

## ***Interactive comment on “MEDEX: a general overview” by A. Jansa et al.***

**Anonymous Referee #1**

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**General Comments** The present paper entitled: MEDEX: a general overview” is overall a descriptive review of the project MEDEX during all of its phases. Its design, its implementation and the results of the project are well and comprehensively analyzed in the text. However, in my opinion since the project refers to the whole Mediterranean region, there was an unequal presentation of the results concerning western and eastern Mediterranean. In fact for the western Mediterranean the authors give a full report and analysis of the facts, episodes and results that were found, while for eastern Mediterranean the description is limited in 2 or 3 facts and episodes with a complete lack of the extreme events in eastern Mediterranean in the calendar (both of wind and rainfall). Similarly, in the analysis of literature there are plenty of references and analysis of previous studies regarding western Mediterranean while for the eastern part the references are very limited.

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**Specific Comments.** - I was wondering the thresholds extremes (60mm/day for rainfall and 20 or 25m/sec for wind) are they results from a statistical analysis or statistical methodology or did the authors took them arbitrarily? - In the calendar of the extreme events countries as Bulgaria, Croatia, France, Italy, Spain are included while others like Greece, Turkey, Cyprus, Israel are not found. Especially for Greece there are numerous days with precipitation over the 60mm/day limit and also many days when extreme winds blow over the Aegean Sea making the sailing of the ships impossible. - I agree with the authors comments that numerous extreme precipitation events can occur with shallow depressions. They presented analytical and persuasive examples for western Mediterranean while once again for eastern Mediterranean not even one example is presented (with extreme precipitation due to a shallow depression system). One classic example of this atmospheric circulation over the eastern Mediterranean is a combination of high surface pressure over central and eastern Europe and shallow low pressure to the south of Italy and Peloponnisos while in the upper levels low geopotential heights or a cut off low cover the southern Balkan Peninsula. This combination of the upper atmospheric circulation centers with the orography in the eastern parts of Greece (mountain Olympos, Ossa, Pilio and the mountains of Eubia) have as a result the extreme rainfall totals even in the eastern regions of the aforementioned mountains. These precipitation heights may exceed 100mm/day or even 200mm/day. Thus in my opinion an updated project like MEDEX should have as a priority the examination of the dynamical and other causes of the extreme precipitation values. - Even though the authors in the literature analysis mention that they will not present a historical overview of the studies concerning the cyclones in the Mediterranean region, I believe that the present study lacks of several important studies regarding mainly authors from the eastern parts of the Mediterranean region as follows: a) The studies of the French meteorologist M Berenger are missing who for the period 1955-1963 analyzed the depressions in the Mediterranean. M. Berenger is the first to study systematically the depressions in the Mediterranean and the authors can find the literature in the library of Meteo-France. b) Also, recent important studies such as Flocas et al

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for the cyclones in the Mediterranean are missing (explosive cyclones, climatological aspects, vertical structure, tracks). c) Final the authors should add the studies of Kallos et al concerning the forecasting of explosive cyclones in the Mediterranean.

Technical Corrections. - page 539, line 13: the authors should erase “due” which is written twice. - Page 545, line 18: they should close the parenthesis “)” - Page 550, line 13: it should be summer and not “summery” - Page 555, line 14: change “systematic” to “systematic”.

Overall, I would like to recommend the publication of the present article after a major revision suggesting to the authors to follow the aforementioned recommendation which would result to the improvement of the text. I would also like a response from the authors concerning the lack of analysis and literature concerning the eastern Mediterranean.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 535, 2014.