

General comments

The paper deals with a meteorological analysis of flash flood in Artvin (NE Turkey) on 24 August 2015. Apart some technical errors below reported, the paper is understandable and the author describes the topic with a good introduction well referenced. He also analysed the meteorological episode using radar, satellite images, weather models and synoptic meteorological stations, giving an overall comprehension of the meteorological phenomenon occurred in the NE of Turkey that caused a flash flood with a landslide. Hence, the paper is reasonably addressed in the aims of NHES.

Specific comments

P2, L16-19: While I understood the second type of flood, it is not clear the first type. Please, clarify it.

P6, L3: I think the comparison is between Figure 4a and 9: can you show them with the same colour legend in the investigated area? The differences between models and observations would be better appreciated.

In fact, in P12-L4, when you say: “Optimum spatial coverage...” It’s difficult to spot with different maps and colours.

P5, Section 2.3: Please, add some references about the NWP models, in particular some physics features about the WRF (used version) and the ALARO models.

P6, L13: What do you mean with “moderate climates”?

P6, L17: you wrote: “the highest amount of precipitation is observed during wet and dry seasons”. It confuses me: how could it be in dry season, if we are talking of the highest amount?

Conclusions: It is well known that these extreme events are usually studied from a hydro-meteorological point of view and, as future developments, it would be interesting to see hydro-meteorological models coupled together in order to forecast the exceeding a warning threshold at least, since the meteorological warning has been correctly issued by the TSMS.

Technical corrections:

P1, L22: I suggest: “...flood damages in the Artvin area.”

P2, L5-10: I suggest: “For example, just one flash flood in 2002...”

P2, L9: I suggest: “For example, just a single flash flood caused €1.2 billion Euro damages in the Gard region of France in 2002 (Huet et al., 2003), €300 million Euro damages in the Pinios (Greece) flash flood during 1994 (Gaume et al., 2008), €65 million Euro economic losses in the Magorala (Spain) flash flood in 2000 (Llasat et al., 2001), and €4.6 million Euro in the 2007 Mastroguglielmo (Italy) flash flood event (Aronica et al., 2008).

P3, L9: Remove “a” before “slow-moving”

P3, L13: I suggest “triggered landslides”

P3, L16: Remove “the” before “rainfall”

P4, L7: Remove the apostrophe after “dollars”

P5, L2: I suggest “meteorological stations”

P5, L4: I suggest: “and to” instead of “as well as”

P5, L9: I suggest “as the previous day atmospheric...”
P5, L19: I suggest: “In the Alaro meteorological model...”
P6, L16: I suggest: “due to...” instead of “because of...”
P7, L4: I suggest to replace “instead of” with “while”
P7, L9-10: I suggest to remove this sentence: “Nevertheless...”
P7, L16: Replace “those” with “the”
P8, L2: Replace: to with “from”
P8, L3: Do you mean “dropping from 4 to 2”?
P8, L7: I suggest: “The maximum daily precipitation value was...”
P9, L6: I suggest: “eastern” instead of “east to”
P9, L9: “and through the axis”: this sentence is not clear, please clarify it.
P9, L16: add “the” before “moving”. Remove semicolon after “thus”
P10, L5: “(not shown)”: do you mean not shown in the text?
P10, L19: I suggest “the storm intensity”
P12, L1: I suggest: to the Alaro model”
P12, L10: I suggest “issue” instead of “give”
P12, L20: I suggest “6 to 7 hours”
P13: L12: I suggest to move this sentence at the beginning of the conclusion section.
P20, L6: I suggest: “in °C”