



Household coping mechanisms for rural WASH in Bhutan

Insights and recommendations

October 2024



Households and communities are on the frontline in responding to the impacts of climate hazards on water, sanitation, and hygiene (WASH). Coping mechanisms – actions that individuals, households, and communities take to deal with a problem and satisfy a need in the near term – are the first (and sometimes only) way that people living in rural areas can address disruptions to their WASH services caused by flooding, drought, landslides, and cold spells.

This visual report presents photos of household coping mechanisms for WASH captured by women, men, people with disabilities and their caregivers in Sakten village (Trashigang district), Chapcha and Sampheling villages (Chhukha district), and Lhamoizingkha village (Dagana district). The report provides recommendations for WASH stakeholders to better support rural households in dealing with climate impacts on WASH.

It is important to note that governments are duty-bearers of the human rights to water and sanitation. They are obligated to take steps to ensure everyone has access

to safe, sufficient, acceptable, physically accessible, and affordable water and sanitation services. Coping mechanisms often offer only temporary relief to households. Therefore, while supporting household coping mechanisms is important for helping people access WASH in the near term, it is often not enough to resolve long-standing issues.

Longer-term climate change adaptation support and improved WASH service delivery are necessary to enable communities to live safely under climate change.

Toilet in Dagana.

Photo credits: SNV/Aidan Dockery.



In Bhutan, SNV, UTS-ISF, and CBM Australia conducted research involving eight households. Participants were asked to take photographs showing how they manage and adapt their access to WASH services during periods of extreme weather, including very wet and very dry conditions. The photographs were taken between January and June 2024. SNV and UTS-ISF also conducted follow-up interviews with four of and eight government officials.

The succeeding pages describe each coping mechanism in more detail – as seen (in photos) and told (in captions) by participating community members. Based on community members' reports, SNV and UTS-ISF formulated recommendations for the following stakeholders:

- **Duty-bearers:** Local government authorities
- **Rights-holder organisations (RHOs):** Civil society organisations, including disabled people's organisations and other groups that represent the interests of a group of people.
- **Community leaders:** Elected leaders living near the community level

A further discussion of the coping mechanisms and the background of this research initiative is available at SNV and UTS-ISF, *Household coping mechanisms for rural WASH: Bhutan and Nepal*, The Hague, SNV, 2024.

SNV, the Institute for Sustainable Futures at the University of Technology Sydney (UTS-ISF), and CBM Australia identified six common categories of rural WASH coping mechanisms from a study conducted in Bhutan and Nepal.



Storage



Diversification



Household water treatment



Buying and selling



Communal pooling



Private WASH modification

'When it rains, I store the rainwater and keep it in the bathroom. When there is no water, it is impossible to maintain cleanliness.'

Mother of children with physical disabilities



'We store water in our buckets and bamboo containers. Sometimes, in the summer, the pipe can be blocked so we need to store water to cook, wash dishes, and to drink.'

Female caregiver

'In winter, it gets cold and the water in the pipes freezes. I collect enough water at night for both the kitchen and the toilet. The water only flows the next day when the sun is out.'

Female caregiver





Storage

What households and communities do: Store water to ensure an adequate supply is available when water shortages or contamination from heavy rainfall are expected.

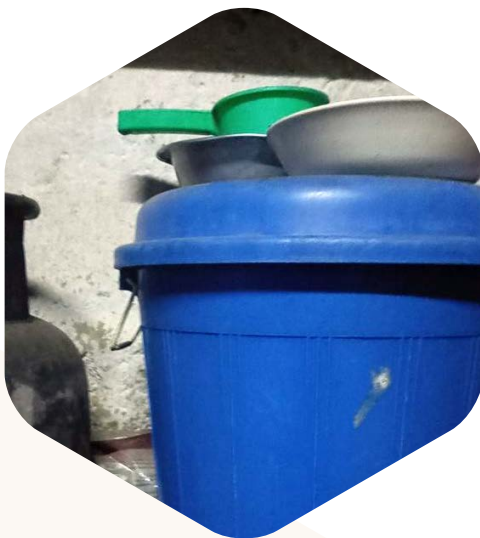
Consider this: Water may not always be stored safely, and stored water can encourage the breeding of vectors.

Recommendations for key stakeholders:

- Local Health Assistants and RHOs promote safe storage and hygienic household water management.
- Community leaders, with support from the Department of Disaster Management, communicate to communities when dry spells or heavy rainfall is expected, in formats accessible to all.
- Disabled People's Organisations and local government leaders support people with disabilities in acquiring safe household water storage technology suitable for their needs and provide them with the necessary training on how to operate it.

'I have not faced any big challenges with water shortages, all thanks to our government, but sometimes there is little water in the summer, so we also harvest rainwater.'

Female caregiver



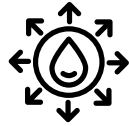
'When we have a water shortage, this is the alternative spring we use to get water. We don't have to fetch water from the spring every day, only during the months when the main water source is low, which is around 2-3 months in the winter.'

Man

'We have around four water sources for the community because one is not enough when debris blocks the main water source.'

Man with a physical disability





Diversification

What households and communities do: Access different water sources (e.g. rainwater, shared taps, springs, unimproved sources) and toilets (e.g., a neighbour's toilet) when the primary options are unavailable due to climate hazards.

Consider this: Some of these alternatives may be unsafe, and conflicts can arise when diverse groups access the same option.

Recommendations for key stakeholders:

- Local governments, Water User Associations (WUAs), and spell out (RHOs), with the support of district engineers and water technicians, carry out Climate-Resilient Water Safety Plans on all water sources used by the community, communicating the risks and control measures available to community members. Water Safety Plans follow principles and practices from the Guide to Equitable Water Safety Planning.
- Local government leaders and the Department of Water capacitate community leaders, RHOs, and WUA members on equitable approaches to planning for the mediation and resolution of conflicts that arise when WASH facilities are shared due to climate hazards.

'I always boil water for her. But she does not like to drink boiled water... she says it does not taste nice.'

Female caregiver



'When it rains a lot, I fetch the water in the buckets and let the dust settle. Once the dirt is settled, I pour it in the vessel and then boil it. Once the water is cool, I store it in the bottle, and then the children drink that.'

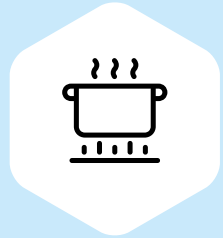
Mother of children with physical disabilities

'I filter the water from the tap with a cloth and then boil it...The next day, I boil new water and don't use the old water from the day before.'

Female caregiver



Household water treatment



What households and communities do: Treat water at the household level, typically by boiling or straining it through a cloth and waiting for solids to settle.

Consider this: The strain-and-settle method does not adequately treat microbial contamination to make water safe for consumption.

Recommendations for key stakeholders:

- Health assistants conduct awareness campaigns in diverse accessible formats capable of reaching people with low levels of literacy, people with disabilities, and other groups to promote appropriate and consistent household water treatment, especially during high-risk periods (e.g., the first rainfall after a lengthy dry period, during the wet season).
- Water User Associations are empowered to request water quality testing materials from local Health Assistants, carry out water quality testing during high-risk periods and communicate water quality concerns and the need for water treatment to all.

**A store-bought
water filter**

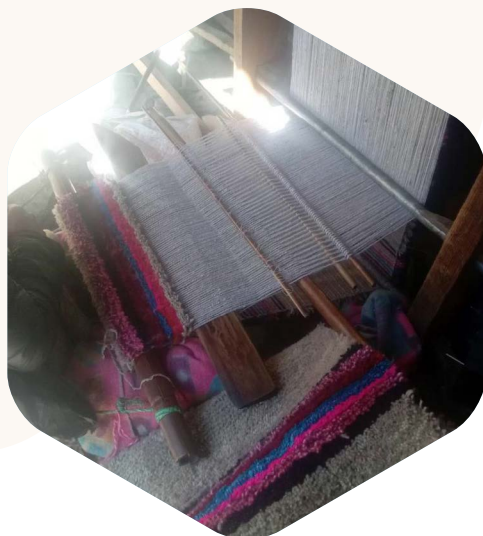


'I bought a tank that can hold about 1,000 litres. So, I store water here and use it during the winter when the pipes freeze.'

Female caregiver

'I stay home so when we have water, we can also make a living, like weaving our nomadic dresses. We can wash and weave clothes for the students and for ourselves as well.'

Female water caretaker





Buying and selling

What households and communities do: Buy products like water storage containers, water filters, electric kettles for boiling water, and disposable menstrual hygiene pads to help overcome climate impacts on WASH. People also sell products to earn money, which supports coping.

Consider this: Markets may not always be affordable or accessible, especially for low-income groups, and may not offer products that are suitable for people with disabilities.

Recommendations for key stakeholders:

- Local governments encourage private sector actors to develop, stock up, and promote affordable products that people commonly use to deal with climate impacts on WASH, including products that are suitable for people with disabilities.
- The Disaster Management Committee at the gewog level subsidises or donates certain products and services before, during, or after disaster events that help people cope, potentially with targeted subsidies for people with disabilities or other vulnerable groups.



'We created the pond near the community because there was no water source. It is also a place where the community goes to for smoke offerings and to hoist prayer flags. This water is used by both us, and our animals also drink from here. Usually there is not much water, but today the pond is full.'

Man with a physical disability



Communal pooling

What households and communities do: Contribute labour and money to maintaining shared infrastructure, like a community water supply, and share information about climate risks and risk-reduction actions.

Consider this: Community participation and sharing are less effective when community social cohesion is weak and/or does not benefit all community members because some groups are excluded from decision-making.

Recommendations for key stakeholders:

- Water User Associations mobilise communal resources (e.g., to protect water sources and manage the water supply scheme) and community buy-in, with support from local governments, to formalise the Associations.
- Community leaders and RHOs ensure that women and people with disabilities can join and meaningfully participate in community WASH discussions. If people with disabilities cannot attend, arrange to gather their input and share back information with them.
- Community leaders provide guidance to community members on what they can do together to manage climate risks and in what cases they should seek support from the government.

'[When the water freezes] we have to make fire near the water pipe to melt the ice. I have to make a fire at the cement water pipe stand to warm the structure.'

Man with a physical disability



'We must leave the tap running a little bit [to prevent freezing]. The cement is also covering the entire water pipe, and that helps prevent the freezing of the water. When it is sunny, we don't leave the water running during the day.'

Man with a physical disability

Private WASH modification



What households and communities do: Modify or improve a private water point or sanitation facility that is not shared with the rest of the community.

Consider this: In some cases, these actions could negatively affect other community members (e.g., allowing taps to run continuously to prevent them from freezing during cold spells, which may reduce water pressure in other parts of the piped water supply).

Recommendations for key stakeholders:

- Water User Associations implement Climate-resilient Water Safety Planning processes to account for coping mechanisms that people take at the household level, such as letting taps run, during risk assessments and implementing control measures.
- Local governments support Health Assistants to advise households on how to construct and maintain safe private toilets and menstrual hygiene management facilities during wet and dry conditions in ways that will not put others or the environment at risk.



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This visual 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. It was published as part of SNV's Towards Climate Resilient Inclusive WASH Services project in Bhutan and Nepal. Jeremy Kohlitz, Leanne Casey, and Avni Kumar of UTS-ISF prepared this report, with contributions from Jigme Choden and Ugyen Wangchuk of SNV in Bhutan, Isabel Calvert of CBM Australia, and Georgina Robinson of UTS-ISF. Gabrielle Halcrow of SNV reviewed the report.

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