ANNEX I

NATURAL HABITAT TYPES OF COMMUNITY INTEREST WHOSE CONSERVATION REQUIRES THE DESIGNATION OF SPECIAL AREAS OF CONSERVATION

Interpretation

Guidance on the interpretation of habitat types is given in the "Interpretation Manual of European Union Habitats" as approved by the committee set up under Article 20 ("Habitats Committee") and published by the European Commission. The code corresponds to the NATURA 2000 code. The sign "*" indicates priority habitat types.

1. COASTAL AND HALOPHYTIC HABITATS

<table>
<thead>
<tr>
<th>Code</th>
<th>Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1110</td>
<td>Sandbanks which are slightly covered by sea water all the time</td>
</tr>
<tr>
<td>1120</td>
<td>* Posidonia beds (Posidonion oceanicae)</td>
</tr>
<tr>
<td>1130</td>
<td>Estuaries</td>
</tr>
<tr>
<td>1140</td>
<td>Mudflats and sandflats not covered by seawater at low tide</td>
</tr>
<tr>
<td>1150</td>
<td>* Coastal lagoons</td>
</tr>
<tr>
<td>1160</td>
<td>Large shallow inlets and bays</td>
</tr>
<tr>
<td>1170</td>
<td>Reefs</td>
</tr>
<tr>
<td>1180</td>
<td>Submarine structures made by leaking gases</td>
</tr>
</tbody>
</table>

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1 "Interpretation Manual of European Union Habitats", version EUR 15/2" adopted by the Habitats Committee on 4 October 1999 and "Amendments to the "Interpretation Manual of European Union Habitats" with a view to EU enlargement" (Hab. 01/11b-rev. 1) adopted by the Habitats Committee on 24 April 2002 after written consultation, European Commission, DG ENV.
12. **Sea cliffs and shingle or stony beaches**
   1210 Annual vegetation of drift lines
   1220 Perennial vegetation of stony banks
   1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts
   1240 Vegetated sea cliffs of the Mediterranean coasts with endemic Limonium spp.
   1250 Vegetated sea cliffs with endemic flora of the Macaronesian coasts

13. **Atlantic and continental salt marshes and salt meadows**
   1310 *Salicornia* and other annuals colonizing mud and sand
   1320 *Spartina* swards (*Spartinion maritima*)
   1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)
   1340 * Inland salt meadows

14. **Mediterranean and thermo-Atlantic salt marshes and salt meadows**
   1410 Mediterranean salt meadows (*Juncetalia maritimi*)
   1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)
   1430 Halo-nitrophilous scrubs (*Pegano-Salsoletea*)

15. **Salt and gypsum inland steppes**
   1510 * Mediterranean salt steppes (*Limonietalia*)
   1520 * Iberian gypsum vegetation (*Gypsophiletalia*)
   1530 * Pannonic salt steppes and salt marshes

16. **Boreal Baltic archipelago, coastal and landupeaval areas**
   1610 Baltic esker islands with sandy, rocky and shingle beach vegetation and sublittoral vegetation
   1620 Boreal Baltic islets and small islands
   1630 * Boreal Baltic coastal meadows
   1640 Boreal Baltic sandy beaches with perennial vegetation
1650  Boreal Baltic narrow inlets
2. COASTAL SAND DUNES AND INLAND DUNES

21. Sea dunes of the Atlantic, North Sea and Baltic coasts

2110 Embryonic shifting dunes
2120 Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
2130 * Fixed coastal dunes with herbaceous vegetation ("grey dunes")
2140 * Decalcified fixed dunes with Empetrum nigrum
2150 * Atlantic decalcified fixed dunes (Calluno-Ulicetea)
2160 Dunes with Hippophaë rhamnoides
2170 Dunes with Salix repens ssp. argentea (Salicion arenariae)
2180 Wooded dunes of the Atlantic, Continental and Boreal region
2190 Humid dune slacks
21A0 Machairs (* in Ireland)

22. Sea dunes of the Mediterranean coast

2210 Crucianellion maritimae fixed beach dunes
2220 Dunes with Euphorbia terracina
2230 Malcolmietalia dune grasslands
2240 Brachypodietalia dune grasslands with annuals
2250 * Coastal dunes with Juniperus spp.
2260 Cisto-Lavenduletalia dune sclerophyllous scrubs
2270 * Wooded dunes with Pinus pinea and/or Pinus pinaster

23. Inland dunes, old and decalcified

2310 Dry sand heaths with Calluna and Genista
2320 Dry sand heaths with Calluna and Empetrum nigrum
2330 Inland dunes with open Corynephorus and Agrostis grasslands
2340 * Pannonic inland dunes
3. FRESHWATER HABITATS

31. **Standing water**
   
3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
   
3120 Oligotrophic waters containing very few minerals generally on sandy soils of the West Mediterranean, with *Isoetes* spp.
   
3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
   
3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.
   
3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* – type vegetation
   
3160 Natural dystrophic lakes and ponds
   
3170 * Mediterranean temporary ponds
   
3180 * Turloughs
   
3190 Lakes of gypsum karst
   
31A0 * Transylvanian hot-spring lotus beds

32. **Running water – sections of water courses with natural or semi-natural dynamics (minor, average and major beds) where the water quality shows no significant deterioration**
   
3210 Fennoscandian natural rivers
   
3220 Alpine rivers and the herbaceous vegetation along their banks
   
3230 Alpine rivers and their ligneous vegetation with *Myricaria germanica*
   
3240 Alpine rivers and their ligneous vegetation with *Salix elaeagnos*
   
3250 Constantly flowing Mediterranean rivers with *Glaucium flavum*
   
3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
   
3270 Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation
   
3280 Constantly flowing Mediterranean rivers with *Paspalo-Agrostidion* species and
hanging curtains of *Salix* and *Populus alba*

3290  Intermittently flowing Mediterranean rivers of the *Paspalo-Agrostidion*
4. TEMPERATE HEATH AND SCRUB

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4010</td>
<td>Northern Atlantic wet heaths with <em>Erica tetralix</em></td>
</tr>
<tr>
<td>4020</td>
<td>* Temperate Atlantic wet heaths with <em>Erica ciliaris</em> and <em>Erica tetralix</em></td>
</tr>
<tr>
<td>4030</td>
<td>European dry heaths</td>
</tr>
<tr>
<td>4040</td>
<td>* Dry Atlantic coastal heaths with <em>Erica vagans</em></td>
</tr>
<tr>
<td>4050</td>
<td>* Endemic macaronesian heaths</td>
</tr>
<tr>
<td>4060</td>
<td>Alpine and Boreal heaths</td>
</tr>
<tr>
<td>4070</td>
<td>* Bushes with <em>Pinus mugo</em> and <em>Rhododendron hirsutum</em> (Mugo-Rhododendretum hirsuti)</td>
</tr>
<tr>
<td>4080</td>
<td>Sub-Arctic <em>Salix</em> spp. Scrub</td>
</tr>
<tr>
<td>4090</td>
<td>Endemic oro-Mediterranean heaths with gorse</td>
</tr>
<tr>
<td>40A0</td>
<td>* Subcontinental peri-Pannonic scrub</td>
</tr>
</tbody>
</table>
5. SCLEROPHYLLOUS SCRUB (MATORRAL)

51. Sub-Mediterranean and temperate scrub

5110 Stable xero thermophilous formations with *Buxus sempervirens* on rock slopes (*Berberidion* p.p.)

5120 Mountain *Cytisus purgans* formations

5130 *Juniperus communis* formations on heaths or calcareous grasslands

5140 *Cistus palhinhae* formations on maritime wet heaths

52. Mediterranean arborescent matorral

5210 Arborescent matorral with *Juniperus* spp.

5220 * Arborescent matorral with *Zyziphus*

5230 * Arborescent matorral with *Laurus nobilis*

53. Thermo-Mediterranean and pre-steppe brush

5310 *Laurus nobilis* thickets

5320 Low formations of Euphorbia close to cliffs

5330 Thermo-Mediterranean and pre-desert scrub

54. Phrygana

5410 West Mediterranean clifftop phryganas (*Astragalo-Plantaginetum subulatae*)

5420 *Sarcopoterium spinosum* phryganas

5430 Endemic phryganas of the *Euphorbio-Verbascion*
6. NATURAL AND SEMI-NATURAL GRASSLAND FORMATIONS

61. Natural grasslands

6110 * Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*
6120 * Xeric sand calcareous grasslands
6130 Calaminarian grasslands of the *Violetalia calaminariae*
6140 Siliceous Pyrenean *Festuca eskia* grasslands
6150 Siliceous alpine and boreal grasslands
6160 Oro-Iberian *Festuca indigesta* grasslands
6170 Alpine and subalpine calcareous grasslands
6180 Macaronesian mesophile grasslands
6190 Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*)

62. Semi-natural dry grasslands and scrubland facies

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates
(*Festuco-Brometalia*) (* important orchid sites*)
6220 * Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*
6230 * Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and
submountain areas in Continental Europe)
6240 * Sub-Pannonic steppic grasslands
6250 * Pannonic loess steppic grasslands
6260 * Pannonic sand steppes
6270 * Fennoscandian lowland species-rich dry to mesic grasslands
6280 * Nordic alvar and precambrian calcareous flatrocks
62A0 Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)
62B0 * Serpentinophilous grassland of Cyprus

63. Sclerophilous grazed forests (dehesas)

6310 Dehesas with evergreen *Quercus* spp.
64. Semi-natural tall-herb humid meadows

6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

6420 Mediterranean tall humid grasslands of the *Molinio-Holoschoenion*

6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels

6440 Alluvial meadows of river valleys of the *Cnidion dubii*

6450 Northern boreal alluvial meadows

6460 Peat grasslands of Troodos

65. Mesophile grasslands

6510 Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)

6520 Mountain hay meadows

6530 * Fennoscandian wooded meadows
7. RAISED BOGS AND MIRES AND FENS

71. Sphagnum acid bogs
   7110 * Active raised bogs
   7120 Degraded raised bogs still capable of natural regeneration
   7130 Blanket bogs (* if active bog)
   7140 Transition mires and quaking bogs
   7150 Depressions on peat substrates of the Rhynchosporion
   7160 Fennoscandian mineral-rich springs and springfens

72. Calcareous fens
   7210 * Calcareous fens with Cladium mariscus and species of the Caricion davallianae
   7220 * Petrifying springs with tufa formation (Cratoneurion)
   7230 Alkaline fens
   7240 * Alpine pioneer formations of the Caricion bicoloris-atrofuscae

73. Boreal mires
   7310 * Aapa mires
   7320 * Palsa mires
8. ROCKY HABITATS AND CAVES

81. Scree

8110 Siliceous scree of the montane to snow levels (*Androsaceta alpinae and Galeopsietalia ladani*)

8120 Calcareous and calcshist screees of the montane to alpine levels (*Thlaspietea rotundifolii*)

8130 Western Mediterranean and thermophilous scree

8140 Eastern Mediterranean screees

8150 Medio-European upland siliceous screees

8160 * Medio-European calcareous scree of hill and montane levels

82. Rocky slopes with chasmophytic vegetation

8210 Calcareous rocky slopes with chasmophytic vegetation

8220 Siliceous rocky slopes with chasmophytic vegetation

8230 Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dillenii*

8240 * Limestone pavements

83. Other rocky habitats

8310 Caves not open to the public

8320 Fields of lava and natural excavations

8330 Submerged or partially submerged sea caves

8340 Permanent glaciers
9. FORESTS

(Sub)natural woodland vegetation comprising native species forming forests of tall trees, with typical undergrowth, and meeting the following criteria: rare or residual, and/or hosting species of Community interest

90. Forests of Boreal Europe

9010 * Western Taïga
9020 * Fennoscandian hemiboreal natural old broad-leaved deciduous forests (*Quercus*, *Tilia*, *Acer*, *Fraxinus* or *Ulmus*) rich in epiphytes
9030 * Natural forests of primary succession stages of landupheaval coast
9040 Nordic subalpine/subarctic forests with *Betula pubescens* ssp. *czerepanovii*
9050 Fennoscandian herb-rich forests with *Picea abies*
9060 Coniferous forests on, or connected to, glaciofluvial eskers
9070 Fennoscandian wooded pastures
9080 * Fennoscandian deciduous swamp woods

91. Forests of Temperate Europe

9110 *Luzulo-Fagetum* beech forests
9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Illici-Fagenion*)
9130 *Asperulo-Fagetum* beech forests
9140 Medio-European subalpine beech woods with *Acer* and *Rumex arifolius*
9150 Medio-European limestone beech forests of the *Cephalanthero-Fagion*
9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*
9170 *Galio-Carpinetum* oak-hornbeam forests
9180 *Tilio-Acerion* forests of slopes, screes and ravines
9190 Old acidophilous oak woods with *Quercus robur* on sandy plains
91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
91B0 Thermophilous *Fraxinus angustifolia* woods
91C0  * Caledonian forest
91D0  * Bog woodland
91E0  * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)
91F0  Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)
91G0  * Pannonic woods with *Quercus petraea* and *Carpinus betulus*
91H0  * Pannonian woods with *Quercus pubescens*
91I0  * Euro-Siberian steppic woods with *Quercus* spp.
91J0  * *Taxus baccata* woods of the British Isles
91K0  Illyrian *Fagus sylvatica* forests (*Aremonio-Fagion*)
91L0  Illyrian oak-hornbeam forests (*Erythronio-carpinion*)
91M0  Pannonian-Balkanic turkey oak –sessile oak forests
91N0  * Pannonic inland sand dune thicket (*Junipero-Populetum albae*)
91P0  Holy Cross fir forest (*Abietetum polonicum*)
91Q0  Western Carpathian calcicolous *Pinus sylvestris* forests
91R0  Dinaric dolomite Scots pine forests (*Genisto januensis-Pinetum*)
91T0  Central European lichen Scots pine forests
91U0  Sarmatic steppe pine forest
91V0  Dacian Beech forests (*Symphyto-Fagion*)

**92. Mediterranean deciduous forests**

9210  * Apeninne beech forests with *Taxus* and *Ilex*
9220  * Apennine beech forests with *Abies alba* and beech forests with *Abies nebrodensis*
9230  Galicio-Portuguese oak woods with *Quercus robur* and *Quercus pyrenaica*
9240  *Quercus faginea* and *Quercus canariensis* Iberian woods
9250  *Quercus trojana* woods
9260  *Castanea sativa* woods
9270  Hellenic beech forests with *Abies borisii-regis*
9280  *Quercus frainetto* woods
9290 Cupressus forests (Acero-Cupression)
92A0 Salix alba and Populus alba galleries
92B0 Riparian formations on intermittent Mediterranean water courses with Rhododendron ponticum, Salix and others
92C0 Platanus orientalis and Liquidambar orientalis woods (Platanion orientalis)
92D0 Southern riparian galleries and thickets (Nerio-Tamaricetea and Securinegion tinctoriae)

93. Mediterranean sclerophyllous forests
9310 Aegean Quercus brachyphylla woods
9320 Olea and Ceratonia forests
9330 Quercus suber forests
9340 Quercus ilex and Quercus rotundifolia forests
9350 Quercus macrolepis forests
9360 * Macaronesian laurel forests (Laurus, Ocotea)
9370 * Palm groves of Phoenix
9380 Forests of Ilex aquifolium
9390 * Scrub and low forest vegetation with Quercus alnifolia
93A0 Woodlands with Quercus infectoria (Anagyro foetidae-Quercetum infectoriae)

94. Temperate mountainous coniferous forests
9410 Acidophilous Picea forests of the montane to alpine levels (Vaccinio-Piceetea)
9420 Alpine Larix decidua and/or Pinus cembra forests
9430 Subalpine and montane Pinus uncinata forests (* if on gypsum or limestone)

95. Mediterranean and Macaronesian mountainous coniferous forests
9510 * Southern Apennine Abies alba forests
9520 Abies pinsapo forests
9530 * (Sub-) Mediterranean pine forests with endemic black pines
9540 Mediterranean pine forests with endemic Mesogeian pines
9550 Canarian endemic pine forests
* Endemic forests with *Juniperus* spp.

* *Tetraclinis articulata* forests

* Mediterranean *Taxus baccata* woods

* *Cedrus brevifolia* forests (*Cedrosetum brevifoliae*)