

The OECD is developing a method to report a more detailed and harmonised account of countries' terrestrial and marine protected areas.

It applies a harmonised methodology to data from the World Database on Protected Areas.

# Analysing data on protected areas

WORK IN PROGRESS

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<http://oe.cd/env-data>

# International goals



**The OECD is developing an improved method to generate more detailed indicators on protected areas, both terrestrial and marine, for countries across the world.**

**It applies a harmonised methodology to data from the World Database on Protected Areas.**



By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on best available scientific information.

*Sustainable development goal 14.5  
United Nations Development Programme*



Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

*Sustainable development goal 15.5  
United Nations Development Programme*



By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved [...]

*Aichi Target 11 of the Convention of Biological Diversity*

# Methodology

## THE WORLD DATABASE ON PROTECTED AREAS

The OECD's indicators are based on data from the World Database on Protected Areas (WDPA), which is a geospatial database of terrestrial and marine protected areas.

The WDPA is managed by the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) with support from the International

Union for Conservation of Nature (IUCN) and its World Commission on Protected Areas (WCPA).

The WDPA is updated monthly. It contains information on more than 200 000 protected areas.

## CATEGORIES OF MANAGEMENT

The World Database on Protected Areas lists protected areas designated at national (IUCN categories I-VI), regional (e.g. the European Natura 2000 networks) or international (e.g. biosphere reserves) levels. The first IUCN categories are more motivated by the preservation of ecosystems and biodiversity, and the latter are more intended as live-in areas. Importantly, these categories only inform on management objectives, not on how effective the management actually is.

- **Ia** Strict Nature Reserve
- **Ib** Wilderness Area
- **II** National Park
- **III** Natural Monument
- **IV** Habitat/Species Management Area
- **V** Protected Landscape/Seascape
- **VI** Protected area with sustainable use of natural resources.
- No IUCN category
- Regional or international designation.

## ACCOUNTING FOR OVERLAPS

Some protected areas are reported under several management categories. For example, areas of a national park can be reported as both Ia - Strict Nature Reserve and II - National Park. Simply adding up the categories could make protected areas seem larger.

The Digital Observatory for Protected Areas (DOPA), a project funded by the European Commission's Joint Research Center, reports areas exclusive of any overlapping more strictly protected areas.

The OECD followed the same method, with three refinements:

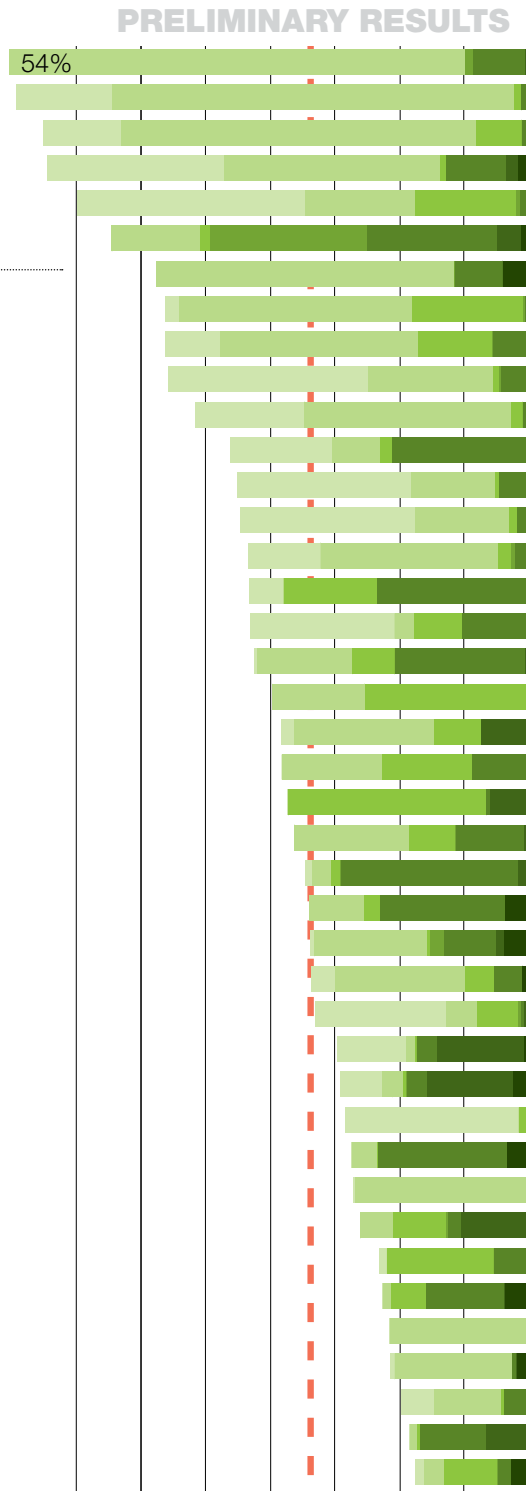
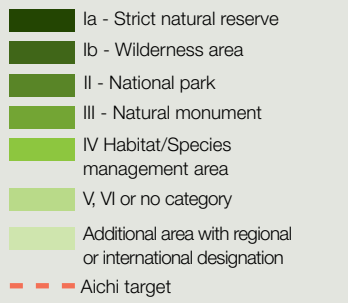
- It also includes protected areas smaller than 100 km<sup>2</sup>.
- It reports separately on nationally and regionally or internationally designated protected areas.
- Protected areas reported less precisely as points (for example, estimated as a 50 km<sup>2</sup> buffer around a specific point) are accounted for separately.

# Terrestrial protected areas

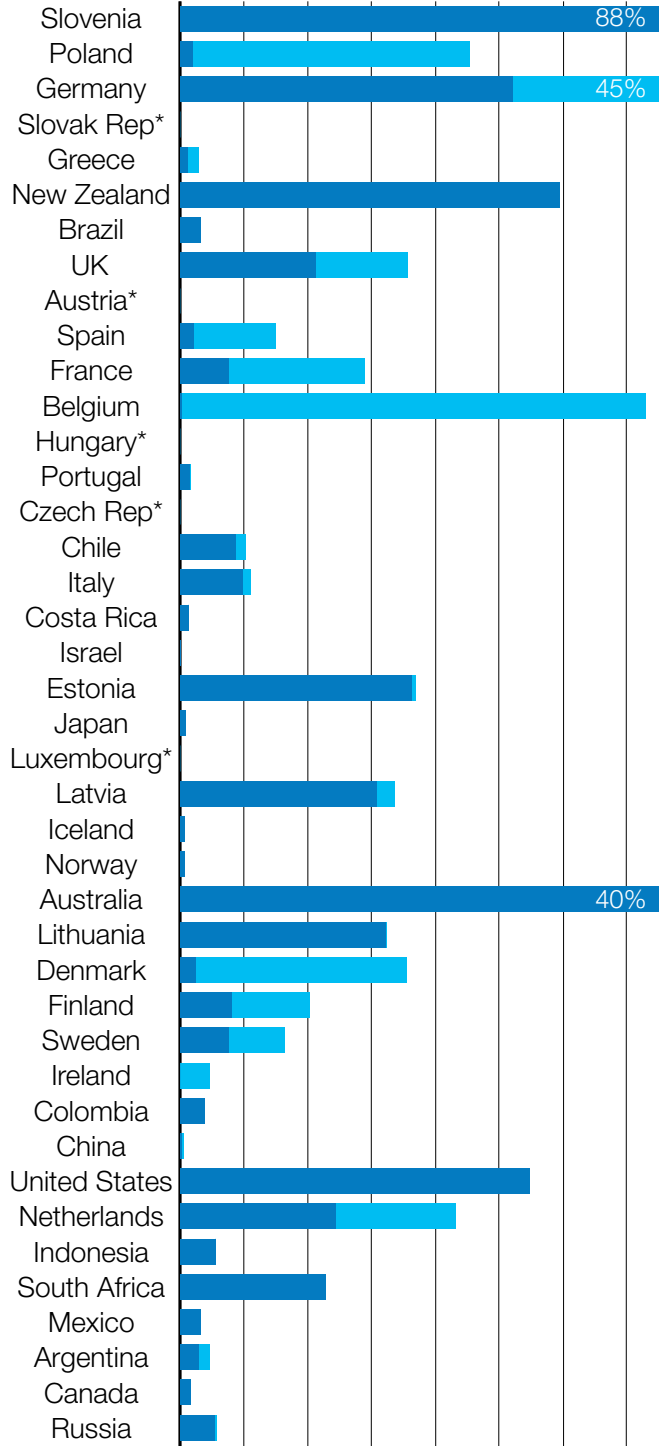
**Pristine wilderness or lived-in natural parks? This chart gives a synoptic view of how protected areas are used in different countries.**

Countries are ranked by the terrestrial area protected in categories Ia to IV. Such analysis by IUCN category was not previously available.

In countries like Poland, Germany, Slovenia and the United Kingdom, the majority of protected areas are nationally designated under IUCN category V, which is primarily concerned with landscape conservation, whereas Estonia, Finland, Sweden and the United States have a notable amount of near-pristine wilderness. Other countries, like Ireland, use mainly regional and international designations such as Natura 2000.



# PRELIMINARY RESULTS



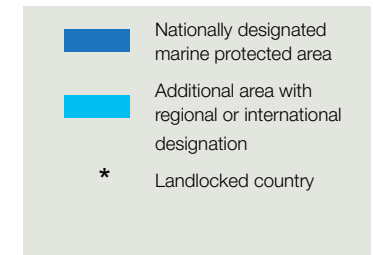
# Marine protected areas

Marine protected areas are charted as a share of each country's exclusive economic zone (EEZ).

The figures presented here summarise protection only within national jurisdictions (EEZ). Globally, about 4% of oceans are protected (UNEP-WCMC).

The variation is striking between Iceland, Norway, India and Saudi Arabia, where less than 1% of the EEZ are designated as protected areas, and Australia, Germany and New Zealand on the other, with more than 25% of their EEZ.

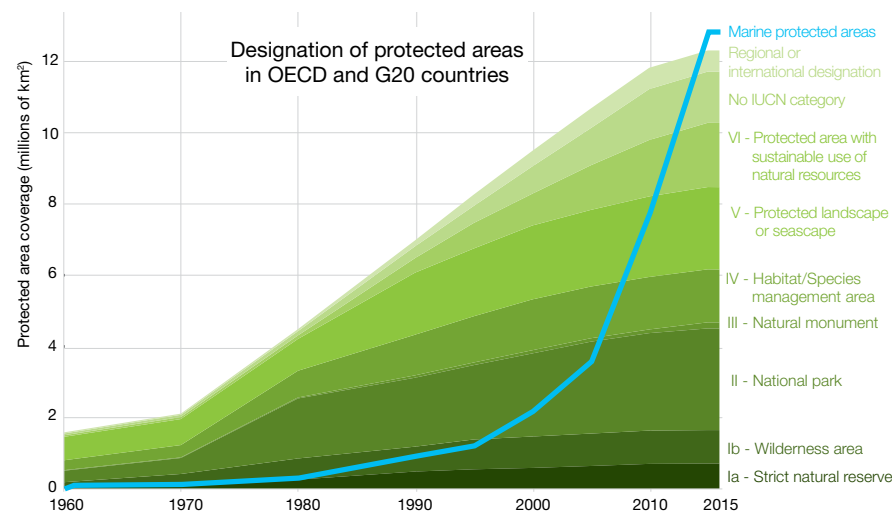
Some countries, such as the United States, France, Australia and the United Kingdom, have extensive small-island overseas territories, that are often rich in marine biodiversity. They are reported separately (and not included in this graph).



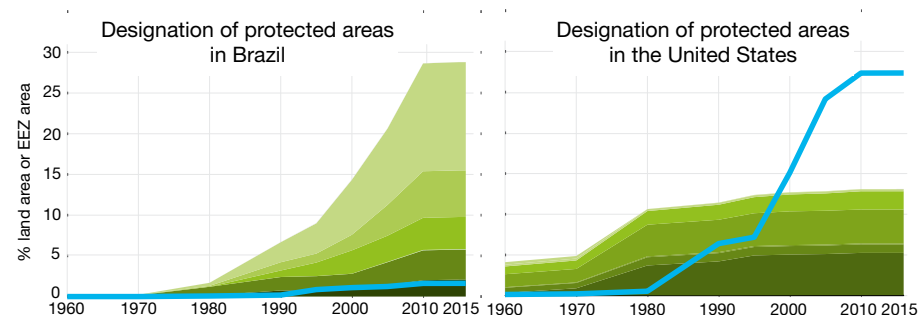
Source: OECD calculations based on April 2016 version of WDPA.

# Historical patterns

Between 1970 and 2010, new terrestrial protected areas were designated at a consistently high rate. Designation of marine protected areas was slow until 2000. Since then, they increased by more than 10 million square kilometres, which is approximately the size of Canada.



Historical data can also give an overview of individual countries' approaches. Brazil, for example, designated protected areas quite recently. Relatively little of this very biodiverse country is strictly protected. The United States figure shows the recent expansion of its national marine protected areas.



Source: OECD calculations based on April 2016 version of WDPA.

PRELIMINARY RESULTS

# Interpretation and limitations

The World Database on Protected Areas is the most comprehensive global database on protected areas. However, it is neither complete nor perfectly accurate, depending on country submissions.

- IUCN categories are not intended as a hierarchical system. They do indicate, to some extent, what activities are permitted in the area, the likely pristineness of the ecosystem and the likely motivation for biodiversity protection.
- Occasionally, large areas are recorded as points (for example, 50 km<sup>2</sup> around specific GPS coordinates) or are not associated with an IUCN category.
- Results may not fully align with summaries published elsewhere, because there are often differences in country coverage, in how country territories are defined, and in what types of protected areas designations are included in these analyses.
- Some of the “no-category” may meet the definition of a specific IUCN, even though they are not recorded as such.
- Categories do not give any indication of the actual level of protection and management effectiveness of these areas.

## Next steps

The method for analysing protected areas data presented here has recently been used in some *OECD Environmental Performance Reviews* and other environmental policy research.

The indicator and related working paper will be published in 2017, on OECD.Stat and OECD iLibrary. They will be included in the forthcoming *Green Growth Indicators* report.

Combining the information on protected areas with other geospatial datasets will allow to refine these indicators, to show sub-national summaries (by state or region); indicators by land cover or ecosystem type.