

Developing household-scale metrics to tackle water insecurity

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Summary

Research by geographers into household water insecurity is improving understanding and helping mitigate water insecurity, and developing flexible research tools for global use.

Challenge

Universal availability of sustainable water sources is a major challenge and important goal recognised in [SDG 6](#); 4 billion people experience severe water scarcity [every year](#), and 663 million people lack access to an improved water source for drinking and non-drinking uses.

Indicators of progress are essential for evaluating and planning work towards increasing access to water. However, water security, and insecurity, [can be complex](#), variable and difficult to track and understand, particularly where survey techniques or monitoring do not identify patterns and practices of water use accurately or at the wrong spatial scale.

Existing indicators may not identify and convey water use and access adequately at all scales – the most common metrics represent national or basin-level scales (Octavianti, 2015).

Moreover, they do not capture differences within populations, and do not incorporate the health, economic or psychosocial effects of water insecurity (HWISE scale user manual). Up-to-date and flexible monitoring is more urgently needed to help plan and monitor mitigations of household water insecurities, whether from climate change or uneven geographical development.

Solution

The Household Water Insecurity Experiences (HWISE) Scale is “a cross-culturally validated scale to measure water insecurity at the household level”. In the HWISE research project, researchers conducted approximately 250 surveys at sites in an initial 14 countries worldwide; there are now [29 sites across 23 countries](#). Each survey is with a household member responsible for water collection and use, and focuses on access to, adequacy, reliability and safety of water.

As well as questions about water supply, availability and scarcity, the scale also incorporates information about food scarcity, personal stress and infant feeding as these are linked with water insecurity. As of February 2018, data collection was completed at 16 sites.

Benefits

Solving problems

The HWISE project uses a refined working definition of water insecurity and research at an unusual scale. The focus on household experiences and the additional use of questions about individual experiences and related issues around water scarcity helps provide a more complete picture of the impact as well as the water supply situation.

The process is also applicable [across different cultures](#), and is calibrated to ensure that responses are comparable in very different countries and environments.

The research has yielded a [variety of papers](#). Knowledge exchange has taken place via the [HWISE network](#), which aims to “build a community... to document, benchmark, and understand the causes and outcomes of water insecurity at the household scale.” The network organises events internationally, including workshops at the Society in 2018 and 2019.

The HWISE metric is being used in [a number of collaborations worldwide](#), and the data from the program is informing [ongoing research projects](#) beyond the HWISE programme. For example, it can be used to complement the WHO/UNICEF’s JMP measure, and has been implemented in monitoring by organisations including Oxfam.

Significantly, [HWISE are collaborating with UNESCO and polling company Gallup](#) to plan the inclusion of the HWISE questions in the 2020 [Gallup World Poll](#) which examines global development and informs a wide range of reports and development indices.

Sources and further reading

[The full handbook for the project](#)

[Gallup World Poll methodology](#)