



INCLUSIVE SHELTER ADAPTATION PRACTICES FOR PERSONS WITH DISABILITIES AND LIMITED MOBILITY

Technical Guide for Emergency Shelter Response in the Gaza Context

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Contents

Inclusive Shelter Adaptation Practices for Persons with Disabilities and Limited Mobility	2
Inclusive Principles for Shelter Design	2
1. Reach: Facilitating access to the shelter and facilities	2
2. Enter: Facilitating entry into the shelter and facilities.....	3
3. Circulation: Facilitating movement within the shelter	4
4. Use: Facilitating use of facilities and services	4
5.Challenges and proposed solutions for inclusive shelter implementation.....	5
Key challenges.....	6
References	7

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Inclusive Shelter Adaptation Practices for Persons with Disabilities and Limited Mobility

In humanitarian emergencies, persons with disabilities face disproportionate barriers in accessing safe and dignified shelter. Field observations collected by HEKS/EPER in Gaza, alongside the experiences and interventions of humanitarian organizations, have highlighted a range of coping mechanisms that individuals, families, and communities adopt to overcome these challenges. Documenting these practices is essential for informing inclusive shelter interventions and strengthening emergency response planning. The RECU principles (Reach, Enter, Circulate, Use) were considered during these observations to ensure that insights reflected accessibility and usability from the perspective of persons with disabilities.

Inclusive Principles for Shelter Design

The inclusive framework offers a comprehensive approach to ensure that repaired shelters are accessible, safe, and dignified for all individuals, including those with physical, visual, auditory, and intellectual disabilities. These principles aim to ensure that individuals can:

1. **Reach:** Access the shelter and its services.
2. **Enter:** Enter the shelter and its facilities independently.
3. **Circulate:** Move around the shelter freely and safely.
4. **Use:** Use the facilities and services to perform daily tasks with safety and autonomy.

1. Reach: Facilitating access to the shelter and facilities

- **Ground leveling and pathway clearance.** : Gaza’s roads are often filled with rubble, posing a serious barrier for people with mobility impairments, especially wheelchair users. It is recommended to level the ground and create smooth, debris-free paths to the shelter unit.



Figure1 Road leveling to facilitate access with local materials (Source: Humanity and Inclusion June 2025)

- **Guidance signage:**
 - **Visual markers:** the use of locally available materials such as colored fabrics or painted metal cans to create clear visual markers along vertical wall edges.
 - **Tactile markers:** Installation of simple tactile guides using ropes or thick cords fixed along walls or pathways to help visually impaired individuals navigate, especially when first arriving at a new shelter.

2. Enter: Facilitating entry into the shelter and facilities

- **Entrance design:**
- **Door width:** When replacing damaged doors, ensure the openings are at least 80 cm wide (preferably 85 cm) to accommodate wheelchair access.
 - **Threshold removal:** Remove or reduce thresholds to no more than 2 cm using sloped wooden planks or a mix of clay and sand to level the surface.
 - **Easy-to-open doors:** Modify doors to open outward where possible and use locally sourced, easy-grip handles (e.g., wooden pieces or plastic pipe segments), avoiding round knobs.



Figure2 Wide-opening internal and external doors with easy access – HEKS/EPER, July 2025

- **Alternative ramps and regular stairs:**
 - **Simple ramps:** Use reclaimed wooden boards to build ramps, or arrange concrete blocks in a gradual slope to create regular-height stairs. A slope ratio of no more than 1:12 (8.3%) is recommended.
 - **Handrails:** Install sturdy handrails on both sides of ramps using reclaimed wood to support elderly people, children, pregnant women, and others.
 - **Non-slip surfaces:** Cover ramps with non-slip materials such as rough vinyl or reclaimed rubber mats.
- **Flooring**
 - **Solid and Level Surfaces:** It is recommended to use reclaimed tiles (ceramic, marble, or interlock) in good condition or flat wooden boards to create solid flooring. A tarp or plastic sheet can be placed on top if the floor is uneven.

- **Color Contrast:** Use materials with contrasting colors to help visually impaired individuals identify room boundaries and entryways. e.g., bright fabric strips or painted edges
- **Lighting**
 - **Enhancing Natural Light:** Use light-colored or reflective materials, such as white plastic sheeting, to increase natural lighting inside the shelter. This benefits all individuals regardless of ability.
 - **Entrance Illumination:** Ensure entryways are well-lit by adding extra openings in the coverings or walls to allow light in, making it safer to enter and exit.

3. Circulation: Facilitating movement within the shelter



Figure 3 Internal partitioning of an open shelter using tarpaulins, with wide walkways left in between – HEKS/EPER, July 2025.

- **Interior pathways:**
 - **Path width:** When reconfiguring shelter spaces, ensure interior pathways are at least 90 cm wide, ideally 150 cm, to accommodate wheelchair users.
 - **Obstacle removal:** Clear all obstructions from pathways and arrange furniture to allow smooth movement.
 - **Tactile and visual cues:** Use textured materials (e.g., ropes or fabric strips) along walls to help visually impaired individuals navigate, especially those newly displaced.
- **Rest areas and furniture:**
 - **Seating:** Provide seating 40–45 cm high using reclaimed materials like wooden crates covered with blankets or fabric.
 - **Wheelchair space:** Leave adequate space next to seating areas for wheelchair users.

4. Use: Facilitating use of facilities and services

- **Sanitation facilities:**

- **Toilets:** Ensure there are no thresholds at toilet entrances. Use reclaimed tiles to create a level, water-resistant, and cleanable floor if existing tiles are damaged.
- **Grab bars:** Install grab bars on both sides of the toilet seat, 30–35 cm from the center, using locally sourced materials like metal water pipes or wooden bars. Use securely fixed materials that can support body weight.
- **Doors:** Where possible, doors should open outward, be at least 80 cm wide (preferably 85 cm), and easy to operate.
- **Washbasins:** Position washbasins 75–85 cm from the floor, with 65–70 cm of clearance underneath and 20 cm depth to allow wheelchair access.
- **Showers:** Ensure level entry and a minimum space of 90×130 cm for wheelchair maneuvering. Add grab bars where possible. Use thick fabrics or plastic sheets to ensure privacy and safety.



Figure4 Temporary inclusive latrines constructed using locally sourced materials - Humanity & Inclusion, June 2025.

Note: The attached image shows a latrine implemented in a makeshift shelter, but the same concept is applied in damaged buildings to seal severe damaged existing bathrooms.

5. Challenges and proposed solutions for inclusive shelter implementation

Despite the clear need and practical recommendations for inclusive shelter design, several challenges hinder the effective implementation of these practices in Gaza. This section outlines the key obstacles and proposes actionable solutions to ensure that shelter interventions remain inclusive, sustainable, and responsive to the needs of vulnerable populations.

Key challenges

Infrastructure Damage and Limited Resources	<ul style="list-style-type: none"> • Widespread destruction of roads, buildings, and public infrastructure limits access and mobility. • Shortages of construction materials and tools make it difficult to implement recommended adaptations.
Lack of Awareness and Technical Expertise	<ul style="list-style-type: none"> • Many households and local builders are unfamiliar with inclusive design principles. • Technical teams may lack training in low-cost, context-appropriate accessibility solutions.
Time Constraints in Emergency Response	<ul style="list-style-type: none"> • Emergency shelter responses often prioritize speed over inclusivity. • Temporary solutions may overlook the long-term needs of persons with disabilities, children, and the elderly.
Social and Cultural Barriers	<ul style="list-style-type: none"> • Stigma and misconceptions about disability may lead to exclusion in shelter planning. • Gender norms may limit the participation of women, especially those with disabilities, in decision-making.
Limited Participation of Affected Groups	<ul style="list-style-type: none"> • People with disabilities, elderly people, and caregivers are often not consulted in shelter design or rehabilitation processes. • Addressing these barriers requires integrating inclusive design from the earliest stages of assessment, planning, and implementation.

2. Proposed solutions

Promote Localized, Low-Cost Innovation	<ul style="list-style-type: none"> • Encourage the use of reclaimed and locally available materials for ramps, handrails, and tactile markers. • Support community-led initiatives that adapt shelters using traditional knowledge and creative problem-solving.
Capacity Building and Technical Support	<ul style="list-style-type: none"> • Provide training for engineers, masons, and community volunteers on inclusive shelter design. • Develop visual toolkits and mobile-friendly guides to support on-site decision-making.
Integrate Inclusion into Emergency Planning	<ul style="list-style-type: none"> • Embed inclusive principles into emergency shelter assessment tools and response protocols. • Allocate dedicated resources for accessibility adaptations from the outset of shelter interventions.
Foster Inclusive Community Engagement	<ul style="list-style-type: none"> • Involve people with disabilities, caregivers, and older adults in shelter planning and monitoring. • Use participatory methods such as focus groups, home visits, and inclusive design workshops.

Advocate for Policy and Coordination	<ul style="list-style-type: none">• Collaborate with humanitarian actors, local authorities, and disability organizations to mainstream inclusive shelter practices.• Advocate for the inclusion of accessibility standards in reconstruction policies and donor frameworks.
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References

[Global shelter cluster- disability inclusion in shelter and settlement programming](#)

[All under one roof](#)

[IASC guidelines](#)

[Humanitarian inclusion standards for older people and people with disabilities](#)

[Guidance on strengthening disability inclusion in humanitarian response plans](#)