

Interactive comment on “Modeling of the cave-ins occurrence using AHD and GIS” by A. A. Malinowska and K. Dziarek

Anonymous Referee #1

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1. Do those AHDs in the title and abstract and those AHPs in the manuscript refer to the same method?
2. Do the “culmination of exploitation edges (Page 7476, line 10)” and the “cumulation of edges of exploitation panels (page 7475, line 13)”, “cumulation of edges (page 7478, line 23)”, “cumulation of edges (page 7479, line 21)” and “cumulation of panel edges (page 7483, line 23)”, etc. refer to the same thing?
3. Page 7478, lines 21-23. Most of the factors depended upon one another. Attempts were made at generalizing these factors and extracting the most important ones. Ultimately, faults and cumulation of edges were selected. Please clarify how generalization was done? i.e. some criteria.

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4. Page 7478, lines 24-25. The analysis of the models presently used for predicting discontinuous deformations of surface reveals that most of the risk factors are not statistically related to the probability of cave-in occurrence. “the analysis of the models”, which models? Where are they in the manuscript? How were the statistical relationships analyzed for the qualitative factors and the quantitative factors respectively?
5. Page 7481, lines 6-7. Such data were used for the final evaluation of cave-in hazard CHN. What is CHN? Is it the same as CHN in the fourth expression?
6. Page 7483, lines 20-24. The analyses performed in the study area revealed that quantitative factors were most important. The main factors generating sinkhole hazard were cumulation of panel edges, and faults. Such quantitative factors as depth of the exploited panel or its thickness were less important.

Quantitative factors were most important, but why were smaller weights assigned for the quantitative factors than for the qualitative factors?

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