PRO SILVA
ANNUAL MEETING LUXEMBOURG
15.-17. June 2022
Forest Horizon

PROGRAM

ORGANISED AND SUPPORTED BY

PRO SILVA Luxembourg

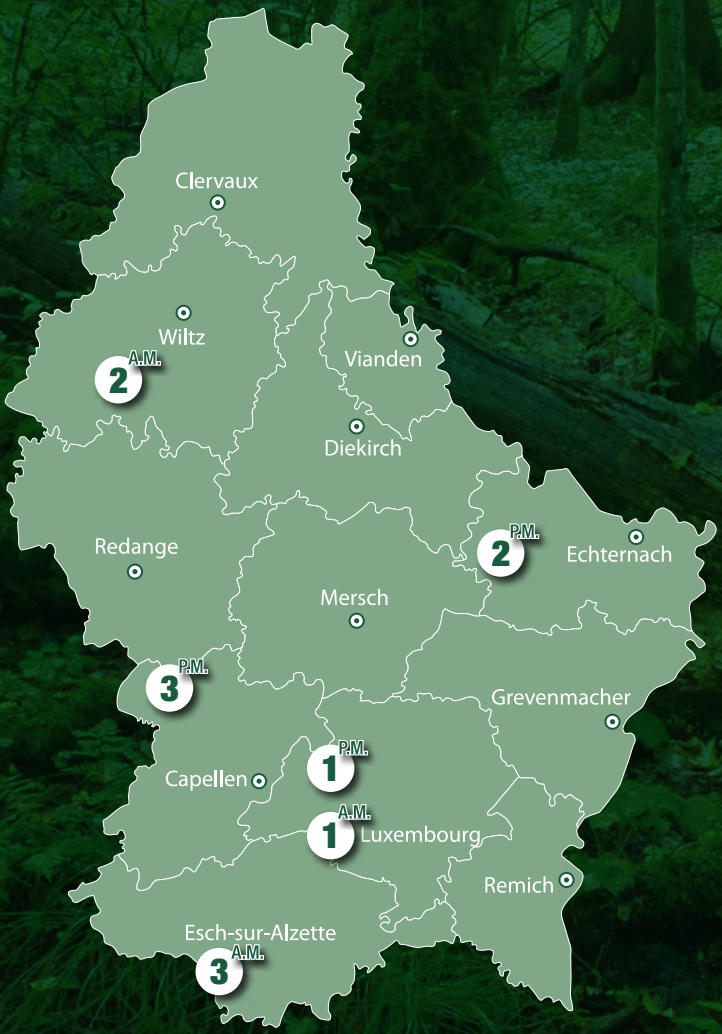
LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Environnement, du Climat et du Développement durable

Administration de la nature et des forêts

Pro Silva Europe and Pro Silva Luxembourg are looking forward to welcome you to the beautiful country of Luxembourg.

After our Annual Meeting, we will travel to the different regions around Luxembourg City and explore the diverse landscapes and forests of the countryside.

Enjoy this unique experience!

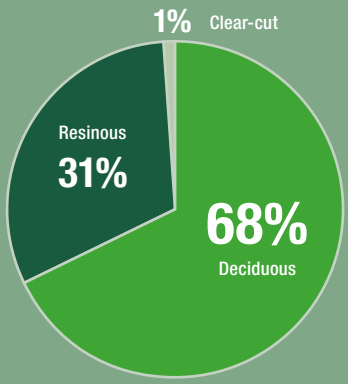


Schedule

Forests in Luxembourg

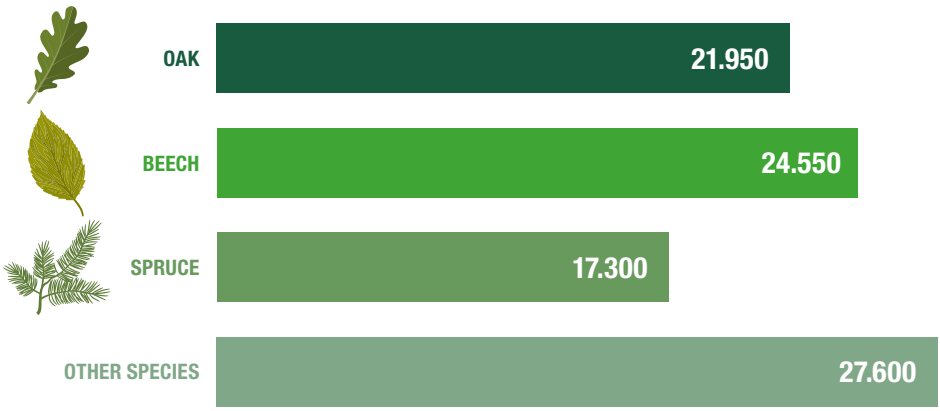
Forests in Luxembourg have a total area of 91.400 ha, which represent approximately 35% of the landscape. The three main species are beech, oak and Norway spruce which represent 68% of the global forest area and are by 31% in mixed stands. Historically, forests were managed as single stage stands and low forest coppices ("Louheck-en"). The aging of the stands has led to an overall capitali-zation of the standing woody biomass as well as increased the amount of large trees, deadwood and other woody material, which contributes positively to biodiversity. The Grand Duchy's hardwood resources amount to just over 28 million m³, which represents an average value per hectare of 337 m³.

PROPORTION OF DECIDUOUS AND RESINOUS STANDS IN LUXEMBOURG



Luxembourg's forests store more than 10.900.000 t of carbon, which is mainly found in deciduous forests (70%). The carbon is mainly stored in the living trees of the forest: more than 95% of the stock is found there, while dead wood accounts for only 3%. Biomass and carbon stock, both linked, are increasing in Luxembourg's forests. This evolution is the result of an increase in the volume of wood per hectare since the year 2000.

MAIN 3 SPECIES IN LUXEMBOURG AND THEIR AREA (HA)



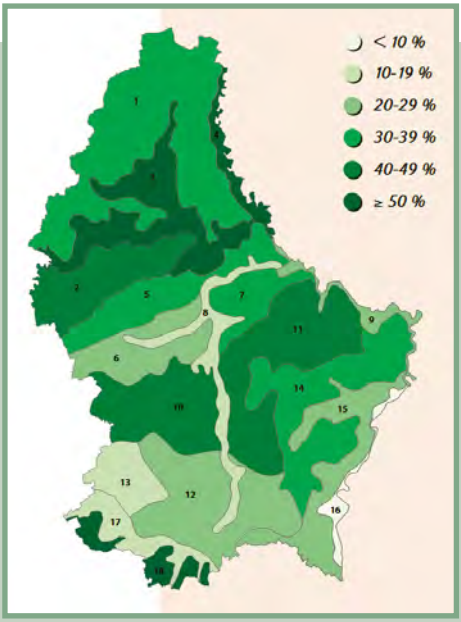
The country is divided into four main ecological zones (Wuchsgebiete). They are distinguished from each other by their geology, morphology, climatic conditions, and the nature of their landscape:

- **The Oesling**, located in the north, covers 33% of the country and is an extension of the Ardennes massif. Its contrasted relief of crests and valleys with steep slopes is the result of the erosion by several rivers (Sûre, Wiltz, Clerve...). The highest point of Luxembourg (559 m) is located in this area with an average altitude of 450 m where late frost and sticky snow are particularly frequent.
- **The Gutland**, is an extension of the Paris basin. It occupies the center and the south of the country and constitutes the largest of the four ecological domains (62% of the territory). It presents a hilly relief dotted with gently sloping hills, suitable for pastures.
- **The Moselle valley**, located in the extreme south-east of the country, forms a narrow strip (1% of Luxembourg's territory). The warm and dry climate makes it suitable to viticulture which covers more than one third of the surface of this ecological domain. The Moselle valley is rather steep but opens up into wide alluvial plains at various points.
- **The Minette basin** covers 5% of the territory in the southwestern part of the country. This former mining region, which extends the iron deposits of Lorraine into Luxembourg, is rather hilly and comprises several crests at an altitude of more than 400 m.

Each ecological zone is divided into ecological regions (Wuchsräume) and ecological sectors (Wuchsbezirke)

Due to their size, the ecological regions in the Oesling and the Gutland logically contain the largest proportion of wooded area (over 90%). However, the Minette region has the highest afforestation rate (60%). The ecological and natural characteristics of the Grand Duchy have a significant influence on the diversity of the populations. In the Oesling, forests are largely dominated by spruce and low forest coppice (oak), both of which are mainly privately owned. In the Gutland and the Minette Basin, the forest landscape is mainly characterised by deciduous species, mainly beech and oak (41%).

More than half of the forests are privately owned (54%), while 46% are publicly owned, which is very close to the average distribution in the European Union. Oesling has almost 82% private forests, while in Gutland 64% of the total woodland area is publicly owned.



QUID READABILITY OF THE ECOLOGICAL AREAS

Oesling ecological area sectors:
1. Northern Oesling Highlands
2. Southern Oesling Highlands
3. Valleys of the Upper Sûre, Wiltz, Clerve and Blees
4. Our Valley

Gutland ecological domain sectors:
5. Oesling hills
6. Attert Gutland
7. Stegen Gutland
8. Valleys of the Alzette, the Attert and the Sûre moyenne
9. Lower Sûre Valley
10. Eisch and Mamer Gutland
11. Schooffiels and Müllerthal Gutland
12. Southern Gutland
13. Rebierg Gutland
14. Pafebierg and Oetrange Gutland
15. Moselle Hills and Syre Valley

Moselle Valley ecological domain sectors:
16. Moselle Valley

Ecological domain of the Minette basin sectors:
17. Minette Slopes
18. Plateaux de la Minette

Take your time to enjoy your stay, visit the Capital, walk among UNESCO World Heritage monuments and contemporary architecture in the heart of the City.

Experience the delights of the city of Luxembourg and discover the tourist places steeped in both history and modernity with hundreds of restaurants and bars of your choice.

1
MORNING

WEDNESDAY
15.06.2022

Welcome speech

Joëlle WELFRING
Minister of Environment, Climate and Sustainable Development of Luxembourg

Michel LEYTEM
Chairman of Pro Silva Luxembourg

Eckart SENITZA
Chairman of Pro Silva Europe

Public policy declaration Pro Silva 2022

Luxembourg
"Hotel Parc Belle-Vue"

5, Avenue Marie Therese
L-2132 Luxembourg

9:00 a.m.
Welcome speech

10:00 a.m.
Annual Meeting

12:00 p.m.
Lunch

Can urban forestry be a good example to promote close to nature forestry?

1
AFTERNOON

WEDNESDAY
15.06.2022

Urban forestry Luxembourg-City

Luxembourg City, forest "Bambësch"

2:00 p.m. - 3:00 p.m.
Walk through Luxembourg City

3:00 p.m. - 6:00 p.m.
Luxembourg City forest Baambësch

6:30 p.m.
Forest dinner

Meeting point:

SPEAKERS

Bettina JOA
Forstliche Versuchs- und Forschungsanstalt Baden Württemberg, Freiburg (DE)

Thierry KOZLIK
Ville de Luxembourg

Olivier BREGER
Administration de la nature et des forêts

Michel LEYTEM
Pro Silva Luxembourg

© Ville de luxembourg - Patrick Müller

The project “Urban forestry Luxembourg” aims at developing strategic recommendations for the future management of urban forests that take into account the various societal demands on urban forests. Thereby, enhancing the understanding of forest visitors’ preferences and spatial behaviour can support urban forest managers in integrating economic, ecological, and social objectives into management plans.

For this purpose, it is necessary to record and evaluate the requirements and expectations of urban forest visitors. This is accomplished by an online survey, including a mapping function that allows collecting public participation GIS-data. Survey participants are invited to map their recreational routes in the urban forests of Luxembourg city and report the respective type of their activity. In order to spatially identify cultural ecosystem services as well as disservices in urban forests, participants are invited to map places in the forests of Luxembourg city that they particularly like or dislike.

In close cooperation with the Service Forêts of the City of Luxembourg, the Luxembourgish Nature and Forest Administration (ANF) and the Forest Research Institute Baden-Wuerttemberg (FVA), the results will be processed, among other things, in form of hotspot and hot route maps of recreational use intensities in the urban forests of Luxembourg city. These maps show activity-specific use intensities and thus can serve as a tool for better integrating the recreational function of the forest into its management.

How can hydrology contribute to forest management?

2
MORNING

THURSDAY
16.06.2022

The Weierbach Experimental Catchment in Luxembourg: 20 years of monitoring in a temperate forest

North of Luxembourg "Burfelt"

8:00 a.m.
Bus departure (Hotel)

9:00 a.m. - 12:00 p.m.
Forest discovery center Burfelt

12:30 p.m.
Lunch

1:30 p.m.
Bus departure (Parking Burfelt)

Meeting point:

SPEAKERS

Jean François IFFLY
Luxembourg Institute of Science and Technology (LIST)

Ginevra FABIANI
Luxembourg Institute of Science and Technology (LIST)

Christophe HISSLER
Luxembourg Institute of Science and Technology (LIST)

Serge HERMES
Administration de la nature et des forêts - Burfelt

Daniel STEICHEN
Pro Silva Luxembourg

The Weierbach Experimental Catchment (0.45 km^2) is the most instrumented and studied sub-catchment in the Alzette River basin in Luxembourg. It is embedded in an elevated sub-horizontal plateau representative of the Ardennes Massif. Its climate is semi marine, with precipitation

being rather evenly distributed throughout the year. Base flow is lowest from July to September, essentially due to higher losses through ground evaporation and tree transpiration in summer. The subsurface is composed of Devonian slates from the Ardennes, overlaid by a periglacial loamy material in which an acidic soil is developing. The area is entirely covered by forest with 70% deciduous and 30% coniferous trees. Since 2009, the Weierbach has been extensively equipped for continuously monitoring water fluxes. Additionally, these compartments are sampled fortnightly at several locations to analyse chemical and isotopic composition of water including rainfall, throughfall, soil water, groundwater and stream water.

Within the last decade, it has matured towards an interdisciplinary critical zone observatory focusing on a better understanding of hydrological and hydro-geochemical processes. This ongoing monitoring and sampling programme is used for answering pressing questions related to fundamental catchment functions of water infiltration, storage, mixing and release in forest ecosystems. A recently started research line aims at investigating interactions between tree species and tree available water that varies in space and time in the forest subsurface.

The presentation will be divided in three parts:

- **The Weierbach Experimental Catchment:** 20 years of hydrological monitoring for the study of the water cycle in forest ecosystem.
- **Understanding species sensitivity to a drying climate:** how European beech and oak trees can respond to a spatially and temporally variable water supply?
- **Impact of Douglas fir on water quality:** how a non-native species may impact water quality?

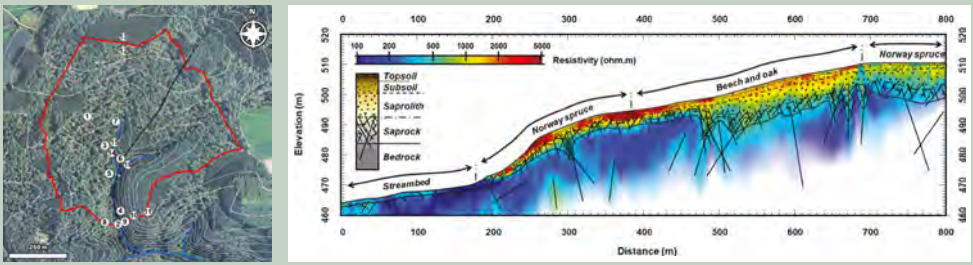


Figure 1: Overview of the Weierbach Experimental Catchment with (a) location of the monitoring and sampling sites (background aerial photography from the Administration du Cadastre et de la Topographie, Luxembourg) and (b) depiction of its subsurface (regolith) structure based on geophysical investigations.

Figure 2: Pictures of monitoring and sampling equipment installed in the Weierbach Experimental Catchment: (a) rain gauge and rainfall sampling (b) catena for soil and air parameter monitoring station, (c) Douglas-fir monitoring and sampling site, (d) V-notch weir at the outlet and (e) automatic water samplers at the outlet.

How to conciliate forestry, nature conservation and tourism?

2
AFTERNOON

THURSDAY
16.06.2022

Synergies and trade-offs between forestry and nature conservation

East of Luxembourg, "Mullerthal"

3:00 p.m. - 6:00 p.m.
Friemholz

7:00 p.m.
Dinner Restaurant
Heringer Millen Mullerthal

10:00 p.m.
Bus return

Meeting point:

SPEAKERS

Jacques PIR
Member of "Observatoire de l'environnement naturel"

Martin LEVIN
Former forest manager-City Forest of Göttingen

Claude PETIT
Natur- & Geopark Mëllerdall

Frank ADAM
Administration de la nature et des forêts

Elisabeth FREYMANN
Administration de la nature et des forêts

The approximately 170 ha large “Friemholz” in the southeast of Berdorf is one of the extraordinary forest massifs of this municipality. Consisting especially of old oaks, it offers a habitat for many animals and plants. Of particular note is the occurrence of the Bechstein’s bat *(Myotis bechsteinii)*. The ideal habitat for the Bechstein’s bat is a richly structured, near-natural managed deciduous forest. Together with experts from the fields of nature conservation and forestry, the forest district Berdorf and the Arrondissement Centre-Est of the Luxembourgish Nature and Forest Administration are working on a project to establish a management concept that combines nature conservation and forest management goals.

The focus of the cooperation is on the following topics:

- Monitoring of the Bechstein’s bat and evaluation of the data
- Forest inventory of the Friemholz forest, with a focus on habitat trees and trees that can be harvested as valuable wood
- Development of a forest management concept that combines nature conservation and forest management goals
- Consideration of the complex problem in order to manage natural oak regeneration in the Friemholz forest
- Implementation of the concept and monitoring of the Bechstein’s bat to control success

Forestry and economic issues

What type of quality timber does the market need?

3
MORNING

FRIDAY
17.06.2022

PRO SILVA
Quality wood. Quality work. Human dignity. A field of hope.

South of Luxembourg

8:00 a.m.
Bus departure (Hotel)

8:30 a.m.
Visit of the construction site of the school Wobrécken, Esch/Alzette

10:30 a.m.
Valorisation of the wood in the wood value chain in Centre nature et forêt Ellergronn

1:00 p.m.
Walking Lunch

2:00 p.m.
Bus return

Meeting point:

SPEAKERS

Pit KUFFER
Witry & Witry Architects

Edmond DECKER
Architect & Pro Silva Luxembourg

Nicole VALKYSER-BERGMANN
NVBCOM

Andreas Nikolaus KLEINSCHMIT VON LENGEFELD
Homo sylvestris europae

Ralf KÖHLER
Luxinnovation Wood Cluster Manager

Pol ZIMMERMANN
Administration de la nature et des forêts

Nora SAHR
Pro Silva Luxembourg

How can we promote quality wood that is less energy intensive than recomposed wood?

How can we initiate the dialogue between foresters and woodprocessors?

What attitude should we have facing climate change, the adaption of non-native species, and the new role of wood and forests?

How can we support innovative silvicultural projects and avoid the question of future generations: Why didn't they try anything?

Valuing quality wood goes hand in hand with valuing the people who work for and with this quality. The actors in the wood industry, from the barrel to the finished object, all deserve consideration. They deserve social and economic recognition worthy of their know-how.

Reducing wood to fibre and chipboard means reducing the craftsman to the status of a labourer. It means enlarging the mass of anonymous unskilled workers, available and interchangeable at will. We end up with the worker who places pieces in an arithmetical order, far from the art of assembly that was the foundation of the crafts. The negation of the joint means that qualification is superfluous. The approach to knowledge has become abstract. To grasp meant to understand, it was a concept that involved all the senses. As perception is reduced to sight, our world is reduced to the virtual. Neither the wood nor the forest is virtual. Let us not confuse the interests of the moment with timeless objectives.

Pro Silva lives up to its definitions. Producing quality wood in accordance with the three parameters: Ecology, economy & society. Man in harmony with his natural environment is the ultimate goal. The forest shouldn't be divided into areas for wood production, wood fibre, water, oxygen, rest, nature reserve and hunting. At least if we don't want to repeat what happened to the city, torn apart into separated functions by the Athens Charter. (CIAM 1933)

The forest is an indivisible whole inscribed in time and culture. In forestry as in urban planning, history will judge.

Edmond Decker, Architect and Pro Silva Member
*(*shortened and translated version of published text)*

Climate change and risk management

How much forestry does the future forest need?

3
AFTERNOON

FRIDAY
17.06.2022

Härebësch - Steinfort Forest district

West of Luxembourg, "Härebësch" (Koerich)

3:00 p.m.
Härebësch
www.haerebesch.lu

5:15 p.m.
Aperitif and musical interlude in a stone quarry

7:00 p.m.
Bus departure

8:00 p.m.
Closing Dinner
Brasserie Mansfeld

Meeting point:

SPEAKERS

Roger SCHAULS
Mouvement écologique

Dan NICOLAS
Luxplan S.A.

Frank WOLTER
Director - Administration de la nature et des forêts

Marc PARRIES
FSC Luxembourg

Ben LOUIS
Administration de la nature et des forêts

Simone DAUPHIN
Pro Silva Luxembourg

With peak speeds of up to 130 km/h, a storm depression passed over the southwest of Luxembourg on 6 July 2014, especially in the Steinfort Forest district, in the Härebësch. The particular severity of the damage is probably due to so-called wet down bursts, which caused a rare but characteristic pattern of damage. The total volume of storm-damaged timber amounted to approx. 40.000 solid cubic meters. Due to the one-time storm event, the total volume was reduced by about 52 % and the number of trees per hectare by an average of 47 %.

Immediately after the storm, the actual condition was documented by means of photos, video footage, drone videos, aerial photographs and 3D laser scanner measurements. This allows an impressive way to follow the development of the forest stand.

The storm areas in the Härebësch were managed with a particular method. The logs were moved exclusively via a logging lane system so that the forest was not driven over in large areas. In various areas, priority was given to the processing of valuable beech and oak logs.

In other defined areas:

- Neither stem wood nor industrial wood was processed. (> 4.500 m³ zero harvest wood),
- Stem wood was processed, crown wood was left ("basis of new habitat structures"),
- All standing stem wood ("candles") was left in the forest as "biotope wood" or "habitat trees" (>4.000 m³).

Timber harvesting was therefore deliberately avoided on a surface of 12 ha. The habitat protection practiced in this way is intended to promote the reintroduction of specially adapted species (wildcat, bats, woodpeckers, etc.).

Two main methods were selected for the replanting of forest stands:

- *Forest development through natural regeneration:* This depends strongly on the regeneration situation in the previous stand and the species composition within close proximity (seed potential). The protection of the existing natural regeneration had priority in the timber processing.
- *Forest development targeted planting* (clumps, nests, or small-scale plantings): this can influence species composition, mixing ratio and planting distance. In addition, exposure, moisture, and soils can be considered and browsing protection measures can be provided.

In order to document this event, the ANF decided to create a forestry trail on the topic of "storm damage", in the Härebësch forest.

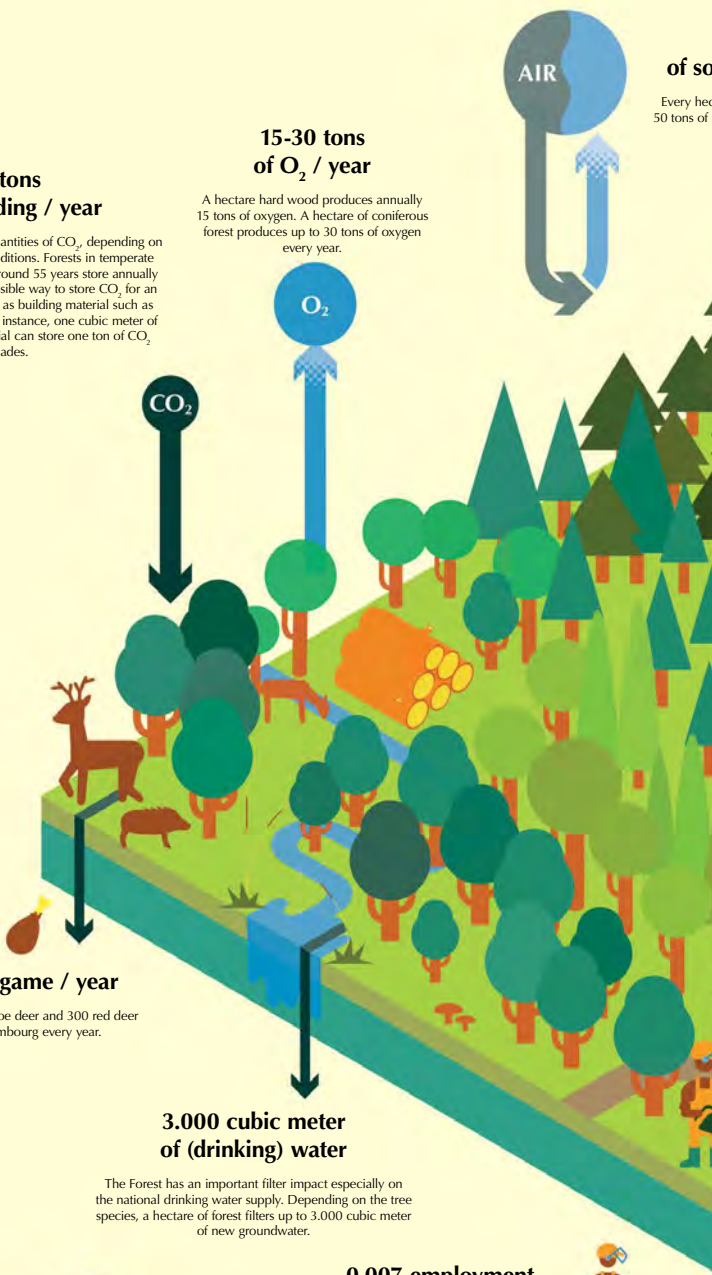
What have 100m x 100m

10,6 tons of CO_2 binding / year

A growing forest stores large quantities of CO_2, depending on the tree species and local conditions. Forests in temperate latitudes with a medium age around 55 years store annually 10,6 tons of CO_2. The best possible way to store CO_2 for an extended time is to use wood as building material such as in roof trusses or furniture. For instance, one cubic meter of wood used as building material can store one ton of CO_2 for decades.

15-30 tons of O_2 / year

A hectare hard wood produces annually 15 tons of oxygen. A hectare of coniferous forest produces up to 30 tons of oxygen every year.



0,1 piece of game / year

5.000 wild boars, 6.000 roe deer and 300 red deer are hunted in Luxembourg every year.

3.000 cubic meter of (drinking) water

The Forest has an important filter impact especially on the national drinking water supply. Depending on the tree species, a hectare of forest filters up to 3.000 cubic meter of new groundwater.

5,9 cubic meter of Wood / Year

Although wood in Luxembourg grows about 10m³/ha/year, only 59 % of that growth are exploited. That is why the stock of upright wood increases continuously.

0,007 employment

About 650 people work in the Luxemburgish forestry business. There are also many companies from the Greater Region, which work in Luxemburg, but whose numbers are not recorded.

# of forest ever done for us?

50 tons
oot and dust / year

ctare of forest filters annually up to
soot and dust from the atmosphere.

19,7 cubic meter
of strong dead wood

Dead wood is a precious habitat for lots of animals-, plant- and mushroom species. Altogether, in Luxembourg, is home to 50 mammal species, 3.800 insect species, 500 plant species and 700 mushroom species.

Distribution of tree species by surface:

Beech 30 %
Oak 27 %
Spruce 21%
Douglas fir 4%

Other species 18 %

About 64 % are deciduous forests and 36 % are coniferous forests

Up to 40 m of forest road

These roads are also willingly used as recreational paths. Without these roads, wood could not be brought out of the forest.

Administration de la nature et des forêts

LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Environnement, du Climat et du Développement durable

In cooperation with the Bavarian State Forests

INFORMATION

Hotel Parc Belle-Vue
5, Avenue Marie Therese
L-2132 Luxembourg

www.geoportail.lu

www.prosilva.lu

Find your way through Luxembourg :

www.mobiliteit.lu

Public transport is FOR FREE in the whole country!
PLEASE WEAR A MASK ON PUBLIC TRANSPORT!


Brasserie Mansfeld
24 min.
1,9 km
Hotel Parc Belle-Vue
Luxembourg
Pafendall
Rumm
Gronn
Gare
Verlu

CONTACTS

Michel LEYTEM
Phone : +352 621 701 121

Michèle FEDERSPIEL
Phone : +352 621 714 021

Marc SCHMIT
Phone : +352 621 731 052

Céline SALCHER
Phone : +352 247 56778

Presentation Pro Silva Luxembourg Board Members

Michel LEYTEM
President

Marc SCHMIT
Secretary

Tiago DE SOUSA
Treasurer

Patrick LOSCH
Member

Nora SAHR
Member

Simone DAUPHIN
Vice President

Mike HALSDORF
Member

Daniel STEICHEN
Member

Pascal ARMBORST
Member

NOTES

THANK YOU

FOR YOUR PARTICIPATION

ORGANISED AND SUPPORTED BY

PRO SILVA Luxembourg

LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Environnement, du Climat
et du Développement durable

Administration
de la nature et des forêts

Pictures: © Shutterstock / Luxplan S.A. / Pro Silva Luxembourg / Booking.com / Guichet.lu
Design by Pasquita Isolani, Luxplan S.A.
Printed by Reka Print+