

MODULE 6

Recycling, reuse and disposal

What's the best way of recycling wood biologically? Which environmental problems does society have to keep in mind as the use of wood increases? (ETH Zurich, EPF Lausanne).

MODULE 5

Wood in a "supporting" role

Can beech be used as a building material? How can multi-storey wooden houses be soundproofed to prevent footfall noise? How resistant to earthquakes are they? Can wooden houses be assembled by robots? (Empa, ETH Zurich, University of West Switzerland)

MODULE 4

Components made of wood

New adhesives and manufacturing methods for laminated wood and plywood are intended to make wood components better and more popular. Novel protective coatings and natural protective layers improve the material's durability. (Empa, ETH Zurich, University of Berne, Université de Fribourg)

Wood – sustainable resource
with a bright future

The National Research Program “Resource Wood” (NRP 66)

Ten million cubic metres of wood grow in Switzerland every year, but only two thirds of it are utilised. The Swiss forest is expanding and getting older.

The National Research Program 66 is intended to increase the demand for domestic wood and develop innovative ways of adding economic value. There is a surplus of Swiss wood – and it can be a substitute for crude oil.

NRP 66 was instigated by the Swiss government in 2010. Research projects started in January 2012.

MODULE 1

The source material: raw timber

Where and when can wood best be harvested in Switzerland?
(Swiss Federal Institute for Forest, Snow and Landscape Research, WSL)

MODULE 2

A commodity for the chemical industry

Lignin, a major wood constituent, can be the starting point for many chemical substances. Waste wood could also be used for this purpose.
(EPF Lausanne, ETH Zurich, PSI, various universities of applied sciences)

MODULE 3

A renewable energy source

Wood furnaces? That was yesterday's thing. Research is now focussing on purified wood gas, bio-methane and high-purity hydrogen produced from wood. (PSI, ETH Zurich, Lucerne University of Applied Sciences and Arts)



Video:
Wood research
at Empa

<http://www.empa.ch/EN36-3>
For smartphone users: scan the QR code
(e.g. with the "scanlife" app)