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Reanalysis of Flash Floods and Debris Flows on two continents and their management strategies

Juan Daniel Rios-Arboleda^{1,2}

¹Cooperative University of Colombia , Medellín, Colombia (juan.riosar@campusucc.edu.co)

²Colombian Polytechnic Jaime Isaza Cadavid, Medellín, Colombia (juandrios@elpoli.edu.co)

This research expands the original analysis of Baker and Costa (1987) including data from Europe and South America with the objective to understand if there are emerging latitudinal patterns. In addition, the threshold proposed by Zimmermann et al. (1997) it is evaluated with the data from tropical zones finding that this is a good predictor.

Mainly, recent Debris Flow occurred in South America are analyzed with the aim of identifying the best risk management strategies and their replicability for developing countries, particularly, the cases that have occurred in Colombia and Venezuela in the last 30 years are analyzed in order to compare management strategies and understand which are the most vulnerable areas to this phenomenon.

It is concluded that large-scale and multinational projects such as SED ALP are required in South America to better characterize events that have left multiple fatalities (sometimes hundreds of people) and better understand how to manage the risk on densely populated areas.

Finally, the use of amateur videos is proposed to characterize these events in nations with limited budgets for projects such as SED ALP, methodology that will be described extensively in later works.