

DETAILED COMMENTS FOR AUTHOR(S)

- 1 Page 6538: This sentence should be clarified "Precipitation recorded in Sarajevo, Tuzla and Zavidovići was lower than in eastern part of the basin...", because in previous sentence, it is stated "The highest amount of precipitation was recorded in Tuzla....."?
- 2 Precipitation that was registered in May 2014, during the rains of 2-5 days, belong to the category of extreme rains. It is not clear how they were treated when determining their return period? Are they tested for statistical exceptions? If yes, how is a probability distribution curve further calculated? The claim: a return period of 5000-10000 years, with no real evidence, is not acceptable!
- 3 Fig 2: scale for the return period isolines of maximum precipitation in April and May for different duration of rain, is not unacceptable, not visible - it should be changed.
- 4 Chapter 4 is devoted to the flood of January 2010, but not for the flood in May 2014? This flood has been marked as important, but it is twice the small scale of the floods which occurred in May 2014 in the basin of the river Bosna.
- 5 During determining of the probability of maximum annual discharge of the river Bosna at the hydrological station Doboj for the period 1961-2014 it is not clear:
 - a. How is determined the maximum discharge in May 2014 in the amount of 4121 m³/s, as well as the appropriate volume of the flood wave in the amount of 1,464 million m³, when it is stated that all hydrological stations downstream from Doboj were destroyed, and the fact that the town of Doboj was under water?
 - b. The fact that the maximum discharge of the river Bosna near Doboj in May 2014 was about 45% greater than the following recorded maximum flow in May 1965 of 2,852 m³/s, while the volume increased around 85% (1464 million m³ compared to 789 million m³) indicates that the flood event of May 2014 have to be checked if it belongs to the category of "statistical exceptions" and after continue the process of it. This was not done in the work!?
 - c. Table 7: data show that the return periods of the May floods in 2014 are estimated on the basis of the probability function calculated for the period before 2014 (data sources: ZV, FHMZ BiH, 2012). This is unacceptable!
 - d. The state that the maximum discharge of Bosna at the confluence of the Sava river was higher than the measured discharge of the Sava on the bridge near Šamac (Croatian Hydrometeorological service on 17 May – 2 day after the Bosna River reached its maximum at Doboj) is or not underestimated?
- 6 It is not clear for which periods were performed calibration and validation of parameters of the developed hydrological model of the river Bosna, because the data on the page 6544 and data from Table 8 not agree.
- 7 It is not clear which type of time step data calculations is performed during the periods of calibration and validation of hydrological model. Application of model for the flood wave in May 2014 was carried out with daily time step data, which is quite a rough estimate, considering that the authoritative time of concentration in many decomposed sub-basins (basin delineation) is less than 24 hours. Fig. 7 indicates this by inflow and outflow hydrographs for the Lukavac reservoir on the river Spreča.
- 8 The hydrological model of the river Doboj should be made with hourly data time step, because the use of daily data loses clarity of the extremes. The hydrological model with such daily data showed that maximum flow rates of the river Bosna during the May floods of 2014 were higher compared to the data presented in Table 7 and the Fig 6. This indicates that my observation shown in item 5d has a real justification.

CONCLUSION

The reviewed work is very significant for a much wider area than is the basin of the river Bosna. However, due to hydrological correctness this paper should be correct before publishing in accordance with the given suggestions.