IMPLEMENTATION OF THE HABITATS DIRECTIVE: IDENTIFYING CHALLENGES

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Abstract: This paper focuses on the habitat types listed in Annex I of the Habitats Directive. On the basis of the examples of habitat types situated in Germany a set of criteria will be applied to identify those whose conservation could be challenging under a static regime. As an example, habitat types (*6210) and (*6240) will undergo closer examination and appropriate management measures will be presented and discussed. As a tool to implement these management measures, management plans are examined in the last part. Finally, requirements on management planning will be outlined.
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Introduction

The Habitats Directive (Council Directive 92/43/EEC) is part of the european nature conservation policy. Together with the sites of Birds Directive (79/409/EEC) it asks for the EU-wide Natura 2000 network of protected areas. The aim of the network is to protect the habitats of species listed in Annex I (Birds Directive), regularly migrating birds, and Annex II (Habitats Directive) as well as specific habitat types (Annex I, Habitats Directive) of european importance. This paper focuses on the habitat types listed in the Habitats Directive. According to the directive, these designated types shall be maintained at or restored to a favourable conservation status. The necessary management measures need to be applied.
To implement the directive, several steps become necessary. Each Member State is responsible for:

- identifying and designating the special areas of conservation (SAC) (Art. 3 & 4, Habitats Directive),
- planning and applying the conservation measures for all habitat types and species which the site was designated for (Art. 6),
- monitoring the conservation status of all subjects of protection (Art. 11 & 17)
- and if necessary readjusting the management measures.

In terms of these implementing steps the situation in Germany is as follows: After identification the sites (pSCI, proposed Sites of Community Importance) was finished and the last sites were transmitted to the Commission in February 2006 with long delay, all sites have been accepted on the Community list (SCI)[1] in December 2007. The planning of management measures is at present the main challenge, which lies in the responsibility of the 16 federal states. This leads to different management options throughout Germany.
Depending on the time scale all natural habitats change dynamically – some of them in a short-term succession, others perform a very long-term development. To comply with the directive the habitat types are to maintained or restored at a favourable conservation status. This goes along with a kind of static conservation approach as these natural

[1] with the exception of one site in the Ems estuary

changes need to be interrupted. But not all habitat types require the same management intensity (Balzer & Stratmann 2006). On the basis of the examples of habitat types situated in Germany a set of criteria will be applied to identify those whose conservation could be challenging under a static regime. Furthermore, a set of suitable managment measures will be compiled for them. As for most sites management plans are an advisable tool to implement these measures (Ellwanger, Schröder & Ssymank 2006), already available plans will be analysed. Therefor it will be evaluated whether the recommended measures are appropriate for the identified sensitive habitat types and whether the plans are complete in form and content.

Identifying sensitive habitat types

Annex I of the Habitats Directive lists 218 habitat types (Balzer & Ssymank 2005) for the whole European Union, of which 91 can be found in Germany. To identify the most sensitive of them, regarding to the static regime being claimed in the Directive (e.g. Art. 1 & 3, Habitats Directive), a set of criteria has been applied. All habitat types underwent a screening to estimate a) its management requirements and b) its succession characteristics. Within each, a) and b), four classes can be distinguished:

a) Management requirements

0 – no management required
1 – management usually not required
2 – management usually required
3 – obligatory management, abandonment as a threat

b) Succession characteristics

0 –permanent community (no succession)
1 – succession periodically interrupted by natural dynamics
2 – slow succession with development to another Annex I habitat type
3 – short-term succession

The classification is mainly based on Ssymank et al. (1998) and Balzer et al. (2004) as these are the only available publications dealing with all habitat types in Germany consistently. The information gathered here is confirmed by the relevant literature.

To identify the most sensitive habitat types, both classifications were combined (Table 1). Applying the sensitivity class matrix, it can be found that 21 of all 91 habitat types were ranked as „very sensitive" (sensitivity class 3). Most of them are open area-types such as dry heaths (4030) or Festuco-Brometalia on calcareous substrates (*6210), but also forest-type *91G0 belongs to the highest sensitivity class.

Table 1. Sensitivity class matrix: combining the classifications of a) and b)

b) Succession characteristics \ a) Management requirements	**0**	**1**	**2**	**3**
0	0	1	1	2
1	1	1	2	3
2	1	2	2	3
3	2	3	3	3

for priority habitat types it is applied: sensitivity = 3 in case a) or b) are ranked as 2

Management measures for sensitive habitat types

In form of a case study, habitat types Festuco-Brometalia on calcareous substrates (*6210) and Festucetalia vallesiacae (*6240) will undergo further investigation. Based on a literature review, a list of management options for this habitat type is compiled (Table 2). Ecological requirements and in conseuqence also the mangament necessity is differing within the subtypes of 6210. While a small amount of occurrences, namely the Xerobromion-vegetation of subtype 6213 is essentielly not subject to succession, the other subtypes need management or land-use to pertain in a good condition.
The management options found in the publications are all similar. Therefore, they are regarded as appropriate measures for that habitat type at different sites.

Table 2. Management measures for dry calcareous grasslands (Habitat Types (*6210) and (*6240))

Habitat type	Management	Author
*6210	- mowing in July, higher reaches in August after orchid blossom - for wide range of species spaciotemporal alternated mowing	Nitsche & Nitsche 1994
*6210	- for regeneration and restauration mowing 2 times end of June and in September - orchid rich sites: mowing in September - removing scrub if required	Hardt, Müller-Calgan & Schmidt 1981
6210	- extreme dry sites primarily without scrub other sites: - removing scrub - grazing in late summer	Treiber 1999
6212	depending on former land use - mowing (mainly in southern Germany) - grazing (northern and eastern Germany) with goats eliminates woody plants - after abandonment beginning with intensive grazing - extensive grazing needs to be combined with mowing	Nitsche & Nitsche 1994
6213	- primary dry grassland - avoid nutrient deposition	Nitsche & Nitsche 1994
6240 (6211)	- mowing in autumn - removing scrub	Nitsche & Nitsche 1994
6240 (6211)	- extensive grazing, 1-2 times per year - selection of regional sheep and goat species	Partzsch 2000

Subtypes of Ssymank et al 1998 are used, as they have different management requirements. Habitat type 6240 corresponds with former subtype 6211.

Analysis of management plans

As nature protection is a field of responsibility of its 16 federal states, implementing the Habitats Directive and therefore the management planning is very heterogeneous in Germany. To this day, it was not possible gathering management plans of all federal states up to now. In the following analysis 11 management plans of 6 federal states were investigated. Two aspects of the plans were analysed: a) completeness of content and form, b) planning and measure-oriented quality.
a) Completeness of content and form
In the Galway seminar on management planning in 1996 a consensus on the formal structure of an ideal management plan was reached. According to this, such a plan should contain the following elements (European Commission 1997):
- policy statement with reference to Article 6 of the Habitats Directive

- site description, including a historical land use analysis
- statement of objectives, including long term and short term goals
- statement of the constraints, including identification of the actors involved
- list of realistic implementation actions, with time schedules and financial planning
- a detailed consultation process
- monitoring and evaluation

Ellwanger, Schröder & Ssymank (2006) mention these criteria also for the German plans. They emphasise that this list may be complemented, depending on the specific situation of the site.

Of all 11 investigated management plans only one was complete regarding to these criteria. In the majority of the plans a detailed consultation process (7 plans) and monitoring and evaluation (7 plans) was missing. A statement of the contraints was lacking in 3 plans. The other criteria were covered either fully or partly by all management plans.

b) Planning and measure-oriented quality

Beside the formal aspects mentioned above, the suggested management measures are of main importance in the evaluation of management plans. Therefor, recommended management options of all "sensitive" habitat types will undergo a closer examination and will be compared with the management suggestions found in research publications. In the case they differ, it needs to be revised whether the reason is caused by specific site conditions or former landuse. Results of this analysis will be presented exemplarily for habitat type (*6210).

For this purpose, seven management plans dealing with habitat type (*6210) were examined. In six of them the management suggestions correspond with those found in the literature. In the seventh case the differences were caused by specific site conditions.

Conclusions

While the planning of concrete management measures was realised adequate for the investigated habitat types in all plans examined in this analysis, a deficit can be recognized by investigating content and form of the plans. Especially the detailed consultation process, the monitoring and the evaluation are insufficient. Moreover, in planning the implementation of actions most plans are missing a time schedule and/or financial budgeting. This is alarming as European Commission (1997) and Ellwanger, Schröder & Ssymank (2006) point out that these aspects are of main importance for the implementation and the success of management plans. Without a monitoring concept the effects of management cannot be unterstood, aberration identified and measures adjusted to site specific needs. Finally, this may endanger the aim of the directive to maintain or restore species and habitat types to a favourable conservation status.

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