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## Low-cost, locally available shelters in Pakistan

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**Flooding in 2010 affected 18 million people in Pakistan. With declining donor funds and flooding again in 2011 and 2012, the humanitarian community required low-cost solutions that could be scaled up to meet both the immediate and the transitional needs of large populations in differing geographical areas.**

The approach of the One Room Shelter Programme that IOM (the UN Migration Agency) Pakistan implemented to meet the recovery needs of affected populations in 2010 marked a move away from the usual emergency response. It favoured vernacular building methods and working with practitioners and communities alike to achieve large-scale ownership of low-cost houses, and was able to help over 77,000 disaster-affected families to construct disaster-resilient shelters. The construction used local traditional techniques and materials, thereby minimising the adverse environmental and labour-related impacts of shelters that use industrial materials and fired bricks. By advocating for a locally produced solution, the programme took on two other major challenges: convincing humanitarian stakeholders to adopt new guidelines and effecting long-term behavioural change in communities.

### Constructing for disaster risk resilience

The overriding preference of humanitarian actors for using industrial materials for shelters stems from assumptions regarding the superiority of modern building materials over local materials and building traditions, ignoring the adverse environmental and social impacts of the former. The One Room Shelter model also gives scope for personalising the resulting shelter and can in effect mainstream disaster risk reduction (DRR).

The One Room Shelter is a low-cost, indigenous shelter solution with minimal environmental impact. Through detailed village-level training, the programme encouraged communities to adopt DRR techniques such as raising the plinth, reinforcing the base of the wall with a 'toe'

and using a low-cost mud-lime combination to plaster walls. This building method allowed women to participate in the re-construction of shelters, as opposed to the contractor-driven approach where industrialised materials were either handled directly by NGO teams or by builders. People's participation in their own recovery – 'self-recovery' – increased their ownership of and pride in the new shelters, evident in the decorations and designs on wall surfaces. The One Room Shelter programme demonstrated that locally appropriate, safer shelter solutions which capitalise on indigenous techniques and capacities can be implemented at low cost.

Achieving consensus and buy-in of national and provincial government counterparts and NGOs in the shelter working group regarding the proposed approach was a key challenge for the programme. It was widely considered, at the time, that such shelters were not *pukka*, that is, of good quality, but built in a traditional way and therefore not robust. Significant political back-and-forth between national and provincial disaster management agencies followed, as the realisation of the vast need and limited funding made the One Room Shelter approach more palatable.

During the pilot, aid recipients were given a range of options in terms of materials they could use. However, providing a choice of the materials to be delivered, detailed technical advice and capacity building was impossible to provide at a sufficient scale. IOM advocated strongly for households to choose a vernacular design that suits the local terrain and environment better than modern manufactured materials, and at a lower cost. Detailed data-collection exercises and consultations with technical stakeholders led to guidelines promoting

a mud-lime one-room structure as the model, adapted to the local context.

Nearly 11,750 community training sessions were carried out for over 500,000 individuals and community members including more than 130,000 women. Based on learning from the pilot, the training was explicitly hands-on and practical and was often complemented by building of demonstration shelters. At this scale, standardisation of the quality of training packages across implementing partners proved challenging but controls such as community focal persons, direct monitoring and complaints mechanisms ensured quality as far as possible.

### Community ownership through cash

In contrast to the standard modality for providing shelter materials, the programme provided direct cash support that enabled households to make choices regarding design, use of materials and the nature of the construction process while at the same time receiving technical training. Cash support was conditional on interim milestones in the construction process being met and tranches were paid out after quality assurance monitoring.

An evaluation of the 2011-12 programme found that respondents overwhelmingly used the cash grants exclusively for shelter construction. However, even though it also reported that the grants were sufficient, anecdotal evidence pointed to recipients having to spend extra for transportation of materials and procurement of additional materials, primarily doors and windows. However, this cash-based approach allowed people choice, supported the communities' own self-help capacities and contributed to the revitalisation of local markets and supply chains.

IOM utilised good practice from micro-finance projects and exchanged the One Room Shelter committee at village level for a focal point for each group of beneficiary households. This person was nominated by the people constructing shelters as someone they trusted to represent them with the local partner and IOM. This was found to be more effective in taking

advantage of peer pressure to ensure completion of all buildings within an agreed time-scale in a particular community.

Often this individual was a local leader – a local religious leader, teacher or businessman/woman. They had to be literate and be able to open a bank account. They received the cash payments on behalf of the group and distributed them. By having these nominated leaders undertaking the cash disbursement and monitoring progress, the programme greatly increased coverage to include women, the elderly, the disabled and others not otherwise able or, due to cultural constraints, not willing to be part of the programme.<sup>1</sup>

Local procurement was challenging for project participants in 50% of cases, primarily because of inflated material costs during the emergency, problems with transport and poor quality materials. However, in most cases, the involvement of community focal persons and NGO staff in local mediation and mass procurement on behalf of consenting communities mitigated these challenges.

The ability to build the shelters was also strongly influenced by the agricultural season, as households hard-pressed for financial resources could not afford to lose their main source of income. In most cases, this meant that women undertook much of the construction work while the men worked in the fields. Despite this, there was no reported community resentment of the self-recovery model. In fact, high levels of ownership were evidenced by beneficiaries even expending resources in personalising buildings.

### Conclusion

To strengthen the evidence base for future responses, the Shelter Working Group in Pakistan is undertaking research to understand the relative resilience, sustainability and acceptability of differing shelter types. This will enable them to provide scientifically tested guidance on low-cost shelter solutions that are flood-resistant, compatible with vernacular architecture and indigenous construction techniques, minimise environmental impacts

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and offer the best value for money, even though the question of durability has not yet been comprehensively answered.

The One Room Shelter strategy introduced a low-cost construction model to communities in rural Sindh who were previously unaware of flood protection measures, and using cash enabled them to ‘learn by doing’. When evaluated, the programme was said to have “met its objectives in general and [to be] universally appreciated by beneficiaries [...] especially women who are the traditional builders in southern Sindh”.<sup>2</sup> Interestingly, in addition to the programme’s achievements, there were a few anecdotal cases of women later complementing their incomes using masonry skills learnt during construction. In addition, beneficiaries talked about multiple DRR features that they had learnt about and applied during the construction process. However, evidence of, for example,

copying of the techniques of the One Room Shelter by people not receiving assistance remains limited. Nevertheless, this apparently successful ‘occupier-driven’ reconstruction process helped maximise coverage of the most vulnerable households; and similar implementation strategies continue to inform shelter recovery programming in 2017.

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