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.

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Further information

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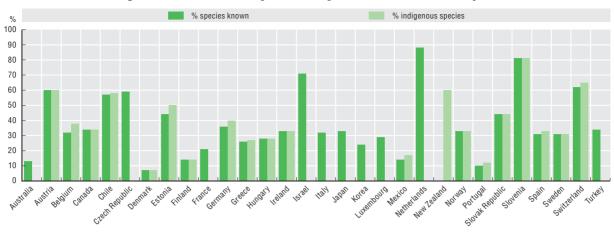
Figure 1.24. Threatened species - mammals, birds and vascular plants, latest available year

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

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

Biological diversity

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

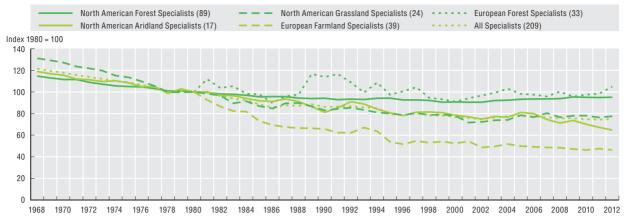
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	Turkey	150	15	477	4	11 707	11	29	34	129	9
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	United States	453	17	831	12	19 569	27	270	40	345	18

Note: See the Annex for country notes.

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

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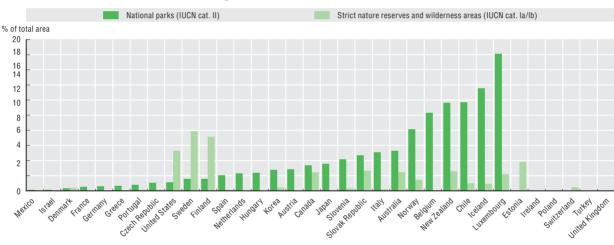
Figure 1.26. Wild bird indices, North America and Europe

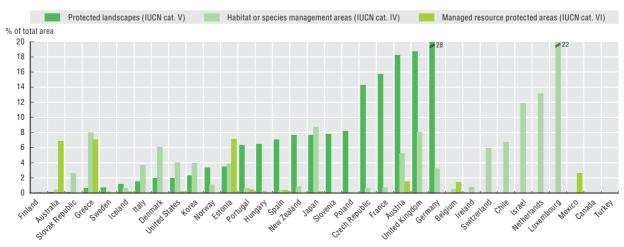


Source: North American Breeding Bird Survey and European Bird Census Council; RSPB; BirdLife International; Statistics Netherlands.

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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