Crowd water

How to address the question "Why do we need (hydrological) data?"





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Summary

- -Aim of the project: assess if citizen science data can help improve hydrological forecasts
- -Sometimes participants ask the question "why do we need hydrological data"
- -Answering this question is important because it addresses one of the main motivations to participate in the project
- -The best answer depends on the participant's dominant motivation to participate





Why we need hydrological data!

- Streamflow data necessary to calibrate hydrological models and thus to forecast floods and droughts
 Streamflow data are often not available for remote regions, e.g., alpine regions in Switzerland
- -Gauging stations are expensive to build and maintain
- -Number of gauging stations worldwide is declining



- 234 forms handed in at the Limmat letterbox*
- 146 reponses on motivation to participate
- 23% of participants want to contribute to science

*as of 22.05.2018

Addressing the motivations

It is important to align information with the participant's motivation to engage in the project. This will hopefully increase the long-term involvement of citizen scientists and thereby also their learning experience.

Letterbox station at Limmat in Zurich

Motivation	Approach
Scientific research	explain scientific background
Greater good	explain usefulness of data, e.g. for developing countries
Curiosity/ fun/ community/ help PhDs	explain project on a more tangible level, e.g. improvement of flood and drought forecast
Reward	possibly no deeper interest in this question, keep measurements fun or highlight fun facts

Crowd water



The CrowdWater app is available for free for

Citizen scientists estimate hydrological parameters: - water level & streamflow - soil moisture

- flow condition of temporary streams



The only equipment used is a smartphone. Simple qualitative scales help to estimate water level, soil moisture and the flow condition of temporary streams; streamflow is estimated qualitatively.

The goal is to use the data to improve hydrological forecasts, either by monitoring ungauged catchments or by combining crowdsourced data and gauging station data.

Android and iOS.





Further information regarding the app and the CrowdWater project:

www.crowdwater.ch

https://www.instagram.com/crowd_water https://www.facebook.com/crowdwater/ https://twitter.com/crowd_water