D-1: Protected areas (PA)

1) General description

1.1) Brief definition

The indicator shows the areas of land, water surfaces and adjacent air layer protected in compliance with the national legislation. It includes the area of highly protected territories and their share in the total area of the country. This indicator can be further broken down by the categories of natural territories which have a special International Union for Conservation of Nature (IUCN) status and for the national categories of protected areas to demonstrate their respective extent and share in the total area of the country.

1.2) Units of measurement

Total area in km^2 or ha and as a percentage of the total country territory in accordance with national categories and by IUCN categories

1.3) Context

Context – Relation to other indicators from the Guidelines - This indicator does not relate to other indicators.

2) Relevance for environmental policy

2.1) Purpose

The indicator provides a measure of the response to the degradation of ecosystems and the loss of biodiversity in a country. It demonstrates the extent to which areas important for conserving biodiversity, cultural heritage, scientific research (including baseline monitoring of processes in the ecosystems), recreation, natural resource maintenance and other environmental values are protected.

2.2) Issue

Sustainable development depends on a sound environment, which in turn depends on ecosystem diversity. Protected areas, especially the full range of IUCN Protected Area

Categories, are essential for conserving biodiversity and contributing to sustainable development.

2.3) International agreements and targets

a) Global level

The United Nations Convention on Biological Diversity (CBD) aimed at the establishment (by 2010 for terrestrial areas and by 2012 for marine areas) and maintenance of comprehensive, effectively managed and ecologically representative national and regional systems of protected areas. Under CBD, the Strategic Plan for Biodiversity 2011-2020 was adopted which requires that 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 through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes (Target 11). Recommendation 16 of the Fourth World Congress on National Parks and Protected Areas (Caracas, 1992) established a target of 10 per cent protected areas for each biome (major ecosystem type).

b) Regional level

The European environment ministers in Kiev in 2003 called for the establishment of a pan-European ecological network by 2015.

c) Subregional level

The Environmental Strategy of countries of South-Eastern and Eastern Europe, Caucasus and Central Asia calls for the increase of the share of protected areas as well as appropriate material and financial support for them. At the European Union (EU) level, the target was to have a Natura 2000 ecological network of special protected areas completed on land by 2005 and on marine sites by 2008, and management objectives for all sites agreed and instigated by 2010. In EU, Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora lists habitat types to be protected in the Member States. In 2011, the EU Council has endorsed the EU Biodiversity Strategy until 2020, which is the EU key instrument for reaching the new EU target for the protection of biodiversity in 2020: EU intends to halt the loss of biodiversity and the degradation of ecosystem services in the EU Member States by 2020, and restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.

3) Methodology and guidelines

3.1) Data collection and calculations

It is necessary for this indicator to have maps of designated areas and inventories of all protected areas of the country showing their location, size, date of establishment and protection regime in accordance with national legislation and relevant international requirements. For intercountry comparisons, protected areas could also be grouped by the IUCN categories. Monitoring and update of data should be done on an annual basis. Percentage of protected areas can be calculated by the formula:

Share of protected areas (%) = (total area of protected areas in hectares or km^2 / total area of the country in hectares or km^2) × 100.

3.2) Internationally agreed methodologies and standards

IUCN defines six management categories of protected area falling into two groups. Totally protected areas are maintained in a natural state and are closed to extractive uses. They include Category I, Strict Nature Reserve/Wilderness Area; Category II, National Park; and Category III, Natural Monument or Feature. Partially protected areas are managed for specific uses (e.g. recreation) or to provide optimal conditions for certain species or communities. They include Category IV, Habitat/Species Management Area; Category V, Protected Landscape/Seascape; and Category VI, Protected Area with Sustainable Use of Natural Resources. This methodology is increasingly used for land ecosystems, less so for marine ecosystems, and least for inland water ecosystems. Inland water ecosystems are usually lumped with land in a terrestrial classification. The methodology for this indicator has not been standardized.

4) Data sources and reporting

Ministries of environment in countries of South-Eastern and Eastern Europe, Caucasus and Central Asia generally collect the data on protected areas. Data on protected areas (total number, area, location and date of creation) by national category are published in annual environmental reports, in national reports on biodiversity status and in statistical yearbooks in many countries. In cooperation with the UNEP World Conservation Monitoring Centre, IUCN World Commission on Protected Areas compiles the United Nations List of Protected Areas, which provides the name, IUCN category, location, size and year of establishment of

all protected areas meeting the IUCN definition, regardless of size and whether or not they have been assigned an IUCN category for all countries. This information is also included in the World Database on Protected Areas. Good examples are the European Nature Information System, managed by the European Topic Centre on Biological Diversity (ETC/BD in Paris) for the European Environment Agency (EEA) and the European Environment Information and Observation Network (EIONET), which covers, in particular, data on habitats and sites compiled in the framework of Natura 2000 (the EU Habitats and Birds Directives).

5) References at the international level

- Convention on Biological Diversity: http://www.cbd.int;
- CBD Strategic Plan for Biodiversity 2011-2020: http://www.cbd.int/decision/cop/?id=12268;
- Guidelines for Protected Area Management Categories. IUCN Commission on National Parks and Protected Areas with the assistance of the World Conservation Monitoring Centre. International Union for the Conservation of Nature and Natural Resources (IUCN), Gland, Switzerland; Cambridge, UK, 1994: http://data.iucn.org/themes/wcpa/pubs/guidelines.htm;
- Parks for Life: Report of the Fourth World Congress on National Parks and Protected Areas (IUCN, 1995);
- 2003 United Nations List of Protected Areas, (IUCN and UNEP/WCMC 2003): http://www.unep-wcmc.org/un-list-of-protected-areas_269.html;
- Ecosystems and Human Well-being: A framework for assessment. Millennium Ecosystem Assessment (2003) (ISBN 1-55963-403-0);
- Benefits Beyond Boundaries: Proceedings of the Fifth IUCN World Parks Congress, IUCN, 2005;
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora;
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds;
- Our life insurance, our natural capital: an EU biodiversity strategy to 2020; SEC(2011) 541 final (http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm);

- IUCN Protected Areas: http://iucn.org/about/work/programmes/gpap_home/pas_gpap/;
- UNEP/World Conservation Monitoring Centre: http://www.unep-wcmc.org/;
- World Commission for Protected Areas: http://www.iucn.org/about/work/programmes/gpap_home/;
- European Nature Information System (EUNIS): http://eunis.eea.europa.eu/;
- World National Parks: http://www.world-national-parks.net/;
- EEA: http://www.eea.europa.eu/themes/biodiversity;
- EIONET: http://www.eionet.europa.eu/;
- IUCN / WCMC Protected Area Management Categories: http://www.unep-wcmc.org/iucn-protected-area-management-categories_591.html.