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UN 2023 Water Conference Side Event

Systems Approach towards achieving Water Security in a Changing Climate

22 March 2023, 17:00, UN Headquarters

Organized by: Newcastle University, UK; Newcastle University
Medicine, Malaysia

Background on the event (one paragraph)

Equitable access to suitable quantity and quality of water for health and well-being, alongside manageable water-related risks to people, the natural and built environment and the economy, are fundamental to water security. This breadth of issues, and their interconnections, creates complexity that requires a systems approach, considering all drivers, pressures, governance, and physical processes that interact across multiple scales and sectors, not just to understand water security, but also to enable the necessary system transformation to achieve SDG6, and support other related SDGs. This event explored the key cross-cutting themes and requirements of a systems approach towards water security in a changing climate, drawing upon experience of developing and implementing a systems approach to achieving water security in the UKRI Water Security and Sustainable Development Hub led by Newcastle University, UK (www.watersecurity.org). Discussants present examples of how systems approaches have been tailored to the local development context, ambition, culture, socio-political context, and setting of different countries (Colombia, Ethiopia, India and Malaysia), and sectors (health and food). The session also focussed processes for creating an inclusive and co-creative platform for stakeholder engagement; opportunities for learning between countries, and development of new cross-sectoral partnerships.

Water Action Agenda (one paragraph, if possible, please include the link to your commitment in the [Water Action Agenda database](#))

The Water Security and Sustainable Development Hub (www.watersecurity.org), led by its partners in Colombia, Ethiopia, India, Malaysia and the UK, will continue to promote, develop, demonstrate and implement a systems approach to achieving water security in a changing climate. The Hub has established a global suite of Collaboratories in Colombia, Ethiopia, India and Malaysia that enable all, researchers, project partners and stakeholders to meet on an

equal basis, to question, discuss, and develop new ideas to address the challenge of water security for all. We will disseminate our findings of how taking a systems thinking approach has informed water security challenges across different sectors and in within the context of our Collaboratory locations and case study areas. We will demonstrate how this approach has: dissolved disciplinary and sectoral silos; changed the spatial scale at which water security is addressed; improved data acquisition and analysis to better understand relationships between sub-systems; considered issues of intersectionality; embraced education; and integrated socio-ecological issues of justice and power with more traditional bio-physical understandings of water security. We believe this is an important step towards turning systems thinking into systems transformation and making the concept of water security actionable and accessible to policy, planning, and practice.

Key Issues discussed (5- 8 bullet points)

1. The criticality of water security and climate resilient water and sanitation systems to the stability of global society and to sustainable development efforts.
2. Interdisciplinary working: the role of, and integration of multiple disciplines and stakeholders in achieving water security in a changing climate.
3. Importance of open access data from a range of sources from remote sensing products to citizen science collection, to understand and quantify risks. Lack of health data relating to water risks.
4. Interaction of different systems e.g. water and food security, water and energy supply.
5. Demonstration of applying a systems approach at national, state and community levels to improve integration, dialogue and aid priority setting for planning of resources and solutions.

Key recommendations for action (5 - 6 bullet points)

1. Water security can only be achieved by building resilience across the whole water system, rather than focusing on individual parts or peoples.
2. Understanding governance structures and identification of relevant stakeholders can help avoid duplication, promote more efficient use of resources and reduce the risk of any potential maladaptation.
3. Data relating to water systems should be open access data and with suitable data management processes.
4. Greater recognition of the value of data collection by citizen scientists to create an evidence base that community stakeholders can present locally relevant issues to policy makers.
5. Systematic collection of baseline health data from communities, in particular; vulnerable communities including from established informal settlements, to aid resources being directed towards taking a preventive rather than reactive approach to managing water-related risks.