

Author's response to the comments

1. The changes you make in response to the comment around efficiency ratio of deposition to erosion are useful, but to my mind you do not yet answer the part of the question about what the phrase “efficiency ratio of deposition to erosion” means. Please could you define what you mean by this, i.e. what efficiency means in this context?

Answer: Under a normal diffusion circumstance, if the transport coefficient is fixed, the changing rate of h (the topography) is only related to the gradient of the current h , no matter if it is a depositional process or an erosional process. The “efficiency ratio of deposition to erosion” here is the efficiency ratio imposed besides the original diffusion process. With this parameter, we could enhance or weaken a certain process according to our need. In order to make it more clear, this place has been added in the text.

2. Your response to the reviewer regarding the comment beginning “What the authors mean by “hydraulic characteristic energy”...” is useful. Please could you integrate this explanation in to the manuscript.

Answer: This explanation has been added as suggested.

3. Your response to the author’s comment beginning “I suppose there are things that Sedapp v2021 do better than the Sedpak model...” is again very useful, but not reflected in the manuscript. As a model development paper it is valuable to contrast with alternative tools. Please can you incorporate this response in to the paper, making sure you evidence the points being made.

Answer: This place has been incorporated in the text as suggested.

4. Your response to the reviewer comment beginning “Figures 8 and 9: Why there are blank spaces between layers...” is again something that would be useful to the reader. Could this be included in the figure caption?

Answer: This place has been included in the figure captions as suggested.