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# *Interactive comment on* "Reduction Evaluation and Management of Agricultural Non-Point Source Pollutant Loading in the Huntai River Watershed in Northeast China" *by* YiCheng Fu et al.

**YiCheng Fu et al.**

swfyc@126.com

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Anonymous Referee Comments-1 reply

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2018-339, 2018.

1 **Reduction Evaluation and Management of Agricultural Non-Point**

2 **Source Pollutant Loading in the Huntai River Watershed in**

3 **Northeast China**

4 Yicheng Fu[*], Wenqi Peng, Jinyong Zhao, Xiaoyu Cui

5 *State Key Laboratory of Simulation and Regulation of River Basin Water Cycle, China Institute*

6 *of Water Resources and Hydropower Research*

7 [*] Corresponding author, E-mail: swfyc@126.com

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9 **Abstract:**

10 With the raise of environmental protection awareness, applying models to control non-

11 point source (NPS) pollution has become a key approach for environmental protection and

12 pollution prevention and control in China. In this study, we implanted the semi-conceptual

13 model SWAT (Soil and Water Assessment Tool) using information on rainfall runoff, land use,

14 soil and slope. The model was used to quantify the spatial loading of NPS nutrient total nitrogen

15 (TN) and total phosphorus (TP) to the Huntai River Watershed (HTRW) under two scenarios:

16 without and with projected buffer zones of approximately 1 km within both banks of the Huntai,

17 Taizi and Daliao river trunk streams and 5 km around the reservoirs. Current land-use types

18 within the buffer zone were varied to indicate the natural ecology and environment. The Nash-

19 Sutcliffe efficiency coefficient ($E_{NS}$) and $R^2$ for flow and predicted nutrient concentrations (TN

20 and TP) in a typical hydrological station were both greater than 0.6, and the relative deviation

21 ($|Dv|$) was less than 20%. Under the status quo scenario (SQS), the simulated soil erosion in the

22 HTRW per year was 811 kg/ha, and the output loadings of TN and TP were 19 and 7 kg/ha,

23 respectively. The maximum loadings for TN and TP were 365 and 260 kg/ha, respectively.

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**Fig. 1.**

**Dear Editor,**

We are so appreciated for your letter on our manuscript "Reduction Evaluation and Management of Agricultural Non-Point Source Pollutant Loading in the Huntai River Watershed in Northeast China", Reference No: hess-2018-339. We are also extremely grateful to the comments of anonymous Referee #1 on our manuscript and carefully considered every comment and made cautious revision accordingly. Based on their suggestions, we have answered the questions in detail one by one. If you have any other questions about this paper, I would quite appreciate it if you could let me know them in the earliest possible time.

Most sincerely,

Yicheng Fu, Wenqi Peng, Jinyong Zhao, Xiaoyu Cui
First Contact: Yicheng Fu, swfyc@126.com

Corresponding author:
Name: yi-cheng FU
E-mail: swfyc@126.com
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**Fig. 2.**

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