

Position Paper of the Expert Committee for Bark Beetle Management

Adopted unanimously at the 6th Meeting of the **Advisory Board *Nationalparks Austria***, held on 10 April 2013.

Mandate

The Advisory Board Nationalparks Austria at its constitutive meeting of 24 November 2010 unanimously decided to establish the Expert Committee “Bark Beetle Management” and gave the task of directing it to Forest Director Andreas Januskovecz.

Participants (without title)

The following persons were nominated as members of the Expert Committee:

Head: Andreas Januskovecz/City of Vienna

From the Federal Government: Viktoria Hasler, Johannes Schima/both Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), Gerald Plattner/ÖBf AG

From the Provinces: Walter Wolf/Upper Austria, Hubert Schwarzinger/Lower Austria, Michael Luidold/Styria

From the NGOs: Gerald Pfiffinger/BirdLife, Bernhard Kohler/WWF, Gerhard Heilingbrunner/UWD

Representatives of the National Park Directors: Herbert Wölger/National Park “Gesäuse”; Erich Mayrhofer/National Park “Kalkalpen”; Peter Rupitsch/National Park “Hohe Tauern”

Experts consulted:

From the Federal Government: Albert Knieling, Leopold Ziehaus, Jutta Molterer, Katharina Kaiser, Enrica Seltenhammer/all Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW); Axel Schopf/University of Natural Resources and Applied Life Sciences (BOKU), Norbert Putzgruber/ÖBf AG

From the Provinces: Gerald Neubacher, Josef Hartl/both Department of Nature Conservation of Upper Austria

From the NGOs: Martin Schwarz/Naturschutzbund OÖ, Christian Tomiczek/BFW, Andreas Holzinger/Provincial Forests of Styria

Representatives of the National Park Directors: Wolfgang Scherzinger, Reinhard Schopf/Technical University of Munich, Hans Kammleitner/ÖBf AG Kalkalpen, Martin Donat/Environmental ombudsman of Upper Austria

Members of the editorial team:

Gerald Pfiffinger, Bernhard Kohler, Norbert Putzgruber, Michael Luidold, Johannes Schima, Gerhard Heilingbrunner, Gerald Neubacher, Andreas Januskovecz (head)

Genesis of the Position Paper

1st meeting on 30 May 2011 at Molln, with excursion National Park “Kalkalpen”

2nd meeting on 21 October 2011 at Gstatterboden with excursion National Park “Gesäuse”

3rd meeting on 15 and 16 October 2012 at Aigen–Schlägl with excursion Bavarian Forest National Park and to the forest of the monastery Aigen-Schlägl

Meetings of the editorial team on February 17th, May 21st and November 27th, 2012

Bark beetle gradations – Relevance for Austrian National Parks

Consultations focused on two spruce bark beetle species, the eight-toothed spruce bark beetle (*Ips typographus*) and the six-toothed spruce bark beetle (*Pityogenes chalcographus*), and showed that they are of particular relevance for the Austrian National Parks “Kalkalpen” and “Gesäuse”. Also experiences made in neighbouring forest stands of the national parks "Bavarian Forest" and "Sumava" were taken into account in the consultations. The manifold ideas of specialists are certainly also an important basis for the assessment of other process protection areas outside national parks (e.g. IUCN Category 1 – Wilderness Areas, according to the criteria of the Wild Europe Initiative).

Principles

The members of the Expert Committee “Bark Beetle Management” unanimously commit themselves to the following principles in large protected areas (national parks and wilderness areas):

Process protection

Process protection – an instrument of nature conservation which focuses on the protection of natural processes occurring in the environment - is particularly important in the nature conservation activities practised in forests because particularly sensitive parts of forest biodiversity can be preserved only by substantially refraining from human control interventions. In Austria, we take special account of this fact by establishing or designating core “non-intervention” areas in national parks, biosphere parks, wilderness areas and natural forest reserves.

Research

Apart from the nature conservation aspect, the developments in process protection areas provide also valuable new information in the fields of forest ecology, sustainable forest management and the phytosanitary forest conservation strategies.

Experience of nature

Process protection areas are also to allow visitors to experience nature in new ways (meeting nature where it is unaltered by human intervention and can develop freely).

Where process protection areas are established in forest communities dominated by coniferous trees, the question arises how to deal with bark beetle gradations, which are also considered an important dynamic component of these ecosystems and whose natural process constitutes an important factor in terms of process protection.

Comprehensive protection of adjacent areas

Comprehensive protection of neighbouring forests requires that areas dedicated to the protection of natural processes and adjacent forests do not mutually affect each other or that such impairments are prevented as far as possible. This principle is also to secure the necessary acceptance of process protection as a nature conservation instrument and to encourage further comprehensive support of it. Process protection areas must therefore be separated from neighbouring forests - outside protected areas - in such a way that no significant disturbance or damage occurs and no markedly higher level of phytosanitary care becomes necessary. On the inverse, it is necessary to ensure also that neighbouring areas do not significantly impair or damage the relevant protected area. The obligation of protecting neighbouring areas can also be met by agreement (contractual nature conservation) using approaches which are worked out preventively (such as the wilderness area Dürrenstein, see also the Annex) and address the zone outside the protected area.

Safeguarding public interest in forests

Key forest effects which are of highest public interest according to the Forest Act (object protection and beneficial function as defined in the Forest Development Plan) and can be preserved for the long term only if interventions are continued must be taken into account already when core areas, where intervention is basically prohibited, are established. Zoning must be in line with the requirements of nature conservation law (FFH Directive and Birds Directive). In the event that established zones must be revised, these requirements must be taken into account (note: In the National Park "Gesäuse" the present zoning is being evaluated with a view to the object protective effect and the beneficial effect as defined in the Forest Act 1975 as applicable. In cases like this, decisions on zoning should be taken only after the present or future risk which non-intervention might pose to the two above-mentioned forest effects has been documented by means of holistic on-site assessments or modelling.

These surveys do not affect the provisions on the legal duty to implement safety precautions.

Public relations work and awareness raising

Natural developments in process protection areas, which include also bark beetle gradations, can to a greater or lesser degree cause changes to the landscape and to the ecological system.

For a better understanding of these processes, comprehensive communication and education measures are required concerning their ecological importance and significance for nature conservation, science and the experience of nature as well as in respect of concerns about possible adverse impacts and the danger of the spread of harmful organisms outside the core zones of the large protected areas. Particular attention must be paid to clear communication, especially on the spot, along hiking trails and at other accesses to the relevant process protection area, and to a comprehensible description of the preventive and monitoring measures that have been taken. Also the long-term aspects of forest dynamics inside and outside the protected

area have to be explained comprehensively and on as factual a basis as possible.

Recommendations

The Expert Committee makes the following recommendations:

Application of section 32a of the Austrian Forest Act 1975 (“ForstG 1975”) as applicable

For the implementation of the basic principles, consistent application of the forest-law provisions set out in section 32a of the Forest Act 1975 (exemption of forest protection obligations in biotope protection forests) is recommended in process protection areas (Pilot National Park “Kalkalpen” and discussed for the wilderness area of Dürrenstein).

Zoning of core areas and intervention zones

In general, it is recommended that process protection areas be clearly divided into as large coherent core areas as possible, which are entirely free from intervention, on the one hand and peripheral intervention zones on the other hand; this has to be taken into account both when such areas are newly established and when existing protected areas are evaluated and maybe re-zoned. Among other things, intervention zones are to ensure the efficient protection of neighbouring areas and to enhance people’s acceptance of process protection zones; they are of special importance in terms of bark beetle gradations. In areas, or parts of areas, where these aspects are of no relevance it is also possible to do without intervention zones.

The recommended width of bark beetle intervention zones is 500 metres; upward and downward deviations must be technically substantiated and determined for the respective area by means of on-site inspection and assessment. As the effectiveness of intervention zones depends on the possibility of rapid and firm action, these zones should be designed in such a way that they will not significantly impair nature conservation goals. The required width of a bark-beetle intervention zone depends, among other things, on the vegetation in the area concerned, on the borders of the stands and the other natural framework conditions at the relevant site. Where this is possible, newly-created intervention zones should not include objects of protection. In existing intervention zones which comprise objects of protection, adequate account should be taken of these objects when fighting bark beetles. Actions which may be necessary to ensure that intervention zones work (such as the construction of haulage facilities in forests or the use of pesticides) must not adversely affect adjacent non-intervention zones or objects of protection in the protected area.

The borders of the intervention zones outside core areas, which are to be agreed upon by operators of protected areas and the authorities, should be as variable as possible for the individual case and should be set based on model results and experts’ recommendations - which means regular evaluations. For the future it is recommended to take account of the requirement of adequate intervention zones in advance when designating protected areas.

By agreement, also approaches like in the point “Protection of adjacent areas” are possible.

In well-substantiated individual cases it may be necessary to re-zone existing protected areas (for example at locations where the requirements of object protection create insolvable conflicts with the process protection approach. The requirement of re-zoning must be soundly substantiated on a scientific basis. If re-zoning takes place, the IUCN criteria for the share of core areas must be taken into account; the new delimitation of the protected area must not lead to a reduction of the non-intervention area in absolute terms; any losses have to be compensated for in quantitative and qualitative terms.

As regards the level of forest protection, in forests adjacent to protected areas the same level of quality has to be maintained or achieved as that to be ensured in other forests according to the Forest Act 1975 as applicable. If, for specific reasons, this is not feasible (e.g. intervention zone is not sufficiently wide due to various conditions like for example, topography, models on bark beetle gradations are not accurate, presence of objects of protection in the containment zone which put limits to efficient control or render it impossible), suitable agreements should be adopted between the operators of protected areas and the people living nearby. Such agreements should not only focus on compensations for proprietary disadvantages, but should also have a preventive effect as provided for in the precautionary principle (e.g. agreement about more intensive monitoring in affected neighbouring areas also to improve the basis of communication).

Monitoring

Inside the protected areas a suitable system of forest protection monitoring is to be established also in neighbouring forest stands in coordination with the relevant forest owners, to be able to provide evidence of the effectiveness of the intervention zones. Also an assessment of the forest genetic resources of the forest stands is recommended.

Research needs

- Continue research and presentation of the added value of process protection areas (benefit for nature conservation, knowledge concerning forest ecology and forest management, added value in terms of nature tourism etc.).
- Information on necessary monitoring networks (density, observation intervals, database, evaluation routines)
- Plant-physiological, genetic and ecological studies in respect of the predisposition towards damage and the resilience of forest stands, in particular taking into account climate change
- Integral assessment of the impacts of process protection strategies on other objects

of protection

- Physiology and ecology of the relevant organisms
- How do important protective effects (for example protection against avalanches, erosion and floods) develop when large parts of forest stands are allowed to develop freely? (Objective: Differentiated view of safety issues, development of forestry in mountain areas and of protection forest management, new information for the establishment of process protection areas.)

Information and communication

- Publication about natural dynamics in forest stands, presentation of relevant research results; proposals for suitable forest protection monitoring
- The Advisory Board Nationalparks Austria is recommended to have itself informed about the ecological and phytosanitary situation in the national parks and the nearby forest stands at regular intervals and to evaluate the results permanently.