Carpathian Convention Seminar
on Education for Sustainable Development

16-18 April 2019, Budapest

Programme

The seminar is organised by the Ministry of Human Capacities of Hungary in collaboration with the UN Environment Vienna Programme Office – Secretariat of the Carpathian Convention and the Ministry of Agriculture of Hungary.

This project is funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety by the Advisory Assistance Programme for environmental protection in the countries of Central and Eastern Europe, the Caucasus and Central Asia and other countries neighbouring the European Union (AAP). It is supervised by the German Environment Agency (Umweltbundesamt, UBA) and the Federal Agency for Nature Conservation (Bundesamt für Naturschutz, BfN).
Agenda

17 April 2019

08.00 – 09.00  Registration and welcome coffee at Hotel Benczúr (1068 Budapest, Benczúr utca 35.)

09.00 – 09.30  Plenary: Welcome and opening of the seminar *(Room: Budapest)*  
Dr Zoltán Maruzsa, Deputy State Minister for Public Education of Hungary  
Teréz Krisztina Szabó, Head of Department, Ministry of Agriculture of Hungary

09.30 – 12.30  On-site visits in 5 groups to green kindergartens and eco-schools

12.30 – 13.30  Lunch break

13.30 – 15.50  Plenary *(Room: Budapest)*- keynotes

13.30 – 14.20  Whole-institutional approach in ESD: Engaging schools and communities in the transition towards a more sustainable future  
*Prof Mariona Espinet*, Autonomous University of Barcelona

14.20 – 15.00  A Rounder Sense of Purpose: Developing educator competences in ESD  
*Dr Paul Vare*, University of Gloucestershire

15.00 – 15.40  Reflections and thoughts on whole-institution approach and ESD teachers’ competences  
*Dr Aravella Zachariou*, UNECE Steering Committee for ESD

15.50 – 16.15  Coffee break

16.15 – 17.15  Parallel workshops

**Room: Mozaik**

A1: The Hungarian Green Kindergarten Network  
*Bálint Lampert*, Széchenyi István University Apáczai Csere János Faculty, Hungary  
Hosted by *Melinda Roszik*, Ferenc Gál College’s Teacher Training Elementary School and Teacher Training Kindergarten, Szarvas, Hungary

**Room: Margeréta**

A2: The Hungarian Eco-school Network  
*Dr Mária Szabó*, Eszterházy Károly University Institute for Educational Research and Development, Hungary  
*Dr Ádám Németh*, Educational District Centre of Sopron, Hungary  
Hosted by *Róza Szabó*, Educational Authority of Hungary

**Room: Business 2**

A3: Teachers’ ESD competence framework in Hungary  
Mónika Réti, Ministry of Human Capacities of Hungary  
Hosted by *Dr Ágnes Szikora*, Educational Authority of Hungary

17.15 – 17.30  Plenary: Recapitulation on Day 1 *(Room: Budapest)*

18.30 – 19.30  Dinner at Hotel Benczúr

19.30 – 21.30  Sightseeing tour in Budapest
18 April 2019

09.00 – 9.10  Plenary: Opening of Day 2 (Room: Budapest)

09.10 – 10.10  Parallel workshops

Room: Business 2

B1: Environmental Education in State Nature Conservancy of Slovak Republic  
Svetlana Pitáková, State Nature Conservancy of the Slovak Republic  
Dr Ingrid Moravčíková Károlyová, State Nature Conservancy of the Slovak Republic  
Hosted by Dr Éva Neumayer, Magosfa Foundation for Environmental Education and Eco-tourism, Hungary

Room: Margaréta

B2: Workshop on the GLOBE Program  
Barbora Semeráková, TERÉZA Educational Center, Czech Republic  
Hosted by Elżbieta Wołoszyńska-Wiśniewska, UNEP/GRID-Warsaw, Poland

Room: Mozaik

B3: The Role and Competences of Educators for sustainable development in the Carpathians  
Dr Tamara Mitrofanenko, UN Environment Vienna Programme Office - Secretariat of the Carpathian Convention  
Dr Agnieszka Świętek, Pedagogical University of Cracow, Poland  
Dr Joanna Zawiejska, Pedagogical University of Cracow, Poland  
Hosted by Dr Péter Szandi-Varga, Váci Szakképzési Centrum Petzelt József Szakgimnáziuma és Szakközépiskolája, Hungary

10.10 – 10.30  Plenary: Feedback from workshops (Room: Budapest)

10.30 – 11.00  Coffee break

11.00 – 12.00  Parallel workshops

Room: Business 2

C1: How can teachers benefit from the international cooperation in ESD?  
Maria-Magdalena Budkus, Ministry of National Education, Poland  
Dobroslawa Egner, Youth Centre of Culture in Piekary Śląskie, Poland  
Małgorzata Nowak, Primary School Sports Championship, Poland  
Anita Poniklo, Fundacja Znak, Poland  
Hosted by András Lénárt, Directorate-General for Social Affairs and Child Protection, Hungary

Room: Margaréta

C2: Future trends challenges competencies opportunities  
Boglárka Ivanegová, Ministry of Environment of the Slovak Republic  
Hosted by Nikoletta Gulya, Kelenvölgyi Primary School, Hungary
Room: Mozaik

**C3: Education for sustainable development research and practice in the Carpathian region**

*Danijela Djukic and Dr Branislav Randjelovic,* Institute for Education Quality and Evaluation, Serbia  
*Lesya Loyko and Radmila Ustych,* NGO FORZA Agency for sustainable development of the Carpathian region, Ukraine  
*Nina Merlușcă,* Ministry of National Education of Romania  
*Dr Marcel Mindrescu,* University of Suceava, Romania  
*Martin Šrom,* Lipka - school facility for environmental education, Czech Republic  
*Oksana Turok,* Rakhiv Secondary school N1, Ukraine  
*Dr Elena Matei and Dr Mihaela-Iuliana Verga,* University of Bucharest, Romania  

Hosted by *Boglárka Szűcs,* Károli Gáspár University, Hungary

12.00 – 12.30 **Plenary:** Feedback from workshops *(Room: Budapest)*

12.30 – 13.30 Lunch break

13.30 – 14.00 **Plenary:** Recapitulation of lessons learnt *(Room: Budapest)*

*Prof Mariona Espinet, Dr Paul Vare, Dr Aravella Zachariou*

14.00 – 15.30 **World Café:** Steps towards regional collaboration in ESD *(Room: Budapest)*

15.30 – 16.00 **Plenary:** Closing of the seminar
Keynote presentations

Whole-institutional approach in ESD: Engaging schools and communities in the transition towards a more sustainable future

Prof Mariona Espinet
Autonomous University of Barcelona

UNESCO Global Action Plan on Education for Sustainable Development has identified whole-institutional approaches as one of the five key priority actions towards the horizon of Education 2030. The presentation will provide a contextual background on the latest ESD international agendas, and on whole-institutional approaches in ESD based on the pioneering international contributions of ENSI (Environment and School Initiatives) projects during the last 10 years. Although there are several types of ESD institutions, this presentation will focus specifically on schools. The dimensions of a quality-learning environment for ESD in schools from a whole-institutional approach will be presented emphasizing the importance of school-community collaboration. Lessons learned from ENSI international experiences will be used to exemplify the dimensions of quality ESD learning environments and to set the stage for further reflections on the Hungarian contexts during the seminar.

Keynote speaker:

Prof Mariona Espinet is a professor at the Universitat Autònoma de Barcelona (UAB) in Catalonia (Spain) and she teaches science education (SE) courses in undergraduate and graduate teacher training programs on early childhood, primary and secondary education. At present she is the coordinator of two research groups ACELEC (Science education activity: Languages, tools and contexts) and Gresc@ (Education for sustainability, school and community) focusing on classroom discourse and critical literacy in SE and EfS, and school/community development in EfS. She has been a member of ENSI and the national coordinator of several EU funded network projects on EE and ESD such as SEED, CSCT, SUPPORT, and CoDeS.
A Rounder Sense of Purpose: Developing educator competences in ESD

Dr Paul Vare
University of Gloucestershire

This presentation explains the story behind the development of the Rounder Sense of Purpose competence framework for ESD educators.

Keynote speaker:

Paul’s first job was teaching then, over 30 ago, he took a job in environmental education and never looked back. He has worked with all phases of education, in voluntary, private and state sectors and across six continents. As NGO representative, he helped draft the UNECE Strategy for ESD then joined the expert groups on ESD indicators and competences. After years of activism, he is now learning to be an academic.
Reflections and thoughts on whole-institution approach and ESD teachers’ competences

Dr Aravella Zachariou
Cyprus Pedagogical Institute
UNECE Steering Committee for ESD

Keynote speaker:

Dr Aravella Zachariou is the Head of the Unit of Education for Environment and Sustainable Development (ESD), in Cyprus Pedagogical Institute and visiting Ass. Professor in EE/ESD at the Frederick University. She is participating in international organizations and networks for Environmental Education and Education for Sustainable Development (e.x. MIO, ENSI, GUPES) and recently (April 2017) she has been elected as the Chair of the UNECE ESD Steering Committee. Her research involves the integration of education for environment and sustainable development in formal and non-formal education as well as in teacher professional development. Her research work is published in international scientific journals for Environmental Education and Education for Sustainable Development and also, presented in international and worldwide conferences. She is the author of the book “Environmental Education and National Curriculum: Theoretical framework and Principles in Cyprus Primary Education” and Co-author of the book “Sustainable Development Issues in Education”. Also she is author and co-author of series of handbooks and educational tools on EE/ESD that used in Cyprus Schools for implementing the ESD Curriculum. She participated (participating) in more than 15 projects funded by EU (Erasmus, Life etc) as a senior expert, researcher and coordinator. She is nominated by the Cyprus Republic as the national focal point in the field of ESD and is representing Cyprus in international fora, technical consultation meetings and expert group meetings in the field of ESD. She was member of the scientific committee for revising the curricula in EE/ESD and she led the scientific committee for the writing the National Strategy on ESD and the technical committee for founding in Cyprus the Governmental Network of Environmental Education Centers.
Workshop sessions

A1: The Hungarian Green Kindergarten Network

The workshop introduces the importance of green kindergartens to education for sustainability. In addition, it will present the operational characteristics of green kindergartens and the process and criteria for becoming a green kindergarten. Besides, the presenter will also briefly mention two special areas: forest kindergartens and forest schools, which provide an excellent opportunity for environmental education.

Presenter:

Bálint Lampert is an assistant lecturer at Széchenyi István University (Apáczai Csere János Faculty of Humanities, Education and Social Sciences). Research area: education for sustainability, forest schools and virtual learning environments.

Workshop host:

Melinda Roszik graduated from college as a kindergarten teacher in 1998, and she got her primary school teacher’s degree in 2013. In 2015 she completed a postgraduate specialist training programme and became a professional teacher qualified in ‘project system environmental education’. At present she is working as a primary school teacher at the Ferenc Gál College’s Teacher Training Elementary School and Teacher Training Kindergarten in Szarvas. Her special field of interest is the practical application of project system education and teaching environmental awareness at an early age. Melinda considers the re-introduction of ‘forest school programme’ at her school in 2014 to be one of most important of her innovations, which has been working excellently ever since.
A2: The Hungarian Eco-school Network

The workshop starts with a short (20-30 minutes long) presentation, summarizing the main characteristics of the Hungarian eco-school system. It shows some exemplary innovations from the Hungarian Eco-school Network. In the focus of the presentation is the whole school approach, which is manifested through pedagogical work, school management with HR included, school operation and through the internal and external communication of the school. See the Eco-school Criteria at https://bit.ly/2CWrpxi. Joining this system is voluntary, and free of any charge for Hungarian schools. The presentation summarizes the different elements, supporting the eco-school network (such as pedagogical tools, teaching and school operations materials, network development events and collaborations, information exchange, teacher training, honouring excellence). The presentation has a special focus on the characteristics of the eco-schools of the Hungarian Carpathians (cross-border activities and close cooperation with national parks and conservationists.) They have a special situation because of the disintegration of local communities that threatens them. (https://bit.ly/2UoKxPi) They are engaged in local traditional culture and in integrating local natural values into their pedagogical practice. Participants will listen about the in-service teacher trainings and programmes, and the annual Sustainability Thematic Week programmes. Participants are invited to contribute to reviewing the challenges eco-schools facing and the guiding principles for best practices in ESD-driven school developments.

Presenters:

Dr Mária Szabó has been working as a research fellow at the Eszterházy Károly University Hungarian Institute for Educational Research and Development for 16 years. She is a former teacher of biology and chemistry and a school leader as well. Her professional interests are school leadership and school development. She participated in several national and international projects in the theme of school development, in professional support of teachers and school leaders, and in the curriculum development as well. She is an experienced trainer and programme developer.

Dr Ádám Németh has been a Deputy Director in charge of professional issues at the Educational District Centre of Sopron since its establishment on January 1st, 2017. He is a lawyer by profession. Between 2013 and 2017 he was the Head of the Human Services Department at Sopron City Local Government. He took part – among others – in the development of the Educational District Centre focusing on the efficient and service supporting approach as well as the successful preparation and fulfilment of both EU and home financed applications.

Workshop host:

Róza Szabó works for the Educational Authority. She is the head of the Regional Pedagogical Educational Centre in Szolnok, which provides different educational services for teachers and schools. Their responsibilities include organizing conferences, teacher training courses, competitions for students, and supporting teachers and schools in implementing the new career model and promotion system. Róza used to be a secondary school teacher. She is a nature lover and enjoys hiking.
Workshop participants get a taste of the work of the mixed expert group forming standards and indicators, integrating ESD competences to the teacher competence framework in Hungary.

In Hungary, teacher appraisal has an impact on teachers’ salaries and may influence career opportunities. While schools can choose the criteria for teacher appraisal, evaluation of the selected criteria is strictly regulated. Teachers are regularly invited to upload an e-portfolio based on which their professional activities are evaluated, and their advancement is stated. Since the introduction of the model, 73179 teachers took part in the qualification process.

Evaluators assess teachers’ portfolio based on a set of 62 indicators which correspond to 8 general competence areas, to which in 2018 a ninth one, ESD competences was added by a government decree in 2018. This means that for teachers’ qualification and advancement processes ESD competences need to be proven. This is only the first step towards integrating teachers’ ESD competences in teachers’ pre- and in-service training. In the second half of 2018 a development process was initiated to determine standards and indicators linked to the ESD competences. The challenge is that the competence indicators should be specific but flexible enough to each educational professional: special needs teachers, kindergarten teachers, subject teachers, speech therapists, psychologists, even principals and supervisors. An expert group was working on preparing a set of indicators and harmonising them with the existing indicators. This process will be highlighted and modelled in the workshop.

**Presenter:**

Mónika Réti is a policy officer at the Ministry of Human Capacities of Hungary, with responsibilities in STEM learning and ESD. Earlier she spent 9 years as a researcher at the Hungarian Institute for Educational Research and Development, engaging in participatory research into collaborative creation of complex educational programs, in which she profited from her former 11-year experience of teaching Biology and Chemistry. She also worked as a consultant and a teacher trainer.

**Workshop host:**

Dr Ágnes Szikora works for the Education Authority from 2001. Since 2012 the Head of the Department for Public Education Administration in the Education Authority, previously the Head of the Law Department in the Education Authority. The Department for Public Education Administration is responsible for organizing the teachers’ assessment exams and procedures in the teachers’ career scheme. This Department is running the Hungarian inspection system as well.
The State Nature Conservancy as a special professional organization of the Ministry of Environment of the Slovak Republic focuses on the aimed at developing the competences of the target groups for sustainable development. The second part of the workshop focuses on two selected school programs (intended for the first - second grade of primary school, after modification also for kindergarten) with practical examples. The first program is dedicated to a brown bear. The focus of the program is protection of bears, elimination of prejudices, instruction on residential signs of bear, how to contribute to its protection and elimination of short-circuit behavior in direct encounters. Within the program participants will prepare a small carton bear besides demonstrations. The second program is dedicated to white stork, which is often found close to human dwellings, endangered wetlands. The program brings stork’s life, issues, caring for an injured stork and their threats (pillars of death, polluted environment). At the end of the program a short game will be offered, which can be readily brought to schools.

**Presenters:**

Svetlana Pitáková, after her studies at Matej Bel University in the field of environmental education, went to work in the UK as the main adviser for the implementation of environmental standards, in a company which was engaged in garment recycling throughout Britain. After coming from the UK, she was employed in the State Nature Protection of Slovak Republic. For several years, she has worked with projects funded by EU funding. A couple of years later, she moved on to the position of Head of Promotion and Marketing, from which I organize promotional and marketing activities across the organization.

Dr Ingrid Moravčíková Károlyová started to study environmental education at Matej Bel University, Environmental Ecology with specialization in Environmental Education. She worked as the head of the science department and the environmental education in the Central Slovak Museum, the Natural Science Department. In the same time, she studied Environmentalism at the Faculty of Constantine the Philosopher in Nitra - protecting and using the landscape with a focus on natural tourism, where she explored the hiking trails and the drainage of the land. She graduated with PhD title. Then she joined Slovak Environmental Agency as head of environmental education at the national level. Ingrid further expanded her knowledge at the university with additional pedagogical training. After her practice in the previous organizations, she joined the State Protection of Nature SR as head of the Department of Environmental Education, Education and Enlightenment, where she also coordinates environmental education also in the Administrations of national parks and protected landscape areas, focusing on nature and landscape protection.

**Workshop host:**

Dr Éva Neumayer has a degree of horticulture engineer and nature protection and doctorate from agricultural sciences. She worked as an intern in Wolf Ridge ELC, USA, where she got experience in environmental education. She has been working as outdoor educator at different NGOs since 1998. Currently she works for Magosfa Foundation where she is responsible for environmental education programs including outdoor education for pupils, adult education (as accredited teacher trainings), lectures and campaigns, and leads projects.
The GLOBE Program international network connects students, teachers and scientists. Students all around the world follow the same scientific way of observations to understand better the environment: What clouds we have above us and what weather patterns are typical for our place. What is the water quality in nearby stream or lake. How fast the trees turn green in spring and colourful in autumn. Teachers get trained in hands-on activities and learn about how to do a environmental research project with students from elementary to secondary schools. As a result of their research, students often create awareness about sustainability issues (such as clean water, urban heat islands, air pollution) in their local community. GLOBE Program also offers smartphone apps for environmental monitoring which make observations and data collection attractive to young generation. More than 160 million data records have been collected in the large database since 1995 when the program was started. Program is implemented with collaboration with NASA and other science and education partners in 121 countries all around the world. More on www.globe.gov

Presenter:

Barbora Semeráková works for the Europe and Eurasia Region Coordination Office of the GLOBE Program, hosted by TEREZA Educational Centre in Prague since 2012. The office is one of the 6 centres that the program has around the world to support community and serves as help desk for country coordinators, teachers, trainers, scientists and other members in Europe. Bara has a long experience as a trainer and mentor in the field of inquiry-based learning and environmental education.

Workshop host:

Elżbieta Wołoszyńska-Wiśniewska is a geographer, nature-lover and educator working with children, youth, teachers and parents, encouraging them to join in the interdisciplinary research of natural phenomena, also with the use of digital tools. Coordinator of the GLOBE Program in Poland and propagator of the idea of getting volunteers and scientists working together to better understand the environment around us (so called citizen science). Head of the Education Department at the UNEP/GRID-Warsaw Center, an NGO promoting social involvement in environmental research and monitoring. She loves to travel, particularly on her bike.
B3: The Role and Competences of Educators for sustainable development in the Carpathians

The participatory workshop aims to promote exchange on the role of schools and particularly teachers in contributing to sustainability transformations in the Carpathian region, gather best practices among participants and collect ideas about how the Carpathian Convention could facilitate cooperation between educators, scientists and other actors from the Carpathian countries on facilitating sustainable development in the region.

The workshop will begin with a brief introduction raising a number of questions:

- How the teachers view their role in contributing to sustainability transformations?
- How can teachers/schools contribute to them?
- What are the best practices and experiences of the participants?
- How do teachers in the Carpathian countries cooperate with other organizations, such as nature protection organizations, universities?
- What are the barriers? How can they be overcome?
- How could we support the teachers in the Carpathians in their contribution to sustainability?

Following the introductory statements, a brief presentation will answer some of the above questions with respect to the situation in Poland, including teacher competences, legal regulations, and supporting conditions for ESD.

3 of the above questions will be selected and participants will be asked to discuss them in groups in a World Café format, followed by brief presentations of each discussion round.

Presenters:

Dr Tamara Mitrofanenko, originally from the North Caucasus, works in the field of science-policy-practice interface, transdisciplinary approaches to sustainability transformations, ESD and regional/community development on behalf of UNEP Office in Vienna, Secretariat of the Carpathian Convention, and the University of Natural Resources and Life Sciences, Vienna (BOKU). Doctor of Natural Resources and Life Sciences with specialization in sustainability sciences.

Agnieszka Świętek (Poland) Ph.D. in geography. University lecturer from the Didactics of Geography Department, Institute of Geography at the Pedagogical University of Cracow. Major research interests: didactic of geography, ecological and regional education, national and ethnic minority education. Author of two scientific monographs on the Roma minority in southern Poland: "The standard of living of Roma in the Lesser Poland voivodeship" and "Education of Roma students in the Lesser Poland voivodeship" based on own research carried out among the Roma community. Experienced at working in educational Erasmus+ Programmes, e.g.: Sustainable Entrepreneurship – A Game-Based Exploration for Lower Secondary Schools (SUSEN).
Dr Joanna Zawiejska is a geomorphologist working in the Institute of Geography, Pedagogical University of Cracow, Poland. Her research interests include environmental and human impacts on river channels, hydromorphological assessment and river restoration, social perception and education about rivers.

Workshop host:

Dr Péter Szandi-Varga born in 1980, was interested in nature already in his childhood, that's why he became a Biology teacher. First, Péter worked in the Hungarian Institute for Educational Research and Development. He was one of the coordinator of the Hungarian Eco-School Network. After that he worked in the field of teacher training. At this time he got his Ph.D. The theme was environmental pedagogy. Currently he works as a teacher in a vocational school. In addition to his work, he developed curriculum and judge textbook. His pedagogical creed is that the example is the most effective tool in the hands of a teacher.
C1: How can teachers benefit from the international cooperation in ESD?

This workshop aims to analyze policies, practice and opportunities for ESD on different levels, especially regional.

We will ask the participants questions:

What is the place of ESD in core curricula? What can Education on Sustainable Development practice tell policy makers? How can we show the relevance of ESD? How can policy makers and other actors understand and support better ESD practice? Funding trends are a critical factor to analyse the evolution and dynamics of ESD. National situations vary greatly in terms of funding sources, delivering these funds, levels of involvement of different stakeholders and mechanisms of coordination.

We will exchange our experience, good practices and advices.

In each country political, economic and social factors are affecting ESD. Poland will present its examples using the form of active participation ("activity matrix method"). We will discuss, based on the experience of the participants, what the challenges of ESD are. We engage participants in an exchange of arguments and goals, further examples of added value of international (regional) cooperation in the field of ESD.

Presenters:

**Maria-Magdalena Budkus** is a counsellor to the Minister at the Ministry of National Education, Department of Textbooks, Curricula and Innovations, area of responsibility: global education (cooperation with Global Education Network Europe), international studies of educational achievements (PISA, TIMSS, PIRLS, ICCS); Erasmus+ programme (Youth, School Education); students contests on human rights and sustainable development; development support projects for Belarus, Georgia, Moldova, Ukraine; also cofounder of WINGS Foundation (Warsaw Initiative of Non-Governmental Support), member of international observation mission of EU and OSCE, PR specialist; interested in multicultural issues; learning 8 languages.

**Dobroslawa Egner** is a teacher and trainer, currently director of the Youth Centre of Culture in Piekary Śląskie (Silesian region). From 2009 engaged in global education. Creator of educational city game "Fair Train" and workshops scenarios. Coordinator of Erasmus+ projects. Active in the field of a fair trade and environment protection.
Malgorzata Nowak works as a teacher at a vocational secondary school. She has been dealing with sustainability and pedagogy of sustainability for more than 10 years. In addition to her work, she is a textbook critic, curriculum developer and coordinator of eco-school in her school.

Anita Ponikło has been associated with NGOs since 2009. Certified trainer of global education. From 2010, conducts conferences and training for teachers, leading active workshops for children and youth in the field of global education, including sustainable development. Involved in many educational activities and projects related to global education, promoting ideas of sustainable development based on SDG (including international and intersectoral activities).

Workshop host:

András Lénárt's interest in sustainable development originates in a joint enterprise established back in 2001 with one of his best friends. Their ambitious goal was promoting environment friendly building solutions and sustainability. They operated a non-profit showroom, helpdesk and information centre. They created an inflatable, portable building that served as a temporary meeting room and exhibition space. The experiences that they collected during these years resulted in becoming the 'annoying green colleague', who switches off the lights, implements selective waste collection in the office, and arrives at work on a bicycle even in December. András’s main field of activity has been and is education: his former and recent jobs include the Ministry responsible for compulsory education, the Ministry responsible for social affairs, the Hungarian Institute for Educational Research and Development, the European Agency for Special Needs and Inclusive Education, etc.
The Future is not a distant, external world where we can send our problems to be fixed by education (OECD, 2019). Our well-being - and the well-being of generations ahead - depends on how effectively we use our knowledge to anticipate and act. In the late 70s David Bowie said that tomorrow belongs to those, wo hear it coming and his statement is ever so relevant for the learning systems of today. Complexity and the speed of change mean that connecting education to the trends shaping the world we live in has never been so urgent.

Yet there is a widening gap between what students need to learn and what teachers teach. To complicate it even further, what students learn is necessary, but no longer sufficient. What is more critical is how they can apply what they learned across fast-changing, unpredictable and disruptive contexts of the 21st century. Education should be about helping students develop a reliable compass and the navigation tools to find their own way through out increasingly complex, ambiguous and volatile world. The aim of the workshop is to discuss future strategic challenges with the participants; identify potential barriers in the flourishing of succesful ESD and last but not least, finding solutions.

**Presenter:**

Boglárka Ivanegová’s main agenda at the Ministry of Environment of the Slovak Republic is concerned with informal environmental education and ESD. Before that I was the co-founder of the first rooftop community garden in Slovakia. For 4 years I worked at a Natural History Museum. I hold a Masters degree in Human Development and Food Security and an interdisciplinary Bachelors degree in Human Ecology.

**Workshop host:**

Nikoletta Gulya has been working as a Geography teacher in public education for 19 years. She is also one of the Members of the Board in the Hungarian Environmental Education Association. Nikoletta’s commitment is strong in education for sustainable development. She has implemented a number of awareness-raising projects among her students and she is an active contributor to the programs of the Hungarian Environmental Education Association.
C3: Education for sustainable development research and practice in the Carpathian region

The workshop’s goal is to promote discussion on the following questions based on seven presentations highlighting good practice, initiatives and research:

- how to share best practices between the Carpathian countries,
- how to learn from each other, anticipate and overcome existing barriers,
- how to 'scale up' by cooperating among initiatives in different Carpathian countries and creating initiatives, in which participants from more than one country are cooperating.

Contributions

(1) Quality and future education- Serbian approach

How efforts by the Institute contribute to the better quality of education, through several views: educational standards, national exams and assessments, international research, vision of education in 21st century.

Presenters:

Danijela Djukic works for the Institute for Education Quality and Evaluation as a head of Center for Quality assurance of educational institutions. She participates in expert teams to develop educational standards, design and implementation of training on monitoring and evaluating educational achievements and standards, develop methodology and instruments for self-evaluation and external evaluation of institutions, develop and implement training programs in the field of self-evaluation, prepares publications in the field of external evaluation of the system, self-evaluation of institutions and promotion of the quality of institutions. Previously, she worked for 17 years as a special education teacher and therapist for children with autism and multiple development disabilities. Danijela also participated in the development of curricula, teaching and learning, programs, implementing programme innovation and activities for ASD, managing team activities, individual and group treatments for children with ASD, teaching class and preschool group- early stimulation and sensory integration, leading expert teams, mentoring, monitoring and supervising educational work, developing cooperation with other institutions.

Dr Branislav Randjelovic PhD in Technical Science and Applied Mathematics, associate professor at University of Nis, Faculty of EE, Department of Mathematics. Head of Insitute for Education Quality and Evaluation, Belgrade, institution responsible for quality control, domestic and international assessments and researches in education, and for preparation of all national exams. Former Head of Teacher training Center Nis, former member of Municipality Council in Nis, former member of primary school board, former member of board of preschool institution in Nis. Participant or researcher on 6 scientific projects. Manager or participant on more than 10 domestic and international educational projects. Published more than 30 scientific papers and 9 textbooks.
(2) Learning about forest in the forest

FORZA, based in Carpathian region of Ukraine, actively promotes forest and environment related education in Ukraine using “forest pedagogics” approach. We have taken up this method from the forestry colleagues of Slovakia who face similar challenges of making the forest sector more transparent and relevant to the needs of local people.

The underlying approach of forest pedagogics is to show more people the natural assets and support them in experiencing and reconnecting to nature. Applying active and cooperative educational methods and approaches as well as active role of foresters jointly with schoolteachers is crucial, making it different from the traditional environmental education.

Importantly, forest pedagogics esteems, promotes and offers forests as healthy and excellent learning-locations for outdoor-education. Learning in the forest about the forest is a perfect example on education of sustainable development built on long-term thinking and respect for nature.

Presenters:

Lesya Loyko is a head and project manager at FORZA, http://www.forza.org.ua/, an NGO with long-standing on-the-ground experience in local development, environmental protection, climate change adaptation focusing on forestry education and improved forest management activities. Having a legal background, since 2004 she was involved in numerous local and cross-border development projects, focusing on sustainable forest management and communities. She managed projects with indoor/outdoor training activities for various target groups (foresters, students, school kids), promote Forest Fest and Forest Pedagogy, endorsing the idea of forests as a healthy and friendly environment for all.

Radmila Ustych having a business background, switched to FORZA in 2004 and since then was involved in numerous local development projects and cross-border actions, focusing on forest-based industries and rural communities. She coordinated a range of outdoor programs and activities for various target groups (school kids, students, disabled, forest summer camps, forest fest events) and forest pedagogy activities, promoting the idea of forests as a healthy and friendly environment for everyone and anyone without restrictions.

(3) Fast forwarding education for sustainable development through OER

Not all parties of the Convention are part of the EU and therefore required to implement the EU policies, but all are part of the United Nations Economic Commission for Europe, briefly called UNECE. All of them have adopted at Vilnius, in 2005, the UNECE Strategy for Education for Sustainable Development, where it is stipulated that we must create competencies for the children with respect to sustainable development. After its first decade, the commitment for continuing the implementation of the strategy was further enhanced at Batumi in 2016, at the Environment for Europe Ministerial Conference. The provisions of the strategy respond both to the Carpathian Convention and to the UN Agenda 2030 for Sustainable Development that 193 member states adopted in 2015.
However, even though in all the aforementioned policy documents it is recommended that governments insert sustainable development education into the formal curriculum of the pre-university education, in practice it is very difficult to achieve it. Changing curriculum requires lots of resources: financial, human, time and material ones. It is a lengthy process that needs lots of approvals. In the meantime, educational content and practices are changing at a dizzy speed.

What would constitute as a solution for keeping the pace with the advancement of knowledge, as well as to make ESD a reality? The education policy makers and the educators are not taking enough into account the potential of open educational resources (OER). OER are materials for learning, teaching, research, or other educational purposes that one can use, adapt and redistribute freely, without constraints - or with very few restrictions - on copyright. The Government of Romania has committed through the National Strategy of the Digital Agenda 2020 to create OER and a Virtual School Library. In this respect, the Ministry of Education has engaged in partnerships to create resources for the Sustainable Development Goals and to make them available to all the pupils and teachers in the country. Likewise, it has requested to all the county school inspectorates to invite teachers to create OER, which will be later transferred into the Virtual School Library, at national level.

**Presenter:**

Nina Merluşcă is a public manager at the Ministry of National Education from Romania, Directorate General for Strategic Management and Public Policy, with a postgraduate degree in public administration from London Metropolitan University – UK (part of the Young Professionals Scheme) and one in public policy from the National Graduate Institute for Policy Studies/政策研究大学院大学 – Japan (Young Leaders Program). She is coordinating a working group for promoting the Sustainable Development Goals (SDGs) of the UN 2030 Agenda and has created partnerships with national and European NGOs and with UNICEF, a dedicated website page and resources available for all the Romanian teachers and pupils, as well as visibility for the SDGs (press releases, fellowship announcements, organized a training at the ministry - in partnership with an NGO - with the topic Global Learning approach on food waste in non-formal education). At the moment, she is collaborating with a coalition of 100 NGOs from the environment and education areas in order to draft a public policy on ESD, based on the 6 priorities of the Batumi Ministerial Statement on Education for Sustainable Development. Beforehand she was part of the National Drafting Committee of revising the Romanian National Strategy for Sustainable Development, she has cooperated with the Romanian European Institute for the study The transition towards a circular economy. From waste management towards a green in economy in Romania and has drafted the country report regarding the implementation of the UNECE Strategy for Education for Sustainable Development.

(4) An outlook on problems facing forest management in post-socialist Romania: deforestation, illegal logging, effects on protected areas and old-growth forests

Massive socio-economic changes occurring in Romania due to the transition from socialist state-owned economy towards free market economy ultimately led to increasing pressure on forest resources, which became economic targets, after they had previously been managed by the state in a well-balanced manner. These transformations, accompanied by substantial economic hardship, and the land and forest restitution process translating into logging thus present considerable challenges for nature conservation. Corruption and lack of transparency are also major problems, leading to cases where sanitary or salvage logging has been misused to harvest healthy forest stands. New
owners appear to harvest much of their forests to gain short-term profits, and most often than not lack the capacity and knowledge for sustainable forest management and nature conservation principles and legislation. Therefore, after the collapse of socialism, forest cover in the Romanian Carpathians has changed to a significant extent, in turn affecting the ability of Romania’s protected areas to safeguard biodiversity (e.g. virgin forests). Furthermore, natural stand-replacing disturbance events also occur in the Romanian Carpathians, including insect infestation, avalanches, fire and wind-throw, with the latter being the most important. All of the aforementioned factors compromise the goals of Romania’s protected area network, lead to an increasing loss of forest habitat, and more isolated and more fragmented protected areas. The effectiveness of Romania’s protected area network in terms of its ability to preserve biodiversity is therefore most likely decreasing.

Presenter:

Dr Marcel Mindrescu is assistant professor at Geography Department, University of Suceava, Romania. He is working in geomorphology, hydrology and climate change in the Carpathian region. He is also member of scientific committee of Rodna National Park (northern Romania).

Co-author:

Laura Bouriaud is professor at Forestry Department, University of Suceava, Romania. She has a role of LEAR for FP7 and Horizon 2020 at the University Stefan cel Mare of Suceava.

(5) Lipka school organization for environmental education

The poster presents ecological and educational work during last years, especially focusing on our international activity within many EU, Erasmus, Visegrad etc. projects. In our everyday work, we prepare from half a day to one-week environmental programs for pupils from 5 to 18, we teach approx. 15 environmental subjects at 3 universities. In the afternoons, weekends and holidays we provide hobby clubs, summer camps, excursion and courses for kinds as well as for teachers and other adults. Education in school gardens, garden therapy and outdoor education are our strong topics. We search for new project partners. Our main goal is to show people various forms of environmentally friendly life.

Presenter:

Martin Šrom is a deputy director of Lipka. Lipka is school organization for environmental education. Lipka is one of the biggest organizations for formal and non-formal environmental education in the Czech Republic.
(6) Ecological activity of the students of the city of Rakhiv as an example of the ESD in the Carpathian region

The poster presents ecological and educational work during the last five years: activity that took place annually, for pupils of elementary (6-10 years) and high school (11-15), in classes, in the courtyard, in the woods, during excursions and study tours, at lessons, during the work of circles and clubs. The training takes place in the form of games, quests, interactive exercises, meetings with scientists, walks and visits to museums and nature protection parks. The main goal is to appreciate the world around us, to respect life in various forms.

Presenter:

Oksana Turok has 17 years of work experience at the school as a Biology teacher, PhD student, head of the Green Pack group and Young Forest Rangers Club, coordinator of the Interactive Club from Rotary Club of Rahu.

(7)

Schools as Vector for Sustainable Education in Romanian Carpathians

The paradigm of sustainable development (SD) that governs the beginning of the third millennium will only be accomplished by both horizontally and vertically efforts in each society, respectively by integrated approach and/or from top-down and vice versa. At the same time, all actors of a society must be involved formally and informally at every moment and in every space, to achieve the sustainability as a way of life for all. As a European country, Romania has tools to be one of the countries with true achievements in this domain. As the Carpathian country, hosting two thirds of the Carpathian chain, Romania has perhaps the greatest responsibilities to develop this space in a sustainable way. However, the effects left by communist development still leaves its mark on the environment, through historical pollution, especially the mining industry, while the transformations that took place in the past thirty years have introduced socio-economic and environmental changes. In this pool of changes, education, and especially school education, is perceived as a vector to ensure SD while politics secure it. In schools, ESD is one of the challenges for National Curriculum as few disciplines (geography, biology) can address this topic. School, through extracurricular programs, can broaden its spectrum of action to be transferred to the society in order to raise the awareness and knowledge, to promote behaviors and actions for SD.
Presenters:

Dr Elena Matei is full professor at Bucharest University, Faculty of Geography, and Director of the Research Centre of Regional Analysis for Environment, Tourism and Sustainable Development. It is also a founder member of S4C, being member of executive board, chairing it between 2016 and 2018. Her expertise is related to sustainable development and education, teaching geography. She is author of eight scientific books/book chapters, over 80 papers in scientific journals and leader or member in 11 national/international projects. Beyond the didactic and scientific career, E.M. was the leader of the national team of Romania at the International Geography Olympiad (2002, 2006), finalized with gold medals of students as well as the president of an NGO overseeing the ecological education of local communities.

Dr Mihaela VERGA is a lecturer at Bucharest University, Faculty of Geography, specialized in environmental sciences, applied geography, natural hazards and risks. Involved in research projects on the Carpathian region, training programs for secondary school teachers, teaching assignments in Erasmus+ Program, educational programs in protected areas. Author of several books/book chapters, scientific articles published in per-reviewed journals or proceedings of international conferences. Leader of national team of Romania at the International Geography Olympiad (2004, 2005) rewarded by the Ministry of Education and Research for meritorious results.

Workshop host:

Boglárka Szűcs graduated as a teacher of biology, geography; tourism economist and European Union expert. Her main interest is the environmental education, how to convert the global environmental responsibility to anyone into daily tasks and everyday routine. Her main field of research is the ethical roots of environmental problems. She works as an environmental educator at the Church and Society Research Institute of the Károli Gáspár University in Budapest.