Hydro4U – European project on sustainable small-scale hydropower in Central Asia officially launched

30th June 2021

Hydro4U is a project funded under the European Union's Horizon 2020 research and innovation programme. Under the coordination of Technical University of Munich, 13 partners from 8 countries are collaborating to boost sustainable small-scale hydropower in Central Asia. Ecofriendly hydropower solutions will be implemented in two demonstration plants in Kazakhstan and Uzbekistan. The project was officially launched on 29th June 2021.

Small-scale hydropower is not extensively exploited in Central Asia despite considerable potential to satisfy unmet electricity demand and chart a new way forward in cooperative cross-sectoral management of shared waters. There is also vast potential to roll out European small-scale hydropower approaches in other regions outside the European continent. However, European technologies have not been widely used due mostly to the lack of adaptation to other contexts; successful test cases are scant as their price point is typically far higher than for Asianmanufactured competitors.

The Hydro4U project will adapt European technologies to Central Asia, demonstrating viability in a forward-looking cross-border water-food-energy-climate nexus and price-competitiveness through design alterations based on a prior analysis of unexploited sustainable small-scale hydropower potential in Central Asia. Hydro4U will install and assess two demo plants: up to 500kW low-head eco-friendly run-of-river plant in Kazakhstan, approx. 2MW medium-head plant in Uzbekistan, both with radically reduced planning and construction costs that do not compromise efficiency. These solutions will be fit-for-purpose based on innovation, modularisation, meaning a radically simplified structural concepts, with longevity, ecocompatibility and socio-political acceptance. A replication model will be developed to address all small-scale hydropower potential in Central Asia. This will demonstrate EU quality standards and create entry points in developing markets for the entire European small-scale hydropower industry.

Hydro4U brings together industry, politics, science and stakeholders from both Central Asia and the European Union with the aim of contributing to a sustainable and climate-resilient future for the region by demonstrating European small hydropower equipment and technologies.

"Hydro4U will demonstrate that small hydropower can be a sustainable and economically feasible source of green energy in Central Asia as well," Prof. Dr. Peter Rutschmann, Hydro4U project coordinator, emphasized the main goal of the project in his welcoming speech.

After an internal kick-off meeting on 29th and 30th June, which marked the official start of the project, a public kick-off event took place in the afternoon of 30th June jointly organized with the European Commission. Representatives of the European Union and of the Central Asian countries opened the session with introductory statements on the existing collaboration framework between the EU and Central Asia, which was followed by a presentation of the Hydro4U project objectives and its planned activities. In a round-table dedicated to "Hydropower in Central Asia", invited stakeholders discussed the opportunities and challenges for future engagements.

Further information on Hydro4U:

Twitter: @Hydro4Uproject

Website: coming soon

About Hydro4U:

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

Grant Agreement number	101022905
Type of project	Innovation Action
Coordinator	Technical University of Munich
Total Project budget	11 488 428.03 €
Total EC funding	9 931 160.13 €
Coordinator	Technical University of Munich
Consortium	13 partners from 8 countries (Germany, Austria, Switzerland, Sri Lanka, Uzbekistan, Spain, Belgium, Kyrgyzstan)

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Pictures:
One of the two hydropower solutions demonstrated within Hydro4U:
(pictures available in high resolution under this link: https://mediatum.ub.tum.de/1553609)

Picture 1 + 2: Shaft power plant © Frank Becht / TUM

World's first shaft power plant in the Loisach River (Germany). Within Hydro4U, the shaft concept, developed by Technical University of Munich (TUM), will be further optimized, modularized and tuned for the demands in CA as one possible solution for sustainable small-scale hydropower.

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