

## Excursion of the Young Geomorphologists (SGmS)

### Europaweg between Herbriggen and Randa (VS) 1 & 2 September 2017



After the SGmS meeting in Zermatt on September 1<sup>st</sup>, the group composed by seven participants (students and PhD students) coming from Switzerland and France went to Herbriggen. During the first small trip in the afternoon, we observed the infrastructures built at the end of Bielzug torrent near the road to prevent the discharge of material from debris flow events (Fig. 1). In fact, in the upper part of the catchment, a rock glacier is present. His velocity increased in the last years, delivering more materials in the torrent.

We spent the night in the Bergfreund hotel in Herbriggen and the next morning we made a trip from Herbriggen, to the Grosse Grabe (Fig. 2), Obere Tannfluh and arrival back in Herbriggen to examine the sediment sources in the catchments, the morphology of the channels and the mitigation measures in the Bielzug torrent (Fig. 3).

After lunch in Herbriggen, we moved by train until Randa for the second part of excursion. We came up until the Hängebrücke (Fig. 4), build this year to keep the connection at high elevation on the Europaweg path. There, we saw the terminal part of the Grabengufer rock glacier (Fig. 5). Together with a landslide in the upper part of the rock glacier, this form is an important sediment source: it encountered a crisis in the late 2000's with very high velocities and sediment transfer rates enhancing debris flow activity.

The day ended in Herbriggen where we had a well-deserved hot chocolate.

Many thanks to all participants for their active attendance and to our excellent expert and trip organizer Mario Kummert. We also would like to thank the Swiss Geomorphological Society for its financial support.





*Figure 1 - Infrastructures built at the end of Bielzug torrent.*



*Figure 2 - Grosse Grabe.*



*Figure 3 - Mitigation measures in the Bielzug torrent.*

*Because of the bad weather, we made some modifications to the original program. The limit of the clouds was quite low and the temperatures were very cold, with the limit of the zero degree at about 2000 m. We therefore decided to avoid the higher altitude areas.*



*Figure 5 - Terminal part of the Grabengufer rock glacier.*



*Figure 4 - Hängebrücke.*