Earth System
Science
Data

Discussions

Interactive comment on "Monitoring ephemeral, intermittent and perennial streamflow: A data set from 182 sites in the Attert catchment, Luxembourg" *by* Nils H. Kaplan et al.

Nils H. Kaplan et al.

nils.kaplan@hydrology.uni-freiburg.de

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Dear Referee,

Thank you for your helpful comments and questions to our manuscript. Please find your questions and comments marked as e.g. « R1.C1: question/comment» followed by our answer marked as e.g. R1.A1: below.

Best regards, Kaplan et al.

« R1.C1: "Specific comments: Page 7, Lines 18-21: When I first read this I was very excited by the Image J plugin and thought that it classified all photos as streamflow

or non-streamflow. But, later when I read the "Data quality and uncertainties" section (page 15, line 10), I realized that there were people involved in this evaluation. I think it would be good to make this point more clear. Rephrase as something like, "Pre-processed images were loaded as virtual stacks in to ImageJ and then visually classified by trained interpreters. . ." »

R1.A1: Adding the information about trained interpreters here will definitely clarify the procedure used to generate the data and we will add this to the revised manuscript. We will include a sentence as proposed. In addition to the pre-processor plugin used in this study we developed a second plugin with the aim to identify the water line on the plate and calculating the water level by making use of automated thresholding functions of ImageJ followed by a Hough transformation to identify the water line. This method was developed for one site witch was located in grassland without interference of light scatter or shading on the plate by vegetation. This approach showed promising results, without 100% accuracy though. Nonetheless, under conditions of changing shading and light scatter on the gauging plate at forest sites, no reliable waterline detection could be achieved, even with some further testing of different auto-thresholds. This second plugin development is not part of the paper because the data was not generated with the use of the plugin. We think that information about a plugin that was not used to generate the data would confuse the reader more than it would inform. In addition we identified some major drawbacks of the gauging plate design in our study, 1) The wooden plates are good for cheap testing phases, but will not endure for more than two years; 2) The handmade paint on the plate looks like an even layer but when it comes to image analysis slight differences in the paint thickness become visible and interfere with the line detection algorithm; 3) The design of the blue detection patterns on the plate need to be improved to be fully able to serve as fiducial markers in the image analysis. Therefore, we used the more reliable method with trained interpreters to produce high quality data.

« R1.C2: Technical corrections: Page 7, line 12: In general, one should not start sen-

tence with a number ("3" in this case), rather, spell out the word "Three" or restructure the sentence so that it does not begin with a number. – check this throughout the manuscript (i.e. page 11 there are a few). Page 7, line 15: Super cool to have an Image J plugin! But... see specific comments above Page 12, line 14: There is a period instead of a space after the (Pfister et al. 2017). Page 15, lines 4-7: Typically, figures are referred to in their order of appearance. It is strange to jump from 8A to 8D. Please order them in the order you discuss them. »

R1.A2: Thank you very much for your helpful technical corrections, we will make all the suggested modifications when revising the manuscript

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