shelter roofs, 1% said their materials were stolen, 1% reported there was not enough space around the shelter, 1% stated the slope next to their shelter was too steep (graph 40).



Graph 40: Reasons for Not Meeting the Standards

Among the respondents that met the standards fully or even partially, 74% tied the rope to roof beam, 10% HH tied the rope to metal footing while 5% reported they tied the rope with the post (graph 41).

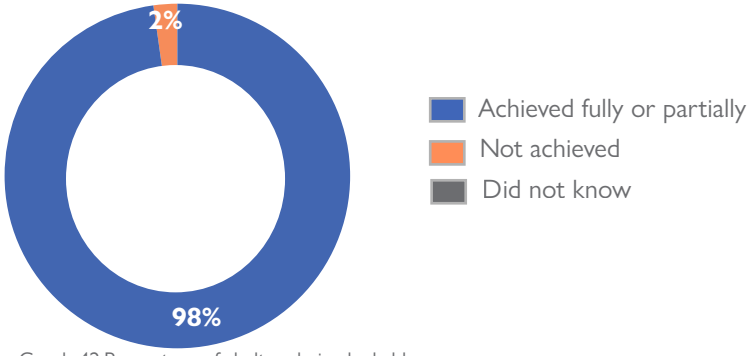


Graph 41: Methods used for tying the shelter

Among those tying the shelter down, 75% HH reported that the tie-down rope was tightly fixed.

26. Lock Inside and Outside of the Shelter:

98.2% of shelters were fully or partially lockable from inside and outside using a padlock and chain or at least only from the inside with a latch. 2% of shelters did not meet the standard by not having shelter lockable from inside and outside.(graph 42).



Graph 42:Percentage of shelters being lockable

Camp 3 (91%) and Camp 26 (91%) had the highest proportion of shelters that met the minimum standard for the shelters to be lockable from inside and outside and camp 6 (64%) had the lowest proportion that met this standard.

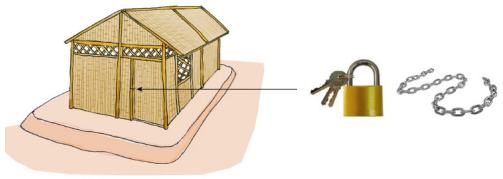
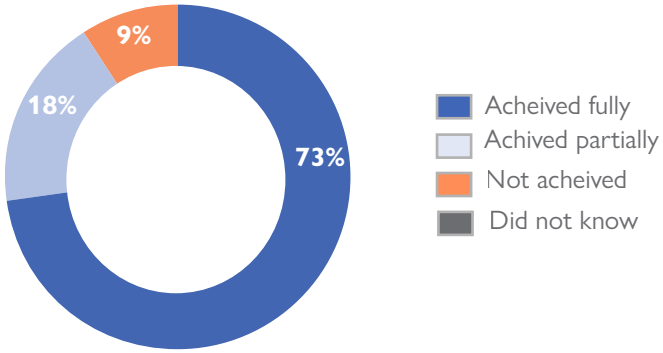


Image 34: Shelter is lockable from inside and outside using padlock and chain

Image 35: If only inside latch then partially locked

27. The Floor is finished with a top layer of cement:

73% 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. 9% of shelters did not meet the standard with less than 3/4th of the floor with a cement top layer. 18% of shelters met the standard partially (some parts of the floor were finished with a top layer of cement but there were small holes) (graph 43).



Graph 43: Percentage of shelters showing floor with or without damage

Camp 12 (90%) had the highest proportion of shelters that met the minimum standard for having cement floor finishing without holes or excessive damage and Camp 21 (35%) had the lowest proportion that met this standard.

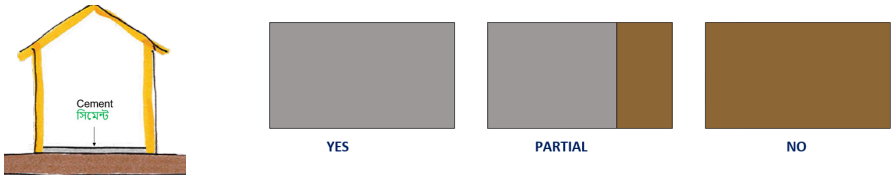


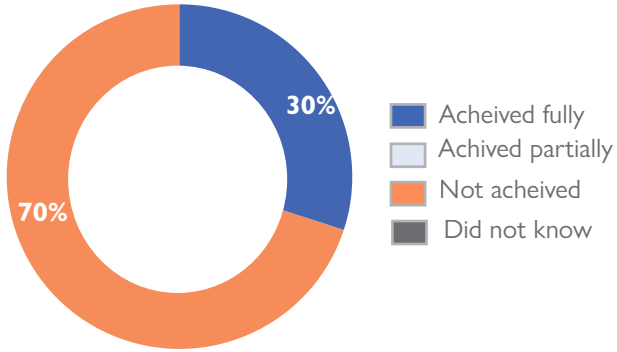
Image 36: Floor with cement top layer without holes or excessive damage

5.4.6 Treatment and protection qualities of shelter materials

28. Sign of Insect Infestation in Structural Bamboo:

30% of shelters have protected bamboo with no signs of insect infestation in the structural bamboo, while 70% showed signs of infestation, out of the shelters assessed (graph 44).

Camp 2E (93%) had the highest proportion of shelters in which the structural bamboo showed signs of insect infestation. Camp 11 (31%) had the lowest proportion of shelters in which the structural bamboo showed signs of insect infestation.



Graph 44: Percentage of shelters showig sign of insect infestation

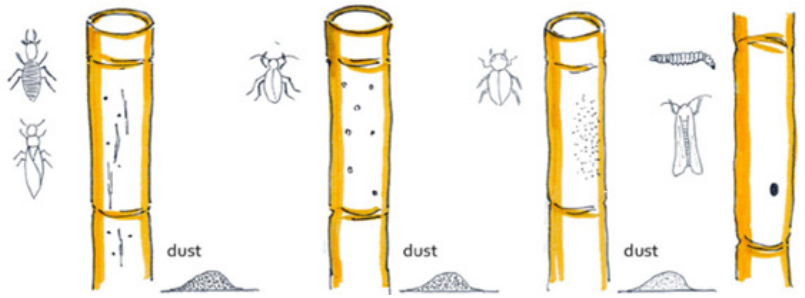
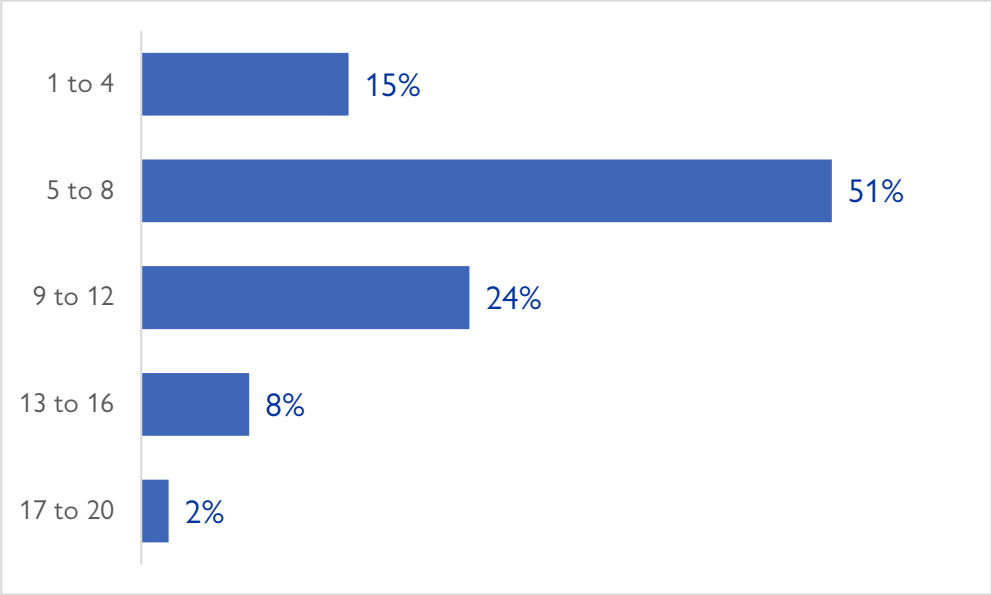


Image 37: Signs of bamboo infestation: big holes, a group of small holes and/or bamboo dust

51% of households reported signs of infestation in 5 to 8 bamboo poles, followed by 24% who indicated infestation in 9 to 12 bamboo poles. Additionally, 15% of households observed infestation in 1 to 4 bamboo, while 10% reported infestation in 13 or more bamboo (graph 45).

The signs of infestation observed were small holes (37%), dust (31%), and big holes (31%).

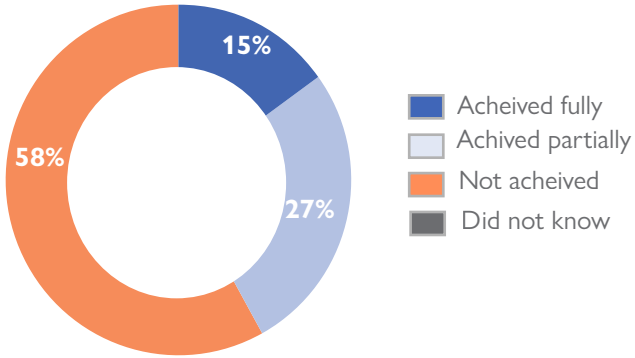


Graph 45: Percentage of HHs Reporting Structural Bamboo Showing Signs of Infestation

29. Used of treated bamboo with no visible sign of insect infection:

15% of shelters met the desired standard of using all treated bamboo for their shelter construction, with no visible sign of insect infestation. 58% of shelters did not meet this standard for treated bamboo and showed visible signs of infestation. 27% reported that treated bamboo was used only for the columns, thus partially meeting the standard (graph 46).

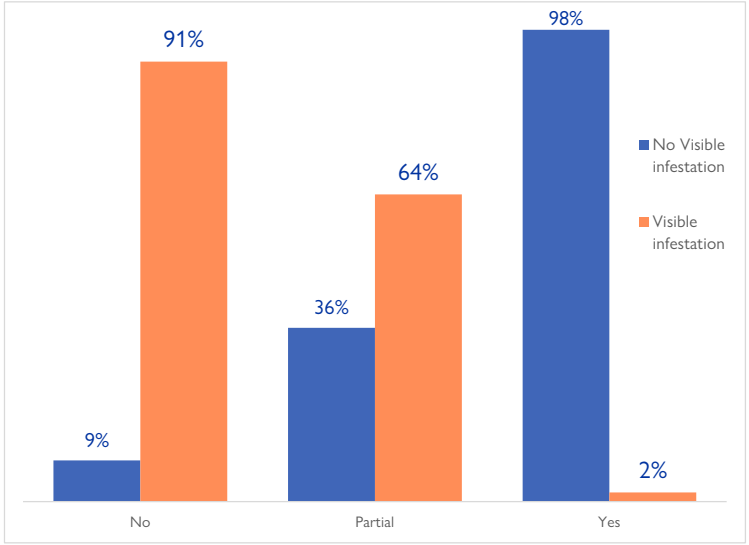
Camp 11 (51%) had the highest proportion of shelters with all bamboo being treated and Camp 17 (2%) had the lowest proportion of shelters had treated bamboo.



Graph 46: Percentage of shelters using treated bamboo with no visible sign of insect infection

Among the shelters that are constructed using only treated bamboo as structural members, 98% of the shelters did not show any signs of insect infestation.

Out of those shelters that did not use treated bamboo, 91% of bamboo showed signs of insect infestation. On the other hand, the shelters that used treated bamboo partially, 64% of them showed signs of insect infestation (graph 47).

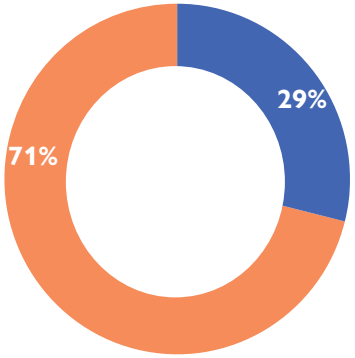


Graph 47: Usage of treated bamboo and thier sign of showing visible infestation

30. The cooking area is protected by a wall:

29% of households reported that the cooking space is protected from fire, among the HHs that reported cooking inside shelters or in their shelter extension (n= 3,107), while 71% said it is not protected (graph 48). The proportion of having unprotected cooking space was higher in Camp 4 (87%) and lowest in Camp KRC (46%).

Out of the households that had protected cooking spaces (29%), 15% of them mentioned that there was no window/ garenja adjacent to the cooking space while 14% had.



Graph 48: Percentage of shelters had protected cooking space

31. The fire-resistant material is used on the cooking area wall

26% of households reported there are fire-resistant materials protecting the walls in the cooking area and 3% HHs did not.

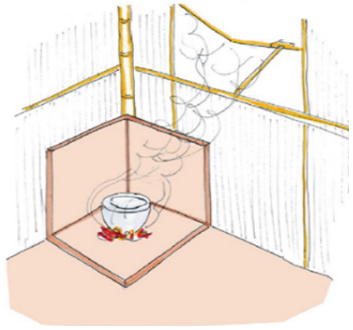
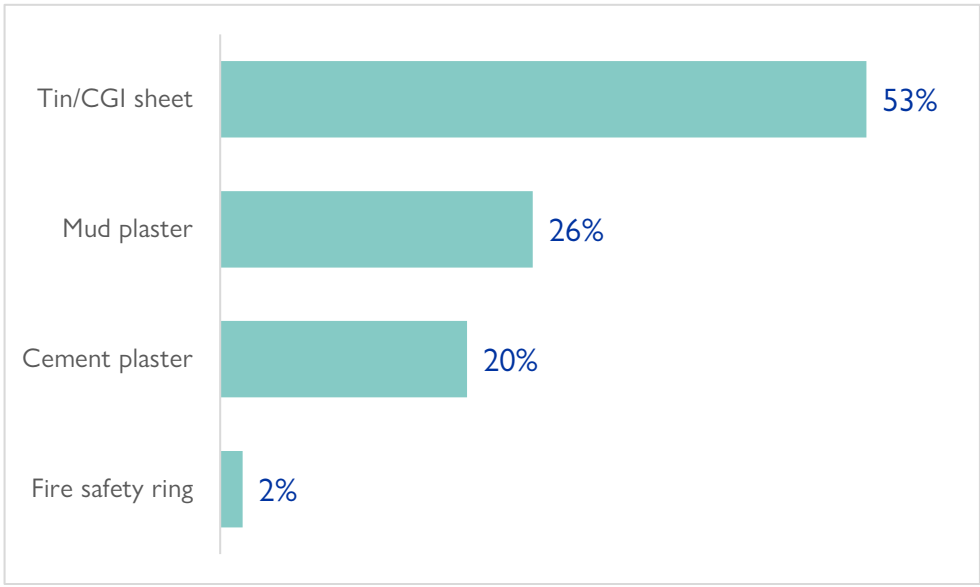


Image 38: Having non-flammable materials protecting the walls in the cooking area

Table 1: Type of cooking space arrangement

Question	Yes	No
1) Is there a window/garenja or door adjacent to the cooking space?	14%	15%
2) Are there fire-resistant materials protecting the walls in the cooking area?	26%	3%

Out of those HHs with fire resistant materials protecting wall (n= 813), 53% had tin/CGI sheets around the cooking space, 26% had mud plaster installed, 20% had cement plaster installed and 2% had fire safety ring (graph 49).

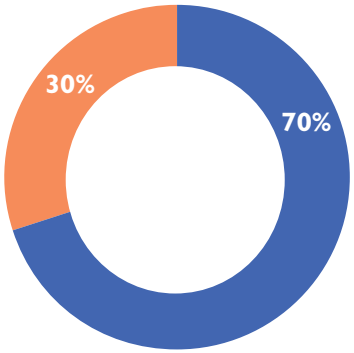


Graph 49: Percentage of different fire-resistant materials used by HHs to protect cooking

5.4.7 Household facilities

32. Households Cooking Space:

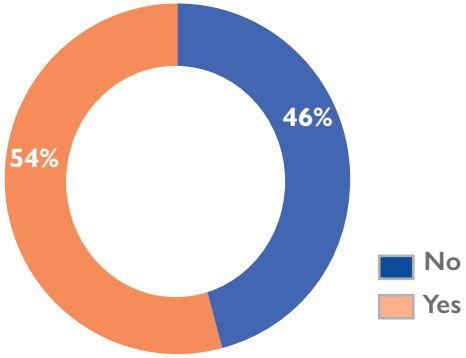
70% of HHs reported cooking space is inside the shelter, 30% cooked in their shelter extension (graph 50). Ten (10) HHs reported not cooking in shelter (eating in neighbor or relative's kitchen) and eight (8) HHs reported cooking outside shelters.



Graph 50: HHs reported different cooking locations

33. Shelter Extension (Self):

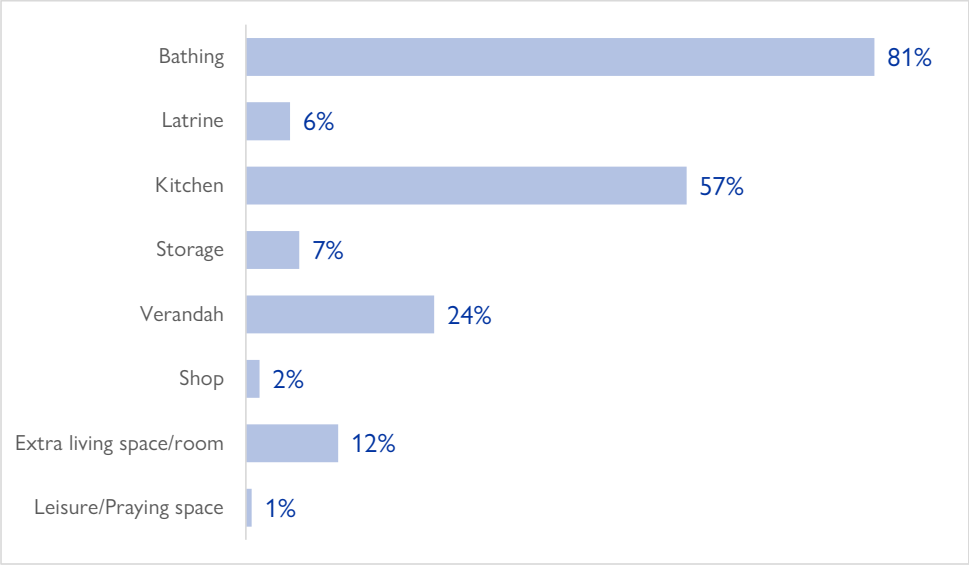
46% of shelters were not extended by households where 54% of shelters were extended by themselves (graph 51). Camp 17 (85%) had the highest proportion of shelters that were extended and Camp 1E (25%) had the lowest proportion of shelters with extension.



Graph 51: Percentage of HHs extending their shelters

81% of households had 1 extension, whereas 18% of households had 2 and 1% had 3 extensions.and more.

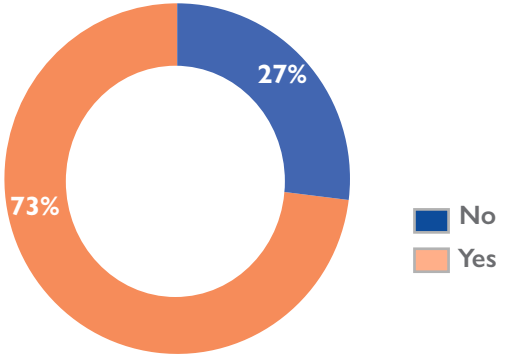
While asked about the purpos eof extention, majority (81%) reported it was for bathing space, followed by 57% reported for kitchen and 24% reported for verandah (graph 52).



Graph 52: Purpose of Shelter Extensions

34. Bathing space within shelter:

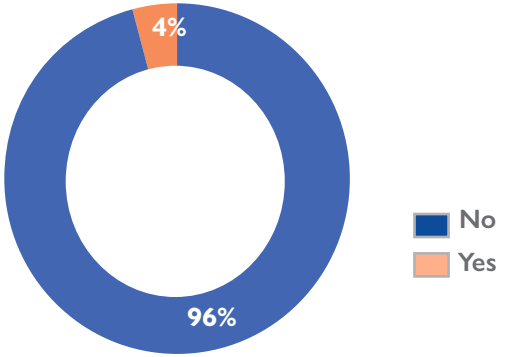
27% of shelters assessed did not have bathing space attached with the shelter while 73% did (graph 53). Camp 7 (86%) had the highest proportion of shelters having bathing space within the shelter and Camp 10 (45%) had the lowest proportion.



Graph 53: Percentage of HHs having bathing space attached with shelters

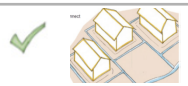
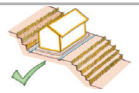
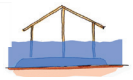
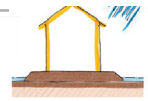
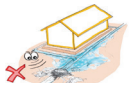
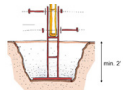
35. Latrine within shelter:

96% of HHs did not have a attached latrine with the shelter while 4% reportedly did (graph 54). Camp 7 (20%) had the highest proportion of shelters having latrine within the shelter while in camp 4, 4 Ext, 16 and 20Ext there were no shelters having latrines within the shelter.

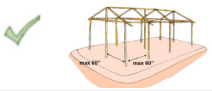
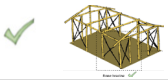
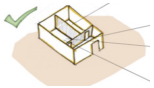
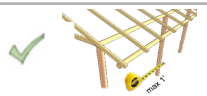
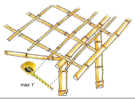
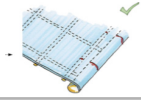


Graph 54: Percentageof HHs having attached latrine with shelters

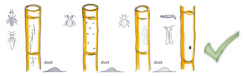
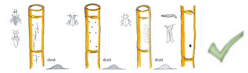
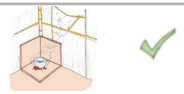
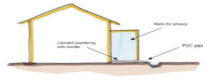
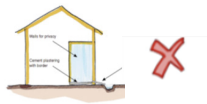
6. COMPARISON BETWEEN 2024, 2023,2022 AND 2021

Sr. No	Detailed Standard elements	Visualization	Type of Performance Standards*	2024	2023	2022	2021
	Site conditions and site preparation						
1	Shelter Size (Area of shelter/living floor area) - 150 sq ft or more		DPS	96.3%	96.5%	94.5%	
2	Shelter settlement plan - row (collective shelter)		DPS	61%	62%		
3	Adequate and Functioning drainage (around the shelter)		DPS	84%	40%	12%	17%
4	Shelter Pathway width- 4ft or more		DPS	38%	37%		
5	Shelter site is safe from soil erosion/landslides/slope protection provided		MPS	70%	72%	60%	59%
6	Impact of floodwaters on the shelter - unaffected		MPS	99.7%	100%	86%	84%
7	Impact of rainwater on the shelter - unaffected		MPS	42%	44%		
8	Impact of waterlogging around the shelter - unaffected		MPS	96.9%	98%	89%	81%
	Excavation and foundation						
9	Height of plinth - 0.5ft (6")		MPS	46%	54%	86%	56%
10	Use of Concrete or Metal Footings		MPS	41%	40%	26%	32%
11	Depth of the Concrete or Metal Footings - 2ft		MPS	38%	38%	21%	44%

*Minimum performance standards (MPS) *Desired performance standards (DPS)

Sr. No	Detailed Standard elements	Visualization	Type of Performance Standards*	2024	2023	2022	2021
	Superstructure work						
12	Distance between bamboo columns - 5ft		MPS	61%	66%	57%	54%
13	Bracing and joint works for structure binding (fully or partially)		MPS	14%	9%	9%	8%
14	At least one internal partition wall within the shelter - 60"-78"		MPS	96%	96%	92%	88%
	Roofing						
15	Distance between Big bamboo Rafters (load-bearing rafters) - 5ft		MPS	72%	61%	51%	62%
16	Distance between Smal bamboo Rafters (load-distribution rafters) - 1ft		MPS	77%	70%	71%	62%
17	Distance between bamboo Purlins - 1ft		MPS	82%	68%	66%	51%
18	The roof does not leak		MPS	16%	22%		
19	Gutters between adjacent shelters - no gutters		MPS	21%	19%	44%	91%
	Finishers						
20	Shelter tie down (fully or partially)		MPS	23%	22%	11%	13%
21	Lock for inside and outside the shelter		MPS	98%	98%	95%	89%

*Minimum performance standards (MPS) *Desired performance standards (DPS)

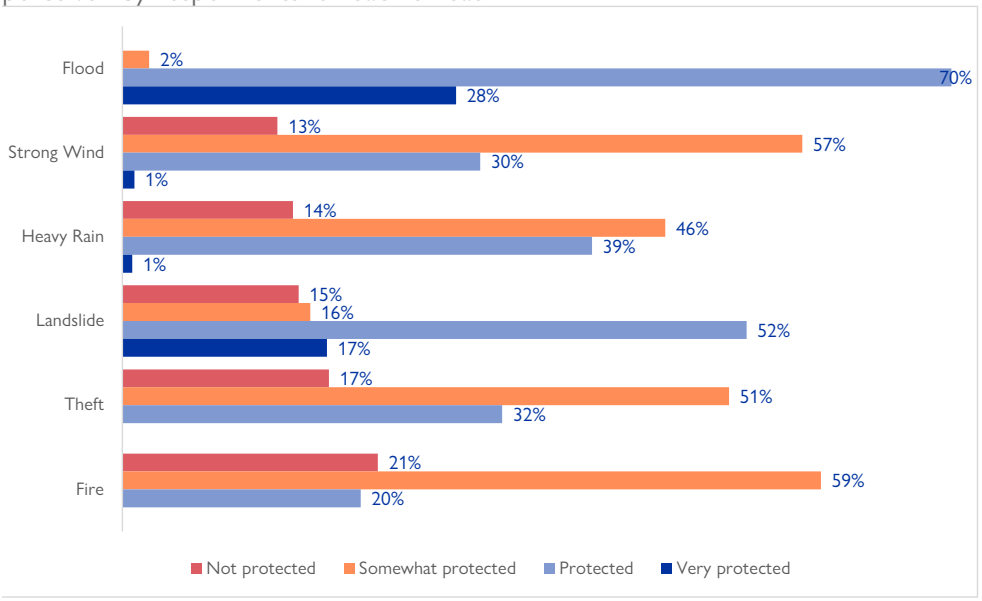
Sr. No	Detailed Standard elements	Visualization	Type of Performance Standards*	2024	2023	2022	2021
22	The Floor is finished with a top layer of cement		MPS	73%	68%	60%	48%
	Treatment and protection qualities of shelter materials						
23	Sign of insect infestation in structural bamboo - no infestation		MPS	30%	31%	24%	14%
24	Use of treated bamboo with no visible sign of insect infection		DPS	15%	15%	15%	9%
25	The cooking area is protected by a wall		MPS	29%	27%		
26	The fire-resistant material is used on the cooking area wall		MPS	26%	26%	21%	22%
	Household facilities						
27	Household cooking space - inside the shelter		MPS	70%	72%	67%	
28	Shelter extension - not by themselves		MPS	46%	46%	39%	50%
29	Bathing space with shelter- not attached to shelter		MPS	27%	45%	70%	27%
30	Latrine with shelter- not attached to shelter		MPS	96%	98%	99%	

*Minimum performance standards (MPS) *Desired performance standards (DPS)

7. HOUSEHOLD PERCEPTION

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.

Most of the respondents reported feeling 'protected' from flood followed by landslide, heavy rains and theft. However, majority of the respondents believes that they are not protected from the fire. The below graph (graph 55) shows the level of protection perceived by respondents for each threat:



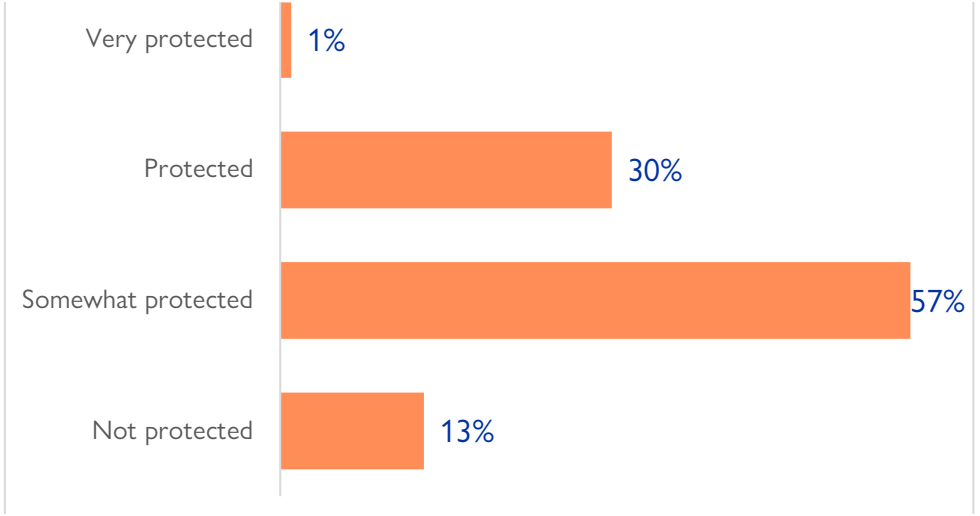
Graph 55: Level of threats perceived by respondents

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

7.1 Cyclones/Strong Winds:

Out of 3,125 surveyed households (HHs), 1% reported that their shelters and sites were 'very protected' while 30% reported 'protected' from cyclones/strong winds (graph 56). Camp 11 (59%) had the highest proportion of households reporting 'protected', while Camp 21 (16%) had the lowest.

Additionally, 57% of the households reported their shelters were somewhat protected (graph 55). Camp 2W (72%) had the highest proportion in this category, whereas Camp 11 (33%) had the lowest.



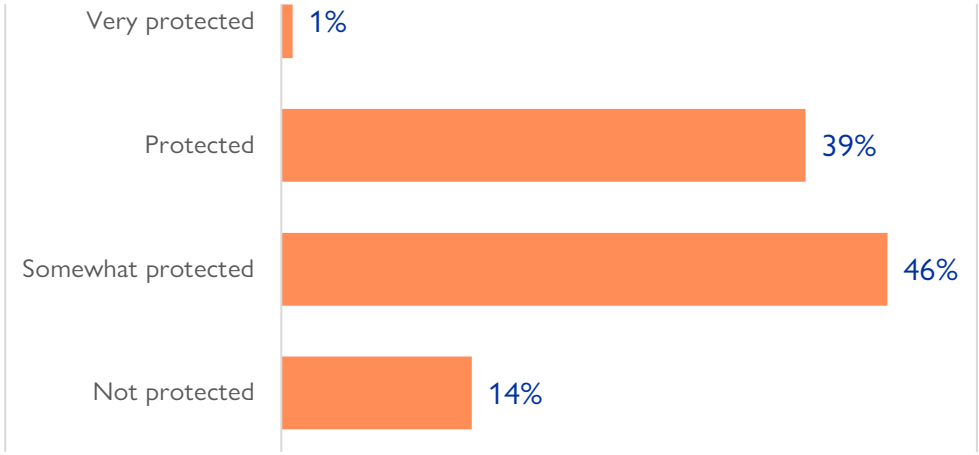
Graph 56: Percentage of HHs Reporting Protection of their Shelter and Site from Cyclones/Strong Winds

Lastly, 13% of all households perceived their shelters as not protected from cyclone or strong winds (graph 55). Camp NRC (23%) had the highest proportion of shelters in this category, while Camp 5 (4%) had the lowest proportion

7.2 Heavy rains:

Out of 3,125 surveyed households (HHs), 1% reported that their shelters and sites were 'very protected' while 39% reported 'protected' against heavy rains (graph 57). Camp 20 (65%) had the highest proportion of households reporting 'protected', while Camp 21 (24%) had the lowest.

Additionally, 46% of the households reported their shelters were somewhat protected (graph 56). Camp 8E (59%) had the highest proportion in this category, whereas Camp 11 (29%) had the lowest.

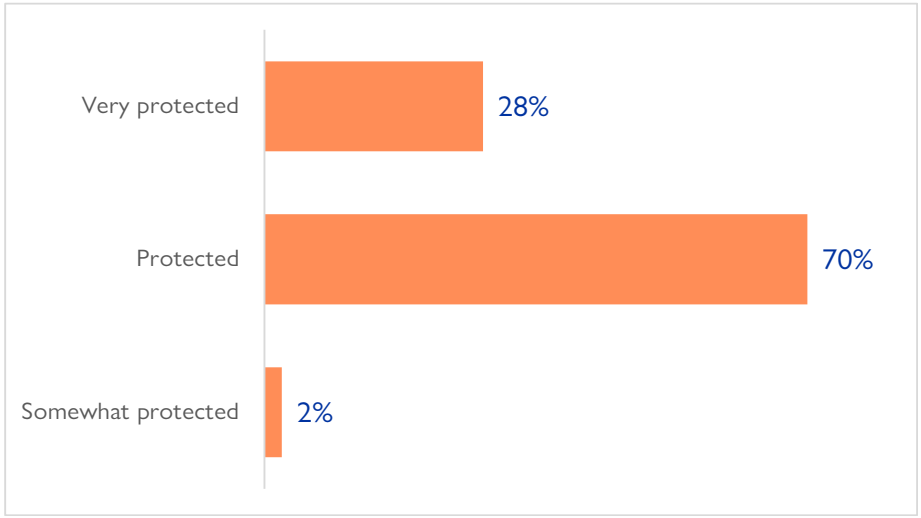


Graph 57: Percentage of HHs Reporting Protection of their Shelter and Site from Heavy rains

Lastly, 14% of all households perceived their shelters as not protected from heavy rains (graph 56). Camp 21 (32%) had the highest proportion of shelters in this category, while Camp 20 (2%) had the lowest proportion.

7.3 Flooding:

Out of 3,125 surveyed households (HHs), 28% reported that their shelters and sites were 'very protected' while 70% reported 'protected' against flooding (graph 58). Camp 25 (87%) had the highest proportion of households reporting 'protected', while Camp 11 (50%) had the lowest.



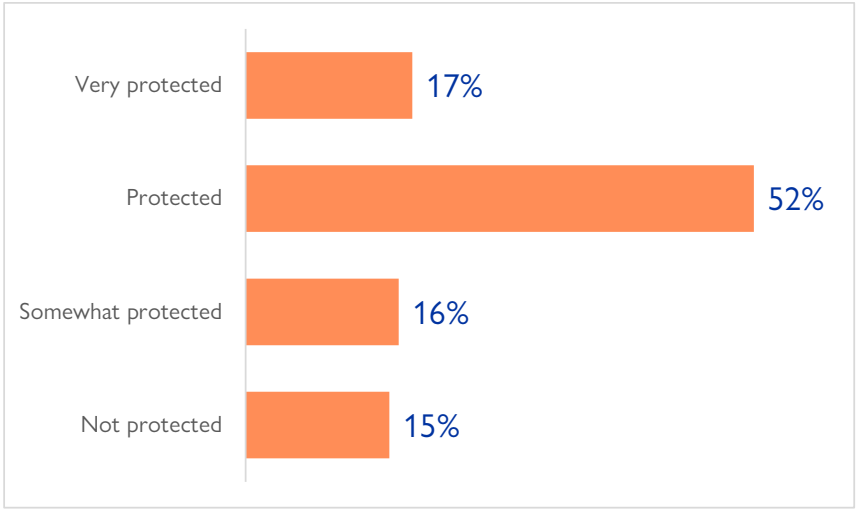
Graph 58: Percentage of HHs Reporting Protection of their Shelter and Site from Flooding

Additionally, only 2% of the households reported their shelters were somewhat protected (graph 57). And only 9 HH reported they felt their shelters as not protected from flood.

7.4 Landslides:

Out of 3,125 surveyed households (HHs), 17% reported that their shelters and sites were 'very protected' while 52% reported 'protected' from landslides (graph 59). Camp 02E (69%) had the highest proportion of households reporting shelter as being 'protected', while Camp 8W (35%) had the lowest.

Additionally, 16% of the households reported their shelters were somewhat protected (graph 58). Camp 7 (35%) had the highest proportion in this category, whereas Camp 24 (1%) and 25 (1%) had the lowest proportion of this type of shelter.

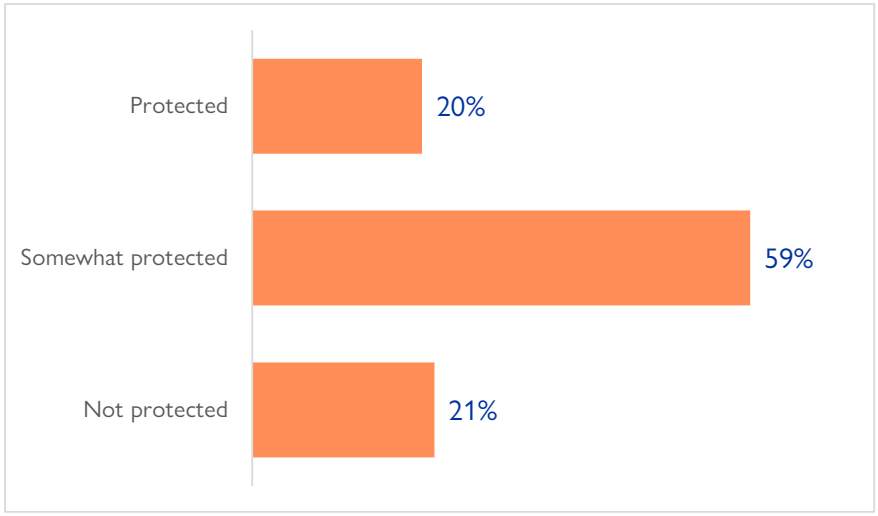


Graph 59: Percentage of HHs Reporting Protection of their Shelter and Site from Landslides

Lastly, 15% of all households perceived their shelters as not protected from landslides (graph 58). Camp 21 (43%) had the highest proportion of shelters in this category, while Camp 4Ext had no shelter as unprotected from landslides.

7.5 Fire:

Out of 3,125 surveyed households (HHs), 20% reported that their shelters and sites were 'protected' from fire (graph 60). Camp 2W (37%) had the highest proportion of households reporting this level of protection, while Camp 13 (7%) had the lowest.



Graph 60: Percentage of HHs Reporting Protection of their Shelter and Site from Fire

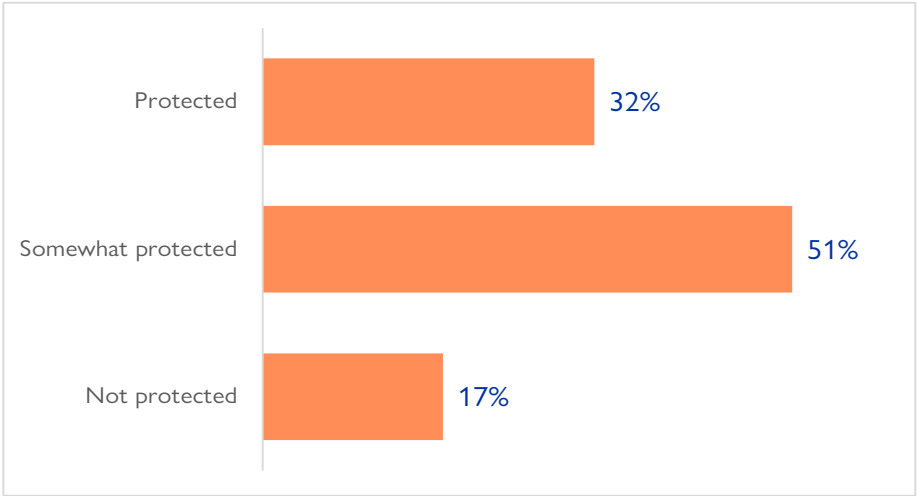
Additionally, 59% of the households reported their shelters were somewhat protected from fire (graph 59). Camp 16 (72%) had the highest proportion in this category, whereas Camp 19 (41%) had the lowest.

Further, 21% of all households perceived their shelters as not protected from fire (graph 59). Camp 13 (49%) had the highest proportion of shelters in this category, while Camp 4Ext (7%) had the lowest proportion.

7.6 Theft/ Intrusion:

Out of 3,125 surveyed households (HHs), 32% reported that their shelters and sites were 'protected' from theft/intrusion (graph 61). Camp 16 (51%) had the highestproportion of households reporting this level of protection, while Camp NRC (12%) had the lowest.

Additionally, 51% of the households reported their shelters were somewhat protected from theft/intrusion (graph 60). Camp 1E (61%) had the highest proportion in this category, whereas Camp NRC (38%) had the lowest.



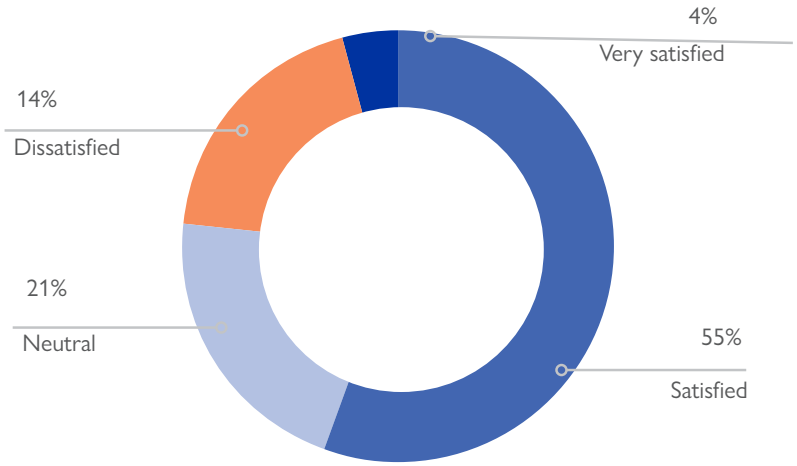
Graph 61: Percentage of HHs Reporting Protection of their Shelter and Site from Theft/ Intrusion

Further, 17% of all households perceived their shelters as not protected (graph 60). Camp NRC (50%) had the highest proportion of shelters in this category, while Camp 16 (5%) had the lowest proportion.

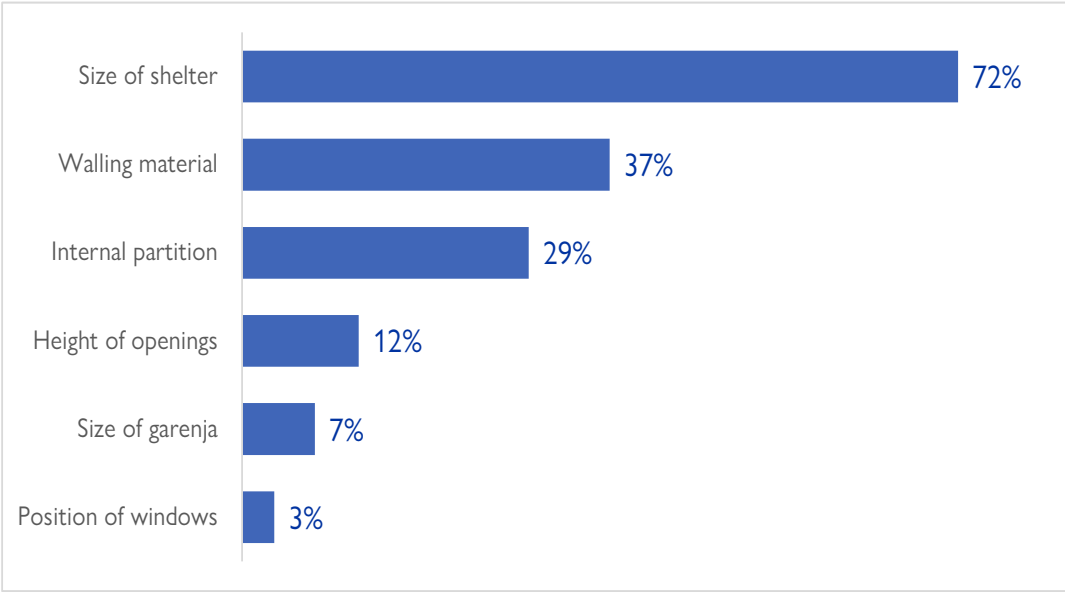
Note: When asked if the HHs have been a victim of the above mentioned issues since last year, 20% of households reported experiencing the issues, while 80% stated they had not encountered these problems.

7.7 HH's level of satisfaction regarding the privacy in their shelters

When households were asked their level of satisfaction regarding privacy in their shelters, 4% were very satisfied, 55% of respondents were satisfied, 21% felt neutral, and 19% were dissatisfied (graph 62).



Graph 62: Percentage of HHs Reporting Level of Satisfaction



Graph 63: 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. 72% of respondents suggested increasing the shelter size, 29% suggested the provision of internal partition, 37% suggested changing the walling material, 12% asked to change the height of openings, 7% asked to change the size of the garenja, and 3% suggested changing the position of windows (graph 63).

8. CONCLUSION

The Shelter Performance Standard Assessment provides valuable data to evaluate the overall conditions of shelters 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, privacy, safety, accessibility, living comfort, and environmental sustainability for the residents. Efforts should be directed toward improving ventilation, the pathway between shelters, adequate plinth height, footing depth, bracing, and fire-weather-insect protection, as well as addressing concerns related to eviction and privacy. By addressing these gaps, the living conditions and safety of residents can be enhanced, leading to more resilient and sustainable self-help integrated community-led participatory technical shelter solutions for the future.

ABOUT NPM

IOM's 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.

NPM in close collaboration with the Shelter-CCCM Sector has designed and developed a comprehensive tool to conduct a Shelter Performance Standard Assessment across the entire camp. The NPM team carried out the assessment to ensure that each shelter meets the established standards and that refugee households have access to protection-focused, culturally appropriate shelter, camp coordination, and camp management solutions. These solutions prioritize privacy, security, protection from environmental elements, hazard reduction, and adequate space for storing belongings and living with dignity.

On behalf of the Shelter-CCCM sector, the NPM has also taken a leading role in processing and analyzing the data to extract meaningful insights from the findings in line with the SCCCM Sector's technical direction. Based on the analysis, NPM produced a detailed narrative report, highlighting key findings, recommendations, and outlining action points aimed at improving shelter conditions and enhancing overall camp safety and the well-being of the refugees.

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