



IAHS2022-463

<https://doi.org/10.5194/iahs2022-463>

IAHS-AISH Scientific Assembly 2022

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On the role of water resources management to transform water, energy, food and ecosystem (WEFE) systems in transboundary river basins

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The program NEXUS Gains addresses key challenges of transforming water, energy, food and ecosystem (WEFE) systems in transboundary bread-basket basins in East and Southern Africa (Blue Nile and Limpopo basins), Central (Aral Sea basin) and South Asia (Ganges and Indus basin) in a changing world. The program particularly explores water resource management options to understand WEFE system interdependencies, trade-offs and synergies and develop more sustainable development pathways for all members society.

The presentation will discuss alternative interventions to increase water productivity different sectors (irrigation, forestry, industries) across scales ranging from farm to watershed to river basin scales. Therefore, particular attention will be given to integrated water storage management in human built and natural infrastructure in South Asia and East Africa. The implications for hydrological process and water resources dynamics and wider environmental, social and economic systems are analyzed and related policy implications are discussed considering also climate change.