



An EU-wide citizen science network to monitor hydrological conditions in intermittent rivers and ephemeral streams

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Studying Intermittent Rivers and Ephemeral Streams (IRES) requires regular observations of streamflow. Unfortunately, intermittent streams are poorly monitored, particularly in temperate climates. To fill gaps in knowledge of the dynamics of intermittent streams, a pilot initiative within the SMIRES project (Datry et al., 2017, <https://www.smires.eu/>) was launched in April 2019. This initiative invited citizens to submit observations for a large number of European intermittent streams.

The goal was collecting datasets that can be used in robust scientific inquiries:

- To identify IRES at the European scale. Everyone was encouraged to report the flow state for any stream in Europe at any time during 2019;
- To investigate the dynamics of flow intermittence by repeating field observations along an IRES at least once each month and if possible at multiple locations.

The CrowdWater app (<https://crowdwater.ch/en/crowdwaterapp-en/>) was used to collect the observations. Each contributor was asked to take a picture of the stream and to identify the current flow state of the stream as one of six classes, from “dry” to “flowing”. The citizen science network has collected, in eight months, more than 3500 observations in ~500 river reaches across 15 countries.

In this presentation, we will discuss the benefits and the limitations of this citizen science effort (i.e., how these data complement the information provided by gauging stations, how and why the collected data were used by the main contributors, how participants can be engaged in the long-term etc.). We will compare the success of this international initiative to other regional or local scale initiatives.

References:

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