Supporting elements

for Boreal Natura 2000 review seminar

(1st part: Core document)

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Context:

The Topic Centre has prepared this Technical paper in collaboration with the European Environment Agency (EEA) under its 2016 work programmes as a contribution to the EEA's work on support to the new Natura 2000 biogeographical process.

Contents

Executive summary

- This report provides analytical elements in support to the review seminar for the Boreal region

- For the first Boreal seminar held in 2011, a list of 18 habitat-types of priority interest for discussion among Boreal countries had been selected. The establishment of this list resulted from a combination of a ranking of habitat-types clustered per broad habitat categories prepared by ETC/BD, based on main outcomes from 2001-2006 Art 17 reporting, and of an expert selection made by the Boreal Steering Committee. The explanation of the approach was described in the pre-scoping document for the Boreal region prepared by ETC/BD in September 2011. Section 3 of the present report presents a re-assessment of these 18 previously selected habitat-types, applying the (almost) same methodology than in 2011, based on outcomes of 2007-2012 Art 17 reporting. This approach aims at identifying habitats of priority interest due to their bad situation. Therefore, in the following sections this approach is called the 'worst situation approach'.

- In section 4 of this document, another methodological approach is described and applied, aiming at the identification of habitats in the Boreal region for which an improvement of the conservation status could potentially be reached rapidly. This approach is the "Low Hanging Fruits" approach.

- Re-assessing the 18 previously selected Boreal habitats according to the 'worst situation approach', making use of 2007-2012 Art 17 overall provides the similar type of ranking than in 2011, however with small differences mainly for freshwater habitats and forest habitats.

- Applying the Low Hanging Fruits approach leads to a selection of 18 habitat-types among which only 3 are common with the 2011 list of 18 habitats selected according to the 'worst situation approach' with 2001-2006 Art 17 data.

- Descriptive fact-sheets are presented for each of the 18 selected Low Hanging Fruits habitats.

1. Introduction

As stated by the European Commission '*the aim of the Natura 2000 Biogeographical Process is to support Member States and expert stakeholders to achieve progress towards legal requirements and ensure that Natura 2000 effectively contributes to meeting the EU 2020 Biodiversity objectives, primarily the full implementation of the nature directives (Target 1). It is and will remain a practical framework to support knowledge building, cooperation and networking on the management of Natura 2000 at the biogeographical level, aiming at achieving coherence in management, monitoring, financing of, and reporting on the Natura 2000 Network and involving Member States, expert stakeholders, practitioners and the European Commission working together in a spirit of collaboration and cooperation. In concrete terms, the Natura 2000 Biogeographical Process provides a means to analyse and interpret results from reporting on species' and habitats' conservation status at a biogeographical level, to identify major threats and to establish corresponding biogeographical level conservation objectives, to engage in active cross-border cooperation and networking between all actors involved in the management of Natura 2000 and to make commitments and recommendations for future action. Through making increased use of relevant data from Article 12 and Article 17 reports, the Process will concentrate on enabling target oriented implementation of the Nature Directives with a view to achieving favourable conservation status for habitat types and species of community interest*'.

The Natura 2000 Biogeographical process was first implemented in the Boreal region with a [Boreal seminar](#) held in May 2012, preceded by preparatory workshops for this region. The same process was then implemented in all other biogeographical regions. As a starting point to discussions among Member States on which habitats (species) to focus priority for collaborative action, the ETC/BD had been asked to propose a methodology for identifying and ranking habitat-types of priority concern based on results from the Art 17 data, and to prepare so-called 'Pre-scoping document' for each biogeographical region. The methodology used in 2011 allowed to identify habitats in a rather bad situation, thus calling for urgent collaborative action among Member States.

In September 2011, the ETC/BD prepared the [pre-scoping document for the Boreal region](#), where 18 habitat-types of the Boreal region were identified and ranked as priority for discussion and further action by Member States.

Now that the first phase of the Natura 2000 Biogeographical process is over, with all biogeographical regions having been covered, a new phase is starting with so-called Review Natura 2000 seminars. This new phase aims at monitoring and evaluating the results of the actions agreed at the kick-off seminars actions and to identify and recommend further priorities and opportunities for continuous development of the process. The first review seminar for the Boreal will take place in October 2016.

The initial foreseen input from the ETC/BD in support to the Boreal review seminar was an update of the pre-scoping document for the Boreal region prepared in September 2011. However the target of ETC/BD support was redefined in spring 2016 following discussions with the European Commission. The present document gathers a number of elements/ analyses, which were agreed as needed in support to the preparation of the Boreal review seminar, namely:

In section 2: revisiting the assessment which had been made in September 2011, based on Art 17 (2001-2006) and leading to the identification of 18 priority Boreal habitat-types, i.e. redo the analysis making use of Art 17 (2007-2012) data. As a few features were newly available as compared to the reporting round, such as the trend in conservation status, the methodology used for assessing and ranking is slightly amended as compared to September 2011 and is presented in section 2. As previously mentioned, this methodology enhances habitats which are in a rather bad situation in terms of conservation status and trends. In section 2 of this document, it will be called the '**worst situation approach'**

In section 3: a new methodology developed upon request from the European Commission by ETC/BD for identifying and ranking priority habitats is presented. Still making use of Art 17 (2007-2012) data, but also data on coverage by Natura 2000, this methodology enhances habitats which have more chance to improve their status in a relatively short term. This approach is called '**Low Hanging Fruits' approach**. Eighteen habitat-types selected according to this approach in the Boreal region are presented and ranked.

In section 4, individual fact-sheets for the18 Low Hanging Fruits habitat-types in the Boreal region are presented.

2. Re-assessing Boreal habitat types based on 2007-2012 reporting data ('Worst situation approach')

2.1 Data used

In the first pre-scoping document for the Boreal region, prepared in 2011, the ranking of habitat-types to define priorities for further discussion among Member States was based on data from the 2001-2006 Art. 17 reporting cycle (national-level assessments). In the following section, an analysis and a ranking of Top priority habitats are made, using (2007-2012) Art. 17 data (http://bd.eionet.europa.eu/article17).

A comparison is made with the previously selected 18 priority habitats defined in September 2011.

2.2 Method used

The methodology applied is the same than for other biogeographical regions, as described below.

2.2.1 Criteria for prioritisation (Criterion A, B and C)

Ranking habitats and species should reflect on one side the conservation 'urgency/priority' (unfavourable conservation status and declining trends) and on the other side joint interest of Member States involved in the seminar (i.e. priority given to habitat types and species which occur in both countries in the region).

The ranking methodology is based on three criteria, i.e.:

Criterion A. *Number of MS where species/habitat types are present.*

Criterion B. *Species and habitat types at unfavourable conservation status*

Criterion C. *Trend information*

Details on how criteria B and C are applied are provided as follows:

Criterion B. *Species and habitat types at unfavourable conservation status*

(U2 & U1 & XX)

The terms of reference for the biogeographical seminars exclude from the discussion species and habitats already at favourable conservation status. This is why species and habitats with favourable conservation status are not taken into account under criterion B. Species and habitats are allocated a score based on their conservation status in each Member State in the following way:

The habitat/species scores

2 points for each Member State in which it has been assessed as Unfavourable-Bad (U2) and

1 point if Unfavourable-Inadequate (U1) or Unknown (XX).

and these scores summed up give the overall score.

This criterion reflects the importance to agree on management for habitat types and species that are far from being at favourable conservation status compared to those ones which are close to favourable status.

Criterion C. *Trend information*

As part of the 2007-2012 Article 17 reporting, Member States also provided information on the trend in Unfavourable conservation status (+ Improving trend, - Declining trend, = Stable, X Unknown

trend). All species and habitat types that were reported as U1 or U2 having an overall negative trend in the Article 17 reports were taken into account.

C = Number of Member States where the trend in Unfavourable conservation status is declining[1]

2.2.2 Applying the methodology to define the Priority Index

After the scores are given to each habitat type and species according to the criteria A, B and C, the scores are then used to calculate a Priority Index for each species and habitat type.

For example the Priority Index for the habitat "Degraded raised bogs still capable of natural regeneration" (7120)" in the Boreal region is assessed as follows:

	Member State	Score for criteria A	Conservation status	Score for criteria B	Trend	Score for criteria C
	EE		U1	1	+	
	LT		U2	2	-	1
	SE		U2	2	-	1
	FI		XX	1		
	LV		U2	2	x	
		5		8		2
Priority Index				50		

A = 5

B = 2(N°U2) + 1(N°U1) + 1(N°XX) = 2*3 + 1*1 + 1*1 = 8

C = 1(N°-) = 1*2 = 2

Priority Index = A*(B+C) = 5*(8+2) = 50

2.2.3 Criteria for clustering habitats and species

The first discussions in 2011 on the new Natura 2000 seminars at biogeographical level identified a need to cluster the habitats and species into broader habitat groups. The clustering of habitat types and species developed by the EEA and the ETC/BD for the EU 2010 Biodiversity Baseline[2] was used as a basis to group species and habitat types under broad habitat groups for the first Boreal pre-scoping document as this was the most recent available grouping covering all concerned Member States and relatively easy to be adjusted for the purposes of these seminars.

Although in general, EEA-ETC/BD now makes use of the typology of ecosystem-types as defined by the MAES[3] process to cluster habitat-types into broader categories, the original clustering of habitats used in the Baseline 2010 is used here to allow a comparison with the September 2011 list (see table 2.1).

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[1] In previous assessment using 2001-2006 data, trend in conservation status was not uniformly reported by MS. Instead, two parameters were taken into account: trend of area of habitat type and qualifier for Structure & functions.
[2] The EU 2010 Biodiversity Baseline provides facts and figures on the state and trends of the different biodiversity and ecosystem components and supports the EU in developing the post-2010 sub-targets and provides factual data for measuring and monitoring progress in the EU from 2011 to 2020 (**http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline**)
[3] Mapping and Assessment of Ecosystems and their Services.

Table 2.1 List of habitat groups used in the 2010 Baseline with distinguishing colours

Grasslands	
Forests	
Heaths and scrubs	
Rock and ice	
Mires and bogs	
Rivers and lakes	
Coastal	
Marine	

2.3   Results of habitat ranking according to the 'worst situation approach'

Results of applying the above described methodology on the18 previously selected Boreal habitat-types, making use of Art 2007-2012 data, as compared to 2011 results are shown in Table 2.2.

Column 9 of Table 2.2 shows the Priority Index for habitats based on (2007-2012) Art 17 data and their ranking. For comparison, the Priority Index calculated with (2001-2006) Art 17 data and the corresponding ranking are presented in column 11.

It should be stressed however that the values of Priority Indices in columns 11 and 9 cannot be compared directly – calculation using (2001-2006) Art 17 data can reach maximal value 100 (because of two parameters used for criterion C) while calculation using (2007-2012) Art 17 data can reach maximal value 80 (one parameter used for criterion C).

Overall the ranking of habitat-types within a habitat group remains almost the same than in 2011 except for habitat 7120 (*Degraded raised bogs still capable of natural regeneration*) which is ranked equal 1st among the 5 habitats of the Mires and bog group instead of 4th previously, and 7160 (*Fennoscandian mineral-rich springs and spring fens*), which is ranked 3rd within this group instead of 2nd previously. Within the Forest group, habitat 9080 (*Fennoscandian deciduous swamp woods*) is ranked 3rd out of 5 previously selected habitat-types instead of 4th previously.

Table 2.2 EU conservation status and Priority Index for habitats in the Boreal region, based on 2007-2012 Art 17 data as compared to results based on 2001-2006 Art 17 data

1	2	3	4	5	6	7	8	9	10	11
Habitat code and grouping	Habitat-type	Priority	EU Conservation status	Trend	Criterion			Priority Index	EU Conservation status	Previous Priority Index
			(2007-2012)		A	B	C	A*(B+C)	(2001-2006)	(2001-2006)
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)	Y	U2	-	5	9	4	65	U2	80
6530	Fennoscandian wooded meadows	Y	U2	-	5	9	3	60	U2	80
6270	Fennoscandian lowland species-rich dry to mesic grasslands	Y	U2	-	5	8	4	60	U2	75
6450	Northern boreal alluvial meadows	N	U2	-	5	8	3	55	U2	70
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	N	U2	-	5	7	3	50	U2	55
9070	Fennoscandian wooded pastures	N	U2	-	4	7	3	40	U2	48
7230	Alkaline fens	N	U1	-	5	6	4	50	U1	75
→7120	Degraded raised bogs still capable of natural regeneration	N	U2	+	5	8	2	50	U1	35
7110	Active raised bogs	Y	U2	-	5	7	2	45	U1	45
→7160	Fennoscandian mineral-rich springs and spring fens	N	U2	-	5	6	2	40	U2	60
91D0	Bog woodland	Y	U1	-	5	4	3	35	U1	15
9010	Western Taiga	Y	U2	-	5	9	3	60	U2	55
9060	Coniferous forests on, or connected to, glaciofluvial eskers	N	U2	-	5	8	3	55	U2	55
→9080	Fennoscandian deciduous swamp woods	Y	U2	-	5	8	2	50	U2	30
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior	Y	U2	-	5	7	2	45	U2	45
9050	Fennoscandian herb-rich forests with Picea abies	N	U2	=	4	5	2	28	U2	32
1630	Boreal Baltic coastal meadows	Y	U2	+	4	7	1	32	U2	40
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	N	U2	-	5	6	3	45	U2	50

Note: Colours used in columns 1 and 2 correspond to broad habitats categories as defined in Baseline 2010 and described in Table 2.1
  Newly ranked habitat-types are flagged with an arrow left to the table

3. Assessing Boreal habitat-types according to the 'Low hanging fruits' approach

3.1 Background to the 'Low hanging fruits' approach

As opposed to the 'Worst situation approach', the 'Low Hanging Fruits (LHF)' approach focuses on habitats which have better chance to improve rapidly, therefore contributing to reaching Target 1 of the EU Biodiversity Strategy.

> **TARGET 1: FULLY IMPLEMENT THE BIRDS AND HABITATS DIRECTIVES**
>
> 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:
> 100% more habitat assessments and 50% more species assessments under the Habitats Directive show a favourable or improved conservation status; and
> 50% more species assessments under the Birds Directive show a secure or improved status.

The methodology proposed for identifying LHF habitats thus takes into account the approach taken to assess progress towards Target 1. 'In the guidelines for assessing conservation status and species at biogeographical level (2007-2012), the different options for changes in conservation status between two reporting periods were presented in a matrix, as shown in Table 3.1:

Table 3.1. Matrix showing the different cases of changes in conservation status between the (2001-2006) and the (2007-2012) reporting periods

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 (=)

FV = Favourable, **U1** = Unfavourable – inadequate, **U2** = Unfavourable – bad, **XX** = Unknown

The signs between brackets indicate the type of change in the conservation status between reporting periods: **(=)** 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'.

Source: Guidelines for Article 17 reporting 2013)

Improvements in conservation status are met in the following cases:

An assessment becomes FV while it was not in the last reporting round
Change from U2 to U1
Change from – to = or +
Change from = to +.

3.2   Proposed methodological approach to identify 'low hanging fruits' (LHF)

The proposed methodology takes into account the following main criteria:

Number of parameters responsible for an Unfavourable Conservation status of a feature (the less parameters, the easier to reach Favourable Conservation Status).

Natura 2000 coverage (the higher the coverage of a feature, the better chances to set conservation measures and improve).

Expert assessment on what is needed to improve the biogeographic assessment in the sense of Target 1 (i.e. either improving status class or improving trend in conservation status).

As not only improvement in status class but also improvements of status trend counts as progress towards Target 1, the method was developed in a way that features in all classes would qualify, also in the 'bad' class.

Step 1: sort & group all features (species or habitats) according to their conservation status and trend in conservation status:

Group 1 – Features that already are in FV
Group 2 – U1+ could change to FV
Group 3 – U1= could change to U1+
Group 4 – U1x could change to U1+
Group 5 – U1- could change to U1=
Group 6 – U2+ could change to U1
Group 7 – U2= could change to U2+
Group 8 – U2x could change to U2+
Group 9 – U2- could change to U2=
Group 10 – XX could change to U1+ or U2+

Step 2: Summing up the conservation status parameters reported for each habitat or species in each Member State that shares the feature in a particular biogeographic region and divide it with the representation (coverage) of the feature in Natura 2000 (in percent)

The following algorithm is proposed: **C = A/B** then multiplied by 100

A = the sum of the parameters Range, Area and Structure & Function (in the case of habitats) or the sum of the parameters Range, Population and Habitat for the species (in the case of species) for all Member States in the region where the habitat or the species occurs.
B = Coverage of the feature by the Natura 2000 network (in percent)
C = Low Hanging Fruit (LHF) score for the habitat or species
For each parameter, the following rules are applied:

U2 = 2 points
U1 = 1 point
XX = 1 point
FV = 0 point
Example: Habitat 3130 in the Boreal biogeographical region: Range U1 in LV (1p), Area U1 in LT and LV (2p), S&F U1 in EE, FI, LT and SE and U2 in LV (6p) = in total 9 points. This is divided with percentage of the habitat that occurring in Natura 2000 sites in the Boreal region (57.48%) and then multiplied by 100. This gives the score 15,66.

Step 3: The features are sorted within each LHF Group 1- 10 after their score from lowest to highest.

Step 4: For each feature the need for improvement in order to contribute to Target 1 is identified (as far as possible, sometimes there are too many unknowns) and the threats reported in Article 17 (only 'High') are taken into account.
Step 5: The features are checked by an expert one by one to sort out which of these habitats are true 'Low Hanging Fruits", i.e. could reach improvement in a limited period of time.

3.3 Testing the proposed approach for habitats in the Boreal biogeographical region

Data from (2007-2012) Art.17 reporting for all Annex I habitats from the Boreal region were used. An overview table of the detailed results can be found in Annex to this note.

The robustness of a methodological approach to identify "low hanging fruits" largely depends on the quality of the data from Article 17. The Boreal region is probably the region with the best and most homogeneous data across Member States. Still, much of the information is based on expert judgment with rather week underpinning especially for Structure & Functions.

In the Boreal region, 82 habitats listed under the Habitats Directive are reported.

Step 1 gives the following results after grouping the habitats:

Group 1 – Habitats that already are FV	–	9 habitats
Group 2 – U1+ could change to FV	–	2 habitats
Group 3 – U1= could change to U1+	–	13 habitats
Group 4 – U1x could change to U1+	–	2 habitats
Group 5 – U1- could change to U1=	–	12 habitats
Group 6 – U2+ could change to U1	–	6 habitats
Group 7 – U2= could change to U2+	–	5 habitats
Group 8 – U2x could change to U2+	–	3 habitats
Group 9 – U2- could change to U2=	–	28 habitats
Group 10 – XX could change to U1+ or U2+	–	2 habitats

Habitats in each group share to a high extent the need for improvement, and groups with the same sort of improvement are closer to each other e.g. Group 3 and 7 – both should change from = to + to improve.

Steps 2 and 3 for all habitats was carried out - the defined algorithm C= A/B was applied and the habitats were ranked inside each group.

In general the habitats with few Member States responsible for improvement and with a high proportion of the habitat inside Natura 2000 are ranked high.

Step 4: For each habitat the main needs to reach improvement towards Target 1 were described based on the data from the Member States national Article 17 reports and the biogeographical assessment.

For most habitats it was rather clear what is needed and about how much as in most cases it is a trend that need to change from – to = or = to + and the most common parameter that should improve are Structure & Functions.

Step 5: Habitats with the highest probability to improve according to Target 1 were selected manually, primarily based on the need for improvement, but also in some cases by taking into account in addition the threats listed in the Art.17 (those reported as 'High').

Results of the tested approach are presented in Table 3.2.

Table 3.2. Habitats selected as 'Low Hanging Fruits' (not ranked)

Habitat	Group	NEED FOR IMPROVEMENT *Critical parameters and MS to reach improvement*
4060	Group 3	Structure & Functions in FI - positive trend needed for quality in FI
9040	Group 3	Structure & Functions in FI - positive trend needed for quality in FI
3210	Group 3	Structure & Functions in FI - positive trend needed for quality in FI
1210	Group 3	Structure & Functions in SE - positive trend needed for quality in SE
1220	Group 3	Structure & Functions in SE - positive trend needed for quality in SE
3180	Group 4	Structure & Functions in EE – positive and known trend needed for quality in EE
8210	Group 5	Area in FI - stop the decrease in Area in FI
3130	Group 5	Structure & Functions in SE - stop the decrease in quality in SE
91D0	Group 5	Structure & Functions in FI - stop the decrease in quality in FI
7140	Group 5	Structure & Functions in SE - stop the decrease in quality in SE
1330	Group 7	Area in SE - restore to get a positive trend in SE
8230	Group 9	Area in SE - stop the decrease in Area in SE
1640	Group 9	Area in FI - stop the decrease in Area in FI
9060	Group 9	Structure & Functions in FI - stop decrease in quality in FI
7160	Group 9	Structure & Functions in SE - stop decrease in quality in SE
4030	Group 9	Area in FI and SE - stop the decrease in Area in FI and SE
6110	Group 9	Structure & Functions in SE - stop decrease in quality in SE
91T0	Group 9	Area in LT - stop decrease in Area in LT

Note: Overlap with list of habitats according to 'Worst situation approach' flagged in yellow for habitats selected with 2001-2006 data and in blue for habitats selected with 2007-2012 data

Most habitats that are "easy targets" are those from Group 3 U1= that should improve to U1+ or Group 5 and 9 U1- and U2- that should improve to U1= respectively U2=. As in most cases the parameter 'Structure & Functions' needs to improve, the more detailed information on what is needed is lacking in the Article 17 reports. Therefore, with this uncertainty in mind, an internal ranking between the listed habitats is not possible at the moment without input from Member States.

Comparing with Table 2.2, it can be seen that 3 'Low Hanging Fruits' habitats were also selected among the Top 18 Boreal habitat-types according to the 'Worst situation approach', based on Art 17 (2001-2006) data i.e. 91DO (*Bog woodlands*), 9060 (*Coniferous forests on, or connected to, glaciofluvial eskers*) and 7160 (*Fennoscandian mineral-rich springs and spring fens*). They are flagged in yellow in Table 3.2

3.4   Conclusions on the 'Low Hanging Fruits' approach applied to Boreal habitat-types

Most of the 'Low Hanging Fruits' habitats depend on improvements in only one MS (not surprising!)
For most LHF habitats, a change in the trend of the 'Structure & Function' parameter is needed. Parameters 'Area' or 'Range' are probably more difficult to improve. This result is another argument in favour of more information on 'Structure & Function' in the Article 17 reporting as it is crucial information needed for a better assessment on how to improve conservation status.

The 10 different groups of habitat can be further investigated for different uses, as they point out a) habitats that are in need of better information (Group 4, 8 and 10); b) habitats that are in need of stopping deterioration (Group 5 and 9); and c) habitats that are probably the closest to a change in status class: U1 to FV or U2 to U1 (Group 2 and 6).

One result of this test is that in general habitats that need an improvement in trend from = to + or − to = are easier and faster in response than habitats that need to change status class from U1 to FV or U2 to U1. It is normally much easier to change a trend than to reach an improvement based on a threshold. Only three habitats from the previous priority ('Top 18') list based on 2007-2012 data are also in the LHF list, but that was expected as the ranking criteria were to a large extent opposed to each other.

4. Introduction to descriptive fact-sheets for Low Hanging Fruits habitats in the Boreal region

Each of the 18 Top Low Hanging Fruits habitat-types identified for the Boreal region are described in separate fact-sheets (see document entitled "Supporting elements for the Boreal review seminar, 2nd part: Fact sheets for "Low hanging fruits" habitats) and provide the following information:

- Summary: A summary of main features described in the following sections:
- Habitat description: as reflected in Manual of Habitats interpretation
- Distribution in the Boreal region and coverage by Natura 2000 network: as reported by Member States in their 2013 report (covering the period 2007-2012)
- Biogeographical conservation status assessment: as reported by Member States in their 2013 report (covering the period 2007-2012) and available at: http: //bd. Eionet.europar.eu/article17/reports2012/
- Pressures, threats and proposed measures: as reported by Member States in their 2013 report (covering the period 2007-2012)
- Reason for selection as 'Low Hanging Fruit' habitat in the Boreal region: outcome of an analysis of the parameters which could rapidly improve
- Priority conservation measures needed: outcome of an expert judgement analysis
- Links: link to the relevant page on the Art 17 portal http: //bd. Eionet.europar.eu/article17/reports2012/
- In addition, a section to be filled by Member States is appended to each fact-sheet.

Annex

Results of application of 'Low Hanging Fruit' criteria per habitat in the Boreal Region

Legend:

CS = conservation status; **n° MS** = number of Member States where the habitat occurs in the region; **R** = Points for Range (see step 2 of methodology); **A** = Points for Area (see step 2 of methodology), **S&F** = Points for Structure & Functions (see step 2 of methodology); **Total**: Total of points summing up R, A, S&F; **Area (km²)** = Total area of habitat; **Area (N2K)** = Area of habitat inside the Natura 2000 network; **N2K cover (%)** = Percentage of total habitat area covered by the Natura 2000 network; **Cover class**: N2K cover expressed in classes (1 = 0-19,9 % , 2 = 20-49,9 %, 3 = 50-79,9 %, 4 = 80-100 %); **LHF index**: Result of the application of the algorithm under step 2 of the LHF methodology x 100; Low Hanging Fruits are marked in light red

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
Group 1 - Habitats in FV on Biogeographical level														
1230	FV	4	0	0	0	0	453	43	10	1	0,00	1	OK	NO HIGH
3220	FV	2	0	0	0	0	49	6	12	1	0,00	1	OK	NO HIGH
4080	FV	2	0	0	0	0	16	7	44	2	0,00	1	OK	NO HIGH
6150	FV	2	0	0	0	0	78	14	18	1	0,00	1	OK	NO HIGH
8110	FV	2	0	0	0	0	2	2	100	4	0,00	1	OK	NO HIGH
8120	FV	1	0	0	0	0	0	0	100	4	0,00	1	OK	NO HIGH
8220	FV	5	0	0	1	1	1364	240	18	1	5,68	2	OK	B02.06 - thinning of tree layer; D01.01 - paths, tracks, cycling tracks; C01.01 - Sand and gravel extraction; K02 - Biocenotic evolution, succession; L05 - collapse of terrain, landslide
8310	FV	4	0	0	1	1	1	0	9	1	11,59	3	OK	L05 - collapse of terrain, landslide; H01 - Pollution to surface waters (limnic &

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
														terrestrial, marine & brackish)
7210	FV	5	0	1	3	4	101	32	31	2	12,71	4	OK	A01 - Cultivation; J02.04.02 - lack of flooding; M01.07 - sea-level changes; J02 - human induced changes in hydraulic conditions; J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; K02.01 - species composition change (succession); K02.03 - eutrophication (natural); K02.04 - acidification (natural)
Group 2 - Habitats needs to be FV on Biogeographical level to improve														
3160	U1+	5	0	1	2	3	17923	3197	18	1	16,82	1	Structure & Functions in FI - hard to say how much needed of pollution reduction to get FV	C01.03 - Peat extraction; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; F02.03 - Leisure fishing; K02.02 - accumulation of organic material
3110	U1+	3	0	0	3	3	15204	2702	18	1	16,88	2	Structure & Functions in FI - hard to say how much needed of pollution reduction to get FV	E03.01 - disposal of household / recreational facility waste; E01.04 - other patterns of habitation; G01 - Outdoor sports and leisure activities, recreational activities; D01.03 - car parks and parking areas; K02.02 - accumulation of organic material
Group 3 - Habitats needs to change from U1= to U1+ on Biogeographical level to improve														
4060	U1=	2	0	0	1	1	1400	1249	89	4	1,12	1	Structure & Functions in FI - positive trend needed for quality in FI	NO HIGH
9040	U1=	1	0	0	1	1	1420	1200	85	4	1,18	2	Structure & Functions in FI - positive trend needed for quality in FI	NO HIGH
3210	U1=	2	0	0	2	2	990	440	44	2	4,50	3	Structure & Functions in FI - positive trend needed for quality in FI	NO HIGH

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
2110	U1=	5	0	1	3	4	6	5	81	4	4,94	4	Structure & Functions in FI and SE - positive trend needed for quality in FI and SE + better knowledge from LT	G01 - Outdoor sports and leisure activities, recreational activities; G05.01 - Trampling, overuse; L07 - storm, cyclone; L02 - tidal wave, tsunamis; M01.07 - sea-level changes
7150	U1=	3	1	2	2	5	104	82	79	3	6,33	5	Area and Structure & Functions in LV - probably both Area and Structure & Functions need to be increasing + better knowledge from LT	C01.03.02 - mechanical removal of peat; M01.01 - temperature changes (e.g. rise of temperature & extremes); C01.03 - Peat extraction; K02 - Biocenotic evolution, succession; J02 - human induced changes in hydraulic conditions; J02.05 - Modification of hydrographic functioning, general; K02.01 - species composition change (succession)
1210	U1=	4	0	1	3	4	11	5	42	2	9,48	6	Structure & Functions in SE - positive trend needed for quality in SE	H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); G05.01 - Trampling, overuse
2140	U1=	5	1	3	4	8	3	2	82	4	9,72	7	Range in FI, Area in FI and LT, Structure & Functions in FI, LT and LV - complex situation	G01 - Outdoor sports and leisure activities, recreational activities; G05.01 - Trampling, overuse; K02 - Biocenotic evolution, succession; K02 - Biocenotic evolution, succession; K02.01 - species composition change (succession); K02.02 - accumulation of organic material
2170	U1=	3	0	2	3	5	1	1	49	2	10,16	8	Structure & Functions in LT and LV, negative trend for area in LT - hard to say how much needed to get a positive trend + lack of knowledge from SE	B01 - forest planting on open ground; G01 - Outdoor sports and leisure activities, recreational activities; K02 - Biocenotic evolution, succession
2190	U1=	5	0	4	5	9	17	15	89	4	10,16	9	Area in FI, LV and SE, negative trend for area in FI and LV, Structure &	K02 - Biocenotic evolution, succession; B02 - Forest and Plantation management & use; J02.02.02 - estuarine and coastal

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													Functions in FI, LV and SE - complex situation	dredging; J02.05 - Modification of hydrographic functioning, general; L07 - storm, cyclone; K02.01 - species composition change (succession); K02.02 - accumulation of organic material
3140	U1=	5	1	1	4	6	769	399	52	3	11,55	10	Structure & Functions in LT and SE - hard to say how much needed to get a positive trend + lack of knowledge from LV	H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); A08 - Fertilisation; E01.02 - discontinuous urbanisation; J02.05 - Modification of hydrographic functioning, general; I02 - problematic native species; K02.02 - accumulation of organic material
3270	U1=	2	0	2	2	4	5	1	25	2	15,73	11	Structure & Functions in LT - hard to say how much needed to get a positive trend + lack of knowledge from LT and LV	A02.01 - agricultural intensification; H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); J02.05 - Modification of hydrographic functioning, general; D03.01 - port areas
6430	U1=	5	0	4	3	7	122	51	42	2	16,54	12	Structure & Functions in FI and LT, area in SE (probably not important) - lack of knowledge from FI, LT and SE	A04.03 - abandonment of pastoral systems, lack of grazing; J02.05 - Modification of hydrographic functioning, general; B01 - forest planting on open ground
1220	U1=	4	0	1	2	3	368	39	10	1	28,67	13	Structure & Functions in SE - positive trend needed for quality in SE	NO HIGH
Group 4 - Habitats needs to change from U1x to U1+ on Biogeographical level to improve														
3180	U1x	1	0	0	1	1	2	1	55	3	1,82	1	Structure & Functions in EE - positive and known trend needed for quality in EE	C01.04.02 - underground mining; H02 - Pollution to groundwater (point sources and diffuse sources)
7220	U1x	5	0	3	4	7	5	1	31	2	22,51	2	Area and Structure & Functions mainly in EE, also Area and Structure &	A08 - Fertilisation; J02.05 - Modification of hydrographic functioning, general; J02.07.05 - other major groundwater

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													Functions in FI and LV and Structure & Functions in SE - positive trend needed in EE, not too hard to reach	abstractions from groundwater for agriculture; J02.01.04 - recultivation of mining areas; C01.04 - Mines; J02.07 - Water abstractions from groundwater; J02 - human induced changes in hydraulic conditions; J02.03 - Canalisation & water deviation; B02 - Forest and Plantation management & use; K02.01 - species composition change (succession); B02.02 - forestry clearance; J02.05 - Modification of hydrographic functioning, general
Group 5 - Habitats needs to change from U1- to U1= on Biogeographical level to improve														
1620	U1-	3	0	0	1	1	1783	589	33	2	3,02	1	Structure & Functions in SE - hard to say who much needed	H01.05 - diffuse pollution to surface waters due to agricultural and forestry activities; H01.03 - other point source pollution to surface water
1610	U1-	2	0	0	2	2	275	83	30	2	6,63	2	Structure & Functions in FI - hard to say who much needed	H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish)
9030	U1-	2	0	2	1	3	342	143	42	2	7,20	3	Structure & Functions and Area in FI - could be possible to stop the decrease?	B02 - Forest and Plantation management & use; M01.07 - sea-level changes
8210	U1-	5	0	1	2	3	6	2	39	2	7,60	4	Area in FI - stop the decrease in Area in FI	B02 - Forest and Plantation management & use; C01.07 - Mining and extraction activities not referred to above; L05 - collapse of terrain, landslide
1310	U1-	3	0	3	2	5	7	4	59	3	8,50	5	Area and Structure & Functions in SE, a positive trend in any of them would be enough?	A04.03 - abandonment of pastoral systems, lack of grazing; K01 - abiotic (slow) natural processes; G01.02 - walking, horse-riding and non-motorised vehicles; G05.01 - Trampling, overuse
8240	U1-	2	0	1	1	2	7	1	20	1	10,15	6	Structure & Functions in	NO HIGH

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													EE - hard to say who much needed	
7310	U1-	2	0	1	2	3	28200	7548	27	2	11,21	7	Area and Structure & Functions in FI - minus operator only from Structure & Functions, hard to say how much needed?	J02 - human induced changes in hydraulic conditions; B07 - Forestry activities not referred to above
1150	U1-	5	1	2	5	8	1211	633	52	3	15,30	8	Area in SE and Structure & Functions in FI and SE - hard to say how much time needed to stop the negative trend?	D03.01.02 - piers / tourist harbours or recreational piers; D03.02 - Shipping lanes; J02.02.02 - estuarine and coastal dredging; J02.11.01 - Dumping, depositing of dredged deposits; K02.02 - accumulation of organic material; A02.01 - agricultural intensification; D03 - shipping lanes, ports, marine constructions; E03 - Discharges; L07 - storm, cyclone; J02 - human induced changes in hydraulic conditions
3130	U1-	5	1	2	6	9	5288	3039	57	3	15,66	9	Structure & Functions in SE - stop the decrease in quality in SE	H01.08 - diffuse pollution to surface waters due to household sewage and waste waters; K02.01 - species composition change (succession); K02.02 - accumulation of organic material; H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; E01 - Urbanised areas, human habitation; G01 - Outdoor sports and leisure activities, recreational activities; K02.01 - species composition change (succession); K02.03 - eutrophication

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
														(natural)
7230	U1-	5	2	5	5	12	2598	782	30	2	39,85	10	Area in SE and Structure & Functions in FI and SE - negative trend have to stop for at least Structure & Functions in FI	J02.08.04 - other major groundwater recharge; M01.02 - droughts and less precipitations; J02 - human induced changes in hydraulic conditions; B07 - Forestry activities not referred to above; J02.05 - Modification of hydrographic functioning, general; J02.03 - Canalisation & water deviation; C01.03 - Peat extraction; K02.01 - species composition change (succession); A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing
91D0	U1-	5	0	3	4	7	40748	3903	10	1	73,08	11	Structure & Functions in FI - stop the decrease in quality in FI	J02.05 - Modification of hydrographic functioning, general; J02 - human induced changes in hydraulic conditions; B07 - Forestry activities not referred to above; J02.03 - Canalisation & water deviation; K02 - Biocenotic evolution, succession; B02.02 - forestry clearance; B02.06 - thinning of tree layer
7140	U1-	5	0	4	5	9	21185	1599	8	1	119,25	12	Structure & Functions in SE - stop the decrease in quality in SE	J02.05 - Modification of hydrographic functioning, general; J02 - human induced changes in hydraulic conditions; B07 - Forestry activities not referred to above; K02 - Biocenotic evolution, succession; K02.01 - species composition change (succession); C01.03.02 - mechanical removal of peat
Group 6 - Habitats needs to change from U2+ to U1 on Biogeographical level to improve														
9110	U2+	1	0	2	1	3	14	12	86	4	3,50	1	Area in SE - hard to improve 20% in short time	K02.01 - species composition change (succession); J03.02 - anthropogenic

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													to get U1	reduction of habitat connectivity
9130	U2+	1	0	2	1	3	9	2	22	2	13,50	2	Area in SE - hard to improve 100% in short time to get U1	K02.01 - species composition change (succession); J03.02 - anthropogenic reduction of habitat connectivity
1630	U2+	4	0	5	6	11	246	191	78	3	14,14	3	Area in SE and Structure & Functions in FI - Area in SE need to increase close to 300% and Structure & Functions in FI need to improve	A04.03 - abandonment of pastoral systems, lack of grazing; K02.01 - species composition change (succession); A03.03 - abandonment / lack of mowing; K01.01 - Erosion; A01 - Cultivation
2320	U2+	5	3	5	5	13	43	33	76	3	17,08	4	Range, Area and Structure & Functions in SE - Range must increase 30%, Area 200% and a better status for Structure & Functions in SE	K02 - Biocenotic evolution, succession; A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing; G04.02 - abandonment of military use; J01.03 - lack of fires; K02.01 - species composition change (succession); K02.02 - accumulation of organic material
9020	U2+	5	0	7	7	14	287	135	47	2	29,80	5	Area in LT and SE and area trend in LT and LV, Structure & Functions in LT and LV - Area in LT and SE have to increase, negative trend on Area has to decrease LV and Structure & Functions in LT and LV has to improve	B02 - Forest and Plantation management & use; J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; K04.05 - damage by herbivores (including game species); K02.01 - species composition change (succession); J03.02 - anthropogenic reduction of habitat connectivity
7120	U2+	5	4	8	7	19	728	188	26	2	73,63	6	This habitat has an upside down approach, so would the area in EE and LV decrease for get from U2+ to U1?	J01.01 - burning down; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; K02.01 - species composition change (succession); C01.03.02 -

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
														mechanical removal of peat
Group 7 - Habitats needs to change from U2= to U2+ on Biogeographical level to improve														
91F0	U2=	4	1	5	6	12	14	12	85	4	14,05	1	Structure & Functions in LT and LV and area in LT - most important to stop the decrease in quality in LV	B02 - Forest and Plantation management & use; J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; J03.02 - anthropogenic reduction of habitat connectivity; J02 - human induced changes in hydraulic conditions
3150	U2=	5	0	1	6	7	2673	987	37	2	18,96	2	Structure & Functions in FI, LT, LV and SE - hard to say how much needed to get a positive trend	H01.05 - diffuse pollution to surface waters due to agricultural and forestry activities; K02 - Biocenotic evolution, succession; H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); A08 - Fertilisation; J02.05 - Modification of hydrographic functioning, general; E01 - Urbanised areas, human habitation; G01 - Outdoor sports and leisure activities, recreational activities; K02.03 - eutrophication (natural)
9160	U2=	3	0	5	4	9	191	76	40	2	22,72	3	Area in LT and LV and Structure & Functions in LV - all negative trend needs to stop	J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; K04.05 - damage by herbivores (including game species); K02.01 - species composition change (succession); J03.02 - anthropogenic reduction of habitat connectivity
1330	U2=	1	0	2	1	3	8	1	10	1	30,00	4	Area in SE - restore to get a positive trend in SE	A04.03 - abandonment of pastoral systems, lack of grazing
9050	U2=	4	0	3	4	7	5559	297	5	1	131,06	5	Area in SE and Structure & Functions in FI - negative	B02.06 - thinning of tree layer; B02 - Forest and Plantation management & use;

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													area trend in SE needs to stop and Structure & Functions trend in FI needs to be positive	J02.03 - Canalisation & water deviation; J02.03 - Canalisation & water deviation; H04 - Air pollution, air-borne pollutants; K02 - Biocenotic evolution, succession; B02 - Forest and Plantation management & use; J03.02 - anthropogenic reduction of habitat connectivity
Group 8 - Habitats needs to change from U2x to U2+ on Biogeographical level to improve														
4010	U2x	2	1	4	4	9	4	4	100	4	9,00	1	Area and Structure & Functions in LV and SE - if the trend of Area in LV are known it could be enough, otherwise it is needed to change the decrease to an increase of Area and/or Structure & Functions in LV and SE	A04.03 - abandonment of pastoral systems, lack of grazing; J02.05 - Modification of hydrographic functioning, general; K02.01 - species composition change (succession); B01.01 - forest planting on open ground (native trees); J03.02 - anthropogenic reduction of habitat connectivity
9190	U2x	3	0	4	3	7	16	10	62	3	11,30	2	Structure & Functions in SE - trend of Structure & Functions needs to be known and positive	B02 - Forest and Plantation management & use; K02 - Biocenotic evolution, succession; K02.01 - species composition change (succession); K04.05 - damage by herbivores (including game species); J03.02 - anthropogenic reduction of habitat connectivity
9180	U2x	5	0	4	4	8	105	58	55	3	14,46	3	Area in LV - Trend in Area need to know and positive	B02 - Forest and Plantation management & use; K02 - Biocenotic evolution, succession; B02.02 - forestry clearance; J03.02 - anthropogenic reduction of habitat connectivity
Group 9 - Habitats needs to change from U2- to U2= on Biogeographical level to improve														
7320	U2-	1	0	0	1	1	15	15	100	4	1,00	1	Structure & Functions in FI - very hard to get U= as the problem is the climate	M01.01 - temperature changes (e.g. rise of temperature & extremes); M01.03 - flooding and rising precipitations

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													change	
8230	U2-	2	0	2	1	3	110	55	50	3	6,00	2	Area in SE - stop the decrease in Area in SE	NO HIGH
6280	U2-	3	0	4	5	9	162	120	74	3	12,09	3	Area in SE and Structure & Functions in EE and SE - probably needs a stop of decrease of area and Structure & Functions in both EE and SE	A04.03 - abandonment of pastoral systems, lack of grazing; E01 - Urbanised areas, human habitation
1640	U2-	4	0	2	4	6	28	12	43	2	13,99	4	Area in FI - stop the decrease in Area in FI	H04.02 - Nitrogen-input; H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); I01 - invasive non-native species; G01 - Outdoor sports and leisure activities, recreational activities; K02 - Biocenotic evolution, succession; G05.01 - Trampling, overuse
2330	U2-	4	3	5	6	14	25	24	95	4	14,81	5	Area and Structure & Functions in LT - the decrease in Area in LT needs to stop	A03.03 - abandonment / lack of mowing; B02 - Forest and Plantation management & use; K02 - Biocenotic evolution, succession; A04.03 - abandonment of pastoral systems, lack of grazing; J01.03 - lack of fires; K02.01 - species composition change (succession); K02.02 - accumulation of organic material
2120	U2-	5	0	6	6	12	22	17	77	3	15,57	6	Area in LV and SE and Structure & Functions in FI and SE - probably needs only the decrease in Area in LV and SE to stop	G01 - Outdoor sports and leisure activities, recreational activities; G05.01 - Trampling, overuse; I01 - invasive non-native species; B01 - forest planting on open ground; L07 - storm, cyclone; K01.01 - Erosion; I02 - problematic native species
2130	U2-	5	0	5	7	12	42	27	63	3	18,99	7	Area and Structure & Functions in SE and Structure & Functions in	G01 - Outdoor sports and leisure activities, recreational activities; G05.01 - Trampling, overuse; K02 - Biocenotic

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													LT - stop decline in SE and LT and better data from LT	evolution, succession; I02 - problematic native species; K02.01 - species composition change (succession); K02.02 - accumulation of organic material
2180	U2-	5	0	2	7	9	804	363	45	2	19,96	8	Structure & Functions and Area in LV - need of stop decrease in quality, and information concerning Area has to be known in LV	E01.03 - dispersed habitation; B02 - Forest and Plantation management & use; E01 - Urbanised areas, human habitation; B02.01.01 - forest replanting (native trees); B02.02 - forestry clearance; B02.04 - removal of dead and dying trees; J03.02 - anthropogenic reduction of habitat connectivity; G05.07 - missing or wrongly directed conservation measures; J01.02 - suppression of natural fires; J01.03 - lack of fires
6450	U2-	5	3	5	8	16	483	363	75	3	21,29	9	Area and Structure & Functions in LV - if decrease is stopped in LV it would probably be enough	A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing; J02.05 - Modification of hydrographic functioning, general; A01 - Cultivation; J02.04.02 - lack of flooding
6530	U2-	5	4	8	9	21	64	56	88	4	23,76	10	Area and Structure & Functions in LV - if decrease is stopped in LV it would probably be enough	A03.03 - abandonment / lack of mowing; K02 - Biocenotic evolution, succession; A04.03 - abandonment of pastoral systems, lack of grazing; B01 - forest planting on open ground; J03.01 - reduction or loss of specific habitat features; K02.01 - species composition change (succession); K03.03 - introduction of disease (microbial pathogens)
9060	U2-	5	0	2	8	10	191	76	40	2	25,24	11	Structure & Functions in FI - stop decrease in quality in FI	K02.01 - species composition change (succession); J01.03 - lack of fires; K02.02 - accumulation of organic material;

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
	-													K02.03 - eutrophication (natural); B02 - Forest and Plantation management & use; C01.01 - Sand and gravel extraction; H04.02 - Nitrogen-input; J03.02 - anthropogenic reduction of habitat connectivity
7110	U2-	5	0	5	6	11	9670	3764	39	2	28,26	12	Structure & Functions in FI and Area in LV - decrease in quality needs to stop in FI and LV and in area in LV	C01.03.02 - mechanical removal of peat; J02.05 - Modification of hydrographic functioning, general; J02 - human induced changes in hydraulic conditions; K02 - Biocenotic evolution, succession; K02.01 - species composition change (succession)
6120	U2-	3	0	4	6	10	19	7	34	2	29,69	13	Area and Structure & Functions in LT and LV - if decrease is stopped in LT and LV it would be enough but probably hard to reach in the short term	A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing; B01 - forest planting on open ground; A02 - modification of cultivation practices; K02.02 - accumulation of organic material
9010	U2-	5	0	7	9	16	26938	13847	51	3	31,13	14	Area and Structure & Functions in SE - decrease in Area and Structure & Functions needs to stop in SE	B02 - Forest and Plantation management & use; H04 - Air pollution, air-borne pollutants; D02 - Utility and service lines; B02.01.01 - forest replanting (native trees); B02.02 - forestry clearance; B02.04 - removal of dead and dying trees; B07 - Forestry activities not referred to above; K04.05 - damage by herbivores (including game species); J01.03 - lack of fires; K02.01 - species composition change (succession); J03.02 - anthropogenic reduction of habitat connectivity
9080	U2-	5	0	5	7	12	1506	574	38	2	31,47	15	Area and Structure & Functions in FI, LV and SE - complex situation with	B07 - Forestry activities not referred to above; J02 - human induced changes in hydraulic conditions; J02.04.02 - lack of

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													several unknowns involved	flooding; J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; J03.02 - anthropogenic reduction of habitat connectivity
3260	U2-	5	0	2	6	8	1061	262	25	2	32,36	16	Area in LT and Structure & Functions in LT, LV and SE - an increase in quality in SE could solve the problem	J02.03 - Canalisation & water deviation; J02.05 - Modification of hydrographic functioning, general; J02.05.02 - modifying structures of inland water courses; J02.15 - Other human induced changes in hydraulic conditions; A02.01 - agricultural intensification; A08 - Fertilisation; A07 - use of biocides, hormones and chemicals; B02.02 - forestry clearance; E01 - Urbanised areas, human habitation; G01 - Outdoor sports and leisure activities, recreational activities; J02.05 - Modification of hydrographic functioning, general
7160	U2-	5	0	3	5	8	88	20	23	2	34,29	17	Structure & Functions in SE - stop decrease in quality in SE	A08 - Fertilisation; C01.04.01 - open cast mining; J02.05.02 - modifying structures of inland water courses; J02.15 - Other human induced changes in hydraulic conditions; J02 - human induced changes in hydraulic conditions; C01.03 - Peat extraction; J02.05 - Modification of hydrographic functioning, general; K02 - Biocenotic evolution, succession; B02.02 - forestry clearance
4030	U2-	5	3	7	7	17	106	44	42	2	40,72	18	Area in FI and SE - stop the decrease in Area in FI and SE	A04.03 - abandonment of pastoral systems, lack of grazing; B01 - forest planting on open ground; A03.03 -

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
														abandonment / lack of mowing; K02.01 - species composition change (succession); J03.02 - anthropogenic reduction of habitat connectivity; J03.01 - reduction or loss of specific habitat features; J01.03 - lack of fires
6510	U2-	5	2	6	7	15	228	74	32	2	46,40	19	Area in LT, LV and SE, Structure & Functions in FIN, LV and SE - stop decrease of Area in LT is probably the critical factor	A04.03 - abandonment of pastoral systems, lack of grazing; E01 - Urbanised areas, human habitation; A03.03 - abandonment / lack of mowing; A01 - Cultivation; I02 - problematic native species;
6210	U2-	5	0	8	9	17	261	90	34	2	49,46	20	Area and Structure & Functions in FI, LT, LV and SE - stop decrease of Area and Structure & Functions in SE is critical, but also FI, LT and LV need to improve	A04.03 - abandonment of pastoral systems, lack of grazing; E01 - Urbanised areas, human habitation; A03.03 - abandonment / lack of mowing; B01 - forest planting on open ground; A02 - modification of cultivation practices
91E0	U2-	5	1	5	7	13	450	114	25	2	51,36	21	Area and Structure & Functions in FI, LV and SE - complex situation with several unknowns involved	J02.05.02 - modifying structures of inland water courses; J02.05 - Modification of hydrographic functioning, general; J02.04.02 - lack of flooding; B02 - Forest and Plantation management & use; K02 - Biocenotic evolution, succession; B02.02 - forestry clearance; J02 - human induced changes in hydraulic conditions; J03.02 - anthropogenic reduction of habitat connectivity
6110	U2-	2	0	2	3	5	10	1	9	1	55,00	22	Structure & Functions in SE - stop decrease in quality in SE	J02.05.02 - modifying structures of inland water courses; K01.01 - Erosion; J03.02 - anthropogenic reduction of habitat connectivity; A04.03 - abandonment of pastoral systems, lack of grazing

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
6410	U2-	5	1	8	8	17	333	91	27	2	62,23	23	Area and Structure & Functions in SE - stop decrease in area and quality in SE	A04.03 - abandonment of pastoral systems, lack of grazing; A03.03 - abandonment / lack of mowing; B01 - forest planting on open ground; K02 - Biocenotic evolution, succession; J02.05 - Modification of hydrographic functioning, general; J02 - human induced changes in hydraulic conditions; A02 - modification of cultivation practices; I02 - problematic native species
9070	U2-	4	2	6	7	15	748	153	21	2	73,14	24	Area and Structure & Functions in SE - decrease needs to stop	A04.03 - abandonment of pastoral systems, lack of grazing; B01.01 - forest planting on open ground (native trees); K02 - Biocenotic evolution, succession; K03.03 - introduction of disease (microbial pathogens)
91T0	U2-	1	0	2	1	3	130	5	4	1	78,00	25	Area in LT - stop decrease in Area in LT	B02 - Forest and Plantation management & use; K02 - Biocenotic evolution, succession
6520	U2-	2	2	4	4	10	9	1	10	1	100,43	26	Area and Structure & Functions in SE - stop decrease in area and quality in SE	A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing
6230	U2-	4	2	8	8	18	71	8	11	1	163,64	27	Area and Structure & Functions in SE - stop decrease in area and quality in SE	A04.03 - abandonment of pastoral systems, lack of grazing; A03.03 - abandonment / lack of mowing; A05.02 - stock feeding; A08 - Fertilisation; A01 - Cultivation; I02 - problematic native species; K02.01 - species composition change (succession)
6270	U2-	5	2	6	8	16	1564	113	7	1	221,24	28	Area and Structure & Functions in SE - stop decrease in area and	A04.03 - abandonment of pastoral systems, lack of grazing; E01 - Urbanised areas, human habitation; A03.03 -

Habitat	CS	n° MS	R	A	S&F	Total	Area (km²)	Area (N2K)	N2K cover (%)	Cover class	LHF index	Rank	Need for improvement	Important threats ('high' only)
													quality in SE	abandonment / lack of mowing; A08 - Fertilisation; B01 - forest planting on open ground; A02 - modification of cultivation practices; A02.03 - grassland removal for arable land; I02 - problematic native species
Group 10 - Habitats needs to change from XX to U1+ or U2+ on Biogeographical level to improve														
3190	XXx	2	0	0	2	2	1	0	60	3	3,35	1	Structure & Functions in LT and LV - hard to say what needed as Structure & Functions are XX in both MS	K01.01 - Erosion; K02 - Biocenotic evolution, succession; A08 - Fertilisation; H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish); C01 - Mining and quarrying; B07 - Forestry activities not referred to above
5130	XX=	4	1	2	4	7	86	44	51	3	13,71	2	Range in LV and Structure & Functions in SE - more information from SE and LV needed	A03.03 - abandonment / lack of mowing; A04.03 - abandonment of pastoral systems, lack of grazing; J03.01 - reduction or loss of specific habitat features; K02.01 - species composition change (succession)