

# ***Interactive comment on “Risk management framework of environmental hazards and extremes in Mediterranean ecosystems” by Panagiotis T. Nastos et al.***

## **Anonymous Referee #1**

Received and published: 27 September 2020

The paper presents a double review: on one side there is the presentation of a framework for risk management, while on the other there is a review of extreme meteorological hazards occurring mainly (but not only) in the wider area of Greece and Eastern Mediterranean.

As for the first review, it would be important to control used terminology and show similarities/dissimilarities with most recent literature. Further it would be important to describe the entire workflow in a more fluid way and less as a list of definitions.

As for the second review, it presents several recent findings for the considered hazard and case study area. However, this part is not connected with the previous one.

It would be important to connect the two parts to make understand why and how they are connected.

Below some specific comments to the text and to the figures.

- Page 2 line 35: I would not start the paper with that sentence, rather I would mention the several factors at the global scale and then say that environmental degradation is one of the majors. - Page 3 line 73: I would start e.g., like "The main components of the risk management framework (Figure 1), namely ... - Page 3 lines 82-84: not all under "" is in italic. - Page 3 section 2.1: This section, which is almost completely composed by definitions, can be made as table, so that people familiar with the terminology can also decide to skip. - Page 4 line 99: Vulnerability not necessarily indicates a possible future state, but can indicate also a present state. - Page 4 line 109: you mention database development in relation to the creation of an archive (or inventory) of historical data and events. However, such archive do not necessarily means creating a database (although often it is a database). I would therefore use a more general term rather than a specific technological choice. - Page 4 line 114: the element GIS is not related to the previous ones in the list. - Page 4 line 118: You mention risk quantification, but after you switch to hazard. - Page 4 line 121: Often there is confusion between vulnerability and susceptibility. You can consider if give a definition of both to clarify which definition you are following. - Page 5 line 138: I would remove the acronym from the title and put after the first occurrence in the text. - Page 6 line 159: A DSS is not necessarily web based- - Page 6 line 169: Dalezios and Eslamian, 2026 -> 2016. - Page 6 line 176: In a previous section you say that Enviornmental hazards include also natural hazard and I would include also Meteological hazards into those, therefore I would use only of the two terms. - Page 7 line 190: Advances in environmental rely: maybe missing a word. - Page 7 line 190: In the following, : maybe missing a word. - Page 7 lines 191-191: maybe need to revise the entire sentence. - Page 7 line 206 up to 5 - up to five times the - Page 9 lines 261-262: The tornadoes and waterspouts are identical phenomena, the first definition is used over land and the second over sea. -> Tornadoes and water-

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spouts are the same phenomena, but the first occur over land while the second over sea. - Page 9 section 3.3: you should clarify if when you mention only tornados, you refer only to events over land or you refer to bot tornado and waterspouts. - Page 9 line 267: damage -> damages - Page 9 line 278: you have not given a definition of funnel clouds and why is different from tornados. - Page 9 line 284: Figure 5 -> Figure 6 - Page 10 line 288: was -> were - Page 10 line 304: Figure 6 -> Figure 7 - Page 10 line 316: Figure 7 -> Figure 8 - Page 11 lines 340-350: Several researchers have noted the importance of convection and especially, mesoscale convective systems in producing warm season precipitation. -> Several researchers have noted the importance of convection, and especially mesoscale convective systems, in producing warm season precipitation. - Page 12 line 352: using satellite imagery found -> by using satellite imagery was found - Page 12 line 367: forcing -> forcings - Page 12 line 379: Figure 8 - Figure 9 - Page 12 line 382: and covers a -> and covering a - Page 13 line 385: drought -> droughts - Page 13 lines 389-390: replace four cases of )( with ; - Page 13 line 404: Figure 9 -> Figure 10 - Page 13 line 411: Figure 10 -> Figure 11 - Page 14 line 442: Figure 11 -> Figure 12 - Page 14 line 446: analyze the results and case studies for each of the three steps of risk assessment: this does not emerge from the text. - Page 15 line 454: floods: this impact in not among the case studies.

- Figure 1: Above the top box is written Risk Assessment, which includes three elements, one of which is again Risk Assessment. - Figure 2: You have Hazard Assessment twice and can be a bit confusing. Further it is not clear why some elements that appear similar in the figure are considered in different ways or hierarchical levels in the text (e.g. under Risk Evaluation you only present DSS and they are useful fr other elements wich graphically are represented in the same way). - Figure 5: this figure is not cited in the text. - Figure 7: what do numbers indicate? - Figure 8: in the legend is showed tornadoes. Is that correct? - Figure 9: The caption of the graphs on the left seems not consistent with the text.

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