PAKISTAN

Participatory Village Planning

HUMANITARIAN RESPONSE CASE STUDY 16

CRS
CATHOLIC RELIEF SERVICES

PROJECT DESCRIPTION

Country: Pakistan
Project location: Jacobabad district, Sindh
Disaster: Monsoon floods
Disaster date: 7-11 September 2012
Affected population: 4.85 million people were affected by the floods, with around a fifth of those affected living in Jacobabad (940,000 people)
Target population: 4,970 households (31,002 people)
Output: 5,167 shelters by mid-2014 (some families received two kits). 77 villages site-planned
Occupancy rate: 100%
Shelter size: 12ft x 19ft (21m2) housed a family of six to Sphere standards
Material cost per shelter: Materials and labor: US$ 380. Total costs: US$ 748

What did CRS do?

Flooding in 2012 in Pakistan's Sindh province affected affected an area near where CRS was already working on a previous flood response, so CRS teams were able to mobilize rapidly to provide 5,167 families with transitional shelters that were quick to build. The shelters conformed to Sphere standards, incorporated Disaster Risk Reduction elements, and were built in three rounds of construction. Following the emergency response, CRS introduced village site-planning to improve village resilience to inevitable future floods.

Background

In early September 2012, Jacobabad district was flooded due to heavy monsoon rain. Many houses collapsed, and people were forced to live in tents, emergency shelters or under the open sky. Around 89% of the population was affected.

Before the flooding, houses in this district were built from mud bricks, and village spaces had typically been organized in a haphazard fashion, making them more vulnerable to the effects of natural disasters. For example, narrow pathways between shelters meant that walls were susceptible to rain draining-off from neighboring roofs, and people had more difficulty to evacuate quickly with their livestock and assets. In addition, some shelters were built far from water sources or had verandas oriented southward, limiting their protection from the summer's sun. Moreover, some villages' composition had a negative social impact on women's freedom to move within their own community.

"We constructed our shelters according to our village settlement plan and now our animals and property are more safe and secure from thieves."

– A community member

Problem Statement

After the 2012 floods, the affected communities resided in tents or emergency shelters, or were living under the open sky. After several years of repeated flooding, communities were reluctant to rebuild their mud homes as the investment of time and resources risked simply being washed away, again. Also, many people were not able to afford pukka (burned brick) houses and faced eviction by the landowners at any time. This meant that most people had been constructing thatch houses that could easily be transported with them if they were forced to move. Tribal conflict is endemic in the area, which sometimes limited access for help and to markets.

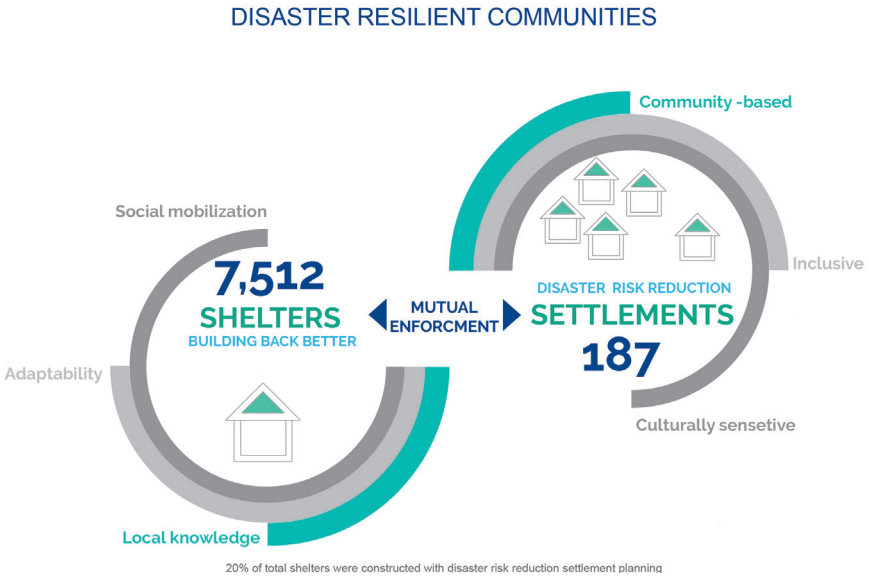
The Government of Pakistan established the National Disaster Management Authority (NDMA) in August 2007 to take the lead in responding to emergencies and disasters, with responsibility for preparedness, response and reconstruction. The NDMA played a coordinating role, working with INGOs and NGOs, and took responsibility for communicating government policy regarding implementation on the ground. The Shelter Cluster focused on the implementation of low-cost, timely shelter construction.

Community site planning involved using small models of houses and infrastructure to help design a new village layout.

Photo: FE Altamash / CRS

Project Implementation

CRS adopted a self-help approach and implemented the project in partnership with a local organization Pakistan Rural Initiatives for Emergency Preparedness, Response and Development (PREPARED), with CRS providing technical guidance and monitoring the field activities. The project team was made up of four CRS staff and 10 local implementing partner staff. The activities were carried out in small clusters of villages at the same time, with the clusters all located within the same Deh (smallest administrative unit). The Dehs were prioritized by need, with those that had the greatest need receiving support in the first of three rounds of construction. A demonstration house was built in each community as a training aid.



Disaster Resilient Communities.
Credit: Waad Tammaa / CRS

Communities identified individuals best suited for construction training and, if no suitable person could be found, a carpenter was brought in from the surrounding area to support them. CRS and a partner field engineer then provided a one-day training for the carpenter.

The trained carpenters built the core of the structures, and were paid 1,000 Pakistani Rupees (PKR), or about US $10, per shelter. The community provided the unskilled labor—mud plastering, plinth construction—required to complete the shelter, with those families who were unable to contribute any labor for their shelter given PKR 600 (US $6) to pay for two days of unskilled labor.

Each family received vouchers worth $375 for construction materials, which they would redeem with pre-identified suppliers, whose warehouses acted as a distribution point. Beneficiary families also received PKR 600 ($6) for transporting the materials. By managing the construction of their own home, families had a strong sense of ownership of the process and tailored the design to their specific needs.

The project also included a strong feedback mechanism, which involved a hotline, complaint boxes and face to face conversations during site visits. All feedback was transferred into a tracking sheet and responded to appropriately.

Site Planning

CRS and its partner introduced village site planning in December 2013 during the third round of construction, and eventually conducted the planning in about 77 villages (20% of the total number). Following an initial community sensitization about the project, each village was mapped, with key hazards and communal facilities identified.

The focus of the site planning exercise with communities was to focus on disaster resilience, but also to ensure that reconstruction plans accounted for other infrastructure requirements (hand pumps latrines, mosque, etc.) and also social elements (privacy, security, access, etc.). Considerations such as drainage during flooding, rain water run-off from the roofs, and village evacuation planning was also discussed with communities. Due to high levels of illiteracy amongst participants, small models of handpumps, shelters and houses were used in the mapping process.

In some communities, due to social barriers, women were excluded from the first round of planning, during which family male representatives made the initial settlement plan on large sheets of paper. In these cases, women's committees were established to ensure equal decision-making between men and women. Women's committees also provided a safe environment for women to freely express their opinions. During the planning exercise, the Social Mobiliser ensured that representatives of each beneficiary family were present, and that any land dispute issues were raised and resolved. The mobiliser also addressed issues such as security and privacy concerns, which were particularly important in villages where several different social castes lived together.

Participant Selection

CRS worked on the provision of shelters in one Union Council at a time. A Union Council (UC) is a small administrative unit, often known as a village council in rural areas. Those UCs that were most flood-prone were prioritized.

Within each UC and village, vulnerable families were identified in collaboration with community committees, according to a set of vulnerability criteria. This community-led process reduced conflict and disputes over who received assistance.

The project targeted families whose homes were completely destroyed or very badly damaged. Checks were made to ensure that families were not receiving duplicate assistance from another organizations. Families also had to be willing to provide labor for the construction of the plinth and plastering of the walls. Beneficiary registration was made on tablet computers which sped up the registration process and facilitated quick analysis of the data.

Coordination

CRS was active in the Shelter Cluster and coordinated with government agencies and other NGOs to adjust targeting for collectively achieving blanket coverage, and to avoid any duplication of efforts.

Materials

The only unfamiliar construction material introduced was the poplar pole. This was accepted by the communities without any problems. The final bill of quantities was determined by CRS' global shelter technical advisor, following the construction of a pilot shelter.

A market assessment based on the list of materials was conducted with local vendors in October 2012 to determine if a sufficient quality and capacity for manufacturing in Pakistan existed to supply all the materials. Organization logisticians selected vendors based on site visits to the suppliers to check the quality of the materials. Materials were mostly trucked in from Punjab since local materials were of low quality and not in sufficient quantity.

A just-in-time approach to procurement was necessary to avoid having large warehouse stocks of bamboo vulnerable to water damage during the monsoon season.

Disaster Risk Reduction (DRR)

Village site planning

CRS introduced settlement planning to communities to support them to help them become disaster-resilient. When families had selected their shelter site individually, it had often been done haphazardly and without coordination. By leaving narrow pathways between shelters, the walls became more susceptible to rain draining off from neighboring roofs, and people had more difficulty evacuating quickly with their livestock and assets. Some shelters had also been built far from water sources, and verandas which were oriented southward limited their protection in the summer.

As a condition for participating in the project, families were supported by CRS to identify safe plots. This included avoiding low-lying areas or areas near steep slopes with risks of landslides, sites next to busy roads, waste dumps or electrical lines, and plots too close to other buildings.

CRS then developed model shelters, hand pumps and latrines, and led settlement-planning exercises with communities to focus on disaster resilience techniques and ensure that village planning accounted for the needs of other infrastructure (hand pumps latrines, mosque) as well as key social elements (protection, privacy, security, access). The communities also considered drainage during flooding, rain water run-off from the roofs, and village evacuation planning. The process engaged both beneficiaries and non-beneficiaries of the shelter materials vouchers.

Wherever possible, planning sessions were attended by men and women. When this was not possible due to cultural reasons, separate feedback was sought from the female community representatives immediately after completing the exercise with the men.

Benefits of the village planning, as identified by participants, included:

- Increased security through better visibility of others' plots.
- Greater village cohesion through joint planning.
- Improved communal spaces, which created several new possibilities, including an area for shared storage of seed or tools.
- Women, who carry out most of the cleaning duties, reported reduced time needed to keep new shelters and plots clean and tidy.

Shelter design

DRR components in the shelter design included:

- Anchoring poplar poles for vertical support
- Posts embedded 2ft. (60cm) into the ground, with excavated pits backfilled with stones and/or well-compacted soil.
- Treating the bases of poplar poles with engine oil to protect against rot and insects.
- Strengthening vertical structural elements by horizontal bamboo beams to create a unified structural system. Diagonal bamboo corner braces attaching the vertical structural elements to the horizontal tie-beams further improved resistance to lateral loads.
- Securing the connections between poplar poles and the bamboo with nails and reinforced with rubber straps; strengthening critical connections with GI wire.

Wider Project Impacts

Some participants reported that they will continue to use the lessons they learned in future village developments, and any new families coming to the village will be educated in the advantages of good settlement planning. Given land tenure issues, many communities appreciated the fact that they could disassemble the shelter and take it with them in the event of eviction.

Building shelters on a raised plinth is one of the most effective ways of reducing damage to shelters during flooding. Drainage ditches were dug with stone or earth curbs dug around the perimeter of shelter to divert rainwater away from the house. A small number of non-beneficiary households replicated the technique when building their own houses.

Photo: FE Altamash / CRS

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