

1. ENVIRONMENTAL TRENDS

Biological diversity

Biological resources are essential elements of ecosystems and of natural capital; they provide the raw materials of production and growth in many sectors of the economy and their diversity plays an essential role in maintaining life-support systems and quality of life.

Pressures on biodiversity can be physical (e.g. habitat alteration and fragmentation through changes in land use and land cover), chemical (toxic contamination, acidification, oil spill, other pollution from human activities) or biological (e.g. alteration of population dynamics and species structure through the release of exotic species or the commercial use of wildlife resources).

Definitions

The indicators presented here relate to selected aspects of biodiversity. They concern:

- The number of threatened species compared to the number of known or assessed species. “Threatened” refers to the “endangered”, “critically endangered” and “vulnerable” species, i.e. species in danger of extinction and species soon likely to be in danger of extinction. Data cover mammals, birds, vascular plants, amphibians and reptiles.
- Wild bird indices for habitat specialist birds for North America and Europe.
- Selected terrestrial protected areas, i.e. areas under the management categories I, II, IV, V and VI of the World Conservation Union (IUCN) classification. Wilderness areas, strict nature reserves and national parks (categories Ia/Ib and II) reflect the highest protection level.

These indicators should be read in connection with information on the density of population and of human activities and need to be complemented with information on the sustainable use of biodiversity as a resource (e.g. forest, fish) and on habitat alteration.

Overview

Pressures on biodiversity and threats to global ecosystems and their species are increasing. Many natural ecosystems have been degraded, limiting the services they provide.

In most OECD countries, the number of species identified as endangered is increasing. Many species are threatened by habitat alteration or loss, both within and outside protected areas (e.g. on farms and in forests). Amphibians are more threatened than birds and mammals. Threat levels are particularly high in countries with high population density and a high concentration of human activities.

Specialist birds have declined by nearly 30% in 40 years. The largest declines occurred in grasslands and arid lands in North America and in farmed lands in Europe. Widespread forest specialists show fluctuating but stable trends.

Protected areas have grown in many OECD countries, but they are not always representative of national biodiversity, nor sufficiently connected. Actual protection levels remain difficult to evaluate, as protected areas change over time: new areas are designated, boundaries are revised and some sites may be destroyed or changed by pressures from economic development or natural processes. Environmental performance depends both on the designation of the area and on management effectiveness.

Comparability

Data on threatened species are available for all OECD countries with varying degrees of completeness. The number of species known or assessed does not always accurately reflect the number of species in existence, and the definitions that should follow IUCN standards are applied with varying degrees of rigour in countries. Historical data are generally not comparable or not available.

International data on protected areas are available for all OECD countries. The definitions, although harmonised by the WCMC (World Conservation Monitoring Centre), may vary among countries.

For additional notes, see the Annex.

Sources

OECD (2015), “Threatened Species”, *OECD Environment Statistics* (database), <http://dx.doi.org/10.1787/data-00605-en>.

EEA (2015), *Common Database on Designated Areas (CDDA)*, www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-9.

UNEP (2015), *The World Database on Protected Areas (WDPA)*, www.protectedplanet.net.

North American Breeding Bird Survey and European Bird Census Council; The Royal Society for the Protection of Birds (RSPB); BirdLife International; Statistics Netherlands.

Further information

Biodiversity Indicators Partnership (BIP), www.bipindicators.net.

International Union for Conservation of Nature (IUCN), www.iucn.org.

OECD (2015), “OECD Work on Biodiversity”, www.oecd.org/env/resources/OECD-work-on-biodiversity-and-ecosystems.pdf.

OECD (2012), *OECD Environmental Outlook to 2050: The Consequences of Inaction*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264122246-en>.

Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Figure 1.24. **Threatened species – mammals, birds and vascular plants, latest available year**



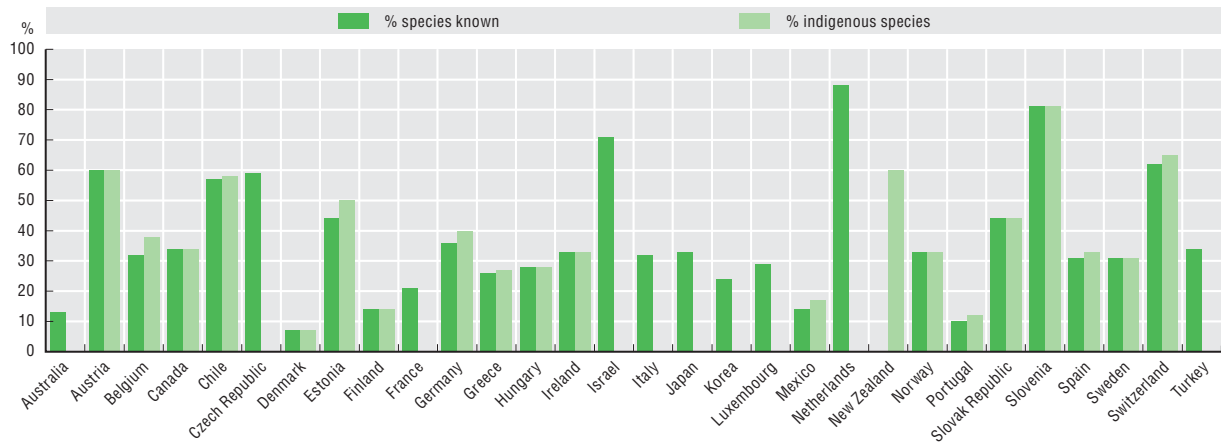
Source: OECD (2015), "Threatened Species", OECD Environment Statistics (database).

StatLink <http://dx.doi.org/10.1787/888933261914>

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Figure 1.25. Threatened species – amphibians, latest available year



Source: OECD (2015), "Threatened Species", OECD Environment Statistics (database).

StatLink <http://dx.doi.org/10.1787/888933261928>

Table 1.8. Threatened species – mammals, birds and vascular plants, latest available year

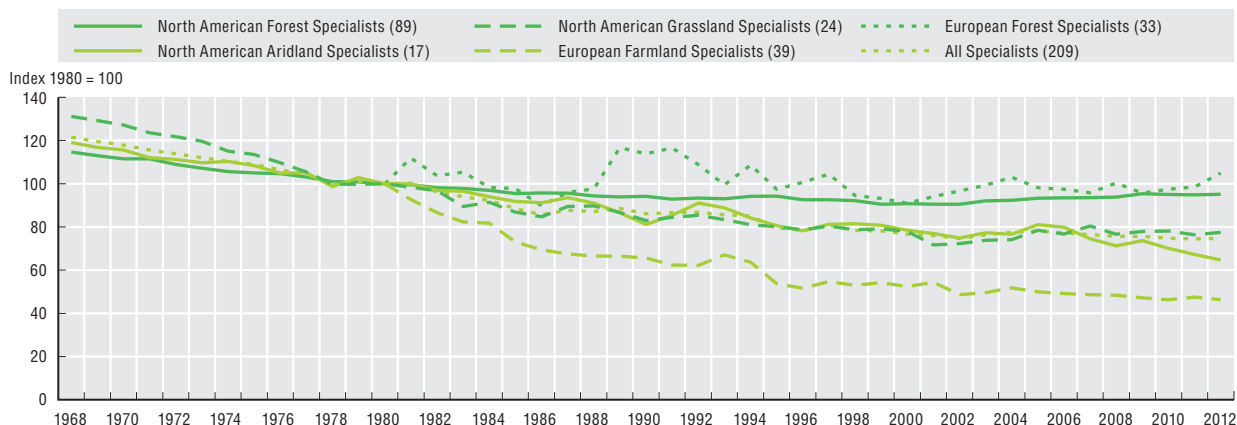
	Mammals		Birds		Vascular plants		Amphibians		Reptiles	
	Species known or assessed number	Species threatened (%)	Species known or assessed number	Species threatened (%)	Species known or assessed number	Species threatened (%)	Species known or assessed number	Species threatened (%)	Species known or assessed number	Species threatened (%)
Australia	387	24	872	13	19 462	7	226	13	933	6
Austria	101	27	242	27	2 950	33	20	60	14	64
Belgium	84	21	220	20	1 818	23	19	32	10	40
Canada	218	18	664	9	5 111	3	47	34	48	60
Chile	175	26	461	11	..	..	63	57	131	25
Czech Republic	91	19	210	52	3 557	33	22	59	13	62
Denmark	67	16	209	16	2 909	4	15	7	8	..
Estonia	65	3	377	10	1 928	9	9	44	2	50
Finland	72	15	248	24	1 240	16	7	14	5	20
France	100	10	568	15	9 096	..	34	21	34	21
Germany	93	34	264	36	3 272	27	22	36	13	62
Greece	115	25	440	14	5 850	4	23	26	66	14
Hungary	90	38	393	15	2 510	7	18	28	15	33
Iceland	4	..	75	44	438	12	..	..	..	..
Ireland	57	2	457	24	2 001	6	3	33	3	33
Israel	105	56	210	19	2 288	17	7	71	105	33
Italy	126	18	267	28	6 711	8	44	32	56	20
Japan	160	21	700	14	7 000	25	66	33	98	37
Korea	124	11	522	11	5 308	4	21	24	31	16
Luxembourg	..	..	54	50	1 323	27	14	29	6	33
Mexico	564	27	1 123	21	25 008	2	376	14	864	19
Netherlands	48	25	213	21	1 490	22	8	88	7	71
New Zealand	65	..	210	..	4 930	..	8	..	100	..
Norway	88	18	248	15	2 962	7	6	33	6	..
Poland	109	12	453	8	2 933	11	18	..	11	27
Portugal	158	20	393	28	3 607	..	20	10	49	20
Slovak Republic	90	22	211	24	3 352	30	18	44	12	42
Slovenia	89	38	387	27	3 452	10	21	81	24	75
Spain	158	13	368	27	8 750	14	36	31	74	26
Sweden	65	20	257	16	2 192	16	13	31	6	33
Switzerland	87	34	205	35	2 981	25	21	62	19	79
Turkey	150	15	477	4	11 707	11	29	34	129	9
United Kingdom	101	..	272	..	2 951	..	20	..	33	..
United States	453	17	831	12	19 569	27	270	40	345	18

Note: See the Annex for country notes.

Source: OECD (2015), "Threatened Species", OECD Environment Statistics (database).

StatLink <http://dx.doi.org/10.1787/888933262323>

Figure 1.26. Wild bird indices, North America and Europe



Source: North American Breeding Bird Survey and European Bird Census Council; RSPB; BirdLife International; Statistics Netherlands.

StatLink <http://dx.doi.org/10.1787/888933261930>

Figure 1.27. Protected areas, 2013



Source: UNEP-WCMC (2014), The World Database on Protected Areas (WDPA); EEA (2015), Common Database on Designated Areas (CDDA).

StatLink <http://dx.doi.org/10.1787/888933261946>



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