



# PRÍRODE BLÍZKE MANAŽMENTOVÉ PRÍSTUPY A MODERNÉ TECHNOLÓGIE PRE PODPORU BIODIVERZITY

SILVATECH4TREES

0410-2SC-BIO-PC2-002

Bern University of Applied Sciences - School of Agricultural,  
Forest and Food Sciences (BFH-HAFL) and ProSilva Switzerland

## Presentation and role in the project



SilvaTech4Trees





# Main roles

... to provide expert support in establishing and measuring the marteloscope plots,

... to link the established “living forest laboratories” to the international platform  
[www.martelage.sylvotheque.ch](http://www.martelage.sylvotheque.ch)

... and to share its know-how and long-standing experience in close-to-nature forest management.



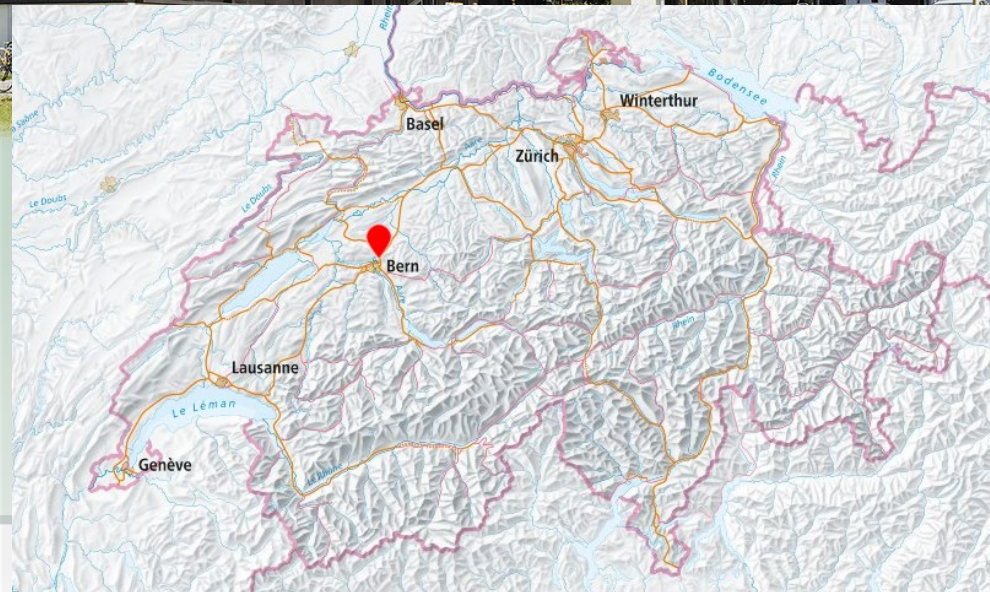
SilvaTech4Trees





Hochschule für Agrar-,  
Forst- und Lebensmittel-  
wissenschaften HAFL

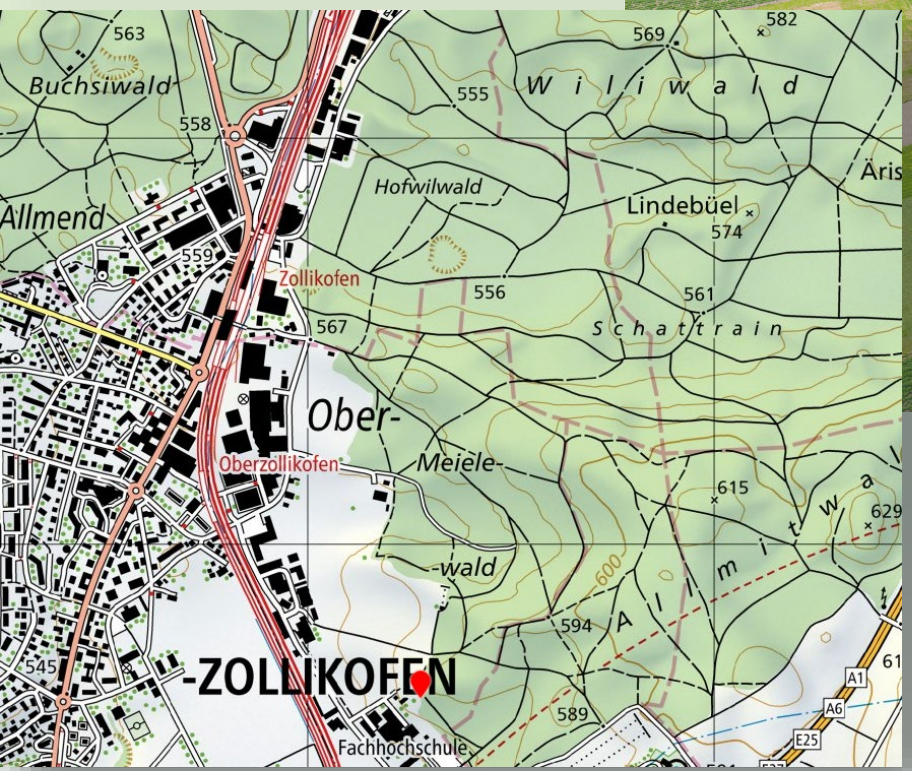
B  
F  
H  
Berner  
Fachhochschule



SilvaTech4Trees



Prírode blízke manažmentové prístupy a moderné technológie pre podporu biodiverzity



SilvaTech4Trees





# BFH-HAFL: Facts + Figures

	<b>Bern University of Applied Sciences (BFH)</b>	<b>School of Agricultural, Forest and Food Sciences (BFH-HAFL)</b>
Established	1997	1967
Departments	8	HAFL
Bachelor degree programmes	32	4 (Agriculture, Forest Science, Food Science, Environmental and Ressource Management)
Master degree programmes	27	2
Languages of instruction	German, French, English	German, French, English
Students	ca. 8'000	ca. 890
Staff	ca. 2'900	ca. 400



SilvaTech4Trees





# Multifunctional Forest Management

We develop **practical, innovative solutions** for the **multifunctional and sustainable management of forest ecosystems**. We operate in a networked, fact-based and technology-oriented manner.

Forest Production



Mountain Forests,  
Natural Hazards and GIS



Forest Ecosystem  
and Management



Forest Policy and International Forest Management



SilvaTech4Trees





## Forest monitoring

> keep the big picture in mind



> map.admin.ch

## Forest management

> flexible steering and control

**20-100y+**

Long term for  
development



**5-20y**

Coordination of  
interventions



Harvesting

**0y**

Tree marking

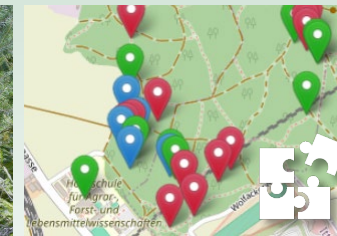
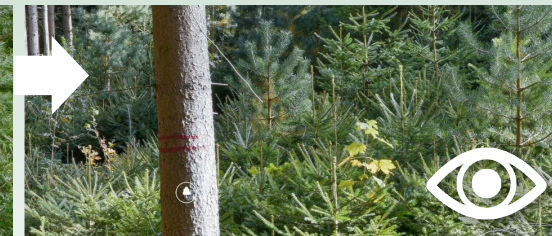
**1-5y**

Wood supply

## Silvicultural knowhow and knowledge management

> training, follow-up, optimisation and further development of silvicultural

**Silvicultural  
concepts**

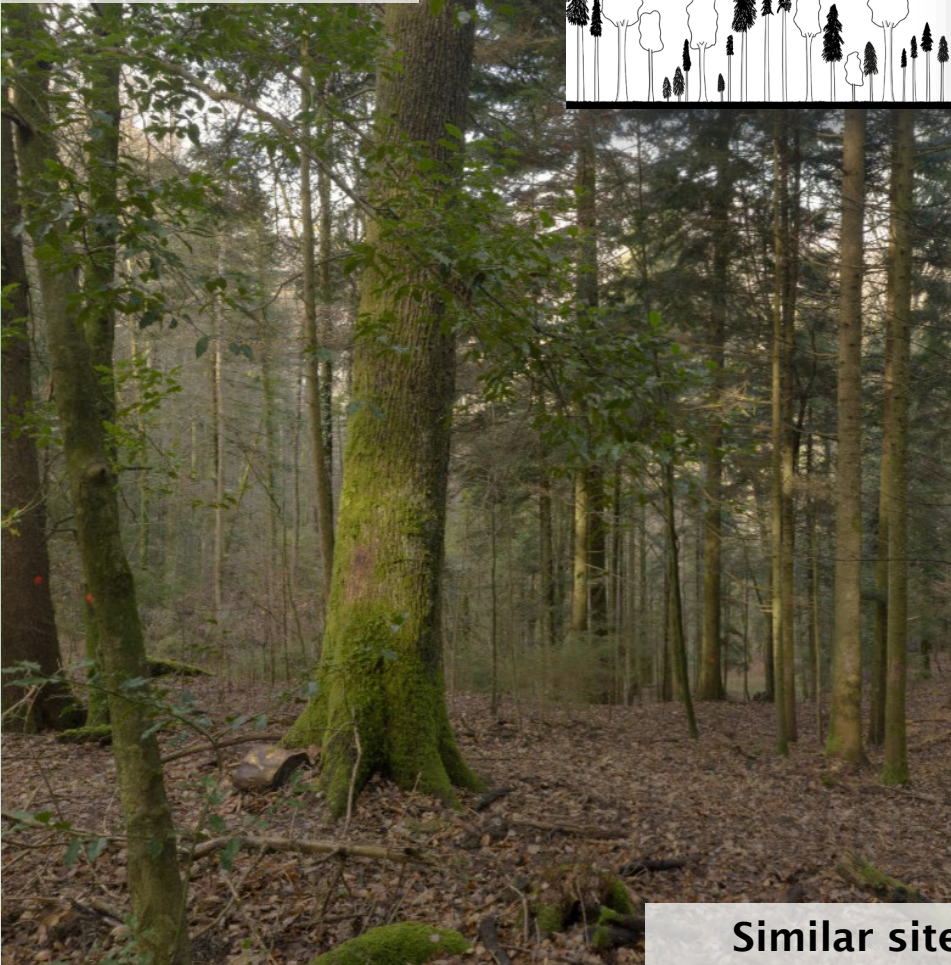




**Uneven-aged  
15+ tree species**



**Even-aged  
... almost only beech**



**Similar site conditions**



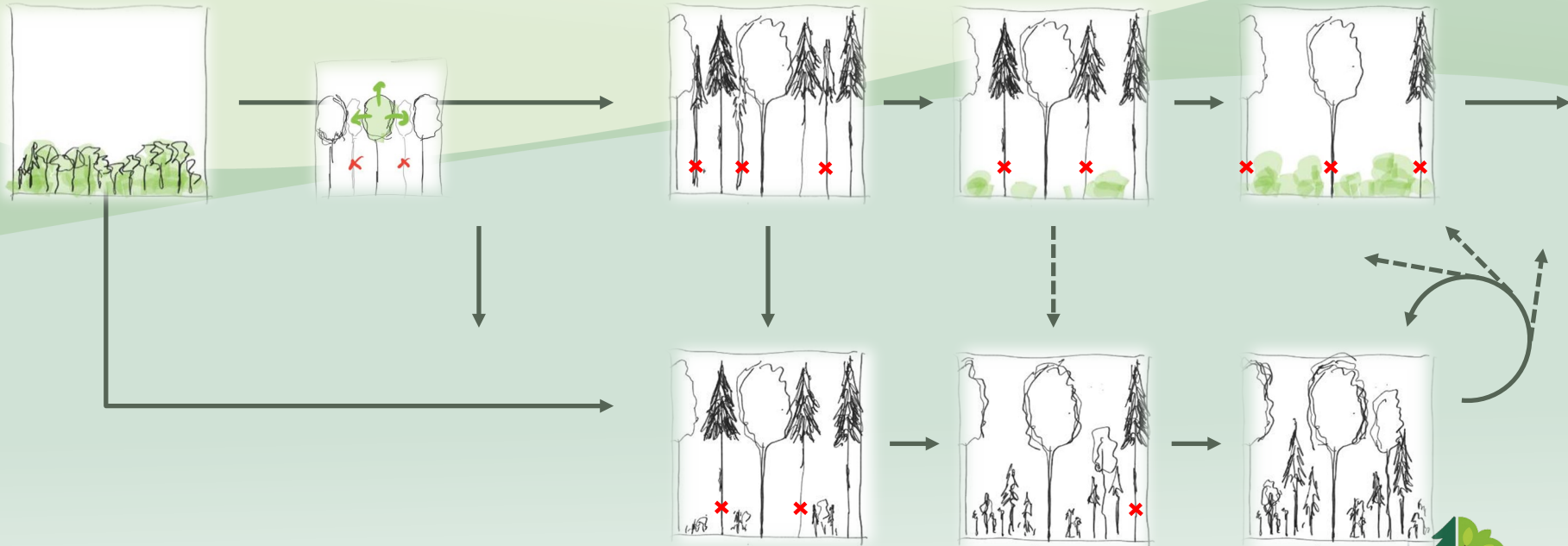


# Close-to-nature silviculture > influencing natural processes, step by step with clear targets ...

Tending and thinning

... regeneration cuts

✗ Tree marking / felling



Transformation to uneven-aged ....

... uneven-aged in  
demographic equilibrium





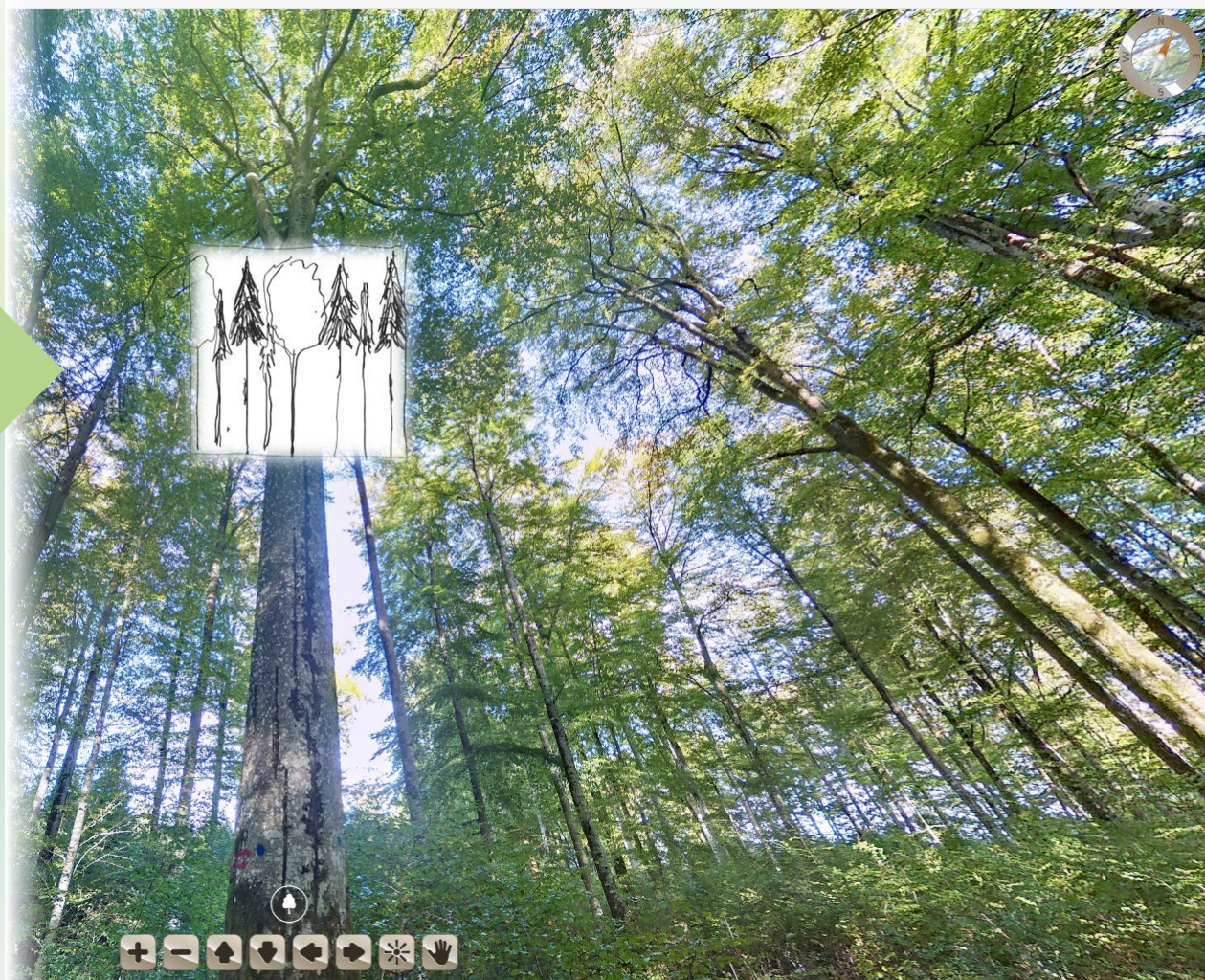
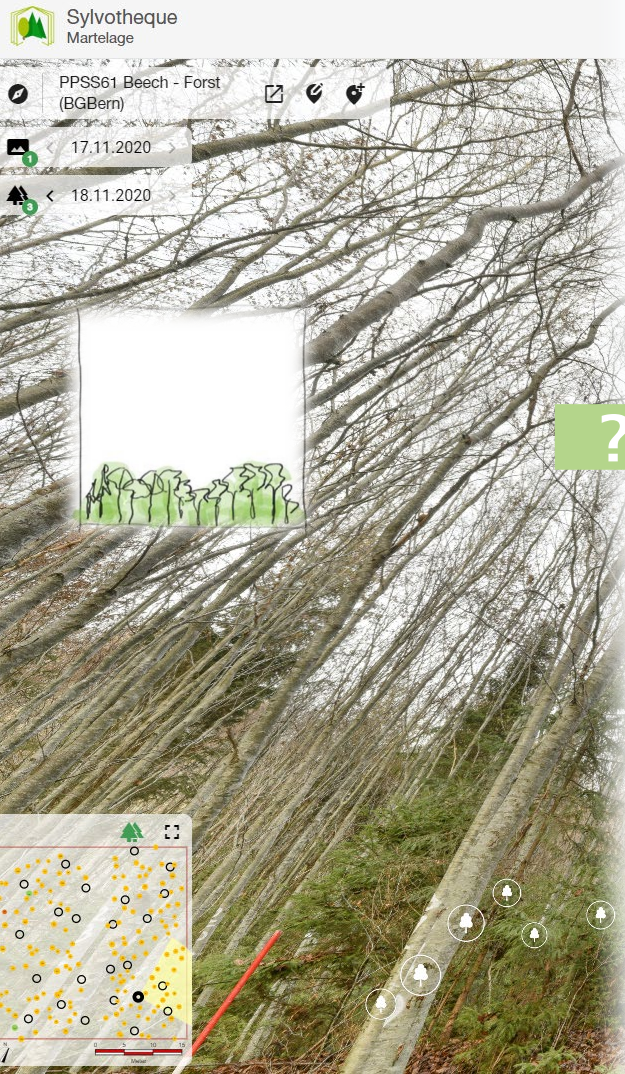


Sylvotheque  
Martelage



Disclaimer Français christian.rosset@bfh.ch





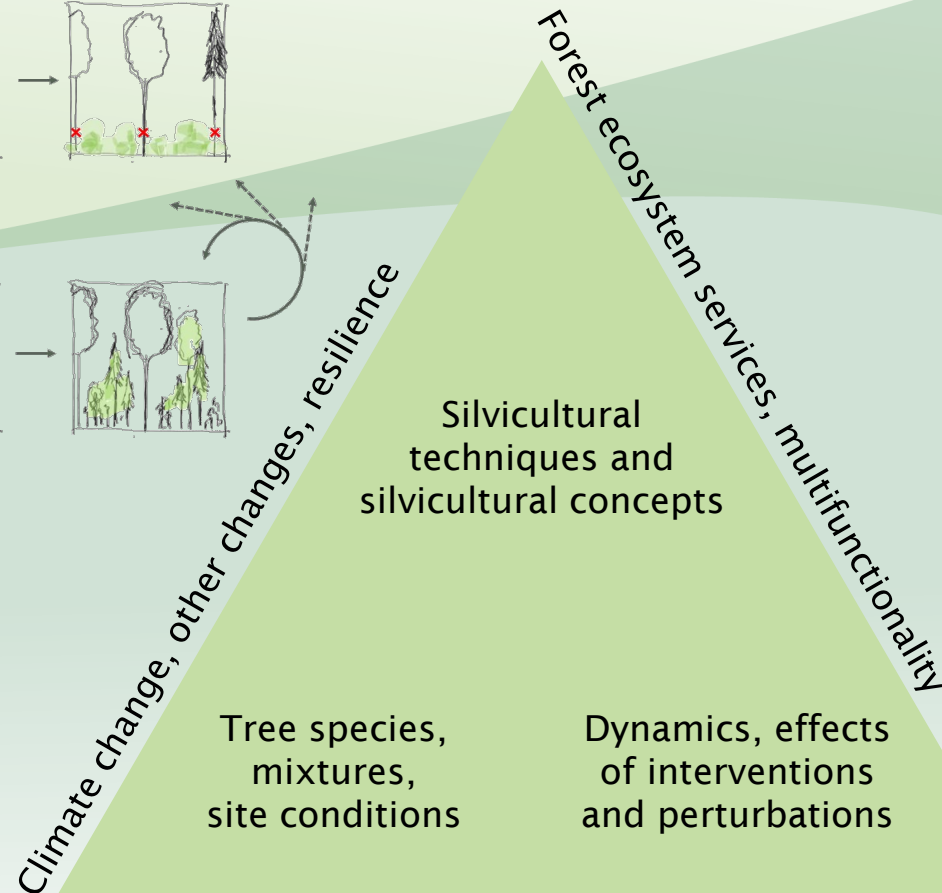
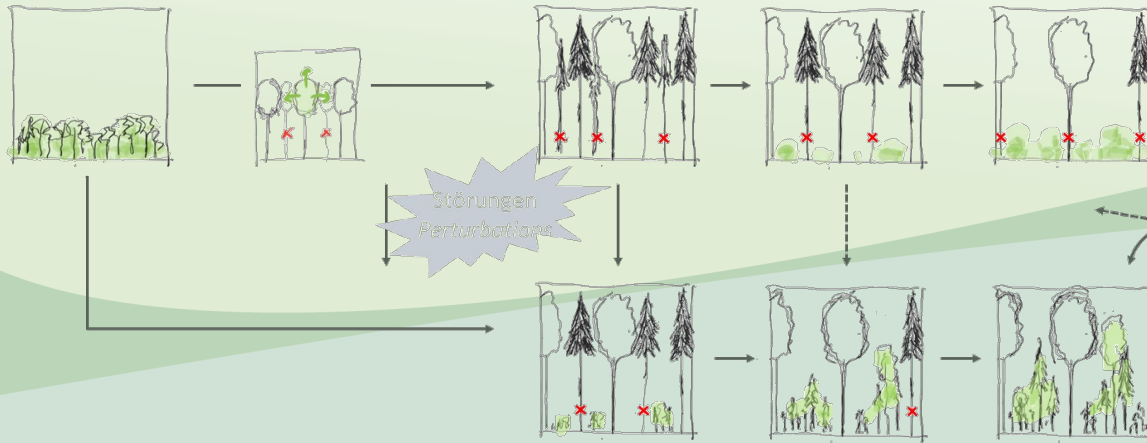


Sylvotheque  
Martelage



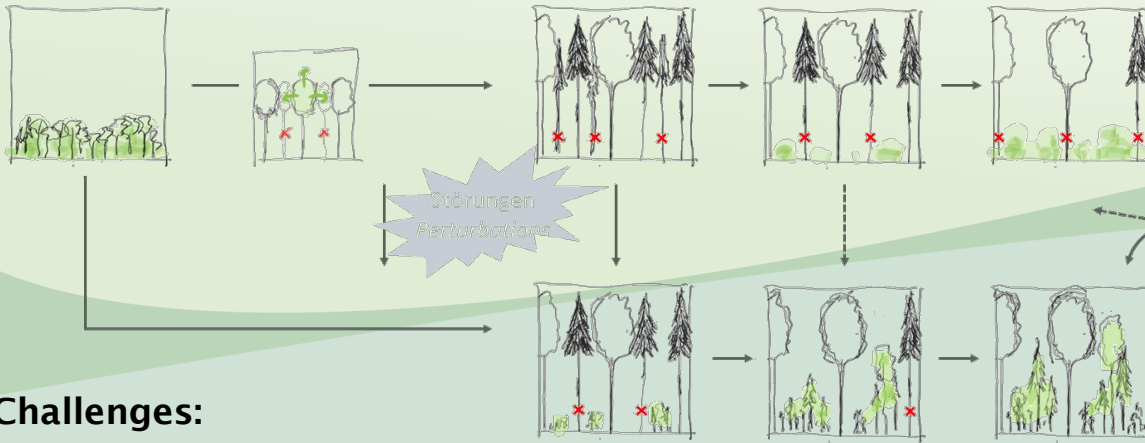


# Close-to-nature silviculture > influencing natural processes, step by step with clear targets, based on facts and evidences ...



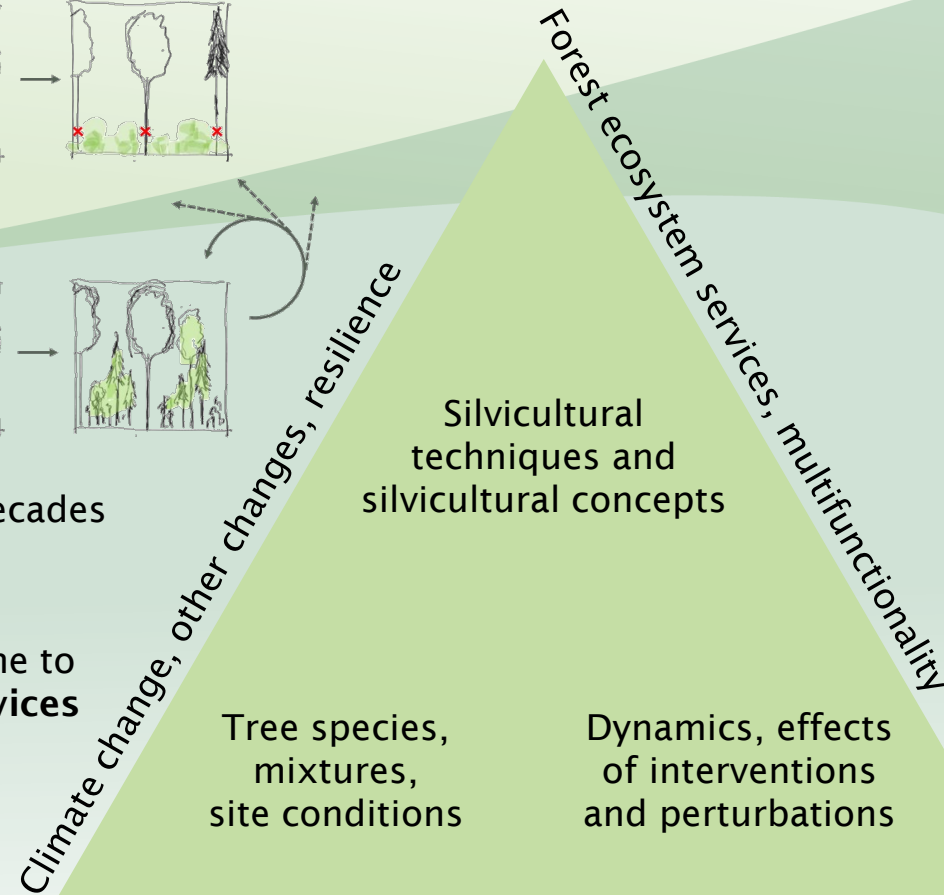


## Close-to-nature silviculture > influencing natural processes, step by step with clear targets, based on facts and evidences ...



### Challenges:

- Realistic own **representation** of forest **dynamics** over several decades
- Broad knowledge of **silvicultural techniques** to **influence** natural processes
- **Coordination** of silvicultural interventions over time to efficiently provide **relevant forest ecosystem services**
- Capacity to handle highly **complex** systems and to face **many different situations**
- Capacity to **adapt** to major **changes** and crisis

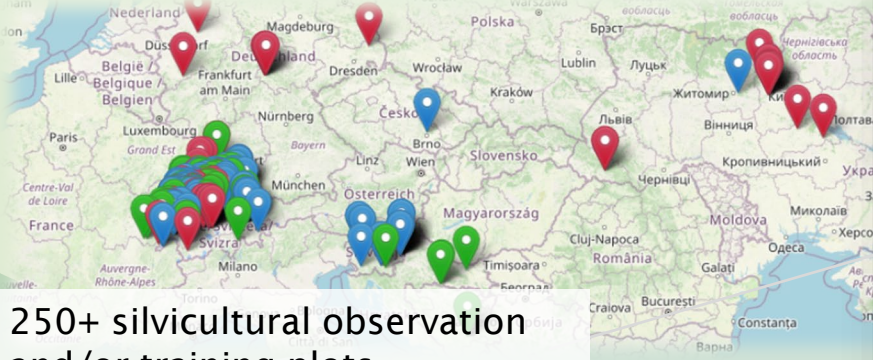


Biodiversity

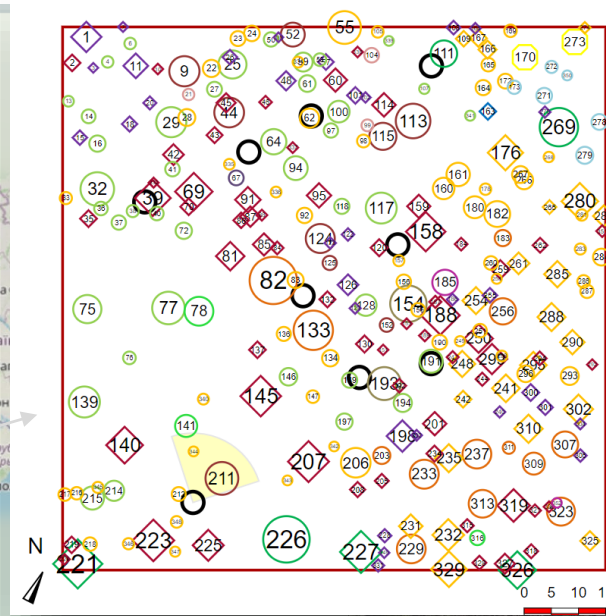




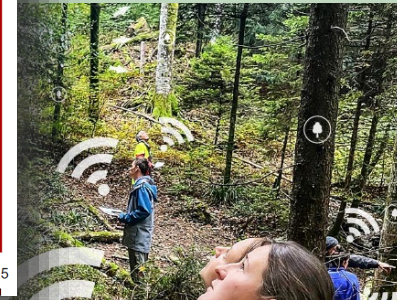
[martelage.sylvotheque.ch](http://martelage.sylvotheque.ch)



250+ silvicultural observation  
and/or training plots




Interactive tree  
map on internet  
and on  
smartphones for  
tree marking  
exercises



Photosphere (360° Panorama) > time travel





 Home

### Thematic filter

Silviculture 

Main tree species 

Main focuses 

Diameter Class 

### Content types

 Tours

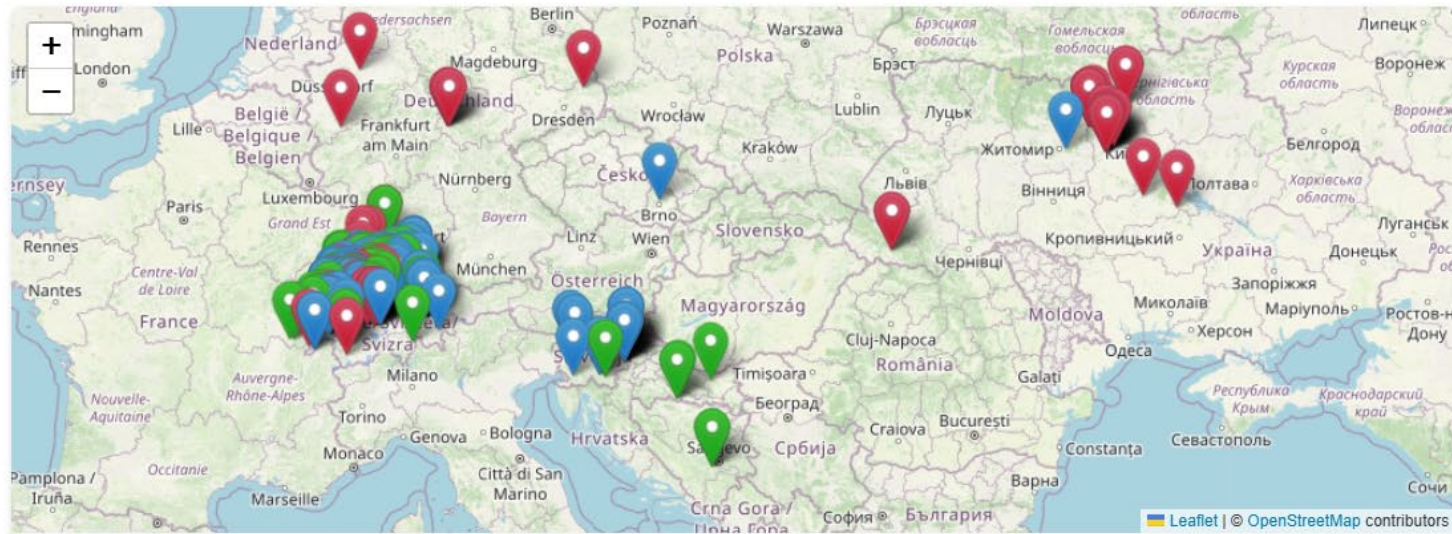
 Topic 

 Guided visit



Sylvotheque  
Martelage

Search



 Virtual tour

 Tour with tree positions and panoramas |  Tour with tree positions |  Tour with panoramas

> [martelage.sylvotheque.ch](http://martelage.sylvotheque.ch)



SilvaTech4Trees





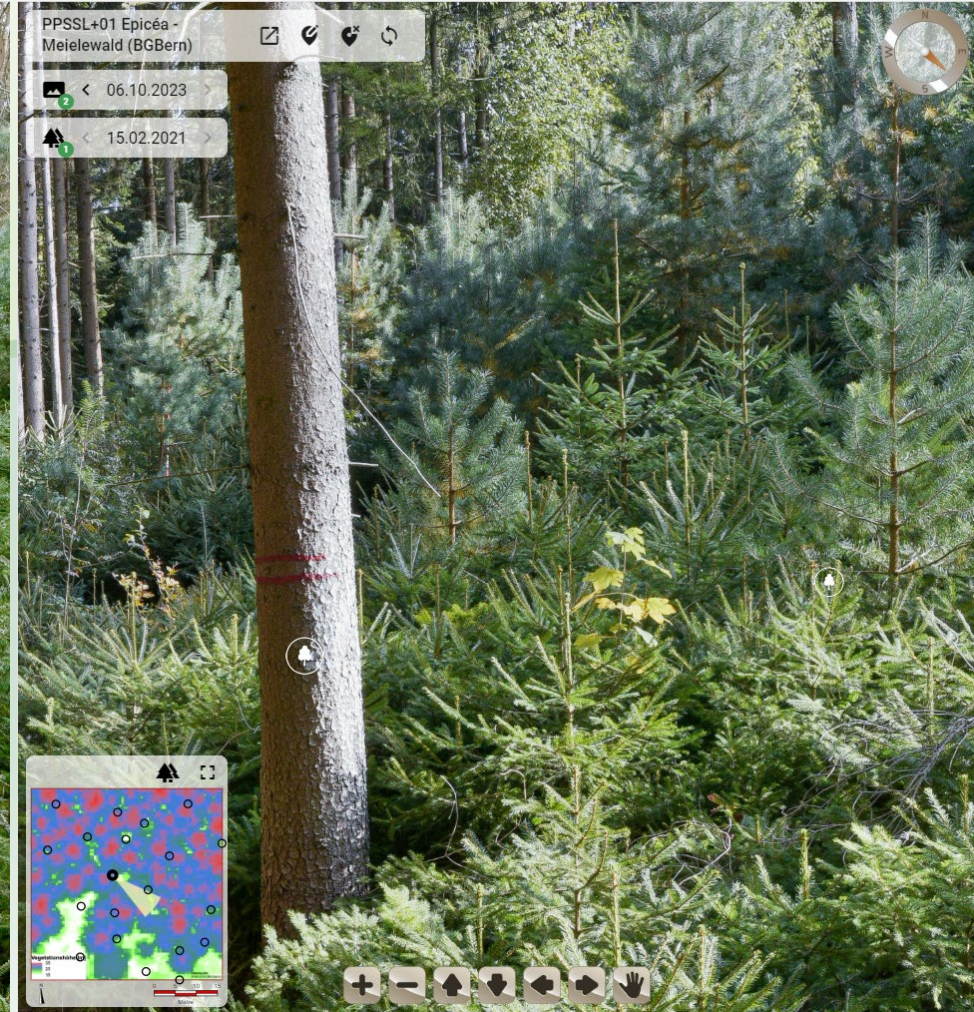
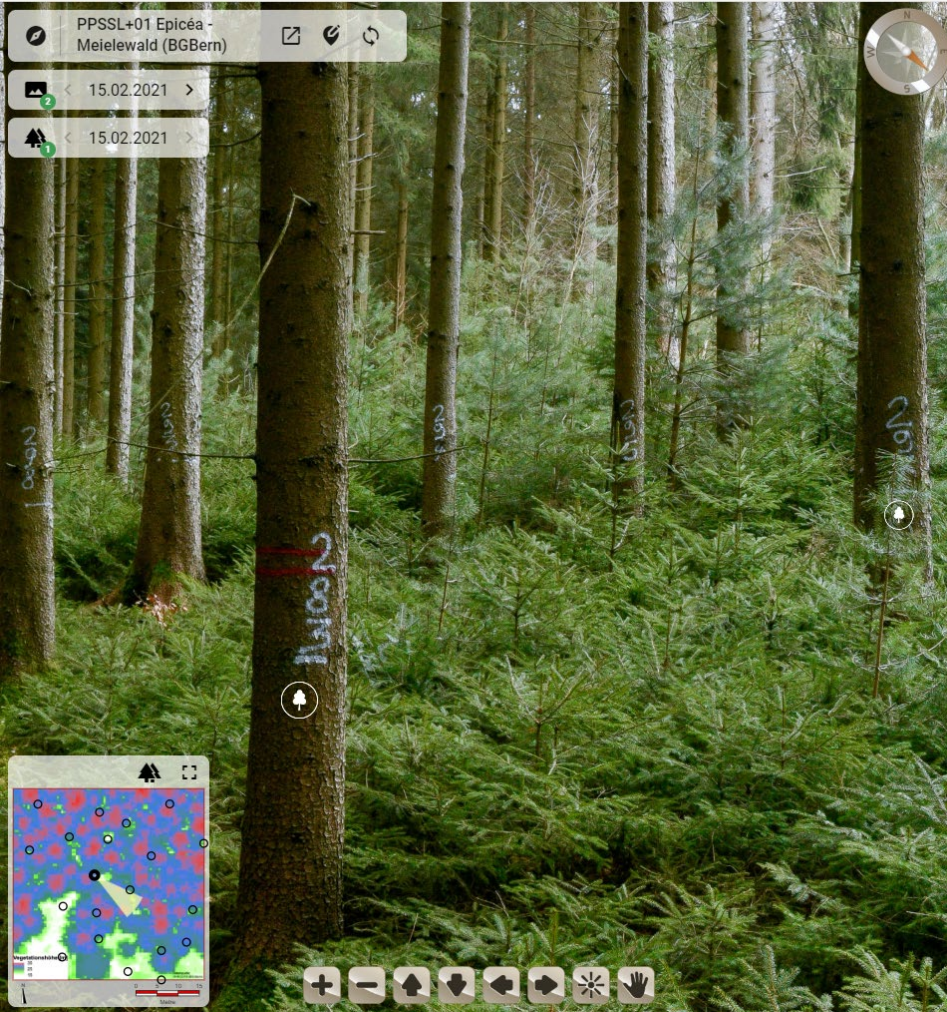
## MSC Mobile

Android



iOS







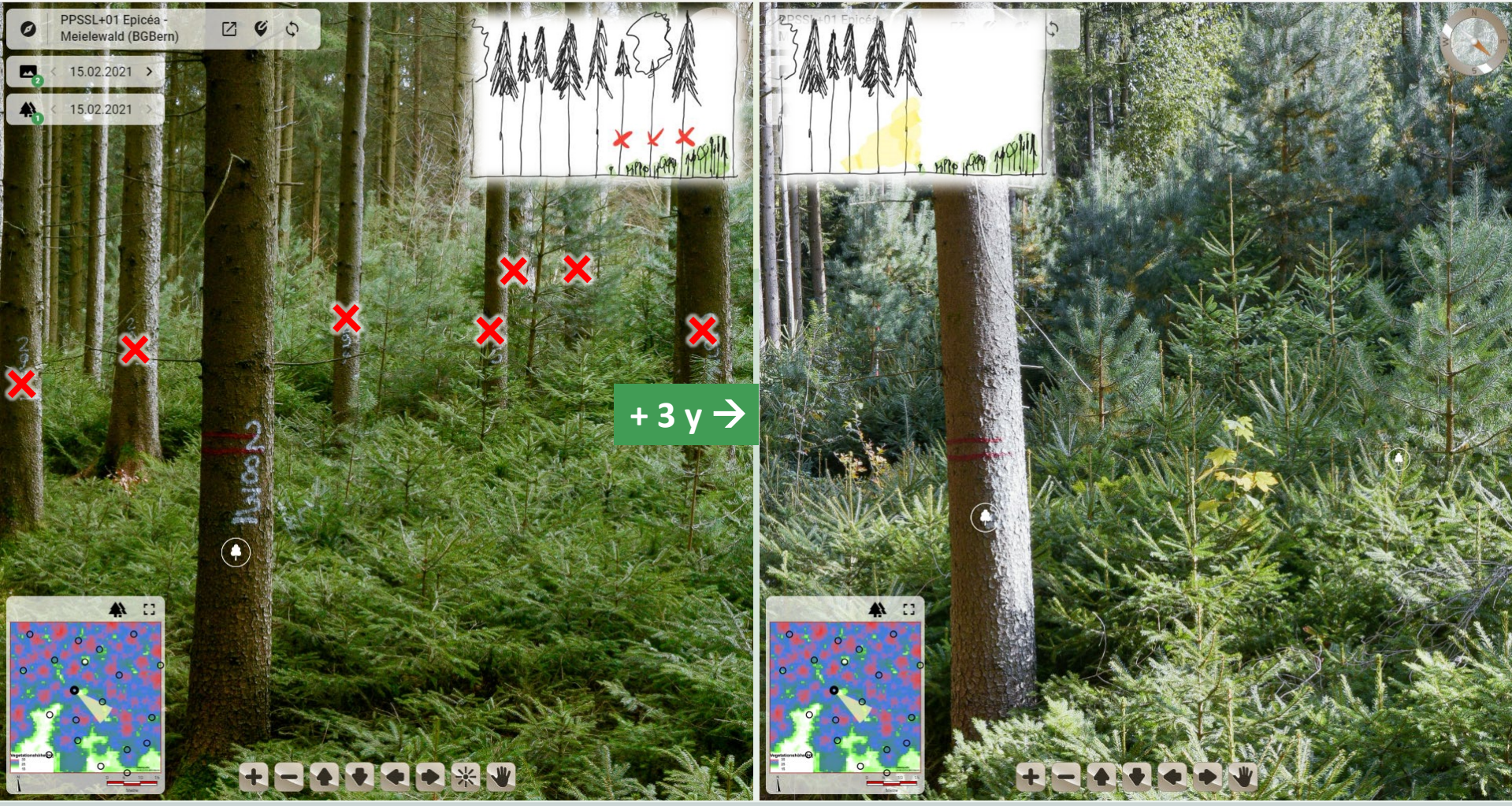
Sylvotheque  
Martelage

PPSSL+01 Epicéa -  
Meielewald (BGBern)


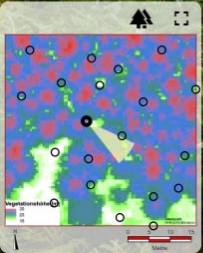
15.02.2021

15.02.2021

Mentions légales DE | FR | EN [Login](#)



+3 y →





**prosilva**<sup>+</sup>

> [info@prosilva.ch](mailto:info@prosilva.ch)

> [www.prosilva.ch](http://www.prosilva.ch)



Stephan Hatt  
Secretary ProSilvaSchweiz - 2026





## ProSilvaSwitzerland – who we are

- Association of foresters from all over Switzerland who are committed to the concept of Continuous Cover Forestry
- Founded 1992 as «Schweizerische Arbeitsgemeinschaft Naturgemässe Waldwirtschaft» – ANW Schweiz
- 2026 about 260 members, more than half of whom are foresters.



SilvaTech4Trees





## ProSilvaSwitzerland – the board



**Erwin Schmid**  
Präsident



**Stephan Hatt**  
Geschäftsführer



**Jan Boni**  
Beisitzer



**Mélila Saucy**  
Beisitzerin



**Patrik Mosimann**  
Beisitzer



**Marcel Hablützel**  
Beisitzer



**Jörg Hässig**  
Beisitzer



SilvaTech4Trees





## ProSilvaSwitzerland – what we do

As a **grassroots** and user organisation, ProSilva develops highly practical silvicultural knowledge across language, cantonal and, last but not least, ownership boundaries.

- We organise **training courses and excursions**, and in particular yearly tree marking exercises.
- We promote **exchange** with other practitioners and experts.
- We develop working **tools** such as our booklet «A brief guide to Continuous Cover Forestry»



SilvaTech4Trees





## Programm 2026

Datum	Veranstaltung	Ort	Thema
30. April	Mitgliederversammlung + Exkursion	Boudry NE	Vortrag: «Dauerwald und Klimawandel – wohin gehen wir?» Exkursion: «Waldbau inspiriert von Geschichte und Natur»
03. - 05. Juni	Studienreise	Sargans Bündner Herrschaft Surses/Forna	Dauerwald und Gebirgswaldpflege
2. Juli 7. Juli 9. Juli	Praxiskurse	Glarus Nord Seon AG Neuchâtel	Einführung in den Dauerwald-Forstbetrieb für Betriebsleiter:innen und Praktikant:innen
15. und 16. Oktober	Anzeichnungsübung	Selzach Marteloskop Lehmannskreuz SO	Baumarten- und Strukturvielfalt am Jurasüdfuss: Waldbaulicher Umgang mit den Unsicherheiten des Klimawandels.



SilvaTech4Trees





## Checkkarten

Der Dauerwald als Waldbauidee, Waldbild und Betriebsform hat sich in der Schweizerischen Waldwirtschaft etabliert und wird grossflächig angewendet. Ein Förster muss daher die Waldbauidee Dauerwald verstehen und anwenden können. Die Checkkarten Dauerwald sollen ihn dabei unterstützen. Sie sind Argumentarium und Gedankenstütze und sollen Impulse geben.

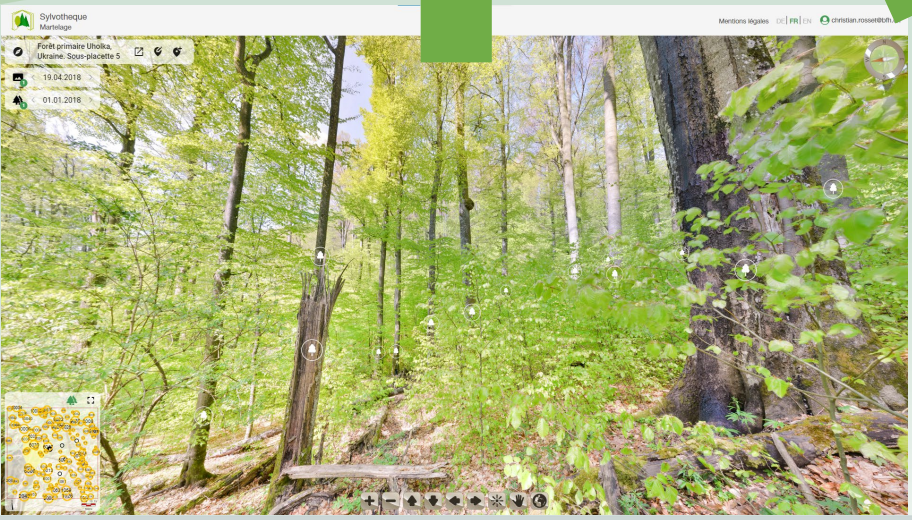
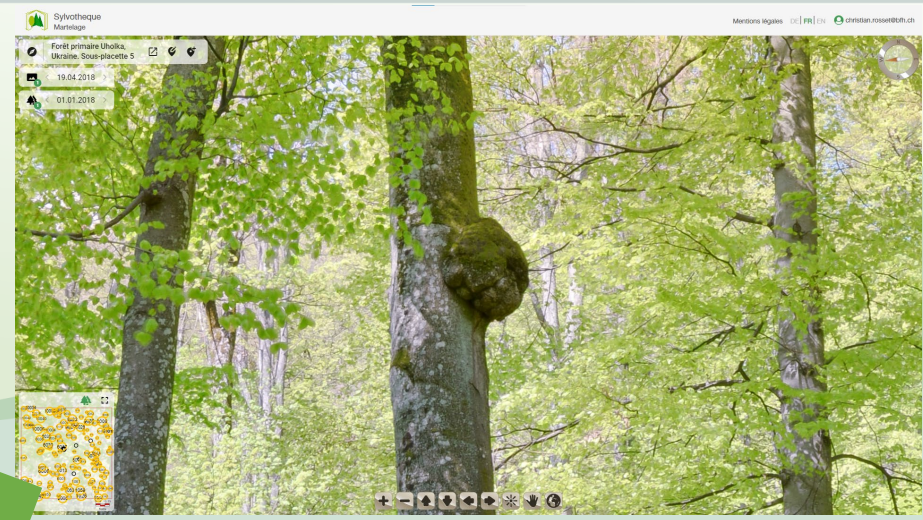
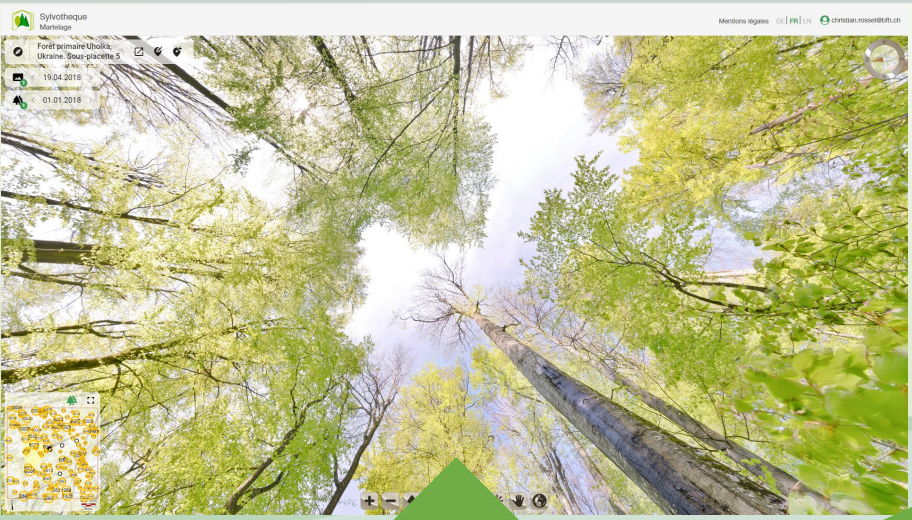
In die Checkkarten Dauerwald sind die Ideen und Erfahrungen vieler Personen eingeflossen. Sie sind erhältlich in Deutsch, Französisch, Italienisch und Englisch.



Die praktischen Anleitungen und Tipps, mit verständlichen







Nikon D810



piXplorer  
programmable  
panoramic  
head robot





## Guided virtual tours



Sylvotheque  
Martelage

Disclaimer DE|FR|EN christian.rosset@bfh.ch

### Navigate through time and explore the diversity of forests

Photospheres allow you to see the forest as if you were there, at 360° from observation points.

Photosphere surveys can be repeated over time to give you a better visual idea of tree growth, the evolution of forest ecosystems and the effects of silvicultural interventions.

The photospheres also allow you to discover forests that you are not likely to see in just a few clicks.

This virtual guided tour will familiarise you with the features of this application in just a few steps.

Auteur: Christian Rosset (BFH-HAFL). Translation based on deepL.com

## Step 1

#### 1 How many tree species do you recognise? ...

... What is special about this view? Can you imagine what these crowns look like during the growing season?

The rest of this guided tour will help you answer all these questions and many more ...

Most of the functions are located at the top and bottom left of the screen, as shown in the diagram below (in French and English).



#### 2 Same view during the vegetation period

#### 3 Comparison of two photospheres



Sylvotheque  
Martelage

#### 2 Same view during the vegetation period

The key new feature is that you can switch from one photosphere view to another with a single click, while keeping the current field of view, so you can see the changes directly between two views.

Loading a photosphere can take a little time depending on the internet connection (generally less than a second), making direct comparison difficult. As soon as the photospheres have been loaded, there is a seamless transition from one to the next.

Try to return to the previous state. As a reminder, a description of the functionalities is available in step 1.

## Step 2

#### 3 Comparison of two photospheres

#### 4 Synchronised movements in photospheres

#### 5 View into the stand

#### 6 Adjusting the field of view of photospheres ...

#### 7 Adjusted visual fields

#### 8 Access to tree information

Did you know?

PPSSL

Photosphere: comparison of cameras

PPSS: indications on their implementation

