

# Master thesis/Study project – Environmental Engineering

Master Thesis Workload: 30 ECTS, 900 hours

Study Project Workload: 12 ECTS, 360 hours

## Stable isotope sampling in a high-elevation catchment in Tyrol (Austria) or South Tyrol (Italy)

Stable isotopes allow to better understand and quantify the composition of runoff from different sources, such as snow and glacier melt or precipitation. Within the SEHAG-project, stable isotopes from different sources (snow and glacier melt or springs) will be sampled over the summer 2022 (July to September). The sampling will take place in one of the research areas of the SEHAG-project, i.e., Horlachtal, Kaunertal (both in Tyrol) and Martelltal/Val Martello (South Tyrol). For taking the samples, it is necessary to be repeatedly on site on the areas throughout the sampling campaign (application for an Erasmus + scholarship is possible). Since the sampling sites are partly difficult to access, it is mandatory to have experience in mountainous areas. Depending on the research area, it is an advantage to speak Italian or German.

### Tasks:

- Development of an isotope sampling strategy for one of the SEHAG research sites
- Performing isotope samplings at different sources (stream water, springs, snow and glacier melt)
- Supervision of the hydrological observation network and performance of stream flow measurements
- Data analysis

### Requirements:

- Experience in Alpine terrain
- Willingness to stay in one of the research areas for couple of weeks
- Basic knowledge in programming and data analysis
- Good technical experience
- Independent, conscientious and responsible way of working

### Start:

May

### Contact:

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