

Climate-Smart Shelter in Practice: Building Back Safer and Greener

15 October 2025

Webinar Summary

1. Introduction

The Global Shelter Cluster (GSC) hosted a webinar for over 90 participants on 'Climate-Smart Shelter in Practice: Building Back Safer and Greener,' bringing together practitioners to share lessons on integrating climate and environmental considerations into shelter programming. The event was organized jointly by the Environment, Recovery, and Technical Communities of Practice, with support from the Swiss Agency for Development and Cooperation (SDC). Mandy George (Senior Environmental Advisor, Global Shelter Cluster) facilitated the session. The session built on the event held in January 2025 - [Sheltering in the Climate Crisis](#) - organized by CARE and the GSC Environment Community of Practice.

2. Framing the Discussion

Mandy George opened the session, highlighting climate and environmental issues as longstanding priorities within the Global Shelter Cluster. She noted the sector's growing focus on climate change adaptation alongside mitigation, donor requirements, and cross-sector collaboration. Mandy outlined ongoing reforms under the Humanitarian Reset initiative, which will result in 8 clusters, down from 11 and with an emphasis on the new "Cluster X" integrating Shelter, Settlements, CCCM, and HLP, with climate, environment, and energy as key focus areas.

A definition of 'Climate-Smart' was reviewed (as per the [IFRC's guide to Climate Smart Programming and Operations](#)), and it was emphasized that climate-smart shelter means *adapting to climate risks while minimising humanitarian actors' contribution to the problem*. It's **adaptation-led, but mitigation-aware** — helping people stay safer today and supporting a more sustainable future at the same time.

3. Minimum Requirements for Climate-Smart Shelter (CARE)

James Morgan from CARE International UK then presented the CARE Shelter Team's newly developed [Minimum Requirements for Climate-Smart Shelter](#). The framework encourages a process-led approach, prioritizing climate risk assessment, community engagement, and environmental sustainability throughout project cycles.

Key principles include:

- Conducting holistic risk assessments covering climate and non-climate hazards.
- Focusing on adaptation while incorporating mitigation practices.
- Using climate science and community knowledge to inform shelter and settlement designs.
- Ensuring community-led decision-making.
- Applying 'do no harm' principles for environmental protection.

CARE aims to collaborate with partners to refine the minimum requirements and develop a 'menu of options' illustrating adaptable, context-specific design elements.

4. Case Studies

4.1 Locally Adapted Shelter Kits for Climate Resilience – Ethiopia

Yodit Gutema, Ethiopia Shelter and NFI Cluster Coordinator (IOM), shared experiences from the Afar region on adapting shelter kits to the local climatic and cultural realities. A full case study can be found [here](#).

4.2 Passive Solar Housing – Afghanistan

Bea Varnai from Geres described the long-term implementation of passive solar verandas ('sun houses') in Afghanistan. These low-cost, locally sourced structures capture and store solar heat, improving indoor comfort and reducing reliance on fuel. The project emphasized training craftsmen, promoting behavior change, and facilitating household-led replication. A full case study can be found [here](#).

4.3 Women-Led Shelter Design – Cox's Bazar, Bangladesh

Farooq Rahman from CARE Bangladesh presented an initiative engaging Rohingya women in shelter design to address climate-related hazards. Consultations identified priorities such as improved ventilation, safer cooking spaces, durable materials, solar lighting, and secure doors. The resulting prototype integrates these features while remaining community-led and context-appropriate. More on this initiative can be found [here](#).

5. Group Discussion Highlights

Breakout sessions with around 50 participants explored the following in a [Mural](#) board:

- What's the hardest trade-off you face in trying to make shelter more climate-smart?
- How have you worked around or balanced these trade-offs in practice?
- What tools, standards, or support would help scale climate-smart shelter in your context?

Overall, participants emphasized the high cost and limited availability of alternative materials, donor flexibility, and the importance of aligning interventions with community priorities and seasonal conditions. Discussions also noted the need for balance between emergency response and long-term resilience. A summary of the key points raised on the Mural board follows below.

Hardest Trade-offs in Making Shelter More Climate-Smart

a. Material Availability, Cost & Procurement

- **Limited availability** of sustainable or bio-based materials in local markets.
- **Higher costs** associated with climate-smart solutions (e.g., insulation, alternative materials, strong foundations).
- Procurement processes often **don't factor in environmental/climate-smart criteria**, focusing instead on speed or cost.

- **Logistical challenges** in accessing appropriate materials, particularly in remote or hazard-prone areas.

b. Technical Capacity & Design Constraints

- **Lack of technical skills & knowledge** on vernacular/innovative climate-smart techniques
- Challenges integrating climate-smart design within **existing humanitarian timelines and funding constraints** (e.g., transitional shelter phases, duration targets).
- Design-material mismatches: e.g., **weather conditions vs. construction techniques** (like adobe drying issues in rainy seasons).

c. Socio-Cultural Acceptance

- Communities may **prefer conventional materials (e.g., concrete)** for cultural, aesthetic, or perceived durability reasons.
- Recipients of assistance may not prioritize passive cooling or insulation because electricity/AC is cheap, preferred, or climate risks are undervalued.

d. Economic & Funding Challenges

- Limited donor budgets restrict the adoption of more expensive climate-smart measures. Climate-smart solutions sometimes seen as “green” or “luxury” rather than essential.
- Humanitarian funding cycles often prioritize **immediate needs** over longer-term resilience.

e. Awareness & Information Gaps

- **Lack of data/research** on climate-smart benefits in specific contexts.
- Misconceptions or limited community awareness about climate-smart shelter.
- Difficulty balancing **urgency vs. environmental appropriateness**, especially during emergency phases.

How These Trade-offs Have Been Balanced or Worked Around in Practice

a. Community Engagement & Co-Design

- **Listening to users** through focus groups and interviews to understand needs and preferences.
- **Co-designing solutions** with communities to increase acceptance and ownership.
- **Feedback loops** help adapt solutions to local contexts without imposing external models.

b. Demonstration & Pilots

- **Demonstration projects and pilot shelters** help people see and understand climate-smart options.
- Sharing good practices and **mock-ups/prototypes with clear guidelines** builds confidence among communities and implementers.

c. Local Adaptation & Material Use

- Seeking **local solutions** and adapting existing designs to use **locally available materials** where possible.
- Hybrid approaches (e.g., durable foundations with lighter upper structures) balance cost, durability, and adaptability.
- Revisiting shelters post-event (e.g., rainy season, earthquakes) to assess performance and learn.

d. Advocacy & Policy Engagement

- **Advocating to donors and government** for flexibility, longer timelines, and inclusion of climate-smart criteria in procurement and policy.
- Making a case for the **cost-effectiveness of preventive adaptation** (e.g., cheaper than disaster response).

e. Training & Capacity Building

- Training communities and practitioners in **vernacular and innovative construction** methods.
- **Low-cost environmental trainings** implemented in various contexts (e.g., Morocco).

Tools, Standards, and Support Needed to Scale Climate-Smart Shelter

a. Policy & Donor Support

- **Donor requests and funding streams** need to prioritize climate-smart shelter.
- **Advocacy and policy interventions** at governmental and agency levels to mainstream climate-smart criteria.
- **Flexibility in funding** across phases to support transitional and durable solutions.

b. Technical Standards & Research

- More **research & data** on context-specific benefits & performance of climate-smart shelter
- Development and dissemination of **standards, guidelines, and performance tools** (e.g., Minimum Standards, risk-hazard mapping).
- Pre-exploration and testing of **eco/natural materials** to improve warehousing and logistics.

c. Market Development

- Support **market development for affordable, sustainable materials**, bringing down costs through local production and supply chains.
- Engage **financial service providers** to make climate-smart products more accessible.

d. Community Awareness & Capacity

- **Raise awareness at community level** about climate-smart approaches and their long-term benefits.
- Promote **proactive engagement** and knowledge sharing among stakeholders, including indigenous and local knowledge holders.

6. Next Steps and Follow-Up

- All participants, please [fill out this short survey](#) on the webinar.
- If you are interested in collaborating with CARE on moving forward with the Minimum Requirements for Climate-Smart Shelter please contact [Sue Webb](#) or [James Morgan](#).
- The Global Shelter Cluster is producing a case study compendium of Greener Shelter Innovations and Interventions. The first two case studies that were presented at this webinar can be found [here](#) for Ethiopia, and [here](#) for Afghanistan.
- The Global Shelter Cluster will be holding more webinars on this topic:
 - In French on Tue. Oct 21st – 14:30 CEST | [Inscrivez-vous ici](#)
 - In Spanish on Tue. Nov 18th – 16:00 CET | [Regístrese aquí](#)
- Join the [Environment COP](#), the [Technical COP Greener Shelter sub-COP](#) and the [Recovery COP](#).
- Join the Recovery COP for a [webinar on Shelter and Health](#) on 28th October.
- If you have any tools and resources on climate change adaptation relevant to shelter and settlements that you'd like to share, please add them to [this list of resources](#) managed by the GSC ECOP.
- For more info please contact: environment.operations@sheltercluster.org

Thank you for your participation!