

# Advancing Equity: Principles for Climate-Resilient Disability Inclusive WASH

*Report*



Co-published by:



# Acknowledgements

---

This work was supported by funding from the Australian Government Department of Foreign Affairs and Trade's Water for Women Fund (grant number WRA-CR01) under the project Inclusive Pathways to Climate-Resilient WASH in Bangladesh.

We are sincerely grateful to the following individuals who contributed to the collaborative development of the Principles for Climate-Resilient Disability Inclusive WASH Services by participating in our workshops and serving on the Advisory Group:

Persons with disabilities and caregivers in Satkhira and Gaibandha who participated in our study (names are not included to ensure anonymity), Md. Sada Mia, Anondo Pal, Shontosh Chondro Barman (Ruparbazar Pratibandhi Jubo Unnayan Songstha, Gaibandha), Subrata Bachar (Ideal, Debhata, Satkhira), Abdul Alim (Protibondhi Unnoyon Shogostha, Debhata, Satkhira), Torun Sardar (Disabled Rehabilitation & Research Association - DRRRA), Salma Mahbub (B-SCAN), Arefeen Ahmed (Jigsaw Consultants), Russell Rashidul Azam (Centre for Disability and Development), Shimu Shikder (ADRA Bangladesh), Peter Maes, Ruhil Amin, Faria Fahim (UNICEF), Tanvir Ahmed (ITN-BUET), Saqif Nayeem Khan, Silvia Rovelli (iDE), Syful Karim, Yeasin Arafat, Tunazzina Hoque (WaterAid), Farjana Jahan, Mahbubur Rahman (icddr,b), Chandan Z Gomes, Sagor Marandy, Paritosh Chandra Sarker, Arunava Saha, Ruhila Parveen, Dulon Joseph Gomes, Rakib Hossain, Mridul Toju, Lablu Khan, Mezanur Rahman, Uttom Das, Joseph Mardy, Hero Gain, (World Vision Bangladesh), Mamum Hossain (Shushilan), Jeremy Kohlitz (ISF-UTS), and Mary Wickenden (IDS).

Front cover photo credit: World Vision/Proshanto Sharma Roy.

**Citation:** Wilbur, J., Ruuska, D., Diba, S.A., Ul Alam, M., Upoma, T.A., Akter, J., Nawaz, S. (2025) Advancing Equity: Principles for Climate-Resilient Disability Inclusive Water, sanitation and Hygiene. DOI: <https://doi.org/10.17037/PUBS.04674714>.

# Summary

---

## Introduction:

Access to water, sanitation and hygiene (WASH) is crucial for health, but billions lack access. People with disabilities face additional barriers, leading to poorer health outcomes. Climate change exacerbates these challenges by disrupting water availability, sanitation infrastructure, and hygiene practices, forcing people to adopt harmful coping strategies. Most climate action strategies fail to address the specific needs of people with disabilities. Establishing operational guidance about strengthening disability inclusion in climate-resilient WASH is essential to begin addressing these gaps.

## Our study:

The *Inclusive Pathways Towards Climate-Resilient WASH* study, led by the London School of Hygiene & Tropical Medicine in partnership with icddr,b and World Vision, investigated the effects of climate hazards on WASH access for people with disabilities in Bangladesh. Using mixed methods, a literature review, and participatory workshops, the team co-developed principles for climate-resilient disability inclusive WASH.

## Building the evidence:

Our scoping review investigated climate change impacts on WASH services in low and middle-income countries, focusing on disability inclusion. Findings revealed that WASH services are highly vulnerable to climate-related disruptions, affecting health and well-being. Notably, there is a significant lack of evidence on the specific impacts on people with disabilities, highlighting an urgent need for targeted research in this area. Our mixed-methods study showed that extreme weather in Bangladesh has severely disrupted WASH services, disproportionately affecting people with disabilities. Damage to 30% of water points and 13% of latrines left nearly half of people with disabilities affected unable to access alternatives. Many altered routines to reduce toilet use, with safety, privacy, and physical challenges as significant concerns. Incontinence and mobility issues further exacerbated their vulnerability. Hygiene was also compromised: restricted access to tube wells forced people to wash in polluted floodwater, worsening health risks. Limited disaster relief, inaccessible shelters, and a lack of communal preparedness compounded these issues. Comprehensive, climate-resilient disability services and disaster relief are essential for safety, dignity, and health.

## The principles: how they were developed, what they are and how to use them:

Participatory workshops in Gaibandha and Satkhira engaged people with disabilities, caregivers, Organisations of Persons with Disabilities, and World Vision staff to validate findings and co-develop recommendations for inclusive, climate-resilient WASH. Six principles and suggested activities were co-developed with sector experts, building on these recommendations and existing frameworks. These principles are designed for practitioners working in WASH, disability, and climate resilience. They prioritise the meaningful inclusion of people with disabilities and their caregivers, grounded in human rights principles such as participation, affordability, and protection from harm. The six principles and suggested activities provide a blueprint for enhancing disability inclusion in existing climate-resilient WASH efforts. While the activities are not prescriptive, practitioners should select those relevant to their context and create additional ones as needed.

This report provides research findings and presents the co-developed principles, explaining their purpose and how to use them.

---

# Table of Contents

<b>1. SUMMARY</b>	<b>2</b>
<b>2. INTRODUCTION</b>	<b>4</b>
• THE INTERSECTION OF DISABILITY, WASH AND CLIMATE CHANGE	4
• RESEARCH STUDY: INCLUSIVE PATHWAYS TOWARDS CLIMATE-RESILIENT WASH IN BANGLADESH	5
• RESEARCH ACTIVITIES	5
• REPORT OVERVIEW	5
<b>3. BUILDING THE EVIDENCE</b>	<b>6</b>
• ADVISORY GROUP FORMATION	6
• REVIEW OF EXISTING LITERATURE	6
• MIXED-METHODS RESEARCH	6
• METHODOLOGY	6
• STUDY FINDINGS	7
<b>4. CO-DEVELOPMENT PROCESS</b>	<b>8</b>
• RECOMMENDATIONS	8
• PRINCIPLES	9
<b>5. OVERVIEW OF THE PRINCIPLES</b>	<b>10</b>
• WHO THEY ARE FOR	10
• WHAT THEY ARE	10
• HOW TO USE THEM	10
<b>PRINCIPLES FOR CLIMATE-RESILIENT DISABILITY INCLUSIVE WASH</b>	<b>11</b>
<b>AND FINALLY</b>	<b>17</b>
<b>ANNEX 1. DEFINITIONS AND KEY CONCEPTS</b>	<b>18</b>
<b>REFERENCES</b>	<b>19</b>

# Introduction

---

## The intersection of disability, WASH and climate change

Access to water, sanitation, and hygiene (WASH) is critical for health and well-being. Safely managed water and sanitation can save countless lives, and hand washing with soap reduces the spread of disease (1, 2). Despite the importance of WASH, billions globally still lack access to these services. Among them, people with disabilities particularly face significant barriers to accessing water and sanitation (3, 4). They often have less access to these essential services, and their needs are frequently greater due to conditions like incontinence, skin diseases, or the need for assistive devices (5-7). This inequality leads to poorer health outcomes compared to others (8, 9).

People with disabilities face a significantly higher risk from climate change, as they are up to four times more likely to die during natural disasters (10, 11). Despite this vulnerability, there is a startling lack of research and policy addressing the effects of climate change on people with disabilities (12). Furthermore, most countries have neglected to include people with disabilities in their climate action strategies, which could exacerbate existing inequalities (13).

Climate change increasingly threatens WASH services through rising sea levels, extreme heat, altered precipitation, flooding, and cyclones. These factors disrupt water availability, quality, and demand, leading to the unreliability of surface water sources and increased groundwater usage. Flooded sanitation facilities contaminate water, damage infrastructure, and force people to adopt harmful coping mechanisms like open defecation and unsafe water consumption (14). Menstrual health, handwashing, and hygiene practices decline, raising health risks (15). People with disabilities, already facing access challenges, become even more vulnerable to the severe health consequences of these disruptions.

The Sanitation and Water for All Climate Task Team define climate-resilient WASH services as those that ‘anticipate, respond to, cope with, recover from, adapt to or transform based on climate-related events, trends and disturbances, all while striving to achieve and maintain universal and equitable access to safely managed services, even in the face of an unstable and uncertain climate, where possible and appropriate, minimising emissions, and paying special attention to the most exposed vulnerable groups’ (16).

There is considerable global effort to operationalise climate-resilient WASH services, including through the WASH Climate Resilient Development Strategic Framework (17) and learning generated across Water for Women’s funded projects (18) However, translating definitions and learning into practical, disability inclusive actions that communities and local governments can implement remains challenging.

---

## Research study:

### Inclusive Pathways Towards Climate-Resilient WASH in Bangladesh

To understand the specific challenges experienced by people with disabilities in the context of climate change, we initiated the Inclusive pathways towards climate-resilient WASH in Bangladesh study. This collaborative research, led by the London School of Hygiene & Tropical Medicine, in partnership with icddr,b, and World Vision, was funded by the Australian Government's Water for Women Fund. Our primary goal was to gather robust evidence on how risks to WASH services from climate hazards impact the health and well-being of individuals with disabilities. We also sought to co-develop principles for climate-resilient disability inclusive WASH interventions in Bangladesh, including suggested activities to achieve the principles.

### Research activities

Through this study, we conducted a scoping review of relevant literature [22] and a mixed-methods study exploring the WASH-related experiences of persons with disabilities and their caregivers in a changing climate. Additionally, we held participatory workshops with study participants, including persons with disabilities, caregivers, Organisations of Persons with Disabilities, and experts, to validate the findings and co-develop the principles.

### Research Overview

This report summarises our research findings, outlines the collaborative process of developing the principles, and presents them. It aims to guide practitioners in applying these principles to strengthen disability inclusion in ongoing climate-resilient WASH initiatives.



Photo Credit: World Vision Bangladesh

# Building the evidence

---

## Advisory Group formation

At the outset of our study, we established an Advisory Group to review the research design and assist in co-developing the climate-resilient disability inclusive WASH principles. We invited academics and practitioners working in WASH, disability, climate resilience, and adaptation to join the group. Before data collection, we held meetings to gather their input on the research design and data collection tools. We shared the draft principles with them to incorporate their insights and enrich the content. This approach allowed the study outputs to benefit from diverse expertise and perspectives, enhancing their relevance.

## Review of existing literature

We conducted a scoping review of existing literature to explore how climate risks affect WASH services and access for persons with disabilities. We also examined coping strategies applied and assessed climate-resilient WASH interventions to see how well they address the needs and inclusion of persons with disabilities (19).

In summary, we found that WASH services and behaviours are highly vulnerable to climate change, with limited data available on the health impacts, particularly for people with disabilities, highlighting the urgent need for action research in this area. Social capital and kinship networks play a critical role during water scarcity, as individuals with disabilities rely on moral obligation for support. To cope, communities diversify water sources and often prioritise agriculture and livelihoods over hygiene, which increases health risks. The consumption of salty water has been linked to conditions such as high blood pressure, hypertension, pre-eclampsia, and respiratory infections. Women and girls face additional risks like skin burns, rashes, blisters, and urinary tract infections from washing menstrual materials and bathing in salty water. Extreme weather events also damage sanitation facilities, contributing to increased open defecation and disease spread, with reconstruction often deprioritised due to repeated damage, mental fatigue, and the pressing need for immediate survival. Water is frequently prioritised for agriculture over sanitation and hygiene, leading to higher rates of open defecation and poor hygiene practices, including reduced water use for handwashing, cleaning, laundry, and menstrual health.

## Mixed-methods research

### Methodology

Our mixed-method exploratory study included three components: 1) adding questions about climate hazards and WASH services to an existing survey in 32 districts of Bangladesh, 2) a nested case-control study to examine the link between climate risks, WASH, and disability, and 3) an in-depth qualitative study focusing on the WASH experiences of people with disabilities and their caregivers in flood- and cyclone-prone districts (Gaibandha and Satkhira respectively). The survey included 1021 people with disabilities and 909 without. For the qualitative study, we selected 39 people with disabilities and 16 caregivers. We used in-depth interviews, observation, and photovoice and ranking. Quantitative data was analysed using descriptive statistics, and qualitative data was analysed through thematic analysis.

---

## Study findings

We found that extreme weather events in Bangladesh have severely disrupted sanitation services, disproportionately impacting people with disabilities. Approximately 30% of water points and 13% of latrines were damaged due to extreme weather events such as cyclones, floods and droughts. Nearly half of people with disabilities who had their latrines damaged by cyclones or floods were unable to access alternative sanitation options. Among those who could, 30% reported adapting their daily routines, such as reducing food and water intake or limiting toilet use, to cope with the lack of accessible facilities. In contrast, only 12% of people without disabilities needed to alter their daily routines. Safety, physical challenges, and lack of privacy were common concerns.

People with disabilities coped by continuing to use flooded toilets, moving faeces aside, and defecating in the open, including floodwater, worsening environmental degradation. People with disabilities who experienced incontinence faced additional challenges, with caregivers struggling to meet toileting and personal hygiene requirements during and after the extreme weather events. Access to tube wells for basic hygiene was challenging, which resulted in restricted bathing and laundry during and after cyclones in Satkhira and washing clothes and menstrual materials in polluted floodwater in Gaibandha.

Many people with disabilities and their caregivers sustained injuries navigating flooded terrain, and this increased reliance of the people with disabilities on their caregivers for water collection, toileting, and maintaining personal hygiene. Many experienced heightened concerns about privacy, dignity, and safety, particularly for women with disabilities.

No participants reported communal efforts to prepare for weather events, such as clearing drains, monitoring groundwater levels, or emptying pit latrines. Beyond government-funded climate-resilient deep tube wells in Satkhira, no organisation has supported climate-resilient WASH services and very few prioritised accessible designs. Disaster relief was limited, with few participants in Satkhira and Gaibandha receiving essential items like soap, menstrual materials, and water purification tablets.

In conclusion, comprehensive support, including climate-resilient WASH services and disaster relief, is vital for addressing the needs of persons with disabilities. Inclusive efforts are crucial for ensuring safety, dignity, and well-being, particularly for those most vulnerable to extreme weather impacts.



## Co-development process

---

### Recommendations

Research is sometimes conducted in an extractive manner, where findings are not validated with participants and recommendations are made without their input. In contrast, we organised participatory workshops in Gaibandha and Satkhira to ensure our study was collaborative. These workshops involved participants with disabilities and caregivers from our research, representatives from Organisations of Persons with Disabilities, and World Vision staff. Together, they validated findings and developed recommendations to address the challenges faced by people with disabilities and their caregivers. These recommendations are incorporated into the principles and activities.

All attendees were highly engaged and gave insightful recommendations. It also raised their awareness about what was possible and how vital inclusive climate-resilient WASH is. Participants said they wanted us to share the principles for climate-resilient disability inclusive WASH with them when they were finalised. The Organisations of Persons with Disabilities said they would use them to influence the district government officials they have strong relationships with. This demonstrates the value of enabling participants to drive their development and poverty reduction.



Photo credit: LSHTM/Jane Wilbur

---

# Co-development process

## Principles

The principles were developed by reviewing several widely used and referenced frameworks, including the Sendai Framework for Disaster Risk Reduction 2015–2030 (20), the Strategic Framework for WASH Climate Resilience (17), the Disability Inclusive WASH Checklist (21), Disability Inclusion in UK Climate Action (22), and Disability and Climate Change: The 4Ps (23). We mapped the content from these documents to identify synergies and gaps. We drafted six principles from this analysis, integrating insights from all the reviewed frameworks and primarily grounding them in human rights concepts.

We held a workshop with experts across disability, WASH and climate change in Bangladesh. The aim was to co-develop principles for climate-resilient disability inclusive WASH, and the workshop objectives were to:

1. Raise awareness about the impacts of climate hazards on the WASH experiences of persons with disabilities and their caregivers
2. Review draft principles for climate-resilient inclusive WASH in Bangladesh with key stakeholders
3. Co-draft suggested activities to achieve the principles

Together, we critiqued the principles and developed activities to meet these, which incorporated the recommendations made by persons with disabilities, caregivers and Organisations of Persons with Disabilities. The principles and actions were shared with the Advisory Group for their review and input before finalisation.



Photo credit: LSHTM/Jane Wilbur

## Overview of the principles

---

### Who they are for

The principles are designed for practitioners working in WASH, disability and climate-resilience. The principles aim to foster a unified approach to addressing climate challenges and enhancing the inclusivity and resilience of WASH services.

### What they are

The principles promote the meaningful inclusion of people with disabilities and their caregivers in climate-resilient WASH interventions. Although developed for the Bangladeshi context, their broad scope makes them relevant to diverse settings, provided they are adapted and tested accordingly.

The six principles are based on human rights core concepts, such as individualised services, participation, affordability, and protection from harm (24). These are grounded in universal, equitable, and accessible services. Each principle has suggested activities to achieve them.

### How to use them

The principles can be used to strengthen disability inclusion in existing climate-resilient WASH efforts by incorporating suggested activities. It is important to note that the activities are not intended to be prescriptive. Practitioners can select those they feel are most relevant to their context and intervention and may also add new activities to the list. These principles can be used with other guidance for climate-resilient WASH that are evolving and emerging.



*Photo Credit: World Vision Bangladesh*

# Principles for climate-resilient disability inclusive WASH

---

## 1. Climate-resilient WASH services and information are accessible to all people with disabilities before, during and after climatic events.

### Suggested activities

#### *Applying risk-informed processes and disaggregating data*

- 1.1 Engage people with disabilities and their caregivers in climate risk assessments to understand their WASH experiences and behaviours before, during, and after climate events. Ensure data collection across impairment groups, genders, and ages.
- 1.2 Incorporate disability data disaggregation in planning, monitoring and evaluation systems using the Washington Group Short Set questions.

#### *Climate-resilient disability-inclusive WASH in public and private settings*

- 1.3 Allocate budget for climate-resilient disability inclusive WASH facilities in households and public settings, including evacuation centres.
- 1.4 WASH infrastructure is planned, designed, and built using universal design principles and climate risk-based planning, ensuring accessibility, safety, and resilience to hazardous events. It incorporates the needs, experiences, and choices of women and men with disabilities and people with diverse impairments.
- 1.5 Provide supplementary and/or piped water supplies to households that include a person with disabilities and accessible information about how to maintain facilities and treat drinking water.
- 1.6 Promote accessible water, sanitation, and hygiene facilities and technologies at home (e.g. raised water resting stand at waterpoint, raised toilet seats, guide rope from the house to the toilet, seat in the bathing area, foot and hand operated handwashing facilities), assistive devices for WASH (e.g. bedpans, urinals, commodes, mattress cover etc) and equipment for caregivers (e.g. lifting devices) that are accessible before, during and after a climate event.
- 1.7 Promote movement aids (e.g. rubber knee and hand pads) to protect people from touching urine and faeces when using latrines.

#### *Accessible and relevant information*

- 1.8 Provide accessible information about how to modify WASH facilities, assistive devices for WASH and equipment for caregivers and where to buy them.
- 1.9 Provide all information in accessible formats (e.g. pictures, audio, captioned media, sign language interpretation, large font, etc).

#### *Climate-resilient activities, disaster risk response and preparedness*

- 1.10 Work with community leaders, Organisations of Persons with Disabilities and Disability Service Providers to identify households that include person/s with disabilities and ensure they benefit from disaster risk response and preparedness activities.
- 1.11 Provide people with disabilities and their caregivers accessible climate risk information, including their rights during climate emergencies.

- 
- 1.10 Work with community leaders, Organisations of Persons with Disabilities and Disability Service Providers to identify households that include person/s with disabilities and ensure they benefit from disaster risk response and preparedness activities.
  - 1.11 Provide people with disabilities and their caregivers accessible climate risk information, including their rights during climate emergencies.
  - 1.12 Support people with disabilities and caregivers in preparing for continued WASH during and after a disaster. For example, co-develop an emergency preparedness checklist with people with disabilities and caregivers. Include emergency contacts, the importance of storing water and soap, and items to take in an evacuation, including medical supplies, assistive devices and hygiene products.
  - 1.13 Support the WASH requirements of people with disabilities and their families before, during and after a climatic event. Promote and distribute soap, cleaning products, affordable incontinence products, menstrual materials, commodes, bedpans etc.

### ***Learning and innovation***

- 1.14 Ensure that emerging climate-resilient WASH technologies and innovations follow universal design principles and meet the needs of people with disabilities by actively involving them throughout the development process. Leverage lessons from similar climate adaptation efforts in other contexts to inform disability-inclusive solutions.
- 1.15 Develop, test and promote locally led innovations in reusable menstrual materials and incontinence products, providing accessible information on their hygienic reuse and environmentally sustainable disposal methods..

## 2. Caregivers can safely deliver hygienic care to people with disabilities before, during, and after climatic events.

### Suggested Activities

- 2.1 Include caregivers of persons with disabilities as a critical population in climate-resilient WASH activities. Support caregivers to participate in climate-resilient WASH planning for the household and community, ensuring that experiences, needs, and ideas are incorporated into solutions.
- 2.2 Elevate caregiver's social status by recognising their valuable role in promoting health and well-being in all communication materials.
- 2.3 Distribute commodes with lids, bedpans, urinals, incontinence products, gloves, and brushes for cleaning, along with information about how to use and clean the products and safely dispose of human waste.
- 2.4 Distribute lifting devices and information about making and using them safely.
- 2.5 Develop and implement a behaviour change campaign for caregivers, promoting safe, dignified, and hygienic care for people with disabilities before, during, and after climate events. The campaign should emphasise supporting individuals in maintaining hygiene as independently as possible, addressing menstrual hygiene, incontinence management, and cleaning assistive devices. Include guidance on creating and using lifting devices and bathing chairs, proper lifting techniques, and providing respectful and dignified care. Monitor progress and repeat the campaign regularly to encourage behaviour change.



Photo Credit: World Vision Bangladesh

---

### **3 People with disabilities do not face harm when accessing climate-resilient WASH services before, during and after climatic events.**

#### **Suggested Activities**

- 3.1 Identify and address specific climate-related risks of harm to people with disability (such as access to sanitation during/after flooding and the risk of direct contact with contaminated water), considering the different risks according to impairment experienced, age, gender and reliance on caregivers.
- 3.2 Incorporate gender-based violence risk mitigation for people with disabilities into the planning of WASH infrastructure, considering access and use before, during, and after climate events. Establish metrics to monitor the effectiveness of these risk mitigation activities.
- 3.3 Ensure WASH services at home, in public and disaster shelters, are climate-resilient, accessible, safe and private. Promote adaptations to make sanitation and hygiene facilities safe and private in consultation with women and men with disabilities, including bathing facilities and spaces where women change menstrual materials.
- 3.4 Promote empowering hygiene behaviour change approaches that foster positive social attitudes toward disability, emphasise mutual support, and strengthen community resilience to climate impacts. Collaborate with religious leaders to amplify these messages through diverse platforms and outreach channels.
- 3.5 Challenge gender inequalities by depicting men and boys supporting women, girls, men, and boys with disabilities in behaviour change messages and campaigns.
- 3.6 Raise awareness of how climate-related disasters heighten risks of abuse, accidents, and discrimination against people with disabilities.
- 3.7 Advocate for and ensure the safe evacuation of people with disabilities and their families to disaster shelters during climate emergencies.
- 3.8 Collaborate with local leaders, Organisations of Persons with Disabilities, Disability Service Providers, and other relevant organisations to develop and implement robust safeguarding measures, generally and specifically for climate emergencies. This must include rules for accessing alternative WASH facilities during water shortages and disasters to mitigate risks of conflict and exploitation. Establish accessible and responsive safeguarding complaint mechanisms and ensure these are widely publicised. Ensure that people with disabilities and their caregivers can easily access and understand how to use these mechanisms.
- 3.9 Partner with humanitarian organisations to provide post-disaster mental health and psychosocial support for people with disabilities and their caregivers

---

## 4 Climate-resilient WASH services are affordable for all people with disabilities.

### Suggested Activities

- 4.1 Strengthen workforce support for people with disabilities in WASH by partnering with Organisations of Persons with Disabilities, disability service providers, and organisations focused on livelihoods and sustainable agriculture activities. This collaboration should focus on equipping individuals with disabilities to gain employment, enabling them to invest in climate-resilient and accessible adjustments to WASH facilities.
- 4.2 Collaboratively design and provide a pro-poor approach to tariffs for climate-resilient water and personal hygiene facilities for households with people with disabilities.
- 4.3 Utilise a pro-poor approach to provide subsidies to private sanitation businesses to incentivise accessible and climate-resilient designs which are appropriate and affordable for people with disabilities.
- 4.4 Advocate for the inclusion of disability in climate justice and finance for WASH.
- 4.5 Advocate for including subsidies and targeted WASH support for persons with disabilities to other actors and increased budget to support accessible WASH infrastructure, accessible information, and outreach to households with persons with disabilities before, during and after a climatic event.
- 4.6 Provide targeted WASH materials to people with disabilities in disaster response and recovery.
- 4.7 Pay the transport costs of people with disabilities and caregivers to attend WASH meetings.



---

## **5 Effective mechanisms exist to assure the right of people with disabilities to actively and meaningfully participate in developing climate-resilient WASH solutions.**

### **Suggested Activities**

- 5.1 Ensure mechanisms are in place for the meaningful participation of persons with disabilities, including those with learning and psychosocial disabilities, throughout the planning, implementation, monitoring, and evaluation of climate change policies and initiatives relevant to WASH. Actively engage women and men with disabilities and caregivers, considering different impairments, ages, and genders, and implement supportive measures to enable their participation in climate-resilient WASH interventions.
- 5.2 Ensure mechanisms are in place for the meaningful participation of persons with disabilities, including those with learning and psychosocial disabilities, throughout the planning, implementation, monitoring, and evaluation of climate change policies and initiatives relevant to WASH. Actively engage women and men with disabilities and caregivers, considering different impairments, ages, and genders, and implement supportive measures to enable their participation in climate-resilient WASH interventions.
- 5.3 Support people with disabilities in participating in climate-resilient WASH, disaster preparedness, and management activities at the household and community levels.
- 5.4 Conduct house-to-house visits for people with disabilities and caregivers unable to leave home, repeat information shared in community meetings in ways everyone can access.
- 5.5 Ensure meaningful participation of persons with disabilities in decision-making across climate, WASH, climate justice, and finance initiatives at all levels—household, community, district, and national.
- 5.6 Collaborate with Organisations of Persons with Disabilities and Disability Service Providers at every stage of the climate-resilient WASH program to ensure it is disability-inclusive.
- 5.7 Support Organisations of Persons with Disabilities and Disability Service Providers in engaging in climate-resilient WASH policy and practice meetings at national and sub-national levels, leading on disability rights within climate justice and finance.
- 5.8 Incorporate persons with disabilities into disaster preparedness committees to ensure their voices are heard in decision-making processes. Support Organisations of Persons with Disabilities in publicly leading and promoting universally accessible approaches during disaster response and reconstruction phases.

---

## **6 Government officials and service providers address the requirements of people with disabilities and their caregivers when providing WASH services that are resilient to climate change impacts.**

### **Suggested Activities**

#### *Training and skills development*

- 6.1 Assess the capacity of government officials and service providers to understand and deliver the principles for climate-resilient disability-inclusive WASH in policies and practices, including the ability to conduct climate risk assessments and communicate effectively with people with disabilities.
- 6.2 Invest in awareness-raising and skills development on climate-resilient, disability-inclusive WASH for officials across health, agriculture, education, and WASH sectors, led by Organisations of Persons with Disabilities or Disability Service Providers. Focus training on climate risks and the needs of different impairment groups rather than general WASH and disability information
- 6.3 Train government officials and service providers on different kinds of vulnerability and the risks of gender-based violence faced by people with disabilities during climate disasters, safeguarding measures to mitigate these risks, and reporting and response mechanisms.

#### *Governance processes and tools*

- 6.4 Develop standardised guidelines for implementing climate-resilient, disability-inclusive WASH principles within policies and programs, and create a comprehensive Development Project Proforma template that prioritises these solutions while aligning with national development priorities and international climate change commitments.
- 6.5 Allocate a separate long-term budget for integrating these principles and activities into climate-resilient WASH policies and programmes, ensuring sustainability beyond the project life cycle. Include key performance indicators on disability inclusion in climate-resilient WASH policies and programmes.

## And finally...

---

The Inclusive Pathways Towards Climate-Resilient WASH in Bangladesh study highlights the critical intersection of disability, climate resilience, and WASH services, revealing pressing challenges and action opportunities. Through participatory research and collaboration with stakeholders, we have co-developed principles designed to address the unique requirements of people with disabilities within climate-resilient WASH initiatives. These principles and suggested activities offer a comprehensive yet flexible guide to incorporating disability inclusion into existing climate-resilient WASH interventions.



*Photo Credit: World Vision Bangladesh*

## Annex 1. Definitions and key concepts

---

**Disability** refers to people ‘who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others’ (25).

**Positive sanitation behaviours** involve building toilets and using them instead of open defecation (25). **Effective hygiene behaviours** include handwashing, menstrual health management, bathing and personal care, food hygiene, and safe water collection and storage, all of which are essential to maintaining health and preventing the spread of disease (25).

**WASH services** are systems that supply a public need. A robust WASH system requires effective governance, strong institutions, adequate financing, robust monitoring, skilled human resources, and well-functioning infrastructure. It also needs a coordinated effort from various stakeholders, including communities, government agencies, and service providers, to deliver WASH services effectively over time (26).

**Inclusive WASH** removes barriers to WASH services for vulnerable individuals, especially those with disabilities (5). It promotes their participation in research, policy, and programme design, ensuring access to tailored information and services. The goal is to provide safe, dignified access independently or with caregiver support. Inclusive WASH also incorporates disability-specific activities and monitoring and reporting that involve people with disabilities.

**Climate-resilient water sanitation and hygiene services.** Climate-Resilient Water, Sanitation and Hygiene (WASH) services anticipate, respond to, cope with, recover from, adapt to or transform based on climate-related events, trends and disturbances, all while striving to achieve and maintain universal and equitable access to safely managed services, even in the face of an unstable and uncertain climate, where possible and appropriate, minimising emissions, and paying special attention to the most exposed vulnerable groups (16).

## References

---

1. Ross I, Bick S, Ayieko P, Dreibelbis R, Wolf J, Freeman MC, et al. Effectiveness of handwashing with soap for preventing acute respiratory infections in low-income and middle-income countries: a systematic review and meta-analysis. *The Lancet*. 2023;401(10389):1681-90.
  2. Wolf J, Johnston RB, Ambelu A, Arnold BF, Bain R, Brauer M, et al. Burden of disease attributable to unsafe drinking water, sanitation, and hygiene in domestic settings: a global analysis for selected adverse health outcomes. *The Lancet*. 2023;401(10393):2060-71.
  3. World Health Organization (WHO), United Nations Children's Fund (UNICEF). Progress on household drinking water, sanitation and hygiene 2000-2020: Five years into the SDGs Geneva; 2021.
  4. Wilbur J, Dreibelbis R, Mactaggart I. Addressing water, sanitation and hygiene inequalities: A review of evidence, gaps, and recommendations for disability-inclusive WASH by 2030. *PLOS Water*. 2024;3(6):e0000257.
  5. Wilbur J, Morrison C, Bambery L, Tanguay J, Baker S, Sheppard P, et al. "I'm scared to talk about it": exploring experiences of incontinence for people with and without disabilities in Vanuatu, using mixed methods. *The Lancet Regional Health - Western Pacific*. 2021;14:100237.
  6. Karimkhani C, Dellavalle RP, Coffeng LE, Flohr C, Hay RJ, Langan SM, et al. Global Skin Disease Morbidity and Mortality: An Update From the Global Burden of Disease Study 2013. *JAMA Dermatol*. 2017;153(5):406-12.
  7. Smith EM, Huff S, Wescott H, Daniel R, Ebuenyi ID, O'Donnell J, et al. Assistive technologies are central to the realization of the Convention on the Rights of Persons with Disabilities. *Disability and Rehabilitation: Assistive Technology*. 2024;19(2):486-91.
  8. Mactaggart I, Baker S, Bambery L, Iakavai J, Kim MJ, Morrison C, et al. Water, women and disability: Using mixed-methods to support inclusive wash programme design in Vanuatu. *The Lancet Regional Health - Western Pacific*. 2021;8:100109.
  9. Kuper H, Heydt P. The Missing Billion: access to health services for 1 billion people with disabilities. *LSHTM*; 2019.
  10. 10. United Nations Economic and Social Commission for Asia and the Pacific. Disability-inclusive disaster risk reduction. Available at [https://www.unescap.org/sites/default/files/pre-ods/E\\_CDR\(4\)\\_INF4.pdf](https://www.unescap.org/sites/default/files/pre-ods/E_CDR(4)_INF4.pdf) (accessed 13 May 2023); 2015.
  11. 11. Stough LM, Kelman I. People with Disabilities and Disasters. In: Rodríguez H, Donner W, Trainor JE, editors. *Handbook of Disaster Research*. Cham: Springer International Publishing; 2018. p. 225-42.
  12. 12. Araos M, Jagannathan K, Shukla R, Ajibade I, Coughlan de Perez E, Davis K, et al. Equity in human adaptation-related responses: A systematic global review. *One Earth*. 2021;4(10):1454-67.
  13. 13. Jodoin S, Lofts K, Bowie-Edwards A, Leblanc L, Rourke C. Disability Rights in National Climate Policies: Status Report. Available at <https://www.disabilityinclusiveclimate.org/researcheng/project-one-ephnc-76974-dsc4y> (accessed 24 June 2024): Centre for Human Rights & Legal Pluralism & International Disability Alliance; 2022.
  14. 14. Kohlitz J, Iyer R. Rural sanitation and climate change: Putting ideas into practice. Brighton, UK: IDS; 2021.
  15. 15. Kohlitz J, Kumar A, Iyer R. 'Rural Sanitation in a Changing Climate: Reflections and Case Studies', SLH Learning Brief 17. Available at <https://sanitationlearninghub.org/resource/rural-sanitation-in-a-changing-climate-case-studies-and-reflections/> (accessed 28 May 2024): The Sanitation Learning Hub, Brighton: IDS 2023.
  16. 16. Sanitation and Water for All Climate Task Team. Definition of climate-resilient water sanitation and hygiene services. Available at [https://www.sanitationandwaterforall.org/sites/default/files/2024-11/ClimateResilientWASH\\_DefinitionPaper\\_final\\_0.pdf](https://www.sanitationandwaterforall.org/sites/default/files/2024-11/ClimateResilientWASH_DefinitionPaper_final_0.pdf) (accessed 28 November 2024); 2024.
  17. 17. UNICEF, Global Water Partnership. WASH Climate Resilient Development Strategic Framework. Available here [https://www.gwp.org/globalassets/global/about-gwp/publications/unicef-gwp/gwp\\_unicef\\_strategic\\_framework-2022-edition.pdf](https://www.gwp.org/globalassets/global/about-gwp/publications/unicef-gwp/gwp_unicef_strategic_framework-2022-edition.pdf) (accessed 2 February 2023); 2022.
-

- 
18. 18. Water for Women. What does Climate-Resilient Inclusive WASH look like? Water for Women 2023-24 Learning Agenda Synthesis of Findings and Insights. In draft.
  19. 19. Wilbur J, Ruuska D, Nawaz S, Natukunda J. Climate Risks to Water, Sanitation and Hygiene Services and Evidence of Inclusive and Effective Interventions in Low and Middle-Income Countries: A Scoping Review. medRxiv. 2024:2024.08.21.24312122.
  20. 20. United Nations Office for Disaster Risk Reduction (UNISDR). Sendai Framework for Disaster Risk Reduction 2015-2030. Available at <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030> (accessed 1 Nov 2024)2015.
  21. 21. Wilbur J, Huggett C. Disability-Inclusive WASH Checklist for Government Officials and Service Providers. Available at <https://sanitationlearninghub.org/resource/disability-inclusive-wash-checklist/> (accessed 6 February 2024).2022.
  22. 22. Bond Disability and Development Group, Climate Action Network UK. Disability inclusion in UK climate action. London, UK: Bond; 2016.
  23. 23. Keogh M, Acuna G, M. Disability and Climate Change: The 4Ps. Available at <https://www.infond.org/resource/disability-and-climate-change-4ps> (accessed 22 February 2024): CBM; 2021.
  24. 24. Amin M, MacLachlan M, Mannan H, El Tayeb S, El Khatim A, Swartz L, et al. EquiFrame: a framework for analysis of the inclusion of human rights and vulnerable groups in health policies. Health and human rights. 2011;13(2):1-20.
  25. 25. Office of the United Nations High Commissioner for Human Rights. Convention on the Rights of Persons with Disabilities Available at <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities#2> (accessed 5 September 2022); 2008.
  26. 26. Organization WH. National systems to support drinking-water, sanitation and hygiene: global status report 2019. UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2019 report. . 2019.

