Flood Resilient Housing and Climate Resilient Settlement Development Plan (CRSDP)

Submitted By: Catholic Relief Services (CRS)/Sindh Housing Recovery and Reconstruction Platform (SHRRP)



Organization Profile

Organization Name: Catholic Relief Services (CRS)

Organization Type: Civil society

Website: www.crs.org

Practice Details

Country(ies): Pakistan

City(ies): Sindh Province

Start Year: 2023

Ongoing: Yes

End Year: N/A

Main Adequate Housing Components:



Housing Thematic Areas:

- Housing in Crisis & Displacement Contexts
- Housing & Climate Mitigation
- Housing & Climate Adaptation
- Housing, Land & Spatial Planning
- Technology & Digital Solutions in Housing

Relevant SDGs:



UN-HABITAT

Problem & Context

In 2022, Pakistan faced catastrophic flooding, displacing 8 million people and damaging 88% of homes in Sindh. Key challenges include limited government capacity, lack of inclusive infrastructure, and weak coordination among actors. CRS identified critical gaps: (1) inadequate technical/social support for reconstruction, (2) absence of integrated settlement planning, (3) lack of coordination platforms, and (4) high carbon emissions from traditional brick kilns. Policy gaps include the absence of climate-resilient housing standards, weak enforcement of environmental regulations, and no institutionalized frameworks for multi-sectoral recovery. These gaps hinder equitable, sustainable recovery and long-term resilience.

Solution Developed

CRS addressed post-flood recovery in Sindh through three integrated strands: (i) reconstruction of 755 resilient homes using an owner-driven approach, piloting disaster-resilient typologies (brick, block, stone, timber) with local masons and materials; (ii) piloting and scaling the Climate Resilient Settlement Development Plan (CRSDP) for integrated recovery across housing, WASH, education, DRR, and infrastructure; (iii) initiating decarbonization of brick kilns to reduce climate impact. Target beneficiaries included flood-affected families, excluded households, women, and local masons. Objectives included restoring safe housing, promoting inclusive settlement planning, and embedding climate-friendly practices. Innovations included: technological—drone mapping, GIS dashboards, flood modeling, and resilient design using local materials; social-women trained as construction supervisors, community-led implementation; institutional-SHRRP platform, scalable guidelines, and NGO-government partnerships. Together, these created a replicable, resilient recovery model.

Implementation

Actions Implemented: CRS reconstructed 755 disaster-resilient homes using an owner-driven approach, provided cash assistance in four tranches, developed minimum reconstruction guideline for 4 typologies, piloted timber housing along with design and testing, trained 1900 local masons, and empowered 18 women as construction supervisors. CRS also piloted the Climate Resilient Settlement Development Plan (CRSDP) in 9 villages and initiated decarbonization of brick kilns through Zigzag technology training.

Actors Involved:

- Government: SPHF (housing lead), District Administration (validation).
- UN/NGOs: UN-Habitat (CRSDP), SHRRP (platform coordination), HelpAge, WHH, Islamic Relief, IOM , IOM, UNOPS, UNICEF and other 50 organizations.
- Private Sector: Brick Kiln Owners Association, and three universities.
- Community Groups: Village Reconstruction Committees (VRCs), trained women volunteers, local masons.

Timeline:

- Planning: Oct 2022- March 2023 (post-flood assessment and design)
- Implementation: July 2023–Sep 2026 (housing reconstruction, trainings, CRSDP scaling, SHRRP coordination, brick kiln decarbonization).
- Scale-up: FY25 onward (CRSDP expansion to 1600+ settlements, SHRRP coordination).

Resources & Partnerships:

- $2 million budget (CRS + donor funding).
- SPHF provided beneficiary lists and validation.
- UNIDO, ADB, and other partners supported CRSDP and brick kiln initiatives.
- SHRRP mobilized $15M in recovery funding and coordinated 60+ actors.

Enablers & Obstacles

Enablers: Key drivers included strong political buy-in from the Government of Sindh and SPHF, which facilitated coordination and validation. Community engagement was central—Village Reconstruction Committees led planning and implementation. Technological tools like drone mapping, GIS dashboards, and CommCare enabled data-driven monitoring. Institutional support through SHRRP ensured multi-stakeholder collaboration, while donor flexibility allowed CRS to pilot and scale innovative approaches.

Obstacles: Challenges included exclusion of households during initial surveys, supply chain issues (e.g., brick shortages), and limited skilled labor. CRS addressed these by validating excluded households with SPHF, connecting communities to local suppliers, and conducting pilot mason trainings. Navigating bureaucratic processes for inclusion and approvals required persistent follow-up and coordination with district authorities.

Results & Impact

Quantitative Results: CRS supported the reconstruction of 755 flood-resilient homes, government endorsed minimum construction guidelines, developed and approved timber housing typology. 1900 masons were trained in resilient construction, and 18 women were empowered as construction supervisors. 61 excluded households were validated and included. The CRSDP was piloted in 9 villages, covering 800 households, and is now being scaled to 1600+ settlements. CRS also trained 17 brick kiln owners and 40 government officials in Zigzag technology to reduce emissions.

Impact on Marginalized Groups: Low-income and excluded households received direct cash assistance and technical support. Women played leadership roles in reconstruction, promoting gender equity. Community-led planning ensured inclusive decision-making and ownership.

Broader Impact: The initiative restored dignity and safety, reduced vulnerability to future floods, and improved access to sanitation, education, and infrastructure. Environmentally, it promoted low-carbon construction and sustainable settlement planning. Economically, it revitalized local labor markets and built capacity for long-term recovery. The model is now informing government policy and donor strategies for scale.

Replication & Scale Up

Yes, the housing practice and minimum construction standards were successfully replicated in Sindh Province, covering 2.1 million homes through SPHF, and in another province by IFRAP, reaching 150,000 households. The Climate Resilient Settlement Development Plan (CRSDP) is also being scaled to 1,600 settlements across 14 districts, targeting 150,000 households. Key enablers included strong government buy-in, donor support, community-led implementation, and the SHRRP platform, which ensured coordination, technical standardization, and multi-stakeholder engagement.

The housing practice can be scaled by integrating it into government planning systems, expanding CRSDP to more districts, and training additional local masons and women supervisors. Leveraging the SHRRP platform for coordination, using digital tools for planning and monitoring, and securing flexible donor funding will enable broader reach. Strong community engagement and government buy-in remain essential for sustainable scale-up.

Policy Uptake

This housing practice has been fully adopted into formal policy frameworks and legislation, and is being implemented at scale with institutional support.

The housing practice and minimum construction standards have been formally adopted by the Government of Sindh through SPHF, covering 2.1 million homes. CRS's pilot informed official guidelines and training curricula now used by government and partners. The Climate Resilient Settlement Development Plan (CRSDP) was launched by the Planning & Development Department and is being scaled to 1,600 settlements. Institutional support through SHRRP ensures coordination, technical standardization, and integration into provincial planning systems.

Lessons & Takeaways

In hindsight, CRS would strengthen early coordination with government to streamline inclusion of missed households and reduce delays. More proactive planning for skilled labor shortages and material supply chains is needed. Future efforts should expand pre-training for masons and community volunteers. Simplifying verification and approval processes with SPHF would improve efficiency. Enhancing digital tools for real-time tracking and feedback could further improve transparency and responsiveness.