Chapter 24
Intersecting Vulnerabilities: Climate Change Impacts and Coping Strategies Among Women with Disabilities in Eastern Africa

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Abstract Women with Disabilities (WWDs) in Eastern Africa experience disproportionate impacts from climate change due to intersecting vulnerabilities stemming from physical, sensory, cognitive, and mental disabilities. These challenges are exacerbated by socio-economic marginalisation, gender inequality, and exclusion from adaptation planning. This study employed a qualitative approach to examine the vulnerabilities, coping strategies, and loss and damage experienced by WWDs across six Eastern African countries. Using purposive sampling, in-depth interviews were conducted with 42 participants representing, 32 WWDs and 10 key informants, including government officials, climate experts, and representatives from disability organisations. Thematic content analysis revealed barriers to evacuation, access to early warning systems, inclusive infrastructure, and policy participation. Despite these barriers, WWDs demonstrated resilience through community support networks, livelihood diversification, and adaptive household practices. However, national climate policies such as NDCs and NAPs rarely address their specific needs. The study calls for gender-transformative, disability-inclusive adaptation policies and frameworks. Future research should assess the effectiveness of existing strategies and promote disability-justice approaches in climate governance.

Keywords Women with disabilities · Climate change adaptation · Intersectional vulnerabilities · Resilience building

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1 Introduction

Climate change is one of the most significant global challenges of the twenty-first century, with its adverse effects disproportionately affecting vulnerable and marginalized communities in developing countries (Ayanlade et al., 2023, Levy & Patz, 2015; Nath & Behera, 2011; Otto et al., 2017; Yadav et al., 2025). Africa is among the most vulnerable regions to the impacts of climate change, facing challenges that extend beyond environmental considerations (Alexandrou, 2022). The continent's vulnerability is deeply rooted in its geographic, socio-economic and cultural contexts, where its location in the tropics, limited resources, reliance on climate-sensitive sectors like agriculture, and widespread poverty compound the risks (Ngacamu, 2023; Parsons et al., 2020). In Eastern Africa, climate change-induced events such as frequent and prolonged droughts, erratic and high intensity rainfall patterns, and consequent flooding have become increasingly frequent and severe, threatening water and food security, livelihoods, ecosystems, and socio-economic stability (Lombe et al., 2024; Lottering et al., 2020; Mulyanyuma, 2024).

African women, particularly those in vulnerable positions and environments, face greater risks to the changing climate due to their intersectional identities (Adam et al., 2024; Chisty et al., 2021; Ergas et al., 2021; Gannon et al. 2022; Shackleton et al., 2015). Among these vulnerable groups, Women With Disabilities (WWDs) in Eastern Africa who face compounded challenges in both adapting to and mitigating the impacts of changing climate (Abdullahi et al., 2024; Engelman et al., 2022; Geary et al., 2024; King & Gregg, 2022; Nyasimi et al., 2022; Saxton & Ghenis, 2018; UN 2006). WWDs encounter disproportionate climate-related losses and damages due to intersecting vulnerabilities. As climate change intensifies, risks such as droughts, floods, and cyclones disrupt livelihoods, limit access to essential services, and heighten disasters for marginalized groups (African Union, 2020; Dominelli, 2024; Kaddour et al., 2023; UNFCCC, 2021; UN Women, 2022). WWDs often struggle to engage in adaptation and mitigation actions tailored to their needs (Kosanic et al., 2022; Stein & Stein, 2022). Loss of livelihoods, displacement, and inadequate healthcare further compound their challenges, increasing dependence and social isolation (Moosa & Tuana, 2014. Cultural stigmas amplify their exclusion from decision-making processes. The intersection of gender, disability, and climate change creates unique challenges, as WWDs are not only affected by physical and socio-economic barriers but are also marginalized in terms of access to climate adaptation strategies and resources. Despite their heightened vulnerabilities, this group has largely remained invisible in climate change discourse and policies. Addressing these challenges requires inclusive policies, gender-transformative and disability friendly adaptation responses, and empowerment programs to enhance their resilience and dignity.

Climate-related Loss and Damage (L&D) disproportionately affects marginalized groups, with WWDs being among the most vulnerable. Different authors have defined L&D as the adverse impacts of climate change that are not mitigated or adapted to, such as displacement, destruction of livelihoods, and loss of cultural identity (Boyd

et al., 2017; Mechler et al., 2019, 2020; Page & Heyward, 2017; Surminski & Lopez, 2014). The IPCC report acknowledges that people with disabilities are disproportionately affected by climate change (IPCC, 2022). WWDs often experience these effects more severely due to systemic inequalities, limited access to resources and intersecting factors such as gender, disability, socioeconomic status, and geographic location (Boda et al., 2021; Crawford et al., 2023; Gomes et al., 2022; Stein & Stein, 2022). For instance, WWDs are often excluded from education, employment, and healthcare (Hashemi et al., 2020; Jansen-van Vuuren et al., 2022; Jones et al., 2021; Masuku et al., 2021; McKinney & Swartz, 2019; Meyer et al., 2022; Morwane et al., 2021). These exclusions amplify their vulnerability to climate-related disasters, leaving them with fewer resources to recover and adapt (Jansen-van Vuuren et al., 2022; Jones et al., 2021; Masuku et al., 2021; Meyer et al., 2022; Morwane et al., 2021). Many WWDs live in poverty, which limits their ability to engage in climate resilient livelihoods or receive early warning systems. Additionally, emergency responses often fail to consider the needs of people with disabilities including WWDs. For instance, evacuation plans may lack accessible transport or shelters, leaving women with disabilities stranded during disasters (UNFCCC, 2021).

Displacement caused by climate disasters increases the risk of gender-based violence for WWDs, who are often targeted due to their perceived vulnerability (Desaia & Mopumita, 2021). Lastly, WWDs are often excluded from climate negotiations and decision-making processes, leading to policies that fail to address their unique needs (UN Women, 2022). It is important to note that there is a data paucity on impact of climate change on WWDs and subsequent L&D (Ned, 2022). The absence of disaggregated data on disability and gender exacerbates the invisibility of these challenges, hindering targeted interventions.

This paper seeks to examine the specific vulnerabilities faced by women with disabilities in Eastern Africa, specifically (a) to assess the specific vulnerabilities of women with disabilities in Eastern Africa in relation to climate change-induced extreme events, (b) to explore the coping strategies and resilience-building practices employed by women with disabilities in Eastern Africa in response to extreme climate events and (c) to evaluate the socio-economic and non-economic losses and damages incurred by women with disabilities due to climate extremes and climate change and identify pathways for enhancing their adaptive capacity and resilience in the region.

2 Study Context

This paper is based on a project titled: Strengthening the Voices of Women with Disability to Actively Participate in Climate Change Policy and Negotiations (STREVOW), which is a three-year initiative funded by the African Development Bank's (AfDB)'s Africa Climate Change Fund (ACCF). Led by the Inclusive Climate Change Adaptation for a Sustainable Africa (ICCASA), the project empowers women with disabilities in Burundi, Uganda, Tanzania, Comoros, Ethiopia, Kenya, and other Eastern African countries to engage in climate change policy and negotiations.

STREVOW seeks to improve climate policies, enhance the influence of women with disabilities in climate action, and develop frameworks for their participation in decision-making. It also fosters alliances to support policy negotiations and translates UNFCCC decisions into accessible formats. By creating inclusive spaces, raising awareness, and strengthening collaboration, the project ensures that the voices of women with disabilities are heard in climate discussions, thus addressing their unique challenges and advancing more equitable climate solutions in the region.

3 Methodology

A qualitative research design was adopted to investigate the lived experiences of Women with Disabilities (WWDs) in the context of climate change impacts and adaptation across Eastern Africa. This methodological approach was deemed most appropriate for capturing rich, nuanced, and context-specific insights into the complex vulnerabilities, resilience strategies, and coping mechanisms employed by this historically marginalised population. The study involved in-depth interviews with 32 WWDs and 10 key informants (KIIs), including government officials, disability rights advocates, climate policy experts, and representatives from civil society organisations. These 42 participants were selected through purposive sampling, ensuring a diverse and information-rich pool of respondents that could offer both personal lived experiences and institutional perspectives on disability-inclusive climate adaptation.

This sample size is consistent with best practices in qualitative research, where thematic saturation—the point at which no new themes emerge—can typically be achieved with 10–15 interviews, especially when participants are highly knowledgeable or directly affected by the issue under study (Hagaman & Wutich, 2016); Guest et al., 2006; D'Cruz, 2013; Vasileiou et al., 2018). The selected key informants were information-rich, thus providing the necessary depth to triangulate and enrich the analysis of data from the 32 WWDs and 10 KIIs. Additionally, Akhter (2022) emphasizes that participants engaged in in-depth Key Informant Interview (KIIs) possess invaluable verbatim knowledge, which holds significant relevance and importance in understanding complex topics or issues. Similarly, Lokot (2021) emphasizes that key informants, due to their specialized expertise and extensive experience with the subject matter, play a crucial role in providing detailed insights and contextual information that may not be readily accessible through other data collection methods. Their perspectives are instrumental in enriching the depth and quality of research findings, ultimately contributing to a more comprehensive understanding of the subject at hand.

In addition to interviews with WWDs, ten key informant interviews (KIIs) were conducted with government officials, disability rights advocates, climate policy experts, and representatives of civil society organizations. These individuals were purposively selected based on their specialized knowledge and strategic roles in disability-inclusive climate adaptation, making them "information-rich" participants (Patton, 2002). As earlier mentioned, the ten respondents align with established best

practices in qualitative research, where thematic saturation is typically reached within 10–15 interviews (D'Cruz & Jones, 2013; Guest et al., 2006; Hagaman & Wutich, 2016; Vasileiou et al., 2018). The KIIs were intended to complement and triangulate the narratives of the 32 WWDs, thereby enhancing the credibility, depth, and policy relevance of the study's findings.

3.1 Study Participants Selection and Characteristics

The study specifically targeted Women with Disabilities (WWDs) who are active beneficiaries of the *Strengthening the Voices of Women with Disabilities to Actively Participate in Climate Change Policy and Negotiations* (STREVOW) project. As part of its participatory framework, the project organises monthly thematic dialogues addressing the intersection of gender, disability, and climate change adaptation. To facilitate inclusive engagement, STREVOW developed and maintained a comprehensive participant database comprising WWDs who voluntarily registered to participate in these dialogues. For the purpose of this study, a purposive sampling approach was employed to select 32 WWDs from this database. Selection was guided by principles of maximum variation to ensure diversity in terms of age, type of disability, socio-economic status, and geographic representation across urban and rural contexts in Eastern Africa.

A purposive sampling method was used to ensure the inclusion of women with various types of disabilities (physical, sensory, intellectual, and mental) across different age groups and socio-economic backgrounds. In total, 32 WWDs of different ages ranging from 21–75 years, participated in the study (Table 1). Additionally, 10 key informant interviews were conducted with local climate change experts, gender advocates, disability rights organizations, and government representatives to gain insights into institutional responses and support mechanisms for this group.

Table 1 Demographic and disability profile of women with disabilities (WWDs)

Attribute	Category	Number of participants
Age group	21–30 years	7
	31–45 years	10
	46–60 years	9
	Over 60 years	6
Disability type	Physical	12
	Visual	8
	Auditory	6
	Cognitive/mental	6
Location	Urban	17
	Rural	15
Total		32

The study encompassed 32 WWDs from diverse urban and rural backgrounds, engaging in various livelihood activities. While agriculture remained the primary source of income for most of the respondents, there was notable growth in non-agricultural pursuits such as small businesses, formal employment, and other off-farm ventures. Both urban and rural communities faced overlapping challenges, with climate shocks like prolonged droughts and severe floods being particularly prevalent. Gender roles and relationships significantly shaped how WWDs adapted to climate impacts, influencing livelihood diversification and adaptive strategies. Interestingly, these climate adaptation practices often served as a catalyst for reshaping traditional gender dynamics within households.

3.2 Data Collection and Analysis

In-depth key informant interviews were initially conducted with Women with Disabilities (WWDs) to gain a deeper understanding of their lived experiences and to explore how institutional frameworks, policies, and community dynamics influence their ability to adapt to climate change. These interviews focused on identifying the barriers WWDs face in accessing climate-related resources and services, as well as their perspectives on the responsiveness of national and local adaptation policies to their unique needs. Following these interviews, a semi-structured questionnaire was administered to the same sample of respondents to gather additional qualitative data on the types and severity of disabilities, the frequency and impacts of climate-induced events (such as floods, droughts, and heatwaves), and the associated non-economic losses experienced. The questionnaire also explored the various climate adaptation strategies employed by WWDs, along with the formal and informal support systems available to them within their respective environments.

All qualitative data obtained from both the interviews and questionnaires were analyzed using thematic content analysis. This involved systematic coding and categorization of responses to identify recurring patterns and emergent themes related to vulnerability, resilience, and adaptive strategies. The analysis enabled the research team to uncover not only the direct impacts of climate change on WWDs but also the broader socio-cultural and institutional factors that shape their adaptive capacities across different contexts in Eastern Africa.

4 Findings and Discussions

4.1 Vulnerabilities of Women with Disabilities in Eastern Africa

Women with Disabilities in Eastern Africa experience distinct and heightened vulnerabilities in the face of climate change-induced disasters. Their challenges go beyond those faced by other women, as physical, sensory, and cognitive disabilities create significant barriers to survival and adaptation.

The findings reveal that Women with Disabilities (WWDs) in Eastern Africa face unique vulnerabilities and non0economic losses from other women when confronted with climate change-induced extreme events (Table 2). These non-economic losses reflect psychosocial dimensions of loss (e.g. trauma, fear, anxiety, and loss of dignity); human rights implications (e.g. loss of agency, participation, and autonomy) and social exclusion and identity-based marginalization exacerbated during climate disasters (Table 2).

First and foremost, physical disabilities impede mobility, making it difficult for women to evacuate during floods or access emergency relief. Women with visual or hearing impairments often lack access to early warning systems or emergency alerts, increasing their exposure to risks. Furthermore, intellectual and mental disabilities may hinder their ability to comprehend or respond to climate-related threats effectively. According to a WWD in Kenya,

> When the floods come, I have nowhere to go. My wheelchair cannot move through the mud, and the schools where communities move to are up the hill. My community members move away during floods, but I am left behind, waiting for someone to help—if they remember

Table 2 Key vulnerabilities and non-economic losses experienced by WWDs

Disability type	Main climate-related vulnerabilities	Non-economic losses and damages
Physical	Inability to evacuate during floods or landslides; lack of accessible infrastructure and shelters	Loss of independence and mobility; heightened risk of injury; reduced self-worth and autonomy
Visual	Inaccessibility of visual early warning systems; increased dependence on others during disasters	Loss of sense of safety; psychological stress due to isolation and disorientation; fear of abandonment
Auditory	Exclusion from emergency audio announcements; communication barriers in shelters or evacuation centres	Loss of dignity from being misunderstood or ignored; anxiety and emotional distress due to communication breakdown
Cognitive/ mental	Difficulty understanding warnings or accessing assistance; reduced capacity to adapt quickly in emergencies	Heightened trauma; emotional overload; exclusion from community support systems due to stigma and misunderstanding

> to come back. During the heavy rainy season of May 2024, I was left in my home for one week with water in my home. Floods are hard for everyone, but for me and other WWDs, it is a battle for survival every single day

Another significant vulnerability is the intersection of disability with poverty. Many women with disabilities in Eastern Africa live in poverty, with limited access to education, healthcare, and social support systems. This socio-economic marginalization exacerbates their vulnerability to climate change, as they lack the financial and material resources needed to recover from climate shocks. According to a WWD from Tanzania,

> After the drought, my crops failed, and I had no savings to buy food. As a woman with a disability, finding work is difficult, and most employers overlook me. When disasters strike, rebuilding is nearly impossible because I have nothing to start with. Climate change makes everything worse—I lose my small vegetable business, my independence, and my dignity. Women like me need support, not just during drought but in building resilience. If we had access to financial aid and training, we could adapt. But without support, we are left in a cycle of poverty that climate change only deepens

Cultural and societal norms also play a critical role in heightening the vulnerability of women with disabilities. In many cases, these women face double discrimination—both as women and as persons with disabilities—leading to social exclusion. In rural areas, where the majority of women with disabilities reside, traditional gender roles limit their mobility and participation in community decision-making processes, preventing them from actively engaging in climate adaptation measures.

> People in my community think I am weak, that I cannot contribute to important matters in our community. When meetings are called to discuss issues affecting the community, no one invites me. They assume I have nothing to say. But I live through the worst impacts. I know what I need. If only the community and government would listen to me and other women like me. If I was part of decision-making on climate matters, I could help create solutions that work for everyone including those with disabilities like me. I need to break through the gates that block my participation because I am not helpless. I can achieve this if the government, community and everyone can hear my voice and listen to me

10 of the WWDs who participated in this study indicated that due to their physical and visual disabilities, they struggle to evacuate during climate disasters such as floods and landslides. The lack of accessible infrastructure, such as ramps and transportation, and early warning systems means they are often left behind in emergency situations, thus increasing their risk of injury or even death. For the visually impaired, they have to rely on a caregiver or relative to move them from danger. A visually impaired WWD reported that,

> Since 2022, we have been receiving intense rainfall, and I hear my neighbors talking about the amount of water that is flowing through Nairobi City. I cannot see the water and without a caregiver, I cannot move. I fear every rainy season, knowing that if disaster strikes, and water comes into my home, I might not make it out without a caregiver. Sometimes I hear on the radio announcement that we will have more than normal rainfall, but I don't know what that means. Does it mean that I should prepare for the more than normal rains and if so, what preparations do I need to make.

A respondent with physical disabilities living in fragile and hilly areas that are susceptible to landslides also reported that.

> Living in hills of Kigali is a daily struggle, but when the rains come, it becomes a nightmare. I cannot run when the ground starts to slide, and there are no safe paths for my wheelchair. When disaster strikes, I depend entirely on others to carry me. Sometimes, help comes too late for some of the people who depend on wheelchairs and crutches. The fear of being buried alive haunts me every rainy season. The community forget that women like me exist until tragedy happens. But we are here, and we deserve to live without constant fear of the land swallowing us.

Women with visual, hearing, or intellectual disabilities frequently lack access to climate-related early warning information. Many alerts rely on visual or auditory signals, which may not be accessible by all, leaving them unaware of impending disasters and unable to take timely action. A woman who is auditory challenged indicated that.

> I am often the last to know anything happening around my community. Warning messages are sent through radios, written notices, or orally by word of mouth. But I cannot hear them or read them. I rely on others to tell me, but what if no one does? By the time I realize something is wrong, and it is often too late to act. Our weather is making floods more frequent, yet early warning systems still do not include me and others like me. We need alerts in sign language, vibrations, or other accessible formats. Our lives matter, and we deserve the same chance to prepare and protect ourselves.

Current national climate change policies and development agendas in Eastern Africa countries, including Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs), fail to adequately address the unique circumstances of WWDs or provide actionable measures that they can adopt. These critical documents often overlook the specific vulnerabilities and barriers faced by WWDs in the context of climate change. As a result, this oversight leaves WWDs without the necessary support and resources to effectively adapt to climate impacts. There is a pressing need for inclusive and targeted interventions within these policies to ensure that WWDs are not left behind in climate adaptation efforts. According to a government official,

> Despite the multifaceted vulnerabilities faced by WWDs due to climate change, our government is still not committing to creating inclusive policies that address their unique needs. We understand that WWDs face significant barriers, including physical, sensory, and cognitive disabilities, as well as socio-economic marginalization and cultural discrimination. It is therefore, imperative that we develop targeted interventions to provide accessible infrastructure, early warning systems, and emergency relief. By doing so, we aim to foster a more equitable and resilient society, ensuring that no one is left behind in the face of climate change.

4.2 Coping Strategies and Resilience Building Practices for WWDs

Despite their vulnerabilities, WWDs in Eastern Africa have demonstrated remarkable resilience and resourcefulness in coping with climate change impacts. One key strategy is the formation of community and/or group support networks (Table 3).

In general, women often rely on family, neighbors, and disability organizations to share resources, provide information, physical assistance, and exchange knowledge on climate adaptation. This applies to WWDs who rely on networks to help mitigate the isolation and vulnerability they face, especially in the aftermath of extreme weather events. A WWD residing in rural area reported that,

> When rains fail, we usually rely on each other. I am never alone because my community stands with me. My neighbors help me move my parents' or sibling's home to collect food and my women group do share important weather information. Without them, I would be

Table 3 Coping strategies and resilience practices

Strategy/practice	Description
Group support networks	Relying on neighbors, family, relatives, church, and women's groups for food, information, and mobility aid
Livelihood diversification	Engaging in small businesses, crafts, and drought-tolerant farming such as growing pigeon peas and local vegetables that can withstand dry spells
Household climate adaptation	Strengthening homes with cement so that they are not eroded, food storage, use of solar energy for lighting and cooking
Participatory advocacy	Engaging in community awareness campaigns during chiefs baraza to voice concerns and influence how WWDs are treated during and after a disasters
Use of assistive technologies	Leveraging mobility aids, mobile phones, and adaptive devices to enhance disaster preparedness
Faith and spiritual resilience	Drawing emotional strength from religious beliefs and faith-based networks during and after crisis
Peer mentorship within the groups	Forming mentorship circles among WWDs to exchange survival strategies and emotional support
Local innovation	Establishing context-specific adaptation solutions, such as raised garden beds in informal urban settlements or makeshift flood barriers along rivers edges
Partnerships with civil society and relief organization	Collaborating with local organizations (such as Red cross, community-based organizations and Non-government organization) to access training, relief support, and adaptation resources

> completely vulnerable. We women with disabilities may face many challenges, but we also support each other. We exchange knowledge, share food, and lift one another up when times are hard. These networks are our strength. If we had more resources and recognition, we could do even more to protect ourselves and adapt to climate change.

Additionally, some women with disabilities have adopted livelihood diversification strategies. For example, women in Kenya have taken up small-scale farming, using adaptive techniques such as rainwater harvesting and planting of drought-tolerant crops. In Uganda, women with disabilities have engaged in small business activities like crafts and tailoring, which allow them to earn an income and reduce their dependence on climate-sensitive agriculture. According to a WWD farmer living in rural area,

> Depending on one source of income is too risky, especially with changing climate. I started small-scale farming with drought-tolerant crops, and when the rains fail, I still have something to harvest. I also make and sell woven baskets at the local market and sometime buyers come from Nairobi and Mombasa cities, giving me another way to earn a living. Many women with disabilities like me are finding creative ways to survive, but we need support such as training, finances to buy raw craft materials, and access to markets. We do not want to rely on charity; we want to be independent. With the right resources, we can build businesses, educate our children and feed our families.

The study also found that women with disabilities engage in climate-resilient practices within their households. These include building stronger homes to withstand floods, using alternative energy sources like solar power, and preserving food stocks in anticipation of drought periods. However, these coping strategies are often limited by financial constraints, lack of access to adaptive technologies, and insufficient training. According to a WWD living in the informal urban settlements,

> I know that climate change will not wait for me to be ready, so I must prepare. My family and I reinforced our home to withstand floods, and I store food in case of drought. We use solar energy for cooking and lighting the home because electricity is unreliable. But these changes are not easy. I struggle to afford better materials, and no one teaches women with disabilities about adaptive technologies. We are doing our best, but we need training, funding, and inclusion in climate programs. If we are given the right tools, we can protect ourselves and contribute to climate solutions.

According to a national government representative.

> As a government, we are inspired by the remarkable resilience and resourcefulness demonstrated by People with disabilities, specifically WWDs and in coping with climate change impacts. Empowering WWDs to lead in climate adaptation is not only essential for their resilience but also contributes to the broader goals of gender equality. By focusing on disability-inclusive climate justice frameworks, we can significantly reduce vulnerabilities and enhance resilience across our country.

4.3 Socio-economic and Non-economic Losses

Women with disabilities in Eastern Africa experience both socio-economic and non-economic losses as a result of climate change. Socio-economic losses include the loss

of income, assets, and productive capacity. For instance, many WWDs are unable to access formal employment or benefit from climate adaptation programs due to physical, societal, and infrastructural barriers. This increases their dependency on external aid, which is often insufficient or inaccessible during climate shocks. A WWD reported that,

> Frequent drought has taken so much from me, not just my small business, but my independence as well. As a woman with a physical disability, I already struggled to find work. When drought destroyed my crops, I had no backup plan. Most climate programs that are brought by the government or NGOs do not consider our needs, and I cannot access training or financial support to rebuild after a drought. I do not want to depend on aid, but what choice do I have when opportunities are not designed for people like me? If we were included in adaptation agricultural programs, we could protect our livelihoods instead of losing everything when drought strikes, which is happening every year.

Non-economic losses include the emotional and psychological toll that climate-induced extreme events have on women with disabilities. These losses often go unrecognized in official assessments, but the trauma of losing homes, livelihoods, or loved ones is deeply felt by this group. Additionally, the stigma and discrimination faced by women with disabilities further contribute to their emotional suffering. A WWD from a flood prone area reported that,

> I am a widow and a WWD and losing my home in the floods was not just about losing a house, it was losing my sense of security. The fear still haunts me. As a woman with a disability, displacement is even harder. People assume I am helpless, and I constantly have to prove that I am capable. The stress of starting over, of being seen as a burden, is overwhelming. But no one talks about this kind of loss. Climate change is not just about money or land, it also takes away our dignity, our peace of mind, and sometimes, even our will to keep fighting.

5 Conclusion

This research underscores the complex and multifaceted vulnerabilities experienced by Women with Disabilities (WWDs) in Eastern Africa in the face of climate change-related disasters. These vulnerabilities arise from the intersection of physical, sensory, cognitive, and psychosocial disabilities with broader structural inequalities—such as poverty, socio-economic marginalization, cultural stigma, and institutional exclusion. The absence of accessible infrastructure, inclusive early warning systems, and equitable service delivery exacerbates the risks that WWDs face during climate-induced events such as floods, droughts, and landslides. Many are unable to evacuate independently, access timely information, or participate in decision-making processes, resulting in both economic and non-economic losses, including trauma, social isolation, and loss of dignity.

Despite these adversities, the study also reveals the resilience and ingenuity of WWDs in responding to the climate crisis. Participants described how they draw on community support networks, diversify their livelihoods, adopt localized adaptation

practices, and advocate for change—often with limited resources and minimal institutional backing. However, these efforts remain constrained by inadequate access to climate finance, adaptive technologies, and capacity-building opportunities.

To ensure that WWDs are not left behind in climate adaptation efforts, **g**overnments, development partners, and civil society actors must urgently operationalize disability-inclusive adaptation. This includes:

- Promote targeted research on the specific vulnerabilities and non-economic losses experienced by Women with Disabilities (WWDs) in the context of climate change. There is a pressing need for evidence that captures the emotional, psychological, cultural, and social dimensions of climate-related loss—including trauma, displacement, loss of dignity, disruption of caregiving systems, and community exclusion. Such research should be participatory, intersectional, and grounded in the lived experiences of WWDs to inform policies and programmes that go beyond material impacts and address the full spectrum of climate-related harm.
- Support further research on disability-inclusive climate adaptation, particularly studies that assess the effectiveness of current strategies, document best practices across diverse ecological and socio-cultural settings, and evaluate the long-term outcomes of adaptation efforts for WWDs. More participatory, gender-disaggregated, and disability-specific research is essential to inform scalable, evidence-based policy and programme design across Eastern Africa and beyond.
- Establishing accessible early warning systems tailored to all disability types—using tactile, auditory, visual, and sign language formats, as well as mobile alerts with vibration functions.
- Developing inclusive evacuation protocols, incorporating accessible transport, trained responders, and disability-friendly shelters within local disaster risk management plans.
- Allocating dedicated budget lines for disability inclusion in national adaptation plans (NAPs), nationally determined contributions (NDCs), and broader climate finance mechanisms.
- Building the capacity of organizations of persons with disabilities (OPDs) and WWD-led groups to engage meaningfully in climate policy formulation, implementation, and monitoring.
- Improving disaggregated data collection by disability, gender, and age to inform context-specific adaptation measures and track loss and damage more accurately.
- Promoting community-based adaptation models that elevate the leadership and lived experiences of WWDs, especially in rural and marginalized regions.

These actions align with international frameworks such as the UN Convention on the Rights of Persons with Disabilities (CRPD) and the principles of intersectional climate justice. Empowering WWDs not only enhances their adaptive capacity but also contributes to more inclusive, equitable, and sustainable climate governance.

Future research should explore the scalability and long-term impact of disability-inclusive strategies, assess financing mechanisms that prioritize marginalized voices, and further document the lived experiences of WWDs to inform transformative policy and practice across the region.

Author Declarations

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Conflicts of Interest/Competing Interests The authors declare that they have no competing interests.

Ethics Approval/Declarations This study was done in compliance with international research standards. Informed consent was obtained from all participants, ensuring confidentiality, voluntary participation, and the right to withdraw at any time. Special considerations were taken to accommodate accessibility needs of Women with Disabilities (WWDs).

Consent to Participate All participants provided **informed consent** prior to data collection. The purpose of the study, participants' rights, and confidentiality measures were clearly explained in accessible formats. Participation was entirely voluntary, and respondents were informed of their right to withdraw at any point without consequence. Consent was documented verbally and in writing.

Consent for Publication Participants were informed that anonymized quotes and aggregated data might be used in publications arising from the study. Consent for publication was obtained during the informed consent process. No identifiable personal information is disclosed, and all data presented ensures the privacy, dignity, and confidentiality of Women with Disabilities (WWDs).

Availability of Data and Materials The underlying data can be made available upon request to the corresponding author.

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