

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 ¹.

The code corresponds to the NATURA 2000 code.

The sign "*" indicates priority habitat types.

1. COASTAL AND HALOPHYTIC HABITATS

11. Open sea and tidal areas

- 1110 Sandbanks which are slightly covered by sea water all the time
- 1120 * *Posidonia* beds (*Posidonion oceanicae*)
- 1130 Estuaries
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1150 * Coastal lagoons
- 1160 Large shallow inlets and bays
- 1170 Reefs
- 1180 Submarine structures made by leaking gases

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 maritimae*)
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- 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 landupheaval 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

- 4010 Northern Atlantic wet heaths with *Erica tetralix*
- 4020 * Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*
- 4030 European dry heaths
- 4040 * Dry Atlantic coastal heaths with *Erica vagans*
- 4050 * Endemic macaronesian heaths
- 4060 Alpine and Boreal heaths
- 4070 * Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo-Rhododendretum hirsuti*)
- 4080 Sub-Arctic *Salix* spp. Scrub
- 4090 Endemic oro-Mediterranean heaths with gorse
- 40A0 * Subcontinental peri-Pannonic scrub

5. SCLEROPHYLLOUS SCRUB (MATORRAL)

51. Sub-Mediterranean and temperate scrub

- 5110 Stable xerothermophilous 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. Sclerophyllous 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 (*Androsacetalia alpinae* and *Galeopsietalia ladani*)
- 8120 Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)
- 8130 Western Mediterranean and thermophilous scree
- 8140 Eastern Mediterranean screes
- 8150 Medio-European upland siliceous screes
- 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 *Ilici-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-Balkan 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 Mesogean pines
- 9550 Canarian endemic pine forests

- 9560 * Endemic forests with *Juniperus* spp.
- 9570 * *Tetraclinis articulata* forests
- 9580 * Mediterranean *Taxus baccata* woods
- 9590 * *Cedrus brevifolia* forests (*Cedrosetum brevifoliae*)