

27 Outdoor sports, leisure and recreational activities is considered a main pressure for achieving European nature conservation targets

Rogier Pouwels¹, Anne Schmidt¹, Ruud Foppen^{2,3}, André van Kleunen³, ¹Wageningen Environmental Research, WUR, Netherlands. ²Department of Animal Ecology and Ecophysiology, Radboud University, Netherlands.

³Sovon, Dutch Centre for Field Ornithology, Netherlands

Introduction

Protected areas are one of the major strategies to conserve biodiversity. Still many habitats and species occurring in these areas are under threat due to pressures from within as well as outside these areas. One of these potential pressures is disturbance by human activities like sports, tourism and other recreational activities. As these activities are increasing in most protected areas, conflicts between outdoor recreation and nature conservation have also increased. In order to take adequate measures, managers need scientific knowledge on the nature and severity of the impact of these human activities on conservation targets (McCool 2016). However, scientific knowledge is inconclusive, and often based on studies that take into account few habitats or species.

In Europe the Habitats and Birds Directives (HBD) are the main nature conservation policy instruments to safeguard Europe's diversity of wild plants, animals and landscapes. The aim of the HBD is to protect the most vulnerable habitats and species in Europe. Their conservation status assessed every six years according to a standard protocol. The assessments show that for many habitats and species the conservation status is still 'unfavourable'. This unfavourable conservation status is caused by a multitude of pressures and threats. Agricultural activities and urbanization are the most frequently reported pressures and threats for both habitats and species.

Method

The information of the assessments is stored in two databases that are available on websites of the EU. The databases from 2015 contain information on the conservation status of 231 habitats, 1319 species (other than birds), 335 breeding bird species, 231 migratory bird species and 151 wintering bird species. For the habitats and species (other than birds) the conservation status is assessed for each

biogeographical region and country the species is present. For bird species the information is available for each country and season in which it is present. As part of the assessment, experts indicate which pressure (currently) or threat (in the future) might lead to an unfavourable conservation status. Experts are able to choose up to 10 pressures and 10 threats from a predefined set of 79 main pressures/threats, which are grouped in 13 categories. Outdoor sports, leisure and recreational activities (code: G01, in short 'recreation') is one of these pressures/threats. Some of the pressures/threats are divided in up to 55 sub-pressures/-threats, but for our analyses we focused on the 79 main pressures.

Results

The habitats database contains 64,826 records of pressures for a combination of habitat/species, country and region. The bird database contains 14,609 records of pressures for a combination of species, season and country. Regarding the 13 categories, pressures related to agricultural activities are selected most often. However, data on the 79 main pressures show that recreation (G01), is selected most often for rocky habitats, breeding and wintering birds. For coastal habitats, dune habitats, sclerophyllous scrubs, mammals, vascular plants and migratory birds recreation ranks in the top five (Table 1).

		#	rank G01
habitats	Bogs, mires & fens	12	9
	Coastal habitats	28	2
	Dunes habitats	21	3
	Forests	79	9
	Freshwater habitats	19	8
	Grasslands	31	9
	Heath & scrub	12	6
	Rocky habitats	14	1
	Sclerophyllous scrubs	13	4
species (other than birds)	Amphibians	56	15
	Arthropods	130	23
	Fish	126	13
	Mammals	128	4
	Molluscs	41	23
	Non-vascular plants	53	6
	Other invertebrates	3	15
	Reptiles	84	12
	Vascular plants	594	5
birds	Breeding birds	335	1
	Migratory birds	231	4
	Wintering birds	151	1

Table 1 Overview of impact of the pressure G01 (Sports, recreation and leisure activity) on Habitats, Species (other than birds), Breeding, Migratory and Wintering birds. In the second column the number of habitats or species within the ecosystem of species group is given. In the third column the rank of G01 among the 79 main pressures is given.

Discussion

The results might seem surprising, as the overall impact of recreation on biodiversity is considered minor compared to other pressures (Young et al. 2005). The results are based on expert knowledge and should therefore be used with care (Sutherland and Burgman 2015). However, due to the large number of experts from different countries and the standardized method, the results provide a robust indication of the impacts (Martin et al. 2012). It might be that experts chose recreation, because it is one of the few human activities that is permitted in most nature areas. Still, as most of the habitats and species protected under the HBD generally occur more frequently within protected areas (Van der Sluis et al. 2016) we tentatively conclude that recreation is indeed a main pressure for Europe's most vulnerable species and habitat types.

To face this pressure, the EU needs to coordinate actions and exchange good examples for sustainable tourism. The databases can be used to find habitats and species where coordinated actions are needed. Good examples are the Egyptian vulture (Neophron percnopterus), wintering Dunlin (Calidris alpina), the Loggerhead (Caretta caretta) and Malcolmietalia dune grasslands. They occur in several countries, their conservation status is 'unfavourable' and recreation is considered an important pressure. However, currently there is no EU policy on tourism and recreation. A more systematic use of appropriate tools for planning of tourism and recreation activities in Natura 2000 site should be promoted, e.g. for impact assessment and monitoring, estimating carrying capacity, analysis of demand and opportunities, socio-economic benefits, etc. (The N2K Group 2019).

References

- Martin et al. (2012). <https://doi.org/10.1111/j.1523-1739.2011.01806.x>. McCool (2016). https://doi.org/10.1007/978-94-017-7209-9_7. Sutherland & Burgman (2015). <https://doi.org/10.1038/526317a>. The N2K Group (2019). https://ec.europa.eu/environment/nature/natura2000/management/pdf/Scoping_Tourism_Natura2000_final.pdf. Van der Sluis et al. (2016). <https://doi.org/10.18174/385797>. Young et al. (2005) <https://doi.org/10.1007/s10531-004-0536-z>. Links to the used databases: <https://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-ee-1>. <https://www.eea.europa.eu/data-and-maps/data/article-12-database-birds-directive-2009-147-ec#tab-derived-dataset>. Weiler et al., 2019, <https://doi.org/10.1016/j.jort.2018.06.001>