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## PROPOSAL

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From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
To:	Secretary-General of the Council of the European Union
No. Cion doc.:	COM(2022) 304 final
Subject:	ANNEXES to the proposal for a Regulation of the European Parliament and of the Council on nature restoration

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Delegations will find attached document COM(2022) 304 final, Annexes 1 to 7.

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Brussels, 22.6.2022  
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ANNEXES 1 to 7

## ANNEXES

to the

**proposal for a Regulation of the European Parliament and of the Council  
on nature restoration**

{SEC(2022) 256 final} - {SWD(2022) 167 final} - {SWD(2022) 168 final}

## ANNEX I

### TERRESTRIAL, COASTAL AND FRESHWATER ECOSYSTEMS – HABITAT TYPES AND GROUPS OF HABITAT TYPES REFERRED TO IN ARTICLE 4(1) AND 4(2)

The list below includes all terrestrial, coastal and freshwater habitat types listed in Annex I of Directive 92/43/EEC referred to in Article 4(1) and 4(2), as well as six groups of those habitat types, namely 1) Wetlands (coastal and inland), 2) Grasslands and other pastoral habitats, 3) River, lake, alluvial and riparian habitats, 4) Forests, 5) Steppe, heath and scrub habitats and 6) Rocky and dune habitats.

#### 1. GROUP 1: WETLANDS (COASTAL & INLAND)

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Coastal and salt habitats</b>	
1130	Estuaries
140	Mudflats and sandflats not covered by seawater at low tide
1150	Coastal lagoons
1310	Salicornia and other annuals colonizing mud and sand
1320	Spartina swards ( <i>Spartinion maritimae</i> )
1330	Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )
1340	Inland salt meadows
1410	Mediterranean salt meadows ( <i>Juncetalia maritimi</i> )
1420	Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> )
1530	Pannonic salt steppes and salt marshes
1650	Boreal Baltic narrow inlets

<b>Wet heaths and peat grassland</b>	
4010	Northern Atlantic wet heaths with <i>Erica tetralix</i>
4020	Temperate Atlantic wet heaths with <i>Erica ciliaris</i> and <i>Erica tetralix</i>
6460	Peat grasslands of Troodos
<b>Mires, bogs and fens</b>	
7110	Active raised bogs
7120	Degraded raised bogs still capable of natural regeneration
7130	Blanket bogs
7140	Transition mires and quaking bogs
7150	Depressions on peat substrates of the <i>Rhynchosporion</i>
7160	Fennoscandian mineral-rich springs and springfens
7210	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
7220	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )
7230	Alkaline fens
7240	Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i>
7310	Aapa mires
7320	Palsa mires
<b>Wet forests</b>	
9080	Fennoscandian deciduous swamp woods
91D0	Bog woodland

## 2. GROUP 2: GRASSLANDS AND OTHER PASTORAL HABITATS

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Costal and dune habitats</b>	
1630	Boreal Baltic coastal meadows
21A0	Machairs
<b>Heath and scrub habitats</b>	
4030	European dry heaths
4040	Dry Atlantic coastal heaths with <i>Erica vagans</i>
4090	Endemic oro-Mediterranean heaths with gorse
5130	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
8240	Limestone pavements
<b>Grasslands</b>	
6110	Rupicolous calcareous or basophilic grasslands of the <i>Alysso-Sedion albi</i>
6120	Xeric sand calcareous grasslands
6130	Calaminarian grasslands of the <i>Violetalia calaminariae</i>
6140	Siliceous Pyrenean <i>Festuca eskia</i> grasslands
6150	Siliceous alpine and boreal grasslands
6160	Oro-Iberian <i>Festuca indigesta</i> grasslands
6170	Alpine and subalpine calcareous grasslands

6180	Macaronesian mesophile grasslands
6190	Rupicolous pannonic grasslands ( <i>Stipo-Festucetalia pallentis</i> )
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> )
6220	Pseudo-steppe with grasses and annuals of the <i>Thero-Brachypodietea</i>
6230	Species-rich <i>Nardus</i> 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 ( <i>Scorzoneratalia villosae</i> )
62B0	Serpentinophilous grassland of Cyprus
62C0	Ponto-Sarmatic steppes
62D0	Oro-Moesian acidophilous grasslands
6410	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )
6420	Mediterranean tall humid grasslands of the <i>Molinio-Holoschoenion</i>
6510	Lowland hay meadows ( <i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i> )
6520	Mountain hay meadows
<b>Dehesas and wooded meadows</b>	
6310	Dehesas with evergreen <i>Quercus spp.</i>
6530	Fennoscandian wooded meadows
9070	Fennoscandian wooded pastures

### 3. GROUP 3: RIVER, LAKE, ALLUVIAL AND RIPARIAN HABITATS

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Rivers and lakes</b>	
3110	Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> )
3120	Oligotrophic waters containing very few minerals generally on sandy soils of the West Mediterranean, with <i>Isoetes</i> spp.
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
3150	Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> — 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
3210	Fennoscandian natural rivers
3220	Alpine rivers and the herbaceous vegetation along their banks
3230	Alpine rivers and their ligneous vegetation with <i>Myricaria germanica</i>
3240	Alpine rivers and their ligneous vegetation with <i>Salix elaeagnos</i>
3250	Constantly flowing Mediterranean rivers with <i>Glaucium flavum</i>
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation

3270	Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
3280	Constantly flowing Mediterranean rivers with <i>Paspalo-Agrostidion</i> species and hanging curtains of <i>Salix</i> and <i>Populus alba</i>
3290	Intermittently flowing Mediterranean rivers of the <i>Paspalo-Agrostidion</i>
32A0	Tufa cascades of karstic rivers of the Dinaric Alps
<b>Alluvial meadows</b>	
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>
6450	Northern boreal alluvial meadows
6540	Sub-Mediterranean grasslands of the <i>Molinio-Hordeion secalini</i>
<b>Alluvial/Riparian forests</b>	
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i>
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )
91F0	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> )
92A0	<i>Salix alba</i> and <i>Populus alba</i> galleries
92B0	Riparian formations on intermittent Mediterranean water courses with <i>Rhododendron ponticum</i> , <i>Salix</i> and others
92C0	<i>Platanus orientalis</i> and <i>Liquidambar orientalis</i> woods ( <i>Platanion orientalis</i> )
92D0	Southern riparian galleries and thickets ( <i>Nerio-Tamaricetea</i> and <i>Securinegion tinctoriae</i> )
9370	Palm groves of Phoenix



#### 4. GROUP 4: FORESTS

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Boreal forests</b>	
9010	Western Taïga
9020	Fennoscandian hemiboreal natural old broad-leaved deciduous forests ( <i>Quercus</i> , <i>Tilia</i> , <i>Acer</i> , <i>Fraxinus</i> or <i>Ulmus</i> ) rich in epiphytes
9030	Natural forests of primary succession stages of landupheaval coast
9040	Nordic subalpine/subarctic forests with <i>Betula pubescens</i> ssp. <i>czerepanovii</i>
9050	Fennoscandian herb-rich forests with <i>Picea abies</i>
9060	Coniferous forests on, or connected to, glaciofluvial eskers
<b>Temperate forests</b>	
9110	<i>Luzulo-Fagetum</i> beech forests
9120	Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer ( <i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i> )
9130	<i>Asperulo-Fagetum</i> beech forests
9140	Medio-European subalpine beech woods with <i>Acer</i> and <i>Rumex arifolius</i>
9150	Medio-European limestone beech forests of the <i>Cephalanthero-Fagion</i>
9170	<i>Galio-Carpinetum</i> oak-hornbeam forests
9180	<i>Tilio-Acerion</i> forests of slopes, screes and ravines
9190	Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains

91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
91B0	Thermophilous <i>Fraxinus angustifolia</i> woods
91G0	Pannonic woods with <i>Quercus petraea</i> and <i>Carpinus betulus</i>
91H0	Pannonian woods with <i>Quercus pubescens</i>
91I0	Euro-Siberian steppic woods with <i>Quercus</i> spp.
91J0	<i>Taxus baccata</i> woods of the British Isles
91K0	Illyrian <i>Fagus sylvatica</i> forests ( <i>Aremonio-Fagion</i> )
91L0	Illyrian oak-hornbeam forests ( <i>Erythronio-Carpinion</i> )
91M0	Pannonian-Balkan turkey oak –sessile oak forests
91P0	Holy Cross fir forest ( <i>Abietetum polonicum</i> )
91Q0	Western Carpathian calcicolous <i>Pinus sylvestris</i> forests
91R0	Dinaric dolomite Scots pine forests ( <i>Genisto januensis-Pinetum</i> )
91S0	Western Pontic beech forests
91T0	Central European lichen Scots pine forests
91U0	Sarmatic steppe pine forest
91V0	Dacian Beech forests ( <i>Symphyto-Fagion</i> )
91W0	Moesian beech forests
91X0	Dobrogean beech forests
91Y0	Dacian oak & hornbeam forests
91Z0	Moesian silver lime woods
91AA	Eastern white oak woods
91BA	Moesian silver fir forests
91CA	Rhodopide and Balkan Range Scots pine forests
<b>Mediterranean and Macaronesian forests</b>	
9210	Apennine beech forests with <i>Taxus</i> and <i>Ilex</i>
9220	Apennine beech forests with <i>Abies alba</i> and beech forests with <i>Abies nebrodensis</i>

9230	Galicio-Portuguese oak woods with <i>Quercus robur</i> and <i>Quercus pyrenaica</i>
9240	<i>Quercus faginea</i> and <i>Quercus canariensis</i> Iberian woods
9250	<i>Quercus trojana</i> woods
9260	<i>Castanea sativa</i> woods
9270	Hellenic beech forests with <i>Abies borisii-regis</i>
9280	<i>Quercus frainetto</i> woods
9290	Cupressus forests ( <i>Acero-Cupression</i> )
9310	Aegean <i>Quercus brachyphylla</i> woods
9320	<i>Olea</i> and <i>Ceratonia</i> forests
9330	<i>Quercus suber</i> forests
9340	<i>Quercus ilex</i> and <i>Quercus rotundifolia</i> forests
9350	<i>Quercus macrolepis</i> forests
9360	Macaronesian laurel forests ( <i>Laurus</i> , <i>Ocotea</i> )
9380	Forests of <i>Ilex aquifolium</i>
9390	Scrub and low forest vegetation with <i>Quercus alnifolia</i>
93A0	Woodlands with <i>Quercus infectoria</i> ( <i>Anagyro foetidae-Quercetum infectoriae</i> )
<b>Mountainous coniferous forests</b>	
9410	Acidophilous <i>Picea</i> forests of the montane to alpine levels ( <i>Vaccinio-Piceetea</i> )
9420	Alpine <i>Larix decidua</i> and/or <i>Pinus cembra</i> forests
9430	Subalpine and montane <i>Pinus uncinata</i> forests
9510	Southern Apennine <i>Abies alba</i> forests
9520	<i>Abies pinsapo</i> 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 <i>Juniperus</i> spp.

9570	<i>Tetraclinis articulata</i> forests
9580	Mediterranean <i>Taxus baccata</i> woods
9590	<i>Cedrus brevifolia</i> forests ( <i>Cedrosetum brevifoliae</i> )
95A0	High oro-Mediterranean pine forests

## 5. GROUP 5: STEPPE, HEATH AND SCRUB HABITATS

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Salt and gypsum steppes</b>	
1430	Halo-nitrophilous scrubs ( <i>Pegano-Salsoletea</i> )
1510	Mediterranean salt steppes ( <i>Limonietalia</i> )
1520	Iberian gypsum vegetation ( <i>Gypsophiletalia</i> )
<b>Temperate heath and scrub</b>	
4050	Endemic macaronesian heaths
4060	Alpine and Boreal heaths
4070	Bushes with <i>Pinus mugo</i> and <i>Rhododendron hirsutum</i> (Mugo-Rhododendretum hirsuti)
4080	Sub-Arctic <i>Salix</i> spp. scrub
40A0	Subcontinental peri-Pannonic scrub
40B0	Rhodope <i>Potentilla fruticosa</i> thickets

40C0	Ponto-Sarmatic deciduous thickets
<b>Sclerophyllous scrub (matorral)</b>	
5110	Stable xerothermophilous formations with <i>Buxus sempervirens</i> on rock slopes ( <i>Berberidion</i> p.p.)
5120	Mountain <i>Cytisus purgans</i> formations
5140	<i>Cistus palhinhae</i> formations on maritime wet heaths
5220	Arborescent matorral with <i>Zyziphus</i>
5230	Arborescent matorral with <i>Laurus nobilis</i>
5310	<i>Laurus nobilis</i> thickets
5320	Low formations of <i>Euphorbia</i> close to cliffs
5330	Thermo-Mediterranean and pre-desert scrub
5410	West Mediterranean cliff-top phrygas ( <i>Astragalo-Plantaginetum subulatae</i> )
5420	<i>Sarcopoterium spinosum</i> phrygas
5430	Endemic phrygas of the <i>Euphorbio-Verbascion</i>

## 6. GROUP 6: ROCKY AND DUNE HABITATS

Habitat type code as referred to in Annex I of Council Directive 92/43/EEC	Habitat type name as referred to in Annex I of Council Directive 92/43/EEC
<b>Sea cliffs, beaches, and islets</b>	
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 <i>Limonium</i> spp.
1250	Vegetated sea cliffs with endemic flora of the Macaronesian coasts

1610	Baltic esker islands with sandy, rocky and shingle beach vegetation and sublittoral vegetation
1620	Boreal Baltic islets and small islands
1640	Boreal Baltic sandy beaches with perennial vegetation
<b>Coastal and inland dunes</b>	
2110	Embryonic shifting dunes
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')
2130	Fixed coastal dunes with herbaceous vegetation ('grey dunes')
2140	Decalcified fixed dunes with <i>Empetrum nigrum</i>
2150	Atlantic decalcified fixed dunes ( <i>Calluno-Ulicetea</i> )
2160	Dunes with <i>Hippophaë rhamnoides</i>
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> ( <i>Salicion arenariae</i> )
2180	Wooded dunes of the Atlantic, Continental and Boreal region
2190	Humid dune slacks
2210	Crucianellion maritimae fixed beach dunes
2220	Dunes with <i>Euphorbia terracina</i>
2230	<i>Malcolmietalia</i> dune grasslands
2240	<i>Brachypodietalia</i> dune grasslands with annuals
2250	Coastal dunes with <i>Juniperus</i> spp.
2260	<i>Cisto-Lavenduletalia</i> dune sclerophyllous scrubs
2270	Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>
2310	Dry sand heaths with <i>Calluna</i> and <i>Genista</i>
2320	Dry sand heaths with <i>Calluna</i> and <i>Empetrum nigrum</i>
2330	Inland dunes with open <i>Corynephorus</i> and <i>Agrostis</i> grasslands
2340	Pannonic inland dunes
91N0	Pannonic inland sand dune thicket ( <i>Junipero-Populetum albae</i> )

Rocky habitats	
8110	Siliceous scree of the montane to snow levels ( <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> )
8120	Calcareous and calcshist screes of the montane to alpine levels ( <i>Thlaspietea rotundifolii</i> )
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
8210	Calcareous rocky slopes with chasmophytic vegetation
8220	Siliceous rocky slopes with chasmophytic vegetation
8230	Siliceous rock with pioneer vegetation of the <i>Sedo-Scleranthion</i> or of the <i>Sedo albi-Veronicion dillenii</i>
8310	Caves not open to the public
8320	Fields of lava and natural excavations
8340	Permanent glaciers

**ANNEX II**  
**MARINE ECOSYSTEMS – HABITAT TYPES AND GROUPS OF HABITAT TYPES**  
**REFERRED TO IN ARTICLE 5(1) AND 5(2)**

The list below includes the marine habitat types referred to in Article 5(1) and 5(2), as well as seven groups of those habitat types, namely 1) Seagrass beds, 2) Macroalgal forests, 3) Shellfish beds, 4) Maerl beds, 5) Sponge, coral and coralligenous beds, 6) Vents and seeps and 7) Soft sediments (above 1000 meters of depth). The relation with the habitat types listed in Annex I of Directive 92/43/EEC is also presented.

The classification of marine habitat types used, differentiated by marine biogeographical regions, is made according to the European nature information system (EUNIS), as revised for the marine habitats typology in 2022 by the European Environment Agency (EEA). The information on the related habitats listed in Annex I of Council Directive 92/43/EEC is based on the crosswalk published by the EEA in 2021<sup>1</sup>.

**1. GROUP 1: SEAGRASS BEDS**

<b>EUNIS code</b>	<b>EUNIS habitat type name</b>	<b>Related habitat type code as referred to in Annex I of Council Directive 92/43/EEC</b>
<b>Atlantic</b>		
MA522	Seagrass beds on Atlantic littoral sand	1140; 1160
MA623	Seagrass beds on Atlantic littoral mud	1140; 1160
MB522	Seagrass beds on Atlantic infralittoral sand	1110; 1150; 1160
<b>Baltic Sea</b>		
MA332	Baltic hydrolittoral coarse sediment characterised by submerged vegetation	1130; 1160; 1610; 1620
MA432	Baltic hydrolittoral mixed sediment characterised by submerged vegetation	1130; 1140; 1160; 1610
MA532	Baltic hydrolittoral sand characterised by submerged rooted plants	1130; 1140; 1160; 1610
MA632	Baltic hydrolittoral mud dominated by submerged rooted plants	1130; 1140; 1160; 1650

<sup>1</sup> [EUNIS marine habitat classification 2022. European Environment Agency.](#)



MB332	Baltic infralittoral coarse sediment characterised by submerged rooted plants	1110; 1160
MB432	Baltic infralittoral mixed sediment characterised by submerged rooted plants	1110; 1160; 1650
MB532	Baltic infralittoral sand characterised by submerged rooted plants	1110; 1130; 1150; 1160
MB632	Baltic infralittoral mud sediment characterised by submerged rooted plants	1130; 1150; 1160; 1650
<b>Black Sea</b>		
MB546	Seagrass and rhizomatous algal meadows in Black Sea freshwater influenced infralittoral muddy sands	1110; 1130; 1160
MB547	Black Sea seagrass meadows on moderately exposed upper infralittoral clean sands	1110; 1160
MB548	Black Sea seagrass meadows on lower infralittoral sands	1110; 1160
<b>Mediterranean Sea</b>		
MB252	Biocenosis of <i>Posidonia oceanica</i>	1120
MB2521	Ecomorphosis of striped <i>Posidonia oceanica</i> meadows	1120; 1130; 1160
MB2522	Ecomorphosis of "barrier-reef" <i>Posidonia oceanica</i> meadows	1120; 1130; 1160
MB2523	Facies of dead "mattes" of <i>Posidonia oceanica</i> without much epiflora	1120; 1130; 1160
MB2524	Association with <i>Caulerpa prolifera</i> on <i>Posidonia</i> beds	1120; 1130; 1160
MB5521	Association with <i>Cymodocea nodosa</i> on well sorted fine sands	1110; 1130; 1160
MB5534	Association with <i>Cymodocea nodosa</i> on superficial muddy sands in sheltered waters	1110; 1130; 1160
MB5535	Association with <i>Zostera noltei</i> on superficial muddy sands in sheltered waters	1110; 1130; 1160
MB5541	Association with <i>Ruppia cirrhosa</i> and/or <i>Ruppia maritima</i> on sand	1110; 1130; 1160
MB5544	Association with <i>Zostera noltei</i> in euryhaline and eurythermal environment on sand	1110; 1130; 1160

MB5545	Association with <i>Zostera marina</i> in euryhaline and eurythermal environment	1110; 1130; 1160
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## 2. GROUP 2: MACROALGAL FORESTS

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
<b>Atlantic</b>		
MA123	Seaweed communities on full salinity Atlantic littoral rock	1160; 1170; 1130
MA125	Fucoids on variable salinity Atlantic littoral rock	1170; 1130
MB121	Kelp and seaweed communities on Atlantic infralittoral rock	1170; 1160
MB123	Kelp and seaweed communities on sediment-affected or disturbed Atlantic infralittoral rock	1170; 1160
MB124	Kelp communities on variable salinity Atlantic infralittoral rock	1170; 1130; 1160
MB321	Kelp and seaweed communities on Atlantic infralittoral coarse sediment	1160
MB521	Kelp and seaweed communities on Atlantic infralittoral sand	1160
MB621	Vegetated communities on Atlantic infralittoral mud	1160
<b>Baltic Sea</b>		
MA131	Baltic hydrolittoral rock and boulders characterised by perennial algae	1160; 1170; 1130; 1610; 1620
MB131	Perennial algae on Baltic infralittoral rock and boulders	1170; 1160
MB232	Baltic infralittoral bottoms characterised by shell gravel	1160; 1110
MB333	Baltic infralittoral coarse sediment characterised by perennial algae	1110; 1160
MB433	Baltic infralittoral mixed sediment characterised by perennial algae	1110; 1130; 1160; 1170
<b>Black Sea</b>		
MB144	Mytilid-dominated Black Sea exposed upper infralittoral rock with fucals	1170; 1160

MB149	Mytilid-dominated Black Sea moderately exposed upper infralittoral rock with fucales	1170; 1160
MB14A	Fucales and other algae on Black Sea sheltered upper infralittoral rock, well illuminated	1170; 1160
<b>Mediterranean Sea</b>		
MA1548	Association with <i>Fucus virsoides</i>	1160; 1170
MB1512	Association with <i>Cystoseira tamariscifolia</i> and <i>Saccorhiza polyschides</i>	1170; 1160
MB1513	Association with <i>Cystoseira amentacea</i> (var. <i>amentacea</i> , var. <i>stricta</i> , var. <i>spicata</i> )	1170; 1160
MB151F	Association with <i>Cystoseira brachycarpa</i>	1170; 1160
MB151G	Association with <i>Cystoseira crinita</i>	1170; 1160
MB151H	Association with <i>Cystoseira crinitophylla</i>	1170; 1160
MB151J	Association with <i>Cystoseira sauvageauana</i>	1170; 1160
MB151K	Association with <i>Cystoseira spinosa</i>	1170; 1160
MB151L	Association with <i>Sargassum vulgare</i>	1170; 1160
MB151M	Association with <i>Dictyopteris polypodioides</i>	1170; 1160
MB151W	Association with <i>Cystoseira compressa</i>	1170; 1160
MB1524	Association with <i>Cystoseira barbata</i>	1170; 1160
MC1511	Association with <i>Cystoseira zosteroides</i>	1170; 1160
MC1512	Association with <i>Cystoseira usneoides</i>	1170; 1160
MC1513	Association with <i>Cystoseira dubia</i>	1170; 1160
MC1514	Association with <i>Cystoseira corniculata</i>	1170; 1160
MC1515	Association with <i>Sargassum</i> spp.	1170; 1160
MC1518	Association with <i>Laminaria ochroleuca</i>	1170; 1160
MC3517	Association with <i>Laminaria rodriguezii</i> on detritic beds	1160

### 3. GROUP 3: SHELLFISH BEDS

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
<b>Atlantic</b>		
MA122	<i>Mytilus edulis</i> and/or barnacle communities on wave-exposed Atlantic littoral rock	1160; 1170
MA124	Mussel and/or barnacle communities with seaweeds on Atlantic littoral rock	1160; 1170
MA227	Bivalve reefs in the Atlantic littoral zone	1170; 1140
MB222	Bivalve reefs in the Atlantic infralittoral zone	1170; 1130; 1160
MC223	Bivalve reefs in the Atlantic circalittoral zone	1170
<b>Baltic Sea</b>		
MB231	Baltic infralittoral bottoms dominated by epibenthic bivalves	1170; 1160
MC231	Baltic circalittoral bottoms dominated by epibenthic bivalves	1170; 1160; 1110
MD231	Baltic offshore circalittoral biogenic bottoms characterised by epibenthic bivalves	1170
MD232	Baltic offshore circalittoral shell gravel bottoms characterised by bivalves	1170
MD431	Baltic offshore circalittoral mixed bottoms characterised by macroscopic epibenthic biotic structures	
MD531	Baltic offshore circalittoral sand characterised by macroscopic epibenthic biotic structures	
MD631	Baltic offshore circalittoral mud characterised by epibenthic bivalves	
<b>Black Sea</b>		
MB141	Invertebrate-dominated Black Sea lower infralittoral rock	1170
MB143	Mytilid-dominated Black Sea exposed upper infralittoral rock with foliose algae (no Fucales)	1170; 1160
MB148	Mytilid-dominated Black Sea moderately exposed upper infralittoral rock with foliose algae (other than Fucales)	1170; 1160
MB242	Mussel beds in the Black Sea infralittoral zone	1170; 1130; 1160

MB243	Oyster reefs on Black Sea lower infralittoral rock	1170
MB642	Black Sea infralittoral terrigenous muds	1160
MC141	Invertebrate-dominated Black Sea circalittoral rock	1170
MC241	Mussel beds on Black Sea circalittoral terrigenous muds	1170
MC645	Black Sea lower circalittoral mud	
<b>Mediterranean Sea</b>		
MA1544	Facies with <i>Mytilus galloprovincialis</i> in waters enriched in organic matter	1160; 1170
MB1514	Facies with <i>Mytilus galloprovincialis</i>	1170; 1160

#### 4. GROUP 4: MAERL BEDS

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
<b>Atlantic</b>		
MB322	Maerl beds on Atlantic infralittoral coarse sediment	1110; 1160
MB421	Maerl beds on Atlantic infralittoral mixed sediment	1110; 1160
MB622	Maerl beds on Atlantic infralittoral muddy sediment	1110; 1160
<b>Mediterranean Sea</b>		
MB3511	Association with rhodolithes in coarse sands and fine gravels mixed by waves	1110; 1160
MB3521	Association with rhodolithes in coarse sands and fine gravels under the influence of bottom currents	1110; 1160
MB3522	Association with maerl (= Association with <i>Lithothamnion corallioides</i> and <i>Phymatolithon calcareum</i> ) on Mediterranean coarse sands and gravel	1110; 1160
MC3521	Association with rhodolithes on coastal detritic bottoms	1110
MC3523	Association with maerl ( <i>Lithothamnion corallioides</i> and <i>Phymatolithon calcareum</i> ) on coastal dendritic bottoms	1110

**5. GROUP 5: SPONGE, CORAL AND CORALLIGENOUS BEDS**

<b>EUNIS code</b>	<b>EUNIS habitat type name</b>	<b>Related Annex I (Habitats Directive) codes</b>
<b>Atlantic</b>		
MC121	Faunal turf communities on Atlantic circalittoral rock	1170
MC124	Faunal communities on variable salinity Atlantic circalittoral rock	1170; 1130
MC126	Communities of Atlantic circalittoral caves and overhangs	8330; 1170
MC222	Cold water coral reefs in the Atlantic circalittoral zone	1170
MD121	Sponge communities on Atlantic offshore circalittoral rock	1170
MD221	Cold water coral reefs in the Atlantic offshore circalittoral zone	1170
ME122	Sponge communities on Atlantic upper bathyal rock	1170
ME123	Mixed cold water coral communities on Atlantic upper bathyal rock	1170
ME221	Atlantic upper bathyal cold water coral reef	1170
ME322	Mixed cold water coral community on Atlantic upper bathyal coarse sediment	
ME324	Sponge aggregation on Atlantic upper bathyal coarse sediment	
ME422	Sponge aggregation on Atlantic upper bathyal mixed sediment	
ME623	Sponge aggregation on Atlantic upper bathyal mud	
ME624	Erect coral field on Atlantic upper bathyal mud	
MF121	Mixed cold water coral community on Atlantic lower bathyal rock	1170
MF221	Atlantic lower bathyal cold water coral reef	1170
MF321	Mixed cold water coral community on Atlantic lower bathyal coarse sediment	
MF622	Sponge aggregation on Atlantic lower bathyal mud	

MF623	Erect coral field on Atlantic lower bathyal mud	
<b>Baltic Sea</b>		
MB138	Baltic infralittoral rock and boulders characterized by epibenthic sponges	1170; 1160
MB43A	Baltic infralittoral mixed sediment characterized by epibenthic sponges (Porifera)	1160; 1170
MC133	Baltic circalittoral rock and boulders characterized by epibenthic cnidarians	1170; 1160
MC136	Baltic circalittoral rock and boulders characterized by epibenthic sponges	1170; 1160
MC433	Baltic circalittoral mixed sediment characterized by epibenthic cnidarians	1160; 1170
MC436	Baltic circalittoral mixed sediment characterized by epibenthic sponges	1160
<b>Black Sea</b>		
MD24	Black Sea offshore circalittoral biogenic habitats	1170
ME14	Black Sea upper bathyal rock	1170
ME24	Black Sea upper bathyal biogenic habitat	1170
MF14	Black Sea lower bathyal rock	1170
<b>Mediterranean Sea</b>		
MB151E	Facies with <i>Cladocora caespitosa</i>	1170; 1160
MB151Q	Facies with <i>Astroides calycularis</i>	1170; 1160
MB151 $\alpha$	Facies and association of coralligenous biocenosis (in enclave)	1170; 1160
MC1519	Facies with <i>Eunicella cavolini</i>	1170; 1160
MC151A	Facies with <i>Eunicella singularis</i>	1170; 1160
MC151B	Facies with <i>Paramuricea clavata</i>	1170; 1160
MC151E	Facies with <i>Leptogorgia sarmentosa</i>	1170; 1160
MC151F	Facies with <i>Anthipatella subpinnata</i> and sparse red algae	1170; 1160
MC151G	Facies with massive sponges and sparse red algae	1170; 1160

MC1522	Facies with <i>Corallium rubrum</i>	8330; 1170
MC1523	Facies with <i>Leptopsammia pruvoti</i>	8330; 1170
MC251	Coralligenous platforms	1170
MC6514	Facies of sticky muds with <i>Alcyonium palmatum</i> and <i>Parastichopus regalis</i> on circalittoral mud	1160
MD151	Biocenosis of Mediterranean shelf-edge rock	1170
MD25	Mediterranean offshore circalittoral biogenic habitats	1170
MD6512	Facies of sticky muds with <i>Alcyonium palmatum</i> and <i>Parastichopus regalis</i> on lower circalittoral mud	
ME1511	Mediterranean upper bathyal <i>Lophelia pertusa</i> reefs	1170
ME1512	Mediterranean upper bathyal <i>Madrepora oculata</i> reefs	1170
ME1513	Mediterranean upper bathyal <i>Madrepora oculata</i> and <i>Lophelia pertusa</i> reefs	1170
ME6514	Mediterranean upper bathyal facies of with <i>Pheronema carpenteri</i>	
MF1511	Mediterranean lower bathyal <i>Lophelia pertusa</i> reefs	1170
MF1512	Mediterranean lower bathyal <i>Madrepora oculata</i> reefs	1170
MF1513	Mediterranean lower bathyal <i>Madrepora oculata</i> and <i>Lophelia pertusa</i> reefs	1170
MF6511	Mediterranean lower bathyal facies of sandy muds with <i>Thenia muricata</i>	
MF6513	Mediterranean lower bathyal facies of compact muds with <i>Isidella elongata</i>	

## 6. GROUP 6: VENTS AND SEEPS

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
<b>Atlantic</b>		
MB128	Vents and seeps in Atlantic infralittoral rock	1170; 1160; 1180
MB627	Vents and seeps in Atlantic infralittoral mud	1130; 1160



MC127	Vents and seeps in Atlantic circalittoral rock	1170; 1180
MC622	Vents and seeps in Atlantic circalittoral mud	1160
MD122	Vents and seeps on Atlantic offshore circalittoral rock	1170
MD622	Vents and seeps in Atlantic offshore circalittoral mud	

## 7. GROUP 7: SOFT SEDIMENTS (ABOVE 1000 METERS OF DEPTH)

EUNIS code	EUNIS habitat type name	Related Annex I (Habitats Directive) codes
<b>Atlantic</b>		
MA32	Atlantic littoral coarse sediment	1130; 1160
MA42	Atlantic littoral mixed sediment	1130; 1140; 1160
MA52	Atlantic littoral sand	1130; 1140; 1160
MA62	Atlantic littoral mud	1130; 1140; 1160
MB32	Atlantic infralittoral coarse sediment	1110; 1130; 1160
MB42	Atlantic infralittoral mixed sediment	1110; 1130; 1150; 1160
MB52	Atlantic infralittoral sand	1110; 1130; 1150; 1160
MB62	Atlantic infralittoral mud	1110; 1130; 1160
MC32	Atlantic circalittoral coarse sediment	1110; 1160
MC42	Atlantic circalittoral mixed sediment	1110; 1160
MC52	Atlantic circalittoral sand	1110; 1160
MC62	Atlantic circalittoral mud	1160
MD32	Atlantic offshore circalittoral coarse sediment	
MD42	Atlantic offshore circalittoral mixed sediment	
MD52	Atlantic offshore circalittoral sand	
MD62	Atlantic offshore circalittoral mud	
ME32	Atlantic upper bathyal coarse sediment	

ME42	Atlantic upper bathyal mixed sediment	
ME52	Atlantic upper bathyal sand	
ME62	Atlantic upper bathyal mud	
MF32	Atlantic lower bathyal coarse sediment	
MF42	Atlantic lower bathyal mixed sediment	
MF52	Atlantic lower bathyal sand	
MF62	Atlantic lower bathyal mud	
<b>Baltic Sea</b>		
MA33	Baltic hydrolittoral coarse sediment	1130; 1160; 1610; 1620
MA43	Baltic hydrolittoral mixed sediment	1130; 1140; 1160; 1610
MA53	Baltic hydrolittoral sand	1130; 1140; 1160; 1610
MA63	Baltic hydrolittoral mud	1130; 1140; 1160; 1650
MB33	Baltic infralittoral coarse sediment	1110; 1150; 1160
MB43	Baltic infralittoral mixed sediment	1110; 1130; 1150; 1160; 1170; 1650
MB53	Baltic infralittoral sand	1110; 1130; 1150; 1160
MB63	Baltic infralittoral mud	1130; 1150; 1160; 1650
MC33	Baltic circalittoral coarse sediment	1110; 1160
MC43	Baltic circalittoral mixed sediment	1160; 1170
MC53	Baltic circalittoral sand	1110; 1160
MC63	Baltic circalittoral mud	1160; 1650
MD33	Baltic offshore circalittoral coarse sediment	
MD43	Baltic offshore circalittoral mixed sediment	
MD53	Baltic offshore circalittoral sand	

MD63	Baltic offshore circalittoral mud	
<b>Black Sea</b>		
MA34	Black Sea littoral coarse sediment	1160
MA44	Black Sea littoral mixed sediment	1130; 1140; 1160
MA54	Black Sea littoral sand	1130; 1140; 1160
MA64	Black Sea littoral mud	1130; 1140; 1160
MB34	Black Sea infralittoral coarse sediment	1110; 1160
MB44	Black Sea infralittoral mixed sediment	1110; 1170
MB54	Black Sea infralittoral sand	1110; 1130; 1160
MB64	Black Sea infralittoral mud	1130; 1160
MC34	Black Sea circalittoral coarse sediment	1160
MC44	Black Sea circalittoral mixed sediment	
MC54	Black Sea circalittoral sand	1160
MC64	Black Sea circalittoral mud	1130; 1160
MD34	Black Sea offshore circalittoral coarse sediment	
MD44	Black Sea offshore circalittoral mixed sediment	
MD54	Black Sea offshore circalittoral sand	
MD64	Black Sea offshore circalittoral mud	
<b>Mediterranean Sea</b>		
MA35	Mediterranean littoral coarse sediment	1160; 1130
MA45	Mediterranean littoral mixed sediment	1140; 1160
MA55	Mediterranean littoral sand	1130; 1140; 1160
MA65	Mediterranean littoral mud	1130; 1140; 1150; 1160
MB35	Mediterranean infralittoral coarse sediment	1110; 1160
MB45	Mediterranean infralittoral mixed sediment	

MB55	Mediterranean infralittoral sand	1110; 1130; 1150; 1160
MB65	Mediterranean infralittoral mud	1130; 1150
MC35	Mediterranean circalittoral coarse sediment	1110; 1160
MC45	Mediterranean circalittoral mixed sediment	
MC55	Mediterranean circalittoral sand	1110; 1160
MC65	Mediterranean circalittoral mud	1130; 1160
MD35	Mediterranean offshore circalittoral coarse sediment	
MD45	Mediterranean offshore circalittoral mixed sediment	
MD55	Mediterranean offshore circalittoral sand	
MD65	Mediterranean offshore circalittoral mud	
ME35	Mediterranean upper bathyal coarse sediment	
ME45	Mediterranean upper bathyal mixed sediment	
ME55	Mediterranean upper bathyal sand	
ME65	Mediterranean upper bathyal mud	
MF35	Mediterranean lower bathyal coarse sediment	
MF45	Mediterranean lower bathyal mixed sediment	
MF55	Mediterranean lower bathyal sand	
MF65	Mediterranean lower bathyal mud	

### ANNEX III

#### MARINE SPECIES REFERRED TO IN ARTICLE 5(3)

- (1) narrow sawfish (*Anoxypristis cuspidata*);
- (2) dwarf sawfish (*Pristis clavata*);
- (3) smalltooth sawfish (*Pristis pectinata*);
- (4) largetooth sawfish (*Pristis pristis*);
- (5) green sawfish (*Pristis zijsron*);
- (6) basking shark (*Cetorhinus maximus*) and white shark (*Carcharodon carcharias*);
- (7) smooth lantern shark (*Etmopterus pusillus*);
- (8) reef manta ray (*Manta alfredi*);
- (9) giant manta ray (*Manta birostris*);
- (10) devil fish (*Mobula mobular*);
- (11) lesser Guinean devil ray (*Mobula rochebrunei*);
- (12) spinetail mobula (*Mobula japanica*);
- (13) smoothtail mobula (*Mobula thurstoni*);
- (14) longhorned mobula (*Mobula eregoodootenkee*);
- (15) Munk's devil ray (*Mobula munkiana*);
- (16) Chilean devil ray (*Mobula tarapacana*);
- (17) shortfin devil ray (*Mobula kuhlii*);
- (18) lesser devil ray (*Mobula hypostoma*);
- (19) Norwegian skate (*Raja (Dipturus) nidarosiensis*);
- (20) white skate (*Raja alba*);
- (21) guitarfishes (*Rhinobatidae*);
- (22) angel shark (*Squatina squatina*);
- (23) salmon (*Salmo salar*);
- (24) sea trout (*Salmo trutta*);
- (25) houting (*Coregonus oxyrhynchus*).

## ANNEX IV

### LIST OF BIODIVERSITY INDICATORS FOR AGRICULTURAL ECOSYSTEMS REFERRED TO IN ARTICLE 9(2)

Indicator	Description, units, and methodology for determining and monitoring the indicator
Grassland butterfly index	<p><b>Description:</b> This indicator is composed of species considered to be characteristic of European grasslands and which occur in a large part of Europe, covered by the majority of the Butterfly Monitoring Schemes. It is based on the geometric mean of species trends.</p> <p><b>Unit:</b> Index.</p> <p><b>Methodology:</b> as developed and used by Butterfly Conservation Europe, Van Swaay, C.A.M, <i>Assessing Butterflies in Europe - Butterfly Indicators 1990-2018</i>, Technical report, Butterfly Conservation Europe, 2020.</p>
Stock of organic carbon in cropland mineral soils	<p><b>Description:</b> This indicator describes the stock of organic carbon in cropland mineral soils at a depth of 0 to 30 cm.</p> <p><b>Unit:</b> tonnes of organic carbon/ha.</p> <p><b>Methodology:</b> as set out in Annex V of Regulation 2018/1999 in accordance to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and as supported by the Land Use and Coverage Area frame Survey (LUCAS) Soil, Jones A. et al., <i>LUCAS Soil 2022</i>, JRC technical report, Publications Office of the European Union, 2021.</p>
Share of agricultural land with high-diversity landscape features	<p><b>Description:</b> High-diversity landscape features are elements of permanent natural or semi-natural vegetation present in an agricultural context which provide ecosystem services and support for biodiversity. In order to do so, landscape features need to be subject to as little external disturbances as possible to provide safe habitats for various taxa, and therefore need to comply with the following conditions:</p> <ul style="list-style-type: none"> <li>a) they cannot be under productive agricultural use (including grazing or fodder production), and</li> <li>b) they should not receive fertilizer or pesticide treatment.</li> </ul> <p>Land lying fallow can be considered as high diversity landscape features if it complies with criteria (a) and (b) above. Productive trees part of arable land agroforestry systems and productive elements in non-productive hedges can also be considered as high diversity landscape features, if they comply with criterion (b) above, and if harvests take place only at moments where it would not compromise high biodiversity levels.</p> <p><b>Unit:</b> Percent (share of Utilised Agricultural Area).</p> <p><b>Methodology:</b> as developed under indicator I.21, Annex I of Regulation 2021/2115, as based on LUCAS for landscape elements, Ballin M. et al., <i>Redesign sample for Land Use/Cover Area frame Survey (LUCAS)</i>, Eurostat 2018, and for land laying fallow, <i>Farm Structure</i>,</p>

*Reference Metadata in Single Integrated Metadata Structure*, online publication, Eurostat.

## ANNEX V

### COMMON FARMLAND BIRD INDEX AT NATIONAL LEVEL

#### **Description**

The Farmland Bird Index (FBI) summarises population trends of common and widespread birds of farmland and is intended as a proxy to assess the biodiversity status of agricultural ecosystems in Europe. The national FBI is a composite, multispecies index that measures the rate of change in the relative abundance of farmland bird species across selected survey sites at national level. The index is based on specially selected species that are dependent on farmland habitats for feeding and or nesting. National common farmland bird indices are based on species sets that are relevant to each Member State. The index is calculated with reference to a base year when the index value is typically set at 100. Trend values express the overall population change in the population size of the constituent farmland birds over a period of years.

**Methodology:** Brlík et al. (2021): Long-term and large-scale multispecies dataset tracking population changes of common European breeding birds. *Sci Data* 8, 21. <https://doi.org/10.1038/s41597-021-00804-2>

“Member States with historically more depleted populations of farmland birds” means Member States where half or more species contributing to the national common farmland bird index have a negative long-term population trend. In Member States, where information on long-term population trends is not available for some species, information on the European status of species is used.

These Member States are:

Czechia

Denmark

Estonia

Finland

France

Germany

Hungary

Italy

Luxembourg

Netherlands

Spain

“Member States with historically less depleted populations of farmland birds” means Member States where less than half of species contributing to the national common farmland bird



index have a negative long-term population trend. In Member States, where information on long-term population trends is not available for some species, information on the European status of species is used.

These Member States are:

Austria  
Belgium  
Bulgaria  
Croatia  
Cyprus  
Greece  
Ireland  
Latvia  
Lithuania  
Malta  
Poland  
Portugal  
Romania  
Slovakia  
Slovenia  
Sweden

#### List of species used for the common farmland bird index in the Member States

<b>Austria</b>
<i>Acrocephalus palustris</i>
<i>Alauda arvensis</i>
<i>Anthus spinoletta</i>
<i>Anthus trivialis</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Jynx torquilla</i>
<i>Lanius collurio</i>
<i>Lullula arborea</i>
<i>Miliaria calandra</i>
<i>Oenanthe oenanthe</i>
<i>Passer montanus</i>
<i>Perdix perdix</i>

<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Serinus citrinella</i>
<i>Serinus serinus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Turdus pilaris</i>
<i>Vanellus vanellus</i>

<b>Belgium - Flanders</b>	<b>Belgium - Wallonia</b>
<i>Alauda arvensis</i>	<i>Alauda arvensis</i>
<i>Anthus pratensis</i>	<i>Anthus pratensis</i>
<i>Emberiza citrinella</i>	<i>Carduelis cannabina</i>
<i>Falco tinnunculus</i>	<i>Corvus frugilegus</i>
<i>Haematopus ostralegus</i>	<i>Emberiza citrinella</i>
<i>Hippolais icterina</i>	<i>Falco tinnunculus</i>
<i>Hirundo rustica</i>	<i>Hirundo rustica</i>
<i>Limosa limosa</i>	<i>Lanius collurio</i>
<i>Linaria cannabina</i>	<i>Miliaria calandra</i>
<i>Motacilla alba</i>	<i>Motacilla flava</i>
<i>Motacilla flava</i>	<i>Passer montanus</i>
<i>Numenius arquata</i>	<i>Perdix perdix</i>
<i>Passer montanus</i>	<i>Saxicola torquatus</i>
<i>Perdix perdix</i>	<i>Streptopelia turtur</i>
<i>Phoenicurus ochruros</i>	<i>Sturnus vulgaris</i>
<i>Saxicola torquatus</i>	<i>Sylvia communis</i>
<i>Sylvia communis</i>	<i>Vanellus vanellus</i>
<i>Vanellus vanellus</i>	

<b>Bulgaria</b>
<i>Alauda arvensis</i>
<i>Carduelis carduelis</i>
<i>Carduelis cannabina</i>
<i>Coturnix coturnix</i>
<i>Corvus frugilegus</i>
<i>Emberiza hortulana</i>
<i>Emberiza melanocephala</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>

<i>Perdix perdix</i>
<i>Passer montanus</i>
<i>Sylvia communis</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Upupa epops</i>

<b>Croatia</b>
<i>Alauda arvensis</i>
<i>Anthus campestris</i>
<i>Anthus trivialis</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Coturnix coturnix</i>
<i>Emberiza cirrus</i>
<i>Emberiza citrinella</i>
<i>Emberiza melanocephala</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Jynx torquilla</i>
<i>Lanius collurio</i>
<i>Lanius senator</i>
<i>Lullula arborea</i>
<i>Luscinia megarhynchos</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>
<i>Oenanthe hispanica</i>
<i>Oriolus oriolus</i>
<i>Passer montanus</i>
<i>Pica pica</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Streptopelia turtur</i>
<i>Sylvia communis</i>
<i>Upupa epops</i>
<i>Vanellus vanellus</i>

<b>Cyprus</b>
<i>Alectoris chukar</i>
<i>Athene noctua</i>
<i>Carduelis carduelis</i>
<i>Cisticola juncidis</i>
<i>Clamator glandarius</i>
<i>Columba palumbus</i>
<i>Coracias garrulus</i>

<i>Corvus corone cornix</i>
<i>Coturnix coturnix</i>
<i>Emberiza calandra</i>
<i>Emberiza melanocephala</i>
<i>Falco tinnunculus</i>
<i>Francolinus francolinus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Chloris chloris</i>
<i>Iduna pallida</i>
<i>Linaria cannabina</i>
<i>Oenanthe cypriaca</i>
<i>Parus major</i>
<i>Passer hispaniolensis</i>
<i>Pica pica</i>
<i>Streptopelia turtur</i>
<i>Sylvia conspicillata</i>
<i>Sylvia melanocephala</i>

<b>Czechia</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis cannabina</i>
<i>Ciconia ciconia</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Perdix perdix</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Serinus serinus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>

<b>Denmark</b>
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<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Corvus corone</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Gallinago gallinago</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Miliaria calandra</i>
<i>Motacilla alba</i>
<i>Motacilla flava</i>
<i>Oenanthe oenanthe</i>
<i>Passer montanus</i>
<i>Perdix perdix</i>
<i>Saxicola rubetra</i>
<i>Sylvia communis</i>
<i>Sylvia curruca</i>
<i>Turdus pilaris</i>
<i>Vanellus vanellus</i>

<b>Estonia</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Linaria cannabina</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Hirundo rustica</i>

<i>Lanius collurio</i>
<i>Linaria cannabina</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Linaria cannabina</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Streptopelia turtur</i>

<b>Finland</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Corvus monedula</i>
<i>Crex crex</i>
<i>Delichon urbica</i>
<i>Emberiza hortulana</i>
<i>Hirundo rustica</i>
<i>Numenius arquata</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Turdus pilaris</i>
<i>Vanellus vanellus</i>

<b>France</b>
<i>Alauda arvensis</i>
<i>Alectoris rufa</i>
<i>Anthus campestris</i>
<i>Anthus pratensis</i>
<i>Buteo buteo</i>
<i>Carduelis cannabina</i>
<i>Corvus frugilegus</i>

<i>Coturnix coturnix</i>
<i>Emberiza cirrus</i>
<i>Emberiza citrinella</i>
<i>Emberiza hortulana</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Lanius collurio</i>
<i>Lullula arborea</i>
<i>Melanocorypha calandra</i>
<i>Motacilla flava</i>
<i>Oenanthe oenanthe</i>
<i>Perdix perdix</i>
<i>Saxicola torquatus</i>
<i>Saxicola rubetra</i>
<i>Sylvia communis</i>
<i>Upupa epops</i>
<i>Vanellus vanellus</i>

<b>Germany</b>
<i>Alauda arvensis</i>
<i>Athene noctua</i>
<i>Emberiza citrinella</i>
<i>Lanius collurio</i>
<i>Limosa limosa</i>
<i>Lullula arborea</i>
<i>Miliaria calandra</i>
<i>Milvus milvus</i>
<i>Saxicola rubetra</i>
<i>Vanellus vanellus</i>

<b>Greece</b>
<i>Alauda arvensis</i>
<i>Apus apus</i>
<i>Athene noctua</i>
<i>Calandrella brachydactyla</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Carduelis chloris</i>
<i>Ciconia ciconia</i>
<i>Corvus corone</i>
<i>Corvus monedula</i>
<i>Delichon urbicum</i>
<i>Emberiza cirrus</i>
<i>Emberiza hortulana</i>
<i>Emberiza melanocephala</i>

<i>Falco naumanni</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo daurica</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Lanius minor</i>
<i>Lanius senator</i>
<i>Lullula arborea</i>
<i>Luscinia megarhynchos</i>
<i>Melanocorypha calandra</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>
<i>Oenanthe hispanica</i>
<i>Oenanthe oenanthe</i>
<i>Passer domesticus</i>
<i>Passer hispaniolensis</i>
<i>Passer montanus</i>
<i>Pica pica</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Streptopelia decaocto</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia melanocephala</i>
<i>Upupa epops</i>

<b>Hungary</b>
<i>Alauda arvensis</i>
<i>Anthus campestris</i>
<i>Coturnix coturnix</i>
<i>Emberiza calandra</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Lanius collurio</i>
<i>Lanius minor</i>
<i>Locustella naevia</i>
<i>Merops apiaster</i>
<i>Motacilla flava</i>
<i>Perdix perdix</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Sylvia nisoria</i>
<i>Vanellus vanellus</i>



<b>Ireland</b>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Columba oenas</i>
<i>Columba palumbus</i>
<i>Corvus cornix</i>
<i>Corvus frugilegus</i>
<i>Corvus monedula</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Fringilla coelebs</i>
<i>Hirundo rustica</i>
<i>Chloris chloris</i>
<i>Motacilla alba</i>
<i>Passer domesticus</i>
<i>Phasianus colchicus</i>
<i>Pica pica</i>
<i>Saxicola torquatus</i>
<i>Sturnus vulgaris</i>

<b>Italy</b>
<i>Alauda arvensis</i>
<i>Anthus campestris</i>
<i>Calandrella brachydactyla</i>
<i>Carduelis carduelis</i>
<i>Carduelis chloris</i>
<i>Corvus cornix</i>
<i>Emberiza calandra</i>
<i>Emberiza hortulana</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Jynx torquilla</i>
<i>Lanius collurio</i>
<i>Luscinia megarhynchos</i>
<i>Melanocorypha calandra</i>
<i>Motacilla alba</i>
<i>Motacilla flava</i>
<i>Oriolus oriolus</i>
<i>Passer domesticus italiae</i>
<i>Passer hispaniolensis</i>
<i>Passer montanus</i>
<i>Pica pica</i>
<i>Saxicola torquatus</i>
<i>Serinus serinus</i>

<i>Streptopelia turtur</i>
<i>Sturnus unicolor</i>
<i>Sturnus vulgaris</i>
<i>Upupa epops</i>

<b>Latvia</b>
<i>Acrocephalus palustris</i>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis carduelis</i>
<i>Carpodacus erythrinus</i>
<i>Ciconia ciconia</i>
<i>Crex crex</i>
<i>Emberiza citrinella</i>
<i>Lanius collurio</i>
<i>Locustella naevia</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>

<b>Lithuania</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis carduelis</i>
<i>Ciconia ciconia</i>
<i>Crex crex</i>
<i>Emberiza citrinella</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>

<b>Luxembourg</b>
<i>Alauda arvensis</i>
<i>Carduelis cannabina</i>
<i>Emberiza citrinella</i>
<i>Lanius collurio</i>

<i>Passer montanus</i>
<i>Saxicola torquatus</i>
<i>Sylvia communis</i>

<b>Malta</b>
<i>Calandrella brachydactyla</i>
<i>Linaria cannabina</i>
<i>Cettia cetti</i>
<i>Cisticola juncidis</i>
<i>Coturnix coturnix</i>
<i>Emberiza calandra</i>
<i>Lanius senator</i>
<i>Monticola solitarius</i>
<i>Passer hispaniolensis</i>
<i>Passer montanus</i>
<i>Serinus serinus</i>
<i>Streptopelia decaocto</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia conspicillata</i>
<i>Sylvia melanocephala</i>

<b>Netherlands</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Athene noctua</i>
<i>Calidris pugnax</i>
<i>Carduelis carduelis</i>
<i>Corvus frugilegus</i>
<i>Coturnix coturnix</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Gallinago gallinago</i>
<i>Haematopus ostralegus</i>
<i>Hippolais icterina</i>
<i>Hirundo rustica</i>
<i>Limosa limosa</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>
<i>Numenius arquata</i>
<i>Passer montanus</i>
<i>Perdix perdix</i>

<i>Saxicola torquatus</i>
<i>Spatula clypeata</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Tringa totanus</i>
<i>Turdus viscivorus</i>
<i>Vanellus vanellus</i>

<b>Poland</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis cannabina</i>
<i>Ciconia ciconia</i>
<i>Emberiza citrinella</i>
<i>Emberiza hortulana</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Limosa limosa</i>
<i>Miliaria calandra</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola torquatus</i>
<i>Saxicola rubetra</i>
<i>Serinus serinus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Upupa epops</i>
<i>Vanellus vanellus</i>

<b>Portugal</b>
<i>Athene noctua</i>
<i>Bubulcus ibis</i>
<i>Carduelis carduelis</i>
<i>Chloris chloris</i>
<i>Ciconia ciconia</i>
<i>Cisticola juncidis</i>
<i>Coturnix coturnix</i>

<i>Delichon urbicum</i>
<i>Emberiza cirrus</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Lanius meridionalis</i>
<i>Linaria cannabina</i>
<i>Merops apiaster</i>
<i>Miliaria calandra</i>
<i>Milvus migrans</i>
<i>Passer domesticus</i>
<i>Pica pica</i>
<i>Saxicola torquatus</i>
<i>Serinus serinus</i>
<i>Sturnus unicolor</i>
<i>Upupa epops</i>

<b>Romania</b>
<i>Alauda arvensis</i>
<i>Anthus campestris</i>
<i>Calandrella brachydactyla</i>
<i>Ciconia ciconia</i>
<i>Corvus frugilegus</i>
<i>Emberiza calandra</i>
<i>Emberiza citrinella</i>
<i>Emberiza hortulana</i>
<i>Emberiza melanocephala</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Lanius minor</i>
<i>Linaria cannabina</i>
<i>Melanocorypha calandra</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Perdix perdix</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Upupa epops</i>

<i>Vanellus vanellus</i>
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<b>Slovakia</b>
<i>Alauda arvensis</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Emberiza calandra</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Hirundo rustica</i>
<i>Chloris chloris</i>
<i>Lanius collurio</i>
<i>Locustella naevia</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Serinus serinus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Sylvia nisoria</i>
<i>Vanellus vanellus</i>

<b>Slovenia</b>
<i>Acrocephalus palustris</i>
<i>Alauda arvensis</i>
<i>Anthus trivialis</i>
<i>Carduelis cannabina</i>
<i>Carduelis carduelis</i>
<i>Columba oenas</i>
<i>Columba palumbus</i>
<i>Emberiza calandra</i>
<i>Emberiza cirrus</i>
<i>Emberiza citrinella</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Jynx torquilla</i>
<i>Lanius collurio</i>
<i>Lullula arborea</i>
<i>Luscinia megarhynchos</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>

<i>Phoenicurus phoenicurus</i>
<i>Picus viridis</i>
<i>Saxicola rubetra</i>
<i>Saxicola torquatus</i>
<i>Serinus serinus</i>
<i>Streptopelia turtur</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Upupa epops</i>
<i>Vanellus vanellus</i>

<b>Spain</b>
<i>Alauda arvensis</i>
<i>Alectoris rufa</i>
<i>Athene noctua</i>
<i>Calandrella brachydactyla</i>
<i>Carduelis carduelis</i>
<i>Cisticola juncidis</i>
<i>Corvus monedula</i>
<i>Coturnix coturnix</i>
<i>Emberiza calandra</i>
<i>Falco tinnunculus</i>
<i>Galerida cristata</i>
<i>Hirundo rustica</i>
<i>Linaria cannabina</i>
<i>Melanocorypha calandra</i>
<i>Merops apiaster</i>
<i>Oenanthe hispanica</i>
<i>Passer domesticus</i>
<i>Passer montanus</i>
<i>Pica pica</i>
<i>Pterocles orientalis</i>
<i>Streptopelia turtur</i>
<i>Sturnus unicolor</i>
<i>Tetrax tetrax</i>
<i>Upupa epops</i>

<b>Sweden</b>
<i>Alauda arvensis</i>
<i>Anthus pratensis</i>
<i>Carduelis cannabina</i>
<i>Corvus frugilegus</i>
<i>Emberiza citrinella</i>
<i>Emberiza hortulana</i>

<i>Falco tinnunculus</i>
<i>Hirundo rustica</i>
<i>Lanius collurio</i>
<i>Motacilla flava</i>
<i>Passer montanus</i>
<i>Saxicola rubetra</i>
<i>Sturnus vulgaris</i>
<i>Sylvia communis</i>
<i>Vanellus vanellus</i>



## ANNEX VI

### LIST OF BIODIVERSITY INDICATORS FOR FOREST ECOSYSTEMS REFERRED TO IN ARTICLE 10(2)

Indicator	Description, unit, and methodology for determining and monitoring the indicator
Standing deadwood	<p><b>Description:</b> This indicator shows the amount of non-living standing woody biomass in forest and other wooded land.</p> <p><b>Unit:</b> m<sup>3</sup>/ha.</p> <p><b>Methodology:</b> as developed and used by FOREST EUROPE, <i>State of Europe's Forests 2020</i>, FOREST EUROPE 2020, and in the description of national forest inventories in <i>Tomppo E. et al.</i>, National Forest Inventories, <i>Pathways for Common Reporting</i>, Springer, 2010, and taking into account the methodology as set out in Annex V of Regulation 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.</p>
Lying deadwood	<p><b>Description:</b> This indicator shows the amount of non-living woody biomass lying on the ground in forest and other wooded land.</p> <p><b>Unit:</b> m<sup>3</sup>/ha.</p> <p><b>Methodology:</b> as developed and used by FOREST EUROPE, <i>State of Europe's Forests 2020</i>, FOREST EUROPE 2020, and in the description of national forest inventories in <i>Tomppo E. et al.</i>, National Forest Inventories, <i>Pathways for Common Reporting</i>, Springer, 2010, and taking into account the methodology as set out in Annex V of Regulation 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.</p>
Share of forests with uneven-aged structure	<p><b>Description:</b> This indicator refers to the share of forests available for wood supply (FAWS) with uneven-aged structure in forests as compared to even-aged structure in forests.</p> <p><b>Unit:</b> Percent of FAWS with uneven-aged structure.</p> <p><b>Methodology:</b> as developed and used by FOREST EUROPE, <i>State of Europe's Forests 2020</i>, FOREST EUROPE 2020, and in the description of national forest inventories in <i>Tomppo E. et al.</i>, National Forest Inventories, <i>Pathways for Common Reporting</i>, Springer, 2010.</p>
Forest connectivity	<p><b>Description:</b> Forest connectivity is the degree of compactness of forest covered areas. It is defined in the range of 0 to 100.</p> <p><b>Unit:</b> Index.</p> <p><b>Methodology:</b> as developed by FAO, Vogt P., et al., <i>FAO – State of the World's Forests: Forest Fragmentation</i>, JRC Technical Report, Publications Office of the European Union, Luxembourg, 2019.</p>

Common forest birds index	<p><b>Description:</b> The forest bird indicator describes trends in the abundance of common forest birds across their European ranges over time. It is a composite index created from observational data of bird species characteristic for forest habitats in Europe. The index is based on a specific list of species in each Member State.</p> <p><b>Unit:</b> Index.</p> <p><b>Methodology:</b> Brlík et al. <i>Long-term and large-scale multispecies dataset tracking population changes of common European breeding birds</i>, Sci Data 8, 21. 2021.</p>
Stock of organic carbon	<p><b>Description:</b> This indicator describes the stock of organic carbon in the litter and in the mineral soil at a depth of 0 to 30 cm in forest ecosystems.</p> <p><b>Unit:</b> tonnes organic carbon/ha.</p> <p><b>Methodology:</b> as set out in Annex V of Regulation 2018/1999 in accordance to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and as supported by the Land Use and Coverage Area frame Survey (LUCAS) Soil, Jones A. et al., <i>LUCAS Soil 2022</i>, JRC technical report, Publications Office of the European Union, 2021.</p>

## ANNEX VII

### LIST OF EXAMPLES OF RESTORATION MEASURES REFERRED TO IN ARTICLE 11(8)

- (1) Restore wetlands, by rewetting drained peatlands, removing peatland drainage structures or de-poldering and discontinuing peat excavation.
- (2) Improve hydrological conditions by increasing quantity, quality and dynamics of surface waters and groundwater levels for natural and semi-natural ecosystems.
- (3) Remove unwanted scrub encroachment or non-native plantations on grasslands, wetlands, forests and sparsely vegetated land.
- (4) Apply paludiculture.
- (5) Re-establish the meandering of rivers and reconnect artificially cut meanders or oxbow lakes.
- (6) Remove longitudinal and lateral barriers (such as dikes and dams), give more space to river dynamics and restore free-flowing river stretches.
- (7) Re-naturalise river beds and lakes and lowland watercourses by e.g. removing artificial bed fixation, optimising substrate composition, improving or developing habitat cover.
- (8) Restore natural sedimentation processes.
- (9) Establish riparian buffers, e.g. riparian forests, buffer strips, meadows or pastures.
- (10) Increase ecological features in forests, such as large, old and dying trees (habitat trees) and amounts of lying and standing deadwood.
- (11) Work towards a diversified forest structure in terms of vegetation and age, enable natural regeneration and succession of tree species.
- (12) Enhance forest diversity by creating mosaics of non-forest habitats such as open patches of grassland or heathland, ponds or rocky areas.
- (13) Make use of “close-to-nature” or “continuous cover” forestry approaches; introduce native tree species.
- (14) Enhance the development of old-growth native forests and mature stands (e.g. by abandonment of harvesting).
- (15) Introduce high-diversity landscape features in arable land and intensively used grassland, such as buffer strips, field margins with native flowers, hedgerows, trees, small forests, terrace walls, ponds, habitat corridors and stepping stones, etc.
- (16) Increase the agricultural area subject to agro-ecological management approaches such as organic agriculture or agro-forestry, multicropping and crop rotation, integrated pest and nutrient management.
- (17) Reduce grazing intensity or mowing regimes on grasslands where relevant and re-establish extensive grazing with domestic livestock and extensive mowing regimes where they were abandoned.
- (18) Stop or reduce the use of chemical pesticides as well as chemical and animal manure fertilizers.

- (19) Stop ploughing grassland and introducing seeds of productive grasses.
- (20) Remove plantations on former dynamic inland dune systems to re-enable natural wind dynamics in favour of open habitats.
- (21) Improve connectivity across habitats to enable the development of populations of species, and to allow for sufficient individual or genetic exchange as well as for species' migration and adaptation to climate change.
- (22) Allow ecosystems to develop their own natural dynamics for example by abandoning harvesting and promoting naturalness, wilderness.
- (23) Remove and control invasive alien species, and prevent or minimize new introductions.
- (24) Minimise negative impacts of fishing activities on the marine ecosystem, for example by using gear with less impact on seabed.
- (25) Restore important fish spawning and nursery areas.
- (26) Provide structures or substrates to encourage the return of marine life, for example coral/oyster/boulder reefs.
- (27) Restore seagrass meadows and kelp forests by actively stabilising the sea bottom, reducing and, where possible, eliminating pressures or by active propagation and planting.
- (28) Reduce various forms of marine pollution, such as nutrient loading, noise pollution and plastic waste.
- (29) Increase urban green spaces with ecological features, such as parks, trees and woodland patches with native species, green roofs, wildflower grasslands, gardens, city horticulture, tree-lined streets, urban meadows and hedges, ponds and watercourses.
- (30) Stop, reduce or remediate pollution from pharmaceuticals, hazardous chemicals, urban and industrial wastewater, and other waste including litter and plastics as well as light in all ecosystems.
- (31) Convert brownfield sites, former industrial areas and quarries into natural sites.

