Shelter/NFI Cluster
NW Syria - XB Hub
ShelterCluster.org
Coordinating Humanitarian Shelter

Photo credit: Mercy USA, NW Syria

Dignified Shelters

Technical Guidance

Annex V.3

January 2024

NORTH-WEST SYRIA

Contents

1. Introduction

This technical guidance builds on the previous version of the Dignified Shelters Technical Guidance which was published in April 2022.

This document is an Annex to the Dignified and Safer Living Conditions Guidance which considers the needs and wider context in which households are sheltered.

As of June 2023, there were 1.97 million IDPs living in in 1,531 IDP sites in NW Syria. %46 of households in IDP sites are living in tents while %44 of those need their tents replaced.[1]

Beyond survival, shelter is an essential contributor to security, personal safety, protection from the climate and resistance to ill health and disease. Ensuring adequate dignified shelter provides households with a place from which they can address their other needs, promoting the use of existing capacities and resources.

The guidance in this document is to promote dignified shelters for those in need of temporary support. The Technical Working Group for Dignified Shelters has drawn on earlier work including the Dignified and Safer Living Condition Guidance and examples from tested designs and materials which have been piloted in NW Syria.

While supporting self-build shelter activities by individual households is preferable in some cases; the scale of shelter needs, HLP considerations and the limited resources of IDP households means that the provision of dignified shelter solutions will require the use of temporary shelter solutions. Any such shelter designs need to reflect the local context, and were possible, local installation technologies and cultural preferences. The shelter should also fit within the wider Dignified and Safer Living Conditions approach to meet the multifaceted needs of the populations.

1. CCCM Power BI dashboard

2. Designing a Shelter

2.1 Appropriateness

For a shelter design to be appropriate, it should reflect the needs, local culture, vulnerability and capacities of the affected community and the resources available. Some shelters can be relocated, upgraded by beneficiaries and the materials can be re-used, whilst others may be designed to be built on sites that should not be modified by beneficiaries.

Shelter interventions should be assessed and designed as part of a wider site analysis, including a topographical site analysis, which considers site conditions, topography and the surrounding built environment. Please see the Dignified and Safer Living Conditions Guidance for further information regarding site selection, prioritization and multi sector site improvements.

The design of a shelter should be reviewed by beneficiaries and their considerations should be taken into account to ensure any proposed shelter is appropriate for the target population.

Appropriateness of designs should also take into account HLP considerations and what is viable within the constraints and permission from public authorities and landowners. See the HLP section of the Dignified and Safer Living Conditions Guidance for further information, please refer to the HLP Due Diligence Guidance.

2.2 Design brief

A design brief is a document that defines the performance of a shelter on criteria including design, size, accessibility, WASH facilities, cooking facilities, thermal insulation, water proofing, safety, protection, cost, durability, time and budget. The design should include a construction calculation note that considers the loads the unit may be exposed to, such as wind and snow to ensure it has safe structural bearing capacity, considering the materials and modalities used.

This document does not consider multi floor buildings. This guidance considers Dignified Shelters as temporary single-story structures to replace tents, emergency shelters or other shelter types which do not meet minimum standards.

2.3 Consultation and Coordination

Preparation of a design brief should include consultation with representatives of IDPs within the target area on the proposed design as well as coordination with the Shelter Cluster, Local Authorities, camp management and other relevant actors who are working within the same location. Focus Group Discussions (FGDs) during the design phase will help ensure design reflect the needs of IDPs. Shelter interventions should be planned in alignment and coordination with other infrastructure interventions and urban planning at the site.

For example, shelters should not be installed without considering the need for WASH, Early Recovery and Livelihoods, Health and Education as well as access to public spaces and services (see the Dignified and Safer Living Conditions Guidance for further information).

2.4 Who Builds

Shelter interventions may consider participation of members from the target community as Cash for Shelter or Cash for Work with technical training opportunities to build the capacity of the beneficiaries while other shelter installation activities may require experienced contractors or implementing agency field staff with specific skills and technical expertise. Please refer to the basis guidance on Cash and Voucher for shelter. The decision on cash for shelter must be built on comprehensive needs assessment considering availability of the items and accessibility to the local markets.

2.5 Maintenance

Once installation is complete, consider what longer term support will be required to maintain the shelters and support IDP families living in them. For example, windows may break, sewage connections may become blocked, taps may need to be replaced. A plan for who will be responsible for maintaining shelters needs to be established and agreed with beneficiaries and camp management. This should consider the financial capacity of IDP households to maintain their shelters.

Beneficiaries can be provided maintenance materials/kits to undertake minor maintenance of the shelters themselves when applicable.

2.6 Hazards, risks and safety

Shelter designs must not increase the vulnerability of occupants to natural hazards such as storms or disease.
The location of a shelter may be more important than its design. Poorly located shelters can increase the risks faced by occupants to flooding or fires or exposure to severe weather conditions, while well located shelters can reduce exposure to hazards. Hazard analysis should be conducted at all target sites to assess risks and adopt mitigating measures. Shelters must not increase risk of death or injury.

Design for hazard resistance should be based on events that are likely to occur within the lifespan of the shelter. Dignified shelters should be able to withstand expected events should as annual heavy rainfall, annual snowfall, strong winds, wet muddy environments during the winter season and strong sun and heat during the summer season. Shelter materials should also be fire resistant and adopt fire mitigation measures as part of site planning and camp management including a 30 m firebreak every 300 m (see CCCM Guidance on Fire safety in Formal and Informal Settlements).

Designs should also consider earthquake resistance and risks from wall and/or roof collapse. For example, using lighter materials and/or adding structural reinforcement can reduce risks. Water tanks on roofs should be adequately structurally supported considering all load bearing requirements.
Shelter used materials should be fire-proof mold resistant.

2.7 Timeliness and installation speed

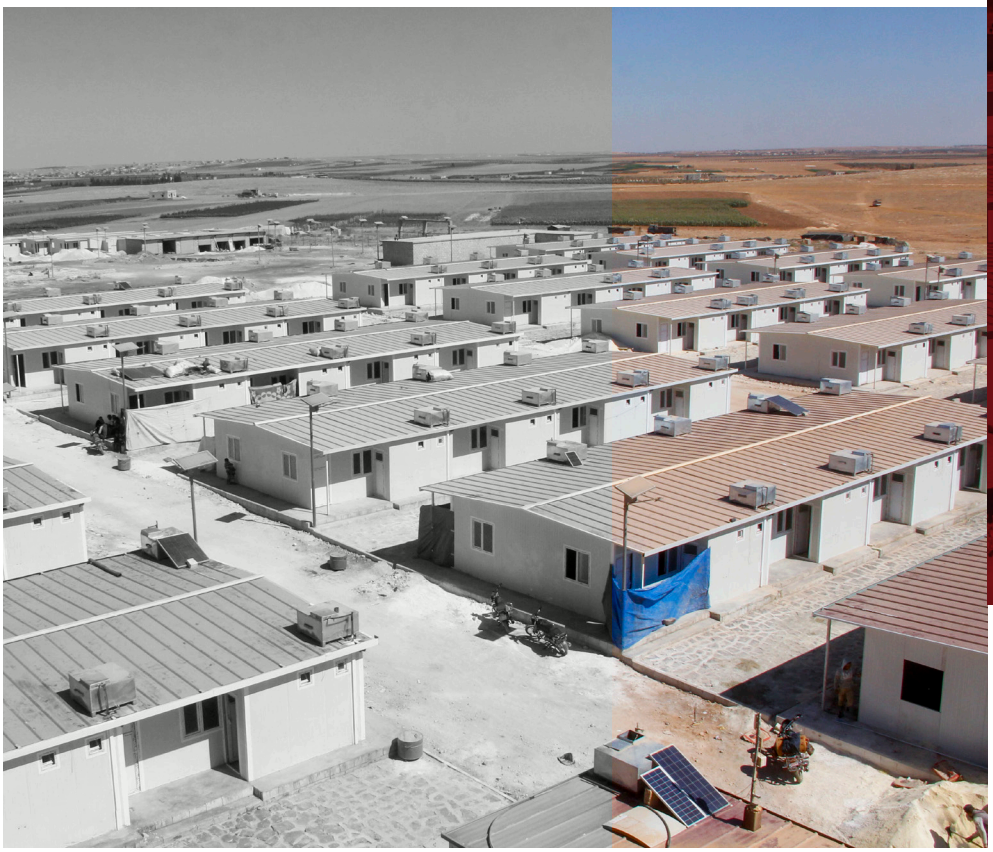
When planning installation of shelters, consider the time required for procurement, site preparation such as levelling and gravelling, and installation. Consider if materials can be procured locally or if they are required to be imported. Review if skilled labor is required or not and if resources are available to do this or if training is required.

2.8 Life span

- The Dignified Shelter should have a minimum **lifespan of up to 5 years**. This is the amount of time that the shelter is intended to last. When agreeing on the design life of a shelter it should be considered that a longer lifespan of a shelter may increase the cost and affect the time required for installation.

- The shelter may have **elements of its design** which have **longer lifespans**, such as steel bars for example. However, the lowest lifespan of any part of the shelter should be at least 5 years with little maintenance required.

- Where possible, shelter installation **materials can be reusable or upgradeable**. For example, the walls, roof, or other materials may be replaced by beneficiaries to extend the life of the shelter beyond 5 years or to increase insulation properties if beneficiaries have the capacity and wish to do so (while considering Housing, Land and Property [HLP] requirements).



2.9 Size and shape

- The **orientation of the shelter** should include doors and windows positioned away from the direction of the prevailing wind, where possible. For privacy, the location of the entrance to the unit should be based on consultation with beneficiaries. Different level sites should maintain better privacy for the affected populations mainly women and girls.

- The design should be **culturally appropriate** and meet the inhabitant's daily needs. Consultation with targeted groups including women and people with special needs to discuss the design is highly recommended.

- The closed living space (**excluding WASH and kitchen areas**) MUST exceed a **minimum of 3.5m**2 per person indoor sheltered living space in accordance with the minimum Sphere standards and NW Syria SNFI Cluster standards. For example, this will provide an absolute minimum of 17.5m2 for a family of 5 or 21m2 for a family of 6. It is recommended to go beyond the minimum standards as appropriate and based on beneficiaries' consultations.

- **A closed living space of at least 5.5m**2 per person must be provided if cooking, bathing and sanitation facilities are included within the covered shelter area.

- It is preferable that the **living area has at least two rooms**, excluding WASH and kitchen areas (if preferred by beneficiaries during consultation). Each room should have at least one window and one internal door.

- **Shelters for larger families** with more than 6 people should include an **additional, third room** while ensuring a minimum of 3.5m2 per person living space.

- It is important to **prioritize attaining a high level of privacy**. The entrance should not directly face the road. At least one room should not be used as a passageway to other areas to allow for privacy.

- Ensure **zoning** of the shelter unit, considering areas for sleeping and living, kitchen, WASH and outdoor zones in a way that considers day and night usage. Cost efficiency may be achieved by zoning the kitchen and the Wash facilities next to each other, if included within the unit.

- Consider **storage space** in the shelter as part of the design (raised storage space below the ceiling for example)

- Inclusion of a **private outdoor gathering area** within the shelter boundary respects and takes into consideration Syria's building typology in rural areas. This can be of great social and psychological importance for families. Consider inclusion of a private outdoor gathering area, if possible, based on feedback from beneficiaries.

- **30m firebreak** every 300 m. See CCCM Guidance on Fire safety in Formal and Informal Settlements.

- **Minimum 3m between at either side of the shelter**. One side of the shelter should face a road. Where possible, 2 times the height of the structure is a preferred appropriate distance between shelters.

- Consider the space surrounding the shelter for modularity and potential future expansion or use for gardens by beneficiaries. This enables the beneficiaries to develop and extend their shelter as needed in future. It is recommended to take that into account in the project design and site planning phase.

- Consider **outdoor areas surrounding the shelter** which may be expanded as semiprivate zones for beneficiaries. Beneficiaries may cover these semi-private outdoor areas to provide shade or protection from the rain.

- The **ceiling height should be a minimum of at least 2.6 – 2.2m** at the highest point, depending on the specific shelter design, materials used, feedback from beneficiaries and thermal insulation considerations.

- Consider **installation of foundations and bases** which shelters (of variable available materials) can be fixed over. Raised bases can protect against wet weather conditions (see Flood Risk Reduction Guidance). The shelter base level should be at least 20cm high from the ground level to avoid risks from wet weather. In some cases, the base of the shelter should be higher, depending on the risk of flooding. This should be based on local assessments and agreement with local authorities and camp management. The foundation can include an extended base surrounding the unit.

- The shelter should be provided with a **latrine and bathing area**, either as a designated private space within the unit or a private facility next to the unit.

- Ensure **cooking spaces** are placed in locations that are well ventilated and will not increase fire risks for households.

- Include installation of **accessible features such as ramps or railings** for households with People with Disabilities (PWD). This should include ramps for access to raised shelter floors, hand railings, acceptable door widths (900mm minimum for wheelchair users) and accessible WASH facilities for PWD. Specific considerations should be considered for people with limited abilities and specific needs.

- **Multiple shelter units connected** can be helpful to save space, greater thermal efficiency, and stability. However, this should only be implemented where acceptance from beneficiaries is confirmed, considering potentially reduced sound insulation and privacy. This is more likely to be accepted among relatives and larger groups of extended families.

- The **roof slope should have a minimum of %5.** This slope ensures adequate drainage of rainwater. The roof should be equipped with a gutter system to divert the collected water away from the shelter›s base or foundations, preferably towards a nearby soak away or drainage system.

- **Consider if beneficiaries require the shelter to be reused** in another location in future. In some cases, it may be preferable for shelter to be able to be disassembled for reassembly in another location in future.

2.10 Materials

- The materials used in constructing dignified shelters (walls and ceilings) must be made of solid **materials that are resistant to weather conditions** such as rain, snow, wind and provide thermal insulation from hot and cold temperatures. The materials should also be fire-resistant.
- The materials used must not be transparent to ensure privacy inside the unit.
- Shelters with **fabric materials (such as plastic sheets, or tarpaulin) for walls or roofing are not considered dignified shelters** as they do not provide adequate thermal and sound insulation and protection.
- **Hard or semi hard plastic panels are not considered suitable materials for walls or roofing unless** they are accompanied with adequate thermal and sound insulation and resist severe weather conditions.


Photo: Turkish Red Crescent (TRC), NW Syria

For donors with restrictions on use of concrete shelters:

- **Concrete bases** can be used for flooring of the shelter.
- **Concrete block walls** up to a maximum of 80cm in height can be used to support sandwich panel walls. However, full waterproofing should be ensured between the joining of the sandwich panels and concrete blocks.
- **Sandwich panel walls and roofs** can demonstrate good efficiency in terms of insulation properties for both sound and heat. However, waterproofing of sandwich panels should be ensured at junctions of panels.


Photo: CARE, NW Syria

- **Sandwich panels should have the following minimum**
  - Preferable thickness 0.3 to 0.8mm sheet metal
  - Foam panel thickness 4cm minimum between the sheets
  - Foam density minimum 38 kg/m3 between the sheets
  - Fire resistance: European standard Fire Class (B S2 d0) (TS EN 1-13501) or equivalent

- Natural materials such as **mud (adobe) bricks** or similar may be considered if they meet anticipated load bearing and weather resistance conditions.

2.11 Environmental Considerations

The Dignified Shelter & Living Conditions approach should include a specific environmental component, which can be determined through an assessment of environmental risks using methods such as NEAT+ assessment. Specific actions should then be taken to reduce these risks and improve the overall impact.

Given the absence of formal legal procedures for environmental project reviews in NW Syria, humanitarian organizations should establish their own review procedures, particularly for transitional and recovery projects that involve the built environment.

For more information, please refer to the NW Syria Environmental Shelter Country Profile.

- It is encouraged to **increase thermal grade** of the shelter materials to reduce heating costs during the winter.
- Construction methods should rely on **locally available skills and competencies** as much as possible.
- **Include zones for gardens**. This can be complimented with household grey water (non-sewage waste) retention systems for water re-use in gardens. The Shelter NFI Cluster encourages pilot approaches of this and sharing of lessons learned by partners.

2.12 Privacy and security

- **Layout should be reviewed with IDP representatives** as part of the site planning design.
- **Doors and windows should not face each other** between units. Create a private zone and side entrances in the design if necessary. Where possible and appropriate, windows can include metal mesh for protection from being broken into or vandalized, based on consultation with beneficiaries.
- **Doors and windows should be lockable** from inside the shelter for security.
- Walls of the shelter should be **opaque (during day and night) for privacy**.
- Where possible, **private latrines and bathing areas** should be attached to the shelter unit or be situated next to the unit.
- Where shelters will be situated at different levels, **consider privacy and viewpoints to within shelters** when designing locations of windows and doors, based on consultation with beneficiaries.

2.13 Lighting and power supply

- **Internal and external lighting must be provided for each residential unit.** This significantly contributes to enhancing the overall sense of safety within the units and the site. It allows children to play or study after sunset, fosters stronger family bonds, and facilitates social interactions. Lighting should be installed in all usable spaces in the shelter including WASH facilities, living rooms, kitchen and one light above the main external door.

- Where there is not a continuous electricity supply, it is recommended to **install batteries with solar panels** or other applicable solar lanterns.

Photo: IYD, NW Syria

- There should also be **public lighting on main roads** to ensure safe and easy access and to mitigate protection risks (especially related to GBV). This must be part of full infrastructure improvement activities following the shelter cluster guidance on dignified and safer living conditions.

2.14 Windows, Ventilation and Thermal Comfort

- Each room in the shelter should have **at least one window and one door with a lock.**
- Windows facing the exterior should be **fitted with metal mesh** protection for security.
- It is preferable to have **fixed fly screens**.
- The **area of one window** should not be less than 1 m2 for living rooms and not less than 0.09 m2 for WASH facilities and kitchens. Size may be modified based on consultation with beneficiaries.
- Consider installation of a small window and/or **ventilation for a cooking area.**
- Consider **cross ventilation to allow for cooling in summer** (this can include vents in the walls if windows are not appropriate or not possible).
- **WASH facilities should have windows** with shutters for privacy.
- Consider the **direction of the prevailing wind** in placement of windows, especially if in a location exposed to severe weather conditions.
- Consider **shading** to prevent the shelter from overheating in summer.

2.15 WASH facilities

- Each shelter should have private WASH facilities (bathing area and a latrine) either connected to the shelter or next to the shelter where possible.
- **Communal latrines** are not considered to be acceptable for dignified shelters.
- **Consult beneficiaries** on the best location for placing the latrine.
- Where possible, **at least four water points** should be provided within the shelter unit's private facilities: one for the latrine, one for handwashing, one for bathing one and one for a cooking area.
- Consider **wind direction and odours** when planning location of latrines.

Photo: BINAA, NW Syria

- Provide a **water tank for each shelter unit**, with all needed connections for inside the shelter. The size of the tank should depend on frequency of refilling, either through a water network or water trucking to ensure a minimum of 40-25 litres per person per day.
- **Sewage management** should be planned as part of the design. This may include connection to a septic tank, holding pit or tank, or connection to a sewage network or decentralized wastewater treatment system. If sewage is directed to a holding pit or tank, a desludging plan should be established as part of the shelter implementation plan.
- **Engage with relevant clusters**, particularly the WASH Cluster, to ensure an integrated approach.
- **Connection to a water network is preferable. Water trucking** can be applicable if connection to a water network is not possible.
- Ensure that any water provided meets the **minimum water quality standards** (Free Residual Chlorine between 0.5-0.2mg/litres).
- Use of **water use efficiency** methods such as grey water reuse for gardening is encouraged.

2.16 Hazard resistance

- See NW Syria Environmental Shelter Country Profile.
- Shelters must be **designed to be less likely to kill or injure people** in a disaster. Lightweight structures are less likely to cause fatalities in the event of collapse. However, lightweight structures are more vulnerable to strong winds. All designs should calculate the wind forces and directions toward each node of the structure.
- Shelter designs should consider that those living in the shelters are **likely to make alterations, extensions, or upgrades over time**. Continued ongoing monitoring is required to order to ensure that any modifications to structures do not become hazardous to those living in the shelters.
- Shelter designs should include **earthquake safety considerations**:
-
    - Shelter NFI Cluster is only recommending temporary single story ground level dignified shelters in IDP sites.
    - Designs should consider earthquake resistance and risks from wall and/or roof collapse. Using lighter materials and/or adding structural reinforcement can reduce risks.
    - Water tanks on roofs should be adequately structurally supported considering all load bearing requirements.

2.17 Cost and budgets

The Dignified Shelter is anticipated to cost up to **2,900 USD** (including WASH facilities). Organisations may go below or above this, depending on cost, quality and availability of materials.

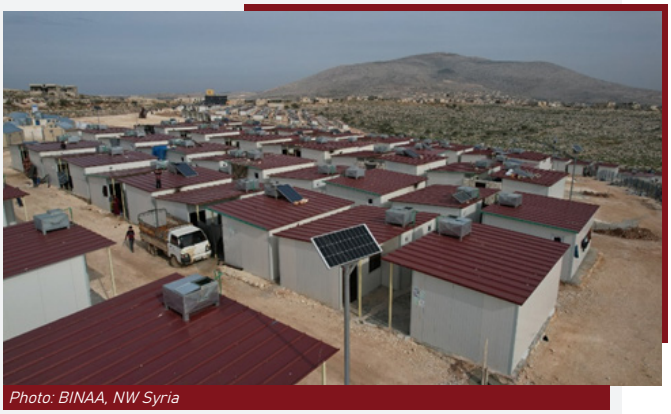


Photo: BINAA, NW Syria

Cost and budgets

3. IDPs Self-Built Approach

In many cases, IDPs living in tents or other temporary shelters have appropriated camp spaces by expanding and modifying household shelter structures to suit their needs. In some camps, IDPs are encouraged to undertake shelter improvements, with assistance shifting from in-kind to cash with encouragement towards self-reliance and self-management approaches. As part of the approach towards dignified shelters, IDPs should play a vital role in their own assistance and ability of self-management. Cash for shelter modalities enables the beneficiaries develop their own shelter the way the desire and provide them with a variety of options.

Humanitarian actors may support this process though:

- Cash for work to replace tents with dignified shelter modalities.
- Provide cash or vouchers for shelter materials to allow participants to implement their own household shelter rehabilitation activities, by employing laborers, or purchasing shelter materials and tools themselves. This requires technical support and guidance from the dedicated filed staff.
- Provide training in construction (masonry, carpentry, metalwork) which will increase their opportunities in the job market and support upgrading of local shelters.
- Provide upgrades to existing self-built IDP shelters, such as installation of windows and doors, repairing leakages and providing or rehabilitating WASH facilities.

Assessments, Focus Group Discussions and KIIs should be undertaken to establish the levels of risks and mitigation that can be taken to address risks. Providing support to IDPs to implement their own shelter improvement activities should take the following elements into consideration:

- Safety and security
- Need for shelter support
- Community acceptance
- Availability of materials and skilled labour in the market
- HLP
- Protection and GBV risks

Photo: Self- Built Shelters in IDP site in NW Syria. Credit: Shafak

4. Resources

- Dignified and Safer Living Conditions Guidance
- Action Plan for Dignified and Safer Living Conditions in NW Syria
- NW Syria Environmental Shelter Country Profile
- SNFI Cluster Strategy (we need to refer to the cluster updated strategy, but it isn't finalized yet).
- SNFI Guidance Note on the Shelter and NFI Response
- TWiG on Flood Risk Reduction - English
- TWiG on Flood Risk Reduction - Arabic
- SNFI Site Planning Support Webpage
- CCCM and SNFI Fire Prevention and Response Guidance Note – English
- CCCM and SNFI Fire Prevention and Response Guidance Note – Arabic
- Guidance Note: Mitigating Protection Risks in IDP Sites Exclusive to Widowed and Divorced Women and Girls (February 2019)
- HLP TWG DUE DILIGENCE GUIDANCE NOV 2023 (ARABIC)
- HLP TWG DUE DILIGENCE GUIDANCE NOV 2023 (ENGLISH)
- Guiding Principles on Internal Displacement
- Sphere Standards, 2018

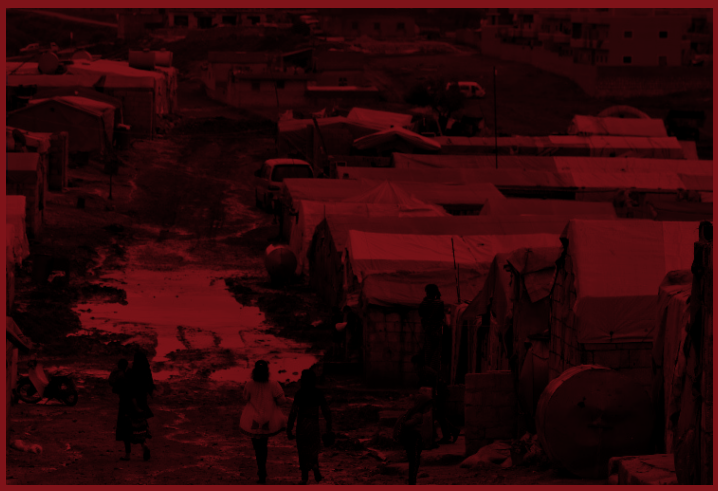
5. Dignified Shelter Working Group Members

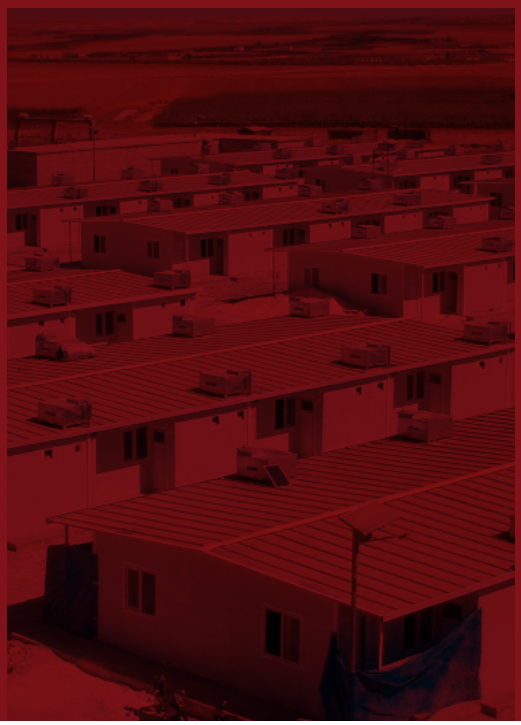
Facilitator: Julian Tung, Shelter NFI Cluster Technical Advisor, CARE

- Msallam Koujan, Shelter NFI Cluster
- Muzdana Caferoğlu, Syria Relief
- Yousef Hamdan, Binaa development
- Ahmad Alragheb, Mercy USA
- Omar Altayeh, Mercy Corps
- Aref Abdulkarim, Shafak
- Abdulkarim Kesoun, Takafulalsham
- Khaled Joneidi, Ataa
- Hacer Bedevi, Ihsan
- Mohammed Zidan, SDI
- Osama Rahim, CARE
- Anas Alibrahim, WATAN
- Hala Hattar, NRC
- Azalden Hossin, IYD
- Khaled Almana, IOM
- Shadin Omar, GOAL
- Yewubdar Mekasha Tesfaye, UNHCR

Dignified Shelters
Technical Guidance

Annex V.3
January 2024





The Shelter NFI Cluster Coordination Team:

Patrick Mutai
Senior Cluster Coordinator
MUTAIP@unhcr.org

Mohammed Alamir
Cluster Co-Chair
coord.turkey@sheltercluster.org

Msallam Koujan
Technical Coordinator
msallam.koujan@care.org

Saleh Albala'wi
Information Management Officer
albalawi@unhcr.org

Mahmoud Abo Shaabo
Information Management Coordinator
mahmoud.shaabo@care.org

Andrew Makachia
Information Management Officer
makachia@unhcr.org

Tarik Temir
Data Management Associate
temir@unhcr.org

This document was authored collaboratively by the Dignified Shelter Technical Working Group and facilitated by Julian Tung

Designed by: Media Department at Assistance coordination unit (ACU)