

***Interactive comment on “Precipitation
 downscaling using a probability-matching
 approach and geostationary infrared data: An
 evaluation over six climate regions” by
 Ruifang Guo et al.***

Anonymous Referee #1

Received and published: 13 December 2017

here are my comments:

p1l11: "proposed" better present tense?

p2l2: which challenges and problems?

fig1: c is unclear what can be seen there

p3l19ff: the matching is not described, what means matching how is it done? Formula?
 Is that Quantile mapping?

C1

p4l11: ..behind [the] downscaling..

p4l28ff: sentence is unclear, what is a non-raining frequency?

p5l20 and p6l2: A variogram

p5l21: (Matheron,...)

comment: Chapter 2.3 and 2.4 also fig 3, tab.1 are well known scores and techniques
 maybe you skip them.

Fig4: please exclude the islands with climate situations 8 and 9 from the map. the
 status of these territories are unclear.

Fig5: is again a processing scheme, maybe it is better to make one out of fig2 and fig5,
 if you change the order of chapter 2 and 3 you can combine chapters 3.3 and 2.2

p7: I found too much information in chapter 3.2.2 maybe you shorten it and only refer to
 the 2 or 3 most important references.

p8l15: [the] imagedefinitely needs language editing

fig7: inscribe, which picture is cmorph data and which dcdf, and which picture belongs
 to which region, maybe confusing or unclear for the reader.

p9l7ff: please write sill, range when necessary instead of d and c+c0

p9-10l32ff: Fig 10, according to the shown events the conclusion is not significant, the
 better fit of dcdf at gauge scale may be pure luck.

p10l11ff: the bad performance of the approach in winter was something I except read-
 ing your methods. How are the correlations between tb and rain in the winter months?

p10l13: rain-no-rain threshold, where is this threshold defined? how large is threshold?

p10l15: what is meant by complex rain systems?

p12l3f: I don't agree with that. the method has problems with, heavy rain (cold, tall

C2

clouds), with complex rain systems? and in winter

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2017-592>, 2017.