

FINE: developing Forest ecological I ndicators for Europe

**Expert Panel Meeting on Forest Biodiversity and Ground
Vegetation, Firenze, Italy, 22-23 March 2007**



European Forest Task Force, BirdLife
<http://forest.birdlife.org>

Acknowledgements

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Contents:

- Forest biodiversity indicators: selected criteria
- Birds as indicators
- What do we expect indicators to indicate?
- FINE OldWood: a small contribution
- Indicators in a bigger context



MINISTERIAL CONFERENCE ON THE
PROTECTION OF FORESTS IN EUROPE

BACKGROUND INFORMATION
FOR IMPROVED PAN-EUROPEAN INDICATORS
FOR SUSTAINABLE FOREST MANAGEMENT

3 February 2003

- **Representative:** Includes all species in a chosen taxon, or a representative group
- **Immediate:** Capable of regular update, ideally, at least on an annual basis.
- **Simplifying information:** Transparent, easy to interpret and visually attractive. Complex information must be presented simply to have impact and communicate.
- **Easily understood:** Non-experts, from policy makers to members of the public, must be able to grasp the issues to have any ownership of them.
- **Quantitative:** Accurate measurement with assessment of error. Shows trends over time, measures a rate of change and changes in the rate.
- **Responsive to change:** Sensitive to environmental change over relatively short time scales.
- **Timeliness:** Allows rapid identification of trends - an early warning of issues.
- **Susceptible to analysis:** Data can be dis-aggregated to help understand the underlying patterns and shed light on the potential causes of trends.
- **Realistic to collect:** Quantitative data are available or can be collected readily. Does not require excessive or unrealistic financial resources.
- **Indicative:** Representing more general components or attributes of biodiversity than just the constituent species trends, ideally reflecting ecosystem health.
- **User driven:** Developed in response to the need of stakeholders.
- **Policy relevant:** Indicators aim to provide signals to policy customers to help them develop and then review policy measures.
- **Stability:** Buffered from irregular, large natural fluctuations.
- **Tractable:** Susceptible to human influence and change.

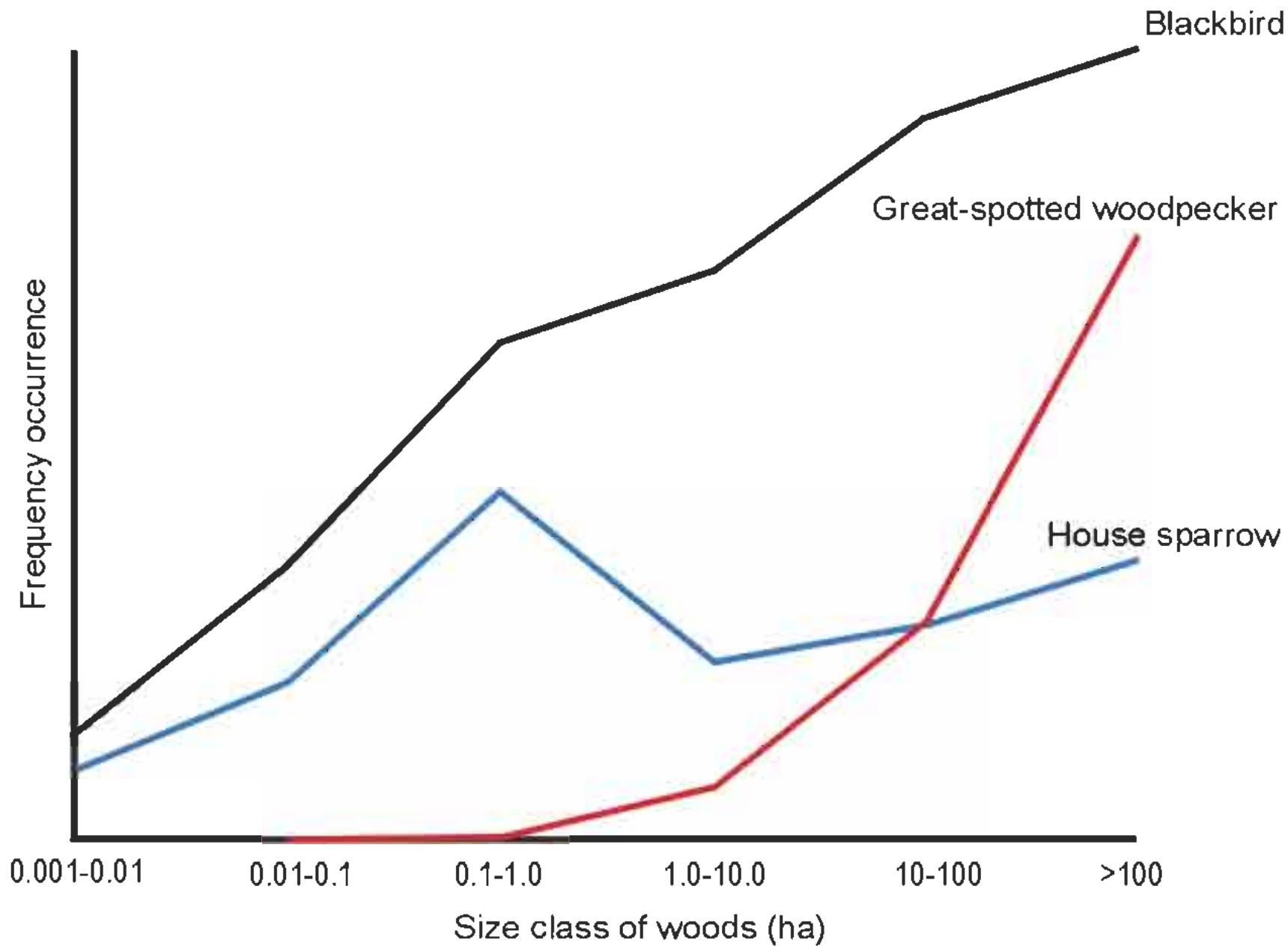
- Practicality (the ease of measuring)
- Utility (usefulness for decision makers)
- Relevance (responsiveness to stressors)
- Scientific merit (scientific basis and support)
- Ecological breadth (degree with which the indicator indicates something about the whole ecosystem)



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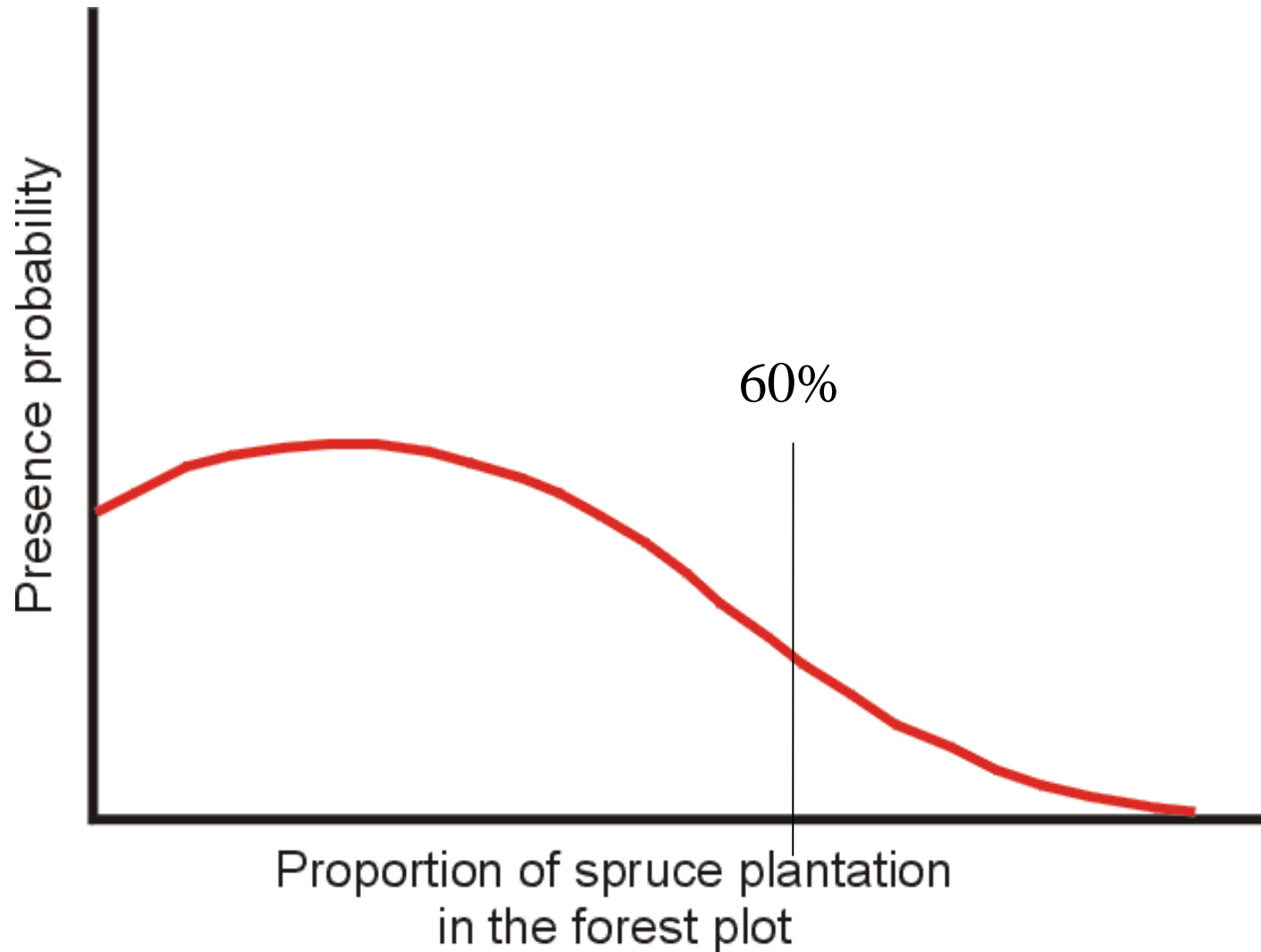
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Moore, N.W. and Hooper, M.D., 1975. On the number of bird species in British woods. *Biological Conservation* 8: 239-50.

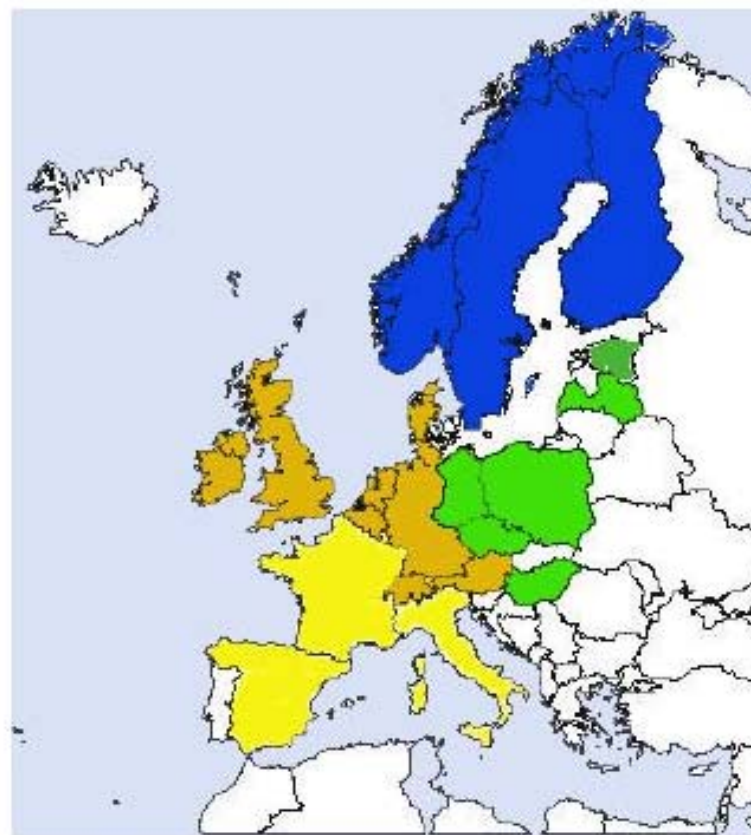
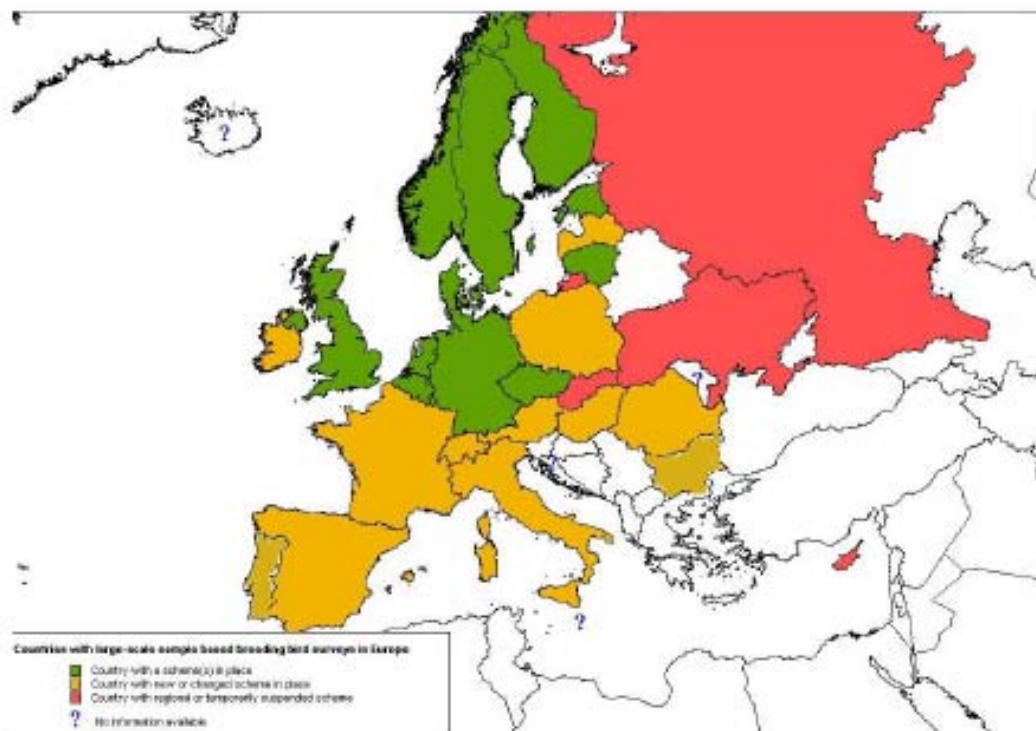
Occurrence of white-backed woodpecker as a function of the forest habitat quality (after Gjerde et al. 2005)



Two major challenges:

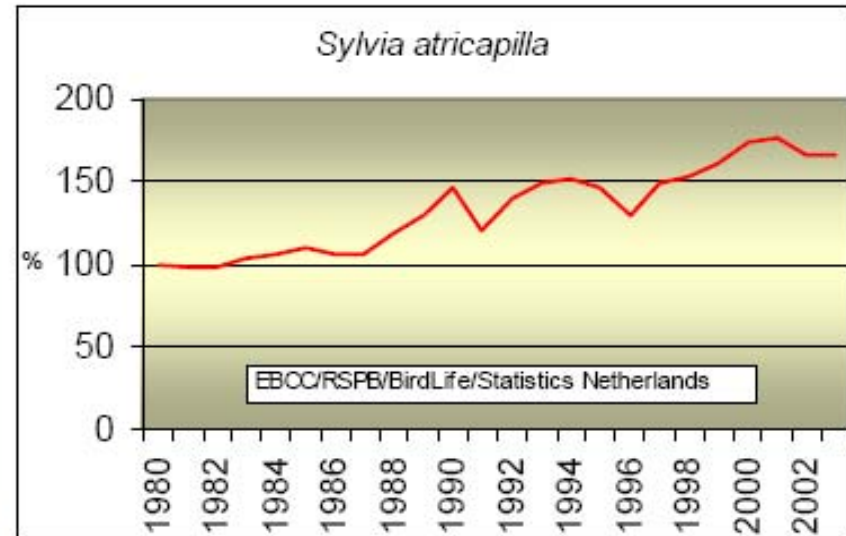
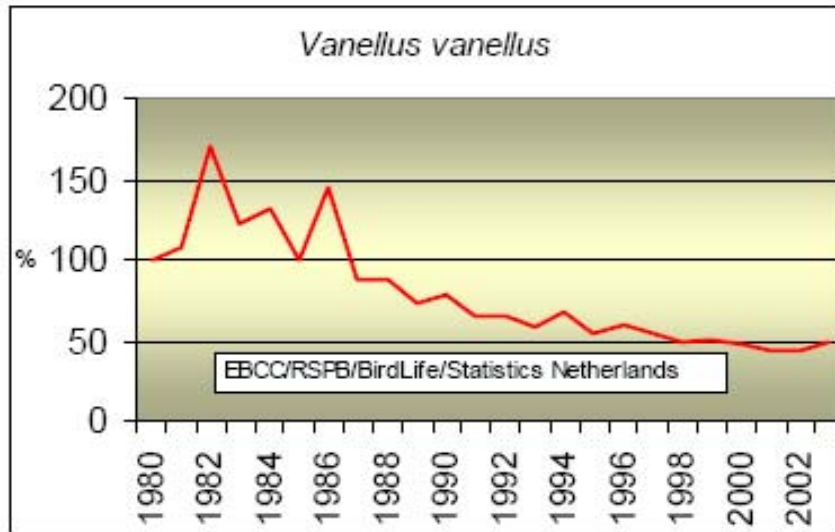
- Species selection
- Sample representativeness

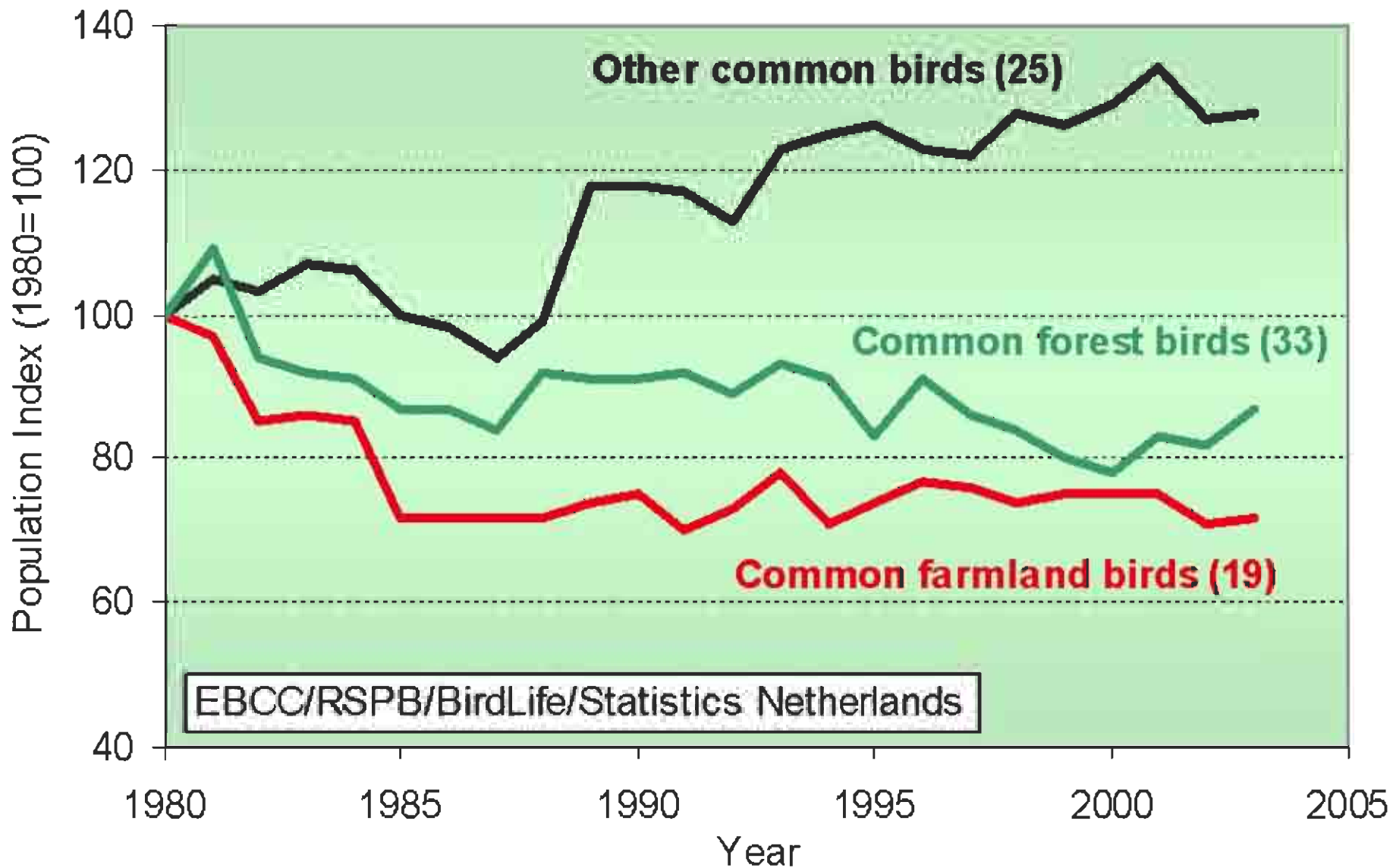
Common bird monitoring schemes in Europe



Courtesy: Petr Vorisek, PECBM coordinator

European trends of species (www.ebcc.info)



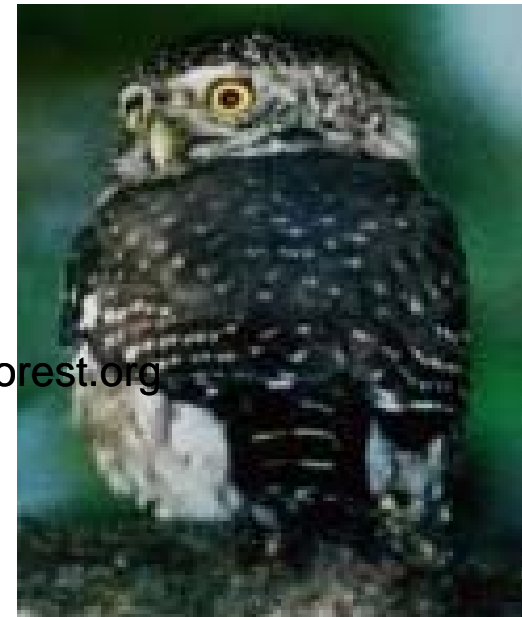




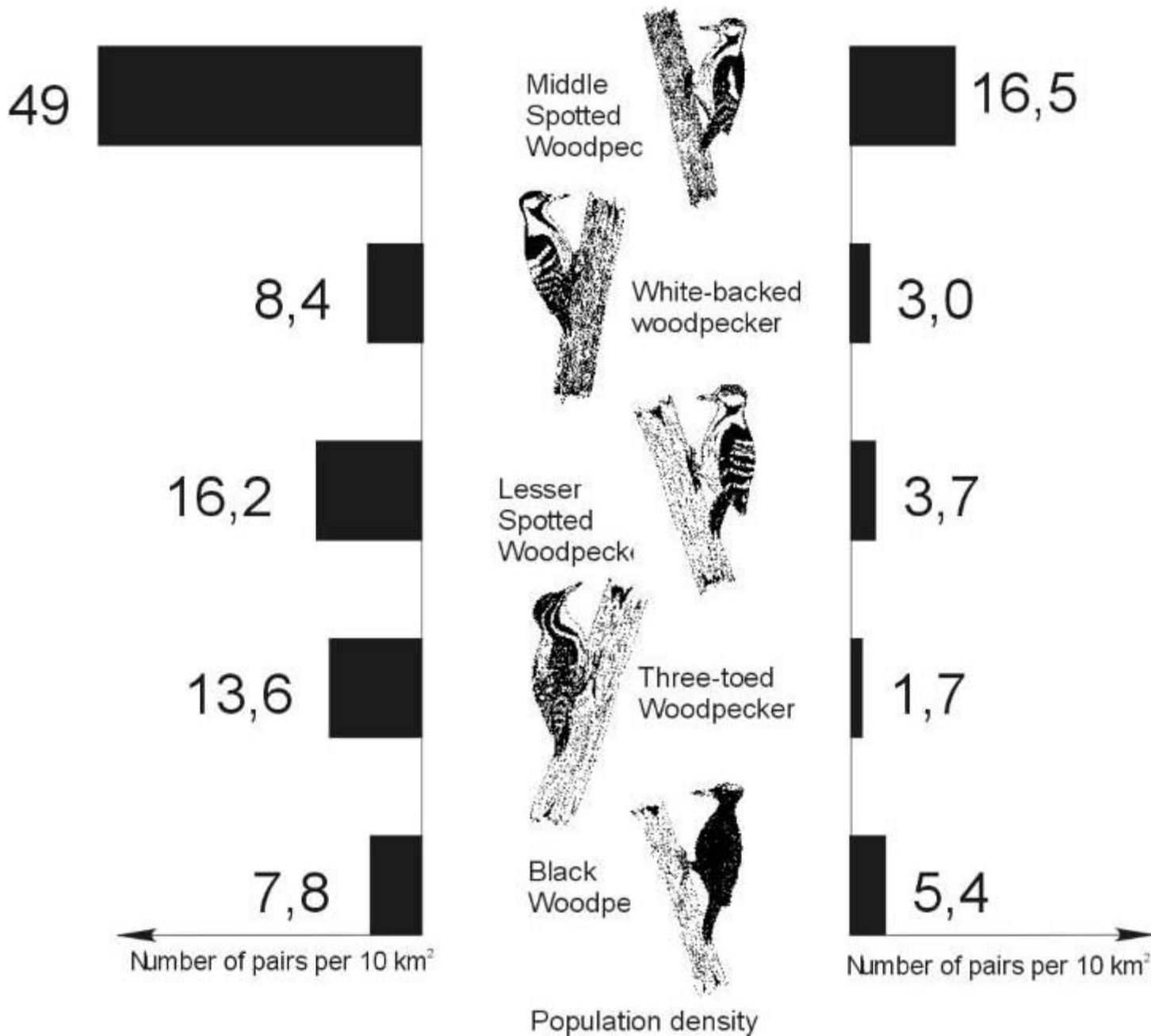
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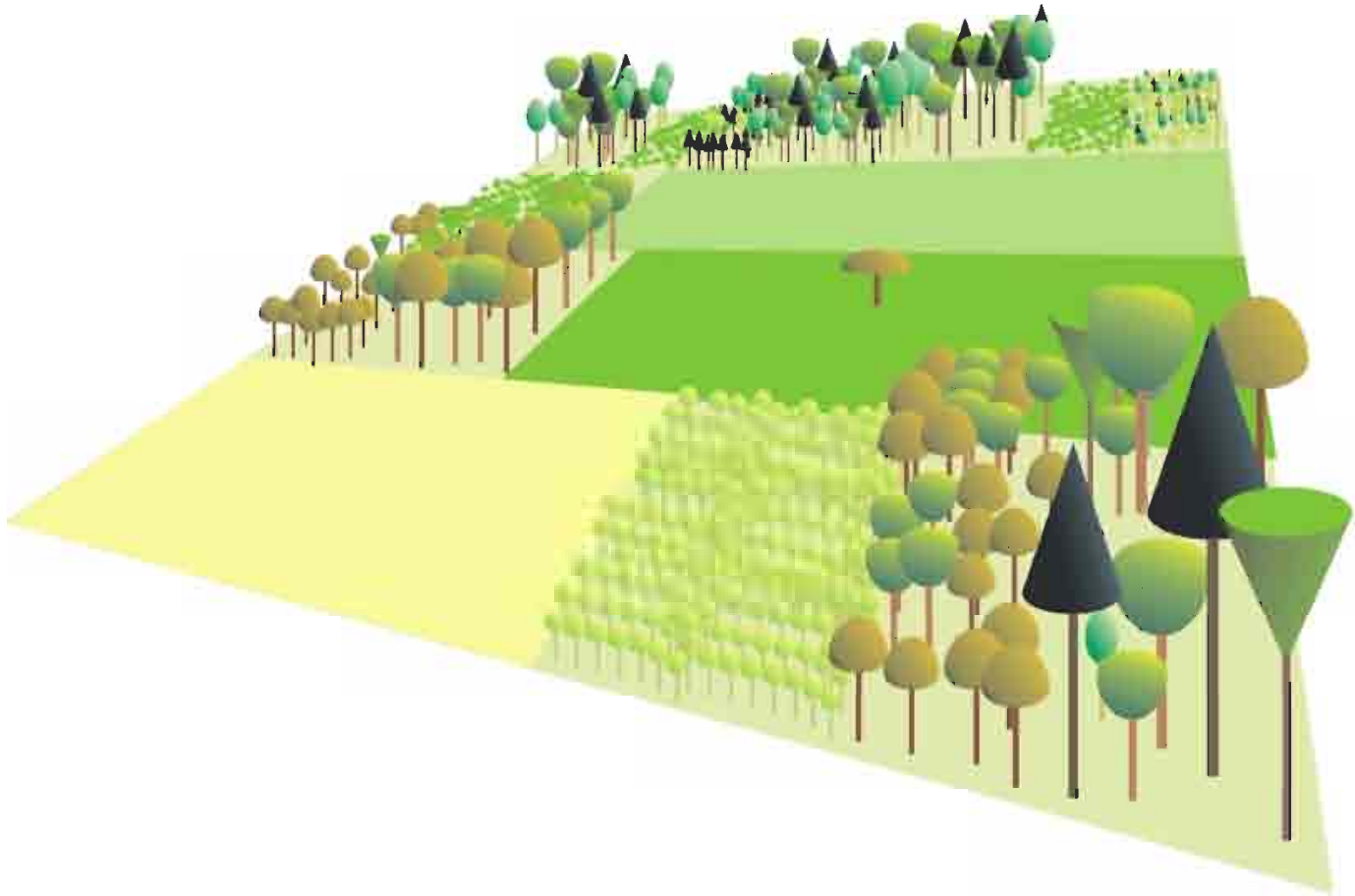
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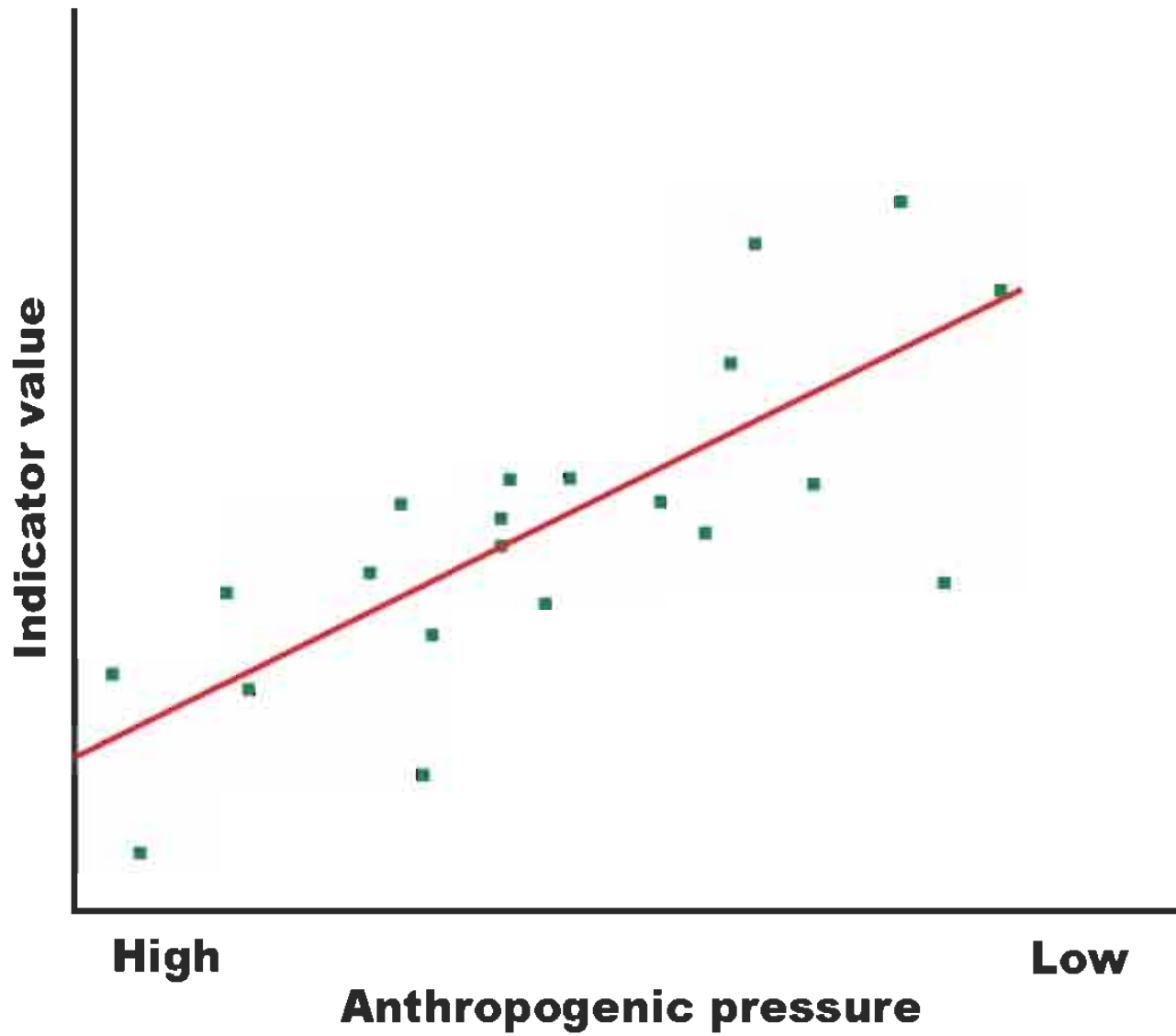


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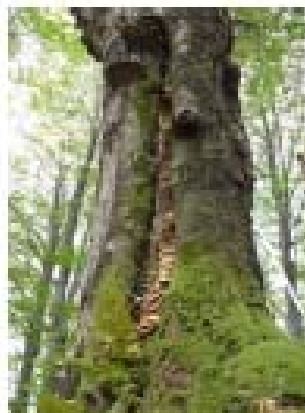






FINE OldWood

<http://oldwood.eu.interia.pl>



[WOLONTARIUSZE POSZUKIWANI!](#)



[VOLUNTEERS WANTED!](#)



[Przewodnik terenowy \(nowa wersja\)](#)



[z przykładami](#)



[OldWood Toolkit \(new edition\)](#)



with

[examples](#)



The project is a joint initiative of the Polish Society for the Protection of Birds (OTOP)



and European Forest Task Force



Major sponsor of the structural indicators module - DEAD WOOD/STARE DREWNO: Global Environmental Fund



FINE OldWood:

Indicators of high conservation values of European forests

Wskaźniki wartości przyrodniczych lasów Europy



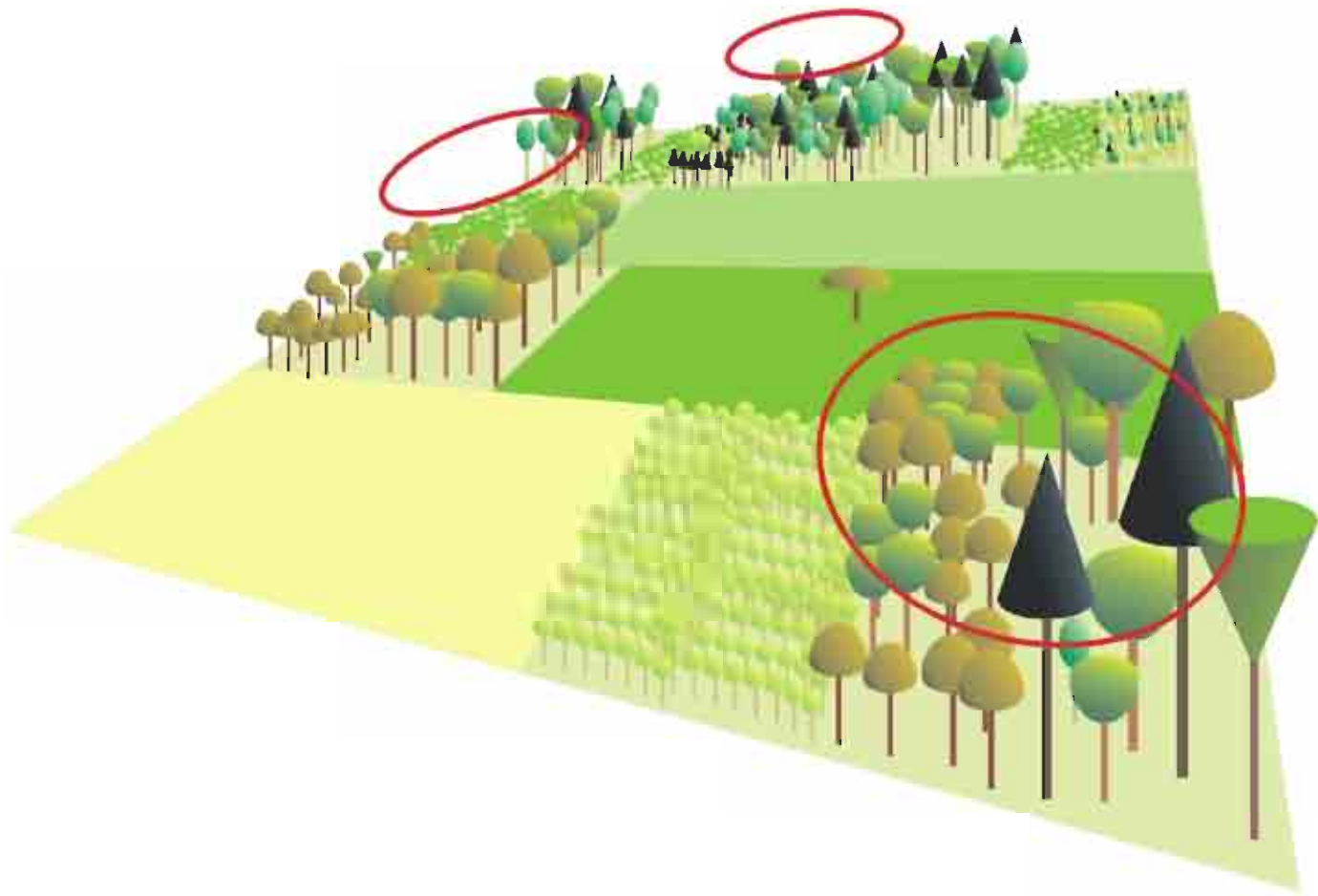
Contact information: General Coordinator, Scientific Coordinator, OTOP

What is FINE?

FINE, Forest Indicators for Europe, is the initiative of the European Forest Task Force BirdLife (FTF) aimed to assess the actual and potential capability of European forests to sustain high conservation values, including biodiversity and characteristics of natural forests. In 2006 FTF inaugurated with its Polish Partner, Polish Society for the Protection of Birds (OTOP) the first FINE's module "structural indicators of forests" or OldWood. OTOP received a grant from GEF-UNDP allowing us to set a network of plots representing widespread Central European forest assemblages: oak-hornbeam, pine, lowland beech and montane beech forests. The volunteers are gathering the data on the ecosystem structure, including canopy composition, vertical structure, presence of veteran and wildlife trees, snags, down dead wood, disturbances. This work should be followed by the taxonomic research of selected groups of organisms.

Czym jest FINE?

FINE (Forest Indicators for Europe) to inicjatywa europejskiej grupy lotnej BirdLife (FTF), której celem jest ocena istniejącej i potencjalnej zdolności lasów Europy do zachowania wysokich wartości przyrodniczych, w tym bioróżnorodności i cech charakterystycznych dla lasów naturalnych. W 2006 r. FTF zaanalogowała wraz ze swoim polskim partnerem, Ogólnopolskim Towarzystwem Ochrony Ptaków (OTOP) pierwszy moduł FINE, OldWood ("Stare Drewno"). OTOP uzyskało grant GEF-UNDP pozwalający na złozenie sieci powierzeń reprezentujących szeroko rozpowszechnione środkowoeuropejskie zbiorowiska lasne: grądy, buczyny nizinowe i górskie oraz bory. Dane zbierane przez ochotników na powierzchniach dotyczą m.in. składu gatunkowego drzewostanu, struktury pionowej ekosystemu, obecności starych drzew, martwego drewna, zaburzeń. Kolejnym etapem FINE powinny być badania taksonomiczne wybranych grup organizmów.



Topical modules of the project

Birds

Plants

Insects

Other Vertebrates

Fungi

Structure (including stands
and woody debris)

Processes

Modelling



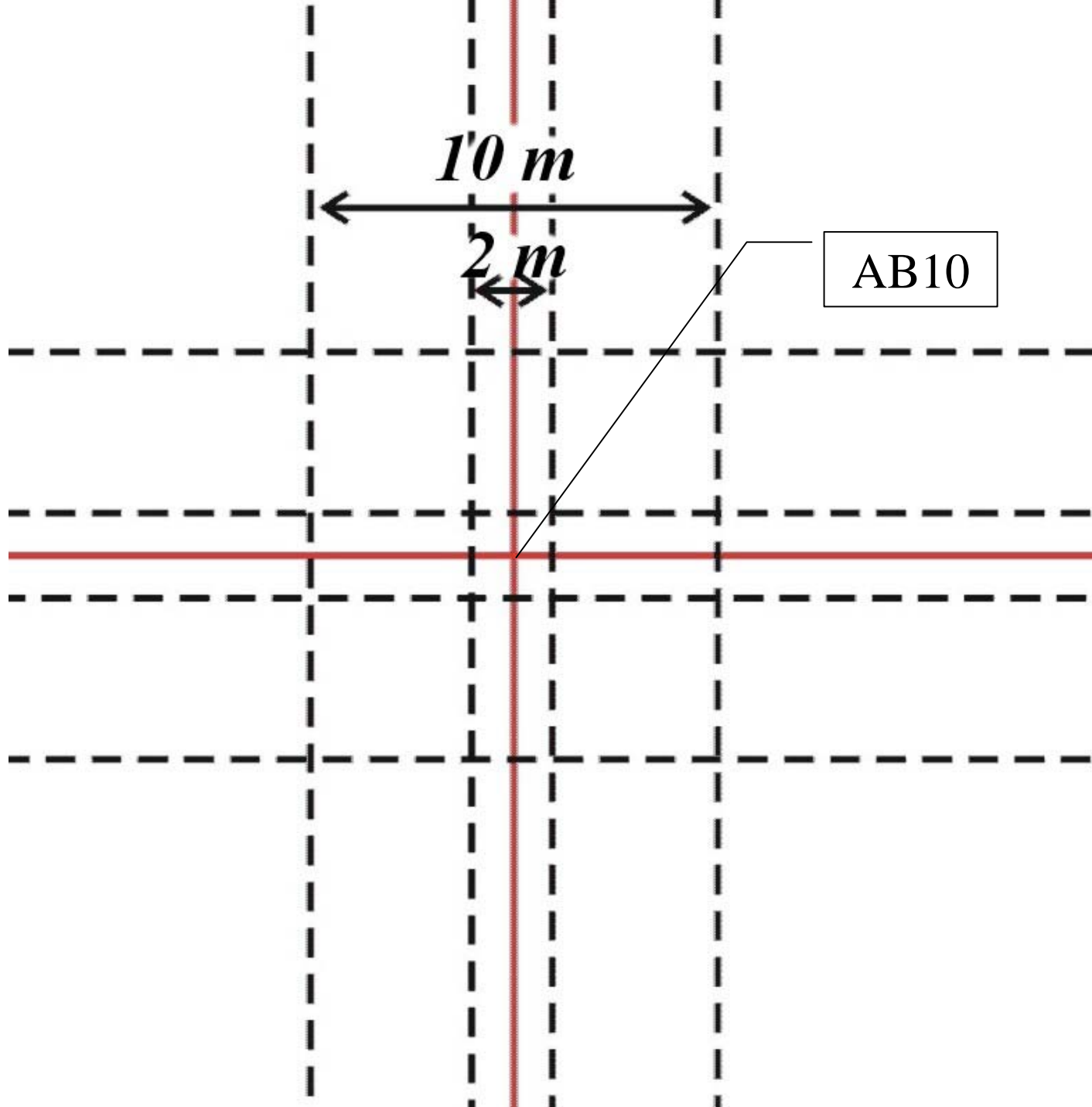


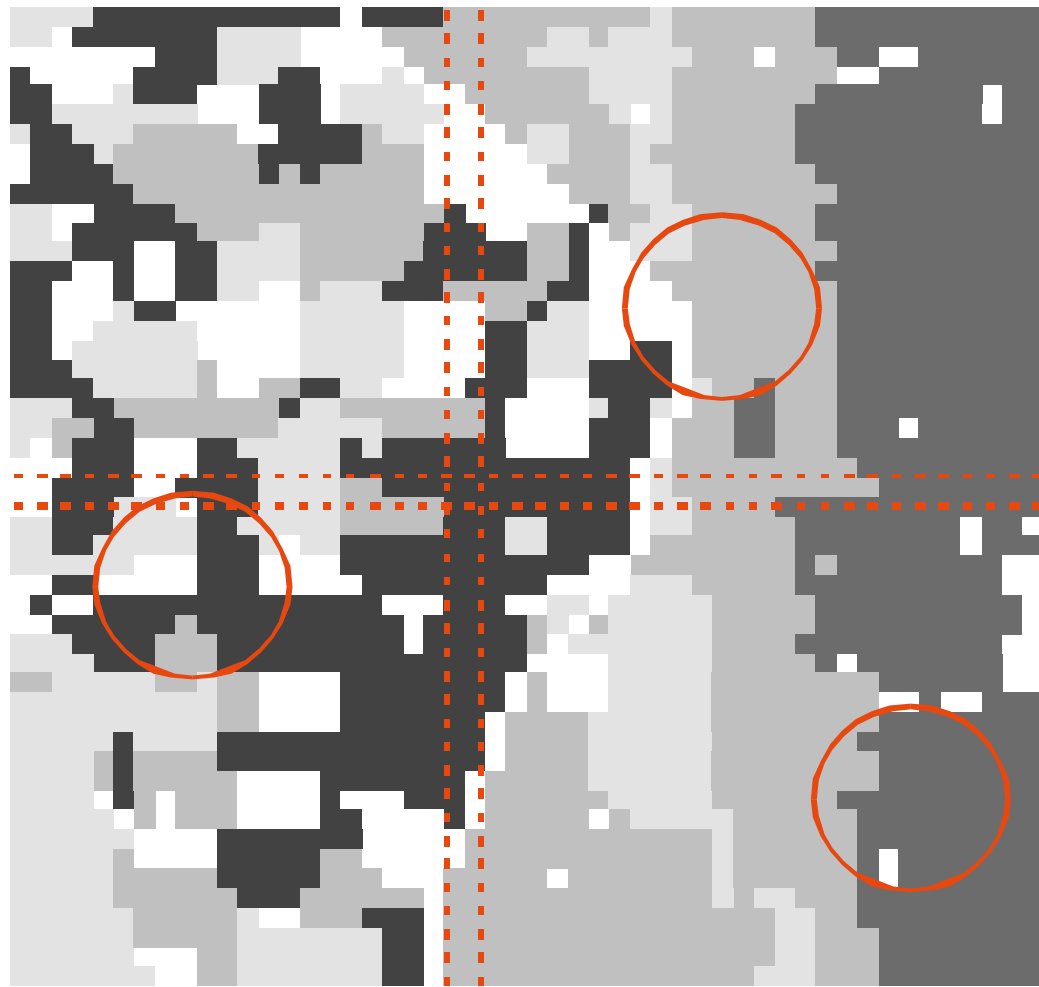






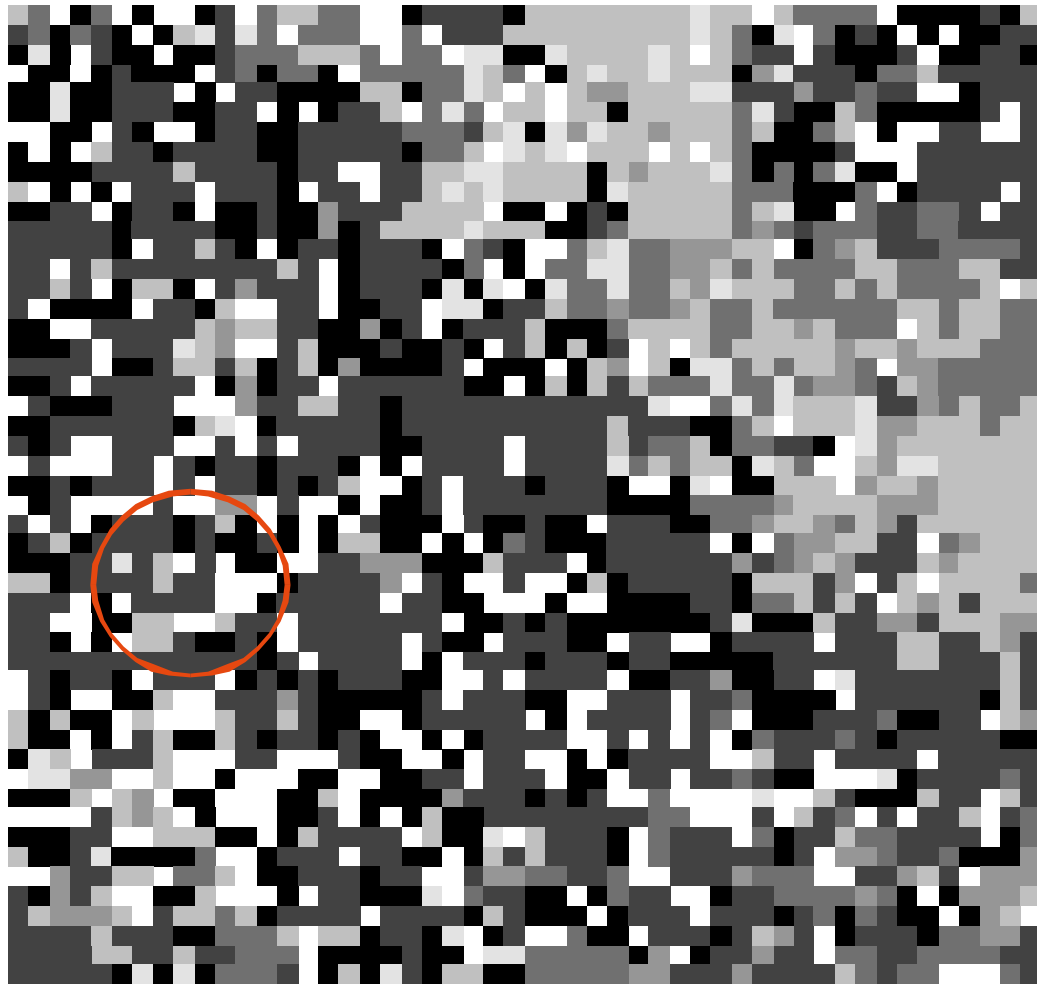






250 m

after Bobiec et al. 2000



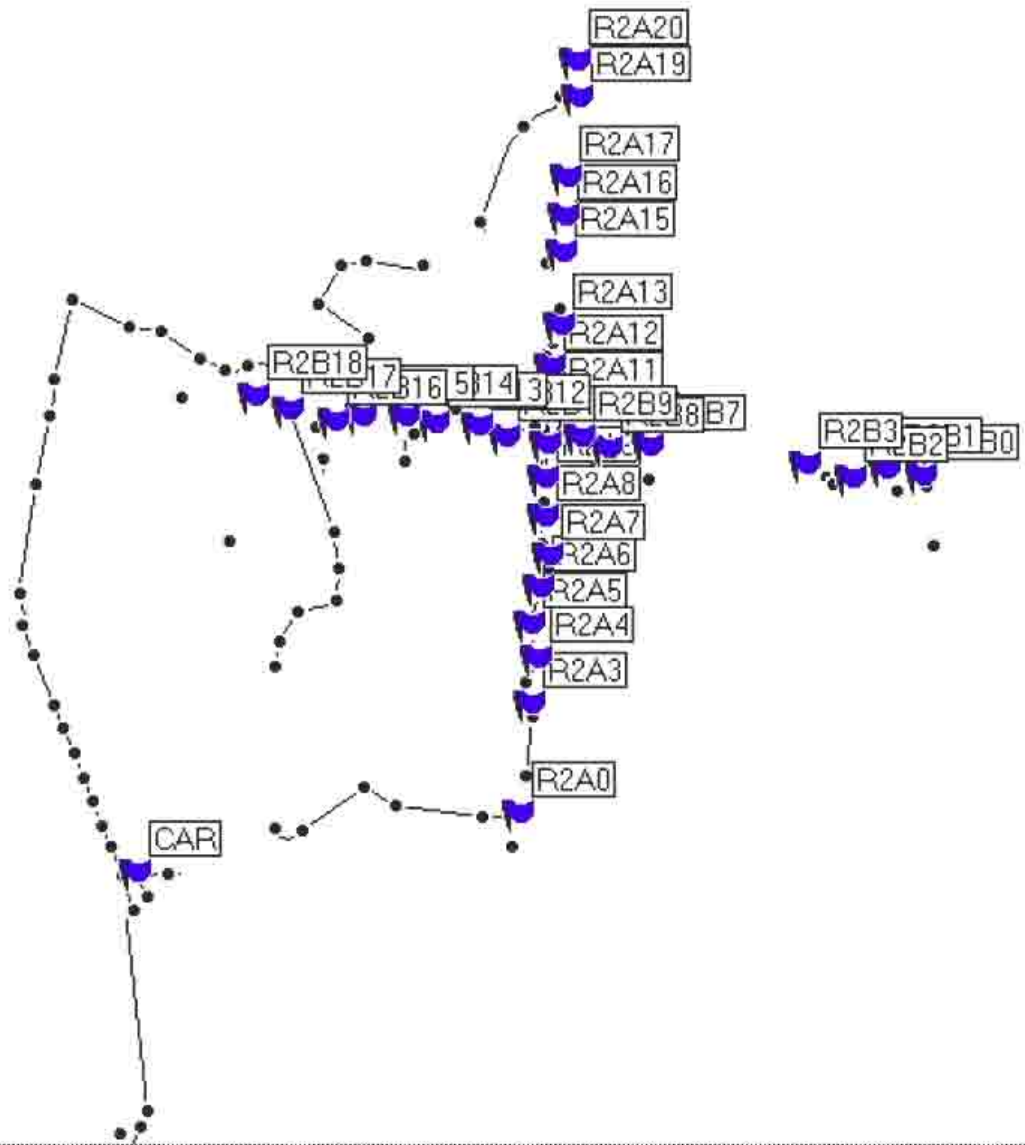
← 250 m →

after Bobiec et al. 2000





Area



... calculation data.
... ed if your GPS supports auto-rou...

30
over

Old trees and decaying wood In forest ecosystems of Poland “Old Wood”

A toolkit for participants Version 07

The project of the **Polish Society for Protection of Birds** in co-operation
with the **European Forest Task Force BirdLife Int.**

Major sponsor:	Global Environmental Fund
Sponsor of the pilot phase:	BirdLife European Forest Task Force
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Co-operation:	Dr Artur Obidziński, Forest Faculty, Warsaw Agricultura University Dr hab. Krzysztof Oklejewicz, Dept of Biology and Agriculture, Rzeszów University Dr Dan Wołkowycki, Białystok Technical Univ. State Forests administration National parks' administration

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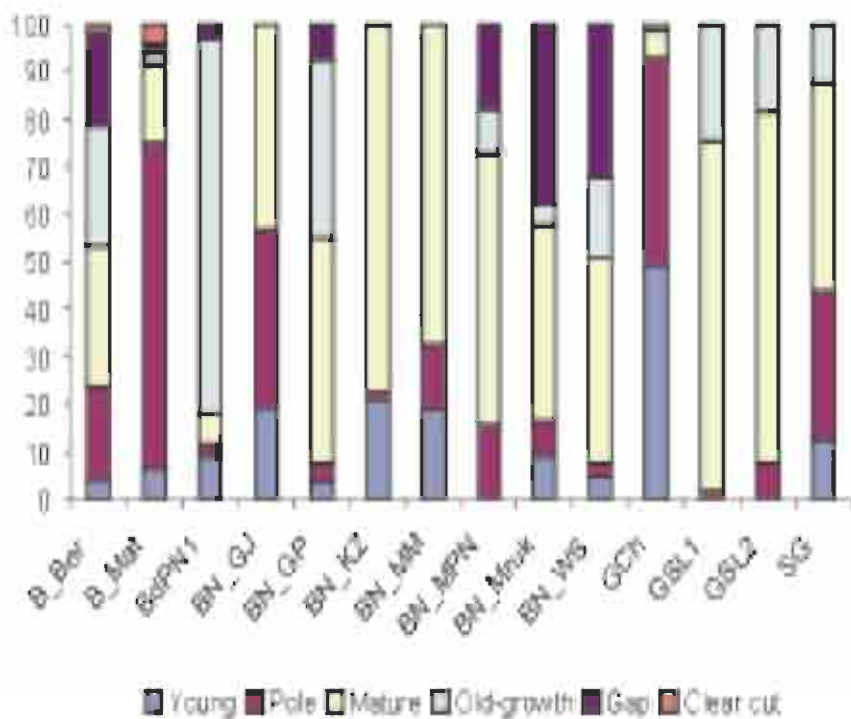
Andrzej Bobiec, andrzej.bobiec@otop.org.pl, phone 0048 66 5286745,

Polish Society for Protection of Birds (OTOP) www.otop.org.pl

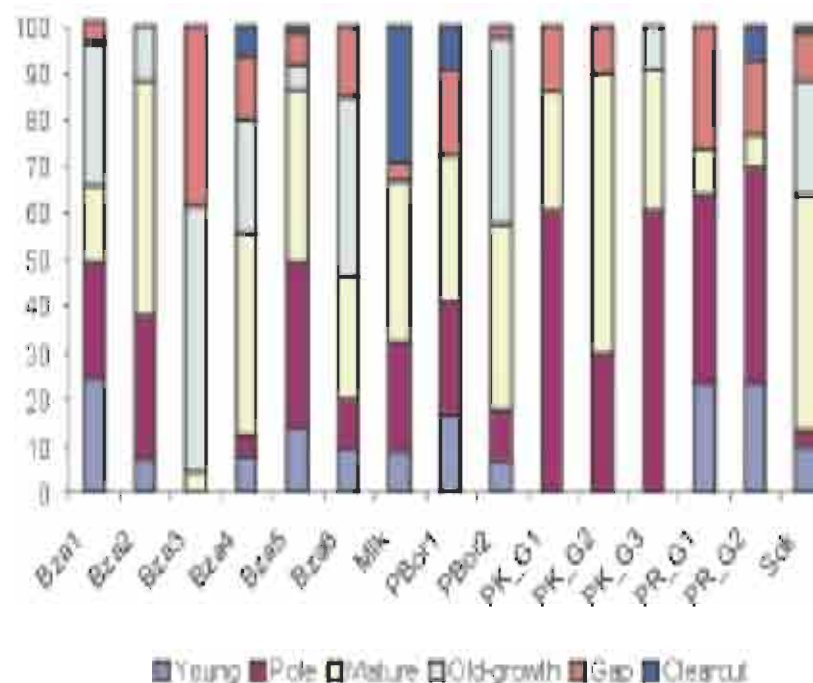
BirdLife European Forest Task Force <http://forest.birdlife.org>



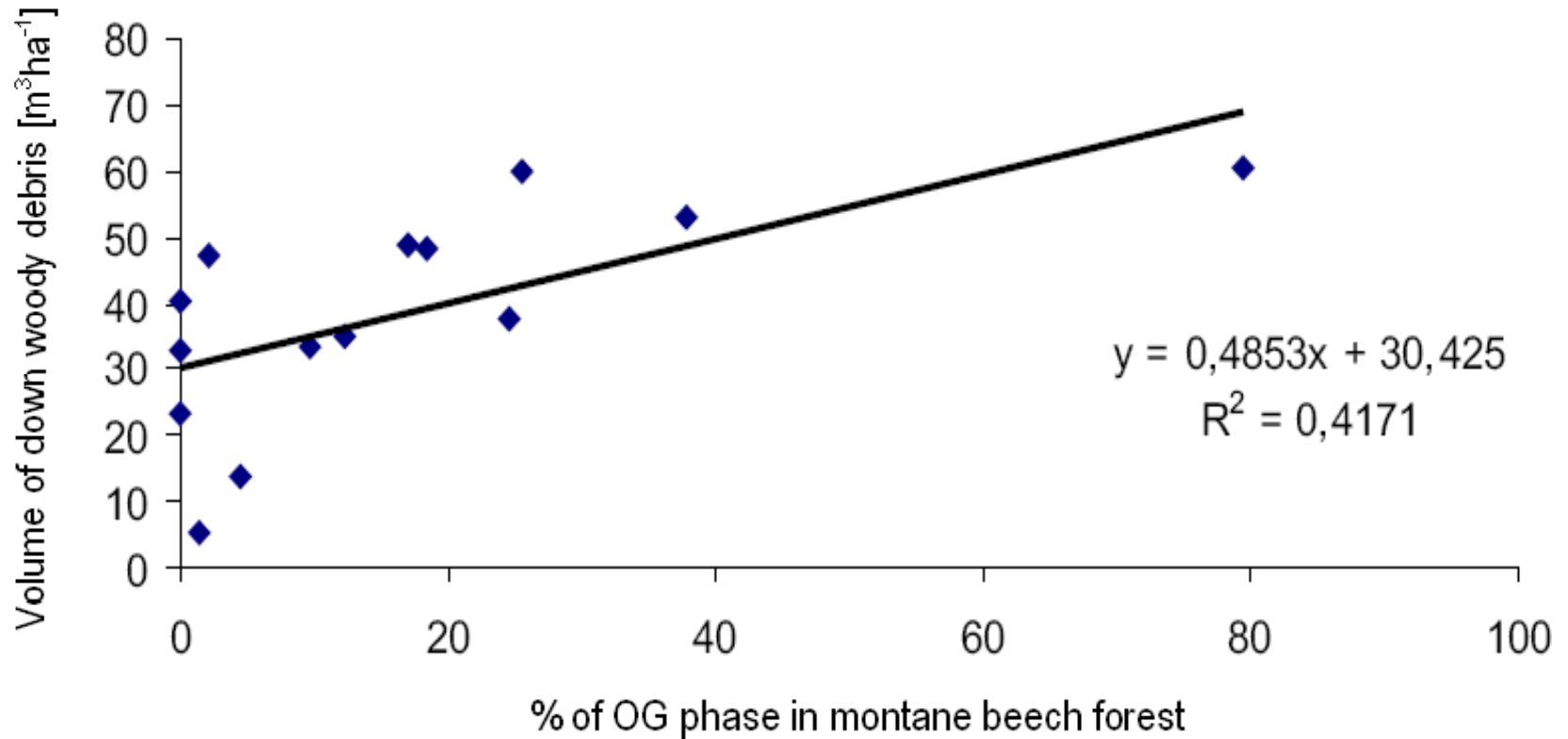
% cover of developmental phases
in montane beech forests



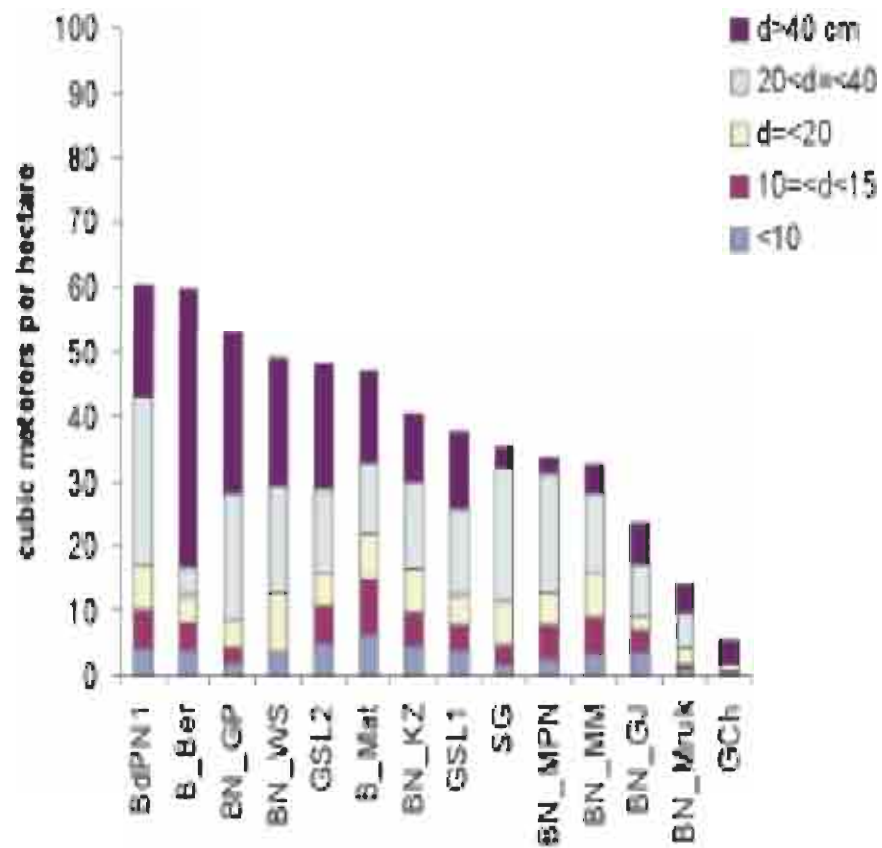
% cover of developmental phases
in oak-hornbeam forests



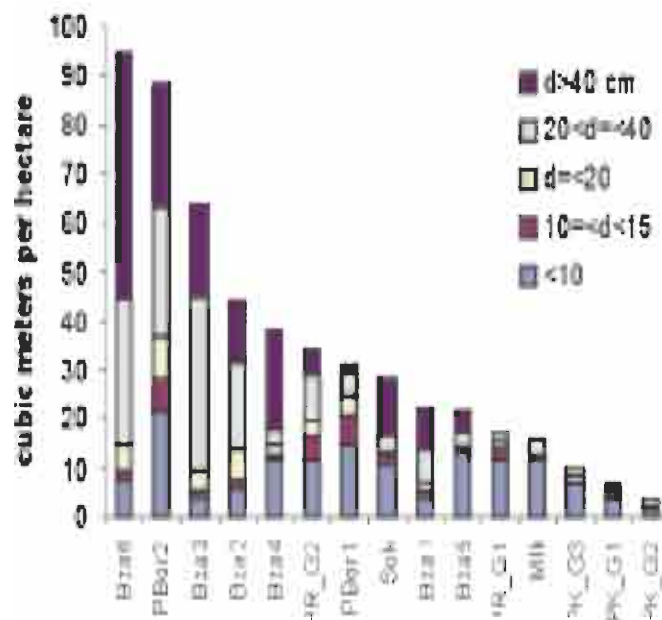
Dead wood resources vs. the old-growth share in the forest community

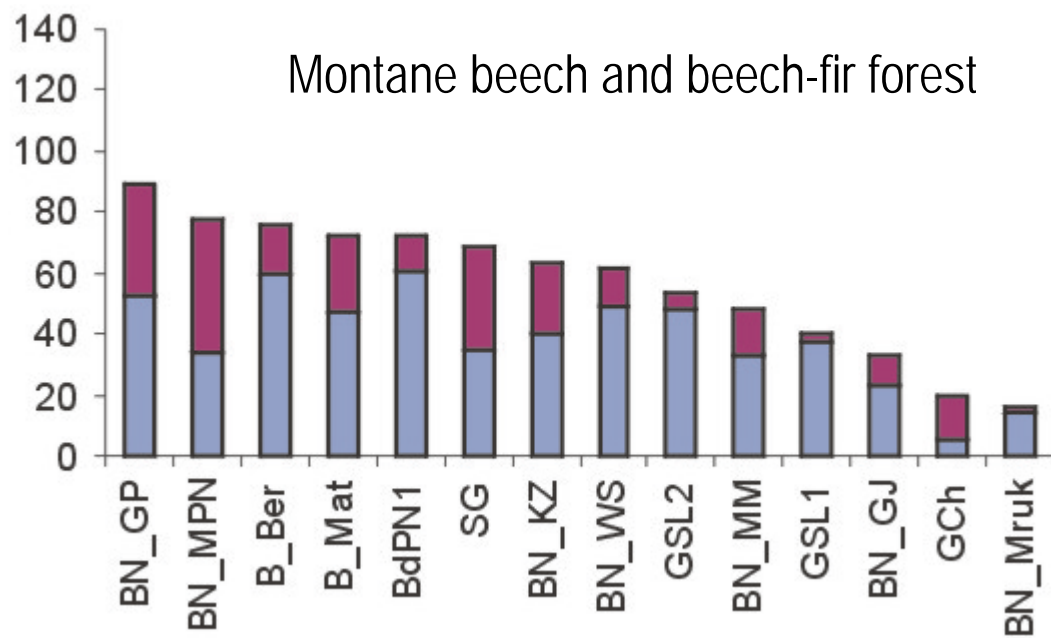
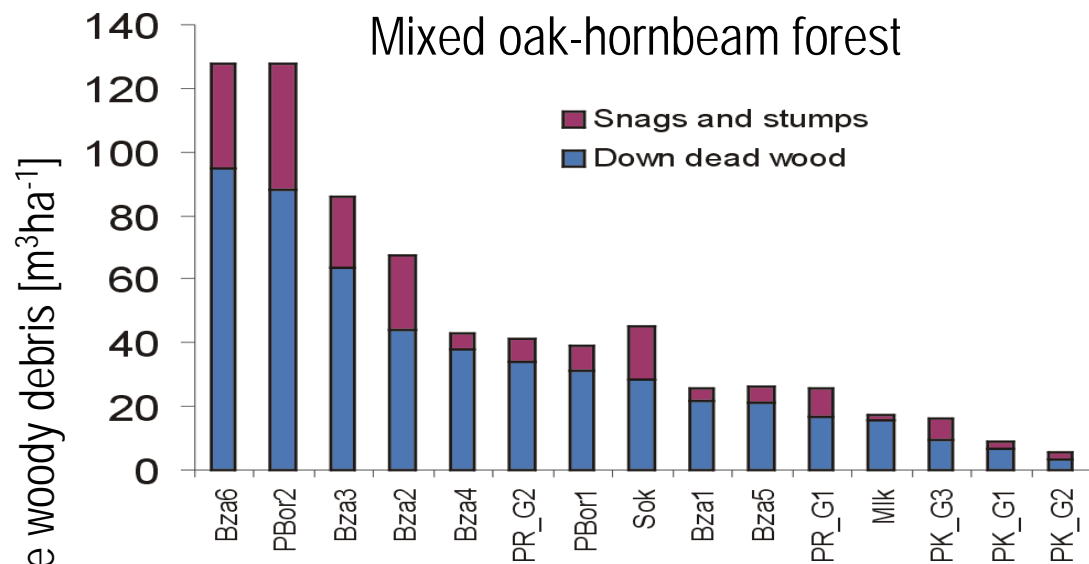


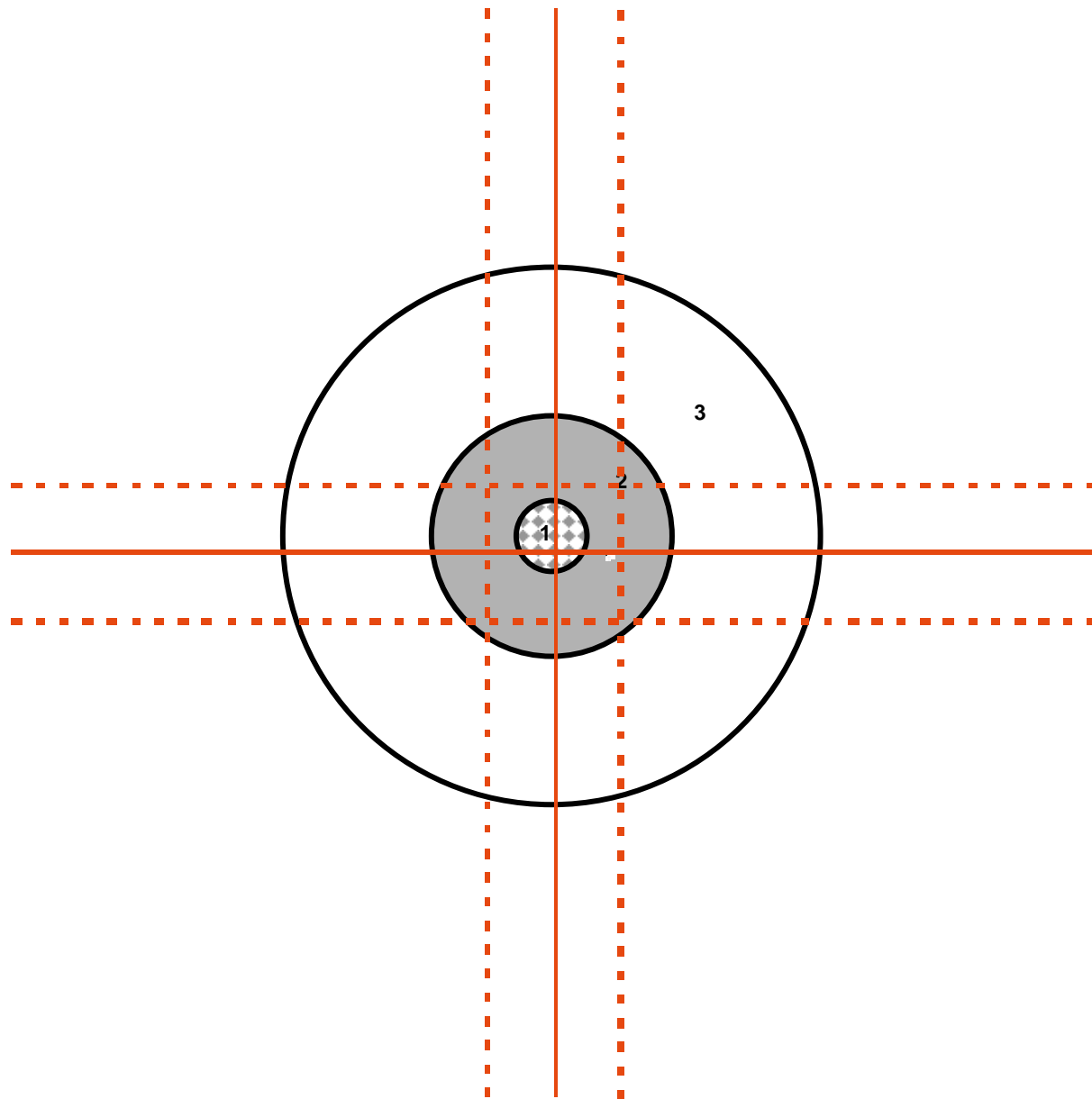
Diameter structure of down dead wood in montane beech forests

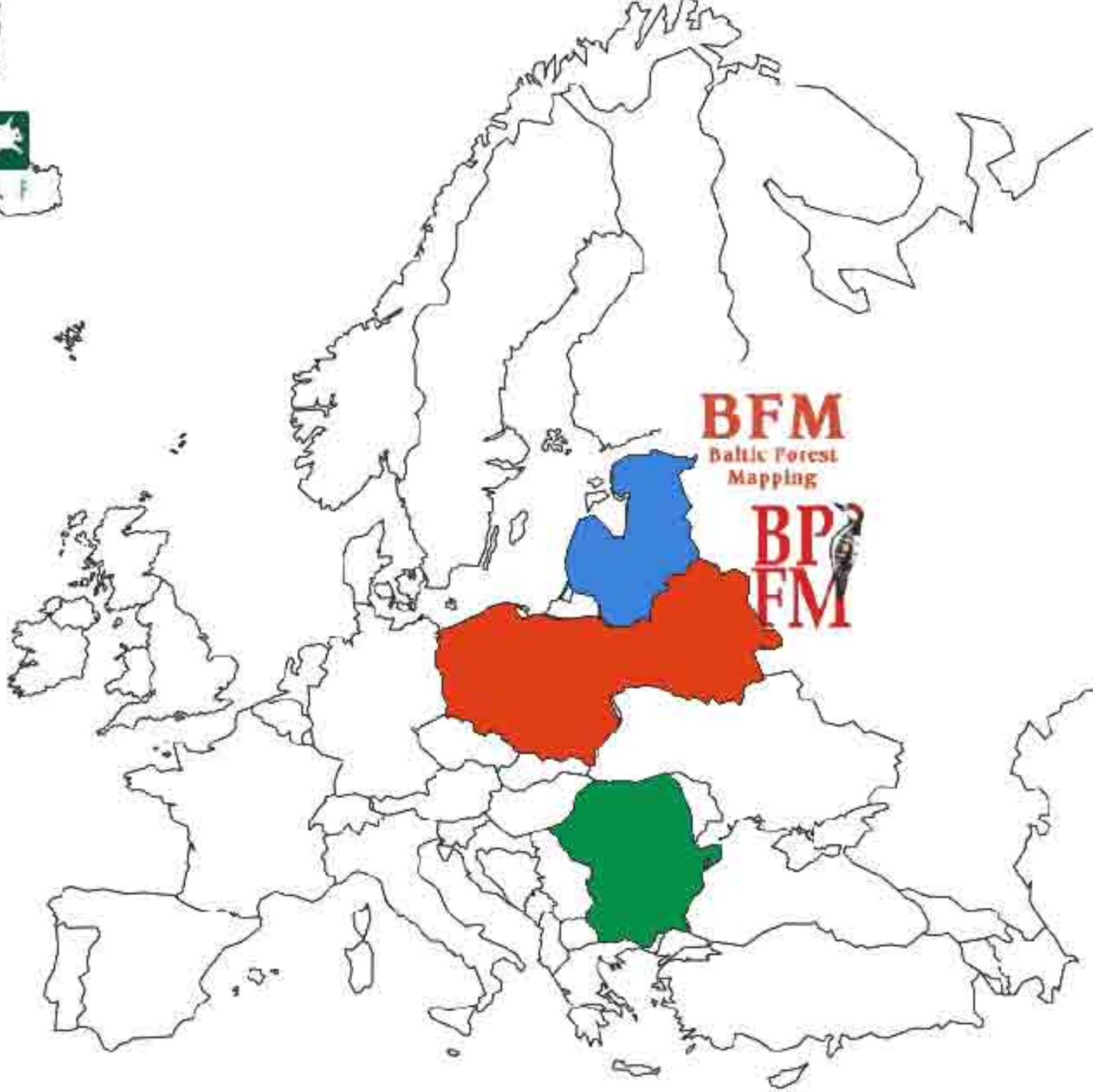


Diameter structure of down dead wood in oak-hornbeam forests









BFM
Baltic Forest
Mapping

**BP
FM**



BFM

Baltic Forest
Mapping

What is the BFM project?



print



1 : 50 000

Show

Latvia

Level

- Level 1 - forest stands (Estonia only)
- Level 2 - generalised 25 km grid map

Protected areas

- strictly protected
- somehow protected



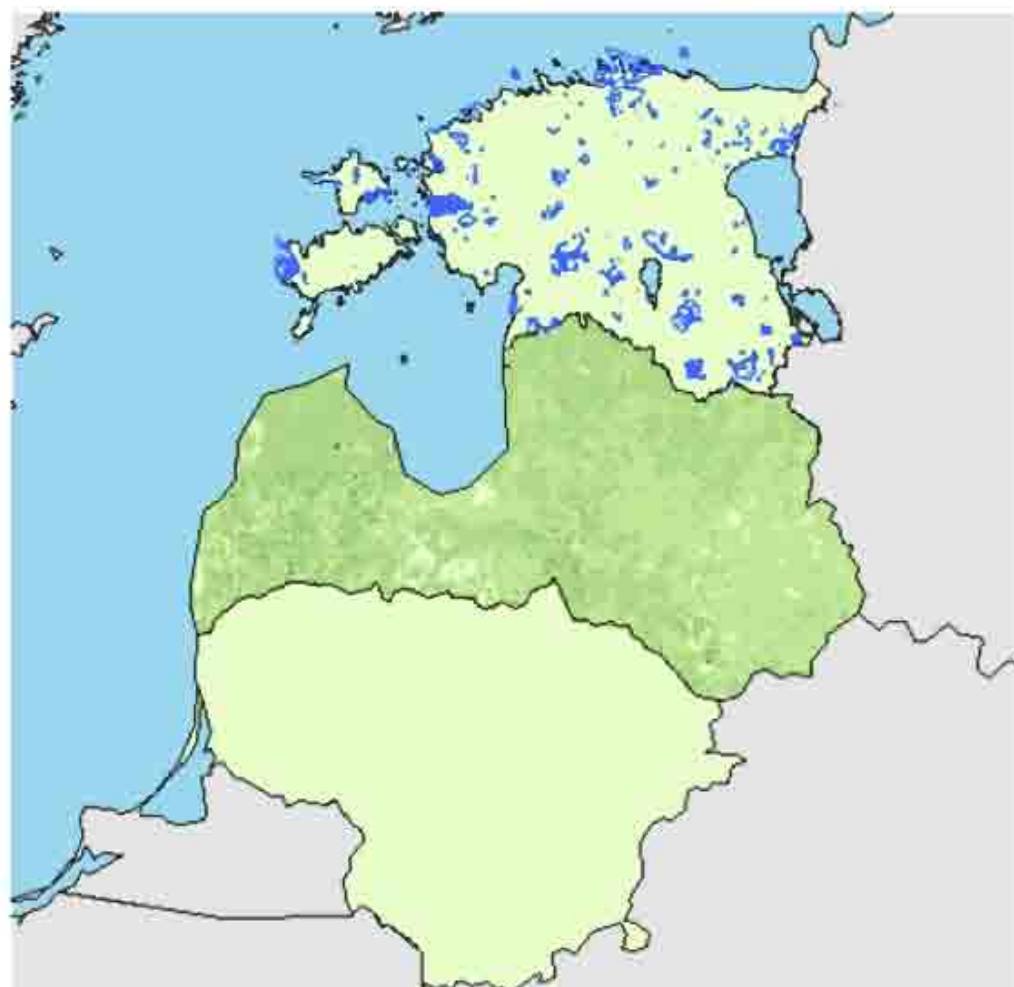
Criteria

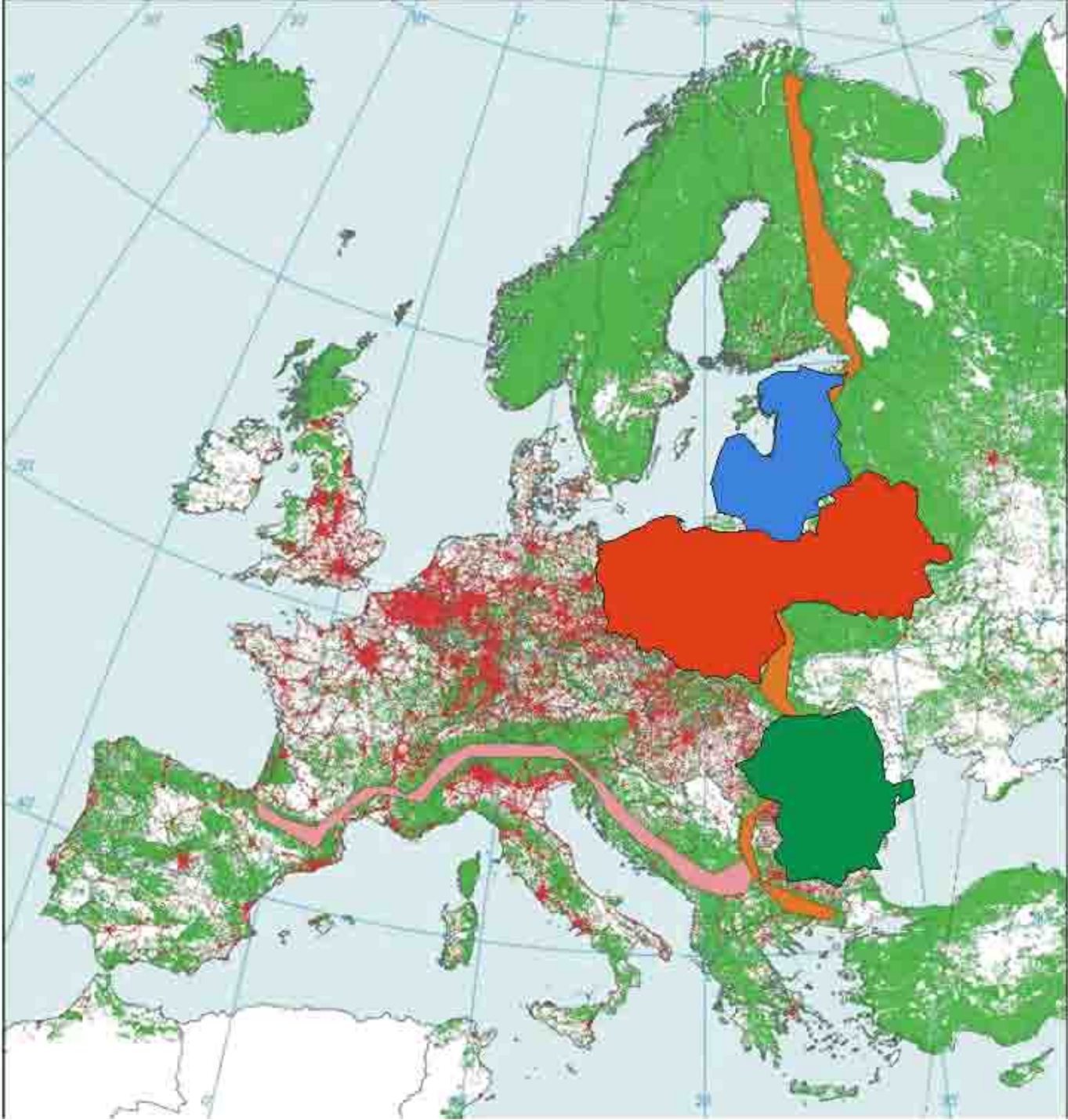
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100%

- All
- Little or no signs of human influence
- Average age of stand more than x years, defined by a matrix covering each country and each dominant tree species separately
- Considerable amount and long continuum of dead wood of different types, rich flora of wood-rotting fungi
- Slopes on steep slopes and ravines (gradient more than 25°, for Latvia more than 15°)
- Uneven age/canopy structure, over-mature/big tree generation present in considerable amounts; very old trees of previous tree generations present
- Forests after large scale natural disturbance (fire, storm, beavers)
- Endangered vegetation types (national forest habitat Red Lists)
- Populations of several rare or endangered forest-dependent species present (e.g. scottish eagle, flying squirrel, rarer woodpeckers)
- Capricious lakes
- Very old trees of previous tree generations present
- Broad-leaved tree species (maple, elm, soft-leaved elm, lime, beech, hornbeam, apple, wild cherry, pear, sweet willow) present in the dominating canopy layer
- Forests of limited access

Show





RESUME

- Birds have a potential of a very strong forest indicator.
- They are currently subject to a thorough scrutiny based on the species-by-species risk assessment; as a result four regional lists of forest birds with high indicative potential will be completed by January 2008.
- Targeted approach in the monitoring plot network design is crucial for successful search of robust forest ecological health indicators.
- Selected ICP Forests-Bio-Soil plots could be combined with the method FINE, providing an efficient tool of the stand dynamic pattern assessment.
- Indicators of forest ecological health may provide strong premises fostering an efficient pan-European forest protection-and-sustainable use system.



Thank you
for your attention