

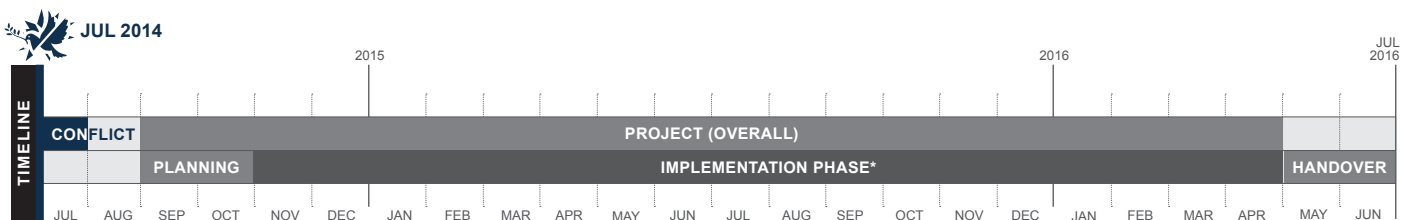
CASE STUDY GAZA (PALESTINE) 2014-2016 / CONFLICT

KEYWORDS: Transitional shelter, Cash assistance, Infrastructure, Training, Guidelines

CRISIS	Israel-Hamas conflict in July-August 2014.		
TOTAL HOUSES DAMAGED	160,000 severely or partially damaged	11,000 totally destroyed	
	(Source: Shelter Cluster factsheet).		
TOTAL PEOPLE AFFECTED	974,700 individuals.		
PROJECT LOCATIONS	Khan Younis, Rafah and Middle Area governorate, Gaza strip, Palestine.		
BENEFICIARIES	484 households (2,831 individuals).		
PROJECT OUTPUTS	470 Transitional Shelters (344 small, 98 medium, 13 large, 14 two-story, 1 pilot). 235 conditional cash grants.		
SHELTER SIZE	44m ² up to 7 persons, 53m ² up to 10 persons, 62m ² for 11 or more, 80m ² (two-story shelter for extended families).		
SHELTER DENSITY	More than 5m ² per person.		
MATERIALS COST PER HOUSEHOLD	USD 4,600 (average).	PROJECT COST PER HOUSEHOLD	USD 6,600 (average).

PROJECT SUMMARY

This project provided 470 transitional shelters to the most vulnerable households in Gaza, whose homes were completely destroyed in the conflict, but had sufficient rubble-free space on their land. This assistance allowed beneficiaries to return to their neighbourhoods to begin rebuilding their permanent houses, while living in an adequate, safe and dignified shelter.



*The project was implemented in different phases, depending on different sources of funding. However, the main steps were:

- 1) Project publicly announced.
- 2) Home verification visits.
- 3) Selection of most vulnerable households.
- 4) Shelters completed and inspected by staff.

STRENGTHS

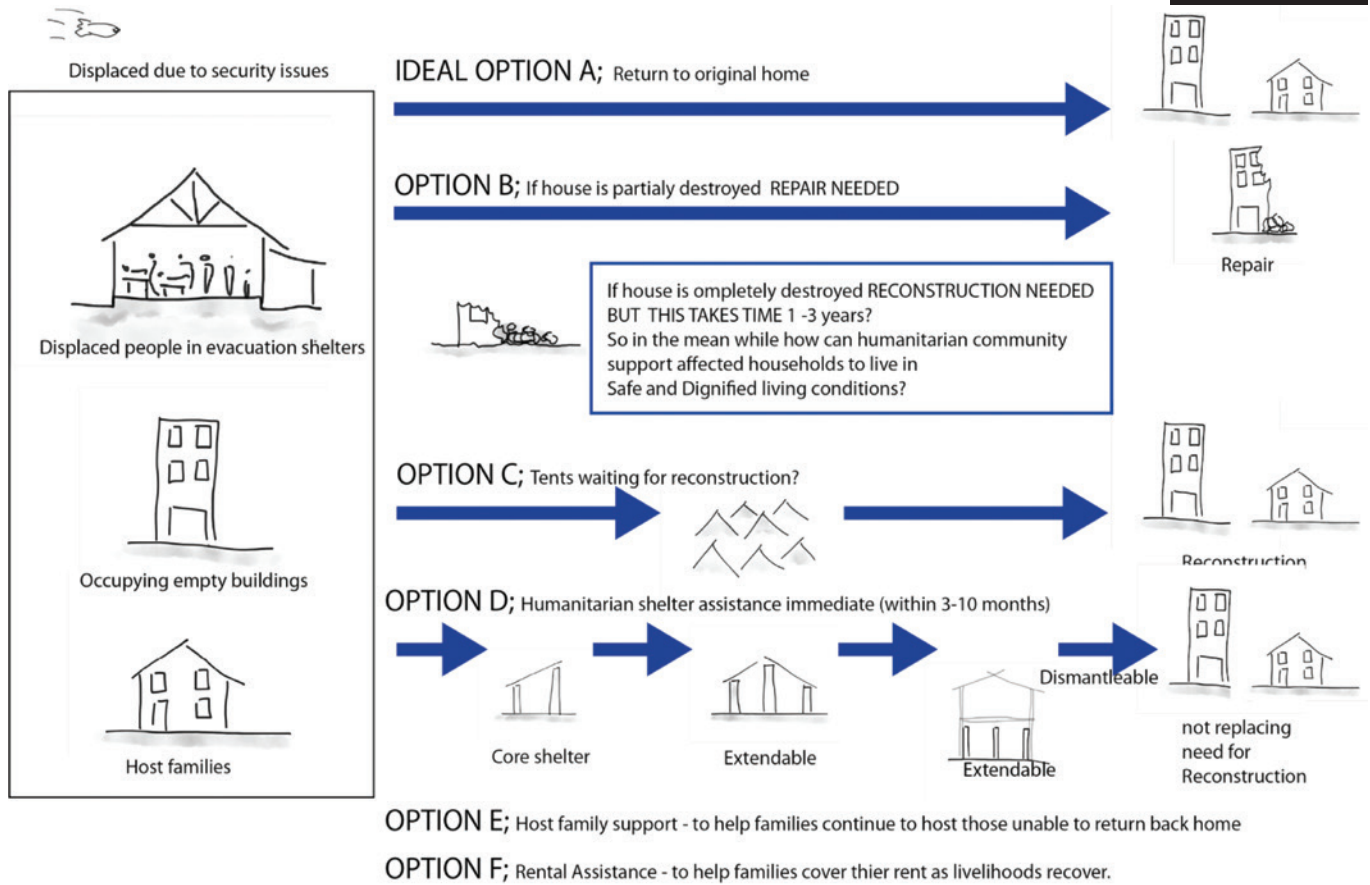
- + Online registration and mobile-app surveys.
- + Durable solution using available materials.
- + Different shelters for a range of family sizes.
- + Hotline and email address for feedback and complaints.
- + Shelters built on beneficiaries' original plots.

WEAKNESSES

- Limited scale compared to needs.
- Long implementation time.
- Some design/building constraints due to limited budgets.



Project staff consulted beneficiaries in order to determine the orientation of the shelter according to their preference, and to sign the contract.



The humanitarian shelter strategy included a menu of options. The project chose to provide transitional shelter support between emergency phase and reconstruction.

BACKGROUND TO THE CRISIS

Fifty-two days of intense fighting in July and August 2014, between Israel and Hamas, caused massive loss of life and infrastructure damage throughout Gaza. The incredibly dense urban environment, coupled with Israel’s belief that Hamas was operating in civilian areas, caused significant impact on civilians, infrastructure and land. During the conflict, the Israeli forces instructed the population of Gaza to evacuate a 3km-wide zone. This area was subject to bombardment, and then land forces caused further destruction of houses and property. Many people evacuated to stay with relatives and friends, while others found refuge in collective centres, mainly schools. Given the urgency, people left their homes with minimal possessions.

SITUATION AFTER THE CRISIS

Before the conflict, the majority of homes were built with reinforced concrete and concrete blocks and had access to public services, such as water and electricity. The conflict damaged or destroyed many homes. People either stayed with host families (usually relatives), or constructed make-shift shelters on their land, next to the remains of their house. Some households rented private apartments, but rental space was very limited and anecdotal evidence estimated that prices had doubled since the conflict. Long after the conflict, the majority of affected people remained in approximately 19 collective centres, as well as in rented accommodation and with host families. A minority moved to individual shelters.

Given the time needed to raise the capital for reconstruction and the procurement restrictions in Gaza (e.g. cement and reinforcement bars), people needed a more durable shelter solution until they had the materials and funds to rebuild.

NATIONAL SHELTER RESPONSE

A joint shelter survey was undertaken, to identify the level of damages and needs and inform the reconstruction process. The Shelter Cluster supported the provision of household NFIs and hygiene kits, as well as emergency shelter materials to support individuals in collective centres and those with host families to provide some basic level of privacy in crowded conditions. Materials were also provided to seal off damaged houses. Various forms of assistance for basic repairs and temporary accommodation were provided. Some agencies imported steel caravans (modular buildings) as transitional shelters, which in some cases generated complaints for lacking privacy and adequate drainage, being cramped, too hot in summer and too cold in winter. There were cases where people refused this form of assistance.

BENEFICIARY SELECTION

Through public announcements, household visits and community meetings, the target communities were informed about the project and affected households were invited to register their interest. Beneficiary selection was based on an initial set of criteria:

- House completely damaged and uninhabitable.
- Family owned the land, or had written permission to live on it for at least two years.
- Sufficient space in the plot to build the transitional shelter.

This required various levels of verification, and there were some cases of false documentation, which, amongst other issues, slowed the beneficiary selection and consequently the construction process.

The selection then proceeded on a case by case basis, using criteria based on both pre-existing and conflict-related



Timber-frame buildings were built on a platform with a plywood floor. From left to right, top: 1. Laying the foundation and ground beams for the transitional shelter. 2. Installing plywood layer over the ground beams. Bottom: 3. Fixing the external wall cladding with screws. 4. Contractor staff placing CGI roofing on the shelter.

vulnerability factors, developed by the organization in collaboration with local communities. These included households with people with disability, young children, female-headed households and low-income households.

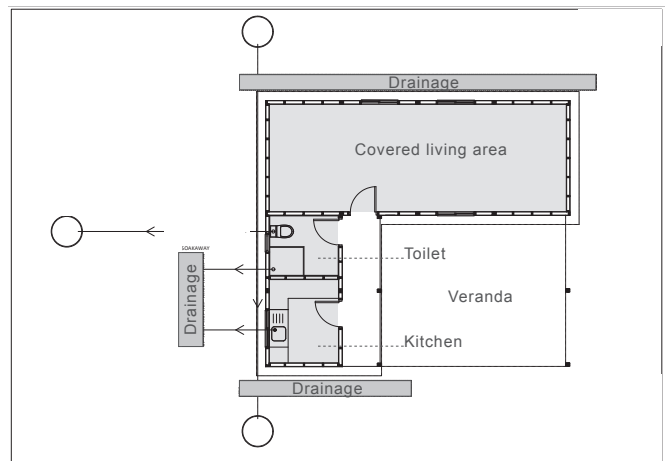
PROJECT IMPLEMENTATION

The organization and a local partner developed the designs for the shelters through a series of workshops and consultations with the community, before beneficiary selection. A pilot building was constructed for the community to review, and was followed by a technical evaluation, to allow the most efficient, safe, and culturally appropriate construction process to be agreed upon. Extensive feedback sessions with community members also confirmed the agreed solution.

Because of the embargo on most building materials other than timber, the organization decided to use a timber frame structure. **The organization then employed a consultant** with experience in timber construction, to assist the procurement and implementation of the project. Timber construction was not common in Gaza and, due to the available time and skills, as well as for quality control, the wooden panels were assembled off-site, and construction done using a **building contractor**. This was selected through a competitive tender process and training was provided by the organization and the consultant. Once the first shelters were built, the contractor worked independently, with supervision from the organization and partners.

The timber frames were constructed in a workshop and then transported by truck to the site. Once erected, the cladding, flooring and roofing materials were delivered and fitted to the frames. Other building trades, such as electricians, plumbers and dry-lining wall fitters completed the building. This **combination of on- and off-site** method of working allowed for greater speed, efficiency and quality control.

While the organization supplied the buildings, **households were responsible for constructing or connecting to a septic tank**, as well as for other enhancements. A user manual



The project built shelters of different sizes, to adapt to the different family sizes. Shelters included a bedroom/living area, a toilet, a kitchen and an open veranda, that could be used to expand the covered space, by adding walls. People had to take care of the external sanitation system, e.g. septic tank.

was developed for the buildings, and all families were provided information and training on fire safety. The contractor was required to supervise their workforce, while field engineers from the organization oversaw the works and liaised with households and the larger community. The organization also assisted with monitoring and technical support, including all design and engineering, quantity surveying, and financial administration.

A conditional cash grant of USD 500 was also provided to 235 households to enhance their shelters, its amount defined following a market assessment. This component was added at a later stage only for some of the shelters, as funding was received in separate tranches. This form of assistance gave households freedom to choose and install shelter improvements, such as false ceilings, wall partitions, electrical network, CGI roofing in the courtyard, sinks, showers, tiling for toilet, kitchen shelving, window screens and water tank stands.



Some people were able to extend the shelters, by closing the open sides of the veranda.

SHELTER DESIGN

Each shelter consisted of three rooms – a bedroom, a kitchen and a bathroom – and was designed to meet cultural needs and expectations, especially privacy and dignity of women. This led to a density of more than 5m² per person, above recommended standards. Moreover, the shelter was specifically intended to be upgraded, extended and re-purposed after the estimated life span of five years. The L-shape design with the veranda allows households to easily construct perimeter walls using timber posts and sheeting material, to expand the living space and allow greater privacy and freedom of movement for women. Examples of modifications included installation of electricity, addition of room dividers, construction of external walls, lining of ceilings, landscaping around the shelter and a variety of other decorative and functional upgrades.

INVOLVEMENT OF AFFECTED PEOPLE

Key informant Interviews with community leaders, other shelter actors and beneficiary households were undertaken and project details were shared through the Shelter Cluster. Focus group discussions (including female groups) were held to discuss shelter needs, designs, and implementation approaches, and the pilot construction facilitated direct discussion and feedback from the beneficiaries. Feedback could also be collected through an email address provided to the families and a toll-free hotline.

Moreover, the organization and partners made regular home visits to beneficiaries, to ensure that they were kept informed and to help with any issues or requests, such as works schedules and where to construct the shelter in the



Given the risk of wooden structures catching fire, shelter owners were given fire safety trainings and were provided with fire extinguishers.

plot. All family members were involved, including children. Gender-balanced teams of trainers allowed both men and women in the family to participate.

RISK MITIGATION

Training was provided to avoid risks associated with unexploded remnants of war and also hazardous waste, such as asbestos. The organization initially considered using rubble for construction, but was advised against and therefore avoided using it. The project included the distribution of fire extinguishers and electric lanterns and delivery of fire safety training to all shelter beneficiaries, to reduce fire hazards and improve safety.

MATERIALS AND PROCUREMENT

Procurement was done locally, since materials could only be purchased in Israel. This was a major constraint for the programme and there was little option to query to the environmental sustainability of the sources. The reliable supply of materials was indeed a major threat to the success of the project. While timber was not initially restricted, later the availability of large-section timber was prohibited. The programme overcame this by redesigning timber frames that could be made by fixing timber studs together to obtain the required size.

TECHNICAL SOLUTIONS

The project used an adaptation of modern platform-timber-frame construction, where the panels are the load-bearing structure – as opposed to the post-and-beam technique. The shelters were built with floor frames (a frame of floor joists) covered with a decking material, which created the platform. The walls of each level were then fitted to the platforms. To meet the challenge of limited space, two-storey buildings were constructed using this approach. A timber frame structural engineer checked all the designs prior to implementation.

WIDER IMPACTS

This shelter model was highly demanded, as it was viewed as one of the best transitional options in Gaza, while many communities rejected other alternatives such as caravans. By providing a solution to live on their properties, the project also allowed people to restart livelihood activities and rebuild financial and social safety nets within their neighbourhoods of origin, hence supporting recovery.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



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The timber-frame construction was new to the country, thus an experienced consultant was hired and, with senior staff from the organization, supervised the contractor.

STRENGTHS

- + **Online registration for beneficiaries** was developed, to avoid the lengthy hard copies application process, and the beneficiary lists were shared with partners to avoid duplication.
- + **The use of timber provided a durable solution using available materials.** This provided optimal space and thermal comfort unlike other shelter options.
- + **Satisfaction surveys on mobile devices** provided a fast and efficient means of information and data collection.
- + **Choice was given to beneficiaries** through the cash grants for shelter enhancement.
- + **Variety of shelter sizes** ensured that the programme catered equitably for a range of family sizes.
- + **A toll-free hotline and email address** allowed a discrete and efficient feedback and complaints mechanism. Complaints were mainly about delays in people’s applications or non-selection as beneficiaries.
- + **The transitional shelters were built on the beneficiaries’ original plots,** helping them restart livelihoods.
- + **Beneficiary willingness to invest in the shelters** with additions and enhancements was a strong indication of their commitment to living in the shelters and to using them for their intended purposes. Two years after the project, the shelters were still used by those who were unable to rebuild.

WEAKNESSES

- **Issues with the design** became apparent during the construction, such as the limited internal height. The design has been altered for future responses.
- **The programme did not include external sanitation systems** and required households to be responsible for this. The design provided for a septic tank was not suitable, the cost presented a constraint for low income households, and the availability of materials was a challenge.
- **Limited scale and long implementation times.** Due to the narrow funding, the project had to prioritize beneficiaries, although in fact all affected households were in need of shelter. Even if the transitional shelter solution was not expensive per se, procurement delays – coupled with the decision to achieve a high level of durability and quality for large, extended, families – caused the project to be relatively slow and reach only a limited number of households.

MATERIALS LIST

- White wood for the main framework	- Vinyl for the Kitchen and bath
- Flooring plywood 17mm thickness	- Aluminium windows and doors
- External cladding from wood (Tongue and Groove)	- Tarpaulin
- Internal cladding (Normal Gypsum boards)	- Nails and screws
- Corrugated Galvanized Iron (CGI) for roofing	- Painting material
	- Sink with stand
	- Toilet bowl

LEARNINGS

- **Communities should be involved early on,** and the shelter model should be considered earlier in the process.
- **The organization improved efficiencies and gained significant insights** through this project, such as developing a strong working relationship with the contractor, which helped building its capacity and efficiency.
- **The selection process was refined** based on lessons learned from this project. Given the extensive need in heavily affected border communities, it was challenging to select the most vulnerable people. **A more nuanced scoring criteria** was developed for future projects that takes into account factors related to socio-economics, health and economic assets.