Dear Editor,

Again thank you very much for taking into account our paper.
In the following table, we answer in detail to every comment given by you and the two referees. Thanks to your observations, we corrected our mistakes, moved some sections and, hopefully, improved the quality of the paper.

Kind regards
The authors

Comments by the editor	Comments by authors
The revised version is indeed much improved, as confirmed also by both Referees.	Thank you very much. You will find main modified sentences and sections highlighted in yellow in this last paper version.
The main comments raised by Referee#1 all require that you better clarify the final objective, applicability and merit/novelty of the work, I would ask you do so in the final version.	According to your suggestion, we added and moved some sentences, above all in the introduction, to better clarify the goal, applicability and merit of our work.
In addition to a list of suggestions for improving the presentation (see both Referees' comments), Referee #1 suggests also a re-organisation of the section presenting the Methods that I agree may really improve the readability and understanding of the paper by the Readers.	Thanks to this comment that we appreciated a lot, we completely reviewed this section. We maintained the description of the study-area at the beginning of Section 2, then we described the meteorological and the hydrological model with required data. Afterwards, we wrote the description of coupling strategy with warning thresholds in one section, while statistical indexes are left at the end of Section 2, as suggested by previous referees. Unifying the hydrological model and required data in one section, now we think to give a more linear description without back and forth between model and its parameterization as properly raised by referee 1.

Comments by Reviewer 1	Comments by authors
Major issues: - The novelty and scope of the work should be clarified. Is the goal to present a tool for irrigation optimization? If so, is it truly applicable (see below)? Or is the main novelty the combination of existing models and its validation on the specific case study?	As written in the text, the goal of our study is to create a tool for irrigation optimization providing landowner with soil moisture observations and forecasts in order to give him the possibility to know in advance whether he has to irrigate or not his maize field. In order to provide soil moisture forecasts, in the 2012 growing season, we couple two models: the WRF meteorological forecasts and the FEST-WB model to run hydrological simulations for soil moisture forecasts. The applicability of such a system goes beyond this case-study and it can be replicated in any geographical area and vegetated field, on condition that soil features, weather, hydrological data and irrigation time allotments are available.
- The applicability of the approach beyond the specific case study and year should be better explained. The authors state they cannot run the model beyond year 2012, due to lack of data. I understand the model cannot be validated due to lack of soil moisture data, but meteorological data should be available to run the model and to further assess its impact in terms of water savings, via a series of what if? scenarios (what if the farmer irrigates according to the initial plan? What if the farmer follows exactly the PREGI suggestions?). If this kind of data is not available routinely, then I wonder what the use of the proposed approach is.	As far as it is concerned this issue as it is written in the text, we did a calibration of our hydrological model for soil moisture during years 2010 and 2011, without including the WRF weather forecasts, which were available only in the 2012 season. During this last year of the PREGI Project (2012), we set up the forecasting chain in real time to produce on the web application, shown in the appendix, soil moisture forecasts useful to landowner for irrigation optimization. At the end of the season, after having collected all observed data, we carried out, first, a validation of the FEST-WB model for soil moisture variable, and then a performance analysis of the hydro-meteorological chain with statistical indexes shown in Sect. 3.2. Unfortunately, this statistical analysis about the operative chain performance was only possible for the 2012 season where, beyond soil moisture observations, we had precipitation and temperature forecasts available to feed the hydrological model to obtain soil moisture forecasts. During the 2010 and 2011 growing seasons, the WRF forecasts were not available, and we cannot run the operative chain, thus a calibration of the hydrological model was the only possible solution, but meanwhile important to assess the hydrological model reliability.
The method section should be reorganized. The order in which material ought to be presented slightly depends on the main novel element in the manuscript (see above), as the novel aspect should appear first in the model description. Nevertheless, I think the authors should first present the model and its data requirement, perhaps the operative chain (but see below), then move to the specific case study and finally discuss the associated model parameterization. The irrigation scheduling (now at the end of page 5) should be presented earlier on, as it represents a crucial aspect for the model and its purposes. Right now the model section is a little confusing, with a lot of back and forth between the model and its parameterization for the Livraga case. A more 'linear' description would allow grasping the	We appreciated a lot this suggestion, because we realized that the Section 2 was a bit confused in the description of the hydrological model and its required data. Hence, we re-arranged this section moving and changing some parts. In particular, as answered to the editor, we first present the area of study, then the meteorological model and after we unified the hydrological model and its required data removing the back and forth written in the previous version. We merged the coupling strategy and warning thresholds, leaving the statistical index description at the end of the section. The crucial aspect of irrigation scheduling is now included in Sect. 2.3, since it is a main required data for hydrological model in this project.

applicability of the approach beyond the specific case.	
One of the most interesting aspects of this work is whether such a complex model will result in a significant water saving. The authors touch upon the question in Section 3.3, where, however, the discussion of the figures appears very rushed. I suggest simplifying the panels, e.g., by reducing the number of lines, merging figures 6 and 7 (or clarifying their difference), and most importantly taking the space to describe the figures.	We accept this suggestion and we merged the figure 6 (related to June and July simulations) and 7 (related to August simulations) in one figure only. We also changed some sentences to better explain the discussion.
The text is characterized by an excessive number of paragraphs. The authors should put care in deciding when, after the end of a sentence, a new paragraph is needed and when it is not.	We accept your correct suggestion and we reviewed the number of paragraphs.
I find the operative chain description rather difficult to follow, only partially useful, and somewhat distracting in its present form. I wonder if a more generic example, with indication of the 'delays' with respect to the initial time, would be easier to follow, maybe even in the form of a table, with columns for the time and action.	We accept this comment and we created a table (Table 2) as you suggested to describe the operative chain with times and delays of actions.
Page 8, L32: 'field' not 'filed'	This suggestion has been accepted.
Section 2.6: the symbols appearing in Eq. 4 should be defined immediately after Eq. 4; Eq. 5 should be defined before discussing what indications it may provide; finally, it is rather unclear where o enters the picture in Fig. 6	This suggestion has been accepted. $\overline{O}$ enters in NS index shown in Figure 4, not in Figure 6.
Section 3.1: I suggest reorganizing the section slightly, first discussing the results of the validation, then delving into which irrigation applications could have been avoided, and finally discussing the use of PREGI	We did not change the Sect. 3.1, because we find linearity in the result description: in particular, we first show the calibration results for the 2010 season, then for the 2011, and, at the end of the section we show the validation results for the 2012 growing season with only the FEST-WB hydrological model for the soil moisture variable.
P11, L23: 'after' or 'during'?	After (i.e. at the end of) the 2012 growing season, in order to collect the required observed data to carry out the validation analysis of the hydrological simulations for soil moisture.
P14, L33: 'combining', not 'combing'	This suggestion has been accepted.
Appendix: In the interest of space, I suggest removing the appendix and the associated figures, as it is unclear what they add to the information provided in the main text (Figure 10 is not too dissimilar from Figure 8).	Since the web platform has an important role in this project, providing the possibility to check in real time soil moisture and precipitation forecasts in Livraga maize field for farmers, we decide to do not remove it. Figure 10 (now Figure 9) shows the developed platform which was daily viewed by the Livraga landowner and farmers. Figure 8, instead, shows the comparison carried out between simulated soil moisture by the FEST-WB model assuming that the landowner had followed his decision

	criteria (with three actual irrigations) in 2012, and if he had followed the PREGI system (with two hypothetical irrigations).

Comments by authors to Reviewer 2

All suggestions have been changed according to his comments.