Forests and Climate Change in the Czech Republic: an appeal for responsibility

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Abstract:

The ongoing **climate change** requires global responsibility in the approach to the management of **supporting sustainable production and consumption of forest products**. In the face of related changes in forest disturbance regimes, **risk-oriented management** has become a key concept. Unstable monocultural forests need to be transformed into stable, uneven-aged and diverse forests which are able to ensure the provision of the required functions. These procedures can reduce the risk of sudden destruction of large forested areas and also promote the desired **asynchronous dynamics and ecological stability of forests**. In regard to the needs of multifunctional management, especially one that supports **biodiversity, water retention in the landscape**, **the accumulation of carbon**, etc., it is necessary to create a framework for the implementation of a **wider spectrum of management alternatives** supporting these functions. **The Platform for Sustainable Landscape Management** (www.nasekrajina.eu) was set up to share information, assistance in developing strategic advice and education for sustainable landscape use. We collaborate with the Czech Ministry of the Environment on the **National Action Plan for Climate Change Adaptation in the Czech Republic** in formulating adaptation measures concerning the way forests are managed.

Situation in the Czech Republic

- **Unsustainable forest management** in **even-aged** and managed forests is still carried on.
- **Discontinuity** in the political development.
- Second half of the 20th century was a period that left heavy environmental damage from **industrial pollution**.
- Forestry mostly **economy-oriented**
- Current massive **spruce forest dieback** caused by drought, root rot and bark beetle attack.

International situation

- The goals of the modern forestry are defined in terms of **sustainability, multi-functionality, biodiversity** and providing **ecosystem services**.
- **Strategic Goal B of Aichi Target: Reduce the direct pressure on biodiversity and promote sustainable use**.
  Target 7: Agriculture, aquaculture and forestry are managed sustainably.
- **European-wide forest damage** and the growing demands of society on the multifunctional character of forests have raised the need for **changes in the current paradigm**.

The **Platform for Sustainable Landscape Management** collaborates with the Czech Ministry of the Environment on the **National Action Plan for Climate Change Adaptation and National Forest Programme** in the Czech Republic in formulating adaptation measures concerning the way forests are managed:

- Introduce methods of **ecological restoration** that respect the pace of **natural rejuvenation** and protect ecosystem values.
- Limit the overall use of clear-cuts and replace the traditional clear-cutting models by **site-based** and **context-dependent forest management** strategies such as, for example continuous cover silviculture
- Strive for a more **natural tree species composition** by underplanting parent stands and prefer **natural forest regeneration** and recruitment of pioneer trees within recovering forests.
- Ensure long-term **maintenance of relationships between wildlife and forests** with economically insignificant damage to allow regeneration of suitable tree species.
- Transform forest management: apply **selective and small-scale management methods** and support natural processes during stand development.
- Ensure the **protection of forest biodiversity and its monitoring** at the level of species and types of forest communities (according to the Habitat Directive). Each community requires its specific management based on **historical knowledge** and depending on the environment. The problem of biodiversity loss must be solved systematically and in **coordination with nature and landscape protection administrations**
- The **wilderness** concept can be applied to species dependent on forest cover continuity, deadwood and large trees (some bryophytes, lichens, fungi, saproxylic beetles and birds associated with old forests, and cavity-nesters) negatively affected by extensive forest management.
- Some endangered species can be supported **by traditional management with shorter rotation** times replacing high forest systems (typically Pannonian oakhornbeam forests).
- **Retain old trees and dead wood** (including logging residues) to a level that will allow the optimal functioning of forests.
- Enhance **natural water retention** and stabilize flows in forest streams to reduce erosion. **Prevent forest wetland desiccation**. **Restore wetlands** and reassess existing ameliorative measures in forests.
- Reduce or completely **eliminate the planting of geographically nonindigenous species** in forests important for biodiversity conservation.
- Prepare a policy against erosion based on **environment-friendly afforestation of non-forest land** with regard to preserving biologically valuable sites and by making use of natural processes.
- Significantly limit or even **completely exclude liming and fertilization of forests**.
- Encourage the **participation of land owners in decision making leading to sustainable local and regional forestry**, the return of residents to the countryside and economic activity on private land.

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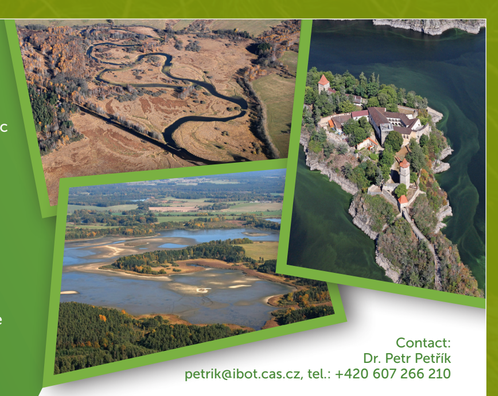
The Platform for Sustainable Landscape Management

The platform is an interest group representing all main sectors of landscape management (academic research organisations, universities, state administrative, state sector organisations, NGOs and private sector) and co-operating with main policy-makers. Our expertise and current activities are focused mainly on forestry sector recently.

WHAT CAN WE OFFER

Cooperating/Involved Institutions

- The Institute of Botany CAS – platform leader
- Nature Conservation Agency of the Czech Republic
- Biology centre CAS
- CENELC.cz
- CzechGlobe – Global Change Research Institute CAS
- Czech University of Life Sciences
- IFER – Institute of Forest Ecosystem Research Ltd.
- University of South Bohemia in České Budějovice
- Mendel University in Brno
- The Silva Tarouca Research Institute for Landscape and Ornamental Gardening
- The Research Institute for Soil and Water Conservation
- T. G. Masaryk Water Research Institute



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