

PRESS RELEASE

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Sustainable Small-Scale
Hydropower in Central Asia

HYDRO4U PROJECT PIONEERS SUSTAINABLE SMALL HYDROPOWER SOLUTIONS TO UNLOCK CENTRAL ASIA'S ENERGY POTENTIAL AMID CLIMATE CHALLENGES

Central Asia holds immense potential for hydropower generation, especially in upstream regions, but outdated infrastructure and limited new developments pose significant challenges, exacerbated by water scarcity and climate change. The Hydro4U project addresses these issues by developing innovative, climate-resilient small hydropower (SHP) technologies optimized for cost-effective and simple implementation in remote areas, while maintaining EU quality and environmental standards. The project partners also introduce advanced planning and assessment tools, engage local communities to enhance socio-economic benefits, and foster partnerships with local companies. This aims to result in sustainable hydropower development and future commercial opportunities in the Central Asian market.

The EU-funded Hydro4U project is now entering the second half of its total project duration and can look back on successful progress phases for preparation and implementation.

During the first 18 months of the project (06/2021-11/2022), Hydro4U partners focused on data collection and building partnerships with key stakeholders in Central Asia. A comprehensive database was created to support future tasks, and the two innovative small hydropower solutions were developed:

- Francis Container Power Solution (FCPS): to be demonstrated at the Shakimardan Enclave (Uzbekistan) in collaboration with state utility Uzbekgidroenergo.
- Hydroshaft Power Solution (HSPS): to be demonstrated in At-Bashy, Kyrgyzstan, in partnership with the private company Orion LLC.

Additionally, tools for sustainable hydropower planning and a monitoring system for the water-energy-food-climate nexus were introduced. Efforts were also made to raise public awareness and prepare for the commercialization of the developed technologies.

In the second project period (12/2022-05/2024), the consortium continued to advance site-specific designs and demonstration activities and shared feasibility studies and design plans with local investors and contractors. The procurement and manufacturing and delivery of the equipment of the Francis Container plant in Shakimardan, Uzbekistan, has already led to completion in August 2024 and commissioning is scheduled for the near future.

For the second demo-site, the Hydroshaft Power Solution in Kyrgyzstan, the delivery of the equipment is scheduled for October 2024.

Key achievements in this phase of the project included the identification of sustainable hydropower potential, the development of a transboundary water accounting system and the promotion of replication strategies. Another focus was on capacity building, market analysis and business model development, supported by dissemination and communication activities.

The current work focusses on the completion and commissioning of the Francis Container Power solution and the implementation of the At-Bashy Hydroshaft Power Solution, but furthermore additional planning sites will be selected. Partners will elaborate two further feasibility studies at these sites to enable replication of our innovative technologies.



The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101022905.

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Some Facts about Hydro4U:

Hydro4U receives funding from the European Union's Horizon 2020 Research and Innovation programme.

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Type of project	Innovation Action
Coordinator	Technical University of Munich
Project duration	01/06/2021 – 31/05/2026
Total Project budget	11 488 428.03 €
Total EC funding	9 931 160.13 €
Consortium	13 partners from 8 countries (Germany, Austria, Switzerland, Sri Lanka, Uzbekistan, Spain, Belgium, Kyrgyzstan)

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Available illustration © SJE. Click on the [link](#) or on the QR code to get the overview of the construction works in Shakimardan:



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