

Review: Learning risk management of geohazards in practice with free and open-source web-GIS based platform: RISKGIS

In particular, we have the following comments:

page	line	comment
1	1	"...with a free and..."
1	9	"...is developed for students studying environmental risk..."
1	10	"...become familiar with..."
1	12	"...hands-on..."
1	12	"...To identify the potential and practicality of the ..."
1	14	"... semesters of the <i>Environmental Risk</i> and <i>Advanced Risk and Vulnerability</i> courses at the University..."
1	15-16	"...are conducted starting with the rapid risk ... exercise and moving on to the more complex risk ... exercise incorporating different case studies..."
1	17	"...are asked to take a test, complete feedback questionnaires or write group reports on the Moodle platform in order to evaluate the exercises, the RISKGIS platform and the performance of the students... "
1	20	"...of 64/100 are achieved..."
1	21	"...and feedback from the students..."
1	26	"...van Westen, 2013). Rapidly developing technologies such as GIS play an..."
2	2	"...achieving goals of science education such as utilisation of technology and development of..."
2	4	"...the evolution of the web and with the advancement of technology it has..."
2	10	Either "in teaching and learning" or "in instructional settings" – you are saying the same thing twice in one sentence.
2	11	Accessibility to hardware: you still need a computer to access a web-GIS, so how is the need for hardware reduced?
2	12-13	"...platforms can be easily accessed from..." or "...platforms are easily accessible from web browsers without purchasing GIS software."
2	12	"limited resources of the Lab": What resources, what lab? See suggestion above (p. 2, lines 12-13).
2	19-20	"interactive, active, activity" in the same sentence – try to eliminate at least one. E.g. "task" instead of activity.
3	14	..and in the following paper: Consider using "exercise" instead of "scenario" since scenario has a different meaning in the risk context.
6	20	Explain what you mean with "Jigsaw".
7	5-6	eliminate parentheses: either use the word or don't (exception: IRM).
8	Figure 2 and rows 3-5	Choose more unmistakable terminology for the figure (and in general). E.g. instead of "alternative formulation" use "planning of measures" or "choosing a course of action". Also, make sure your explanation of the figure (rows 3-5) uses the same words as appear in the diagram. Add numbers to the figure so it is very clear which step is which and the reader doesn't have to do the matching herself.
8	10	What is meant by hazard layer? I would rather suggest the term "scenario".
9	8	The value 5000000 CHF needs to be further explained. I recommend

		to replace it with a factor since 5000000 CHF is a value used in Switzerland. The VSL approach reflects the societal willingness to pay for averting a fatality, which is closely related to a specific country.
9	11	12 hours in each of 365 days per year.
9	15-21	The unit for individual risk should be 1/year in my eyes. It translates as how often per year, a particular person (a person living in object i) is likely to die. With the unit “deaths/year” you are suggesting that the individual risk says how many people die per year, which is what the collective risk (non-monetised) is about. By using the unit 1/year, you can eliminate the irritating “1” in equation 3.
9	28-30	year in citation UNISDR is missing
10-11	26-29	Use a variable (e.g. CBR) instead of an actual ratio (N/K_{tot}) to name the cost-benefit ratio in equation 5. $K(j)$ is confusing, especially since up until now, j has been the index for a particular hazard. Use K_{tot} throughout. Even if it is fairly obvious, explain R(before) and R(after) when you list your variables below equation 5.
11	14 and following	Alternative and criteria are not capitalised in this context.
11	23	Ideal not idea
11	20	Explain $L_p(x_p^*)$ in equation 7.
12	10-13	Why are some words italic? Also the case in following lines.
12	16	Why did so few students comply? Could it be that only a certain “type” of student took the quiz and answered the questionnaire, thus distorting your results?
12	23	What is the benefit of a remote area?
12	26	Wouldn't that be a return period of 500 years, then? 25 years may not make a big difference on that scale but it is confusing for the reader.
12	27	The term “location site effects” does not make sense.
14	3	Figure 4: There should not be any red bars (even if they are very slight) for a 0 value. Use the word points (or an equivalent) instead of notes (in the text above and below the figure as well as in the figure itself).
14	6	As it turns out in line 11 and following, you are not asking questions but giving statements which students can agree or disagree with. Hence, please change the word “question” as well as the abbreviation “Q” for the statements (applies to the rest of the paper, too). Mention the Likert scale here as well, not only later on in the paper. It may give the impression, that you are using two different approaches.
14	9	You might mention that a SUS score above 68 is considered above average...
15	9-16	Consider putting these pros and cons into a bullet point list for a better overview. Consider it, too, for the presentation of the other results in the following paper.
20	19	Was the consideration of ecological aspects already part of this exercise?
26	12	This question does not fit well with the scale “not at all to absolutely”. Consider rephrasing it or adding a second scale.
26	20	What is moderate, what is high severity?
27	11	Explain your scale of 1 to 5 in words in the text, not just the figure caption. Again, not all the questions are suitable for “not at all to absolutely”.

27	Fig.15	Try to avoid 3D graphs.
28	8	"...cost was the better choice despite the limitation of risk for human beings." I don't understand this argument.
28	23	Either use the word collaborative or don't but don't put it in parentheses – this makes for cumbersome reading.
28-29		A detailed repetition of the questionnaire results is not appropriate in the discussion. Generalise and mention only the key points. Also, the suggestion of the exercises running parallel to the course should not appear for the first time in the discussion – this belongs with the questionnaire results and can be briefly mentioned here as a potential future development for the course..
generally		<ul style="list-style-type: none"> • Especially for key vocabulary, choose one term and stick with it throughout. E.g. protection measures – why confuse the reader with "alternatives"? Or "scenarios" for "exercises" – simply use exercises in the whole paper to keep things clear. • Give a brief description of the Innovative Teaching Project. • What is the purpose of the questionnaires concerning the group work (e.g. figure 15)? What do you learn from the answers and how is this information useful? • In the case of the Brienz case study: Was the real solution presented and discussed in class? That would nicely round off the exercise, showing students what was decided by the experts and explaining why. • Could the tool be adapted for real decision makers in natural hazard risk? Perhaps that could be a future aim for the project.