

CASE STUDY

SOMALIA 2022-2024 / COMPLEX CRISIS

CONTEXT / SETTLEMENT

SUPPORT METHODS

CRISIS

Complex, protracted crisis
(drought, floods, and conflict)

PEOPLE
AFFECTED

8.25 million people during the drought period*
2.5 million people due to El-Niño induced flooding**

PEOPLE
DISPLACED

1.3 million Internally Displaced People*

PEOPLE WITH
SHELTER NEEDS

4.9 million people*

PROJECT
LOCATION

Multiple IDP sites and settlements across Somalia

PEOPLE
SUPPORTED BY
THE PROJECT

≈ 2,132,500 people supported with multiple types of assistance between mid-2022 and 2024

PROJECT
OUTPUTS

Emergency phase: 37,256 HH reached with emergency shelter assistance as part of the multi-sectoral Minimum Response Package (MRP) and 48,063 HH as part of the integrated First Line Response (FLR).
≈ 1.5 million ind. reached through the Common Pipeline.
1,500 HH supported with improved emergency shelters (IES) in a reconfigured site.
200 HH supported with IES which were later upgraded.
500+ community members contributed to site preparation activities through cash-for-work and community engagement.

Transitional phase:

42 HH upgraded their IES with mudbricks.
1,160 HH received transitional shelters after relocation.

Durable phase:

500 HH received rental support.
1,000 HH received concrete hollow block shelters.
61 HH supported with permanent shelter construction.
160 community members trained on mudbrick production and DRR.

SHELTER
SIZE

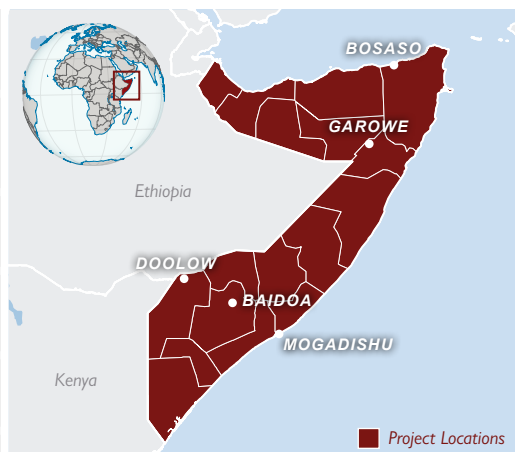
15.75-21 m² (incremental shelter typologies)
16-22.2 m² (permanent shelter typologies)

SHELTER
DENSITY

3.5 m² per person (minimum)

DIRECT COST

USD 600 (or less) for improved emergency shelter
+USD 1,040 for upgrade with mudbrick walls
+USD 1,595 for upgrade with CGI walls
+USD 2,120 for upgrade with concrete blocks
USD 2,520 for one-room core permanent shelter
USD 5,000+ for two-room permanent shelter



PROJECT SUMMARY

Between 2022 and 2024, Somalia faced an intensification of its historic drought, followed by severe El Niño-driven riverine and flash floods, while conflict and insecurity continued to drive displacement and humanitarian needs. In response, a multi-layered shelter programme supported newly displaced, protracted, eviction-affected and host-community households through emergency shelter assistance, transitional and incremental shelter construction, rental support and durable housing solutions. The response combined large-scale life-saving assistance with pathways towards recovery by strengthening local capacities, promoting locally appropriate construction, linking shelter with tenure security and livelihoods, and supporting community ownership.



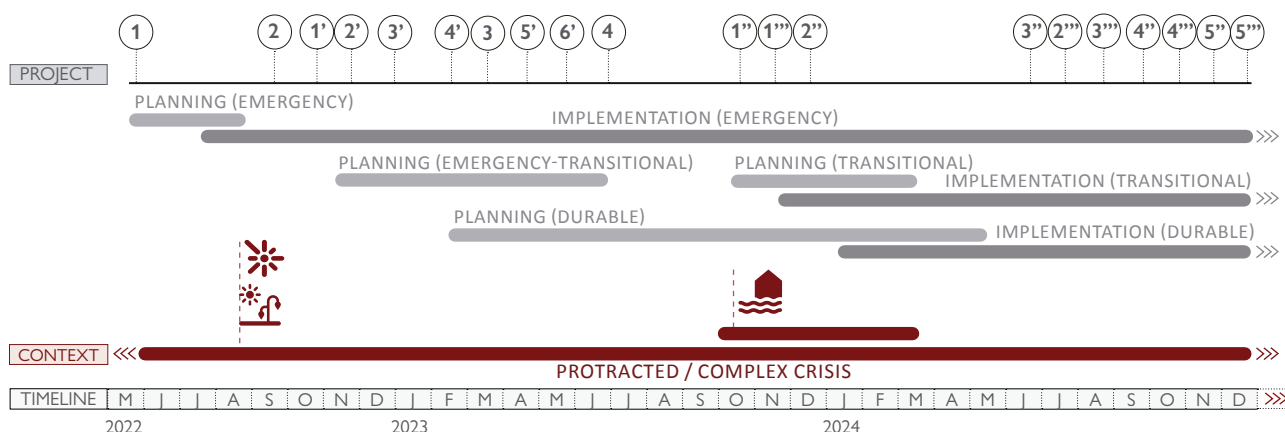
The prolonged 2022-2023 drought severely affected communities across Somalia causing wide-spread displacements.



When displaced, families often build makeshift shelters called "Buls" in self-settled sites.

* Somalia Humanitarian Response Plan, 2023;

** United Nations, Somalia.



 **Aug 2022:** Level 3 Emergency activation due to the historic drought, mass displacement, and extreme food insecurity.

 **Oct 2023 - Mar 2024:** El Niño Floods.

Emergency phase:

- 1 **May 2022 - Jan 2023:** Implementation of the Minimum Response Package (MRP), a multi-sectoral and multi-agency large scale response to drought.
- 2 **Sep 2022:** Planning for the establishment of the Common Pipeline System for in-kind responses.
- 3 **Mar 2023:** Common pipeline operations begin.
- 4 **Jul 2023 - Sep 2024:** Integrated drought response through First Line Response (FLR).

Emergency -Transitional phase:

- 1' **Oct-Nov 2022:** Design of an incremental shelter approach approved by the community and local authorities. Improved Emergency Shelter (IES) typology planned to be constructed to accommodate an influx of drought affected IDPs.
- 2' **Nov 2022:** Earth construction feasibility study and local capacity assessment.
- 3' **Dec 2022:** Construction of shelter prototypes using different designs and materials by local contractors to identify construction challenges, inform future training, and gather community feedback.
- 4' **Feb-Mar 2023:** Participatory analysis of local habitat assessments and contributions to cluster's Shelter Response Profile.
- 5' **Mar-Jun 2023:** Several trainings on earth construction with local masons and engineers to pilot mudbrick construction.
- 6' **Jan-Jun 2023:** 1,500 Improved Emergency Shelters (IES) were constructed engaging 200 community members with cash modality.

Transitional phase:

- 1'' **Oct 2023 - Mar 2024:** Shelter prototypes were constructed to test the incremental shelter approach and gather feedback from local authorities and community members.
- 2'' **Dec 2023 -Jun 2024:** 40 Improved Emergency Shelters were upgraded with mudbricks as pilots with two different designs.
- 3'' **Jun-Aug 2024:** 200 IES were incrementally upgraded with cement blocks as part of a two-phase approach in collaboration with another shelter partner.
- 4'' **Jun-Sep 2024:** Construction of 1,160 transitional shelters (CGI and cement blocks) completed as part of a relocation project.
- 5'' **Jun-Nov 2024:** A Training of Trainers (ToT) conducted with local masons, contractors, cluster partners and engineers from local authorities to disseminate the knowledge on earth construction.

Durable phase:

- 1''' **Nov 2023 - Jun 2024:** A rental market assessment was conducted to understand the average costs and challenges of renting in Mogadishu. The team also started government and community engagement and beneficiary selection during this time.
- 2''' **Jul 2024 onwards:** Households were relocated to their choice of rental housing and began receiving rental subsidies, as well as a relocation grant and monthly consumption allowance aligned with the national social protection assistance. Numeracy and literacy, life skills and entrepreneurship / TVET training began later in the year.
- 3''' **Aug 2024:** Construction of 1,000 owner-driven shelters completed as part of a relocation programme.
- 4''' **Oct 2024:** Construction of another 61 shelters completed as part of a relocation programme.
- 5''' **Nov 2024:** A collaborative initiative was planned between national and international universities, technical experts, diaspora, and govt to co-develop scalable housing solutions



Improved Emergency Shelters (IES) were designed to enable households to incrementally upgrade their shelters over time.



Upgradable walling materials, including concrete blocks and mudbricks, improve the durability and safety of Improved Emergency Shelters (IES)

BACKGROUND & CONTEXT

Somalia's humanitarian crisis is among the world's most complex and long-standing. Decades of conflict, political instability, poverty, limited infrastructure and recurrent climate shocks have weakened household resilience, restricted access to basic services and driven repeated displacement, particularly towards urban and peri-urban centres.

Between 2016 and 2017, consecutive failed rainy seasons drove around 6.3 million people into urgent need of humanitarian assistance. After this, Somalia entered a recovery and transition phase, but the situation remained fragile and quickly shifted into a protracted humanitarian crisis rather than a full recovery. Between 2022 and 2023, Somalia experienced one of its longest and most severe droughts in four decades, following five consecutive failed rainy seasons. The crisis left 8.25 million people in need of assistance, including 4.9 million people with shelter needs, and triggered a humanitarian system-wide scale-up. Soon after, El Niño-driven rains and floods caused further displacement, damaged broadly shelters and infrastructure, and disrupted livelihoods and services.

This case study reflects a shelter response across the humanitarian–development nexus, covering the drought emergency, subsequent El Niño floods and ongoing durable solutions efforts.

DISPLACEMENTS AND SHELTER NEEDS

Internally displaced people in Somalia are largely concentrated in urban and peri-urban centres. On arrival, many households settle in informal sites and construct traditional makeshift shelters known locally as “Buul”, using available materials such as grass, sticks, stones and fabrics. Although these shelters often fall below minimum standards, they reflect strong local knowledge and self-reliance.

Over time, informal settlements frequently become overcrowded and remain exposed to limited services, poor drainage and insecure tenure. Many sites are located on private or contested land, exposing households to eviction and secondary displacement.



During displacement, women and children often move first, and women are tasked to prepare makeshift shelters before men join them.



The El-Niño floods hit soon after the drought in 2023, causing further damage and displacement

NATIONAL SHELTER RESPONSE

The drought and subsequent floods deepened pre-existing vulnerabilities and further blurred the distinction between emergency response and recovery. Newly displaced households required immediate support, while protracted and eviction-affected households required safer settlement options, more durable shelter and tenure security.

The national shelter response therefore adapted to the changing context, prioritizing shock-responsive assistance while supporting movement towards more stable, resilient and dignified living conditions. During droughts and floods, the Shelter and NFI Cluster prioritized emergency shelter materials, SNFI kits, emergency shelter kits, and other emergency, transitional and more durable shelter solutions. For emergency in-kind assistance, the response relied on local partners with access in hard-to-reach areas and the Common Pipeline, a joint system for procurement, storage and distribution of emergency shelter and non-food items. For shelter construction activities, partners continued to provide support as per the agencies' resources and capacities, while making an attempt to harmonize the shelter responses.

At the same time, durable solutions efforts in Somalia were advanced through different initiatives, including a joint programme on durable solutions and resilience and a multi-agency consortium supporting displaced communities in transitioning towards longer-term stability and resilience. Working closely with development partners, government authorities and local communities, these initiatives applied integrated, area-based approaches to support recovery for displaced and at-risk communities. They prioritized government leadership and strengthened local systems to promote sustainable solutions for displacement.



During the emergency phase, newly displaced people received minimum emergency solutions, such as shelter and EHIs, often integrated with hygiene kits.

RESPONSE PHASES			
	PHASE	TRIGGER	IDP STATUS
I	Emergency Phase / in-kind response	drought, floods, conflict, fire, etc	new arrivals
II	Emergency Phase / shelter construction	drought	new arrivals
III	Transitional Phase / shelter construction	protracted crisis	protracted IDPs
IV	Transitional Phase / shelter construction (relocation) through consortium approach	protracted crisis	eviction-affected IDPs
V	Durable Phase / shelter construction (relocation) through consortium approach	protracted crisis	Variable IDPs status
VI	Durable Phase / rental assistance through consortium approach	protracted crisis	
VII	Durable Phase / shelter construction	protracted crisis	

PROGRAMME DESIGN / STRATEGY

Given Somalia's cyclical and protracted crisis, shelter responses were designed to be flexible and layered, delivering life-saving emergency assistance during acute shocks while simultaneously supporting durable solutions for long-term displacements. Even within emergency funding cycles, interventions were intentionally structured to allow gradual transition from immediate relief toward recovery and resilience.

While having a Durable Solutions portfolio in place, the organization focused on establishing and streamlining emergency in-kind and shelter construction responses to gradually move towards a transitional phase and, finally, complement the assistance modalities of the durable solutions portfolio. A multi-layered approach was adopted combining in-kind support, site development activities, incremental shelter construction and upgrades, rental support and durable housing. Modalities were selected according to response phase, location, access, household needs, tenure conditions, market capacity and operational feasibility. Cash-based approaches were used where feasible to increase household ownership, while in-kind assistance remained essential for rapid response at scale and in areas with limited access.

A central design principle was that shelter alone would not lead to durable solutions without links to housing, land and property, security, livelihoods, services and community ownership. The shelter construction programme integrated site planning, tenure considerations, local labour, technical training and maintenance. It also explored locally suitable materials, particularly earth construction, to reduce reliance on imports and retain skills in the community.



Distributions also included demonstration sessions on the plastic sheets.

PROJECT IMPLEMENTATION

This section captures the main response phases and types, as also summarized in the table above.

I. EMERGENCY PHASE / IN-KIND RESPONSE

In 2022 and early 2023, newly displaced households in locations with high numbers of new arrivals were supported through the Minimum Response Package (MRP), a coordinated multi-sector package that included distribution of emergency shelter materials, as well as assistance on WASH, health, nutrition, protection and multipurpose cash delivered jointly by a few agencies. Building on this model, the First Line Response was later adopted by the humanitarian country team as an integrated, area-based initiative to deliver timely, standardized and scalable life-saving multi-sector assistance to newly displaced households across Somalia.

Given the need to provide shelter materials at scale amid ongoing logistical challenges, the establishment of the Shelter Common Pipeline in early 2023 strengthened efforts to support affected households during emergencies, enabling partners to access and deliver shelter materials and NFI kits in a timely manner. The response included plastic sheets and ropes as core shelter materials to enhance buul shelters typically constructed using locally available materials, rather than promoting unfamiliar and costly emergency shelter typologies.

As a preferred shelter item, plastic sheeting enhanced protection from rain and extreme heat while remaining practical to transport and distribute at scale.

The Common Pipeline also provided financial and technical support to local partners, strengthening localization and response quality. Post-distribution monitoring informed demonstrations and installation guidance, while the model expanded reach in hard-to-access areas and later helped inform the Rapid Support Mechanism (RSM), which supports multi-sectoral integrated localized humanitarian response through actors working under area-based coordination structures.



An Improved Emergency Shelter (IES) with raised for an easy upgrade and as a flood mitigation measure.



The incremental upgrading process encourages participation of the households in the construction process and promote livelihood opportunities

II. EMERGENCY PHASE / SHELTER CONSTRUCTION

In 2022, large numbers of drought-affected IDPs settled in multiple displacement sites in makeshift shelters in Somalia's Gedo region. To accommodate thousands of displaced people, a reconfiguration project in Ladan's IDP site was carried out near Doolow town, in coordination with local authorities and other humanitarian actors to secure land tenure.

Once land tenure was secured, 1,500 plots were demarcated and supported by drainage, culverts, streetlights and basic services provided by different actors.

The planned site and stronger tenure conditions created an opportunity to go beyond short-term emergency shelter. Conventional emergency shelter typologies were not suitable, as they relied on imported materials and increased costs, had a short lifespan, and were difficult to upgrade. An Improved Emergency Shelter (IES) typology was therefore designed with a stronger foundation, raised plinth, higher columns and a timber frame with extended roof eaves. Initially covered with plastic sheeting, the structure could later be upgraded with more durable materials such as CGI sheets, mudbrick or concrete blocks.

Between January and June 2023, 1,500 IES and 450 latrines were constructed, with 200 community members engaged as unskilled labour through cash-for-work.

The IES model was later replicated in another site where 200 IES were constructed and later upgraded by another shelter actor through an owner-driven approach using cement block walls. A third partner also adopted the typology, demonstrating the broader relevance of the incremental design.



Upgrades were incremental, and allowed different partners to contribute.

III. TRANSITIONAL PHASE / SHELTER CONSTRUCTION

The increasing frequency of droughts and other climate-related shocks highlighted the need for shelter solutions that were more sustainable, climate-adaptive and locally feasible than conventional CGI-based shelters or traditional wattle-and-daub construction. The latter is a technique known locally which however can contribute to environmental degradation when implemented at scale. Earth construction was therefore explored to reduce reliance on imported materials, improve durability, create livelihoods, strengthen local ownership and reduce pressure on timber resources.

An earth construction feasibility study, local capacity assessment and participatory habitat assessments informed the approach. Mudbricks and compressed stabilized earth blocks were assessed, with mudbricks ultimately selected because they can be produced easily by communities without the need for machinery or highly specialized skills, making the approach more practical and less prone to implementation risks. Prototypes tested feasibility, identified challenges and further training needs, and gathered community feedback.

Several trainings on earth construction were conducted with local masons, engineers, contractors, community members, Shelter Cluster partners and local authority engineers to disseminate earth construction techniques and build a network of trained practitioners. As a pilot project, 42 Improved Emergency Shelters were upgraded with mudbrick walls and CGI roofs. Partners later constructed 400 mudbrick shelters showing the acceptance and replication of such evidence-based sustainable construction method.



Training on eathern construction techniques, including plastering, was key.



In the transitional phase, a resettlement site was set up in northern Baidoa, with each household receiving a land title deed and plot allocation certificate.



The most vulnerable households in the site received cement blocks shelters.

IV. TRANSITIONAL PHASE / SHELTER CONSTRUCTION (RELOCATION) THROUGH CONSORTIUM APPROACH

The Barwaaqo Northern Extension in Baidoa was a government-led durable solutions initiative that relocated households exposed to eviction and flood risk to a planned settlement with more secure land tenure, infrastructure and basic services. A total of 1,160 transitional shelters were completed (each with an individual household latrine), and households received land title deeds and plot allocation certificates. Site development included roads, drainage, solar streetlights and other communal facilities.

The shelter design was adapted through consultations with communities, authorities and technical partners. Mudbrick walling was initially proposed, but local authority acceptance and regulatory considerations limited its use. The final typology balanced government requirements, available budget, scalability and future improvement potential: most shelters used CGI sheet walling, while the most vulnerable households received cement block walls (these shelters also served as demonstration for upgrading CGI shelters to cement blocks in the future). Conditional cash enabled households to complete flooring. Following the handover of the shelters and to ensure their maintenance, community maintenance committees were trained for inspections and minor repairs.

V. DURABLE PHASE / SHELTER CONSTRUCTION (RELOCATION) THROUGH CONSORTIUM APPROACH

In Garowe, 1,000 households were relocated to serviced settlements. Title deeds reduced eviction risk, while site development included roads, drainage, solar streetlights and a primary school. Each household received a 13 x 13 m plot and constructed a one-room shelter; in flood-prone areas, 98 shelters had elevated foundations.

The shelters were built through an owner-driven cash-based approach, with mobile money payments released in instalments linked to construction progress and supported by technical supervision. Households also received practical construction training, supporting timely completion and strengthening basic construction and maintenance knowledge.



Because of budgets and government requirements, most shelters in the Barwaaqo relocation site were built with CGI sheet cladding for the walls.

VI. DURABLE PHASE / RENTAL ASSISTANCE THROUGH CONSORTIUM APPROACH

In Mogadishu, climate shocks, conflict and long-term displacement increased pressure on urban land and housing markets, contributing to rising rents and forced evictions. In response, 500 households facing imminent eviction were supported to relocate into formal rented housing and receive 18 months of rental assistance, as part of a pathway out of displacement and aid dependency.

Rental support was combined with relocation assistance, legal identity documentation, life skills, livelihoods training, productive asset transfers and support to open bank accounts. This package aimed to help households maintain rent after project support ended, while improving tenure security, dignity and access to formal housing.

VII. DURABLE PHASE / SHELTER CONSTRUCTION

A further 61 permanent housing units were constructed through a multi-agency planned relocation and durable solutions intervention in Bosaso. Households moved from high-risk informal settlements to the Gribble site, received housing and tenure documentation, and gained access to basic services and infrastructure that were developed incrementally. This shifted their residential status from insecure informal occupancy towards a more stable settlement arrangement.

MAIN CHALLENGES

- **Limited access to field locations:** insecurity limits access to many field locations, affecting staff movement, transportation of in-kind materials (with air cargo often being the only transport option), and also activity monitoring. The Common Pipeline, with timely prepositioning of items and a large partner database, has been able to address these challenges to some extent. Secondly, to monitor shelter construction activities, in addition to on-site technical supervision, a multi-layered monitoring strategy was adopted including real-time evaluation and remote construction management to guarantee the quality and timely completion of all activities, especially those that had a cash-based component.
- **Implementation delays and coordination challenges:** Due to security and political instability, as well as delays in coordination and approvals with local authorities, implementation timelines were affected which resulted in temporarily suspending activities, delaying registrations and site activities. Continuous coordination with authorities, communities and CCCM actors helped reduce disruption.
- **Regional variation in construction costs:** material prices varied due to access constraints, transport routes and reliance on imported materials or supplies from Mogadishu. Long-term agreements with local contractors helped stabilize unit costs and support faster implementation.
- **Aid diversion risks:** in some locations, households reported being asked to pay or provide goods or mobile money in exchange for assistance. Monitoring systems, hotlines, sensitization, staff training and safeguards were strengthened to reinforce that assistance was free of charge. To address the challenge, the Remote Monitoring Team (RMT), a group of Somali diaspora, was established to verify, conduct household verifications, and monitor shelter activities amid security challenges.
- **Complex social networks and targeting risks:** site gatekeepers, clan dynamics and informal power structures affected targeting and implementation. Transparent communication with community leaders and local authorities helped mitigate these challenges.
- **Data-sharing limitations:** limited identification documentation and weak interoperability between registration systems increased duplication risks, particularly for cash assistance programmes that relied on biometric registration. Work towards common registration standards and improved referrals aimed to strengthen verification and accountability.
- **Acceptance of earth construction:** limited familiarity and differing views among local authorities affected approval of earth-based approaches that would have been more sustainable and cost effective in the long term. Advocacy, demonstrations, prototypes and engagement with government, universities and technical experts helped increase awareness, but uptake remained uneven and required midterm engagement and investments. To address this challenge, following the activities covered in this case study, the organization partnered with the Ministry of Public Works, Reconstruction and Housing and launched the Homegrown, Sustainable, and Scalable Shelter Solutions in Somalia initiative in early 2025, bringing together Somali university students, local professionals, the Somali diaspora, international students, and technical experts to co-develop culturally appropriate, sustainable, and scalable housing solutions while raising awareness of earth construction techniques.
- **Sequencing between emergency and durable solutions coordination mechanisms:** While both coordination mechanisms aimed to address displacement-related needs, opportunities for systematic collaboration and joint planning were not always fully realized. As a result, organizations implementing both emergency shelter and durable solutions interventions often played a bridging role, helping to connect the two approaches. Moreover, due to the large scale of needs, the SNFI cluster had capacity constraints to facilitate strategic collaboration, information sharing, and collective planning across partners. This occasionally resulted in organizations pursuing parallel approaches or competing for limited resources and funding opportunities.



Earth-based construction, and primarily adobe (mudbricks), was promoted but could not always be adopted at scale due to limited familiarity of the techniques and perception barriers.



The incremental shelter approach allowed partners to join efforts and resources, for instance enabling one partner to upgrade the emergency shelters built by another. This helped bridge the gap between emergency and more durable solutions.

OUTCOMES AND WIDER IMPACTS

The different responses showed how several major activities were implemented to ensure a safe, dignified, and adequate standard of living.

For emergency responses, the success of the Minimum Response Package (MRP) in delivering coordinated, multi-sector assistance to newly displaced households led to the adoption of the First Line Response (FLR) modality, which scaled and standardized rapid, multi-partner emergency support across Somalia.

The impact of the Common Pipeline Programme extended beyond improved supply chain and logistics efficiency, but fostered stronger partnerships, coordination mechanisms, and localization outcomes. The success of this model later informed the development of the Rapid Support Mechanism (RSM).

The incremental shelter approach created a practical bridge between emergency and more durable shelter support, and mudbrick construction demonstrated the feasibility of locally appropriate shelter approaches, while contributing to a broader shift towards sustainable construction practices.

Durable solutions interventions such as rental support and planned relocations improved tenure security, settlement conditions and housing options, improving household stability and pathways to self-reliance.



Cash-for-work was used to engage community members in site-level activities.



The use of timber frames for shelter construction allowed to erect many units in short timeframes, while also permitting several upgrade options once resources and conditions allowed.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- ✓ **Integrated multi-sectoral response packages:** the Minimum Response Package addressed the most pressing needs through a multi-agency and multi-sectoral assistance that is coordinated, integrated and timely, and provided a foundation for the later First Line Response scale-up.
- ✓ **Common Pipeline model:** centralized procurement, warehousing and logistics improved access to quality shelter and NFI materials, while financial and technical support to local partners strengthened localization, reach and response consistency.
- ✓ **Evidence-informed programme improvement:** post-distribution monitoring conducted at scale across the country by pipeline partners, including photographic documentation of plastic sheeting on buul shelters, informed technical guidance, field demonstrations and improved installation practices.
- ✓ **Prototyping and consultation:** go-see visits, prototypes and repeated engagement with communities and authorities helped adapt shelter designs to local priorities and secure acceptance for new or improved typologies.
- ✓ **Incremental shelter approach:** the Improved Emergency Shelter created an upgradable emergency structure that durable solutions actors could use as a platform for longer-term improvements.
- ✓ **Transfer of mudbrick construction skills:** training and practical implementation helped local masons, engineers, contractors and communities acquire earth construction skills, supporting replication and future locally led innovation.
- ✓ **Engaging local talent, diaspora experts, academic institutions, technical experts and government counterparts:** collaboration on sustainable construction and climate-adaptive shelter solutions strengthened local ownership and institutional partnerships, laying the foundation for continued research, innovation, and locally led development of earth construction approaches beyond the project.

WEAKNESSES

- ✗ **Capacity development for partners on administrative and compliance processes:** financial contributions under the Common Pipeline were sometimes delayed because partners had limited capacity to submit documentation that met compliance requirements, highlighting the need for earlier financial reporting support.
- ✗ **Acceptance of earth construction:** misconceptions and limited familiarity among some authorities slowed approvals and required design adaptations, demonstrating the importance of sustained advocacy and early government engagement.
- ✗ **Limited integration of inclusive shelter design:** inclusive shelter design for people with disabilities could not be fully integrated in initial project cycles due to tight implementation timelines and was instead addressed at a later stage.
- ✗ **Limited private sector engagement:** private sector partnerships were not fully explored, although they could support innovation, efficiency, materials supply and sustainability in future shelter programming.
- ✗ **System-level linkage between emergency and durable solutions was limited:** although some partners upgraded emergency shelters under durable solutions programmes, this depended on agency-level advocacy rather than on sequencing with a systematic planning and financing across coordination structures.



Mudbricks were used to upgrade the walls of emergency shelters.



FURTHER READING ON SHELTER PROJECTS

On resettlement in Somalia: [SP 2008 / A.8](#); [SP 15-16 / A.22](#).

On the Common Pipeline: [SP 10TH ED. / A.03 SOUTH SUDAN](#).

On large scale implementation using adobe: [SP 15-16 / A.27 UNITED REPUBLIC OF TANZANIA](#).



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Despite the barriers encountered around the acceptance of earth for construction, the program implemented several measures to ensure its adoption and future scale up. These included research, training, prototyping, advocacy and innovative initiative involving academia, government and the Somali diaspora.

LESSONS LEARNED

- **Adaptability.** The shelter model can be adjusted to household needs, informed by community consultations, FGDs, and other feedback mechanisms.
- **Integrated emergency assistance is essential in large-scale, multi-crisis contexts:** coordinated packages across sectors help ensure households are not supported in one sector while remaining underserved in others.
- **Housing, Land and Property considerations should start early:** tenure security enables households to invest in shelters and allows more sustainable site and shelter improvements with reduced eviction risk, and therefore should be considered from the outset of a response.
- **Long-term agreements can support faster construction:** agreements with local contractors can stabilize costs and facilitate larger-scale implementation of incremental shelter typologies in volatile markets.
- **Earth construction requires sustained technical investment:** Earth construction requires strong technical expertise, as poor workmanship can affect structural quality and durability. Practical training and regular refresher sessions are essential to ensure consistent application of appropriate construction techniques.
- **Maintenance should be planned from the outset:** Establishing community maintenance committees and equip them with training and basic tools helps ensure shelters can be maintained, particularly where vulnerable households lack the resources to do so independently after handover.
- **Robust monitoring is critical in access-constrained settings:** combining on-site monitoring, remote call-centre verification and third-party monitoring can strengthen quality control, accountability and feedback.
- **Emergency and durable solutions investments should be linked geographically and programmatically:** where possible, durable solutions funding should build on existing humanitarian investments in the same settlements, allowing shelters and sites to be progressively upgraded.
- **Local talent, diaspora and academic partnerships can sustain innovation:** engagement with universities, technical experts, diaspora and government stakeholders can build ownership of new shelter approaches beyond individual project cycles.