

Expert Group on Adaptation to Climate Change

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Climate adaptation and the forests in the Carpathian Region

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Carpathian Convention**



Content

- About the Carpathian Convention
- Climate change adaptation in the region
- Strategic agenda on climate adaptation
- Protocol on Sustainable Forest Management
- Challenges and measures



Carpathian Convention

- Adopted on 22nd May 2003
- Entered into force on 4th January 2006
- Ratified by all seven State Parties (CZ, HU, PL, RO, RS, SK, UA)
- Goal: pursue comprehensive policy and cooperation in order to guarantee protection and sustainable development of the Carpathians



Appropriate WGs at the Carpathian Convention

- WG on Sustainable Forestry

Article 7

Sustainable agriculture and forestry

Applying sustainable mountain forest management practices in the Carpathians

Pursuing policies aiming at designating protected areas in natural, especially virgin forest



Appropriate WGs at the Carpathian Convention

- **WG on Adaptation to Climate Change**
 - Capacity building programme which draws on, and enhances the connectivity of the Region
 - Information management and awareness rising
 - Climate-proofing of infrastructure, investments and climate-cross compliance
 - Development of forestry measures for climate change adaptation
 - Making biodiversity management more dynamic
 - Evaluation of Carpathian ecosystem services
 - Capacity-building on proposal-writing for adaptation funding



How do you contribute with your work in your country/organization to climate change adaptation activities?

Strategic Agenda on the Adaptation to Climate Change

1. Introduction
2. Background
3. Impacts of climate change in the Carpathians
4. Policy responses to create a Path to a Climate-Proofed Carpathian Economy
5. Institutional and organisational responses
6. Cross-Cutting Opportunities
7. Opportunity for the EU Funds from 2014-2020:
8. Steer the Region's Development Towards a Climate-Proofed Carpathian Space
9. Potential Priority Climate Change Adaptation Actions



How do you contribute with your work in your country/organization to climate change adaptation activities?

The Protocol on Sustainable Forest Management

To achieve the objectives, Parties shall cooperate on:

1. Maintaining/enlarging forest cover
2. Ensuring the productive functions and rural development
3. Promoting the sound use of wood as well as non-wood forest products
4. Improving health and vitality
5. Identifying and protecting natural and virgin forests
6. Promoting the restoration of close to nature forests
7. Enhancing the role of the forest-based sector in mitigating climate change
8. Improving protective forest functions
9. Strengthening the governance of the forestry sector, enforcing forest law, combatting illegal logging, etc.



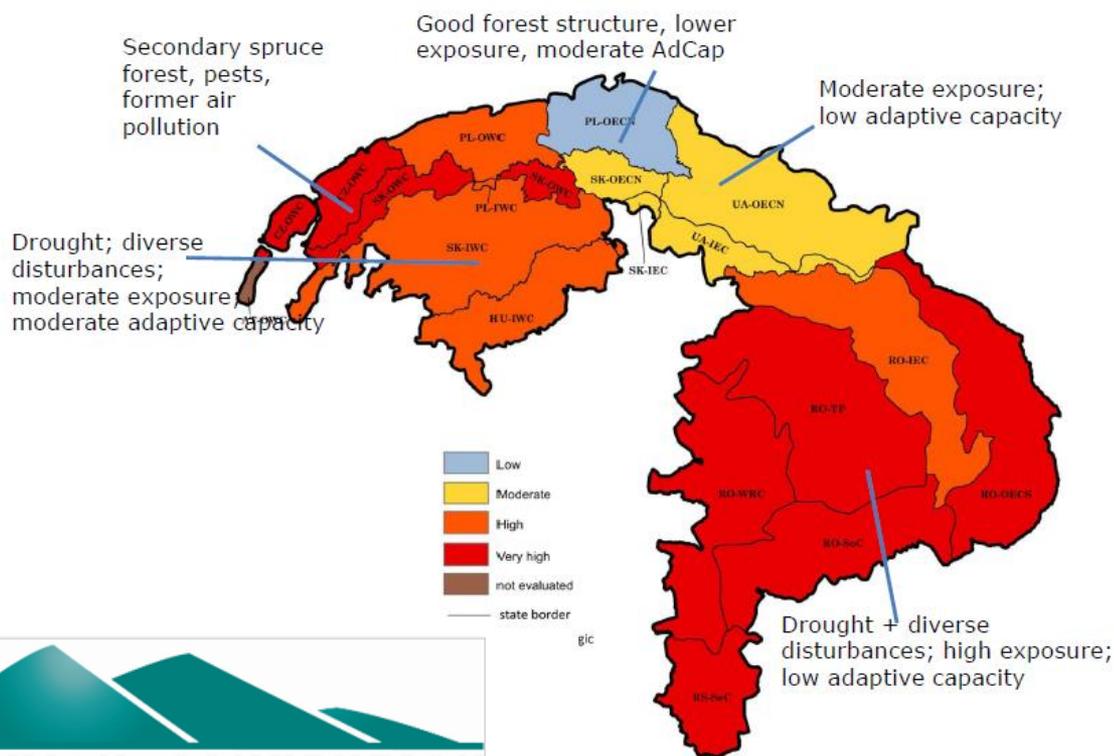
How do you contribute with your work in your country/organization to climate change adaptation activities?

- **Article 14 of the Protocol on Sustainable Forest Management**
 1. Each Party shall pursue policies aiming at enhancing the role of the forestry sector in mitigating climate change, with particular attention to finding the right balance between increasing carbon stocks in forest ecosystems, promoting the use of renewable wood energy, and the sound use of wood products as substitutes of rough materials derived from non renewable resources.
 2. Each Party, taking into consideration the effects of climate change, shall pursue adaptation policies and measures aiming at increasing the stability and the resilience of the Carpathian forests.
 3. Each Party, taking into consideration the increased vulnerability of forest to the fires and other extreme events due to climate change, shall undertake appropriate measures in order to reduce the risk and mitigate the effects



How do you contribute with your work in your country/organization to climate change adaptation activities?

Forests – vulnerability



Hlasny et al.,
CarpathCC project



Please describe a successful example of climate change adaptation measures implemented in your country/by your organization

Project under preparation:

Reducing erosion during the forest management activities

Submitted projects:

ConnectGREEN project, which focuses on the identification and management of ecological corridors in the context of spatial planning in the Danube-Carpathian region, submitted under the second call of the INTERREG Danube Transnational Programme (DTP)

-WILD for DC project, which focus on sustainable solutions for wildlife crime prevention (among which illegal logging) in the Danube Countries, submitted under the second call of the INTERREG Danube Transnational Programme (DTP)

Running projects:

In connection with protected areas, biodiversity, ecological corridors like Transgreen (DTP-1 project)



Is there a national strategy (does your organization have a strategy) on adaptation of forests to climate change?

Tasks for the future:

- strengthen the cooperation between the WGs
- improve the cooperation with the neighbouring regions
- increase the activity in the frame of UNEnvi



What are major challenges related to climate change and forests in your country/organization?

Key impacts

Impact depends on diverse factors, such as tree species, forest structure, elevation

Lower elevation forests, mainly in south SVK, HUN, ROM, SRB are especially prone to drought and temperature rise

Increase in extreme rainfall events & deforestation may increase risk of landslides

Intensifying droughts and windstorms followed by outbreaks of bark beetles and defoliating insect are the main risks; +potential influx of new pest species

Treeline moving upward, changes in composition

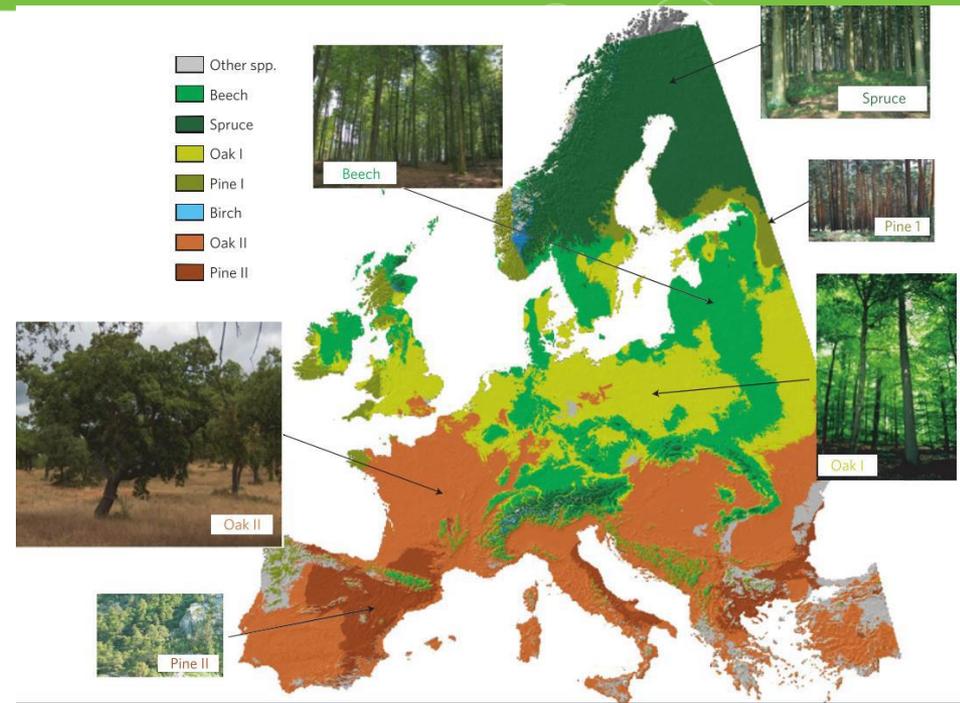
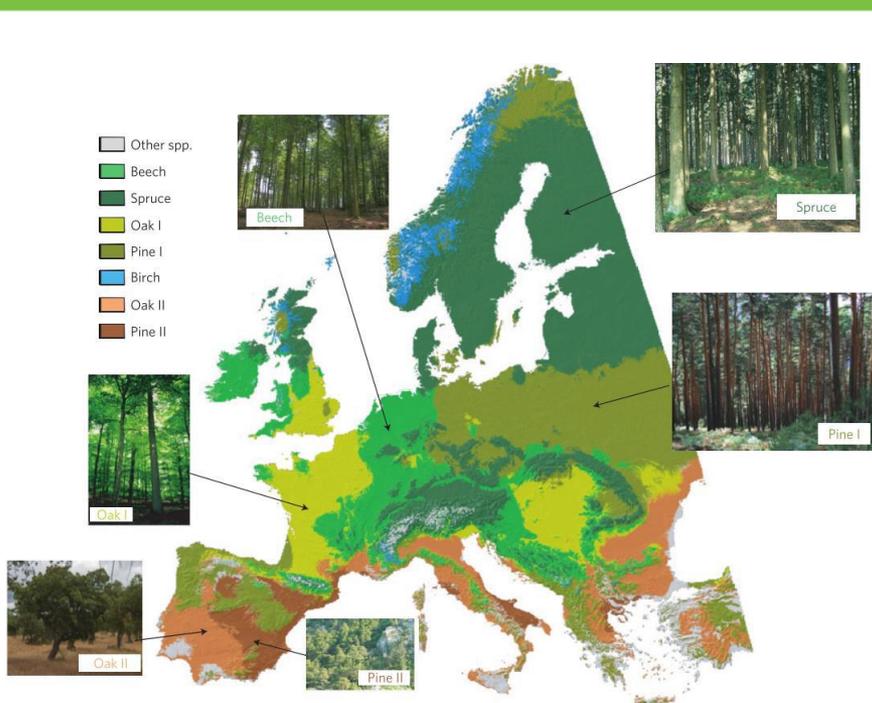


Perspectives (Hlasny, 2017)

- Ca 20 % of forests disturbed during recent 25 years (Griffiths et al. 2014)
- Impact of large-scale windthrows, e.g. SK 2004, RO 1995
- Indications of drought-induced mortality and decline in vigor appearing (HU, RO)
- Observations of new insect pests (northern bark beetle being the most well-known)
- Indigenous pests changing population dynamics and distribution (e.g. spruce bark beetle)



Shifting climate and vegetation (Hanewinkel et al, 2012)



Future (Hlasny, 2017)

- Intensifying disturbances, which include new pests and diseases
- Shifting disturbance regimes towards the prominence of heat, drought and forest fires
- Disturbances reduce the share of vulnerable species and age classes, and may catalyze forest conversion and adaptation (should be used wisely in management)
- Increased forest dynamics in water limited environments
- Drought-tolerant species will be favored and management might consider assisted migration and similar concepts



Literature

- Future Imperfect. UNEP, September, 2014
- Homepages
 - Carpathian Convention, for example
 - Future Imperfect
 - Sixth Meeting of the WG on Sustainable Forest Management & Workshop on balancing bioenergy production and sustainable forest management in Mountain Area
 - CarpathCC project
 - Carpivia project
 - CarpatClim project



Thank you for your attention!

