

Interactive comment on “Effects of ecological factors and human activities on nonpoint source pollution in the upper reach of the Yangtze River and its management strategies” by X. W. Ding et al.

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General Comments

The authors have developed a new methodology for simulating nonpoint source pollution in large spatial-temporal scale watersheds, applied it into the upper reach of the Yangtze River and proposed its method for obtaining parameters, and then revealed the effects of ecological factors and human activities on nonpoint source pollution. In my opinion, you have developed a useful tool for estimating the impacts of causal factors

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on water pollution and analyzed them in a significant large-scale watershed.

1. The topic of this manuscript is meaningful concerning that it gives a new methodology to reveal the effects of ecological factors and human activities on nonpoint source pollution. 2. The manuscript is with some innovations and proposes a method to calculate nonpoint source pollution in large scale watersheds and to simulate the spatial-temporal distribution of the pollution. 3. The literature review is comprehensive and fair, which presents a critical comment on previous work in this field. 4. The new method is an innovation of this manuscript and the authors also calibrated its parameters for upper reach of the Yangtze River. It presents a reasonable and specific demonstration for model application and parameter calibration. 5. The results and discussion section gives a specific and critical evaluation of the effects of ecological factors, those of human activities, as well as the combined one on nonpoint source pollution in study area. 6. The manuscript is well organized. However, this would require few improvements in some expression. Hence, it may be more desirable.

Comments on specific sections of manuscript:

1. Page 3, line 11, “quantificationally” should be revised as “quantitatively”. 2. Page 3, line 12, “proposed based on it is also...” should be revised as “proposed based on it are also...”. 3. Page 4, line 13 and line 14, “macro scales models” should be revised as “macro scale models”. 4. Page 8, line 8, “at the outlet section the URYR” should be revised as “at the outlet section of the URYR”. 5. In the part of 2.3.3, past tense verbs should be used to describe the valuation process of export coefficients. 6. Page 14, line 22 and line 23, “The sort of the contributions of the various anthropogenic sources is the same with that for sediment.” should be revised as “The contributions of the various anthropogenic sources are similar to those for sediment”. 7. Page 15, line 9, “. . .NPS pollution in the URYR were also analyzed” should be revised as “. . .NPS pollution in the URYR was also analyzed”. 8. Page 16, line 11, “deeply affected by rainfall” should be revised as “greatly affected by rainfall”.

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