Are WASH services climate ready? Vulnerability assessment and adaptation options.

Tuesday 27th August 2019, 2 pm-3:30 pm, World Water Week in Stockholm

This document gives a short summary of the presentations and discussions held during the session "Are WASH services climate ready? Vulnerability assessment and adaptation options" that was convened by DFID, GWP, pS-Eau, WaterAid and WHO with participation from the University of Leeds and University of Oxford at the World Water Week 2019 in Stockholm.

Programme

Time	
14:00-14:05	**Welcome message** Barbara Evans (University of Leeds)
14:05-14:30	**Introduction: understanding the links between WASH, climate and health** (Colette Génevaux, pS-Eau) and **Climate vulnerability assessments** (Guy Howard, Bristol University)
14:30-15:20	**Market place of experiences** (2 rounds) **1 - Building resilience from the bottom up: participatory WASH vulnerability analysis in Bangladesh** (Virginia Newton-Lewis, WaterAid) This case study from Bangladesh shares experiences of using participatory techniques including seasonal calendars and vulnerability mapping to identify potential impacts and solutions to enable community-based approaches to climate change adaptation. **2- Building adaptation to climate change in health in the least developed countries through resilient WASH** (Waltaji Kutane, WHO Ethiopia) WHO and DFID have initiated and supported the government of Ethiopia in the implementation of Climate Resilient Water Safety Plans (CR-WSP) as an output of ''Building adaptation to climate change in health in the least developed countries through resilient WASH'' project from 2013 to 2018. 31 water supplies in five regions of the country were concerned, and approximately 1.25 million populations benefited from this large scale programme. **3 - HyCRISTAL: Integrating Hydro-Climate Science into Policy Decisions for Climate-Resilient Infrastructure and Livelihoods in East Africa** (Barbara Evans, University of Leeds) HyCRISTAL aims to improve the understanding of key climate-water processes in the East African region by developing methods and tools and apply them to decision-making processes. The research has been modelling the interaction of increased heavy rainfall on risk propagation where sanitation is poor and then identifying optimum infrastructure investments for cities in East Africa.
15:20-15:30	**Wrap-up of the marketplace and conclusion** Leonard Tedd (DFID)

Introduction

The introduction of the session highlighted the links between climate change and water, sanitation and hygiene (WASH) services:

- Climate hazards of relevance to WASH services are: rising sea levels, variability of seasonal rainfall patterns, rise in average and peak temperatures, droughts (both seasonal and intra-seasonal), greater frequency and intensity of extreme events (flash flooding, storm surge, etc.)
- Climate hazards pose direct risks to water and sanitation services: less availability of water resources, increased water demand, damage to infrastructures (from floods mainly and in particular for electric equipment), which affect in turn the access and quality of the services
- Climate change increases the health risks associated with waterborne diseases and defective water and/or sanitation services. Evidence of the links between diarrhoea prevalence and temperature/precipitation were given by research.
- Climate vulnerability assessments (CVA) are important tools to provide a systematic assessment of the impacts that climate change will have on WASH services (safety, accessibility, sustainability). Macro-level assessments will be useful to identify priority areas (national level) when micro-level assessments are needed to define operational actions and priorities (local level).
- Adaptation options should follow CVAs and planning should include concerted and multi-sector approaches, at the different scales of action (including community levels). There is a continuum between the development of services in a "non-climate-stressed" environment and adaptation actions. However specific climate thinking should be introduced from initial project phases, leading to reflexions such as diversifying water and energy sources, optimising energetic systems, adapting the treatment capacities of systems, developing a risk-culture in anticipation of extreme events, etc.
- Mitigation actions have significant potential, in particular for sanitation systems. "Simple" actions can already be considered, eg. the energy supply choice (choosing gravitational systems and solar over thermal energy), promoting reuse or resource recovery when relevant, etc. However, more research is required to quantify this potential and identify priority areas.

➔ *See powerpoint for more detail*

World café

Café table 1 - Building resilience from the bottom up: participatory WASH vulnerability analysis in Bangladesh (Virginia Newton-Lewis, WaterAid)

WaterAid described the linkages between WASH, climate change adaptation and the use of participatory vulnerability assessments in its programme work in Bangladesh. We described how climate change is one of many issues facing WASH service provision and that the interaction with pre-existing threats creates additional challenges when seeking to achieve climate resilience. This difficulty is compounded by the fact that there is often limited data available at the local level. This

means we rarely understand climate vulnerabilities in WASH systems and how these interact with local socio-economic and hydrological baselines.

Bangladesh is an extremely climate-vulnerable country and WaterAid Bangladesh seeks to improve the capacity of local government and community to plan for and respond to threats impacting on WASH access as part of broader local government planning. To support this work WaterAid has conducted participatory climate vulnerability assessments at ward level in the south-west of the country. These exercises (general discussions; seasonal calendars; institutional mapping and vulnerability mapping together with household surveys) provide not only community-level information about climate threats and existing WASH services but also build capacity, raise awareness and open dialogues with local government about WASH service provision.

Most of the questions about this case study related to how this approach can be scaled up and there was a desire to see greater participation, more data, more accuracy and greater reach. We recognise that these will be a big challenge, and it was great to see this enthusiasm and understanding that tackling these challenges was a vital component of adaptation for WASH.

Café table 2- Building adaptation to climate change in health in the least developed countries through resilient WASH (Waltaji Kutane, WHO Ethiopia)

Key messages from the café table:

1. Government ownership and decision-makers leadership to bring in to attention climate change in health and WASH service;
2. Identifying national/ country capacity and using in evidence generation with minimum capacity building training. Example from Ethiopia: use of academician from universities for the vulnerability assessment;
3. Community engagement through pilot implementation. Example from Ethiopia: Climate-Resilient Water Safety Plans implemented by 31 water supplies over the last 4 years, serving 1.25 million population.
4. Establishing a baseline and continuing documentation of lessons for scale-up and sharing the experience with the global community.

For more information: https://wsportal.org/location/ethiopia/

Café table 3 - HyCRISTAL: Integrating Hydro-Climate Science into Policy Decisions for Climate-Resilient Infrastructure and Livelihoods in East Africa (Barbara Evans, University of Leeds)

See information on the project: https://futureclimateafrica.org/

Conclusion

After a wrap-up from café table facilitators, the closing message was given by Leonard Tedd from DFID.

- Addressing gaps in climate action requires taking into account the role of WASH services for adaptation and mitigation;

- Data collection and evidence generation are essential to address climate issues in a relevant way and to engage policymakers; support from the academic community is required for this

(more research is needed to quantify greenhouse gas emissions from sanitation systems – eg. from HyCRISTAL project);

- Critical commitment is very important to support programmes: high-level commitment in particular (eg. case study from Ethiopia), but also community involvement (eg. from WaterAid programme in Bangladesh);

- This session was organised on behalf of an informal group of organisations whose common objectives are to push for better integration of the WASH and health sectors into climate discussions. This Alliance for Climate Health and WASH met in Stockholm during the World Water Week and highlighted the need to mobilize partners in the sector, in the light of an important year for climate discussions (UN report on climate change, next World Water Day and World Water Week on climate, etc.). WASH services and the health sector must gain greater visibility in climate negotiation forums, one of the challenges being their integration into INDCs. For more information on the alliance, contact: jonathanfarr@wateraid.org.