

Interactive comment on “Results of the post flash-flood disaster investigations in the Transylvanian Depression (Romania) during the last decade (2001–2010)” by V. Arghiuș et al.

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Received and published: 15 January 2014

Dear Dr. Elena Petrova

We would like to thank you for your helpful and useful comments on our manuscript. We will take into account your recommendations. The paper will be improved and re-submitted when we will receive the next review from the Editor. The point-by-point responses to your comments are shown in the following.

Comment 1: Geomorphic differences of the study basins should be analyzed in more detail and shown on the corresponding relief maps, because these characteristics are

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very important for the flash flood occurrences.

Answer 1.1: In this article we have tried to address the issue of genetic factors, especially for the analyzed events, with emphasis on the triggering factors (i.e. Meteorological context). However, Table 2 includes the main characteristics of the basins studied, including the relevant morphometric and geomorphic parameters. In this context, we will insert the following text in the end of the section 1.1., page 6202, before the line no. 15: “The main characteristics related to the analyzed basins are listed in Table 2”.

Answer 1.2: Regarding the relief maps we added the Digital Elevation Model (DEM) in Figure 4. Also, we have maps representing the slope gradient and drainage density for each basin, but by their insertion in the paper would make it too extensive.

Comment 2: The demographic density and land use types of the study areas should be shown.

Answer 2.1: The demographic density in the basins studied is shown in the last column of the Table 2.

Answer 2.2.: Regarding to the land use type of the studied areas, values on forestation coefficient (the forest-use land is the main land use type related to flash-floods) were mentioned in the same table.

Comment 3:p.6208, line 25-27 – “During the 2001–2010 period, the damages represented 1.50% of the cumulated value of the entire country (2005 USD69 574 000 as compared to 2005 USD4.678 billion): :” – The sentence is unclear. Please, rephrase.

Answer 3.1.: Firstly, the significance of the year 2005 (e.g. 2005 USD69 574 000) is related to the analysis of the direct, tangible damages that require normalization of event loss values (goods and assets values and the cost of repairs/replacements) for changes in inflation. Thus, using the annual average values of the Implicite Price Deflator, an adjustment of damages cost at the values of goods and services in year 2005 was performed. These mentions were included at the end of the Chapter 2

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“Methods and data” (see page 6205, line 1-7). Secondly, “the damages” were replaced with “this value”. We have added additional text in this reply, to understand the context. The text could be modified as follows: Counting the direct, tangible damages caused by the analysed flash flood events, the total summed up to 2005 USD69 574 000 (Table 4). “During the 2001–2010 period, this value represented 1.50% of the cumulated value of the entire country (2005 USD69 574 000 as compared to 2005 USD4.678 billion): : :”

Comment 4: Fig.2 – The location of the appropriate flash-flood events should be shown on the figures.

Answer 4.1.: The study region has been inserted in these figures. On the other hand, we consider that the representation of the study basins on such scale of map is irrelevant.

Comment 5: Fig.4 – The figures are too small. The legend on all three maps is the same and can be shown once.

Answer 5.1. The figures have been modified according with your suggestions. In addition, related to your recommendation from Comment 1., we added the Digital Elevation Model (DEM).

Comment 6.: The places most affected by the flash flood disasters should be shown.

Answer 6.1.: Unfortunately, we haven't sufficient data to provide such a figure. The only available data are for the Ciunga Basin. Having a much larger area, the Tarlisua and Feernic basin, require detailed satellite imagery during flash-flood events that we do not have. In this context we consider irrelevant such representation.

Comment 7: (p.6201, line 4) spelling: “hydro-“ (instead of “hidro-“)

Answer 7.1: Corrected

Comment 8: (p.6203, line 3) wording: “economic” (instead of “economical”)

Answer 8.1.: Corrected

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Comment 9: p.6209, line 11 – “The main factor is naturally associated with natural causes.” – Please, rephrase.

Answer 9.1.: This section has been rephrased. The text has been modified as follows: “The main factor is asso ciated with natural causes.”

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 6199, 2013.

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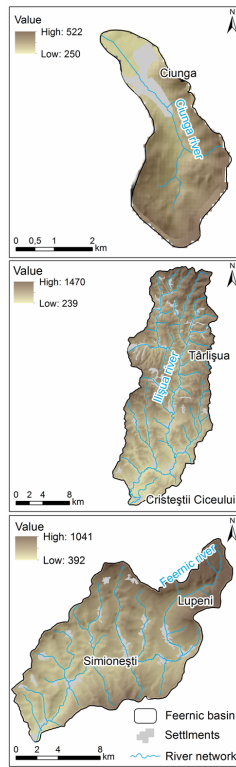


Fig. 1.

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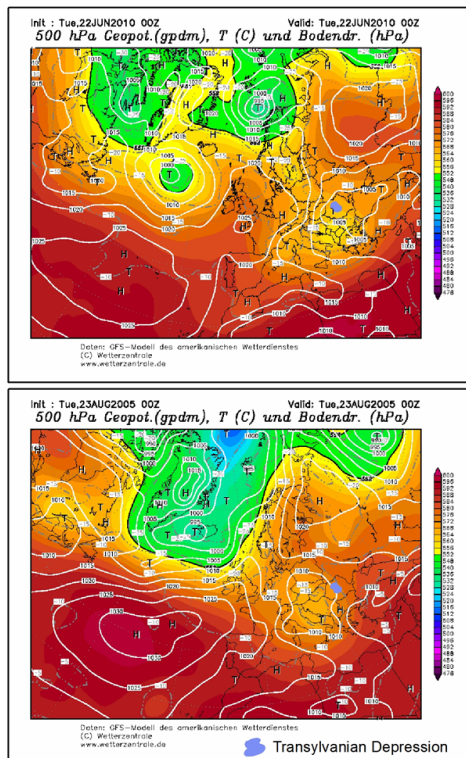


Fig. 2.

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