

PROJECT COMPLETION REPORT

Date: 29.02.2024

1 Project details

Project title:	Carpathian ESD: Strengthening the ESD network in the Carpathian Convention via science-policy-practice interface
Beneficiary countries:	Parties to the Carpathian Convention: Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia, Ukraine
Recipients of advisory assistance:	Carpathian Convention actors with yet little experience with ESD, as well as Carpathian ESD experts not yet aware of / linked with the Carpathian Convention
Implementing organisation:	UN Environment Programme (UNEP), Vienna Programme Office, Secretariat of the Carpathian Convention (in the following: Carpathian Convention Secretariat)
Project partners in beneficiary countries:	<ul style="list-style-type: none"> • Science for the Carpathians (S4C) network, represented by: <ul style="list-style-type: none"> - Institute of Geography, Pedagogical University of Kraków, Poland (in the following: PUK Poland)¹ - Global Change Research Institute of the Czech Academy of Sciences (GCRI), Czech Republic - Jagiellonian University, Poland • UNEP/GRID-Warsaw Centre, Poland • Ministry of Climate and Environment, Poland² • Ministry of Human Capacity of Hungary, Ms. Mónika Reti³
Other project partners	Leuphana University of Lüneburg

¹ The institute has been transferred to Institute of Biology and Earth Sciences in the end of 2023, and the name of the university was changed to the University of the National Education Commission (as of 1 October 2023). In order to simplify, and despite the name change of the university, we will refer to it as PUK Poland, throughout the report.

² While not originally envisioned as a partner, the Ministry closely collaborated with the Carpathian Convention Secretariat in the framework of the Presidency of Poland of the Carpathian Convention (2020-2023).

³ The Ministry of Education equivalent in Hungary, which has changed the names a couple of times throughout the project. While the Ministry was not officially a project partner, many activities were conducted in close collaboration with Ms. Monika Reti, the ESD expert and National Focal Point (NFP) of Hungary in international ESD-related processes, and eventually the officially nominated governmental Carpathian ESD expert on behalf of the Ministry. In order to simplify, we do not reflect the name changes of the Ministry and will refer to it instead as Ministry of Human Capacity of Hungary throughout the report.

Project period:	01.04.2021 to 29.02.2024
Project number:	154791

2 Rapporteur's details

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3 Report

3.1 Activities performed to achieve project outputs

The project brought together ESD experts from the seven Carpathian countries, extended the network, facilitated exchange among them, identified their shared vision as well as concrete activities and plans for addressing the recommendations resulting from the previous Carpathian activities, supported by AAP, and for integrating ESD into the implementation of the Carpathian Convention on an institutional and structural level.

Specific activities are described below, grouped by the project Work Packages (WPs), as described in the application:

1. WP1. Building a Carpathian network of ESD experts,
2. WP2. Educational Programs,
3. WP3. Integration of the project activities and results into the Carpathian Convention,
4. WP4. Project management.

All of the listed activities have been conducive to achieving the planned project outputs.

- Deviation in terms of activities and timelines are outlined and described accordingly.
- Additional (not originally planned) activities, but those which emerged as a result of the project and contributed to its outputs and outcomes, are indicated and described accordingly.

WP1. Building a Carpathian network of ESD experts

1) The **6th Forum Carpaticum conference “Linking the Environmental, Political and Societal Aspects for Carpathian Sustainability”**, was organized on **June 21-25, 2021**. The main organizer of the Forum Carpaticum – on behalf of the Science for the Carpathians (S4C) network – was the Global Change Research Institute of the Czech Academy of Sciences (GCRI).

- As planned, an ESD session and ESD workshop were organized at the Forum by the Carpathian Convention Secretariat in cooperation with Leuphana University Lüneburg (in the following: Leuphana University), Institute of Geography of the Pedagogical University, Kraków, Poland (in the following: PUK Poland), the Ministry of Human Capacity of Hungary as well as with inputs from other Carpathian ESD experts⁴.
- As planned, Leuphana University was represented by an ESD expert, Dr. Lydia Kater-Wettstädt, who actively engaged in the development of the session and workshop, in collaboration with other co-organizers⁵, which resulted in identification of gaps, discussion

⁴ See Annex I, including workshop and session plans (Annex I.1, I.2), preparatory meeting presentation (Annex I.12) presentations from the workshop, session and plenary devoted to the ESD (Annex I.3-I.8) and the report of ESD activities at the Forum Carpaticum (Annex I.0).

⁵ See e.g. Annex I.2, Carpathian ESD Workshop Plan.

of a preliminary joint Carpathian ESD vision, recommendation of actions and research questions.⁶

- Participation costs of 39 experts from the Carpathian countries (in the field of ESD as well as related fields, including biodiversity, rural development, etc.) were supported by the project, specifically in the form of support to conference fees of active participants⁷. (The main costs of the Forum Carpaticum's organization by the main organizer GCRI were covered by the Visegrad Fund project⁸, which was one of the outcomes of the previous AAP project 112045⁹ implemented by the Carpathian Convention Secretariat.)

⇒ Additional activities and partnerships:

- While this was not originally planned and was a result of active integration of ESD into the Forum Carpaticum organization, a keynote focused on "*ESD in sustainable regional development. Approaches to implementation*" was given by Leuphana University, Dr. Lydia Kater-Wettstädt.¹⁰
- A participatory exercise was conducted in a plenary of Forum Carpaticum, focused on ESD as well as on transdisciplinarity and strengthening the role of Carpathian universities in addressing societal challenges.¹¹
- The organizer of the World Environmental Education Congress (WEEC), planned in Prague, Czech Republic, in 2022, and envisioned as one of the project activities, was invited to attend the Forum Carpaticum conference and present the WEEC, in order to invite and facilitate stronger participation from the Carpathian experts in this international event.¹²
- The Ministry of Human Capacity of Hungary played a larger role as a partner than originally envisioned due to the strong engagement of the ESD expert, National Focal Point (NFP) to the UNECE Steering Committee on ESD, Monika Reti.
- In addition to Carpathian networking only, a Memorandum of Understanding (MOU) was signed between the S4C and the Caucasus Scientific Network, facilitated actively by the Carpathian Convention Secretariat in the framework of the Carpathian ESD project, and education, young scholar training and science- policy-practice interface were included among the joint topics of collaboration.¹³
- Preparatory activities for the Forum Carpaticum and other Carpathian ESD events were listed and briefly described in project updates to the donor. Records can be found in Annex V.

⁶ See Annex I.0 (Carpathian ESD Network_FC2021_Report_09.2021).

⁷ See Annex I.11.

⁸ Visegrad Fund Project no.: 36060356; Project title: Linking Science, Policy and People for Sustainable Carpathians; 1.3.2020 – 28.2.2022; Grantee: GCRI. For more information see:

https://www.czechglobe.cz/en/projects/?project=Sustainable+Carpathians&provider=0&year_from=&year_to= ; as well as: <https://forumcarpaticum.czechglobe.cz/>.

⁹ See <https://www.umweltbundesamt.de/en/topics/sustainability-strategies-international/cooperation-eeca-centraleastern-european-states/project-database-advisory-assistance-programme/integrating-nature-protection-sustainable-tourism>.

¹⁰ See Annex I.0 and Annex I.6_Forum Carpaticum Plenary II_ESD_TD.

¹¹ See Annex I.0 and Annex I.6_Forum Carpaticum Plenary II_ESD_TD.

¹² See Annex I.0, I.8.

¹³ See Annex I.10 and I.10a.

- The Forum also was used as an occasion to collect participatory inputs into the new S4C Research Agenda, in order to include ESD and participatory approaches among key topics for Carpathian sciences.¹⁴

⇒ Deviations:

- Due to the COVID-19 pandemic, the Forum was fully held online, although arrangements for a hybrid conference were made originally, based in Brno, Czech Republic.

2) A **meeting** bringing together the **Carpathian Convention Implementation Committee (CCIC), including Carpathian Convention NFPs, key actors working in several thematic areas of the Carpathian Convention and selected Carpathian ESD experts** was organized on the occasion of the **12th CCIC meeting in Krakow, Poland, on 18-19 November 2021**. The event was co-organized with the Convention partner organization UNEP/GRID-Warsaw Centre and the Polish presidency of the Carpathian Convention, and in close collaboration with the S4C and ESD experts from Hungary.

- ESD recommendations from Forum Carpaticum 2021 were integrated into the S4C recommendations document and submitted and presented at the CCIC.
- A presentation informing the CCIC about the Carpathian ESD project activities and a way towards developing a Carpathian ESD Expert Network was delivered.
- A workshop in collaboration with UNEP/GRID-Warsaw Centre was organized as part of the CCIC, one session of which focused directly on education.¹⁵
- Among the resulting CCIC recommendations on ESD, adopted by the meeting, the Convention NFPs were invited to provide nominations of ESD experts into the network.¹⁶
- Supported active participants included Carpathian Convention Secretariat colleagues (supported partly by the project and partly by UNEP Vienna contribution), the hired Carpathian ESD networking expert from Hungary, the ESD expert from the Ministry of Human Capacity of Hungary and the Ukrainian Carpathian Convention NFP.
- Participation of a ministerial ESD expert from Hungary was particularly important, because she could identify the educational aspects already integrated into the Convention activities, which the Convention Parties and partners do not always perceive as such, and communicated this clearly to the Parties. She also highlighted the benefits of integrating pedagogical expertise into the Convention activities.
- About 30 participants joined the meeting in person, and about 40 attended online. Participants included experts from all Carpathian countries as well as from Austria and Italy.¹⁷

The CCIC meeting agenda, ESD- and S4C-related presentations, the Secretariat report to the CCIC as well as the final meeting report with the draft policy decisions and CCIC recommendations can be found in Annex II and on the Carpathian Convention event webpage.¹⁸

¹⁴ The final Research Agenda can be found in Annex IV.1.

¹⁵ See Annex II.9.

¹⁶ P. 4-5 of the CCIC recommendations, see Annex II.7

¹⁷ See the LOP in Annex II.8

¹⁸ <http://www.carpathianconvention.org/2021/11/18/12th-meeting-of-the-carpathian-convention-implementation-committee-18-11-2021-19-11-2021-krakow-poland/>

⇒ Additional activities and partnerships:

- A workshop on strengthening networks within the Carpathian Convention was integrated into the CCIC agenda, co-organized by a Carpathian Convention network expert, Marta Vetier, hired as one of the external ESD experts, and focused on lessons learned from the Carpathian Convention networks in order to strengthen the Carpathian ESD Expert Network.¹⁹

⇒ Deviations:

- Integrating the cross-sectoral ESD workshops with CCIC was not planned originally – however, proved useful to strengthen integration of ESD into the Carpathian Convention; as such, this activity is also relevant for achieving the outputs of WP3.
- Originally it was planned that participation costs of at least 8 experts in ESD and other Carpathian Convention fields will be covered by the project. However, due to the COVID-19-related challenges, the CCIC meeting was held in a hybrid mode, which limited the number of experts, who could travel, and the originally planned networking component. Many ESD experts could not travel to Poland due to the COVID-19-related situation and joined online. 2 ESD experts from Hungary and 1 Ukrainian official active participant were supported by the AAP funds as well as 1 Carpathian Convention Secretariat staff.
- The project coordinator was invited to spend 1 month at Leuphana University in November-December 2021, in order to facilitate closer collaboration, and therefore travelled to Poland from Lüneburg, Germany, instead of Vienna, Austria (as informed the Donor in advance).

3) “Carpathian ESD” was **presented on 2 occasions at the 11th World Environmental Education Congress**, held in **Prague, Czech Republic**, on **March 14-18, 2022**, with the aim to inform the wider expert community about the Carpathian process, receive feedback and attract more experts from Carpathian countries to the process:²⁰

- Dedicated in-person cross-cutting dialogue session (March 15, 2022) “*Linking education with local and regional sustainable development challenges*”. The session was organized by Tamara Mitrofanenko (UNEP), Lydia Kater-Wettstädt (Leuphana University), Joanna Zawiejska (S4C, PUK Poland), Monika Reti (Ministry of Human Capacity of Hungary) and Attila Varga (Eötvös Loránd University).
- Virtual presentation “*Towards the Carpathian ESD Expert Network: integrating education for sustainable development into the activities of the Carpathian Convention*” in the session “*Transformative, Transgressive Learning in Communities*” (March 17).

⇒ Additional activities and partnerships:

- In addition to the active participation in WEEC on March 16, the Carpathian Convention Secretariat was invited to present the Carpathian ESD project virtually in an online symposium about using citizen science as a communication tool in conservation activities in the Carpathian region.²¹

¹⁹ Presentation introducing the topic is in Annex II.4.

²⁰ All related materials can be found in Annex VI.I.

²¹ The seminar materials can be seen here: http://carpathians.citizenscience.cz/?page_id=435#symposium

- The Carpathian Convention Secretariat was invited to present at the Youth Environmental Education Congress, held as part of the WEEC, contributing to additional outputs of WP2.²²
- 4) The **2nd Carpathian ESD Seminar**, in cooperation with project partners and strong support of the Carpathian Convention presidency of Poland, was organized on **28-30 September 2022** in **Zakopane, Poland**. Participation of 36 experts from all seven Carpathian countries was supported. The seminar report and list of participants can be found in Annex III.1.
- A **virtual follow-up meeting** took place on **8 December 2022**²³ with ESD experts, in order to follow up on joint projects and activities initiated at the seminar and to consider potential synergies with other relevant processes and partners.

⇒ Emergent activities and partnerships contributing to the Carpathian ESD Expert Network:

A number of activities following up on the 2nd Carpathian ESD Seminar supported stronger integration of the ESD and learning topics into the Convention partner activities:

- The results of the ESD Seminar have been presented by the Romanian experts at the **conference "Geographical Perspectives On Global Changes"** held in the University of **Bucharest, Romania, 18-19 November 2022**.²⁴
- An ESD expert from the Czech Republic, Michal Medek, Czech Institute for Heritage Interpretation, who attended the 2nd Carpathian ESD Seminar, proposed to integrate a Carpathian Convention case study into the "*Which Interpretative Strategies Do Learning Landscapes Need*" workshop at the **Interpret Europe Conference, 12-15 May 2023**, in **Sighisoara, Romania**, which was to take place for the first time in a Carpathian country. Romanian ESD experts were invited to join. An ESD expert from the Romanian protected area "Retezat National Park", Lucia Ursu, joined this workshop and presented the Carpathian Convention and its ESD Expert Network there.²⁵
- Experts participating in the Carpathian ESD Seminar from Ukraine, Czech Republic and Slovakia as a result developed the **joint project "Education for sustainable development: transferring V4 countries' experience for Ukraine's recovery"**, which has been selected to receive support by the **Visegrad Fund** (project period 10.2023-05.2024). The project supports capacity building and exchange between Ukrainian and other Carpathian and international institutions, and particularly trainings of the "**International Carpathian School**," which has been organized since 2011 for Ukrainian young scientists.²⁶ The Secretariat participated in the International Carpathian School in 2023²⁷, as a follow up to the organizers joining the Carpathian ESD Expert Seminar.

²² See Annex IX.3.

²³ See Annex III.4.c.-e, Annex III.5.

²⁴ See programme in Annex III.2.

²⁵ The report of the expert can be found in Annex VI.10 and has been partly included into the Update to the Donor of 05.2023, Annex V.6.

²⁶ Website of the project: <https://necu.org.ua/proyekty/eduv4ua/en/>; <https://necu.org.ua/education-and-exchange-of-experience-for-sustainable-development-of-the-carpathian-region/>, see Annex IX.4.

²⁷ International Carpathian School 2023 website: <https://necu.org.ua/international-carpathian-school-2023-sustainable-development-of-the-carpathian-region/>. The Secretariat presentation can be found in Annex IX.4.

5) Highlighting the Convention ESD-related activities in the **international fora, including the UNECE Steering Committee for ESD, the Environment for Europe Ministerial Conference and the UNESCO ESD-related process**. Supporting communication among Carpathian experts with respective UNECE and UNESCO contacts:

- The Carpathian Convention Secretariat, in collaboration with the Ministry of Human Capacity of Hungary and S4C, organized a Carpathian online **side event at the Regional Forum on Sustainable Development for the UNECE Region on April 6, 2022**, entitled **“Enhancing nature conservation with ESD expertise: towards a transdisciplinary approach in the Carpathian region, integrating quality education and sustainable development governance”**.²⁸ The results constituted co-production of knowledge on how the Carpathian Convention and especially the Carpathian ESD Expert Network can help facilitate the implementation of the UNECE Strategy for ESD 2021–2030 in the Carpathian region, based on the 4 strands of the UNECE ESD Strategy:
 - 1) Quality education;
 - 2) Whole institution approach: communities of transformational learning;
 - 3) Digitalisation and ESD;
 - 4) Entrepreneurship, employment, innovation and ESD.

The resulting document was included into the further activities towards creation of the Carpathian ESD Expert Network.²⁹

- In order to facilitate liaison between the Carpathian ESD Expert Network and the UNECE Steering Committee on ESD and/or **UNESCO ESD-related networks** and activities (e.g. **ESD for 2030 Global Network**), the Carpathian Convention Secretariat requested the Carpathian Convention NFPs to facilitate nominations of those governmental ESD experts to the Carpathian ESD Expert Network, who already act as NFPs to the UNECE or UNESCO processes.³⁰ Consequently, the following received nominations in line with the **UNECE NFPs**: Hungary, Poland, Slovakia. While official nominations from Serbia are pending, the UNECE NFPs from the Ministries of Education and Environment have expressed their readiness to collaborate with the Carpathian Convention Secretariat³¹.
- Carpathian ESD was presented on several occasions at the high-level **Environment for Europe (EfE) Ministerial Conference in Nicosia, Cyprus, on 5-7 October 2022**, by the Carpathian Convention Secretariat (Tamara Mitrofanenko) and S4C / PUK Poland (Joanna Zawiejska), including:
 - Via a high-level side event, involving governmental representatives of Hungary, Serbia, Poland,
 - At a high-level segment of the Ministries of Education.

The report of the Carpathian ESD at EfE can be found in Annex VI.3, together with other relevant documents.

²⁸ <https://regionalforum.unece.org/index.php/events/enhancing-nature-conservation-esd-expertise-towards-transdisciplinary-approach-carpathian>

²⁹ See Annex VI.2 for all related documents.

³⁰ See official email requesting nominations in Annex III.9.

³¹ See the list of officially nominated experts in Annex III.3.

⇒ Additional activities and partnerships:

- The presentation of the Carpathian ESD at the high level segment of the EfE Ministerial Conference was noted by the **Global Education Network Europe (GENE)**, and the Carpathian Convention Secretariat was invited to attend the **European Global Education Congress**, which took place in **Dublin, Ireland, on November 3-4, 2022**.³²
 - Due to the last minute invitation, the participation of the project coordinator in the conference was supported by GENE, therefore not posing additional financial strain at the project.
 - Participation in the conference facilitated collaboration with the **Hungarian and Serbian and Slovak governmental ESD experts** as well as **GENE experts based in Slovakia**, and liaison with the **GENE network**. A national meeting in Slovakia took place to discuss the implementation of the declaration, adopted at the congress. Nominated Carpathian ESD experts from Slovakia and Hungary attended the meeting, in order to consider synergies in the Carpathian ESD Expert Network. The expert from Slovakia, Monika Rybova, reported on the event at a virtual meeting of the Carpathian ESD experts on 8 December 2023.³³
- After the Carpathian ESD Expert Network was officially welcomed by the COP7 of the Carpathian Convention (WP3, Annex VIII.2), the Carpathian Convention Secretariat followed up on the collaboration with the UNECE Steering Committee on ESD, including by taking part in the 1st **“Capacity-building workshop for facilitating national reporting on implementing the new implementation framework of the UNECE Strategy for ESD (2021–2030) along the four priority strands,”** by providing inputs from the Carpathian Convention and the Carpathian ESD Expert Network at the 2nd workshop and sharing best practices from Carpathian ESD experts with the workshop organizers. Moreover, closer collaboration with the Chair of the UNECE Steering Committee on ESD, a governmental and scientific ESD expert from Cyprus, emerged towards the end of 2023.³⁴

⇒ Challenges and deviations:

- The Ministry of Human Capacity of Hungary was planning to take part in the UNESCO World Conference on ESD in 2021 to present the Carpathian ESD project and respective activities at this international occasion. However, due to scheduling challenges by the UNESCO organizers, the Hungarian State Secretary was not given the floor at the conference. In response, the Carpathian Convention Secretariat reached out to UNEP colleagues, engaged in the organization, to see if there is a way to include the Hungarian intervention into the conference reports³⁵, however, due to the cumbersome communication, the Hungarian officials decided against this option.
- Experts from Ukraine were nominated for the 2nd Carpathian ESD Seminar on a temporary basis, given the challenges faced by Ukraine due to the war. Nomination of governmental experts from the Czech Republic is pending due to lack of time availability of governmental experts. At the moment, the Carpathian Convention NFP is the official contact point for Carpathian ESD activities and a number of non-governmental experts are network members. However, recent exchange with the Czech NFP to the UNECE Steering

³² See invitation in Annex VI.4 and <https://www.gene.eu/ge2050-congress>.

³³ See meeting report, agenda and materials in Annex III.4.b-e and Annex X.16.

³⁴ See Annex VI.5.

³⁵ See email exchange in Annex VI.6.

Committee on ESD indicated that a dedicated governmental NFP to the Carpathian ESD Expert Network may be identified in the near future.

- The nominated expert from Hungary left the Ministry of Human Capacity in 2023, and so far has not been replaced. The nominated expert from the Ministry of Education of Slovakia has passed away in 2023, and we have not received an updated nomination yet.³⁶
- Collaboration with Leuphana University was not as rigorous in 2022, because Leuphana University ESD experts from the Institute for Sustainability Education and Psychology, engaged in the project development, left the university. As a result, closer collaboration was pursued with the Institute for Sustainable Development and Learning (ISDL) at Leuphana University. In November 2022, the Carpathian ESD project was presented to the **Austrian academic ESD network** in order to broaden our collaborations with academic experts.³⁷ In 2023, collaboration with **Leuphana University** has been strengthened again, with support from ISDL staff and with a **new ESD professor** joining Leuphana University, Daniel Fischer. He and his colleagues were integrated into the **Forum Carpathicum 2023** and a **joint project concept** was submitted to the **Deutsche Bundesstiftung Umwelt (DBU)** in December 2023 (see below).

6) The **7th Forum Carpathicum “Carpathian Futures – Critical Transitions”**, took place in **Krakow, Poland**, in **September 25-28, 2023**, and brought together scientists, practitioners and stakeholders to share recent research and discuss the challenges and possible modes of adaptation to ongoing environmental, economic and socio-political crises in the Carpathian region. The Forum Carpathicum was organized by the S4C network in close collaboration with the Carpathian Convention Secretariat. The Book of Abstracts and other materials can be found in Annex VII.

- During the Forum Carpathicum, a **session and workshop on ESD** were organized, where researchers and practitioners could present their own work, followed by a workshop where participants further discussed the vision for the Carpathian ESD Expert Network and joint activities.
- **Leuphana University** professor on ESD, Daniel Fischer, joined the session as the keynote speaker, inviting Carpathian ESD experts to collaborate with his team and the Leuphana University in general.³⁸
- As a follow up to the Forum Carpathicum, the Carpathian Convention Secretariat coordinated inputs from the S4C network and the Forum participants to the **policy recommendations to the COP7** of the Carpathian Convention.
- Around 125 in-person participants took an active part in Forum Carpathicum, including from all Carpathian countries, Austria, Italy and other international participants, a few more joined online during the **hybrid sessions**, such as **“Capacity Building for rebuilding Ukraine and ESD”**. 21 participants took part in the Carpathian ESD workshop.³⁹

³⁶ See Annex III.3.

³⁷ See email exchange and presentation slides (03.11.2022) in Annex VI.7 and VI.7a.

³⁸ See the report on ESD activities in Annex VII.1.

³⁹ See Annex VII.8 for the Forum Carpathicum LOP and for official confirmations of participants supported by AAP.

⇒ Additional activities and partnerships

- Additionally, a special session on **capacity building for rebuilding Ukraine** took place during Forum Carpaticum, where needs with respect to training, education and capacity building of Ukrainian refugees and Ukrainian stakeholders in the Carpathian area of Ukraine have been discussed, and the initiatives from the Carpathian Convention and its partners, including Carpathian ESD experts, were presented.⁴⁰
- A **S4C meeting** took place in order to decide on the next Forum Carpaticum and on the further developments of the S4C network. It was proposed by Slovak experts to organize the next Forum Carpaticum in September 2025 in Slovakia. The participants agreed to invite more interested researchers from the Carpathian countries to be active in the S4C network and to continue discussing the next conference organization with the broadened active members' group. At least one of the young Carpathian ESD experts expressed interest in taking on an active role in the S4C.⁴¹ A **follow-up meeting** took place on 4 December 2023 to decide on the way forward.⁴² The participants agreed to engage new active members via distributing a survey, which has been completed by the interested participants in February.
- Collaboration with Leuphana University was strengthened by integrating Carpathian Convention and Carpathian ESD inputs as well as S4C partners into the concept for the **project “Promoting Biodiversity through Transdisciplinary Learning Interventions in the Carpathians (ProBioTIC)”** developed and submitted by Leuphana University to the DBU. The concept focusses on transdisciplinary learning interventions linking ESD, biodiversity and sustainable consumption in the Carpathians.⁴³

⇒ Difficulties and deviations:

- Originally it was planned that the Forum will be organized by PUK Poland, however, institutional restructuring beyond influence of the project partners, which took place in late 2022-2023, made it impossible. In order to make sure that the Forum takes place in 2023, another S4C institution, the Jagiellonian University, Poland, agreed to organize the Forum Carpaticum. Other than delays and late announcement, we believe that this challenge did not substantially influence the Forum Carpaticum results. Due to the very active work of the S4C colleagues with the Carpathian Convention Secretariat, the Forum Carpaticum 2023 was a successful endeavor.
- Administratively, the Forum Carpaticum was organized via a donor agreement with the main organizer, Jagiellonian University, Poland. The funds were transferred via the United Nations Office for Project Services (UNOPS) to the Jagiellonian University in order to support the participation of active participants, including: Carpathian ESD experts, Ukrainian scientists and young scientists in the Forum Carpaticum.⁴⁴

⁴⁰ See presentation of S4C at COP7 for main summary, Annex VIII.2.e and the S4C recommendations document in Annex IV.6.

⁴¹ See the list of active participants, who expressed interest to be more active in S4C in Annex IV.5.

⁴² Brief report can be found in Annex IV.7.

⁴³ See concept note submitted to the DBU in Annex IV.8 and preparatory meeting screenshot in Annex X.18.

⁴⁴ Report files from the Jagiellonian University can be found in Annex VII.8.

⇒ Emergent activities and partnerships related to the science-policy-practice interface:

- An ESD chapter was included into the **S4C Research Agenda 2022-2030**⁴⁵, which is now available online both on the Convention website and the S4C website. The Research Agenda was part of the S4C Visegrad Fund project, which was one of the outcomes of the previously supported AAP project 112045 (see Footnote 14 above). The Carpathian ESD project contributed to the resources of the Carpathian Convention Secretariat, which facilitated and co-edited the Research Agenda production and introduced chapters on education, participatory approaches and green energy.
- Carpathian science-policy-practice interface activities were presented by several Carpathian ESD experts at the **International Transdisciplinary Conference (ITD)**, that took place **online** on **13-17 September 2021**, in a presentation and abstract entitled “Facilitating a stronger role for the Science for the Carpathians network in the sustainable development of the Carpathian region.”⁴⁶
- The Carpathian Convention Secretariat and S4C representatives were invited to and attended a **workshop “Science Communication for the Carpathians”**, held at the University of **Vermont, U.S.A**, in hybrid mode on **26 July 2022** in the framework of the exchange entitled “Bridging the Divide between U.S. and European Perspectives on Sustainable Forestry Through Effective Science Communication” (duration **25-31 July, 2022**) and funded by the Trust for Mutual Understanding, a philanthropic organization based in New York, NY.⁴⁷
- Further support to S4C coordination and networking was provided by the Carpathian Convention Secretariat, including with the **Caucasus Scientific Network**. Based on the MOU, signed between the S4C and the Caucasus Scientific Network at the Forum Carpathicum 2021, several Carpathian Convention and S4C representatives, including Carpathian ESD experts, participated actively in the **Caucasus Mountain Forum, 04-06 July 2023, Kazbegi, Georgia**, providing inputs on transdisciplinary approaches, sustainable tourism development, climate change research and ESD. The UNEP colleague presented Carpathian ESD in the **cross-regional workshop “Education for Sustainable Development: Tools and Stories of Mindset Transformation”**.⁴⁸

⁴⁵ Cudlin, P; Zawiejska, J; Mitrofanenko, T; Mazsa, K; Melnykovich, M. (eds.) 2022. S4C Research Agenda 2022–2030. | Science for the Carpathians (S4C) and Global Change Research Institute GCRI: Brno, Czech Republic and Krakow, Poland. See

http://www.carpathianconvention.org/tl_files/carpathiancon/Downloads/02%20Activities/Awareness%20Raising/911S4CResearch%20Agenda2030Final.pdf and <https://carpathianscience.org/s4c-research-agenda/>.

⁴⁶ The conference booklet with the Carpathian ESD abstract can be found at the website: https://api.swiss-academies.ch/site/assets/files/48681/1_itd2021_conferencebooklet_8sep - corr_jan22.pdf, and is available in Annex VI.8a. The conference presentation can be found in Annex VI.8.

⁴⁷ The workshop agenda can be found in Annex IV.9.

⁴⁸ The concept note of Carpathian ESD integration into the ESD workshop can be found in Annex VI.9. Keynote speakers, including 3 from the Carpathian region and its ESD network can be found here: <https://www.caucasus-mt.net/Caucasus-Mountain-Forum-2023/keynote-speakers.html>; the Programme, where the Carpathian Convention and S4C keynotes were integrated into every session can be found here: <https://www.caucasus-mt.net/Caucasus-Mountain-Forum-2023/programme.html-4>. Only Tamara Mitrofanenko’s travel was supported by the AAP funds. Other Carpathian experts were invited by the Caucasus organizers.

- A chapter on S4C collaboration with the Carpathian Convention was co-authored by the Secretariat with S4C scientists and accepted by the editors of the publication. It is expected to be published in 2024.⁴⁹
- An **online ReLaunching event of the Carpathian ESD Expert Network** took place on 11 December 2023. The event was meant to relaunch the network after its official welcome by the COP7 of the Carpathian Convention to invite final participatory inputs to the Carpathian ESD vision, mission and strategic priorities for 2024-2026 as well as to make final decisions on the webpage of the Carpathian ESD Expert Network, drafted by the Carpathian Convention Secretariat.⁵⁰
- Based on the discussions at the event, the Carpathian ESD experts prepared a report, outlining the vision, mission, objectives and strategic priorities as well as recommending activities relevant for scientific and practice-based networks in the Carpathian countries.⁵¹

Additional activities relevant for WP1:

- The **Carpathian ESD Expert Network webpage** was created by the Carpathian Convention Secretariat with inputs and feedback of the Carpathian ESD community and has been launched in January 2024. The participatory Resource Sharing component of the webpage will be tested and updated until May 2024.⁵²
- A **database of Carpathian ESD experts** is maintained by the Carpathian Convention Secretariat, for internal use, in order to facilitate continuity and integration of the interested experts.

WP2. Educational Programs

- 7) A contribution was made to the **S4C Interdisciplinary Winter School** organized by the S4C network on **1-4 February, 2022** in **Krakow and Zakopane, Poland** which was partly supported by the S4C Visegrad Fund project. The Carpathian Convention staff supported the Winter School organization and provided two presentations.⁵³ The Winter School programme was focused on sustainable and unsustainable tourism, thus also following up on the outcomes of the AAP project number 112045.
- Due to COVID-19 pandemic restrictions, a limited number of participants were invited, although more expressed their interest in participation. 9 young scholars from the following Carpathian countries: Czech Republic (1), Hungary (2), Poland (1), Romania

⁴⁹ Mitrofanenko, T.; Melnykovich, M.; Kubal-Czerwińska, M.; Kuras, K.; Vetier, M.; Halada, L.; Zawiejska, J.; and Nijnik, M. (forthcoming). Science-policy-practice collaborations towards sustainable development in the Carpathian Region. In: Safeguarding Mountain Social-Ecological Systems: a Global Challenge. Vol. 2., Schneiderbauer, S., Szarzynski, J., Shroder, J., Fontanella Pisa, P. (eds.), Elsevier's Hazards and Disasters Series.

⁵⁰ The agenda and presentation materials can be found in Annex III.6, the presented webpage draft in Annex III.7 and the Carpathian ESD Expert Network conceptual framework in Annex III.8-8a.

⁵¹ See the report in Annex III.10.

⁵² See the document with the Website draft used for the discussion at the Relaunch event in Annex III.7, the webpage is accessible at: <http://www.carpathianconvention.org/topics/awareness-raising-education-and-public-participation/esd/>.

⁵³ See Annex IX.1 for Winter School materials. The School storymap can be seen on: <https://storymaps.arcgis.com/stories/3f502c008a1e4466823748d68ec5d995>.

(2), Slovakia (1) and Ukraine (1), as well as from collaborating regions (Turkey and Armenia) took part in the event. Two other invited participants cancelled shortly before the event. The group represented the following disciplines: economy, biology, ecology, landscape architecture, landscape ecology, physical geography and tourism. Students engaged in discussions, workshops, field presentations and group tasks through the duration of the Winter School.

8) **New study programme at the Pedagogical University of Krakow (PUK Poland)** in collaboration with the Carpathian Convention Secretariat

Until 2022, the Institute of Geography of PUK Poland was working in close contact with the Carpathian Convention Secretariat to develop and implement a new graduate programme (BSc) focused on sustainable development in the Carpathians and sustainable environmental management. The Institute of Geography at the time strongly supported geography and entrepreneurship education as well as environmental research with a number of relevant programmes. The need to develop a sustainability programme, firmly based in the Carpathian context, reflected the student group profile (most students enrolled come from the Carpathian region) as well as the current trends in the job market in the region.

⇒ Deviation:

- As of early 2023, the reorganization of the university (**since October 2023: University of the National Education Commission, Krakow**)⁵⁴ resulted in the establishment of the Institute of Biology and Earth Sciences and transfer of some of the programmes (including *tourism and recreation*) to other faculties and the overall redefinition of the university strategy. In the view of new priorities, the ESD experts involved in the Carpathian ESD Expert Network, S4C members and other researchers at the Institute of Biology and Earth Sciences specializing in the Carpathian region focused on the development of a **3-year graduate programme in sustainable tourism** (*Ekoturystyka*). The programme was effectively launched in October 2023 (academic year 2023-2024).
- The programme aims to provide a comprehensive, advanced interdisciplinary knowledge of the natural environment and socio-economic, cultural and legal conditions of development and organization of sustainable tourism, with a special focus on the Carpathian region. The prospective graduate is a person, who demonstrates an active entrepreneurial and pro-environmental attitude and understands the need for universal environmental education. The programme emphasizes awareness of the value and importance of natural and cultural heritage for humanity and aims to instill the responsibility for its conservation as well as openness to the use of modern solutions and infrastructure that minimize adverse impacts of tourism on the environment.

⁵⁴ To reflect a growing number of non-teaching programmes, the name of the university was changed to the University of the National Education Commission, Krakow (as of 1 October 2023).

⇒ Additional / emergent activities, contributing to young scholar training:

- The Secretariat was invited to present the Carpathian Convention and its activities at the **Summer Field School (online) on Mountain Ecosystems and Resource Management**, which was planned to take place in Ukraine, but was held **online** due to the COVID-19 pandemic and to involve a larger number of international young and early career scholars, in **19-28 September 2021**. Harald Egerer provided a high-level inaugural talk and Tamara Mitrofanenko presented the Carpathian Convention and its activities.⁵⁵
- As already mentioned above, the Carpathian Convention Secretariat colleague took an active part in the **Youth Environmental Education Congress in Prague, Czech Republic**, on **17 March 2022**, upon invitation by the organizers.⁵⁶
- As one of the outcomes of the Carpathian ESD Seminar, Ukrainian organizers of the young scholar training “**International Carpathian School**” invited the Carpathian Convention Secretariat to present its activities supporting Ukraine at the International Carpathian School **online** on **22 February 2023**. Moreover, the organizers collaborated with other Carpathian ESD seminar participants and developed the project "Education for sustainable development: transferring V4 countries' experience for Ukraine's recovery", submitted and successfully funded by the Visegrad Fund (see Footnotes 26, 27 above). In the framework of this V4 project, the International Carpathian School 2024 was held in hybrid mode on 21-15 February, based in Kosiv, Ivano-Frankivsk Region, Ukraine. The Carpathian Convention Secretariat provided a virtual presentation on Carpathian ESD activities, the Carpathian ESD Expert Network and the S4C Network.⁵⁷
- Based on the evolving closer collaboration with S4C, the Carpathian Convention Secretariat was invited to provide a keynote and organize a workshop at the **Student Conference on Conservation Science. Connecting East and West Europe in conservation biology (SCCS Europe)**, which is a capacity building event for young and early career scholars from Europe, which took place in **Balatonvilágos, Hungary** on **September 13-16, 2023**.⁵⁸ A total of 38 participants took an active part in the conference, including young scholars from Hungary and several other countries. Tamara Mitrofanenko took an active role in presenting as a keynote speaker, organizing a workshop focused on Carpathian biodiversity-related topics and also participated in the evaluation of student presentations.
 - The event, which was not originally part of the project activities, but was one of the outcomes of the Carpathian ESD networking efforts, **provided an important networking opportunity with Hungarian organizers**, who joined a follow-up project concept submitted by Leuphana University and mentioned above. Moreover, it provided links to **Serbian biodiversity experts, who expressed interest in the Carpathian ESD activities and were invited to the COP7** of the Carpathian Convention. All costs were covered by the Hungarian organizers.
- One of the young Carpathian ESD experts from Romania approached the Carpathian Convention Secretariat with a request to provide a presentation to the **Young and Early Career Geographers Working Group on Geography and Sustainability (YECG-GeoSus)** – a working group organized by the International Geographical Union - Young

⁵⁵ Materials related to the Summer school can be found in Annex IX.2.

⁵⁶ Related email exchange can be found in Annex IX.3.

⁵⁷ International Carpathian School 2024 website: <https://necu.org.ua/the-international-carpathian-school-2024-the-winter-session-on-february-21-25/>. The related materials can be found in Annex IX.4.

⁵⁸ Brief information about SCCS Europe 2023 can be found on the website: <https://sccs.ecolres.hu/node/289>.

and Early Career Geographers Task Force, which she is an active member of. The **online** presentation and discussion was held on **5 February, 2024**.⁵⁹

WP3. Integration of the project activities and results into the Carpathian Convention

- 9) Based on the interdisciplinary and intersectoral discussions and recommendations, it was decided to use part of the external expert funds of the project to **engage a Carpathian Convention network expert from Hungary, member of S4C, Marta Vetier** in order to understand the successes and challenges of the existing Carpathian Convention networks, such as the Carpathian Network of Protected Areas and the S4C network. After the 12th CCIC, we received feedback from some of the Convention NFPs that this **helped to formulate a positive attitude towards ESD among Convention Parties**. The final report produced by Marta Vetier, based on her research, organization of the workshop at the 12th CCIC (see below) and additional interviews, can be found in Annex IV.2.
- 10) In addition to the evidence of integration of the project into the Carpathian Convention in the above-reported activities, the Carpathian Convention Secretariat staff integrated information about the project into Convention official documents, including progress reports to the **CCIC meetings**⁶⁰ and COP7 and into the policy decisions, prepared for and adopted by the **COP7**.⁶¹
 - 1) DECISION COP6/8 Strengthening science-policy-practice interface and cooperation with scientific networks,
 - 2) DECISION COP6/19 Awareness raising, education and public participation Article 13 of the Carpathian Convention.
- 11) Close collaboration with the **Polish presidency** on the project is evident from its contribution to the organization of the 2nd Carpathian ESD Seminar.⁶²
- 12) Carpathian ESD topics were integrated into the **Carpathian biodiversity-related activities**. For example, one of the outcomes of the 2nd Carpathian ESD Seminar was a concept of a **Carpathian Day**, an event linking education, awareness-raising and Carpathian biodiversity and sustainable development.⁶³ A Carpathian Day is already celebrated in Romania on September 26th, but the Carpathian ESD experts decided to share this practice with other Carpathian countries. In fact, the final dates for Forum Carpathicum 2023 were decided by the S4C organizers based on this concept.
- 13) Education was integrated as one of the core objectives of the **Carpathian Biodiversity Framework**, adopted at COP7.⁶⁴ The Carpathian ESD vision was inspired by the adopted Carpathian Vision 2050, which constitutes part of the integrated into the Carpathian Biodiversity Framework.⁶⁵

⁵⁹ The presentation and the description of YECG-GeoSus can be found in Annex IX.6.

⁶⁰ All CCIC-related documents can be found on the website:

<http://www.carpathianconvention.org/category/events/ccic/>. The Carpathian Convention Secretariat progress report CCIC recommendations from CCIC 12 are available in Annex II. The respective Carpathian Convention Secretariat progress report for CCIC 13 is available in Annex VIII.3.

⁶¹ All COP7 documents are available here: <http://www.carpathianconvention.org/cop7/cop7.html>. Selected documents, including final recommendations, LOP and Carpathian ESD-related presentations are included in Annex VIII.2.

⁶² See official confirmation in Annex III.1.c.

⁶³ See the concept in Annex VIII.3.

⁶⁴ See the Framework in Annex VIII.2.e.

⁶⁵ See slide 5 in Annex III.6.b and final relaunch report in Annex III.10.

14) ESD topics were integrated into the meeting of the **Carpathian Convention Working Group on Sustainable Agriculture and Rural Development (WG SARD)**, which took place in **Vatra Dornei, Romania on 26-27 April, 2023**:

- While the Romanian nominated ESD experts could not attend the meeting, the Carpathian Convention NFP from Romania, who closely followed the Carpathian ESD process, attended the meeting as well as the Slovak NFP, who had attended the Carpathian ESD workshop.
- A reflection on ESD was included into the agenda of the WG SARD, in order to highlight and strengthen links between the different sustainable development fields addressed by the Carpathian Convention and relevant for the WG SARD, including cultural heritage and traditional knowledge, sustainable landscape management and education and learning activities. Education and vocational training is an important topic in the SARD Protocol to the Convention, which includes: "Strengthening of formal and informal education, advanced training and qualification including intergenerational learning, access to local public services and advisory service" among the topics of cooperation of the countries.
- The meeting addressed **Carpathian pastoralism** as one of its main points, and questions of education, vocational training and awareness raising are highly relevant, for example, due to:
 - 1) lack of appropriate understanding of and teaching about pastoralism/herding tradition in the Carpathians,
 - 2) the need to provide vocational training to herders in order to integrate traditional ecologically friendly practices and
 - 3) the need to raise awareness about the importance of the Carpathian pastoralism tradition.⁶⁶

15) A **brief on the integration of ESD into the Carpathian Convention** was prepared and included on the Convention website⁶⁷ as well as used to communicate this process to NFPs, governmental experts and other actors. The brief is evolving as new activities emerge. The current version of the brief can be found in Annex VIII.6.

16) The **7th Conference of the Parties (COP7) of the Carpathian Convention** took place in **Belgrade, Serbia on October 10-14, 2023**. The Carpathian ESD Expert Network was highlighted and presented in detail during the **technical segment** of the COP7 as well as presented and discussed during the participatory **CARPATHIAN EXPO event**⁶⁸. The network was positively received, and Parties expressed support for Carpathian ESD activities and for continuing to focus on ESD among Carpathian Convention priority activities.

- The **Serbian** hosts and the current **presidency** of the Carpathian Convention (**October 2023-2026**) positively received information about the Carpathian ESD activities and several Serbian colleagues expressed interest in the Carpathian ESD Expert Network.

⁶⁶ See relevant meeting materials in Annex VIII.1.

⁶⁷ The version of the brief from 10.2022 is available at:

http://www.carpathianconvention.org/tl_files/carpathiancon/Downloads/02%20Activities/Awareness%20Raising/2112022%20docs/Briefing%20on%20Integration%20of%20ESD%20into%20the%20Carpathian%20Convention102022.pdf.

⁶⁸ The programme of the CARPATHIAN EXPO event, held as part of COP7 of the Carpathian Convention (<http://www.carpathianconvention.org/cop7/cop7.html>), can be found here: <http://www.carpathianconvention.org/cop7/docs/presentations/Carpathian%20Expo%20Programme.pdf>.

- The **Carpathian Biodiversity Framework** adopted at the COP7 includes education among its key objectives – this is one of the achievements of the Carpathian ESD project, which raised awareness about the importance of ESD as a tool for implementing the Carpathian Convention.⁶⁹
- The Carpathian ESD Expert Network was officially welcomed in the COP7 decisions: **DECISION COP7/19**, Para. 2:

The Conference of the Parties

Welcomes the Carpathian Education for Sustainable Development (ESD) Expert Network as a cross-sectoral network of diverse actors: official nominated Governmental experts, NGO practitioners, teachers and academic experts, thus facilitating cross-thematic linkages, expanding and strengthening Convention networks, and communication within the Convention and awareness-raising about the Convention, encourages the Parties, who have not done so yet, to nominate Carpathian ESD experts to the network, and requests the Secretariat to support the process, furthermore invites the Carpathian Troika to continue collaborating on supporting the Carpathian ESD Expert Network and its activities.⁷⁰

The Parties also welcomed project activities, including the **Carpathian ESD Seminar** and the process of developing the **Carpathian ESD vision and strategic priorities**. The Carpathian Convention Secretariat received many positive messages supporting its work on ESD, including from the high-level COP7 panel, reaffirming the relevance of this topic for the Carpathian Convention work.

- The **Carpathian ESD project and AAP support** were acknowledged in the official decisions **DECISION COP7/8** (Strengthening science-policy-practice interface and cooperation with scientific networks), Para 9, and **DECISION COP7/19** (Awareness raising, education and public participation) Para. 6.
- Carpathian ESD has been announced as one of the Carpathian Convention priority topics and as a recognized tool to implement the Carpathian Biodiversity Framework as well as to facilitate cross-sectoral links between biodiversity and other important areas of the Convention, including pastoralism.
- Around 200 participants attended COP7. All relevant COP7 materials can be found in Annex VIII.2.

WP4. Project management

- 17) Regular updates were provided to the Donor, as necessary, and the project progress was monitored and amendments requested, accordingly. Annex V contains a compilation of **project updates**.
- 18) **External ESD experts hired:** 3 ESD experts from Hungary, Poland and Slovakia were hired throughout the project, in order to support the development of the Carpathian ESD Expert

⁶⁹ As indicated above, see Framework in Annex VIII.2.e.

⁷⁰ See Annex VIII.2.a.

Network, the elaboration of the Carpathian ESD vision, mission, objectives and strategic priorities for 2024-2026⁷¹, and to help integrate the Carpathian ESD Expert Network with national practice and research networks on ESD. The experts' reports are available in Annex IV.2 and Annex. III.10 respectively.

19) Most significant **project events** are outlined in Annex III.5.

⇒ Additional / emergent activities:

- A **Master Student** from the **Bard Centre for Environmental Policy**, interested in linking Carpathian ESD and biodiversity activities, joined the Carpathian Convention Secretariat team between August and December 2023. She has made highly useful contributions to the Carpathian ESD activities, including supporting Carpathian ESD events described in this report and creating the Carpathian ESD Expert Network webpage.
- Carpathian ESD and its links with the Carpathian Biodiversity Framework are being explored in this student's **master's thesis**, which is projected to be completed in May 2024.

⇒ Deviations:

- Due to administrative and bureaucratic delays, the Donor Agreement was signed in June 2021, and the funds arrived on the Carpathian Convention Secretariat account only in October 2021. As such, UNEP Vienna pre-financed project activities until that point.

⁷¹ The vision and mission are outlined in the Carpathian ESD Expert Network Webpage: <http://www.carpathianconvention.org/topics/awareness-raising-education-and-public-participation/esd/>. The vision, objectives and strategic priorities are integrated into the Carpathian ESD Expert Network Conceptualization structure, available here: http://www.carpathianconvention.org/wp-content/uploads/2024/01/ESD-Expert-Conceptualization-Structure_1.2024.pdf.

3.2 Project outputs achieved

Planned outputs	Outputs achieved	Explanation of deviations, if applicable
<p>Facilitating exchange between Carpathian ESD experts during several meetings and workshops. The meetings and workshops will be devoted to:</p> <p>1) joint elaboration of a vision, strategy and concrete actions in the field of ESD in the Carpathians,</p> <p>2) follow-up on the recommendations provided during the previous meetings supported by the AAP project number 112045 (Forum Carpaticum 2018 and the Carpathian ESD Seminar).</p> <ul style="list-style-type: none"> • Outlining a vision and strategy for further integration of ESD into the Carpathian Convention in light of the ESD for 2030 Framework • Elaborating a proposal for the 7th Conference of the Parties (COP7) of the Carpathian Convention of integrating the network of ESD experts into the Convention structure <p><i>(Indicators:</i></p> <ul style="list-style-type: none"> • <i>meeting and workshop agendas</i> • <i>lists of participants</i> • <i>participants from each Carpathian country</i> • <i>workshops' results elaborated in the reports)</i> 	<ul style="list-style-type: none"> • Continuous exchange facilitated through in-presence and online workshops and events at the regional and international level. All Carpathian countries were represented by ESD experts. • Carpathian ESD vision, mission, objectives and strategic priorities outlined, based on the participatory inputs throughout the project • Results from AAP project number 112045, including 1st Carpathian ESD Seminar and Forum Carpaticum 2018 integrated into the project activities and built upon • Carpathian ESD Expert Network and its activities officially welcomed at the COP7 of the Carpathian Convention and in the COP7 decisions • Activities to strengthen science-policy-practice interface and collaboration with the S4C network have been integrated into official policy decisions of the Carpathian Convention and have been supported by the Parties • Participants from all Carpathian countries played an active role in main project events 	<ul style="list-style-type: none"> • While the UNESCO ESD for 2030 framework has been considered for the Carpathian ESD vision and strategic priorities, the final results are more closely based on the needs and ideas of the Carpathian community, in order to promote ownership. The UNECE ESD Strategy was considered as a relevant reference among other international frameworks informing the Carpathian ESD process. • When the project was developed, we envisioned the possibility that the Carpathian ESD Expert Network might be converted to one of the working groups of the Carpathian Convention. However, based on recommendations by the Parties and experts, it was decided that it will be more effective to keep it as a “hybrid” network, bringing together governmental and non-governmental experts on an eye-level – and, in addition, inviting Carpathian ESD inputs in all Convention thematic working groups.

Planned outputs	Outputs achieved	Explanation of deviations, if applicable
	(although not in every event)	
<p>Accompanying the abovementioned process with research in collaboration between the Convention Secretariat with the Leuphana University Lüneburg, including joint conceptualization and implementation of several ESD-related events of the Carpathian Convention</p> <ul style="list-style-type: none"> • Organization of an ESD workshop and session during the Forum Carpaticum 2021 and 2023 in cooperation with Leuphana University and other project partners • Elaboration of transdisciplinary research questions in order to support the ESD process of the Carpathian Convention in cooperation with the Leuphana University Lüneburg and other project partners and beneficiaries (<i>indicator: questions reflected in the project reports</i>) <p><i>(Indicators:</i></p> <ul style="list-style-type: none"> • <i>participation of Leuphana and Carpathian Convention experts in the meetings</i> • <i>agenda of ESD workshop and session in 2021 and 2023</i> • <i>lists of participants</i> 	<ul style="list-style-type: none"> • Leuphana experts participated in and co-organized several project events, as planned, including Forum Carpaticum 2021 and 2023. • Research questions related to Carpathian ESD were outlined and integrated into the Forum Carpaticum reports and the S4C Research Agenda 2030 as well as in the report of the Carpathian ESD Expert Network relaunch.⁷² • While Leuphana University colleagues could not attend the 2nd Carpathian ESD Seminar, joint research collaboration was established there among several Carpathian researchers. • A joint project concept was submitted to the DBU by Leuphana University, elaborated in collaboration with 2 Carpathian Convention partners from Hungary and Poland. The concept focusses on transdisciplinary learning interventions linking ESD, biodiversity and sustainable consumption in the Carpathians. 	<ul style="list-style-type: none"> • The Leuphana University expert could not travel to the WEEC in Prague, 2022, as originally planned, due to COVID-19 concerns. • Due to the engaged Leuphana ESD experts leaving the university in 2022 and other Leuphana staff not being available, Leuphana University was not represented at the 2nd Carpathian ESD Seminar. However, the Carpathian Convention Secretariat kept communication and updates with the staff of the Institute for Sustainable Development and Learning (ISDL) of Leuphana University, in order to maintain collaboration, which intensified again as of September 2023, with the arrival of the new Leuphana ESD professor Daniel Fischer.

⁷² See Annexes I.0; III.10, IV.1.

Planned outputs	Outputs achieved	Explanation of deviations, if applicable
<ul style="list-style-type: none"> • <i>questions reflected in the project reports)</i> 	<ul style="list-style-type: none"> • Carpathian ESD was presented to the Austrian academic ESD network in order to invite research collaborations. • Carpathian ESD and its links with the Carpathian Biodiversity Framework are being explored in a current student's master's thesis at the Bard Center for Environmental Policy, which is projected to be completed in May 2024. 	
<p>Following up with the previous and newly elaborated ESD-related recommendations by organizing concrete activities</p> <ul style="list-style-type: none"> • A 2nd Carpathian ESD Seminar, which will bring together experts from all Carpathian countries to exchange knowledge and experience and contribute to their networking • Contributing to a Summer School for young researchers • Supporting the development of a new study programme at the Pedagogical University of Krakow and linking it with the Carpathian Convention activities <p><i>(Indicators:</i></p> <ul style="list-style-type: none"> • <i>agendas</i> • <i>list of participants</i> • <i>participants from each Carpathian country</i> 	<ul style="list-style-type: none"> • The 2nd Carpathian ESD Seminar was organized, bringing together experts from all 7 Carpathian countries and focused on networking and joint project and research ideas. • Contribution was made by the Carpathian Convention Secretariat to the organization and programme of the “Winter School” for young researchers, organized by the S4C network. • In addition, contributions were made to other events for young researchers, including at the <ul style="list-style-type: none"> ○ International Carpathian School, ○ Student Conference on Conservation Science, ○ Youth Environmental Education Congress, ○ Summer Field School on Mountain 	<ul style="list-style-type: none"> • Due to COVID-19-related challenges, the S4C Summer School was postponed and became a “Winter School”. • Contributions to more young researcher training was made by the Carpathian Convention Secretariat and project partners than originally planned, as more opportunities emerged during the project duration, which also contributed to the outputs.

Planned outputs	Outputs achieved	Explanation of deviations, if applicable
<ul style="list-style-type: none"> <i>results elaborated in the report)</i> 	<p>Ecosystems and Resource Management.</p>	
<p>Disseminating information about the Carpathian Convention ESD-related activities via various regional and international fora, including UNECE and UNESCO processes, devoted to ESD</p> <p><i>(Indicator:</i></p> <ul style="list-style-type: none"> <i>Results elaborated in the reports)</i> 	<ul style="list-style-type: none"> The Carpathian Convention ESD-related activities were presented at many regional, national and international events and conferences, including scientific (WEEC 2022, ITD 2021 conference) and policy-related (EfE Ministerial Conference 2022) as well as youth conferences and training events (International Carpathian School, Student Conference on Conservation Science, Youth Environmental Education Congress, Summer Field School on Mountain Ecosystems and Resource Management. and professional networks (e.g. Austrian academic ESD network). Collaboration with the UNECE Steering Committee on ESD intensified after Carpathian ESD had been presented at the EfE Ministerial Conference, with the aim of synergizing activities and reporting. The Carpathian Convention Secretariat provided inputs at the second “Capacity-building workshop for facilitating national reporting on implementing the new implementation framework of the UNECE 	<ul style="list-style-type: none"> There was a challenge with the presentation of Carpathian ESD at the UNESCO World Conference on ESD, as explained in the first part of the report. However, the Carpathian Convention Secretariat reached out to the UNESCO ESD Net coordinators and plans to continue building up on this synergy. At the same time coordination with the UNECE Steering Committee on ESD has yielded stronger collaboration with this international network.

Planned outputs	Outputs achieved	Explanation of deviations, if applicable
	<p>Strategy for ESD (2021–2030) along the four priority strands”, held on 23 January 2024.</p> <ul style="list-style-type: none"> • Moreover, as an outcome of the 2nd Carpathian ESD Seminar, the Carpathian Day, celebrated in Romania on September 26, was promoted in other Carpathian countries. 	

3.3 Reaching of the project goal (outcome) – target-performance comparison

When the project was developed, the following outcomes were envisioned:

- 1) Building a network of ESD experts from the Carpathian region with the intention that continuous and regular exchange among them will provide the basis for a structure similar to a thematic Working Group of the Carpathian Convention. In the long-run, the goal is for the created network of ESD experts to carry out tasks, similar to a Convention Working Group, including development and implementation of projects as well as elaboration of policies supporting the implementation of ESD-related agreements (such as ESD for 2030 strategies and education-related provisions of the Convention on Biological Diversity, etc.) in the Carpathian region

This outcome has been accomplished. However, based on recommendations, it was decided that instead of aiming at creating another thematic working group, the Carpathian ESD Expert Network should rather have an intersectoral character and be represented in all Carpathian Convention thematic meetings. The precedent has been set to inviting active participation of Carpathian ESD experts and/or S4C experts to the Convention meetings and events.

Another contribution to this outcome in the long-term was that education was integrated among the strategic objectives of the Carpathian Biodiversity Framework adopted at COP7 in October 2023.

Nominations of several Carpathian governmental ESD experts to the network, who are the same as the NFPs to the UNECE Steering Committee on ESD and UNESCO ESD processes, further contributes towards this outcome.

However, we must note that some of the nominations are still pending (Czech Republic, Ukraine, Serbia), and in the case of Romania the nominated experts are not NFPs to the UNECE or UNESCO processes. Still, collaboration with the UNECE NFPs from Serbia has been established; preliminary ideas to strengthen collaboration with the Carpathian Convention Czech NFP in the field of ESD-biodiversity synergies have been discussed and communication with the UNECE NFP from Czech Republic has been established in early 2024. Furthermore, the Carpathian Convention NFP from Romania, from the Ministry of Environment, initiated dialogue with the UNECE NFP from the Ministry of Education in January 2024. Ukraine official nominations are pending due to the war, however, Ukrainian experts are actively participating in the network activities.

With respect to integration into the S4C research network, the ESD themes were first highlighted by the organization of participatory workshops and eliciting and then collecting recommendations on education from a multidisciplinary group of scientists, who saw the urgent need for ESD, but had no capacity or motivation that would support their consistent engagement in related research. Through this initial discourse and growing involvement of S4C experts, who were asked to provide input for various side events and meetings, ESD has become fully integrated in the research activities of the community with sessions and keynote talks eventually presented at the Forum Carpaticum conference. Although more involvement of scientists is needed, the general perception has shifted considerably as the network embraced the ESD themes also in the new ESD-focused chapter of the S4C Research Agenda.

- 2) Establishing collaboration of the Convention Secretariat and the Carpathian Convention partners, including the S4C network, with the Leuphana University Lüneburg. The intention is that such collaboration will enable critical and reflective transdisciplinary action research. This will support ESD and learning for sustainability transformations in the Carpathian region

- 3) Co-creating recommendations for research (proposed research questions), policy and practice (a vision, strategy and actions of how to best integrate ESD into Carpathian Convention activities and vice-versa) using a more rigorous reflection process and state-of-the-art knowledge about learning processes and transdisciplinary methods

Collaboration with the Leuphana University was initiated and strengthened via the Carpathian ESD project. Despite some challenges due to staff shifts at the Leuphana University, a joint project concept has been recently submitted by Leuphana University, elaborated in collaboration with several Carpathian Convention partners, which focused on facilitating critical and reflective transdisciplinary action research.

Research recommendations have been co-created in collaboration with Leuphana University and Carpathian ESD experts and integrated into the Forum Carpaticum 2021 ESD report and the S4C Research Agenda 2030. Furthermore, a joint research paper has been initiated at the 2nd Carpathian ESD Seminar.

- 4) Facilitating integration of recommendations into concrete activities of the Convention and its partners in the field of ESD.

This outcome has been achieved through Carpathian ESD activities, through the establishment of an intersectoral Carpathian ESD Expert Network, the integration of ESD into the thematic work of the Convention, including biodiversity, sustainable agriculture and rural development, and through the development of joint activities and collaboration between Carpathian ESD experts, both: facilitated by the Carpathian Convention Secretariat and independently from the Secretariat.

Of course, further questions and recommendations have been outlined as a result of the process, and we are looking forward to continuing our work towards further strengthening the Carpathian ESD Expert Network and integration of ESD and transdisciplinary learning into the Convention implementation activities.

- 5) Increasing awareness on the regional and international levels about the ESD-related activities of the Carpathian Convention.

This outcome has been achieved through activities of the Carpathian Convention Secretariat at the regional, cross-regional and international, level as well as of Parties' and partners activities at the local and national level. Among the evidence is the invitation of the Carpathian Convention Secretariat to the GENE congress and the active participation of Carpathian ESD experts in various thematic activities, as described in the first part of the report.

Among the originally identified problems and challenges were:

- *Challenges to cooperation between the NFPs of the UNECE Steering Committee on ESD from the Carpathian countries on a long-term basis: little capacity on behalf of the ministries to send NFPs to the UNECE Steering Committee on ESD meetings and the lack of time on both sides to engage in continuous exchange*

While this challenge will require continuous efforts, we have addressed it by requesting and receiving nominations of Carpathian ESD experts, who are also NFPs to the UNECE Steering Committee on ESD, and by strengthening our collaboration with the UNECE Steering Committee and its Chair, representative of Cyprus.

- *The lack of exchange between the scientists working in the field of ESD in the Carpathian countries and the Carpathian Convention partners on the non-governmental and governmental level*

Another long-term challenge, which has been directly addressed by the intersectoral nature of the Carpathian ESD Expert Network. We have managed to bring ministerial and non-governmental experts together during several Carpathian Convention and Carpathian ESD events, and the aim of the network is to continue this process. As such, we consider that the situation has improved. However, we are planning to make further efforts in this respect.

- *Lack of consistent cooperation in the field of ESD in the Carpathian Convention, lack of understanding by the Convention Parties of the relevance of ESD to the Convention implementation*

This challenge has been addressed by the establishment of the Carpathian ESD Expert Network and the process of awareness-raising among the Carpathian Convention NFPs during the project. The integration of education into the Carpathian Biodiversity Framework, discussions at several working groups and the agreement by the Parties to prioritize ESD among Carpathian Convention activities are strong indicators that this challenge has been solved. However, it will of course also require continuous efforts and synergies.

3.4 Assessment of the project by the recipients of advisory assistance and of the collaboration with other partners in the beneficiary country

The remarks received from the “recipients” and engaged stakeholder groups included:

- Governmental and non-governmental ESD experts from the Carpathian countries:
 - Gratitude, expressions of support and encouragement from the ESD experts on the efforts to facilitate collaboration and exchange by the Carpathian Convention Secretariat
 - Enthusiasm at the wealth of education-related activities of the Carpathian Convention and surprise that many Convention actors did not realize the relevance of ESD to their work
 - One of the governmental ESD experts particularly stressed her support for the integration of the scientific approach into the project and also promoted the Carpathian ESD Expert Network creation as a scientifically-founded process via her networks. This contributed to raising awareness about the Carpathian ESD Expert Network at the UNECE Steering Committee on ESD.
 - We have received several expressions of support for linking the Carpathian ESD Expert Network and the S4C network activities.
 - A discussion of Carpathian identity was linked to the Carpathian ESD vision.
- Constructive critical comments received:
 - Some experts expressed the importance of clarifying what ESD can and cannot do, in order to manage expectations and prevent overstating the role of ESD in complex processes of socio-ecological transformations.
 - There were many discussions about the definitions of different forms of education (ESD vs. environmental education, global education, climate education, etc.) and

why ESD was the chosen one. However, for the Carpathian Convention Secretariat and the Parties the reference to Sustainable Development makes sense, particularly due to links with other international processes, such as the UNESCO ESD Framework 2030, the UNECE Steering Committee on ESD, 2030 Agenda for Sustainable Development.

- Some comments addressed, whether it is more important to focus on ESD projects of the ESD network or to integrate and strengthen ESD components of other Convention areas. Our decision was to continue efforts on both fronts, especially after education was integrated into the Carpathian Biodiversity Framework and into the work of the Working Group on Sustainable Agriculture and Rural Development.
- There is a continued discussion on the relative importance of formal versus non-formal ESD, stemming from differing experiences and backgrounds of experts. Those with academic background, especially embedded in the formal teacher training programmes and relevant research fields, advocate for a stronger collaboration on decision-making level that could possibly result in a more consistent introduction of ESD-related content into mandatory curricula at regional or national level. Other experts emphasize the effectiveness and applicability of non-formal ESD. While during the 2nd Carpathian ESD Seminar these opposing views were constructively channeled into different, expertise-based activity streams, the discussion emphasized a need for a comprehensive identification and assessment of ESD projects and impacts across the region.
- Carpathian Convention NFPs:
 - While supportive of the project, in its beginning some NFPs were skeptical about the broader relevance of ESD to the work of the Carpathian Convention, however, they were open to learning.
 - Some governmental experts were skeptical about creating another international ESD initiative on top of the UNECE Steering Committee on ESD or did not understand the added value of the Carpathian ESD Expert Network.
 - One of the NFPs informed the Carpathian Convention Secretariat that engagement of the Convention networking expert contributed to her positive outlook on the project.
 - Due to the very active project implementation, some NFPs noticed the prevalence of education-related reports and decisions of the Carpathian Convention (highlighting that the ESD-related part of the Convention programme of work was as rigorous as that related to biodiversity, which is usually the core focus of the Convention).
- The S4C network representatives:
 - Welcome to the integration of the ESD and participatory research topics into the Research Agenda and Forum Carpaticum programme;
 - Appreciation for the inclusion of new members into the S4C network, whose primary interest focuses on ESD themes and education. This has been achieved via common events (S4C's events and events supported by this AAP project). The significance of this step lies in joining the conventionally separated research communities. Initially, ESD initiatives were perceived as somewhat exotic and marginal to concrete, Carpathian-related research objectives, despite unambiguous and repeated calls and recommendations for more focus on social education,

needed in relation to several Carpathian-related issues. However, as the sphere of education and education research is often undervalued, such perception was also palpable in Carpathian-themed conferences that focused on other disciplines. The inclusion of ESD as a parallel, equal theme at the consecutive scientific meetings was a stepwise, prolonged process, largely supported by the implementation of this project.

- Various other Carpathian Convention partner organizations working at the cross-section of various thematic areas and ESD:
 - The members of the Working Group on Sustainable Agriculture and Rural Development agreed about the importance of linking their work with educational initiatives, particularly with respect to vocational training.
 - The Carpathian Network of Protected Areas and various protected areas' experts started participating in the Carpathian ESD Expert Network due to its relevance to their activities, for example, regarding the Carpathian Day activities in Romania.

Positive and negative experiences while collaborating with the recipients and other partners in the beneficiary countries:

- While overall the experience of the project, especially towards its second part, was positive, due to the motivation and support expressed by the partners and beneficiaries, the following positive experiences particularly stood out:
 - Readiness of the NFPs of Poland (the Carpathian Convention Presidency until October 2023) to learn about the relevance of ESD and to devote time and resources to the 2nd Carpathian ESD Seminar,
 - The success of the 2nd Carpathian ESD Seminar and the collaborations that resulted from it,
 - Close collaboration with the Hungarian governmental ESD expert and the Hungarian NFP, who helped generate support for Carpathian ESD by the other Parties,
 - Strong support expressed by the governmental experts of Hungary, Poland and Slovakia at the EfE Ministerial Conference side event,
 - Interest and support provided by the Serbian State Secretary from the Ministry of Education, who is the NFP of the UNECE Steering Committee on ESD, despite the delays with her official nomination,
 - Support and positive feedback expressed by the Serbian NGO expert, who joined the network at the 2nd Carpathian ESD Seminar,
 - Positive bottom-up developments of the Carpathian ESD Expert Network: experts enthusiastically collaborating together on conferences and project developments, possibility for the Carpathian Convention Secretariat to contribute to several young scholar training events, relevant for the Carpathian ESD Expert Network,
 - Enthusiastic Serbian scientist, who joined one of the young scholar training events (SCCS) and COP7 and expressed interest and willingness to collaborate in the

framework of the S4C and ESD networks, thus expanding the number of active Serbian experts,

- Identification of joint interests with the NFP of the Czech Republic, relevant for integration of ESD into the Carpathian Convention and science-policy-practice interface (training and representation of Carpathian experts and scholars in biodiversity-related international expert processes),
 - Strong support received from the UNECE Steering Committee on ESD, based on the relevance of the Carpathian ESD Expert Network for the process and on the engagement and commitment of experts from Hungary, Poland and Slovakia.
- Negative experiences and challenges:
 - Negative experiences were related to the lack of understanding and acceptance of ESD as a relevant process for the Carpathian Convention by some of the NFPs at the beginning of the project, and the initial efforts needed to promote regional cooperation in the field of ESD as part of the Carpathian Convention Programme of Work.
 - Another challenge constituted differences in commitments among the Parties and NFPs: while some overwhelmingly supported regional cooperation on ESD and strongly facilitated it, others were skeptical due to the lack of staff available to engage in this field.
 - After the support for the Carpathian ESD Expert Network was apparent from all Parties, challenges constituted in reconciling the status of the Carpathian ESD Expert Network within the Convention: While some preferred an independent and/or hybrid network, which will function in an inter-institutional way, for others having a thematic working group of the Carpathian Convention would have been a more straightforward way forward. However, the positive outcome was that we managed to identify a suitable formulation, with support from the Parties, as reflected in the adopted decisions of COP7 (Annex VIII.2.a.).
 - Other negative experiences resulted from institutional and structural challenges of the region, such as uncertainty faced by the governmental experts at the time of political elections, challenges faced by environmental and educational NGOs, restructuring challenges in universities, which caused difficulties and delays. These challenges persist, they are beyond the influence of the project partners and beneficiaries for the most part, and we will continuously need to address them to ensure successful follow up.
 - A particular challenge remains the lack of ESD experts available at the ministerial level, either in the Ministries of Education or Ministries of Environment. This resulted in difficulty of finding nominations in some situations (e.g. Czech Republic, who on several occasions expressed interest, but lack of capacity), replacing the officially nominated experts after they were no longer available, and respective delays (e.g. Hungary and Slovakia).
 - Lack of communication and cooperation between Ministries of Environment and Education remains another challenge. Although best practices exist (such as in Hungary, collaboration between the Carpathian Convention NFP in the Ministry of Agriculture and Ministry of Human Capacity, or formal collaboration between the ministries in Serbia), they do not always yield the results in practice (for example, in

Serbia, while the experts have been identified and have agreed to join the Carpathian ESD Expert Network, the official nomination is pending).

- A key negative experience, beyond the influence of the project partners, was the war in Ukraine, which gravely influenced our activities and participation of Ukrainian experts: many Ukrainian experts had to flee, some male experts were no longer able to engage in sustainable development-related processes or could not leave Ukraine to participate in events. The needs and challenges of the Ukrainian Carpathians have exacerbated and became more complex. Nomination of ESD experts can understandably not constitute a priority for Ukraine at the moment. However, active participation of many Ukrainian experts continues, especially online.
- Another challenge was that many ESD experts tend to be highly motivated professionals already engaged in many projects, both on a paid and volunteer basis. As such, some experts could not attend some of the meetings and events, while still expressing interest in staying informed. Such challenges are particularly evident in case of experts from various disciplines in academia, unless their research is directly related to education. Time constraints and commitments to work in their disciplines and evaluation requirements often limit involvement as engagement in 'side' projects is not encouraged. As such, the Carpathian ESD Expert Network must offer added value to its members that makes it worth participating in – and evidently, a number of experts have expressed the need and added value it provides.

3.5 Lessons learnt and recommendations

Regarding cooperation with the beneficiary project region / with the subject matter / for the benefit of follow-up projects:

- Generally for the region, ESD is not a widely expected nor understood term, despite multiple efforts over the past decade(s). Even in formalized settings, understanding of environmental education is more prevalent and often confused with ESD. This is also related to the fact that elements of ESD conventionally belong to a number of subjects (especially in formal education) or disciplines and emphasizing ESD as separate often seems obsolete or repetitive. However, we have seen that with support of the Carpathian ESD project, progress has been made at least among the Carpathian Convention Parties and partners. Still **discussions on definitions and terms should continue as part of learning and awareness-raising. Moreover, awareness-raising efforts will need to be diversified to address different actor groups and their specific needs** (Carpathian Convention official experts nominated to the CCIC and working groups, local authorities, protected areas' experts, shepherds, formal education specialists and decision-makers, etc.).
- Efforts of awareness-raising and mutual learning with the Carpathian Convention Parties and stakeholders during the project unveiled **closer links between ESD, biodiversity, pastoralism and cultural heritage, which need to be integrated into follow-up activities**. Integration of education among objectives of the Carpathian Biodiversity Framework constituted one important outcome and step towards ensuring sustainability of efforts in this respect. Concrete knowledge gaps are, for example: availability of shepherds'

/ herders schools in the Carpathian countries, whether or not they are providing pastoralism-related trainings and integrate approaches enhancing ecosystem benefits of pastoralism. We also discovered that some university materials misrepresent the value of traditional agricultural practices, portraying them as primitive and undesirable.

- **Successful development of the Carpathian ESD Expert Network was strongly linked with the need to foster and support “Carpathian identities”**, which are felt stronger in some parts of the region than in others. Moreover, it is closely linked with a **diverse cultural and natural heritage** in some parts of the Carpathians. **This learning was integrated into the project activities already and is reflected in the vision statement and strategic activities proposed for the Carpathian ESD Expert Network, and further work will be needed in this respect.**
- The need to coordinate efforts among partners has been confirmed on many levels. As such, regular meetings and Carpathian ESD seminars are relevant and useful efforts and need to be continued and coordinated by the Carpathian Convention Secretariat. **The 3rd Carpathian ESD Seminar is planned in Serbia in 2025.**
- The challenges of engaging state parties in sustainability-related issues, including ESD, are faced often at the regional, national and international level. Therefore, **synergies need to be further strengthened with the UNECE, UNESCO and relevant EU strategies and networks, including GENE** and initiatives related to climate change education (EU Climate Pact, Education for Climate Coalition, OECD's Global Teaching Insights on Climate Action...).
- We have learned that in some situations we need to be patient with respect to contacting and engaging governmental officials, due to potentially turbulent political periods.
- The Carpathian ESD Expert Network stands out as one of the 2 regional intergovernmental ESD networks in Europe, and the approach of integrating science-policy-practice interface strongly into the network development and management has been highlighted. As such, it is important to maintain ESD research as part of the S4C efforts, including an **ESD session and workshop at the 8th Forum Carpaticum, envisioned in September 2025.**
- **Challenges of engaging Carpathian researchers, especially young scholars, in transdisciplinary research and science-policy-practice interface** are evident. These are likely related to the organization of science/research institutions in Carpathian countries that almost conventionally separates not only disciplines, but also basic from applied science with **limited funding and time constraints** for projects focused on the latter. In consequence, the challenges of fostering transdisciplinary research are often related not to the lack of interest among the researchers, but to limitations resulting from institutional contexts in Carpathian Countries, as well as from requirements and reward systems in national contexts, which are not conducive to inter-and transdisciplinary collaborations. While these might be difficult to address in the short-term, the Carpathian Convention Secretariat already supported collaborations between S4C and other scientific networks to begin understanding and addressing these challenges, and **more work in this respect will be necessary.**
- A concrete learning outcome integrated into the ESD strategic priorities, resulting from Forum Carpaticum and reflecting the challenges associated with the war in Ukraine, is the need to **focus on capacity building for rebuilding Ukraine and ensuring sustainable development and protection of the Ukrainian Carpathians**, which is facing increasing socio-ecological pressures. We envision more concrete activities based on the project outputs (such as the special session on Ukraine during Forum Carpaticum), also linked with

pastoralism, as Ukraine was named among the key Carpathian countries with significant cultural heritage and traditional ecological knowledge in this respect.

- **Challenges of integrating marginalized groups (e.g. Roma communities) and social aspects of sustainability, as well as topics such as green energy.** Quality ESD programs should do more than just scratch the surface of sustainability issues. We tend to talk more about the beauty and uniqueness of the Carpathians, but often leave other, rather difficult and conflicting topics that are part of the Carpathians out of the discussion. For example, discussions are often focused on the protection of the Carpathian cultural heritage, while some notions of this heritage might be incompatible with sustainability (e.g. certain gender norms). **Integrating more thorough understanding of these issues into practice is needed in the follow-up activities. Furthermore, the topic of accessibility of ESD to marginalized groups is both relevant and under-addressed:** How likely are remote mountain communities to engage in regional ESD activities? What about marginalized communities? **Issues of inequalities, strikingly present in our region, should be addressed and not hidden by the beauty of our nature.**
- The lessons learned as well as identified knowledge gaps and challenges listed above need to be addressed and consolidated with **follow-up activities**, e.g. in the frame of follow-up projects focusing on: a) Links between Carpathian ESD, pastoralism and biodiversity; b) Improved understanding of how socio-economic inequalities / needs of marginalized groups and their intersections with nature protection and sustainable development can be addressed; c) Sharing of best practices in ESD-related capacity building and training across Carpathian countries, including via organization of Carpathian Day activities beyond Romania.

Recommendations for further developing the Advisory Assistance Programme:

- Consider **organizing networking opportunities** for project partners and beneficiaries working on similar topics / in the same countries. Perhaps, such opportunities could be integrated in supported projects' activities

In our experience, the AAP was well suited to implementation of our activities, and the facilitation provided by AAP staff was much appreciated.