

Close-to-Nature Forest Management in the Czech Republic



Tadeáš Štěrba, Michal Friedl, Pavel Kolařík, Antonín Kusbach

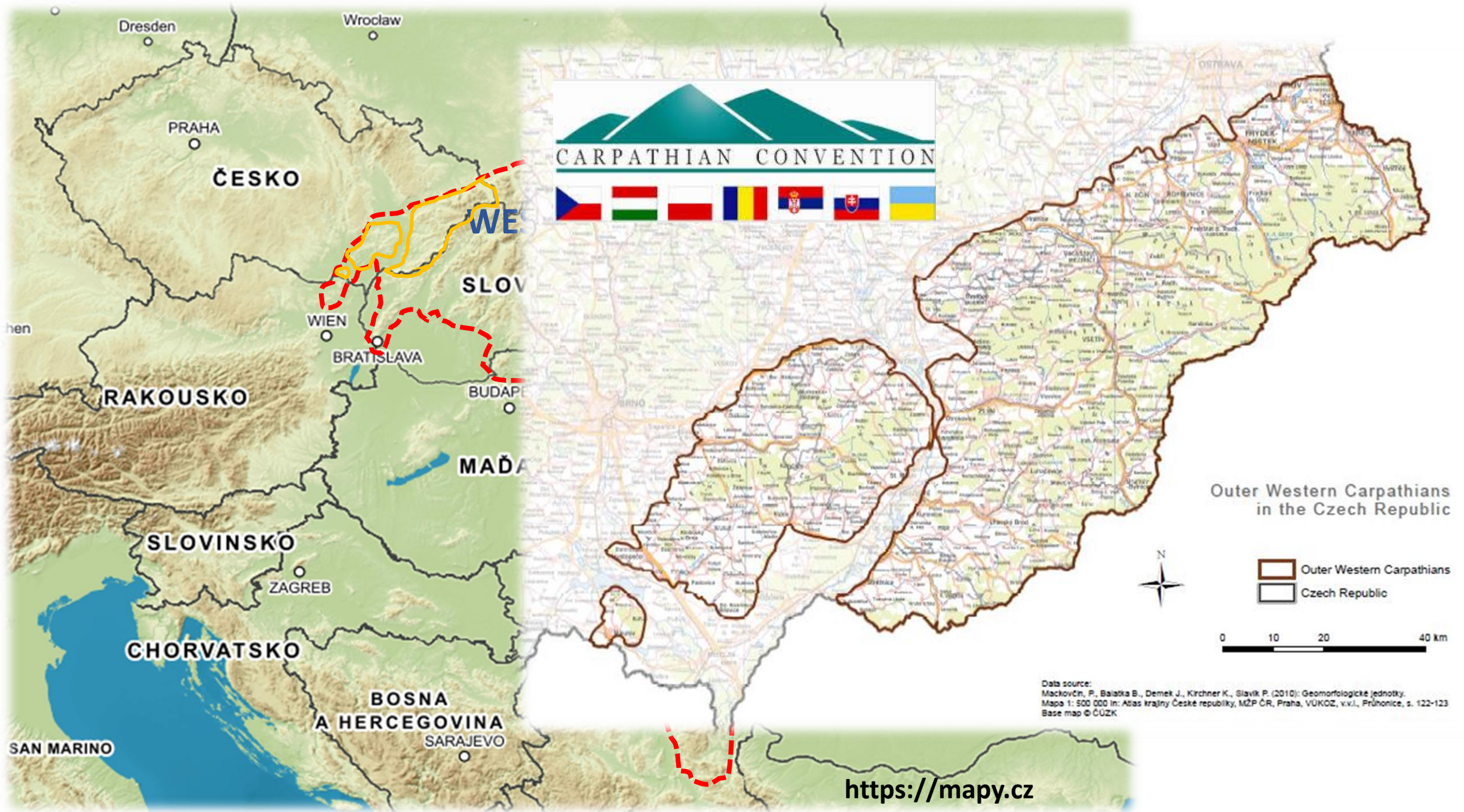
Forest Management Institute

Czech Republic



MINISTRY OF AGRICULTURE
OF THE CZECH REPUBLIC





<https://mapy.cz>

Basic information on forests under the Carpathian Convention in the Czech Republic (CR)

- Total area of the forest lands is 261 817 ha (9,7% of the forests in the CR).
- Forest coverage: 37%
- Rich soils predominate.
- Forests from lowlands (166 m a.s.l.) to mountains (1323 m a.s.l.).





Ownership structure of forests in the Carpathians (CR)

popis	ha	%
State forest	110 613	42,2
Legal entities	15 482	5,9
Municipal and city forests	31 744	12,1
Church forests	31 850	12,2
Forest groups and companies	4 232	1,6
Natural persons	67 893	25,9
Others	2	0,0
Total	261 817	100

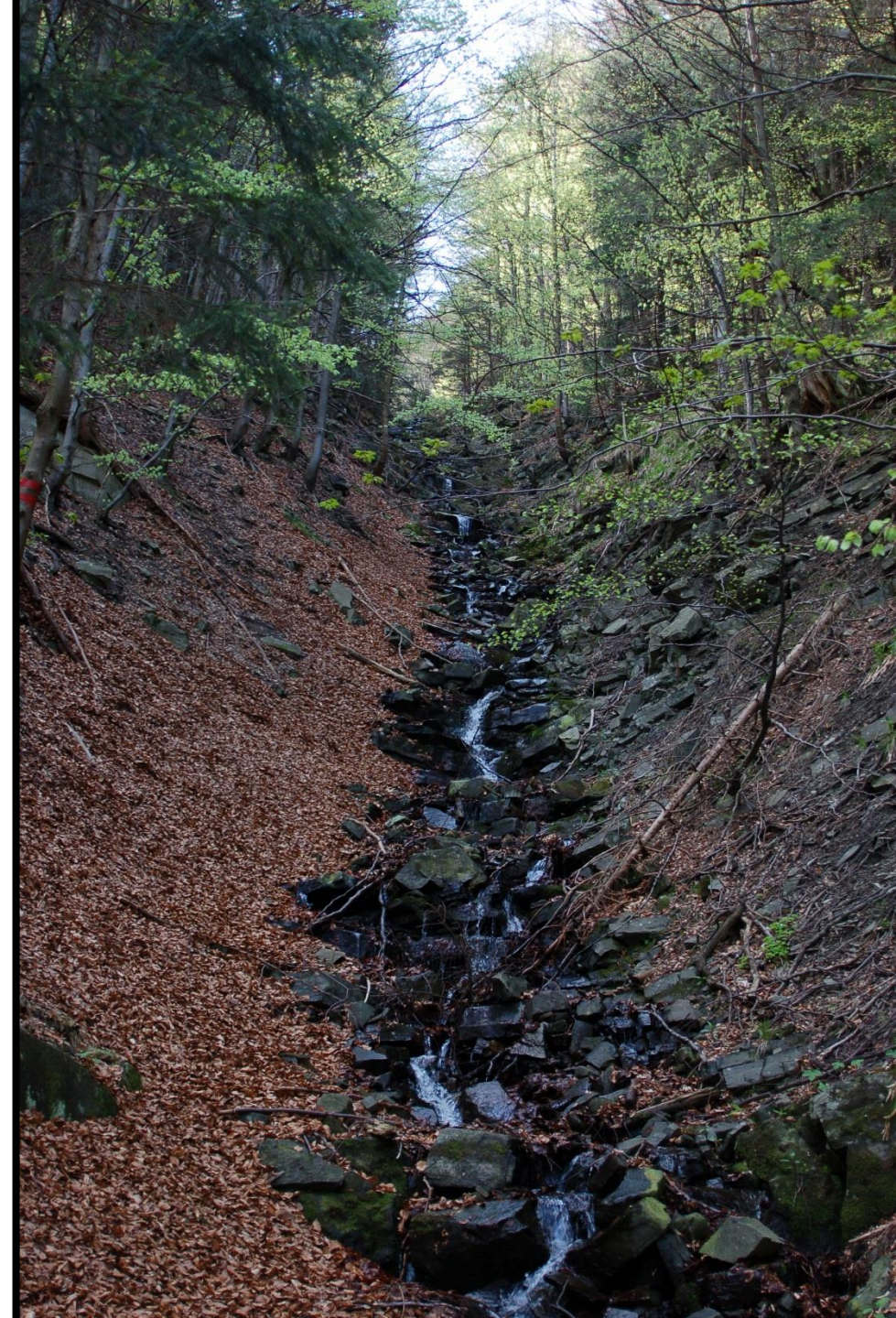
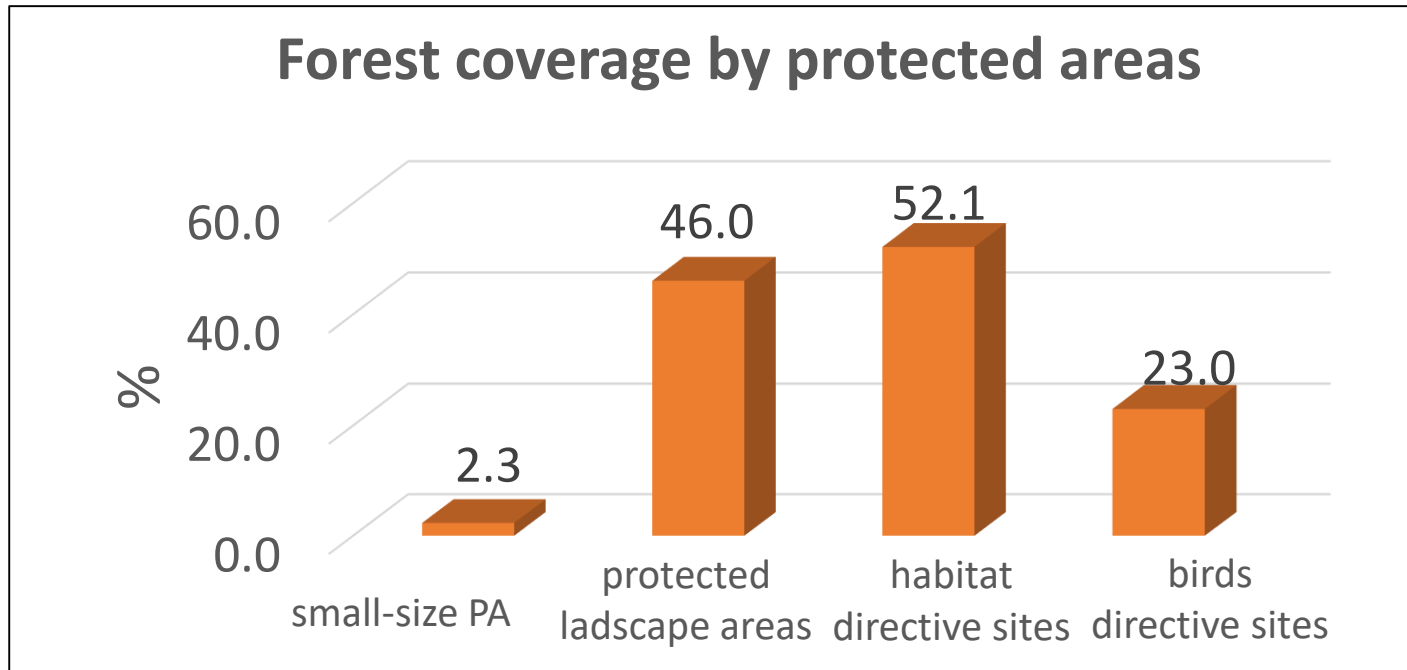


Forest categorization in the Carpathians (CR)

Forest category	Carpathian part of the Czech Republic (%)	The whole Czech Republic (%)
Commercial forests	84,4	74,3
Protection forests	2,7	2,1
Specific purpose forests	12,9	23,7
Total	100	100

Nature conservation of the nature in the Carpathians (CR)

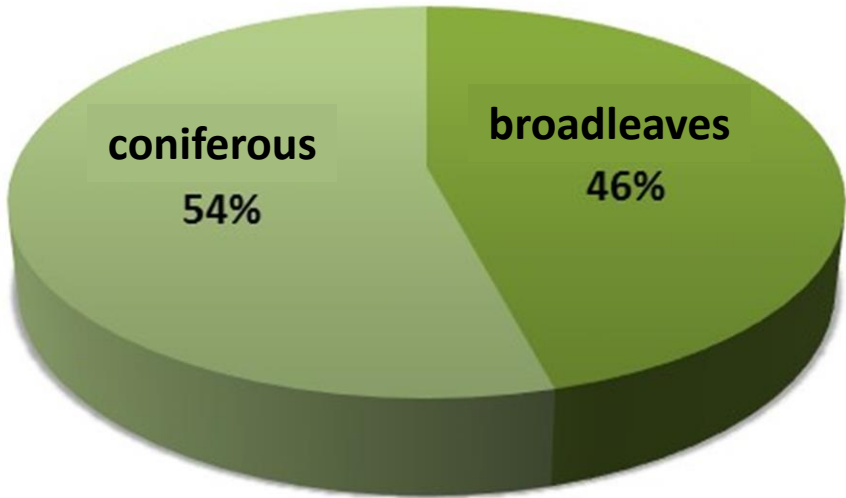
- 425 protected areas (PA) were declared in 7 categories of nature conservation, representing 34% of the total area of the Carpathians (CR)
- 59% of forests are covered by at least one of the nature conservation categories



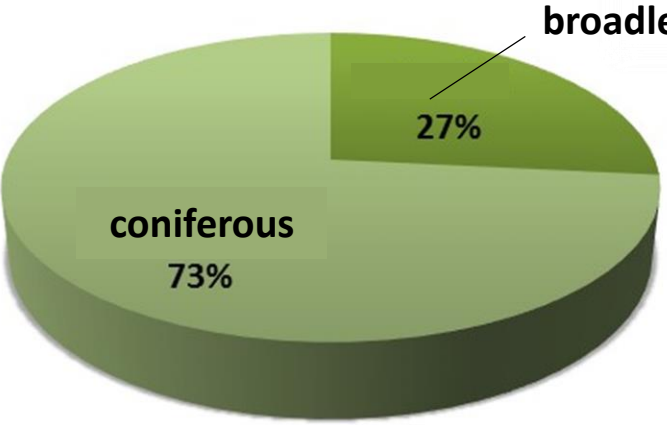
Tree species composition of forests in the Carpathians (CR)

Species	%
<i>Picea abies</i>	44.2
<i>Fagus sylvatica</i>	20.9
<i>Quercus petraea</i> agg.	6.1
<i>Pinus sylvestris</i>	4.4
<i>Carpinus betulus</i>	4.4
<i>Quercus robur</i>	3.7
<i>Larix decidua</i>	3.2
<i>Tilia cordata</i>	2.6
<i>Abies alba</i>	2.1
<i>Fraxinus excelsior</i>	1.8
<i>Betula pendula</i>	1.8
<i>Acer pseudoplatanus</i>	1.7
Other broadleaves	2.9
Other coniferous	0.2

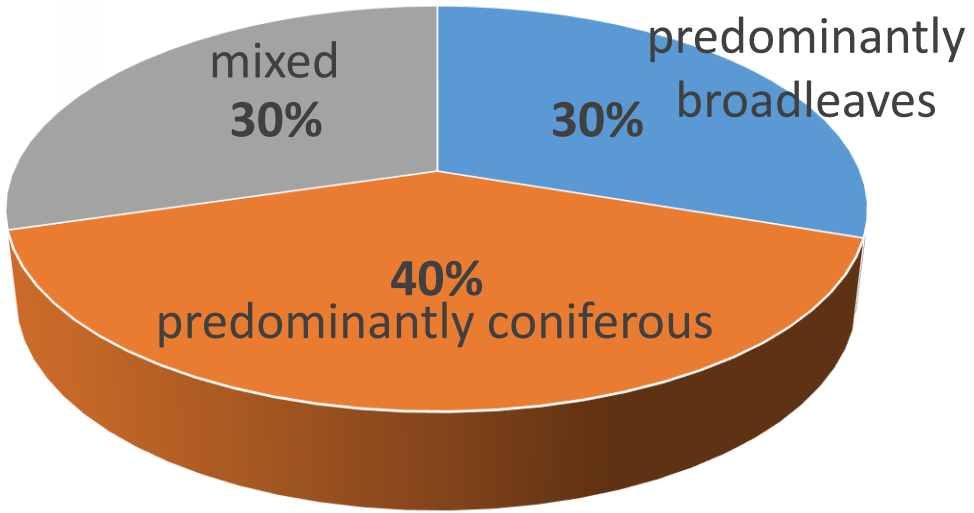
in the Carpathians (CR)



in the Czech Republic



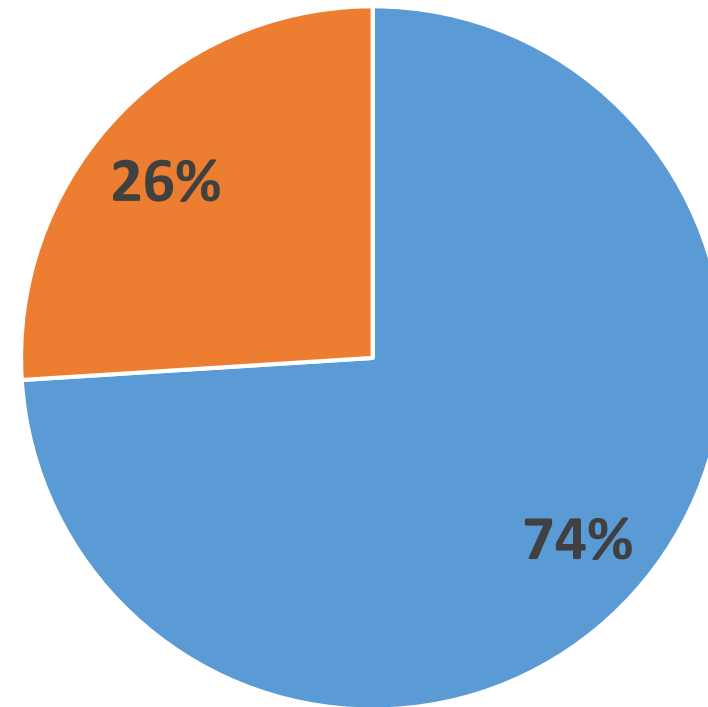
mixed forest of Carpathians (CR)





Forest regeneration in the Carpathians (CR)

source: Czech Statistical Office



■ artificial

■ natural

Close-to-nature forest management in the Czech Republic

<https://www.pralesy.cz/projekty>

- Forest management in the CR is consistent with the final declaration of international conferences (Strasbourg, 1990; Rio de Janeiro, 1992; Helsinki, 1993; Lisbon, 1998; Vídeň, 2003...)
- Principles of sustainable management are described in general terms there.
- What is forest sustainability?
- The scale of inclination towards more natural management was defined in National Forest Programme II (2008)
 - Forest management is differentiated according to natural conditions, forest category, size and type of ownership and state of stand.



The scale of inclination towards more natural management in the Czech Republic (National Forest Programme II)

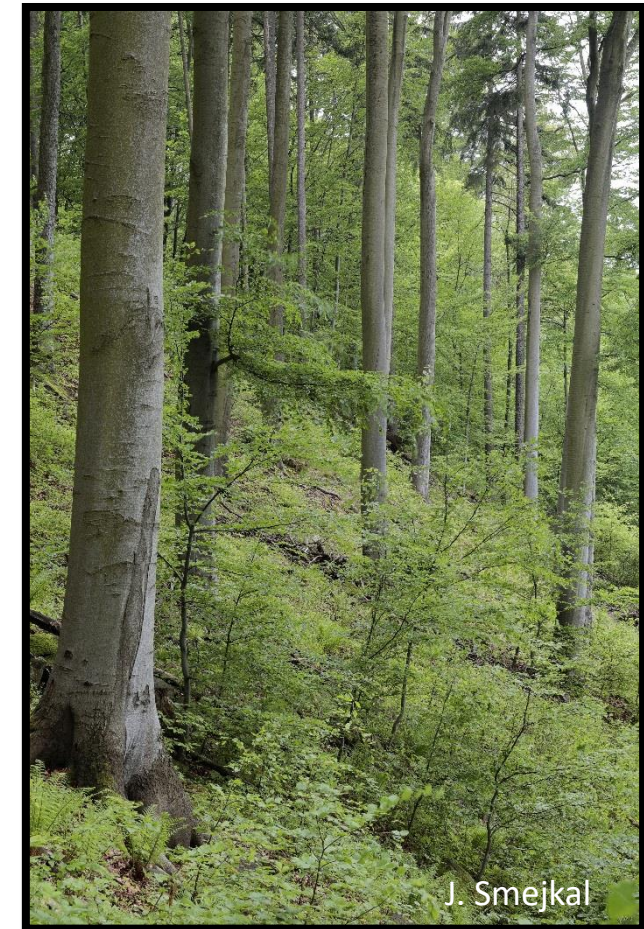
	Sustainable management	More natural management practices
Clear-cuts	Rectifying the clear-cut size	Elimination of clear cutting (selection of individual trees – not the selection system)
Structure and tree species composition	Mixed stands with the preference of economically important species	Respect of the potential natural vegetation (slightly increased share of commercially attractive tree species)

The scale of inclination towards more natural management in the Czech Republic (National Forest Programme II)

	Sustainable management	More natural management practices
Introduced tree species	Introduced species are acceptable	Management of autochthonous species only
Forest management planning – age	Time arrangement – the object of interest is the stand	Age is not significant – the object of interest is the tree
Forest management planning – cutting	Groundwork for the planning of cuts is standing volume	Groundwork for the planning of cuts are total current increment and target tree dimension

Close-to-nature forest management in the Czech Republic (Carpathian Region)

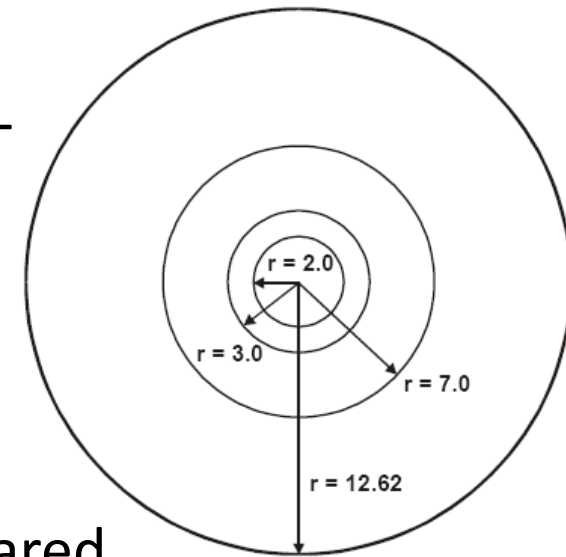
- Close-to-nature forest management (CNFM) is managed individually in the Carpathian part of the CR.
- Rather, it is built on the interest of owners and foresters (some foresters of state forest, church forest and private owner) – an exemplary object is Vlára and some others of Forest Service Frýdek–Místek, FS Luhačovice, FS Ostravice.



J. Smejkal

Close-to-nature forest management in the Czech Republic (Carpathian Region)

- The current Forest Code is primarily based on forest management with an emphasis on age.
- For large-scale use, different forest management planning is required – the summing (planning) unit is an aggregate complex of forest types (essentially just national parks in the CR).
- Different approach to collected data for forest management plan – Forest inventory on circular surface (analogy of National Forest Inventory)
- Great expertise is required.
- But CNFM approaches can be applied in any forest condition – cleared area after calamity, transfer of spruce monocultures ...



Pro Silva Bohemica

<http://www.aleserber.cz/obrazek/3/kocanda-5/>

- Movement (not conservationist), which seeks to promote the principles of CNFM in CR (members are especially scientists and practical foresters).
- Member of the pan-European movement of Pro Silva Europa.
- They define the basic principles of the CNFM.
- Annually they organize a meeting and practical field excursion (e.g. to France, Hungary, Slovakia)
- Pro Silva Bohemica: <https://prosilvabohemica.cz/>
- Pro Silva Europa: <https://www.prosilva.org/>





Thanks for your attention.