

Appendix B. First three hierarchical levels of the EUNIS Habitat classification (EEA 2002). Further hierarchical habitat levels can be found under the ‘Hierarchical visualisation of EUNIS habitat type classification’ at: <http://eunis.eea.eu.int/habitats.jsp>.

Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
A	Marine habitats	A1	Littoral rock and other hard substrata	A1.1	Littoral rock very exposed to wave action
				A1.2	Littoral rock moderately exposed to wave action
				A1.3	Littoral rock sheltered from wave action
				A1.4	Rock habitats exposed by action of wind (e.g. hydrolittoral)
		A2	Littoral sediments	A1.5	Rockpools
				A1.6	Littoral caves and overhangs
				A2.1	Littoral gravels and coarse sands
				A2.2	Littoral sands and muddy sands
				A2.3	Littoral muds
				A2.4	Littoral mixed sediments
				A2.5	Habitats with sediments exposed by action of wind (e.g. hydrolittoral)
		A3	Sublittoral rock and other hard	A2.6	Coastal saltmarshes and saline reedbeds
				A2.7	Littoral sediments dominated by aquatic angiosperms
				A3.1	Infralittoral rock very exposed to wave action and/or currents and tidal streams
				A3.2	Infralittoral rock moderately exposed to wave action and/or currents and tidal streams
				A3.3	Infralittoral rock sheltered from wave action and currents and tidal streams
				A3.4	Caves, overhangs and surge gullies in the infralittoral zone
				A3.5	Circalittoral rock very exposed to wave action or currents and tidal streams
				A3.6	Circalittoral rock moderately exposed to wave action or currents and tidal streams
				A3.7	Circalittoral rock sheltered from wave action and currents including tidal streams
				A3.8	Caves and overhangs in the circalittoral zone
		A4	Sublittoral sediments	A3.9	Deep circalittoral rock habitats
				A3.A	Vents and seeps in sublittoral rock
				A4.1	Sublittoral mobile cobbles, gravels and coarse sands
				A4.2	Sublittoral sands and muddy sands
				A4.3	Sublittoral muds
				A4.4	Sublittoral mixed sediments
				A4.5	Shallow-water sediments dominated by angiosperms (other than [Posidonia])
A5	Bathyal zone	A4.6	[Posidonia] beds		
		A4.7	Deep circalittoral sediment habitats		
		A4.8	Seeps and vents in sublittoral sediments		
		A5.1	Bathyal zone hard substrates		
		A5.2	Bathyal zone mixed substrates		
		A5.3	Bathyal zone sand		
		A5.4	Bathyal zone muddy sand		
		A5.5	Bathyal zone mud		
A5.6	Seeps in the bathyal zone				
A5.7	Caves in the bathyal zone				

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3	
B	Coastal habitats	A6	Abyssal zone	A6.1	Hard substrates on the abyssal plain	
				A6.2	Soft substrates on the abyssal plain	
				A6.3	Tectonic ridges	
				A6.4	Seamounts	
				A6.5	Abyssal hills	
				A6.6	Hadal zone (deep ocean trenches)	
				A6.7	Caves in the abyssal zone	
				A6.8	Anoxic deep seabed habitats below anoxic water	
			A7	Pelagic water column	A7.1	Enclosed coastal saline or brackish water
					A7.2	Partially enclosed coastal water
					A7.3	Unenclosed mixed shallow water
					A7.4	Unenclosed seasonally stratified coastal water
					A7.5	Euphotic zone in non-coastal water
					A7.6	Reduced-salinity water below the euphotic zone
					A7.7	Water over continental shelf below euphotic zone
					A7.8	Water below euphotic zone over seabed beyond continental slope break
					A7.9	Ice-dominated marine habitats
					A7.A	Open ocean habitats with currents and eddies
					A7.B	Anoxic water column
			B1	Coastal dune and sand habitats	B1.1	Angiosperm communities of sand beach driftlines
					B1.2	Sand beaches above the driftline
			B1.3	Shifting coastal dunes		
			B1.4	Coastal stable dune grassland (grey dunes)		
			B1.5	Coastal dune heaths		
			B1.6	Coastal dune scrub		
			B1.7	Coastal dune woods		
			B1.8	Moist and wet dune slacks		
			B1.9	Machair		
	B2	Coastal shingle habitats	B2.1	Shingle beach driftline habitats		
			B2.2	Unvegetated mobile shingle beaches above the driftline		
			B2.3	Upper shingle beaches with open vegetation		
			B2.4	Fixed shingle beaches. with herbaceous vegetation		
			B2.5	Shingle and gravel beaches with scrub vegetation		
			B2.6	Shingle and gravel beach woodland		
	B3	Rock cliff, ledges and shores.	B3.1	Supralittoral rock (lichen or splash zone)		
			B3.2	Unvegetated rock cliffs. ledges. shores and		
			B3.3	Rock cliffs. ledges and shores. with halophytic angiosperms		
			B3.4	Soft sea-cliffs. often vegetated		

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
C	Inland surface water habitats	C1	Surface standing waters	C1.1	Permanent oligotrophic lakes. ponds and pools
				C1.2	Permanent mesotrophic lakes. ponds and pools
				C1.3	Permanent eutrophic lakes. ponds and pools
				C1.4	Permanent dystrophic lakes. ponds and pools
				C1.5	Permanent inland saline and brackish lakes. ponds and pools
		C2	Surface running waters	C1.6	Temporary lakes. ponds and pools (wet phase)
				C2.1	Springs. spring brooks and geysers
				C2.2	Permanent non-tidal. fast. turbulent watercourses
				C2.3	Permanent non-tidal. slow. smooth-flowing watercourses
				C2.4	Tidal rivers. upstream from the estuary
				C2.5	Temporary running waters (wet phase)
		C3	Littoral zone of inland surface waterbodies	C2.6	Films of water flowing over rocky watercourse margins
				C3.1	Species-rich helophyte beds
				C3.2	Water-fringing reedbeds and tall helophytes other than canes
				C3.3	Water-fringing beds of tall canes
				C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
				C3.5	Pioneer and ephemeral vegetation of periodically inundated shores
				C3.6	Unvegetated or sparsely vegetated shores with soft or mobile sediments
D	Mire, bog and fen habitats	D1	Raised and blanket bogs	D1.1	Raised bogs
				D1.2	Blanket bogs
		D2	Valley mires. poor fens and transition mires	D2.1	Valley mires
				D2.2	Poor fens
				D2.3	Transition mires and quaking bogs
		D3	Aapa. palsa and polygon mires	D3.1	Palsa mires
				D3.2	Aapa mires
				D3.3	Polygon mires
		D4	Base-rich fens	D4.1	Rich fens. including eutrophic tall-herb fens and calcareous flushes and soaks
				D4.2	Basic mountain flushes and streamsides. with a rich arctic-montane flora
		D5	Sedge and reedbeds. normally without free-standing water	D5.1	Reedbeds normally without free-standing water
				D5.2	Beds of large sedges normally without free-standing water
D5.3	Swamps and marshes dominated by [<i>Juncus effusus</i>] or other large [<i>Juncus</i>] spp.				
D6	Inland saline and brackish marshes and reedbeds	D6.1	Inland saltmarshes		
		D6.2	Inland saline or brackish species-poor helophyte beds normally without free-standing water		

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
E	Grassland and tall forb habitats	E1	Dry grasslands	E1.1	Open thermophile pioneer vegetation of sandy or detritic ground
				E1.2	Perennial calcareous grassland and basic steppes
				E1.3	Mediterranean xeric grassland
				E1.4	Mediterranean tall-grass and [Artemisia] steppes
				E1.5	Mediterraneo-montane grassland
				E1.6	Subnitrophilous grassland
				E1.7	Non-Mediterranean dry acid and neutral closed grassland
				E1.8	Mediterranean dry acid and neutral closed grassland
				E1.9	Dry, open perennial and annual siliceous grassland, including inland dune grassland
		E2	Mesic grasslands	E1.A	Mediterranean dry acid and neutral open grassland
				E1.B	Heavy-metal grassland
				E2.1	Permanent mesotrophic pastures and aftermath-grazed meadows
				E2.2	Coarse permanent grassland and tall herbs, usually mown but little grazed
				E2.3	Mountain hay meadows
				E2.4	Iberian summer pastures (vallicares)
				E2.5	Meadows of the steppe zone
				E2.6	Agriculturally-improved, re-seeded and heavily fertilized grassland, including sports field and grass lawns
				E3	Seasonally wet and wet grasslands
		E3.2	Mediterranean short humid grassland		
		E3.3	Sub-mediterranean humid meadows		
		E3.4	Moist or wet eutrophic and mesotrophic grassland		
		E3.5	Moist or wet oligotrophic grassland		
		E4	Valley mires, poor fens and transition mires	E4.1	Snow-patch grassland
				E4.2	Moss and lichen dominated mountain summits, ridges and exposed slopes
E4.3	Acid alpine and subalpine grassland				
E4.4	Calciphilous alpine and subalpine grassland				
E4.5	Alpine and subalpine enriched grassland				
E5	Woodland fringes and clearings and tall forb habitats	E5.1	Over-grazed arid Mediterranean garrigues (ermes)		
		E5.2	Thermophile woodland fringes		
		E5.3	[Pteridium aquilinum] fields		
		E5.4	Moist or wet tall-herb and fern fringes and meadows		
		E5.5	Subalpine moist or wet tall-herb and fern habitats		
		E5.6	Lowland habitats colonised by tall nitrophilous herbs		
E6	Inland saline grass and herb-dominated habitats	E6.1	Mediterranean inland saline grass and herb-dominated habitats		
		E6.2	Continental inland saline grass and herb-dominated habitats		

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
F	Heathland, scrub and tundra habitats	F	Tundra	F1.1	Shrub tundra
				F1.2	Moss and lichen tundra
		F2	Arctic, alpine and subalpine scrub habitats	F2.1	Snow-patch dwarf willow scrub
				F2.2	Evergreen alpine and subalpine heath and scrub
				F2.3	Subalpine deciduous scrub
				F2.4	[Pinus mugo] scrub
		F3	Temperate and mediter-raneomontane scrub habitats	F3.1	Temperate thickets and scrub
				F3.2	Mediterraneo-montane broadleaved deciduous thickets
		F4	Temperate shrub heathland	F4.1	Wet heaths
				F4.2	Dry heaths
				F4.3	Macaronesian heaths
		F5	Maquis, matorral and thermo-Mediterranean brushes	F5.1	Arborescent matorral
				F5.2	Maquis
				F5.3	Pseudomaquis
				F5.4	[Spartium junceum] fields
				F5.5	Thermo-Mediterranean shrub habitats
		F6	Garrigue	F6.1	Western garrigues
				F6.2	Eastern garrigues
				F6.3	Illyrian garrigues
		F6.4	Black Sea garrigues		
		F6.5	Macaronesian garrigues		
		F6.6	Supra-Mediterranean garrigues		
		F6.7	Mediterranean gypsum scrubs		
		F6.8	Xero-halophile scrubs		
F7	Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)	F7.1	West Mediterranean spiny heaths		
		F7.2	Central Mediterranean spiny heaths		
		F7.3	East Mediterranean phrygana		
		F7.4	Hedgehog-heaths		
F8	Thermo-Atlantic xerophytic habitats	F8.1	Canarian xerophytic habitats		
		F8.2	Madeiran xerophytic habitats		
F9	Riverine and fen scrubs	F9.1	Riverine and lakeshore [Salix] scrub		
		F9.2	[Salix] carr and fen scrub		
		F9.3	Southern riparian galleries and thickets		
FA	Hedgerows	FA.1	Hedgerows of exotic species		
		FA.2	Highly-managed hedgerows of native species		
		FA.3	Species-rich hedgerows of native species		
		FA.4	Species-poor hedgerows of native species		
FB	Shrub plantations	FB.1	Shrub plantations for whole-plant harvesting		
		FB.2	Shrub plantations for leaf or branch harvest		
		FB.3	Shrub plantations for flowers or fruit. other than vineyards		
		FB.4	Vineyards		
G	Woodland and forest habitats and other wooded land	G1	Broadleaved deciduous woodland	G1.1	Riparian [Salix]. [Alnus] and [Betula] woodland
				G1.2	Fluvial [Fraxinus] - [Alnus] and [Quercus] - [Ulmus] - [Fraxinus] woodland
				G1.3	Mediterranean [Populus]. [Fraxinus]. [Ulmus] and related riparian woodland
				G1.4	Broadleaved swamp woodland not on acid peat

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
				G1.5	Broadleaved swamp woodland on acid peat
				G1.6	[Fagus] woodland
				G1.7	Thermophilous deciduous woodland
				G1.8	Acidophilous [Quercus]-dominated woodland
				G1.9	Non-riverine woodland with [Betula]. [Populus tremula]. [Sorbus aucuparia] or [Corylus avellana]
				G1.A	Meso- and eutrophic [Quercus]. [Carpinus]. [Fraxinus]. [Acer]. [Tilia]. [Ulmus] and related woodland
				G1.B	Non-riverine [Alnus] woodland
				G1.C	Highly artificial broadleaved deciduous forestry plantations
				G1.D	Fruit and nut tree orchards
		G2	Broadleaved evergreen woodland	G2.1	Mediterranean evergreen [Quercus] woodland
				G2.2	Eurasian continental sclerophyllous woodland
				G2.3	Macaronesian [Laurus] woodland
				G2.4	[Olea europaea] - [Ceratonia siliqua] woodland
				G2.5	[Phoenix] groves
				G2.6	[Ilex aquifolium] woods
				G2.7	Canarian heath woodland
				G2.8	Highly artificial broadleaved evergreen forestry plantations
				G2.9	Evergreen orchards and groves
		G3	Coniferous woodland	G3.1	[Abies] and [Picea] woodland
				G3.2	Alpine [Larix] - [Pinus cembra] woodland
				G3.3	[Pinus uncinata] woodland
				G3.4	[Pinus sylvestris] woodland south of the taiga
				G3.5	[Pinus nigra] woodland
				G3.6	Subalpine mediterranean [Pinus] woodland
				G3.7	Lowland to montane mediterranean [Pinus] woodland (excluding [Pinus nigra])
				G3.8	Canary Island [Pinus canariensis] woodland
				G3.9	Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]
				G3.A	[Picea] taiga woodland
				G3.B	[Pinus] taiga woodland
				G3.C	[Larix] taiga woodland
				G3.D	Boreal bog conifer woodland
				G3.E	Nemoral bog conifer woodland
				G3.F	Highly artificial coniferous plantations
		G4	Mixed deciduous and coniferous woodland	G4.1	Mixed swamp woodland
				G4.2	Mixed taiga woodland with [Betula]
				G4.3	Mixed sub-taiga woodland with acidophilous [Quercus]
				G4.4	Mixed [Pinus sylvestris] - [Betula] woodland
				G4.5	Mixed [Pinus sylvestris] - [Fagus] woodland
				G4.6	Mixed [Abies] - [Picea] - [Fagus] woodland
				G4.7	Mixed [Pinus sylvestris] - acidophilous [Quercus] woodland
				G4.8	Mixed non-riverine deciduous and coniferous woodland

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
H	Inland unvegetated or sparsely vegetated habitats	G5	Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice	G4.9	Mixed deciduous woodland with [Cupressaceae] or [Taxaceae]
				G4.A	Mixed woodland with [Cupressaceae]. [Taxaceae] and evergreen oak
				G4.B	Mixed mediterranean [Pinus] - thermophilous [Quercus] woodland
				G4.C	Mixed [Pinus sylvestris] - thermophilous [Quercus] woodland
				G4.D	Mixed [Pinus nigra] - evergreen [Quercus] woodland
				G4.E	Mixed mediterranean pine - evergreen oak woodland
				G4.F	Mixed forestry plantations
				G5.1	Lines of trees
				G5.2	Small broadleaved deciduous anthropogenic woodlands
				G5.3	Small broadleaved evergreen anthropogenic woodlands
				G5.4	Small coniferous anthropogenic woodlands
				G5.5	Small mixed broadleaved and coniferous anthropogenic woodlands
				G5.6	Early-stage natural and semi-natural woodlands and regrowth
				G5.7	Coppice and early-stage plantations
		G5.8	Recently felled areas		
		H1	Terrestrial underground caves, cave systems, passages and waterbodies	H1.1	Cave entrances
				H1.2	Cave interiors
				H1.3	Dark underground passages
				H1.4	Lava tubes
				H1.5	Underground standing waterbodies
				H1.6	Underground running waterbodies
				H1.7	Disused underground mines and tunnels
		H2	Screes	H2.1	Boreal siliceous screes
				H2.2	Boreal limestone screes
				H2.3	Temperate-montane acid siliceous screes
				H2.4	Temperate-montane calcareous and ultra-basic screes
				H2.5	Acid siliceous screes of warm exposures
				H2.6	Calcareous and ultra-basic screes of warm exposures
H3	Inland cliffs, rock pavements and outcrops	H3.1	Acid siliceous inland cliffs		
		H3.2	Basic and ultra-basic inland cliffs		
		H3.3	Macaronesian inland cliffs		
		H3.4	Wet inland cliffs		
		H3.5	Almost bare rock pavements. including limestone pavements		
H4	Snow or ice-dominated habitats	H3.6	Weathered rock and outcrop habitats		
		H4.1	Snow packs		
		H4.2	Glaciers		

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3			
I	Regularly or recently cultivated agricultural horticultural and domestic habitats	H5	Miscellaneous inland habitats with very sparse or no vegetation	H5.1	Fjell fields and other freeze-thaw features with very sparse or no vegetation			
				H5.2	Glacial moraines with very sparse or no vegetation			
				H5.3	Clay, silt, sand and gravel habitats with very sparse or no vegetation			
				H5.4	Dry organic substrates with very sparse or no vegetation			
				H5.5	Burnt areas with very sparse or no vegetation			
				H5.6	Trampled areas			
				H5.7	Boulder fields			
		H6	Recent volcanic features	H6.1	Sparsely vegetated volcanic mountain summits, lava and ash fields			
				H6.2	Unvegetated lava and ash fields			
		H6.3	Fumaroles, solfataras and mofettes		H6.3	Fumaroles, solfataras and mofettes		
					I1	Arable land and market gardens	I1.1	Intensive unmixed crops
							I1.2	Mixed crops of market gardens and horticulture
I1.3	Arable land with unmixed crops grown by low-intensity agricultural methods							
I1.4	Inundated or inundatable croplands, including rice fields							
I1.5	Bare tilled, fallow or recently abandoned arable land							
I2	Cultivated areas of gardens and parks	I2.1	Large-scale ornamental garden areas					
		I2.2	Small-scale ornamental and domestic garden areas					
		I2.3	Weed communities of recently abandoned garden areas					
J	Constructed, industrial and other artificial habitats	J1	Buildings of cities towns and villages	J1.1	Residential buildings of city and town centres			
				J1.2	Residential buildings of villages and urban peripheries			
				J1.3	Urban and suburban public buildings			
				J1.4	Urban and suburban industrial and commercial sites still in active use			
				J1.5	Disused constructions of cities towns and villages			
				J1.6	Urban and suburban construction and demolition sites			
		J2	Low density buildings	J2.1	Scattered residential buildings			
				J2.2	Rural public buildings			
				J2.3	Rural industrial and commercial sites still in active use			
				J2.4	Agricultural constructions			
				J2.5	Constructed field boundaries			
				J2.6	Disused rural constructions			
				J2.7	Rural construction and demolition sites			
		J3	Extractive industrial sites	J3.1	Active underground mines			
				J3.2	Active opencast mineral extraction sites, including quarries			
J3.3	Recently abandoned above-ground spaces of extractive industrial sites							

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Code	Hierarchical level 1	Code	Hierarchical level 2	Code	Hierarchical level 3
		J4	Transport networks and other constructed hard-surfaced areas	J4.1	Weed communities of transport net works and other constructed hard-surfaced areas
				J4.2	Road networks
				J4.3	Rail networks
				J4.4	Airport runways and aprons
				J4.5	Hard-surfaced areas of ports
				J4.6	Pavements and recreation areas
				J4.7	Constructed parts of cemeteries
		J5	Highly artificial man-made water and associated structures	J5.1	Highly artificial saline and brackish standing swaters
				J5.2	Highly artificial saline and brackish running waters
				J5.3	Highly artificial non-saline standing waters
				J5.4	Highly artificial non-saline running waters
				J5.5	Highly artificial non-saline fountains and cascades
		J6	Waste deposits	J6.1	Weed communities of waste deposits
				J6.2	Household waste and landfill sites
				J6.3	Non-agricultural organic waste
				J6.4	Agricultural and horticultural waste
				J6.5	Industrial waste
				J6.6	Waste resulting from building construction or demolition