Coppice in Europe and NATURA 2000

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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

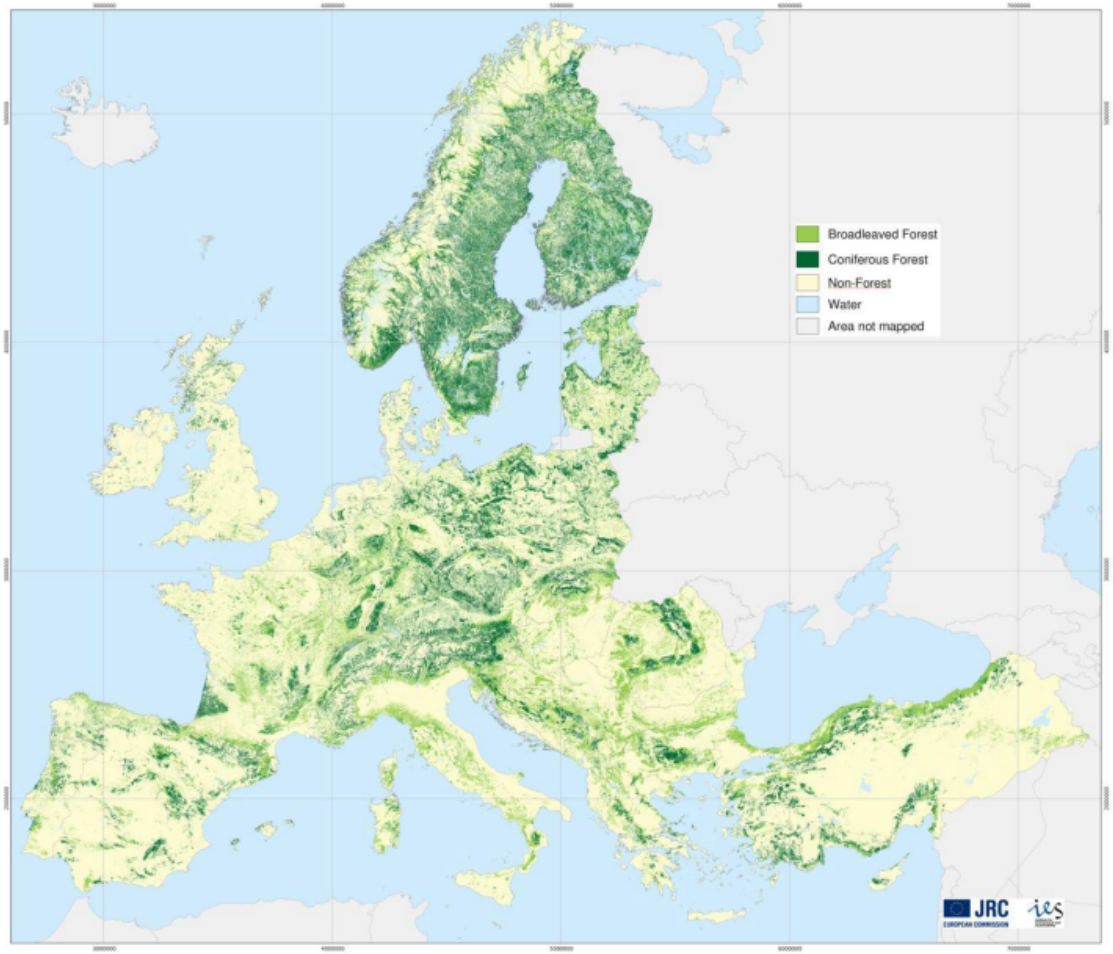


Figure 1. European Forest Map, 2006: JRC – EFDAC.
Available at: http://forest.jrc.ec.europa.eu/activities/forest-mapping

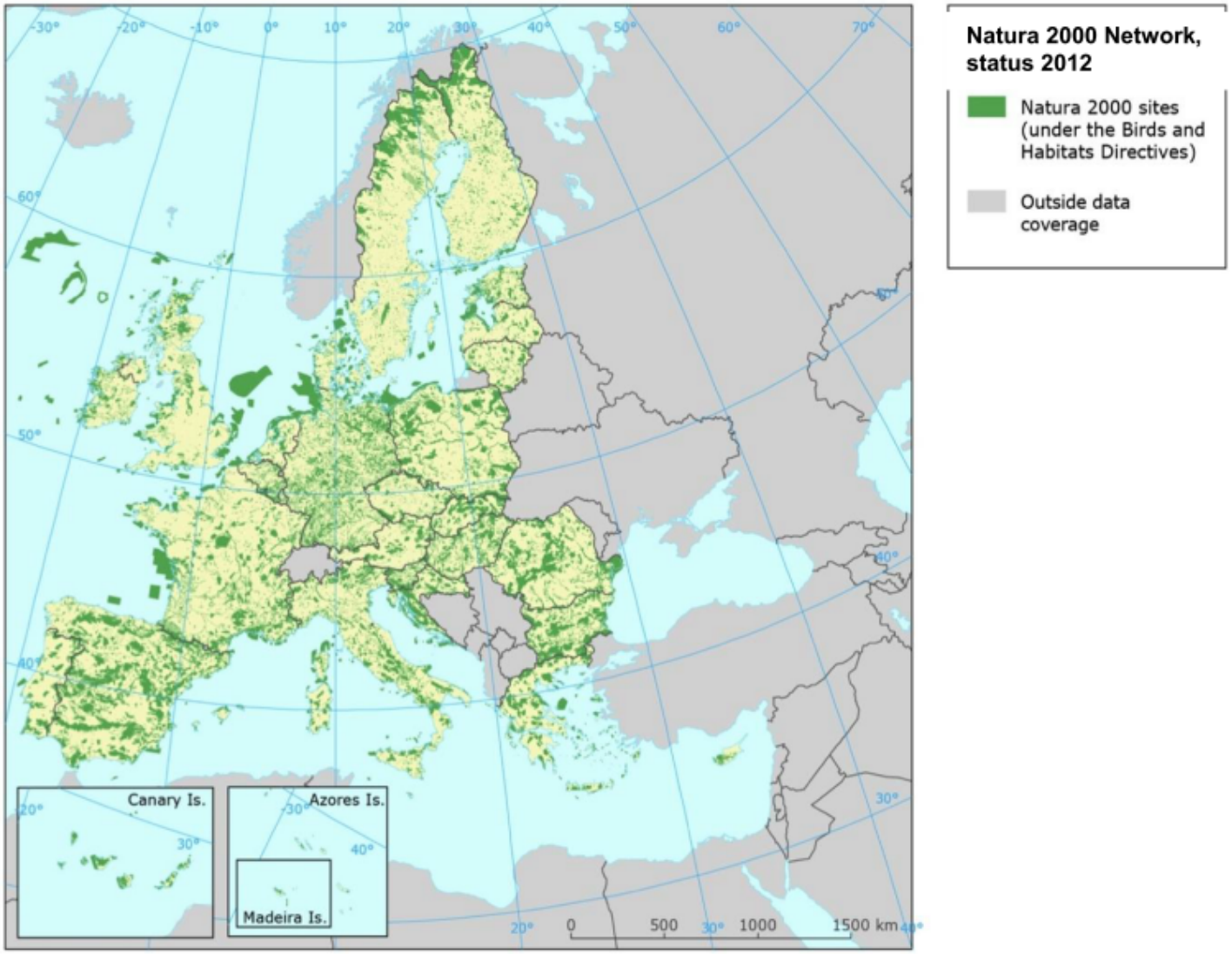


Figure 7: The Natura 2000 Network (2012)

Table 1. Natura 2000 forest area

Member State	Total Natura 2000 on land (km²) (1)	Total Natura 2000 Forest* Area (km²) (2)	% Natura 2000 which is Forest*	Forest & other wooded land (km²) (3)	Total Forest* within Natura 2000 (%)
AT	12.559	4.790	38	40.060	12
BE	3.883	2.130	55	7.060	30
BG	38.066	22.220	58	39.270	57
CY	1.628	880	54	3.870	23
CZ	11.062	7.510	68	26.570	28
DE	55.142	26.550	48	110.760	24
DK	3.584	760	21	5.910	13
EE	8.076	4.670	58	23.500	20
ES	137.365	79.780	58	277.470	29
FI	48.851	28.910	59	232.690	12
FR	69.127	30.090	44	175.720	17
GR	35.761	15.550	43	65.390	24
HR	20.675	9.172	44	24.740	37
HU	19.950	8.080	41	20.290	40
IE	9.222	410	4	7.890	5
IT	57.137	29.300	51	109.160	27
LT	7.890	4.910	62	22.400	22
LU	469	280	60	880	32
LV	7.449	4.030	54	34.670	12
MT	41	20	49	0	-
NL	5.563	1.210	22	3.650	33
PL	61.059	33.470	55	93.370	36
PT	19.010	7.460	39	36.110	21
RO	53.788	22.390	42	67.330	33
SE	57.410	23.530	41	312.470	8
SI	7.673	4.990	65	12.740	39
SK	14.442	9.460	66	19.330	49
UK	20.884	1.290	6	29.010	4
Total	**787.766**	**383.842**	**49**	**1.802.310**	**21**

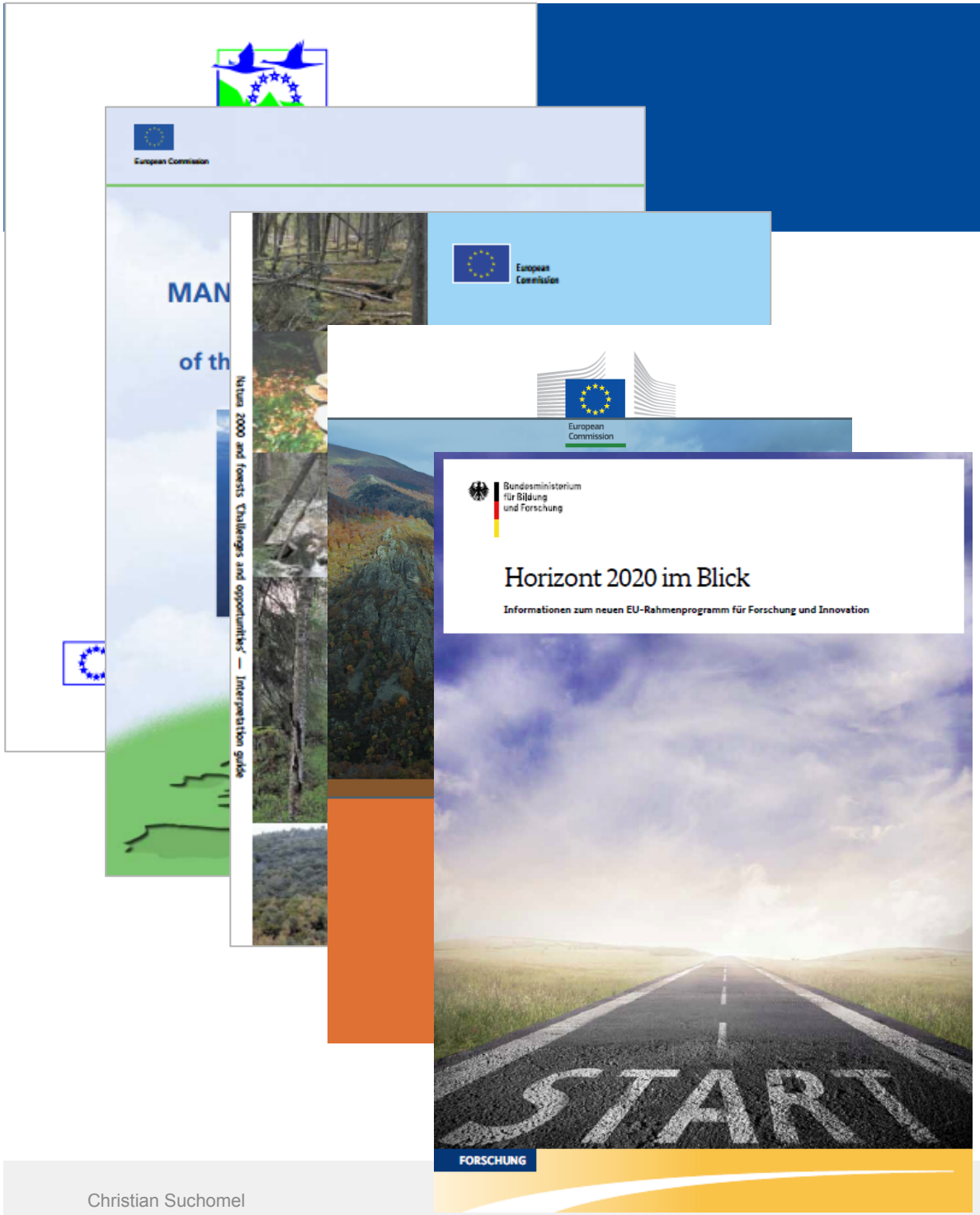
Coppice in Europe

	Coppice and coppice with standards	Percentage of total forest area	Source
France	4.714.000 ha	50,0 %	BMELF 1982
Belgium	174.000 ha	30,0 %	BMELF 1982
Austria	96.000 ha	1,7 %	HOCHBICHLER 2008
Italy	3.200.000 ha	54,5 %	INFC 2005, FAO 2005
Greece	2.000.000 ha	49,3 %	Puumalainen 2001
Germany	75.316 ha	0,7 %	BWI² 2004
Europe	21.000.000 ha	16,0 %	Puumalainen 2001

Coppice in Germany

	high forests	Plenterwald	coppice and coppice with standards	all
Baden-Württemberg	1.297.013	10.803	3.101	1.310.916
Bayern	2.372.638	22.178	27.576	2.422.393
Brandenburg + Berlin	983.671	395	3.556	987.622
Hessen	822.287	n.v.	3.998	826.284
Mecklenburg-Vorpommern	496.272	n.v.	6.598	502.871
Niedersachsen + Hamburg + Bremen	1.099.741	n.v.	2.187	1.101.929
Nordrhein-Westfalen	841.340	n.v.	5.975	847.316
Rheinland-Pfalz	792.938	n.v.	12.646	805.585
Saarland	93.318	n.v.	1.582	94.899
Sachsen	476.675	399	199	477.273
Sachsen-Anhalt	465.009	n.v.	399	465.408
Schleswig-Holstein	155.199	n.v.	1.692	156.892
Thüringen	495.681	400	5.806	501.887
Germany (all states)	10.391.783	34.175	75.316	10.501.274

Source: Bundeswaldinventur 2



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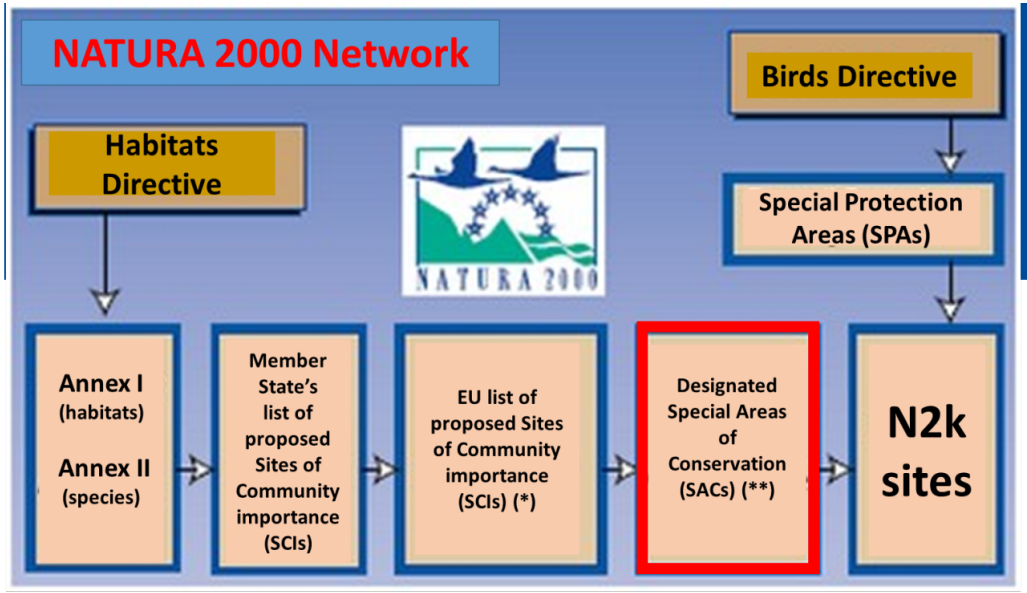

(*) Adopted by the EU
(**) Designated by Member States within six years from the adoption of European lists of Sites of Community Importance (SCIs)

The EU Natura 2000 network is generally not a network of strictly protected areas in which no economic activities should take place. **Therefore in most Natura 2000 sites, a wilderness approach will not be the most appropriate form**

*The **wilderness concept** calls for a segregated approach, which does not take into account the social, economic and ecological requirements of forests under Natura 2000, and therefore **contradicts the formulations of Article 2 of the Habitats Directive. The approach of segregating different forest functions does not fit into the culture of managing forests in Europe**.*

Confederation of European Forest Owners (CEPF) and European State Forest Association (EUSTAFOR) Joint Position Paper on Sustainable Forest Management and Natura 2000_Bruxelles 2012

Objectives

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"Coppice forests: past, present and future"
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Integrating conservation objectives into forest management: coppice management and forest habitats in Natura 2000 sites

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Most forest habitats, as defined and listed for their nature conservation importance in the Habitats Directive of the European Union and in the Bern Convention, result from centuries of human intervention. This paper explores the scope for, and the attitudes towards coppicing in Natura 2000 sites in some of the EU28 countries where coppice was historically one of the most important traditional silvicultural systems. A questionnaire survey was circulated to experts involved with Natura 2000 sites and case studies were conducted in Belgium, the Czech Republic, Estonia, Germany, Italy and the United Kingdom,

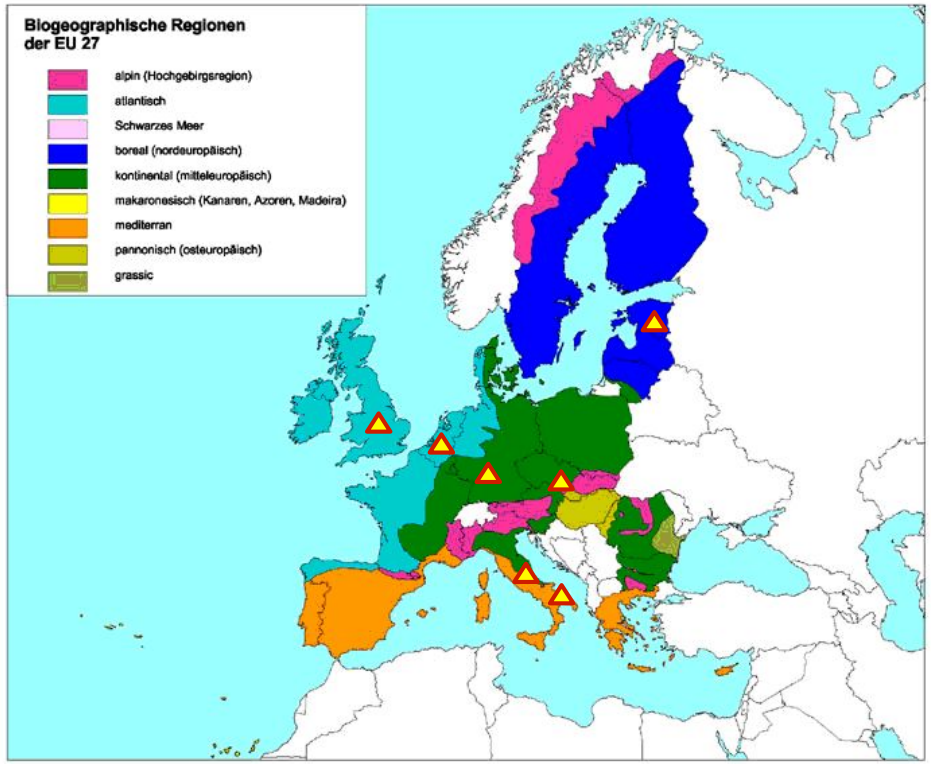
Objectives

- **Understand how coppices are dealt with in different EU28 countries and Natura 2000 SCIs/SACs;**
- **Identify the forest habitat types, among those listed in Annex I of the Habitats Directive, with the potential for coppice management (FHT_WPC) according to biological capacity (Del Tredici 2001), or which are or have been historically coppiced (FHT_C in each country);**
- **Verify the distribution and conservation status of the FHT_C across countries and Natura 2000 sites;**
- **Assess the extent to which the Habitats Directive was being implemented by SMPs, and the administrative level of responsibility for managing Natura 2000 sites**

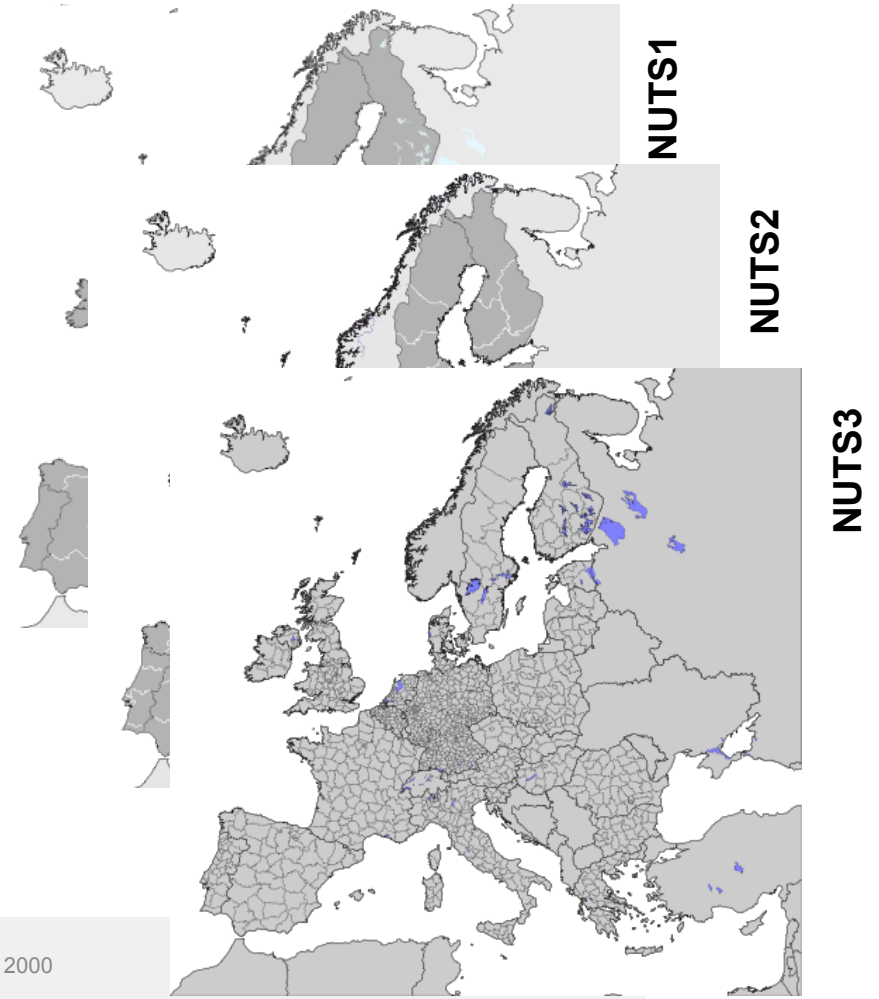
Methods

- Analysis of official documents and data
- Questionaire to regional or national administrations
- Case studies (sites and managment plans)

Study area

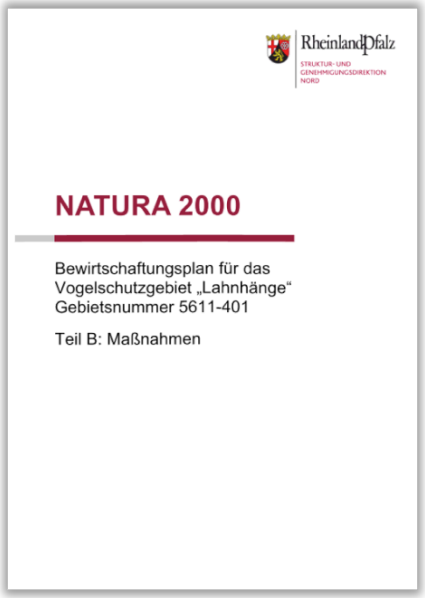


EE
UK
BE
DE
CZ
IT

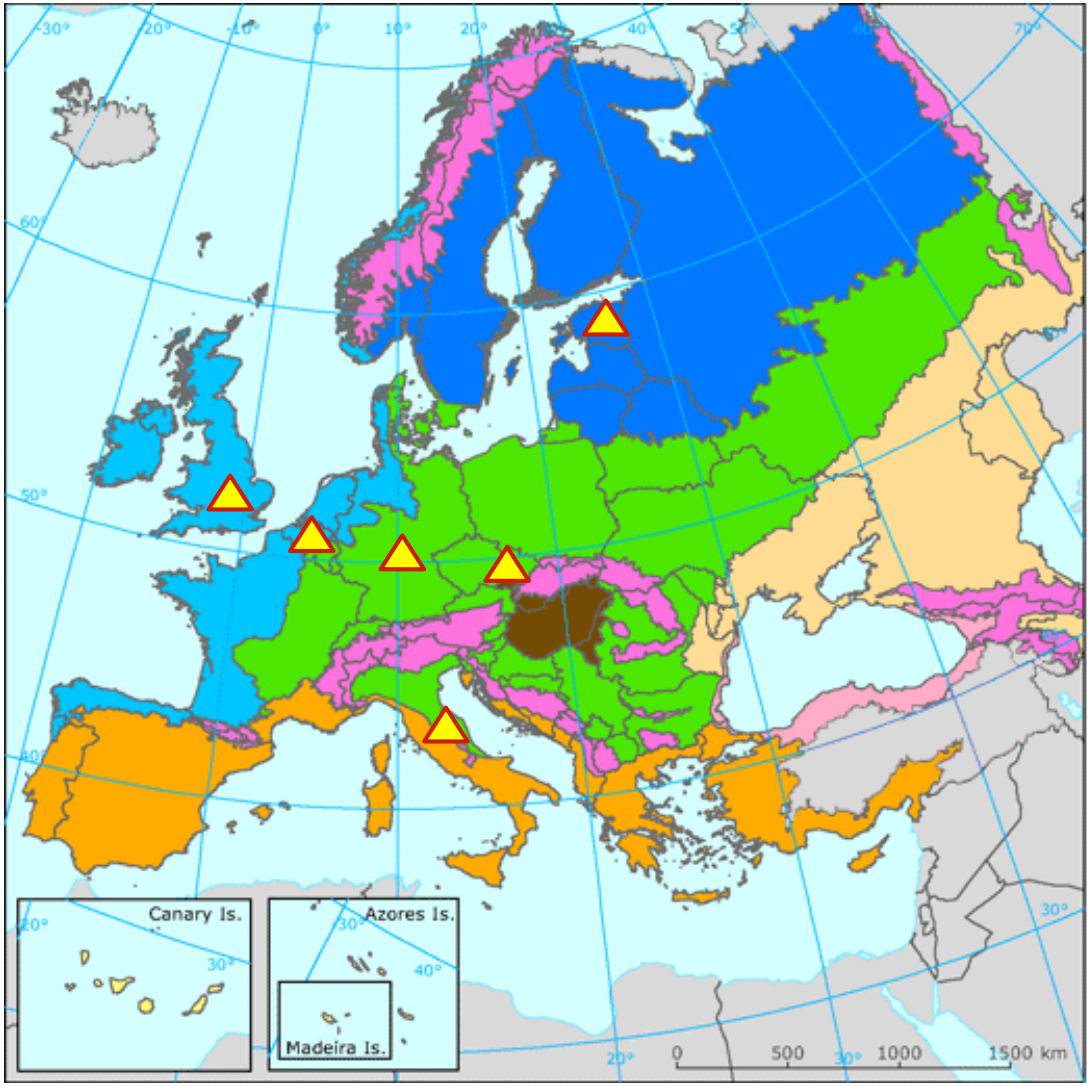


Methods

- Standardised data collection across selected countries (EU and national level) (official databases)
- Standardised questionnaire (15 open ended questions) across selected countries (EE, UK, DE, CZ) | NUTS (BE-1, IT-C1, IT-D4, IT-E2, IT-F4
- Standardised analysis of “Site Management plans” (SMP) prescribed by Habitat Directive for SCI/SAC N2k sites in EE, UK-J, UK-L, DE-B, IT-E2, IT-F4.



Results

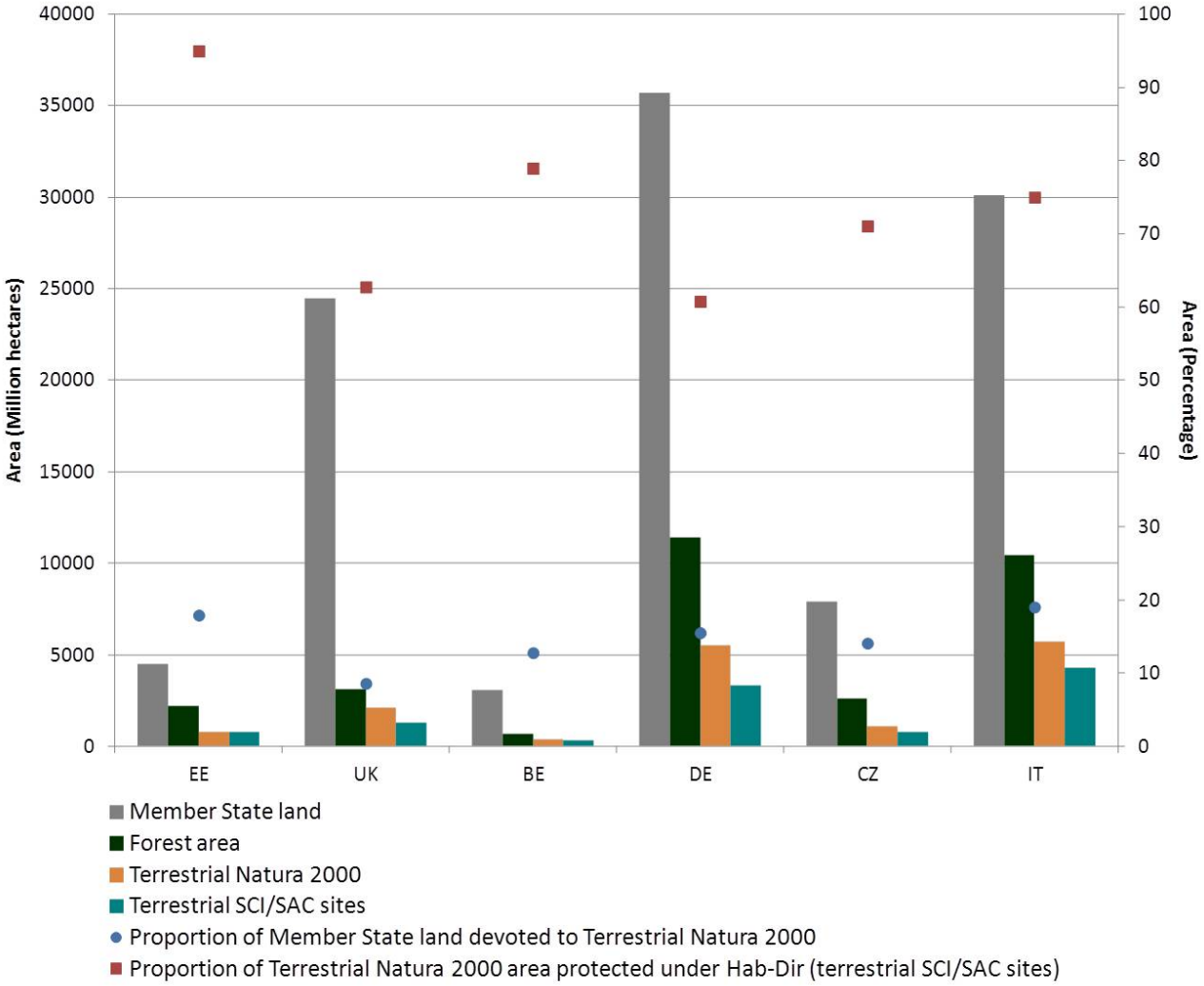


Biogeographic regions in Europe, 2011

- Alpine
- Atlantic
- Black Sea
- Boreal
- Continental
- Macaronesia
- Mediterranean
- Pannonian
- Steppic
- Outside data coverage

For BE, CZ, DE, EE, IT, UK:
Natura 2000 network covers
14,6% of terrestrial area.

Results


40000
35000
30000
25000
20000
15000
10000
5000
0
Area (Million hectares)
100
90
80
70
60
50
40
30
20
10
0
Area (Percentage)
EE
UK
BE
DE
CZ
IT
Member State land
Forest area
Terrestrial Natura 2000
Terrestrial SCI/SAC sites
Proportion of Member State land devoted to Terrestrial Natura 2000
Proportion of Terrestrial Natura 2000 area protected under Hab-Dir (terrestrial SCI/SAC sites)

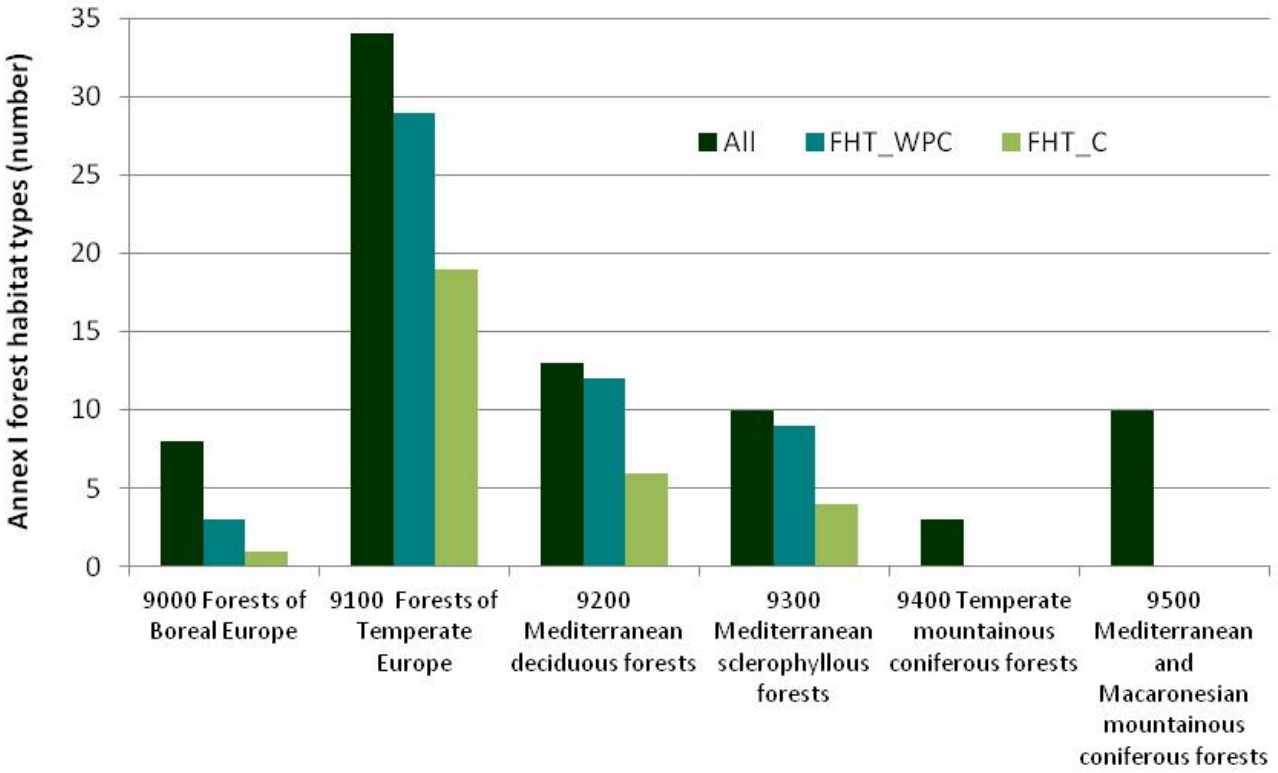
Results

Forests habitats with potential for coppice

53 / 78 (= 68 %)	Potential for coppice
55 %	9100 Forests of Temperate Europe
23 %	9200 Mediteranian deciduous forests
17 %	9300 Mediteranian sclerophyllous forests
6 %	9000 Forests of Boreal Europe

32 forest habitat types are present in the responding countires (= 60 %)
31 forests habitat types: coppicing was a common regeneration method

Results



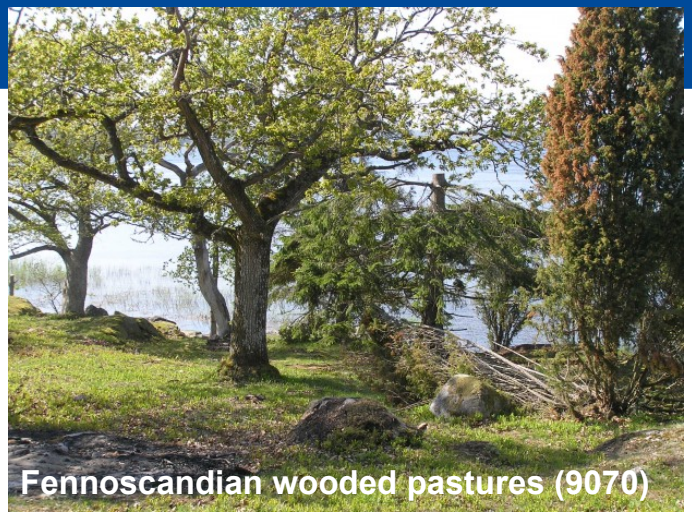
The majority of FHT belong to Forests of Temperate Europe; Mediterranean Deciduous and Sclerophyllous Forests, which mostly have good potential for coppice management

38% FHTs are/have been managed as coppices

20-50% SCIs/SACs surveyed contain habitat types that are associated with coppice management

(A) Habitat type code and name	(B) Presence	(C) Coppiced
9020* Fennoscandian hemiboreal natural old broadleaved deciduous forests (*Quercus, Tilia, Acer, Fraxinus or Ulmus*) rich in epiphytes	Yes	EE
9070 Fennoscandian wooded pastures	Yes	EE
9080 Fennoscandian deciduous swamp woods	Yes	EE
9110 *Luzulo-Fagetum* beech forests	Yes	IT,BE,CZ
9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)	Yes	BE,UK
9130 *Asperulo-Fagetum* beech forests	Yes	IT,BE,CZ,DE,UK
9140 MedioEuropean subalpine beech woods with Acer and *Rumex arifolius*	Yes	IT
9150 MedioEuropean limestone beech forests of the *Cephalanthero-Fagion*	Yes	IT,CZ
9160 SubAtlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*	Yes	IT,BE,CZ,DE,UK
9170 *Galio-Carpinetum* oakhornbeam forests	Yes	CZ,DE
9180* *Tilio-Acerion* forests of slopes, screes and ravines	Yes	IT,CZ,DE,UK
9190 Old acidophilous oak woods with *Quercus robur* on sandy plains	Yes	BE,DE,UK
91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Yes	UK
91B0 Thermophilous *Fraxinus angustifolia* woods	No	-
91C0 Caledonian forest	No	-
91D0* Bog woodland	Yes	UK
91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*	Yes	IT,BE,CZ,DE,UK
91F0 Riparian mixed forests of *Quercus robur, Ulmus laevis* and *Ulmus minor, Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)	Yes	IT,CZ,DE
91G0 Pannonic woods with *Quercus petraea* and *Carpinus betulus*	Yes	CZ,DE
91H0* Pannonian woods with *Quercus pubescens*	Yes	CZ
91I0 Euro-Siberian steppic woods with *Quercus* spp.	Yes	CZ
91K0 Illyrian *Fagus sylvatica* forests (*Aremonio-Fagion*)	Yes	IT
91L0 Illyrian oakhornbeam forests (*Erythronio-carpinion*)	Yes	IT
91M0 PannonianBalkanic turkey oak -sessile oak forests	Yes	IT
91N0 Pannonic inland sand dune thicket (*Junipero-Populetum albae*)	No	-
91Q0 Western Carpathian calcicolous *Pinus sylvestris* forests	No	-
91S0 Western Pontic beech forests	No	-
91V0 Dacian Beech forests (*Symphyto-Fagion*)	No	-
91W0 Moesian beech forests	No	-
91X0 Dobrogean beech forests	No	-
91Y0 Dacian oak and hornbeam forests	No	-
91Z0 Moesian silver lime woods	No	-
9210* Apeninne beech forests with *Taxus* and *Ilex*	Yes	IT
9220 Apennine beech forests with *Abies alba* and beech forests with *Abies nebrodensis*	Yes	IT
9230 GalicioPortuguese oak woods with *Quercus robur* and *Quercus pyrenaica*	No	-
9240 *Quercus faginea* and *Quercus canariensis* Iberian woods	No	-
9250 *Quercus trojana* woods	Yes	IT
9260 *Castanea sativa* woods	Yes	IT
9270 Hellenic beech forests with *Abies borisii-regis*	No	-
9280 *Quercus frainetto* woods	Yes	IT
92A0 *Salix alba* and *Populus alba* galleries	Yes	IT
92B0 Riparian formations on intermittent Mediterranean water courses with *Rhododendron ponticum, Salix* and others	No	-
92C0 *Platanus orientalis* and *Liquidambar orientalis* woods (*Platanion orientalis*)	No	-
92D0 Southern riparian galleries and thickets (*Nerio-Tamaricetea* and *Securinegion tinctoriae*)	No	-
9310 Aegean *Quercus brachyphylla* woods	No	-
9320 *Olea* and *Ceratonia* forests	No	-
9330 *Quercus suber* forests	No	-
9340 *Quercus ilex* and *Quercus rotundifolia* forests	Yes	IT
9350 *Quercus macrolepis* forests	Yes	IT
9360 Macaronesian laurel forests (*Laurus, Ocotea*)	No	-
9380 Forests of *Ilex aquifolium*	Yes	IT
9390 Scrub and low forest vegetation with *Quercus alnifolia*	Yes	-
93A0 Woodlands with *Quercus infectoria (Anagyro foetidae-Quercetum infectoriae)*	Yes	-

Results


Fennoscandian wooded pastures (9070)


Oak-hornbeam (9170)


Tilio-Acerion forests of slopes, screes and ravines (9180)

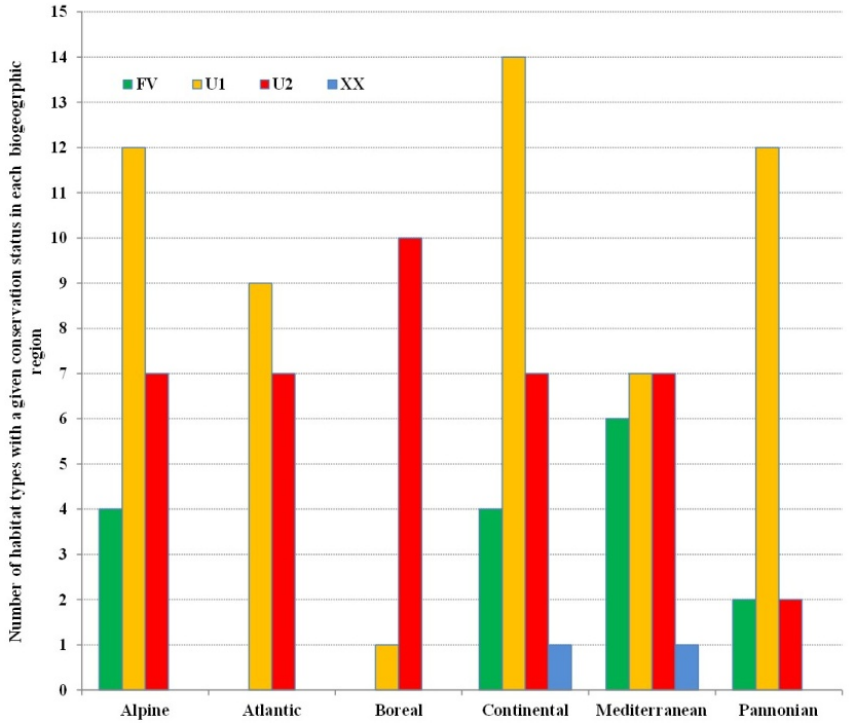

Macedonian oak (9250)


Upland oak forest (91A0)


Holm oak (9340)

Results

- Coppice is allowed by law in all countires
  CZ has to be autorised on a case-by-case basis under specific restrictions
- Conservation status: Majority is classified as „unfavourable or inadequate (U1) or unfavourable or bad (U2)
  (other e.g.: „favourable“, „unfavourable recovering“, „unfavourable declining“, „not assessed“, „unknown“)



Results

- Progress in formulating SMPs varied widely between the EU countries. Some countries have no SMPs so far, but some, like Slovenia, Sweden and Denmark, have completed nearly 90% of their network area. The average was well below 50%.
- SMPs in all countries surveyed took particular account of species listed in Annexes to Habitats Directive
- SMPs did not cite species which are favoured by active coppice managment and focused exclusively on Annex II species
- Active coppice managment was reported for most countires (none in EE, research in CZ)
- None intervention is the default management strategy for protected areas.
- No special management prescriptions for coppice in SMPs for BE, CZ, DE and UK – but in some IT regions.
- Coppice restoration (e.g., oak, oak-hornbeam) is reported in UK , DE, CZ for coppice specialists (e.g., insects, birds, small mammals)

- Special prescriptions for coppices (e.g., coupe size, rotation lenght, standard's density , sporadic tree species), are only reported for IT SMPs
- Rare non Annex II species requiring coppice woodland structure are seldom considered (e.g., DE, hazel grouse *Bonasa bonasia*, IT-C1,
- Site management plans are descriptive, not detailed prescriptions, no schedule

Results

Proportions of SMPs mentioned coppice or former coppicing/pollarding:

100 % / 86 % in IT-E2 Umbria
43 % / 94 % in IT-4 Puglia
14 % / 31 % in UK-L Wales
16 % / 44 % in UK-J South East England
10 % / 80 % in DE-B Rhineland-Palatinate
9 % / 2 % in EE

Species benefit from coppice

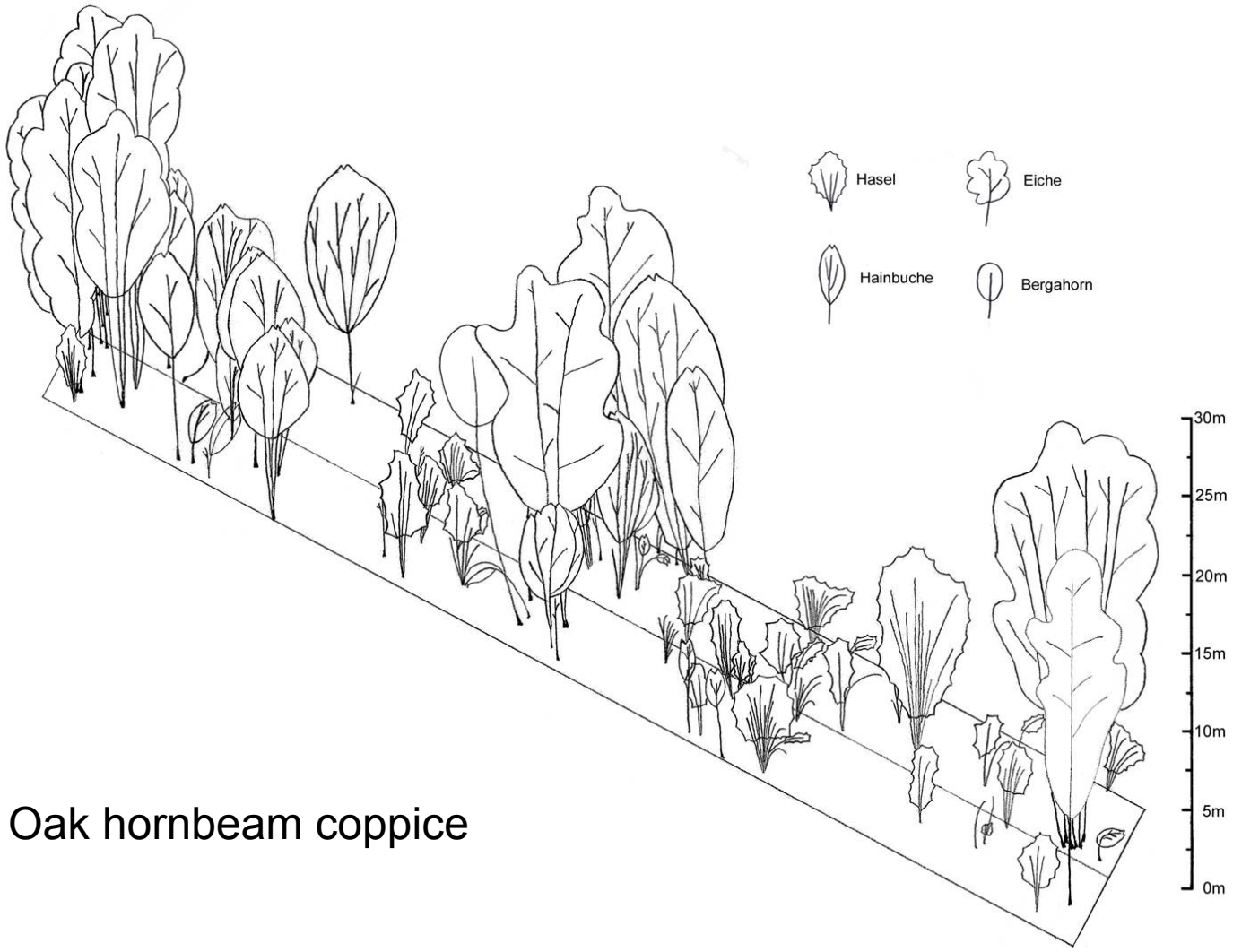
- Coppice related species

- Hazel grouse (*Bonasia bonasia*)
- Hazel mouse (*Muscardinus avellanarius*)
- Euphydryus maturna
- Eriogaster catax

Tab. 4: Bindungen einiger Tierartengruppen an Niederwald.

Artengruppe	Reaktion auf Niederwald	Quelle
Spinnen (Arachnidea)	rund ein Drittel mehr Spinnenarten gegenüber dem Hochwald	HERMANN-PIR in LANUV 2007
Hundertfüßer (Chilopoda)	besonders zahlreich in den jungen Niederwaldstadien	DÜSSEL-SIEBERT in LANUV 2007
Tausendfüßer (Diplopoda)	kommen eher in den älteren Stadien vor	DÜSSEL-SIEBERT in LANUV 2007
Asseln (Isopoda)	nur wenige bis kein Vorkommen	DÜSSEL-SIEBERT, in LANUV 2007
Käfer (Coleoptera)	reiches Vorkommen, in jungen Stadien vermehrt Laufkäfer, Zusammensetzung aus Wald- und Offenlandarten, auch zahlreiche Bockkäfer	KOLBE 1968; HOCHHARDT 1996; ROSSMANN 1996; FUHRMANN in LANUV 2007
Ameisen (Formicidea)	reiches Vorkommen, u. a. Rote Waldameise	GOEBEL 1988; FINK 1982
Hautflügler (Hymenoptera)	überdurchschnittliches Artenreichtum, u. a. Erdhummel, Holzbienen, Hornissen	EMEIS 1967; FINK 1982; FUHRMANN in LANUV 2007
Schmetterlinge (Lepidoptera)	hohes Artenreichtum, viele Rote-Liste-Arten, Schmetterlinge besiedeln zahlreiche Nischen, viele Arten der Nachtschmetterlinge	HACKER 1983; FREUNDT und PAUSCHERT 1992; TWADELLA und FASEL in LANUV 2007; REIF und HACKER 1991
Vögel (Aves)	Baumpieper in frühen Stadien, Gartengrasmücke in Sukzessionsstadien, dann Mönchsgrasmücke und Goldammer, später Blau- und Kohlmeise, in hiebsreifen Beständen Waldlaubsänger	BLANKENSTEIN in LANUV 2007; HOCHHARDT 1996
Fledermäuse (Microchiroptera)	viele Fledermausarten vorhanden, z. B. Zwergfledermaus, Wasserfledermaus, Braunes Langohr	FREDE in LANUV 2007
weitere Säugetiere (Mammalia)	zahlreiche Säuger profitieren, darunter einige Rote-Liste-Arten wie die Haselmaus, Mauswiesel, Feldhase, Iltis	FREDE in LANUV 2007

Results



Oak hornbeam coppice

Thank you!

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Results

Species benefit from coppice

- Tabell, Artengruppem, die profitieren