

Science based nature conservation in Europe

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Lessons from the Habitats Directive

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Biological Diversity



- Background – why a habitats directive?
- Drafting the directive
- Which species & habitats ?
- Need for standards & clear guidance
- Adapting to change
- Communication
- Conclusions



Why a habitats directive?

* * *

A response to

- Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)
- Well documented loss of biodiversity in Europe



Biodiversity loss in Europe

e.g. most of Europe's mires have been lost



Continent	Original mire area ($\times 1,000 \text{ km}^2$)	Present mire area ($\times 1,000 \text{ km}^2$)	Present/ former Mire area (%)	Loss of mire area (%)
Europe	495	187	38	62
Asia	1,070	980	92	8
Africa	10	5	50	50
North America	1,415	1,350	95	5
South America	25	20	80	20

>90% of mires lost in Ireland & United Kingdom





The Habitat Directive implements the Berne Convention across the European Union

- First draft 1988
- Adopted 1992
- Directive includes both protected areas & species protection



The Habitats Directive

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- Contains several terms which are not defined
e.g. 'Typical species'
- Some definitions which are difficult to use
e.g. 'Favourable Conservation Status'



Selection of species for Annexes II, IV & V

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- Based on the Annexes of the Bern Convention
- But also subject to discussion & negotiation
- Additional species added due to EU enlargement

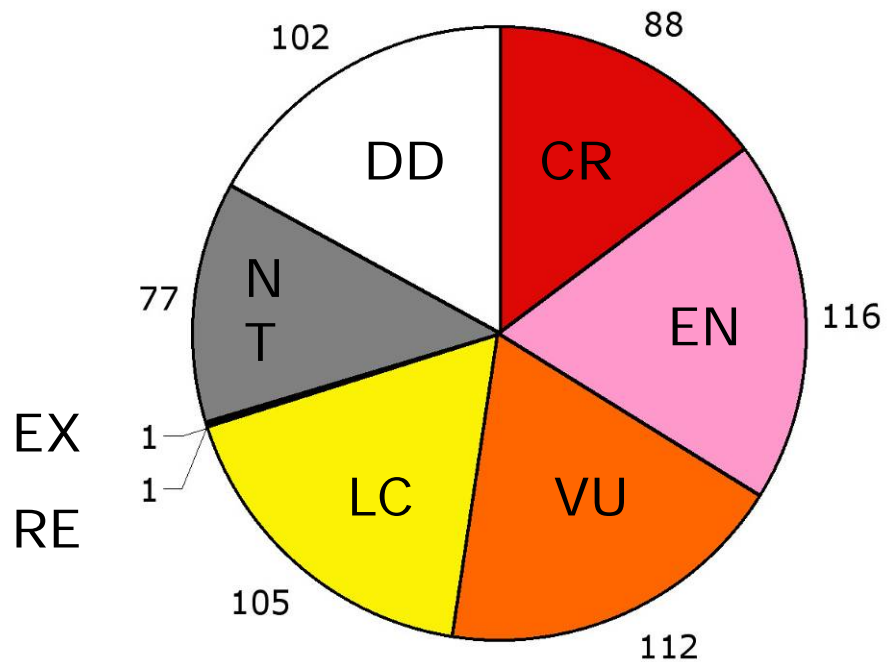


Were the correct species chosen ?

- 9 species of dragonfly listed as 'Critically Rare' or 'Endangered' on the EU27 Redlist but none of these species are listed on the annexes of the Habitats Directive
- 11 butterfly species listed as CR or EN on the EU27 Redlist but only 4 listed on the annexes of the Habitats Directive



Were the correct species chosen ?



603 taxa of vascular plants listed on Annexes II, IV & V

64 plant taxa listed on the annexes are considered 'Not threatened' in EU27 Redlist of vascular plants (in press)



Correct annex ?

- *Crocidura canariensis* listed on Annex IV
- Considered 'EN' by IUCN
- According to 'Atlas y libro rojo de los mamíferos terrestres de España' habitat loss is a major threat
- Annex II also appropriate ?



Selection of Habitats for Annex I

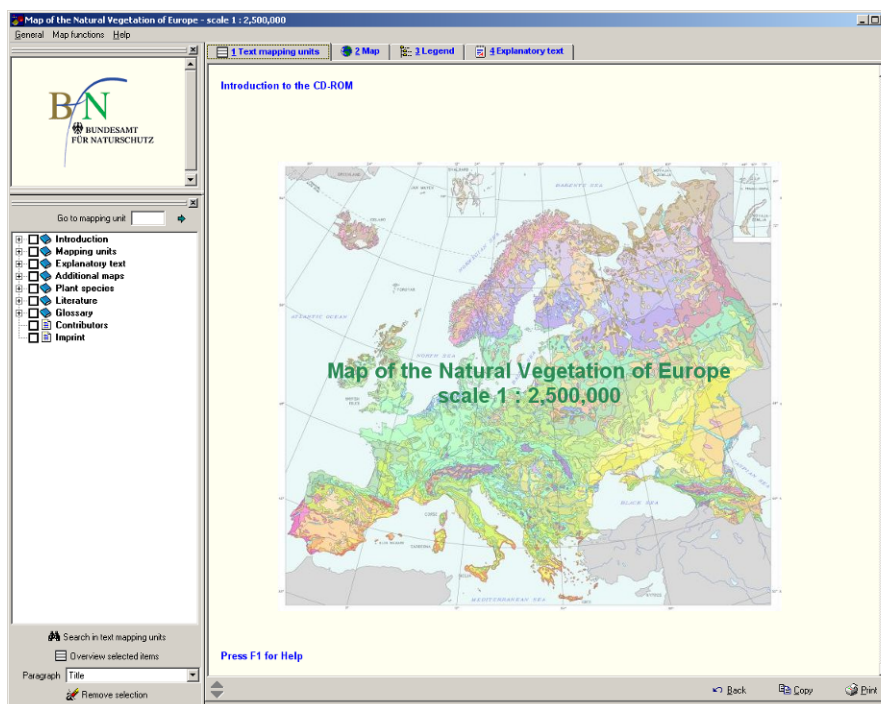
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- Initial list based on expert judgement - little data available
- First draft in 1988 based on CORINE Biotopes typology
- Clear that some countries had more influence than others



No European Redlist for habitats or plant communities

Potential Natural Vegetation of Europe (Bohn et al 2000-2003) has 36 mapping units with an area 100km² or less



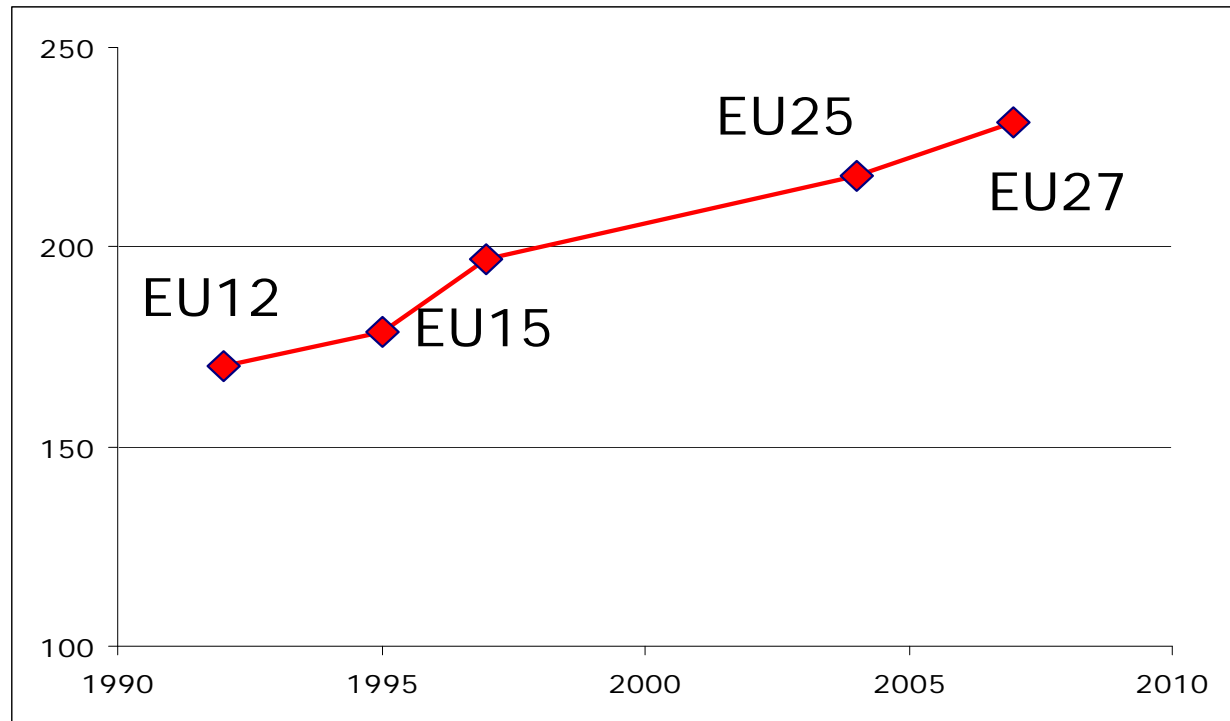
27 occur in the EU

Only 2 cannot be easily assigned to an Annex I habitat



The Annexes have been extended due to EU enlargement

N° of Annex I habitats



Possible to add species & habitats but not to delete



Some taxa listed on the annexes cause problems

1988 draft listed the moth
Callimorpha quadripunctaria rhodensis -
a subspecies endemic to the island of
Rhodes

But listed as *Callimorpha quadripunctaria*
on Annex II with 'priority' status when
adopted in 1992



- *Callimorpha quadripunctaria* is a widespread species and not endangered



- Such errors undermine the credibility of the directive
- Correcting the name can only be done by the Council of Ministers



Euphrasia mendoncae Samp. (Annex V)

Described based on specimens collected from a single locality in Portugal in 1932 but the taxa has never been found again despite extensive survey



Now considered part of *E. minima* Jacq. ex DC



www.gbif.org

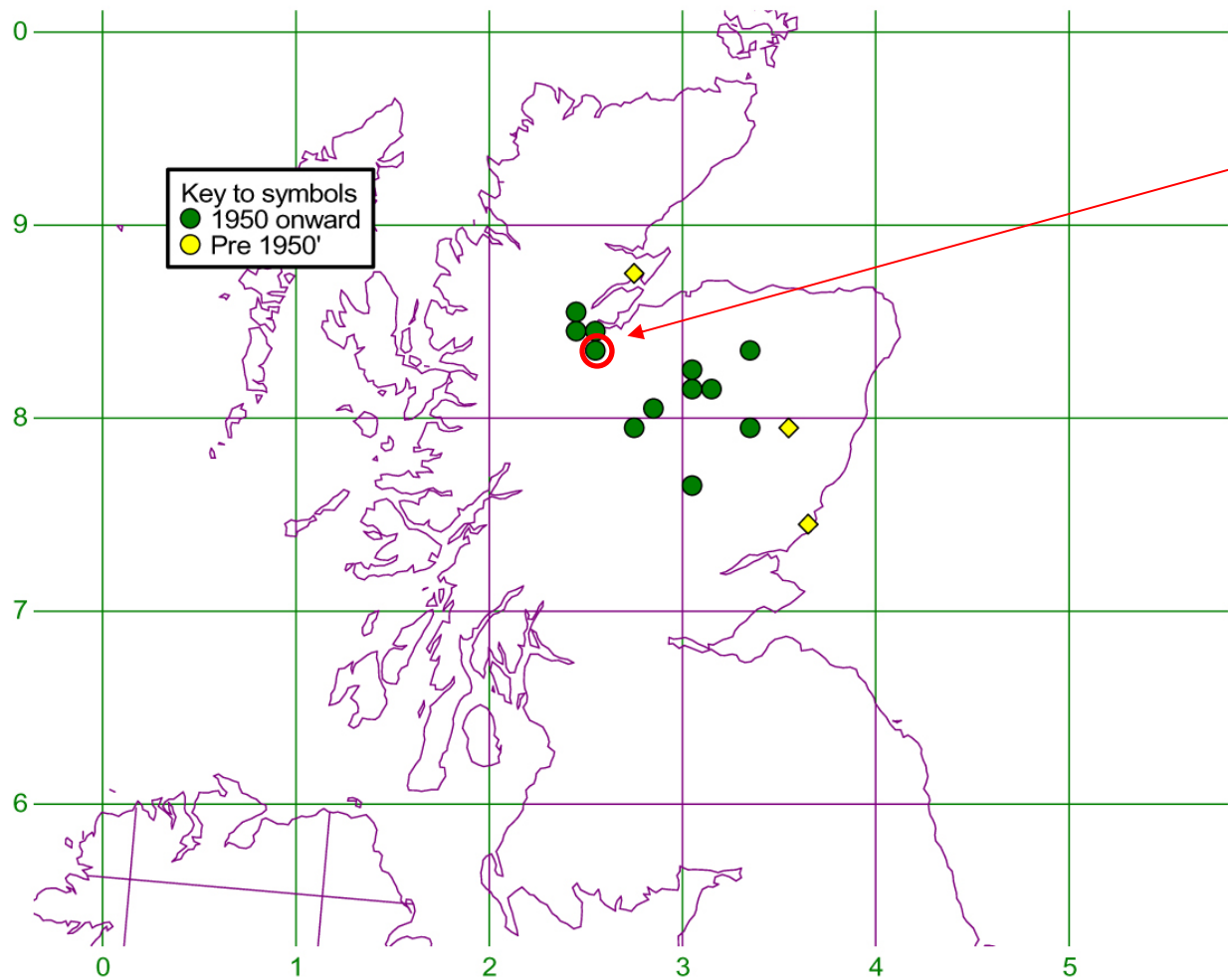


- Our knowledge of many of these species and habitats has increased since 1992 but difficult to amend the annexes either to take into account changes or to correct errors
- Some national legislation allows for regular review of lists of protected species (e.g. UK Wildlife & Countryside Act)
- In theory possible under the Habitats Directive (Article 19) but difficult



Many species (especially invertebrates & bryophytes) remain poorly known causing problems for site selection, site management & reporting.





Distribution of *Buxbaumia viridis* in the United Kingdom (Plantlife 2008)



SPECIES ACCOUNT FOR *ANISUS VORTICULUS* (TROSCHEL, 1834) (GASTROPODA: PLANORBIDAE), A SPECIES LISTED IN ANNEXES II AND IV OF THE HABITATS DIRECTIVE

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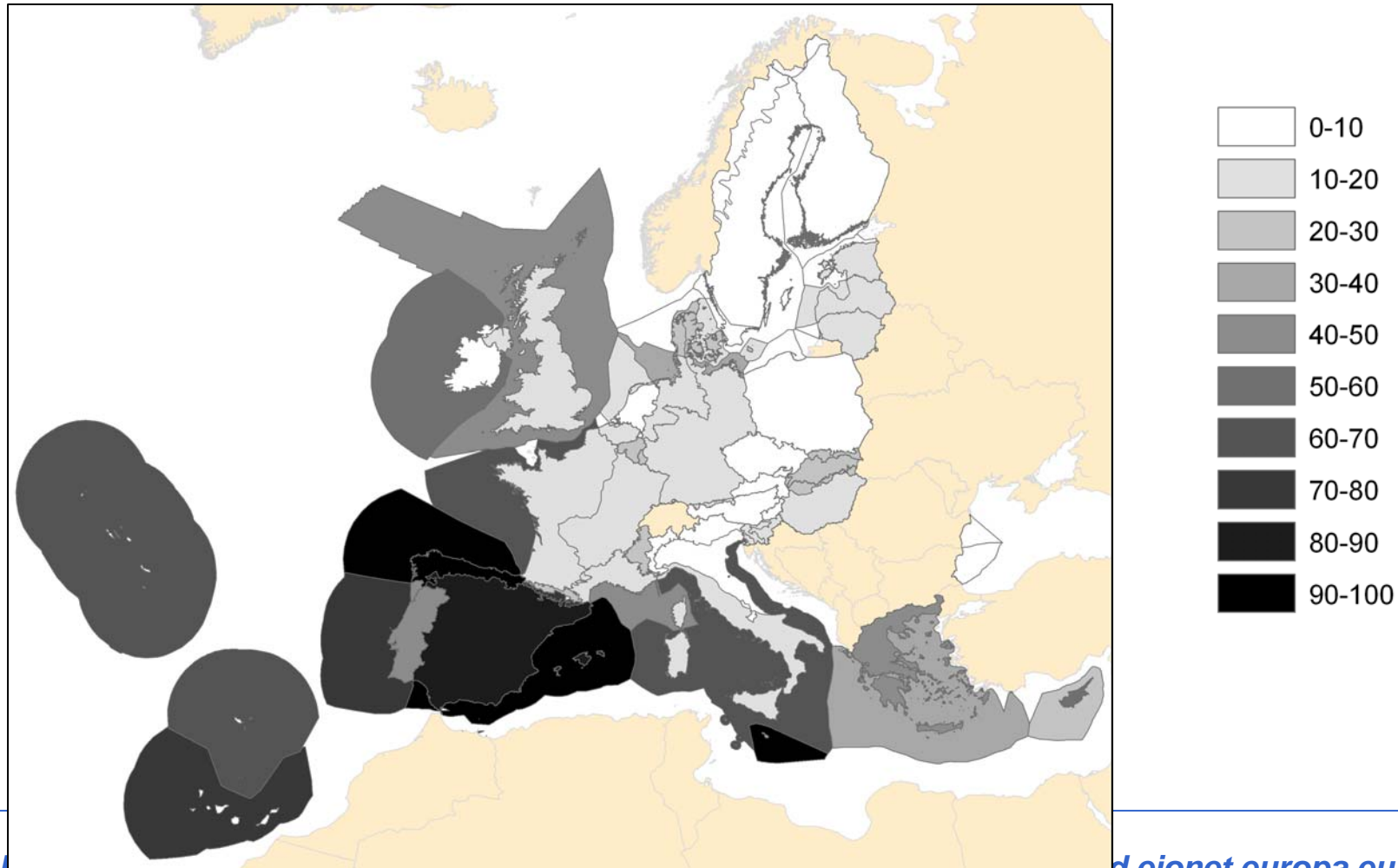
Abstract Information from more than hundred published sources, augmented by previously unpublished expert knowledge, is compiled to build up a species account for the Western Palearctic planorbid gastropod *Anisus vorticulus* (Troschel, 1834),

threatened at about the spe and threats, t habitats (lake ated with cal normally an s To date, cons general inform tion recomme

Key words

“Although more than hundred sources were used to compile the present account, the autecology of *Anisus vorticulus* (like the vast majority of threatened European gastropods) is insufficiently well known to allow for authoritative statements to be made on how to manage the species and its habitat to maintain healthy populations.”

Percentage of MS assessments reported as 'Unknown' for the 2001-2006 Article 17 report



Need for common standards

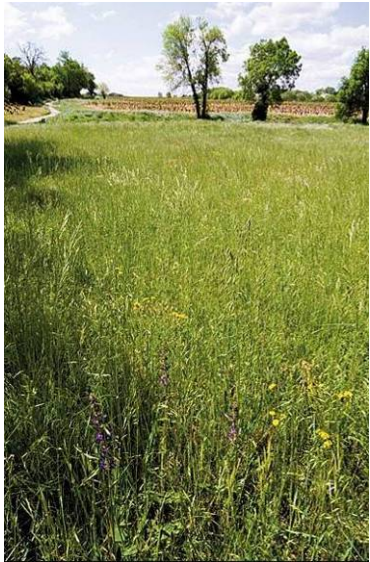
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Although subsidiarity is important there is still a need for a common understanding & compatible data



6510 Lowland hay meadows

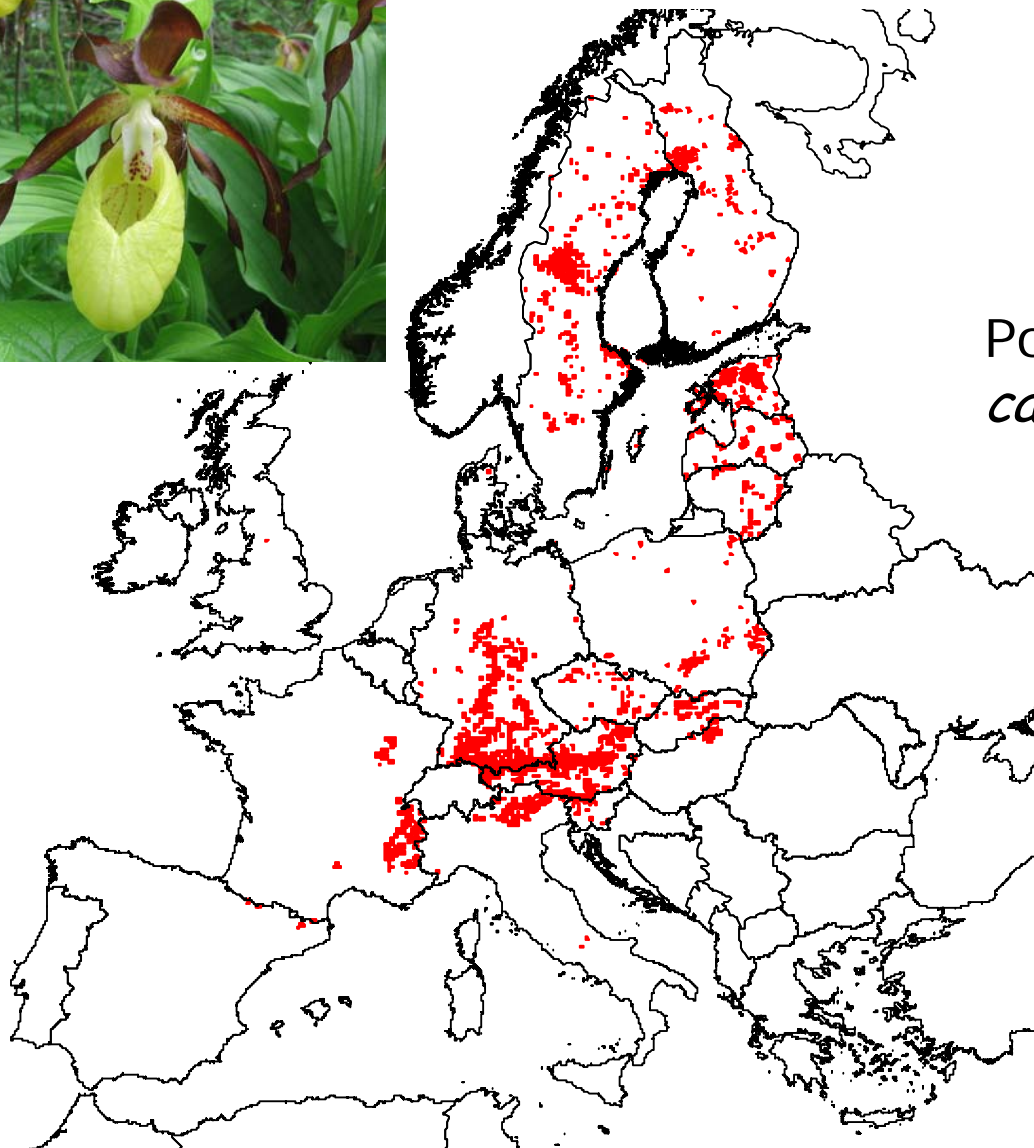
Interpretation Manual refers to 2 alliances - *Arrhenatherion* & *Brachypodio-Centaureion nemoralis*



Alliance	AT	DE	FR	IT	NL	UK
<i>Arrhenatherion elatioris</i>	✓	✓	✓	✓		
<i>Brachypodio-Centaureion nemoralis</i>		✓	✓			
<i>Cynosurion cristati</i>						part
<i>Alopecurion pratensis</i>					✓	
<i>Plantaginion cupanii</i>				✓		
<i>Ranunculion velutini</i>				✓		

Portugal - only *Arrhenatherion*, most haymeadows are *Cynosurion* and therefore not included in 6510





Varied population units

Population of *Cypripedium calceolus* reported as –
individuals
flowers
localities
shoots
tuffs
X (unit not given)

Cypripedium calceolus



Annex I temperate forest habitats - Atlantic region



Code	BE	DE	DK	ES	FR	IE	NL	PT	UK
9110	XX	U1	FV		U1		U1		
9120	U2	XX	FV	XX	U2	Ž	U1		U2
9130	U1	U1	FV		U1				U2
9150	U2	U2		XX	U1				
9160	U1	U1	FV	XX	U1		U2	U1	U2
9170		U2							
9180	XX				U2				U2
9190	U2	U1	FV		U1		U1		U2
91A0					U1	U2			U2
91C0									U2
91D0	U2	U2	XX		U2	U1	U1		U2
91E0	U2	U1	FV	XX	U2	U2	U1	FV	U2
91F0	U2	U2			U2		U2		
91J0						U2			U2
91T0	U2								
	BE	DE	DK	ES	FR	IE	NL	PT	UK
% FV	0	0	86	0	0	0	0	50	0

‘Favourable’ in Denmark due to criteria used to assess ‘Structure & function’



Revised guidelines & reporting format now available

**Assessment and reporting under Article 17
of the Habitats Directive**

**Explanatory Notes & Guidelines
for the period 2007-2012**

Final Draft

July 2011

Compiled by Douglas Evans and Marita Arvela
European Topic Centre on Biological Diversity

Based on work by a small
expert group & consultation
with the countries

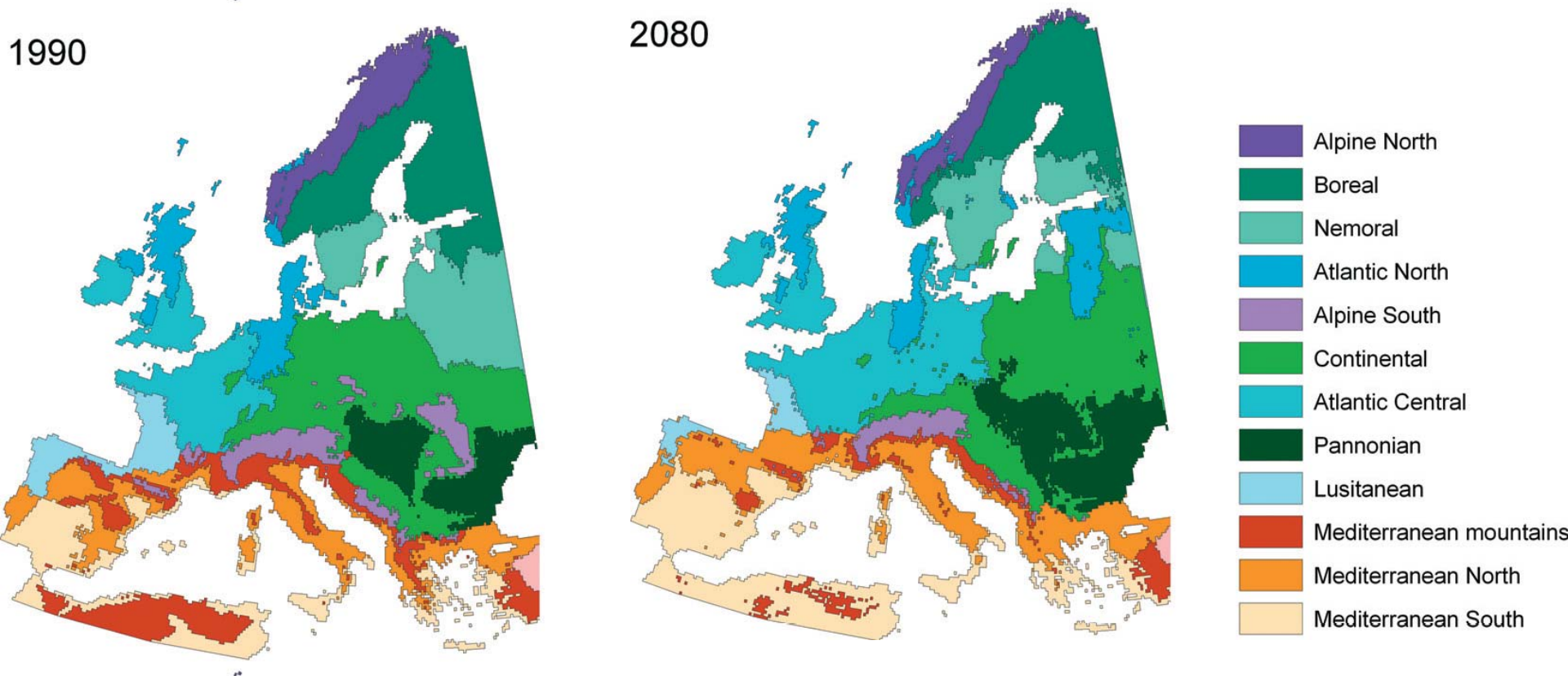


Adapting to change

- Nature is dynamic
- Major changes forecast due to changing climate & landuse



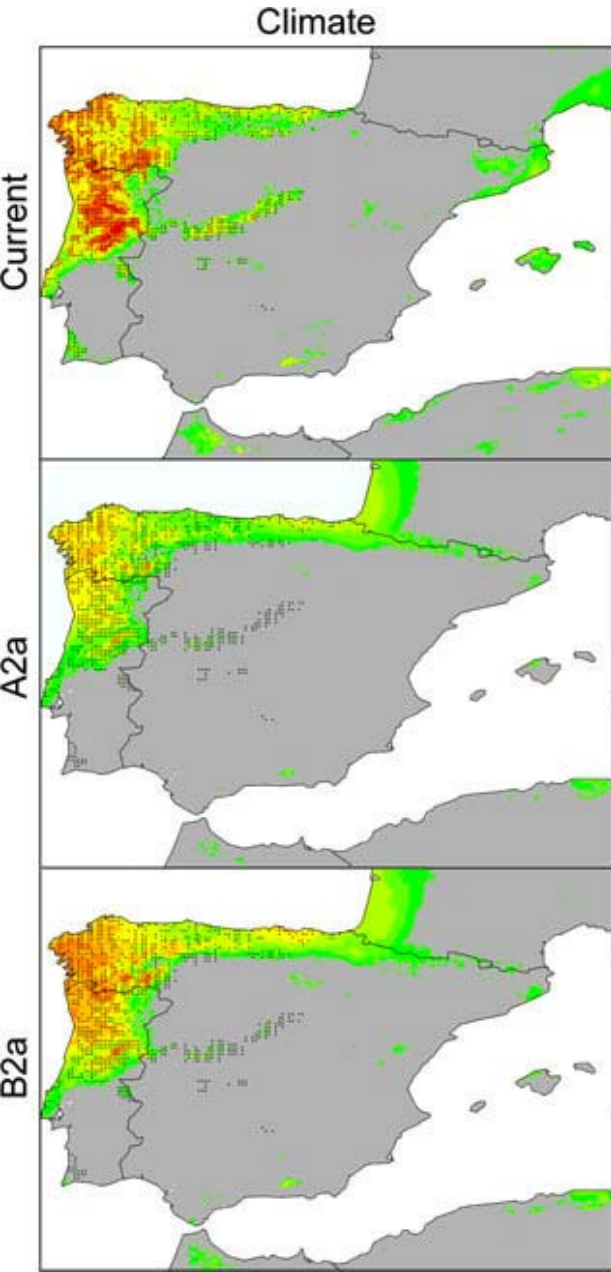
Regional scale changes



Metzger *et al* 2008. Projected environmental shifts under climate change: European trends and regional impacts. *Environmental Conservation* 35 (1) 64-75.

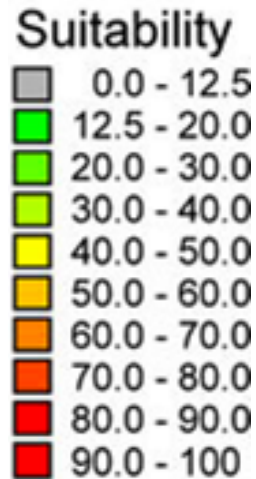


Changes in species distribution



Potential distribution of the lizard *Lacerta schreiberi* under current environmental conditions and projections for 2080

(Rödder & Schulte 2010)



Communication - too much misunderstanding

Journal of Environmental Planning and Management
2011, 1–19, iFirst article



The governance of Natura 2000 sites: the importance of initial choices in the organisation of planning processes

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(Received 24 February 2010; final version received 29 November 2010)

The management of Natura 2000 sites requires that planning authorities need to achieve

Involvement of all concerned is crucial

balance these objectives with social and economic interests. A study of two cases, one in England and one in the Netherlands, shows that the initial choices about the organisation of a deliberative planning process can create a solid basis



Much Commission guidance is only available in English



Limited value to many site managers



Some conclusions

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- Biodiversity legislation needs to be clear to lawyers, scientists & all involved in its implementation
- Good information on species & habitats is essential (but sometimes we can't wait for research)
- Flexibility is needed in lists of species & habitats to be protected
- Common standards & understanding required
- Information needs to be available





THANK YOU

