

Interactive comment on “Assessing parameter importance of the Common Land Model based on qualitative and quantitative sensitivity analysis” by J. D. Li et al.

J. D. Li et al.

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To HESS Editor

Dear Editor,

First of all I would like to thank you and the reviewer for providing valuable comments which have helped us improve the manuscript. We have addressed the reviewer comment by revising the manuscript as below.

We look forward to further comments and decision from you. Best regards

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Sincerely,

Qingyun Duan, Corresponding author

Comment:

The paper could be further improved if the authors could work more on improving the presentation. For instance, the descriptions of figure formats (such as Line 20-27 on Page 2256) should be moved to the figure captions instead of putting them in main body.

Response:

Thank the reviewer for your advice. We have made the changes in the figure captions as you suggested:

1. For Figure 2, the title has been changed to “The sensitivity score of sensible heat given by SOT. The length of needles represents the sensitivity score.”
2. For Figure 3, the title has been changed to “The sensitivity score of sensible heat given by MARS. The length of needles represents the sensitivity score.”
3. For Figure 4, the title has been changed to “The sensitivity score of sensible heat given by DT. The length of needles represents the sensitivity score.”
4. For Figure 5, the title has been changed to “The sensitivity score of sensible heat given by Morris method. The length of needles represents the sensitivity score.”
5. For Figure 6, the title has been changed to “The qualitative sensitivity analysis results of different methods for sensible heat. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.
6. For Figure 7, the title has been changed to “The qualitative sensitivity analysis results of different methods for latent heat. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.

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7. For Figure 8, the title has been changed to “The qualitative sensitivity analysis results of different methods for upward longwave radiation. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.
8. For Figure 9, the title has been changed to “The qualitative sensitivity analysis results of different methods for net radiation. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.
9. For Figure 10, the title has been changed to “The qualitative sensitivity analysis results of different methods for soil temperature. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.
10. For Figure 11, the title has been changed to “The qualitative sensitivity analysis results of different methods for soil moisture. The sensitivity scores are normalized to [0, 1]. 1 means most sensitive and 0 means least sensitive.
11. For Figure 12, the title has been changed to “The relative importance of parameters obtained by RSM Sobol’ total effect analysis.”
12. For Figure 13, the title has been changed to “The relationship between the number of screened parameters and cumulated relative importance for different sensitivity analysis methods.”

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/10/C1838/2013/hessd-10-C1838-2013-supplement.zip>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 2243, 2013.