

Interactive comment on “DamaGIS: a multisource geodatabase for collection of flood-related damage data” by Clotilde Saint-Martin et al.

Anonymous Referee #1

Received and published: 8 March 2018

GENERAL COMMENT

The article “DamaGIS: a multisource geodatabase for collection of flood-related damage data” by Clotilde Saint-Martin and co-authors presents a geographical database for collecting information on flood-related damages. Data gathering, database structure, and results of the application to a case study in southern France are reported. The description of the database is accurate and the conclusions are well balanced among benefits, limitations and perspectives. The paper is clear, well written and potentially publishable. The English language is on average.

In my opinion, the manuscript needs minor revisions before being accepted for publication.

C1

SPECIFIC COMMENTS

The whole database is based on proprietary formats and software, so limiting the accessibility and the usability of data and system. This should be acknowledged.

I suggest to rewrite the abstract. It does not sufficiently the content of the paper. In the present form, it is more similar to an introduction. It should describe the purpose, the method, the structure, the results and the conclusions of the work. Moreover, also the application to the study area should be cited.

Page 1, lines 18-19: Authors state that floods are the most damaging hazard in the world and then provide some details about people involved and economic damage. To support this statement they should compare these values with other values related to different hazards, e.g. earthquakes, tsunamis, landslides, wildfires.

Page 1, line 22: please note that the IPCC (2014) synthesis report provides evaluations on flood risk to the population, and states that the number of people exposed to flood events will increase worldwide. This should be mentioned.

Page 2, lines 17-18: I suggest mentioning the last report of Munich RE: https://www.munichre.com/site/mram-mobile/get/documents_E-253943638/mram/assetpool.mr_america/PDFs/3_Publications/TOPICS_GEO/TOPICS_GEO

Page 2, line 32: some other databases and inventories of floods in Italy should be mentioned. In fact, In Italy, an inventory of historical floods (and landslides) was prepared within the framework of the AVI (the acronym is for Italian Vulnerable Areas) project; see http://avi.gndci.cnr.it/it/archivi/archiviostorico_it.htm <http://sici.irpi.cnr.it/storici.htm>. Moreover, the website of the POLARIS project (<http://polaris.irpi.cnr.it/>), managed by CNR-IRPI (Research Institute for the Geo-Hydrological Protection of the Italian National Research Council), provides updated annual reports on floods and landslide risk to the population in Italy. Finally, I would suggest having a look at the recent paper by Napolitano et al. (2018), in which a new database structure for landslides and floods

C2

and their consequences, as well as numerous other natural hazard databases (see references therein), are presented.

Page 6, line 11: Authors state that each flood event corresponds to a polygon feature. Please specify how the polygon is drawn.

Page 7, lines 15-16: just a curiosity: why Authors used Lambert93 as reference system instead of a more common WGS84?

Page 8, Table 1: "Seasonal accommodation" is the name of the type and of one subtype. For the sake of clarity, I would suggest differentiate them.

Page 10, Figure 4: I'm not sure that the first block of the flow diagram (e.g., Flooding; Yes; No) is useful. If a record is included in the database, a flood must have occurred.

Page 11, Figure 5: I would suggest adding an inset with the indication of the study area inside the whole France or Europe.

Page 12, line 13: given the explanations provided in the previous two periods (from the beginning of the page), the main reason of the over-representation of economic activity and road network is related to the information completeness. These two types of element are considered by more information sources and media than the others. This issue of information completeness should be better acknowledged by the Authors.

Page 12, Figure 7: the dates of occurrence of the flood events could be added to the IDs in the labels of x-axis.

Page 14, "Limitations of the database" section: I would suggest acknowledging the possible lack of information in the compilation of the database. Page 15, line 9: I suggest including also an index to assess the temporal accuracy of the data.

TECHNICAL CORRECTIONS

Please check the reference style, both in the text and in the list. Add DOI to the references in the list. See: https://www.earth-system-science-data.net/Copernicus_Publications_Reference_Types.pdf

C3

[data.net/for_authors/manuscript_preparation.html](https://www.earth-system-science-data.net/for_authors/manuscript_preparation.html) and https://www.earth-system-science-data.net/Copernicus_Publications_Reference_Types.pdf

Page 1, line 8: correct "for collection" into "for the collection".

Page 1, line 9: I suggest modifying "...million Euros of damage, and reducing the..." into "...million Euros of damage; therefore, reducing the...".

Page 2, line 21: change "the United States is..." into "the United States are...".

Page 4, line 6: I would write "websites".

Page 4, line 7: I would write "blogs".

Page 4, line 8: I would write "websites".

Page 6, line 4: damage in capital letters?

Page 6, lines 10-11: I would rewrite the sentences in a more general way, as follows: The EVENT feature class identifies flood events that have caused damage. Since 2011, 23 flood events have been recorded in the South of France and included in the database.

Page 7, line 6: correct "DAMAGIS" into DamaGIS.

Page 10, line 16: change "the next section" into "this section".

Page 11, line 6: change "involve" into "involves" and "affect" into "affects".

Page 11, line 6: the sentence "each group made up one-quarter of the total" is a repetition of the previous one, given the percentages. Therefore, I suggest deleting it.

Page 12, line 16: please correct "evens".

Page 13, line 3: I would delete "however".

REFERENCES

C4

IPCC – Intergovernmental Panel on Climate Change, 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Geneva, Switzerland 151 pp.

Napolitano, E., Marchesini, I., Salvati, P., Donnini, M., Bianchi, C., and Guzzetti.: LAND-deFeND e An innovative database structure for landslides and floods and their consequences, *J. Environ. Manage.*, 207, 203-218, doi:10.1016/j.jenvman.2017.11.022.

Interactive comment on *Earth Syst. Sci. Data Discuss.*, <https://doi.org/10.5194/essd-2018-28>, 2018.