Participation of the Swiss Climate Summer School 2023 (Climate-Water-Energy-Food-Nexus), September 2023

My name is Sarah Hanus and I am a 3rd year PhD student in Hydrology at the University of Zurich. In my PhD project, I investigate the importance of mountain areas for water provision for water use in lowlands. Mountains often provide disproportionally high runoff in river basins while water use is comparatively low. Therefore, water from mountain areas is likely relevant for downstream water uses, e.g. irrigation of crops, and therefore for food security.

My PhD research covers a range of topics from glaciology to crop growth. That is why it was important for me to attend a summer school that covers a variety of topics that are interconnected with hydrological sciences. The SGHL generously supported my attendance at the Swiss Climate Summer School 2023 at Monte Verita, Ascona on the topic “Climate-Water-Energy-Food-Nexus”.

It was an inspiring week full of lectures and discussions about the complex interconnectedness of climate, water, energy and food. I am very grateful for the opportunity. In the following paragraphs, I will reflect on some key elements of the summer school.

Diversity of topics

Due to the nature of the topic, lectures at the summer school spanned a great variety of topics, from the physical basis of climate change, over transboundary water issues and land use decisions to the precautionary principle and climate policies. It was very refreshing to listen to the variety of lectures, especially because the lecturers had a broad variety of backgrounds: physics, economics, political science and philosophy. It showed me from how many different angles, the same research fields can be addressed. Also, the poster session with poster presentations from the participants of the summer school was very diverse. Explaining my research to a broader audience than hydrologists, helped me to sharpen my research objectives and results.

Workshops

The workshops at the summer school gave me the opportunity to dive deeper into specific topics. I especially enjoyed the workshop on the philosophy of modelling and values in sciences. We discussed the question “Should science be value-free?” and “Can science even be value-free?”. It was enriching to take a broader view of the science we do, which in everyday work often falls short. It gave me the opportunity to think about my values and how they shape the science I do. We discussed that it is helpful to discuss our research topics and methods with people outside our niche and research group to identify implicit values within our research “bubble”.

Figure 1: Group Picture (Credits: C2SM)

Conclusions

Even though, I work only on a small part of the Climate-Water-Energy-Food-Nexus, it is important to keep in mind that water, food and energy systems do not exist separately from each other but influence each other. The summer school has shown me that working across disciplines and connecting the nexus is challenging but possible. Therefore, we need research teams with diverse backgrounds to gain a better understanding of the systems. My conclusion of the summer school is that we need both: researchers who focus on very detailed questions in one discipline, e.g. hydrology, and researchers who have a broader thematic focus and bridge the gap between disciplines, e.g. hydrology and agriculture.