

Interactive comment on “Analysis of a risk prevention document using depend ability techniques: a first step towards an effectiveness model” by Laetitia Ferrer et al.

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Received and published: 17 November 2017

This is a multi-author comment by: A Almerini, A Angle, A Bae, N Belew, J Casselman, S Devendran, D Dusseau, A Evengaard, D Farone, M Feng, X Fonseca-Morales, T G Hamm, R Heath, A Ho, Y Ho, L Hoffman-Hernandez, E Jeong, S Joshi, C Lang, A Liu, B Llamanzares, D Ng, M Nielsen, I Nomura, L Pawar, J Payne, R Cohen, M Ruid, A Schimel, S Schwager, A Soriano Quevedo, N Turner, M Vignes, Y M Xu, Y Zhang

General comments:

Overall, this paper provides a solid analysis of the shortcomings of DICRIM and 3

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modes of analysis that could improve the risk prevention document and its use by mayors in France. The author gives a good explanation of sources that have already explored this topic. It would be of interest to the reader to present a broader background explaining why the DICRIM are not efficient at the moment.

Some graphics were visually pleasing, and easily understandable. Others had too many components and colors to the point that a quick meaning cannot be drawn from the image. We suggest to select the key points and components that cannot be explained better in text, and simplify the graphics to emphasize these components. Many of the figures don't have captions and are difficult to understand, and the formatting of many of the tables make the presentation of information difficult to understand.

The methods section should have more detail on the process of the research. For instance, by saying that the DICRIM was “carefully read” does not entirely explain how many times it was read, who read them, was it the same person each time, or how to identify the different factors in the DICRIM. If different people read different DICRIMs, different interpretations would have an impact on the outcomes and conclusions.

We suggest to connect each measurement criteria to the cognitive biases and heuristics of the town, instead of addressing them in one paragraph in the paper. One of the reasons used to justify why the DICRIM needed to be evaluated was to encourage better risk prevention by the French public, but the authors have not addressed research that suggests better information does not necessarily promote increased action. In the conclusion, they state supplying necessary information allows information to be taken without bias. This seems to overly simplify. Making decisions without bias is virtually impossible.

The article could benefit from more analysis of the results instead of just a presentation of results. Also, the results are provided in a chronological experimental context as opposed to a logical sequence. It would be very helpful if the useful elements which were missing from the DICRIM were presented more prominently as the findings of the

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article.

Lastly, the target audience of this article is not clear. It seems unlikely that policy makers would be able to take valuable information from the analysis, as gleaming the most important take-away messages is difficult. It would be helpful to incorporate more discussion on how this could be used by local policy makers; we suggest soliciting feedback from a test group of such stakeholders to hear their comments. What is the definition of effectiveness? Improving effectiveness of the DICRIM is one of the main points of article, so defining success more clearly would be helpful. It is also a little unclear how this approach would have equal relevance outside of France.

While we have found the content of the paper innovative and relevant, we have had reservations about its style. The paper suffers from heavy use of jargon, and a lot of repetition. Many of the sentences feel like "stops/starts" and disjointed (e.g. 5. Application, p. 26), rendering it difficult for the reader to comprehend the authors' points. Oftentimes, the authors utilize pronouns as subjects and we were confused as to what "it"s and "they"s specifically referred to. If the authors use a diversity of sentence structures, this can make their content a lot more cohesive. In general, shortening and condensing the article would be helpful, to allow for an easier, more concise read.

Specific Comments:

We don't feel that tables should be supplementary to information provided; they should stand alone and be easily interpreted by the reader. If they are supplementary, they can be added in the appendix. Table IV is not a standalone graphic and needs further information in order to be understood. More information needed for page 27's final analysis.

Tables in the paper are poorly stylized both in terms of graphics and in terms of the text. e.g. Table III on page 14 attempts at outlining technical functions of services. Two of said functions are "Inform to raise awareness of risk (TF1)" and "Inform to fuel knowledge on risk (TF2)". It is unclear what "fueling knowledge" means. And for a

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reader who does not look for an explanation in the article, it is not clear how TF1 and TF2 are different.

On p. 11, Table I, what are the ellipses (...) at the very bottom? Is part of the table missing? What does the "(extract)" mean in the end of the figure legend? There are also some spacing issues with text in figures and tables (e.g. p. 11, Table I).

Table IV: Need to rewrite the technical functions and components.

P. 18 Table V: very difficult to read the text and format of information. For example, instead of "x"s denoted satisfaction of a component, authors could fill in the entire box with black for a stronger visual and easier understanding.

On p. 3, Fig. 1, it is difficult for a person who is red-green color blind to read the boxes denoted as "urban planning" components; easy change. Otherwise, an infographic may be a suitable substitution.

Figure 3: Not entirely clear what has been done previously vs. what will be done in this paper.

Bullet points on bottom of page 5 could be converted to paragraph form. Some of the figures, e.g. figure 2 have features, e.g. dotted lines, which are assumed to convey certain information but the meaning is not explained.

In page 21 the cells are blank. In 4.2.4- the title Constraints/Components is unclear. There were some parts that made claims without providing supportive statements, e.g., line 24, pg 4.

Consider citing official disaster statistics rather than secondary sources (Introduction sites Huffingtonpost & BBCNews).

In terms of style, we suggest to avoid 'justified' text in charts especially, as it creates strange spacing of words that are difficult to read.

Technical corrections:

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Figure 1 needs a description added.

3.2 line 35 does not specify the experts involved and "classical specialist" needs to be defined.

Figure 2 has "literature" spelled incorrectly.

4.2 line 10: TFA is not a common term and needs to be defined.

4.1.2 doesn't have complete sentences

Some of the acronyms are difficult to remember and lengthy; an Appendix at the beginning or end with a list of all acronyms to refer to would be helpful.

Consistent font size would also be helpful for the reader's flow.

On p. 4, line 30, we cannot understand whether you are telling the reader to communicate the message clearly, or that they are communicating their own message clearly? Please clarify.

Page 2: "This is highly significant as human behavior during major disasters is influenced by their own knowledge of risk 15 (Enrico L. Quarantelli 2008). However, it equally depends on their cognitive bias (overconfidence, risk control delusion, denial, irrationality, etc.) (Kahneman and Tversky 1979) on the particular situation they face and more precisely on how they perceive that situation (Matt Dombroski 2006). " The wording in this excerpt is confusing. We do not know what "it" means in "it equally depends". It is not helpful to the reader to have a list of cognitive biases in parentheses; we suggest to break that apart and go into depth.

Page 3: "In 2004, the update and modernization of the 1987 law takes place. " - clunky wording.

P2 L23 "provide" -> "providing"

P3 L10 "al" -> "and"

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P4 L23-24 "they are not thinking to communicate to the Great Public" -> "they are not designed for communication with the greater public"

When referencing material there are times when instead of et al, the authors wrote 'and al' Pg 11, line 5- seems unnecessary.

In abstract, line 8- "Given than" should be "given that"

Table on page 31 is missing text in multiple boxes.

Tables on pages 28-31 could be better designed. The spacing could be tighter to make the tables fit in the horizontal direction, and color could help improve the readability

Spelling error in the title: depend ability should be "dependability". Could effectiveness and dependability be defined in the abstract or early in the introduction?

Table VII: what does the word "faulty" mean, what are the criteria to say that we are effectively in a failure mode p15 L11-12 inversion of TF3 and TF4 in regard to Table III

We suggest to avoid the frequent use of parentheses, as this helps with the flow of ideas to the reader. Line 2, page 2, for example, "year" needs to be plural.

Introduction, page 3 line 10 "behavior al" should be "behavioral". Also the use of the word "behaviour" was used in conjunction with behavior. Good to keep consistent.

Page 8, line 10 "evaluation is conduced" should be "conducted"

Figure 2, "litterature" should be "literature"

Page 22 "For the sake of simplicity", perhaps the simplicity is too simple? Making it challenging to understand.

Page 17, line 9 "fulfil" should be "fulfill"

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-311>, 2017.

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