unicef

Global Water Partnership

# WASH Climate Resilient Development

**Technical Brief**

## Integrating climate resilience into national WASH strategies and plans

## About UNICEF

UNICEF works in more than 100 countries around the world to improve water supplies and sanitation facilities in schools and communities, and to promote safe hygiene practices. We sponsor a wide range of activities and work with many partners, including families, communities, governments and like-minded organizations. In emergencies we provide urgent relief to communities and nations threatened by disrupted water supplies and disease. All UNICEF WASH programmes were designed to contribute to the Millennium Development Goal for water and sanitation.

## About GWP

The Global Water Partnership is an intergovernmental organisation of 13 Regional Water Partnerships, 85 Country Water Partnerships and more than 3,000 Partner Organisations in 172 countries. Its vision is a water secure world. Its mission is to advance governance and management of water resources for sustainable and equitable development through integrated water resources management (IWRM). IWRM is a process that promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems and the environment.



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**Prepared in cooperation with HR Wallingford and the Overseas Development Institute (ODI)**

HR Wallingford
*Working with water*

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# Contents



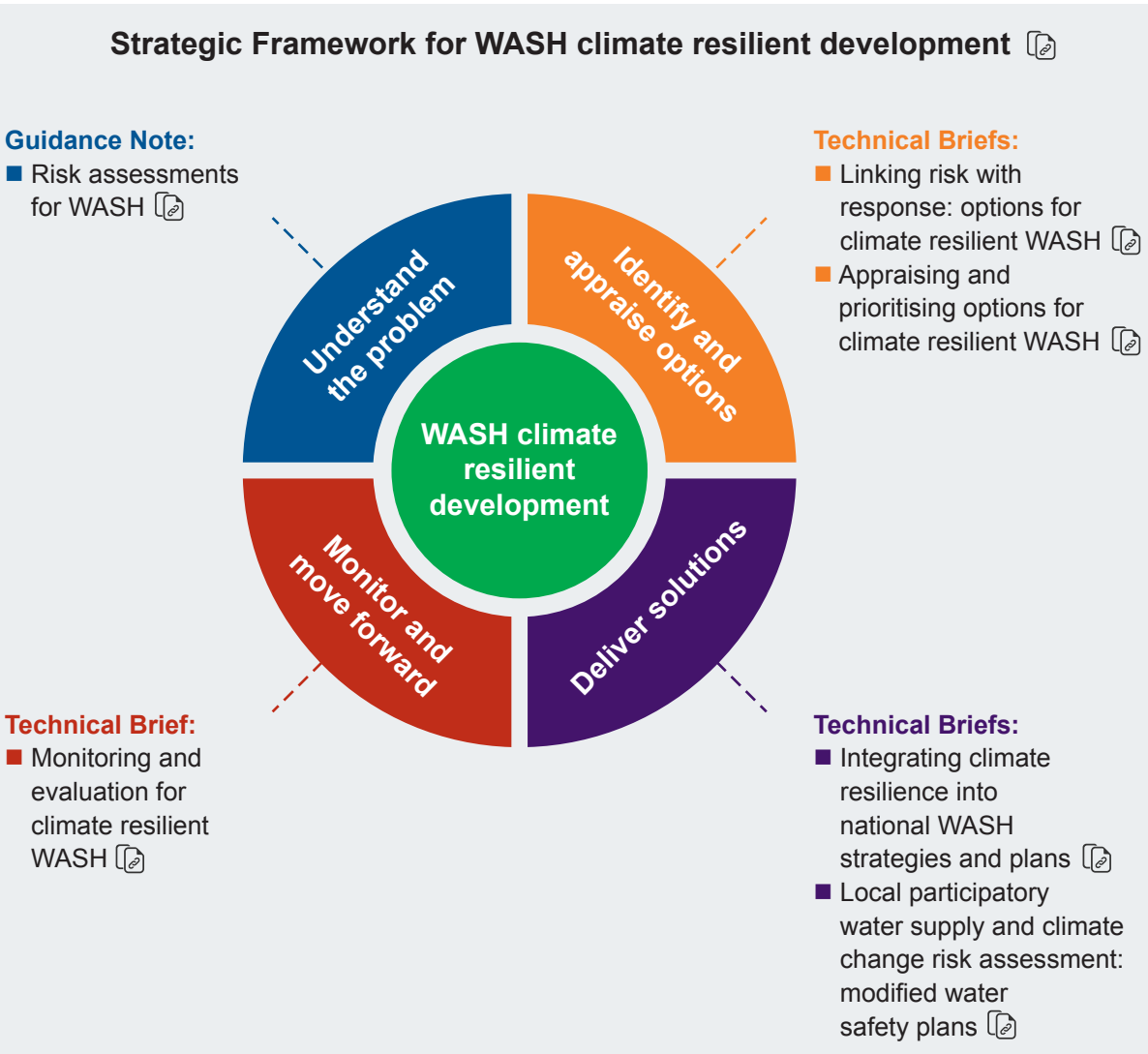
**Figures**

# Supporting climate resilience in the WASH sector

This Technical Brief forms part of the Strategic Framework for WASH Climate Resilient Development, produced under a collaboration between GWP and UNICEF.[1] The Framework advances sector thinking around WASH and climate change, cutting across both development and emergency preparedness programmatic spheres; climate resilience is addressed as a cross-cutting issue encompassing elements of both disaster risk reduction and climate change adaptation.[2] It serves to set out the rationale and concepts for WASH climate resilient development, as well as improve understanding of how to ensure that climate resilience is considered in WASH strategies, plans and approaches.

The objective of the Strategic Framework is to support WASH service delivery that is resilient to the climate, both now and in the future. The Strategic Framework is centred around four quadrants of activity; this Technical Brief sits within the 'Deliver solutions' quadrant, shown in the figure below.

**Strategic Framework for WASH climate resilient development**




[1] GWP and UNICEF (2014)
[2] http://www.gwp.org/en/we-act/themesprogrammes/Climate-Resilience/WASH-Climate-Resilient-Development-a-GWP-UNICEF-Collaboration/

# 1. About this Technical Brief

## 1.1 Background

The water, sanitation and hygiene (WASH) sector is already affected in many different ways by weather and climate events such as variability, seasonality, extreme events and climate-related disasters. This translates into negative impacts on drinking water availability and quality and on the performance of sanitation and hygiene services as well as impacts on investments and infrastructure. Climate change will place additional stresses on delivering and sustaining public health and well-being related outcomes[2], and today's evidence suggests that people living in developing countries will be worst hit by changes, particularly those living in marginalised and vulnerable environments.

Although the precise nature and extent of change are not yet certain, planners and policy-makers responsible for the WASH sector should start acting now to build climate resilience and support adaptation within the WASH sector. Waiting for certainty is not an option.[3]

Resilience can be defined as the ability of people and systems to anticipate, adapt to and recover from the negative effects of shocks and stresses (including natural disasters and climate change) in a manner that reduces vulnerability, protects livelihoods, accelerates and sustains recovery, and supports economic and social development, while preserving cultural integrity.[4] Climate resilient development promotes measures and approaches that will deliver benefits now as well as under potential future climate change[5], and enhancing disaster risk prevention and preparedness is often a first line of defence in adapting to future climate change.

Responses led by government WASH ministries and departments need to be robust to climate risks alongside other pressures on resources, systems and services (so-called stressors) such as demographic change, economic transitions, increasing competition over limited resources, and conflicts. Integrating climate resilience into WASH strategies and plans is therefore an important entry point in working towards and delivering more sustainable WASH services. To manage these risks, specific actions may be based on impacts that have already been observed.

Making WASH services more resilient and adaptable to climate change brings potential to improve overall WASH service provision and to enhance poverty reduction and sustainable development.[6]

## 1.2 Aim and scope

This Technical Brief is part of efforts to ensure early action and an effective response by national WASH ministries and departments to prepare and implement coherent and balanced national WASH strategies and plans that incorporate climate resilience. The specific focus of the Technical Brief is on 'how to integrate climate resilience into national WASH strategies and plans', with an emphasis on strategies and plans for small-scale rural WASH systems and community services.

The Technical Brief is targeted at government planners and decision-makers responsible for developing and implementing national WASH strategies and plans, as well as development cooperation agencies that can play the role of 'champions' in the process of integration. Integration into strategies and plans is a good start point for governments to take a lead on enhancing climate resilience and to embrace the principles and practices set out in the overall Strategic Framework.

Integration will be an evolving process and the Technical Brief promotes the notion of applying a 'climate lens' to strategies and plans. The purpose of the 'climate lens' approach is to stimulate a questioning mode of thinking, to identify risks and opportunities that will improve climate resilience and to focus on priorities that generate quick wins.

[2] Calow et al., 2011
[3] WHO/DFID, 2009
[4] Interpretations and definitions will vary across organisations, for example "The ability of children, households, communities and systems to anticipate, manage, and overcome shocks and cumulative stresses" (UNICEF) and "The ability of a social or ecological system to resist, absorb, accommodate and recover from the effects of a (climate) hazard in a timely and efficient manner while retaining the same basic structure and ways of functioning" (GWP)
[5] AMCOW, 2012
[6] UN-Water, 2014

This Technical Brief provides:

- An introduction to the objectives, structure and content of the Technical Brief
- An overview of applying a 'climate lens' to national WASH sector strategies and plans, the key elements to consider, and the anticipated benefits of applying the approach
- A description of a stepwise approach to applying a 'climate lens' and resources to support its implementation
- Guidance on the application of the stepwise approach in the form of guiding questions, potential responses and suggested actions
- The incorporation of knowledge, information and good practice strategies and plans.

# 2. Applying a 'climate lens' to national WASH sector strategies and plans

## 2.1 National WASH sector strategies and plans

At the highest level, national WASH strategies and plans aim to ground strategic WASH objectives in wider national development strategies and goals encompassing poverty reduction, public health, disaster risk reduction (DRR) and others. They highlight the critical importance that WASH contributions make to health, education, gender equity, productivity, long-term poverty reduction, and development and growth.

Most countries manage their WASH sector development process through cyclical multi-annual national and sector strategic plans, developed through participatory processes with lead WASH sector ministries and departments, central planners and others. The setting of objectives and priorities will be informed by both top-down and bottom-up processes and benefit from lessons learned during previous implementation cycles.

Within national WASH strategies and plans, the management of water resources and increasing access to drinking water supply and quality will be important considerations alongside other public health aspects such as sanitation, hygiene and behaviour change. Specific mention is often given to community WASH services in schools and health facilities. Strategies and plans will consider the demographics of the country and should advocate targeted interventions to areas of greatest need.

Attention is also usually given to the critical issue of strengthening the institutional structure in the WASH sector, which will help to improve coordination, coherence and monitoring. Investment costs and financing mechanisms are generally provided at a high level. Strategy implementation plans will include timelines and responsibilities of the WASH ministries and departments for individual intervention areas.

## 2.2 Elements of a 'climate lens' approach

A 'climate lens' approach[7] is essentially an analytical method that stimulates a questioning mode of analysis, as illustrated in Figure 2.1. Ideally, a 'climate lens' should be applied during the formulation of national WASH sector strategies and plans. However, there are also many benefits in applying this retrospectively to identify areas where existing strategies and plans, and the implementation priorities and approaches recommended within these, could be strengthened with respect to climate resilience during review and reformulation processes.

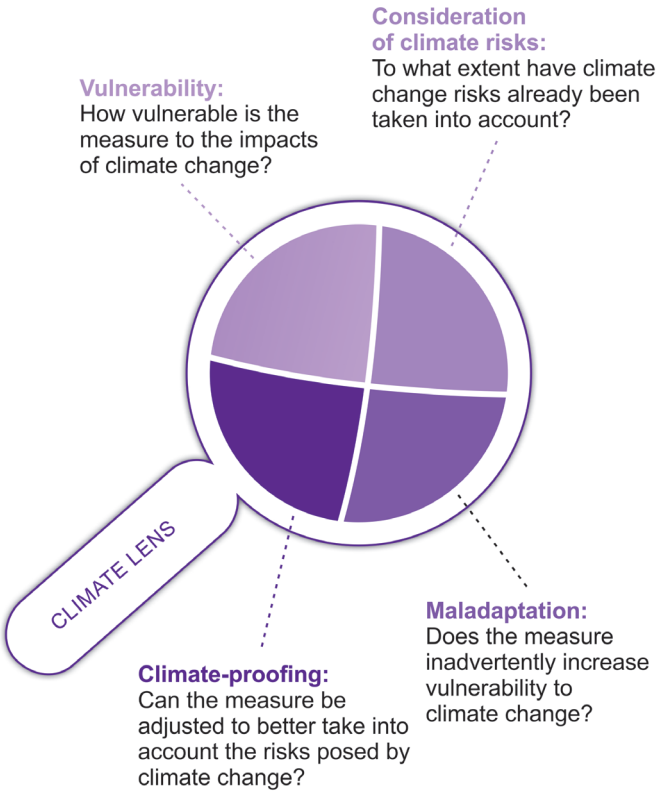



Figure 2.1: Elements of a 'climate lens' approach
*Source: Adapted from OECD (2009)*

With respect to national WASH strategies and plans it can serve to examine the following:

- To what extent have climate risks already been taken into account? Examine the extent to which national WASH strategies and plans draw on already identified climate change and climate-related DRR priorities and analyses, and how these have been taken into consideration in the course of the formulation of national WASH strategies or plans.
- How vulnerable are strategies and plans to the impacts of climate change? Examine the extent to which climate change risks and impacts are understood, and the extent to which identified approaches are resilient to climate change.

[7] OECD, 2009

- Does the strategy or plan inadvertently increase vulnerability to climate change? Examine the extent to which there is a good understanding of how to manage climate risks, and whether good practice and innovation can help to reduce vulnerability and enhance climate resilience.
- Can strategies and plans be adjusted to better take into account the risks posed by climate change? Examine the extent to which knowledge, information and good practice for climate resilience are integrated into national WASH strategies and plans.

## 2.3 Benefits of a 'climate lens' approach

The application of a 'climate lens' to national WASH strategies and plans will help to improve their overall formulation, with positive impacts subsequently materialising during the implementation of on-the-ground activities and investments. Anticipated benefits would be to:

- Ensure national WASH strategies and plans are aligned with existing national climate change adaptation and climate-related DRR priorities and actions
- Ensure vulnerabilities and risks arising from climate variability and change are considered in national WASH strategies and plans, and subsequent implementation
- Strengthen and supplement country analyses by incorporating climate change considerations and ensuring measures are responsive to the impacts of climate variability and change
- Assist with the prioritisation of measures by identifying children and their communities living in high-risk locations, and targeting investments to areas where the needs are most pressing
- Provide a foundation to ensure that subsequent programming and implementation incorporates considerations of climate risks
- Identify elements of good practice for managing current climate variability and risks that may also contribute to managing future risks
- Identify opportunities for innovative approaches to manage climate risks and to strengthen climate resilience
- Identify cross-sectoral influences on WASH services and provide the impetus for engagement, collaboration and shared learning with stakeholders from outside the WASH sector
- Provide evidence on what amendments might be warranted in order to address climate risks and to strengthen climate resilience.

## 2.4 Other considerations

The integration of climate resilience into national WASH strategies and plans is not an end point in itself. The challenge is to also integrate climate resilience into subsequent programmes and implementation actions, including those of the government's WASH partners and support agencies. Implementation approaches across water supply, sanitation and hygiene services should be selected or adapted to reinforce climate resilience. Benefitting from existing good practice and the identification of innovative measures and approaches that help manage current climate risks is likely to be a good start point. This is particularly true where these innovative measures and approaches also provide a foundation for managing future climate risks. Strengthening awareness and sharing knowledge will help to ensure that considerations of climate risks are incorporated in subsequent programming, project planning and implementation cycles.[8]

Although the concept of climate resilience in the WASH sector is relatively new, it is growing in importance. Cross-fertilisation and the sharing of ideas and approaches is to be encouraged, and can help to speed up the identification of reliable and affordable responses and solutions. Making use of evidence and good practice that has been compiled at an international level can help to supplement national-level knowledge. Out-of-the-box thinking is also necessary, particularly where climate-related hazards affecting WASH services are addressed more efficiently and effectively by taking preventive measures outside the realm of the WASH sector itself (e.g. better land use management). An integrated approach to identifying climate resilient solutions will ultimately be one that considers all sectors and stakeholders that impact on the effective functioning of WASH services.

Strengthened capacity to supplement existing WASH planning, decision-making and implementation processes will be necessary. Capacity development should be firmly grounded in existing institutional roles and responsibilities and be targeted towards strengthening existing skills and practices in risk-based approaches, rather than as a separate stream of activity.[9]

The process of integrating climate resilience into WASH sector strategies and plans should result in greater awareness among WASH sector planners and decision-makers of the implications of climate change risks on the sector and the appropriate responses to manage these.

[8] UNDP and UNEP, 2011
[9] A separate Technical Brief on *Capacity development for climate resilient WASH* is being prepared by GWP-UNICEF

# 3. A stepwise approach to applying a 'climate lens'

## 3.1 The stepwise approach

A stepwise approach to applying a 'climate lens' to national WASH sector strategies and plans is recommended. Quick wins can be achieved by considering the following initial questions:

- Does your country already have a national WASH sector strategy and plan, and is it aligned with overarching national climate change and climate-related DRR priorities and actions?
- Is there a good understanding of climate change impacts on the WASH sector, and has this knowledge and information been used to inform strategies and plans?
- Is there a good understanding of how to manage climate risks, and has good practice and innovation been built into strategies and plans?

A flow chart centred on these questions, and their responses, is presented in Figure 3.1.

The pathway through the flow chart will vary from country to country as some countries may be further advanced in terms of integration than others. Suggested actions for different steps in the process are further elaborated in Section 3.2.

A Guidance Note and a Technical Brief are also available to support implementation of suggested actions in the flow chart, namely:

- Guidance Note on *Risk assessments for WASH*
- Technical Brief on *Linking risk with response: options for climate resilient WASH*

## 3.2 Questions, responses and actions

### *3.2.1 Does your country already have a national WASH strategy and plan?*

National WASH sector strategies and plans aim to anchor WASH objectives within wider development strategies and goals (e.g. Poverty Reduction Strategies, the Sustainable Development Goals or similar). They highlight the critical importance WASH contributions make to national development objectives with respect to health, education, gender equity, productivity, long-term poverty reduction and growth. In the context of national development, WASH strategies and plans should also be aligned with existing national climate change adaptation and climate-related DRR priorities and actions.

Climate change adaptation is increasingly referenced in overarching national economic, social and environmental development policies, and in many cases national priorities and actions have already been identified. In addition, in Least Developed Countries (LDCs), National Adaptation Programmes of Action (NAPAs)[10] have already identified activities that respond to urgent and immediate needs with regard to adaptation to climate change. The recently instigated National Adaptation Plans (NAPs)[11] process is also now extending the NAPA process by looking at medium- and long-term adaptation needs.

The WASH sector is identified as a priority sector in many of these overarching national documents. However, many of the responses and actions have yet to be integrated into national WASH sector strategies and plans.

Possible sources of information include:

- National climate change policies (or their equivalent) identifying sustainable development strategies, environmental action plans and disaster risk prevention and preparedness plans, among others
- UNFCCC National Communications[12] identifying who and what is vulnerable to climate change and how vulnerability varies across geographic sub-regions and different sectors
- National Adaptation Programmes of Action (NAPA) detailing the country's priority activities that address their most urgent and immediate needs to adapt to climate change
- National Adaptation Plans (NAPs) process helping countries plan what needs to be done to ensure that the implementation of adaptation strategies will be effective.

[10] See http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/4583.php
[11] See http://unfccc.int/adaptation/workstreams/national_adaptation_plans/items/6057.php
[12] See http://unfccc.int/national_reports/non-annex_i_natcom/submitted_natcom/items/653.php

***3.2.2 Is there a good understanding of climate risks in your country?***

National WASH strategies and plans should be informed by analyses of the impacts of climate variability and change. Climate change intensifies risks to WASH systems and risk-based planning is essential.

WASH strategies and plans that are informed by climate risk assessments will help to deliver WASH approaches and solutions that are more likely to withstand climate-related shocks and stresses. Climate-informed decisions help to identify and prioritise high-risk locations and to target investments in areas where the risks are highest.

Strengthening and supplementing situational analyses by incorporating climate change considerations will help to ensure that strategies and plans become more responsive to the impacts of climate variability and change. Upfront climate risk assessments will also facilitate appropriate contextual customisation of adaptation approaches and solutions to climate resilience.

Cross-sectoral influences will need to be taken into consideration when improving the climate resilience of WASH services. Engagement and collaboration with stakeholders from outside the WASH sector, as well as between the various levels of governance within the WASH sector itself, will be an important factor.

A key element for the integration of climate resilience into WASH strategies and plans is the prioritisation of no/low regrets measures and approaches. These measures have a high chance of success against the full range of uncertainty in climate change projections and other future drivers. In addition, they often allow DRR and climate change adaptation agendas to be brought together more explicitly to tackle underlying climate-related issues.

***3.2.3 Is there a good understanding of how to manage climate risks?***

Many elements of good practice for managing current climate variability will also provide opportunities to enhance resilience to future climate variability and change. For example, careful siting and design of water and sanitation infrastructure can help to ensure that it retains its ability to operate under climate-related hazards such as floods and droughts. In areas where there will be increased stress on water availability (surface water and groundwater), augmenting supplies through increased storage or rainwater harvesting may be a solution to managing periods of low flow. Protection of water sources and improved management of source catchments are also likely to bring benefits both now and in the future to water availability and water quality.

However, building climate resilience is not just about infrastructure and management practices. Raising awareness and stimulating behavioural change can also bring benefits by encouraging the use of water-saving technologies and promoting water use efficiency and conservation. Climate hazards such as floods affect not only water supply infrastructure, but also sanitation facilities. Flood affected latrines can lead to negative changes to sanitation hygiene behaviour with negative impacts on public health.

By adopting approaches that make WASH services more resilient and adaptable to climate change there is the potential to improve the overall performance of the sector. Integrating these at a national WASH strategy and planning level is beneficial and helps to ensure that existing good practice and innovation provide a foundation for subsequent refinement during more detailed programming and project implementation levels.

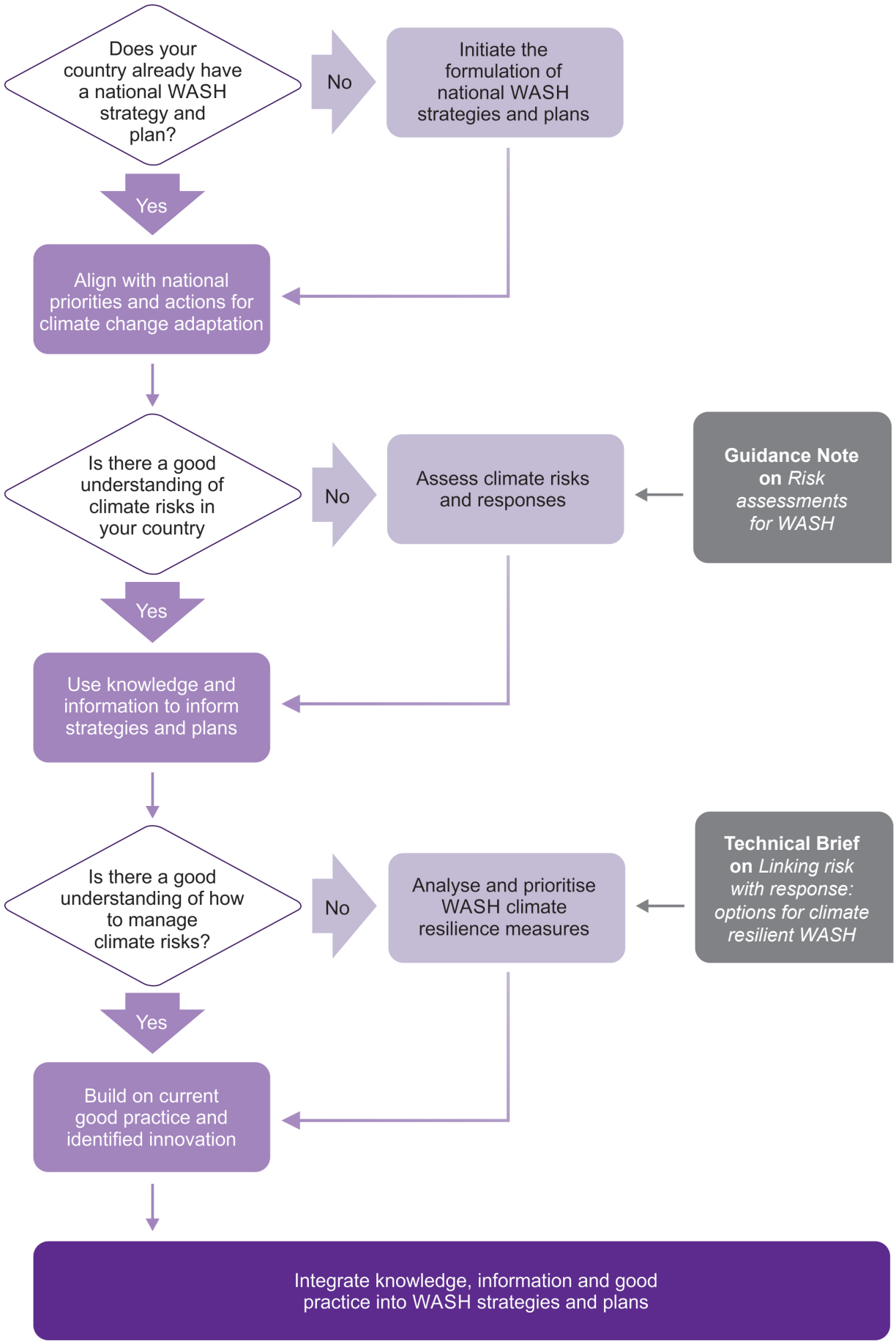



Figure 3.1: A stepwise approach to integrating climate resilience

## *Does your country already have a national WASH strategy and plan?*

### YES – Align with national priorities and actions for climate change adaptation

The alignment of national WASH strategies and plans with national adaptation priorities is an important first step and ensures coherence between WASH sector development and national agendas for action on climate change.

Specific actions would be to:

- Review existing national climate change policies, strategies, plans and associated documentation to identify national adaptation and climate-related DRR priorities, noting in particular those that relate to, or have an influence on, the WASH sector
- Establish to what extent existing WASH strategies and plans encompass and align with national climate change adaptation priorities, and in particular note any gaps or omissions
- Communicate and disseminate national climate change priorities relevant to the WASH sector among WASH ministries, departments and partner agencies at all levels of governance
- Work with WASH ministries and departments to align WASH strategies and plans with national climate change priorities
- Ensure realigned priorities are captured in outline plans for strategy implementation, including those for financing, budgeting, monitoring and evaluation.

### NO – Initiate the formulation of national WASH strategies and plans

Where national WASH strategies and plans do not exist, a process to develop these is recommended. This will bring opportunities to integrate climate resilience from the outset. Processes will vary from country to country, but many of the other considerations and actions identified in this Technical Brief will also remain valid. The reformulation or revision of national WASH strategies and plans also provides an excellent opportunity to strengthen the integration of climate resilience.

Specific actions would be to:

- Engage in WASH sector strategy and planning processes and ensure climate resilience becomes an integral component from the outset
- Make the case for climate resilience as an integral component of national WASH strategies and plans, drawing on evidence of existing climate impacts on WASH outcomes, and highlighting how climate change can further exacerbate these
- Engage in cross-sectoral dialogues, not simply within the WASH sector itself, to ensure factors outside of the WASH sector's realm of influence are taken into account within climate resilience strategies and plans.

## *Is there a good understanding of climate risks in your country?*

### YES – Use knowledge and information to inform strategies and plans

Climate-informed decisions help to identify and prioritise high-risk locations and target investments to areas where the risks are highest. Findings from climate risk assessments will also help to deliver WASH approaches and solutions that are more likely to withstand climate-related shocks and stresses.

Specific actions would be to:

- Strengthen and supplement WASH situational analyses by incorporating climate resilience considerations
- Ensure the formulation of strategies and plans has been responsive to the impacts of climate variability and change, and do not inadvertently increase vulnerability
- Review priorities and ensure these consider communities and locations most vulnerable to climate risks
- Prioritise no/low regrets measures and approaches as these will help to manage current climate variability as well as future change
- Ensure cross-sectoral influences and actions are identified and taken into consideration as a mechanism to improve climate resilience.

### NO – Assess climate risks and responses

Risk assessment is already a central component of many WASH situational analyses, but in many cases this has not yet been extended to encapsulate climate risks. Strengthening and supplementing situational analyses by incorporating climate change considerations will ensure strategies and plans become more responsive to the impacts of climate variability and change.

Specific actions would be to:

- Gather evidence on the impacts of climate variability and change at the country level, including an analysis of climate hazards, vulnerabilities, exposure and adaptive capacity
- Draw on past experiences and benefit from previous studies and information on the impacts of climate variability and change
- Identify the most serious and plausible climate-related threats, and how these impact specifically on the WASH sector
- Reach agreement among WASH ministries, departments and their implementation partners on the most important climate risks, and how best to respond to these risks
- Increase understanding among national WASH ministries and departments, and their implementation partners, of the ways climate change influences WASH service delivery outcomes and response measures.

### Further information and support

A **Guidance Note on *Risk assessments for WASH*** (part of the GWP-UNICEF Strategic Framework for WASH Climate Resilient Development) is available.

The Note provides:

- An overview of risk-based planning and programming
- An introduction to key concepts (drawing from Intergovernmental Panel on Climate Change [IPCC] terminology) on hazard, vulnerability, exposure and capacity
- Advice on grounding climate risk analyses within existing broader risk assessment processes
- Guidance on risk analyses appropriate to water supply, sanitation and hygiene services
- Additional sources of information on climate risk analyses, and examples of their application in selected countries
- A spreadsheet tool is available to accompany the Note and help complete the risk assessment for WASH.

## *Is there a good understanding of how to manage climate risks?*

### YES – Build on current good practice and identified innovation

Many elements of good practice to manage current climate variability will also provide opportunities to enhance resilience to future climate variability and change. Building on existing good practice and proven methods is a good place to start.

Specific actions would be to:

- Collate evidence on existing good practice and integrate recommended approaches into strategies and plans
- Maximise the use of approaches to influence and change behaviour to ensure this also supports the climate resilience agenda
- Ensure innovation benefits from lessons learned internationally and from institutions specialising in the piloting and testing of innovative techniques and approaches
- Where appropriate, incorporate the piloting of approaches to test their effectiveness in managing climate variability and change
- Raise awareness among key WASH stakeholders on current good practice and innovative approaches for enhancing climate resilience.

### NO – Analyse and prioritise WASH climate resilience measures

Prioritisation should aim to ensure WASH resilience measures target areas of highest risk and meet the needs of those most susceptible to these risks, often the poorest and most vulnerable groups, including women and children.

Specific actions would be to:

- Evaluate the performance of WASH facilities and services under existing climate hazards such as floods, droughts and storms
- Gather evidence from local stakeholders on what worked well and what did not during extreme events, and from community experiences of coping with historic climate variability
- Identify aspects or components of WASH facilities and services that contributed to robust performance and those that led to failure or under-performance under different climatic hazards
- Draw on identified international best practice and innovation, and contextualise and customise recommended approaches and solutions for your own country context
- Agree recommended approaches (e.g. for different hazard types) and incorporate recommendations into strategies and plans.

### Further information and support

A **Technical Brief on *Linking risk with response: options for climate resilient WASH*** (part of the GWP-UNICEF Strategic Framework for WASH Climate Resilient Development) is available.

The Brief provides:

- Guidance on how to benefit from, and build on, existing good practice
- Insights into the importance of no/low regrets options
- Advice on measures to address water supply, sanitation and hygiene issues, not only looking at infrastructure, but also giving consideration to emergency preparedness, behavioural change and participatory practices
- Advice on measures and approaches to address different hazard types
- Guidance on identifying interventions appropriate to local contexts and risk factors, and that strengthen community adaptive capacity.

# 4. Integrating knowledge, information and good practice into strategies and plans

The final step is to integrate the knowledge, information and good practice identified in the earlier steps into the national WASH strategies and plans. Integration should be consolidated across a number of different facets of strategies and plans and be able to demonstrate that:

- Strategies and plans incorporate and are responsive to analyses of the impacts of climate change and/or climate-related disasters
- Room has been made within budget estimates for options to build climate resilience, including from horizontal funds for cross-sectoral activities where these have been identified
- Indicators to monitor the implementation and effectiveness of climate resilience measures are defined and included as part of ongoing monitoring and reporting systems.

This integration will provide a high-level foundation for climate resilience and is a start point for further action, rather than an end point in itself. Encapsulating climate resilience at the national level will help to ensure that concepts, practices, funding and priorities for climate resilience continue to be reflected in all subsequent WASH programming and implementation processes. It provides an overarching framework for the elaboration of a hierarchy of subsequent programming and implementation action plans at a range of governance levels and scales.

A clear next step is to ensure the knowledge, information and good practice identified at the national strategy and planning level also provide a basis for more climate resilient WASH sector programming. In most cases, programming will be disaggregated across constituent parts of WASH, for example water supply and safety, sanitation and hygiene, WASH in schools and community facilities, emergency preparedness and response, and wider water security and environmental measures. Further detailed analyses and refinement of climate resilient measures and approaches that respond to these sub-sector contexts and concerns can therefore be considered at this stage.

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