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**Supporting elements for
the second Natura 2000 seminar for
Continental, Pannonian, Black Sea
and Steppic regions**

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Executive summary

- This report provides analytical elements in support to the second Natura 2000 seminar for the Continental, Pannonian, Black Sea and Steppic regions.
- For the first seminar held in 2015, a list of 59 habitat-types of priority interest for discussion among countries of the Continental, Pannonian, Black Sea and Steppic regions had been selected. The establishment of this list resulted from a combination of a ranking of habitat-types prepared by ETC/BD based on main outcomes from 2001-2006 Art 17 reporting (20 habitats for the Continental region and 22 habitats for the Pannonian region clustered per broad habitat categories), and of an additional selection made by the Continental, Pannonian, Black Sea and Steppic regions Steering Committee (19 habitats added). The explanation of the approach was described in the pre-scoping document for the Continental, Pannonian, Black Sea and Steppic regions prepared by ETC/BD in December 2014¹. Section 2 of the present report presents a re-assessment of these 59 previously selected habitat-types, applying the (almost) same methodology than in 2014, based on outcomes of 2007-2012 Art 17 reporting. Details on conservation status and ranking of habitats are provided for the Continental and for the Pannonian regions, while only an indication of the presence of the selected priority habitats is provided for the Steppic and the Black Sea regions. The described 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’.
- While re-assessment of the 20 previously selected habitats of the Continental region according to the ‘worst situation approach’, making use of 2007-2012 Art 17 reporting provides –with limited exceptions- similarities with the ranking based on 2001-2006 Art 17 reporting, there are noticeable changes in the ranking for the 22 previously selected habitats of the Pannonian region.
- In section 3 of this document, another methodological approach is described and applied, aiming at the identification of habitats for which an improvement of the conservation status could potentially be reached rapidly, respectively for the Continental and in the Pannonian regions. This approach is the “Low Hanging Fruits” approach.
- Out of the 20 habitat-types for the Continental region and 22 habitat-types for the Pannonian regions selected according to the Low Hanging Fruits approach, respectively five and nine are common with the list of habitats selected for each of these regions according to the ‘worst situation approach’ based on 2007-2013 Art 17 data.
- Supporting data for both approaches (‘Worst situation approach’ and ‘Low Hanging Fruits approach’ are provided in a separate excel file.

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*

¹ Aronsson, M., Arvela, M., Bailly Maitre, J., Gavilan, L-P., Richard, D. and Sohlman A., 2014. Pre-scoping document for the Continental/Pannonian, Black Sea/Steppic regions (1st part Core document). ETC/BD report to the EEA, 27 pp + annexes

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 [first Continental, Pannonian, Black Sea and Steppic biogeographical seminar Alpine Natura 2000 Biogeographical seminar](#) took place on 29 June-1st July 2015, preceded by preparatory workshops for this region. 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 reporting for the period 2001-2006, and to prepare so-called 'Pre-scoping document' for the biogeographical regions. The applied methodology allowed to identify habitats in a rather bad situation, thus calling for urgent collaborative action among Member States.

Following discussion among Member States, a final selection of **59 habitat-types**² of the Continental, Pannonian, Black Sea and Steppic regions were identified as priority for further action by Member States. This was reflected in the Continental, Pannonian, Black Sea and Steppic Pre-scoping document prepared by ETC/BD in December 2014. It is to be noted that for the Steppic and Black Sea regions no habitat selection is done. Instead, an indication of the presence, in these regions, of priority habitats selected for the Continental and the Pannonian regions is indicated.

The second phase of the biogeographical seminars aims at monitoring and evaluating the results of the actions agreed at the kick-off seminars for each biogeographical region and to identify and recommend further priorities and opportunities for continuous development of the process. The second Natura 2000 seminar for the Continental, Pannonian, Black Sea and Steppic regions will take place in October 2018.

The present document gathers a number of elements/ analyses, which were agreed as needed in support to the preparation of the Continental, Pannonian, Black Sea and Steppic second seminar, namely:

In section 2: revisiting the assessment which had been made in December 2014, based on Art 17 (2001-2006) and leading to the identification of 20 priority Continental habitat-types and 22 priority Pannonian habitats, i.e. redo the analysis making use of Art 17 (2007-2012) data. The 19 habitats which had been added by the Steering Committee are also assessed and ranked. 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 December 2014 and is presented in section 2. An indication of the presence of the selected habitat-types is provided for the Steppic and the Black Sea regions. As previously mentioned, this methodology enhances

² The original ranking by ETC/BD applied to 20 habitat-types for the Continental region and 22 habitat-types for the Pannonian region. Nineteen habitat-types were further added by the Steering Committee for these regions. In total 59 habitat-types were selected

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 and with relatively low effort. This approach is called '**Low Hanging Fruits**' approach. Twenty two habitat types for the Continental region and 20 for the Pannonian region, selected according to this approach are presented and ranked.

2 Re-assessing Continental, Pannonian, Black Sea and Steppic Sea habitat types based on 2007-2012 reporting data ('Worst situation approach')

2.1 Data used

In the pre-scoping document for the Continental, Pannonian, Black Sea and Steppic regions, prepared in December 2014, 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). Following a pre-selection, by ETC/BD, of 20 habitat-types for the Continental region and 22 habitat-types for the Pannonian region, the biogeographical steering committee decided to add 19 habitats of the Continental region and 1 habitat for the Pannonian region, which led to a final selection of 59 priority habitat-types for both regions. It is to be noted that for the Steppic and Black Sea regions no habitat selection is done. Instead, an indication of the presence, in these regions, of priority habitats selected for the Continental and the Pannonian regions is indicated.

In the following section of the present document, a re-analysis and a re-ranking of the 59 previously selected habitats are made, using more recent Art. 17 data, i.e. from the period 2007-2012 (<http://bd.eionet.europa.eu/article17>).

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 a higher number of 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 (declining trend)*

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 declining³

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 “*Species-rich Nardus grasslands on siliceous substrates in mountain areas (and submountain areas in Continental Europe)*” (6230) in the Alpine region was assessed as follows:

	Member State	Score for criteria A	Conservation status	Score for criteria B	Trend	Score for criteria C
	AT		U1	1	=	
	BG		U1	1	=	
	DE		U1	1	-	1
	ES		XX	1		
	FR		FV			
	IT		U2	2	-	1
	PL		U2	2	-	1
	RO		FV			
	SE		U2	2	-	1
	SI		U1	1	-	1
	SK		U1	1	-	1
		11		12		6
Priority Index	198					

$$A = 11$$

$$B = 2(N^{\circ}U2) + 1(N^{\circ}U1) + 1(N^{\circ}XX) = 2*3 + 1*5 + 1*1 = 12$$

$$C = 1(N^{\circ}-) = 1*6 = 6$$

$$\text{Priority Index} = A*(B+C) = 11*(12+6) = 198$$

2.2.3 Clustering habitats per main habitat groups

Habitat-types had been clustered by the Steering Committee of the Continental, Pannonian, Steppic with distinguishing colours, as presented in Table 2.1.

³ 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.

Table 2.1 List of habitat groups used with distinguishing colours

Sparsely vegetated land	
Coastal	
Woodland and Forest	
Grassland	
Heathland and scrub	
Wetlands	
Rivers and lakes	

2.3 Results of habitat ranking according to the ‘worst situation approach’

Continental region

Results of applying the above described methodology on the 20 previously selected Continental habitat-types, making use of Art 2007-2012 data, (2013 results) as compared to 2007 results (Art 17 2001-2007 data) are shown in Table 2.2a. Results for the 19 Continental habitat-types added by the Steering Committee are presented in Table 2.2b.

In both cases, presence of the habitat-types in the Steppic and in the Black Sea regions is indicated, when relevant.

Both when using 2007 and 2013 results, the ranking of the 19 habitat-types added by the Steering Committee goes much beyond 20. For the 20 initially selected habitats, the new ranking shows a number of changes in the order of “priority” habitats:

- While 11 habitats rank among the first ones under both assessments, there is a noticeable exception with habitat 91E0 (*Alluvial forests with Alnus glutinosa and Fraxinus excelsior*) which ranks 2nd using 2013 data while it ranked 14th with 2007 data.
Habitat 9110 (*Luzulo-Fagetum beech forests*) ranks 12th with 2013 data while it only ranked 17th with 2007 data.
Habitat 5130 (*Juniperus communis formations on heaths*) and habitat 3160 (*Natural dystrophic lakes and ponds*) which ranked respectively 12th and 13th with 2007 data only rank respectively 21st and 28th with 2013 data.

Fourteen out of the 20 first ranking habitats (making use of 2013 results) are present in the Black Sea region and 10 occur in the Steppic region.

Table 2.2.a EU conservation status and Priority Index of 20 first ranking habitats of the Continental region, comparing assessments based on (2007-2012) Art 17 data and (2001-2006) Art 17, with indication of habitat presence in the Steppic and in the Black Sea regions

Habitat (distinguished per habitat group)	N2K code	CON CS (2007)	A*(B+C) (2007)	PRIO 2007	CON CS (2013)	A*(B+C) (2013)	PRIO 2013		Occur in BLS	Occur in STE
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	6410	U2	403	1	U2	364	1		X	X
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)	91E0	U2	198	14	U2	338	2		X	
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	6210	U2	351	2	U2	325	3		X	
Alkaline fens	7230	U2	338	3	U2	324	4			
Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)	6510	U1	312	4	U2	324	4		X	X
Transition mires and quaking bogs	7140	U2	299	5	U1	299	6			
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	3130	U2	286	6	U2	260	7		X	X
Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	6230	U2	275	7	U2	253	8			
Riparian mixed forests of <i>Quercus robur</i> , <i>Ulmus laevis</i> and <i>Ulmus minor</i> , <i>Fraxinus excelsior</i> or <i>Fraxinus angustifolia</i> , along the great rivers (<i>Ulmion minoris</i>)	91F0	U2	231	10	U2	253	8		X	X
Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	3150	U2	260	8	U1	247	10		X	X
European dry heaths	4030	U2	240	9	U2	210	11		X	
Petrifying springs with tufa formation (Cratoneurion)	7220	U2	221	11	U1	208	12		X	
Luzulo-Fagetum beech forests	9110	U2	182	17	U1	208	12			
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	6430	U1	169	21	U1	208	12		X	X
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	3140	U2	180	18	U2	204	15		X	X
Bog woodland	91D0	U2	198	14	U1	198	16			
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	7210	U1	165	23	U1	187	17		X	X
Mountain hay meadows	6520	U1	162	25	U2	180	18			
Rivers with muddy banks with <i>Chenopodium rubric. p. p</i> and <i>Bidention p. p</i> vegetation	3270	U2	165	23	U1	176	19		X	X
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	3260	U1	195	16	U1	169	20		X	X
<i>Juniperus communis</i> formations on heaths or calcareous grasslands	5130	U2	216	12	U1	168	21			
Rupicolous calcareous or basophilic grasslands of the <i>Alyso-Sedion albi</i>	6110	U1	168	22	U1	168	21		X	
Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains	9190	U2	96	42	U2	162	23		-	-
Depressions on peat substrates of the <i>Rhynchosporion</i>	7150	U2	170	20	U2	160	24			
Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands	2330	U2	144	27	U2	160	24			
Tilio-Acerion forests of slopes, screes and ravines	9180	U1	132	32	U1	144	26		X	
Asperulo-Fagetum beech forests	9130	U1	144	27	U1	132	27		-	-
Natural dystrophic lakes and ponds	3160	U2	200	13	U1	130	28		X	X
Active raised bogs	7110	U2	171	19	U2	128	29			

Table 2.2.b. EU conservation status and Priority Index of the 19 habitats of the Continental region which had been added by the Steering Committee, comparing assessments based on (2007-2012) Art 17 data and (2001-2006) Art 17, with indication of habitat presence in the Steppic and in the Black Sea regions

Habitat (distinguished per habitat group)	N2K code	CON CS (2007)	A*(B+C) (2007)	PRIO 2007	CON CS (2013)	A*(B+C) (2013)	PRIO 2013		Occur in BLS	Occur in STE
Degraded raised bogs still capable of natural regeneration	7120	U2	128	33	U2	120	30			
Salicornia and other annuals colonizing mud and sand	1310	U1	135	30	U1	117	31	X	X	
Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinus betuli</i>	9160	U1	99	38	U1	117	31			
Xeric sand calcareous grasslands	6120	U2	133	31	U2	105	34	X	X	
Galio-Carpinetum oak-hornbeam forests	9170	U1	150	26	U1	72	42	X		
Caves not open to the public	8310	U2	120	34	U1	60	46	X	X	
Fixed coastal dunes with herbaceous vegetation ("grey dunes")	2130	U2	55	49	U2	55	48	X	X	
Coastal lagoons	1150	U2	66	47	U2	40	52	X	X	
Embryonic shifting dunes	2110	U1	35	59	U1	40	52	X	X	
Annual vegetation of drift lines	1210	U1	42	53	U1	36	56	X	X	
Humid dune slacks	2190	U2	40	55	U2	28	60	X	X	
<i>Salix alba</i> and <i>Populus alba</i> galleries	92A0	U1	24	67	U2	28	60	X	X	
Eastern white oak woods	91AA				U2	15	80			
Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	1410	XX	9	84	U2	12	82	X	X	
Mediterranean tall humid grasslands of the <i>Molinio-Holoschoenion</i>	6420	XX	4	97	U1	4	99	X	X	
Ponto-Sarmatic deciduous thickets	40C0				U1	4	99			
Ponto-Sarmatic steppes	62C0				U1	2	104			
Vegetated sea cliffs of the Mediterranean coasts with endemic <i>Limonium</i> spp.	1240	FV	0	108	FV	0	108	X		
Estuaries	1130	U2	42	53				X		

Note: in light brown: no assessment for this habitat

Pannonian region

Table 2.3a shows the same type of results for the 22 previously selected Pannonian habitat-types and Table 2.3b shows results for the one habitat (8310) which had been added by the Steering Committee (ranking much beyond 22 under both assessments).

There are significant changes in the ranking of several habitats when comparing results of the two assessment periods:

- Habitat 7140 (*Transition mires and quaking bogs*), 3150 (*Natural eutrophic lakes with Magnopotamion of Hydrocarition-type vegetation*) and 6210 (*Semi-natural dry grasslands and scrubland facies on calcareous facies*) rank respectively 4th, 5th and 7th with 2013 results while they ranked respectively 23rd, 12th and 17th with 2007 results!
- Habitats 3130 (*Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or the Isoëto-Nanonjuncetea*), 4030 (*European dry heaths*) and 9180 (*Tilio acerion forests of slopes, screes and ravines*) rank 10th ex-aequo with 2013 results while they ranked respectively 18th and 19th ex-aequo with 2007 results.
- Habitats 6260 (*Pannonic sand steppes*) and 6250 (*Pannonic loess steppic grasslands*) which ranked respectively 1st and 2nd with 2007 results only rank 10th and 7th with 2013 results.

Nineteen out of the 22 priority habitats selected based on 2013 results are present in the Black Sea region and 12 occur in the Steppic region.

Table 2.3 EU conservation status and Priority Index of 20 first ranking habitats of the Pannonian region, comparing assessments based on (2007-2012) Art 17 data and (2001-2006) Art 17, with indication of habitat presence in the Steppic and in the Black Sea regions

Habitat (distinguished per habitat group)	N2K code	CON CS (2007)	A*(B+C) (2007)	PRIO 2007	CON CS (2013)	A*(B+C) (2013)	PRIO 2013		Occur in BLS	Occur in STE
Euro-Siberian steppic woods with <i>Quercus</i> spp.	9110	U2	36	2	U2	32	1		X	X
Riparian mixed forests of <i>Quercus robur</i> , <i>Ulmus laevis</i> and <i>Ulmus minor</i> , <i>Fraxinus excelsior</i> or <i>Fraxinus angustifolia</i> along the great rivers	91F0	U2	36	2	U1	24	2		X	X
Molinia meadows on calcareous or basophilic grasslands of the <i>Alyso-Sedion albi</i>	6410	U2	32	5	U2	24	2		X	X
Transition mires and quaking bogs	7140	U2	15	23	U2	18	4			
Subcontinental peri-Pannonic scrub	40A0	U2	32	5	U1	16	5		X	
Natural eutrophic lakes with Magnopotamion of Hydrocharition – type vegetation	3150	U1	24	12	U1	16	5		X	X
Pannonic loess steppic grasslands	6250	U2	36	2	U2	15	7			
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	91E0	U2	24	12	U1	15	7		X	
Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (*important orchid sites)	6210	U2	21	17	U1	15	7		X	
Pannonic sand steppes	6260	U2	44	1	U1	12	10		X	X
Alluvial meadows of river valleys of the <i>Cnidion dubii</i>	6440	U2	32	5	U1	12	10		X	X
Pannonic salt steppes and salt marshes	1530	U2	28	8	U1	12	10		X	X
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	3260	U2	28	8	U1	12	10		X	X
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	6430	U2	28	8	U2	12	10		X	X
Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)	6510	U2	28	8	U1	12	10		X	X
Rivers with muddy banks with <i>Chenopodium rubri</i> p.p and <i>Bidention</i> p.p. vegetation	3270	U1	24	12	U1	12	10		X	X
Sub-Pannonic steppic grasslands	6240	U2	24	12	U1	12	10		X	
Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanonjuncetea</i>	3130	U1	20	18	U1	12	10		X	X
European dry heaths	4030	U2	18	19	U2	12	10		X	
Tilio acerion forests of slopes, scree and ravines	9180	U2	18	19	U1	12	10		X	
Pannonic inland dunes	2340	U2	15	23	U2	12	10			
Pannonian woods with <i>Quercus pubescens</i>	91H0	U2	15	23	U1	12	10		X	
Alkaline fens	7230	U2	24	12	U2	10	23			
Inland salt meadows	1340	U2	12	27	U2	10	23			
Pannonic inland sand dune thicket (<i>Junipero-Populetum albae</i>)	91N0	U2	10	30	U2	10	23			

Natural dystrophic lakes and ponds	3160	U2	18	19	U1	9	26		
Pannonic woods with Quercus petraea and Carpinus betulus	91G0	U2	15	23	U1	9	26		
Juniperus communis formations on heaths or calcareous grasslands	5130	U1	12	27	U1	9	26		
Pannonian-Balkan turkey oak-sessile oak forests	91M0	U2	18	19	U1	6	29		

Table 2.3b. EU conservation status and Priority Index of the habitat of the Pannonian region which had been added by the Steering Committee, comparing assessments based on 2007-2012 Art 17 data and 2001-2006 Art 17, with indication of habitat presence in the Steppic and in the Black Sea regions

Habitat (distinguished per habitat group)	N2K code	CON CS (2007)	A*(B+C) (2007)	PRIO 2007	CON CS (2013)	A*(B+C) (2013)	PRIO 2013		Occur in BLS	Occur in STE
Sparsely vegetated land	8310	U1	6	32	U1	6	29		X	X

3 Assessing Continental and Pannonian 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							XX
		FV	U1 +	U1	U1 -	U2 +	U2	U2 -	
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 out and 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 values for conservation status of 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, where:

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

The lower the score the higher is the ranking of a habitat as LHF.

Example: Habitat 7220 in the Alpine biogeographical region: Range U1 in AT, ES, IT and XX in RO (4p), Area U1 in AT, IT, PL, SI and XX in DE, ES, FR, RO, SK (9p), S&F U1 in AT, BG, IT, SK and XX in DE, FR, PL, RO (8p) = in total 21 points. This is divided with percentage of the habitat that occurring in Natura 2000 sites in the Alpine region (98.35 %) and then multiplied by 100. This gives the score 21.35.

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 Continental and the Pannonian biogeographical regions

3.3.1 Applying the approach for both regions

Data from (2007-2012) Art.17 reporting for all Annex I habitats from the Continental and the Pannonian regions were used. An overview table of the detailed results can be found in a separate excel file.

The robustness of a methodological approach to identify "low hanging fruits" largely depends on the quality of the data from Article 17. The quality of data across Member States in the Continental and the Pannonian regions is heterogeneous. Much of the information is based on expert judgment with rather weak underpinning especially for Structure & Functions.

In the Continental region, 153 habitats listed under the Habitats Directive are reported and 56 in the Pannonian regions

As shown in 3.2, **Step 1** consists in identifying groups of habitats which fall under each 10 different groups

Group	Characteristics of habitats	Continental	Pannonian
Group 1	Habitats that already are FV	20 habitats	8 habitats
Group 2	U1+ could change to FV	4 habitats	1 habitat
Group 3	U1= could change to U1+	49 habitats	22 habitats

Group 4	U1x could change to U1+	7 habitats	0 habitat
Group 5	U1- could change to U1=	16 habitats	10 habitats
Group 6	U2+ could change to U1	2 habitats	1 habitat
Group 7	U2= could change to U2+	14 habitats	5 habitats
Group 8	U2x could change to U2+	7 habitats	0 habitat
Group 9	U2- could change to U2=	29 habitats	9 habitats
Group 10	XX could change to U1+ or U2+	5 habitats	0 habitat

Except for Groups 1 and 2, habitats in each group share a need for improvement, and groups with the same sort of improvement needed are closer to each other e.g. Group 3 and 7 – both should change from ‘=’ to ‘+’ to improve. However, within each group, measures needed for the change to happen may be quite different

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 Art 17 national reports and the EU biogeographical assessments. For a habitat’ conservation status to improve on a short term, mainly the parameters ‘Structure and functions’ and ‘Area’ are relevant, as opposed to ‘Range’ which generally can only improve on the long term. ‘Future prospects’ assessment was felt not reliable enough – because reported in a very heterogeneous way by Member States - to be used in the analysis. Thus, looking at the EU conservation status of a habitat within a biogeographical region, an analysis is made of which parameter is the most influential in assigning this status. Then, looking at national data, an analysis is made of which country is mainly responsible for the EU status of this parameter.

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 from = 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 possibility for a rapid improvement, but also in some cases by taking into account in addition the threats listed in the Art.17 (those reported as ‘High’).

3.3.2 Results for the Continental region

As can be seen from Table 3.2 among the 20 habitats listed selected as “Low Hanging Fruits” (LHF), nine belong to Group 5 (U1- should improve to U1=) and 10 to Group 9 (U2- should improve to U2=). Due to lack of more detailed information, in the Article 17 reporting, on the parameters that need to be improved, an internal ranking between the listed habitats is not possible.

Eight LHF habitats are present in the Black Sea region and two in the Steppic region.

It can be seen that four ‘Low Hanging Fruits’ habitats were also selected among the Top 20 Continental habitat-types according to the ‘Worst situation approach’, based on Art 17 (2007-2013) data i.e. 7210 (*Calcareous fens with Cladium mariscus and species of the Caricion davalliana*), 7140 (*Transition mires and quaking bogs*), 7220 (*Petrifying springs with tufa formation (Cratoneurion)*) and 91F0 (*Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia, along the great rivers (Ulmenion minoris)*). They are flagged in grey in Table 3.2.

Table 3.2. Habitats selected as ‘Low Hanging Fruits’ (not ranked) for the Continental region, with indication of their presence in the Steppic and Black Sea regions

	Habitat	Concl	TYPE OF IMPROVEMENT NEEDED (Critical parameters and MS to reach improvement)	Presence in STE	Presence in BLS
Group 5	2310	U1-	Area in DE - stop decline in Area in DE		
Group 5	6170	U1-	Area in FR - stop decline in Area in FR		
Group 5	6220	U1-	Area in IT - stop decline in Area in IT		X
Group 5	6240	U1-	Area in DE - stop decline in Area in DE		X
Group 5	8160	U1-	Structure and Functions in FR - stop decline in quality in FR		
Group 5	7210	U1-	Area in FR - stop decline in Area in FR		
Group 5	6110	U1-	Area in DE - stop decline in Area in DE		X
Group 5	7140	U1-	Area in PL - stop decline of Area in PL		
Group 5	7220	U1-	Area in FR - stop decline of Area in FR		X
Group 5	1620	U1-	Structure and Functions in SE - stop decline in quality in SE		
Group 9	6530	U2-	Area in SE - stop decline in Area in SE		
Group 9	62A0	U2-	Area in IT and SI - stop decline in Area in IT and SI		X
Group 9	1330	U2-	Area in DE - stop decline of Area in DE		
Group 9	7110	U2-	Area in FR - stop decline in Area in FR		
Group 9	92A0	U2-	Area in IT - stop decline in Area in IT, better information from FR	X	X
Group 9	6270	U2-	Area in SE - stop decline in Area in SE		
Group 9	2330	U2-	Area in DE and PL - stop decline in Area in DE and PL		
Group 9	6120	U2-	Area in PL - stop decline in Area in PL		
Group 9	6210	U2-	Area in FR and IT - stop decline in Area in FR and IT		X
Group 9	91F0	U2-	Area in PL - stop decline in Area in PL	X	X

Note: Overlap with Top 20 list of habitats according to ‘Worst situation approach’ flagged in grey

3.3.3 Results for the Pannonian region

As can see from Table 3.3 among the 22 habitats selected as “Low Hanging Fruits” (LHF), four belong to Group 3 (U1= should improve to U+), eight belong to Group 5 (U1- should improve to U1=) and eight to Group 9 (U2- should improve to U2=). Due to lack of more detailed information, in the Article 17 reporting, on the parameters that need to be improved, an internal ranking between the listed habitats is not possible.

Twelve LHF habitats are present in the Black Sea region and eight in the Steppic region.

It can be seen that nine ‘Low Hanging Fruits’ habitats were also selected among the Top 22 Pannonian habitat-types according to the ‘Worst situation approach’, based on Art 17 (2007-2013) data i.e. 91H0 (*Pannonian woods with Quercus pubescens*), 1530 (*Pannonic salt steppes and salt*

marshes), 3130 (*Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanonjuncetea*), 6440 (*Alluvial meadows of river valleys of the Cnidion dubii*), 6260 (*Pannonic sand steppes*), 91E0 (*Alluvial forests with Alnus glutinosa and Fraxinus excelsior*), 91F0 (*Riparian mixed forests of Querus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia along the great rivers*), 4030 (*European dry heaths*) and 6410 (*Molinia meadows on calcareous or basophilic grasslands of the Alyso-Sedion albi*). They are flagged in grey in Table 3.3.

Table 3.3. Habitats selected as ‘Low Hanging Fruits’ (not ranked) for the Pannonian region, with indication of their presence in the Steppic and Black Sea regions

	Habitat	Concl	TYPE OF IMPROVEMENT NEEDED (Critical parameters and MS to reach improvement)	Presence in STE	Presence in BLS
Group 3	6190	U1=	Structure and Functions in HU - improve quality in HU		
Group 3	8220	U1=	Structure and Functions in CZ - improve quality in CZ		X
Group 3	91H0	U1=	Structure and Functions in HU - improve quality in HU		X
Group 3	1530	U1=	Structure and Functions in HU - improve quality in HU	X	X
Group 3	3130	U1=	Structure and Functions in HU - improve quality in HU	X	X
Group 3	8230	U1=	Structure and Functions in CZ - improve quality in CZ, better information from SK	X	X
Group 5	6520	U1-	Structure and Functions in HU - stop decline in quality in HU		
Group 5	91M0	U1-	Structure and Functions in HU - stop decline in quality in HU	X	X
Group 5	6440	U1-	Structure and Functions in HU - stop decline in quality in HU	X	X
Group 5	3140	U1-	Area in SK - stop decline in Area in SK	X	X
Group 5	6260	U1-	Structure and Functions in HU - stop decline in quality in HU		
Group 5	91E0	U1-	Structure and Functions in HU - stop decline in quality in HU		X
Group 5	40A0	U1-	Structure and Functions in HU - stop decline in quality in HU		X
Group 5	91F0	U1-	Structure and Functions in HU - stop decline in quality in HU	X	X
Group 9	4030	U2-	Area in HU - stop decline in Area in HU		
Group 9	6120	U2-	Area in SK - stop decline in Area in SK		
Group 9	6410	U2-	Area in HU - stop decline in Area in HU	X	X
Group 9	6230	U2-	Range and Area in HU - stop decline in Range and Area in HU		
Group 9	7230	U2-	Structure and Functions in HU - stop decline in quality in HU		
Group 9	91N0	U2-	Structure and Functions in HU - stop decline in quality in HU		
Group 9	91T0	U2-	Area in SK - stop decline in Area in SK		
Group 9	2340	U2-	Area in HU - stop decline in Area in HU		

Note: Overlap with Top 22 list of habitats according to Worst situation approach’ flagged in grey

3.4 Conclusions on the 'Low Hanging Fruits' approach applied to Continental, Pannonian, Black Sea and Steppic 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 (in most cases stop the decline in quality) 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 and 8); b) habitats that are in need of stopping deterioration (Group 5 and 9).
- 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 four (CON) and nine (PAN) habitats from the previous priority ('Top list') 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.