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Workshop on science in decision-making:
How to improve knowledge exchange among scientists and decision makers in Carpathians?

Results of the Workshop Discussion

1. **What are the most urgent knowledge gaps in the field of Biodiversity for the Carpathian Convention? How can they be addressed in the research agenda and in research projects?** *(Discussion hosts: Luboš Halada and Pavel Cudlin)*

This group discussed knowledge gaps related to biodiversity. It was perceived that even the basic information, such as habitat and species distribution, is not sufficient on pan Carpathian level. Therefore, it is needed to enhance mapping and assessment of biodiversity in Carpathians and specifically in non-EU Carpathian countries – including habitat and species distribution mapping.

There is:

- Lack of management measures to keep biodiversity;
- Lack of knowledge of long-term processes (we study mostly present state)
- Lack of knowledge of indirect effects of human activities to species/biodiversity
- Non-sufficient knowledge of effects of climate change to biodiversity.
- Non-sufficient knowledge of consequences of forestry management to biodiversity.
- Not sufficient knowledge of invasive species and their regulation

Data on large carnivores’ populations are mostly available from foresters; there is a need to apply other methods. Questions to be investigated: optimal size of large carnivores’ populations, knowledge of human interaction with large carnivores, effect of legal hunting to pack structure and behaviour.

Recent spruce dieback in Carpathians could be considered as threat to natural forests while in monocultures it could be considered as an opportunity.

The gaps exist in more complex approaches to biodiversity: ecosystem approach, services to humans, ecosystem effects to human health, methods of mapping and assessment of ecosystem services.

2. **What are important interdisciplinary areas and research questions under the Carpathian Convention strongly related to Biodiversity, which can be addressed by S4C?** *(Discussion hosts: Attila Varga and Joanna Zawiejska)*

Overall challenge: Mainstreaming biodiversity issues in research and other policy agendas, recommendations.

- Ecosystem services:
  - a need for a practical regionally adapted guideline used to assess ecosystem services during spatial planning, as well as for pan-Carpathian assessment tools (local legal, environmental or socio-economic contexts may lead to different
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results or management challenges e.g. within the same geographic region in two neighbouring countries).
- data collection for spatial planning, landscape conservation
- green infrastructure planning (increase ecosystem services)
- identification of ecosystem services provided by natural areas
- increase visibility of the ecosystem services for political and economic decision makers
  - biodiversity as service for tourism
  - regulation of fossil fuel usage

- Landscape management
  - cultural traditions,
  - interaction with religions
  - river-basin management
  - effects of transport, road networks on biodiversity
  - effects of demographic changes

- Education:
  - use citizen science approach as possible
  - researchers need to train teachers instead of teach pupils directly
  - involve main research findings, and protection approaches into school curricula (eg. large carnivores)

3. **What are concrete ways and opportunities for scientists to cooperate with WG on Biodiversity and CC Secretariat in order to support CC work in this field?** *(Discussion hosts: Klaudia Kuras and Tamara Mitrofanenko)*

There is a lack of communication between the S4C and the CC focal points and WGs, which should be addressed:

- S4C colleagues should be present at the WG meetings and CCIC
- Workshop format for discussion was found by participants to be useful and successful
- Focal Points are open to requests for interviews, etc.
- S4C should select a national S4C contact point, which would be one S4C representative, which could be in touch with the respective CC national focal points, so that they can inform each other about activities
- Secretariat can provide space for selected relevant research on the CC website
- Inviting focal points to the relevant scientific events on the national and regional level
  - Challenges of getting national FPs to the Forum Carpathicum

S4C could support inter-sectorial linkages of the CC, such as by integrating information on Biodiversity into other thematic WGs, such as agriculture, tourism, forestry, and vice-versa.
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Inter-connection of platforms and databases should be considered, such as thematic platforms (on Biodiversity) or databases of experts (such as those from the S4C and those who are not linked with this network, but still do research).

S4C should be linked with CNPA and researchers working in protected areas.

The Carpathian Convention can facilitate organization of inter-sectorial multi-stakeholder events, which can support preparation of position-papers and recommendations, to be communicated by the Carpathian Convention to the focal points. This can support the Focal Points when they approach other ministries and other organizations with requests for cooperation and action.

- S4C could be involved into the elaboration of the position paper on the Common Agricultural Policy

Recommendations “officially” elaborated by the Carpathian Convention in this way could strengthen the position of focal points and facilitate their action on the national level. S4C could support such events by providing space for them during Forum Carpaticum conferences, and cooperating with CC on organizing them.

- Question: to which extent can S4C be considered an official research body of the CC?

Researchers of the S4C could provide scientific information needed to support decisions made in the WGs. Moreover, research briefings can be prepared on specific topics relevant for CC events, such as recommended references of S4C publications. Invited WG participants could look at these recommended research in order to be better prepared for the meetings.

Recommendations from WWF DCP:

- Select a list of Indicator Species, and monitor these species on a long term to assess the state of Carpathian ecosystems
- Involve the scientists from S4C into advocacy and awareness-raising initiatives

Inputs from Bill Keeton:

- Adopting a broader approach to protecting the few remaining valleys in the Carpathians where natural processes and dynamics are operating at truly landscape scales
- Considering Capercaillie as an indicator/umbrella species