Natura 2000 and Forests

– Assessing the State of Implementation and Effectiveness

What Science Can Tell Us

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Executive Summary

Background

Natura 2000 is the core pillar in the European Union's (EU) biodiversity conservation policy. It is an EU-wide ecological network of protected areas that cuts across countries' borders, administrative levels, policy sectors and socio-economic contexts. The network is established and managed according to the legally-binding provisions of the 1979 EU Birds Directive (79/409/EEC, revised in 2009) and the 1992 EU Habitats Directive (92/43/EEC).

Natura 2000 aims to achieve biodiversity conservation and to combine it with the sustainable development of land and natural resources. It can allow for continuation of land uses (eg agriculture, forestry) as long as they do not significantly compromise conservation objectives for habitats and species within and beyond the network.

The Natura 2000 network now covers almost 18% of the EU's territory. Forests are of crucial importance for Natura 2000 and vice versa. Almost 50% of the whole coverage of the network is comprised of forests. This means that nearly 25% of the total forest area in the EU-28 is part of the EU-wide network of protected areas. Yet knowledge about the implementation of Natura 2000 in forests and its effects on biodiversity, forest management and other land uses across the EU is fragmented.

This science-based study aims to narrow the gaps in the scholarly, practical and policy-related knowledge. It looks from policy, economic and ecological perspectives at the monitoring of forest biodiversity in Europe, as well as the challenges, achievements, effectiveness and efficiency of the implementation of Natura 2000 in forests in the EU-28. The study provides conclusions and recommendations that can support decision-making in policy and practice.

Forest biodiversity monitoring

Recently, decision makers in forest policy and practice in Europe have faced partly contradicting information about the state of biodiversity in Europe's forests from the two main monitoring processes in Europe (FOREST EUROPE and Natura 2000).

This can be explained to a large extent by important differences in terms of the processes' key concepts and definitions, assessment tools (criteria and indicators; thresholds), levels and units of analysis, data collection and data analysis methods, knowledge-production traditions, policy objectives and governance context.

Recommendations

- Improve data quality, harmonization and standardization between FOREST EUROPE and Natura 2000, for example by a systematic integration of additional key biodiversity variables in FOREST EUROPE's assessment frameworks and national reports, and using FOREST EUROPE's updated Pan-European Criteria and Indicators in the Natura 2000 process.
- Create a deeper understanding of changes in forest biodiversity status over space and time, for example by reframing current indicators, parameters and drivers (social and economic).
- Secure appropriate European and national level financial and administrative support for forest biodiversity monitoring activities.
- Strengthen stakeholder consultation and the inter-sectoral exchange of knowledge, especially at national and local scales and between nature protection and forestry domains.
- Strengthen the transfer of knowledge from science to policy and practice and vice versa, using existing platforms.

Implementation of Natura 2000 in forests and other land uses

Domestic approaches to the implementation of Natura 2000 over the last 25 years have been characterized by a series of challenges. These include failures in formal implementation as regards the full transposition of the EU Nature legislation into national law on time, and the identification and establishment of sufficient Natura 2000 sites. The formal and practical implementation of the Natura 2000 network has triggered substantial policy and management conflicts. It has been a long and complex process for the responsible authorities and the stakeholders involved.

These challenges can be explained by the ambitious goals of the policy, the significant regional differences related to bio-geographical conditions and ecological processes, traditional practices in biodiversity conservation and land use, political systems, policy priorities and administrative capacities, and socio-economic factors across the EU Member States.

There is a need to reconcile biodiversity conservation and different land uses (e.g. forestry, agriculture), to establish cooperation between public and non-state actors, to practice an integrated and participatory approach to formulate conservation objectives and implement appropriate management measures, and to secure a multi-level monitoring and reporting of implementation and impacts.

Recommendations

- Tackle ideological and information challenges in Natura 2000 implementation, for example by improving two-way communication between distinct responsible authorities and stakeholders, and clearly spelling out both win-win situations and trade-offs for nature conservation and forest management practices.
- Tackle economic interest-based challenges in Natura 2000 implementation, by encouraging co-funding from all administrative levels, and from nature conservation and forestry/agriculture.

- Tackle institutional challenges in Natura 2000 implementation, by improving the consistency of the overall policy framework, including all relevant policies, strengthening coordination and creating co-responsibility between the nature conservation sector and the forestry/land-use sectors.

Ecological effectiveness of the implementation of Natura 2000 in forests

The effectiveness of Natura 2000 in forest systems can be difficult to assess from an ecological perspective. Succession in forests occurs over timescales that make it difficult for the effectiveness of relatively recent policy measures to be gauged, and unequal research coverage of impacts among different biogeographical regions, Member States, habitats and taxonomic groups also imposes constraints. While Natura 2000 can be an effective instrument to protect, or restore habitats and species to favourable conservation status if appropriately implemented across the EU-28, its current "real" effectiveness is much more difficult to evaluate with the available scientific information.

We need a better understanding of the impacts of climate change, nitrogen emissions and forestry operations on biodiversity and the effectiveness of Natura 2000 policy in the future. For effective conservation, we must consider landscape-scale, long-term change and create a connected, flexible network that can cope with these changes.

Recommendations

- Improve the positive effects of Natura 2000 in forests, with flexible, integrated and adaptable site designation and management planning, to allow species and habitats to remain represented despite changes over time. The protection offered by site designation must not be undermined as a result of this flexibility.
- Improve the consistency of Natura 2000 management, by better policy coordination across the EU, a more standardized and consistent approach in data collection, and the involvement of forest managers in assessing conservation status and providing guidelines.
- Account for ecosystem goods and services within and beyond Natura 2000, understanding the trade-offs that can occur between services, and between services and management objectives. Educate forest managers and users on the relevance of services in protected areas.
- Share and apply best practice examples of Natura 2000 management planning.

Efficiency and economic aspects of the implementation of Natura 2000 in forests

Protected areas are sometimes seen as expensive, partly because the benefits they generate are not easily measurable and not directly comparable to the costs they involve. Specifically, the implementation of Natura 2000 could trigger significant costs for forest owners and enterprises. The value of benefits and ecosystem services provided by Natura 2000 largely overcomes the implementation costs. However, the establishment and management of Natura 2000 is faced with a low legitimacy and acceptance from forest owners and land users, who feel they are not well compensated for changing their practices. This mismatch results in a lack of cost-effectiveness as well as conflicts and implementation barriers.

The available EU-level funding instruments can cover only a small amount of the estimated costs of the implementation of Natura 2000. The budget gap is not filled sufficiently by national or alternative funding sources. The funding problem is not limited to a lack of funds, but also to an ineffective use of existing funds. This is because of lack of integration across policy sectors, diverging policy priorities at different policy levels, and conflicting interests between land-use and conservation.

Funding schemes in forests should be designed specifically for long-term dynamics and commitments, should include agricultural and forestry interests as well as environmental groups, and should include financial commitments from public and/or private local-level beneficiaries.

Recommendations

- Support more research and exchange of knowledge, to compare the cost-effectiveness and efficiency of different financial incentives for Natura 2000 in forests, including pilots for result-based payments.
- Strengthen incentive-based conservation instruments, with further enhanced use of compensation payments to trigger sufficient participation of forest owners.
- Design economic incentives for flexibility and the long-term, to take account of ecological, climate and societal changes as well as new scientific information.
- Support the integration between EU and national agricultural/rural development policy (and funds) and Natura 2000 in view of better supporting the implementation of nature conservation objectives in forests.
- Clarify political and administrative responsibilities for biodiversity conservation in view of creating an effective, efficient and integrated policy framework.

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