Water For Women

Building Climate Change Resilience and Adaptation in Inclusive WASH

Australian Aid

Strengthening Governance

for Climate-Resilient WASH Systems

In brief

Water for Women (WfW) is unique in its role as an implementation and research fund that contributes to local, regional and global understanding of best practice in climate-resilient inclusive development. During the 2023–24 extension period, drawing on learnings from the implementation of climate-resilient and inclusive water, sanitation and hygiene (WASH) projects and research across the Asia–Pacific region, WfW partners sought to explore a fundamental learning question: **What does climate-resilient inclusive WASH development look like?**

In exploring this question, three dedicated learning groups considered:

1. How do WASH programs commonly understand climate risk and resilience? How can this be further developed to better inform the design of WASH interventions?

2. **How do WASH governance systems commonly integrate climate risk and resilience? What lessons from promising practices can we share to support strengthened climate risk integration?**

3. Why and how is gender equality, disability and social inclusion critical to climate-resilient WASH?

This brief shares key findings and insights from the second learning group (2) about **strengthening governance for climate-resilient WASH systems**.

- **WASH sector stakeholders are increasing efforts to strengthen the climate resilience of WASH** development globally.
- **Integrating climate risk and resilience into WASH governance systems is central** to these efforts, but is a new reform area in most settings.
- **Many frameworks for climate risk and resilience and WASH governance exist,** but most relate to governance functions; few consider climate risk and resilience as part of how governance should be performed.
- **Promising practices have emerged from WfW climate-resilient inclusive WASH projects** in the Asia-Pacific region; they can guide integration of climate risk and resilience into inclusive WASH governance systems.

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Abbreviations

CFAR	Centre for Advocacy and Research, India
CWSIP	Community-Based Water Security Improvement Planning
GEDSI	Gender Equality, Disability and Social Inclusion
DWCB	District WASH Coordination Body
IWC	International WaterCentre at Griffith University
JSR	Joint Sector Review
LLEE	Live & Learn Environmental Education
MIS	Management Information System
NWASH MIS	National WASH Management Information System
PNG	Papua New Guinea
SIWI	Stockholm International Water Institute
SNV	SNV Netherlands Development Organisation
SWA	Sanitation and Water for All
Thrive / EMW	Thrive Networks / East Meets West
UTS-ISF	University of Technology Sydney – Institute for Sustainable Futures
WASH	Water, Sanitation, and Hygiene
WfW	Water for Women
WSP	Water Safety Planning

Introduction

Water for Women (WfW) is an implementation and research fund that is uniquely placed to contribute to local, regional and global understanding of best practice in climate-resilient, inclusive water, sanitation and hygiene (WASH) development. Under Water for Women's collaborative Learning Agenda 2023-24,[1] WfW partners sought to explore a fundamental learning question: **What does climate-resilient inclusive WASH development look like?**

As the effects of climate change are increasingly being felt across the globe, WASH stakeholders are working to strengthen the climate resilience of WASH sector development. A central part of this effort is to **integrate climate risk and resilience into WASH governance systems**. This is a key way for the sector to transition to climate-resilient inclusive WASH development and contribute to broader resilience and sustainable development. However, integrating climate risk and resilience into WASH governance systems is a new reform area in most settings. There is still much to learn about how best to do this work in different contexts. To contribute to learning in this important area, WfW sought to explore two more specific questions:

- **How do governance systems for climate-resilient inclusive WASH commonly integrate consideration of climate risks and resilience?**
- **What lessons from promising practices can we share to support strengthened climate risk integration?**

The frameworks section of this learning brief presents a review of guidance and good practice for integrating climate risk and resilience into WASH governance systems in existing conceptual frameworks. This review sets the scene for how inclusive WASH governance systems are commonly conceptualised, and how integration of climate risk and resilience into WASH governance systems is framed.

Building on these findings, the promising practices section offers a set of eight promising practices for integrating climate risk and resilience into WASH governance systems. These practices emerged from the practical experiences of WfW partners and are further illustrated in spotlights from WfW projects.

Methods

A review of existing global frameworks was conducted to understand how WfW could best contribute lessons in an already crowded space. The review considered frameworks commonly used by WfW partners in their work to integrate climate risk and resilience into inclusive WASH governance. Additional documents related to WASH governance systems (not specific to climate resilience), disaster risk reduction, food security and adaptive governance were obtained from internet searches. From 28 reviewed frameworks and guidance documents, nine were selected[2] for in-depth comparison by two focus groups: one being a technical working group comprising WASH and climate change experts from WfW partner organisations, and one with WfW partners from across Asia.

To identify promising practices, a qualitative thematic analysis was undertaken. Documentation examined as part of this thematic analysis included progress and monitoring reports of 15 projects and selected WfW research reports. The learning group reviewed the promising practices identified from the thematic analysis.

Frameworks

Civil society organisations (CSOs) and research organisations (ROs) apply a broad range of conceptual frameworks[3] in programs to influence WASH governance systems. Many frameworks for integrating climate risk and resilience into governance systems exist.

As outlined in the methods section, global frameworks commonly used by WfW partners were reviewed, along with guidance documents and frameworks related to WASH governance systems (not specific to climate resilience), disaster risk reduction, food security and adaptive governance. Of 28 reviewed frameworks and guidance documents, nine were selected for in-depth comparison.

The reviewed frameworks differ in how they define 'governance systems'; some emphasise the rules and processes for decision-making, while others focus on the structures, laws, policies and institutions that oversee service provision. Entry points for interventions to strengthen WASH governance systems and integrate climate risk and resilience in WASH governance systems also vary accordingly. The Stockholm International Water Institute (SIWI) developed its Water Governance Framework from a synthesis of other frameworks. It presents the components of the governance system as the functions (the 'what') governance performs, the attributes of 'how' governance functions are performed, and the outcomes to which the governance functions contribute, all influenced by the values and aspirations of individuals and organisations involved (Figure 1).

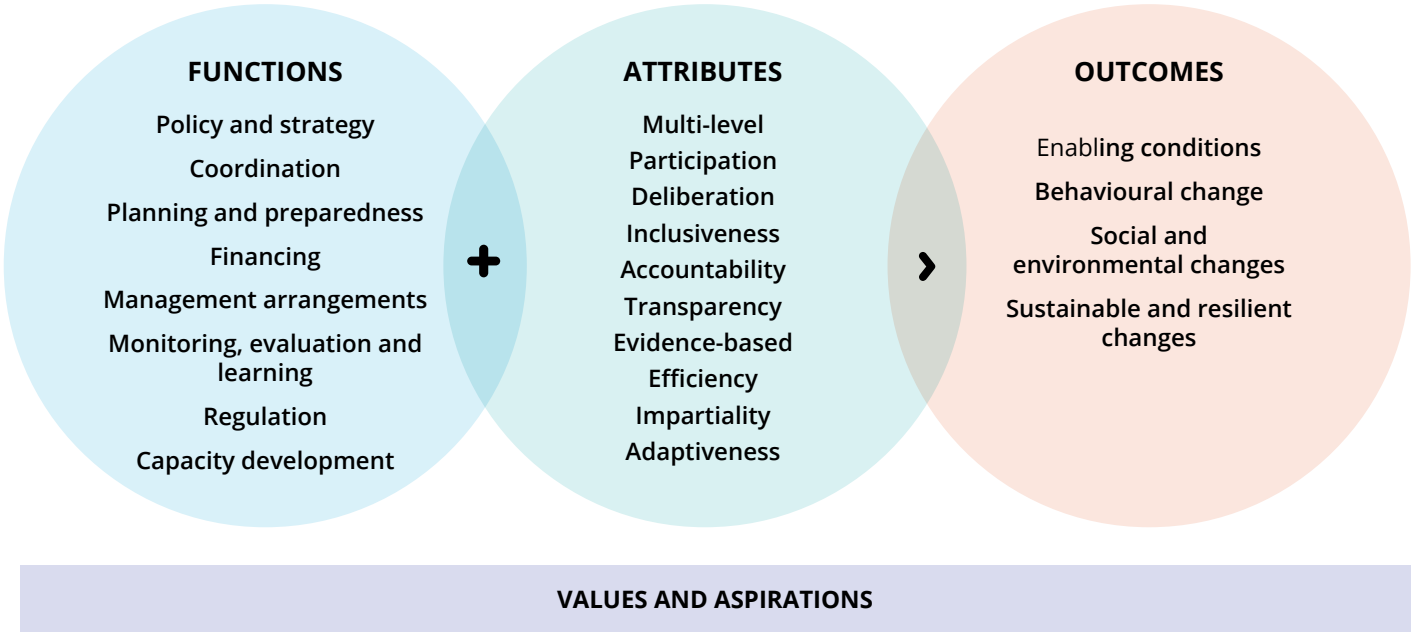


Figure 1. SIWI's Water Governance Framework for Practitioners (adapted from Jiménez et al., 2020)

The selected frameworks were mapped against the SIWI framework (Figure 2) based on how prominent concepts align with its governance components of functions, attributes, outcomes, and values and aspirations, and whether they are represented systematically.[4] Most frameworks relate to the functions of the governance system. Only two frameworks include substantial guidance or good practice related to all three governance components of function, attributes, and values and aspirations. This mapping excludes 'governance outcomes', which all frameworks consider in some way.

- The Sanitation and Water for All (SWA) Framework, which was co-developed with the SIWI Water Governance Framework, is commonly used by CSOs and government in the WASH sector and in the WfW monitoring framework. It broadly describes governance functions as 'building blocks', attributes as 'collaborative behaviours', and actors' values as 'guiding principles'. SWA's climate change briefing describes the integration of climate change adaptation and mitigation into this framework, but is not specific to climate risk and resilience.
- The Pacific Resilience Standards are not WASH-specific but present practice-based guidance for resilience building in the Pacific. They categorises governance functions related to people, mechanisms (system architecture) and processes, while attributes and values are described as function-wide 'guiding principles' and standards.

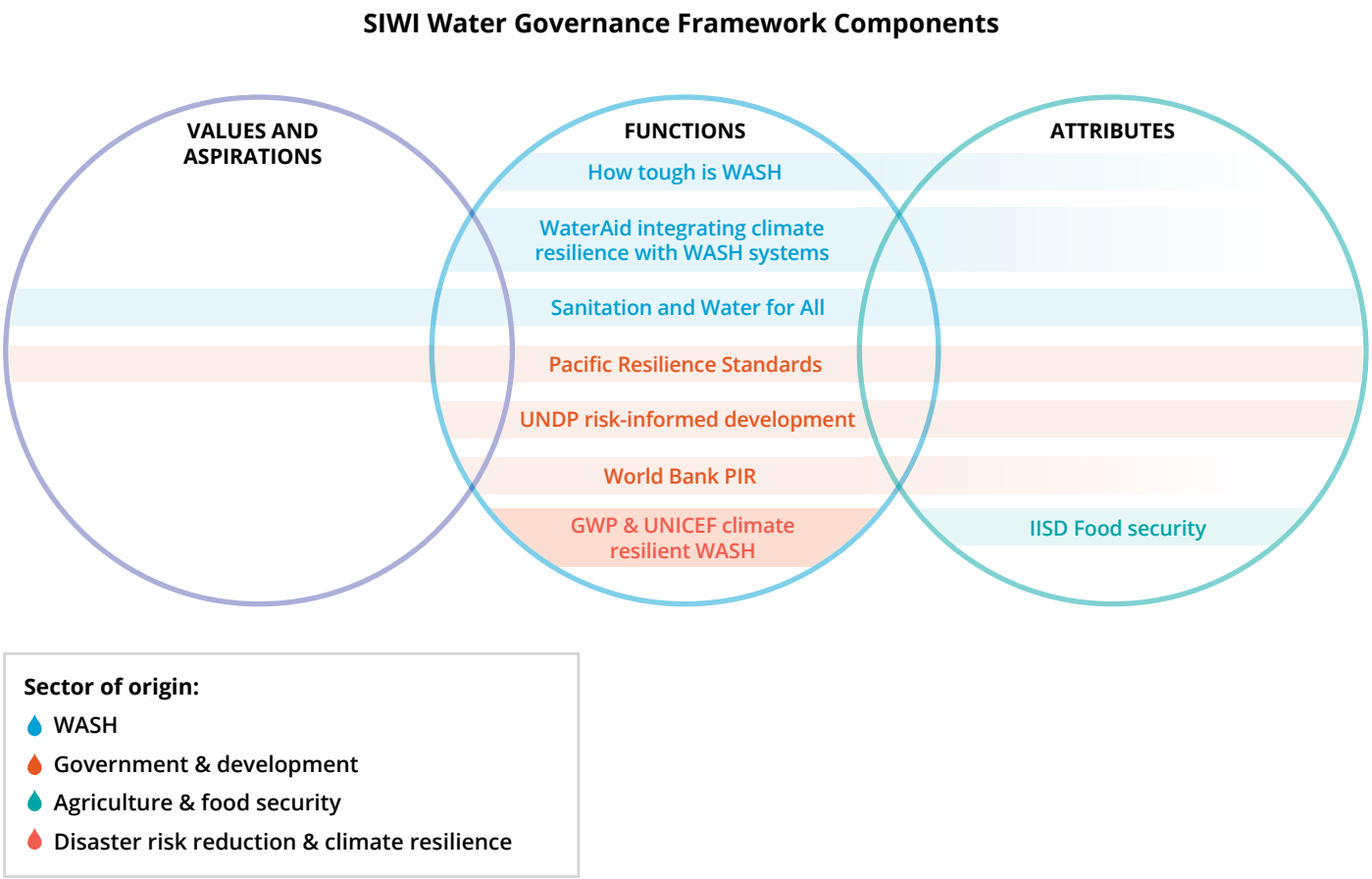


Figure 2. Mapping of the relative emphasis of nine frameworks related to climate risk and resilience and water governance against selected elements of the SIWI framework

This mapping highlights that existing guidance and good practice examples available to practitioners seeking to integrate climate risk and resilience into WASH governance typically focus on integration into governance functions. Few consider climate risk and resilience as part of how governance should be performed, how integration should occur, and how the values and aspirations of the WASH, gender equality, disability and social inclusion (GEDSI), and climate actors involved can be considered and influenced as part of climate risk and resilience integration. In seeking to reduce both inequities and climate risks through WASH governance systems, as WfW does, a focus on approaches to integration is vital.

Promising practices

The promising practices section of this learning brief contributes to the attributes aspect of integrating climate risk into WASH governance systems. As outlined in the frameworks section, these aspects have received little attention in international guidance and frameworks for integrating climate into governance systems.

Eight promising practices for integrating climate risk and resilience into inclusive WASH governance systems are outlined in this section. These practices emerged from experience in implementing WfW climate-resilient inclusive WASH projects from 2023 to 2024. Each promising practice is described and its importance explained. Brief case studies are included to illustrate some of the practices.

In addition to the promising practices documented here, WfW's experience is that some WASH practitioners lack a sound conceptual understanding of climate risk and resilience. This impedes the ability to undertake effective climate risk and resilience integration work. Accordingly, a shared conceptual understanding of climate risk and resilience should be established before embarking on substantive reforms. This conceptual understanding of climate risk and resilience for WASH is examined further in the learning brief: Integrating Risk and Resilience for Climate-Resilient WASH Programming

Promising practice 1: Integrating climate risk into existing WASH processes, not through standalone climate-oriented processes

Embed climate risk and resilience into the WASH planning, budgetary and implementation processes that are already in place. That is, incorporate climate risk and resilience as a component of existing WASH processes; avoid creating new, separate, specific processes.

This practice is considered important primarily because it enables WASH-related climate risks to be considered systematically alongside other WASH-sector development issues. In this way, it reinforces existing mechanisms and promotes a balanced and comprehensive approach to climate-resilient inclusive WASH development. More specifically, it encourages:

- systematic incorporation of adaptation activities into all WASH projects and investments to make them climate-resilient and/or build WASH-related adaptive capacity
- programming and implementation of dedicated WASH adaptation projects or investments that seek to build adaptive capacity as part of a coherent WASH development program or 'programmatic' approach, rather than separately or disjointedly
- direction of available resources – including climate finance resources – to areas where problems or needs are greatest. In this way, resources contribute efficiently to broad climate-resilient inclusive WASH development and not just to areas where climate risk-related problems/needs are greatest.

Embedding climate risk and resilience into existing WASH processes also helps integration to be administered efficiently. In general, creating new and separate processes for climate change adds additional coordination requirements and transactions costs. It can also be duplicative, create confusion for practitioners, and even undermine existing governance mechanisms.

Spotlight 1: Strengthening climate risk capacity within existing WASH governance in Nepal

WfW partners: SNV Netherlands Development Organisation (SNV), International Water Management Institute (IWMI), CBM Australia and University of Technology Sydney - Institute for Sustainable Futures (UTS-ISF)

Locations: Dailekh and Sarlahi, Nepal

The Government of Nepal is progressively supporting the autonomous local governments, established after federalism, in strengthening their WASH governance processes. A National WASH Management Information System (NWASH MIS) gathers and consolidates data on WASH assets, and since 2022 it has been mandatory for local governments to use it for evidence-based planning. The Climate Resilient Water Safety Plans Guideline (CR-WSP) for rural water supply systems[5] guides operators of such systems to identify climate hazards and risks and implement control and adaptation measures. WfW partners saw an opportunity to use these tools, endorsed by the federal government, for strengthening the capacity of local governments in four target rural municipalities (RMs) across Dailekh and Sarlahi in climate-risk informed planning and operation of water supply systems.

Through their WfW project, Towards Climate-Resilient Inclusive WASH Services in Rural Nepal and with the support of local NGO partners (Everest Club and Rural Women Upliftment Association), SNV firstly trained WASH focal persons and information technology officers in the four RMs to collect data for the NWASH MIS, which included identification of climate change and disaster impacts on water supply systems. The project team facilitated local governments to use the NWASH MIS innovatively by combining data on climate change impacts, together with analyses of service levels, asset condition, and inclusion parameters, to make decisions on prioritising investments for improving water supply. SNV and IWMI urged the RMs to demonstrate commitment for climate action during their annual planning process, and the RMs used their WASH plans to allocate budget for climate-resilient upgrades to water supply systems.

Secondly, based on learnings on climate adaptation, including differentiated impacts on vulnerable groups, supported by UTS-ISF and CBM Australia, SNV further improved the guidance in the CR-WSP Guideline and updated the RMs' standard operating procedures for water supply. The project team trained service providers on applying the procedures to enhance climate resilience in water supply operation, including regular monitoring and mitigation of climate risks in the wider catchment area.

Focusing on existing WASH governance mechanisms and processes informed the approaches partners took to integrating climate risk and resilience. Although various tools exist globally to integrate climate risk and resilience into WASH, looking at existing federally endorsed tools and processes like NWASH MIS and CR-WSP highlighted that sufficient local information already existed to inform climate resilience in government WASH planning if subnational government were supported with the knowledge and capacity to use it. Improving and using the existing government endorsed systems helped to institutionalise climate risk and resilience within existing standard operating procedures, to progress climate risk integration despite limited human and financial resources, and to develop capacity among those with existing responsibilities for climate-resilient inclusive WASH.

Promising practice 2: Building climate risk management capacities as part of broader WASH governance-strengthening efforts

Build climate risk management capacities as part of broader reforms to strengthen WASH governance. That is, include climate risk management as a component of general reforms to strengthen WASH governance and avoid standalone climate-specific system capacity building. This practice accounts for the interdependence and frequent integration of core governance functions (such as existence of a district WASH committee with roles and responsibilities for formulating district-level 5-year WASH plans; project risk and screening) and climate risk-oriented functions (such as responsibilities of a district WASH committee to assess climate risks as part of a district WASH planning process and tools available for this; climate risk aspects of risk screening). In many settings, gaps and weaknesses in core governance functions require combination of these general elements with targeted climate risk management capacity strengthening. This practice helps put climate risk management capacities on solid foundations and increases the likelihood of achieving their intended objectives.

Similar to promising practice one, building climate risk management system capacities as part of broader WASH governance strengthening reforms improves the efficiency of reforms. It streamlines reform efforts and avoids duplicative assessment and consultation activities.

A member of the Community Management Committee assists a resident to complete a service request for their household using a QR code system in Shakti Vihar, Ward 21, Bhubaneswar
Credit: Amarjeet Kumar Singh

Spotlight 2: Integrating climate risk in Joint Sector Review in Papua New Guinea

WfW partners: World Vision, Plan International, WaterAid and Live & Learn Environmental Education (LLEE)

Location: Papua New Guinea (PNG)

In 2022, the Government of PNG embarked on a reform program to strengthen national governance of its WASH sector, beginning with a Joint Sector Review (JSR). The JSR was collectively led by the three key government agencies with responsibilities for WASH – the WASH Programme Management Unit, National Department of Health, and National Department of Education – supported by WfW's PNG WASH Consortium, WaSH Em i Bikpela Samting.

The JSR's methods were based on the SWA Building Blocks framework mentioned in the frameworks section and covered all key functions of WASH governance. Climate risk management capacities were incorporated into this existing methodological framework.

By considering climate risk management capacities as part of broader national WASH governance system capacity assessment, the JSR supported greater departmental engagement on climate risk management governance capacity and shared leadership and commitment to improve it. Also, it promoted an integrated and cohesive approach to governance strengthening, ensuring that reforms meet the most important needs and are optimally combined and sequenced. This approach is expected to build achievable and sustainable governance system capacities that will contribute to climate-resilient inclusive WASH development over coming years and decades.

Officials at the launch of the WASH JSR Report in Port Morseby (left to right): Mr John Nokue, WaSH Planning and Management Unit – Department of National Planning and Monitoring; Ms Anna Gilchrist, First Secretary – Health, Australian High Commission; Mr Avea Avaroa, Acting Assistant Secretary – WaSH and Schools Self Reliance Coordination, National Department of Education; and Mr Chris Jensen, National Director of World Vision
Credit: World Vision PNG

Promising practice 3: Pooling public climate finance with other sources of international development finance

Pool public climate finance with other types of international development finance. This means funding providers combine and administer development assistance and public climate finance through a single, consolidated mechanism.

The key benefit of this practice is that it can markedly improve climate finance effectiveness. By providing for a wider range of eligible investments, pooling finance can better align with, use, and improve WASH governance systems while responding to the impacts of climate change. As outlined in promising practice one, this enables a more programmatic approach to climate-resilient inclusive WASH development and for available resources to be allocated where they are most needed. Pooling funds allows the investment to continue to strengthen WASH governance systems, enhance the system's utility (including in administration of international public climate finance), *and* support climate-resilient inclusive WASH development.

Water for Women's experience indicates that the most effective climate-resilient inclusive WASH investments incorporate adaptation as *part* of a project or investment. In this way, most climate-resilient inclusive WASH investments are not principally climate-risk focused and cannot be fully funded by climate finance (administered through dedicated/vertical climate funds). For example, an investment program may be supporting development of WASH strategic plans to guide investment identification and prioritisation (development finance), but additional targeted work is also required to integrate climate risk assessments and appropriate responses (climate finance). Pooling of funds supports this approach.

Another benefit of pooling funds is that it can markedly increase access to international climate finance for small organisations and governments that administer small WASH investments. The transaction costs in accessing climate finance from dedicated or vertical climate finance funds are often prohibitive.[6] Pooling funds reduces transactions costs in securing co-funding for these types of investments and reduces the amount of proposal writing, coordination effort etc. required to secure funding to improve inclusive WASH systems that are climate-resilient.

For WASH CSOs, an overview of the climate finance landscape, practical recommendations and opportunities to access climate financing, and to identify innovation and financing pathways is provided in the learning brief:
The Case for Climate Finance: Exploring Future Financing Opportunities for WASH CSOs

Since participating in water care taker training, supported by SNV through their WfW project, Dechen (right) is one of 17 women who perform essential maintenance and repairs on rural water supply schemes – a first for Bhutan that is transforming more than just piped water services
Credit: SNV Bhutan

Promising practice 4: Adapting and strengthening existing tools – only creating new ones if clearly needed

Adapt and strengthen existing tools as the first and best approach. That is, incorporate climate risk into existing policy and planning tools wherever practicable and sensible. For example, incorporate climate change risk into existing water balance modelling tools, risk screening tools, gender equality WASH monitoring tools, and cost-benefit analysis tools.

Once this first-generation work is done, remaining gaps and weaknesses can be tackled. WfW's experience is that residual gaps often relate to obstacles to stakeholders enhancing their adaptive capacity – the root causes of vulnerability. Further insights on this are shared in the learning brief: Integrating Risk and Resilience for Climate-Resilient WASH Programming.

A new tool should only be created and institutionalised if the benefits gained from the additional knowledge generated are expected to outweigh the time and resources required to apply it. Ideally, any new tools should be developed through a collaborative and, where applicable, government-led approach. This can take considerable time. WfW's experience is that developing (following a collaborative approach), piloting and refining a new tool require two to three years. Less time allows no margin for coordination disruptions, and is generally inadequate for meaningful participation of multiple groups and trialing and refining the tool.

This practice is considered important for the same reasons as outlined in promising practices one and two. That is, it promotes systematic consideration of climate risk and resilience alongside and, if applicable, as part of other WASH development challenges. It also increases efficient administration of governance processes and avoids system overload and confusion. While organisations may be tempted to introduce new tools when existing ones do not seem to meet their objectives, extra tools contribute to system overload and confusion among government and non-government actors. WfW partners have also observed that new tools that are perceived as originating externally, without contextualisation, are less accepted and therefore less likely to influence change.

Members of the Disabled People's Association of Solomon Islands (DPASI) lead audit training on accessible WASH as part of Plan International's WfW project, Climate Adaptive and Inclusive WASH in Solomon Islands. Participants included key government stakeholders from the Ministry of Health and Medical Services, and the Ministry of Education and Human Resource Development
Credit: Plan International

Spotlight 3: Integrating climate risk into Cambodia's Water Safety Planning Guideline

WfW partner: Thrive Networks / East Meets West (Thrive / EMW)

Locations: Kampong Cham, Kampong Chhnang, Kratie, Prey Veng, Pursat and Tboung Khmum, Cambodia

Commune-level WSP has been a reform priority for the Kingdom of Cambodia since 2015. To support the implementation of this reform, a WSP guideline was prepared and is being rolled out across Cambodia using an adaptive management, learning-for-improvement approach.

In 2023, Thrive / EMW started working with national, provincial, and local levels of government through their WfW project, Community-Led Inclusive Climate-Resilient WASH to support the rollout of WSP reforms and strengthen consideration of climate risks and resilience. Helping to review and adapt the existing WSP guideline(s) resulted in additional elements being incorporated in risk assessment pertaining to climate change.

Integrating climate risk assessment into the risk assessment steps of the existing WSP guidelines, rather than creating a new tool for this purpose, was preferred in this situation. It was considered more practical and streamlined to implement, and less likely to create confusion for practitioners. WSP was new to many provinces and communes, so ensuring that the guidelines clearly explained where climate risk assessment 'fit in' was vital.

Incorporating climate risk assessment into the existing WSP guideline was also considered beneficial for systematic practice. Participants in the review believed that a separate guideline or tool would reduce the chance of this aspect being applied routinely or properly.

Thrive / EMW team members and community leaders from eight communes following WSP capacity building training to support CR-WSP guideline implementation
Credit: Thrive / EMW / Kim Hor

Promising practice 5: Prioritising inclusive processes and tools

Explicitly prioritise inclusivity in integration of climate risk and resilience into WASH governance processes and tools. This requires considering women and marginalised groups separately and meaningfully involving representatives of these groups in risk assessments. This practice involves reforming decision-making processes so they explicitly consider the risks to women and marginalised groups. It provides opportunities for excluded groups to engage with, and participate in, responsible decision-making and oversight bodies.

At a fundamental level, this practice is important because climate hazards often affect community groups differently. That is, women and marginalised groups face WASH-related climate risks that differ, in both nature and extent, from those other community groups and the 'average' community member face. For WASH investments and interventions to meet these groups' specific needs, risk assessment must consider these groups (by analysing disaggregated data), including the specific barriers that constrain their capacity to manage climate risks. This enables more effective reduction of WASH-related climate risks (that is, equity as an enabler). If this is not practised, climate risk integration is likely to exacerbate existing inequalities and risks (that is, maladaptation).

A further benefit of this practice is that it improves broader social equity and social justice objectives (that is, equity as an outcome). Over the long term, this will indirectly enable marginalised groups to build their adaptive capacities and in turn better manage WASH-related climate risks.

More detailed information on the practice of using inclusive processes and tools in climate integration, and why this is critically important for achieving climate-resilient inclusive WASH, is provided in the learning brief:
The Criticality of GEDSI for Climate-Resilient Inclusive WASH

A community engagement, consultation and discussion session on the impacts of climate change in Ex–Service, Wewak District
Credit: WaterAid PNG / Joyce Maragas

Spotlight 4: Disaggregating WASH-related climate risks affecting women and marginalised groups in Timor-Leste

WfW partner: WaterAid

Locations: Liquiça and Manufahi, Timor-Leste

Since 2019, there has been substantive reforms to WASH governance arrangements in Timor-Leste with a particular focus on deepening decentralisation. To support decentralisation in Liquiça and Manufahi Municipalities, WaterAid has supported municipal governments to develop an operation and maintenance mechanism to support community-level WASH planning as part of the WfW project HALIRAS BESI – Strengthening connections for equality, resilience, adaptation and sustainability of WASH. This support has included adding a climate risk assessment module into the planning mechanism, which has been informed by a guidance note prepared by UTS-ISF titled, Climate Change Response for Inclusive WASH.

Key features of the climate risk assessment module include separate women's and men's group discussions to consider climate risk assessment; explicit exercises to examine and discuss how key (expected WASH-related) climate impacts are experienced differently by different groups within the community; and discussions of how climate events affect already gendered norms of decision-making and WASH responsibilities at household and community level. These activities recognise that WASH risks to the community can be better managed when the people who have the main daily responsibility for WASH activities are also involved in decision-making.

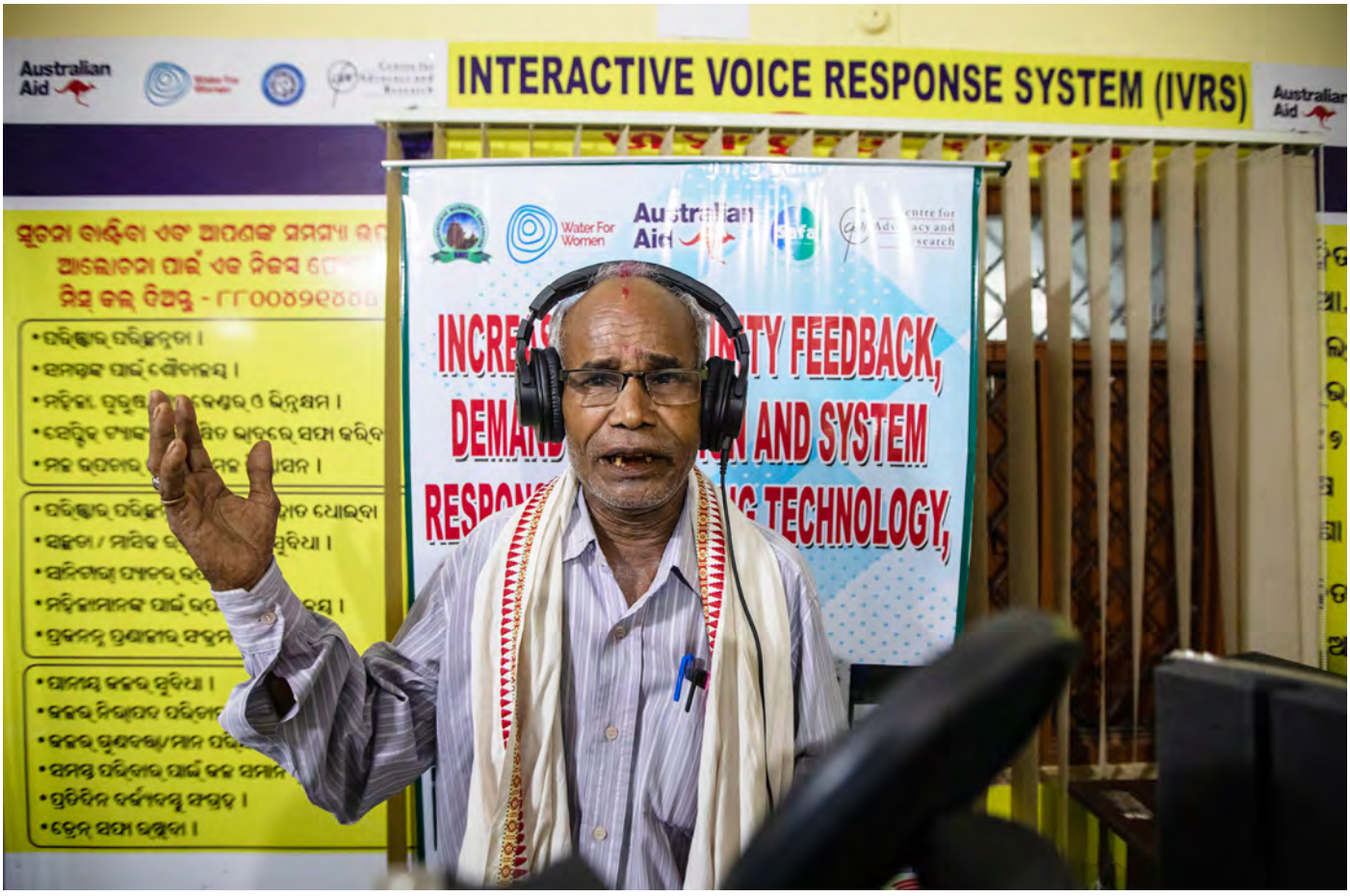
Taking a gender-responsive approach to community climate risk discussions has helped communities to better understand that current inequalities in water access can become worse in the future under the effects of climate change and to consider how community climate adaptation plans can be sensitive to the varying vulnerability among different community members. It has prompted communities to reflect on what interventions and changes to behaviour they need to make to address the root causes of inequalities.

A focus group discussion with women is held in Liquiçá to support community-level climate-resilient WASH planning Credit: WaterAid Timor-Leste

Promising practice 6: Strengthening participation of community and rights holders to improve accountability in climate risk governance

Integration of climate risk and resilience into WASH governance should explicitly consider where accountability for risk sits within the system. Accountability-based processes that encourage active participation and representation of rights holders within climate risk assessments and climate risk management help to hold WASH and climate risk duty bearers accountable to the communities they serve.

Similar to promising practice five, including diverse perspectives in climate risk assessment and management can enable WASH governance systems to better respond to the voices and needs of those most affected by climate risks. This means ensuring climate risk management strategies respond to the vulnerabilities of marginalised groups, and including measures to meet their needs for safe water and sanitation during extreme climatic events. Focusing on values of participation, transparency and accountability in the integration of climate risk into inclusive WASH governance systems can encourage fairer and more targeted measures for climate adaption. It can also establish relationships and mechanisms that allow groups most affected by climate change to take responsibility and engage in governance for managing climate risks in WASH. Mutual accountability can deepen shared responsibility, and strengthening trust between government, CSOs and private sector service providers can strengthen responsiveness and support for long-term climate adaptation.



A member of the community feedback forum records content for the Interactive Voice Response System (IVRS) in Bhubaneswar. The IVRS is an innovative community feedback forum for early warning systems, sharing WASH updates and communicating directly grievances to the concerned focal point, and capturing other community feedback, supported by the Centre for Advocacy and Research (CFAR) through their WfW project
Credit: CFAR / Amarjeet Kumar Singh

Spotlight 5: Empowering communities through participatory governance for climate-resilient inclusive WASH

WfW partner: CFAR

Location: Bhubaneswar, India

Ward 38 in Bhubaneswar, India, is a diverse urban community of over 12,000 people living in five informal settlements. As of June 2024, community-driven efforts have provided all households with an individual water connection and over 99% with an individual toilet. The motivation to improve water services was partly inspired by vulnerability to climate change. About one tenth of families in Ward 38 live in climate-vulnerable locations, such as low-lying areas that flood regularly, lack adequate water supply, or suffer overflowing septic tanks.

To improve resilience to climate hazards for Ward 38, the Slum Development Association (elected community committee tasked with liaising with local government bodies), and Sanitation Sub-Committee (formed and trained by CFAR to support the Bhubaneswar Municipal Corporation and affiliated WASH agents) mobilised community influencers and CSOs through participatory governance approaches. With support from CFAR through the WfW project, Building Climate-Resilient WASH for Climate-Impacted Populations, they installed a saniclimi wall – a public-facing tool for monitoring and tracking WASH and climate issues. The saniclimi wall consolidates community information about climate vulnerability and WASH service disruptions to highlight issues and provide data for deliberation and decision-making. The Slum Dwellers Association, Sanitation Sub-Committee, community representatives and municipal government use the saniclimi wall data and micro-planning to discuss and prioritise upgrades to water and sanitation services.

The participatory governance approach benefitted the community through repairs to water points before the dry season, emptying of septic tanks before monsoon season, more regular water testing, and community awareness raising and education programs about climate resilience. Involving the community in decision-making has been important. The community's active involvement in identifying needs and solutions ensured services were well suited to the context and incorporated local knowledge and practices related to climate resilience. As a result, WASH services were readily accepted and utilised, and heightened community ownership and responsibility means they are more likely to maintain and protect their services.

A representative of the Bhubaneswar Municipal Corporation addresses the first review meeting for the saniclimi wall in Ward 38
Credit: CFAR archives

Promising practice 7: Utilising both scientific and customary climate data

Utilise a combination of scientific and customary climate data to help inform climate risk integration in WASH governance. That is, input both scientific and customary climate data into climate risk analysis. A mixture of these types of data is important for three main reasons.

First, scientific modelling provides the most robust and reliable predictions of how the climate will change and the level of uncertainty associated with these changes. This is critical for informing long-term climate-resilient inclusive WASH investments. Without this information, investments may not achieve their objective(s) or could even contribute to maladaptation, and it is hard to establish a robust climate change rationale for a given investment (typically needed to obtain climate change adaptation finance).

Second, customary climate hazard and weather data, and customary understanding of the impacts of climate hazards, are localised and accessible. Localised and customary climate hazard and impact data can be rich in detail and scaled to the local setting, enabling more specific and accurate risk assessments. Further, generating and sharing information that is understandable and relatable for local communities helps them to engage in risk assessment and resilience building, especially if it reinforces customary knowledge and practices.

Third, multiple data sources enable triangulation. This improves the reliability and usefulness of risk analysis in informing high-quality evidence-based climate-resilient inclusive WASH investments.

Community facilitators test water quality during community-based water security improvement planning (CWSIP) in Solomon Islands
Credit: Plan International and LLEE

Spotlight 6: Integrating climate risk and resilience into community water governance through local and cultural knowledge

WfW partner: International WaterCentre at Griffith University (IWC)

Location: Solomon Islands

Rural communities of many Pacific Island countries and territories are tasked with managing their own water systems. This task has proved difficult and rarely resulted in sustained universal access to safe and reliable water supplies, especially during or after climate-related disasters. Planning and management processes that build on local knowledge are more likely to be adopted and sustained by rural communities.

Under IWC's Community-Based Water Management WfW project, IWC, Plan International and LLEE worked with Solomon Islands National University and the University of the South Pacific to develop the CWSIP approach. This risk-based approach was designed to help rural Solomon Islands community water committees to plan for current and future risks to water supply, including climate-related risks, through their existing community water governance processes. The approach explicitly builds on local knowledge, such as the impacts of and resilience measures taken in past disasters and hazards, and aligns with local ways of learning and sharing knowledge.

While CWSIP builds on regional and global guidance for integrating climate risks into WSP and community water management, scientific data for predicting localised climate hazards in the Solomon Islands are scarce. Scientific knowledge was used to shortlist the most likely climate hazards in the Solomon Islands, and to support discussions about climate-related impacts to people's health. Incorporating local and cultural knowledge in CWSIP helped to strengthen climate-resilience community water management by:

- identifying customary practices associated with better water supplies in the past that could be revived to inspire and motivate community responses to climate hazards
- building bridges between old and young people around customary knowledge
- reinforcing community ownership of water management by showing that many adaptation to climate-related challenges already exist within their own culture.

Organising the CWSIP activities at the zone level, which is the community governance level associated with culture and social cohesion, meant that the process was socially inclusive and that the action plans developed were highly implementable through customary norms of community collective action.

A representative from the Environmental Health Department interviews a community member in Labulabu, Solomon Islands
Credit: IWC / Mark Love

Promising practice 8: Linking up integration efforts

Integrate climate risks and resilience at multiple, related entry points and governance levels – rather than as discrete efforts. That is, implement a suite of integration activities that address functional areas that are connected and interrelated.

Many of the tools and frameworks described in the frameworks section of this learning brief consider the entry points for integrating climate risk and resilience separately for each function of the governance system. For example, separate programs or interventions may try to clarify roles and responsibilities for climate risk adaptation, integrate climate risks into WASH sector plans, and define climate-sensitive WASH monitoring indicators. By directing an intervention at multiple entry points and seeking alignment of climate risk integration between multiple governance processes, integration efforts can reinforce one another and be more effective at achieving system change.

Similarly, WASH governance functions at national, subnational and community levels are not always well aligned. Climate risk and resilience integration can strengthen sharing of information and coordination between actors at different administrative levels. National climate risk integration that considers the perspectives, experience and challenges of sub-national actors responsible for delivering WASH services is more likely to lead to practical applications and buy-in from sub-national actors. Conversely, involving national actors in efforts to integrate climate risk into WASH governance at district and community levels can improve national decision-makers' understanding of the governance challenges faced in service provision. It can also encourage better alignment of sub-national processes with national policies and strategies.

Spotlight 7: Linking integration entry points in WASH governance in PNG

WfW partner: WaterAid

Location: Wewak District, PNG

The review of the first five-year District WASH Plan for Wewak (2018–23) in East Sepik Province, PNG in 2023 presented an opportunity to integrate climate risk and resilience in district WASH planning and service provision. Under the WfW project, Strongim WASH Kominiti Projeck, seeking to document a scalable model for other districts to learn from, WaterAid supported the Wewak District WASH Coordination Body (DWCB) to include a focus on climate risk integration in the review. At the same time, WaterAid worked with PNG's national WASH Programme Management Unit to revise the indicators in the National WASH MIS. They incorporated climate resilience and water resource management in the MIS, and rolled it out as a data collection and WASH planning tool for districts across the country.

With different actors leading each of these WASH governance processes, coordination and building buy-in from national, provincial and district government was necessary to optimise climate risk integration. This was partly achieved through testing the MIS indicators and consulting the DWCB about what integration was realistic in practice. Knowledgeable members of the DWCB, such as East Sepik Provincial Health Authority staff, shared the Wewak experience at MIS trainings in other provinces. Bringing climate actors such as the Provincial Administration's Office of Environment and Climate Change into WASH mechanisms at multiple levels, such as the district-level DWCB and the National Technical Working Group on WASH and climate, further encouraged information sharing and alignment.

Working to integrate climate risk into national and subnational WASH governance improved the quality of climate risk integration in both the district WASH plan and the National MIS. It is hoped the alignment between the processes will improve the efficiency of translating climate risk monitoring into climate-resilient service provision in Wewak District. It should also help WASH actors in other provinces and districts to see the value in layering climate risk across WASH data collection, planning and service delivery.

Conclusion

Integrating climate risk and resilience into WASH governance systems is a new reform area in most settings. Existing guidance documents assist practitioners to undertake this work, but these resources tend to focus on the functions and entry points for integration. Little guidance shows how to undertake this integration work; how governance should be performed, how integration should occur, and how the values and aspirations of the WASH, GEDSI and climate actors involved can be considered and influenced as part of climate risk and resilience integration.

Examination of WfW's experiences revealed a range of good practice examples of how to integrate climate risk and resilience into WASH governance systems. While these practices were identified from the perspective of discrete projects – and therefore have resource opportunities and constraints that differ from those of government programs – we believe these practices can be applied widely.

This learning brief sets out eight key practices that are considered most promising for supporting effective integration of climate risks and resilience into WASH governance systems. We urge practitioners to adopt some or all of these practices in efforts to transition to climate-resilient inclusive WASH development.

A ward councillor (second from right) conducts a community meeting in East Sepik, PNG, April 2024 Credit: WaterAid / Tariq Hawari

Endnotes

[1] Water for Women, *Learning Agenda*, WfW, Melbourne, 2023. https://www.waterforwomenfund.org/en/learning-and-resources/learning-agenda.aspx

[2] Frameworks were selected for their emphasis on practical application and resonance with WfW project approaches: the *Sanitation and Water for All* approach, accessed 16 October 2023. https://www.sanitationandwaterforall.org/about/our-work/priority-areas/building-blocks

Pacific Islands Forum Secretariat, *Pacific Resilience Standards: A Practitioner's Guide*, Pacific Islands Forum Secretariat, 2021, accessed 16 October 2023. https://reliefweb.int/report/world/pacific-resilience-standards-practitioners-guide-december-2021

Global Water Partnership (GWP) and United Nations Children's Fund (UNICEF), *Strategic Framework for Wash Climate Resilience*, GWP and UNICEF, 2024, accessed 19 October 2023. https://www.gwp.org/en/WashClimateResilience/the-framework/

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S Tyler et al., *Climate Resilience And Food Security: A Framework for Planning and Monitoring,* International Institute for Sustainable Development (ISSD), 2013, accessed 19 January 2024. https://www.iisd.org/publications/report/climate-resilience-and-food-security-framework-planning-and-monitoring

A Jiménez et al., *New Framework on Water Governance for Practitioners*, SIWI, 2020, accessed 7 December 2023. https://siwi.org/latest/new-framework-on-water-governance-for-practitioners/

[3] Conceptual frameworks are analytical tools used to organise ideas and represent the relationships between variables. The frameworks reviewed in this learning activity represented various characteristics of governance systems for WASH, and/or components of climate risk and resilience as they relate to service systems and disaster risk management. Such frameworks present general and high-level guidance for application in analysing situations, validating assumptions, designing interventions and research, and evaluating change or impact, and are usually intended to be contextualised and adapted for a specific use or a specific context. WfW partners noted that conceptual frameworks can help to make climate risk and resilience – abstract concepts to some stakeholders, such as subnational government staff – more tangible and relatable to stakeholders' roles, and provide useful tools for sector discussions of strengths, weaknesses and entry points to consider climate risk and resilience in WASH.

[4] The World Bank, *Water Supply and Sanitation Policies, Institutions and Regulation*, https://www.worldbank.org/en/topic/water/publication/adapting-to-a-changing-world; Howard et al., *The How Tough is Wash Framework for Assessing the Climate Resilience of Water and Sanitation*, https://www.nature.com/articles/s41545-021-00130-5; and WaterAid, *Integrating Climate Resilience with Wash Systems Strengthening*, https://washmatters.wateraid.org/publications/integrating-climate-resilience-with-wash-system-strengthening all described at least three attributes (such as participation, inclusiveness) within assessment questions, rubric descriptions or key messages, but they are not represented systematically as governance dimensions or cross-cutting principles, unlike in some other frameworks assessed.

[5] Government of Nepal, Ministry of Water Supply and Sanitation, *Climate Resilient Water Safety Plans Guideline - Rural Water Supply System*, World Health Organization, Kathmandu, Nepal, 2017. https://www.who.int/publications/m/item/climate-resilient-water-safety-plans-guideline-rural-water-supply-system

[6] Water for Women, *The Case for Climate Finance: Exploring Future Financing Opportunities for Wash CSOs*, WfW and SAGANA, 2025, (pending publication).

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Water for Women supports improved health, gender equality and well-being in Asian and Pacific communities through climate-resilient and socially inclusive WASH projects and research. It is the Australian Government's flagship WASH program, investing AUD159.9 million over seven years. Water for Women partnered with civil society organisations, research organisations and local partners to deliver 40 projects in 16 countries from 2018 to 2024. Knowledge and learning are central to Water for Women, positioning the Fund as an important contributor to global knowledge development and sharing in climate-resilient, inclusive WASH. Water for Women's Learning Agenda promotes collaborative learning, knowledge development and sharing to support long-term transformative change to WASH policy and practice globally.

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