



**Shelter/NFI Cluster**  
**X-Border Operation - Turkey Hub**  
ShelterCluster.org,  
Coordinating Humanitarian Shelter



WORKSHOP REPORT

**Shelter solutions**  
for  
**IDP Settlements**  
**in North West Syria**

Shelter Workshop, 11-17 September 2019, Burç, Turkey

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# 1. Context

After eight years of conflict, the number of IDPs in North West Syria (NWS) keeps increasing. According to OCHA, there are two million IDPs in NWS in November 2019, including the 400,000 displaced since May 2019. Conflict and deterioration of the security situation continue to trigger alarmingly high levels of internal displacement. According to the CCCM Cluster, around two thirds of the newly displaced people decided to move to host communities and, as a consequence, renting an apartment has become more difficult. In sub-districts such as Salqin, people have to pay a couple of hundred US dollars to rent a small apartment. In NWS, 27% of households (HHs) living in solid/finished buildings, 16% in damaged buildings and 11% in unfinished buildings are obliged to pay rent<sup>1</sup>. The remainder of households either own the property or are living with other families, rent-free. In Dana, the sub-district hosting the largest number of IDPs in NWS, it is estimated that 21% of households who should pay rent cannot afford to pay. This situation puts those people at risk of eviction. If this happens, camps or informal settlements would be their last resort solution. Dana is only able to accommodate in adequate shelter conditions a critically low number of inhabitants. The recent large-scale influx of IDPs has exacerbated the already strained housing situation: the lack of adequate shelter has left 56% of households in Dana sub-district to live in vulnerable conditions and in managed, informal or transit camps.

In September 2019, OCHA estimated that 669,000 IDPs were living in camps or informal sites. The SNFI Cluster and the CCCM Cluster consider camps as a last resort solution<sup>2</sup>.

Compared to HHs living in houses or apartments, HHs living in collective centres, informal camps, managed camps and transit camps face much higher rates of adequacy issues: 83% report facing three or more adequacy issues, including lack of lighting around shelter, lack of privacy or lack of insulation from heat/cold<sup>1</sup>. The shelter situation in informal sites is extremely difficult as only 4% of the people reported having no adequacy issues. HHs living in managed camps report a slightly lower rate of adequacy issues compared to informal camps, 85% mentioning three or more adequacy issues compared to 89% in informal settlements.<sup>1</sup>

Humanitarian organizations have to respond to large waves of displacement that happen in a very short period of time. In the meantime, they have to assist protracted IDPs that have already been living in camps or informal sites for several years.

## DEFINITIONS

- **Managed/Planned Camp:** A site or structure established by an accountable humanitarian actor to shelter IDPs that, to the extent possible, meets minimum SPHERE standards.
- **Informal Camps/Settlements/Sites:** A group of tented or other types of housing units established by IDPs themselves or by non-experienced actors, often erected on land that the occupants have no legal claim to. IDPs do not usually intend to stay in these locations for extended periods of time.
- **Collective Centers:** Other types of settlements, e.g. schools, public buildings or factories that are inhabited by five or more IDP families.

<sup>1</sup> Source: SHELTER OVERVIEW IN NORTHWEST SYRIA June/July 2019, HNAP and SNFI Cluster

<sup>2</sup> Source: Northwest Syria Snapshot - As of 20 November 2019

## 2. A Shelter workshop to identify additional shelter solutions

The most common shelter solution provided by humanitarian organizations in camps is the tent, that can be good and cost-effective during emergency. One of the reasons for choosing this solution is that tents can be relocated to a safer site in case of danger. However, there have not been reports of a large number of people moving with their tents in a short period of time. IDPs have been developing their own shelter solution for long accommodation, including the construction of concrete buildings which raise housing, land and property issues when IDPs do not own the land.

In July 2019, the SNFI Cluster members expressed their interest in identifying additional shelter solutions, for several reasons: first, the lifespan of a tent is limited and therefore it does not provide durable protection against the elements beyond one; second, the GBV Sub-Cluster shared concerns about protection risks such as challenges to lock tents; The tent canvas can also be easily cut, therefore there are protection and GBV risks; finally, the tent is an emergency solution and it does not provide a dignified solution to protracted IDPs and therefore does not meet one of the core principles of protection in the medium and long term, dignity in humanitarian aid.

The SNFI Cluster members decided to start discussions on shelter solutions in camps (even if tent issues were managed by the CCCM Cluster at the time).<sup>3</sup> In August 2019, the Strategic Advisory Group (SAG) of the SNFI Cluster collected information regarding existing shelter solutions already implemented in NWS camps/sites: tents and basic shelter kits that are recommended by the SNFI and CCCM Clusters. The SAG also discussed other shelter solutions currently not recommended such as the caravans. In Addition, the SAG looked at additional potential solutions such as the Refugee Housing Unit (RHU) or the concrete canvas shelter.

After collecting more details about the different shelter solutions, including specifications and Post Distribution Monitoring (PDM) reports, the SNFI Cluster coordination team prepared summaries that are included in this document. In September 2019, 20 SNFI Cluster members set up one Refugee Housing Unit (RHU) in Turkey to get familiar with this solution that has never been implemented in Syria. On 11 September, the SNFI Cluster Coordination Team organized a workshop to show the RHU and discuss the existing and other potential shelter solutions for IDPs living in camps/sites in NWS. The main objective of this workshop was to:

- Present the existing shelter solutions implemented by the SNFI Cluster members
- Present additional potential shelter solutions
- Show tents and RHU on the workshop site
- Get the feedback from the participants about the different shelter solutions
- Elaborate recommendations regarding the shelter solutions in camps or informal sites

## 3. Participants of the workshop

Two sessions were organized. The first session was held in Burc, near Gaziantep, on 11 September with 37 participants. On 17 September, a second session was organized through VTC with the SNFI Cluster members based outside of Gaziantep.

Of the 42 participants, 12 were from Non-Governmental Organizations, 9 from International Non-Governmental Organizations, 3 from UN agencies. Participants belonged to the Shelter-NFI Cluster, CCCM Cluster, Protection Cluster, GBV Sub-Cluster and Housing Land and Property Working Group.

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<sup>3</sup> In the Cross-Border operation, the CCCM Cluster was responsible for coordinating the shelter response in camps in North West Syria for several years. Currently, however, the SNFI Cluster is gradually taking over this responsibility.

## 4. Shelter solutions already implemented and approved by the SNFI Cluster

During the workshop, several thematic group discussions were organized to get feedback from the participants on: logistics, protection, Gender Based Violence, Housing Land and Property rights, value for money and protection against the elements. The SNFI Cluster summarized the recommendations in a draft report and shared it with the SAG members and the participants of the workshop that are involved in the Syria Response. The SNFI Cluster coordination team received additional feedback and recommendations from them. This workshop report is the result of the consultative process that included the two workshop sessions and the feedback from the draft report. SNFI Cluster members have to do a context and risk analysis before implementing any shelter solutions in camps. As the tent is the solution implemented by SNFI and CCCM cluster members, the family tent is used as a benchmark to compare other solutions.

- **Family Tent**

**The Family tent** can still be provided to IDPs to replace damaged tents or to extend existing camps. The CCCM Cluster recommends not to create tensions between communities within on camp (such as having IDPs living with very different shelter solutions with regards to their quality and durability). When the implementation of the RHU is not possible due to the local context, budget issues etc, the Family tent could be considered.

- **Basic Shelter Kit**

**The Basic shelter kit** is a cheaper solution (approximately USD 100) that can be provided only for a short term and when it is likely that the IDPs would go back to their houses within a few weeks. In that case, if we consider only the value for money, the basic shelter kit is a better solution than a tent as short-term solution. This shelter solution should be closely monitored in order to know how people use it after a month or when they want to move. The best use of the basic shelter kit is to repair or upgrade pre-existing makeshift shelters as it contains a tool box, timber and plastic sheeting.

## 5. Shelter solutions implemented to be monitored

- **Caravan (ongoing project to be monitored)**

The participants in the workshop recognized that the **caravan** provides a better protection than the tent because of its durability, its stronger materials and because it can be locked. A shading element should be added to protect against the sun during the summer to avoid overheating. Even though the unit cost is higher than the tent (USD 3000 compared to USD 600), in the long term, after four years, the caravan becomes cheaper than the tent that needs to be replaced every year. It is also a more dignified shelter solution than the tent. The caravan is recommended for formal camps and new camps when IDPs are very likely to stay several years. Caravans would not be donated to the IDPs.

In-depth Housing, Land and Property (HLP) due diligence is required in order to know the status of the land. The objective of the due diligence is to provide the greatest degree of tenure security to beneficiaries and to ensure HLP rights of both shelter beneficiaries and land/property owners in Northern Syria are protected to the greatest extent possible.

The other issue is the unit cost of the Caravan. Only a few donors agree to fund a USD 3000 shelter solution. On short term, it remains an expensive investment when it is estimated that 4.7 million Syrians are in need of shelter assistance.

**Monitoring** In order to inform the SNFI Cluster members, the organisations implementing caravans' project need to closely monitor the impact on people of concern, host communities, lands and properties, etc. Organisations should monitor the level of satisfaction of males and females regarding thermal comfort, living space, privacy, ventilation, safety, quality of materials.

## 6. Shelter solutions to be piloted in North-West Syria

- **Refugee Housing Unit (RHU)**

The Shelter NFI Cluster team and the SAG recommend piloting a **Refugee Housing Unit (RHU)** project in North West Syria. It is important to pilot this solution to better understand its suitability for the NWS context, noting that UNHCR has deployed more than 44,000 RHUs in 40 different operations to date with different levels of satisfaction.<sup>4</sup> The participants of the workshop agreed that the RHU is a much more dignified and safer shelter solution than the tent or the basic shelter kit. This is confirming an external evaluation of the RHU in 6 different countries including Iraq.<sup>5</sup>

Although the initial investment may be more, in the long term the RHU becomes more cost effective, because it has a longer lifespan (more than three years), and IDPs can take it when they return.

However, do no harm principles should be carefully applied in the context analysis and implementation. Its implementation should not create tensions between beneficiaries, and it is recommended to use them in the safest areas of North West Syria where the IDPs are more likely to stay more than a year.

**Monitoring** In order to inform the SNFI Cluster members, the organisations implementing RHUs' project need to closely monitor the impact on people of concern, host communities, lands and properties, etc. Organisations should also monitor the level of satisfactions of males and females regarding thermal comfort, living space, privacy, ventilation, safety, quality of materials. Finally, it is important to verify if such solution would create tensions between beneficiaries and people still living in damaged tents or makeshift shelters.

- **Locally made emergency shelter (additional information needed)**

During the second workshop session with organizations not based in Gaziantep, participants shared information about a **locally made emergency shelter** that cost around USD 200.<sup>6</sup> This solution is interesting for its potential impact on local economy, it is made by IDPs and it includes recycled materials that can be found locally. However, the quality of the shelter depends on the quality of the welding for the metal structure and the quality of the plastic sheeting. A small shelter/livelihood project could be piloted in order to know if such solution could be promoted by the SNFI Cluster.

**Monitoring** In order to inform the SNFI Cluster members, the organisations piloting the locally made emergency shelters should closely monitor the impact on people of concern, host communities, lands and properties, etc. Organisations should also monitor the level of satisfactions of males and females regarding thermal comfort, living space, privacy, ventilation, safety, quality of materials. As one of the advantages of this solution is the livelihood component, this solution should be piloted in coordination with the Early Recovery Cluster as well as with the SNFI Cluster. The impact on the local economy should be evaluated.

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<sup>4</sup> Even if overall 71% of female and 55% of male are satisfied or very satisfied with the RHU, there are differences of satisfaction between the countries. As an example, in Tanzania, 91% of displaced population living in an RHU (443/452) are overall satisfied or very satisfied with the RHU compared to 54% (393 /730) in Niger and 63% (696/1099) in Iraq. Source: IMPACT RHU external evaluation, May 2019.

<sup>5</sup> Brazil, Burundi, Cameroon, Iraq, Niger, Tanzania.

<sup>6</sup> This solution has not been presented during the first Session on 11<sup>th</sup> of September.

## 7. Solutions not recommended

- **Concrete Canvas Shelter (not recommended)**

The **concrete canvas shelter** is **not recommended** by the Cluster for two main reasons. First, this solution cannot be moved and therefore should be considered as permanent. The CCCM Cluster does not recommend permanent shelters in IDP camps or informal settlements. Second, because of its shape, the concrete canvas shelter may be confused for a military facility. However, some engineers who participated in the workshop suggested to modify the shape. This would require a different structural frame and therefore additional structural study and testing.

## 8. Limitations

The SNFI Cluster lacks information regarding the situation in the camps. So far, the CCCM Cluster has registered 388 sites, including collective centres, planned camps, transit/reception centres and spontaneous camps, and continues to register new sites every week. The total number of people living in each shelter type (tents, makeshift shelters, concrete buildings, etc.) in camps is unknown. The status of the land where IDPs set up their tents or makeshift shelters is unknown. This information is important to better understand the living conditions of the people in the camps, including their security of tenure. The SNFI Cluster is coordinating with the CCCM Cluster to do an assessment in the camps to better understand:

- The population in camps, in informal camps, in collective centres;
- The number of people living in tents, makeshift shelters, concrete houses in camps (managed and informal);
- The conditions of the different shelter types;
- The occupancy situation: are the people renting the land in the camp? Do they occupy the land for free? Are they squatting? If they pay for the land, how much do they pay per month?

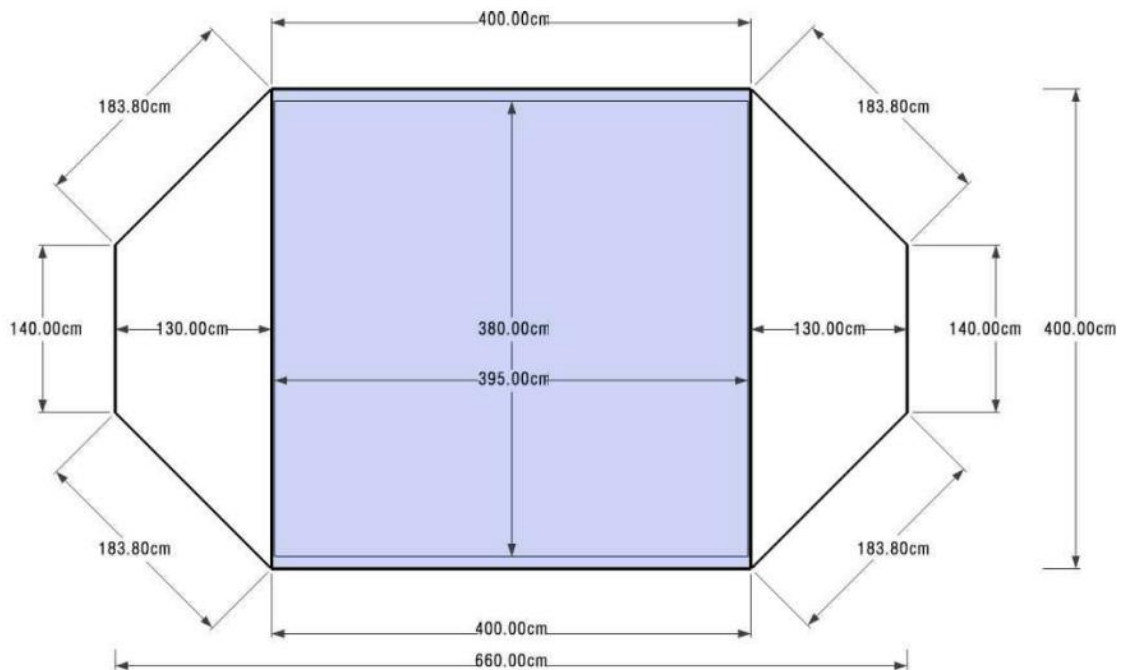
The SNFI Cluster lacks information on the satisfaction about the tents. Several partners have mentioned that tents are sold on the market; however, there are no consolidated data on either the percentage of tents sold after installation or the cost of those tents sold on the market. The SNFI Cluster is addressing this issue by developing standard Post Distribution Monitoring (PDM) guidelines.



## Basic Shelter kit

<b>Size</b>	17.5 - 20 sqm - 4m x 5m 5 persons
<b>Cost effectiveness</b>	USD 100 Lifespan: around 4 weeks for the kit - 12 months for tools box. Better quality tarpaulin could be provided to increase the lifespan.
<b>Key features</b>	2 - 4 ventilations
<b>Materials and protection against the elements</b>	Fair protection against rain, wind and sun. Ventilation is not very good, therefore can be hot during summer. Fire safety: Depends on the quality of the plastic sheeting.
<b>Protection</b>	High protection/GBV risk. (Easy to enter it, IDPs cannot leave valuable items when they leave the shelter. No privacy, no partition (could be added). The plastic sheeting can be easily cut that makes women and girls, especially those who lives alone, feel not safe even inside the shelter.
<b>HLP and mobility</b>	Basic due diligence required. Self-help. Assembly by 2 persons in 30-45 minutes. Tools box delivered with the kit. (Technical teams to provide support according to needs). Can be easily dismantled.
<b>Production and logistics</b>	1000 kits per week Transport: 30kg per kit, 100 kits per truck.
<b>Context analysis</b>	The Shelter/NFI Cluster members should carefully analyze the context in order to identify the appropriate shelter solutions. When IDPs are likely to move to another location, it is better to provide a shelter that can be relocated. When it is likely that the IDPs would return soon to their home it is better to provide a cheap shelter solution.
<b>Conclusion and Recommendations</b>	<p>The basic shelter kit is recommended only when tents or more durable solution cannot be implemented. The kit can be provided to IDPs who might move to another location. It requires a technical team to build the shelters. A tool box is part of the kits but may not be practical to carry when people are on the move. HLP due diligence is required as latrines and other infrastructures would be also necessary for newly displaced people. It is advised not to distribute the kit for gatherings of more than 10 families, to avoid the creation of informal settlements. <b>This solution is not recommended for female headed households</b> (widows, divorced, separated, etc.). The participants of the workshop, including protection experts, consider that protection and GBV risks are high due to weak materials, lack of privacy and ununlockable door.</p> <p>Protection against weather is limited, therefore the kit is <b>not recommended during winter</b>.</p> <p>It is a cheap solution; however, if beneficiaries receive first a shelter kit, then a tent some time later, this solution would not in the longer term, offer such good value for money.</p> <p><b>The shelter kit with its toolbox is appropriate to repair or upgrade makeshift shelters.</b></p>

## b) Family Tent

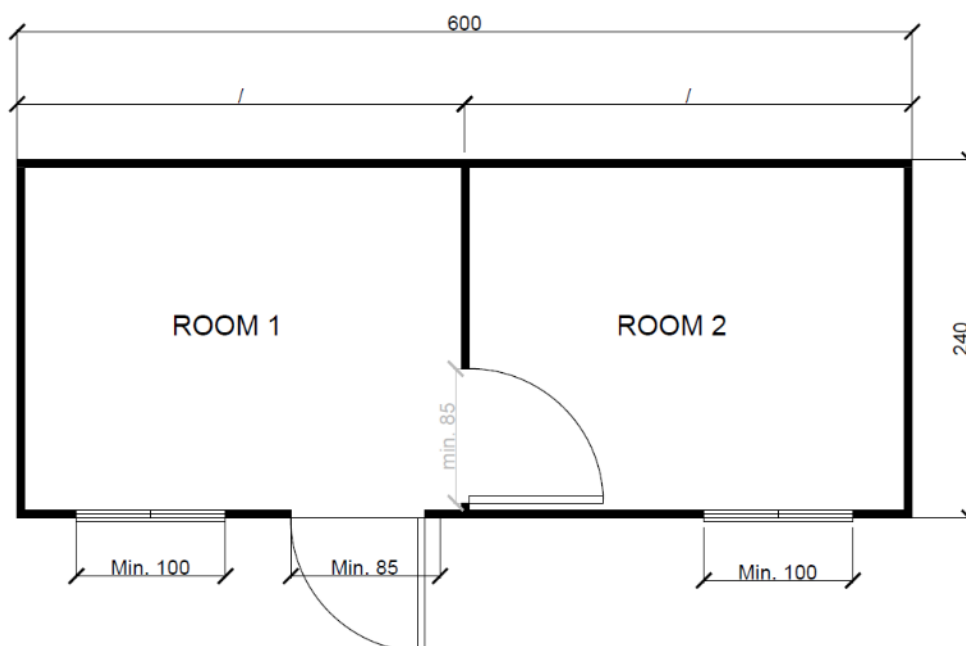


## Family Tent

*In Syria, different types of tent are distributed. The tent presented in this report is a type of tent used by several humanitarian organizations around the world. However, other types of tents are also implemented in Syria. Characteristics are different. Price is similar.*

<b>Size</b>	17.5 sqm - 20sqm - 4m x 5m - Can accommodate 5 persons (sphere standards)
<b>Cost effectiveness</b>	USD 600 Lifespan: 1-year (starts to be damaged after 6 months) Plastic sheeting could be provided after 6 months
<b>Key features</b>	4 windows with mosquito net and 2 doors (depends on design)
<b>Materials and protection against the elements</b>	The tent provides a good protection against rain for 1 year Fire retardant
<b>Protection</b>	Possible protection/GBV risk. Cannot be securely locked. The tent canvas can be easily cut making women and girls, especially those who lives alone, feel not safe even inside the tent. It is easy to enter it, IDPs cannot leave valuables unattended. Little privacy: one curtain included.
<b>HLP and mobility</b>	Due diligence and gravelling required. Assembly by a team of 2 in 1/2 hour without additional tools. Can be easily dismantled. Easy for the family to take it with them.
<b>Production and logistics</b>	Some suppliers can produce 4000 per month in Turkey. Several suppliers available in Turkey. Transport: 80kg, easy to pack, 80 units per truck
<b>Conclusion and Recommendations</b>	The tent provides a good protection against rain for 1 year. It can be used for up to one year and its lifespan can be extended with tarpaulin to improve waterproofing. The participants of the workshop including protection experts consider that protection and GBV risks are due to weak materials, lack of privacy and unlockable door. Due diligence is required as the tents need to have latrines and other infrastructures. This shelter option does not ensure safety and privacy of women and girls. In addition, there is no data about IDPs moving with their tents in various location even if the majority of IDPs have been displaced several times. Considering that some IDPs have been displaced for seven years, the SNFI Cluster members are aiming to provide more durable and dignified shelters.
<b>Website</b>	<a href="https://www.unhcr.org/admin/sts/53fc7dd99/unhcr-core-relief-items-catalogue-unhcr-family-tent-cold-weather-fire-retardant.html">https://www.unhcr.org/admin/sts/53fc7dd99/unhcr-core-relief-items-catalogue-unhcr-family-tent-cold-weather-fire-retardant.html</a>

a) Caravan



## Caravan (to be monitored)

<b>Size</b>	13.4 sqm - 6m x 2.4m - Can accommodate 4 persons only (sphere standards)
<b>Cost effectiveness</b>	Minimum: USD 2350 (for 4 persons) – USD 3000 (for 5 persons; prorated to 17.5sqm) Price can change depending on quality and quantity of caravans purchased. The SNFI Cluster recommends shelter for 5-6 persons. Lifespan: 5-10 years depending on quality.
<b>Key features</b>	2 windows and 1 door. Lockable door
<b>Materials and protection against the elements</b>	Good protection against heavy rain, strong wind and sun Fire retardant (1 hour)
<b>Protection</b>	(Lockable door; and lockable windows.) Bars could be added on the windows. Good privacy: one partition included (2 rooms)
<b>HLP and mobility</b>	Can be built by a team of 6 people in 12 hours. Cannot be moved or assembled by IDPs. Due Diligence required and high level of certainty about the land ownership. The Caravans should be set up on 6-8 concrete blocks on a flat land. The size of the blocks depends on the quality of the soil.
<b>Production and logistics</b>	couple of thousands produced per month (companies have stock) Transport: 10 per truck 1030kg
<b>Risk analysis</b>	As the assembly of caravans require technical expertise and professional equipment such as a crane, it is important to be sure about the land ownership and to have the authorization to use the land for at least 5 years.
<b>Conclusion and Recommendations</b>	<p>The participants in the workshop recognized that the caravan provides a better protection than the tents. Even though the unit cost is higher than the tent, after 4 years, the caravan is cheaper than the tent that needs to be replaced every year. It is also a more dignified shelter solution than the tents. The caravan is recommended in formal camps and new camps when IDPs are very likely to stay several years. Caravans would not become the property of the IDPs.</p> <p>The size of the caravans is too small for a family of 5 people. A bigger caravan (17.5sqm according to sphere standards) is recommended for 5 individuals. The cost of a bigger caravan would be around US\$ 3.000.</p> <p>A second roof should be added to protect against the sun during summer to avoid overheating.</p> <p>The ongoing caravan projects should be closely monitored in order to inform future projects.</p>

a) Refugee Housing Unit



## Refugee Housing Unit (Pilot project recommended)

<b>Size</b>	17.5 sqm - 5.7m x 3.3m - Can accommodate 5 persons (sphere standards)
<b>Cost effectiveness</b>	≈ USD 1275 Lifespan: More than 3 years. Spare kit included.
<b>Key features</b>	4 windows & 4 ventilations. Lockable door and solar panel.
<b>Materials and protection against the elements</b>	Good protection against heavy rain, strong wind and sun. Fire retardant materials. The new version has been improved after some fire incidents that occurred in Greece and in Iraq.
<b>Protection</b>	(Lockable door; Semi-hard and opaque plastic panels.). Solar powered portable lamp included. Little privacy: one curtain included.
<b>HLP and mobility</b>	Due diligence required. The RHU does not need foundation; however, it is recommended to raise the floor to avoid water coming inside in case of heavy rains. Assembly by a team of 4 in 5-6 hours without additional tools. Can be dismantled in 2-3 hour with 4 people. Can be moved, but more difficult than tents.
<b>Production and logistics</b>	Limited to the existing factory. According to better shelter, the manufacturer, another production line could be added. Transport: 36 units - 160kg, easy to pack
<b>Risk analysis</b>	As the RHU is twice as expensive as a tent (USD 1275 compared to USD 600), the organizations willing to implement RHU projects should consider the value of the shelter in their risk analysis: RHU sold by beneficiaries or used by non-beneficiaries.
<b>Conclusion and Recommendations</b>	<p>The participants in the workshop recognized that the RHU provides a better protection than the tents. According to an external evaluation done in 6 countries (2436 units assessed) 81% if females feel safer in the RHU (compared to emergency shelter solutions such as tents). The RHU is better value for money than a tent, as after two years of use it becomes cheaper than the tent, which, instead, must be replaced every year. It is also a more dignified shelter solution than the tent because it looks less temporary. The evaluation in Iraq showed that 63% of the beneficiaries were satisfied or very satisfied with the RHU including with the thermal comfort.</p> <p>The RHU is recommended in formal camps and new camps when IDPs are very likely to stay more than a year.</p> <p>Considering that RHUs have not been used in Syria yet, it is recommended to implement a pilot project which should be closely monitored. Some SNFI Cluster members requested to add a ventilation shaft for a heater pipe.</p> <p>The floor needs to be raised to avoid flooding inside the shelter during heavy rains.</p> <p>Some participants also raised some concerns about the fact that the RHU is only produced by one supplier. This could affect the supply chain and the price.</p>
<b>Website</b>	<a href="http://bettershelter.org/">http://bettershelter.org/</a>

## b) Locally made emergency shelter



## Locally made emergency shelter (Pilot project recommended)

<b>Size</b>	18 sqm. (flexible) - Can accommodate 5 persons (sphere standards)
<b>Cost effectiveness</b>	<p>Minimum: USD 200</p> <p>Lifespan: unknown, depending on the quality of the plastic sheeting.</p> <p>Have a good impact on the local economy.</p>
<b>Key features</b>	2 windows and 1 lockable door
<b>Materials and protection against the elements</b>	<p>Fair protection against heavy rain, wind and sun. Limited ventilation. Ventilation should be incorporated in the design.</p> <p>Fire protection depends on the materials used. Fire retardant materials should be used.</p>
<b>Protection</b>	Weak protection as it is easy to cut the plastic sheeting even if the door can be lockable. Therefore, it has limited safety for women and girls. However, the walls could be improved with plywood or other stronger panels. Partitions could be easily added.
<b>HLP and mobility</b>	<p>Can be built by IDPs in one or two days with welding equipment. Cannot be easily moved because the metal pipes are welded.</p> <p>Due Diligence required (similar to a tent).</p> <p>This shelter does not need foundation; however, it is recommended to raise the floor to avoid water coming inside in case of heavy rains.</p>
<b>Production and logistics</b>	Local production with recycled materials.
<b>Conclusion and Recommendations</b>	<p>This solution is interesting for its potential impact on local economy: it is made by IDPs and it includes locally available recycled materials. However, the quality of the shelter depends on the quality of the welding and plastic sheeting. A small shelter/livelihood project could be piloted in order to know if such activity could be promoted. Several SNFI Cluster members are interested in piloting this solution.</p> <p>Ventilation and pipe for a stove should be added.</p> <p>HLP due diligence is required as latrines and other infrastructures would be also necessary for newly displaced people.</p> <p>The floor needs to be raised to avoid water going inside the shelter during heavy rains.</p>

a) Concrete Canvas (not recommended)



<b>Concrete canvas (not recommended)</b>	
<b>Size</b>	21 sqm - 7m*3m - Can accommodate 6 persons (sphere standards)
<b>Cost effectiveness</b>	≈ USD 2130 Lifespan: more than 10 years
<b>Key features</b>	4 windows and 2 ventilations. Lockable door
<b>Materials and protection against the elements</b>	High protection against heavy rain, strong wind and sun Fire-resistant materials
<b>Protection</b>	(Lockable door; concrete walls, and lockable windows.) Considering that the shape is like military shelters, it is recommended to change the design to make sure those shelters would not be confused with military facilities. No privacy, no partition (could be added)
<b>HLP and mobility</b>	Due Diligence and high level of certainty about the ownership. Can be built by a team of 6 people in 12 hours. Unable to dismantlement. Should be considered as permanent building.
<b>Production and logistics</b>	Transport: 9 per truck 1100 kg, easy to pack
<b>Context/Risk analysis</b>	Risk analysis should be done before any implementation. It is not recommended by the SNFI Cluster. However, the construction of a pilot with a different design could be built in Turkey (not for people of concern).
<b>Conclusion and Recommendations</b>	Considering that this type of shelter is permanent and that for its shape, it could be confused with a military shelter, the design should be modified. A pilot should be built then tested before any implementation for IDPs in Syria.  <b>Not Recommended</b>
<b>Website</b>	<a href="https://www.concretecanvas.com/cc-shelters">https://www.concretecanvas.com/cc-shelters</a>