

# ***Interactive comment on “A stepwise GIS approach for the delineation of river valley bottom within drainage basins using a cost distance accumulation analysis” by Gasper L. Sechu et al.***

**Gasper L. Sechu et al.**

gasper.sechu@gmail.com

Received and published: 18 August 2020

Dear Anonymous Referee #1,

Thank you for your feedback and concerns. We have reviewed the DTW model, and although similar, it has a difference in the underlying computation. DTW model computes the accumulative slope values along a least-cost path by summing up the slopes within cells. Our method uses the ArcGIS function Cost Distance Accumulation which computes the accumulated cost distance by considering nodes (see reference). The cost distance accumulation is the sum of an average of the slopes taken at the nodes when moving between cells. This implies that results from our method should have a

[Printer-friendly version](#)

[Discussion paper](#)



smoother accumulative effect than those from the DTW model. We developed a practical tool that can easily be used with the ArcGIS Software. We can however reference the DTW model for the practical similarity.

Reference: <https://pro.arcgis.com/en/pro-app/tool-reference/spatial-analyst/how-the-cost-distance-tools-work.htm>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-361>, 2020.

## HESSD

---

[Interactive comment](#)

[Printer-friendly version](#)

[Discussion paper](#)

