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Title: Transforming Inclusion into Action: A Participatory Framework for Disability-Inclusive
Disaster Risk Reduction

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Executive Summary

This policy brief examines the persistent implementation gap in disaster risk reduction (DRR) for people with disabilities. Despite the existence of inclusive policies and international commitments, current top-down and non-participatory approaches often fail to translate into effective protection during emergencies. This failure transforms natural disasters into human catastrophes for this population. To bridge this gap, this brief advocates for a shift toward a participatory co-design approach in which people with disabilities and Disabled People's Organizations (DPOs) are engaged as equal partners across all stages of DRR.

Based on the analysis, three priority policy recommendations are proposed:

1. Institutionalizing the meaningful participation of DPOs in DRR governance and decision-making structures at local and national levels;
2. Investing in capacity-building programs for emergency responders that are co-developed and co-delivered by experts with disabilities;
3. Co-creating, legislating and enforcing mandatory accessibility standards for emergency infrastructure and early warning systems in collaboration with DPOs.

Integrating lived experience into DRR is not a symbolic gesture but a strategic necessity. By adopting participatory co-design, policymakers can develop more effective, context-sensitive and equitable disaster preparedness and response systems, ultimately reduce preventable harm and save lives.

Keywords: Disasters, Disaster risk reduction, Earthquakes, Iran, Participation, People with disabilities

1. Introduction

Ensuring the safety of people with disabilities during disasters is a policy commitment at both international and national levels. Although international instruments such as the UN Convention on the Rights of Persons with Disabilities (CRPD) and the Sendai Framework affirm the right of persons with disabilities to equal protection, accessibility and participation in disaster preparedness and response [1, 2], global evidence indicates a persistent and critical implementation gap that reflects broader failures to translate DRR agreements into practice [3].

Bridging this critical implementation gap, the UNDRR Strategic Framework 2026–2030 underscores the disproportionate impact of disasters on people with disabilities, such as structural exclusion, inaccessible early warning systems and limited participation in risk governance. It calls for the mainstreaming of disability across all dimensions of DRR [4].

The UNDRR 2023 Global Survey Report underscores the severity of this gap: 84% of persons with disabilities lack personal preparedness plans, 56% cannot access risk information in appropriate formats and 86% are excluded from local DRR decision-making. While promising initiatives in countries such as Jordan, Uganda and Fiji demonstrate the feasibility of disability-inclusive approaches, these efforts remain fragmented and insufficient [5].

The core policy problem addressed in this brief is therefore unequivocal: DRR systems continue to fail in delivering effective, equitable and life-saving protection for people with disabilities, despite clear legal obligations.

Empirical evidence consistently shows higher risks of injury, mortality and exclusion for persons with disabilities [6], alongside substantial inaccessibility of emergency relief services (30–45%)

during disasters [7]. This situation exposes the limitations of traditional, top-down, standardized and post hoc accessibility measures [8].

Guided by the central question of: how DRR systems can move beyond nominal inclusion toward genuinely transformative outcomes, this brief draws on a qualitative synthesis of scholarly literature, international policy documents, empirical studies and a doctoral dissertation based on interviews with people with physical disability affected by major earthquakes in Iran and key informants from disaster management and DPOs [9]. It identifies critical policy and implementation gaps and advances concrete actionable, evidence-informed recommendations to strengthen inclusive DRR practice.

2. Critique of Policy Option

○ *The Challenges*

Current DRR frameworks face several interconnected challenges that hinder their effectiveness for persons with disabilities:

- **Planning without Partnership (Non-Consultative Planning):** Emergency protocols and infrastructure are frequently designed without the meaningful involvement of DPOs, leading to critical oversights in accessibility (including: inaccessible shelters, warning systems and evacuation pathways). A comparative analysis of disaster management practices underscores the global nature of this exclusion, where the needs and participation of people with disabilities are consistently overlooked and leading to fatal flaws [10, 11].
- **Capacity Gaps in Response (Untrained Responders):** First responders, despite their dedication, often lack the specific training required to effectively assist persons with diverse disabilities, from assisting someone who uses a complex wheelchair to

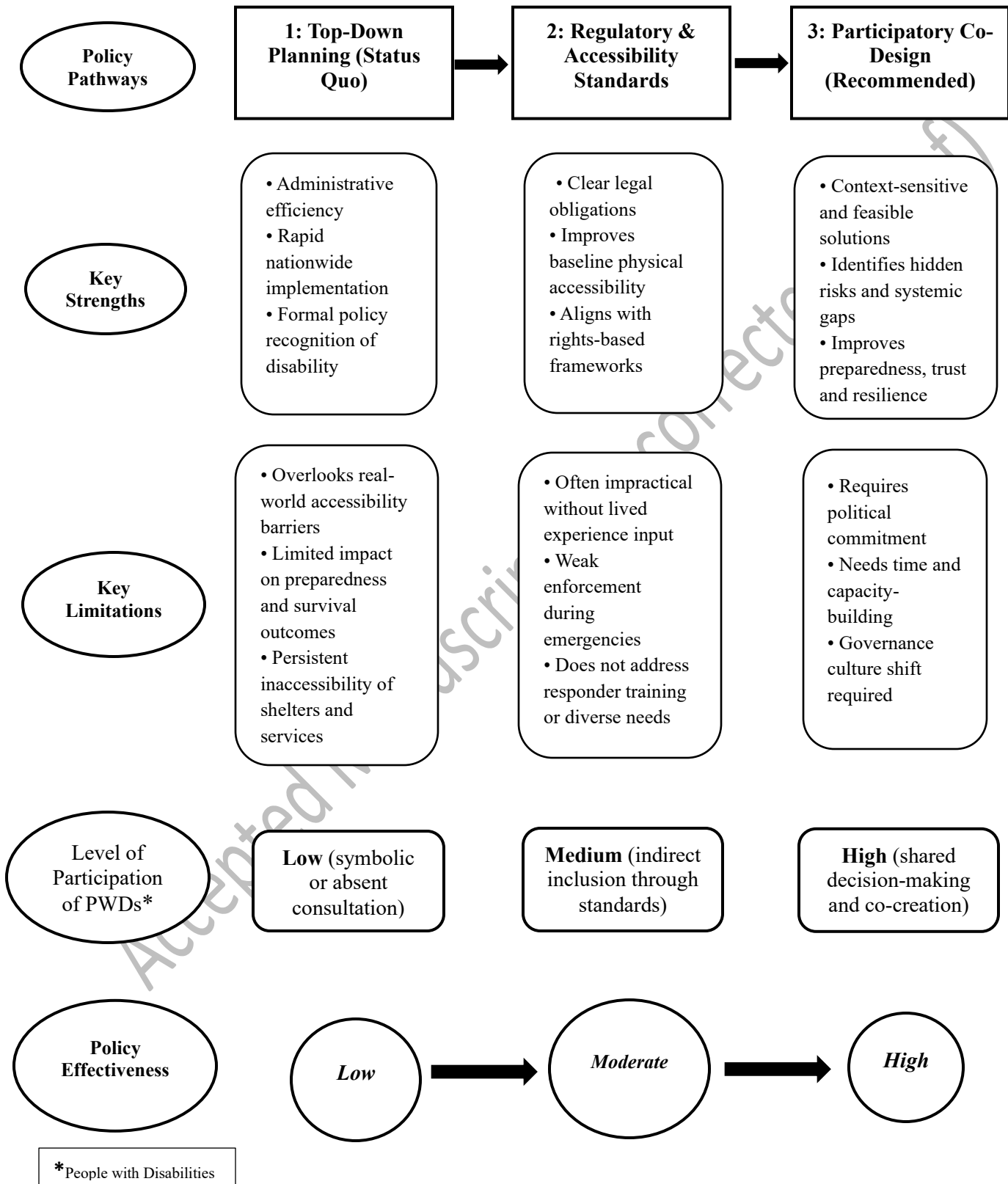
communicating with a person who is non-verbal. This lack of training directly impacts the safety and survival of individuals with disabilities during emergencies [12].

- **Standardized Solutions for Diverse Needs:** Standardized emergency services, aid packages and protocols fail to account for the diverse needs across different disabilities. A one-size-fits-all approach to aid delivery fails to accommodate the wide spectrum of requirements, leaving critical needs unaddressed across domains from survival to rehabilitation. Standardized leaving many without appropriate support [13].
 - *Policy Pathways*

Disability-inclusive DRR policies follow three distinct pathways, defined by their level of engagement with people with disabilities and resulting outcomes. As illustrated in Figure 1, effectiveness increases along a continuum from top-down planning to regulatory standards and optimally, to participatory co-design.

The analysis highlights that top-down and regulation-only approaches, while administratively efficient and legally robust, often fail to address real-world accessibility barriers. In contrast, participatory co-design approaches that recognize persons with disabilities as core policy actors, produce more equitable, feasible and sustainable DRR outcomes [9, 10, 14].

Figure 1. Policy Pathways for Disability-Inclusive DRR



3. Policy recommendations and application

- *Policy recommendations*

Building on the preceding analysis, the following policy recommendations translate evidence into actionable reforms aimed at strengthening disability-inclusive DRR. These recommendations call for coordinated action across national policymaking bodies, disaster management agencies, public health organizations and local urban planning and service delivery systems.

Table 1 outlines each recommendation alongside its key actions, responsible stakeholders, anticipated effectiveness, feasibility, adaptability, expected long-term impacts and monitoring indicators.

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Table 1. Actionable Policy Recommendations for Disability-Inclusive DRR

Policy Recommendation	Key Actions	Responsible Stakeholders	Effectiveness	Feasibility & Adaptability	Expected Impact Over Time	Monitoring Indicators
1. Institutionalize Participatory DRR Governance	Formalize inclusion of DPOs as voting members in all national and local DRR planning and decision-making bodies	Key agencies such as: Parliament, National Disaster Management Organization, Local Municipalities, DPOs	High – addresses root causes of implementation failure by integrating lived experience into decision-making	Moderate to High – feasible through regulatory reform; adaptable to different administrative levels and local contexts	Short-term: improved relevance of DRR plans Medium-term: increased preparedness and trust Long-term: sustained reduction in exclusion and disaster-related harm	% of DPO representatives; frequency of participation with voting rights
2. Invest in Co-Developed Capacity Building	Allocate dedicated funding to create and deliver training curricula for emergency responders that are co-developed by experts with disabilities.	Ministry of Health, Ministry of Interior, Iranian Red Crescent, International Donors	High – evidence shows improved responder performance and survival outcomes	High – can be integrated into existing training systems; adaptable to different hazard types and disability groups	Short-term: improved responder awareness and skills Medium-term: more effective emergency response Long-term: institutionalized inclusive response capacity	Number of responders trained; post-training performance assessments
3. Co-Create and Enforce Accessibility Standards	Develop, legislate and monitor mandatory accessibility standards for shelters, evacuation routes and early warning systems in collaboration with DPOs	National Standardization Body, Urban Planning Authorities, DPOs	Moderate to High – improves structural accessibility and baseline safety	Moderate – requires cross-sector coordination; highly adaptable to local infrastructure and resources	Short-term: identification of critical accessibility gaps Medium-term: improved access to emergency infrastructure Long-term: resilient, inclusive built environments	Compliance rates; annual monitoring reports

- **Policy Application**

Participatory co-design requires alignment with existing structures and resources, avoiding the need for parallel systems.

A. Operationalization under Current Conditions

- **Short-term:** Integrate DPOs into existing DRR committees via administrative directives or regulatory amendments, with no significant financial burden.
- **Medium-term:** Pilot co-created accessibility standards in high-risk areas.
- **Long-term:** Institutionalize participatory co-design and embed lived experience.

B. Anticipated Policy Effects

- **Short-term:** Improve DRR plan relevance and practicality, enhancing preparedness and response.
- **Medium-term:** Boost trust and coordination between authorities and disability communities, improving compliance, information flow and resilience.
- **Long-term:** Reduce preventable harm, mortality and exclusion for people with disabilities during disasters, leading to more equitable outcomes.

C. Potential Unintended Consequences

- **Participatory DRR:** Slow decision-making, risk of tokenistic participation and unequal representation.
- **Solutions:** Clear participation mandates and diversity requirements for DPO representation.
- **Capacity Building:** Higher costs, limited qualified trainers with disabilities and institutional resistance.

- **Solutions:** Allocate dedicated budgets and foster inter-agency coordination.
- **Accessibility Standards:** Impose short-term financial/administrative burdens.
- **Solutions:** Strengthen regulatory oversight and clarify responsibilities.

D. Implementation Requirements and Barriers

- **Requirements:** Political commitment, legal recognition, dedicated budgets and capacity building for institutions and DPOs.
- **Barriers:** Institutional resistance to power-sharing, limited technical capacity and fragmented coordination.
- **Solutions:** Strong leadership, collaboration and normalization of participatory practices within DRR institutions.

4. Conclusion

A resilient society requires more than inclusive language; it demands inclusive practice. The persistent protection gap for people with disabilities in disasters stems from systemic oversight, not necessity and can be addressed through deliberate political will and inclusive design. Persons with disabilities bring vital, yet underutilized, expertise that can significantly improve preparedness and response. Integrating this expertise is not merely an ethical imperative but a strategic necessity to save lives, uphold the right to safety for every citizen and finally bridge the persistent life-threatening gap. Embracing a participatory co-design approach can transform DRR systems into truly equitable, responsive frameworks. The time for transformative action is now.

Declaration of Interest. The author reports no conflicts of interest.

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