

## Swiss Federal Research Institute WSL

Research for People and the Environment



The Swiss Federal Institute for Forest, Snow and Landscape Research WSL focuses on the use and protection of both natural habitats and urbanized areas. It aims to identify and tackle new research topics at an early stage.

The goals of WSL research are to ensure that landscapes and forests are managed sustainably and that an integrated approach is taken to coping with the kinds of natural hazards that typically occur in mountainous countries. WSL is a leading research institute internationally and provides the scientific basis for pursuing sustainable environmental policies in Switzerland.

WSL develops ways of solving socially relevant problems together with its partners in industry, in the wider scientific community and society. It takes an inter- and transdisciplinary approach to research, which is oriented towards finding practical solutions. This problem-oriented approach is one of WSL's special strengths.

The people at WSL rely on networks in their thinking and work. WSL cultivates close cooperation with other institutions in the ETH domain, but at the same time it also maintains its independence. The people who work at WSL are the institute's capital, with their above average level of commitment and their concern to foster a dialogue between research, practitioners and the public.

[www.wsl.ch](http://www.wsl.ch)

### The research groups where the artist might be in residence: Forest Ecosystem Processes

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The Research Unit addresses the impact of natural and anthropogenic environmental changes on the nutrient and carbon fluxes in forests, the hydrological cycle within forests and on forest ecosystem health.

To this end the RU studies the biogeochemical cycles of carbon and nutrients and their long-term trends using long-term studies, large-scale surveys, as well as field and laboratory experiments. It also addresses the quantitative effects of forest growth on regional carbon, nutrient and water fluxes and develops methods to quantify resource pools and fluxes in forest ecosystems on different scales. The outcomes of this research allow the development of scenarios to assess and model the risk linked to regional and global anthropogenic changes, including nutrient and pollution deposition, climate change, carbon dioxide increase and changes in forest management, on forest (ecosystem) health, in both, the short and long run.

The Unit forms the core of the Swiss Long-term Forest Ecosystem Research LWF, contributing to the ICP Forests monitoring network, to which Switzerland has been committed by signing the Geneva Convention on Long-Range Transboundary Air

Pollution. It also provides information on several criteria and indicators for sustainable forest management laid down by the Ministerial Conference on the Protection of Forests in Europe.

More information:

[www.wsl.ch/forschung/forschungunits/wald/index\\_EN](http://www.wsl.ch/forschung/forschungunits/wald/index_EN)