

Long-term Forest Ecosystem Research Programme LWF

Objectives and overview of the research sites



WSL programme

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The Long-term Forest Ecosystem Research programme LWF investigates the effects from anthropogenic and natural influence factors on the long-term health of the forests and the potential risks to humans. For a sound assessment, a profound understanding of the relationships between processes, causes and effects in the ecosystem are necessary.

The Long-term Forest Ecosystem Research programme LWF is based on four different site categories:

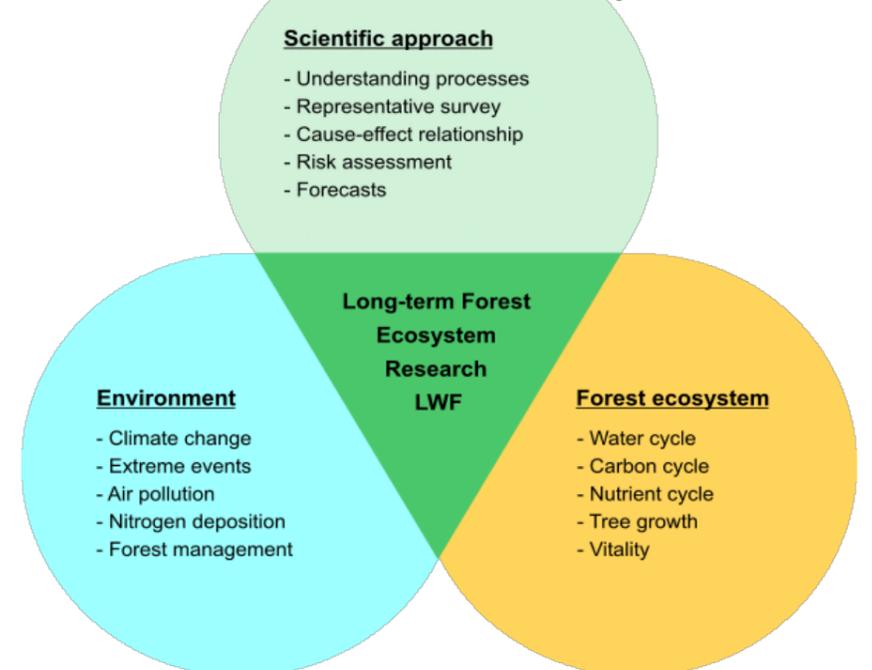
1. Annual assessments on the **Sanasilva** Inventory's systematic network (see separate poster)
2. Continuous measurements of environmental factors and observation of forest condition on **long-term research plots**.
3. Linkage to other national and international monitoring networks, such as **TreeNet** (see separate poster), **ICP-Forests**, **ICOS**, and **ILTER-Europe**.
4. Additional sites where treatments and/or experiments are applied, extend the LWF programme in order to answer specific questions on cause-effect relationships and respective mechanisms in ecologically relevant issues.

The **LWF programme** provides long-term data series with a scientific interpretation to national and international policy makers, which allow the evaluation of and meaningful conclusions on possible causes of changes in forest functions and services as well as future scenarios. Measurements are based on international standard methods and quality control as set down in the ICP-Forests Manuals. The LWF comprises 19 non-systematically distributed sites across Switzerland. The sites cover instead of the main forest communities, the main geographical regions and the main regions where forests may be most under environmental pressure. Two sites, Davos and Lägeren, are defined as Super sites and are part of the NABEL and other networks. At the LWF sites, various analyses are carried out continuously on the level of the atmosphere, vegetation/biodiversity and the soil (see separate LWF poster on measurements and sensors).

Objectives of the programme:

- ❖ Early detection and a representative assessment of changes in forest condition
- ❖ Determination of external influences, both from anthropogenic and natural sources and their effect on the forest ecosystem (element inputs, climate)
- ❖ Determination of changes in important components within the forest ecosystem
- ❖ Development of indicators to assess the condition of the forest
- ❖ Integrated risk assessment based on different stress scenarios
- ❖ Extended platform for internal and external research projects

The LWF investigates the interactions between the environment and forest ecosystems



LWF sites (●)



Sanasilva (●) and TreeNet (●) sites

