



Interactive  
Comment

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

### **Anonymous Referee #2**

Received and published: 13 April 2014

#### General comments:

Authors show an important work towards the prediction of land surface failure due to underground coal extraction. The methods are clearly introduced. However, no obvious improvements are contributed to.

In reality, the most difficult problem is to select the factors and to determine their weights. Regarding to correlated factors, authors mentioned to extract the most important one, which is required by the AHP method. However, whether could we consider these correlated factors by using correlated weight matrix (Not a diagonal matrix). Specific comments and technical corrections:

P2, L4, please give the full name of AHD, so do any other acronyms when they first

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turn up, e.g. WLC. Besides, what's the difference of AHD and AHP in this manuscript?

P3,L20, "methodics" ->"methods"

P4, L6, "on surface ->"on the surface"

P4,L 22, "characteristic"->"characteristics"

P6,L22, " Ultimately, faults and cumulation of edges were selected." which means these factors are the most important ones?, can authors give more explanations?

P8, L10, " For above defined weights the consistency ratio was  $CI = 0.06$ ." In this sentence, please make sure the correctness of "consistency ratio" and "CI"

How can you calculate the value with equation (1).

As for Table 4, I'm not sure the correlation between eigenvector and weight, and the calculation procedure.

P11,Ls22-21 " The analyses performed in the study area revealed that quantitative factors were most important." should be "qualitative factors"

Please indicate each table in main text, where only Table 1 and table 3 are indicated.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 7473, 2013.

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