Expert input sheet

Conservation and management of Continental and Black Sea Woodland and forest in Bulgaria

Contributor
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Habitat(s):
91H0 Pannonian woods with Quercus pubescens

Biogeographical region:
Continental; Black Sea

Member state:
Bulgaria

Region(s) (if applicable):
Bulgaria

Issues and pressures
B02.01.02 Forest replanting (non-native trees)
B02.02 Forestry clearance (clear cuts)
B02.04 Removal of dead and dying trees
B06 Grazing in forests/woodland
F04.02 Collection (fungi, lichen, berries etc.)
E01.03 Dispersed habitation
J01.01 Burning down
K02.01 Species composition change (succession)
L07 Storm, cyclone

Conservation requirements
Development and implementation of Natura 2000 management plans. Development and implementation of legislation (especially regarding management and land use restrictions). Formal education, awareness, and capacity-building/training. Research on: biology and ecology, habitat status, threats, uses and harvest levels, conservation measures, trends (monitoring, especially of the stand dynamics and the favourable conservation status). Habitat and site based actions on maintenance/conservation, restoration, corridors, identification of new protected areas, establishment of protected areas, management of protected areas, expansion of protected areas, community-based initiatives. Management of forests under continuous cover forestry systems and sustainable use of forest resources (multiple forest ecosystem services approach applied). Designation of territories for maintenance of old-growthness (at least 10% of the habitat area at a management unit scale).
Introduction and implementation of certain restrictions in managed forests: (i) management intensities or maximum allowable cut (e.g. less than 90% of the annual growth at stand scale); (ii) minimum length of regeneration period (e.g. at least 40 years); and (iii) minimum quantities of deadwood of certain
minimal size (e.g. at least 10m³/ha of rooting logs and snags logs larger than 15cm); (iv) restrictions of grazing (e.g. no grassing to be allowed in areas subjected to or after regeneration activities and/or on slopes steeper than 45 degrees.); and (v) restrictions of management on slopes steeper than 45 degrees.

**Conservation management**

The actual measures and practices (out of the abovementioned) include: (i) Few management plans of Natura 2000 zones have been developed but not yet implemented really efficiently; (ii) Some targeted measures for management of forests in Natura 2000 have been developed (by the State Forest Agency), but not yet been broadly implemented neither proven effective on practice; (iii) Some methodologies have been suggested for evaluation of the favourable conservation status of forest habitats, however due to data restrictions, those are mostly based on approximate data coming from forest management plans, often shown in relative terms (e.g. average age, average diameter) and not on real monitoring in permanent sample plots and targeted parameter values measured in absolute terms (e.g. cubic meters of volume, distribution of three by diameter of breast height, cubic meters of dead wood), as it should be; (iv) some restrictions in forest management in Natura 2000 have been elaborated by the research society and nature protection NGOs, however those have not been officially accepted and legalised in the current form yet (discussions are ongoing). Education and research on biology, ecology and forestry is going on up to university level but some programs need enhancement (they mostly suffer from being quite conceptual and theoretic); not really enough scientific papers, regarding state and dynamics of targeted forest habitats are published in internationally recognised journals (e.g. those referred on the web of science). Management of forests under continuous cover forestry systems has not been broadly implemented yet and the multiple forest ecosystem services approach is not widely known and adopted. Designation of territories for maintenance of old-growthness has not yet taken place and is (by now) most often impeded by the structures of the State Forest Agency.

**Species specific management:**

Yes

Species based actions are to be provided by the experts on the particular species.

<table>
<thead>
<tr>
<th>Code</th>
<th>Species</th>
<th>Author</th>
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<tbody>
<tr>
<td>A089</td>
<td>Aquila pomarina</td>
<td>&quot;Brehm, 1831&quot;</td>
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<td>A234</td>
<td>Picus canus</td>
<td>&quot;Gmelin, 1788&quot;</td>
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<td>A238</td>
<td>Dendrocopos medius</td>
<td>&quot;(Linnaeus, 1758)&quot;</td>
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<td>1846</td>
<td>Fritillaria drenovskii</td>
<td>Degen &amp; Stoj.</td>
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<td>Ruscus aculeatus</td>
<td>L.</td>
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<td>2291</td>
<td>Fritillaria graecaBoiss.</td>
<td>&amp; Spruner</td>
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<td>2192</td>
<td>Galium rhodopeum</td>
<td>Velen.</td>
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<tr>
<td>2327</td>
<td>Himantoglossum caprinum</td>
<td>(M.Bieb.) Spreng.</td>
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**Barriers and bottlenecks**

Insufficient funds to elaborate management plans of Natura 2000 zones. Insufficient funds to compensate forest owners for foregone profits (e.g. by retaining biotope trees and dead wood, and designating areas of old-growthness). Lack of skills, knowledge and interests in stakeholders involved in forest management. Policy framework (inappropriate/lack of policy).
Solutions and opportunities
More efficient collaboration between EU level structures and Bulgarian primary stakeholders in forestry. Enhancing the understanding of sustainable management options for forests, triggered by the significant societal changes and emerging policies on biodiversity, bioenergy and climate change. Dissemination of knowledge obtained by policy and ecosystem research to stakeholders in forestry by implementation of training courses. Attempts to assess the quantity and value (in money) of different forest ecosystem services (e.g. biodiversity conservation, water yield, non-wood forest products, carbon sequestration) and analyse the efficiency of different management scenarios and polices in this respect. This might help improvement the National Tax Policy in assuring some founds to be used for compensation of forest owners for foregone profits (e.g. by retaining biotope trees and dead wood, and designating areas of old-growthness).

Cross cutting issues
Integration of Natura 2000 into other sectorial priorities – e.g. more efficient use of Natura 2000 recommendations and restrictions in elaboration and implementation of Forest Management Plans in both state and private forests. Encourage discussion and prompt thinking (e.g. initiation of round tables at both state and regional scale) about the ways Natura 2000 can be integrated as part of cross-sectorial approaches, social and biodiversity priorities.

Lessons learned / best practice
There are lack of traditions in Bulgaria in successful transformation of coppice forests into seed originated ones, which should be a first priority in this particular habitat. Regular shelterwood system which has been broadly used during last two decades proved to be inefficient in this respect, hence more experiments are needed in implementing other silvicultural systems (e.g. irregular shelterwood, and/or combinations between shelterwood and group systems).

Opportunities for joint action
Exchange of knowledge and expertise between Member States and stakeholders within the Biogeographical region regarding methodologies and criteria used in determining the favourable conservation status of forest habitats will provide an opportunity of rese.

References
