



# 5<sup>th</sup> 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**

# 5<sup>th</sup> 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*



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

**5<sup>th</sup> Forum Carpathicum**

Adapting to Environmental and Social Risk in the Carpathian Mountain Region

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# Outline

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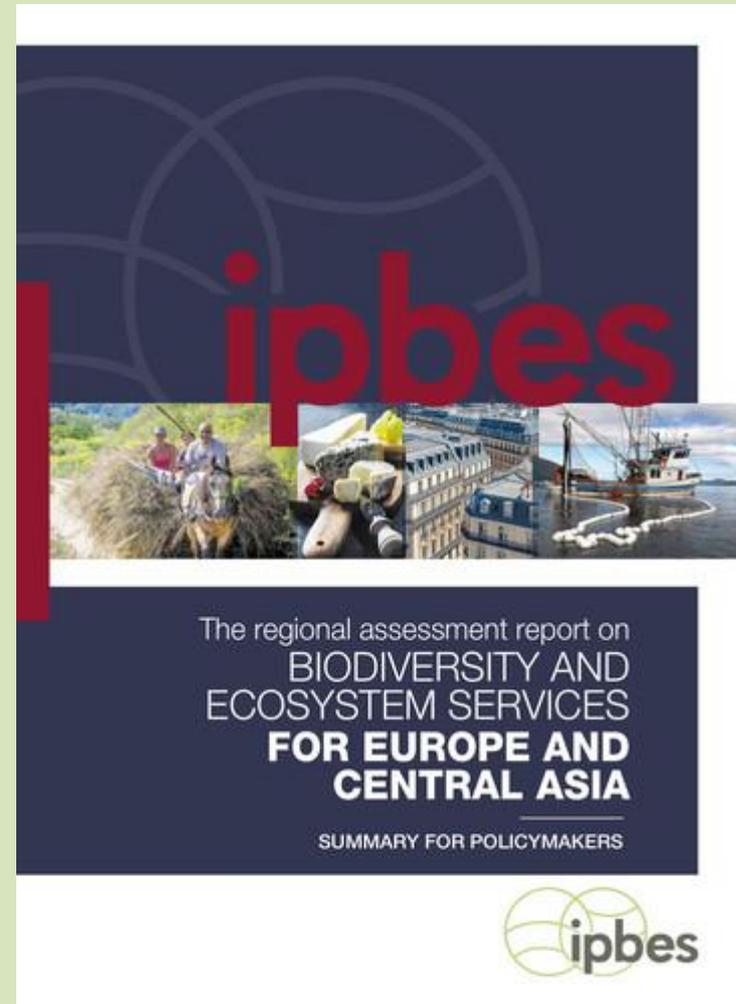
# Biodiversity

*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

A group of approximately 15 people, including men, women, and children of various ages, are posing for a group photo on a rocky mountain path. They are all smiling and waving their hands. The background features a small waterfall cascading over rocks, surrounded by rugged, brownish vegetation typical of a high-altitude mountain environment. The overall scene is bright and cheerful, suggesting a community outing or a successful project completion.

## 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

- **S4C and Forum Carpathicum conferences**
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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