Science for Solutions decade: HELPING
Hydrology Engaging Local People IN one Global world
IAHS Scientific Decade 2023-2032

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Details of the Working Group – Non-conventional water (NCW) use for integrated water resources management

Describe the work and how your suggested working group will contribute to the goal(s): The Working Group aims to address all the goals of Theme 2 by proposing an integrated approach to the use of Non-conventional water (NCW) - namely Desalinated seawater and highly brackish groundwater; Rainfall-runoff or atmospheric water captured by water harvesting; Marginal-quality water resources (treated wastewater; agricultural drainage water; saline and/or sodic groundwater) - based on multiple interdisciplinary community-based tools. The work will be structured around four main pillars: (1) consolidation and creation of scientific knowledge on the status and potential of NCW (2) interdisciplinary research collaboration to investigate biophysical, social and economic aspects of NCW (3) capacity development of researchers and practitioners on NCW (4) policy recommendations targeted at promoting a sustainable uptake of NCW in water policies.

Describe the methods you will use to achieve the goal(s): The group will gather international researchers on NCW starting from the involvement of different PRIMA funded projects focusing on NCW use, AG-WaMED (https://agwamed.eu/), AGREEMed (https://agreemed.eu/), AGREEMAR (https://www.agreemar.inowas.com/), fostering also the participation of practitioners and stakeholders. It will be enlarged through the network of connections of the proponents. Methods will include online and in-person plenary meetings, participation in conferences, short term scientific mobilities, and regular sub-groups meetings to advance the work under the four pillars.

Describe the (a) short-term, (b) the long-term and (c) the ultimate results you hope to achieve: (a) To create a platform for the community of researchers working on Non-conventional Water (NCW) solutions, namely: Desalinated seawater and highly brackish groundwater; Rainfall-runoff or atmospheric water captured by water harvesting; Marginal-quality water resources (treated wastewater; agricultural drainage water; saline and/or sodic groundwater); including also their potential integration with Nature-based Solutions. To assess the baseline level of NCW application at regional and global scales, considering their impact and the barriers for their application. (b) To create a database of good practices of implementation of NCW use, also considering the involvement of the stakeholders in their design and implementation, and the potential Water-Energy-Food-Ecosystem (WEFE) Nexus implications. To support policy making and good practices for NCW solutions implementation. (c) To foster the socially, economically, and environmentally sustainable application of NCW in different contexts.

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