

AGU Fall Meeting 2015, San Francisco

Conference report

I am very grateful to the Swiss Geomorphological Society (SGmG) for their support that granted me the opportunity to participate at the American Geoscience Union (AGU) Fall Meeting 2015, held in San Francisco, CA (USA) between December the 14th and the 18th.

I submitted a contribution to an Earth and Planetary Surface Processes session namely “Erosion and Sediment Transport in Steep Landscapes”. The title of the research presented was “The sediment yield of high mountain environment watersheds: do high frequency climate signals propagate through the sediment cascade?” and was accepted for a poster presentation. In this piece of research, we demonstrated how high frequency climate signals (e.g. the quite abrupt changes observed in the last five decades) have a considerable impact on high mountain environment. Particularly, a distinct response to temperature forcing is observed; two periods with climatic conditions either side of a critical threshold for glaciers are identified. To deepen our understanding of these dynamics, we are interested in investigating that changes in climatic indicators have an influence upon water yield and sediment export on these landscapes. A unique and valuable resource is available for the case studies we adopted in the Swiss Alps: hydroelectric power infrastructure management data. We used these long term records of extracted water flow and flushing from these infrastructures to determine water yield and coarse sediment export from two small and partially glaciated watersheds located in the Swiss Alps, over the last five decades. The adopted methodology allowed the identification of evidence of landscape response to climate forcing, manifested in enhanced sediment export. However, we found that sediment flux can be occasionally damped because of the ineffectiveness of rockwalls-hillslope-channel-outlet connectivity. Despite being scheduled for Friday afternoon when most people are leaving early, the poster attracted a vast number of interested people. I was able to present my finding and share with them the possible reasons for the many still open questions that my research encloses. The discussions were really insightful and many people also took interest in my recently published paper on a similar subject, so I was very pleased with the outcome of my contribution.

I particularly enjoyed the conference in its whole. It was very well organized and I had the opportunity to participate in many sessions that enlarged my view in geomorphology in general and more particularly in how geoscience researchers approach science in North America. In a final note, it must be said that the conference center in the middle of San Francisco downtown was really well located and the beauty of the bay enriched the experience.

I really appreciated attending the AGU Fall Meeting as it has been a very enriching experience. I am sincerely grateful for your support!

With my best regards,

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