

# GAZA

## Promoting Local Solutions for Emergency Shelter and Recovery



**PROJECT DESCRIPTION**

**Project location:** Middle Area Governorate, Gaza

**Conflict:** Gaza emergencies

**Project Duration:** July 2017 to December 2018 (18 months)

**Target Population:** All conflict-vulnerable households in Gaza

**Project Budget (USD):** \$207,823

**Donor:** Caritas Germany & CRS Private Funds

**Partners:** Bayader for Environment and Development Association (Bayader)



**13%** of housing severely damaged or destroyed

**What did CRS do?**

With generous funding from Caritas Germany, CRS and local partner Bayader designed a flexible shelter response strategy to assist Gazans in the event of another conflict. The response included both physical and cash-based solutions that respond to the distinct needs of each family. To determine the best physical shelter solutions, CRS and Bayader held a shelter design competition whereby contractors, architects and engineers, recent graduates and students submitted drawings for emergency and transitional shelters. CRS constructed the top two winning designs along with a third 'mixed' prototype to test alternative construction materials and techniques proposed in other submissions. Construction of the three prototypes was completed in June 2018.

**Background**

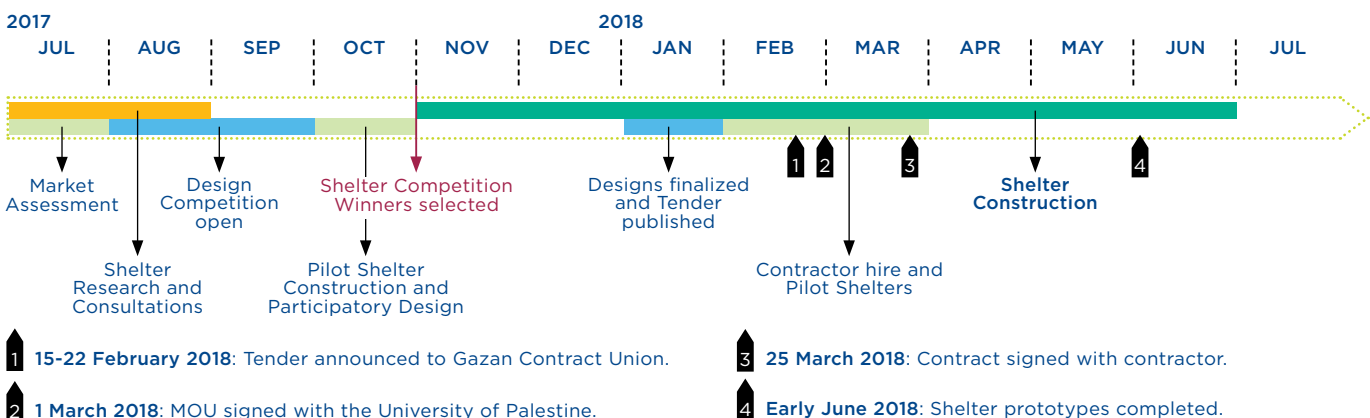
Over the last decade, three large-scale conflicts with Israel have resulted in profound human loss as well as damage to infrastructure and tens of thousands of homes. In these emergencies and post-conflict recovery, shelter was a key need for Palestinian families. In the most recent 2014 conflict, an estimated 13% of housing in Gaza was severely damaged or destroyed, leaving 108,000 people internally displaced and in need of shelter. At peak periods during the conflict, approximately 500,000 internally displaced persons (IDPs) had

to take shelter in public areas, such as schools and other public buildings. Tensions remain high between Gaza and Israel with demonstrations from the 'Great March of Return' continuing several months later. Many actors agree that another large-scale conflict is likely to occur.

**Problem Statement**

Despite the involvement of numerous actors, Gaza Shelter Cluster members identified key gaps from the 2014 response. They included: insufficient coordination among humanitarian actors; mixed adherence to agreed sectorial strategies and standards; overly complex coordination mechanism with governmental authorities; information gaps from the housing damage assessment; insufficient coordination and communication with communities; poor beneficiary targeting; slow transition from temporary to permanent solutions; constraints related to the Israeli blockade on material imports; and donor constraints. These gaps ultimately led to a slower, less effective response to families' needs, particularly unmet physical and cultural needs in shelter interventions in the 12 to 18 months after the conflict. CRS understands that the post-conflict context is dynamic with an uncertain supply of construction materials resulting from the Israeli-led air, land and sea blockade. These conditions require a flexible and adaptable approach to respond.

**Project Timeline**





## Project Approach

### Assessment and Research

CRS researched and developed a flexible shelter response comprising different options such as emergency and transitional shelter designs and cash-based assistance including vouchers and rental subsidies. A flexible shelter response allowed CRS and its partners to implement readily available shelter solutions designed for a dynamic context. CRS aimed to fill the gap in emergency preparedness by planning well ahead of the next conflict. This preparation will increase both the speed and effectiveness at which CRS, partners and other shelter actors can respond, ultimately helping more families to recover from conflict.

In July and August of 2017, CRS carried out a Rapid Market Assessment to understand the available materials and local preferences, as well as Key Informant Interviews with the most active Shelter Cluster actors to map interventions and lessons learned from other agencies. CRS also conducted five focus group discussions (FGDs) with affected communities to understand their shelter experience following the last conflict, including the coping mechanisms of displaced persons and host families and communities' use of cash assistance.

The assessment revealed that families were often displaced multiple times by the conflict. To meet their daily needs, they often took on debts, sold personal belongings, relied on local NGOs, religious institutions, political parties and community focal points, and/or received support from relatives and friends.

Families showed a clear preference for returning home and repairing damage. Where that was not possible, rental subsidies were offered. In cases where rental subsidies were not possible, families from rural contexts preferred transitional shelters, while urban families preferred living in (and completing) unfinished apartments.

Other families preferred to live in tents on their own land or in damaged homes with makeshift repairs (sealing broken windows/walls with tarpaulins) rather than stay in schools or with host families, as it provided greater privacy.

These findings underscored the importance of designing a flexible shelter solution that could adapt to a dynamic environment where various construction materials may be scarce or even non-existent.

### Shelter Design Competition

From August 2017 to November 2018, CRS and Bayader held a shelter design competition across Gaza to come up with a physical emergency and transitional shelter solution. To ensure good community engagement with the competition, CRS and Bayader held information sessions at universities, distributed flyers, posted on media, met with local community leaders and with local engineering syndicates. Contractors, architects, recent graduates and students were invited to submit shelter designs. Applicants were encouraged to submit shelter concepts that responded to their distinct needs as well as to the local context and availability of local materials.

A selection committee judged submissions based on criteria such as innovation, cost and gender-responsiveness (i.e. privacy). The committee was composed

of engineers from CRS, Bayader, Norwegian Refugee Council (NRC), UNRWA, the Gazan Engineering Syndicate, as well as two community leaders.

Out of 96 submissions, the selection committee shortlisted 12 finalists for phase 2 of the competition. CRS met with each of the finalists to discuss their ideas and provide guidance for improving their designs ahead of the next phase of the competition.

In November 2017, CRS hosted a full day event aimed at selecting the winning designs. The 12 shortlisted candidates presented their designs and fielded questions from the selection committee and community members. After the presentations, the community and selection committee members voted for the top three designs.

Prizes for the winning designs included a cash prize, or the combination of a cash prize and short-term consultancy. CRS also provided a small honorarium to the short-listed candidates, to help compensate for the shelter design presentation and competition. The two winners who chose the combined prize collaborated with CRS and Bayader to refine their shelter designs based on feedback from community members, before constructing full-scale prototypes. Thermal comfort was an issue frequently raised by families who had lived in transitional shelters, so the refined blueprints incorporated features for greater airflow intended to increase thermal comfort.

### Prototype Construction

In March 2018 the University of Palestine (UoP) loaned a parcel of land for the construction of the shelter prototypes. To allow for greater experimentation with alternative construction materials and building techniques, CRS and Bayader opted to construct the top two winning designs and add a third experimental design that used different building materials and techniques - such as sandbags, gabions and greenhouse - not previously used for shelter construction in Gaza. These materials were chosen based on cost and availability per the parameters of the shelter design competition.

Item	Prototype1 (winner)	Prototype2 (runner-up)	Prototype3 (exp.)
ConcreteHollowBlock (new or salvaged)	✓		
Green Cake block	✓		
Galvanized Steel for columns, beams and purlins	✓		
Whitewood	✓		✓
OrientedStrainBoards (OSB)	✓		
Aluminum Sliding Windows	✓	✓	✓
Aluminum Doors	✓	✓	✓
External Door	✓	✓	✓
CorrugatedGalvanized Iron Roof Sheet (CGI)	✓		✓
Plywood		✓	
PVC Tile Roof Sheet		✓	
Earthbagsandtyingcord			✓
Gabion and tie-bars			✓

Table shows the core construction materials used for the three prototype designs. Credit: CRS

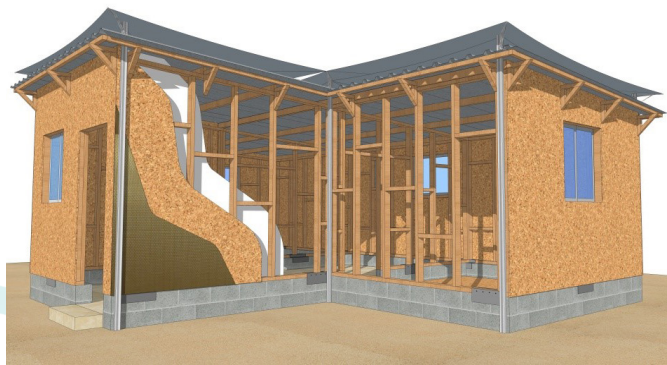
## Shelter Prototype Feedback

CRS and Bayader led eight FGDs to capture community feedback on the three prototypes. Each FGD was held in the shelters' living rooms so participants could experience the thermal conditions first-hand. FGD findings revealed that men and women alike prioritized thermal comfort and appreciated the high-quality materials used in prototype 1. Women focused on the quality of the flooring (rigid floors), while men focused on the options for expansion to accommodate additional family members.

## Design Improvements and Dissemination

After the design competition, CRS worked with the winning designs to make them suitable for incremental construction. This was in response to the need to be able to construct 'emergency' shelters that can become long-term solutions through upgrades and additions. Alongside this work, CRS developed an Emergency Preparedness Operations Manual (EPOM) for shelter responders which included recommendations on design based on the winning shelters.

The aim of the EPOM is to serve as a resource to assist in the initial stages of an emergency shelter response in Gaza, providing emergency responders with an overview of emergency and transitional shelter programming tools, templates and resources developed and used during CRS' shelter response work in the Gaza Strip from 2014-2018. It is organized according to the phases of an emergency response: design, start-up and implementation. EPOM also includes a menu of options for shelter programming to allow flexible response depending on target population, location, preferred implementation modality, etc.



1st place design (top) and construction of the 1st place design (bottom).  
Photo: CRS

## Learnings & Recommendations

**Scaling up and applying to new contexts:** Transitional shelter blueprints were drafted, tested, and refined through a participatory process. The resulting innovative designs and building techniques could be used in other contexts where resources are scarce or where delayed reconstruction efforts necessitate more durable solutions. If successfully scaled, the pilot shelters can help ensure that CRS, partners, and other actors are prepared to meet the needs of conflict-affected families in a dynamic post-conflict context in Gaza. Additionally, the very process of a community-led shelter solution could be applied in other contexts.

**Balancing cost and quality of transitional shelters:** The cost of the winning transitional shelter designs (approximately \$5,000 USD) may present challenges in securing sufficient funds for a large-scale intervention. On the other hand, lower-cost design options of lesser quality may dissuade beneficiary households from accepting transitional shelter assistance, for fear the shelter won't last until reconstruction is an option. This can result in more pressure on host families or collective centers. Due to recent experience with delayed reconstruction efforts in Gaza—with some families still awaiting assistance four years on—the constant refrain is that transitional shelters need to be durable enough to last a minimum of 3-5 years.

**Over-representation of transitional vs. emergency shelter designs:** The project was initially looking for incremental designs that could be used from the emergency through the transitional/recovery phase. Most participants submitted transitional shelter designs and only a few submitted emergency designs. This created an unbalanced competition with most people favoring the more sustainable/durable transitional shelter designs. As such, CRS worked to transform the final design into a "phased" shelter design: a shelter that can first serve as an emergency shelter and then be upgraded to a transitional shelter using additional "phases" of assistance.

**Preparatory measures for more accurate pricing:** While pricing was part of the evaluation criteria, innovation was prioritized. Additionally, the overall costs of submission were underestimated by both the applicants and selection committee—mostly because costs were estimated based on initial drawings and design ideas. In the future, a market assessment conducted before the competition would provide the selection committee with more accurate (approximate) materials costs, and thus allow them to better evaluate the designs to ensure they are within the accepted price range.

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