Color legend:

(1) Comments from Referees
(2) Author's response
(3) Author's changes in manuscript

We have revised Manuscript nhess-2019-227 in light of the editor's comments. All changes suggested by the editor have been incorporated and English correction was carried out. Details of the changes are provided below.
We hope that everything in the new manuscript is in order and that you now find it acceptable. We thank the reviewers and editor for their help and positive criticism. If you have any concerns please do not hesitate to contact me.

Sincerely yours

Eveline Sayão

## EDITOR

The manuscript is suitable for the special issue and the risks associated to anthropic actions related to hydroenergy which is one of the most widely applied renewable energy sources are cross discipline relevant for the EGU (also for the ERE) section.
The reviewers made good and thorough comments, and the authors replied well to them, thus improving the paper.

I welcome especially the change in the title. I would suggest a further highlight of this in the lines 76-79 by emphasizing the transition from available information (collection) to database by all the steps this includes (organisation and classification of data, mapping etc.). Since also an ontology is included (see comment further down) the data visualisation approach as seen by digital humanities research (ex. in a working group of NeDiMAH network) should be highlighted.

Line 138-139. Figure 2 (the new one) is a really well done ontology model, as also stated in the text which refers to how the UML model was built. I would like however to see a little more detail on what choices have been done for this. In particular which was the transition from the UML to the relational database in Figure 3, then line 147.

Please revise the English.

**COMMENTS ON THE TEXT**

**Database and web viewer**

Lines 76-79. The motivation for creating the Seismicity Database Triggered by Reservoir (BDSDR) arose 77 from the research in the cases that occurred in Brazilian Reservoirs when observing the lack of 78 cohesion of information, pertinent to the study, presenting only isolated cases or listing with the 79 locations of occurrences.

Re: It is a good suggestion. We agree with the reviewer and make a correction.

Lines 80-84. According to the NeDiMAH WG4 the use of digital collections for research has an impact on the creation, management and long-term sustainability of digital data, and the use of digital resources for the creation and publication of new knowledge is a vital part of the digital life cycle, then we used this group on the basis of our database. (NeDiMAH Working Groups. European Science Foundation, 2020).

**First Phase: Conceptual Modeling**

Lines 138-139. Figure 2 presents the conceptual model based on OMT-G, developed in the StarUML 5.0.2.1570 software while Table 1 explains each relationship of the OMT-G model.

Re: Ok, We agree with the editor. The chapter has been rewritten.

Lines 138-139. It was analyzed which entities would compose this database and which attributes each one of them. As well as, check which entities are related and define the cardinality of each relationship.

Lines 145-158. In this process, it was observed that a reservoir (main entity) is related to hydrometric entities, dams, municipalities, gravimetry, chemical events, crustal thickness, hydrography, the region's stress regime, pluviometry, electromagnetism and magnetometry. So, as it is an entity with the highest number of relationships, lace it at the center of the model. Opt for the OMT-G model, to elaborate the conceptual model, as Borges et al. (2005) this model better meets the needs of geographical applications, both in the form of presentation and in the way of relating. So, when using the OMT-G model, you can easily identify how conceptual or relational tables are non-geographic data or a type of geographic data that the table represents. When creating tables in the OMT-G model, the user applies the type of geographic data similar to the correct mode or type of display for an entity. So, if an entity is implemented in the database, it will be a table point other than the upper left corner, a star, if it is a polygon or a multipolygon, in its upper left corner, and so on. The types of representation used in this modeling were: point - represented by a star, polygon or multipolygon - represented by a square, line - represented by a line, and a level variation - represented by isolines

**Second Phase: Logical Modeling**

Line 147. The logical model was created using the StarUML 5.0.21570 software.

Re: We agree with the editor. The chapter has been rewritten.

Lines 168-175. Finally, the relational model was implemented after completing the process of developing the conceptual model. A creation of the relational model consists of taking as elaborated tables in the conceptual model and inserting as primary key identifications in the key characters and inserting the type of each attribute (integer, real, text, char, varchar, etc.). It can be seen in the figures both the conceptual and the relational model that, like the screens are executed by dotted lines, because the OMT-G model as entities with georeferenced characteristics are applied by dotted lines. And if a simple (non-spatial) relationship is performed, an indication of this relationship is made by continuous lines.