Interactive comment on "Real time drought forecasting system for irrigation management" by A. Ceppi et al.

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This manuscript (Real time drought forecasting system for irrigation management) by Ceppi et al., is interesting due to the importance of water scarcity studies in agricultural areas such as the Po Valley in northern Italy and I think that the article could be relevant for HESS readers. Notwithstanding, in my opinion the paper could be improved with some corrections.

Pag. 15812 Line 8 The fourth IPCC Report has been cited, but the fifth IPCC Report has been published even though only as "Summary for Policymakers". I suggest to cite the fifth IPCC Report (2013) and insert the following reference in the reference list: IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
This suggestion has been accepted

Pag. 15812 Line 14 Please clarify if 30 days can be considered as a long-range forecast
As written to reviewer 2, the term medium-range has been chosen.

Pag. 15814 Line 8 I suggest: "The application proposed in this paper"
This suggestion has been accepted

Pag. 15814 Lines 10-20 In the introduction the aims of the paper are not clearly stated, so, I recommend rewriting the paragraph from lines 10 to 20.
The aims of this study is to provide a tool available on a web platform through a google maps where the landowner is able to monitor soil moisture conditions and forecasts for the next 30 days over his cultivated area. The chosen test-bed is the Livraga maize field. However, it could be replicated in different agricultural field.
To monitor soil moisture conditions 3 TDR probes and one eddy-covariance station were installed, while to produce probabilistic soil moisture forecasts the WRF meteorological model has been coupled with the FEST-WB hydrological model.
However to better highlight this point, we are going to rewrite this paragraph.

Pag. 15815 Line 19 The acronym ARPA must be defined.
This suggestion has been accepted

Pag. 15816 Line 6 Capitalize the first letters of "global ensemble prediction system".
This suggestion has been accepted

Pag. 15817 Lines 3-5 In these lines the authors refer to some precipitation and temperature gauges, avoiding details about their location. I suggest to localize these gauges in Fig. 1a.
We are going to add precipitation and temperature gauges located in the area of study on Fig 1.

Pag. 15819 Lines 1-13 Please clarify how equation 1 becomes equation 2
See the comment written for the reviewer 2.

Pag. 15819 Line 22 I suggest: "Figs. 2 and 3 show" avoiding "The following"
This suggestion has been accepted

Pag. 15819 Lines 23-24 The three TDR probes were installed at 10, 35 and 70 cm depth as stated in these lines or at 10, 35 and 60 cm depth as stated at Pag. 15817 Line 19
Correct depths for the three TDR are: 10, 35, 70, hence the statement at L19, P15817 will be changed.

Pag. 15820 Line 12 I suggest to insert (Fig. 3) at the end of this line
This suggestion has been accepted. As written to reviewer 2, we accept to revise lines 9-17 and to present the Figure 3 first.

Pag. 15820 Lines 26-27 The reference "Wilks, 2006" mentioned in the text is missing in the references list
As mentioned to referee 2, we add this citation in the reference list.

Pag. 15820 Line 27 Change the reference "Jolliffe, 2003" mentioned in the text in "Jolliffe and Stephenson, 2003" as reported in the references list
This was our mistake, the right citation is the one you propose, as mentioned to referee 2.

Pag. 15822 Line 1 I suggest: "As it is shown in Figs. 5 and 6" avoiding "the following graphs"
This suggestion has been accepted

Pag. 15823 Line 2 Is the acronym related with the Nash–Sutcliffe index NS (as in text) or ENS (as in the formula)?
We homogenize the acronym for Nash-Sutcliffe index (NS), as mentioned to referee 2.

Pag. 15823 Lines 8-9 I suggest: "However, in Fig. 7" avoiding "in the following picture".
This suggestion has been accepted

Pag. 15825 Line 11 I suggest: "Fig. 10 shows" avoiding "The next picture"
This suggestion has been accepted

Formulae Results of some indices are described before the equation are defined, I suggest to define the formulae and then to describe the results of the application of these formulae (e.g. Nash–Sutcliffe)
As we answered to reviewer 1 and 2, we accept to extend the Section 3 and to rename it as "Models and methods", adding a paragraph for statistical indexes used in this study, where we define the performance metric shown in the text.

Figure 1 I suggest to localize the precipitation and temperature gauges in Fig. 1a and to insert a bar scale in Fig. 1b.
This suggestion has been accepted

Can the authors explain the reason why have Livraga and Lodi been evidenced?
Livraga is our test-bed and Lodi is the main chief town in the surrounding area, however, we decide to delete Lodi from this map, since it has no relevance in this study, but only a geopolitical meaning.

Figures 2,3 and 4 I suggest to differentiate the contributions of precipitation and irrigation in these figures using two different colors in the bars. Moreover I suggest to use the same axis dimension for all the three figure (e.g. the Soil Mosture axis of Fig. 2a is different from the Soil Mosture axis of Fig. 3a).
As answered to reviewer 2, we will plot in different colors irrigation and precipitation amounts. Then, we are going to enlarge the axis fonts and, above all, we will use the same axis dimension for all the three figures.

Finally I suggest to insert the main grid also for the x-axis.
This suggestion has been accepted

Figures 9 and 10 Part of the text in the legend box of these figures is in Italian
Ok, we are going to homogenize them in English.