Danish Refugee Council (DRC)’s Shelter Upgradation in IDP Hosting Sites in Khokha, Yemen

Introduction:
Due to the situation of protracted displacement continuing throughout 2022, the need for the upgrade of existing shelters was crucial to improve the living conditions of IDPs in Khokha district, Yemen. The majority of sites in Khokha District, West Coast can be classified as scattered and dispersed IDP hosting sites. This means that often the sites take up comparatively larger spaces, and clusters of households can be found with some distance between one another. The majority of the sites are located in coastal areas, resulting in exposure to constant windy weather which causes damages to all types of shelters. Of the 1,989 shelters housing IDP families in DRC managed sites in Khokha, 50% are Emergency Shelters compared to 32% Transitional Shelters. The rest are either makeshift or traditional shelters. Of those 1,989 shelters in 13 sites, DRC identified that 46% were in need of shelter upgradation (June 2022).

DRC selected two sites - Al-Badi and As'-Sad (Khokha District) - to target with support under Yemen Humanitarian Fund (YHF) funding in late 2022. The IDP communities targeted have been living in these sites for more than three years, in shelters categorized by a lack of safety and dignity and in significant need of maintenance and upgrade work. With various types of shelters in use in the selected sites, DRC’s team used a tailored approach to shelter upgradation modalities, carrying out in-depth community consultation and technical assessments at the household level to identify upgrade designs that would best meet the needs of the individual households. DRC contextualized the shelter upgradation to ensure the highest levels of both cost-efficiency and beneficiary engagement as the upgradation modality was designed through household level assessment as well as community consultation.

Project Overview and Objectives:
The shelter upgradation project was funded by YHF, with the aim of improving living conditions for displaced persons and developing resilience through integrated multi-sectoral assistance including Shelter, NFIs and CCCM. The targeted number of shelter upgradation under the project was 267 shelters in DRC managed sites. DRC’s team adopted approaches that are environment friendly, with an emphasis on using locally available materials such as mud, Khazaf, and Qash (Tomam) for the shelter upgrading.
Technical Assessment:
DRC’s team carried out integrated CCCM, Shelter and Protection assessments in order to design the modality of implementation. The assessments identified shelter specific needs and the construction materials that would be necessary to improve households’ shelters and protective environment, reaching the minimum standards required for safe and dignified living conditions. The assessment focused both on the household level vulnerabilities, as well as the current shelter type and condition. Meeting minimum standards of shelter provision helps to reduce the displacement-related shelter vulnerabilities of displaced families. It was acknowledged however that shelter upgrades remain a relatively short-medium term intervention, and these need to be delivered in a wider context of understanding and identifying opportunities for durable solutions.

Photo: DRC staff assess shelter condition in one of the Khokha IDP Hosting Sites. Credit: DRC Yemen

FGDs (Focus Group Discussions):
Consultation was made with the target communities through FGDs to determine the type of materials which could be used for the upgradation of existing shelters, as well as to identify construction modalities taking into considerations of fire risk protection measures and other risks. DRC worked with the community to focus on identifying local materials for use as far as possible. The team explained to the IDPs that on-site training would be conducted for each household as part of ensuring a degree of participation and capacity building. While the community expressed their interest in learning new skills through constructing their own shelters under technical supervision of the team, they highlighted that some families would need the full support in construction through skilled casual worker due to lack of able-bodied members in those families.

Preparation and Design phase:
Through analysis of the FGD findings, DRC identified four different types of shelters requiring upgrade kits, and designed the necessary upgrade kits for each type based on the issues identified.

DRC engaged with the Executive Unit for IDPs and gained the necessary approvals from landowners for implementation to go ahead, ensuring an understanding that the proposed intervention would provide only improvements to existing structures. It was noticeable that landowners did not raise concerns regarding the shelter upgradation, compared to Transitional Shelter implementation (for which partners have previously faced some challenges in gaining acceptance).
As part of the exit strategy and to increase sustainability, DRC aimed to prioritize community engagement through provision of technical capacity building of community committees to carry out the shelter upgradation work. This modality supported building community self-reliance, ownership, and decision making.

DRC sourced many of the materials such as mud and Thomam (Qash) from the local area, thereby supporting local businesses and income generation as part of the wider benefits of the project.

For the majority of the targeted families, DRC carried out an on-site training for the selected IDP community members on the upgradation construction design and process, so that they would be able to carry out the upgradation work themselves, with technical guidance from the skilled labourers and DRC CCCM Infrastructure team. DRC’s also utilized a small number of skilled local casual workers to support in the construction of shelters for families with vulnerabilities.

The photos below show some examples of the shelters both before and after the shelter upgradation work:

**Actual Implementation:**

![Before](image1)

![After](image2)

![Before](image3)

![After](image4)

*Photos: Examples of IDP family shelters before and after the DRC upgrade work was implemented in Khokha IDP hosting sites. Credit: DRC Yemen.*
What impact did the CCCM contextualization have on this project?

Through taking a beneficiary-centric approach, the project achieved the optimum outcome in terms of improving shelter conditions with a high degree of community ownership, as well as ensuring cost-efficiency. The shelter upgradations provided were well adapted to the existing shelter designs and materials utilized in the targeted sites, ensuring that the most suitable and relevant intervention was provided. This helped to ensure materials were well utilized and contributing to reducing risk exposure. In addition, the participants learned the new skills of shelter upgradation that can support their community in the long run, including in carrying out simple, day-to-day maintenance tasks for their shelters.

Voice from the field: (Beneficiary from Al Badi site):

“Upgrading my shelter will no longer be a big challenge as my contribution to the re-construction gave me experience. These are the same materials we used in Dunaiyan (Area of Origin), giving me the freedom to use my local style. My house is stronger and different than before, but we would love if DRC had distributed more shelter upgrading kits.”

Key Lessons Learned and Recommendations:

With the large number of families continuing to face conditions of protracted displacements in Yemen, new approaches are needed to address their shelter needs. Emergency Shelter Kits, when available, meet a life-saving need, but do not offer a dignified standard of living and the materials deteriorate quickly. Transitional Shelter construction is often not feasible due to land ownership restrictions and the high unit cost. In such situations, contextual shelter upgradation based on community consultation and existing shelter types can ensure better living condition for IDPs in a cost- and time- efficient manner. Shelter upgradation provides a modality which builds upon existing infrastructure and materials, thus minimizing the need for new designs, new procurement, and extensive construction work. This does however require a certain minimum standard of existing materials – this modality would not be appropriate for example if families are living in very poor makeshift shelters, or where existing Emergency Shelter materials have been entirely destroyed. In addition, each style will likely have a different lifespan, which will need to be monitored and assessed over the coming months and years. In some cases (especially for the Emergency Shelter Kit Upgrade design), this will likely be significantly less than the lifespan of a new Transitional Shelter.

DRC has also carried out a similar intervention with contextualized shelter upgrade activities in Lahj, the findings of which can also be shared with interested partners.

The four designs utilized by DRC’s team in the Khokha can be seen below:
1. Kit 1 (Rounded Mud Cladded Traditional Shelter)

- 7x7 wooden poles 6 pics with 4m length
- Iron Bar 8 mm Diameter used for fixing
- Mud Cladding for Walls
- Door and windows for ventilation
- 2 plastic Sheets and 15 Qash (Thomam) bundles to Cover roofings
- Sisal Rope to Fix the Qash covering

Kit 2 Enhanced Emergency Shelters

- Wooden plates 10x2.2cm and 4m length, 3 Pieces to support the roof structure to slope and support for corner wall bracing. The roof structure is covered with plywood’s 9 mm thickness 5 pieces for isolation against water leakage
- New door and 2 windows with its hardware
- The new plywood roofing is covered with 3 plastic sheets to protect the wooden roofing from water and also include covering walls
Type 3 Kit

5 wooden poles 5*5 cm and 4 m length to support roof to slope and forming safe gable structure

The plastic sheet will be covered with Qash (Thomam) 15 bundles which been fixed by sisal ropes to protect the plastic sheet from direct sunlight and also to provide internal thermal isolation

The wooden roofing structure is covered with plastic sheet for better isolation against water leakage during raining season

Walls are cladded with mud

Providing plywood to install the door and windows with its hardware

Type 4 Kit

5 bundle of Thomam (Qash) 2 plastic sheets for roofing

2 pieces of Khazaf (1.22*3.8 m) length

5 pieces of Corrugated iron sheets 3m length

Sisal rope for Thomam Fixation

Sewing Nylon rope was provided to sew any holes on the Khazaf Cladding

Washers, nail 2 inch and hammer for fixation
### Summary of Key Advantages and Disadvantages (per type):

<table>
<thead>
<tr>
<th>Upgradation Type</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td><strong>Type 1</strong></td>
<td></td>
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<tr>
<td>Round Mud-Cladded Traditional Design (Cost: $170)</td>
<td>The door ensures more safety</td>
<td>If the water source is not available nearby, it would take additional efforts of water trucking for the muds</td>
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<td></td>
<td>The roofing (with iron bar and wooden poles) and the muds on the wall keep shelters less hot during the summer.</td>
<td>Drying out muds takes time.</td>
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<td></td>
<td>Mud plastering reduce the internal temperature in hot weather</td>
<td>Require more time at the preparation phase</td>
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<td></td>
<td>Locally available materials</td>
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<td></td>
<td>Enhanced protection from fire incident</td>
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<td></td>
<td>Better ventilation</td>
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<td><strong>Type 2</strong></td>
<td></td>
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<tr>
<td>EESK Upgrade (Cost: $190)</td>
<td>The extension of the roof with plastic sheets and plywood keeps the shelter better protected from sunlight and raining</td>
<td>Plastic sheets need to be replaced time to time.</td>
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<td><strong>Type 3</strong></td>
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<tr>
<td>Transitional Shelter Upgrade (i) (Cost: $160)</td>
<td>Mud plastering reduce the internal temperature in hot weather</td>
<td>If the water source is not nearby, it would take additional efforts of water trucking for the muds</td>
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<td>Enhanced protection from fire incident</td>
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<td>Better ventilation</td>
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<tr>
<td><strong>Type 4</strong></td>
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<tr>
<td>Transitional Shelter Upgrade (ii) (Cost: $180)</td>
<td>The iron-coated corrugated sheet protects against insects, snakes etc.</td>
<td>The iron-coated corrugated sheets could have more extended to cover more part of the shelter</td>
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<tr>
<td></td>
<td>Local materials (Khazaf and Qash) keep the shelters less hot during hot weather</td>
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