

WaSH Futures Workshop Report:

Climate Change Adaptation for Sustainable WaSH and Community Resilience

Friday 20th May, 2016, Brisbane, Australia



Facilitators

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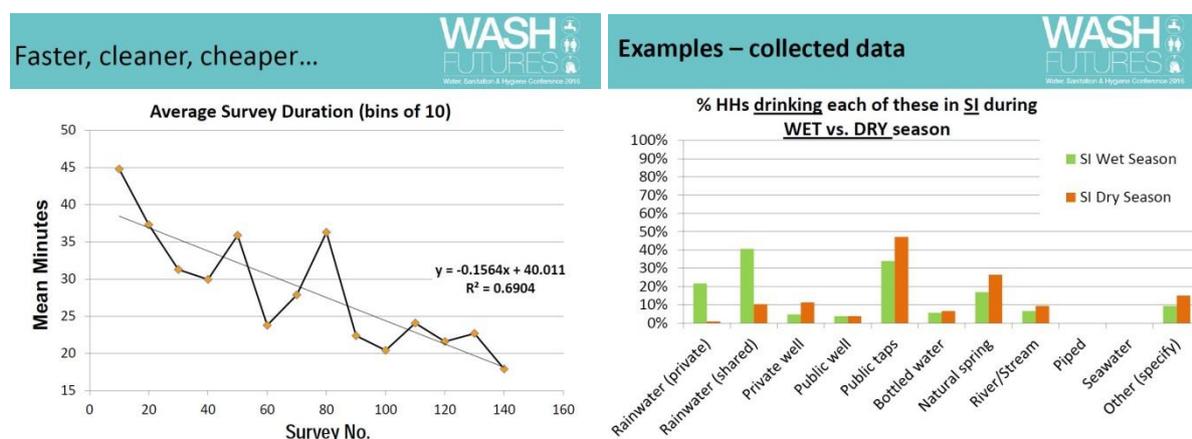
Learning Objectives

The workshop aimed to facilitate sharing and learning on:

- Projected impacts of climate change on water, sanitation and hygiene;
- Handbooks, guidance materials and other resources on climate-resilient WaSH approaches, and tools to support assessment of adaptation options;
- Traditional and modern adaptation strategies; and
- Policy challenges and opportunities for integrated planning and coordination.

SESSION 2: RESOURCES AND TOOLS TO GENERATE EVIDENCE AND SUPPORT CLIMATE CHANGE ADAPTATION AND WASH

Presentation – “Investigating multiple household water sources and uses through tablet-based, computer assisted personal interviews (CAPI)” (Mark Elliott, University of Alabama) Many households in developing countries use multiple water sources to meet their daily WaSH needs. Drinking water data in global surveys (e.g. DHS) and data sources (e.g. JMP) focus almost exclusively on the primary drinking water source. Knowledge gaps on multiple sources have been recognized by WaSH researchers, however, data collection is considered to be complex and time consuming. Filling these knowledge gaps around household water management is essential to understand the impacts of water use and management practices on health and hygiene, livelihoods, climate change resilience and adaptation. Tablet or smartphone based tools enable more efficient and comprehensive data collection on multiple water sources.



Small group activity – data sources/resources for CCA and WaSH (Facilitator: Mark Elliott) Groups brainstormed useful sources of data, tools and other resources to guide planning and decision-making for climate change adaptation in WaSH. Information and resource needs (or “gaps”) were also identified in discussions.

Useful resources:

- [Water Use Master Planning and 3R Guidelines \(Nepal\)](#)
- [Local participatory water supply and climate change risk assessment / modified water safety plans \(UNICEF\)](#)
- [WaSH Climate Resilient Development Strategic Framework \(UNICEF\)](#)
- [DRR and WASH Comprehensive Guidance \(Global WASH Cluster\)](#)
- [WaterAid Climate Change resources](#)
- [Handbook on Climate Change and Disaster Resilient Water, Sanitation and Hygiene Practices \(WaterAid\)](#)
- [Profit from Storage: The costs and benefits of water buffering \(3R Water Secretariat\)](#)
- [Technologies for Adaptation Guidebook series \(UNEP\)](#)
- [Water Sector Technologies for Adaptation \(UNEP\)](#)
- [Human health and climate change in Pacific Islands Countries \(WHO\)](#)
- [IPCC - various climate change assessment reports](#)
- [Supporting community adaptation to water shortages in Kiribati – “Dynamic Adaptive Management Processes: A Facilitator’s Guide”](#)
- Country Adaptation and Disaster Management Plans (*WaSH should be integrated*)
- Capacity and vulnerability assessment tools – various
- Cost benefit analysis tools (*e.g. World Bank*)

- An indicator framework for assessing livelihood resilience in the context of social-ecological dynamics - Ifejika Speranza et al.
- Measuring and assessing resilience: Broadening understanding through multiple disciplinary perspectives - Quinlan, Allyson et al.

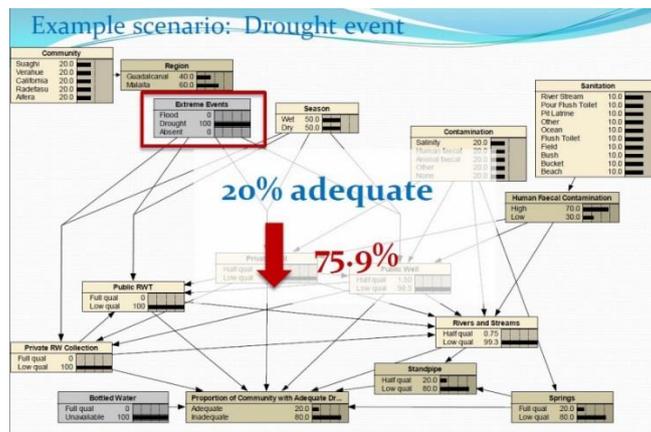
Information/resource gaps:

- Traditional knowledge – we need to build from this.
- Integrated economic analysis for WaSH and climate change (cost-benefit).
- Information management systems required to improve access available data.
- Need indicators for climate change adaptation mainstreaming
- Most adaptation has happened by communities themselves – but data is lacking on these initiatives. More evidence-based research is needed in this area (and in WASH-Climate nexus more generally).

SESSION 3: INTEGRATING TRADITIONAL ADAPTATION STRATEGIES IN WASH INTERVENTIONS

Presentation – “Bayesian Belief Network (BBN) Modelling” (Wade Hadwen, Griffith University)

The Pacific Adaptation to Climate Change for WaSH (PACCWASH) Project has used BBN models to depict current WaSH conditions and the impact of seasonal change and extreme events on WaSH systems in atoll and floodplain communities in the Pacific. The BBNs show how mitigation of negative impacts currently occurs, and how current and potential adaptation options for climate change may impact the system and increase access to drinking water under different scenarios.



Small group activity – intersections between traditional and modern adaptations in WaSH (Facilitator: Wade Hadwen)



Groups identified examples of traditional and modern adaptation interventions in WaSH, and where these have been successfully integrated. Some examples included:

Traditional strategies

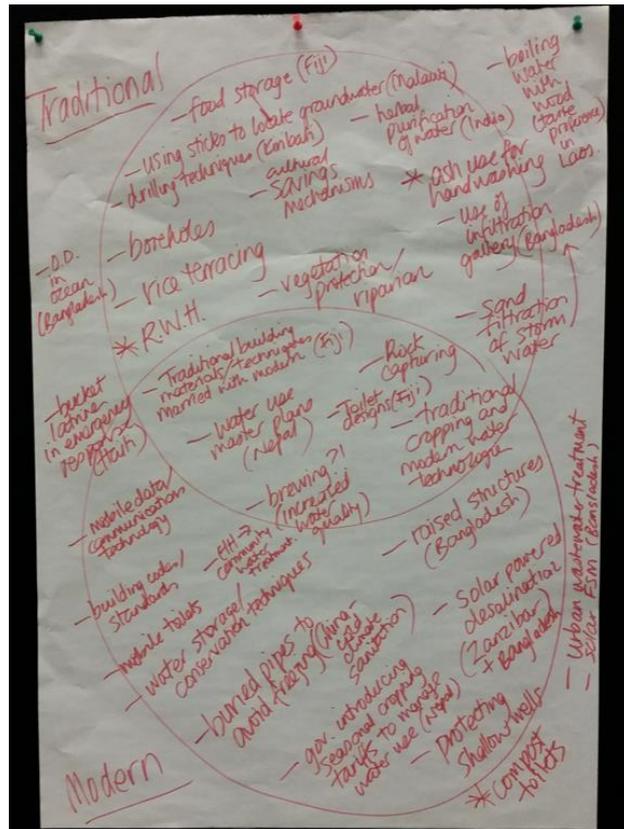
- Rice terracing in Southeast Asia
- Herbal purification of water in India
- Infiltration galleries in Bangladesh
- Improvised rainwater harvesting
- Boiling water with wood in Laos
- Sand filtration of storm water
- Riparian protection
- Drilling techniques in Kiribati
- Water storage and austerity

Modern interventions

- Solar desalination
- Composting and mobile toilets
- Seasonal cropping tariffs to manage water use in Nepal
- Raised structures in Bangladesh

Integrated strategies

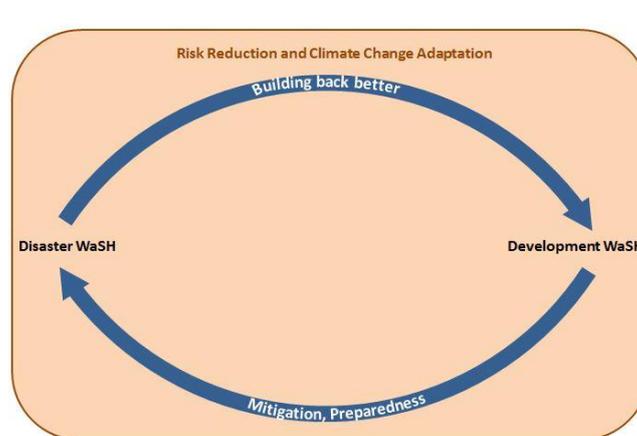
- Integrating traditional building practices with engineering standards
- Water Use Master Planning in Nepal



SESSION 4: POLICY CHALLENGES AND OPPORTUNITIES

Presentation – “Closing the loop between emergency and development WaSH” (Annika Kearton, International WaterCentre)

There is a need to “close the loop” between disaster and development WaSH, to encourage “building back better” following a disaster event, and risk mitigation and preparedness for disaster risk reduction and climate change adaptation in peace time. Sustained access to WaSH in a changing climate requires greater integration of CCA, DRR and WaSH at the level of projects and programming, and at the level of policy and planning. Strengthening essential functions in the enabling environment will go a long way to reducing risk for more sustainable WaSH service delivery.



Presentation – “Drawing on the Evidence Base: Some Useful Resources” (Melita Grant, University of Technology, Sydney)

Child-centred community-based adaptation tools are useful for understanding of the impact of WaSH and climate change interventions on the ability of children and their communities to adapt to climate change, and what successful adaptation look like from the perspectives of children, youth and their communities. Adaptive management tools can be used to understand the impacts of climate change on various water supply options, and provide a multi-criteria analysis process to identify viable water supply options and triggers or indicators of change for when a new water option should be planned.

FACILITATING CLIMATE CHANGE ADAPTATION IN KIRIBATI



Small group activity – developing an advocacy plan (Facilitator: Melita Grant)

Groups used Theory of Change and Stakeholder Power Analysis tools to explore a process for developing advocacy plans for sustainable WaSH and climate change adaptation.

THEORY OF CHANGE

