

Sustainable Water Footprints in a Transboundary River Basin under Climate Change

Title of the project

Sustainable Water Footprints in a Transboundary River Basin under Climate Change:
The Case of the Syr Darya Basin, Central Asia

Type

PhD Research

Duration

March 2023 – March 2027

Persons involved

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Summary of the research

Water consumption in the Syr Darya Basin is growing rapidly due to increased demand from particularly the agriculture and energy sectors, while supply is becoming more erratic due to climate change. The environmental catastrophe that is continuing to unfold around the Aral Sea, the Syr Darya's final destination, as well as sporadic transboundary conflicts over water resources, provide stark illustrations of an impaired water allocation process in need of revision. However, the current decision-making process for water allocation not only lacks an understanding of historical drivers and impacts of water consumption and over-allocation, but also of how such drivers and impacts would change in the future under climate change and socio-economic developments. Moreover, comprehensive and reliable water-related data to support decision-making and policy formulation is largely absent.

This research aims to improve the understanding of historical and potential future drivers and impacts of water consumption in the Syr Darya Basin, to support decision-making. Guided by principles from the field of water footprint assessments. The outcomes of this research will substantively and methodologically advance the field of water footprint assessment while supporting water management in the Syr Darya Basin in its transition towards a more sustainable and science-based water allocation regime.

Keywords

Water Footprint, Water Footprint Assessment, Water Allocation, Water Management, Syr Darya, Climate change, Sustainability, Transboundary River Basin

More information

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