



Overview of the Theme 2 of IAHS HELPING: Holistic Solutions for Water Security

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The term "water security" denotes the sustainable availability and access to clean and safe water for diverse purposes, ensuring the well-being of individuals, communities, and ecosystems. Despite numerous proposed solutions from the scientific community to address water security challenges, a genuinely holistic, systems-level approach is still lacking. The research conducted under Theme 2 of the new IAHS HELPING decade is grounded in the premise that holistic solutions for water security necessitate an integrated approach. This involves understanding the potential and challenges associated with mitigation methods for floods, droughts, and water quality/pollution, as well as being aware of the sectorial nexus of problems and solutions. Nature-based solutions (NBS) are also considered for sustainable water management. The theme brings together seven working groups (WGs) focusing on methods and applications for characterising droughts in the Anthropocene, providing near-term water availability forecasts, and conducting water systems analysis using integrated tools and participatory engagement. Additionally, these WGs address interactions between water, energy, health, and ecological systems, with the aim of advancing ecological restoration and the implementation of NBS. This talk will present a high-level overview of the WGs, showcase preliminary findings, and discuss the potential for integrating insights and methods from multiple work streams into a comprehensive framework for water security solutions.