

Interactive comment on “Regional soil erosion assessment based on sample survey and geostatistics” by Shuiqing Yin et al.

Anonymous Referee #1

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Review of the manuscript “Regional soil erosion assessment based on sample survey and geostatistics” by Shuiqing Yin et al.

General comments:

In general, the paper addresses an interesting topic, which would fit into the scope of HESS. Regional soil erosion assessment is still challenging due to the often-missing input data needed for such assessment. Therefore, an alternative approach to the more widespread – mostly USLE based approaches - would be welcome. However, I suggest rejecting the paper for the following reasons: I have general doubts if the produced regional assessment is valuable or if one could learn something regarding the methods presented. The authors use the erosion estimates from 3116 ‘points’ in the Shaanxi province and interpolate these data for a large region using different inter-

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polation schemes. Mathematically the interpolation might be correct. However, from an erosion research perspective it just does not make any sense to interpolate erosion data from single locations (with specific land use, slope, slope length, soils, rainfall and soil management) into a large area without taking these important variables into account. The authors present the Chinese variant of the USLE, which identified all important parameters of erosion (Eq. 1, P. 6, line 23), why not using these parameters as co-variables in an interpolation or apply the model itself. From the different interpolation models presented it is obvious that those taking some of the important erosion drivers into account (models II-V) outperform model I, which solely use the erosion data for interpolation. So, concluding my comments I appreciate any efforts to regionalize soil erosion information but I do not think that the presented approach is a promising pathway to follow.

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