

The paper describes the evaluation of the performances of 2 nowcasting systems both in terms of precipitation and of hydrological response and anticipation. The two systems were analyzed and tested on an area in the south of France considering various basins in the hydrological analysis.

I think the paper is interesting and quite well structured even if in some parts difficult to read. The topic of the paper is of scientific and operational interest.

I suggest to accept the paper after some modifications.

Major issues:

Section 2.2.2. I think the authors should be more detailed about PIAF, I see they cite another paper and a presentation (found on web) but this is an interesting part of the paper. They should insert more formalization about PIAF about the blending methods and some equations and if necessary a scheme, so that readers can understand how the system works. Currently the paragraph is too generic.

It is not clear to me why the authors did not evaluate the products on the same time window. I understand that probably PIAF from a certain lead time head will tend to be really similar to AROME-NWC (or not?). Looking at figures 3, 4, 7 (and others) I would find interesting having the lines (or dots) on same time windows (60 to 360 min). Since I have some experience about how is sometimes (potentially) hard and time consuming a request like this, I do not want to constrain the authors to lengthen all the PIAF graphs if they have not the run easily available. Anyway they should insert some discussion about this point.

Section 3.3 Hydrological verification is interesting, but I have to say is quite complex to follow in some passages. The explanation is detailed but sometime I lose myself between reading it and looking the figures or the tables. I suggest inserting bullet points along the explanation in order to make more schematic the explanations. Two elements would be interesting:

- 1) As I said before for rain evaluation, it would be interesting the case of using the blending in PIAF algorithm in range 60-360 minutes, and trigger hydro model. I do not know if this is possible at least for the two events of hydrological evaluation; if this request too work I do not ask to the authors to carry out the analysis.
- 2) The propagation capability of hydro model. The authors states "The evaluation aims at addressing the following question: How many hours of anticipation on floods can we have at most in terms of intensity and temporality of the flood peaks using rainfall nowcasting". Hydro model could have a key role in some cases. I believe it would be interesting to see the graphs in Figure 10 and 11, leaving the routing of hydro model working for 3-6 hours. It seems to me that hydro model is not exploited in all its potentialities. This reflects also in the Conclusions.

Other comments:

Pgg 2 lines 25-29, the sentence is not clear, please rephrase. Line 29 maybe observations not observation.

Pgg 3 lines 77. Not clear. do you mean "verification methods"?

Pgg 6, line 168 "...The reference is the discharge simulation obtained using the radar rainfall estimates ANTILOPE as input to the distributed hydrological.." this is a reasonable ad used approach, I only suggest to insert some refereces

Pgg 7, line 199 "...PIAF results from the linear combination of AROME-NWC prediction fields and radar extrapolation. The weights given to each predictor are adjusted according to their recent performance against observation..." It is not clear in which way, more details in section 2.2.2 e some more comments here can help to understand.

Pgg 8, lines 227 231. Please rephrase this paragraph is not really clear. I would start "In order to veify..."

Pgg 9 lines 254-255. Please rephrase

Pgg 10 lines 305. Remove "the" in sentence .."the four..."

Pgg 10 lines 320 – 321. "Anticipation time is not proportional to the size of the watersheds, i.e. the smaller catchments with the lowest concentration times do not necessarily have a shorter anticipation time".

I believe that this depends on the single events, and how much it is well forecast in terms of rainfall which is the driver of hydro model. Anyway in some cases this could be also due by the fact that authors stopped the simulations with rainfall availability. It could be interesting to evaluate how results changes exploiting the propagation capability of the hydro model, if and when a gain in anticipation of the flood is obtained.

Pgg 13 the range of RMSE is [0, infinite]

Table 4: outlet Repieux, it is not clear to me if the sequence 5/3/4 is possible. But again