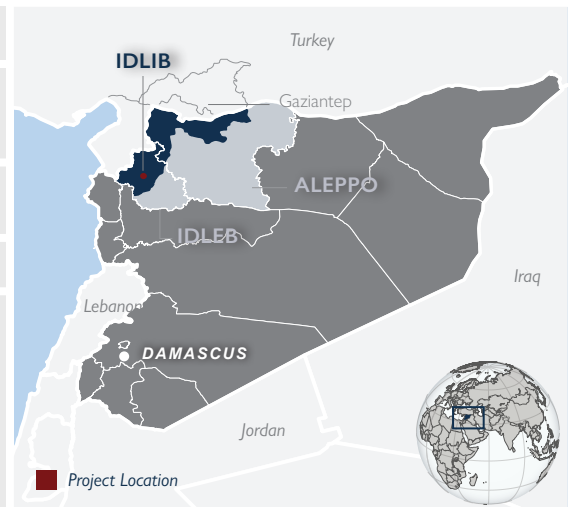


CASE STUDY

# SYRIAN ARAB REP. 2021–2022 / SYRIAN CRISIS

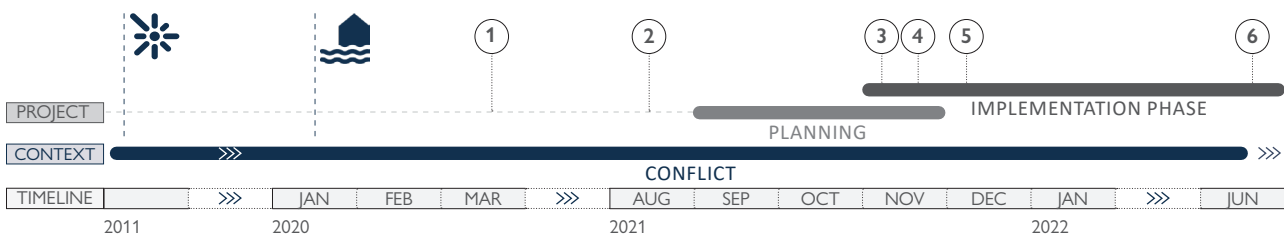
KEYWORDS: Emergency shelter, Habitability, NFI distribution, Winterization

<b>CRISIS</b>	Syrian crisis, 2011 onwards
<b>PEOPLE AFFECTED</b>	<b>14.6 million</b> people in need <b>6.9 million</b> IDPs*
<b>PEOPLE WITH SHELTER NEEDS</b>	<b>5.9 million</b> people within Syria*
<b>LOCATION</b>	Idlib, Northwest Syria
<b>PEOPLE SUPPORTED IN THE PROJECT</b>	<b>Tent Leveling Pilot:</b> <b>685 people</b> (120 HH) were supported in the pilot <b>Core Winterisation Package:</b> <b>13,423 people</b> (2,300 HH) received NFI kits and clothing kits
<b>PROJECT OUTPUTS</b>	<b>120 tent bases</b> constructed ahead of flooding event <b>2,300 NFI kits</b> distributed <b>7,953 clothing packages</b> distributed
<b>SHELTER SIZE</b>	Tent base sizes were <b>6x4m, 5x4m, 9x4m, 12x4m</b> . (Depended on the size of the tents)
<b>SHELTER DENSITY</b>	<b>3.3 m<sup>2</sup></b> per person
<b>DIRECT COST</b>	<b>USD 160</b> per tent
<b>PROJECT COST</b>	<b>USD 173</b> per tent
* 2022 Humanitarian Needs Overview: Syrian Arab Republic, February 2022.	



**PROJECT SUMMARY**

The objective of the tent leveling activity, which was part of a larger winterization project, was to provide protection to family's tents and belongings in time for the seasonal wet weather, through the provision of concrete tent bases. This tent leveling supported 120 households across 2 camps in Idlib. An evaluation took place 6 months after construction, in a timeframe that allowed learning to be captured before project planning would commence for the next winterisation project. At a relatively low cost, the impact of tent leveling was high with positive results around the wider impacts of shelter and settlements. The tent base was successful in protecting participants homes from flooding wet weather. However in general, the tent leveling support is not effective at protecting people from winter conditions if they do not have a weatherproof shelter that will sit on top of the tent base, or a durable shelter solution, such as stone or concrete houses.



- 2011:** Syrian crisis began.
- Jan 2020:** Severe flooding across Northwest Syria affecting over 126 IDP sites and over 67,000 people, including 40% of the people supported by the 2020 winterisation project.
- 1** **Mar 2020:** NFI response to families who had critical needs due to the floods.
- 2** **Aug 2021:** Plans developed for tent leveling pilot project.
- 3** **07–25 Nov 2021:** Tent leveling phase.
- 4** **Nov 2021–Dec 2022:** Distribution of NFI kits, clothing packages.
- 5** **22 Dec 2021:** Post-Distribution Monitoring for tent leveling.
- 6** **1 Jun–04 Jun 2022:** Tent leveling evaluation.



Aerial image of a camp in Idlib devastated by the heavy floods, forcing many families to leave their homes during the night and take shelter elsewhere.

## CONTEXT

The crisis in the Syrian Arab Republic (Syria) began in March 2011 and has since displaced over 5 million people to neighboring countries and over 6.9 million people internally (Syrian Humanitarian Response Plan, 2022). The current crisis is compounded by interlinking factors and events (ongoing hostilities, regional economic crisis, damage to infrastructure, COVID-19, and environmental shocks) that caused significant suffering to the population. Northwest (NW) Syria experiences harsh winter conditions with freezing temperatures, rain, and snowfall. This is particularly worrying for displaced families living in camp settings, many of whom are residing in tents and makeshift shelters. Increasing the thermal comfort of households via winterization activities is a priority for the Shelter and Non-Food Item (SNFI) Cluster.

### SITUATION BEFORE THE CRISIS

In NW Syria, over 1.8 million people live in 1,421 sites of last resort – 87 percent of which are self-settled Internally Displaced Persons (IDP) tented camps. Those sites are more vulnerable to flooding due to the lack of site planning, infrastructure, and management systems – which coupled with the annual heavy rainfall in the winter and spring months leaves the sites particularly at risk of flooding events. In 2022, approximately 30 percent of IDP sites in NW Syria experienced flooding, affecting over 540,000 people (Syria, HNO 2023). Self-settled camps are often located in high-risk areas such as in river systems or agricultural land compounding vulnerability to flooding and (in some cases) creating difficulties or even preventing relief efforts as access is impacted due to unpaved roads and heavy mud.

### SITUATION DURING/AFTER THE CRISIS

Syria remains a complex humanitarian and protection emergency characterized by over 10 years of ongoing

hostilities and their long-term consequences, including widespread destruction of civilian infrastructure, explosive ordnance contamination, and the largest number of displaced populations in the world. The protracted crisis has inflicted immense suffering on the civilian population, who have been subject to massive and systematic violations of international humanitarian and human rights law. More recently, the accelerating economic deterioration and impacts of climate change have increasingly become additional key drivers of needs, compounding vulnerabilities even further. In 2022, approximately 14.6 million people needed humanitarian assistance, an increase of 1.2 million from 2021. Syria remains one of the largest humanitarian responses in the world, with assistance delivered to 6.8 million people per month in 2022 (2022 Syria HRP).

### NATIONAL SHELTER STRATEGY

The SNFI Cluster set its winterization activities in 2021, focused on increasing thermal warmth. This was considered to be a lifesaving intervention due to the many interlinked vulnerabilities of the displaced population and the extreme weather associated with winter (2021 SNFI Strategy).

The priorities were “1. Fuel and stove distribution; 2. Winterization NFI packages (including tarpaulin, rope); 3. Winter clothing for children and vulnerable adults; and 4. Tent leveling” (2021 SNFI Strategy). Drawing on organizational experience, the project focused on Priority 2 (winter NFIs) and Priority 3 (winter clothing). A tent leveling pilot component was added, aiming to expand that experience and increase the impact of the overall intervention.

NW Syria experiences seasonal wet weather and flooding events, which can have devastating impacts on families whose homes and belongings are vulnerable to rain and flood water. By raising tents off the ground around 20 centimeters via concrete and gravel bases, the intervention aimed to mitigate potential damage to homes and possessions that could impact that household's ability to keep



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*The harsh winter makes life very difficult for displaced people in camps. It's really particularly difficult for the elderly people and people with disabilities, who live in torn and ripped and flimsy tents in sub-zero temperatures. (Mark Cutts, 2022)*

warm (e.g., if carpets, mattresses, and blankets get wet or if they are destroyed). Through evaluation activities following the project, 80 percent of respondents reported that the tent base provided protection from the cold.

During the design of this pilot, the organizational strategy was focused on supporting people at the individual and household levels. As such, broader interventions focused on community-level infrastructure and flooding mitigation through drainage network implementation were outside of the scope of this project.

## PROJECT DESIGN/STRATEGY

Following the winter of 2020, large-scale rainfall caused localized flooding events that impacted at least 192 informal camps. As a result, many households that had been recently supported with winterization packages lost their items due to flood damage. It was then decided to conduct a pilot project for tent leveling using the SNFI cluster technical guidance.

Given that a large proportion of the previous year's assisted IDPs in the area had been impacted by flooding and the increasing likelihood of flooding events moving forward, a project was needed that added a layer of protection to participants by mitigating the impact of flooding. The tent leveling modality offered a cost-effective solution that could be retrofitted to existing tents and makeshift shelters, allowing participants to remain in their current location – limiting disruption and onward displacement. While the tent bases are not a permanent durable solution, with an under-layer of polythene or similar acting as a dump barrier, they offer a significant improvement to the living condition of participants and could potentially provide a foundation on which incremental improvements could be made.

## IMPLEMENTATION

To move the project forward, the organization (based outside of Syria) contributed by providing technical shelter expertise and support, procurement assistance and advice (with the tender of the contractor and due diligence process), and remote monitoring and evaluation. The partner team (based in Syria) undertook stakeholder engagement, including with the regional government while also conducting Housing, Land and Property (HLP) assessments to ensure rights of tenure for participants. Once the project implementation started, the in-country team provided oversight of the entire process to ensure quality control and that humanitarian principles were upheld. In addition, the in-country team provided vital coordination with camp management and implemented the field monitoring and evaluation process which encompassed tent leveling quality checks that were conducted within two days of construction, Post Distribution Monitoring (PDM) activities that were conducted one month after installation and evaluation activities that were conducted six months after installation.

Through coordination with the Syria SNFI Cluster, camps with a need for core winterization and tent leveling support were identified. Post-identification, camp, and household-level surveys were conducted to understand the needs of the population within each area. Selection criteria were then applied within each camp to identify which individuals required support. This information was then shared back within SNFI Cluster for further coordination.

As this was the organization's first attempt to implement tent leveling support, a small caseload was identified (120) to ensure that improvements could be verified in all areas (e.g., camp and household identification, procurement, construction, and participant engagement) before committing to a larger scale intervention.

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*Tent leveling construction activities - (above) Building of the tent base perimeter with mortar blocks, November 2021. (below) Filling of the tent base with aggregate before the final cement layer, November 2021.*





Cementing of the tent bases, November 2021. Size of the different tents were measured, and the tent bases were constructed according to the tent sizes.

## TARGETING

A total of 120 families in two camps were selected by the partner in-country team based on the following criteria:

- Families living in IDP or refugee camp/tent settlements who were susceptible to flooding on their existing plots.
- Tent/shelter sites where tent bases would improve resilience and protection from flooding without resulting in a complete loss of household shelters and materials (to determine this, the in-country team conducted camp level and household level needs assessments to ascertain which locations and housing structures were most vulnerable to flooding damage if heavy rains were to occur, and then which households would benefit from a tent base construction).
- Families with critical shelter and household items need or few, if any, available resources.

## COMMUNITY CONSULTATIONS

- Needs Assessments were conducted at the camp and household levels to ensure feedback was incorporated into the project design.
- Follow up construction quality checks were conducted to ensure that each tent base was of high quality and to refer damages to the constructor (if any) that required repair.
- Post Distribution Monitoring was conducted, which helped the organization to understand the extent to which the project objective and outcome were met.

An evaluation was conducted six months after the construction of tent bases and included interviews with project participants and key informants.

As this was a new modality for both organizations involved, the pilot project offered a good learning opportunity. Community consultations during the needs assessment phase helped in the adoption of a flexible approach to the sizing of concrete base structures. There were also many touch points after the installation, where project participants were asked to provide feedback on the project activities. Feedback gathered through tent base quality checks,

PDM, and evaluation activities was instrumental in helping the organization shape the next project and ensured that the project design was appropriate to the needs of the affected population.

## MAIN CHALLENGES

- **Camp Selection for Tent Bases:** During camp assessments for the tent leveling pilot, it was recognized that tent sizes varied across camps. The initial use of rigid criteria for tent sizes as part of camp selection led to lengthy assessment times and difficulties in identifying suitable locations. Once tent base installation commenced, the in-country team and contractor adopted a more flexible approach, where the size of participant's homes was measured, and tent bases were constructed tailored to the tent size. The project's contingency budget was able to accommodate the flexible approach.
- **Tent base ramps:** During the construction of tent bases, several families were identified as having members with disabilities. There was concern that raising tents off the ground by 20cm would make access to homes more difficult. When identified post-construction, the in country team visited these families to offer the addition of a concrete ramp to ease access into the raised homes. While families shared that adding ramps wasn't a priority need at the time, the project team felt strongly that these ramps should have been an option for families before the construction.
- **Poor quality tents:** The in country project team identified several tents that required replacement or repair. While this information was shared with the coordinating body, it was not certain that they would receive this support in time for the wet weather. Tent base construction was successful in protecting households from flooding damage, but many people provided feedback that the poor quality tents were not fully protective from winter weather conditions. The team identified that adding in future interventions a complimentary tarpaulin to the tent leveling support may be a simple solution to help families in enhancing the weather resilience of their homes if needed.

## MATERIALS AND SUPPLY

The in-country partner engaged a civil-works contractor through a competitive procurement process, contracting out the tent base construction package. Once the team had conducted due diligence checks and was satisfied with the civil works contractor's policies and processes, responsibility for the following elements was passed on to the contractor: procurement of materials (cement blocks, gravel, and cement), transportation of the materials to the installation site and the labor required for the construction of tent bases. Contractor work was overseen by the in-country team and a construction foreman, ensuring it was delivered according to the agreed-upon specifications, timeframes, and quality.



Interior view of a tent after the construction of the tent base.

### TENT BASE CONSTRUCTION PROCESS

<b>Step 1</b>	Materials were delivered and unloaded at each tent location on the day of its construction to mitigate family obstruction.
<b>Step 2</b>	Families' belongings were removed from the tent. The tent canvas was then either rolled up from the ground or the entire tent was disassembled.
<b>Step 3</b>	The tent base outline was measured and marked out.
<b>Step 4</b>	The surface of the ground was cleared of any rocks or debris to place the gravel and blocks.
<b>Step 5</b>	A layer of fine gravel was laid and leveled to provide a base for the concrete mix and blocks.
<b>Step 6</b>	A string line was set to mark the height of the base. The blocks were placed and fixed with concrete.
<b>Step 7</b>	Once the block layer was complete, the concrete was left to cure before the addition of gravel.
<b>Step 8</b>	Once the concrete was cured, a 15cm layer of coarse gravel was placed and leveled within the base.



Survey results and KIs indicated that eighty percent of the people felt the tent base did a good job at providing insulation from the cold, and also highlighted the importance of tent bases are for families' health, wellbeing and flood protection.

## STRENGTHS, WEAKNESSES AND LESSONS LEARNED

### STRENGTHS

- √ **Evaluation results showed that the tent leveling support had a positive impact on people's health and well-being.** A total of 98 percent of families felt that the tent base improved how safe they felt during the winter months, 96 percent said that the tent base had a positive impact on their wellbeing and 100 percent said that the tent base helped to protect their and their family's health. However, separate lines of questioning highlighted that the tent base didn't provide complete protection to health and wellbeing, with 14 percent of respondents saying that flooding caused damage to family members' health.
- √ The tent bases were constructed in November 2021 ahead of any heavy rain and flooding events. Six months later, 96 percent of respondents stated that the tent base had fulfilled **its purpose of preventing flooding damage throughout the winter season.**
- √ The tent leveling cost is USD 70 per tent base and can be constructed within one day. Given the positive evaluation of the participants, the organization deemed this to be a **good value for money.**
- √ **Engagement with project participants** at two days, one month, and six months after the initial installation provided valuable opportunities for feedback. Through feedback activities, the organization found that people were able to augment/improve their bases themselves. These augmentations provided further insight into how future projects may enhance effectiveness in meeting beneficiary needs.

### RECOMMENDATIONS MOVING FORWARD

- A ramp was added during installation for those identified as having mobility challenges and/or those who would benefit from a ramp.
- A single tarpaulin and a rope were given to each household during installation to enhance the weather resilience of existing tents and mitigate potential water ingress.
- A skim layer of concrete was added during installation to improve household comfort and weather protection.



### FURTHER READING ON SHELTER PROJECTS

On **Syrian Arab Rep.:** [A.23 / SYRIAN ARAB REP. 2019-2020;](#)  
[A.31 / SYRIAN ARAB REP. 2018;](#) [A.8 / SYRIAN ARAB REP. 2011](#)

On **NFI distribution:** [A.9 / PARAGUAY 2019-2020;](#)  
[A.10 / PHILIPPINES 2013-2015](#) [A.4 / CUBA 2012](#)

On **Winterization:** [A.4 / NEPAL 2015](#)

### WEAKNESSES

- × When providing tent leveling support, **the condition of tents should also be addressed**, either with tent replacements or with additional tarpaulins to make repairs.
- × **Access to the tent base** (20cm off the ground) for people with disabilities was not initially considered within the tent leveling design.
- × **The initial use of rigid criteria for tent sizes as part of camp selection led to lengthy assessment times** and difficulties in identifying suitable camps. A flexible approach to sizing is recommended in future projects.

### LESSONS LEARNED

- The project highlighted the importance of incorporating the needs of people with disabilities within the tent leveling design. People with disabilities should be identified before construction and consulted on whether there is a need for adjustments to the tent base to allow for easier access (which is raised 20cm off the ground).
- While the tent base was effective in protecting peoples' homes and possessions from flood damage, feedback was received that shelters would leak due to the wet weather. Further considerations should be made on shelter resilience to wet weather, in addition to any vulnerabilities that may exist regarding flooding.
- Most people have either added, planned to add, or wished to add a layer of cement to their tent base. The purpose of this was to improve weather protection and improve the comfort of people living on top of the base. A concrete layer could thus be added to the initial construction of the tent, to avoid participants having to spend this money themselves when they have competing priority needs and to improve overall impact. Incorporating this cement layer during construction will also ensure that the design meets high-quality standards and that the improvements are made ahead of any potential flooding.
- Although only a relatively small number of families added additional bricks to the perimeter of their tent base (e.g., raised wall), half of the respondents felt this was something that should be done at the point of construction. It is recommended that future projects consider adding additional bricks to the perimeter of the tent base at the point of construction.