

Interactive comment on “Validation of two precipitation data sets for the Rhine River” by C. S. Photiadou et al.

Anonymous Referee #3

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General comments The paper presents a valuable analysis of precipitation data sets over the Rhine river basin. The paper is clearly written. In general it would be interesting if the authors could discuss more whether they suspect logical explanations (perhaps physically based) for some of the consistent performance differences between CHR08 and E-OBS for wet/dry seasons and short/long return period events.

Detailed comments Title: Perhaps the title could be a bit more descriptive, e.g. by adding something about the validation method: "... through streamflow simulation" p5466, l 1: suggest replacing "number" with "two" p5466, l 6: The extended data set permits.. p5466 - 5470 l18, Introduction: I think the introduction is too long, especially the general sections about climate change impact research. It is also not clear from the

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beginning why these sections are written. I suggest introducing in the beginning that some of the limitations of current data sets are going to be discussed, illustrating the need for extended data sets of high quality. Then still I think readers will understand the value of the research and hence I suggest making these sections much shorter. p5468 l6: this is also just mentioned in p5467 l28. p5470 l20: ..space.. consider "... satellite-based.." p5471 l21: "These data sets.." p5470 l23: From this sentence it is not clear whether the authors also present the development of the extended datasets. My impression is that the authors also developed the extended datasets and present them here, hence I suggest mentioning that in this sentence. (If not than in other parts of the paper when development of datasets is discussed, it should be made clear that this is not part of the present work) p5471 l12: "...consistent.." p5472 l10-15: Are fixed monthly values used, averaged over the years (e.g. every June has the same potential evap)? Or is every month different, averaging the 30/31 days of temp and sunshine measurements for estimating the month average potential evap. Please make clear in text. p5472 l28: "A full description.." p5474 l9: This has been also written in p5473 l24 p5474 l4: "...resolution of 25 km encompassing.." p5476 l21: Not sure if this is clearly/properly formulated. Consider "...based on estimates of the magnitude of a discharge event of a given probability." p5481 l10: "Secondly.." in stead of "In addition" p5481 l23, l25: "the error of the.." or the confidence interval itself is reduced p5481 l5-7: consider leaving out (already in discussion of results) p5482 l12: "...in almost every catchment. p5482 l13-15: consider leaving out, (already in discussion of results). p5482 l29-: Finally... Firstly.. but "secondly" seems to be missing.

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