



Mountain Forests & Risk Management

Call for Application

ETH Sustainability Summer School 2017

ETH Zurich, Tamina Valley Pfäfers, Switzerland

July 1 - July 9, 2017

Mountain Forests & Risk Management

The ETH Sustainability Summer School 2017 goes back to the roots of the term sustainability: into the forest. More precisely, into the Swiss mountain forest.

You and 31 other students from all academic levels, disciplines and cultures will get the unique opportunity to understand and experience mountain forests from an inter- and transdisciplinary perspective.



Mountain forest with wooden tripods protecting the settlements and infrastructure of the Tamina valley against natural hazards like avalanches (Photos: Stephan Birrer)

Background

Mountain forests provide a multitude of services on which mountain inhabitants as well as downstream communities depend. They supply timber, store carbon and offer recreational opportunities. Furthermore, they protect settlements and infrastructure from natural hazards such as rock-fall.

Mountain forests are fragile: Only few tree species thrive under the harsh high-elevation conditions, and biotic processes are slow due to short growing seasons. For example, the natural re-growth of forest after a blow-down event may take many decades. In addition, chronic anthropogenic changes of the climate as well as changes to the frequency and severity of extreme events constitute considerable hazards to these ecosystems.

Managing mountain forests and risks is a long-term and costly process and everything but trivial. In order to maintain the functionality of ecosystem services, economical, ecological, social and engineering perspectives need to be considered. This course aims to integrate all these perspectives.

Outline

The Summer School 2017 will last 9 days and will offer you a balance of theoretical input, case study work and hands-on experience in the forest.

In the theoretical part you will receive input by experts from academia, the private sector and NGOs. The acquired knowledge will be the basis for discussions within your case study group and also with local stakeholders. The tentative topics include:

- What should future natural hazard mitigation look like: natural mountain forests vs. artificial structures?
- What is the future of economically marginal mountain settlements?

Date:	July 1-9, 2017
Location:	Pfäfers, SG
Eligibility:	all disciplines
Recognition:	2 ECTS
Fee:	CHF 250
Application by:	March 17, 2017

- Will we need “climate-smart” forest management that adapts to a changing climate and to changing demands for ecosystem services by humans?
- What will be the role of hunting to manage game populations in order to protect mountain forests against game damage?

In the practical part, you and your fellow students will experience three days of “hands-on” work in a Swiss mountain forest, i.e. the realities of practical forest management work, and will be better able to assess the ecological, economic and engineering challenges that are important in the context of mountain forest management.

Course location is the → [mountain seminar house Piz Alun](#) in St. Margrethenberg close to Pfäfers.

Practical Work

The practical work will take place in a protection forest in the Tamina Valley in Canton St. Gallen. Located within Pfäfers municipality, this forest prevents avalanche release, soil erosion and rockfall that otherwise would hit the road linking the villages of Pfäfers and Vättis, the settlements of Ragol and Vadura, or the Mapprag power plant. In 1990, the winter storm «Vivian» ravaged the Tamina Valley and severely damaged the protection forest.



Volunteers building wooden tripods on the steep slopes of the Swiss Re protection forest (Photo: Bergwaldprojekt)

Due to its steep terrain and few roads, this forest cannot be managed cost-effectively. In order to maintain its protective function, the Swiss NGO Mountain Forest Project runs a volunteering-program together with the Swiss Re Foundation.

The ETH Sustainability Summer School 2017 partners with the Mountain Forest Project to offer a unique learning experience: theoretical knowledge gained via scientific presentations and group work will be complemented by the realities of practical forest management work.

Therefore, you will spend three days in the Swiss Re protection forest where you can experience this mountain forest and its ecosystem services with all your senses.

Under the guidance of trained forestry workers of the Mountain Forest Project and the Tamina Forest Service, you will be active in planting, building snow and wildlife protection measures, constructing footpaths and maintaining avalanche controls. Experiencing the effort to work in harsh terrain under difficult conditions and discussing the work with local stakeholders will enable you to better assess the ecological, engineering, economic and social challenges of mountain forest management.

For more information on the prerequisites and logistics please visit the website → www.sustainability.ethz.ch/summer-school



Mountain forest in the Tamina Valley (Photos: Stephan Birrer)

Organizers

The Summer School program is organized in collaboration between → [ETH Sustainability](http://www.sustainability.ethz.ch), the central hub for coordinating sustainability activities at ETH Zurich, the → [Chair of Forest Ecology at the ETH Department USYS](http://www.fe.ethz.ch) and the Swiss NGO → [Bergwaldprojekt](http://www.bergwaldprojekt.ch), which is funded by the Swiss Re Foundation.

→ www.sustainability.ethz.ch

→ www.fe.ethz.ch

→ www.bergwaldprojekt.ch

Who should apply?

The Summer School is open to 32 Bachelor, Master and PhD students from ETH Zurich and other universities from a wide range of nationalities and disciplines such as Architecture, Biology, Earth Sciences, Engineering,

Environmental Sciences, Geomatics Engineering and Planning, Management, Technology and Economics, Public Policy, Law, Spatial Development and Infrastructure Systems, Computer Science, or Modelling.

The course aims to ensure a well-balanced mixture between science, technology and social sciences. Candidates will be evaluated on their academic record, previous work experience, their readiness to work actively in the mountain forest, as well as their dedication to sustainability topics and interdisciplinary work. Prerequisites are excellent English skills in speaking and writing.

The ETH Zurich accredits successful completion of the course with 2 ECTS.

Application and costs

Applicants are required to fill in an → [online form](#) and upload a one-page CV and a one-page letter of motivation.

Deadlines:

Application: March 17, 2017

Notification: April 28, 2017

The course fee is CHF250, and includes accommodation, breakfast, lunch and dinner, the travel from Zurich to the seminar house and return as well as local transport in the mountains.

Please note that health, accident and private liability insurance coverage is your own responsibility.

Find more information on the website

→ www.sustainability.ethz.ch/summer-school

