

TOWARDS A CARPATHIAN NETWORK PLATFORM

DISCUSSION PAPER, DRAFT V01_REV (NAME OF THE PLATFORM)

1. Introduction

Mountain ecosystems play a critical role of for providing essential goods and services, including water supply, biodiversity, leisure and landscape, and are important income sources for communities through agriculture, tourism and the use of natural resources. While climate changes and disturbances in mountain systems have had impacts on lowland communities throughout human history, the ability to track and manage these impacts has majorly emerged in recent decades.

However, the important role of mountain ecosystems beyond national borders and the risks they are increasingly facing is still widely underrepresented in decision making processes for natural hazard risk prevention and early warning systems as well as coping with impacts of climate change. As mountains are particularly vulnerable to climatic changes, protecting important sites for mountain biodiversity is vital for ensuring long term and sustainable use of mountain natural resources and to build resilience.

The transboundary dimension of climate change risks needs to be better understood to ensure effective collaboration towards achieving global goals on climate change (United Nations Framework Convention on Climate Change, UNFCCC and the Paris Agreement) and disaster risk reduction (Sendai Framework for Disaster Risk Reduction, UNDRR) as well as the Sustainable Development Goals (SDGs). Climate impacts in one country will create risks and opportunities – and therefore may require adaptation – in other countries, due to cross-border connectivity within regions and globally.

A mountain range such as the Carpathians encompasses transboundary ecosystems, where adverse climate impacts on one part of a transboundary ecosystem can create impacts for all the countries that share the ecosystem's services. For example, heat wave- and drought-induced forest fires in one country can disturb the air quality of countries far away downwind. Furthermore, countries' responses to climate change, for example by building new dams or diverting more water into irrigation, can have massive impacts on downstream countries via this pathway ([Benzie et al., 2016](#)).

In order to steer progress towards building resilience and supporting collaborative action on climate risks and impacts in the Carpathians, governance actors require effective science-policy interfaces capable of timely recognition and communication of early warnings as well as longer-term risks, backed by effective monitoring networks.

This **discussion paper** aims to provide background information on examples for climate change platforms and networks, including their activities and organizational structure and puts forward a proposal for establishing a platform for collecting, managing, sharing and

disseminating information on climate change and its effects in the Carpathian region. The ultimate objective will be to create a viable arrangement governed by the Carpathian Convention and supported by / included into dedicated European or global projects while enjoying strong national and regional ownership. Partners benefit from being part of the platform for many reasons, including opportunities for networking, collaboration, knowledge-sharing, and the accessing of funding avenues.

A Carpathian Network Platform could be a forum that brings together diverse actors across the Carpathian space in order to collaborate on disaster risk reduction (DRR) and climate change adaptation (CCA) priorities. The platform thrives to create an enabling environment for DRR and CCA and aims to ensure that collaborating partners are efficiently equipped with the knowledge and resources they need to act on climate change risks.

The platform can build in particular on the predecessor projects CARPIVIA, CARPATCLIM and CARPATCC. The Carpathian Convention together with GRID-Arendal and Eurac Research has published in 2017 an "[Outlook on climate change adaptation in the Carpathian mountains](#)" (in the context of the Mountain Adaptation Outlook Series). Together with the Austrian University of Life Science (BOKU), work is underway to improve high resolution forecast of climate change effects on the local level in the Danube Carpathian region.

A dedicated section for climate change adaptation in the Carpathians has been created on the European Climate Adaptation Platform [Climate-ADAPT](#), hosted and maintained by the European Environment Agency (EEA). The [Climate-ADAPT Strategy 2019-2021](#), adopted in January 2019, outlines various lines of activities relating to transboundary information:

- Enhancement of Climate-ADAPT case studies and adaptation options:
The target is submitting to the Climate-ADAPT DB an average number of 10 case studies per year during 2019-2021, to fill the gaps and have an appropriate coverage in sectors and impacts, *considering also the geographical dimension*.
- Further development of Climate-ADAPT web content, including the section on 'Countries, Transnational regions and cities'
- Dissemination strategy:
According with the results of the Climate-ADAPT evaluation, some specific user groups have not yet been sufficiently reached, i.e. sectoral experts and *users from eastern and central European countries*. To filling this need, the Dissemination Strategy has a focus in targeted dissemination action towards these specific groups.

2. Purpose and goals of the proposed platform

The last Conference of the Parties (COP5, 2017) adopted an amendment to the Carpathian Convention, the [new Article 12bis on Climate Change](#) in order to emphasise the importance of the climate change issues in the Region. Parties are currently undergoing the ratification process of this amendment.

Article 12bis on Climate Change highlights in lit.b that Parties to the Convention shall, inter alia, promote research and scientific cooperation, transnational cooperation, public participation and cooperation of all stakeholders.

Creating a **Carpathian Network Platform for climate change** would clearly support the implementation of the dedicated Article on climate change **towards the following goals:**

- Exploring common priority actions to strengthen regional cooperation in the Carpathians;
- Identifying possible areas of synergy between national and sub-national approaches to deliver more successful outcomes coping with climatic changes;
- Strengthening the networking of Parties to the Carpathian Convention through possibly exploring new mechanisms of cooperation and sharing experiences;
- Supporting participatory and decision-making processes to accelerate action for mutual concerns;
- Exploring further the policy, science and practice aspects that can help promote innovative approaches;
- Joining forces on funding opportunities and drawing the attention of donors towards the benefits of greater regional cooperation;
- Promoting climate research on both qualitative and quantitative levels and foster the application of its results.

The Carpathian Convention Working Group on Climate Change could act as a Steering Committee for the platform, overseeing and steering all activities and setting priorities. Partners of the platform should be nominated by the national focal points, considering the most relevant national institutions in each country working on climate change and disaster risk reduction. The [Science for the Carpathians Initiative](#) (S4C) could as an already established forum ensure scientific excellence.

3. Examples for climate change platforms and networks

VIRTUAL ALPINE OBSERVATORY:

Since 19 April 2012 the “Virtual Alpine Observatory” (VAO) has been operating as a network of European High Altitude Research Stations based in the Alps and similar mountain ranges, and now includes ten countries (Austria, Bulgaria, Czech Republic, France, Germany, Georgia, Italy, Norway, Slovenia and Switzerland). This cross-border and interdisciplinary cooperation has made it possible to address in great depth scientific problems relating to the atmosphere, biosphere, hydrosphere and cryosphere systems, and also the possible impact of environmental influences on health.

Organisation

The VAO thrives on the networking and consistent exchange between the partners and the respectively connected community of scientists and engineers. Another essential element of

the VAO is therefore the regular organisation of a “VAO Symposium“ to share know-how and experiences, which also offers scientific and technical young talent a platform where they can network and present themselves.

The VAO is governed by a steering committee – the VOA Board – composed of representatives of the respective institutions in the partner countries. The steering committee normally meets once a year. The VAO-Board is supported by the VAO-Office. The VAO-Office especially represents a central contact point for scientists and stakeholders and performs tasks mainly in the fields of public relations, lobbying, fundraising and administration.

Weblink: <https://www.vao.bayern.de/index.htm>

PYRENEES OBSERVATORY

The Pyrenees Observatory is a cross border initiative of territorial cooperation of the Working Community of the Pyrenees (CTP), launched in 2010 under the presidency of Midi-Pyrénées, regarding climate change. The members of the CTP, and therefore of the OPCC, are the Governments of Aragon, Nouvelle Aquitaine, Catalunya, Euskadi, Navarre, Occitanie and the Principality of Andorra. Since 2017 Aragon Region has the Presidency of the Working Community of the Pyrenees.

The Pyrenees Climate Change Observatory, OPCC, aims to monitor and understand the climate change phenomenon in the Pyrenees in order to help the territory adapt to its effects. Their vision is to be the reference platform of knowledge on adaptation to climate change in mountain ecosystems.

Organisation

Its operation is structured around a Technical Committee, a Coordination Committee and an Advisory Committee:

- The technical committee is composed by representatives of the 7 territories of the CTP, and has the function of guiding and setting priorities.
- The coordination committee is made up of the partners of the project and is responsible for coordinating and carrying out the operational part of the project.
- The advisory committee is made up of scientists and representatives of the relevant socioeconomic sectors in the Massif. Its purpose is to ensure scientific rigour and provide strategic guidance to the work of the OPCC.

Weblink: <https://www.opcc-ctp.org/en/contenido/presentation-opcc>

ANDORRAN MOUNTAIN OBSERVATORY

The Andorran Mountain Observatory (Observatori de la Muntanya d'Andorra; OMA) is a project run by the Andorra Snow and Mountain Study Centre (CENMA), part of the Andorran Research Institute (IEA), whose aim is to monitor the evolution of physical and biotic elements in Andorra using scientific indicators of quality.

The aim of the OMA is to update continuously this easy-to-consult tool, which has been developed to provide different types of user – from students, professionals and administrative bodies, to members of productive sectors – with high-quality information that can facilitate decision-making processes.

The environmental indicators allow to:

- Understand the evolution of the landscape.
- Evaluate the efficiency of management methods.
- Analyse global and climate changes.
- Evaluate the effects of climate change.
- Evaluate the effects of global change.
- Evaluate the effect of particular impacts.
- Understand the evolution of natural hazards.

Weblink: <http://www.oma.ad/en/mountain-observatory>

SCIENTIFIC NETWORK FOR THE CAUCASUS MOUNTAIN REGION (SNC-MT)

Established in July 2014, the Scientific Network for the Caucasus Mountain Region (SNC-mt) is an open network of researchers and other stakeholders interested in disciplinary, interdisciplinary and transdisciplinary research on the Caucasus region and academic collaboration. SNC-mt seeks to improve research capacity for and within this region (Armenia, Azerbaijan, Georgia, Islamic Republic of Iran, Russian Federation, Turkey) and to link research to the needs of sustainable development and environmental protection. With their initiative, scientists from the Caucasus and from other countries exploring the Caucasus are following in the tradition of counterparts from mountain regions around the world, where scientific networks have emerged to promote and consolidate knowledge and understanding about a given mountain range and to help confront transnational challenges.

SNC-mt aims at promoting research collaboration that generates knowledge on mountains to support sustainable development; coordinating the development of a comprehensive research strategy for the Caucasus mountain region; strengthening research capacities and making the Caucasus more prominent in European and global contexts; exchanging knowledge and sharing best practices within the Caucasus and with other mountain regions; and strengthening the nexus between scientists, practitioners and decision-makers.

Regional Research Agenda

Following the example of its counterpart in the Carpathians (Science for the Carpathians, S4C) one of the main priority activities of the SNC-mt is development of a Regional Research Agenda. The purpose of this activity is to establish a collaborative process for identifying the current state of knowledge in core issue areas related to sustainable mountain development in the Caucasus region, key challenges and opportunities, and priority gaps for scientific research and development.

The elaboration of the Caucasus Regional Research agenda became possible through the project "Supporting Sustainable Mountain Development in the Caucasus (Sustainable Caucasus)" funded by the Swiss National Science Foundation and the Swiss Agency for Development and Cooperation under the SCOPES Program.

Weblink: <http://caucasus-mt.net/en>

THE CANADIAN MOUNTAIN NETWORK (CMN)

The Canadian Mountain Network (CMN) is an alliance of partners from universities, governments, Indigenous and non-Indigenous communities, not-for-profits, and businesses dedicated to the sustainability of mountain environments and communities across the country and around the world.

CMN was established in January 2016 to collaboratively address the diverse challenges facing mountain regions by harnessing existing capacities and seeking new research relationships between Indigenous and non-Indigenous researchers and communities. Our aim is for CMN to become a national and global leader in inclusive, co-designed, interdisciplinary mountain-research that recognizes the interconnectedness in mountain systems between the environment, economy, and society, and encourages an integrated approach for long-term sustainability that serves the needs of mountain communities.

Weblink: <http://canadianmountainnetwork.ca/>

NETWORK FOR RESEARCH ON MOUNTAIN ENVIRONMENTS OF LATIN AMERICA AND THE CARIBBEAN (LACARMOREN) [*NOT YET ESTABLISHED!*]

Mountain Specialist Group Researchers and other professionals from Brazil, Mexico, Chile, Ecuador, Colombia, and Argentina participating in the Mountains 2018 International Conference held in Nova Friburgo (Dec 2018), agreed, supporting the Charter of Nova Friburgo, to establish the Network for Research on Mountain Environments of Latin America and the Caribbean (LACARMOREN). This network will be linked to the Mountain Partnership, which has offered to provide support at different levels, including communication, engaging with other organizations, and fund-raising. LACARMOREN will definitely include research in Mountain Protected Areas of the hemisphere, so will link with IUCN WCPA Mountain group as well as Mountain Research Initiative (MRI).

PARTNERSHIP FOR ENVIRONMENT AND DISASTER RISK REDUCTION (PEDRR)

The Partnership for Environment and Disaster Risk Reduction (PEDRR) is a global partnership comprised of UN agencies, international and regional NGOs as well as specialist institutes that collectively aim to influence policy, enhance implementation and better coordinate efforts in environmental management for disaster risk reduction, climate change adaptation and sustainable livelihoods. It promotes ecosystems management as the key strategy to reduce disaster risk, increase local resilience and adapt to a changing climate.

Activities:

- **Advocacy:** PEDRR raises awareness of the role of ecosystems in disaster risk reduction and promotes innovative natural resource management approaches, such as integrated flood management, for risk management. It provides technical expertise to influence global and national policies and to support the ISDR system.
- **Capacity development:** PEDRR seeks to enhance knowledge and skills, particularly at the national level, in applying ecosystem management solutions for disaster risk reduction and climate change adaptation and mainstream these approaches in national and local development planning.
- **Exchange of knowledge and practices:** Drawing from science, practitioners' experience and indigenous knowledge systems, PEDRR pulls together cutting-edge research and field-based examples that demonstrate ecosystems-based approaches to disaster risk reduction and adaptation.
- **Networking:** PEDRR promotes partnerships at global, regional and national levels and fosters collaboration between the environmental science and development communities.

Organisation:

The PEDRR Secretariat is hosted at the Post-Conflict and Disaster Management Branch (PCDMB) of the United Nations Environment Program in Geneva, Switzerland. The Secretariat is supported by UN Environment/PCDMB and a rotating pool of interns, who are involved in PEDRR's social media, website, weekly newsletter, and other communication assignments.

Weblink: <http://pedrr.org/>

CLIMATE CHANGE CENTRE AUSTRIA (CCCA)

The Climate Change Centre Austria (CCCA) is a network supported by Austria's most important institutions concerned with work on climate change. It has been founded as a non-profit association in 2011 for promoting climate research and climate impact research and fostering collaboration in and among those fields. The CCCA does not actively conduct

research but sees itself as a collaborative network to coordinate Austrian activities on climate change.

Activities:

The association's purpose and specific goals are:

To strengthen Austrian climate research

- Improving the coherence of climate research in Austria
- Increasing the efficiency of climate research (networking, synergies)
- Creating a culture of high-quality research
- Increasing visibility of climate research and understanding of relevance
- Facilitating cooperation with other relevant areas of research

Facilitate the education of a new generation of researchers and supporting knowledge transfer

- Facilitating the education of young scientists
- Promotion of the Young Scientists working group

To support science transfer

- networking workshops
- newsletter
- intelligible publications
- organise and hold scientific conferences and workshops (such as the Austrian Climate Day)

To advise politics and society

- Provision of the scientific basis for climate policies on national, EU and international levels
- Provision of target-group orientated education on questions of climate change for various actors in society

Organisation:

The CCCA Management Board elected by the General Assembly of CCCA members steers the activities of the network and provides guidance to the operational units.

CCCA operational units

- CCCA-Coordination Office
 - Supports all CCCA-bodies in administrative and content-related matters as well as its strategic activities
 - Responsible for Annual Austrian Climate Convention („Austrian Climate Day“), CCCA working groups
- CCCA-Service Centre
 - Functions as neutral knowledge broker within the network
 - Clearing point for thematic inquiries from science, administration, industry and general public
 - Facilitates the dissemination of information and coordinates this process

- CCCA-Data Centre
 - Provides central national archive for relevant climate data and information

The CCCA currently has 21 full members and four sponsoring members.

Weblink: <https://ccca.ac.at/en/homepage>

4. Potential funding for creating a Carpathian Network Platform for climate change

EU funding remains likely to be the main financing source for transnational collaboration on climate change, in particular the South-East Europe Transnational Cooperation Programme, which includes all Carpathian countries (incl. non-EU Member States). Other important EU programmes are ESPON, HORIZON 2020 and LIFE, which support environmental, nature conservation and climate action projects. Likewise, the EEA and Norway Grants serve as opportunities for regional cooperation in the Carpathians.

For the EU Regional Development and Cohesion Policy beyond 2020, the European Commission proposes a New Framework with five investment priorities, including a **Greener, carbon free Europe, implementing the Paris Agreement and investing in energy transition, renewables and the fight against climate change**. For the upcoming programming period under the EU Multiannual Financial Multiannual financial framework for 2021-2027 negotiations are underway, aiming for an agreement before the end of the year 2019.

The June 2019 European Council adopted the EU's Strategic Agenda 2019-2024. It is intended to guide the work of the Institutions in the next five years, focusing on four main priority areas:

1. Protecting citizens and freedoms
2. Developing a strong and vibrant economic base
- 3. Building a climate-neutral, green, fair and social Europe**
4. Promoting European interests and values on the global stage.

The October Environment Council will have a policy debate on the EU's strategic long-term vision for a climate neutral economy as well as preparing conclusions on the preparations of the UNFCCC COP 25. In December the European Council shall provide guidance on the EU's long-term strategy since the EU, under the Paris Agreement, is to submit its long-term strategy for greenhouse gas emission reductions to the United Nations Framework Convention on Climate Change (UNFCCC) by 2020. This shall be followed in early 2020 by adopting the EU 2050 long-term strategy.

Further in preparing the new programming period for cohesion 2020+ the EU Strategy For The Danube Region (EUSDR) is revising its Action Plan. Based on a series of consolidated inputs by all actors of the Strategy, the European Commission will use the consolidated

proposal to draft the New Action Plan which prospectively shall be endorsed by the Ministers of the Danube Region in October 2019.

It will be up to the EU Member States and the European Council in the forthcoming months to reiterate the importance of transboundary collaboration on climate change concerns and with this secure sufficient funding sources within the next MFF budget lines.

For the current funding period, one specific H2020 call offers an opportunity to engage for the proposed Carpathian platform:

HORIZON 2020 FRAMEWORK PROGRAMME (H2020) CALL:
TOWARDS A COMPREHENSIVE EUROPEAN MOUNTAIN RESEARCH STRATEGY
(ID: LC-CLA-23-2020)

Topic description:

Specific Challenge:

European mountain regions play a central role for the well-being of many highly populated European regions for instance for water and energy supply, weather regimes, recreation and tourism. European mountain regions are home to a high degree of biodiversity, including many endemic species that occur nowhere else. However, mountain regions are expected to react far more sensitively to global change than other parts of the world. Therefore, research on sustainability of these regions is important not only for the population living there and the many tourists visiting them (e.g. 150 Millions/year for the Alps) but for a significant part of Europe's population. European countries operate excellent research infrastructures in mountain regions and are leading in many fields concerning climate, ecosystems, life in extreme environments, pollution monitoring and other aspects. Making the most efficient use of these resources and the latest scientific developments for addressing the abovementioned challenges, while contributing to climate change mitigation efforts targeted at this specific ecosystem, requires a high degree of coordination within Europe and beyond. **Hence, a prominent challenge for this topic is to support and coordinate research and innovation to advance the understanding of current changes in mountain areas derived from climate changes, the synergies with other human-related forcing, the prediction of potential changes in these regions, and to foster observations for a sound monitoring of the regions.**

Scope:

The action should coordinate and support mountain regions research in Europe and develop a comprehensive European Mountain Research Strategy building on existing European activities. This strategy should aim to support the development of services necessary for the adaption to climate change and the improvement and extension of observations, in particular in-situ ones, for the monitoring of the mountain regions. **In line**

with Responsible Research and Innovation (RRI), citizens, civil society organisations and other relevant stakeholders should be involved in the co-design of the research strategy. This initiative strives for enhanced coordination with international research organisations and programmes related to mountain regions research (e.g. WMO, ESA, GEO, NEMOR and JPI 'Climate') as well as with relevant operational services including Copernicus. This action should support the implementation of the EU Strategy for the Alpine Region – EUSALP (<https://www.alpine-region.eu/>) and the GEO global Network for Observation and information in Mountain Environment – GEO-GNOME (http://earthobservations.org/geoss_wp.php), and take advantage of other regional and thematic networks initiatives that are being developed in Europe.

In line with the strategy for EU international cooperation in research and innovation (COM(2012)497), international cooperation is encouraged, in particular with countries such as Canada, China, India, Russia, United States, and Latin American countries.

The Commission considers **that proposals requesting a contribution from the EU in the range of EUR 1.5 million** would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact:

The project results are expected to contribute to:

- substantially raising the scale and ambition of inter-disciplinary mountain regions research policy in Europe;
- improved coherent and efficient use of European resources for mountain research;
- significant extension of the Copernicus and EuroGEOSS services and products to the mountain regions;
- step change in the domain of open data access, quality control and interoperability for mountain region monitoring and adapting to climate change.

This call appears to be a unique opportunity to incorporate the idea of establishing a Carpathian platform with the scope and goals as suggested under chapter 2 of this paper. Participating in the call provides a concrete window of opportunity not only to embed collaboration on DRR and climate change in the Carpathians into a European Mountain Research Agenda, but also to secure necessary funding for setting up a suitable structure for the platform.

The Carpathian Convention has a [Memorandum of Understanding](#) with the [Science for the Carpathians Initiative](#) (S4C), which connects scientists in Central Europe, defines research priorities for the region and enhances international collaboration with partners from outside the Carpathians. This initiative is already a well-suited structure to be part of the call.

There is also a long-lasting partnership with and a special role of the European Academy (EURAC), also linking Alpine and Carpathian regions, and hosting the GLOMOS.

The planned opening date of the call is 12 November 2019 with a **deadline for submission until 13 February 2020**.

5. Proposed next steps

The following is proposed as next steps taking forward the idea of establishing a Carpathian Network Platform:

Meeting of the Carpathian Convention Working Group on Climate Change on 9 October in Budapest:

- Presentation and discussion of the proposed creation of a platform
- Seek principal support and agree on general direction, purpose and goals
- Formulate next steps, including informing the national focal points and identifying relevant national institutions to be invited to the platform

Follow-up activities to the WG meeting:

- Identify and nominate institutions to be involved in the preparations to submit a proposal to the Horizon2020 call; Reach out to the S4C Science for the Carpathians
- Elaborate further the content and operational issues on how to establish the platform

Tenth Meeting of the Carpathian Convention Implementation Committee (11-13 December, 2019):

- Present the idea of establishing a Carpathian Network Platform and seek approval for subsequent activities