

# **Integrating SMART principles in Flood Early Warning System Design in the Himalayas (NHESS-2025-2081)**

**Authors: Sudhanshu Dixit<sup>1</sup>, Sumit Sen<sup>1\*</sup>, Tahmina Yasmin<sup>2</sup>, Kieran Khamis<sup>2</sup>, Debashish Sen<sup>3</sup>, Wouter Buytaert<sup>4</sup>, David M. Hannah<sup>2</sup>**

<sup>1</sup>Centre of Excellence in Disaster Mitigation and Management, Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, India

<sup>2</sup>School of Geography, Earth & Environmental Sciences, University of Birmingham, Birmingham, UK

<sup>3</sup>People's Science Institute, Dehradun, India

<sup>4</sup>Department of Civil and Environmental Engineering, Imperial College London, London, UK

\*Correspondence to [sumit.sen@hy.iitr.ac.in](mailto:sumit.sen@hy.iitr.ac.in)

## **Dear Editor and Reviewers,**

We thank the reviewers for their careful evaluation of our manuscript and for their constructive feedback. We are grateful for the positive recommendation and the helpful suggestion to clarify the scope of Early Warning System (EWS) implementation. In response, we have revised the abstract and conclusion to explicitly state that this study does not focus on the operational EWS, while highlighting the key contributions to EWS-relevant components and design. We believe these revisions enhance the clarity and positioning of the manuscript.

This clarification has been added to the Abstract (lines 25–27, Page 1) and the Conclusion (final paragraph, lines 558–561, Page 18), as shown below:

Abstract (lines 25–27):

While developing an operational EWS is beyond the scope of this study, the findings provide foundational hydrometeorological insights and practical evidence to inform the implementation of SMART, community-centred urban flood EWS in Himalayan regions.

Conclusion (lines 558-561):

Although establishing an operational EWS lies beyond the scope of this study, the results offer robust hydrometeorological understanding and practical guidance to support the design of a SMART, community-focused urban flood EWS for the Himalayan region and comparable mountainous urban areas.