Interactive comment on "Using nowcasting technique and data assimilation in a meteorological model to improve very short range hydrological forecasts" *by* Maria Laura Poletti et al.
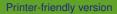
Maria Laura Poletti et al.

laura.poletti@cimafoundation.org

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Thank you for the corrections and the valuable comments even along the manuscript. The answers to the specific questions are hereafter reported.

"Already in the abstract the main issue of this manuscript is raised, namely only three major events in a specific area are evaluated. There is no chance to detect false alarms of such an approach. We work on similar topics and approaches (e.g. Antonetti et al,2019) and are always requested to provide justification when we use a limited

number of events. "

We know that the limited number of events is something to work on. We will insert a sentence in the conclusion highlighting the fact that the number of analyzed event is small, and that it is not possible to make a detailed evaluation of the system performances also in terms of false alarms. We could do the analysis on only 3 events because of limits on computational resources and on the availability of data.

"Another issue I want to be addressed is the "distributed analysis", which considers different basin classes but show no distributed results. I would expect a map of the target area which spatial visualization of the index of agreement chosen. "

The distributed results, shown in Figure 9, 10 and 11, are represented in terms of RCRPS using boxplot. Each boxplot is representative of many points, grouped according to the lead time of the forecast for which the score is calculated. The use of this representation instead of a map is aimed to summarize all the information regarding the configurations of hydrological nowcasting chain analyzed, all the forecast time steps, the different events. If the reviewer believes that it could be useful a representation of the RCRPS results over the domain upon which the score is computed, it can be added a map, fixed the configuration analyzed, the event considered and the lead time, containing at each grid point a mean value of the RCRPS calculated on all the forecasts of the event. This is not in our opinion really representative of the results, which are probably better shown by the box plots of RCRPS in Figures 9 to 11; moreover it would be necessary to do maps on different lead times, increasing the number of figures; maybe an alternative could be adding a map that shows the grid points which belong to each drainage area class, in order to better interpret the aforementioned figures (9 to 11).

"The section discussion and conclusion need a major re-arrangement, as no actual discussion is presented"

The section presenting the discussion and the conclusion regarding the results and

possible future works will be deepened and extended.

The technical corrections along the manuscript have been integrated.

Best regards,

Maria Laura Poletti, on behalf of the co-authors

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