

Shade netting: simple design – effective relief

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NRC's simple but innovative shelter design provided relief for thousands of displaced people in Pakistan.

In the relentless heat of the Pakistan summer, with temperatures well in excess of 40 degrees centigrade, the heat inside the tents used by hundreds of thousands of those displaced during 2009's conflict in North West Frontier Province (NWFP) and Swat exceeded

temperatures within the tents. NRC looked at two main designs: flat or with a peaked (or central) ridge. After some testing, the flat roof proved to be the better design, providing more shading from the UV and light, meaning the tent underneath and the people in it stayed cooler.



Shade netting in Sheikh-Yaseen camp, Pakistan, provided relief for women and children.

a suffocating 50 degrees. The Norwegian Refugee Council (NRC) quickly responded by designing an innovative shade netting structure for the tents in the camps. In cooperation with UNHCR and the NWFP Emergency Response Unit, the new design was used widely across many of the camps and settlements.

NRC Peshawar Project Coordinator Roger Dean, who designed the shade nets, explains that: "With women and children in particular staying in the tents all day, dehydration, extreme fatigue and even loss of life were expected."

The design was simple but effective. The shade netting structure deflected the heat and glare of the sun, substantially lowering the

The peaked design would also have required a much taller structure with three extra poles, including a 3.5 metre pole in the centre. These small changes raised the cost and also made the structure more difficult for the displaced families to erect themselves. A central pole meant that the tent underneath would have been positioned within one half of the shelter rather than in the middle, resulting in less optimal shading of the tent as the sun moved during the day. The final important design feature was to ensure adequate spacing between the tents to encourage air flow.

Due to market availability, green agricultural netting was purchased locally. Whilst not the ideal material, it is still much more effective than

plastic sheeting. The cost ranged from 4,800 PKR (US\$61) to about 6,000 PKR (\$76) per unit, including all materials and the full tool kit.

The response from those who received the netting was overwhelmingly positive. "My children could sleep during the day and did not need to take a bath five times a day," said Soheila Khattak, a resident of Sheikh-Yaseen camp in Mardan, where the project was started.

This simple design intervention is an effective example of the Shelter Cluster generating a solution across the shelter providers in an emergency. The design was taken up by the cluster and rolled out across NWFP, with the support of UNHCR and the national authorities. Demand for the netting was high and, with the support of the Norwegian Ministry of Foreign Affairs and the Swedish International Development Agency, NRC alone supplied enough netting for over 2,000 tents.

The camps where NRC supplied the netting have now closed and the displaced have returned, with the focus of the international community shifting to recovery and the on-going crisis in Waziristan. Most of the IDPs took both their tent and the netting with them when they returned. Should a similar emergency occur in the future, however, there is no doubt that NRC will use shade netting again – and has in fact already looked at its use in its Somalia programme and the Dadaab IDP camp in Kenya, where sunlight and heat are a serious issue as well.

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