

Capacity for climate risk identification, vulnerability, and resilience assessments

Participating Partners

UTS: ISF, SNV, International Water Centre, Plan International, WaterAid, SINU, unicef and WHO



WATER
&
WASH 2023
FUTURES

Achieving SDG6 in a Changing Climate



#WaWF23

Acknowledgement of country

**In the spirit of reconciliation, we acknowledge the Turrbal people as the traditional custodians of the land on which we are meeting today,
Meeanjin –*the place of the blue water lilies.***

We acknowledge their connections to land, sea and community.

We pay respects to their elders and leaders past, present and emerging, and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Find out more > <https://www.turrbal.com.au/our-story>

Introduction

Objective: To build the capacity and confidence of Water and WASH practitioners in undertaking climate risk, vulnerabilities and resilience assessments.

Outcomes

- Participants are able to identify existing tools and approaches utilized in undertaking climate risk identification, vulnerability, and resilience assessments that can be incorporated into their future activities and which are appropriate to their contexts and objectives
- Increased consideration of gender, social inclusion and disability within assessments.
- Participants are facilitated to share practical experiences in undertaking assessments and learn from others.



SNV Lao PDR – Flood levels, 2023

Workshop Sessions

Session 1: Introduction to Climate risk identification, vulnerability, and resilience assessments – ISF-UTS and unicef

Session 2: Practical tools - Climate Resilient – Water and Sanitation Safety Planning – WHO, IWC/Griffith University, SINU and Plan

Session 3: Practical tools cont. – WaterAid, ISF-UTS and Plan Indonesia

Session 4: Applying tools in practice, experience sharing and panel discussion – SNV and Plan International

Partners



Session 1

Overview of climate risk, vulnerability and resilience assessments

UTS-ISF

Dr Jeremy Kohlitz



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Session agenda

1. Objectives of climate risk, vulnerability and resilience assessments
2. Group discussions on experiences or plans to do assessments
3. Risk, vulnerability and resilience of what? How can we know?
4. Group activity
5. UNICEF/GWP assessment tool

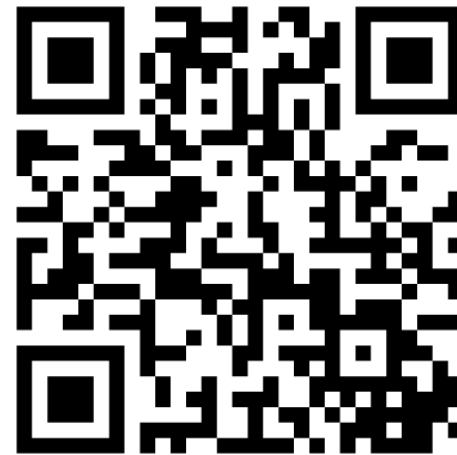
What's your level of familiarity?

What is your level of familiarity with climate risk, vulnerability or resilience assessments for WASH?

Enter your response into Menti:

Menti.com (code: 8316 9121)

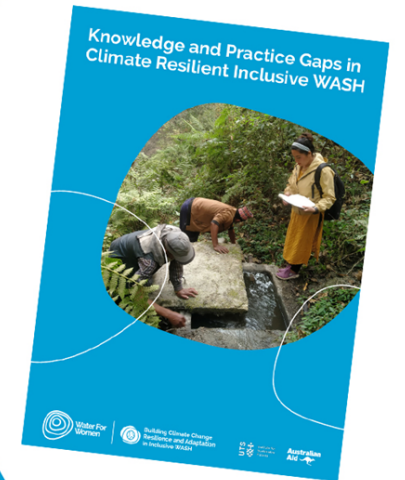
Or use QR code



Water for Women climate change learning agenda

- DFAT Water for Women Fund supporting climate resilient WASH projects
- Learning agenda aimed to fill key knowledge gaps
- Capacity development in risk, vulnerability and resilience assessments identified as a top organisational need

Access now



Rapid assessment of existing resources & tools

- Identified and assessed tools and resources
- Many resources to build understanding by practitioners about climate impacts on WASH services and projects (including training modules)
- 29 “tools” that explicitly seek to address WASH and climate impacts
 - Most assess risks (hazard identification and risk assessment), some also consider vulnerability (e.g., identifying who will be affected)
 - Range in type: **Manuals**, guidance & technical briefs (how to do an assessment); **Facilitators’ guides** (how to communicate and guide others to do assessments); Compendium of useful tools
 - List of tools is available if interested

Name of tools/guide	Summary	Organisation/ Author	Year	Geography / Scale	Settings	Tool Type	Intended User(s)	Purpose	Key topics/approaches	Link(s)
Climate Change Response for Inclusive WASH: A guidance note for Plan International Indonesia	This Guidance Note provides activities and recommendations for integrating considerations of climate change into its existing inclusive WASH programming, which focuses on STBM (Community-led Total Sanitation).	ISF-UTS, Plan International, Water Aid Kohlitz et al.	2020	Indonesia	Rural	Guidance Notes	WASH facilitators; PLAN International	It is intended to provide inspiration to the wider global WASH sector and demonstrate the relevance of gender and social inclusion in responding to climate change impacts on WASH	> Climate -sensitive community mapping > Climate impacts on sanitation accessibility >Considering climate impacts in the gender and WASH monitoring tool >Five resources and future visioning	https://waterforwomen.uts.edu.au/outputs/climate-outputs/ccriw-guidancenote-indonesia/
Climate Change Response for Inclusive WASH: A guidance note for Water Aid	This Guidance Note provides activities and recommendations for integrating considerations of climate change into its existing inclusive rural water service programming	ISF-UTS, Plan International, Water Aid Kohlitz et al.	2020	Timor Leste	Rural	Guidance Notes	WASH facilitators; Water Aid	It is intended to provide inspiration to the wider global WASH sector and demonstrate the relevance of gender and social inclusion in responding to climate change impacts on WASH	> Impact diagram (climate risk and impacts) > Who Does, Who Decides during climate change (gender exercise) > Feedback session for community > Five resources	https://multisitestaticcontent.uts.edu.au/wp-content/uploads/sites/57/2021/01/25083448/Guidance-Note-CCRIW-TL-1.pdf
WASH Climate Resilient Development: Risk Assessment for WASH	There are two parts to the assessment. The first part is a high-level assessment for risks across all types of hazards. The second part is a detailed assessment for climate-specific risks only.	GWP; UNICEF	2017	Global	national and sub-national	Guidance Notes	UNICEF, Government planners, decision-makers and practitioners responsible The Guidance	Users of this Guidance Note will assess hazard, exposure, vulnerability and capacity and bring these together to provide an overall scoring of risks.	Hazards Exposure Vulnerability Risk Prioritisation	https://www.sanitationandwaterforall.org/tools-portal/tool/risk-assessments-wash
Climate Resilient water Safety plans Guidelines	This guideline has been developed to implement climate resilient water safety plan (CR-WSP) and it is intended for a very simple rural water supply scheme	Ministry of Water Supply and Sanitation, Govt of Nepal,	2017	Nepal	Rural	Guideline	water operators, all agencies in water and sanitation sectors	A simple rural water supply system can use this as Basic Guideline in the first phase and then may to shift to Advanced WSPs, when the water operator gains confidence on application of WSPs and the water system is upgraded as well. This	Climate Resilient WSPS steps -WSP team formation -Water supply system analysis -Identification of hazard and hazardous events and control measures/improvement -Monitoring, verification and record	https://climate.mohp.gov.np/30-manuals/106-climate-resilient-water-safety-plan-guideline-2017

What are climate risk, vulnerability and resilience assessments?

- A systematic process for collecting evidence of climate-related threats (or opportunities) to WASH services and users or their capacity to respond to threats (or take advantage of opportunities)
- Often used to inform the design of adaptation actions, allocation of resources, or monitoring
- Usually led by experts, but can involve and draw on knowledge of all WASH stakeholders
- Can be carried out at different scales (household, community, social-ecological system, national, etc.)

How to go about carrying out an assessment?

What/who are you aiming to assess and for what purpose?

I want to assess a rural water supply to design technological risk reduction measures



Identify climate hazards and assess risks of potential impacts [CR-WSP]

I want to assess how women and girls will be affected to provide targeted support



Assess experiences of women and girls and their agency in coping with climate impacts [CCRIW]

I want to assess how well equipped my utility is to handle the uncertainty of climate change to improve processes



Assess levels of flexibility, adaptiveness, and rapid learning within the utility [Adaptive management tools]

Different ways of viewing the climate change problem

- Increasing hazards and risks
 - E.g. Flooding may become more frequent and intense which increases risk of pathogen transmission
- Deepening inequalities
 - E.g. People with disabilities may have less agency to cope with climate impacts that consequently deepen their disadvantage
- Heightened uncertainty
 - E.g. How to plan future WASH services when we don't know exactly how the natural environment and society will react?

**Different ways of framing the problem (and your assessments)
will lead to different programmatic and service responses**



Risk/hazard

- Exposed source
- Deteriorating infrastructure
- Flowrate can't keep with demand

VULNERABILITY

- Unequal levels of service
- Women are underrepresented
- Intra-community politics

SES RESILIENCE

- Single water resource & system
- Management not adaptive
- Land use activities threaten water resources

Case study – rural water in Vanuatu



Risk/hazard

- Exposed source
- Deteriorating infrastructure
- Flowrate can't keep with demand

Case study – rural water in Vanuatu

Questions to consider for choosing methods

- What/who are you assessing?
 - E.g. a specific WASH service, district gov't, a latrine, a group of people
- What decision-making process do you want to support?
 - E.g. inform adaptation, allocation of resources, monitoring
- What scale is the assessment at?
 - E.g. community-level, sub-national or national gov't, utility
- Who do you want to involve in carrying out the assessment?
 - E.g. community members, non-WASH experts
- What is the timescale?
 - E.g. Present time, near-future, 20+ years from now

Activity

At your table:

1. Think about an actual or hypothetical assessment you'd like to do
2. Consider the 5 questions on the previous slide
3. What methods/approach do you think would work best for your assessment?

Information sources for assessments

Two common sources of information for assessments

1. Data on historical trends and climate projections, and interpretations of their implications for WASH by experts



2. People's lived experiences of climate impacts on WASH



Data interpretation by experts

Description:

(Quantitative) data on historical climate trends related to WASH, and future climate projections, are collected. Their implications for WASH are interpreted by experts.

Experiences of people locally

Description:

Place-based assessment of the people's past and current experience with climate hazards, and facilitation to consider what would happen if future climate hazards worsen.

Data interpretation by experts

Examples of information sources:

- Historical weather or hydrological data collected by meteorological, environmental agencies;
- Climate change projections compiled by IPCC, World Bank, national climate change agencies, etc.

Experiences of people locally

Examples of information sources:

- Key informants living in the area which may include:
 - Community members
 - WASH service providers
 - Local government authorities
 - Rights holder organisations

Data interpretation by experts

Pros:

- Assessments can be more easily made at larger scales
- Expert assessment can identify potential issues not detected by local stakeholders
- Quantitative data lends a sense of objectivity
- Data supports evidence-based decision making
- Climate projections give the clearest insights to future climate

Experiences of people locally

Pros:

- Can assess nuanced social dimensions of climate impacts
- Allow for detailed understanding of context-specific issues
- Enables local stakeholders to share and interpret knowledge with one another
- Helps local stakeholders to see connections between impacts and solutions

Data interpretation by experts

Cons:

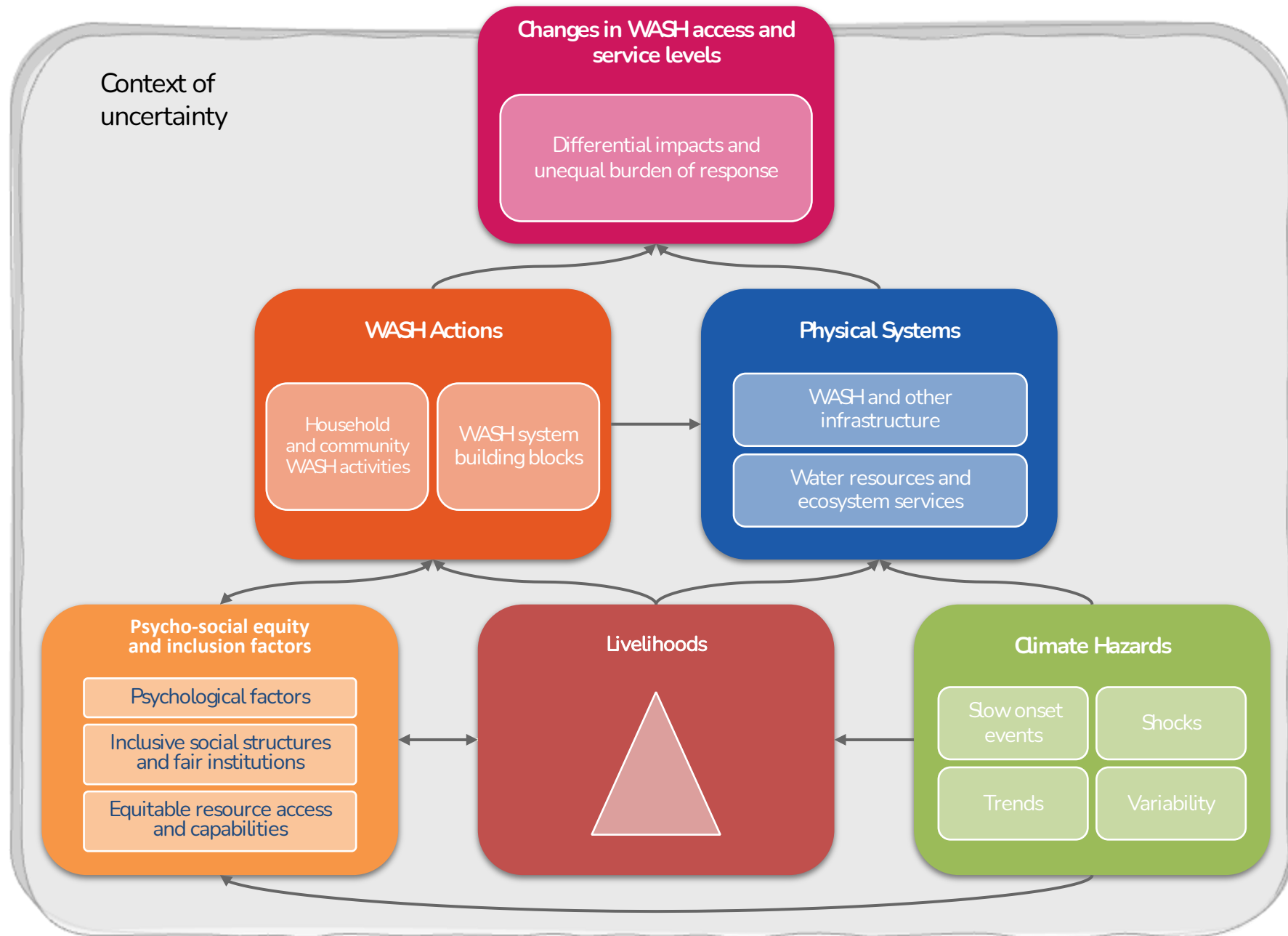
- Climate projections may have limited accuracy at local scales (i.e. within 100km X 100km areas)
- There is significant uncertainty with how precipitation will change in some regions of the world
- Large-scale assessments may miss contextual information
- Climate science and jargon can be disempowering for those without specialist knowledge

Experiences of people locally

Cons:

- Some risks are beyond or transcend local scales
- The experiences of local stakeholders may be inadequate for assessing future climate change
- Local stakeholders may lack specialist knowledge or skills for detecting some climate risks to WASH

Risk to what? Vulnerability or resilience of what?



Assessing psycho-social equity and inclusion factors

Equitable resource access and capabilities

- Experts have proposed hundreds of resources and capabilities that enable people to adapt to climate change
- There is no definitive list of resources or capabilities that one needs
- Assessments should consider the extent to which resources and capabilities are distributed equitably



Assessing psycho-social equity and inclusion factors

Inclusive social structures and fair institutions

- To what extent is WASH decision-making inclusive during and after extreme weather?
- To what extent do political, administrative and legal systems uphold humans rights principles of equality, transparency, accountability, and empowerment?



Assessing psycho-social equity and inclusion factors

- **Psychological factors**
- Even if people have high adaptive capacity, they may not translate it into action
- Influential psychological factors include:
 - Risk attitudes
 - Personal experiences
 - Trust and expectation in authorities
 - Spiritual beliefs
 - Place attachment
 - Competing concerns



Assessing physical WASH systems

- Includes WASH infrastructure and infrastructure on which WASH depends (e.g. roads and markets) and water resources
- CR-WSP and SSP are systematic ways of assessing risks to infrastructure
- Assess use and operation of WASH infrastructure
- Environmental assessments include water balance calculations, biodiversity evaluation, hydrological modelling and more



Assessing livelihoods

- Indirect impacts of climate change on WASH can be profound
- May be challenging to assess because impacts are beyond just the WASH sector
- At local scales, ‘rich picture’ drawing can facilitate assessment of related impacts
- Partnerships with non-WASH agencies may be needed



Assessing WASH actions

Building block	Climate resilience aspects
Policy and strategy	<ul style="list-style-type: none"> • Climate resilience in WASH policy and strategy • WASH in climate policy and strategy • GEDSI aspects of climate change impacts in WASH
Institutional arrangements (national or subnational)	<ul style="list-style-type: none"> • Clarity of agency roles and responsibilities for climate resilience • Coordination between WASH-related agencies & other agencies e.g. climate change/meteorology, WRM, DRR, social development etc.
Capacity development (national govt, sub-national govt, CSOs/RHOs/ DMOs, private sector)	<ul style="list-style-type: none"> • Capacity in climate risk identification, vulnerability & resilience assessments • Capacity in implementing adaptation response
Financing (national or subnational)	<ul style="list-style-type: none"> • Costs & financing for pro-poor/GEDSI assistance in climate change response • Financing to improve learning & experimentation in new approaches • Financing viable private sector business models for resilient services • Costs & financing for climate-proofing infrastructure, disaster recovery, diversification or building in redundancy
Infrastructure	<ul style="list-style-type: none"> • WASH infrastructure that can withstand or resist expected climate impacts & relevant design standards • WASH infrastructure that is responsive to climate impacts by offering multiple options for accessing WASH, being quickly repairable or having adjustable management • Resilient WASH infrastructure that is accessible to & meets the needs of all people
Planning, monitoring and review (national and subnational)	<ul style="list-style-type: none"> • Inclusion of climate data, risks, vulnerability assessments & adaptation responses in WASH plans • Monitoring systems for climate risks & impacts on WASH services • Inclusive planning and disaggregated MEL data on climate impacts on disadvantaged groups
Environment & water resources	<ul style="list-style-type: none"> • Climate change impacts on hydrological systems at basin & local scales and links to WASH service delivery • Infrastructure or management actions to protect or improve the quality and quantity of water resources needed for WASH service delivery in face of climate change • Inclusive decision-making about water resource management during climate extremes to ensure WASH service continuity
User & community engagement	<ul style="list-style-type: none"> • Access to data on climate change & WASH, including by women and disadvantaged groups • Valuing & integrating local knowledge of climate into WASH planning & evidence • Awareness or behaviour change in users & communities about climate change, implications for WASH & adaptation responses • Public & civil society leadership on climate action in WASH, including rights and accountability

Activity

What do you think the WASH sector needs to give more attention to in risk, vulnerability and resilience assessments (pick 3)?

1. Assessing equitable resources access and capabilities
2. Assessing inclusive social structures and fair institutions
3. Assessing psychological factors
4. Assessing WASH infrastructure and its management
5. Assessing environmental/water resources
6. Assessing livelihoods and interactions with WASH
7. Assessing WASH actions

