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Citizens review citizens: a game-based quality control of stream level observations

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The accuracy of citizen science data determines its usefulness. If there are many observations, it can be assumed that errors average out. However, some variables change quickly and determining an average classification over a period of time is not meaningful. In this case, an approach for quality control is to use photographs and to engage the citizens in the classification of these conditions at one point in time. The most common classification can then be assumed to be close to the truth. The CrowdWater project (www.crowdwater.ch) collects stream level class data via the freely available CrowdWater app. Users upload images of the conditions of the river and determine the water level class compared to a reference image with a virtual staff gauge at a certain point in time. The use of such pictures enables many people to assess the stream level at the time that the picture was taken and to use the "wisdom of the crowd" to improve the accuracy of the collected data. To make the assessment of the pictures of the streams more engaging, the CrowdWater project developed an online game. In the game, the players compare the image of the stream with the reference image with a virtual staff gauge and vote on the water level class they think is most suitable for the update-image. The vote distribution is then used to calculate the mean value and to consider the certainty associated with individual update-images. Furthermore, we hope that the game will engage additional hobby-hydrologists, who for some reason have not yet submitted their own data with the CrowdWater app. This poster will show how the CrowdWater game helps to increase the credibility of the water level class data and how it engages people in hydrological citizen science.