

Index

-
- Acacia saligna*, 222, 231
Accipiter gentilis. See Goshawk
Acer negundo. See Box Elder
Acipenser naccarii. See Adriatic Sturgeon
Acipenser ruthenus. See Sterlet
Acipenser sturio. See Atlantic Sturgeon
Acrocephalus paludicola. See Aquatic Warbler
 Action Plan for nature, people and the economy, 84, 116
 adaptive management, 53, 82, 176, 317, 334, 443, 504, 630
 Adriatic basin, 200–201
 Adriatic Sea, 17, 33, 201, 214, 415, 574
 Adriatic Sturgeon, 421
 Aegean, 353
 Aegean Sea, 33
 Aegean–Levantine Sea, 17
Aegypius monachus. See Cinereous Vulture
 Aesculapian Ratsnake, 243
 Africa, 50, 436, 594
 agricultural land
 habitat management and restoration
 Austria, 151–152
 Belgium, 173
 Croatia, 212–213
 Germany, 343
 Hungary, 385–386
 Italy, 425–426
 Poland, 505
 Portugal, 526
 Slovakia, 567
 Slovenia, 586–587
 UK, 659–660
 agriculture, biodiversity
 pressures. *See also* pollution
 abandonment, 20, 23, 34, 96, 110–111, 145, 151, 184, 195, 201–202, 221, 238, 249, 274, 311, 313, 355, 376, 395, 415, 417, 434–436, 444, 461, 493, 535–537, 557, 575, 591, 596
 agricultural expansion, 19–21, 111, 219, 254, 469, 534, 537, 577, 634
 agricultural improvements/intensification, 19, 22–23, 96–97, 110, 129, 145, 151, 160–161, 163, 184, 212, 221, 257, 276, 302, 313, 331, 334, 355, 394–395, 404, 407, 415, 420, 436, 470–471, 482, 495, 516–517, 531, 534, 536, 557, 593, 595, 610, 634, 637
 bioenergy, 20, 22, 239
 conversion of pastures/grassland to cropland, 22, 110, 151, 184, 255, 595
 conversion of pastures and meadows to silage, 19, 22, 110, 163, 302, 396
 conversion of semi-natural habitats to intensive agricultural land, 163, 239, 374, 493, 516, 658
 decline in rotations and fallow, 19, 97, 110, 130, 202, 334, 595
 drainage, 19, 95, 257, 313–314, 334, 394, 396, 435–436, 471, 482, 495, 537, 577, 659
 fertiliser use, 19, 144, 163, 260, 313, 334, 404, 417, 453, 471, 482, 495, 557, 577, 595, 637
 forage harvesting replacing grazing, 22, 334
 industrialisation, 19–20, 23, 110, 237
 irrigation, 19, 95, 376, 471, 516, 526, 595
 loss of landscape features (hedges, etc.), 19, 237, 302, 312–313, 334, 417, 495, 575, 577
 monocultures/low crop diversity, 22, 334, 376, 495
 over-grazing, 95–96, 184, 376, 394–395, 468, 658–659
 pesticides, 19, 22, 144, 163, 239, 313, 323, 417, 471, 495, 557, 595, 637
 ploughing and reseeding of semi-natural grassland, 22, 95, 110, 313–314, 587, 595
 specialisation, 19, 110, 129, 160, 163, 257, 407, 595
 Aichi targets. *See* Convention on Biological Diversity targets
Ailanthus altissima, 535, *See also* Tree of Heaven
Alauda arvensis. *See* Skylark
 Albania, 1, 26, 30–31, 41, 49, 125, 357, 364
Alburnus alburnus. *See* Common Bleak
Alca torda. *See* Razorbill
Alcedo atthis. *See* Common Kingfisher
Alces alces. *See* Elk
Alectoris chukar. *See* Chukar
Alectoris graeca whitakeri. *See* Sicilian Rock Partridge
Alnus glutinosa, 160, 291, 575, 680
Alnus incana, 291
 Alpine biogeographical region, 13, 15, 200
 Austria, 142–143, 148
 Croatia, 200, 209–210
 Finland, 292–293
 France, 311–312
 Germany, 332–333
 Poland, 493
 Romania, 534, 547
 Slovakia, 555
 Spain, 593
 Sweden, 613, 621, 630
 Alpine Ibex, 417, 420, 429
 Alpine Longhorn Beetle, 142
 Alpine Marmot, 420
 Alps, 13, 15, 17, 20, 29, 32–33, 142–143, 149, 151, 311, 415, 574–575
Alytes obstetricans. *See* Common Midwife Toad
Ambrosia artemisiifolia, 535
Amelanchier spicata. *See* Low Juneberry
 American Bullfrog, 163
 American Mink, 275–276, 288, 304, 453, 507, 606
Amorpha fruticosa, 535, *See also* False Indigo-bush
Anas acuta. *See* Pintail
Anas crecca. *See* Common Teal
Anas platyrhynchos. *See* Mallard
 Andorra, 30–31, 125
Angelica palustris, 243
Anser albifrons albifrons. *See* Greater White-fronted Goose
Anser anser. *See* Greylag Goose
Anser brachyrhynchus. *See* Pink-footed Goose
Anser erythropus. *See* Lesser White-fronted Goose
 Apennine Chamois, 420–421, 429
 Apennines, 13, 32, 415
 Apollo, 360, 561
 appropriate assessment (HD Article 6(3)). *See* Natura 2000
Apus apus. *See* Common Swift
 aquaculture, biodiversity pressures, 395–396, 537
 aquaculture, environmentally friendly, 185, 510
 Aquatic Warbler, 50, 458, 494–495, 505, 513
Aquila adalberti. *See* Spanish Imperial Eagle
Aquila chrysaetos. *See* Golden Eagle
Aquila fasciata. *See* Bonelli's Eagle
Aquila heliaca. *See* Eastern Imperial Eagle

- Arctic biogeographical region, 15
Ardea alba. See Great White Egret
Ardea cinerea. See Grey Heron
Arenaria interpres. See Turnstone
 Arhus Convention. See Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters
Arnica montana, 614
Artemisia laciniata, 148
Asclepias syriaca. See Common Milkweed
 Ash, 453
 Asia, 17, 50
 Asian Hornet, 527, 606
 Asp, 284
 Aspen, 291
Aspius aspius. See Asp
Astacus astacus. See Noble Crayfish
Athene noctua. See Little Owl
 Atlantic, North-east (MSFD region), 13, 17, 90
 Atlantic biogeographical region, 15, 33
 Belgium, 161
 Denmark, 254–255
 France, 311–313
 Germany, 332
 Portugal, 514
 Spain, 593
 Atlantic marine region, 13, 18, 522
 Denmark, 256
 Germany, 332
 Spain, 593
 Sweden, 613, 621
 Atlantic Ocean, 24–25, 28–29, 50, 115
 Atlantic Salmon, 243, 266, 395, 400, 440
 Atlantic Sturgeon, 479
Atriplex semibaccata, 222
 Aurochs, 14, 19, 243
 Austria, 26, 30–32, 34, 43, 49, 108–109, 116, 125, 130, 142–158, 588
Austropotamobius pallipes. See Freshwater Crayfish
 Avocet, 312, 332
Aythya ferina. See Common Pochard
Aythya fuligula. See Tufted Duck
Aythya marila. See Scaup
Aythya nyroca. See Ferruginous Duck
 Azores, 1, 107, 125, 514, 529
 Azores Bullfinch, 527
 Badger, 500
Balaenoptera musculus. See Blue Whale
- Balearic Shearwater, 50, 516, 594, 600
 Balkan, 29, 32–33
 Balkan Chamois, 360
 Balkan states, 41, 197
 Balkans (mountains and peninsula), 13, 181, 574
 Ballast Water Management Convention (BWM Convention). See International Convention for the Control and Management of Ships' Ballast Water and Sediments
 Baltic Dunlin, 257, 275, 288
 Baltic Sea, 13, 17, 21, 24–25, 45, 50, 90, 115
 Denmark, 256, 258, 263
 Estonia, 273, 275
 Finland, 293–294, 300, 304, 307, 309
 Germany, 332, 334
 Lithuania, 451, 459, 463
 Poland, 493–494, 496, 507–508
 Sweden, 613, 615, 620–621, 627
 Baltic Sea Action Plan, 45
 Baltic states, 13, 29, 33, 41, 107, 300, 442
Barbastella barbastellus, 542
 Barbel, 162
Barbus barbus. See Barbel
 Barcelona Convention. See Convention for the Protection of the Mediterranean Sea against Pollution
 bark beetle outbreaks, 144, 153, 237, 239, 249, 252, 453, 495, 499, 557, 577
 Barn Owl, 234
 Barn Swallow, 516
 Barnacle Goose, 280, 332, 477
 Basking Shark, 409
 bats, conservation of, 50, 79
 Belgium, 168
 Estonia, 280
 France, 318
 Spain, 521
 Bay of Biscay, 13, 17
 Bearded Vulture, 360, 421, 596, 598, 600–602
 Beaver, 14, 79, 114, 148, 168, 205–206, 243, 261, 274–275, 323, 333, 457, 478, 485, 495, 499–500, 511, 576, 620, 649, 661
 Beech Marten, 500
 bees, conservation of
 Belgium, 168
 Ireland, 400
 Belarus, 1, 29–33, 49, 125, 502
 Belgium, 19, 26, 30–31, 34, 42, 49, 108–109, 116, 125–126, 128–129, 160–179
 Brussels Capital Region, 160
 Flanders, 116, 160–161
 Wallonia, 160–161
 Bern/Berne Convention. See Convention on the Conservation of European Wildlife and Natural Habitats
Beroe ovata, 25
Betula pendula, 291
Betula pubescens, 291
Betula pubescens subsp. *czerepanovii*. See Mountain Birch
 Białowieża forest, 493, 498–499, 502, 506, 508, 511
 biodiversity indicators, 8, 54, 90, 101, 106–107, 110, 118, 132, 251, 269, 275, 307, 327, 447, 465, 590, 624, 629, 635–636
 birds, 23–24, 110, 118, 144, 157, 238, 274, 313, 417, 436, 452, 470, 495, 516, 636
 butterflies, 110, 347, 470, 629
 SEBI indicators (Streamlining European Biodiversity Indicators), 83, 178
 biodiversity offsets, 117–118
 Finland, 302, 308
 France, 322, 326
 Germany, 342–343
 UK, 657–658
 Biodiversity Strategies
 Belgium, 167
 Bulgaria, 186
 Croatia, 204
 Cyprus, 225
 Denmark, 260
 Estonia, 277–278
 Finland, 297
 Germany, 338
 Greece, 358, 367
 Hungary, 379
 Ireland, 400
 Italy, 419
 Lithuania, 455–456
 the Netherlands, 475
 Poland, 499
 Portugal, 519–520
 Slovakia, 559
 Slovenia, 581
 Spain, 597
 Sweden, 618–619
 UK, 643–644
 biogeographical regions, 6, 13
 Biosphere Reserves. See UNESCO Man and Biosphere Programme
 bird species, number in each European country, 31
 BirdLife International, 66, 108, 123
 Birds Directive (BD), 3, 59, 135
 aims (Article 2), 3, 63–64, 75
 Annex I birds, 3, 7–8, 27, 29, 34, 77, 106–107, 109–110, 113–114, 116–117
 Annex II birds that may be hunted, 75–78, 113–114, 122–123
 Annex III birds that may be traded, 75
 Articles, summarised versions, 62
 drivers and development, 4, 51, 60, 70
 funding, 80–82, 112, 114, 134–137, *See also* nature conservation funding
 habitat measures for birds (Article 3), 69
 impacts on bird populations, 83–84, 109
 influence on the development of the Habitats Directive, 65
 monitoring and reporting, 82–83, 134
 conservation status, 5–8, 77, 106–109, 116
 conservation status categories, 5
 implementation reports (Article 12), 83
 objectives and key measures, 3, 64
 Special Protection Areas (SPAs)
 coherence requirements (Article 4(3)), 66–67, 69
 identification and classification (Article 4), 66–69
 inclusion in the Natura 2000 network, 66
 management and protection (Articles 3(3) and 4(4)), 69–75, 402
 overall coverage, 126, *See also* protected area types and coverage
 species protection measures, 75–78
 derogation provisions and conditions (Article 9), 76–77, 121, 420
 general protection (Article 5), 75
 hunting regulation (Article 7), 75–78, 114, 121–123
 trade restrictions (Article 6), 75
 strengths and weaknesses, 111–114
 supporting measures, 79–80
 research topics (Annex V), 79

Index

- Birds Directive (BD) (cont.)
 transposition and role of case law, 65–66, 72, 127
- Bison, 14, 243, 457–458, 494–495, 500, 506, 511, 561
- Bison bonasus*. See Bison
- Black Cherry, 386
- Black Francolin, 226
- Black Grouse, 163, 238, 291, 440, 453, 479, 500, 506, 561
- Black Locust, 374, 386
- Black Rat, 527
- Black Sea biogeographical region, 16
 Bulgaria, 534
- Black Sea coast, 14, 29, 182, 184, 534
 Bulgaria, 535
- Black Sea marine region, 13, 17–18, 24–25, 46, 50, 90, 92, 115
 Romania, 545
- Black Stork, 162, 200, 274, 279, 288, 333, 440–441, 458, 485, 494, 506, 530
- Black Woodpecker, 29, 453, 615
- Black-bellied Sandgrouse, 516
- Blackcap, 226–227
- Black-tailed Godwit, 275, 288, 317, 468, 478, 482–484
- Black-throated Diver, 613
- blue infrastructure, 320, 322–323, 423, 486, 524
- Blue Whale, 28
- Bluefin Tuna, 600
- Bluethroat, 485
- Bombina bombina*. See Fire-bellied Toad
- Bonasa bonasia*. See Hazel Grouse
- Bonelli's Eagle, 421, 430, 526, 595
- Bonn Convention. See Convention on Migratory Species (CMS)
- Boreal biogeographical region, 15, 132, 292, 618
 Estonia, 273
 Finland, 291, 293
 Latvia, 435
 Lithuania, 451
 Sweden, 612–613
- Bos primigenius*. See Aurochs
- Bosnia and Herzegovina, 1, 26, 30–31, 41, 49, 125, 576
- Botaurus stellaris*. See Eurasian Bittern
- Botrychium simplex*, 614
- Bottlenose Dolphin, 201, 423, 521
- Box Elder, 386
- Branta bernicla*. See Brent Goose
- Branta canadensis*. See Canada Goose
- Branta leucopsis*. See Barnacle Goose
- Branta ruficollis*. See Red-breasted Goose
- Brent Goose, 332
- Brexit, 5, 666, 668
 UK post-2020 plans and 2021 Environment Act, 645–647
- Britain, 634–677, *See also* United Kingdom
- Brook Lamprey, 256, 400, 479
- Brown Bear, 19, 27, 111, 142, 148, 155, 189, 200, 206, 274, 280, 291, 298, 318, 333, 360, 420–421, 429, 496, 535, 541–542, 556, 561, 575–576, 581, 590, 595–596, 598–602, 605, 620
- Brown Shrimp, 472
- Bubo bubo*. See Eagle-owl
- Bucephala clangula*. See Goldeneye
- Bucharest Convention. *See* Convention on the Protection of the Black Sea against Pollution
- Bufo bufo*. See Common Toad
- Bufo viridis*. See Green Toad
- built/infrastructure developments, 85, 110, 128, 136, 144, 163, 182, 202, 222, 243, 270, 279, 288, 293, 322, 324, 342, 355, 374, 376, 389, 470–471, 511, 521, 537, 544, 546, 577, 646, 657, 664
- Bulgaria, 16, 26, 29–30, 32–34, 43, 49, 107–108, 123, 125, 127, 129, 134–135, 155, 181–199
- Burhinus oedicnemus*. See Eurasian Thick-knee/Stone Curlew
- butterflies, conservation of, 34, 113
 Croatia, 213
 Romania, 542
 Slovenia, 581, 587
 UK, 659
- Buxbaumia viridis*, 142
- Cabrera's Vole, 594
- Calandra Lark, 595
- Calidris alpina*. See Dunlin
- Calidris alpina schinzii*. See Baltic Dunlin
- Calidris canutus*. See Red Knot
- Calonectris diomedea*. See Scopoli's Shearwater
- Canada Goose, 477
- Canary Islands, 1, 107, 602
- Canis aureus*. See Golden Jackal
- Canis lupus*. See Wolf
- Cantabrian Capercaille, 595–596, 600
- CAP (Common Agricultural Policy), 19, 61, 82, 88, 95–100, 410
- Agricultural Fund for Rural Development (EAFRD), 43
- Areas facing Natural Constraints (ANC) (M13)/Less Favoured Areas (LFA), 99–100, 130, 152–153, 195, 197, 214, 249, 313, 345, 369, 407, 425, 446, 465, 549, 567, 570, 607, 629
- CAP 2014–2020 Priority 4, 97, 99
- CAP 2023–2027, 96–97, 130, 136
- CAP Strategic Plans (CSPs), 96, 131
 eco-schemes, 96, 131, 484
- environmental conditionality (cross-compliance), 96–97, 130, 584, 668
- European Agricultural and Guarantee Fund (EAGF), 95, 627
- European Agricultural Fund for Rural Development (EAFRD), 10, 80–81, 96, 99, 131, 151, 153, 175, 214, 232, 267, 284, 286, 288, 305, 326, 345, 369, 389, 407, 427, 439, 465, 486, 508, 527, 529, 549, 570, 588, 627, 662
- objectives and reforms, 95–96, 131
- organic farming measure (M11), 153, 567, 607
- payments linked to production, 96
- Pillar 1 greening measures (green direct payments), 96–97, 130, 152, 302, 587
- RDP advisory services measure (M2), 427
- RDP agri-environment/agri-environment-climate (M10), 11, 42, 71, 77–99, 101, 103, 121, 129–131, 137, 139
- Austria, 152–153, 157
- Belgium, 161, 166–167, 171, 173
- Bulgaria, 184, 189, 195
- Croatia, 205, 213
- Cyprus, 232
- Czech Republic, 249
- Denmark, 267, 274
- Estonia, 276, 283, 286
- Finland, 292, 302, 305, 307
- France, 316–317, 320, 326
- Germany, 343, 345
- Greece, 367, 369
- Hungary, 384–386, 389, 391
- Ireland, 404–405, 407
- Italy, 419, 425–427
- Latvia, 439, 444, 446
- Lithuania, 456, 462, 465
- the Netherlands, 475, 478, 482–484, 486
- Poland, 496, 504–505, 508, 511
- Portugal, 526–527
- Romania, 542, 545, 549
- Slovakia, 567, 570–571
- Slovenia, 579, 585–588, 591
- Spain, 598
- Sweden, 617, 624, 627
- UK, 637, 642, 655, 659–660, 662, 666
- RDP basic services measure (M7), 232, 427
- RDP forest-environment-climate measure (M15), 100, 132, 153, 195, 389, 567, 662
- RDP investments in forests measure (M8), 100, 132, 249, 427, 588, 662
- RDP knowledge transfer measure (M1), 425, 427
- RDP Nature 2000 measure (M12), 71, 99, 132, 195, 213, 224, 234, 249, 286, 427, 461, 465, 508, 545, 549, 551, 567, 588
- RDP non-productive investments measure (M4.4), 99, 207, 213, 425, 427, 486, 662
- RDP organic farming measure (M11), 99, 130, 197, 214, 249, 267, 302, 313, 324, 345, 369, 446, 465, 529, 629
- Rural Development Programme (RDP) measures, 10, 71, 97–100, 118, 129–130, 132–133, 137, 175, 195, 213, 234, 249, 286, 288, 305, 369, 426, 446, 486, 508, 526–527, 545, 567, 570, 588, 627, 655, 659, 664
- Rural Development Programmes (RDPs), 11, 96, 173, 207, 224, 232,

- 248, 318, 326, 367, 405, 425, 439, 526, 607
- Rural Development Regulation, 96, 100, 130 set-aside, 96, 234, 313, 334
- Capercaillie, 75, 202, 238, 274, 291, 317, 440–441, 458, 500, 506, 537, 541, 557, 561, 566, 576
- Capra ibex*. See Alpine Ibex
- Capra pyrenaica*. See Spanish Ibex
- Capreolus capreolus*. See Roe Deer
- Carassius auratus*. See Goldfish
- Carduelis carduelis*. See Goldfinch
- Caretta caretta*. See Loggerhead Turtle
- Carlina onopordifolia*, 494
- Carpathians, 13, 15, 17, 29, 32, 143, 151, 493, 511, 535, 547, 555
- Carrión Crow, 637
- Castor fiber*. See Beaver
- CBD (Convention on Biological Diversity), 1, 46, 52–54, 111, 116
- Aichi targets, 54–55, 119
- 11 – protected areas, 9, 54, 68, 115, 123–124, 128, 423, 651
- 15 – ecosystem restoration, 116, 304
- 9 – IAS, 94
- date since countries have been a Party, 49
- in situ* conservation (Article 8), 53
- Other effective area-based conservation measures (OECM), definition of, 9
- post-2020 global biodiversity framework, 52–56, 101, 119
- protected area, definition of, 8–9, 124
- Strategic Plan and targets for 2010, 54, 100
- Strategic Plan and targets for 2020 (Aichi targets), 9, 55
- sustainable utilisation, definition of, 75
- CDDA (European Nationally Designated Areas Inventory), 8, 10, 123–124
- Cedar of Lebanon, 232, *See* *Cedrus brevifolia*
- Cedrus brevifolia*, 220, 230, 232, *See also* Cedar of Lebanon
- Celtic Seas, 13, 17
- Central Mediterranean Sea, 17, 415
- Cervus elaphus*. *See* Red Deer
- cetaceans (whales and dolphins), conservation of, 50, 56
- Ireland, 400, 409
- Italy, 423
- Portugal, 521
- Spain, 599, 604
- Cetorhinus maximus*. *See* Basking Shark
- Chalara fraxinea*, 203
- Charadrius alexandrinus*. *See* Kentish Plover
- Charadrius hiaticula*. *See* Common Ringed Plover
- Chelonia mydas*. *See* Green Turtle
- Chersophilus duponti*. *See* Dupont's Lark
- Chukar, 226
- Ciconia ciconia*. *See* White Stork
- Ciconia nigra*. *See* Black Stork
- Cinereous Vulture, 189, 360, 594, 596
- Circus aeruginosus*. *See* Marsh Harrier
- Circus cyaneus*. *See* Hen Harrier
- Circus pygargus*. *See* Montagu's Harrier
- Cistus heterophyllus* subsp. *Carthaginensis*, 595
- CITES. *See* Convention on International Trade in Endangered Species of Wild Fauna and Flora
- CJEU (Court of Justice of the European Union) cases, 66
- Basses Corbières (C-374/98), 70
- C-10/96, 77
- C-103/00, 360
- C-157/89, 76
- C-157/96, 73
- C-182/02, 77
- C-182/10, 73
- C-247/85, 77
- C-252/85, 77
- C-279/11, 403
- C-294/03, 402
- C-3/96, 68
- C-323/17, 73
- C-334/04, 363
- C-344/03, 77
- C-371/98, 68
- C-38/99, 76
- C-392/96, 402
- C-435/92, 76
- C-473/19, 619
- C-474/19, 619
- C-504/14, 360
- C-518/04, 360
- C-66/06, 402
- C-674/17, 298
- C-79/03, 77
- C-849/19, 363
- Commission v. France* (C-241/08), 71, 317
- Commission v. Ireland* (C418/04), 66, 399–400, 402
- Commission v. UK* (C-6/04), 65, 68
- Eco Advocacy* (C-721/21), 399
- FIE (C-254/19), 399
- Germany C-244/0571
- Grace and Sweetman* (C-164/17), 399
- Holohan and others (C-461/17), 399
- Lappel Bank* (C-44/95), 68, 641
- Leybucht Dykes* (C-57/89), 70
- NEPPC (C-470/16), 399
- People Over Wind and Sweetman (C-323/17), 399
- Santona Marshes* (C-355/90), 68
- Sweetman* (C-258/11), 399
- Waddenzee* (C-127/02), 72–73
- Clanga clanga*. *See* Greater Spotted Eagle
- Clanga pomarina*. *See* Lesser Spotted Eagle
- Clangula hyemalis*. *See* Long-tailed Duck
- climate change adaptation, 35, 46, 51, 67, 99, 101, 113, 128, 222, 298, 344, 364, 511, 571, 653
- Finland, 304
- France, 323
- Hungary, 386–388
- Spain, 607
- UK, 661–662
- biodiversity impacts, 25, 110, 144–145, 161, 164, 376, 453, 472, 482, 606, 614, 630, 637–638
- biodiversity pressures, 24, 109, 111, 115, 144, 174, 184, 203, 221–222, 293–294, 314, 355, 395–396, 417, 471–472, 495, 517, 537, 577, 595, 630
- ecosystem-based mitigation and adaptation, 101, 304, 308, 571, 604–605, 631, 653, *See also* nature-based solutions
- carbon sequestration and storage, 116, 136, 175, 285, 303–305, 308, 630, 659, 664
- effects, 24–25, 144–145, 222, 303, 308, 366, 375, 377, 472, 517, 630
- mitigation, 99, 304, 626, 631
- coastal habitats
- habitat management and restoration
- Latvia, 444
- Romania, 546
- Spain, 606
- UK, 660–661
- Cochlearia polonica*, 494
- Coenonympha oedippus*. *See* False Ringlet
- Colias myrmidone*. *See* Danube Clouded Yellow
- collectivisation, 19, 23, 237
- Coluber cypriensis*, 220
- Columba palumbus*. *See* Woodpigeon
- Common Bleak, 516
- Common Crane, 302, 489, 494–495, 500, 511, 620, 649
- Common Eider, 255, 275, 298, 463, 469, 472
- Common Hamster, 173, 500
- Common Kestrel, 469–470
- Common Kingfisher, 66
- Common Milkweed, 386
- Common Murre, 516
- Common Pochard, 122, 261, 500
- Common Rhododendron, 635
- Common Ringed Plover, 312
- Common Scoter, 255
- Common Shelduck, 469
- Common Snipe, 395, 482
- Common Sole, 472
- Common Spadefoot Toad, 162, 479
- Common Swift, 163
- Common Tern, 453
- Common Toad, 239, 417
- Common Tortoise, 535
- Common Whitethroat, 313
- Common Yew, 520
- Conference on the Human Environment in Stockholm, 48, 59, 259, 519
- conservation status. *See* Birds Directive and Habitats Directive, monitoring and reporting
- Continental, 15, 332
- Austria, 142–144, 157
- Belgium, 160, 163
- Croatia, 200–201, 209–210
- Czech Republic, 237
- Denmark, 254–255
- France, 311–312
- Poland, 493
- Romania, 534
- Slovenia, 575
- Sweden, 613, 618
- Convention for the Prevention of Pollution from Ships (MARPOL 73/78), 44

Index

- Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR Convention), 47, 56. *See also* protected areas, types and their coverage
- Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention)/ Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean, 45, 56
- Specially Protected Areas of Mediterranean Importance (SPAMI), 8, 45. *See also* protected areas, types and their coverage
- Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Aarhus Convention), 48, 186, 337, 380, 399, 580
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 44, 85
- Convention on Long-Range Transboundary Air Pollution (CLRTAP), 46, 94
- Convention on Migratory Species (CMS), 45, 49, 51, 112, 122, 134, 595
- action on lead gunshot, 51
- Agreements
- ACAP, 49–50
 - ACCOBAMS, 49–50
 - AEWA, 49–51, 77, 123
 - ASCOBANS, 49–50
 - EUROBATS, 49–50
 - Wadden Sea Seal, 49–50
- COP resolutions, 50
- MoUs and Action Plans, 50
- African-Eurasian Landbirds, 50
 - migratory raptors, 50–51
 - protection for globally threatened species, 50
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), 41, 45, 49, 51–52, 77–78, 111, 121–122, 224, 226, 333, 419, 541, 581, 642
- Emerald Network, 52, 59, 112, 645
- enforcement/case files, 51, 185, 227, 359–360, 364
- influence on the Birds and Habitats Directives, 51
- protection of species listed in appendices, 51, 113, 204, 279
- Tunis Action Plan 2013–2020, 78
- Convention on the Protection of the Black Sea against Pollution (Bucharest Convention), 46
- Convention on Wetlands (Ramsar Convention), 8, 41–49, 66, 75
- Ramsar Sites, 41. *See also* protected areas, types and their coverage
- Coracias garrulus*. *See* Roller
- Coregonus oxyrinchus*. *See* Houting
- CORINE, 5–6, 21–22, 26
- CORINE Biotopes, 66, 187, 190, 390, 440, 446
- Cork Oak, 514, 520, 526, 530, 594
- Corn Bunting, 145, 257, 470, 556, 595
- Corncrake, 202, 213, 312, 400, 435, 485, 505, 537, 542, 556, 576, 659
- Cortaderia selloana*. *See* Pampas Grass
- Corvus corax*. *See* Raven
- Corvus corone*. *See* Carrion Crow
- Cotula coronopifolia*, 616
- Coturnix coturnix*. *See* Quail
- Council of Europe, 1, 13, 51–52, 100, 112
- Council of Europe Landscape Convention, 602
- Council of the European Union, 91, 93
- COVID-19 pandemic, 11, 55, 61, 119, 135–136
- Crangon crangon*. *See* Brown Shrimp
- Crassula helmsii*. *See* New Zealand Pygmyweed
- Crex crex*. *See* Corncrake
- Cricetus cricetus*. *See* Common Hamster
- Croatia, 26, 30–31, 34, 41, 43, 49, 108–109, 125–126, 134, 200–218, 576, 588
- Curlew, 150, 317, 395, 468–469, 500
- Cypriot Mouse, 220
- Cypripedium calceolus*. *See* Lady's Slipper Orchid
- Cyprus, 26, 30–31, 33–34, 43, 49, 107–108, 122, 125, 127, 129, 219–236, 634
- Cyprus Grass Snake, 221, 223
- Cyprus Mouflon, 220, 223–224, 234
- Cyprus Scops-owl, 220
- Cyprus Warbler, 220–221, 234
- Cyprus Wheatear, 220
- Czech Republic, 21, 23, 26, 30–31, 33–34, 43, 49, 69, 108–109, 116, 119, 125, 128, 148, 237–254
- Dalmatian Pelican, 193, 535, 542
- Dama dama*. *See* Fallow Dear
- Damon Blue, 381
- dams, 24, 35, 114, 202, 221, 276, 284, 314, 516, 521, 526, 557, 596
- removal of, 288, 314, 323, 606
- Danube Clouded Yellow, 561
- Danube Delta, 16, 28, 143, 534–535, 541, 543, 546, 548, 551
- Danube Salmon, 535
- data sources, 5–11
- deer, effects of high densities, 24, 163, 658
- Dendrocopos leucotos*. *See* White-backed Woodpecker
- Denmark, 9, 26, 30–31, 34, 41–42, 49–50, 108–109, 116–117, 123, 125, 136, 254–272, 332
- Desmoulin's Whorl Snail, 256
- development planning and impact assessment
- Austria, 151
 - Belgium, 173
 - Bulgaria, 193
 - Croatia, 212
 - Cyprus, 230–231
 - Czech Republic, 247
 - Denmark, 265
 - Estonia, 283
 - Finland, 301–302
 - France, 322
 - Germany, 342
 - Greece, 365–366
 - Hungary, 384–385
 - Ireland, 404
 - Italy, 425
 - Latvia, 443–444
 - Lithuania, 462
 - Poland, 504–505
 - Portugal, 525
 - Romania, 545–546
 - Slovakia, 566–567
 - Slovenia, 585–586
 - Spain, 605
 - Sweden, 624–625
 - UK, 656–658
- Dianthus arenarius* ssp. *bohemicus*, 243
- Dicranum viride*, 142
- Dinaric Alps and region, 13, 200, 574
- Directive on Environmental Crime, 87
- Directive on the conservation of natural habitats and of wild fauna and flora. *See* Habitats Directive
- Directive on the conservation of wild birds. *See* Birds Directive
- disease/pathogens, 20, 24, 203, 453, 521, 575, 600, 635, 637
- disturbance, biodiversity pressures, 20, 22, 111, 129, 185, 230–231, 238, 257, 260, 262, 277, 298, 334, 472, 482, 489, 496, 537, 577, 599
- Douglas Fir, 314
- drainage, 374
- dredging, 276, 284, 293, 396, 524, 637
- Dreissena polymorpha*. *See* Zebra Mussel
- drivers and causes of change
- Austria, 144–145
 - Belgium, 163–164
 - Bulgaria, 184–186
 - Croatia, 203
 - Cyprus, 221–222
 - Czech Republic, 239
 - Denmark, 257–258
 - Estonia, 276–277
 - Finland, 293–294
 - France, 313–314
 - Germany, 334–335
 - Greece, 355–356
 - Hungary, 375–377
 - Ireland, 395–396
 - Italy, 417
 - Latvia, 436–437
 - Lithuania, 452–453
 - the Netherlands, 470–472
 - Poland, 495–496
 - Portugal, 516–517
 - Romania, 536–538
 - Slovakia, 557
 - Slovenia, 576–577
 - Spain, 595–596
 - Sweden, 615–616
 - UK, 636–638
- Dryobates minor*. *See* Lesser Spotted Woodpecker
- Dryocopus martius*. *See* Black Woodpecker
- dumping at sea, 56, 396, 638
- Dunlin, 312, 332, 469
- Dupont's Lark, 594
- Dusky Large Blue, 576
- Dwarf Mountain Pine, 257
- Eagle-owl, 526, 620
- Eastern Bloc, 19, 23, 119, 121
- Eastern Europe, 1, 22–23

- Eastern Imperial Eagle, 143, 197, 381, 556
 ecological corridors and networks, 66, 69, 113
 Austria, 150
 Belgium, 164, 169, 171
 Bulgaria, 187, 189–190
 Croatia, 204
 Czech Republic, 243, 246
 Denmark, 260, 264–265
 Estonia, 282–283
 Finland, 302
 France, 113, 316, 320
 Germany, 340
 Hungary, 383–384
 Ireland, 403
 Italy, 423, 425
 Latvia, 442
 Lithuania, 113, 460
 the Netherlands, 113, 475, 479–480
 Poland, 503, 505
 Portugal, 523
 Romania, 544, 551
 Slovakia, 564–566, 570
 Slovenia, 580, 582, 591
 Spain, 599–601, 603–604
 Sweden, 621, 623
 UK, 652–653, 656–657, 662, 669
 ecosystem services, 35, 101, 110, 118, 121, 307
 ecosystem-based approach, 56, 87, 91–93, 115, 129, 658
 Edible Dormouse, 500
 Egypt, 122, 417
 Egyptian Fruit bat, 221
 Egyptian Vulture, 360, 369, 595
 EIA Directive, 72, 85–86, 129
 implementation issues, 129, 151, 185, 192, 322, 366, 385, 402–404, 498, 505, 525–526, 546, 566, 656, 666
Eichhornia crassipes. See Water Hyacinth
 Eleanor's Falcon, 354
 Elk, 261, 291, 457
Emberiza calandra. See Corn Bunting
Emberiza cirlus. See Cirl Bunting
Emberiza hortulana. See Ortolan Bunting
Empetrum hermaphroditum, 142
Emys orbicularis. See European Pond Turtle
 England, 118, 131, 136, 634–677
 English Channel, 13, 17
 Environment Commissioner, Virginijus Sinkevičius, 135
 Environment for Europe Ministerial Conferences, 42, 100
 Environmental Action Programme (EAP), 42, 59, 81, 100–101
 environmental crime/wildlife crime, 87, 122, 227, 381, 400, 421, 599, 648
 Environmental Liability Directive (ELD), 86, 89
 environmental principles, 60, 646
Epidalea calamita. See Natterjack Toad
Equus ferus ferus. See Tarpan
Erica tetralix, 435
Erinaceus europaeus. See European Hedgehog
Erithacus rubecula. See Robin
Erysimum pieninicum, 494
 Estonia, 26–27, 30–31, 33–34, 43, 49, 108–109, 116, 125–126, 130, 273–290
 EU air pollution policy and legislation, 93–94
 Air Quality Directive, 87, 93
 Large Combustion Plants Directive, 94
 National Emissions Ceilings Directive (NECD), 87, 94
 EU biodiversity strategies and targets, 60
 1998 European Community Biodiversity Strategy, 100
 2010 EU target and Biodiversity Strategy, 100–101
 EU Biodiversity Strategy to 2020, achievements, 116–119
 Target 1 improve habitats and species, 102, 112, 116
 Target 2 Action 6 green infrastructure, 116
 Target 2 Action 7a biodiversity proofing, 117
 Target 2 Action 7b no-net-loss, 117
 Target 2 ecosystem restoration, 102, 116–119, 133, 137, 174, 568
 Target 2 MAES, 118
 Target 3 agriculture and forestry, 102, 118, 132
 Target 4 fisheries, 102, 118–119
 Target 5 IAS, 94, 102, 118
 EU Biodiversity Strategy for 2030, 119–121, 124, 132–133, 135, 370, 488, 503, 511, 571, 581, 597, 604, 609, 616, 630
 EU Nature Restoration Plan – key commitments by 2030, 120
 Nature protection – key commitments by 2030, 120
 new governance framework, 120
 EU Biodiversity Strategy Dashboard, 9
 EU Circular Economy Action Plan, 61
 EU Common Agricultural Policy (CAP). *See* Common Agricultural Policy
 EU environmental legislation, 134–135, 137
 infringement cases, 61, 65, 68, 79, 122, 127–128, 135
 Austria, 150, 156
 Belgium, 166
 Bulgaria, 185, 187, 192, 198
 Cyprus, 225, 227, 229
 Estonia, 284
 Germany, 332, 337, 339, 342
 Greece, 358, 360, 363, 365, 367, 370
 Ireland, 399, 402–404, 406
 Italy, 418, 420, 423, 425
 Malta, 227
 Poland, 499, 503
 Portugal, 519, 524–525
 Slovakia, 561
 Slovenia, 580
 Sweden, 620, 630
 instruments that influence biodiversity, 86
 nature conservation legislation, 3, 61–84, 111–114
 pilot cases
 Cyprus, 225
 Italy, 420, 423–424
 pilot mechanism and infringement procedures, 65, 135
 EU environmental policy, its development, 59–61
 EU Farm to Fork Strategy, 61, 119, 121, 131, 609
 EU forest policy, 85, 99, 132, 136
 EU Forest Strategy, 85, 99, 132
 EU maritime policy and legislation, Common Fisheries Policy (CFP), 56, 87, 92–93, 396, 410
 European Fisheries Fund (EFF), 80–81, 627
 European Maritime and Fisheries Fund (EMFF), 80–81, 92–93, 116, 133, 176, 195, 214, 232, 305, 326, 369, 427, 458, 463, 486, 508, 607, 627, 664
 European Maritime, Fisheries and Aquaculture Fund (EMFAF), 93
 measures, 128, 410, 463, 619
 Integrated Coastal Zone Management (ICZM), 91, 366
 Marine Strategy Framework Directive (MSFD), 13, 17, 87, 90–91, 93, 112, 118, 129, 167, 172, 263, 282, 402, 410
 good environmental status, 87, 90–92, 102, 116–118, 129, 167, 172, 658
 marine protected areas (MPAs). *See* protected areas, types and their coverage
 strengths and weaknesses, 115–116
 Maritime Spatial Planning Directive (MSPD), 87, 91–92, 116, 129
 EU Nature Restoration Law (proposal), 61, 119, 131, 137, 630
 EU Platform on Coexistence between People and Large Carnivores, 79
 EU Soil Strategy, 60
 EU Sustainable Development Strategy, 100
 EU Treaties
 Amsterdam (1997), 43, 60–61, 100
 Lisbon (2007), 43
 Maastricht (1992), 42, 60
 Rome (1957), 42, 59–60, 95
 Single European Act (1986), 42, 60
 TEU (Treaty on the European Union), 43, 70, 92
 TFEU (Treaty on the Functioning of the European Union), 43, 65, 80
 EU water policy and legislation, Environmental Quality Standards Directive, 115
 Floods Directive, 86, 115
 Groundwater Directive, 115
 Nitrates Directive, 86, 90, 115, 323, 489, 507
 Urban Waste Water Treatment Directive (UWWTD), 86, 90, 115
 Water Framework Directive (WFD), 60–91, 98, 112, 153, 222, 265–266, 284, 334, 366, 389, 391, 400, 410, 476, 496, 506–507, 526, 539, 585, 626
 ecological status, 24, 89, 91, 114, 157, 396, 407, 577
 river basin management plan (RBMP), 89, 98, 115, 222, 506, 526, 559

Index

- EU water policy and legislation (cont.)
 strengths and weaknesses, 114–115
 water status, 89, 114–115
 water policy Fitness Check, 114–115
- Euphydryas aurinia*. See Marsh Fritillary
- Euphydryas maturna*. See Scarce Fritillary
- Eurasian Bittern, 561, 661
- Eurasian Lynx, 27, 142, 148, 150, 200, 206, 217, 238, 243, 274, 280, 291, 297–298, 304, 333, 440, 458, 500, 535, 542, 556, 561, 575–576, 620, 661
- Eurasian Thick-knee/Stone Curlew, 148, 659
- Eurasian Wild Horse. See Tarpan
- European Beech, 160, 332, 613
- European Breeding Bird Atlas (2nd), 29
- European Commission, support and enforcement role, 65, 68, 74, 77–79, 121, 123, 127, 135, 525
- European Community, 1, 42, 51, 60–61, 94, 100
- European Council, 101
- European Environment Agency (EEA), 1, 5, 8, 21, 60, 67
- European Green Deal, 61, 101, 119, 131, 356, 370, 511
- European Hare, 223, 226, 360, 457, 477
- European Hedgehog, 390
- European Mink, 275–276, 280, 288, 435, 595, 600, 606
- European Mouflon, 376, 386
- European Parliament, 60, 93, 119, 406
- European Plaice, 472
- European Pond Turtle, 440, 500, 561
- European Rabbit, 477, 500, 526, 600–601, 635
- European Rewilding Network, 173
- European Souslik, 148, 243, 500, 535, 567
- European Topic Centre on Biological Diversity (ETC/BD), 7–8, 64, 67
- European Tree Frog, 261, 479
- European Union, 49
- extinction debt, 35, 276, 284
- Fagus sylvatica*, 574, *See also* European Beech
- Falco cherrug*. *See* Saker Falcon
- Falco eleonorae*. *See* Eleanor's Falcon
- Falco naumanni*. *See* Lesser Kestrel
- Falco peregrinus*. *See* Peregrine Falcon
- Falco tinnunculus*. *See* Common Kestrel
- Falco vespertinus*. *See* Red-footed Falcon
- Fallow Deer, 376
- False Indigo-bush, 185, 386
- False Ringlet, 576
- Fan Mussel, 595
- farmland birds, conservation of, 130
 the Netherlands, 478, 482–484
 UK, 659–660
- Federation of Associations for Hunting and Conservation of the EU (FACE), 77, 122–123
- Felis silvestris*. *See* Wildcat
- Fen Orchid, 381
- Fenton's Wood White, 142
- Ferruginous Duck, 185, 200, 202, 535, 542, 561
- Finland, 26, 29–31, 34, 43, 49, 107–109, 124–125, 132, 291–310, 612, 614, 625
- Finnish Forest Reindeer, 291
- Fire Salamander, 390
- Fire-bellied Toad, 261, 267, 453
- fires, 24–25, 185, 231–232, 303, 313, 366, 503, 595
- fish, conservation of, 79, 118
 Austria, 153
 Denmark, 266
 Estonia, 284
 France, 323
 Greece, 360
 Poland, 507, 510
 Slovenia, 584
 Sweden, 626
- fisheries, biodiversity pressures, 28, 115–116, 164, 270, 396, 410, 596
- bottom trawling/dredging, 21, 115, 164, 258, 263, 472, 615, 637, 654
- by-catch, 21, 24, 110, 115, 121, 164, 277, 496, 516, 615, 637
- overfishing/unsustainable use, 21, 24–25, 92–93, 110, 115, 118, 277, 355, 417, 489, 516, 537, 546
- fisheries, measures to address pressures, 56, 78, 92–93, 118, 214, 228, 230, 256, 298, 320, 366, 370, 396, 599, 604, 606, 637, 654, 668
- Fitness Check of the Birds and Habitats Directives, 33, 61, 83–84, 110, 112, 116, 126, 135, 448
- lessons, 114
- Floating Pennywort, 163, 472
- flood prevention/protection/defence, 20, 257, 334, 345, 485, 537, 660–661
- FOREST EUROPE process, 132
- Forest Stewardship Council (FSC), 174, 188, 193, 526, 547
- forestry
 forest certification, 171, 174, 188, 193, 526, 547, 622, 658
 management plans, 131–132, 169, 173–174, 462, 506, 539, 545, 547, 565–566
 sustainable forest
 management, 24, 99, 132, 169, 173–174, 188, 212, 499, 506, 575, 658
 forestry, biodiversity pressures, 121
 abandonment of traditional management (e.g. coppicing), 20, 24, 248, 471, 637
 afforestation, 21, 95, 144, 276, 374, 376, 394, 396, 421, 453, 526, 537, 574, 594, 606, 637–638, 658
 bioenergy, 132, 145, 308, 314, 631
 clear-cutting, 20, 110, 132, 145, 239, 303, 376, 394, 396, 453, 615, 625
 conversion of semi-natural forest to intensive forestry, 23–24, 27, 132
 deadwood removal, 20, 143–144, 152, 293, 303, 417, 495
 decline in old growth/old trees, 276, 293, 303, 495, 548, 557
 drainage, 130, 257, 275, 291, 293, 303, 396
 fertiliser use, 396
 forest roads, 303, 557
 high harvest rates, 132, 274, 276, 288, 303, 314, 436, 453, 495, 506, 566, 595
 illegal logging, 185, 230, 535, 537, 547–548
 intensification, 20, 110, 132, 274, 276, 293, 303, 314, 376, 453, 557
 non-native trees, 20, 132, 182, 314, 374, 386, 394
 eucalyptus, 20, 516, 519, 526, 593
- Pinus, 20, 516, 593
- pesticides, 396
- plantations, 20, 23, 182, 237, 239, 386, 394, 396, 435, 516, 593, 596, 613, 634, 658, 660
- forests
 biodiversity changes, 302–303
 habitat management and restoration, 131–132
 Austria, 152
 Belgium, 173–174
 Bulgaria, 193
 Croatia, 212
 Estonia, 283–284
 Finland, 303–304
 Germany, 343–344
 Greece, 366
 Latvia, 445
 Poland, 506
 Portugal, 526
 Romania, 548
 Slovakia, 567
 Slovenia, 586
 Sweden, 625
 UK, 660
 pest outbreaks, 185, 495, 503, 557
 primeval/primary/virgin, 27, 132, 149, 239, 463, 535, 547, 555, 571
 protection
 Bulgaria, 193
 Finland, 303–304
 Greece, 366
 Lithuania, 462–463
 Sweden, 625
 France, 26, 29–30, 32–33, 42, 49, 69, 108–109, 117–118, 122, 125, 127–128, 311–330, 529
Francolinus francolinus. *See* Black Francolin
- Fraxinus angustifolia*. *See* Narrow-leaved Ash
- Fraxinus excelsior*, 160, 575, 680, *See also* Ash
- Freshwater Crayfish, 393
- Freshwater Pearl Mussel, 243, 275, 395–396, 400, 408, 435, 440, 614, 620, 626
- Fulica atra*. *See* Coot
- Galemys pyrenaicus*. *See* Pyrenean Desman
- Galium cracoviense*, 494
- Gallinago gallinago*. *See* Common Snipe
- Gallinago media*. *See* Great Snipe
- Garganey, 482
- Gavia arctica*. *See* Black-throated Diver

- Gelochelidon nilotica*. See Gull-billed Tern
- Gentianella bohemica*, 148, 243
- Germany, 13, 19, 21, 26, 28, 30–34, 41–42, 49–50, 70–71, 107–109, 118, 125, 127, 136, 148, 155, 206, 261, 270, 331–352, 472
- Geronticus eremita*. See Bald Ibis
- Glis glis*. See Edible Dormouse
- Golden Eagle, 275, 279–280, 297, 400, 530, 620, 648
- Golden Jackal, 189, 500
- Golden Plover, 75
- Goldeneye, 496, 542
- Goldfinch, 144, 516
- Goldfish, 386
- Goosander, 275
- Goshawk, 648
- governance, legislation and policy, 134–137
- Austria, 147
- Belgium, 164
- Bulgaria, 186–188, 192–193
- Croatia, 203–205
- Cyprus, 222–225
- Czech Republic, 239–247
- Denmark, 258–260
- Estonia, 277–279
- Finland, 294–297
- France, 314–317
- Germany, 335–338
- Greece, 356–359
- Hungary, 377–380
- Ireland, 396–400
- Italy, 417
- Latvia, 437, 439
- Lithuania, 453–456
- the Netherlands, 472–477
- Poland, 496, 498–499
- Portugal, 517, 519–520
- Romania, 538–540
- Slovakia, 557–560
- Slovenia, 577–581
- Spain, 596–598
- Sweden, 616–619
- UK, 638–647
- grassland
- habitat management and restoration
- Estonia, 284
- Ireland, 404–405
- Latvia, 444–445
- the Netherlands, 482–484
- Romania, 546–547
- Great Britain, 13, 17, 29, 33, 393, 634–677
- Great Bustard, 27, 50, 143, 155, 381, 385–386, 515–516, 530, 542, 567, 594
- Great Cormorant, 168, 280, 381, 500, 561, 620
- Great Crested Newt, 79, 121, 242, 648
- Great Snipe, 494, 500
- Great White Egret, 375, 381
- Great White Pelican, 182
- Greater Spotted Eagle, 279–280, 288, 297, 494, 500
- Greater White-fronted Goose, 332, 542
- Greece, 14, 26, 29–30, 32–33, 42, 49, 108–109, 119, 125–126, 129, 133, 353–373
- green infrastructure, 116–117, 129
- Belgium, 164, 167, 171, 174–175
- Bulgaria, 193–194, 197
- Croatia, 213
- Cyprus, 232
- Denmark, 260
- Estonia, 285
- Finland, 302, 304, 307
- France, 316, 320, 322–323
- Germany, 340
- Hungary, 379
- Ireland, 403, 406
- Italy, 427, 429
- Latvia, 445
- the Netherlands, 486
- Portugal, 524, 527
- Romania, 548
- Slovakia, 565–566, 568, 571
- Spain, 604–605, 607, 610
- Sweden, 623, 626–627
- UK, 656
- Green Toad, 275
- Green Turtle, 220–221
- Greenpeace* judgement (UK High Court), 65, 645
- Grey Heron, 168, 500
- Grey Partridge, 167–168, 312, 333, 375, 457, 469–470, 542, 556
- Grey Seal, 28, 256, 275, 280, 288, 332, 635
- Grey-headed Woodpecker, 163
- Greylag Goose, 317, 477, 542
- Griffon Vulture, 189, 221, 323, 360, 421, 594, 596
- Grus grus*. See Common Crane
- Gull-billed Tern, 332
- Gulo gulo*. See Wolverine
- Gypaetus barbatus*. See Bearded Vulture
- Gyps fulvus*. See Griffon Vulture
- habitat/ecosystem degradation, 163, 184–185, 203, 334, 355, 365, 374, 376, 455, 537, 542, 577, 595–596, 636
- habitat fragmentation, 22, 35, 110, 129, 144, 161, 163, 184, 203, 231, 238, 258, 314, 374, 417, 425, 470, 475, 480, 489, 496, 521, 542, 546, 557, 577, 595, 601
- habitat loss/destruction/conversion, 110–111, 129, 131, 144, 163, 184–185, 314, 322, 374, 395, 415, 417, 452, 500, 516, 531, 595, 600, 619, 635–637, 659
- habitat management and restoration, 135
- Austria, 151–153
- Belgium, 173–175
- Bulgaria, 193
- Croatia, 212–213
- Cyprus, 231–232
- Czech Republic, 248
- Denmark, 265–266
- Estonia, 283–285
- Finland, 302–304
- France, 322–323
- Germany, 343–344
- Greece, 366–367
- Hungary, 385–386
- Ireland, 404–406
- Italy, 425–426
- Lithuania, 462
- the Netherlands, 482–484
- Poland, 505, 507–508
- Portugal, 505
- Romania, 546–548
- Slovakia, 567–568
- Slovenia, 586–587
- Spain, 605–606
- Sweden, 625–626
- UK, 658–662
- habitat status and trends, 110, 118
- Austria, 143–144
- Belgium, 161
- Bulgaria, 182–183
- Croatia, 201
- Cyprus, 220
- Czech Republic, 238
- Denmark, 255
- Estonia, 274
- Finland, 292–293
- France, 312
- Germany, 332–333
- Greece, 354
- Hungary, 375
- Ireland, 394
- Italy, 416
- Latvia, 435
- Lithuania, 451
- the Netherlands, 469
- Poland, 494
- Portugal, 515
- Romania, 536
- Slovakia, 556
- Slovenia, 575–576
- Spain, 594–595
- Sweden, 613–614
- UK, 635
- habitat types (HD Annex I)
- 1110 Sandbanks, 164, 413, 614
- 1120* *Posidonia* beds, 18, 201, 220, 354, 415, 606
- 1130 Estuaries, 413, 469
- 1140 Mudflats, 161, 164, 413
- 1150* Coastal lagoons, 201, 222, 394, 494
- 1160 Large shallow inlets, 413, 469, 613
- 1170 Reefs, 201, 400, 614
- 1230 Vegetated sea cliffs, 494, 613
- 1310 *Salicornia*, 616
- 1320 Spartina swards, 255
- 1330 Atlantic salt meadows, 255
- 1520* Iberian gypsum vegetation, 230
- 1530* Pannonic salt steppes, 16, 143, 201
- 1620 Boreal Baltic islets, 613
- 1630* Boreal Baltic coastal meadows, 15, 273, 292
- 2110 Embryonic shifting dunes, 201, 255, 453, 494
- 2120 Shifting dunes, 161, 494
- 2130* Fixed coastal dunes, 394, 469, 494
- 2140* Decalcified fixed dunes, 255
- 2160 Dunes with *Hippophaë*, 161
- 2180 Wooded dunes, 435, 453, 494
- 21A0* Machairs, 15
- 2250* Coastal dunes with *Juniperus*, 360
- 2320 Dry sand heaths, 255
- 2340* Pannonic inland dunes, 16, 143, 201
- 3110 Oligotrophic waters, 494, 507, 612
- 3130 Oligotrophic to mesotrophic waters, 612
- 3140 Hard oligo-mesotrophic waters, 494, 507
- 3150 Natural eutrophic lakes, 161, 442, 494
- 3160 Natural dystrophic lakes, 494, 612
- 3180* Turloughs, 393
- 3210 Fennoscandian natural rivers, 613–615
- 3230 Alpine rivers with *Myricaria*, 201
- 3260 Water courses – plain to montane, 201, 507
- 3270 Rivers with muddy banks, 201, 469

Index

- habitat types (HD Annex I)
 (cont.)
- 32A0 Tufa cascades of karstic rivers, 201
 - 4010 North Atlantic wet heaths, 332, 435
 - 4030 European dry heaths, 201, 332, 444
 - 4060 Alpine and Boreal heaths, 142, 332, 613
 - 4080 Sub-Arctic *Salix* scrub, 613
 - 5220* Matorral with *Zyphus*, 230, 594
 - 6120* Xeric sand calcareous grasslands, 161
 - 6150 Siliceous alpine and boreal grasslands, 311, 613–614
 - 6170 Alpine and subalpine calcareous grasslands, 201, 332, 613–614
 - 6210* Semi-natural dry grasslands, 273–274, 332, 393–394, 535
 - 6220* Pseudo-steppe, 16, 201
 - 6230* Species-rich *Nardus* grassland, 201, 535
 - 6240* Sub-Pannonic steppic grasslands, 201
 - 6250* Pannonic loess steppic grasslands, 16, 201, 375
 - 6260* Pannonic sand steppes, 16, 201, 375
 - 6270* Fennoscandian lowland grasslands, 274
 - 6280* Nordic Alvar, 15, 273–274, 615
 - 62A0 E. sub-Mediterranean dry grasslands, 201
 - 62B0* Serpentophilous Cyprus grassland, 220
 - 62C0* Ponto-Sarmatic steppes, 535
 - 6310 Dehesas, 16, 594
 - 6410 *Molinia* meadows, 161, 201, 312, 375
 - 6430 Hydrophilous tall herbs, 312, 332
 - 6440 Alluvial meadows, 375
 - 6450 N. boreal alluvial meadows, 15, 273–274
 - 6460 Peat grasslands of Troodos, 220, 222
 - 6510 Lowland hay meadows, 161, 312, 332, 375, 535
 - 6520 Mountain hay meadows, 161, 312, 332, 376, 535
 - 6530* Fennoscandian wooded meadows, 274, 444, 613
 - 6540 Sub-Mediterranean grasslands, 201
 - 7110* Active raised bogs, 273, 394, 445, 451, 453, 612–613
 - 7130* Blanket bogs, 15, 394
 - 7140 Transition mires, 273, 451, 612
 - 7210* Calcareous fens, 273
 - 7230 Alkaline fens, 273–274, 451–452, 493–494
 - 7240* Alpine pioneer fens, 311
 - 7310* Aapa mires, 15, 612
 - 7320* Palsa mires, 613–614
 - 8240* Limestone pavements, 393
 - 8310 Caves not open to the public, 161, 201
 - 8330 Sea caves, 201
 - 8340 Permanent glaciers, 614
 - 9010* Western taiga, 15, 274, 451, 612, 625
 - 9020* Fennoscandian hemiboreal broad-leaved forest, 453
 - 9030* Natural forests of upheaval coast, 15, 612
 - 9040 Nordic subalpine/subarctic forests, 613
 - 9050 Fennoscandian herb-rich forests with *Picea*, 303, 453, 625
 - 9070 Fennoscandian wooded pastures, 15, 274
 - 9080* Fennoscandian deciduous swamp woods, 15, 274, 303, 451
 - 9110 *Luzulo-Fagetum* beech forests, 15, 160, 493, 613
 - 9120 Atlantic acidophilous beech forests, 311
 - 9130 *Asperulo-Fagetum* beech woods, 160, 493, 613
 - 9150 Medio-European limestone beech forests, 257
 - 9160 Sub-Atlantic and medio-European oak and oak-hornbeam forests, 201, 493, 613
 - 9170 *Galio-Carpinetum* oak-hornbeam forests, 15, 257, 493
 - 9180* *Tilio-Acerion* forests of slopes, 201, 311
 - 9190 Old acidophilous oak woods, 160, 452, 493, 613
 - 91A0 Old sessile oak woods, 15
 - 91C0* Caledonian forest, 15
 - 91D0* Bog woodland, 303, 451, 612
 - 91E0* Alluvial forests, 160–161, 200, 453, 575
 - 91F0 Riparian mixed forests, 161, 200–202, 575
 - 91H0* Pannonian woods, 16
 - 91I0 Euro-Siberian steppic woods, 375
 - 91J0* *Taxus baccata* woods, 15
 - 91K0 Illyrian *Fagus sylvatica* forests, 200, 574
 - 91N0* Pannonic sand dune thicket, 375
 - 91P0 Holy Cross fir forest, 494
 - 91S0* Western Pontic forest, 16
 - 91V0 Dacian beech forest, 535
 - 91X0* Dobrogean beech forest, 535
 - 91Y0 Dacian oak and hornbeam forests, 535
 - 9230 Galician-Portuguese oak woods, 311, 594
 - 9330 *Quercus suber* forests, 594
 - 9370* Palm groves of Phoenix, 354
 - 9390* Scrub with *Quercus alnifolia*, 220
 - 93A0 Woodlands with *Quercus infectoria*, 220
 - 9410 Acidophilous montane to alpine *Picea* forests, 201, 493
 - 9430* Subalpine and montane *Pinus uncinata* forests, 142
 - 9530* (Sub-) Mediterranean pine forests with black pine, 222
 - 9560* Endemic forests with *Juniperus*, 232
 - 9570* *Tetraclinis articulata* forests, 594
 - 9590* *Cedrus brevifolia* forests, 220
- Habitats Directive (HD), 3, 135
- aims (Article 2(2)), 3, 63
 - Annex II species, 3, 5, 67
 - Annex IV species, 3, 5, 63, 78–79, 121
 - Annex V species, 3, 5
 - Articles, summarised versions, 62
 - drivers and development, 51, 60, 65, 70
 - favourable conservation status, 63, 67, 70, 79–80, 82, 112, 134
 - application to the Environmental Liability Directive, 86, 89
 - definition and assessment, 7, 64, 107, 134
 - favourable reference values, 7, 64, 230, 440, 466, 520, 613, 620
 - funding, 80–82, 112, 114, 132–137, *See also* nature conservation funding
 - Prioritised Action Frameworks (PAFs), 82, 133
 - provisions for SCIs (Article 8), 80
- HD habitats (Annex I habitat types), 3, 5–6, 11, 13, 27, 66, 97, 106–107, 113, 116–117
- HD species (Annex II and/or Annex IV and V), 5–6, 29, 34, 106–107, 113–114, 116–117
- monitoring and reporting, 82–83, 134
- conservation status, 5–8, 106–109, 116, 118
- conservation status categories, 5
- surveillance and reports (Article 17), 83–84
- Natura 2000, coherence (Article 3), 67, 112–113
- Natura 2000, coherence measures, 67
- landscape features (Articles 3(3) and 10), 67, 136
- Natura 2000, establishment of the network, 67–69, *See also* Natura 2000 coverage
- Natura 2000, identification and designation of sites (Article 4), 66–67
- biogeographical seminars, 67
- designation of SCIs as SACs (Article 4(4)), 67
- SCIs (Article 4(2)), 67
- Standard Data Form, 67, 69, 447
- Natura 2000, site management and protection, 69–75, *See also* Natura 2000 assessment of plans and projects (Article 6(3)), 70–73, 88, 127
- conservation objectives, 69–71, 73–74
- conservation priorities (Article 4(4)), 69
- derogation conditions and compensatory measures (HD Article 6(4)), 73–75, 85, 127
- deterioration and disturbance, prevention of (Article 6(2)), 70–71, 75, 127, 317
- necessary conservation measures (Article 6(1)), 70
- objectives and key measures, 3, 64
- species protection measures, 78–79
- derogation provisions and conditions (Article 16), 79, 207, 582, 602, 620, 648
- management measures for Annex V species (Article 14), 79
- strict protection of Annex IV species (Articles 12 and 13), 78, 121, 360

- strengths and weaknesses, 111–114
 supporting measures, 79–80
 transposition and role of case law, 65–66, 72, 127
Haematopus ostralegus. See Oystercatcher
Haliaeetus albicilla. See White-tailed Sea-eagle
Halichoerus grypus. See Grey Seal
Hamatocaulis vernicosus, 453,
 See also Slender Green Feather Moss
 Harbour Porpoise, 164, 256, 332, 334, 496, 500, 613, 620
 Harlequin, 386
 harmful subsidies, 93, 114, 129–130, 328, 386, 389–390
Harmonia axyridis. See Harlequin
 Hazel Dormouse, 162, 256
 Hazel Grouse, 163, 280, 291, 500, 576
 HD habitats (Annex I habitat types). See also habitats (HD Annex I)
 heathland
 habitat management and restoration Latvia, 444
 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area, 45, 56
 hen harrier, 397
 Hen Harrier, 122, 312, 408, 648
Heracleum mantegazzianum, 507
Heracleum sosnowskyi, 507
 High Nature Value (HNV) farming, 27–28, 34, 96–100, 110, 118, 129–131, 142, 152, 161, 173, 273, 276, 284, 302, 312, 313, 331, 332, 343, 347, 393, 415, 425, 515, 531, 534, 535, 546, 549, 555, 575, 588, 593 loss, 110, 129, 161, 276, 313, 331, 343, 417, 516, 575 support for, 34, 96–97, 99–100, 130, 152–153, 161, 175, 213, 326, 343, 546, 549, 570, 588
 High Nature Value (HNV) forest, 28, 111
Hirundo rustica. See Barn Swallow Holly, 520
 Holm Oak, 514, 520
 Horned Grebe, 494
 House Sparrow, 516
 housing, 21, 144, 220–221, 231, 312, 471, 489, 516, 654, 657
 Houting, 256, 267
Hucho hucho. See Danube Salmon
 Hungarian Meadow Viper, 381
 Hungary, 26, 30–32, 34, 43, 49, 108–109, 116, 125, 130, 204, 214, 374–392, 588
 hunting, biodiversity pressures, 28, 121, 224, 239, 260, 274, 277, 361, 395, 415, 420, 430, 477, 521, 535, 537, 542, 647, See also under species issues birds, 110, 122, 226–227, 500, 648 mammals, 206, 275, 600
 hunting, regulation, 75–79, See also species issues
Hydrocoloeus minutus. See Little Gull
Hydrocotyle ranunculoides. See Floating Pennywort hydropower, 24, 111, 144–145, 185, 237, 298, 437, 525, 537, 557, 577, 613, 615, 621, 626, 631
Hyla arborea. See European Tree Frog
 Iberia, 13, 22, 29, 32–33, 593–594, 600–601
 Iberian coast, 13, 17
 Ice Age, The/glaciation effects, 13–18, 29, 181, 254, 291, 311, 353, 393, 434, 575, 612, 635
 Iceland, 1, 26, 28–30, 33, 49, 125, 197
Ilex aquifolium. See Holly illegal killing/persecution, biodiversity pressures, 110, 121–122, 217, 226–227, 260, 298, 361, 400, 420, 440, 500, 521, 601, 648, See also poaching, See also species issues
Impatiens glandulifera. See Indian Balsam
 Important Bird Areas (IBAs), as a reference for the identification of SPAs, 66, 68, 126
 Indian Balsam, 386
 Industrial Emissions Directive, 86, 89
 Integrated Pollution Prevention and Control Directive, 86
 International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention or BWM Convention), 48
 International Council for Bird Preservation, 68
 International Panel on Biodiversity and Ecosystem Services (IPBES), 21, 54–55
 International Waterfowl and Wetlands Research Bureau, 68
 invasive alien species (IAS), biodiversity pressures, 20, 25, 110, 144, 161, 163, 184, 203, 221–222, 247, 276, 314, 367, 374–375, 386, 417, 471–472, 507, 516, 526, 535, 537, 595, 615, 637
 invasive alien species (IAS), measures to address, 87, 94–95, 118 Cyprus, 231 Czech Republic, 247–248 Finland, 292–293 Greece, 367 Hungary, 386 Lithuania, 463 Poland, 507 Portugal, 526–527 Spain, 606
 Invasive Alien Species (IAS) Regulation, 48, 87, 94–95, 118
 Ionian Islands, 362
 Ionian Sea, 17, 353, 415
Ips acuminatus, 495
Ips typographus, 495
 Ireland (Republic of), 13, 17, 26, 29–30, 32, 34, 42, 49, 66, 71, 93, 108–109, 116, 125, 127–128, 130, 135, 393–414, 529
 Irish Sea, 50
 Italy, 14, 19, 26, 30–33, 42, 49, 108–109, 113, 122, 125, 135, 148, 214, 415–433, 588
 IUCN (The International Union for Conservation of Nature), 8–9, 11, 52, 113, 119, 123–124, 126
 Juncker, Jean-Claude, 84
 Karpathos Frog, 360
 Kattegat, 13, 17
 Kazakhstan, 1
 Kentish Plover, 472
 key developments in nature conservation, summary of, 397, 418, 438, 578 Austria, 145 Belgium, 165 Bulgaria, 186 Croatia, 203 Cyprus, 225 Czech Republic, 240 Denmark, 259
 Estonia, 278 Finland, 295 France, 315 Germany, 336 Greece, 357 Hungary, 378 Lithuania, 454 the Netherlands, 473 Poland, 497 Portugal, 517 Romania, 538 Slovakia, 558 Spain, 597 Sweden, 616–617 UK, 639
 key events in nature conservation policy and legislation in Europe, 42
 Key statistics, 5–7
 BD Annex I birds, 5 biogeographical regions, 5, 13 conservation status standard indicator of progress, 5–8 gross domestic product (GDP) per capita, 5 HD habitats (Annex I), 5 HD species (Annexes II and/or Annex IV and V), 5 land cover (CORINE), 5 marine waters area, 5, 13 national table Austria, 142 Belgium, 160 Bulgaria, 181 Croatia, 200 Cyprus, 219 Czech Republic, 237 Denmark, 254 Estonia, 273 Finland, 291 France, 311 Germany, 331 Greece, 353 Hungary, 374 Ireland, 393 Italy, 415 Latvia, 434 Lithuania, 451 the Netherlands, 468 Poland, 493 Portugal, 514 Romania, 534 Slovakia, 555 Slovenia, 574 Spain, 593 Sweden, 612 UK, 634 population density, 5 table explanation, 6 terrestrial area, 5 key terms, definitions, 5–11 Killer Whale, 25, 600 Kosovo, 1, 26, 30–31 Kyiv Resolution, 43, 47, 100

Index

- Lacerta agilis*. See Sand Lizard
Ladigesocypris ghigii, 360
 Lady's Slipper Orchid, 280, 381
Lagocephalus sceleratus. See Silver-cheeked Toad-fish
Lagopus lagopus. See Willow Grouse
Lagopus lagopus scotica. See Red Grouse
Lagopus muta. See Rock Ptarmigan
 lakes
 habitat management and restoration
 Greece, 367
 Latvia, 444
 Sweden, 625–626
Lampetra fluviatilis. See River Lamprey
Lampetra planeri. See Brook Lamprey
 land use change/land cover change/land conversion, 19, 21–22, 29, 110–111, 152, 161, 163, 173, 221, 334, 344, 355, 366, 395, 402, 416, 435, 557, 595
 landscape features, 69, 79, 97, 101, 184, 559, 571
Lanius collurio. See Red-backed Shrike
Lanius minor. See Lesser Grey Shrike
Lanius senator. See Woodchat Shrike
 Lapland, 294, 303
 Lapwing, 122, 257, 333, 395, 468, 482–484, 556
 Larch, 242
 Large Blue, 275, 280, 576
Larix decidua. See Larch
 Latvia, 9, 26, 30–31, 34, 41, 43, 49, 108–109, 116, 123, 125, 132, 434–451
 Lawton, John, 127, 652–653, 656, 662
 Lebanon, 122
 legislation. See also governance, legislation and policy
Lepomis gibbosus, 535. See also Pumpkinseed
Leptidea morsei. See Fenton's Wood White
Lepus europaeus. See European Hare
Lepus timidus. See Mountain Hare
 Lesser Grey Shrike, 542, 556, 595
 Lesser Horseshoe Bat, 142, 500
 Lesser Kestrel, 189, 360, 515, 526
 Lesser Spotted Eagle, 279, 297, 435, 500, 536, 542
 Lesser Spotted Woodpecker, 452
 Lesser White-fronted Goose, 360, 620
 Levantine Viper, 225
 Liechtenstein, 1, 26, 30–31, 49, 125, 197
 light pollution, 163, 577, 637
Limosa limosa. See Black-tailed Godwit
Linaria loeselii, 453
 Lionfish, 231
Liparis loeselii. See Fen Orchid
Lissotriton vulgaris. See Smooth Newt
Lithobates catesbeianus. See American Bullfrog
 Lithuania, 26, 30–31, 33–34, 41, 43, 49, 69, 108–109, 125, 127, 132–133, 451–467
 Little Bustard, 515–516, 594–595, 610
 Little Gull, 453
 Little Tern, 202, 257, 453, 472
 Loggerhead Turtle, 201, 220, 354, 357, 360, 369, 423
Loiseleuria procumbens, 142
Lolium perenne, 19
 Long-tailed Duck, 261, 463, 494, 496, 613, 615
 Louisiana crayfish, 472
 Low Juneberry, 444
 Lower Danube Green Corridor, 188, 193–194, 544
Lucanus cervus. See Stag Beetle
Luronium natans. See Floating Water-plantain
Luscinia svecica. See Bluethroat
Lutra lutra. See Otter
 Luxembourg, 1, 26, 30–31, 34, 42, 49, 108–109, 125–126
Lynx lynx. See Eurasian Lynx
Lyrurus tetrix. See Black Grouse
 Macaronesian biogeographical region, 1, 5, 514, 593
 Macaronesian islands, 29
 Macaronesian marine region, 1, 5, 13, 29, 90, 523
Macrovipera lebetina. See Levantine Viper
Maculinea arion. See Large Blue
Maculinea/Phengaris nausithous. See Dusky Large Blue
Maculinea/Phengaris teleius. See Scarce Large Blue
 Madeira, 1, 107, 125, 514, 529
Magallana gigas. See Pacific Oyster
 Mallard, 395, 477, 500
 Malta, 1, 26, 30–31, 34, 43, 49, 65, 107–108, 122, 125–126, 135, 227
 Manx Shearwater, 28
 Marbled Polecat, 535
 Marbled Teal, 594
Margaritifera auricularia. See Spengler's Freshwater Mussel
Margaritifera margaritifera. See Freshwater Pearl Mussel
 marine ecosystems, 21, 24–25, 34, 90–91, 110, 115, 134, 201, 353, 516, 596, 606–607, 636–637
 habitat management and restoration
 Spain, 606
 marine nature conservation. See also EU Maritime Policy and Legislation
 Cyprus, 227
 Lithuania, 463
 Spain, 599–600, 606
 Sweden, 619
 UK, 644–645, 652, 654–655, 658
 marine protected areas (MPAs). See Protected Areas, types and coverage
 marine Regional Seas Conventions and North Sea Ministerial Conferences, 56–57
 marine regions, 13, 18
 Maritime Pine, 516
Marmaronetta angustirostris. See Marbled Teal
Marmota marmota. See Alpine Marmot
 Marsh Fritillary, 267
 Marsh Harrier, 167
Martes foina. See Beech Marten
Martes martes. See Pine Marten
Mauremys caspica. See Striped-neck Terrapin
Mauremys rivulata. See Striped-neck Terrapin
 Mediterranean biodiversity hotspot, 18, 219, 353, 593
 Mediterranean biogeographical region, 13, 16–17, 25, 29, 32–33, 122
 Croatia, 200–201, 209–210
 Cyprus, 219
 France, 311–313
 Greece, 353
 Italy, 420
 Portugal, 514
 Slovenia, 574
 Spain, 593, 607
 Mediterranean islands, 14, 311
 Mediterranean Monk Seal, 28, 50, 220–223, 225–227, 234–235, 354, 360, 369, 420, 423
 Mediterranean Sea marine region, 13, 17–18, 24–25, 28–29, 33, 50, 90, 92, 115
 Cyprus, 234
 Greece, 354, 360
 Italy, 415
 Spain, 593, 604, 607
Melanitta fusca. See Velvet Scoter
Melanitta nigra. See Common Scoter
Melanocorypha calandra. See Calandra Lark
Meles meles. See Badger
Mergus merganser. See Goosander
Mesocricetus newtoni. See Romanian Hamster
 meta-populations, 35, 70, 471
Microcarbo pygmaeus. See Pygmy Cormorant
Microtus cabrerae. See Cabrera's Vole
Microtus taticus. See Tatra Vole
Milvus milvus. See Red Kite
 mineral extraction (gravel, etc.), 185, 255, 258, 395, 506, 537, 637–638, 661
 mining, 128, 136, 182, 376, 383, 394, 516, 537
Miniopterus schreibersii, 542
 mires
 habitat management and restoration, 507
 Estonia, 285
 Ireland, 405–406
 Latvia, 445
 UK (peatlands and uplands), 658–659
 mitigation hierarchy, 74, 117–118, 322, 342, 443
Mnemiopsis leidyi, 25, 535
 Moldova, 1, 30–31, 41, 49, 125, 193
Monachus monachus. See Mediterranean Monk Seal
 Montagu's Harrier, 167, 312, 500, 516
 Montenegro, 1, 26, 30–31, 49, 125
Motacilla flava. See Yellow Wagtail
 Mountain Birch, 291, 613
 Mountain Hare, 291
 multilateral environmental agreements (MEAs), 41, 44, 121
Mus cyriacus. See Cypriot Mouse
Muscardinus avellanarius. See Hazel Dormouse
Mustela lutreola. See European Mink
Mustela putorius. See Polecat
Myotis bechsteinii, 542
Myotis myotis, 542
Myotis oxygnathus, 542
Najas flexilis. See Slender Naiad
 Narrow-leaved Ash, 200, 203
 National Biodiversity Strategies and Action Plans

- (NBSAP). *See* Biodiversity Strategies
 - Natrix natrix cypriaca*. *See* Cyprus Grass Snake
 - Natterjack Toad, 168, 275, 280, 288, 400
 - Natura 2000, 112, 116, *See also* Habitats Directive appropriate assessments (HD Article 6(3)), implementation issues, 129
 - Croatia, 212
 - Cyprus, 224, 231
 - Czech Republic, 247
 - France, 317, 320
 - Greece, 365–366
 - Ireland, 403–404
 - Italy, 424
 - Lithuania, 443
 - Poland, 504
 - Portugal, 525–526
 - Romania, 544
 - Slovakia, 566, 586
 - Sweden, 623
 - UK, 654
 - coherence, 67, 69–70, 73–74, 79, 112–113, 126, 128
 - coherence measures, 67
 - compensatory measures (HD Article 6(4)), implementation issues, 127, 172, 211, 247, 320, 343, 403, 504, 519–520, 525, 586, 625, 654
 - costs, 132–133
 - establishment of the network, 67–69
 - funding, 80, 82, 132–133
 - identification and designation of sites (HD Article 4), 66–67
 - integrated funding model, 80, 82, 133
 - overall coverage
 - marine, 69, 124
 - terrestrial, 68, 119, 124
 - Prioritised Action Frameworks (PAFs), 10–11, 82, 131, 133
 - Austria, 153
 - Belgium, 175–176
 - Bulgaria, 194, 197
 - Croatia, 213
 - Cyprus, 232
 - Czech Republic, 248
 - Denmark, 266–267
 - Estonia, 285–286
 - Finland, 304, 307
 - Germany, 344–345
 - Greece, 367, 369
 - Hungary, 388–389
 - Ireland, 406
 - Italy, 426–427
 - Latvia, 445–446
 - Lithuania, 463
 - the Netherlands, 486
 - Poland, 508
 - Portugal, 527
 - Romania, 548
 - Latvia, 445–446
 - Lithuania, 463
 - Poland, 508
 - Portugal, 527
 - Romania, 548
 - Slovakia, 568
 - Slovenia, 587–588
 - Spain, 607
 - Sweden, 618, 626
 - UK, 662
- site management and protection, 69–75, 127–128, 130
- conservation objectives, 128
- Natura 2000 barometer, 8, 68
- natural history, 13
 - Austria, 142–143
 - Belgium, 160–161
 - Bulgaria, 181–182
 - Croatia, 200–201
 - Cyprus, 219–220
 - Czech Republic, 237–238
 - Denmark, 254–255
 - Estonia, 273–274
 - Finland, 291–292
 - France, 311–312
 - Germany, 331–332
 - Greece, 353–354
 - Hungary, 374–375
 - Ireland, 393–394
 - Italy, 415–416
 - Latvia, 434–435
 - Lithuania, 451
 - the Netherlands, 468–469
 - Poland, 493–494
 - Portugal, 514–515
 - Romania, 534–535
 - Slovakia, 555–556
 - Slovenia, 574–575
 - Spain, 593–594
 - Sweden, 612–613
 - UK, 634–635
- natural history, European overview, 13–25
- nature conservation benefits, 133, 136
 - Belgium, 175
 - Bulgaria, 194
 - Croatia, 213
 - Cyprus, 232
 - Czech Republic, 248–249
 - Denmark, 266–267
 - Estonia, 285–286
 - Finland, 305
 - France, 324
 - Germany, 344–345
 - Greece, 367
 - Hungary, 388–389
 - Ireland, 406
 - Italy, 426–427
 - Latvia, 445–446
 - Lithuania, 463–465
 - the Netherlands, 486–487
 - Poland, 508–510
 - Portugal, 527–530
 - Romania, 548–549
 - Slovakia, 568–570
 - Slovenia, 587–588
 - Spain, 607–609
 - Sweden, 627–629
 - UK, 662–666
- funding sources
 - Cohesion Fund, 80–82, 133, 195, 249, 283–285, 288, 389, 446, 508, 529, 568
- Slovakia, 568
- Slovenia, 587
- Spain, 607
- Sweden, 627
- UK, 662
- nature conservation costs
 - Austria, 153
 - Belgium, 175
 - Bulgaria, 193–194
 - Croatia, 213
 - Cyprus, 232
 - Czech Republic, 248
 - Denmark, 266
 - Estonia, 285
 - Finland, 304–305
 - France, 323–324
 - Germany, 344
 - Greece, 367
 - Hungary, 388
 - Ireland, 406
 - Italy, 426
 - Latvia, 445
 - Lithuania, 463
 - the Netherlands, 485–486
 - Poland, 508
 - Portugal, 527
 - Romania, 548
 - Slovakia, 568
 - Slovenia, 587
 - Spain, 607
 - Sweden, 626–627
 - UK, 662
- nature conservation funding, 80–82, 119, 121, 131–137
 - Austria, 153–156
 - Belgium, 175–176
 - Bulgaria, 194–197
 - Croatia, 214
 - Cyprus, 232–234
 - Czech Republic, 249–251
 - Denmark, 267–269
 - Estonia, 286
 - Finland, 305–307
 - France, 324–326
 - Germany, 345–347
 - Greece, 367–370
 - Hungary, 389
 - Ireland, 406–407
 - Italy, 427
 - Latvia, 446
 - Lithuania, 463–465
 - the Netherlands, 486–487
 - Poland, 508–510
 - Portugal, 527–530
 - Romania, 548–549
 - Slovakia, 568–570
 - Slovenia, 587–588
 - Spain, 607–609
 - Sweden, 627–629
 - UK, 662–666
- EU LIFE Programme, 11, 80–82, 121, 128, 133, 174, 189, 195, 214, 232, 249, 267, 288, 326, 345, 389, 407, 427, 446, 465, 508, 529–530, 549, 570, 588, 609, 627, 664, 666
- EU Multiannual Financial Framework (MFF), 80, 117, 133, 136
- European Agricultural Fund for Rural Development (EAFRD), 80–81, *See also* Common Agricultural Policy (CAP)
- European Fisheries Fund (EFF). *See* Common Fisheries Policy (CFP)
- European Maritime and Fisheries Fund (EMFF). *See* Common Fisheries Policy (CFP)
- European Regional Development Fund (ERDF), 80–82, 128, 134, 155, 175, 195, 232, 249, 286, 305, 326, 369, 389, 407, 427, 461, 465, 508, 529, 549, 568, 570, 588, 607, 664
- European Social Fund (ESF), 81, 133, 427, 609, 664
- Horizon 2020 Framework Programme for Research and Innovation, 81, 446
- Interreg, 155, 157, 166, 174–175, 214, 249, 367, 369, 407, 465, 529, 570, 588
- payments for ecosystem services (PES), 176, 324, 327, 427, 446, 664
- Nature Directives, 3, 135, *See also* Birds Directive and Habitats Directive
- benefits, 114
- BHD habitats and species, 5
- costs, 114
- Fitness Check, 43, 114, *See* Fitness Check of the Birds and Habitats Directives
- funding, 80–82, 112, 114, 132–137, *See also* nature conservation funding
- provisions for SCIs (Article 8), 113
- monitoring and reporting, 82–83, 134
- conservation status, 5–8, 106–109
- conservation status categories, 5
- objectives and key measures, 3, 64

Index

- Nature Directives (cont.)
 standard indicator of progress, 8, 107, 109
 strengths and weaknesses, 111–114
 supporting measures, 79–80
 transposition and role of case law, 65–66, 72, 127
 nature-based solutions (NBS), 136
 flood protection the Netherlands, 485
 Hungary, 386–388
Neogobius melanostomus. See Round Goby
 Neolithic, 18, 254, 393, 634
Neophron percnopterus. See Egyptian Vulture
Neovison vison. See American Mink
 net gain (of biodiversity), 118, 136, 646, 657–658
 Netherlands, 19, 26, 30–31, 34, 41–42, 49–50, 69, 108–109, 113, 116, 125, 135, 332, 468–492
 New Zealand Pygmyweed, 472, 637
 NGOs, stakeholders and the wider public, 134–135, 137
 Austria, 147
 Bulgaria, 188
 Croatia, 205
 Cyprus, 223–224
 Czech Republic, 241–242
 Denmark, 258–259
 Estonia, 279
 Finland, 294–296
 France, 315–316
 Germany, 335
 Greece, 359
 Hungary, 380–381
 Ireland, 398–399
 Italy, 419
 Latvia, 438
 Lithuania, 456–457
 the Netherlands, 476–477
 Poland, 497
 Portugal, 518
 Romania, 540–541
 Slovakia, 560
 Slovenia, 579–580
 Spain, 598–599
 Sweden, 617–618
 UK, 641–642
 no net loss (of biodiversity), 61, 89, 117, 136, 322, 657
 Noble Crayfish, 453, 479, 615
 noise, biodiversity pressures, 115, 163, 396
 Nordic countries, 295, 300, 305
 North America, 17
 North Macedonia, 1, 26, 30–31, 41, 49, 125, 357, 364
 North Sea, 13, 21, 50, 56, 115, 164, 167, 172, 258, 332, 636, 658
 North Sea Ministerial Conferences, 56
 Northern Chamois, 541
 Northern Ireland, 395, 634–677
 Norway, 1, 13, 26, 28, 30–31, 41, 49, 122, 125, 197, 251, 620, 625
 Norway Spruce, 291, 332, 344, 453, 612
Numenius arquata. See Curlew
Numenius tenuirostris. See Slender-billed Curlew
Nyctereutes procyonoides. See Raccoon Dog
Odocoileus virginianus. See White-tailed Deer
 Odum, H. T., 246
 OECM (Other effective area-based conservation measures). See protected areas, definitions and criteria
Oenanthe cypriaca. See Cyprus Wheatear
Oenanthe fluviatilis. See River Water-dropwort
 Olm, 575, 577
 Oostvaardersplassen, 17, 480
Ophiostoma novo-ulmi (Dutch elm disease), 635
Orcinus orca. See Killer Whale
 organic farming, 131, 343, 376,
 See also Common Agricultural Policy (CAP)
 biodiversity impacts, 131, 153, 249, 302, 510
 EU target, 101
 Oriental Plane, 220
 ORNIS Committee, 76–77
 Ortolan Bunting, 313, 576
Oryctolagus cuniculus. See European Rabbit
Osmoderrna eremita, 280
 OSPAR Convention. See Convention for the Protection of the Marine Environment of the North East Atlantic
 Osprey, 279, 297, 500, 506, 613
Otis tarda. See Great Bustard
 Otter, 79, 115, 148, 156, 168, 243, 266, 275, 297, 318, 381, 420, 440, 478, 489, 500, 596
Otus cyprinus. See Cyprus Scops-owl
Ovis aries musimon. See European Mouflon
Ovis gmelini ophion. See Cyprus mouflon
Ovis orientalis ophion. See Cyprus Mouflon
Oxyura leucocephala. See White-headed Duck
 Oystercatcher, 468–469, 472, 482
Pacifastacus leniusculus. See Signal Crayfish
 Pacific Oyster, 25, 615
Padus serotina. See Black Cherry
 Pampas Grass, 606
Pandion haliaetus. See Osprey
 Pan-European 2020 Strategy for Biodiversity, 47
 Pan-European Biological and Landscape Diversity Strategy (PEBLDS), 42, 100, 133
 Pannonian biogeographical region, 16
 Czech Republic, 237
 Hungary, 374
 Romania, 534
 Slovakia, 555
 Pannonian plain, 574
 Paris European Summit, 59
Parnassius apollo. See Apollo
Passer domesticus. See House Sparrow
Passer montanus. See Tree Sparrow
 peat extraction, 273–274, 276, 393–395, 403–404, 406, 453, 615
Pelecanus crispus. See Dalmatian Pelican
Pelecanus onocrotalus. See Great White Pelican
Pelobates fuscus. See Common Spadefoot Toad
Pelophylax cerigensis. See Karpathos Frog
Perdix perdix. See Grey Partridge
 Peregrine Falcon, 185, 239, 333, 620, 648
Petromyzon marinus. See Sea Lamprey
Phalacrocorax carbo. See Great Cormorant
Phasianus colchicus. See Pheasant
 Pheasant, 75, 477, 542
Phocoena phocoena. See Harbour Porpoise
Phoenicolacerta troodica, 220
Phoenix theophrasti, 354
Picea abies, 303, See also Norway Spruce
Picea sitchensis. See Sitka Spruce
Picoides tridactylus. See Three-toed Woodpecker
Picus canus. See Grey-headed Woodpecker
 Pine Marten, 500
 Pink-footed Goose, 167
Pinna nobilis. See Fan Mussel
 Pintail, 469
Pinus mugo. See Dwarf Mountain Pine
Pinus pinaster. See Maritime Pine
Pinus radiata, 593
Pinus sylvestris. See Scots Pine
 Plant Protection Products Regulation, 86
 plants, conservation of, 34, 78–79, 113
 Bulgaria, 189, 194
 Cyprus, 229
 Denmark, 266
 Italy, 419
 Sweden, 621
Platalea leucorodia. See Spoonbill
Platanus orientalis. See Oriental Plane
Pleuronectes platessa. See European Plaice
Pluvialis apricaria. See Golden Plover
Pluvialis squatarola. See Grey Plover
 poaching, 185, 223, 226, 420–421, 430, 535, 541–542, 546, 601, 616,
 See also hunting and illegal killing
Podiceps auritus. See Horned Grebe
 poisoning, 185, 360, 381, 395, 601
 Poland, 13, 15, 21, 23, 26, 29–34, 43, 49, 108–109, 119, 123, 125, 127, 129, 132–133, 135, 204, 465, 493–512, 558, 562
 Polecat, 500
 policy. See also governance, legislation and policy
 pollinators, conservation of, 101
 Belgium, 168
 Ireland, 400
 polluter pays principle, 60, 136, 646, 668
 pollution, 28, 114, 355, 417, 595
 acid rain and acidification, 20–21, 93–94, 471, 479–480, 489, 615, 625–626, 637, 658
 air, 20, 24, 46, 93–94, 110, 136, 239, 327, 417, 637, See from agriculture, 20–21, 144, 275, 417, 470, 472, 484, 489, 557, 577, 596, 606, 638
 from aquaculture, 395, 417
 ammonia, 21, 24, 93–94, 163, 265, 404, 471–472, 480, 637

- chemicals, 110, 115, 284, 334, 557
 critical load, 24, 94, 111, 121, 163, 334, 484, 626
 DDT (Dichlorodiphenyltrichloroethane), 19, 239, 275, 288, 294, 333
 eutrophication, 21, 93, 293, 471
 freshwater habitats, 20, 163, 256, 294, 334, 444, 453, 507, 577, 615
 marine habitats, 21, 115, 163, 276, 294, 334, 396, 417, 496, 507, 596, 615
 terrestrial habitats, 21, 163, 257, 293, 341, 596, 615, 637, 658
 heavy metals, 21, 25
 industrial discharges/effluent, 20, 24
 lead poisoning from gunshot, 24, 123, 419
 marine litter/ocean waste, 25, 115, 334
 nitrates, 86, 90, 506
 nitrogen dioxide/nitrogen oxides, 21, 94, 239
 nutrients (nitrogen and phosphorus), 20, 25, 110, 115, 163, 257–258, 265, 270, 294, 334, 396, 404, 496, 506–507, 615
 oil, 276
 ozone, 93–94
 polychlorinated biphenyls (PCBs), 21, 25, 275, 288, 294, 334, 638
 sewage, 20–21, 24, 577, 596, 638
 sulphur, 21, 24, 93–94, 239, 294, 658
 toxic contaminants, 25, 110, 115, 333, 638
 from transport, 470, 489
 from waste, 56, 90, 115, 144, 184–185, 202, 294, 394, 472, 546, 571, 615, 637
 water, 24, 182, 185, 284, 394, 417, 496, 507, 526, 537, 567, 575
 pollution, measures to address, 86–87, 114, 260, 596
 Denmark, nutrient pollution, 265
 lead gunshot, prohibition, 51, 123, 599
 the Netherlands, nitrogen pollution, 484–485
 Poland, water pollution, 506
 UK, water pollution, 658
Polyommatus damon. See Damon Blue
Populus tremula. See Aspen
Porphyrio porphyrio. See Purple Gallinule
- Portugal, 16, 19, 26, 30–31, 33–34, 42, 49, 107–109, 113, 125, 133, 514–534, 594, 600
Posidonia oceanica, 18, 415
 powerlines, biodiversity pressures (collisions and electrocution), 186, 243, 314, 601
 precautionary principle, 56, 60, 73, 127, 384, 525, 642, 646, 658
 predators effects of high densities, 238, 482, 637
 persecution of, 110, 185, 304, 521, 535, 600–601, 648
 pressures on habitats and species, conclusions, 110–111
 pressure indicators, past trends and outlook, 110
 Prioritised Action Frameworks (PAFs). See Natura 2000, funding
Procambarus clarkia. See Louisiana crayfish
Procambarus clarkii. See Red Swamp Crayfish
 Programme for the Endorsement of Forest Certification (PEFC), 174, 547
 protected areas, approaches to management, 128
 Austria, 151
 Belgium, 172–173
 Bulgaria, 192
 Croatia, 211–212
 Cyprus, 230
 Czech Republic, 246–247
 Denmark, 264–265
 Estonia, 283
 Finland, 301
 France, 321–322
 Germany, 341–342
 Greece, 364–365
 Hungary, 384
 Ireland, 403–404
 Italy, 424–425
 Latvia, 443
 Lithuania, 461–462
 the Netherlands, 480–482
 Poland, 504
 Portugal, 524–525
 Romania, 545
 Slovakia, 565–566
 Slovenia, 584–585
 Spain, 604–605
 Sweden, 623–624
 UK, 655–656
 protected areas, approaches to protection, 127–128
 Austria, 150–151
 Belgium, 172
 Bulgaria, 191–192
 Croatia, 210–211
 Cyprus, 229–230
 Czech Republic, 246
 Denmark, 264
 Estonia, 282–283
 Finland, 300–301
 France, 320–321
 Germany, 340–341
 Greece, 364–365
 Hungary, 383–384
 Ireland, 403
 Italy, 423–424
 Latvia, 442–443
 Lithuania, 460–461
 the Netherlands, 480–482
 Poland, 503–504
 Portugal, 524
 Romania, 544–545
 Slovakia, 562–563
 Slovenia, 582–584
 Spain, 604–605
 Sweden, 623
 UK, 653–655
 protected areas, coherence
 Austria, 150
 Belgium, 171–172
 Croatia, 210
 Cyprus, 229
 Czech Republic, 246
 Denmark, 264
 Estonia, 281–282
 Finland, 300
 France, 320
 Germany, 340
 Greece, 364
 Hungary, 383
 Ireland, 402–403
 Italy, 423
 Latvia, 442
 Lithuania, 459–460
 the Netherlands, 479–480
 Poland, 500–502
 Portugal, 523–524
 Romania, 544
 Slovakia, 564–565
 Slovenia, 584
 Spain, 604
 Sweden, 623
 UK, 652–653
 protected areas, definitions and criteria, 8–9, 123–124
 protected areas, IUCN categories, 9–10, 127
 protected areas, targets, 8–9, 119, 124, 128
 protected areas, types and their coverage, 8–10, 115, 123–124, 126–128
 Austria, 149–150
 Belgium, 169–171
 Bulgaria, 189
 Croatia, 207–210
 Cyprus, 227–229
 Czech Republic, 243–246
 Denmark, 261–264
 Estonia, 280–281
 Finland, 298–300
 France, 318
 Germany, 338–340
 Greece, 362–364
 Hungary, 381–383
 Ireland, 400–402
 Italy, 421–423
 Latvia, 440–442
 Lithuania, 458–459
 the Netherlands, 479
 Poland, 500–502
 Portugal, 522–523
 Romania, 542–544
 Slovakia, 561–564
 Slovenia, 582–584
 Spain, 602–604
 Sweden, 620–623
 UK, 649–652
 Protected Planet website, 8, 124, 128
Proteus anguinus. See Olm
Pseudotsuga menziesii. See Douglas Fir
Pterocles orientalis. See Black-bellied Sandgrouse
Pterois miles. See Lionfish
Pteromys volans. See Siberian Flying Squirrel
Puffinus mauretanicus. See Balearic Shearwater
Puffinus puffinus. See Manx Shearwater
Puffinus yelkouan. See Yelkouan Shearwater
 Pumpkinseed, 472, 516
 Purple Gallinule, 421
Pusa hispida. See Ringed Seal
Pusa hispida saimensis. See Saimaa Seal
 Pygmy Cormorant, 182, 542
 Pyrenean Desman, 594, 600
 Pyrenean Oak, 514
 Pyrenees, 13, 15, 17, 29, 32, 311, 318, 599, 601–602
Pyrrhula murina. See Azores Bullfinch
 Quail, 221
 Quaternary period, 13, 181, 254
Quercus alnifolia, 220
Quercus infectoria, 220
Quercus petraea. See Sessile Oak
Quercus pyrenaica, 594, See also Pyrenean Oak
Quercus robur, 160, 200, 332, 575, 594, 613
Quercus rotundifolia. See Holm Oak
Quercus suber. See Cork Oak
 Raccoon Dog, 276, 304
Raja clavata. See Thornback Ray
 Ramsar Convention/Sites. See Convention on Wetlands

Index

- Rangifer tarandus fennicus.* See Finnish Forest Reindeer
- Ranunculion fluitantis*, 507
- Rapana venosa*, 535
- raptors/birds of prey, conservation of, 50, 111
- Bulgaria, 189
 - Estonia, 275
 - Hungary, 381
 - Ireland, 400
 - Italy, 421
 - Poland, 499
 - Romania, 547
 - Spain, 596–597
 - UK, 648
- Rattus rattus.* See Black Rat
- Raven, 479, 511
- Razorbill, 516
- recreation, 257, 262, 267, 270, 302, 305, 334, 339–341, 355, 394, 426, 453, 460–463, 469, 472, 480, 503, 508, 530, 568, 596, 629, 654, 659
- Recurvirostra avosetta.* See Avocet
- Red Deer, 261, 376, 480, 541–542
- Red Fox, 226–227, 360, 453, 457, 500, 599, 637
- Red Grouse, 648
- Red Kite, 338, 400, 649
- Red Knot, 332, 472
- Red List (Red Data Book) assessments, 7, 11, 35, 63
- Belgium, 161
 - Bulgaria, 182–184
 - Croatia, 202–203
 - Cyprus, 221
 - Czech Republic, 238, 242
 - Denmark, 257
 - European, 29, 106
 - Finland, 292–294, 308
 - France, 312, 317, 327
 - Germany, 333
 - Greece, 355, 370
 - Ireland, 394, 409
 - Italy, 416, 420
 - Lithuania, 457
 - Poland, 495, 511
 - Sweden, 615, 629
 - UK, 636
- Red Squirrel, 291
- Red Swamp Crayfish, 516
- Red-backed Shrike, 442, 453, 556
- Red-breasted Goose, 28, 182, 189, 192, 197, 535, 542
- Red-eared Slider, 527
- Red-footed Falcon, 536, 542, 561
- Redshank, 468, 482
- Redwing, 541
- Regional Seas Conventions, 45–47, 56, 90
- renewable energy, 25, 51, 185, 314, 365, 537, 577, 596, 658
- reservoirs, 20, 314, 496, 511, 516
- rewilding, 17, 34, 135
- Czech Republic, 243, 248
 - Denmark, 262
 - France, 327
 - Hungary, 383
 - the Netherlands, 480
 - Poland, 507–508
 - UK, 661
- Rhinolophus ferrumequinum*, 542
- Rhinolophus hipposideros*, 142, 500, 542, See also Lesser Horseshoe Bat
- Rhododendron ponticum.* See Common Rhododendron
- Rhodopes (Rhodope mountains), 13, 181
- Rhynchoscypris percnurus.* See Swamp Minnow
- ricefields habitat management and restoration
- Italy, 425–426
- Ringed Seal, 275, 613
- Riparia riparia.* See Sand Martin
- river canalisation/channel re-engineering, 20, 24, 237, 266, 314, 498, 557, 596
- River Lamprey, 256
- River Water-dropwort, 266
- rivers habitat management and restoration, 507
- Austria, 152–153
 - Denmark, 266
 - Estonia, 284–285
 - Latvia, 444
 - the Netherlands, 485
 - Poland, 506
 - Spain, 606
- hydropower licensing
- Sweden, 626
- Robin, 226
- Robinia pseudoacacia.* See Black Locust
- Rock Ptarmigan, 420
- Roe Deer, 280, 304, 376
- Roller, 221, 435
- Romania, 16, 26–27, 29–30, 34, 43, 49, 107–108, 123, 125, 128, 133–134, 155, 193, 534–554
- Romanian Darter, 536
- Romanian Hamster, 535
- Romanichthys valsanicola.* See Romanian Darter
- Rosa rugosa*, 257, 444, 507, 616
- Rosalina alpine.* See Alpine Longhorn Beetle
- Roseate Tern, 400
- Rospuda valley/fens, 135, 494, 498–499, 504, 511
- Round Goby, 277
- Rousettus aegyptiacus.* See Egyptian Fruit Bat
- Rowan, 291
- Rupicapra pyrenaica.* See Southern Chamois
- Rupicapra pyrenaica ornata.* See Apennine Chamois
- Rupicapra rupicapra.* See Northern Chamois
- Rupicapra rupicapra balcanica.* See Balkan Chamois
- Rupicapra rupicapra tatraica.* See Tatar Chamois
- Russia, 1, 13, 50, 300, 305
- Saimaa Seal, 292, 298
- Saker Falcon, 143, 189, 197, 556
- Salamandra salamandra.* See Fire Salamander
- Salmo fariooides*, 360
- Salmo lourouensis*, 360
- Salmo macedonicus*, 360
- Salmo pelagonicus*, 360
- Salmo peristericus*, 360
- Salmo salar.* See Atlantic Salmon
- Sámi people, 297–298, 303, 612
- Sand Lizard, 275, 280, 649
- Sand Martin, 168
- Sandwich Tern, 257, 332
- Sardinian Warbler, 234
- Saxicola rubetra.* See Whinchat
- Saxifraga hirculus*, 453
- Scandes, 15
- Scandinavia, 13, 15, 25, 32, 121
- Scarce Fritillary, 142, 243, 453, 576
- Scarce Large Blue, 576
- Scaup, 469, 541
- Sciurus vulgaris.* See Red Squirrel
- Scopoli's Shearwater, 423
- Scotland, 15, 123, 625, 634–677
- Scots Pine, 291, 332, 612
- SEA Directive, 72, 85–89, 129 implementation issues, 129, 283–284, 404, 462, 505, 525–526, 545, 656, 666
- REFIT evaluation, 88, 129
- Sea Lamprey, 256, 614
- seabirds, conservation of, 56, 92, 118
- Croatia, 214
 - UK, 92
- seals, conservation of, 50
- Cyprus, 227
 - Finland, 298
- Serbia, 1, 26, 29–30, 41, 49, 125, 155, 214
- Sessile Oak, 332, 613
- Siberian Flying Squirrel, 274–275, 279–280, 291, 435
- Sicilian Rock Partridge, 420
- Signal Crayfish, 516, 615
- Silene holmannii*, 360
- Siluris glanis.* See Wels Catfish
- Silver-cheeked Toad-fish, 231
- Sitka Spruce, 394
- Skylark, 226, 257, 313, 333, 420, 470, 482, 541, 595
- Slender Green Feather Moss, 256
- Slender Naiad, 256
- Slender-billed Curlew, 50
- Slovakia, 21, 23, 26, 30–31, 33–34, 43, 49, 69, 107–109, 113, 125, 128, 130, 132–133, 151, 555–573
- Slovenia, 26, 30–34, 43, 50, 108–109, 126, 132, 206, 214, 574–592
- Smooth Newt, 239
- solar energy, 222, 535, 596
- Solea solea.* See Common Sole
- Solidago canadensis*, 386
- Solidago gigantea*, 386
- Somateria mollissima.* See Common Eider
- Sorbus aucuparia.* See Rowan
- Southern Chamois, 596
- Spain, 14, 16, 19, 26, 29, 32–34, 42, 50, 68, 80, 108–109, 116–117, 122, 126, 130, 529, 593–611
- Spalax leucodon.* See Lesser Mole-rat
- SPAMI (Specially Protected Areas of Mediterranean Importance. See Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention)/ Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean
- Spanish Ibex, 596
- Spanish Imperial Eagle, 521, 526, 530, 594–596, 600–601
- spatial planning, 128–129
- Austria, 151
 - Belgium (maritime/marine), 167
 - Bulgaria, 193
 - Croatia, 205, 212
 - Cyprus, 222
 - Czech Republic, 246–247
 - Denmark, 265
 - Estonia, 283, 288
 - Finland (land-use planning), 301
 - France, 315, 320, 322
 - Germany (landscape planning), 337, 342–343
 - Hungary, 383
 - Ireland, 398
 - Lithuania, 455
 - maritime/marine, 87, 91–92, 115–116, 129, 621

- the Netherlands, 474–475, 480, 488–489

Poland, 496, 503–505

Romania, 546

Slovakia, 559, 562, 572

Slovenia, 580, 585

Spain, 605

Sweden, 621, 624

UK (maritime/marine), 658

Spatula querquedula. See Garganey

species, areas with high richness in species, endemics and threatened species, 32

species-area relationship, 33

species issues dealing with conflicts, 79

Austria, large carnivores, 157

Belgium, fish-eating species, Beaver and Wolf, 168–169

Croatia, large carnivores, 207

Hungary, e.g. Wolf, Otter and Great Cormorant, 381, 389

Italy, large carnivores, 421

the Netherlands, geese on farmland, 477–478

Portugal, Wolf, 521

Romania, large carnivores, 541, 552

Spain, large carnivores, 601–602

Sweden, crop damage, fisheries and large carnivores, 620

UK, Great Crested Newt, 121, 648–649

hunting, 4, 75–79, 114, 121–123

Belgium, 168

Croatia, 206

Cyprus, 223–224, 226, 228

Denmark, 260, 262

Estonia, 280, 288

France, 316–317

Greece, 360–362

Italy, 419–421, 430

Lithuania, 457

Poland, 500

Portugal, 521

Romania, 541–542

Spain, 599

Sweden, 618–619

UK, 641, 648

illegal killing/persecution, 51, 78, 87, 114, 122

Cyprus, songbirds, 226–227

Ireland, raptors, 400

Latvia, fish, 440

Poland, fish-eating species, 500

Portugal, predators, 521

Spain, Brown Bear, 601

UK, raptors, 648

large carnivores, management

Croatia, 206–207

Denmark, 261

Finland, 298

France, 318

Romania, 542, 552

Slovenia, 581–582

poisoning, addressing, 51

Greece, 360

Portugal, 521

Spain, 599–600

powerlines, reducing impacts

Czech Republic, 239, 243

Portugal, 521

Slovakia, 561

Spain, 601

Species of European Conservation Concern (SPEC), 28

species protection legislation (including hunting and fishing regulations), 148

Belgium, 167–172

Bulgaria, 188–189

Croatia, 205–206

Czech Republic, 242–243

Denmark, 260–261

Estonia, 279–280

Finland, 297–298

France, 317–318

Germany, 338

Greece, 359–360

Hungary, 381

Ireland, 400

Italy, 419–421

Latvia, 439–440

Lithuania, 457–458

the Netherlands, 477

Poland, 499

Portugal, 520

Romania, 541–542

Slovakia, 560–561

Slovenia, 581–582

Spain, 599

Sweden, 619–620

UK, 647–648

species recovery and re-introduction programmes, 121

Austria, 148–149

Belgium, 167–168

Bulgaria, 189

Croatia, 206

Denmark, 261

Estonia, 280

France, 317–318

Hungary, 381

Ireland, 400

Italy, 421

Latvia, 440

Lithuania, 458

the Netherlands, 478–479

Poland, 500, 506

Portugal, 521

Portugal, 521

Romania, 542

Slovakia, 561

Spain, 599

Sweden, 620

UK, 649

species status and trends, 110

Austria, 144

Belgium, 161–163

Bulgaria, 183–184

Croatia, 202

Cyprus, 220–221

Czech Republic, 238–239

Denmark, 256–257

Estonia, 274–276

Finland, 293

France, 312–313

Germany, 333–334

Greece, 354–355

Hungary, 375

Ireland, 394–395

Italy, 416–417

Latvia, 437

Lithuania, 452

the Netherlands, 469–470

Poland, 495

Portugal, 515–516

Romania, 536

Slovakia, 556–557

Slovenia, 575–576

Spain, 595

Sweden, 614–615

UK, 635–636

Speckled Ground Squirrel, 494

Spengler's Freshwater Mussel, 595, 600

Spermophilus citellus. See European Souslik

Spermophilus suslicus. See Speckled Ground Squirrel

Spiny Dogfish, 472

Spiraea tomentosa, 507

Spoonbill, 200, 332, 485

Squalus acanthias. See Spiny Dogfish

Stag Beetle, 162, 261, 390

Steppic biogeographical region, 16, 534–535

Romania, 534

Sterlet, 155

Sterna dougallii. See Roseate Tern

Sterna hirundo. See Common Tern

Sternula albifrons. See Little Tern

Strategic Action Plan for the Black Sea Region, 539

Streptopelia turtur. See Turtle-dove

Striped-neck Terrapin, 221, 223

Strix aluco. See Tawny Owl

surveillance, monitoring, reporting and research, 134–135, 407–409

Austria, 156

Belgium, 176–178

Bulgaria, 197–198

Croatia, 214–216

Cyprus, 234

Czech Republic, 251–252

Denmark, 269–270

Estonia, 286–288

Finland, 307–308

France, 326–327

Germany, 347

Greece, 370

Hungary, 389–390

Italy, 427–429

Latvia, 446–448

Lithuania, 465–466

the Netherlands, 487–488

Poland, 510

Portugal, 530

Romania, 549–551

Slovakia, 570–571

Slovenia, 588–590

Spain, 609

Sweden, 629–630

UK, 666–667

Sus scrofa. See Wild Boar

Sustainable Hunting Initiative, 77, 121

Swamp Minnow, 494

Sweden, 26, 29, 31, 34, 41, 43, 50, 94, 108–109, 126–127, 132, 612–631

Switzerland, 1, 26, 31–32, 50, 122, 126

Sylvia atricapilla. See Blackcap

Sylvia borin. See Garden warbler

Sylvia communis. See Common Whitethroat

Sylvia melanocephala. See Sardinian Warbler

Sylvia melanothorax. See Cyprus Warbler

Syria, 122

Tadorna tadorna. See Common Shelduck

Tarpan, 14

Tatar Chamois, 496

Tawny Owl, 29

Taxus baccata. See Common Yew

Testudo graeca. See Common Tortoise

Tetraclinis articulata, 594

Tetrao urogallus. See Capercaille

Tetrao urogallus cantabricus. See Cantabrian Capercaillie

Tetrax tetrax. See Little Bustard

Thalasseus sandvicensis. See Sandwich Tern

Thesium ebracteatum, 453

Thornback Ray, 472

Three-toed Woodpecker, 557, 576, 615

Index

- Thunnus thynnus.* See Bluefin Tuna
- tourism, 153, 161, 163, 201–202, 219–221, 305, 355, 365, 367, 381, 424, 446, 496–497, 503, 510, 519–520, 527, 537, 546, 572, 577, 596, 605, 659
- ecotourism/nature tourism, 232, 285, 312, 326, 456, 461, 463, 486, 508, 523, 594, 627
- Trachemys scripta.* See Yellow-bellied Slider Turtle
- Trachemys scripta elegans*, 527
- transport (roads, etc.), biodiversity pressures, 20, 22, 35, 110, 164, 206, 221–222, 314, 395, 435, 504, 517, 521, 557, 577, 596, 605, *See also* pollution
- transport (roads, etc.), measures to address, 171, 340, 363
- Tree of Heaven, 185, 386
- Tree Sparrow, 144
- Tringa totanus.* See Redshank
- Triturus cristatus.* See Great Crested Newt
- Tufted Duck, 469, 500
- Turdus iliacus.* See Redwing
- Turkey, 1, 21
- Turnstone, 312
- Tursiops truncatus.* See Bottlenose Dolphin
- Turtle-dove, 78, 122, 221, 226, 317, 361, 420, 452–453, 516, 556, 595, 661
- turtles, conservation of, 50, 92
- Croatia, 214
 - Cyprus, 224, 227, 230, 234
 - Greece, 360
- Tyto alba.* See Barn Owl
- Ukraine, 1, 23, 29, 33, 50, 126, 155, 193
- UNEP, 52
- UNEP World Conservation Monitoring Centre (UNEP-WCMC), 8–9, 123
- UNESCO Man and Biosphere Programme (MAB), 44
- Biosphere Reserves, 8, 10, 44, *See also* protected areas, types and their coverage
- United Kingdom (UK), 1, 9–10, 14, 26, 29, 31–34, 41–43, 50, 61, 65, 68, 70, 79, 92, 108–109, 116, 121–123, 126–127, 130–131, 133, 135, 634–677
- United Nations, 52
- United Nations Convention on the Law of the Sea (UNCLOS), 46, 56
- United Nations Economic Commission for Europe (UNECE), 94
- United Nations Framework Convention on Climate Change (UNFCCC), 46
- unsustainable harvesting, 185
- urban sprawl, 22, 314, 385
- urbanisation, 23, 110, 163, 182, 201, 221, 308, 312, 322, 417, 419, 435, 451, 470, 496, 519, 535, 537, 557, 577, 591, 637
- Uria aalge.* See Common Murre
- Ursus arctos.* See Brown Bear
- Vanellus vanellus.* See Lapwing
- Velvet Scoter, 261, 275, 463, 494, 496
- Vera, Frans, 14
- Vertigo moulinisiana.* See Desmoulin's Whorl Snail
- Vespa velutina nigrithorax.* See Asian Hornet
- Vipera schweizeri*, 360
- Vipera ursinii rakosiensis.* See Hungarian Meadow Viper
- Volga Delta, 28
- von der Leyen, Ursula, 61
- Vormela peregrina.* See Marbled Polecat
- Vulpes vulpes.* See Red Fox
- Wadden Sea/Waddenzee, 28, 50, 72–73, 255, 263, 332, 334, 469, 476, 479, 481, 654
- Wales, 634–677
- water abstraction, 20, 24, 114, 293, 526, 557, 637
- Water Hyacinth, 527, 606
- water management, 366
- Poland, 506
- waterbirds/waterfowl, conservation of, 41, 50, 111, 367
- Bulgaria, 193
 - the Netherlands, 482–484
 - Spain, 598
- Wels Catfish, 516
- Western Europe, 19, 22–23, 121, 135
- Western Mediterranean Sea, 17, 415
- wetlands, 110
- drainage, 19, 111, 254, 257, 273, 279, 293, 303, 355, 396, 451, 457, 495, 577, 615, 637, 658
- habitat management and restoration
- Bulgaria, 193
 - Croatia, 213
 - Denmark, 266
 - France, 322
 - Romania, 546
 - Slovakia, 567–568
 - Spain, 606
 - UK, 660–661
- Whinchat, 312
- White Stork, 243, 442, 479, 530, 556, 620
- White-backed Woodpecker, 453, 557, 576
- White-headed Duck, 182, 421, 594, 600
- White-tailed Deer, 304
- White-tailed Sea-eagle, 148–149, 156, 200, 259, 270, 275, 279, 288, 297, 333, 400, 441, 489, 495, 556, 649
- Wild Boar, 14, 168, 238, 261, 274, 360, 376, 423, 457, 500, 542, 620, 661
- Wildcat, 205–206
- wildlife crossing/green bridge, 206, 322, 340, 588
- Willow Grouse, 435
- wind energy/turbines, 145, 151, 176, 185, 203, 222, 334, 338, 342, 516, 521, 631, 638, 658
- wise use, 48, 75, *See also* sustainable use
- Wolf, 19, 27, 111, 147–148, 157, 168, 189, 200, 206, 217, 238, 256, 259, 261, 274, 280, 291, 298, 318, 333, 351, 381, 415, 417, 420–421, 429, 440, 457–458, 495, 499–500, 512, 515–516, 520–521, 528, 530, 535, 542, 556, 561, 575–576, 581, 596–598, 600–602, 609, 616, 620
- Wolverine, 27, 291, 298, 620
- Woodchat Shrike, 516
- Woodpigeon, 226, 477
- World Commission on Environment and Development, 52
- World Database on Protected Areas (WDPA), 8–10, 123–124
- World Heritage Convention, 44
- World Heritage Sites, 8, 44, *See also* protected areas, types and their coverage
- World Summit on Sustainable Development ('Rio + 10' summit), 54, 100
- WWF, 52
- Yelkouan Shearwater, 423
- Yellow Wagtail, 482
- Yellow-bellied Slider Turtle, 231
- Zamenis longissimus.* See Aesculapian Ratsnake
- Zebra mussel, 606