

Interactive comment on “Meteorological analysis of flash floods in Artvin (NE Turkey) on August 24, 2015” by Hakki Baltaci

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I thank the reviewer for his/her constructive comments. According to your reviews, I rearranged the moderate and minor points as follows: Moderate Points:

Reviewer quote 1: At the end of abstract, I recommend one sentence as a take-home message (general message)

Answer 1: According to your comments, i added “This study supports conventional weather analysis, satellite images, and forecast model output to alert forecasters to the potential for heavy rainfall.” Sentence at the end of the abstract.

Reviewer quote 2: Similarly, in the Conclusion Section, please add a few sentences as a take-home message for decision makers to emphasize the applicability of the

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outcomes of this study

Answer 2: At the end of the Conclusion Section, “The synoptic and atmospheric descriptions give better knowledge of the mesoscale convective systems and the mechanisms driving torrential rains in the EBS. It is hoped that more detailed studies will be performed on synoptic development leading to extreme summer precipitation events in EBS.” Sentence was corrected and added.

Minor Points:

P1. L12. ...total accumulated rainfall AMOUNTS of 136, 69, and 109 mm WERE measured. . . . It was corrected.

P1. L22. Delete ‘the’ before Artvin. Done.

P2. L2. Insert ‘the’ before warm.on THE warm Mediterranean Sea. . . . Done.

P2. L6. Delete ‘the’ before 2002. Done.

P2. L6. Delete Euro sign (. . . .caused 1.2 billion damages. Similar, also correct: P2.L7, P2.L8, P.2L9. . . . Done

P2. L9. Delete ‘the’ before 2000. . . .flood in 2000. . . . Done.

P2. L10. WORD CHOICE. My recommendation:it is necessary to IMPROVE OUR CURRENT UNDERSTANDING about the. It was corrected.

P2. 16. Re-write. My recommendation: Depending on the catchment characteristics, mainly two types of flood occur in Turkey. It was corrected.

P2. L18. COMMA. Insert a comma after ‘affected’. Done

P2. L18. CAPITALIZATION. Capitalize ‘river’. . . .of the Meric River. . . Done.

P3. L5. Re-write. My recommendation:in Antalya, a coastal city located on the Mediterranean Sea. Done.

P3. L8. Re-write. My recommendation: . . .investigated the hydrometeorological role of floods occurred during 7-10 September, 2010 in the Marmara Region. Done.

P3. L15-17. Re-write. My recommendation: The underlying geology of the EBS is generally consists of semi-permeable volcanic rocks which reduce infiltration and enhance runoff production (XXXX). It was corrected.

P3. L17-19. Re-write. My recommendation: The north-eastern coastal parts of Turkey, regions located on the windward slopes of the EBS facing the Black Sea, receives more than 2000 mm of annual precipitation which is the wettest part of the country. It was corrected.

P3. L19-21. Re-write. My recommendation: The large mountainous area which extends through the Black Sea, and slope instability due to steep gradients as well as intense rainfall result in flash floods and landslides and threaten the settlements in the EBS region. It was corrected.

P4. L1. VERB. . . .facilitate. . . Done.

P4. L7. TYPO at the end of dollars. . . .dollars' Delete the apostrophe. Done.

P4. L8. WORD CHOICE. . . .the DETRIMENTAL EFFECTS of floods for. . . . Not changed

P4. L11. WORD CHOICE. . . .the aim of this research is TO FOCUS on. . . . Not changed

P4. L20. Insert a comma after synoptic. . . .synoptic, and Done.

P4. L22. WORD CHOICE. . . .with WEATHER forecasts. . . . Done.

P5. L4. Insert 'to' before retrieve. . . .as well as TO retrieve. . . . Done

P5. L16-19. Re-write. Section 2.3 was rewritten according to the comments of the Reviewer 1.

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P6. L2. Insert a comma after 'domain'. . . .domain, and Done

P6. L9. Re-write. My recommendation: This mountain chain extends parallel to the Black Sea and Done

P6. L11-12. Re-write. My recommendation: . . .the region also experiences orographic effect on precipitation. Not changed

P6. L14-15. Re-write. My recommendation: The rain shadow effect on the lee side of the mountainous area CAUSES a more. . . Done

P7. L2. WORD CHOICE. . . .(MAP) VARIES from. Done

P7. L6. Explain MCS. Describe acronym 'MCS'. It was explained in Introduction Section

P7. L7. WORD CHOICE. . . .were OBSERVED AT Hopa, Rize, and Pazar with Done

P7. L13. Insert a comma after 'Hopa'. . . .Hopa, and Done

P7. L17. Insert a comma after 'Arhavi'. . . .Arhavi, and Done

P7. L20. WORD CHOICE. . . .Another coastal station, Arhavi. . . . Done

P7. L22. Re-write. Describe it. Temporal distribution of WHAT? Temporal distribution of XXXXXXXX that. It was corrected by adding "precipitation" after Temporal

P8. L1. Insert 'THE' before midday.at THE midday on the. . . . Done

P8. L2. REPLACE. Hourly observations AT the three stations. . . . Done

P8. L2. REPLACE. . . .increased FROM 27 to 32. . . . Done

P8. L3. REPLACE. . . .DROPPED to 2-4 mm. . . . Done

P8. L6. DELETE 'station'. . . .at Hopa during. Done

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P8. L19 CHECK. I am not sure 'phenomenology' is the correct word there? Not changed

P9. L4-7. Re-write. (Azarbijan). Make sure that a reader should understand that Azerbaijan is another country that locates east of Turkey. Not changed

P9. L17-18. Re-write. My recommendation: . . .with a decrease in temperature from Done

P10. L1. VERB. . . .that developed severe. . . . Done

P10. L4. REPLACE. . . .activity before and during Done

P10. L11. . . .were used to examine THE ATMOSPHERIC CONDITIONS ON 24 August. . . . Done

P10. L17-19. Re-write. You do not need to say more yellowish. On the other hand, more intense storms were observed over the land areas such as Georgia (Fig.7a). Done

P11. L5. WORD CHOICE. . . .was investigated IN DETAIL by. . . . Done

P11. L9. WORD CHOICE. . . .the role of SSTs of the Black Sea on. Not changed

P11. L10. INSERT 'the'. . . .for THE BS. . . . Done

P11. L12. WORD CHOICE. . . .were NORTH OF the latitude of 44°N. Done

P11. L13. VERB TENSE. Use PAST TENSE. . . .exceedED Done

P11. L14. WORD CHOICE. . . . values in NORTH OF 44°N latitude. Done.

P11. L20. VERB TENSE.station observations WERE clearly. Done.

P12. L1. Describe Alaro model. Detail description of the Alaro were given in Section 2

P12. L5-7. Re-write the sentence. Not changed

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P12. L12. VERB TENSE. . . .offices GAVE alert messages. . . .instead of GAVE, I used issued term.

P12. 14. Insert a comma after 'Artvin'. . . .Artvin, and Trabzon. . . Done.

P13. L7. WORD CHOICE. . . .was transported FROM THE SEA to the atmosphere. Done.

Figure 1. Narrower region for Turkey map. Show Georgia and Azerbaijan as countries. Not changed

Figure 2. In the caption: Hopa CITY centre. . . . Done.

Figure 4. In the caption: . . .in THE eastern Black Sea. . . . Done.

Figure 5. In the caption: I recommend using following: . . .units in g kg-1). . . . Done

Figure 5. L7. Insert a space after 2015, 00:00 UTC. . . . Done.

Figure 8. L2. Mean of August. . . . Done.

L3. . . .over THE Black. . . . 24 August. . . . Done.

L4. . . .long-term Augustdata ARE derived. . . . Done.

Figure 9. Delete comma after region. . . .region (a) for. . . . Done.

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