

## Interactive comment on "The response of precipitation characteristics to global warming from global and regional climate projections" by Filippo Giorgi et al.

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Response to the issue of novelty raised by both reviewers. First, we would like to thank the reviewers for their comments, which are certainly well taken. Both reviewers question the novelty of the paper, so perhaps we should clarify the genesis of this article. The paper is essentially drawn from the Alexander von Humboldt's medal lecture given by the first author (FG) at the 2018 EGU general assembly. The paper was solicited by the EGU office, since it is apparently standard procedure that medal recipients are asked to synthesize their lecture into a paper for an EGU journal. As such, the paper is not intended to present a review of the large body of literature covering this field. By

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the same token, it is not intended to be a paper containing new research, since the medal lecture was mostly a synthesis of the author team contribution to this topic. In other words, the paper mostly synthesizes the main messages that came out of previous work conduted by the author team, plus some limited new analyses. Having said this, we want to clarify a few points. First, none of the figures of this paper have been taken directly from previous papers. For the medal lecture and for this paper we produced figures that, although mostly not the result of a conceptually new analysis, had not been presented previously and were produced specifically for the medal lecture. Second, we certainly acknowledge the fact that the paper probably does not cite many relevant previous studies, however this comes directly from the fact that the paper is not a review, but mostly a synthesis of previous work by the authors. Certainly this does not come from a willingness to ignore previous work. We tried to amend this problem by including the literature cited by Referee 1, plus other papers that we considered most relevant for the text, although certainly it is possible that important papers are still not cited. As the referee mentions, there is a huge body of work on this topic, and it is difficult to keep track of it all. Finally, although it is certainly possible that some outcomes of our analysis might not be entirely in line with previous work, we do not think that they "contradict" previous findings, as we hope to show in the response to the specific comments. We hope we have clarified the origin and nature of this paper and it is clearly an editorial decision whether a paper of such nature belongs to ESD, which we deemed was the most appropriate EGU journal to submit it to.

Response to specific comments.

Referee 2 The manuscript has a very important and exciting objective but in the end, it looks like a very routine analysis and I am unable to find any scientific merit. It may be because of the writing style or maybe because the analysis looks very standard. I am also unable to find any new methodological development. The conclusions are as per intuitions and it suits better as a review or assessment article. The hydrological simulations also need a detailed description. The human component is also a major

component in hydrology and I am not sure how the authors are incorporating the same.

Reply: Concerning the novelty of the approach, see our response above.

Concerning the hydrological calculations, we are not sure what the refereee is referring to, since the are no hydrological simulations included in the paper.

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