



## How much biodiversity does Natura 2000 cover?

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### Keywords

Reserve planning; conservation planning; biodiversity; prioritization; extinction.

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### Received

10 April 2013

### Accepted

9 May 2013

All authors are members of the interdisciplinary graduate school “Cooperation of Science and Jurisprudence in Improving Development and Use of Standards for Environmental Protection—Strategies for Risk Assessment and Management.”

doi: 10.1111/conl.12037

Maes *et al.* (2013) argue that amendments to the Annexes of the Habitats Directive “would divert attention and resources and risks being counterproductive,” that other species would also benefit from the conservation measures for the species listed on the Annexes and that priority should focus on funding and implementing management. This argumentation very well illustrates the inertia of European administrative processes, such as the Habitats Directive. A time span of 20 years has apparently not been sufficient to implement a properly managed reserve network, whereas during the same time, major changes in the Common Agricultural Policy (CAP) led to rapid land use changes threatening biodiversity (e.g., Eggers *et al.* 2009). We are concerned that with the current species lists and only 7 years left, it will be virtually impossible to halt biodiversity loss on the territory of the EU

by 2020. It is probably never “the right time” (Maes *et al.* 2013) to change any European directive, simply due to the protracted and complex European legislation processes. However, we believe that regular amendments and a stronger link of the Annexes to Red Lists will assure that the Habitats Directive becomes an adaptive tool and hence independent of such protracted administrative processes.

Contrary to the argument of diverted resources put forward by Maes *et al.* (2013), we believe that only via the mechanisms embedded in the Habitats Directive itself, we can ensure conservation of threatened species which are not listed on the annexes. Local administrations are fully occupied with implementing Natura 2000, with only few resources left to protect unlisted species, even if they are highly endangered. It is, thus, rather optimistic to rely

on additional voluntary conservation action at the national level for such species, particularly when dealing with “noncharismatic” ones. The low efficiency of current resource allocation is well illustrated by the case of the Common Wall Lizard (*Podarcis muralis*). The Common Wall Lizard is not threatened according to the European Red List (Temple & Cox 2009), but its record on Annex IV can trigger costly translocations. Two of such translocations performed in Germany amounted to ca. 600,000 € (in Heilbronn) and 200,000 € (in Mainz), well exceeding conservation budgets typically available to local administrations. Although the compensatory habitat created for Common Wall Lizards in Heilbronn may benefit other xerothermic species, the translocated population in Mainz even belonged to a nonnative lineage (Schulte *et al.* 2012a)—and it is known that introduced populations of the Common Wall Lizard may threaten the native lineage of this species (Schulte *et al.* 2012b).

A clearer focus on threatened species does not necessarily mean that too many resources will be diverted from existing conservation projects. Many of the species and habitats listed will probably remain on the Annexes and changes of the Red List status usually occur gradually (except if a taxon is assessed for the first time). To avoid regional loss of biodiversity, it is probably a useful approach to keep species on the Annexes which are threatened only in parts of the EU, e.g., the Fire-bellied toad (*Bombina orientalis*) or the Weatherfish (*Misgurnis fossilis*). However, adding 40 threatened butterfly and dragonfly species to the Annexes (as outlined by Maes *et al.* 2013) would assure the preservation of these species, whereas it is by no means clear whether they benefit from current conservation measures undertaken under the Habitats Directive. One has to keep in mind that most of the species listed on the Annexes have not been strategically chosen, and their potential as “umbrella species”

has never been tested explicitly. It might thus be worth analyzing, how many endangered but nonlisted species in fact occur in the existing Natura 2000 reserves and if they may profit from the current network. If, however, the “favorable conservation status” of European biodiversity is simply measured based upon the existing species lists of the Annexes, a too optimistic résumé will be drawn in 2020.

## Acknowledgments

The authors are members of the interdisciplinary graduate school “Cooperation of Science and Jurisprudence in Improving Development and Use of Standards for Environmental Protection—Strategies for Risk Assessment and Management,” funded by the German Science Foundation (DFG, GRK 1319).

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