

Interactive comment on “Optimising predictor domains for spatially coherent precipitation downscaling” by S. Radanovics et al.

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I thank the reviewers for their comments and the authors for their reply. The reviewers raise interesting points. For example reviewer 1 asked a valid question about the domains, which the authors have addressed by an additional experiment. This argument is expanded by reviewer 2, who asks for irregular domains as a rectangular shape is counter intuitive to the concave patterns observed. The authors respond that in an earlier study no significant difference was found and that the computational burden would be too high. I agree with the reviewer and believe that a future study should concentrate on non rectangular shapes (the study the authors quote was published in 2004 and technology has significantly advanced, which should allow to mitigate the

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additional computational burden).

The reviewers question: "Why did you use ERA reanalysis data and not ERA-Interim?". The authors respond: "ERA-40 still has a slightly longer archive than ERA-Interim and a long archive is very important for the analogue method, because the analogue method can not create situations that are not in the archive. The longer the archive the more rare situations will be included. Additionally, the longer archive made it possible to look at the sensitivity to the archive length. "

ERA-Interim data length is 32 years and of higher resolution. The sensitivity analysis is performed with respect to 20 years, thus it could have been also done with ERA-Interim. Indeed the authors show (and quote references) indicating that there is not much impact for time series beyond 20 years. Thus I feel the rebuttal needs to address this issue in a revised manuscript better.

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