General Comments
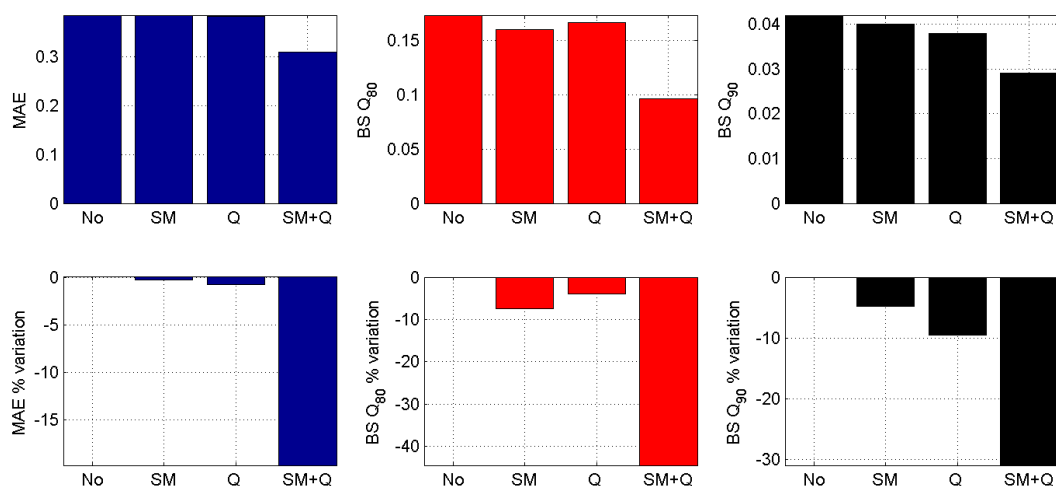
The authors addressed most of the reviewers' comments and, in my opinion, the paper was significantly improved. Specifically, a more detailed description on the LISFLOOD model calibration and on the data assimilation procedure was added in the paper. However, the reading of the paper submitted on WRR by Wanders et al. (2014) is still needed to fully understand the calibration procedure. It would have been easier if the authors had provided this paper as auxiliary material.

Moreover, I still have two major comments/suggestions that, in my opinion, should be addressed before the publication.

1) The soil moisture timeseries shown in Figure 10 are for me not sufficient to have an idea of the agreement between satellite and modelled data and, hence, their impact on the model. The visualized timeseries are too short and looking this figure is not clear how it is possible that satellite soil moisture data could provide some improvements. Can the author show a longer time series? What is the correlation between modelled and satellite data? In the figure, the model simulation without the assimilation should be also shown (e.g. the ensemble mean). In my opinion, this will clarify the reader to see the potential of satellite data for hydrological modelling.

2) I like that the authors added the simulation with the assimilation of ONLY satellite soil moisture data and in the configuration for which the model was calibrated with 7 discharge stations. This configuration could represent the real operational conditions of the EFAS system and, hence, the assimilation experiments carried out in the study really show that the assimilation could improve the EFAS system. However, I would give a slightly different interpretation to the results shown in Table 2 (if I understood correctly!). In my opinion, the results should be analysed in the case of no assimilation (baseline configuration, Q7noDA) and compared with those considering the assimilation of only soil moisture (Q7satDA), only discharge (Q7), and soil moisture plus discharge (Q7sat). By doing this analysis (see the figure below), it appears evident that the assimilation of soil moisture or discharge (only) provides only a little improvement in the performance while the joint assimilation has a significant positive impact. This is not expected to me as I suppose that the impact of assimilating discharge should be higher than soil moisture, and I do not expect the large differences that are obtained from the joint assimilation. Do the authors have some explanations for that?

Specific Comments

P2, L11:   "ensure optimal performance". I suggest smoothing this sentence as the true errors of satellite soil moisture products are unknown and the optimal performance cannot be ensured.

P2, L15:   "reduced by 65%". To which comparison are you referring? I was not able to understand from the results reported in Table 2.

P5, L15:   Results with the assimilation of soil moisture only are also shown in the revised manuscript. Please revise.

P6, L16:   It should be 2 layers for the simulation of the unsaturated zone in the original version of LISFLOOD.

P7, L12:   Typo "mount" should be "amount"

P12, L2:   Can the authors specify the measurement error covariance for soil moisture observations? At least the mean values could be reported. This would be particularly important for future studies aiming to assimilate these satellite products.

P13, L28:   I would add the word "realizations" after "102 and 15300"

P14, L3:   Typo "comclided" should be "concluded", I guess.

P17, L15:   Specify better that the overestimation is present in the period selected for the visualization in Figure 4 that does not represent the whole period. I needed to reread the paper more times to understand this.

P17, L28-29:   Please revise this sentence, as it is not clear.

P19, L24:   Section 3.4 – This section is not clear to me, see the General Comments. For instance, it reads: "The uncertainty in …. is reduced for Q7noDA compared to Q7". From the results shown in Table 2 it seems to be the opposite, please check.