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Vertigo Effect: Institutional dynamics in nature conservation

Christina Pichler-Koban, Martina Ukowitz, Michael Jungmeier

Abstract

Red lists of endangered species are meaningful instruments to prioritise efforts in nature conservation in general and in the management of protected areas in particular. By example of Desmoulin's whorl snail (*Vertigo moulinsiana*) we investigate the complex societal and institutional processes that lead to the inclusion of the specimen into IUCN's and other red lists. In a transdisciplinary research design, we integrate historic and contemporary materials. First results propose that red lists can be considered important societal norms rather than stringently scientific concepts. This would allow and call for new perspectives on nature conservation and protected areas as well.

Key words

Red Lists, protected area management, Desmoulin's whorl snail, transdisciplinary research

Introduction

The presented project is financed by the Jubilee fund of the Austrian National Bank. The object of research is the social and institutional processes that cause endangered animal and plant species to be placed on red lists. We study this using the example of Desmoulin's whorl snail (*Vertigo moulinsiana*) a tiny inhabitant of humid habitats distributed mostly in Europe. The species is on national and international red lists and protected by national legislation of various countries and under Annex II of the EU Habitats Directive.

The available literature shows that the classification of *V. moulinsiana* as a red list species is based on scientific arguments and arguments related to nature conservation biology. However, the initial hypothesis is that red lists are like standards and are derived from the need for standards in specific administrative and legal processes and in political decision-making processes. Unlike, for example, industrial standards, nature conservation decisions are made in an open yet not very explicit process with the participation of civil and scientific actors. Our aim is to investigate this using the instruments of institutional analysis and to answer the following research questions using the example of *V. moulinsiana*:

- What are the societal and institutional processes that lead to the high significance of a specific animal species?
- Which social and institutional processes are expressed in the assessment of a species as 'endangered' or 'protected'?
- What impact does nature conservation classification as 'endangered' or 'protected' have on subsequent social and institutional processes?
- What general conclusions can be drawn from the results for theory-based and practical nature conservation work at international, European, national and local level?

The research team has already dealt with motives and social concerns leading to conflicts in terms of nature conservation topics and especially in protected areas (PICHLER-KOBAN & JUNGMEIER 2015, 2017). The conflicts are often historically justified but also play a major role in the research project outlined here. They are therefore closely linked to the topic of the 'Parks and Management – Conservation Conflicts in Protected Areas' session.

Methods

The methodical approach comprises inquiries based on literature and documents, qualitative interviews and qualitative text analysis. The interdisciplinary project team represents a mix of natural sciences, social sciences, humanities, jurisprudence and economics. The transdisciplinary research design uses the interaction between science and societal reality as a knowledge path culminating in socially robust knowledge (GIBBONS et al. 1994; UKOWITZ 2012, 2014). Perspectives from various specialist fields relevant to the topic and perspectives of relevant public institutions are raised and discussed. The project outcomes are aimed essentially at two target groups: relevant social stakeholders (representatives from politics, public administration and various interest groups) and scientific communities.

Results

As regards *V. moulinsiana*, the process, as portrayed in Red Lists, emerged as follows. Researchers initially focused their attention on the animal. They were specialists with a passionate, albeit undirected devotion to the discovery and labelling of new species (Fig. 1). In 1849, Dupuy described the species. The oldest Austrian evidence dates back to Meynrad von Gallenstein in 1848 and the 'Moorwiesen südlich von Klagenfurt' (bog meadows south of Klagenfurt) (MILDNER 2000). In 1999, zoologist Paul Mildner searched for *V. moulinsiana* in the Carinthian Wetlands and identified approximately 30 locations (MILDNER 2000). ELLMAUER (2005) cites 35 recent and one historical Carinthian location. Contrastingly, there have been isolated sightings in the Federal States of Burgenland, Lower Austria, the Tyrol and Vorarlberg with scattered sightings across the whole of Europe. One person made a valid comment on the distribution of Red List species, namely that sightings and dissemination correspond more so to the geographical location of the experts *per se* rather than to the dissemination of the species concerned.



Figure 1: The figure gives an impression of the size of our research object– here named as *Pupa moulinsiana*, one of various synonyms in use for the snail (Photo: Descouens 2013).

Red Lists constitute an attempt to assess the degree of vulnerability of the respective species. A brief review of the history of their emergence shows that the classification – which started out as the initiative of individual researchers – was highly subjective and depended on the experience and preferences of the respective expert. With the increasing importance attached to nature conservation at international level, a professionalization process started to emerge around the creation of Red Lists. The International Union for the Conservation of Nature (IUCN) established a Species Survival Commission (SSC) and set itself the task to develop worldwide standards for developing Red Lists and introduced these in 1994 as Red List Categories and Criteria. Red Lists are legally incorporated in international conventions, e.g. Convention on Biological Diversity, Bonn Convention. At the same time, other national and regional Red Lists continue to be strongly influenced by individual researchers. The Berne Convention was launched on the international stage in 1979. In Austria, the content essentially deals with the Bird Protection Directive and the Fauna Flora Habitat Directive. The provisions are stipulated in the nature conservation and hunting laws of the Federal States.

The afore-mentioned agreements and laws are reflected in numerous regulations which must be implemented within official nature conservation directives, e.g. the designation of Natura 2000 sites due to the presence of specific types of habitat or the presence of annex species. The associated constraints or restrictions and potential resulting conflicts are areas where the impact of Red Lists can be initially perceived for various interest and population groups.

Discussion/Conclusion

Our research to date suggests that the selection and classification of species as ‘endangered’ or ‘protected’ are partly due to chance and partly to subjective perception. Decisions made on this basis are all well and good. However, if there is no evidence to show how these decisions were reached, they will be deemed ‘arbitrary’ and vulnerable.

Application of the Red List option at several levels (international, national, regional) as well as the list of annex species at European level and the legally binding implementation in federal structures generate a complex institutional landscape and considerable density in terms of nature conservation. It is perceived by large parts of society as ‘overbearing nature conservation’.

The considerable relevance of Red Lists in many areas of nature conservation shows how important it is to examine this tool. Even some participating stakeholders are unclear as to how Red Lists emerge, how they are applied and how much impact they ultimately have. Individuals interviewed at all levels (regional, national, international) welcome the scientific debate surrounding this topic.

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