

Interactive comment on “Seasonal Dynamics of Rainfall Erosivity in Switzerland” by S. Schmidt et al.

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Dear Anonymous Referee #1,

Thank you for the interactive comment and the suggestions in the annotated pdf. We are pleased to hear that the topic is of interest that you suggest for publication with moderate revisions. We are confident that your comments will help to improve the manuscript. In the following, we will provide a short reply to the three main points raised by you. A detailed point by point answer will follow after the closure of the interactive discussion.

The first main point of critique addresses the title. Reviewer #1 feels that “seasonal rainfall erosivity” should be changed towards “monthly rainfall erosivity”.

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It is true that the presented rainfall erosivity maps are at a monthly resolution. However, the R-factors of Switzerland are investigated on different temporal scales (daily, monthly, and seasonal). R-factor maps of each season are shown in Fig. 4 and cumulative R-factors on a daily basis are shown in Fig. 6. As such we consider it valid to keep the more extensive “seasonal” title to include different temporal resolutions, which help to understand seasonal pattern like it was done in the discussion section.

Second, reviewer #1 considers the literature reviewing as incomplete, the methodology not well documented and misses a comprehensive discussion.

In the introduction, we focused on Swiss studies. Here we can add a more general sentence also referring to other important erosivity studies not related to Switzerland. In section 3.1 (line 26 to 28) we already highlighted and discussed relevant studies of the R-factor on a monthly scale. We appreciate the recommended literature. Regarding the methodology we suppose there was a misunderstanding, the kriging has solely been used to interpolate the residues coming from the regression between the spatial covariates and the monthly R-factor. We will try to make this point clearer in the revised version. We decided to merge results and discussion. The discussion follows the results in each subsection. To avoid repetition, no comprehensive discussion was added. We will consider this for the revised version.

The final remark of the reviewer relates to discrepancies in bibliography and citations and in errors in the presentation.

Sorry, these issues occurred during the final formatting of the manuscript. The citation software did not work properly. Regarding the errors in presentation, the uppercase letters in the units got messed up as well during formatting. We appreciate the remarks and will carefully check the references in the revised manuscript.

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