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European Topic Centre on
Biological Diversity

Technical paper 2/2014

Article 17 Reporting – Habitats Directive: Guidelines for assessing conservation status of habitats and species at the biogeographical level (2007-2012)

This document gives guidance to help make the assessments of Conservation Status for biogeographical and marine regions of the European Union, including background material.

If you have any problem, please contact Doug Evans (evans@mnhn.fr). If necessary this document will be revised or a 'Frequently Asked Questions' posted on the EIONET forum at: http://forum.eionet.europa.eu/etc-bd-consortium/library/etc-bd-20014-2018/etc-bd-2014-agreement/shared-documents-article-17-work/index_html

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Terminology used in this document

EU Regional assessment – assessment of Conservation Status for a biogeographical or marine region for the EU

Evaluation matrix – Matrices used for evaluating Conservation Status of habitats and species, see Appendix 1

Parameter – Range, Future prospects (both habitats & species) Area Structure & Functions (habitats) Population, Suitable habitat (species)

Qualifier – indicates direction of change of either a parameter or overall assessment

Target 1 matrix – Matrix used to assess if an assessment of Conservation Status can be considered as a contribution towards target 1 of the EU 2020 Biodiversity Strategy (see table 11)

Trend – direction of change of a numerical value such as area or population trend

1 INTRODUCTION

Member states report on the conservation status of all habitats and species listed in the annexes of the Habitats Directive using an agreed methodology as described in the Explanatory Notes & Guidelines (Evans & Arvela 2011)[1]. Based on the Member State assessments the ETC/BD produced assessments for each biogeographical or marine region for the 2001-2006 report which were used for the European Commission's Composite Report (EC 2008) and other publications and the EEA and the ETC/BD will produce similar assessments for the 2007-2012 reporting cycle using the methodology used previously. A web tool has been developed to help the regional assessments[2]

Where a habitat or species is only present in one Member State for a given region or where or all Member States reported the same assessment (e.g. all 'Unfavourable-bad') the EU regional assessment will be the same as the national assessment. This was the case for approximately half of the assessments for 2001-2006 and, it is assumed that the situation will be similar for 2007-2012. The ETC/BD developed a series of three methods for producing regional assessments for other cases.

This document explains the methods used and is based on an earlier document produced for the last reporting round, updated where appropriate, in particular to include consideration of changes between the two reporting periods and the need to measure progress to Target 1 of the EU 2020 biodiversity strategy. Sections 1 to 11 describe the methods to be used, using examples taken from both reporting rounds. Appendix 2 summarises the methodologies as flow charts and is intended to be used as a form of recipe book or *aide memoire*.

Each assessment requires the following:

- Assessment of Conservation Status for each region in which the habitat/species occurs (FV, U1, U2, XX). The method used should be recorded for each parameter and for current Conservation Status.
- If current Conservation Status is unfavourable (U1 or U2) it should be qualified to indicate if improving, deteriorating, stable or unknown (+, -, =, x)
- The possible contribution to Target 1 of the EU 2020 Biodiversity Strategy should be indicated
- The trend of possible contribution should be indicated (+, -, =, x)
- The nature of any change between the two reporting rounds should be examined and an indication given that the change is or isn't 'genuine' (yes, no, no change)
- An Audit trail should be completed for each region noted which methods have been used & (if necessary) explaining the choice
- A Data sheet should be completed for each habitat/species for each region in which it occurs together with a summary for the European Union.

It is not always necessary to complete all the fields of the 'EU Biogeographical assessment and proposed corrections', for example assessments of individual parameters should not be completed if Method 3 is used, further details below.

[1] Evans & Arvela (2012) Assessment and reporting under Article 17 of the Habitats Directive Explanatory Notes & Guidelines for the period 2007-2012 https://circabc.europa.eu/w/browse/0de47902-0a08-41dd-943c-520066a3c529

[2] http://bd.eionet.europa.eu/article17/reports2012/ - Species data summaries for species and Habitat data summaries for habitats.

Bulgaria and Romania joined the EU in 2007 and did not participate in the last reporting round, all habitats and species are considered to be 'unknown' for 2001-2006 in these countries for all the regions in which they occur. Greece has not reported for the period 2007-2012; it is assumed that the assessments for 2001-2006 are also valid for the period 2007-2012.

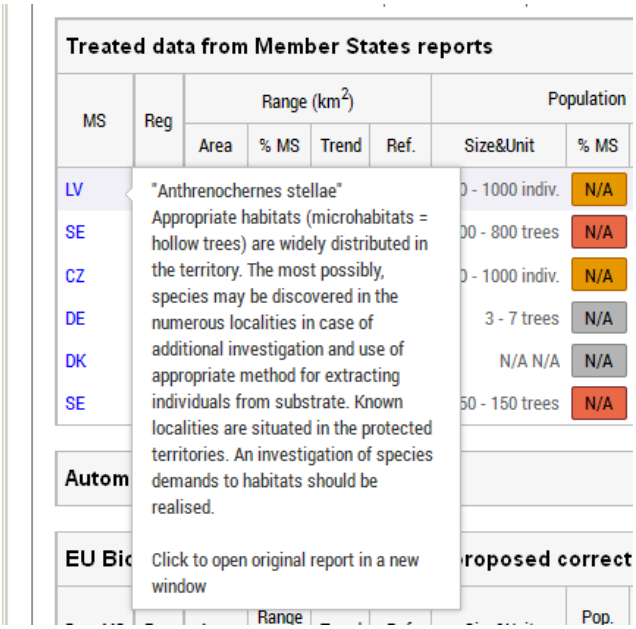
2 ASSESSING CONSERVATION STATUS

It is strongly recommended that, before starting any assessment, that the assessor spends some time examining the data provided by the Member States, using the 'mouse over' function to see if there is additional information which will be useful, for example placing the mouse over the country codes will show any information given as 'Other relevant information' (fields 2.7.5 (habitats) & 2.8.2 (species)) as shown in figure 1a. It is particularly important to see if additional population data has been given in units other than the approved unit(s), see figure 1b.

Although the assessment tool will give access to the data from the earlier reporting period (2001-2006) it is recommended that you use the old tool to access the earlier assessments[3] as this will also give access to the data sheets and audit trails and maps from that period.

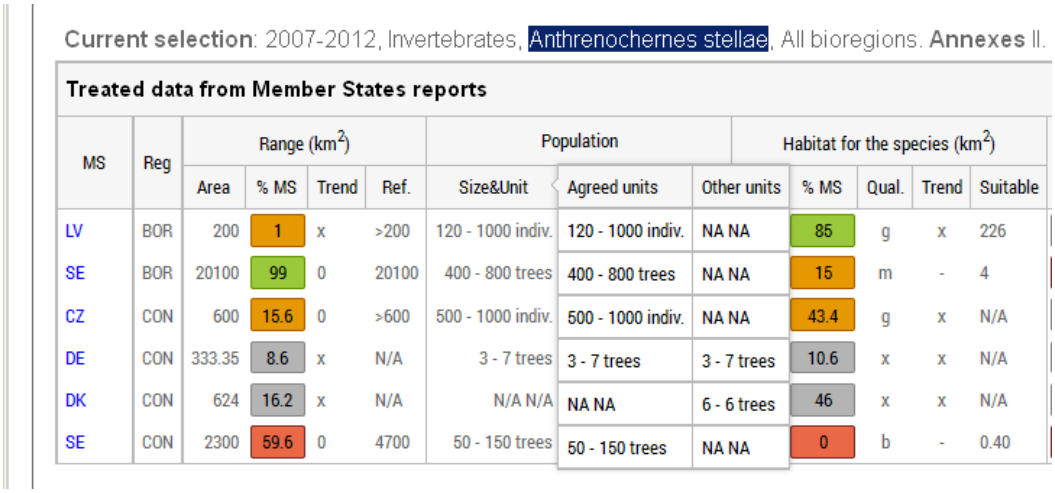
Figure 1 Additional information available using the 'mouse over' function for *Anthrenochernes stellae* (all regions)

a) by hovering the mouse over the country code.



[3] http://bd.eionet.europa.eu/activities/Reporting/Article_17/Reports_2007

b) By hovering the mouse over the column heading 'Size & Unit'



Current selection: 2007-2012, Invertebrates, Anthrenochernes stellae, All bioregions. **Annexes** II.

Treated data from Member States reports

MS	Reg	Range (km²)				Population			Habitat for the species (km²)			
		Area	% MS	Trend	Ref.	Size&Unit	Agreed units	Other units	% MS	Qual.	Trend	Suitable
LV	BOR	200	1	x	>200	120 - 1000 indiv.	120 - 1000 indiv.	NA NA	85	g	x	226
SE	BOR	20100	99	0	20100	400 - 800 trees	400 - 800 trees	NA NA	15	m	-	4
CZ	CON	600	15.6	0	>600	500 - 1000 indiv.	500 - 1000 indiv.	NA NA	43.4	g	x	N/A
DE	CON	333.35	8.6	x	N/A	3 - 7 trees	3 - 7 trees	3 - 7 trees	10.6	x	x	N/A
DK	CON	624	16.2	x	N/A	N/A N/A	NA NA	6 - 6 trees	46	x	x	N/A
SE	CON	2300	59.6	0	4700	50 - 150 trees	50 - 150 trees	NA NA	0	b	-	0.40

Assessments should be recorded using the section 'EU Biogeographical assessment and proposed corrections' of assessment tool (bottom of the screen), information is saved by clicking the 'Add assessment' button and can be edited by clicking on the name of the assessor at the right of the section. Further information on the tool and its functions is given in section 9.

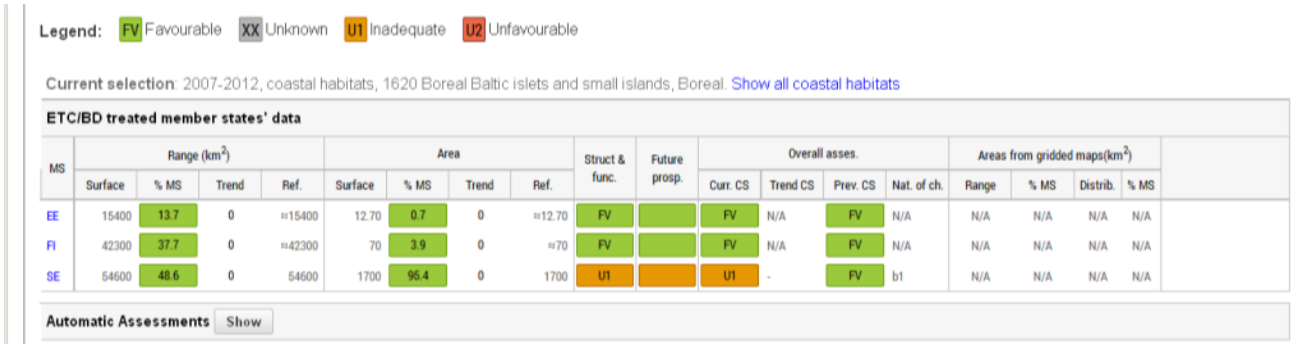
Where there is only one national report for a region, the EU regional assessment should be the same and the method reported as '**00**'. However the report should be checked to see if the national assessment is credible. For example, in 2001-2006 some species considered 'Critically endangered' by IUCN and/or national authorities were reported as 'Favourable'. In such cases the Member State report should not be revised but the assessor may wish to make an alternative assessment for the EU. Where this is done, the method and any supplementary data used must be recorded in the 'Audit trail' (see section 8).

If this method is used, all of the fields in the line 'Add assessment' should be completed whenever possible.

In some cases, all the Member States within a region may have reported the same conclusion for a parameter. Here, this conclusion will also be the EU conclusion for the parameter and this should be recorded as method '**0**'. For example, both range and area were reported as 'Favourable' for habitat '1620 Boreal Baltic islets and small islands' by all 3 countries in which this habit occurs in the Boreal biogeographical region and so both these parameters will be 'Favourable' for the EU regional assessment (see figure 2).

If this method is used, the fields in the line 'Add assessment' should be completed whenever possible.

Figure 2 Member State assessments for habitat '1620 Boreal Baltic islets and small islands' for the Boreal biogeographical region.



Legend: FV Favourable XX Unknown U1 Inadequate U2 Unfavourable

Current selection: 2007-2012, coastal habitats, 1620 Boreal Baltic islets and small islands, Boreal. Show all coastal habitats

ETC/BD treated member states' data

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.				Areas from gridded maps(km²)			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Trend CS	Prev. CS	Nat. of ch.	Range	% MS	Distrib.	% MS
EE	15400	13.7	0	≈15400	12.70	0.7	0	≈12.70	FV		FV	N/A	FV	N/A	N/A	N/A	N/A	N/A
FI	42300	37.7	0	≈42300	70	3.9	0	≈70	FV		FV	N/A	FV	N/A	N/A	N/A	N/A	N/A
SE	54600	48.6	0	54600	1700	95.4	0	1700	U1		U1	-	FV	b1	N/A	N/A	N/A	N/A

Automatic Assessments Show

After considering several possibilities and having discussed the subject with the Habitats Directive Scientific Working Group back in 2007-2008, three methods to assess conservation status of habitats and species at the regional level (biogeographical and marine) were developed for the 2001-2006 report for use where a habitat/species occurs in two or more Member States in a region with varying assessments; they are all based on data and conclusions from the original Member States reports.

The same methods will be used for the 2007-2012 report.

In summary, assessments should be carried out using (in order of preference):

Method 1: by aggregating parameters data from MS reports and using the evaluation matrices presented in Appendix 1; this is the preferred method for the parameters range, population (of a species) and area (of a habitat) but often not possible due to data constraints.

Method 2: by calculating the weighted average of the individual parameters conservation status, which are then combined as in the last row of the matrices in Appendix 1. This is the second preference.

Method 3: by calculating the weighted average of Member State overall conservation status assessments. This method should only be used when neither methods 1 or 2 are possible.

As indicated above, for habitats/species only present in one MS, the MS assessment is the EU assessment (unless there is clear evidence that MS assessment is wrong). Weighting and thresholds used by the three methods are discussed in the following sections.

It is probable that in some cases no regional assessment will be possible; these should be noted as 'unknown'.

Box 1 at the end of this section summarises which methods can be used for each parameter or overall assessment of Conservation Status.

2.1 Method 1

Aggregation of data – Aggregate data provided by Member States for quantitative parameters and aggregate conservation status for some qualitative parameters:

i) Aggregate data on 'range' and 'population' from Annex B of the reporting format[4] (species) and on 'range' and 'area' from Annex D of the reporting format[2] (habitats), and use the evaluation matrices (Annex C for species, Annex E for habitats) to obtain the conservation status of these parameters

ii) For 'habitat for the species' and 'future prospects' (species) and 'structure and functions' and 'future prospects' (habitats) the conservation status is obtained by weighted aggregation of the respective national assessments (Method 2)

iii) Finally, the overall status is calculated by using the rules given in the last line of the evaluation matrices (Appendix 1).

Parameter	Conservation Status			
	Favourable ('green')	**Unfavourable – Inadequate ('amber')**	**Unfavourable - Bad ('red')**	***Unknown (insufficient information to make an assessment)***
Overall assessment of CS [15]	All 'green' OR three 'green' and one 'unknown'	One or more 'amber' but no 'red'	One or more 'red'	Two or more 'unknown' combined with green or all "unknown'

Table 1 below summarises the approach of method 1 and gives some examples.

For example (see Table 2 below), for *Canis lupus* in the Alpine region summing the range reported by the six Member States concerned gives a range for the biogeographical region. Similarly, the reported values for Favourable Reference Range (FRR) can be summed to give an estimate for the entire region and in this case it is clear that range is increasing although the magnitude is not known. As range is approximately equal to the FRR and the trend is positive, the parameter 'range' is assessed as 'Favourable' according to the criteria given in the evaluation matrix for species (see Appendix 1).

Although it is in theory possible to use Method 1 for the parameter 'Habitat for the species' this should not be done as there is a great variation in how this parameter has been assessed by the Member States.

If this method is used, all the fields in the line 'Add assessment' should be completed when possible.

[4] Assessment and reporting under Article 17 of the Habitats Directive Reporting Formats for the period 2007-2012 https://circabc.europa.eu/sd/d/5c427756-166d-4cc8-a654-fca8bfae3968/Art17%20-%20Reporting-Formats%20-%20final.pdf

Table 1 A summary of Method 1 with examples

Parameter	Species	Habitats	Procedure	Overall conservation status determined for each parameter by	Example	Overall FINAL assessment
1	Range	Range	Sum MS data	Applying matrix conditions	Range more than 10% above 'favourable ref. range': **conclude FV**	Use last line of Evaluation Matrix Example: two FV, one U1 and one XX: then overall assessment is **U1** – one or more 'amber' but no 'red'
2	Population	Area	Sum MS data	Applying matrix conditions	Population less than 10% below 'favourable reference population': **conclude U1**	
3	Suitable habitat	Structure & Functions	Weight aggregation of national assessment (see method 2 below)	Applying threshold (see note)	**FV**	
4	Future prospects	Future prospects	Weight aggregation of national assessment (see method 2 below)	Applying threshold (see note)	**XX**	

Note: see section 4 Thresholds for further details

2.1.1 Population

The reporting format for 2007-2012 asks for population sizes to be reported using agreed units (mostly number of individuals), but allows Member States to also report population using other units (e.g. number of localities). The assessment tool will only use population reported in the agreed unit, but there may be cases where one or more Member States have only reported using an alternative unit. In such cases the assessor may be able to convert the alternative to the agreed unit (e.g. if the alternative is pairs or calling males) or if all Member States have used the same alternative, use that information.

For example, for *Triturus cristatus* in the Boreal region, three MS have reported using 'individuals' (the agreed unit) while two have reported as 'Adults'. Assuming that number of adults is approximately equal to the number of individuals, it is still possible to use Method 1.

Table 2 Data for 'Range' reported for *Canis lupus* in the Alpine region for 2007-2012.

Member State	Range (km^2)	Trend	Favourable Reference Range (km^2)
BG	26 800	x	26 800
FI	8 500	0	≈8 500
FR	29 900	+	≈29 900
IT	12 700	+	≈12 700
PL	8 080	0	≈8 080
RO	67 300	x	≈67 300
SI	3 934	+	≈3 934
SK	26 368	+	≈26 368
Alpine region	183 582	**+**	≈183 582

Where only one country has not used the agreed unit it may be possible to derive an estimate in the agreed unit. For example it is possible to calculate the mean population density from the countries which have reported both the agreed unit and a distribution map using the agreed grid. This can then be used to estimate the population for a country which has provided a map but not a population. There may also be cases where, although a value for population from one country is missing, it is clear from the report that the value is very small and would make little difference to the overall EU regional assessment for population.

Any such assumptions should be clearly described in the Audit trail (see section 8).

2.1.2 Favourable Reference Values and operators

In many cases, MS did not report a value for Favourable Reference Range (FRR), Population (FRP) or Area (FRA), but they know the value is approximately equal or is larger than the current value and this is reported using the 'operators' ≈, >, >>. The assessment tool will show individually the sum of all precise values and of values plus operators (see Table 3).

Favourable Reference Values for the EU region need only be recorded if Method 1 is used.

Table 3 Reported Favourable Reference Areas for habitat 9010 Western Taiga in the Boreal region (data from 2001-2006)

MS	Favourable Reference Area
EE	1 004
FI	>14 000
LT	≈ 600
LV	250
SE	35 000
Sum	36 254 ≈ 600 >14 000

In this example the FRA for the region will be >50 854 km² and as the area is only 29 749 km² the conclusion for 'Area' must be Unfavourable-Bad (U2) as the reported value is more than 10% below the Reference Value.

For population, the countries can report a range (e.g. 10 – 50 individuals) which will lead to the regional population also having a range. If the Favourable Reference falls within this range, population can be considered equal to the reference value.

As noted in the 'Assessment and reporting under Article 17 of the Habitats Directive Explanatory Notes & Guidelines for the period 2007-2012', the operator '>>' indicates that the difference between the actual and favourable values is so great that the parameter will be 'Unfavourable-Bad'.

When the only country that has used the operator 'much greater than' has a very small part of the EU regional population, the operator >> will not apply to the EU regional reference value. For example, the Czech Republic and Germany used the operator '>>' for the population of *Canis lupus* in the Continental region for 2007-2012 but the Czech population is between 0 and 10 individuals and the German population 39 individuals from a regional population of some 3 000 and it would not be appropriate to use >> for the region.

2.1.3 Trends

Some 'conditions' used in the evaluation matrix require an estimate of the trend (e.g. "Stable (loss and expansion in balance) or increasing", "Large decrease") and the following thresholds should be used

- If the sum of stable is ≥ 75 %, then qualifier is stable (=) for the region
- If the sum of unknown is > 50 % then qualifier is unknown (x) for the region
- If the net balance is ≥ 10%, sign of balance gives qualifier (i.e. if positive, qualifier is '+', if negative qualifier is '-'
- If the net balance is < 10 % then qualifier is stable (=)

For further information on these thresholds see section 5.1. If trends are not required for the assessment, they do not need to be estimated or recorded. Note that a stable trend is recorded as 0 while a stable Conservation status is recorded as = .

2.2 Method 2

Aggregation of individual parameters - Weighted aggregation of each of the four conservation status parameters with an overall assessment using the rules given in the last line of the evaluation matrices (Appendix 1)

Table 4 below summarises the approach of method 2 and gives some examples.

Table 4 A summary of Method 2 with examples

Parameter	Species	Habitats	Procedure	Overall conservation status determined for each parameter by	Example	Overall FINAL assessment
1	Range	Range	Weight aggregation of national assessment	Applying threshold (Figure 4 in chapter 4)	80% FV, 10% U1, 10% XX: **conclude FV**	Use last line of Evaluation Matrix Example: one FV, one U1 and one U2: then **overall assessment is U2** – one or more 'red')
2	Population	Area	Weight aggregation of national assessment	Applying threshold (Figure 4 in chapter 4)	10% FV, 60% U1, 10% U2, 20% XX: **conclude U1**	
3	Suitable habitat	Structure & Functions	Weight aggregation of national assessment	Applying threshold (Figure 4 in chapter 4)	50% FV, 20% U1, 30% U2: **conclude U2**	
4	Future prospects	Future prospects	Weight aggregation of national assessment	Applying threshold (Figure 4 in chapter 4)	40% FV, 40% U1, 20% XX: **conclude U1**	

Table 5 illustrates how the MS assessments can be weighted by area, in this case 66% of the habitat area has 'Structure & functions' unknown while ≈ 87 % (66 + 21.3) is U1 for 'Future prospects'. Using the thresholds given below (see Section 4), 'Structure & functions' for the region will be 'Unknown' (XX) and 'Future prospects' 'Unfavourable-inadequate' (U1). These conclusions can then be used together with conclusions for the other two parameters derived using Method 1 in the evaluation matrix to give the overall conclusion.

Table 5 Using Method 2 to assess 'Structure and functions' and 'Future prospects' for habitat 4040 Dry Atlantic coastal heaths with *Erica vagans* in the Atlantic region (data from 2007-2012).

MS	Area (km^2)	%	Structure & functions	Future prospects
ES	31	66,0	XX	U1
FR	10	21,3	U1	U1
UK	6	12,8	U2	U2
Atlantic region	47		XX	U1

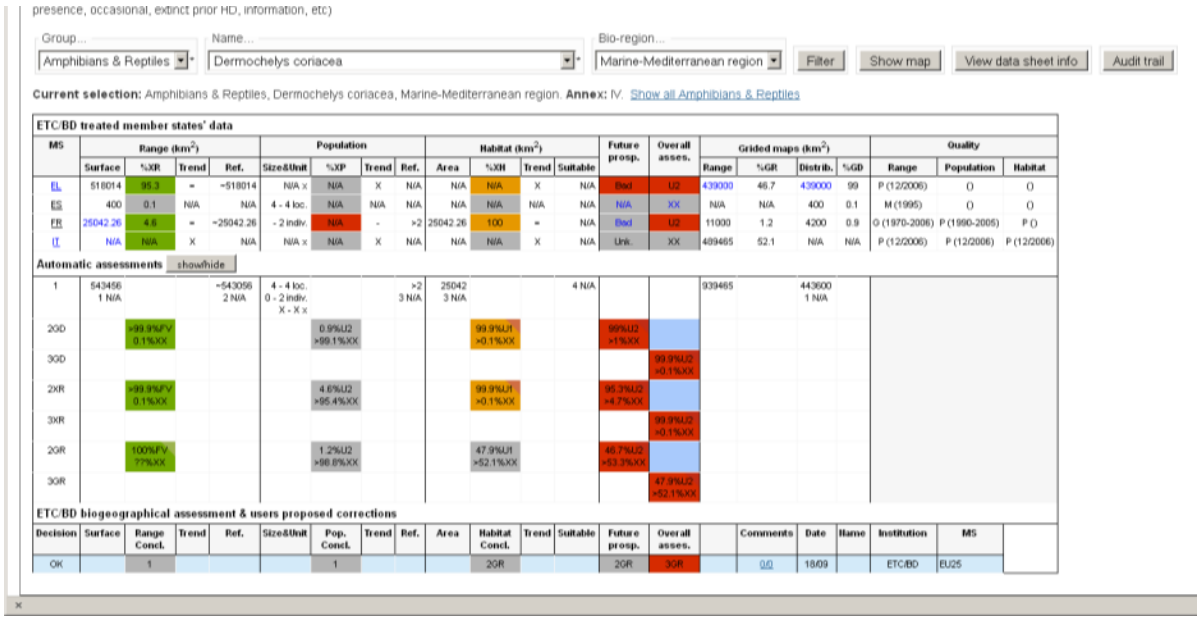
2.3 Method 3

Aggregation of overall status – This method uses a weighted aggregation of the overall conservation status and will be used when data on individual parameters is missing or unusable.

Method 3 makes a regional assessment using only the overall Conservation Status as reported by the Member States. This is required where data for range and population (species)/area (habitat) are incomplete and one or more countries have not delivered GIS data. Using this method usually involves making some assumptions, as shown by the assessment for the marine turtle *Dermochelys coriacea* (Marine-Mediterranean) for 2001-2006 (see figure 3). In this case the Audit trail gives the assumptions ("All of the parameters are lacking information from at least one country and Malta and Gibraltar (UK) have not provided any data thus making the assessment inapplicable due to difficulties in weighting use (estimates of range are clearly made according to different approaches and the chosen population size units are not uniform amongst countries). However, considering the Critically Endangered Red List status of this species, an assessment was in any case made by using method 3 and the overall status is unfavourable bad (a status which results no matter what available weighting is used)."

This method should only be used where there is no alternative. If Method 3 is used, no conclusions should be given for the parameters and the fields in the 'Add assessment' line need not be completed.

Figure 3 Assessment using Method 3 for *Dermochelys coriacea* (Marine-Mediterranean) for 2001-2006.



All three methods rely, at least partially, on using area or population to weight assessments at national level together with 'thresholds' for assessing the conservation status of either each parameter or the overall assessment. Therefore, the following sections of this paper will address these issues.

2.4 Cladonia, Lycopodium & Sphagnum spp

For these 3 taxa listed on Annex V the Member States have the option to report only the overall Conservation Status and do not have to deliver maps. In practise, although some Member States have also reported all 4 parameters & supporting data, it is likely that only Method 3 will be possible.

Box 1 **Possible methods for each parameter or for overall Conservation Status**

	Habitats	Species
Range	1, 2	1, 2
Area covered by habitat (habitats only)	1, 2	
Population of species (species only)		1, 2
Structure & functions (habitats only)	2	
Habitat for the species (species only)		2
Future prospects	2	2
Overall Conservation Status	MTX, 3	MTX, 3

3 WEIGHTING

Simply averaging the results for each member state ignores the reality that a different proportion of each habitat and species occurs in each country. The overall conservation status of a habitat type, or species, should reflect the status and proportion of that habitat type, or species, present in each Member State and biogeographical/marine region. Weighting is therefore a fundamental aspect of the process of assessing conservation status at regional level for habitats and species present in more than one Member State. Weighted values will be provided in the assessment tool.

3.1 Which parameters require weighting?

In Method 1, weighting is only applied to those parameters for which it is not possible to aggregate data from Member States and apply the matrices directly, namely:

- 'Structure & functions' for habitats
- 'Future prospects' for both habitats & species

Weighting may also be used for 'population', when different units are reported or for cases where data is incomplete. In these cases a regional assessment will be derived from either individual parameters or the overall assessment.

In Method 2, weighting is applied to each of the four parameters:

- 'Range' for both habitats & species
- 'Area' for habitats and 'Population' for species
- 'Structure & functions' for habitats and 'Habitat of species' for species
- 'Future prospects' for both habitats & species

In Method 3, weighting is applied to the 'overall conservation status' reported by the Member State for each habitat type and species.

3.2 What should be used for weighting?

Regardless of the method (1, 2 or 3) that will be used, it is proposed to follow the procedure described below to choose the most appropriate weighting (Table 6); this choice shall take into account the availability and quality of the data provided by Member States (in the tool these will appear as '2GD, '2XR', 3XR' etc. under 'automatic assessments', these codes are explained in table 8). The method used should be recorded for each parameter and for the overall assessment

'Area' is preferred to 'Range' as it is clear that although guidance was given in the 'Explanatory Notes & Guidance' countries have estimated range using differing methods. Although in principle Range from MS data (3) is preferred to Range from GIS data (4) there may be exceptions due to the variety of methods used by MS to estimate range; both approaches 3 and 4 should only be used where no alternative exists.

Where data is incomplete the 'other relevant information' field should be checked as it may give a reason why a given missing value can be omitted or any other reason that may help taking a decision[5].

Where Member State data on area/population or range cannot be used it is proposed to use the Member State spatial data. It is recognised that using area as a proxy for population ignores variation in population density, but is the best available proxy if a total population cannot be estimated from Member State data.

For example, it is not possible to sum population for *Triturus cristatus* in the Atlantic region (see Table 7) as a variety of reporting units have been used; however, it is possible to estimate the proportion of the 'population' in each of the conservation status classes by using the percentage of occupied grids in each Member State.

Table 6 Order of preference for which weighting should be used.

Order of preference	Habitats	Species
1st	Area (from MS data)	Population [a] (from MS data)
2nd	Area (from GIS data)	Distribution area - area of 10 km x 10 km grids (from GIS data)
3rd	Range (from MS data)	Range (from MS data)
4th	Range (from GIS data)	Range (from GIS data)

Note : a - see section 2.1.1 on population

[5] For example, in 2001-2006 the Belgium report on *Cricetus cricetus* in the Continental region had many fields left empty but noted under 'complementary information' that there are only scattered individuals and it is clear from a quick examination of the rest of the dataset that omitting Belgium from the assessment will have no impact on the final result

Table 7 Data for 'Population' reported for *Triturus cristatus* in the Atlantic region for 2001-2006

Member State	Population Size & Unit	Population % GIS	MS Assessment
BE	157 - 157 grids	2.9	U2
DE	284 - (284) XX	16.5	U1
DK	N/A XX	3.1	XX
FR	975 - 1997 XX	40.7	U1
UK	75000 - 75000 localities	32.6	U1
NL	878 - 1500 grids	4.1	U1
Atlantic region		100	0% FV 93.9% U1 2.9% U2 3.1% XX Conclusion for population = **U1**

Note: 'XX' indicates unknown unit. 'Population % GIS' is based on the percentage of 10 x10 km grid cells where the species is present according to the spatial data reported for field 'Distribution'. The calculation of percentage per class will be done by the assessment tool.

The assessment tool makes the necessary calculations which are presented under 'automatic assessments'.

Table 8 Codes used for the weighting methods (G is spatial data, X is tabular data)

Code	Meaning	Preference
0	Conclusions for a parameter are the same for all MS within the region	1
00	The habitat or species only occurs in one MS within the region so, unless there are good reasons, the MS assessment is also the EU regional assessment	1
1	Parameter assessed using the evaluation matrix after summing the member state data. This should only be used for range, population (species) and area(habitat).	1
2XA	Parameter weighted by area of the coverage from XML data (habitats only)	2
2XP	Parameter weighted by population from XML data (species only)	2
2GD	Parameter weighted by area of distribution from GIS data	3
2XR	Parameter weighted by range from XML data	4
2GR	Parameter weighted by surface of gridded range from GIS data	5
3XA	Overall conclusion weighted by area from XML data (habitats only)	6
3XP	Overall conclusion weighted by population from XML data (species only)	6
3GD	Overall conclusion weighted by area of distribution from GIS data	7
3XR	Overall conclusion weighted by range from XML data	8
3GR	Overall conclusion weighted by surface of gridded range from GIS data	9
Other codes		
MTX	Overall conclusion assessed from assessments using methods 1 or 2 of the 4 parameters, using the last row of the evaluation matrix (only used for overall Conservation Status)	-
OTH	Other method was used, explanations provided in Audit trail	-

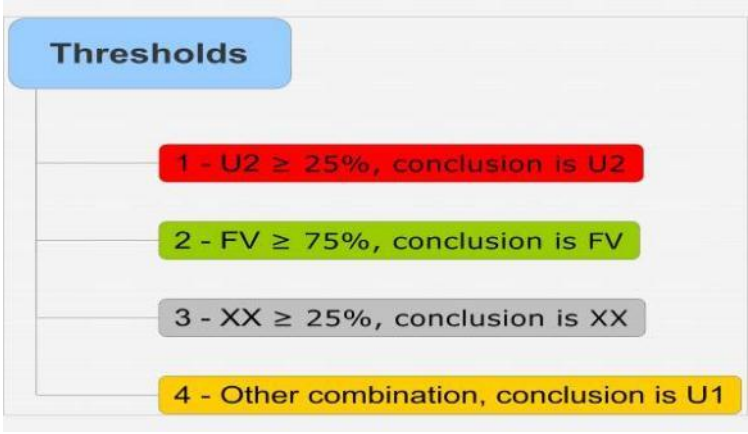
Note: where 2 or more methods are given the same preference, only one will be possible in a given situation.

4 THRESHOLDS FOR REGIONAL ASSESSMENTS

Following discussion at both the Scientific Working Group in November 2007 and at the workshop held by the ETC/BD in March 2008 the following thresholds were proposed and they will be used for 2007-2012 assessment as well. They are the same for all parameters which makes the assessment simpler to explain and to program. They should be envisaged as a series of sieves or filters, each applied in sequence (see Figure 4):

1. If the proportion of a habitat/species reported as 'Unfavourable – Bad' (U2, red) is greater or equal than 25% the habitat/species is considered 'Unfavourable – Bad' (U2, red) for the region.
2. If the proportion of a habitat/species reported as 'Favourable' (FV, green) is greater or equal than 75% the habitat/species is considered 'Favourable' (FV, green) for the region.
3. If the proportion of a habitat/species reported as 'Unknown' (XX) is greater or equal than 25% the habitat/species is considered 'Unknown' (XX) for the region.
4. Any other combination is considered as 'Unfavourable – Inadequate (U1, 'amber')

Figure 4 Decision making chain using thresholds



Although these thresholds are arbitrary, trials showed that changing them made little difference to overall conclusions.

5 QUALIFIERS FOR ASSESSMENTS

Given the definition of 'favourable conservation status' in the Habitats Directive, changes in the overall conservation status, for example from unfavourable to favourable or, from unfavourable bad to inadequate - require relatively major changes in the individual conservation status parameters to be noted. The use of qualifiers (trend of the overall conservation status) allows more subtle changes (improvement or deterioration) of the unfavourable categories to be identified. This information is also useful to measure progress to Target 1 of the EU Biodiversity Strategy for which it is necessary to identify which 2007-2012 assessments can be considered as 'Favourable' or 'improving'. It is clear which assessments are Favourable or change from U2 to U1 but other improvements require a qualifier (improvement, stable, deterioration) to be given to all unfavourable assessments. Except where an assessment is for a habitat or species present in only one MS in the region, or where all MS report the same qualifier it is necessary for the assessors to qualify all unfavourable EU regional assessments (e.g. U1+, U2=, U2-).

This a new element compared to the previous assessments. Member States were obliged in 2007-2012 to report whether the overall trend is improving, declining, stable and unknown whenever the overall conservation status was unfavourable (U1 & U2), this was optional in 2001-2006.

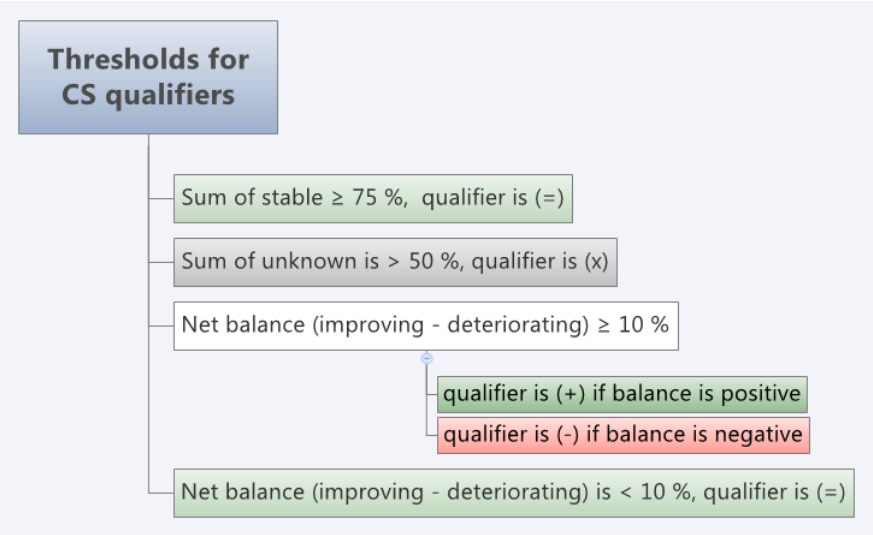
Although it would be possible in some cases to use qualifiers for each of the 4 parameters if not using method 3 (Aggregation of overall status) only the overall conclusion is qualified for the EU regional assessments. This is both to reduce the workload and because the use of qualifiers for parameters by the MS was not obligatory and so often not reported.

The MS qualifiers can be weighted using the same methods as used for the assessments.

5.1 Thresholds for Qualifiers

- If sum of stable is ≥ 75 %, then the qualifier is stable (=) for the region
- If sum of unknown is > 50 % then the qualifier is unknown (x) for the region
- If the net balance is ≥ 10%, sign of balance gives qualifier (i.e. if positive, qualifier is '+', if negative qualifier is '-'
- If the net balance is < 10 % then qualifier is stable (=)

Figure 5 Decision making chain to identify qualifiers for conservation status



For example, for *Triturus cristatus* in the Boreal region weighting by GIS area of distribution gives

Qualifier	% of area
+	9
=	0
-	86
x	4

'Stable' is zero and 'Unknown is <50% and the net balance (9-86 = -77) is much larger than 10 and negative so in this case the qualifier for the regional Conservation Status is deteriorating (-).

Similarly for 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*), weighting using habitat area gives stable as 51.7% (1.6 + 2 + 0.1 + 39 + 5.6 + 0.6 + 2.8), unknown as 5.9%(1.8 + 4.1) (<50%) with a net balance of -42.4 (0-42.4) so the regional qualifier is deteriorating (-). Note that the 4.9% of area which is favourable is considered as stable for these calculations and if an assessment is unknown, the qualifier is also 'unknown' (see Figure 6).

Figure 6 National assessments of Conservation Status for habitat 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) in the Alpine region (2007-2012)

Current selection: 2007-2012, Forests, 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae), Alpine. Show all Forests

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.				Areas from gridded maps(km²)			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	Range	% MS	Distrib.	% MS
AT	58000	19.5	0	≈58000	229	22.3	-	>229	U1		U1	-	U1	a	51800	20.8	41700	22.6
BG	25200	8.5	x	25200	16.03	1.6	x	16.03	U1		U1	=	N/A		17400	7	11900	6.4
DE	4155.63	1.4	0	4155.63	21	2	0	21	FV		FV		FV	nc	4400	1.8	4100	2.2
ES	9122	3.1	x	≈9122	18	1.8	+	≈18	U1		U1	x	U1	nc	5900	2.4	4800	2.6
FI	7000	2.4	0	≈7000	1.50	0.1	0	≈1.50	FV		FV		FV		5400	2.2	1800	1
FR	38700	13	0	≈38700	400	39	-	x	U1		U2	=	U2	nc	30300	12.2	22700	12.3
IT	43500	14.6	-	>>43500	198.62	19.4	-	>>198.62	U2		U2	-	U1	c1	37600	15.1	32200	17.4
PL	10008	3.4	0	≈10008	56	5.5	x	≈56	U1		U2	=	U1	b1	11100	4.5	9800	5.3
RO	50700	17.1	0	≈50700	6.60	0.6	0	>6.60	FV		U1	=	N/A		37200	14.9	16900	9.1
SE	20300	6.8	0	20300	29	2.8	x	29	FV		FV		FV	nc	16600	6.7	7400	4
SI	1826	0.6	-	>1826	7	0.7	-	>7	U1		U1	-	U1	a	2100	0.8	2100	1.1
SK	28720.70	9.7	0	>28720.70	42	4.1	+	>42	U1		U1	=	U1		29100	11.7	29400	15.9

6 NATURE OF CHANGE

Changes in conservation status between 2001-2006 and 2007-2012 may be due to a variety of reasons other than genuine change, for example changes in methodology, better data now available, etc. In order to identify which changes are genuine rather artefacts, the Member States were asked to indicate reasons for change using an agreed coding (see Table 9 and Figure 7).

Table 9 Codes used to report nature of change

a	there is a genuine change: the overall conservation status improved (or deteriorated) due to natural or non-natural reasons (management, intervention, etc.)
b1	the change observed is due to more accurate data (e.g. better mapping of distribution) or improved knowledge (e.g. on ecology of species or habitat)
b2	the change observed is due to a taxonomic review: one taxon becoming several taxa, or vice versa
c1	the change observed is due to use of different methods to measure or evaluate individual parameters or the overall conservation status
c2	the change observed is mainly due to the use of different thresholds e.g. to fix Favourable reference values
d	no information about the nature of change
e	the change observed is due to less accurate or absent data than the one used in the previous reporting period (*this code was added to the list after some Member States had already received the draft audit trail*)
nc	no change (e.g. overall trend in conservation status only evaluated in 2013 but assumed to be the same in 2007 or not known)

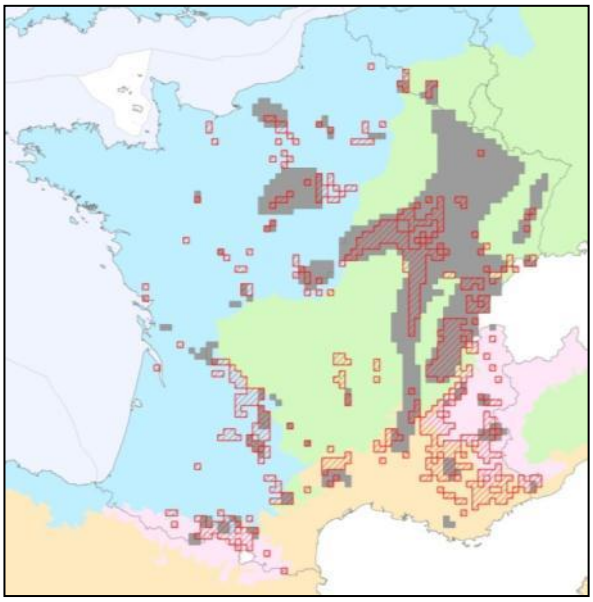
Figure 7 Extract from 'reasons for change' from Ireland

Taxon group	Species name	year	ATL	MATL	Code	
Fish	Salmo salar	2007	U2		1106	
		2013	U1=		1106	
			c1		1106	should have been amber in 2007
Amphibians	Bufo calamita	2007	U2		1202	
		2013	U2+		1202	
			a		1202	
Amphibians	Rana temporaria	2007	U1		1213	
		2013	FV		1213	
			b1		1213	no actual change

As part of the assessment work to be done for the 2007-2012 report, experts are required to indicate if changes in regional assessments between the two reporting periods are likely to be genuine or not genuine. As well as changes noted by the MS, there are also likely to be changes due to the method used for weighting for the EU assessments or where the MS data used for weighting has changed. For

example, the assessment for habitat 6110 for the Continental region used weighting by GIS area (method 2GD) but the GIS area of habitat 6110 in the Continental region of France has decreased from 72 700 km² to 25 300 km² (see Figure 8) although there has been no significant change in the distribution of the habitat; assuming the reported distribution in other countries does not change, the proportion of the habitat in France would drop from 46 to 23%.

Figure 8 **Distribution of '6110 Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*' in France for 2001-2006 (grey) and 2007-2012 (red cross hatching).**



7 CONTRIBUTION TO TARGET 1

The EU 2020 Biodiversity Strategy includes six targets and 20 actions to help Europe reach its goal. Target 1 is about nature conservation and restoration having a focus on the Birds and the Habitats Directives.

Target 1

To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments:

(i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show (a favourable or) an improved conservation status; and

(ii) 50% more species assessments under the Birds Directive show a secure or improved status.

To achieve this requires a 50% improvement for species and a 100% improvement for habitat types from 2001-2006. To assess progress to this target one needs to identify the assessments which

- Are Favourable for 2007-2012
- Have improved since last reporting round

Table 10 indicates the possible changes and how they can be classified. Changes labelled A and B account for Target 1.

Once the Conservation Status and its qualifier for 2007-2012 have been assessed, Table 11 should be used to determine if the assessment will contribute to the Target; the codes from the appropriate cell shall be noted on the assessment tool. For example if the assessment has changed from U2 to U2+, B+ should be recorded. See discussion paper on 'Measuring progress under Target 1' [6] for further details.

[6] https://circabc.europa.eu/sd/d/aacfbe5b-aec5-4306-8e78-60a1374f39ac/Measuring%20progress%20under%20Target%201.docx

Note: this document will be updated and finalized in April, but changes will only concern the Birds component of the Target.

Table 10 Matrix for measuring progress under Target 1

Change in conservation status between reporting periods		CS in 2007-2012							
		FV	**U1 +**	**U1**	**U1 -**	**U2 +**	**U2**	**U2 -**	**XX**
CS in 2001 - 2006	**FV**	A (=)	C (-)	C (-)	C (-)	C (-)	C (-)	C (-)	E (x)
	U1	A (+)	B (+)	D (=)	C (-)	C (-)	C (-)	C (-)	E (x)
	U2	A (+)	B (+)	B (+)	B (+)	B (+)	D (=)	C (-)	E (x)
	XX	A (=)	B (+)	D (=)	C (-)	B (+)	D (=)	C (-)	D (=)

The signs between brackets indicate the type of change in the conservation status between periods 'p' and 'p+1': (=) no change, (+) improvement, (-) deterioration, (x) not known.

'A' indicates 'favourable' assessments, 'B' 'improved' assessments, 'C' 'deteriorated' assessments, 'D' unfavourable and unknown assessments that did not change, and 'E' assessments that became 'unknown'.

When using the matrix, the nature of change should be examined as it may indicate that an apparent change is an artefact due to changes in methodology or improvement in data quality. For example for *Lopinga achine* in the Boreal region the assessment has apparently changed from U1 to FV, however this is largely due to a change from U1 to FV in Estonia which hosts >80% of the region's population and which is due to an improvement in knowledge (see Table 11). Thus the 'true' conservation status in 2001-2006 was FV and there has been no real change and A= should be recorded rather than A+.

Table 11 Changes in Conservation status between 2001-2006 and 2007 – 2012 for *Lopinga achine* in the Boreal region

MS	Conservation status 2001 - 2006	Conservation status 2007 - 20012	reason for change	Population (individuals)	% per MS
EE	U1	FV	b1	100 000	81,3
FI	U1+	FV	a	10 000	8,1
LT	Data not yet available				
LV	FV	FV		1 000	0,8
SE	U2-	U2-		12 000	9,8

This is likely to be the case for many habitats and species which occur in Bulgaria and Romania which have very large areas/populations but which did not report for the period 2001-2006. Thus for Canis lupus, the population in the Continental region is reported as 2603 - 3146 individuals (plus 62 10x10 grids) of which some 2000 are in Bulgaria and Romania.

The following procedure should be used to see if the earlier assessment may need to be reconsidered.

First, using the weighting that was used when assessing individual parameters, sum the percentage of 'no change' (code 'nc') and the percentage of 'genuine change' (code 'a') – all other codes (b to e) would be considered 'non-genuine change'.

Then check the following:

1) If sum ‘no change’ + sum ‘genuine change’ ≥ 75 %, then NO re-evaluation needed (just use the CS given in column ‘Prev. CS’)

2) If sum ‘no change’ + sum ‘genuine change’ < 75 %, then check net balance ‘non-genuine’ – ‘genuine’ change

3) If net balance ‘non-genuine’ – ‘genuine’ change < +10 %, then NO re-evaluation needed

4) If net balance ‘non-genuine’ – ‘genuine’ change ≥ +10 %, then re-evaluate the 2007 CS based on the 2013 weights

For example, for *Halichoerus grypus* in the Marine Baltic region, assuming the German population for which no population was reported can be ignored (it was 6 individuals for 2001-2006), 49.8% of the population shows genuine change (a) and 34.6 no change, 49.8+34.6 = 84.4 which is >75. In 2001-2006 the Conservation Status was Favourable, for 2007-2012 it is likely to be different, mostly due to a genuine change from U1 to FV in Sweden which accounts for almost 50% of the population

-To fill in column nature of change (Nat. of ch.), compare the 2013 and the pre-filled 2007 conservation status (i.e. the CS made in 2007)

- If 2013 CS and 2007 CS are the same, note ‘nc’
- If 2013 CS is different from 2007 CS, note ‘yes’ (genuine change) if you did not have to re-evaluate the 2007 CS (condition 3 above)
- If 2013 CS is different from 2007 CS, note ‘no’ (non-genuine change) if you had to re-evaluate the 2007 CS (condition 4 above)

- To fill in columns under ‘Target 1’ (‘Contrib.’ and ‘Type’) use the Target 1 matrix (Table 11)

- Using the 2013 CS assessment to identify the column
- Using the pre-filled 2007 CS assessment if it was not re-evaluated (conditions 1 and 3 above) to identify the row
- Using the re-evaluated 2007 CS assessment (condition 4 above) to identify the row

As noted above, all habitats and species are considered ‘unknown’ for 2001-2006 in Bulgaria and Romania. Given the large areas of habitat and species with large and healthy populations in these countries many apparent improvements are likely to be ’non-genuine’. For example, it is likely that *Canis lupus*, previously assessed as ‘Unfavourable-bad’ in the Continental region, will be ‘Favourable’ as these countries have ≈ 2 000 – 2 500 individuals from a regional total of ≈ 2 600 – 3 000.

A summary of what needs to be recorded in the assessment tool is given in Table 12.

Table 12 A summary of the information to be recorded to measure progress to Target 1 of the EU 2020 Biodiversity Strategy.

Heading in the tool	Overall assessment				Contrib. Target 1	
	Curr CS	Trend CS	Prev CS	Nat change	Contrib	Type
meaning	Conservation Status for a region (2007-2012)	Qualifier (trend in CS): is CS improving, deteriorating or stable?	Conservation Status for a region in 2001-2006	Nature of change Is the change in CS considered to be 'genuine'?	Contribution to Target 1 (codes from matrix of possible changes, Table 11)	From matrix of possible changes (Table 11)
Possible values	FV U1 U2 XX	+ - = x (unknown)		yes no nc (no change)	A (favourable) B (improvement) C (deterioration) D (same) E (unknown)	+ (improvement) - (deterioration) = (no change) x (not known)
Example	U1	+	U1	nc	B	+

Note: the Assessment Tool will automatically complete the field 'Previous Conservation Status' (Prev CS).

8 AUDIT TRAIL & DATASHEETS

At the right hand side of the assessment tool are buttons labelled 'View data sheet info' and 'Audit trail'. Clicking either of these opens a popup up window (see Figures 9 & 10).

The 'Audit trail' pop up window (see Figure 9) should be used to record which method was used. If a method other than the preferred method was used this should be justified, as in Figure 8 for habitat 91D0 where method 2XA would normally have been the preferred option.

In addition, all decisions made by the assessors must be noted here in order to make the 'expert judgements' transparent and, if needed, replicable. This may include the option to use, in exception and justified situations, an alternative data source (e.g. a national red list where information on future prospects is missing or dubious), conversion of a non-standard population unit, etc.

A short text should be prepared for each habitat/species in the 'Data sheet info' pop up window (see Figure 10) which should make a brief summary to help interpret the assessment. Some guidelines and guide to style are given in Appendix 3 Preparing Datasheets – some guidelines.

There should be one datasheet for each region assessed, this can highlight differences between countries and make reference to any problems with the data, if the habitat or species is reported from other countries as occasional or regionally extinct this should also be mentioned. There should also be an overall datasheet which should focus on the differences and similarities across all regions. If a habitat or species only occurs in one region, the regional datasheet will also be the overall datasheet.

In many cases the datasheet prepared for the 2001-2006 report may be useful as a starting point, for example the text "The ladies slipper orchid is a widespread plant, found from Europe east through Asia to the Pacific Ocean. It is found in open woodland on moist calcareous soils. It has declined over much of the European part of its range, and as a result is legally protected in a number of countries" for *Cypripedium calceolus* (Figure 10) is still valid and could be cut & pasted from the old to the new datasheet information box.

This text will be used for the Summary sheets for each species/habitat.

Figure 9 Audit trails from 2001-2006 for (left) 4010 - Northern Atlantic wet heaths with *Erica tetralix*, Atlantic & (right) 91D0 - Bog woodland, Alpine.

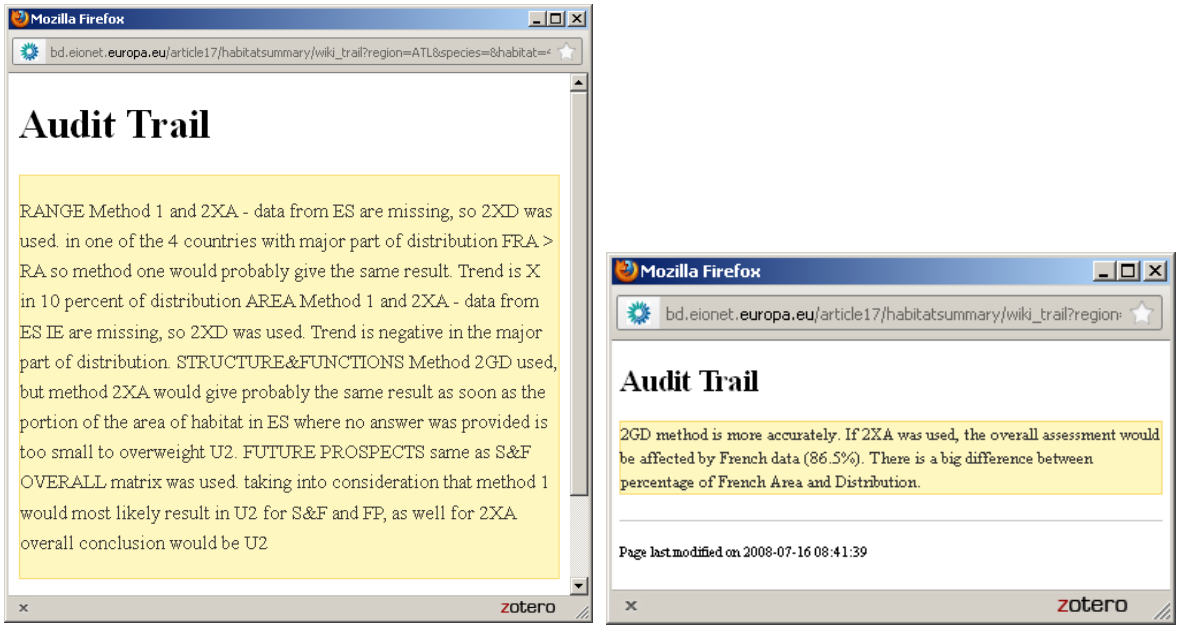
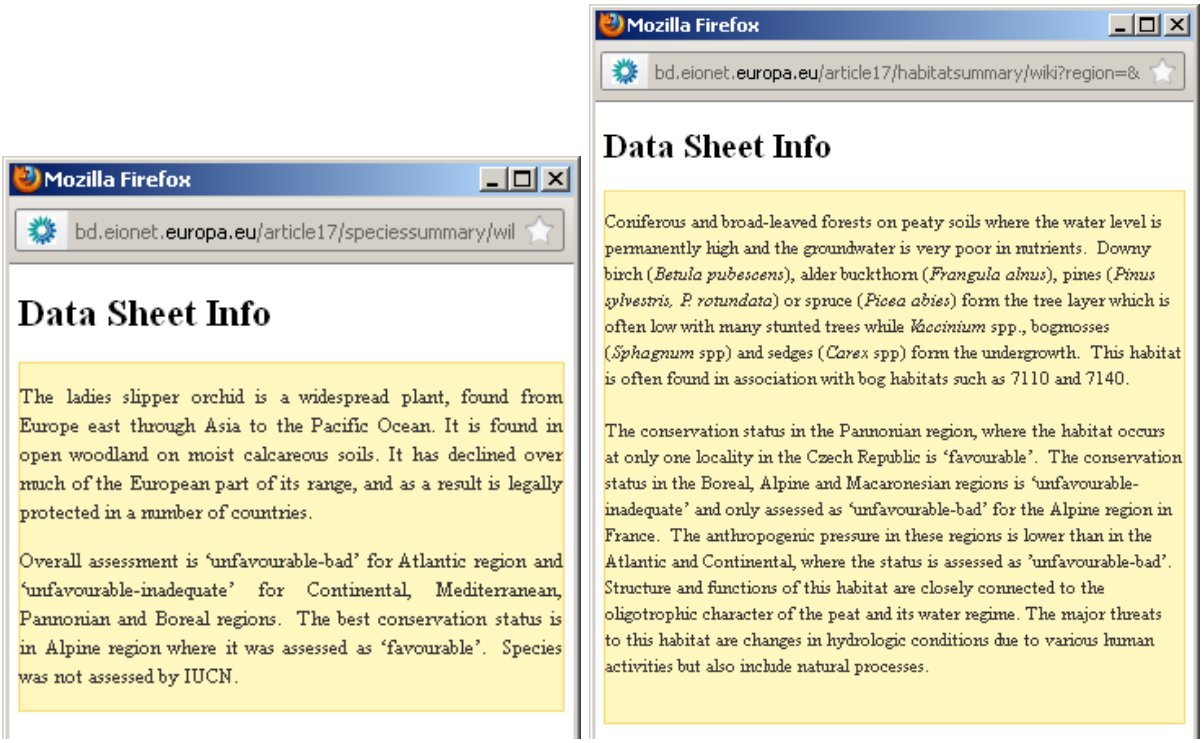


Figure 10 Data sheets from 2001-2006 for the plant *Cypripedium calceolus* (left) & habitat 91D0 - Bog woodland(right).

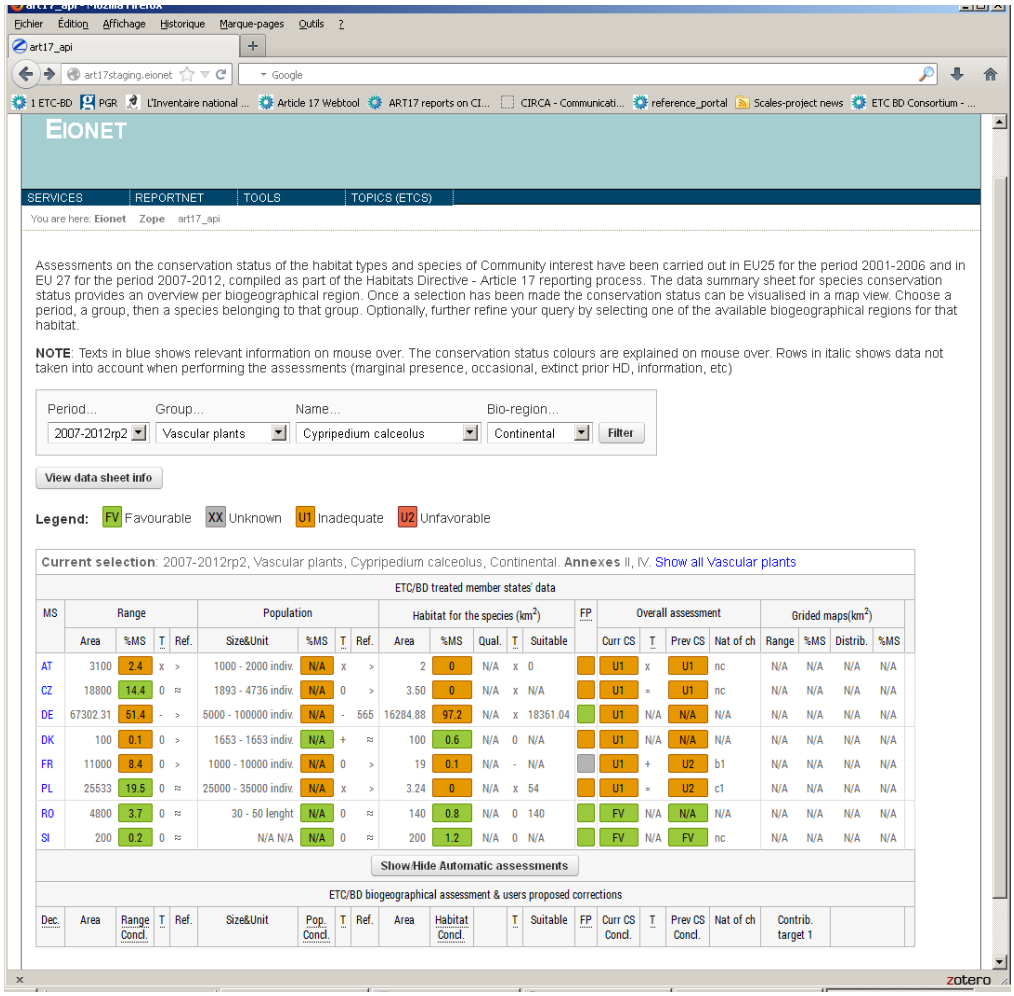


9 THE ASSESSMENT TOOL

The assessment tool will be similar to that used for the 2001-2006 report (Figure 10) but some additional functions have been added to help assess and record changes. The presentation of the maps has also changed and will now show distribution (on a 10x10 km grid) coloured to indicate national assessments of Conservation Status (Figure 11).

Although the revised tool will give a summary of the 2001-2006 assessment, it is suggested that assessors have two browser windows open, one for each assessment period to help with assessing and understanding changes between reporting periods. The 'old' assessment tool[7] should be used for data, assessments, etc for 2001-2006. Having a large monitor or two monitors side by side make this much easier.

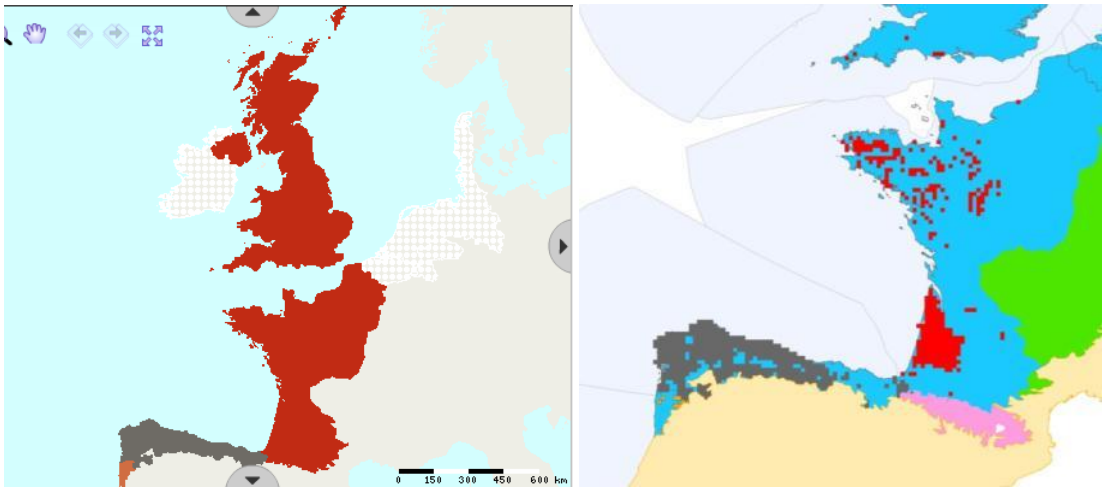
Figure 11 Screenshot of the assessment tool showing data for *Cypripedium calceolus* in the Continental Region *(to be updated once tool finalised)*



[7] http://bd.eionet.europa.eu/activities/Reporting/Article_17/Reports_2007

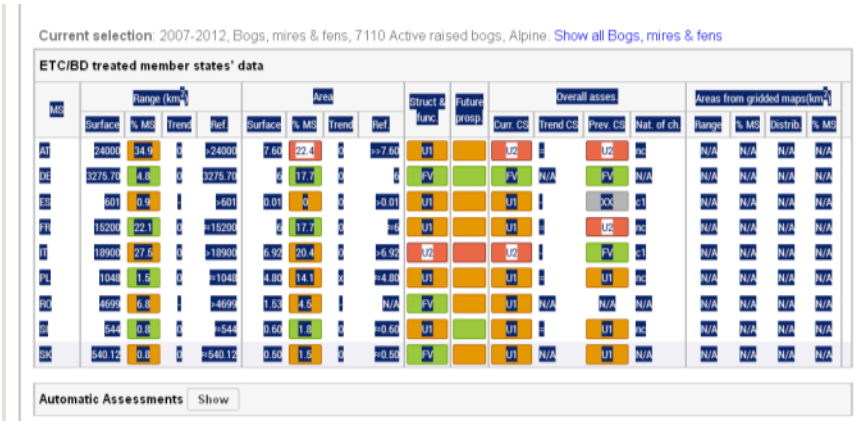
Hovering the mouse over certain fields will display additional information, for example hovering over the MS code will display any text at field '2.8.2 Other relevant information' while a mouse over population size & unit will give information on population reported using other units.

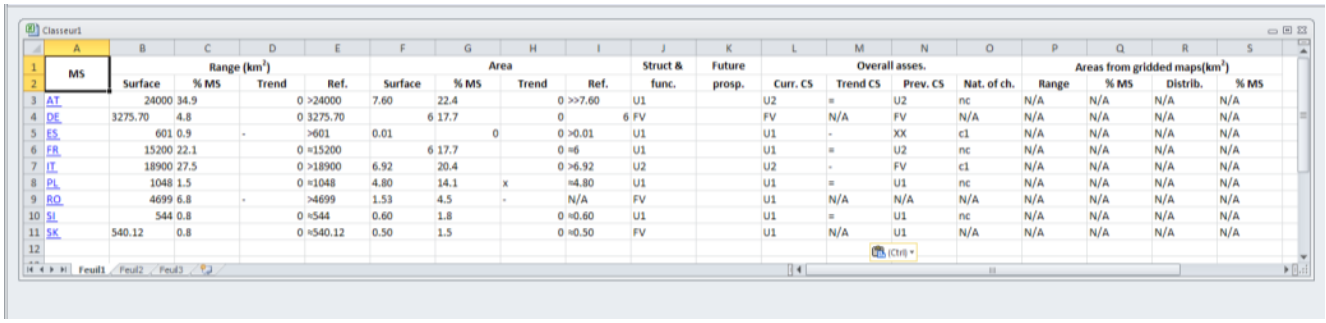
Figure 12 **Maps for the habitat 4020 Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* (Atlantic region). Map from 2001-2006 (left, gridded distribution was available as an overlay but this function is no longer available) and mock up of the map planned for 2006-2012 (right).**



It is possible to copy and paste from the tool to e.g. a spreadsheet, this may be useful if you want to make calculations not given by the tool (see Figure 13).

Figure 13 **Highlighting and selecting text in the tool allows the data to be copied into a spreadsheet**





10 MARINE HABITATS & SPECIES

Some habitats which were considered as 'terrestrial' in 2001-2006 are now considered 'marine', for example '1130 Estuaries'. This means that the two assessments will be found under different regions, e.g. '1130 Estuaries' was Boreal but is now Marine Baltic; a full list is given below. The assessment tool will take this into account.

1130 Estuaries
1140 Mudflats and sandflats not covered by seawater at low tide
1650 Boreal Baltic narrow inlets

In 2001-2006 several species were assessed both for a marine and a terrestrial region, for example, the turtle *Caretta carretta* and the seal *Monachus monachus* for both MED and MMED. Many anadromous fish were also reported from both marine and terrestrial regions but the marine reports were usually very incomplete as little information is available. For 2007-2012 it was agreed that for anadromous fish would only be assessed for their terrestrial regions while seals and marine turtles would only be assessed for the marine regions although such assessments should take into account the role of the other region. The only exceptions to this are the fish *Acipenser sturio* which only occurs in the sea for most countries and the seal *Phoca hispida saimensis* which lives in lakes rather than the sea.

11 EXTINCT SPECIES

The text below is adapted from a proposal by Axel Ssymank[8] informed by discussions at the November 2007 meeting of the Habitats Scientific Working Group. Note this is also to be used for the overall EU regional Conservation Status and NOT for the individual parameters.

For legal reasons arising from the Habitats Directive it is essential to distinguish two situations:

1. Species, that became extinct before the Directive came into force: for these species there is no obligation to report on or to re-establish them; however Member States may have scientific reasons for re-establishing a species and to report on it with the intention to use this as an restoration objective
2. Species, that became extinct after the Directive came into force (or during this reporting period): for these species reporting is obligatory.

For the first situation, the regional assessment of conservation status will not take into account that specific extinction; however, that fact may be mentioned in the data sheet if there is sufficient information to do it.

In the second case, the regional assessment must take into account that recent extinction; normally, such assessment cannot be favourable (FV) and will often be Unfavourable – bad (U2). However there may be exceptions, depending on the extent and/or proportion of the extinct population compared to the biogeographical one.

Therefore, the regional assessments should take into account the following elements, if available:

1. Was the historical distribution always marginal or temporary (a few years up to a few decades)? If not,
2. Was the historical distribution/population:
   (a) a small range/a small population, or
   (b) a large range/a bigger population

For the **overall assessment** the following procedure will be used:

- Marginal and temporal historical occurrences will be neglected (see case a) above)
- If the species is extinct in one Member State only, the assessments will be carried on the basis of the Member States which still have occurrences. Afterwards, the overall assessment will then be modified as follows:

Conclusion based on other MS	Situation in MS where species is extinct	Adjusted final conclusion
FV	2.(a) 2.(b)	U1 U2
U1, U2, XX	2.(a) or 2.(b)	U2

- In cases where a species is extinct in two or more Member States, the overall assessment will be Unfavourable-Bad (**U2**).

[8] German representative at the former Habitats Scientific Working Group

APPENDIX 1 – THE EVALUATION MATRICES

https://circabc.europa.eu/sd/d/5c427756-166d-4cc8-a654-fca8bfae3968/Art17%20-%20Reporting-Formats%20-%20final.pdf

a) Species

Parameter	**Conservation Status**			
	Favourable ('green')	**Unfavourable - Inadequate ('amber')**	**Unfavourable - Bad ('red')**	***Unknown (insufficient information to make an assessment)***
Range (within the biogeographical region concerned)	Stable (loss and expansion in balance) or increasing AND not smaller than the 'favourable reference range'	Any other combination	Large decline: Equivalent to a loss of more than 1% per year within period specified by MS OR more than 10% below favourable reference range	*No or insufficient reliable information available*
Population	Population(s) not lower than 'favourable reference population' AND reproduction, mortality and age structure not deviating from normal (if data available)	Any other combination	Large decline: Equivalent to a loss of more than 1% per year (indicative value MS may deviate from if duly justified) within period specified by MS AND below 'favourable reference population' OR More than 25% below favourable reference population OR Reproduction, mortality and age structure strongly deviating from normal (if data available)	*No or insufficient reliable information available*
Habitat for the species	Area of habitat is sufficiently large (and stable or increasing) AND habitat quality is suitable for the long term survival of the species	Any other combination	Area of habitat is clearly not sufficiently large to ensure the long term survival of the species OR Habitat quality is bad, clearly not allowing long term survival of the species	*No or insufficient reliable information available*
Future prospects (as regards to population, range and habitat availability)	Main pressures and threats to the species not significant; species will remain viable on the long-term	Any other combination	Severe influence of pressures and threats to the species; very bad prospects for its future, long-term viability at risk.	*No or insufficient reliable information available*
Overall assessment of CS	All 'green' OR three 'green' and one 'unknown'	One or more 'amber' but no 'red'	One or more 'red'	Two or more 'unknown' combined with green or all "unknown"

b) Habitats

Parameter	**Conservation Status**			
	Favourable ('green')	**Unfavourable – Inadequate ('amber')**	**Unfavourable - Bad ('red')**	***Unknown (insufficient information to make an assessment)***
Range (within the biogeographical region concerned)	Stable (loss and expansion in balance) or increasing AND not smaller than the 'favourable reference range'	Any other combination	Large decrease: Equivalent to a loss of more than 1% per year within period specified by MS OR More than 10% below 'favourable reference range'	*No or insufficient reliable information available*
Area covered by habitat type within range **Note:** There may be situations where the habitat area has decreased as a result of management measures to restore another Annex I habitat or habitat of an Annex II species. The habitat could still be considered to be at 'Favourable Conservation Status' but in such cases please give details in the Complementary Information section ("Other relevant information") of Annex D	Stable (loss and expansion in balance) or increasing AND not smaller than the 'favourable reference area' AND without significant changes in distribution pattern within range (if data available)	Any other combination	Large decrease in surface area: Equivalent to a loss of more than 1% per year (indicative value MS may deviate from if duly justified) within period specified by MS OR With major losses in distribution pattern within range OR More than 10% below 'favourable reference area'	*No or insufficient reliable information available*
Specific structures and functions (including typical species)	Structures and functions (including typical species) in good condition and no significant deteriorations / pressures.	Any other combination	More than 25% of the area is unfavourable as regards its specific structures and functions (including typical species)[9]	*No or insufficient reliable information available*
Future prospects (as regards range, area covered and specific structures and functions)	The habitats prospects for its future are excellent / good, no significant impact from threats expected; long-term viability assured.	Any other combination	The habitats prospects are bad, severe impact from threats expected; long-term viability not assured.	*No or insufficient reliable information available*
Overall assessment of CS	All 'green' OR three 'green' and one 'unknown'	One or more 'amber' but no 'red'	One or more 'red'	Two or more 'unknown' combined with green or all "unknown'

[9] E.g. by discontinuation of former management, or is under pressure from significant adverse influences, e.g. critical loads of pollution exceeded.

APPENDIX 3 – A FLOW CHART FOR ASSESSMENTS

1. GENERAL

Before starting any assessment it is recommended to spend a few minutes examining the data and using the 'mouse over' feature to see if there is any relevant information, for example on alternative population units.

Check the dataset to see if missing values are important (and may make an assessment impossible) or if they can be ignored without changing the overall evaluation. For example Belgium has reported on *Cricetus cricetus* in the Continental region with many fields left empty but note under 'complementary information' that there are only scattered individuals and it is clear from a quick examination of the rest of the dataset that omitting Belgium from the assessment will have no impact on the final result.

The flow charts are arranged in sections, first separate sections for the assessment of conservation status for habitats (section 2) and species (section 3) followed by a section of qualifiers and contribution to Target 1 which is for both habitats and species.

2. HABITATS

Method 1

GENERAL	
Is data on area complete for all concerned MS?	Yes Use Area for weighting Go to 5
	No Go to 2
2) Is an estimate of area available for all MS from GIS ?	Yes use Area(GIS) for weighting Go to 5
	No Go to 3
3) Is data on range complete for all concerned MS?	Yes use Range for weighting Go to 5
	No go to 4
4) Is an estimate of range available for all MS from GIS ?	Yes Use Range(GIS) for weighting Go to 5
	No assessment not possible using method 1
5) Is data complete for Trends (Range & Area)	Yes

	Go to 'RANGE'
	No Method 1 cannot be used
RANGE	
1) Note Sum of range of each MS to give 'range(region)'	Go to 2
2) Is 'Favourable Reference Range available for all concerned MS ?	Yes Note Sum of estimates - 'FRR(region)' go to 4
	No Go to 3
3) Is an estimate of FRR(region) possible ? (eg missing values from MS with small proportion of total area of habitat so absence not important)	Yes make estimate of FRR(region) go to 4
	No EITHER 'unknown' OR not possible to use method 1
4) Is trend(range) reported for all concerned MS	Yes go to 5
	No EITHER 'unknown' OR not possible to use method 1
5) Is magnitude reported for all concerned MS ?	Yes Calculate 'magnitude(region)' Go to 6
	No Go to 8
6) is Range(region) stable or increasing AND Range(region) NOT <FRR(region) ?	Yes Range considered 'Favourable' Go to 'Area'
	No Go to 7
7) is there a large decrease in range(region) ? (equivalent to 1% per year)	Yes Range considered 'Unfavourable-Bad' Go to 'Area'
	No go to 8
8) Is range(region) < 10% below FRR(region	Yes Range considered 'Unfavourable-Bad' Go to 'Area'

	No Range considered 'Unfavourable-Inadequate' Go to 'Area'
AREA	
1) Note Sum of area of each MS to give 'area(region)'	Go to 2
2) Is 'Favourable Reference Area available for all concerned MS ?	Yes Note Sum of estimates - 'FRA(region)' go to 4
	No Go to 3
3) Is an estimate of FRA(region) possible ? (eg missing values from MS with small proportion of total area of habitat so absence not important)	Yes make estimate go to 4
	No EITHER 'unknown' OR not possible to use method 1
4) Is trend(area) reported for all concerned MS	Yes go to 5
	No Go to 6
5) Is magnitude reported for all concerned MS ?	Yes Calculate 'magnitude(region)' Go to 6
	No Go to 8
6) is Area(region) stable or increasing AND Area(region) NOT <FRA(region)	Yes Area considered 'Favourable' Go to 'Structure & Function'
	No Go to 7
7) is there a large decrease in range(region) ? (equivalent to 1% per year)	Yes Range considered 'Unfavourable-Bad' Go to 'Structure & Function''
	No go to 8
8) Is range(region) < 10% below FRR(region	Yes Range considered 'Unfavourable-Bad' Go to 'Structure & Function''

	No Range considered 'Unfavourable-Inadequate' Go to 'Structure & Function''
STRUCTURE & FUNCTION	
1) Is >90% reported as 'Favourable' ?	Yes Structure & Function' considered 'Favourable Go to 'Future Prospects'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes Structure & Function' considered 'Unfavourable-Bad' Go to 'Future Prospects'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes Structure & Function' considered 'unknown' Go to 'Future Prospects'
	No Structure & Function' considered 'unfavourable – inadequate' Go to 'Future Prospects'
FUTURE PROSPECTS	
1) Is >90% reported as 'Favourable' ?	Yes Future Prospects'considered 'Favourable Go to 'Overall assessment'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes Future Prospects'considered 'Unfavourable-Bad' Go to 'Overall assessment'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes Future Prospects'considered 'unknown' Go to 'Overall assessment'
	No Future Prospects'considered 'unfavourable –

	inadequate' Go to 'Overall assessment'
'OVERALL ASSESSMENT'	
1) All parameters assessed as 'Favourable' OR one unknown and all other favourable	Yes 'Overall assessment' considered 'Favourable'
	No go to 2
2) One or more parameters assessed as ''Unfavourable-Bad'	Yes 'Overall assessment' considered 'Unfavourable-Bad'
	No Go to 3
3) Two or more parameters assessed as 'unknown' with remaining parameters 'Favourable' OR all assessed as 'unknown'	Yes 'Overall assessment' considered 'unknown'
	No 'Overall assessment' considered 'unfavourable – inadequate'

Method 2

Use parameters weighted by Area, occupied grid cells, range or range obtained from GIS (listed in order of preferability)

RANGE	
1) Is >90% reported as 'Favourable' ?	Yes Range considered 'Favourable Go to 'Area'
	No go to 2
2) is >10% reported as ''Unfavourable-Bad'	Yes Range considered 'Unfavourable-Bad' Go to 'Area'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes

	Range considered ‘unknown’ Go to ‘Area’
	No Range considered ‘unfavourable – inadequate’ Go to ‘Area’
AREA	
1) Is >90% reported as ‘Favourable’ ?	Yes Area considered ‘Favourable Go to ‘Structure & Function’’
	No go to 2
2) is >25% reported as ‘‘Unfavourable-Bad’	Yes Area considered ‘Unfavourable-Bad’ Go to ‘Structure & Function’’
	No Go to 3
3) Is >25% reported as ‘unknown’	Yes Area considered ‘unknown’ Go to ‘Structure & Function’’
	No Area considered ‘unfavourable – inadequate’ Go to ‘Structure & Function’’
STRUCTURE & FUNCTION	
1) Is >90% reported as ‘Favourable’ ?	Yes Structure & Function’ considered ‘Favourable Go to ‘Future Prospects’
	No go to 2
2) is >25% reported as ‘‘Unfavourable-Bad’	Yes Structure & Function’ considered ‘Unfavourable-Bad’ Go to ‘Future Prospects’
	No Go to 3
3) Is >25% reported as ‘unknown’	Yes Structure & Function’ considered ‘unknown’

	Go to 'Future Prospects'
	No Structure & Function' considered 'unfavourable – inadequate' Go to 'Future Prospects'
FUTURE PROSPECTS	
1) Is >90% reported as 'Favourable' ?	Yes Future Prospects' considered 'Favourable Go to 'Overall assessment'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes Future Prospects' considered 'Unfavourable-Bad' Go to 'Overall assessment'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes Future Prospects' considered 'unknown' Go to 'Overall assessment'
	No Future Prospects' considered 'unfavourable – inadequate' Go to 'Overall assessment'
'OVERALL ASSESSMENT'	
1) All parameters assessed as 'Favourable' OR one unknown and all other favourable	Yes 'Overall assessment' considered 'Favourable'
	No go to 2
2) One or more parameters assessed as ''Unfavourable-Bad'	Yes 'Overall assessment' considered 'Unfavourable-Bad'
	No Go to 3
3) Two or more parameters assessed as 'unknown' with remaining parameters	Yes

'Favourable' OR all assessed as 'unknown'	'Overall assessment' considered 'unknown'
	No 'Overall assessment' considered 'unfavourable – inadequate'

Method 3

If this method is used only the overall Conservation Status and its qualifier need to be recorded

'OVERALL ASSESSMENT'	
1) Is >90% reported as 'Favourable' ?	Yes 'Overall assessment' considered 'Favourable'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes 'Overall assessment' considered 'Unfavourable-Bad'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes 'Overall assessment' considered 'unknown'
	No 'Overall assessment' considered 'unfavourable – inadequate'

2 SPECIES

Method 1

GENERAL	
1) Is population reported by all concerned MS and using the same (or easily inter-convertible) units	Yes use this for weighting for 'Habitat' & 'Future Prospects' Go to 3
	No Go to 2
2) Is data available from GIS on the N° of grid cells occupied for each MS ?	Yes use this as a proxy for population size & for weighting go to 3
	No

	Method 1 not applicable Try Method 2
3) Is data for Trends (Range & Population) complete ?	Yes go to 'Range'
	No Method 1 not applicable Try Method 2
RANGE	
1) Note Sum of range of each MS to give 'range (region)'	Go to 2
2) Is 'Favourable Reference Range' available for all concerned MS ?	Yes Note Sum of estimates - 'FRR(region)' go to 4
	No Go to 3
3) Is an estimate of FRR (region) possible ? (e.g. missing values from MS with small proportion of total population so absence not important)	Yes make estimate go to 4
	No EITHER 'unknown' OR not possible to use method 1
4) Is trend (range) reported for all concerned MS	Yes go to 5
	No EITHER 'unknown' OR not possible to use method 1
5) Is magnitude reported for all concerned MS ?	Yes Calculate 'magnitude(region)' Go to 6
	No Go to 8
6) is 'Range' (region) stable or increasing AND 'Range' (region) NOT <FRR (region)	Yes 'Range' considered 'Favourable' Go to 'Population'
	No Go to 7
7) is their a large decrease in range(region) ? (equivalent to 1% per year)	Yes 'Range' considered 'Unfavourable-Bad' Go to 'Population'

	No go to 8
8) Is 'Range' (region) < 10% below FRR(region	Yes 'Range' considered 'Unfavourable-Bad' Go to 'Population'
	No 'Range' considered 'Unfavourable-Inadequate' Go to 'Population'
POPULATION	
1) Note Sum of population of each MS to give 'population (region)'	Go to 2
2) Is 'Favourable Reference Population' available for all concerned MS in inter-convertible units ?	Yes Note Sum of estimates - 'FRP (region)' go to 4
	No Go to 3
3) Is an estimate of FRP (region) possible ? (e.g. missing values from MS with small proportion of regional population so absence not important)	Yes make estimate go to 4
	No not possible to use method 1
4) Is trend(area) reported for all concerned MS	Yes go to 5
	No Go to 6
5) Is magnitude reported for all concerned MS ?	Yes Calculate 'magnitude(region)' Go to 6
	No Go to 8
6) is Population (region) stable or increasing AND Population (region) NOT <FRP(region)	Yes Population considered 'Favourable' Go to 'Habitat for the species'
	No Go to 7
7) is there a large decrease in Population (region) ? (equivalent to 1% per year)	Yes Population considered 'Unfavourable-Bad' Go to 'Habitat for the species'
	No

	go to 8
8) Is Population (region) < 10% below FRP(region)	Yes Population considered 'Unfavourable-Bad' Go to 'Habitat for the species'
	No Population considered 'Unfavourable-Inadequate' Go to 'Habitat for the species'
HABITAT FOR THE SPECIES	
1) Is >90% reported as 'Favourable' ?	Yes 'Habitat for the species' considered 'Favourable Go to 'Future Prospects'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes 'Habitat for the species' considered 'Unfavourable-Bad' Go to 'Future Prospects'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes 'Habitat for the species' considered 'unknown' Go to 'Future Prospects'
	No 'Habitat for the species' considered 'unfavourable – inadequate' Go to 'Future Prospects'
FUTURE PROSPECTS	
1) Is >90% reported as 'Favourable' ?	Yes 'Future Prospects' considered 'Favourable Go to 'Overall assessment'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes 'Future Prospects' considered 'Unfavourable-Bad' Go to 'Overall assessment'
	No

	Go to 3
3) Is >25% reported as 'unknown'	Yes 'Future Prospects considered 'unknown' Go to 'Overall assessment'
	No 'Future Prospects' considered 'unfavourable – inadequate' Go to 'Overall assessment'
'OVERALL ASSESSMENT'	
1) All parameters assessed as 'Favourable' OR one unknown and all other favourable	Yes 'Overall assessment' considered 'Favourable'
	No go to 2
2) One or more parameters assessed as ''Unfavourable-Bad'	Yes 'Overall assessment' considered 'Unfavourable-Bad'
	No Go to 3
3) Two or more parameters assessed as 'unknown' with remaining parameters 'Favourable' OR all assessed as 'unknown'	Yes 'Overall assessment' considered 'unknown'
	No 'Overall assessment' considered 'unfavourable – inadequate'

Method 2

Use parameters weighted by Population, area of distribution (occupied grid cells), range or range obtained from GIS (listed in order of preference). If this method is used it is not necessary to complete all the fields for the parameter being assessed.

RANGE	
1) Is >90% reported as 'Favourable' ?	Yes Range considered 'Favourable Go to 'Population'
	No go to 2

2) is >10% reported as ‘‘Unfavourable-Bad’	Yes Range considered ‘Unfavourable-Bad’ Go to ‘Population’
	No Go to 3
3) Is >25% reported as ‘unknown’	Yes Range considered ‘unknown’ Go to ‘Population’
	No Range considered ‘unfavourable – inadequate’ Go to ‘Population’
POPULATION	
1) Is >90% reported as ‘Favourable’ ?	Yes Population considered ‘Favourable Go to ‘Habitat for the species’
	No go to 2
2) is >25% reported as ‘‘Unfavourable-Bad’	Yes Population considered ‘Unfavourable-Bad’ Go to ‘Habitat for the species’
	No Go to 3
3) Is >25% reported as ‘unknown’	Yes Population considered ‘unknown’ Go to ‘Habitat for the species’
	No Population considered ‘unfavourable – inadequate’ Go to ‘Habitat for the species’
HABITAT FOR THE SPECIES	
1) Is >90% reported as ‘Favourable’ ?	Yes ‘Habitat for the species’ considered ‘Favourable Go to ‘Future Prospects’
	No go to 2
2) is >25% reported as ‘‘Unfavourable-Bad’	Yes ‘Habitat for the species’ considered

	'Unfavourable-Bad' Go to 'Future Prospects'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes 'Habitat for the species' considered 'unknown' Go to 'Future Prospects'
	No 'Habitat for the species' considered 'unfavourable – inadequate' Go to 'Future Prospects'
FUTURE PROSPECTS	
1) Is >90% reported as 'Favourable' ?	Yes Future Prospects' considered 'Favourable Go to 'Overall assessment'
	No go to 2
2) is >25% reported as ''Unfavourable-Bad'	Yes Future Prospects' considered 'Unfavourable-Bad' Go to 'Overall assessment'
	No Go to 3
3) Is >25% reported as 'unknown'	Yes Future Prospects' considered 'unknown' Go to 'Overall assessment'
	No Future Prospects' considered 'unfavourable – inadequate' Go to 'Overall assessment'
'OVERALL ASSESSMENT'	
1) All parameters assessed as 'Favourable' OR one unknown and all other favourable	Yes 'Overall assessment' considered 'Favourable'
	No go to 2
2) One or more parameters assessed as	Yes

‘‘Unfavourable-Bad’	‘Overall assessment’ considered ‘Unfavourable-Bad’
	No Go to 3
3) Two or more parameters assessed as ‘unknown’ with remaining parameters ‘Favourable’ OR all assessed as ‘unknown’	Yes ‘Overall assessment’ considered ‘unknown’
	No ‘Overall assessment’ considered ‘unfavourable – inadequate’

Method 3

If this method is used only the overall Conservation Status and its qualifier need to be recorded

‘OVERALL ASSESSMENT’	
1) Is >90% reported as ‘Favourable’ ?	Yes ‘Overall assessment’ considered ‘Favourable’
	No go to 2
2) is >25% reported as ‘‘Unfavourable-Bad’	Yes ‘Overall assessment’ considered ‘Unfavourable-Bad’
	No Go to 3
3) Is >25% reported as ‘unknown’	Yes ‘Overall assessment’ considered ‘unknown’
	No ‘Overall assessment’ considered ‘unfavourable – inadequate’

3 QUALIFIER FOR CONSERVATION STATUS & CONTRIBUTION TO TARGET 1

QUALIFIER	
1) Using the weighting used for Method 1 or 2, calculate the % of habitat /species in each qualifier class (+, -, =, x)	If sum of stable is ≥ 75 %, then the qualifier is stable (=) for the region If not go to 2
2)	If sum of unknown is > 50 % then the qualifier is unknown (x) for the region If not go to 3
3)	If the net balance is ≥ 10%, sign of balance gives qualifier (i.e. if positive, qualifier is '+', if negative qualifier is '-'
4)	If the net balance is < 10 % then qualifier is stable (=)
CONTRIBUTION TO TARGET 1	
5) Using the same weighting estimate the proportion (as %) of the habitat/species which is 'no change' plus 'genuine change' using the information at 'Nat of change' from MS.	If ≥75 go to 6 If <75 go to 7
6)	Previous Conservation Status considered 'reliable', go to 9
7) Check net balance [(non- genuine)-(genuine)] [genuine changes are indicated by code 'a']	If < 10 previous Conservation Status considered reliable, go to 9 If > 10 go to 8
8) The previous Conservation Status should be examined to see if it would have been different with new data	Go to 9
9) Are 2013 CS and 2007 CS the same	If yes note 'nc' at 'Nat. of ch' for the EU Biogeographical assessment & go to 12 If not go to 10
10) 2013 CS is different from 2007 CS	If the 2007 CS was considered 'reliable' (see 6 & 7), note 'yes' at 'Nat. of ch' for the EU Biogeographical assessment & go to 12 If the 2007 CS was not considered 'reliable' (see 8) go to 11
11)	Note 'no' at 'Nat. of ch' for the EU Biogeographical assessment & go to 12
12) Identify which column of the Target 1 matrix	If yes, use the 2007 CS to identify which letter &

is appropriate. Was the 2007 CS considered reliable (question 8)?	sign to use to complete 'contribution' and 'type' for the EU regional assessment (e.g. A+, D=, etc) If no go to 13
13	Use the 'revised' 2007 CS to identify which letter & sign to use to complete 'contribution' and 'type' for the EU regional assessment (e.g. A+, D=, etc)

APPENDIX 3 - PREPARING DATASHEETS – SOME GUIDELINES

1/ For well-known species it's English name should be included in the first sentence e.g.

"The lynx is ….."

For less well known species indicate which type of organism it is, e.g.

"Cynodontium suecicum is a moss restricted to Fenno-Scandinavia …."

English names can be found on EUNIS (http://eunis.eea.europa.eu/species.jsp)

2/ Do not use abbreviated forms for names of countries or for biogeographic regions

e.g. "….widespread in the Alpine region of Austria" rather than … "widespread in ALP region of AT"

3/ Range, Area, Structure & function, etc should be referred to as 'parameters'

4/ Use 'favourable', 'unfavourable-bad', etc rather than 'green', 'U1', 'bad', etc and Favourable Reference Area, Favourable Reference Population, etc rather than FRA, FRP, etc

5/ For numbers less than ten, write out the number rather than giving the numeral e.g. five rather than 5. For numbers greater than ten use the numerals

6/ Be careful to stick to making statements of fact only; don't stray into opinions

7/ Avoid capitals as far as possible – they interrupt the flow of reading.

8/ Avoid starting sentences with numbers – if you have to start with a number, write it out, or see if you can recast the sentence so it doesn't need to start with a number

9/ Use lower case for species names (in English, obviously Latin binomials need the first name capitalised), unless the name is a proper name. E.g. Daubenton's bat, but lady's slipper orchid. However, do capitalise the first word of a name if it is the start of a sentence.

10/ Try to keep sentences short and simple – for most readers English will not be their first language. Try to avoid multiple clauses to a sentence, you can almost always break a long sentence in to two or more simpler ones.

12/ Use a spell checker, but please make sure it is set to English (UK), not US – words like organisation should be spelt with an 's' not a 'z' also use 'colour' not 'color'. You may find it easier to write in WORD and then copy & paste into the assessment tool.

13/ Try to avoid the use of symbols such as ampersand (&).

14/ Capitalise the names of Biogeographic regions, e.g. Atlantic biogeographical region

15/ Use two spaces between sentences rather than one. The extra white space makes it easier to read the words, and highlights the end of the sentence better.

16/ Sources of additional information which may be useful include;

European Red Lists

http://ec.europa.eu/environment/nature/conservation/species/redlist/

French Cahiers d'habitats Natura 2000

http://inpn.mnhn.fr/telechargement/documentation/natura2000/cahiers-habitats

Spanish Red data books

http://www.mma.es/portal/secciones/biodiversidad/inventarios/inb/

Interpretation Manual of European Union Habitats - EUR28
http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf

17/ If you think of other suggestions please contact Doug Evans (evans@mnhn.fr) who will circulate them to all involved

APPENDIX 4 – SENSITIVE SPECIES

The following species are considered 'sensitive' in one or more countries; this means that their distribution in that country will not be shown on the maps made available to the public. Assessors who are logged into their EIONET account will be able to see the complete distribution – please do not distribute these complete maps (e.g. in presentations or publications).

Species name	country	Species code
Agriades glandon aquilo	FI	1930
Aichryson dumosum	PT	1519
Aldrovanda vesiculosa	DE	1516
Andryala crithmifolia	PT	1807
Argyranthemum pinnatifidum ssp. *succulentum*	PT	1761
Argyranthemum thalassophilum	PT	1824
Arnica montana	LU	1762
Berberis maderensis	PT	1484
Beta patula	PT	1446
Caldesia parnassifolia	DE	1832
Calypso bulbosa	FI	1949
Carabus (variolosus) nodulosus	DE	5377
Carabus menetriesi pacholei	DE	1914
Chamaemeles coriacea	PT	1537
Cheirolophus massonianus	PT	1809
Coenonympha oedippus	DE	1071
Crepis pusilla	MT	4082
Cypripedium calceolus	FI	1902
Cypripedium calceolus	LV	1902
Discula tabellata	PT	1002
Discula testudinalis	PT	1003
Discula turricula	PT	1005
Discus guerinianus	PT	1023
Distichophyllum carinatum	AT	1380
Echinodium spinosum	PT	1397
Elaphe longissima	PL	1281
Emys orbicularis	DE	1220
Eriogaster catax	DE	1074
Euphydryas aurinia	FI	1065
Euphydryas maturna	DE	6169
Geomitra moniziana	PT	1006
Geranium maderense	PT	1571
Gibbula nivosa	MT	2578
Goodyera macrophylla	PT	1907
Gortyna borelii lunata	DE	4035
Hirudo medicinalis	LV	1034
Hymenophyllum maderensis	PT	1422
Idiomela subplicata	PT	1025
Jasminum azoricum	PT	1652
Lacerta viridis	DE	1263
Lampedusa melitensis	MT	4061
Liparis loeselii	FI	1903
Lopinga achine	FI	1067

Lutra lutra	LU	1355
Lycaena helle	DE	4038
Maculinea arion	FI	1058
Marcetella maderensis	PT	1539
Margaritifera margaritifera	FI	1029
Margaritifera margaritifera	LU	1029
Margaritifera margaritifera	LV	1029
Monachus monachus	CY	1366
Monachus monachus	IT	1366
Monizia edulis	PT	1620
Musschia wollastonii	PT	1756
Orchis scopulorum	PT	1906
Parnassius apollo	FI	1057
Parnassius mnemosyne	DE	1056
Parnassius mnemosyne	FI	1056
Phalaris maderensis	PT	1894
Pipistrellus maderensis	PT	2017
Pittosporum coriaceum	PT	1532
Polystichum drepanum	PT	1412
Pulsatilla patens	DE	1477
Pulsatilla patens	FI	1477
Rhinolophus ferrumequinum	LU	1304
Saxifraga portosanctana	PT	1529
Scyllarides latus	PT	1090
Silene furcata ssp. *angustiflora*	FI	1975
Sinapidendron rupestre	PT	1512
Sorbus maderensis	PT	1541
Teucrium abutiloides	PT	1701
Teucrium betonicum	PT	1702
Thamnobryum fernandesii	PT	1382
Thesium ebracteatum	DE	1437
Zamenis longissimus	DE	6091