Household coping mechanisms for rural WASH

Bhutan and Nepal

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About SNV

SNV is a global development partner deeply rooted in the African and Asian countries where we operate. With 60 years of experience and a team of approximately 1,600 people, we strengthen capacities and catalyse partnerships that transform agri-food, energy and water systems. Working on the core themes of gender equality and social inclusion, climate adaptation and mitigation, and strong institutions and effective governance, we tailor our approaches to different contexts to achieve large-scale impact and create sustainable and more equitable lives for all.

About this learning report

This report documents lessons and insights from recent learning and research activities in rural water and sanitation services, conducted jointly by SNV, UTS-ISF, and CBM Australia. It was published as part of SNV's Towards Climate Resilient Inclusive WASH Services project in Nepal and Bhutan. The study was designed by this report's contributors, Avni Kumar of UTS-ISF and Teresa Lee of CBM Australia. Gabrielle Halcrow of SNV and Naomi Carrard and Melita Grant of UTS-ISF reviewed this paper.

Contents

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Cover photo: A woman in Nepal draws drinking water from a protected container. Photo credit: SNV/Meeting Point.

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Water For Women

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Introduction

Households and communities are the frontline responders to the impacts of climate hazards on water, sanitation, and hygiene (WASH). The documented evidence of these impacts in rural areas of low- and middle-income countries is growing.[1] However, it is not clear how diverse people living in these areas, including people with disabilities, are coping and how they can be better supported. This report focuses on these issues and provides key recommendations for government and non-government organisations.

This report outlines research findings from SNV, the Institute for Sustainable Futures at the University of Technology Sydney (UTS-ISF), and CBM Australia. It contains feedback from community members in rural areas of Nepal and Bhutan on how they cope with the impacts of climate hazards, such as flooding, dry spells, and landslides, on their access to safe WASH services. It presents six commonly used coping mechanisms, problems associated with these mechanisms, and their implications for gender equality, disability, and social inclusion (GEDSI) with added emphasis on people with disabilities. The report also provides reflections on the findings and key recommendations for the WASH sector.

[1] J. Kohlitz and S. Lala, 'Climate-fuelled water systems failure in rural Nepal, already taking place', *SNV website*, https://www.snv.org/update/climate-fuelled-water-systems-failure-rural-nepal-already-taking-place (accessed 14 August 2024).

The six coping mechanisms explored in this study are:

Storage. Stocking up on reserves of a resource when it is relatively more abundant to ensure its availability when scarcity sets in.

Diversification. Maintaining access to different WASH facilities or water resources so there are multiple ways to meet needs in case one or more of these WASH resources fail.

Household water treatment. Practising making water safe and fit for consumption at the household level.

Market exchange. Using markets to purchase products or services for reducing risks or addressing impacts.

Communal pooling. Sharing wealth, labour, information, or income; joint ownership of assets or resources; and mobilisation of communal resources to collectively reduce risks or address impacts.

Private WASH modification. Modifying or improving private water points or sanitation facilities not shared with the rest of the community.

Behavioural messages and prompts on a communal toilet that highlight the importance of water in practising good hygiene and maintaining the sanitation facility.

Governments are the duty-bearers of the human right to water and sanitation. They are obligated to make progressive improvements towards ensuring everyone in their country has access to safe, sufficient, acceptable, physically accessible, and affordable water supply and sanitation facilities. Rural community members often take up coping mechanisms because their rights are not being realised. Hence, coping mechanisms are generally no more than stopgaps to meet basic WASH needs in the near-term. Responsibility lies with policymakers, practitioners, researchers, and donors – as well as the communities themselves – to ensure sustainable and safely managed WASH services for everyone in this era of climate change.

Yet, coping mechanisms play an important role in mediating WASH access when climate hazards are experienced. In rural areas of low- and middle-income countries, WASH users are often the first to respond to climate impacts, not the government or civil society organisations or even service providers. Coping mechanisms are commonly the only way people can resolve the consequences of climate hazards. A better understanding of how coping mechanisms mediate WASH access can help WASH stakeholders better support diverse rural community members in overcoming climate impacts on the road to sustainable and safely managed services for everyone.

The coping mechanisms study

The study team (SNV, UTS-ISF, and CBM Australia) collected feedback from rural community members in Nepal and Bhutan on how they cope with the effects of very wet and dry weather on their WASH access through the photovoice method and follow-up interviews in 2023/24. The photovoice method involved facilitating community members to photograph their own coping mechanisms. They were given a prompt, like 'Please create a few photographs that show how you get clean water for your household needs when the weather is very wet and stormy.' Community members then created photos and provided brief captions describing each photo. The same prompts were given for different weather conditions (such as 'very wet and stormy' and 'very hot and dry') about access to water, sanitation, and menstrual hygiene. Follow-up interviews allowed the study team to better understand the reported coping mechanisms and to ask about community-level responses to climate impacts. There were also interviews with local government staff about their initiatives to respond to climate change and disasters.

Water has multiple uses. Here, a resident waters their kitchen garden using the household tap. In some areas, the same water is used to support domestic and agriculture/livelihood needs.

The study team used photovoice because it enabled community members to describe their own household coping mechanism and choose how to visually represent it, which led to better interpretations.[2] Follow-up interviews allowed the study team to understand the broader context, such as community-level actions and planned government initiatives not captured in the photos.

The study team identified the coping mechanisms based on a list of common rural livelihood adaptations identified by Agrawal.[3] They identified coping mechanisms as actions taken by individuals to improve their situation specifically in response to a climate hazard. Sometimes, participants responded to a prompt by describing a negative outcome (e.g., a water point failing, needing to use a dirty toilet) or an action that did not improve the situation (e.g., open defecation, using less water for bathing). The team did not consider these outcomes and actions as coping.

There were 21 participants in the photovoice method: eight in Bhutan and 13 in Nepal. In Bhutan, four participants were women and four were men (including one male with a disability). In Nepal, six participants were women, seven were men, and seven were people with disabilities (four men and three women). The caregivers of the participants with a disability sometimes also participated. All people with disabilities had either a physical mobility or sensory impairment. In Nepal, participants were from Sarlahi and Dailekh districts. In Bhutan, participants were from Trashigang, Dagana and Zhemgang districts. Each of the study sites are in rural areas approximately 3–6 hours from the nearest urban centre. People's livelihoods in these areas are primarily farming and livestock. The team held follow-up interviews with six local government staff (two in Nepal and four in Bhutan) and 19 community members (12 in Nepal and seven in Bhutan).

The choice of participants likely influenced the coping mechanisms observed. People may adopt a variety of coping mechanisms that are influenced by the intersectionality of their socioeconomic status, personal circumstances, environmental context, and more. One limitation of this study is that it did not explore coping mechanisms for a more diverse range of people, such as those with cognitive disabilities. While the coping mechanisms described here are likely to be prevalent, it is possible that there are other forms. Further, although the study team encouraged people with disabilities to take their own photos where they could, sometimes caregivers took photos on their behalf. This may be due to entrenched decision-making roles. Hence, some photos may represent the caregiver's point of view rather than the person with a disability. It was not clear during the study when a photo was being directed by the person with a disability or the caregiver.

Structure of this report

This report presents the following information for each of the six coping mechanisms:

- What is it: a brief description.
- Examples of practice: how participants from Nepal and Bhutan described using the coping mechanism to meet a WASH need.
- Examples of (anticipated) climate hazards that trigger the coping mechanism: what caused participants to use the coping mechanism.
- Potential risks to manage: negative side-effects associated with the coping mechanism identified by the study team.
- GEDSI considerations: positive, negative or neutral implications of the coping mechanism for gender equality, disability, social inclusion or equitable WASH service delivery identified by the study team.

The final section of the report includes overall reflections from the study team on the results and overall recommendations for WASH stakeholders.[4]

[2] J. MacArthur, N. Carrard, S. Koh, and J. Willetts, 'Fostering the Transformative Potential of Participatory Photography: Insights from Water and Sanitation Assessments', *PLoS Water*, vol. 1, no. 8, 2022, e0000036.

[3] A. Agrawal, 'Local Institutions and Adaptation to Climate Change', in R. Mearns, and A. Norton (eds.), *Social dimensions of climate change: Equity and vulnerability in a warming world*, Washington DC, The World Bank, 2010, pp. 173-178.

[4] Photos and more detailed recommendations relating to each coping mechanism in Nepal and Bhutan are available here. See: SNV and UTS-ISF, *Household coping mechanisms for rural WASH in Bhutan: Insights and recommendations*, The Hague, SNV, 2024 and SNV and UTS-ISF, 2024, *Household coping mechanisms for rural WASH in Nepal: Insights and recommendations*, The Hague, SNV, 2024.

Storage

What is it: stocking up on reserves of a resource when it is relatively more abundant to ensure its availability when scarcity sets in.

Examples of practice: storage of water is the most common form of this coping mechanism for WASH. Households in Nepal and Bhutan frequently store water in anticipation of clean water scarcity. Stored water may be later used for drinking, flushing toilets, domestic uses, and feeding livestock. Households store water in a variety of containers, including buckets, drums, plastic tanks, jerry cans, copper pots, and bamboo containers. Water is most commonly stored at a household level, although one community in Bhutan constructed ponds to store water for the whole community.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- dry periods when yields from water sources become low;
- wet periods when the intake of the piped supply becomes blocked resulting in supply cut-off;
- turbid water during and following intense rainfall events; and
- cold spells that freeze piped water.

Potential risks to manage:

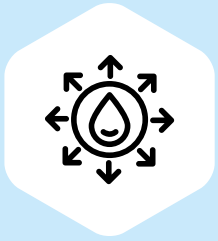
- Stored water is susceptible to microbial contamination if the containers and retrieval of water from the containers are not hygienic.
- Stored water can encourage the breeding of vectors.
- Containers and reservoirs may have an insufficient capacity for storing enough water until dry spells end.

GEDSI considerations:

Storage may be a particularly important coping mechanism for people with physical disabilities. When water scarcity occurs, water may only be available at distant sources that can be difficult to reach. Families in Nepal and Bhutan reported storing water specifically for a family member with a disability who could not travel to distant alternative water sources. Ensuring families with a member with a disability have access to safe storage materials and educating caregivers and people with disabilities on hygienic water management will help mitigate associated risks.

Sometimes water collection responsibilities are given to a particular group (e.g., women and girls). This may overly burden them with collecting large amounts of water in anticipation of a climate hazard.

Larger and safer water storage containers may be cost-prohibitive for the lowest-income households. Consequently, they may use small containers that are more likely to allow contaminants to enter (e.g., unsealed buckets with no spigot).



Diversification

What is it: maintaining access to different WASH facilities or water resources so there are multiple ways to meet needs in case one or more of these WASH resources fail.

Examples of practice: it is common for households in Nepal and Bhutan to maintain access to multiple water sources and switch between them. They may do this if a climate hazard has made the primary water source unusable or to take advantage of weather conditions (e.g., using rainwater harvesting systems more frequently in rainy conditions). Households reported switching use between a private tap, a shared tap, unprotected springs, surface water, and collected rainwater. They may also use different toilets (e.g., a neighbour's toilet or communal toilet) when the primary toilet becomes unavailable.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- dry periods when yields from water sources become low;
- wet periods and storms when surface runoff, flooding or windblown objects damage pipelines;
- turbid water during and following intense rainfall events; and
- cold spells that freeze piped water.

Potential risks to manage:

- Some alternative water sources (e.g., unprotected springs and surface water) are unsafe for consumption and/or are distant from households.
- Competition and conflict can arise if community members disagree about rules or rights to access certain water sources.
- People may be exploited (e.g., coerced to make unreasonable payments or provide favours) when accessing an alternative water supply.

GEDSI considerations:

People with disabilities (including people who are physically or cognitively impaired) have a greater need for robust WASH facilities that can resist effects of climate hazards. They may face further challenges in diversifying access if the services are distantly located or difficult to physically reach.

Marginalised groups may be discouraged or prohibited from, or have less social capital for, diversifying their access to multiple WASH facilities. For example, people from lower castes may not be allowed to use certain shared water points and sanitation facilities.

Maintaining access to multiple safe WASH facilities (e.g., paying fees for a piped water connection while also paying for a well-designed domestic rainwater harvesting systems) may be cost-prohibitive for low-income households and people with disabilities who must decide how to allocate their already scarce financial resources.

Household water treatment

What is it: practising making water safe and fit for consumption at the household level.

Examples of practice: In Nepal and Bhutan, households reported three treatment practices: filtration through a store-bought or donated water filter, straining water through a cloth and waiting for solids to settle, and boiling. Water is usually only treated when it appears turbid or discoloured, although some people reported always treating water before drinking.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- heavy rainfall causing water to appear turbid or discoloured; and
- landslide damage to primary water supplies causing households to use alternative sources they perceived to be unsafe.

Potential risks to manage:

- The straining and settling treatment method is generally not effective at reducing microbial contamination to safe levels.
- Inconsistency in treatment (i.e., only treating water when it appears dirty) may be inadequate for protecting against waterborne diseases.

GEDSI considerations:

People with disabilities, who may be left alone at home during work hours, may not have access to safe water and not be able to treat it themselves. They may not know what to check for or how to use the various filtration, straining, or boiling options. People with disabilities require training on household water treatment in formats that are accessible.

Lower-income households and households far away from markets may have more difficulty in procuring filters, electric water boilers, or fuel for boiling water. Family members with gendered roles for collecting and burning firewood to boil water may be disproportionally burdened or at a higher risk of respiratory disease – particularly where firewood is burnt inside small quarters.

Market exchange

What is it: using markets to purchase products or services for reducing risks or addressing impacts.

Examples of practice: households purchase storage containers (e.g., large rainwater harvesting tanks) and water filters as described in 'storage' and 'household water treatment'. In Nepal, women reported difficulty in keeping reusable menstrual hygiene materials dry during the rainy season. Instead, they purchased disposable pads from vendors during these times.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- prolonged rainfall making it difficult to dry out reusable menstrual hygiene materials after washing; and
- dry and wet conditions necessitating the purchase of products to enable storage and household water treatment coping mechanisms.

Potential risks to manage:

- Repeatedly purchasing products or services or making large one-off payments may contribute to entrenching poverty.
- Markets may not always be available or affordable when needed.
- Exchange of permanent or reusable products with disposable products can increase local waste generation.

GEDSI considerations:

Markets may be less likely to offer products and services that meet the needs of people with disabilities if it is not profitable. Sometimes, there may be opportunities to support people with disabilities and women to produce and sell products locally that meet the needs of diverse people (such as disposable sanitary pads).

Lower-income households and households far away from markets are less likely to take advantage of market-based coping mechanisms.

Communal pooling

What is it: sharing wealth, labour, information, or income; joint ownership of assets or resources; and mobilisation of communal resources to collectively reduce risks or address impacts.

Examples of practice: community members in Nepal and Bhutan reported collective repairs and maintenance (e.g., clearing out intakes that become blocked after heavy rainfall) to keep shared water supplies functioning. Some communities collect fees from households to pay a caretaker to do this. Information on hygienic water management practices (e.g. safe household water storage, protecting the water source from contamination) is shared at community events. Participants in both Nepal and Bhutan reported that their community members support one another to meet WASH needs during disaster events.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- Heavy rainfall, flood, landslides, and extreme weather that damage shared water supplies or create contamination risks.

Potential risks to manage:

- Communal pooling may be less effective where social cohesion and social ties are weak.
- When a climate hazard affects everyone in the community, it may constrain too many people (e.g., financially) to make communal pooling effective.

GEDSI considerations:

Community-based information sessions may not provide information in an accessible format for people with disabilities. All information, including announcements of information-sharing events, should be inclusive of people who are blind, deaf, or have comprehension challenges.

Depending on their social ties, a community may mobilise resources to assist disadvantaged people in gaining access to WASH when experiencing climate hazards, or exclude them from responses. Community decision-making on communal WASH systems should involve consultations with people with disabilities and other vulnerable groups, even if they cannot contribute to physical labour.

Private WASH modification

What is it: modifying or improving private water points or sanitation facilities not shared with the rest of the community.

Examples of practice: in Bhutan, households light fires under a household tap stand or allow taps to run continuously to prevent water from freezing during cold spells. In Nepal, one person reported preparing a pathway to their toilet before each monsoon season to ensure easy access in rainy conditions.

Examples of (anticipated) climate hazards that trigger the coping mechanism:

- cold spells that freeze piped water; and
- erosion and muddy conditions affecting access to sanitation facilities.

Potential risks to manage:

- Modifications that benefit a single household (or group of households) may be detrimental to others (e.g., leaving a tap running continuously to prevent freezing may deplete a shared water resource and/or lower pressure in the public water supply).
- Modifications may be costly or labour intensive, and therefore not achievable for all community members.

GEDSI considerations:

Private modifications may be necessary in order to make a particular water point or sanitation facility easier for people with disabilities, older people, pregnant women or children to access or use during climate hazards. Yet modifications should be encouraged only when they do not disadvantage other groups.

Being focused on private benefits, this coping mechanism rarely brings about communal benefits. It may come at the expense of other community members who have fewer resources to pursue private interventions of their own. For example, unregulated self-supply in response to water shortages could contribute to the lowering of groundwater tables and cause water points – used by people unable to pursue their own self-supply options – to fail.

Water and sanitation services in rural, mountainous areas are especially vulnerable, as facilities face the harsh elements of nature and the growing impacts of climate change.

Reflections

The commonly used coping mechanisms provide relatively fewer benefits for people with disabilities

Sometimes people, especially those with disabilities, simply could not cope with the impacts of climate hazards on WASH access. For example, people with disabilities described how they were more likely to slip and fall when accessing a toilet or water point outside the house during very wet conditions: *'[I] have difficulty walking. The path to the toilet becomes slippery during the rain. I have fallen several times while attempting to use the toilet in such weather conditions.'* In these instances, there is no coping mechanism and people live with increased risks. Other examples of failures to cope include open defecation when toilets stop working during flooding, using unhygienic toilets where there is insufficient water for cleaning, decreasing water consumption during water shortages, and using alternative water points that are distant from the home (where the alternative is challenging to access, the team considered this a failure to cope rather than an example of diversification).

People with disabilities often depend on family members to support coping. Diversification becomes a less useful coping mechanism for them if alternatives are difficult to physically access without help or if they face discrimination from other community members that restricts their access. People with disabilities also often have fewer financial resources for utilising the market exchange mechanism and may rely on family members to procure assets. Water storage and household water treatment emerged as important coping mechanisms for people with disabilities, but they often required assistance from family or other caregivers to enact.

Accessible water storage and treatment solutions, combined with community and government support, can aid people with disabilities in coping. Through appropriately designed products and training on operation and maintenance, some people with disabilities can be supported to store and treat water at the household level. For example, domestic rainwater harvesting systems with a tap inside the home and boiling or filtration technologies that only require simple manipulation could enable some people with disabilities to care for themselves. Such options could be sourced through communal pooling if communities are facilitated to assist their more vulnerable neighbours. Shared WASH facilities can also be made more accessible to people with disabilities through communal pooling. Local governments or community leaders should support families with a person with disability to modify private WASH facilities to make them suitable in very wet and dry weather.

Households and communities have more coping mechanisms for water than for sanitation and hygiene

Community members talked about a more diverse range of coping mechanisms for water compared to sanitation or menstrual hygiene management, which appeared to be less affected by climate hazards. While community members used a couple of coping mechanisms for sanitation (storing water for flushing and using a neighbour's, friend's or public toilet), sometimes they could not cope. Participants in Nepal and Bhutan mentioned their toilets become muddy in the wet season and unhygienic in the dry season, but they have to just live with it. Some participants in Nepal resort to open defecation when toilets became unavailable due to a climate hazard.

Improved water services would help address common issues like inadequate water for flushing and toilet cleanliness. Although participants did not refer to capital maintenance issues – like latrine damage or overflowing of containments – they may benefit from advice on preventing these issues as climate change increases the frequency and intensity of heavy rainfall events. Local governments and WASH organisations should emphasise the importance of good quality construction materials and techniques, especially for containment units (e.g., pits and tanks). Superstructures could also be built to be robust or be built using materials that are cheap and easily re-buildable. Latrines should be disability- and women-friendly, and enable desludging (where relevant) to reduce flood-related risks to sanitation.

Support to communities should account for shifting local social, economic, and environmental contexts

The extent to which coping mechanisms provide (equitable) benefits to communities depends on the local social, economic, and environmental contexts. Solutions must account for the shifts that climate change and other local, regional and worldly changes bring to these contexts.

Social cohesion is closely tied to the efficacy of the communal pooling coping mechanism and can also mitigate the risks of conflict with the diversification mechanism. Social interventions like raising community awareness of the issues facing people with disabilities and other vulnerable groups, may build empathy and goodwill. However, broader forces of economic development, globalisation, and environmental change are undermining traditional ideas of social cohesion based on living in a shared geographic area. It may be risky to continue relying on social solidarity to enable people to deal with climate impacts on shared WASH resources.

Professionalised and regulated rural water service delivery offers an alternative. Professional service providers may be more adept at mobilising financial (e.g., tariffs paid by community members) and other communal resources to deliver climate-resilient services than an informal and voluntary entity relying on solidarity. Professional service providers – community-based, private, or government entities – are also easier to train and regulate to detect and address climate risks and account for the needs of people with disabilities. Service authorities can also enforce local regulations to manage conflict around shared water supplies. Yet, where solidarity remains strong (e.g., in some parts of rural Bhutan) this shift is perhaps less urgent.

The economic context is most closely related to the market exchange coping mechanism. Lower-income households are less able to afford products and services – such as those that enable the storage, household water treatment, and private WASH modification mechanisms. Also, markets may not stock products that meet the needs of people with disabilities. Even with economic development in Bhutan and Nepal, markets may not reach the lowest-income households or meet the needs with disabilities on their own. Consequently, demand and supply of products and services that support coping with climate impacts may create inequality. Benefits might not reach groups who are most in need and vulnerable, often disproportionally represented by people with disabilities.

Incentives to build climate-resilient WASH services may require financial instruments – such as subsidies, tax incentives, and regulatory advantages – and pro-social business models to reach everyone.[5] Government and civil society organisations should use them to make products and services for responding to climate risks (e.g. increased storage, deep borehole drilling services where appropriate) available and affordable for low-income groups and more appropriate for people with disabilities.

The environmental context shapes the viability and necessity of the diversification, storage and household water treatment mechanisms. Water-rich environments enable diversification through making water resources more plentiful, give people more options to access. Water storage is more effective when annual average rainfall is high and distributed over the year, rather than centred on a single annual monsoon period. Household water treatment may be important following intense rainfall events when high levels of surface runoff contaminate water sources. The environment may also influence the market exchange mechanism. For example, dry environments may encourage the development of markets for deep borehole drilling services, whereas wet environments, in which spring and surface water are plentiful, may discourage them.

Water resources monitoring is becoming more important to guide government and donor investments in rural water development as climate change modifies local hydrological cycles. If climate change causes annual rainfall to occur more intensely around a single monsoon period (i.e., creating a longer dry season), water storage becomes less viable. Changes in rainfall patterns

[5] N. Carrard, J. Kohlitz, S. Soeters, G. Halcrow, J. Murta, and J. Willetts,, 'Reaching all in Rural Sanitation: Experiences From Inclusive Programming in Five Countries', *Development in Practice*, vol. 30, no. 5, 2020, pp. 609-623.

(combined with changes in demand) may alter the landscape of water sources and their yields. Precipitation projections for Nepal and Bhutan, and subsequently how water resources will change, are highly uncertain (although an increase in the frequency and intensity of heavy rainfall events is likely). Nevertheless, governments can develop and monitor practical environmental indicators to guide decision-making on water source upgrades and development.[6] This includes measures such as monitoring rainfall through simple rain gauges and fitting monitoring wells with loggers that enable remote telemetry. Governments can use this information to understand how water resources are changing in real time and respond appropriately, rather than trying to predict an uncertain future.

Supporting longer-term adaptations and transformations

To realise the human rights water and sanitation, governments and the broader WASH sector have a duty to progress WASH services, despite climate change. Households and communities cannot be left to get by with coping mechanisms alone. Yet, reaching sustainable, safely managed WASH services for everyone will take time.

Local governments in Nepal and Bhutan are supporting rural communities and households in various ways to better deal with climate hazards. Some rural municipalities in Nepal construct communal water storage tanks, aim to support every household to have an indoor tap, raise awareness on climate risks for WASH, communicate early warning of climate hazards, and distribute sanitary pads, water filters, and water storage receptacles. Local governments in Bhutan reported fewer initiatives but have a goal to support 24/7 household access to water service, and mentioned mobilising community members to protect water sources, communicating early warnings, and seeking partnerships with civil society organisations to increase inclusion, support disaster risk reduction, and implement climate change adaptation programmes. Such initiatives provide relief to families and can be built upon to develop more comprehensive approaches.

A realistic course of action enables positive coping mechanisms in the near-term while also positioning WASH stakeholders to implement adaptations or transformations to sustain services in the long run.

In support of this, the following summarises the recommendations for government and non-government organisations:

- Collect information on the particular climate impacts that people with disabilities and other vulnerable groups struggle to cope with to inform and tailor WASH solutions within broader disaster risk reduction and climate change adaptation initiatives.
- Expand the services of disabled people's organisations and help desks in Nepal and Bhutan to address the particular WASH needs of people with disabilities during and after the occurrence of climate hazards.
- Implement sanitation programs emphasising the need for private household latrines constructed with good quality (or easily re-buildable) materials and techniques, designed for desludging (where appropriate), and designed for disability- and women-friendly usability.
- Support professional rural water management models to facilitate communal pooling of resources and effective climate resilience practices (e.g. climate-resilient water safety planning) and post-construction support mechanisms.
- Establish and operationalise regulations and peacebuilding activities for managing conflicts relating to the sharing of water resources and supplies.
- Design pro-poor business models, incentives, and targeted subsidies to ensure that recommended climate adaptations for WASH are affordable and suitable for everyone.
- Monitor water resources through practicable indicators to inform investment decisions about water source development and upgrading.

[6] Water for Women, 'Environmental Indicators of Climate Risks to Inclusive WASH', *Water for Women*, 2022, https://www.waterforwomenfund.org/en/news/environmental-indicators-of-climate-risks-to-inclusive-wash.aspx (accessed 14 August 2024).

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Impact that matters

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