



5th Forum Carpathicum 2018

*Adapting to Environmental and Social Risk in the
Carpathian Mountain Region*

Report and Recommendations

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and sessions leaders



Outline

- **S4C and Forum Carpathicum conferences**
- **Recommendations of the 5th Forum Carpathicum**
- **Recommendations to the Carpathian governance**



Science for Carpathians (S4C)

- connects scientists and practitioners in Carpathians
- defines research priorities for the region
- enhances international collaboration with partners from outside the Carpathians

10 years of Carpathian conferences



Launched in the first S4C conference in Kraków, Poland (27-28 May 2008) as a direct response to the Carpathian Convention's need of a voice from the Carpathian science community.

Forum Carpathicum conferences

2010 Kraków (Poland)

Integration of nature and society towards sustainability

2012 Stará Lesná (Slovakia)

From data to knowledge, from knowledge to action

2014 Lviv (Ukraine)

Local Responses to Global Challenges

2016 Bucharest (Romania)

Future of the Carpathians: Smart, Sustainable, Inclusive

2018 Eger (Hungary)

**Adapting to Environmental and Social Risk in the
Carpathian Mountain Region**

5th Forum Carpathicum

15-18 October 2018 Eger, Hungary



Conference organizers

Partner organizations

5th
Forum Carpathicum

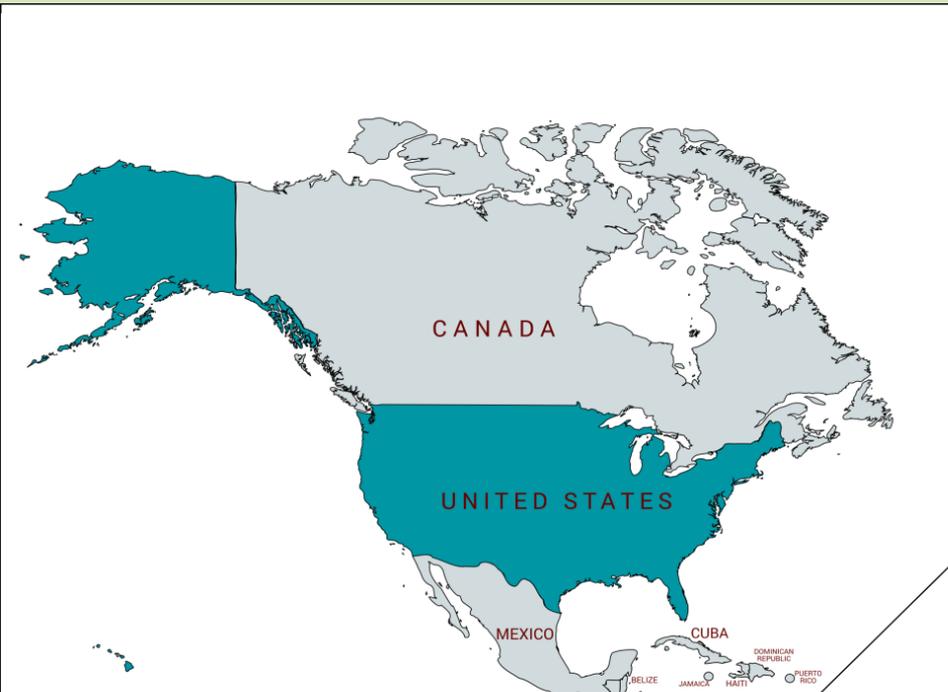
Adapting to Environmental and Social Risk
in the Carpathian Mountain Region

Hotel Eger-Park, Eger, Hungary | 15-18 October 2018

WELCOME

5th Forum Carpathicum 2018

Adapting to Environmental and Social Risk in the Carpathian Mountain Region



Austria	7
Belgium	1
Czech Republic	13
Germany	1
Hungary	9
Italy	2
Poland	31
Romania	15
Serbia	2
Slovakia	6
Spain	1
Switzerland	4
Ukraine	14
United Kingdom	2
United States	1

5th Forum Carpathicum

Adapting to Environmental and Social Risk in the Carpathian Mountain Region

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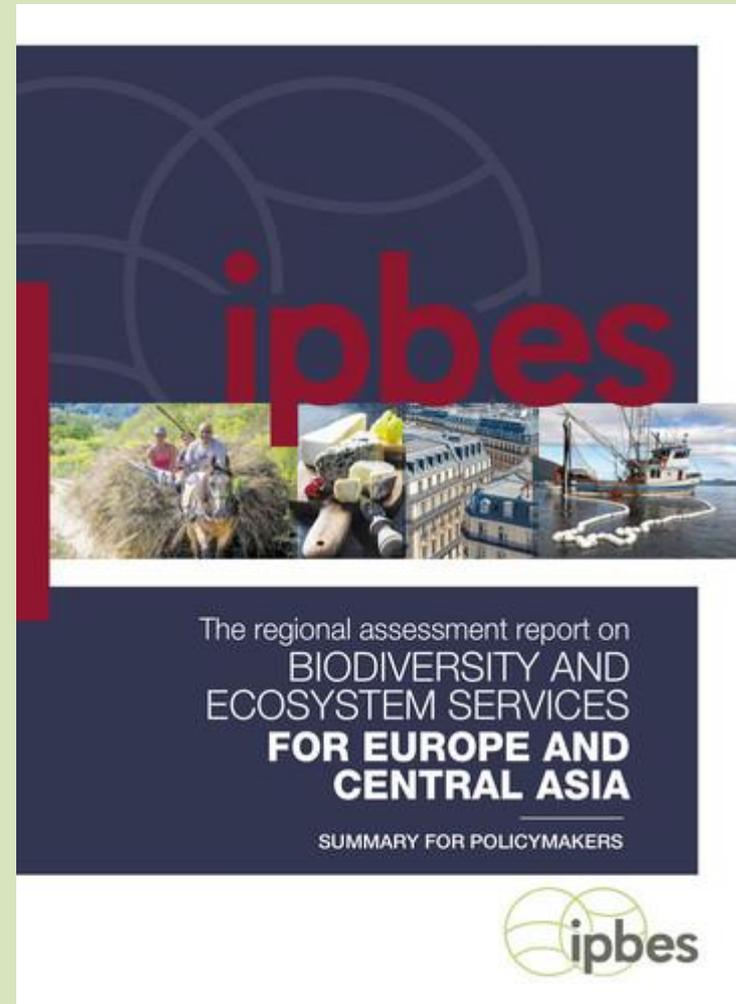
Biodiversity

FC session: Climate change vulnerability and adaptation of biodiversity

- The high biological diversity of the Carpathians **faces growing pressures**
- In the long-term perspective, **almost every natural habitat type** in the Carpathians **has remarkable decreased**
- The Carpathians still support viable populations of large carnivores, but increasing infrastructure development presents challenges to **maintaining connectivity** of their habitat and to **avoid its fragmentation and isolation**
- Improve networks of scientists engaged in multidisciplinary research
- Facilitate **trans-boundary and regional scale research**
- Continue to **harmonize protocols and methods** throughout the Carpathian region

Novelties of IPBES

- Many new data, new reviews, new syntheses (since 2005)
- Focus also on institutions driving changes in species and ecosystems
- **Inclusion of social sciences**
- **Inclusion of indigenous and local knowledge**
- IPBES recognizes and respects the contribution of indigenous and local knowledge to the conservation and sustainable use of biodiversity and ecosystems and takes an **interdisciplinary and multidisciplinary approach** that incorporates all relevant disciplines



Summary for policymakers: 52 pages, 17 authors
Report: >1100 pages, >120 authors

Some key IPBES messages relevant for Carpathians

- A more **integrated, participatory approach** is needed in protected area management.
- **Traditional knowledge is rich in our region but is often not respected.**
- **Traditional practices are needed for conservation** but are largely side-lined in regulatory frameworks.
- **Landscape-specific and culture-specific agricultural regulatory frameworks and subsidy systems** are needed.
- Small-scale extensive land use often **survives in protected areas** only.

*“The land area, **where traditional practices are still applied** has **substantially decreased** in many regions of Europe and Central Asia as a result of socio-economical changes and land-use intensification. However, many practices have **survived on marginal lands**, in protected areas, or as a result of socio-cultural preferences.”*

*„Protected area governance and management regimes are often characterized as **top-down with low levels or quality of public participation**; inflexible responsible authorities and insufficient consideration of the local context; engendering negative public perceptions; and resistance amongst members of local communities.”*

Spatial development

FC session: Land cover and land use change: current status, new approaches, future challenges

- **Landscape diversity declined significantly** over time in the Carpathian region
- Widespread **urban sprawl, infrastructure development, and land use intensification** induce a growing challenge how to manage the Carpathians sustainably
- **Spatial planning need to be addressed to mitigate settlement sprawl** and its negative impact on the environment

Scattered settlements



Dominik Kaim (2017)



Landscape homogenisation 1962-2009

Photo: Dominik Kaim

Sustainable and integrated water/ river basin management 1

FC session: Carpathian waters: functioning, management, silvicultural and social impacts

- Carpathian **rivers experienced considerable and complicated changes** to their hydromorphological quality in the last century.
- Channel incision considerably **modifies the functioning** of physical and biotic processes in mountain watercourses, but **new approaches are proposed to improve their management** and mitigate negative impacts of incision.
- Despite **river restoration activities are still rare** in the Carpathian region, they clearly demonstrate benefits for water management and the state of riparian communities

Sustainable and integrated water/river basin management 2

FC session: Carpathian waters: functioning, management, silvicultural and social impacts

- **Perception of hydromorphological features by stakeholders** is important for proper conservation of valuable fluvial processes.
- Anthropogenic factors (e.g. air pollution, spruce stand decay or clear cut) can affect spring water chemistry in forested regions of the Carpathians.
- **Establishing a new forest with a different composition** (fir, beech and maple) **after spruce stand decay** can change spring water chemistry – increase the content of basic cations and reduce nitrogen

Sustainable agriculture and rural development

FC session: Rural development, social innovation and adaptive responses of disadvantaged communities in mountain areas

- Promote **social innovation** as a force to sustainable development in the Carpathians and **reduce marginalization** of disadvantaged communities.
- Promote **public-private partnerships** to scale-up and scale-out of social innovation and new governance mechanisms.
- Create a database of **examples of social and social-ecological innovations** in rural Carpathian communities
- Create a workable **network between successful cases**, extending opportunities for wider (transboundary) cooperation and social innovation

The potential for social innovation in the revitalisation of Carpathian mountain communities

Social innovation involves: *“the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors”*

- It is **grounded in the actions of civil society**, not necessarily operating alone, but often in partnership with others
- It **offers new ways of addressing long-standing social economic and environment problems** especially in areas where the market economy is fragile and the state has limited resources



Bill Slee: The potential for social innovation in the revitalisation of Carpathian mountain communities

Braemar – a mountain community driven by a strong community development trust

- Took over a castle as tourist attraction
- Restored traditional rural buildings
- Developed a community hydro scheme
- Developed social care project
- Developed community gardens
- Now thinking about social needs housing project

The potential for social innovation in the revitalisation of Carpathian mountain communities

Challenges

- **Legacy effects of five decades of state socialism** especially the all-embracing nature of the states activity
- **Weak development of civil society**, distrust by state of some civil society organisations and a drift towards authoritarian nationalism in some countries
- **Fragility in the market economy** - villages “dying”
- **Collective action tainted** by past narratives of enforced collectivisation
- **Low levels of social capital**
- **Weak institutional support mechanisms**

Five critical points in creating more potential for social innovation in the Carpathians

- Recognise what **assets you have and build on them: the most low carbon lifestyles in Europe?**
- Accept the limits of action by the state and the market - don't wait for them to deliver salvation!
- **Share good practice** in social innovation and build on it- there are good examples
- Build **new partnerships of academics, state actors, businesses and civil society** to create action spaces to deliver sustainable development-rural lives are not constructed in silos!
- Recognise that social innovation is easier in advantaged communities and less advantaged communities may well need more support

Sustainable forest management 1

FC session: Forest dynamics and natural disturbance-based forestry

- **Employ research on forest dynamics and natural disturbance regimes** to understand the range variability to which organisms are adapted.
- **Use natural disturbance ecology** to inform development of sustainable forestry systems.
- **Develop natural-disturbance based forestry systems**, including silvicultural approaches to promote restoration of old-growth forest characteristics and emulate partial disturbances.
- **Revise our understanding of forest dynamics** in the Carpathian region based on research from a regional permanent plot network.
- **Adapt forest management** to shifting disturbance baselines caused by climate change.
- **Anticipate future changes in forest composition**, species distributions, and ecosystem service provisioning.

Sustainable forest management 2

FC session: Effects of forest management on biodiversity

- **The area of primeval forests have been strongly and considerably decreasing in the Carpathians** - strong negative effects on biodiversity
- **Both the conservation of protected areas and the ecologically sustainable forest management in production forests** are very important for the conservation of forest biodiversity on landscape level
- Production forests: the use of **close to nature forestry systems** (as traditional partial coppicing, continuous cover forestry methods and intermediate disturbance based forestry) should be increased beside rotation forestry systems for the maintenance of forest biodiversity.
- For conservation planning the determination of **conservational aims should be defined for the selected areas for the next decades**, in some cases abandonment (preservation) while other cases conservation oriented management fit better for the conservational aims.
- For the indication of forest biodiversity responses **multi-taxa indicators** based on the composition of communities are necessary.



Sustainable tourism

- Work towards full **consensus how to achieve sustainable tourism** in the Carpathian region (*e.g. planned ski resort can have far-reaching consequences on the ecosystems and biodiversity*)
- Apply research more effectively. **Scholarly outputs in the literature do not consistently reach stakeholders and constituent communities**

Photo: Y. Bihun



Cultural heritage and traditional knowledge

FC session: Traditional ecological knowledge and traditional land management



Photo: Babai Dániel

Cultural heritage and traditional knowledge

FC session: Traditional ecological knowledge and traditional land management

- **Traditional knowledge is rich in our region**, and deserve culturally appropriate support.
- Traditional knowledge is **not well respected or considered in environmental management**.
- There is a need **for better incorporation of traditional knowledge across all sectors** of environmental management and sustainability efforts
- Small scale traditions often remain only in protected areas.
- **Environmental education could be better embedded in local/regional culture.**

AN UPCOMING EVENT ON TRADITIONAL KNOWLEDGE IN OUR REGION

- **A discussion forum and training course** for researchers, government representatives and students will be organized in 2019 to help recognition, documentation and use of traditional ecological knowledge in our region (East-Central Europe) **organized jointly by CBD and IPBES (in Hungary or Romania).**



**Cultural landscape with species-rich hay meadows
in the Eastern Carpathians: Gyimes**

Photo: Molnár Zsolt

Climate change adaptation

- Measurements and models indicate **significant changes of temperature and drought with considerable consequences to vegetation belts and main forest types**
- **Adapt forest management to shifting disturbance baselines** caused by climate change
- **Enhance communication to local communities and regional authorities** on consequences of climate change to forest
- **Protect ecological corridors** facilitating species migrations to mitigate some climate change vulnerabilities

Awareness raising, education and public participation

*Workshop: Education for Science & Society in the Carpathians
Place: Lyceum , Eger*



Awareness raising, education and public participation 1

Session and workshop: Education for Science & Society in the Carpathians

Main challenges for Education for Sustainable Development (ESD)

- The high speed of technical development – **information overflow**
- **Growing alienation** from nature, urbanisation
- **Political neglect of the natural values**
- **Bad practices** in ESD: little attention to free exploration in nature, little activities with adult and parents, neglect the problem of slow learners
- **Fragmentation of knowledge:** competition for students' attention, learning only for passing the exams, irrelevant knowledge production by universities
- **Lost of traditional, local knowledge**, even the very basic facts
- **Lack of co-operation** between natural and social sciences and educators

Awareness raising, education and public participation 2

Recommendations

- Promote **projects focused on teacher education** for education for sustainable development
- **Promote educational cooperation** between mountain regions
- **Involve business, NGO and stakeholders** into educational projects
- **Compare curricula in Carpathian countries** and adapt national and local curricula to new challenges
- Encourage **communication between the ministries of education**
- Require scientific assessments of the effects of all supported long-term projects on education projects
- **Support/develop Carpathian MS programme in sustainable mountain development**
- Establish a **CC working group in education** influencing ESD policy

A light blue map of the Carpathian Basin region in Europe, showing the Carpathian Mountains and surrounding countries. The title 'Outline' is centered at the top in a dark red font.

Outline

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Recommendations to Carpathian governance 1

- Consider **enhancing cross-sectoral discussions at the international level** under the Carpathian Convention (currently there is limited overlap between participants of topical working groups)
- Data on organizations' participation to meetings of the Carpathian Convention could allow actors of the Convention (Secretariat, parties, NGOs, protected area administrations etc.) to reflect on their engagement and to **identify possible future directions for the development of the Carpathian Convention's network**
- Need to ensure that **datasets are harmonized across countries**, and **data gaps are reduced** as much as possible (*eg. data submitted by the Carpathian Convention's parties under the Forest Protocol's virgin forest inventory were very heterogenous*)

Recommendations to Carpathian governance 2

- Attention should be paid to **harmonisation of national-level policy objectives and international commitments** (eg. policy objectives of Carpathian Convention's Forest Protocol and the Hungarian Forest Code seem to go in different directions)
- We should **recognize the role of education** and promote universities to become role-models for **participatory governance through the implementation of transdisciplinary case-based teaching projects**



Next Forum Carpathicum: 2020 Czech Republic Průhonice Castle and Conference Centre