HOUSEHOLD’S PERCEPTION AND USE OF 150 SQ. FEET SHELTERS
(BUILT FOR THE FIRE RESPONSE IN CAMPS 9, 8E AND 8W)
SURVEY ANALYSIS: OCTOBER, 2022
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LIST OF ACRONYMS

1. IOM- International Organization for Migration
2. NPM- Needs and Population Monitoring
3. RRRC- Refugee Relief and Repatriation Commissioner
4. MoDMR-Ministry of Disaster Management and Relief
5. FDMN-Forcibly Displaced Myanmar Nationals
6. MTS- Mid-term Shelters
7. FCN- Food Card Number
8. NFI- Non-Food Items
9. HH- Household
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1. BACKGROUND
In response to shelter reconstruction after the March 22nd fire in 2021, MoDMR shared an “Approval of design for construction of shelters in Rohingya camps” on April 4th (including single storey shelters and specification of the materials to be used) stating that a “single storey shelter of 10 feet x 15 feet size can be constructed for one household if construction of double storey shelter is not possible because of positional reason”.

The RRRC issued a document entitled “Approval of basic principles for construction of shelter in FDMN camps” (15 April 2021) stating that “at the moment only one storied shelter will be constructed in the FDMN camps considering quick re-construction of shelters due to the massive fire incident and imminent monsoon”. The RRRC then requested the Shelter/NFI Sector and IOM to provide a design.

- The design of a shelter of 10 feet x 15 feet (150 sq. feet) was approved on April 25th, only for the reconstruction of shelters affected by the fire on March 21st
- In the submitted document, it was proposed that this shelter size (150 sq. feet) is for up to four family members (standard family size) and 1.5 shelters (225 sq. feet) can be provided for up to six family members and two shelter units (300 sq. feet) for seven or more family members to ensure dignified living conditions.

However, the RRRC subsequently communicated that the approved design of 150 sq. ft. is for the HHs with up to six family members and that the same design should be followed across all the camps, not only for shelters affected by the March fire. This design is currently the only approved one for single-storey mid-term shelters (MTS), and the RRRC no longer recognizes its previous MTS design approvals.

To reinforce the advocacy with the government on dignified living conditions, there is a need for a comprehensive and independent survey across the camps to measure the perception of the new design and impact of the reduced size. This survey targeted 3 camps where MTS were built based on the approved design. All the responses are based on the HHs perception, no technical verification was included in this assessment.

2. TARGETED HOUSEHOLDS
A perception survey as a part of post-distribution monitoring was conducted between December 2021 and January 2022 in camps 9, 8E and 8W. The survey targeted households whose shelters were damaged in the fire of March 2021, and received the new MTS shelter design of 150 sq.ft size and households who were affected by the fire but did not receive 150 sq. ft. shelters. Those who did not receive shelters were either waiting for the shelter construction or did not accept the new design and shelter size.

2.1 Primary Research Purpose:
- a) To assess level of communications to HHs about shelter size prior to construction
- b) To assess if HHs made changes to the new MTS design
- c) To collect HH feedback on the new MTS design
- d) If families kept the same plot size and location as before the fire.

3. METHODOLOGY AND DATA COLLECTION
The sample size was calculated based on 95% confidence level and 5% margin of error. A total of 446 respondents were surveyed across camps 9, 8W, and 8E. 81% of the HHs surveyed received new shelters after the fire incident and 19% surveyed had not received new shelters. The survey questionnaire was divided in two parts.

- Part I: those who received the 150 sq. ft. shelters
- Part II: those who are awaiting the 150 sq. ft. shelters or have chosen not to receive it

\[\text{Mid Term Shelter Unit is considered to be 150 sq. ft. shelter.}\]
4. DEMOGRAPHICS

Out of 446 surveyed HHs:

- **49%** Respondents were male
- **51%** Respondents were female
- **66%** Respondents were head of the household
- **50%** Respondents reported they had adolescent members in their HHs

(Graph 1) Out of the 446 HHs surveyed, 36% HHs had 1-4 members (small-sized HH), 27% had 5-6 members (medium-sized HHs), and 37% had 7 and above members (large-sized HH). The average HH size from this survey was found to be 5.7 members.

(Graph 2) Out of all the HHs surveyed, 77% had one FCN, 22% had two FCNs, and 1% had three FCNs. This survey showed that 23% of the assessed HHs have more than one family (FCN) in the same shelter.

(Graph 3) Out of total 1-4 members HH size, 99% HHs had 1 FCN card holder and 1% had 2 FCN card holders. HHs who have 5-6 members, 95% had 1 FCN card holder and 5% had 2 FCN card holders. Out of HHs who have 7 or more family members, 70% had 1 FCN card holder, 29% had 2 FCN card holders, and 1% had 3 FCN card holders.

Out of all surveyed HHs: 76% had 1 married couple, 14% had 2 married couples, 1% had 3 married couples and 9% HHs had no married couples in the shelter. It was found that in some shelters, more than one married couple were living with a single FCN. Example: from all HHs surveyed with two married couples (62 HHs), 30% had one FCN and 70% had two FCNs.
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5. KEY FINDINGS

5.1 Part I: The findings below are from the 81% of the respondents (361 HHs) who received a new shelter from shelter organizations after the fire.

5.1.1 Shelter Units

Based on RRRC decision HHs with 1-6 members were to receive one unit of 150 sq. ft. shelters and those with 7 and above members were to receive 2 units so shelter with up to 300 sq.ft.

(Graph 4) Size of HHs Who Received New Shelters

| Large HHs (7 and above members) | 38% |
| Medium HHs (5-6 members) | 26% |
| Small HHs (1-4 members) | 36% |

(Graph 5) 70% of those who received new shelters received one shelter unit (up to 150 sq. ft.), and 30% received two shelter units (up to 300 sq.ft.).

(Graph 6) Only 75% of large size HHs with 7 or more members received two shelter units. Thus, 25% of large families (i.e., 34 out of the 137) did not receive 2 units of shelters - the primary reason being space constraints in the camps. In some cases, it was also due to the contractor approach (building only 150 sq. ft. shelters per HHs) and not following the site plan.

99% of small HHs with 1-4 members received one shelter unit (1 HHs with 1-4 members received 2 shelter units), and 94% of medium-sized HHs with 5-6 members received one shelter unit, while 6% received two shelter units.

(Graph 7) This graph shows the % of HHs who received one/two shelter units and distributed them according to the number of FCN card holders residing at that shelter. Among HHs who have three FCN card holders, 100% HHs received 2 units of shelter. Among HHs who have two FCN card holders, 80% received 2 units and 20% of HHs received 1 shelter unit. Among HHs who have one FCN card holder, 77% received 1 unit and 23% received 2 shelter units.
5.1.2 Community Consultation
Shelter actors, along with WASH and Protection carried out community consultations using a row-by-row approach\(^1\) to receive consent and acceptance of the 150 sq. ft. shelter design. The survey shows that, 89% of responders were aware of shelter size and 11% respondents (female 71% and male 29%) were not aware at the time of accepting the shelter (Graph 8).

Graph 8: Awareness of Shelter Size Prior to Construction

5.1.3 Privacy Concerns
Privacy concerns in the shelters were analyzed based on understanding of the relationship between neighbors and density of the shelters in camps 9, 8W, and 8E.

65% HHs reported having relatives living immediately around their shelters, 9% HHs reported having friends living around their shelters, and 26% HHs reported not knowing who lived around their shelters. Three quarters of all HHs who received the new shelters knew their neighbors.

Graph 9: Relationship to Neighbours

5.1.4 Average Covered Space based on the Approved Design
Average covered space per person in the 150 sq. ft. shelters including the extensions for kitchen, veranda, extra living space, storage and shops. (Excluding bathing space and sanitation facility).

Table 1: Average Covered Space Per Person Based on HH Size

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Average Covered Space</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sq. ft./person</td>
</tr>
<tr>
<td>Large HHs (7 and above members)</td>
<td>31</td>
</tr>
<tr>
<td>Medium HHs (5-6 members)</td>
<td>27</td>
</tr>
<tr>
<td>Small HHs (1-4 members)</td>
<td>46</td>
</tr>
<tr>
<td>Average</td>
<td>35</td>
</tr>
</tbody>
</table>

As per the Sphere Standards for shelter, there must be a minimum of 3.5 square meters per person, excluding cooking space, bathing area, and sanitation facility. The covered space of 150 sq. ft. shelters received after the March 2021 fire were disaggregated per HH size. For HHs with 1-4 members, this survey found the average covered space as 4.3 sq. m./per person including cooking space; for HHs with 7 members the covered space was lower that the Sphere standards - at 2.9 sq. m./per person including cooking space; and for HHs with 5 or 6 members, the covered space was found to be the smallest, i.e., 2.5 sq. m./per person including cooking space. Thus, the privacy concerns could be the highest for HHs with 5-6 members which have the least amount of space considering 1 unit of 150 sq. ft. shelters they have received. Therefore, the SNFI Sector should continue advocacy to the RRRRC to allocate 150 sq. ft. shelters only to HHs with maximum 4 family members, 225 sq. ft. shelters for those HHs with 5-6 members and 2 300 sq. ft. shelters for those with 7 and more members to ensure minimum dignified living conditions.

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\(^1\) A row-by-row approach was carried out to ensure micro-settlement planning row-wise by consulting each HH on the existing shelter size, proposed shelter size, and the adjustments possible in each row of shelters. This consultation was carried out jointly by site management, site planning, WASH, Protection, and Shelter.
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5.1.5 Shelter Orientation and Position
A row of shelters in this assessment has been defined as three or more continuous shelters with a common roof. 39% of shelters are connected to adjacent shelters in a row with a common roof, while 61% shelters are not in a row - they could either be standalone, or have a zig-zag roof connection. Out of the HHs whose shelters are in a row, 25% shelters can access their neighbor’s shelter with an internal door.

From this assessment, the average length of a shelter row is 40 ft., and the average width is 15 ft. Based on the size followed- of approximately 10’X15’, the assessment shows that on an average one row of shelters consists of 4 shelters.

Height of shelters: The height of shelters built in the fire response found to have met the technical standard of walls being between 6-7 ft high (at wall plate). The average height of shelters was found to be 6’11”. 2% of shelters surveyed had less than 6’ height which is below technical standards and compromise privacy and ventilation.

5.1.6 Shelter Extensions
(Graph 10) 71% of the HHs surveyed have extended their shelters. Out of those who extended their shelters, 66% were HHs with 5 and above members.

(Graph 11) Out of the HHs who extended their shelters, 66% had one extension, 28% had two extensions, and 6% had three extensions.

5.1.7 Average Area of Extension
The average size of an extension was approximately 43 sq. ft. (4 sq. m.). Comparing the camp-wise extension size (see Table 2 below), Camp 9 has the smaller extensions on average, compared to Camps 8E and 8W. 25% of the extensions built by the HH were less than 6’ in height. The average height of these extensions recorded is 5’3”. The lowest height extension measured in the survey was 3’6” in height and was being used as a kitchen and as a verandah.

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Covered Space of Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in sq. ft.</td>
</tr>
<tr>
<td>Camp 8E</td>
<td>51</td>
</tr>
<tr>
<td>Camp 8W</td>
<td>44</td>
</tr>
<tr>
<td>Camp 9</td>
<td>35</td>
</tr>
</tbody>
</table>

Table 3: Comparison of Average Covered Space Per Person Including and Excluding Extensions, as Per HH Size

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Average covered space (including extension)</th>
<th>Average covered space (excluding extension)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sq. ft./Person</td>
<td>Sq. m./Person</td>
</tr>
<tr>
<td>Large HHs (7 and above members)</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>Medium HHs (5-6 members)</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Small HHs (1-4 members)</td>
<td>57</td>
<td>5</td>
</tr>
</tbody>
</table>
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(Table 3) Considering the restricted size of shelters per HHs, especially 150 sq. ft. for those HHs with 5-6 family members, shelter extensions are the only way for a family to have minimum dignified living conditions. Including self-built extensions, the average covered living space regardless of the family size increased by around 0.75 sq. m. (9 sq. ft.) per family. 0.1 sq. m. (6 sq. ft) for families with 7 members, 0.5 sq. m for families of 5-6 members (9 sq. ft.) and 0.7 sq. m. (11sq. ft for families of 1-4 members).

(Graph 12) The most commonly used materials for extensions are the same as those used to build the MTS i.e., borak, muli, tarpaulin, nylon rope, and bamboo matting. The most common use for the extension was for bathing (42%) followed by kitchen (33%), verandah (12%). A few HHs used the extension as a latrine, extra living space, storage, or as a shop.

98% of the assessed HH’s extensions were structurally dependent on the main shelter (attached to main shelter), while 2% of HHs extensions were independent of the main shelter (used for bathing purposes).

**Structurally Dependent Extensions:*

For the purpose of the survey, it was defined that structurally dependent extensions:

- were structurally adequate if they had two or more borak columns and if those columns were connected with borak beams;
- were structurally partially adequate if they had minimum two borak columns or minimum two muli columns and if those columns were connected with muli beams;
- were structurally inadequate if they did not have any borak bamboo structural members.

(Graph 13) 35% of the structurally dependent extensions were found to be structurally adequate, 57% were found to be partially adequate, and 9% were found to be structurally inadequate.
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It was found that 25% of HHs who received new shelters made some changes to the structural elements of the shelter. The most common changes were made to the borak (beam, column, bracing) tarpaulin, such as cutting doors for accessing shelter extensions.

For the purpose of the survey, it was defined that independent extensions:

- were structurally adequate if they had four or more independent borak bamboo columns and those columns were connected with borak bamboo beams
- were structurally partially adequate if they had minimum two borak columns with borak or muli beams
- were structurally inadequate if they had only muli bamboo and did not have any other structural members

Out of the shelters with independent extensions (2% of all shelters with extensions, 4 HHs), 50% were found to have extensions structurally partially adequate while 50% had the extension structurally inadequate.

5.1.8 Modifications to the Shelter

It was found that 25% of HHs who received new shelters made some changes to the structural elements of the shelter. The most common changes were made to the borak (beam, column, bracing) tarpaulin, such as cutting doors for accessing shelter extensions.

5.1.9 Cooking Space

For the purpose of the survey, it was defined that independent extensions:

- were structurally adequate if they had four or more independent borak bamboo columns and those columns were connected with borak bamboo beams
- were structurally partially adequate if they had minimum two borak columns with borak or muli beams
- were structurally inadequate if they had only muli bamboo and did not have any other structural members

Out of the shelters with independent extensions (2% of all shelters with extensions, 4 HHs), 50% were found to have extensions structurally partially adequate while 50% had the extension structurally inadequate.

A larger proportion of medium-sized households cook in the shelter extension, compared to small and large-sized HHs. For the families with 5-6 members, space inside shelters is not enough for cooking, considering the restricted shelter size. In the graph above, the 1% of medium-sized HHs cooked in their relatives’ cooking spaces.
5.1.10 Occupancy

36% of surveyed HHs have adolescent females staying at home all day and 37% have adolescent males staying at home all day. 21% of HHs who received the 150 sq.ft. shelters have both male and female adolescents staying in the shelter all day.

100% of HHs surveyed have at least 1 adult female in home through the day. 28% HHs have 2 adult women and 14% have 3 adult women in the shelter all day.

84% HHs have at least one adult male at home in the day.

19% of surveyed HHs have at least one male adolescent, one female adolescent, one male adult, and one female adult in the shelter throughout the day.

5.1.11 Shelter Plot

98% of the surveyed HHs have their new shelter on the same plot as before the fire. (Graph 17) 68% of HHs stated that their plot size is smaller in comparison to the size before the fire. For 27% HHs the plot is the same size, and for 5% HHs the plot size is larger.

(Graph 18) Among Small size (1-4 members) HHs, 29%, 66%, and 6% of HHs stated that their plot size is same size, smaller, and larger respectively in comparison to the size before the fire. Regarding Medium size (5-6 members) HHs, 21%, 75%, and 4% of HHs stated that their plot size is same size, smaller, and larger respectively in comparison to the size before the fire. And among Large size (7 and above members) HHs, 30%, 64%, and 5% of HHs stated that their plot size is same size, smaller, and larger respectively in comparison to the size before the fire.

5.1.12 Perception of 150 sq. ft. Shelters

The 150 sq. ft. fire response shelters were built by 15 different shelter organizations in three camps. Although the structural components of the shelters were the same - as specified by the SNFI Sector, the organizations construction modality and material quality differed (subject to time constraints of procurement and market availability). Thus it is seen that some of the same elements were liked by some and disliked by other HHs.

The top five aspects the HHs liked about their shelters were that it is a strong shelter structure, has good quality flooring, has good quality and durable materials used, has strong joints and connections, and good ventilation.

32% of surveyed HHs shared that they do not dislike anything about their shelters. The top five aspects HHs disliked about their shelters were that there isn’t enough space inside the shelter, it is too cold in winter, low quality materials are used, has good quality and durable materials used, and good ventilation.

92% HHs feel safe in their shelter, while 8% do not feel safe.

(Graph 19) Those who do not feel safe shared their main concerns and highlighted safety, privacy and over crowdedness. Less lighting and ventilation were also raised as concerns by HHs. 13% of all large-sized HHs felt unsafe compared to medium-sized HHs (4%) and small-sized HHs (5%).
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(Graph 19) 10% of male respondents stated that they feel unsafe and 90% feel safe. Simultaneously, 94% of female respondents stated that they feel safe and 6% not.

(Graph 20) HHs with adolescents felt more unsafe (in terms of privacy, safety, and congestion) than HHs without adolescents as seen in the graph below.

(Graph 22) 44% of the protection concerns (safety, privacy, over crowdedness, less lighting and ventilation) affected female HH members, 31% affected children and adolescents (up to 17 years old), 20% affected male HH members, and 5% affected older persons (above 60 years old)

(Graph 23) 94% HHs shared that their new shelter is better or much better than their previous shelters. 3% stated that it is the same as the previous shelter, while the remaining 3% stated that their new shelters are worse than their previous shelters.

(Graph 24) HHs with adolescents felt more unsafe (in terms of privacy, safety, and congestion) than HHs without adolescents as seen in the graph below.
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(Graph 25) 36% of the HHs reported that they do not want to change anything about their shelters. 17% proposed to mainly change structural elements, 12% would like to change the shelter size of 150 sq. ft, and 11% would want to shift the door position. Besides this, a few HHs would want to change the roofing, walling, cooking space, floor finish, and bamboo quality.

Graph 25: Percentage of Elements Which HHs would Like to Modify in their Shelter

<table>
<thead>
<tr>
<th>Elements to Modify Shelter</th>
<th>Large HH (7 and above members)</th>
<th>Medium HHs (5-6 members)</th>
<th>Small HHs (1-4 members)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not want to change anything</td>
<td>16%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Structure (columns or beams)</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Roof</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Door</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Shelter size</td>
<td>3%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Cooking space</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

(Graph 26) 40% HHs were very satisfied with their shelters; 57% were satisfied; 3% were neither satisfied or unsatisfied.

Most HHs (95%) of those who received new shelters did not submit any complaints regarding their shelters.

53% of those who complained received responses and 47% did not receive a response to their complaints. Out of those who received responses, 60% were satisfied or very satisfied with the response; 20% were neutral; and 20% were not satisfied with the response.

Out of those who were neither satisfied nor dissatisfied about the shelter support (3%= 12 HHs) only 1 submitted a complaint.

Out of 361 HHs that received new shelters, one HH shared that they paid money to the shelter actor for an additional shelter. SNFI Sector is undertaking further investigation on the issue as it involves partners who did not coordinate shelter assistance.
5.2 Part II: Findings from the 19% of the respondents (85 HHs) who did not receive a new shelter from shelter organizations after the fire - because they refused to accept it or were still awaiting it at the time of data collection.

95% of the HHs who have not received new shelters live in one shelter unit, and 5% (consisting of 7 and above members) live in two shelter units. Out of the 95% living in one shelter unit, 42% are small-sized HHs, 30% are medium-sized HHs, and 28% are large-sized HHs.

(Graph 27) 39% of the HHs reported living in structurally unsafe shelters; 31% have built a structurally safe shelter on their own; 11% HHs are living together with relatives (14 HHs were living with relatives, out of which 13 HHs were awaiting new shelters). As seen in the graph, some were awaiting SD works, or relocation if in a high risk zone. In a few cases the original shelter plot was no longer available, so the HHs were waiting for an alternative.

76% of the HHs still wanted to receive 150 sq.ft. shelters, and the process of taking forward their shelter construction was still ongoing at the time of the survey.

(Graph 28) Out of those who still wanted to receive the shelters, the highest proportion 40% were small-sized HHs, 32% were large-sized HHs (who should receive two units). However, the lowest proportion - 28%, were medium sized HHs of 5-6 members which shows that 150 sq. ft. shelter, even if structurally sound and in good quality is not willingly accepted by families with 5-6 members due to the limited shelter size.

24% (20 HHs) did not want to receive new shelters. Out of these, 20% were small-sized HHs, 45% were medium-sized HHs, 35% were large-sized HHs. With one unit of 150 sq. ft. shelters, the medium-sized HHs greatly fall short of the Sphere standards for covered space per HHs, as discussed earlier. The HHs who did not want new shelters preferred material support instead - the most commonly asked materials being tarpaulin and treated borak bamboo, nylon rope, muli bamboo, RCC posts, and cement.

These materials would help beneficiaries to make repairs to the existing size of shelters.

*1 shelter unit is 150 sq. ft. new MTS