



WORLD
METEOROLOGICAL
ORGANIZATION



Case Study

HydroHub Innovation Call on Operational Hydrology

Countries

Afghanistan, Bhutan, United States of America

Summary of Activity

The WMO HydroHub launched a call for innovation in operational hydrology, challenging candidates to propose a mature observation technology and increase its fitness for operations, directly demonstrating value in collaboration with a national hydrological service.

Development of documentation for self-manufacturing and maintenance were in focus, rather than the technologies themselves.

The call was awarded to Northern Widget LLC, a small company in Minnesota, United States of America, run by two entrepreneurs with academic background and long experience in hydrometry and electronics. Based on their open source and open hardware projects the company's data logger was improved to support telemetry modules and minimize maintenance. The combination with several sensors makes the solution a full hydrometry station at very low cost.

All parts can be assembled locally, following the created manufacturing documentation that will be applied first with partners in Bhutan. Colleagues from Afghanistan will join the field mission to Bhutan in order to transfer knowledge to Afghanistan, for which documentation will be translated to the local languages Pashto and Dari.

The project will prove that self-manufacturing and maintenance of this technology is possible and should encourage uptake in other countries.

Benefits

- Identification of a mature open license hydrometry solutions and improvement of fitness for operations at national services
- Creation of documentation for self-manufacturing in the context of a local hydro-meteorological service with the potential to reduce cost and increase sustainability of the national hydrological observation network
- Demonstrating fitness for operations of the solution in collaboration with national services
- Demonstrating the quality of documentation in a locally lead rollout to Bhutan and Afghanistan
- Engaging with the academic community to insource knowledge and practical expertise while conveying the WMO HydroHub's innovation mission
- Enabling entrepreneurs to invest time and resources in the pursuit to develop solutions for the benefit of the hydro-meteorological community

Contact: hydrohub@wmo.int