

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

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### **1 General comments**

This paper addresses the question of collection and sharing information on flood related damages, based on multiple and complementary information sources. It proposes a data structure for the description and recording of information on damages, and an interesting method for rating their severity. The data structure is well described and easy to use, even if some improvements could probably still be achieved (see my specific comments hereafter). The dataset provided is still far from comprehensive, but it is already rich (729 damage records) and will probably be useful to the scientific community for future work on the 23 flood events currently recorded. I finally think the

C1

important question of the future feeding of this database in a collaborative way could be further discussed in the paper. Considering all of this, I recommend only minor revisions before publication.

### **2 Specific comments**

- Despite this database has currently been implemented in France, as mentioned by the authors it would probably also be useful for the collection of information on flood-related damages in other countries. To facilitate its use at an international scale, it would be better to provide the geographic coordinates of damages in a more generic coordinates system (WGS 84 for instance).
- Additional links with other existing databases on floods and related damages could probably be developed. Even if the damaGIS database offers a level of detail which is probably not available in other open data sources, I am wondering for instance if the “EVENTS” table could not be linked to the following other data sources: Gaspar (<http://www.georisques.gouv.fr/dossiers/telechargement/gaspar>), BDHI (<http://bdhi.fr>) or even Erisk (<https://erisk.ccr.fr>), or the research “FloodHymex” database ([http://mistrals.sedoo.fr/HyMeX/?project\\_name=HyMeX](http://mistrals.sedoo.fr/HyMeX/?project_name=HyMeX)).
- The spatial extent of each event seems to be represented as a combination of administrative territories in the geometry of the “EVENT” class. Are there any reasons for this? It is a quite surprising choice since a number of recorded damages are located outside the geometry of the event. Why not having simply chosen a box with the maximum/minimum x and y values the damages records for each event? As an alternative, this “EVENT” class could also be provided without associated geometry.

C2

- Even if using new media is an efficient way for the inventory of damages, one drawback is that some of the references used will not be available anymore after several years. See for instance the reference provided for damage Id “Dam\_5-02”. I do not see any solution to this, but this limit of the dataset should at least be clearly stated in the text of the article.
- I could only check the content of data provided in shapefile .shp format. In these files, two additional fields “Shape-length” and “Shape-area” do appear. These fields can be removed, or their signification has to be detailed in the text of the paper.
- The question of extending the feeding of this database to a collaborative way is finally central to improve in the future its spatial coverage, its comprehensiveness, and its final usefulness. This question could be slightly more developed in my opinion to see what could be the possible options for this purpose.

### 3 Technical corrections

- p.1 l.9: “Even if partial data is available”
- Figure 3: the connection between DAMAGE and EVENT feature classes is not properly represented (the field names do not correspond)
- p.7 l.5: “Finally, the third and main feature class of the structure is the DAMAGE one, which ..”
- p.7 l.23: “..available in the “DETAIL” field of the DAMAGE feature class.”
- p.9 l.3: “.. “SEVERITY” field. This rating system is presented and explained in the next section.”

C3

- p.12 l.8: Naulin et al. (2013, doi: 10.1016/j.jhydrol.2013.01.044) provide a broader analysis on this question of road network exposure to flooding
- p.14 l.3: “.. the DAMAGIS database, the high resolution of the data ...” The word accuracy is inappropriate here.
- p.14 l.5: .. “offering this level of detail in open access.” The word accuracy is inappropriate here.

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C4