Avoiding Future WASH Failures with Climate Risk Management Tools

An Assessment of Current Practice

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• Introduction
• Clarifying Terminology
• Overview of Climate Risk Management Tools for WASH
• Quick Reviews of Interesting Tools
• Quick Philippine Case Study
• Lessons Learned & Recommendations
Introduction
• **Predicted climate impacts on WASH**
  – Threats to WASH infrastructure, water quality, water (and food) security
    • e.g. A major flood could wreck latrines / spread sludge contamination
  – Many WASH techs have high resilience, if *properly managed* with impacts in mind (e.g. raise latrines above flood level)
  – But, the WASH sector lacks proper management, with high vulnerability to *existing* climate, never mind future impacts!

• **Climate change adaptation (CCA) for WASH: One of many priorities**

• *Key refs: IPCC (2008), WHO/DFID Vision 2030 (2009), Calow et al. (2011)*
Rationale of this Work

- Part of a larger DFID project on climate risk screening in Ethiopia
- Here: A **quick global scan & synthesis** of existing ‘tools’ for CCA relevant to the WASH sector
- In the process:
  - Clarify definitions
  - Ask: are new tools necessary (generally, or for specific contexts) or can existing ones be adapted?
Climate Risk Management Tools for WASH
Terminology

• A variety of overlapping definitions
  – (Climate proofing, Climate mainstreaming, Climate risk screening, Climate risk assessment, Portfolio screening)
• Hammill & Tanner’s (2011) term of Climate risk management adapted here, creating: “Climate risk management tools for WASH”
• Three classes of “tool” defined:
  1. Tools for general CCA (applicable to WASH)
  2. WASH sector-specific management tools (Not directly related to CCA)
  3. WASH sector-specific CCA tools

(Similar framework possible for other sectors)
An Overview of the Main Tools

- At least 8 existing (narrower) reviews
- These + additional tools I found = >260 unique tools
  - ~ 84 class 1 tools
  - ~ 171 class 2 tools
  - ~ 19 class 3 tools
- Definitely still not comprehensive!

Class 1
Tools for General CCA

Class 2
WASH Sector-Specific Mgmt Tools

Class 3
WASH Sector-Specific CCA Tools
Case Studies
Class 1 Tools for General CCA

- CRiSTAL (Community-Based Risk Screening Tool – Adaptation and Livelihoods)
- ORCHID (Opportunities and Risks of Climate Change and Disasters)
- CEDRA (Climate Change and Environmental Degradation Risk and Adaptation Assessment)
- CARE Toolkit for Integrating CCA into Development Projects

Plus >80 more!
CRiSTAL

- Developed by IISD and partners
- One of the best known tools
- Targets local project planners
- Identifies & prioritises climate risks for local projects
- Now on its 5th version, also translated into French, Spanish & Portuguese
- Many successful applications in >20 countries, including for the WASH sector (river basin mgmt)

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**PHASE A: Understand the livelihoods and climate context**

1. **Describe livelihood context**
   - Describe livelihood activities, key actors, gender and diversity aspects, and the ecological context
   - Assess the implications for your analysis
   - Identify resources that are important to local livelihoods and who has access and control over them

2. **Analyze climate risk**
   - Document observed and projected climate changes in the area
   - Identify current and potential future climate hazards
   - Document the impacts of these hazards
   - Document community responses to climate impacts

**PHASE B: Evaluate the implications for your project**

3. **Revise existing project activities**
   - Assess impacts of project activities on livelihood resources that are important in the climate context
   - Revise project activities to support climate adaptation
   - Identify opportunities and barriers to project implementation

4. **Design new project activities**
   - Propose new activities to reduce climate risks identified in step 2
   - Identify criteria for evaluating proposed activities
   - Prioritize and select proposed activities based on evaluation criteria
   - Identify opportunities and barriers to project implementation

**PHASE C: Support monitoring & evaluation**

5. **Identify key elements for your monitoring and evaluation framework**
   - Identify the changes in behaviour or practice you want to see by the end of your project as a result of the implementation of adaptation activities
   - Identify important factors (climatic and non-climatic) that can influence your expected outcomes

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**STEPS AND PROCESS**

- Describe livelihood activities, key actors, gender and diversity aspects, and the ecological context
- Assess the implications for your analysis
- Identify resources that are important to local livelihoods and who has access and control over them

- Document observed and projected climate changes in the area
- Identify current and potential future climate hazards
- Document the impacts of these hazards
- Document community responses to climate impacts

- Assess impacts of project activities on livelihood resources that are important in the climate context
- Revise project activities to support climate adaptation
- Identify opportunities and barriers to project implementation

- Propose new activities to reduce climate risks identified in step 2
- Identify criteria for evaluating proposed activities
- Prioritize and select proposed activities based on evaluation criteria
- Identify opportunities and barriers to project implementation

**OUTPUTS**

- List of livelihood resources for men and women that are most affected by climate hazards and most important for responding to climate impacts
- Proposed adjustments to existing projects
- Prioritized new activities to support climate adaptation
- A list of key opportunities and barriers to revised/new project implementation
- List of desired adaptation outcomes and important influencing factors to be monitored
Class 2 WASH Sector-Specific Management Tools

- WOPs (Water Operator Partnerships)
- WSPs (Water Safety Plans) & Sanitation Safety Plans
- IWRM (Integrated Water Resources Management) / IUWM (Integrated Urban Water Management) / Community-Based IWRM
- Various WASH decision support ‘tools’ (i.e. best practice handbooks), e.g. EAWAG Compendium of Sanitation Systems

Plus >164 more!
Water Operator Partnerships (WOPs)

- Formal or informal arrangements between water providers
- Initially North-South arrangements, now increasingly South-South
- Often facilitated by third-party NGO/IGO, e.g. WaterLinks (ADB/IWA/USAID/GWOPA) in Asia
- High demand for these among utilities
- >60 facilitated by WaterLinks since 2008

### Identification

**Key Activities**
- Identify potential operators
- Discuss preliminary interests and priorities
- Create operator profiles and upload to database

**Outputs**
- Operator profiles
- Preliminary confirmation of interest to partner

### Introduction

**Key Activities**
- Introduce partners based on matchmaking factors, including priority development needs and interests, and capabilities
- Introduce potential partners
- Develop proposed WOP scope
- Facilitate agreement to partner

**Outputs**
- Proposed WOP scope (concept note)
- Partnership agreement (letter of intent)

### Establishing

**Key Activities**
- Coordinate and implement diagnostics visit
- Develop WOP joint work plan
- Facilitate work plan agreement
- Formalize WOP

**Outputs**
- Diagnostics report
- Joint work plan including activities, milestones, resource contributions
- Formal WOP agreement (MOU)

### Implementation

**Key Activities**
- Initiate and support work plan implementation
- Track progress and results
- Facilitate regular communication
- Initiate discussion on replication and scale-up

**Outputs**
- Progress reports
- Collection of WOP materials including training modules
- WOP report on outcomes and impacts

### Expansion

**Key Activities**
- Document and share WOP achievements and lessons
- Facilitate development of scale-up and replication plans
- Help seek technical and financial support for scale-up and replication

**Outputs**
- Scale-up and/or replication plans
- Dissemination of WOP results for replication
Class 3 WASH Sector-Specific CCA Tools

- Rapid Climate Change Adaptation Assessment (RCAA) for WASH Providers in Informal Settlements
- WEAP (Water Evaluation and Planning System)
- Dessai and Hulme’s (2007) climate sensitivity analysis on WASH
- ICLEI’s strategic planning for CCA for urban WASH
- RiPPLE’s WELS (Water Economy for Livelihoods) approach for rural settings

Plus >15 more!
Rapid CCA Assessment (RCAA)

• Developed by Heath et al. (2012) to assess climate vulnerabilities and recommend adaptations specifically for the WASH sector in urban slums
• **5-stage method:**
  1. Lit review to identify predicted impacts
  2. Field assessments to determine existing community / service provider vulnerabilities
  3. Preparation of hydrological scenarios to model these impacts on local water resources
  4. Assessment of potential impact of these scenarios on the community
  5. Identification, analysis & recommendation of most relevant adaptation interventions
• **Key strengths:** method can scale in complexity, very accessible to local stakeholders
Tools in Practice: Manila Water

- One of Metro Manila’s two private WASH utilities
- Has been very proactive on climate risk management:
  - Climate change policy in 2007 (1st in the Phils)
  - Availed of WOPs, both as trainer & recipient
  - Interesting cross-tool example: WOPs used to train them on WEAP, to assist in CCA planning
  - Technological climate proofing (e.g. Olandes STP)
- Challenges: fragmented WASH sector; lack of good climate data; a trade-off: more CCA work results in increased tariffs for customers
Emerging Policy Issues and Lessons Learned
Lessons

• Do YOU have time to assess >260 tools? (I didn’t!) – thus, risk of selecting inappropriate/unnecessary tool
• My opinion: Better to strengthen/consolidate/translate existing tools than to create any more! (e.g. CRiSTAL & WEAP)
• Mismatched desire for scale vs. actual audience: Hammill & Tanner (2011) find most tools’ audience = ‘university-educated development professional’
• Thus, most tool use to date is top-down, not yet demand-driven by local stakeholders, and most are only written in English!
Policy Issues

- For better tools, risk managers should ask:
  - What balance between tool simplicity (ease of access) vs. the need to avoid inappropriate solutions (maladaptation)?
  - What balance between good WASH management vs. a climate change focus?
  - What is the desired audience? – Is a simple tool best; a complex tool, with training provided; or a complex tool, led by an external expert? (think about scalability of each)
  - Is a local language translation needed?
  - Is another new tool REALLY necessary? Couldn't an existing tool just be adapted to do the same thing?
  - How to avoid self-assessment issues like this…

Table 3. Assessment of Climate Change-Related Risks

<table>
<thead>
<tr>
<th>Planning/Iнстitutional Failures</th>
<th>Manila Water</th>
<th>Maynilad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited organizational capacity</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Poor coordination with other organizations</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Limited or inaccurate information on climate changes, impacts, hydrology</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Limited institutional mandate: no control over vital factors that affect the services provider’s ability to improve climate readiness</td>
<td>2</td>
<td>1</td>
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</tbody>
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Rank
(0 = no risk, 1 = low risk, 2 = medium risk, 3 = high risk)
Summary & Key Messages

- The market is flooded with a huge variety of tools, many of which have similar principles, yet messy definitions
- WASH sector resilience can be built via general CCA, sector-specific management, or sector-specific CCA
- Adapting to existing climate variation just as important as future climate impacts
- Focus efforts on strengthening existing tools (integrating CCA into sector management tools like IWRM) & creating local demand
Thank you!