

### **Comments to the editor:**

The authors dedicated to explore the regularity of transportation for cohesive collapsed materials. The regularity contains two parts: quantity and energy. Physical experiments were conducted to monitor riverbank collapse processes, and the percent of collapsed materials were calculated by critical particle method. The bed load motion efficiency coefficient ( $e_b$ ), suspended load motion efficiency coefficient ( $e_s$ ) and sediment carrying capacity factor ( $U^3/gR\omega$ ) were introduced to describe the transportation materials in terms of energy dissipation. The research contents and technique proposed in the study are interesting and useful in understanding river evolution process. The manuscript is basically well organized. Therefore, I would suggest the manuscript be accepted after moderate revisions.

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The authors dedicated to explore the regularity of transportation for cohesive bank collapsed materials. The regularity contains two parts: quantity and energy. Physical experiments were conducted to monitor riverbank collapse processes, and the percent of collapsed materials were calculated by critical particle method. The bed load motion efficiency coefficient ( $e_b$ ), suspended load motion efficiency coefficient ( $e_s$ ) and sediment carrying capacity factor ( $U^3/gR\omega$ ) were introduced to describe the transportation of collapsed materials in terms of energy dissipation. The research contents and technique proposed in the study are interesting and useful in understanding river evolution process. The manuscript is basically well organized. However, the manuscript still needs to be revised. Some problems are given as follows:

1. Line 37, “Langendoen & Simon,2008”, suggest adding blank before 2008.
2. Line 65, “Rijin and Leo”, suggest changing and to &.
3. Line 100, “(45°, 60°, 75°, 90°)”, ensure consistent formatting of commas.
4. Line 110, suggest changing “propeller” into “propeller-type current-meter”, “shows” to “showed”.
5. Line 131, in Table 1, for each group of the experiments (No.1, 2, 3, 4), there were two “Flux” and “Water discharge time”, why?
6. Line 131, please explain how you design the bank morphology and water discharge time.
7. Line 137, 153, suggest changing “toe of the bank” to “bank toe”.
8. Line 152, in Table 3, for each group of the experiments, there is only one “Collapse

amount”, does the amount represent the whole collapse amount?

9. Lines 160, 161, ..., suggest changing the units “Nm<sup>-3</sup>”, “ms<sup>-2</sup>” to “N•m<sup>-3</sup>”, “m•s<sup>-2</sup>”, ...
10. Lines 171-175, please add literatures to support the sentences.
11. Lines 192-193, Lines 209-213, the units such as “ms<sup>-1</sup>”, “ms<sup>-2</sup>” should be changed to “m•s<sup>-1</sup>”, “m•s<sup>-2</sup>”.
12. Lines 194-198, it’s better to add literature to explain why you selected the sediment carrying capacity factor ( $U^3 g^{-1} R^{-1} \omega^{-1}$ ). Please add literatures.
13. Line 216, Line 242, in Figure 7 and Figure 8, whether the curves were the show of the equations (2) and (7)? If not, it is better to provide trend lines.
14. Line 237, “ $\kappa=0.4$ ,  $p=0.3551$ ,  $N=0.72$ ”, line 240, “ $k_s=2D$ ”, suggest adding blanks before and after the equal sign.
15. Line 238, change “m/s” to “m•s<sup>-1</sup>”.
16. Lines 250-251, “sediment suspension energy decreased because of the drag reduction of suspended sediments provided by Zhang (1963)”, what does it mean? Please explain the drag reduction of suspended sediments.
17. Lines 266-275, “There are still limitations that need to be addressed within future research ...”. More specific research work should be addressed within future research based on this study, please rearrange this part.