Yemen Shelter Typologies

October 2020

Prepared by NRC In Collaboration with the Shelter Cluster Yemen 2020
INTRODUCTION

Shelter Cluster Yemen was established in August 2009 as a result of protracted conflict from 2004 to 2010 leading to mass displacements. The establishment of the sector was followed by merging the Shelter and CCCM (Camp Coordination and Camp Management) cluster in March 2010. By June 2015 no camp policy had been adopted and in September 2018 an alternative to Camps Policy was adopted for Yemen. Finally in July 2019, CCCM Cluster was activated as a standalone cluster.

Shelter, including the provision of Non-food items (NFIs), has been one of the most dynamic Inter-clusters interventions due to the nature the conflict and emergency in Yemen. It’s successful implementation has paved the way for the introduction of other important clusters like CCCM. Given the importance of shelter and NFI sector, there is need to profile its offerings in the different areas of the country.

The profiling of shelter typologies and designs implemented by Shelter partners in Yemen is in practice spans more than a decade and will continue to be updated with new typologies. The aim remains is to facilitate cross learning between the different shelter partners, in the different governorates and areas, by ensuring that relevant information is made available and accessible to all, and that mistakes are not repeated, or there is no reinventing of the wheel every time a new shelter project is started.

This profile is to be used alongside the Shelter technical guidelines for Yemen, published in the last quarter of 2020. It summarizes contributions made by the different shelter partners in the mission. The profiling did not look at why the typologies were adopted, neither does it profile the other alternative typologies not implemented. But even as it facilitates cross learning, Shelter Partners will continue with its value of innovation in as far as carrying out improvements to the existing typologies, introducing new typologies and in the ways of delivery. More importantly, continued innovation will further address environmental and other cross cutting concerns identified in the country strategies. The profile is to be availed shelter and other program staff and shelter agencies.

Badar Abdulle, Shelter Cluster – Technical Advisor
Sana’a, Yemen.
October 2020

Acknowledgements;

Contributions (text and pictures) have been made by all shelter partner staff in the mission during the TWiG period, ranging from officers to managers. Particular thanks to Younes Ghanim, NRC’s Area Shelter Manager as Co-chair for the Shelter TWiG, also Ali Al-Eryani- Shelter Cluster-Information Manager supported in the visualisation and formatting.
The Purpose of this Options:

The main purpose of this technical working group is to collect, review, and produce final draft for shelter options (guidelines) for the whole country putting into consideration different context need of shelter options. This production is in a harmonized way to allow quick reference, comparative analysis and contextual assessment.

By presenting a diverse range of shelter options and development practice in a one document, shelter practitioners and other stakeholders may more easily access information on shelter types to inform their work. Future revision will allow for the further inclusion of new designs and these options should be considered as a ‘live’ resource.

The structure of the shelter options

- Emergency Shelter Designs
- Transitional Shelter Designs
- Durable/Permanent Shelter Designs

The contains of shelter options contains:

- Background
- Shelter Description.
- Bill of quantities.
- Technical drawing.
- Challenges and lessons learned.
- Photos
More than 10% of the total population of Yemen has experienced the shock of displacement due to ongoing conflict. Thousands IDPs HHs are fleeing and settled in unplanned settlement in open areas where they expected to receive emergency suitable shelter to resist the harsh weather condition and one of NRC shelter option is the improved shelter kits where NRC have two type of improved shelter kits each one are provided based on the context need and consultation with the beneficiaries.

Challenges and lesson learn:
NRC implemented the activity using in kind and providing technical support at the field during the erection and provide brochure for beneficiaries and sometimes if the materials available at local market NRC provide cash for beneficiaries to buy this shelter items from the local markets.

HLP problem and land property as those IDPs are relocated from Raydah district to Kharif due to land issue with the owner.

BoQs:

<table>
<thead>
<tr>
<th>Drawing:</th>
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</thead>
<tbody>
<tr>
<td>[SIDA 1802_Contents of ESKs.xlsx](Shelter 3.5x4.pdf)</td>
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</tbody>
</table>

Photos
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>ESKs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>NRC</td>
</tr>
<tr>
<td>Location</td>
<td>ALkamees Camp – Bani AlHarith _ AASana’a</td>
</tr>
</tbody>
</table>

**Background:**
The proposed activity aims to provide timely humanitarian assistance and protection to vulnerable men, women and children in hard to reach areas through innovative, needs based and integrated programming and via advocacy action through improved access to appropriate shelter and basic household and provision of ESKs and shelter intervention as below.

**Challenges and lesson learn:**

1. **Constraints:**
   - The BEFs list that we provide was include host community
   - Getting the approval for NAMCHA
   - The process of spot check for the beneficiaries.
   - The size of the bag is very heavy and is difficulty for the elderly and women to carry to their desired locations and this meant that NRC had to hire extra casual workers to help this beneficiary group
   - To realizing the above constraints, the Shelter team was work very closely with the authorities, cooperate with him, and facilitate any constraints cooperation with the supportive team.

2. **Lessons learned and recommendation:**
   - Provision of in-kind assistance for the host community.
   - Improve stander enhance ESKs with dimension at least 4x3 m
   - Change the type of nails with different size
   - Increase number of Plastic sheet

**BoQs:**
Enhanced ESK_BoQs.xlsx

**Drawing:**
ESK drawing

**Photos**
Shelter type: Transitional shelters  
Partner: NRC  
Location: Abs

Background:
More than 10% of the total population of Yemen has experienced the shock of displacement due to ongoing conflict. Thousands IDPs HHs are fleeing and settled in unplanned settlement in open areas where they expected to receive emergency suitable shelter to resist the harsh weather condition and one of NRC shelter option is the improved shelter kits where NRC have two type of improved shelter kits each one are provided based on the context need and consultation with the beneficiaries.

Challenges and lesson learn:

Challenges:
- There was not enough budget for the requested items.
- The process of spot check for the beneficiaries.
- Restrictions, or obstruction of, conflict affected people’s access to services and assistance, including the denial of access of women to services Regards.

Lesson Learned:
- Increase the amount of support to reach the cluster specifications for the Improve Shelter Kits or NFIs kits.
- Provision of in-kind assistance for the host community.
- Increase number of Blankets and Mattress according to the amount of individuals.
- Management should discuss the de-confliction approvals as it takes long time.

BoQs: Improve Emergency Shelter OCHA YEMF1i  
Drawing: T-Shelter Abs.pdf

Photos
### Background:

More than 10 % of the total population of Yemen has experienced the shock of displacement due to ongoing conflict. Thousands IDPs HHs are fleeing and settled in unplanned settlement in open areas where they expected to receive emergency suitable shelter to resist the harsh weather condition and one of UNHCR option is the enhanced emergency shelter kits which includes wooden poles and plates and plastic sheet with ropes. UNHCR implemented this type of emergency shelter in all governorates where there is displacement.

### Challenges and lesson learn:

#### BoQs:

- BoQs_Enhanced
- Emergency Shelter UNHCR.pdf

#### Drawing:

- DRW1_Enhanced
- Emergency Shelter UNHCR.pdf

- DRW2_Enhanced
- Emergency Shelter UNHCR.pdf

### Photos

![Enhanced Emergency Shelter](image1.jpg)

![Emergency Shelter](image2.jpg)
### Shelter type
Enhanced Shelter Kits

### Partner
NRC

### Location
Lahj

#### Background:
NRC designed this type of shelter and implement it to be applicable to Lahj weather conditions by enhancing the emergency shelter kits to be double in the shelter items including wooden poles and plates to be able to resist the wind load which is too speedy in Tuban district at Almeshqafah IDPs hosting sites which is open area Also NRC added wooden sheets 1.22m*2.44m for the roofing to enhance the insulation of heat which lead to increase the heat of the shelter especially in noon hours.

#### Challenges and lesson learn:
- HLP problem and land property where most of the beneficiaries faced threats to be evicted from the land and not getting enough space to apply the recommended area space 45m2 per HHs so we were working on the minimum standards.
- Community based approach was not applicable in context like Lahj due to lack of skilled labours so NRC change the modality and used contractor to complete the works then NRC handed over the shelters to beneficiaries.

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<thead>
<tr>
<th>BoQs:</th>
<th>Drawing:</th>
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<tr>
<td>Copy of remark 6m x 3m of Enhanced Shelter Kits</td>
<td>DRW1_Enhanced Emergency Shelter NRC.pdf</td>
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<tr>
<td>DRW2_Enhanced Emergency Shelter NRC.pdf</td>
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</table>

#### Photos

- [Image of Enhanced Shelter Kits]
- [Image of Enhanced Shelter Kits]
- [Image of Enhanced Shelter Kits]
- [Image of Enhanced Shelter Kits]

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Yemen Shelter/NFI Cluster

Twitter: @ShelterClustYE

www.sheltercluster.org

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<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Transitional Shelter (3.66m*3.66m)</th>
</tr>
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<tbody>
<tr>
<td>Partner</td>
<td>NRC</td>
</tr>
<tr>
<td>Location</td>
<td>Sana’a governorate- Hammdan district and Amran governorate</td>
</tr>
</tbody>
</table>

**Background:**

More than 10% of the total population of Yemen has experienced the shock of displacement due to ongoing conflict. Thousands IDPs HHs are fleeing and settled in unplanned settlement in open areas where they expected to receive emergency suitable shelter to resist the harsh weather condition and one of NRC shelter option is the improved shelter kits where NRC provided based on the context need and consultation with the beneficiaries.

**Challenges and lesson learn:**

- HLP problem and land property where most of the beneficiaries faced threats to be evicted from the land due to the quality of improved shelter kits which is semi-permanent and this lead to a concern for the owner of lands.
- Land issues of space as no site planning according to minimum standard are applied.
- Community based approach was slow but it worked in Amran and Sana’a context.

**BoQs:**

- Improved shelter Kits NRC.xlsx

**Drawing:**

- DRW1_Improve Emergency Shelter NRC.pdf
- DRW2_Improve Emergency Shelter NRC.pdf

**Photos**
Shelter type: Transitional shelters
Partner: NRC
Location: Al Houdieda

Background:
Due to poor situation for the IDPs who are living in Aluhayia district within Hodieda governorate in separated random settlements, NRC has decided to upgrade the situation for those families.

Due to the sites of those families are located in hot area with severe harsh weather condition NRC designed shelter to be suitable with that climate and traditional methods of construction in that environment and utilizing the local materials.

NRC implemented 250 shelters in 2017 in Aluhayia district Hodieda governorate.

Challenges and lesson learn:

- Regardless NRC standardized the design but generally as it was not implemented 100% according to one design as it was cash modality so the BoQs is different in some items from area to other depend on the availability of material in each sub-district and space required per family so almost common material were used.
- It requires more efforts to provide community mobilization and provide technical support in order to achieve the objective of this option.

BoQs:

final of BoQs for Shelter 300$.xlsx

Drawing:

DRW1_Transition Emergency Shelter NRC.pdf

Photos
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>TESK (Tehamah Emergency shelter Ket)</th>
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<tbody>
<tr>
<td>Partner</td>
<td>UNHCR</td>
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<tr>
<td>Location</td>
<td>Tehamah Coast</td>
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</tbody>
</table>

**Background:**
- Due to the weather of Tehamah Coast and all coastal regions in Yemen is too hot and the IDPs could not live inside the current ESK shelter which composed from plastic sheets were installed on wooden frame, UNHCR has decided to upgrade this shelter of ESK to be more suitable with the high heat in these areas through add some local materials to cover the ceiling and walls of shelters in order to reduce the heat inside the shelters to be more suitable with the weather in those areas.
- After the new modification on the ESK UNHCR has named this shelter with TESK to be limited on the hot areas such as Tehamah areas.
- The new shelter was designed by strong ceiling to become later as Transitional Shelter Unit (TUS) by IDPs themselve through add the mud walls along the external perimeter of shelter or any additional local materials if they want to get more a good weather inside the shelter.
- UNHCR has implemented 50 units for 50 IDP families as prototypes in Al-Ghanawes area in Hodeidah governorate through
- UNHCR’s partner in Hodeidah, the IDPs there have liked the design and they need provide more.

**Challenges and lesson learn:**
The best implementation method for this shelter is through the implementer partner (IP) of the organization because the shelter needs some industrial labors to prepare some items in shelter structure such as a middle columns, ceiling and wooden frame.
Challenges: Lack of productivity for the local materials which called “Al-Khazaf” is considered one of the challenges for this type of shelter because this material is producing locally by the host communities families in Tehamah area, so the production need some advanced time to prepare large quantity.
To avoid the challenges the UNHCR is trying to use several sources from those families to skip the lacking of the local material and the UNHCR’s IP will contract with many resources to produce this local material.
UNHCR’s IP also have small workstation to prepare the steel bars of the shelters ceiling and middle columns as well to be ready to install directly in the shelters.

**BoQs:**
- BoQs_TESK.pdf

**Drawing:**
- DRW_TESK.pdf

**Photos**
- ![Photo 1](BoQs_TESK.pdf)
- ![Photo 2](DRW_TESK.pdf)
Shelter type: TSK
Partner: UNHCR
Location: ---

Background:
Under design

Challenges and lesson learn:
Under design

BoQs:
The new modified BoQ.XLSX

Drawing:
TSK DWG.pdf

Photos
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Transitional shelters</th>
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<tbody>
<tr>
<td>Partner</td>
<td>NRC</td>
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<tr>
<td>Location</td>
<td>Hodieda</td>
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</table>

**Background:**
Due to poor situation for the IDPs who are living in AlQanawis district within Hodieda governorate in separated random settlements, NRC has decided to upgrade the situation for those families.
Due to the sites of those families are located in hot area with severe harsh weather condition NRC designed shelter to be suitable with that climate and traditional methods of construction in that environment and utilizing the local materials.
NRC implemented 200 shelters in 2018 in AlQanawis district Hodieda governorate.

**Challenges and lesson learn:**
- Regardless NRC standardized the design but generally as it was not implemented 100% according to one design as it was cash modality so the BoQs is different in some items from area to other depend on the availability of material in each sub-district and space required per family so almost common material were used.
- It require more efforts to provide community mobilization and provide technical support in order to achieve the objective of this option.

**BoQs:**
- [final of BoQs for Shelter 500$.xlsx](DRWs_TSK_NRC.pdf)

**Photos**

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Yemen Shelter/NFI Cluster  
Twitter: @ShelterClustYE  
www.sheltercluster.org
Shelter type: Transitional shelters

Partner: UNHCR

Location: Abs district - Hajjah governorate

**Background:**

Due to poor situation for the IDPs who are living in Abs district within Hajjah governorate in separated random settlements, UNHCR has decided to upgrade the situation for those families. Due to the sites of those families are located in hot area, UNHCR has designed shelter to be suitable with that climate and traditional methods of construction in that environment. UNHCR has implemented 1,700 shelters in 2017, and currently 3,200 shelters under progress.

UNHCR has selected the materials of transitional shelters from the same environment to provide income opportunities for host communities and IDPs themselves. Most of used materials are locally except some materials were used to establish the external structure of shelters to be geometrical shape, such as wooden poles and plates and other materials to install the ceilings.

**Challenges and lesson learned:**

- UNHCR faced some challenges in the first phase in lacking the local materials because the sources of most of that materials located in conflict areas, this challenges led to partially modified to overcome that challenges.
- New materials were added in the second phase to overcome the lacking of local materials such metal mesh covered by local materials made by palm leaves.

<table>
<thead>
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<th>BoQs:</th>
<th>Drawing:</th>
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<tr>
<td>BoQs_TSK_Abs_UNH_CR.pdf</td>
<td>DRWs_TSK_Abs_UNH_CR.pdf</td>
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</table>

**Photos**
Shelter type: ESK
Partner: All Girls Foundation for Development (AGF)
Location: Shoki Al Qadhi

Background:
Regarding shelter kits, they were bought through a public tender, and the winning bidder signed an agreement to provide shelter kits in accordance with the quality of the Shelter Cluster and as per the numbers stated in the agreement. The provider also took the responsibility to deliver the kits to the site of the project in the aforementioned districts. Once the kits arrived at the area, the process of distribution started immediately. It was a systematic process that went through clear organized steps which resulted in easy and accurate distribution to the IDPs whose names had been prepared, updated on a regular basis, and verified by the field team of the Foundation (AGF).

Challenges and lessons learned:
- One of the challenges that faced the AGF field team was choosing the eligible beneficiaries for the number of IDPs was bigger than the target of the project. The team needed to be very careful to choose the most people in need although all were in real need for the assistance!
- Another challenge was getting permits and official papers from the local authority which consumed a lot of time and effort. However, after constant follow up AGF could successfully obtain all necessary documents.

BoQs:
- [BoQs.xlsx](BoQs.xlsx)

Drawing:
- [DRWs.pptx](DRWs.pptx)
- [DRW_ESK_AGF.pdf](DRW_ESK_AGF.pdf)

Photos
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Permanent shelter</th>
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<tbody>
<tr>
<td>Partner</td>
<td>ACTED</td>
</tr>
<tr>
<td>Location</td>
<td>IBB</td>
</tr>
</tbody>
</table>

**Background:**
This project was implemented by ACTED as an emergency strategy for IDPs who occupied schools in order to resume the study in the school. Shelter solutions for IDPs who were in schools and in order to re-function for schools, the IDPs have some options to leave the schools.

- Cash for rent for 9 months (implemented by ACTED Ibb)
- Building one room in case the IDP has land in a safe place and off of conflict. The BoQs in the excel sheet (implemented by ACTED Ibb)

**Challenges and lesson learned:**

<table>
<thead>
<tr>
<th>BoQs:</th>
<th>Drawing:</th>
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<tbody>
<tr>
<td><img src="image" alt="BoQ for one room" /></td>
<td><img src="image" alt="Drawing" /></td>
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</table>

**Photos**

![Photo of permanent shelter](image)
Shelter type: Transitional/Permanent Shelter
Partner: SDF
Location: Hudeidah

Background:
Under the Yemen Humanitarian Response Plan program funded by UNDP, SDF is implementing the C4W activities in Hajjah and Al Hudeidah governorates. The purpose intervention is focused on emergency employment generation. Affected communities need in cash-bashed intervention support to generate employment. The identified districts are in 1st priority convergence list with acute needs. These districts have experienced the cholera outbreak in terms of presence of IDPs, Hajjah continues to host 19% of the displaced population. Due to multiple coordination and challenges in operation, Hajjah and Hudeidah comparatively present difficult context to operate in. Hudeidah has the highest global acute malnutrition cases.

Challenges and lesson learn:
- Water and mud sources that are used in building are far from the work site.
- Lack of hands skill in construction.
- Weak community contribution in the region.

BoQs:

\[
\text{BoQs}\_PS\_SDF.png
\]

Photos: 

\[
\text{BoQs}\_PS\_SDF.png
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<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Adaptive shelters wooden rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>OA</td>
</tr>
<tr>
<td>Location</td>
<td>Taiz</td>
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</tbody>
</table>

**Background:**

In Taiz the displacement happened in the north side for the city beginning of the war, IDPs settled in abandoned buildings without walls/doors/windows, and some settled in abandoned walled yards, targeting the IDPs with the standard shelter was not applicable in the locations in the city, another option was in hand to implement adaptive shelter suit the locations/host community property, a wooden rehabilitation, walls, doors and windows, were satisfied for the host community in their property no change will happened,

**Challenges and lesson learn:**

The building owner request of not reconstruct any new works, any objects that may be added into the building must be easy in composed and ...in case of moving to another area/building, there is no place for protection, privacy or safety, safety factor that is better for the year seasons like in summer or winter which doesn’t affected by heat or cold and it doesn’t cost much and easy to form barriers according to changeable designs for each building with possibility of contribution controlling according to individuals and households needs.

<table>
<thead>
<tr>
<th>BoQs:</th>
<th>Drawing:</th>
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<tr>
<td>BoQs_Adaptive_shelters wooden reha</td>
<td>DRWs_Adaptive_shelters wooden reha</td>
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</table>

**Photos**

![Shelter photos](image1.jpg)

![Shelter photos](image2.jpg)

![Shelter photos](image3.jpg)

![Shelter photos](image4.jpg)
## Background:

The Refugee Housing Unit (RHU) is an innovative shelter solution resulting from a collaborative research & development project undertaken by Better Shelter and UNHCR, with the support of the IKEA Foundation. This partnership was formed with the aim of developing an improved shelter solution that provides greater dignity and supports the protection of refugees and other people of concern.

- **PARTICIPATORY DESIGN:** The RHU design draws on consultations with persons of concern, with user feedback integrated into the improved model design.
- **INTERNATIONAL STANDARDS:** The RHU design is in line with SPHERE standards, and provides the recommended minimum living space for a family of five.
- **SUPPORTING SOLUTIONS:** Within the context of a phased response, RHU’s can be upgraded with local materials in support of more durable shelter solutions.
- **CONTEXT-SPECIFIC:** The RHU has a modular and robust structure that allows its use in a range of contexts from family accommodation to community spaces.
- **SOLAR ENERGY:** The RHU provides 6 hours of electricity supply for lighting, while providing plugs for the charging of electronic devices.

### BoQs/ Drawing

[ RHU 1.2 Fact Sheet.pdf ]

### Photos

![RHU Images](image1.jpg) ![RHU Images](image2.jpg)
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Enhanced Shelter Kits Option (3.66m*4.88m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>NRC</td>
</tr>
<tr>
<td>Location</td>
<td>Lahj</td>
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</tbody>
</table>

**Background:**
NRC designed this type of shelter to be applicable to South Yemen weather conditions by enhancing the emergency shelter kits to be double in the shelter items including wooden poles and plates to be able to resist the wind load which is too speedy specially in open area. Also NRC added wooden sheets 1.22m*2.44m for the sides and roofing to increase durability of shelter and enhance the insulation of heat and block vision inside the shelter and designed door and window from wooden sheet to give the IDPs more privacy, safe and keep dignity. Additionally, NRC used plastic sheet to keep the shelter from the rains, about the white termite NRC added DURSBAN to keep the wood.

**Challenges and lesson learn:**
- Community based approach was not applicable in context like Lahj due to lack of skilled labours so NRC change the modality and used contractor to complete the works then NRC handed over the shelters to beneficiaries.

**BoQs:**

```markdown
3.66m 4.88m BoQs of enhance T shelter Kit
```

**Drawing:**

![T Shelter Drawing.7z](attachment://T_Shelter_Drawing.7z)
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Durable Shelter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>Pure Hands</td>
</tr>
<tr>
<td>Location</td>
<td>Sana’a</td>
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</tbody>
</table>

**Background:**
Whereas days pass, the humanitarian situation in Yemen is deteriorating dramatically. Yemen is a country that has been classified as one of the most conflict-affected spots in the world. It is originally a developing country with a fragile governmental regime and neglected wealth resources. The current conflict that started in 2015 has added to the misery of the people and caused disastrous outcomes on the economy such as inflation and lack of goods.

With the large number of displaced persons, and due to the long period of displacement, which will not be useful with the emergency shelter, another proposal has been prepared that will last longer and preserve the dignity of the displaced.

It’s a miniature model of a house that has a room, a kitchen and a bathroom. The cost is $ 2500 per shelter. The number of beneficiaries are 7 in each shelter.

**Challenges and lesson learn:**

**Challenges:**
- The fragile security situation in Yemen.
- Cash liquidity issue and money exchange office can’t make the cash transfer to the office.
- Land Ownership.

**Lesson learn:**
In this type of relief project, ownership of the land on which shelter will be built is the biggest challenge, and coordination with local authorities and donors should be undertaken before any action can be taken.

Building shelter in a way that makes it lasting more than one years is more rewarding than the tents that end with the air conditions (hot and cold), which may not preserve the dignity of the displaced.

**BoQs:**
- BoQs_EESK_Pure_Hands.jpg

**Drawing:**
- DRW_EESK_Pure_Hands.pdf

**Photos**
Based on the geography, climate and availability of resource and materials, the thatched cottage is the most suitable as a transitional solution for IDPs in Al Mukha district. Thatching is the craft of building a roof with dry vegetation such as straw, water reed, sedge rushes, heather, or palm fronds, layering the vegetation so as to shed water away from the inner roof. The construction is a relatively sustainable construction method, with straw being a renewable material that is readily available. Straw cottages also have high insulation qualities, keeping the building warm in winter and cool in summer, with R-values between 40 and 60 when built correctly. It is also relatively cheap, made from an agricultural by-product. Another advantage of straw bale construction is that it is a relatively easy method for novice builders, meaning that it can be utilized by owner-builders without extensive experience or volunteer crews. This also reduces the labor costs involved in building which can be substantial in many parts of the developed world.

### Challenges and lesson learn:

<table>
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<tr>
<th>BoQs:</th>
<th>Drawing:</th>
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<tr>
<td><img src="BoQs_TSK_BCFHD.do" alt="BoQs" /></td>
<td><img src="BoQs_TSK_BCFHD.do" alt="Drawing" /></td>
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</table>

### Photos

[Image 1](image1.png)  [Image 2](image2.png)
### Shelter type
Transitional Shelter

### Partner
GWQ

### Location
Mukha

#### Background:
The intervention of transitional Shelter is planned to provide suitable places and longer-term shelter solutions for IDP families in accordance with their needs, and environmentally appropriate.

Based on the geography, climate and availability of resource and materials, the thatched cottage is the most suitable as a transitional solution for IDPs in Al Mukha district.

Thatch house is small room 3x6m arranged in square, and it's mainly erected of local timbers.
This type is suitable in wet and hot areas like Al Mukha District.

#### Challenges and lesson learn:
GWQ facing many issues regarding building the transitional shelter:
- Getting the land for building the construction shelter,
- Some people claimed the land ownership,
- The local authorities asked GWQ to change the location of the transitional shelter site.

#### BoQs:
- BoQs_GWQ.pdf

#### Drawing:
- DRWs1_GWQ.pdf
- DRWs2_GWQ.pdf

#### Photos
Shelter type | Transitional Shelter
---|---
Partner | NRC
Location | Amran

**Background:**
NRC support IDPs hosting sites with transitional shelter for 7 IDPs sites in Amran. Thousands IDPs HHs are fleeing and settled in unplanned settlement in open areas where they expected to receive emergency suitable shelter but due to the harsh weather condition NRC established T shelters instead of ESKs.

**Challenges and lesson learn:**
- The HLP issues that we are facing with some IDPs hosting site as three sites have been threaten for evacuation for land tenure.
- The process of eviction and landownership response
- Tension between IDPs and host community and HCs always constrict the implementation of sustainable intervention and trying to be benefited.

**BoQs:**
- BoQ for Enhanced T-Shelter3 (2).xlsx

**Drawing:**
- DRWs for Enhanced T-Shelter 22.pdf

**Photos**

[Images of the shelter are shown here.]
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>Rental Subsidies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>NRC</td>
</tr>
<tr>
<td>Location</td>
<td>Amran</td>
</tr>
</tbody>
</table>

**Background:**

Thousands of IDPs are fleeing and settled in collective centers such as schools which need to be refunctioned and some are renting houses in urban areas and they can’t pay for rent and most of families are forced to sell their own possessions and others are subjected to threats of forced eviction and sexual exploitation so NRC provide emergency cash for rent for a period from 3-9 months and accordingly find exit strategy for this cash either by providing long term shelter solution ex. Rehabilitation for rent or link it with livelihood program for self-dependent and the process include proper documentation by drafting contract between NRC and the beneficiaries to pay the rent for the owners.

NRC implemented this type in urban areas in six governorates.

NRC pay according to cluster standard amount of 100$ per month for a period of (3-9 months)

**Challenges and lesson learn:**

- Sometimes providing exit strategy of livelihood not applicable especially for disable men and women and elderly people or lack of funding.
- Sometimes providing exit strategy using rehabilitation not applicable if the owner of the house doesn’t want any upgrade in his house.

**Photos**
**Partner**
UN-Habitat

**Shelter type**
Rehabilitation and reconstruction

**Place**
Tehamah Coast, Al Hudaydah Al Khawkha and Al Tuhayta districts

**Background:**
The United Nations Human Settlement Program (UN Habitat) had commenced in 2018 a project to deal with conflict-affected cities in Yemen and Al Hudaydah Governorate is one of the focus for the program.

Around 3.3 million people live in Al-Hudaydah Governorate, while around 600,000 live in Al-Hudaydah City.

*As part of the project “Emergency Response to the Immediate Shelter and WASH Needs for IDPs in Displaced Areas and Conflict Affected Neighborhoods within Al Hudaydah Governorate-Yemen”, Project focuses on Living conditions improved of most war affected and vulnerable households; including women-headed households, families with disabilities, children, widows, and families without income in, Al Khawkha and Al Tuhayta Districts west coast.; using environmentally-friendly and cost-effective construction material,*

125 houses affected reconstructed and rehabilitated including un-hygenic WASH facilities and supply solar kits with the total number of beneficiaries is 158 HH, in Al Khawkha and Al Tuhayta Districts,

**Challenges and lesson learn:**
- Early presence in the field for any agency is critical in establishing credibility, visibility, and resource mobilization in emergencies.
- Reconstruction after a major disaster is a long process because of its complex nature. Human resources and service providers become over-stretched because of competing and excessive demand on their time and services.
- Most of beneficiaries have damaged feelings, because of the impacts of the conflict that make the dealing with them is tough also that raise their predictions, therefore, this requires dealing with them with prudence and awareness to make them satisfied.

**BoQs:**

<table>
<thead>
<tr>
<th>BoQs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing:</td>
</tr>
<tr>
<td>RoOF REPAIR Model (1).pdf</td>
</tr>
<tr>
<td>Bathroom Dwg.pdf</td>
</tr>
<tr>
<td>Building Room_1 Dwg.pdf</td>
</tr>
</tbody>
</table>

**Photos**
Shelter type | TSs
---|---
Partner | IOM
Location | Taiz

**Background:**
The purpose of this intervention is reducing vulnerability and hardship of IDPs and host community by facilitating access to standard adequate shelters necessary for preservation of human dignity in South Taizz governorate and setting a foundation for future recovery and durable solutions to displacement through sound analyses and working towards a shared aim of maximizing project outcomes.

**Locations & Land Tenure:**
- IDPs Sites Managed by IOM in South Taiz as priority targeted locations
- Local Government Areas, apriority, or private land with landlord official approval
- IDP sites/locations most affected

**Challenges and lesson learned:**
- Unforeseen Weather Conditions.
- Armed conflict approached areas close to the IDPs site
- Limited Space to Set Up T-shelter.
- The budget ceiling limited the interventions
- ISSUES between Host community and IDPS
- Labor Shortages
- Low Participation

**BoQs:**
- TS Construction & Materials.xlsx

**Drawing:**
- TS Plan.pdf
- TS Plywood Section (A-A).pdf
- TS Plywood Section (B-B).pdf

**Photos**
<table>
<thead>
<tr>
<th>Shelter type</th>
<th>EESK (Emergency Enhanced Shelter Kit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>DRC</td>
</tr>
<tr>
<td>Location</td>
<td>Taiz, Hajjah, Hudaydah</td>
</tr>
</tbody>
</table>

**Background:**
DRC currently has funding through YHPF for prepositioning of 2,500 EESK in Taiz (500), Hajjah (1,000) Al Hudaydah (1,000). EESK contents and design are in line with Cluster standard.

**Challenges and lesson learn:**
- Shortages in certain materials including plastic sheet has led to delay in procurement and delivery
- Potential for overuse and misuse of emergency shelter when a transitional or longer term shelter solution is more appropriate.

**BoQs:**
- Modified Improved shelter kit[2].xlsx

**Drawing:**
- Design of the revised enhanced_emergenc ESK_SC_2020[1].pdf
- y_shelter_kit_v6.pdf
### Shelter type
Transitional ("T") Shelter

### Partner
DRC

### Location
Abs, Az Zurah, Southern Hudaydah, Lahj

### Background:
DRC has been refining its transitional shelter design since early 2018 in Abs. The design has been constructed across Abs and Az Zurah, and DRC is preparing for construction on the West Coast, and in Lahj. Targeted areas are sites managed by DRC SMC / CCCM. Funding for this has been supported by Danida (2018/2019), ECHO and YHPF (2019 and 2020).

### Challenges and lesson learn:
- Procurement delays notably on locally available grass. Efforts should be made to order locally materials in advance, and to identify alternative material if there is going to be limited quantity or risk to depleting the local market.
- T Shelters require maintenance and specific care should be taken to prepare for flood risk and other weather events.
- Land agreement negotiations are key barrier to constructing transitional shelter in the south of the country. Many sites are under eviction threat and there is not an official agreement between private landowners and local authorities.
- In the north, access to IDP sites to conduct assessments, train and monitor construction remains limited and continuously challenges shelter implementation.

### BoQs:
- BoQ T_shelter 092020[1].xlsx

### Drawing:
- SMC north, Drawings for T-shelter
Shelter type: Shelter Upgrade Kit (SUK)
Partner: DRC
Location: Southern Hudaydah

Background:
Shelter upgrade kits were designed based on focus group discussions and distributed with funding from ECHO in IDP sites managed by DRC on the West Coast. 1,600 kits were distributed at the end of 2019 and beginning of 2020.

DRC in coordination with local authorities and extensive consultations with the community developed an upgrade shelter kit which allowed the beneficiaries to upgrade their current shelter from either an emergency shelter or a makeshift shelter. Before the start of the distribution, training sessions were conducted for the beneficiaries on the installation method; reviewing the available materials, tools and possible building techniques to be utilized. After the distribution was completed, DRC teams monitored the implementation to advise families on the use of the materials. Construction support was provided to vulnerable households who did not have the resources to do it themselves.

Challenges and lesson learn:
Procurement delays notably on locally available grass. Efforts should be made to order locally materials in advance, and to identify alternative material if there is going to be limited quantity or risk to depleting the local market.

BoQs:
No need for technical drawing

Photos
Shelter type: Durable/Permanent Shelter - Cash for rehabilitation
Partner: NRC
Location: Amran

Background:
The proposed activity aims to provide timely humanitarian assistance and protection to vulnerable men, women and children in hard to reach areas through innovative, needs based and integrated programming and via advocacy action through improved access to appropriate shelter and basic household and provision of rehabilitation the IDPs rental houses with provision of conditional cash for rehabilitation.

Challenges and lesson learn:
- Some BEFs are not available and some cannot attend to the distribution points.
- The BEFs list that we provide was include host community.
- The amount of support is so low it should be at least 2500 USD.
- The house owner are not available to sign the contacts.

BoQs:
For each HHs our shelter field engineers conducted details technical assessment with BoQs for each beneficiary.

Drawing:
- Pictures Before The Rehabilitation
- Pictures After The Rehabilitation
- Final Report of Rehabilitation Project for IDPs in Amran City
- Contact No. (2)