



egea

**EGEA Annual Congress 2024
Change for the Future
Scientific Report**

Edited by the EGEA Annual Congress 2024 Science Team

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Introduction

Theme of this EGEA year and theme of *Change for the Future*

With **Agrifuture** being EGEA's theme for 2024, we believe there is no better time to look into the future. **Agriculture** has traditionally been a core element of the Podhale-area (Poland) where the EGEA Annual Congress 2024 takes place. Podhale's economy and culture is strongly connected to farming, yet the agricultural practices used have continuously raised questions regarding their **sustainability**. It is key to brace and prepare the local agricultural sector for the heavily changing political, economical and ecological environment in podhale.

All of us are aware of the dynamically altering conditions resulting from **worldwide human impact** and **climate change**. With **extreme occurrences** and **catastrophes** that have been and are now happening in Europe, we want to provide insight and give room for diving further into these issues in a place filled with nature, deeply sensitive to unstable circumstances.

We also cannot forget the ever-so-important **EGEA Regional Restructuring**. In its spirit, we offer space to talk about the **future of our Association**. What does it look like with the new division just around the corner? What new challenges will we be faced with?



Scientific Programme of the EGEA Annual Congress 2024

Parts of the Scientific Programme of the EGEA Annual Congress 2024 included:

- a **scientific lecture** delivered by a special guest lecturer from the Jagiellonian University in Kraków, Associate Professor Grzegorz Micek, PhD;
- 8 **scientific workshops** spread out in 4 working sessions and summed up by a workshop results presentation, all delivered by 16 motivated and knowledgeable workshop co-leaders from various EGEA entities (tab. 1);
- 4 **scientific excursions** showcasing the beautiful yet vulnerable environment of the Podhale region (tab. 2).
- 10 **scientific entries** enriching the much beloved Daily Geographer (tab. 3).

Tab. 1. Scientific workshops at the EGEA Annual Congress 2024

#	Title	Issue(s)	Workshop co-leader #1	Workshop co-leader #2
1	The symbiosis between the geographical area and the species of plants and animals	The harmony of flora and fauna in different parts of Polish Carpathian Mountains and how to keep it alive	Bristena Misca, EGEA Timișoara	Mateusz Gajda, EGEA Kraków
2	'Til the landslide brought me down	Land mass movement in the Podhale region	Tonya Banasik, EGEA Kraków	Natalia Hinc, EGEA Kraków
3	The value of the Polish Highlands folklore for tourism and their possible impact on local culture	Highlander folklore's impact on local tourism and culture	Martyna Kazlauskaitė, EGEA Vilnius	Laurynas Cicėnas, EGEA Vilnius
4	The future of political involvement of young adults – case study of Kościelisko municipality and Podhale region	Defining the weight of young adults in creating civil society nowadays	Stanisław Konieczny, EGEA Warsaw	Ugur Eren Daştan, EGEA Izmir

5	Branching Out: Aerial Insights into Sustainable Forestry	The importance of forests around us & reasonable management of them. How remote sensing can help understand it more	Wiebke Breternitz, EGEA Jena	Lennart Greiner, EGEA Jena
6	The past and the future of the settlements in the Polish Western Carpathians	Changes in the settlement patterns in the Polish Western Carpathians over the years and now	Theresa Steinert, EGEA Osnabrück	Lukas Jensen, EGEA Hannover
7	The impact of mass tourism and how Tatra NP can minimise their impact on the environment	The impact of mass tourism in the Tatra National Park	Klara Grošanić, EGEA Zagreb	Korana Komar, EGEA Zagreb
8	How to adapt the infrastructure and lifestyle to the harsh environment of the Tatra Mountains	The adaptation of infrastructure to the environment of the Tatra Mountains	Matúš Béber, EGEA Prague	Vít Šrámek, EGEA Prague

Tab. 2. Scientific excursions at the EGEA Annual Congress 2024

#	Name
1	<i>Agrifuture</i> : Kościeliska Valley (easy hike)
2	Mass tourism high above: Morskie Oko (medium hike)
3	Into the Forest: Grzybowiec & Siklawica (medium-hard hike)
4	Glacial relief of the Tatras: Czarny Staw Gąsienicowy (hard hike)

Tab. 3. Scientific entries published in the Daily Geographer at the EGEA Annual Congress 2024

#	Title	Author
1	The characteristics of firn-ice patches in the Morskie Oko catchment (Polish Tatra Mountains)	Michał Kamiński, EGEA Kraków
2	The role of geography in the construction of local identity. An analysis of the relationships between space, community, and historical heritage in the Cămpulung-Moldovenesc depression	Vlăduț-George Lucan, EGEA Iasi
3	The saturated hydraulic conductivity of forest soils in Beskydy mountains	Martin Zmelty, EGEA Ostrava
4	Impact of the natural environment on the location of a cemetery of the Wielbark culture in Stara Rzeka, Świecie district	Bartek Zawadzki, EGEA Toruń
5	Triple Collocation & Time Series Analysis for Surface Moisture Retrieval using Earth Observation Indices in the Overberg District, South Africa	Marcel Felix, EGEA Jena
6	The Vision of the Ideal Student Campus in an International Perspective	Wiktoria Ryczko, EGEA Olsztyn
7	Circassian Villages in Uzunyayla (Kayseri, Türkiye) with Cultural Geography Approach	Mustafa Şamil Bak, EGEA Izmir
8	Large-scale bedforms in the vicinity of Serwy Lake (NE Poland): their morphometry and links to the high-energy glaciofluvial environment	Mateusz Suwiński, EGEA Toruń
9	Competing Lithium Narratives: A Comparative Analysis of Discourses Around Lithium in the EU and the 'Lithium Triangle'	Michael Maier, EGEA Graz
10	The comparison of flood wave patterns in the "Łysy Potok" catchment before and after deforestation in its catchment area	Michał Kamiński, EGEA Kraków

Scientific lecture

A very special introduction to the theme of *Change for the Future* and the region of Podhale as a whole was delivered by our scientific guest, **Associate Professor Grzegorz Micek, PhD.**

Professor Micek works at the Department of Regional Development of the Jagiellonian University in Kraków, where he gives lectures which are always met with great interest by the students. His research interests include but are not limited to: **local and regional development, business location factors** and **the economics of peripheral cities and regions.**

During the Scientific Opening of the Annual Congress, Professor Micek delivered a thematic lecture titled ***What shapes the trajectories of mountainous areas? The case of the Polish Carpathians.*** Here is what he said about it beforehand:

“During my forthcoming address, I will be eager to identify the determinants of specific growth trajectories of mountainous areas using path dependence and formation constructs. In particular, I would be happy to reveal the mysteries of the historical development of the Polish Carpathians and to provide more detailed studies of selected towns and rural areas.”

Professor Micek's lecture was divided into five sections, namely:

- Introduction to the theme and aims of the lecture,
- Introduction to the concepts of path dependence and path formation,
- Discussing key challenges and resources of mountainous areas,
- Naming selected key regional industrial paths of the Polish Carpathians,
- Conclusions.

When discussing selected key regional industrial paths of the region, Professor Micek employed a case study approach, allowing congress participants to get a better insight into various development paths appearing in Podhale – a region relying on far more than just tourism. Participants learnt about:

- **Nowy Sącz** & **Łącko**, nestled in the Carpathian orchard belt (plums and apples) with new paths emerging (agrotourism, roof window manufacturing),
- **Zakopane** & its closest vicinity, relying on endogenous resources (nature and culture) but nowadays welcoming rather exogenous inflow of visitors,
- **Kalwaria Zebrzydowska**, boasting a three-way development path (furniture industry, footwear industry, pilgrimage),
- and **Krosno**, known traditionally for petroleum industry and glass works, but nowadays relying on modern industries: aviation, automotive and furniture.

Professor Micek concluded his speech by pointing out how individual the development path of every city may be – depending on both its resources and how the city and its residents decide to make use of it. He then pointed out how remote work and its repercussions could be the next factor altering development paths of the Podhale region, a subject he would like to see more studies on.



Scientific workshops

#1 The symbiosis between the geographical area and the species of plants and animals

Introduction

The goal of this workshop was to teach the participants about the behaviours of wild animal's which you can encounter along a hike path or a trail. We discussed 4 main animals (snakes, bears, wolves and jackals). Another focus point in our workshop was to make sure that the participants know the Carpathian range. The animals that we talked about very often occur in these mountains. Also, the Carpathian range is a very important spot for biodiversity in Europe. In another session of the workshop we talked about the surviving skills that you should know when you are going on a hike. We put together a list of edible mushrooms.

Methodology

We started with presenting them the Carpathian range. We explained to the participants how it was formed and how many mountain massives it contains. We focused on the Tatra mountains. Furthermore we discussed the climate and weather in the mountain range. Next we focussed on the geomorphology and geology of the Tatra mountains on a large scale. We ended the session with everyone drawing the Carpathian rage from photographic memory to see how much attention the participants paid to the presentation.



In the second session we talked about the symbiosis between animals and geographical areas. We discussed how the geographical areas are influencing the animals that live in those areas and what you should do if you encounter them in the wild. The focus was on snakes, wolves, bears and jackals.



Next, we talked about what you should bring to a hike that is longer than ten hours. We managed to arrange the perfect backpack. Part of it being a first aid kit that contains all the essentials for mountaineering. Part of this survival training was also learning about which plants are edible. Also, we gave the participants a list of edible mushrooms. Unfortunately there was no time for a mini hike to show them the mushrooms in the wild. However, some of the participants ventured into the forest near the accommodation and found some of the mushrooms so we could identify them together.



During the fourth session we prepared for the workshop presentation. Part of it was creating several games for the rest of the participants that didn't attend our workshop. We tried to train them on a smaller scale of what to do in different situations which one could face during a mountain hike. Thereby we especially highlighted the mushroom list and the first aid kit.

Results & Interpretation

The interactive workshop with many opportunities for the attendees to participate actively taught the participants key factors which should be taken into account when going on a mountain hike. Thereby we always draw knowledge to find solutions for mountaineering challenges from real world situations and personal experiences. The workshop participants are now aware about the necessary precautions a hiker should have and how one can use things found in nature to survive different situations. The participants gave very positive feedback and reached their learning goals.

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#2 'Til the landslide brought me down

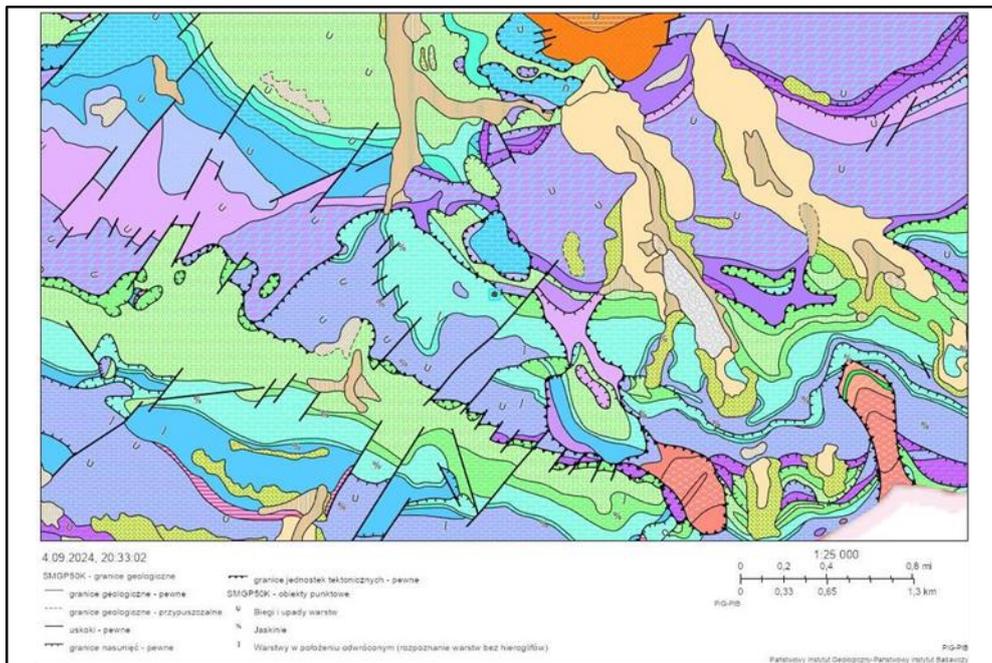
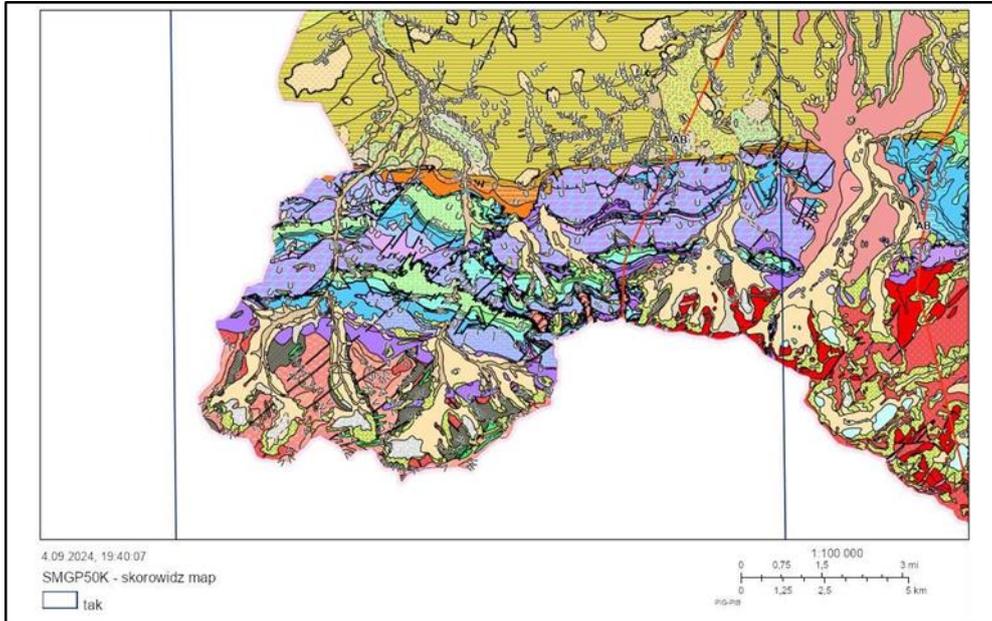
Introduction

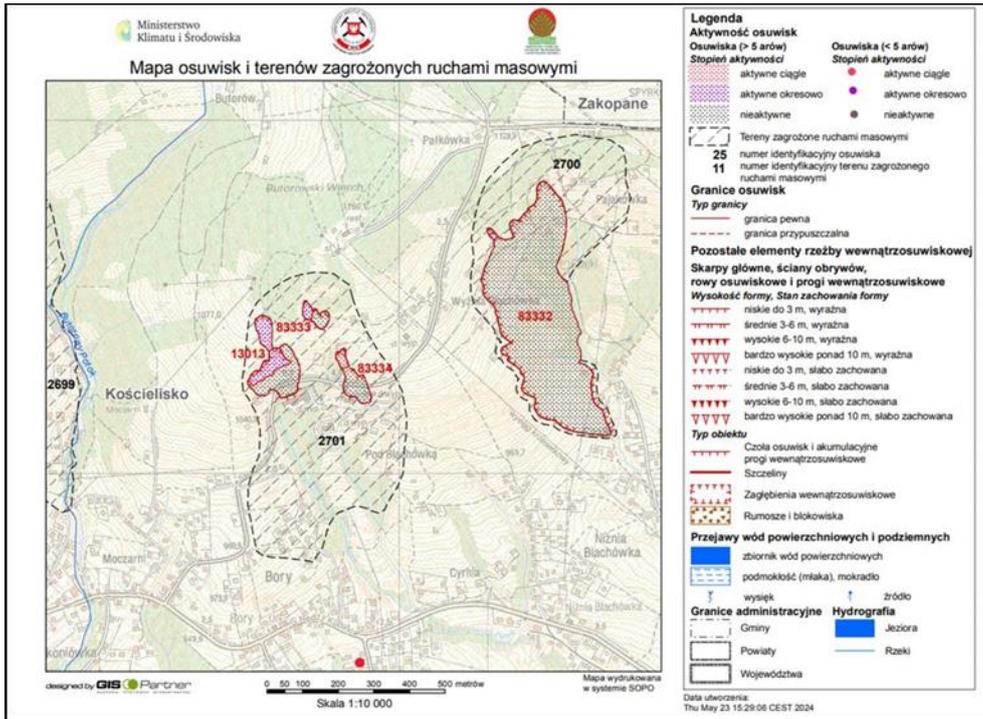
The topic of our workshop is landslides and mass movements, particularly in the Podhale region of southern Poland. The goal is to introduce our participants to the definition of landslides, the factors influencing them, the types of landslides and mass movements, as well as the historical perspective and future of landslides in the Western Carpathians. We posed several scientific questions designed to encourage participants to reflect on the subject: How should we protect ourselves against landslides? Is it possible to prevent landslides or only to partially mitigate them? What technological advancements are helping us today? Should we focus on preventing landslides or on warning people? Are there any positive effects from landslides?

Methodology

In the workshop on landslides and mass movements in Podhale, we used a variety of tools and resources to facilitate learning, discussion, and practical activities. During two of the sessions, we used multimedia presentations to deliver content, including slideshows and videos. We examined real-world case studies of mass movement incidents in Podhale and other European regions. These case studies helped illustrate the causes, impacts, and responses to different types of mass movements, allowing participants to gain insights from past experiences. We used geological and landslide maps of the Western Carpathians, provided by the Polish Geological Institute – National Research Institute, to visualize data related to land mass movement hazards, vulnerabilities, and mitigation measures. Additionally, we facilitated group exercises and discussions to encourage active participation and knowledge sharing among participants.

We also used an online tool – Mentimeter – to collaborate and create a mind map related to the word ‘landslide’.





What words come to your mind after hearing 'landslides'?

52 responses



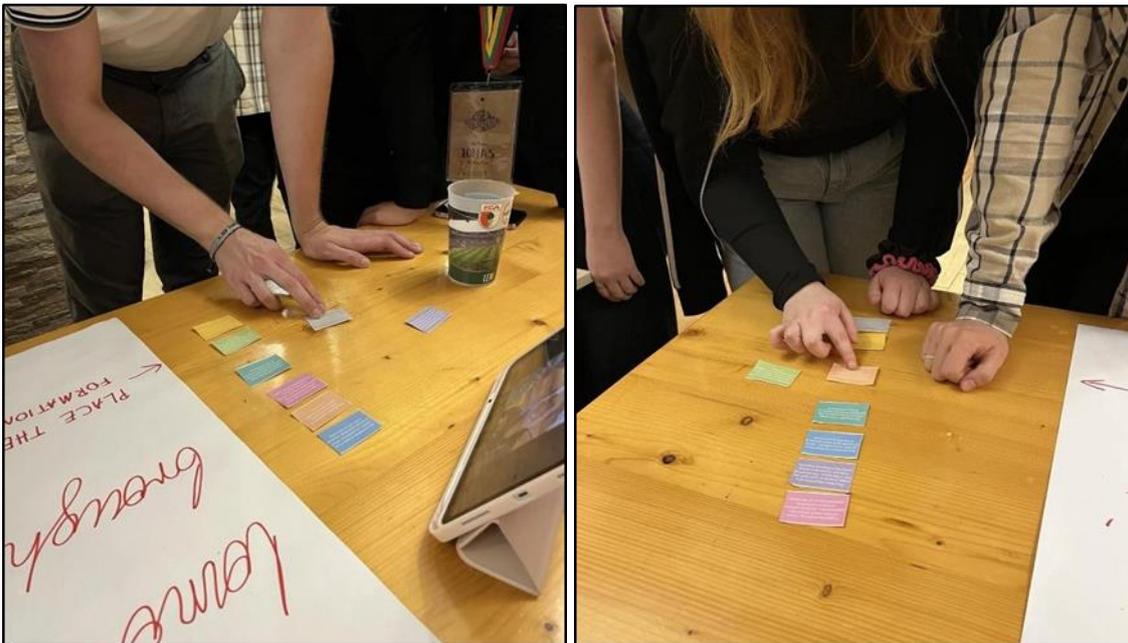
Output of our workshop

As a final output of our workshop, we asked participants to record short videos on the topics discussed during the 1st, 2nd, and 3rd sessions:

1. How to prevent landslides?
2. What are the natural causes of mass movements?
3. What are the human causes of mass movements?
4. How to protect ourselves from landslides?

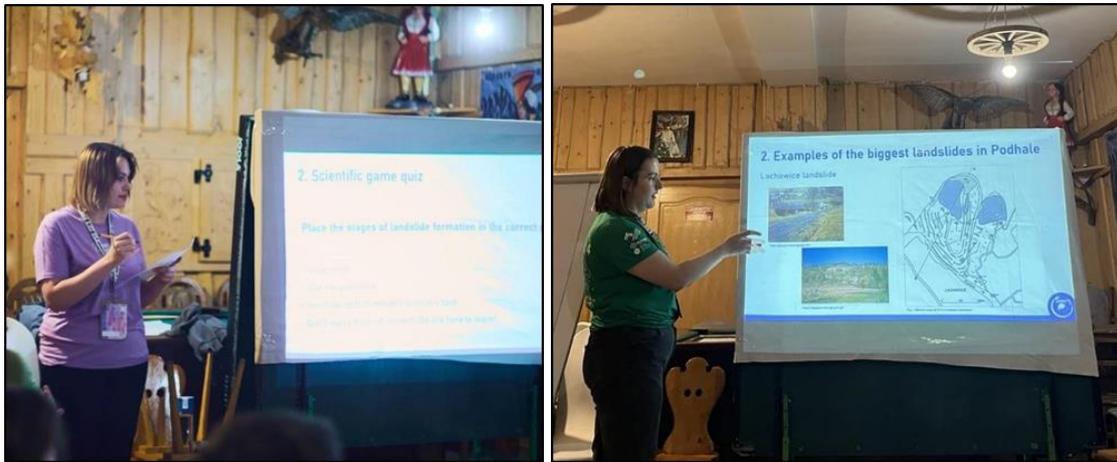
You can see the results of their work at this link: [Summary video](#)

During the workshop presentation, all congress participants had the opportunity to play a game that was originally a task for workshop attendees in the first session. The task involved placing the stages of landslide formation in the correct order.



Results & Interpretation

As a result of four sessions of hard work, our participants were able to discuss the topic of landslides using scientific language. They managed to answer the previously posed questions on their own (see the created videos section “Output of our workshop”). Our attendees became aware of the issues of landslides in the Podhale region and showed interest in landslides in their own countries and regions. They learned how to use tools for gathering information about landslides in Poland. Fortunately, despite the unfavorable circumstances, we were able to achieve all the initially set goals. As advice for future workshop leaders, we recommend being prepared for various incidents and weather conditions. It's essential to always have a Plan B, or even a Plan C. You must be patient and, at times, come up with new solutions under time pressure.



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#3 The value of the Polish Highlands folklore for tourism and their possible impact on local culture

Introduction

This workshop focused on the relationship between the folklore of the Polish Highlands and its impact on tourism. We aimed to explore the unique traditions of the Górale people, understand how their cultural heritage attracts visitors, and examine how tourism influences the preservation of these traditions. Key questions included:

- How does the Górale folklore contribute to the region's appeal as a tourist destination?
- What are the positive and negative effects of tourism on local culture?
- How can tourism grow while preserving cultural authenticity?

Through interactive activities and discussions, participants engaged with these questions and shared ideas on the future of tourism and cultural preservation in the Polish Highlands.

Methodology

The workshop employed an interactive, experiential learning approach, integrating lectures, discussions, and participatory role-playing. Key components included:

1. **Presentations and Discussions:** Presentations highlighted Górale culture's history, economic impact, and the commodification of culture through tourism. Discussions followed, allowing participants to reflect on how tourism shape's local identity.



2. **Role-Playing Activity:** The Górale Village Acting Activity provided an immersive experience, assigning participants roles such as shepherds and tourists. The storyline focused on festival preparations, illustrating tensions between cultural preservation and tourism pressures. Through interactions, participants explored the balance between commercialization and tradition.
3. **Debrief and Reflection:** A debrief session followed the role-playing activity, where participants discussed the pressures of tourism on traditions, debated cultural commodification, and brainstormed sustainable tourism solutions.



4. **Collaborative Brainstorming:** The workshop concluded with a brainstorming session, encouraging participants to propose ways to promote responsible tourism, support local artisans, and foster mutual respect between tourists and locals.



5. **Use of Visual and Cultural Artifacts:** Various cultural artifacts, including traditional clothing and music were used to enhance engagement and deepen appreciation for Highland culture.

Conclusion

This mixed-methods approach combined icebreakers, presentations, role-playing, and reflection to ensure participants not only learned about Górale culture and tourism but also experienced the complexities of cultural preservation. The workshop facilitated dynamic exchanges of ideas and promoted active learning, enabling participants to reflect on their roles in sustainable tourism.

Results & Interpretation

We consider the workshop a success, with impressive attendance and high participant engagement. The enthusiasm for Górale culture was evident through lively discussions and insightful questions, reflecting strong interest in the topics covered.

Key outcomes included:

1. **Awareness of Cultural Commodification:** Participants acknowledged the risks of commodifying Górale culture for tourism, stressing the need to balance economic gains with cultural preservation.
2. **Sustainable Tourism Emphasis:** There was a consensus on the importance of sustainable tourism practices, with ideas like promoting local artisans and small-scale tourism that prioritizes authenticity.
3. **Deeper Understanding of Traditions:** Immersive activities, particularly the role-playing, fostered a greater appreciation for Górale traditions and their significance.

Participants enjoyed the interactive elements, especially the role-playing, which effectively illustrated the complexities of cultural preservation. However, time management in role-playing and brainstorming sessions needs improvement to allow deeper exploration of ideas.

Overall, the workshop successfully encouraged dialogue on balancing cultural preservation with tourism's economic opportunities, highlighting the need for sustainable practices in the Polish Highlands.



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#4 The future of political involvement of young adults – case study of Kościelisko municipality and Podhale region

Introduction

We aimed to discuss the dynamics at play of political involvement of young adults in order to foresee the change in the future, which falls in line with the theme of the congress. The goal was to see the politics' future and future's politics at the same time. For this purpose we followed a couple of question which can be simplified as:

- What does political involvement stand for ?
- What are the levels of political involvement ?
- How are people of the Podhale Region involved politically?
- What could be the practices to improve people's attachment to the place ?

Methodology

As for the methodology for the workshop we decided on the mixed research method. First we come up with the research questions to help us. Then we dug deeper with a literature search. These first steps shaped our frame which can be classified as the theoretical background. We also benefited from a wide range of articles from different disciplines such as political science, geography and economics. In order to find data (both visual and quantitative) we searched many digital libraries from think-tanks and NGO's such as the World Bank, European Union, OECD etc. We put everything together as slides in a pptx format to have a visual presentation.

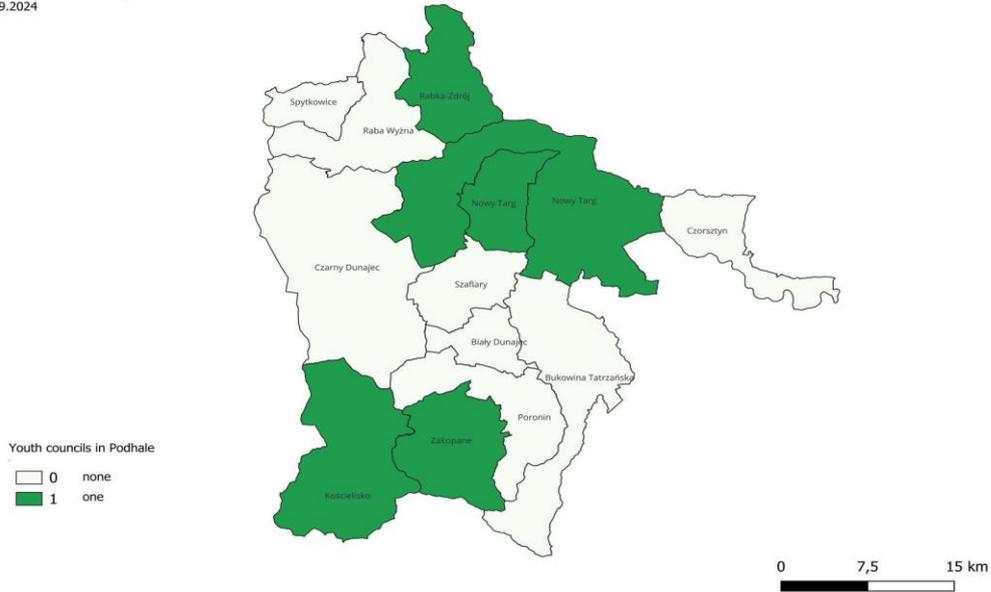
For a more qualitative analysis we arranged a Q&A session with the secretary of the Koscielisko Commune, during which our participants were able to ask questions about both the political path of an actual politician and the political situation of the people who live in the region. For that once again we would like to express our gratitude to the secretary Mr. Mariusz Koperski who agreed to help us even though he had a very tight schedule.



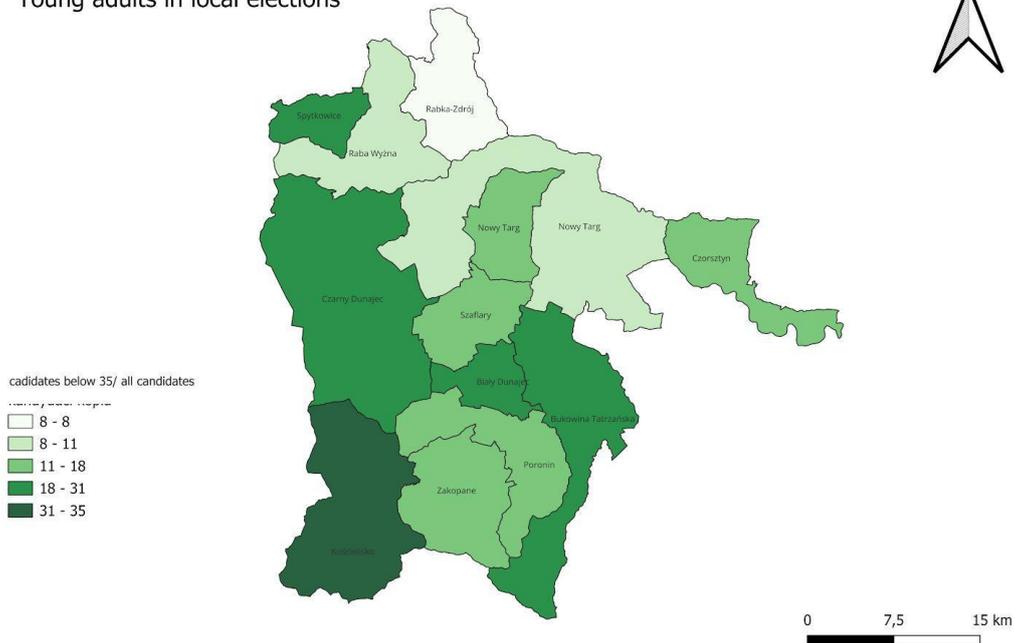
To comprehend the current political involvement of young adults in the Podhale region we had some maps prepared.

Youth councils in Podhale

Author: Stanisław Konieczny
01.09.2024



Young adults in local elections



For the third session of the workshop we planned a field trip in order to complete the case study. We split our participants into 3 even groups and every group had 2 translators who could speak Polish. We asked our participants to make interviews with local young people about political involvement level. Every group tried to extract some information

from the young people living nearby about their attitudes towards the region. After the field trip we merged the groups again and discussed the results together.

During the last session of the workshop once again we split our participants into 2 groups. Both groups worked on their presentation about all the sessions. They summed it up and prepared different slides to show during the workshop presentation.

Results & Interpretation

From our perspective we can gladly call this experience a success. The workshop was met with great interest from the participants. The attendance was really high for all the sessions. Participants were eager to make contributions and speak up their mind which was something we were looking for. From the beginning of the first session to our Q&A session with the secretary there were a lot of questions and we believe that shows their level of interest. As for the outcome of the workshop we concluded on the matters of political involvement of young adults. We could show that the more attached to their region young people are, the higher their political involvement is. This was observed on the local and regional level. This outcome actually aligns with the articles from our literature review.

During the last session of our workshop we prepared an evaluation form via Google Forms and sent it to participants in order to know more about the workshop from their side. According to our unanimous form, we could improve the time management which we realised on our own too. We should've arranged our time table better to give the participants proper time to brainstorm and to do the interviews. Also, during the last session, we should've been quicker so they could have much more time to summarize their work.

On the positive side, the participants liked the open environment to discuss social issues about political involvement. The Q&A session seemed to be much appreciated, indicating that it is a good technique to keep in mind for future references.

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#5 Branching out: Aerial insights into sustainability

Introduction

In this workshop, we provided participants with an understanding of the regional forest ecosystem in the Podhale region while introducing them to the fundamentals of Remote Sensing and its applications in forestry. Participants explored forest management strategies from the perspective of different stakeholders and developed their own approaches. A key component was hands-on experience with Google Earth Engine, a cloud-based platform for processing Remote Sensing data. Through this, participants learned to analyse forest characteristics, monitor the current status of the forest, and address the challenges it faces. By processing Remote Sensing data, they generated maps and interpreted them to gain insights into forest health and management strategies. Both of us, as M.Sc. Geoinformatics and Remote Sensing students, brought relevant knowledge and experience, with Wiebke having completed an internship at Thüringen Forst, the forestry agency in Thuringia.

Methodology

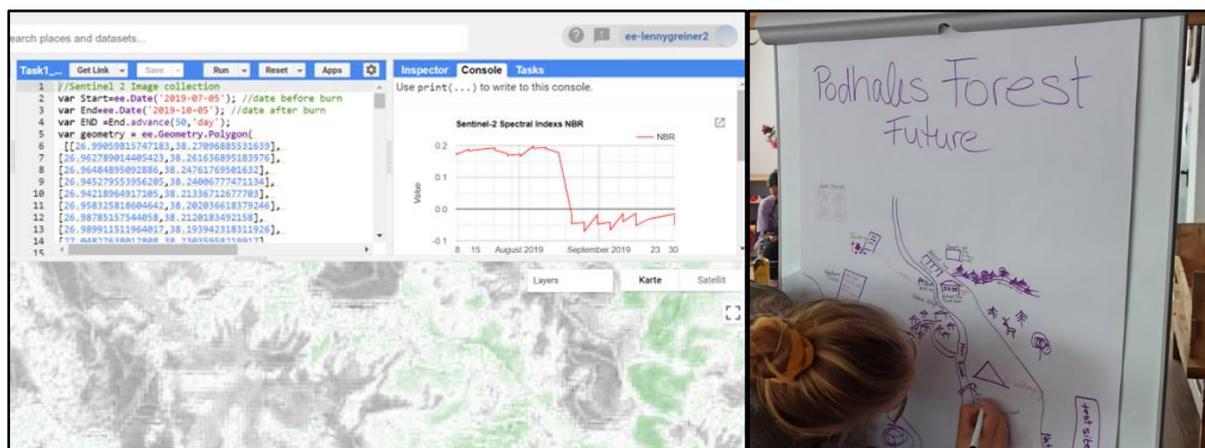
The workshop took place over four sessions and began with an introductory lecture on the local forest ecosystem and the concept of forest management, covering dominant tree species, pests, and habitat trees. Participants flew a drone to capture RGB images of the local forest ecosystem. During a field trip, they measured soil pH levels, determined tree height, identified plant species, and examined tree pests. In the next session, they were introduced to the basics of Remote Sensing and the cloud-based Google Earth Engine platform, where they explored cloud masking, filtering by time and region, and worked with optical datasets like Sentinel 2 and Landsat. Tools for automated burned area detection and forest cover loss due to illegal logging were also

presented. Participants brainstormed forest management strategies from the perspectives of different stakeholders, such as local neighbours, nature conservationists, and logging companies and prepared a pitch of their visions for the forest. In the final session, these ideas were synthesised into a comprehensive forest management strategy for the Podhale municipality. Equipment such as pH-level sets from the University of Jena, a drone provided by David V., and tools like magnifying glass and geologist hammers were supplied by us.

Results & Interpretation

In the field, the participants were asked to measure tree height and pH-level and to take pictures of interesting things in the field that were discussed later directly in the field. Regarding the pH-level we measured very differing values within one forest that seems very contradictory. Because of the unsatisfactory wifi, we had to change rooms in the third session. Results have been presented in the workshop presentation after the fourth session. The management strategy has been presented in a poster. The photos from the field and from the hands-on sessions were shown in a slideshow to the fellow EGEAns. Some photos of the workshop are attached in this document

It was important that we asked for laptops beforehand. We made the experience that energizers, minigames after every 10 slides, were also very important to assure that the participants stay concentrated. Furthermore, we experienced that a 50:50 mixture of theory vs. praxis is a good balance. We were happy with the procedure of the workshop and could imagine very well being workshop co-leader at a future congress. Thanks to the Orga-Team, especially to Kuba and Patryk for the technical and organisational support.



<h3>PODHALE REGIONAL PLANNING AUTHORITY</h3> <p>Government Representative</p> <p>You are officials tasked with balancing the diverse interests of all stakeholders while developing and enforcing sustainable forest management policies. Your focus is on ensuring economic development, environmental protection, and community welfare.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Develop a comprehensive land-use plan that includes sustainable logging areas, conservation zones, and tourism corridors. Enforce regulations that limit deforestation and promote the replanting of native species. Mediate discussions to create compromises between the timber industry and conservation groups. Launch a funding program for sustainable development projects that benefit both the economy and the environment. 	<h3>PODHALE NEIGHBORS NETWORK</h3> <p>Local Community</p> <p>You represent the residents of the region. While some locals depend on tourism and timber jobs, most desire peace and oppose both increased tourist influx and deforestation.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Implement noise and traffic regulations to reduce the disturbance from increased tourism. Oppose any further deforestation or expansion of timber activities near residential areas. Support sustainable tourism initiatives that respect local culture and natural heritage. Advocate for community involvement in decision-making processes regarding forest management. 	<h3>PODHALE TIMBER CO.</h3> <p>Forestry Company</p> <p>You are in the housing industry. Your business is relying on the timber production. Your primary goal is to maximize profits and secure the longevity of your company over the next decades.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Increase the annual timber harvest quota to meet rising demand in the housing market. Implement a selective logging approach to maintain forest health while maximizing yield. Secure long-term leases for timber rights to guarantee future resource availability. Collaborate on reforestation programs with fast-growing, commercially valuable species.
<h3>MOUNTAIN HEART CONSERVATION GROUP</h3> <p>Environmental NGO</p> <p>You advocate for the protection and conservation of the forest ecosystem. Your focus is on preserving biodiversity, protecting the habitat of species like the lynx, and minimizing human impact on the forest.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Establish new protected areas where logging and new construction are prohibited. Develop a wildlife corridor to connect fragmented habitats and protect species like the lynx. Limit the expansion of human activities, such as new hiking trails and tourism infrastructure. Launch a public awareness campaign on the importance of forest conservation and biodiversity. 	<h3>HIGHLAND ECOLOGICAL RESEARCH INSTITUTE PODHALE</h3> <p>Research Institute</p> <p>You study the region's ecosystem, aiming to make the forest climate-resilient. You advocate for diversifying tree species and introducing more climate-resilient species.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Conduct controlled experiments to test the viability of introducing climate-resilient tree species. Create a research-based, adaptive forest management plan that responds to climate change. Propose a pilot project for mixed-species reforestation to enhance biodiversity and resilience. Share research findings with other stakeholders to promote science-based decision-making in forest management. 	<h3>EXPLORE PODHALE INITIATIVE</h3> <p>Tourism Board</p> <p>You represent the local tourism industry. Your guests come to enjoy the recreational opportunities in the forest. Your goal is to attract more tourists by expanding hiking trails and promoting eco-friendly tourism.</p> <p>Potential Demands</p> <ul style="list-style-type: none"> Develop and expand a network of hiking and biking trails to enhance visitor experience. Introduce eco-friendly infrastructure, such as composting toilets and sustainable lodges. Promote guided eco-tourism programs that educate visitors about the environment. Establish seasonal limits or quotas to prevent over-tourism and reduce environmental impact.



Picture 1: Screenshot of the presented tool for Burned Area Detection in Google Earth Engine

Picture 2: Poster for the visualisation of Podhales Forest Management Strategy

Picture 3: Stakeholder role cards for session 3 and 4

Picture 4: pH-level measurement of the soil in the forest

Picture 5: Start of the DJI mini drone to capture RGB pictures from the local forest

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#6 The past and the future of settlements in the Polish Western Carpathians

Introduction

In our Workshop we wanted to find out about the past the present and the future of four main settlements in the Polish Western Carpathians. Lukas has a lot of knowledge in the historical part due to his studies. Theresa had her focus on Geoinformatics in her Bachelor studies.

Methodology

We used papers, websites, archival maps and the geoinformation infrastructure of the Polish government. In the beginning a short introduction on orthophotos, maps and LiDAR was given. After that the participants were divided in four groups and worked on papers that were about the economy in the Polish Carpathians. These findings were presented to the whole group. In another groupwork session the participants focused on four settlements in the region. For those settlements the participants had sources and were asked to find out about the past, the present and the future of the settlements. Each group made a presentation and that was discussed in plenum.

Results & Interpretation

The results can be used on the region but are only transferable to the Carpathian regions. The results did meet our expectations based on the issues we had during the AC. A problem was the language since we wanted our participants to also search for sources

themselves but most were in Polish. We helped ourselves by dividing the groups so that each group had at least one Polish speaking person.

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#7 The impact of mass tourism and how Tatra NP can minimise its impact on the environment

Introduction

Tatra National Park is visited by more than 4,5 million tourists every year. Large numbers of visitors, with an uneven spatial and temporal distribution throughout the year, pose a threat to the environment and local communities, both directly and indirectly. The participants of this workshop were introduced to the topic of mass tourism, the history of tourism in Tatra National Park and to the concept of a sustainability strategy in order to produce informed conclusions and sustainability guidelines for the NP.

Both workshop leaders attended university courses that dealt with mass tourism as well as organized EGEA Euro-Med Regional Congress 2023: Managing Tourism and Heritage which covered topics around mass tourism in Croatia. They are well informed about the problems mass tourism poses, as well as about the ways in which it can be sustainably managed.

Methodology

The workshop started out by introducing the participants with positive and negative sides of mass tourism and its development around the world. They were also introduced with Tatra National Park, its establishment and basic tourist information. After this, the workshop leaders covered the problems mass tourism poses in Tatra National Park, mentioning both economic, socio-cultural and environmental implications. Following the

introduction, the participants held a debate around the topic of cable car and ski lift construction in Tatra NP. Each participant was assigned a specific role (e.g. NP manager, entrepreneur, biologist, local...). Using the knowledge the participants acquired throughout the workshop and using examples from their home countries, they were asked to make sustainability guidelines for Tatra NP.

Results & Interpretation

Tatra National Park faces many problems connected to mass tourism. The yearly number of visitors keeps growing, with the highest concentrations appearing in summer months (summer school holidays), winter (ski season) and around the May and June long weekends. The consequences are not only visible inside the NP but in the area around it as well. The biggest town, Zakopane, faces many problems – air pollution, traffic congestion, few parking spaces, urban sprawl, etc. Zakopane are famous for their specific wooden architecture style which, in many cases, isn't being preserved with the construction of new accommodation facilities, making Zakopane turn into another style-less, generic looking tourist destination. Inside the park, wildlife faces fragmentation and degradation of its habitat due to sprawling tourist infrastructure (paths, roads, cable cars, ski trails). The main example is the Tatra chamois, whose lifestyle patterns were already greatly altered in the past decades. Soil and vegetation around tourist infrastructure is being degraded as well due to a lack of adequate planning and visitor management.



Fig. 1. Tourists around the Morskie Oko lake.

The group came up with many ideas which could help Tatra National Park and the surrounding areas manage visitors in a more sustainable way. Some examples are: constructions of footpaths according to the expected carrying capacity, limiting the number of visitors that can enter the NP at a time, advertising different areas of the NP

in order to take the pressure off of busiest attractions, supporting local entrepreneurs, encouraging the use of the park and ride system, etc.

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#8 How to adapt the infrastructure and lifestyle to the harsh environment of the Tatra mountains

Introduction

The topic of the workshop is How to adapt the infrastructure and lifestyle to the harsh environment of the Tatra mountains.

The research questions are

1. What environmental challenges influence the life and architecture in the mountains (Tatras)?
2. What materials/techniques are mostly used for building in mountainous terrain? and
3. How does the architecture adapt to the mountainous conditions?

Our knowledge is based on our personal experience living in such areas as well as an academic interest in said topic. An additional literature research related to the workshop helped us gain further insights into the topic's scientific background.

Methodology

The workshop was divided into three main parts applying four learning methods: frontal presentation, guided excursion, group work and discussion.

The presentation was based on materials gathered from architectural magazines, scientific articles related to the topic and materials provided by several official authorities operating in the Tatra mountains. The presentation showcased the challenges faced in mountainous areas as well as other areas with extreme weather conditions and showed the different approaches, both current and historical, how to deal with those conditions.

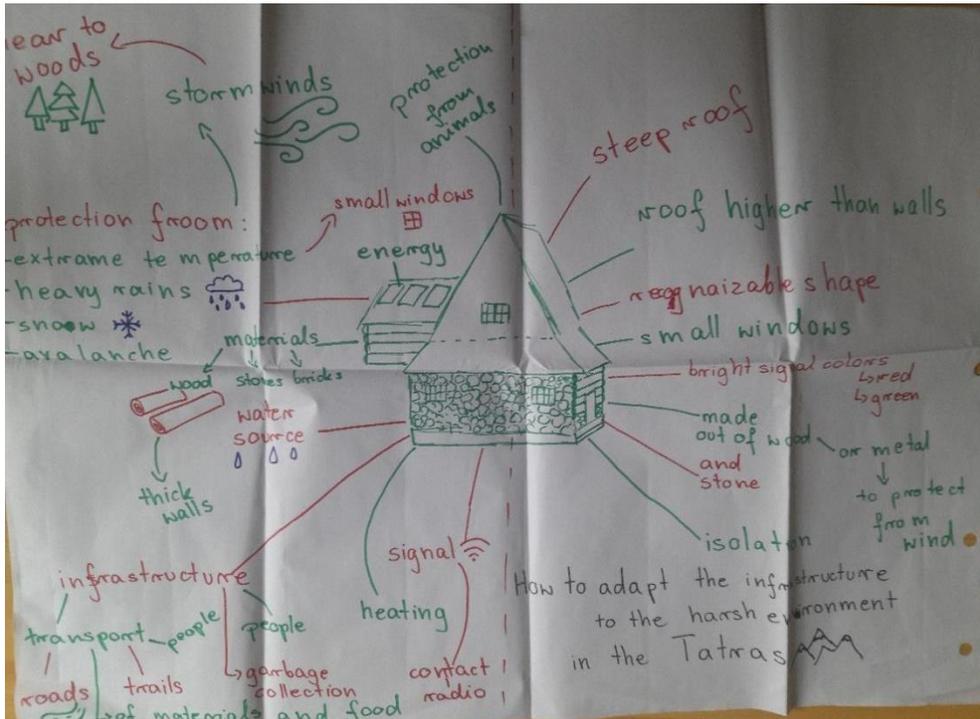
The guided excursion took part in Koscielisko, where the AC took place and showcased several important buildings and landmarks utilizing presented architectural solutions to extremes of weather.

The last part of the workshop was the group work session, where participants took part in several guided discussions debating the research questions, came up with their own solutions to adapting architecture to weather extremes and created the workshop outcome, a model of a building adapted to extremes of weather, using the knowledge from the presentation and debates.

Results & Interpretation

The mind maps created during the debates show possible solutions and adaptations related to the research questions and can be seen in the appendix. The workshop outcome, also in the appendix, showcases how the participants utilized the knowledge gained during the workshop in the creation of their own mountain hut model adapted to extremes of weather.

Many workshops struggle with keeping the participants engaged. We tried to solve this by interweaving different parts of the presentation, such as research-based knowledge with current examples, videos, news reports etc. and other activities, such as discussion and the creative problem-solving session. This worked out quite well but could be improved by changing the order of different activities.





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Scientific excursions

#1 Agrifuture: Kościeliska Valley (easy hike)

The Agrifuture: Kościeliska Valley excursion explored how **traditional pastoral practices** like sheep herding and cheese production coexist with **nature conservation** in the Tatra National Park. This connected directly to the congress theme of sustainability and the future of agriculture, focusing on how historical practices can adapt to modern environmental challenges while preserving cultural heritage. The Tatra region offered an ideal backdrop for discussing the balance between human activity and environmental protection.

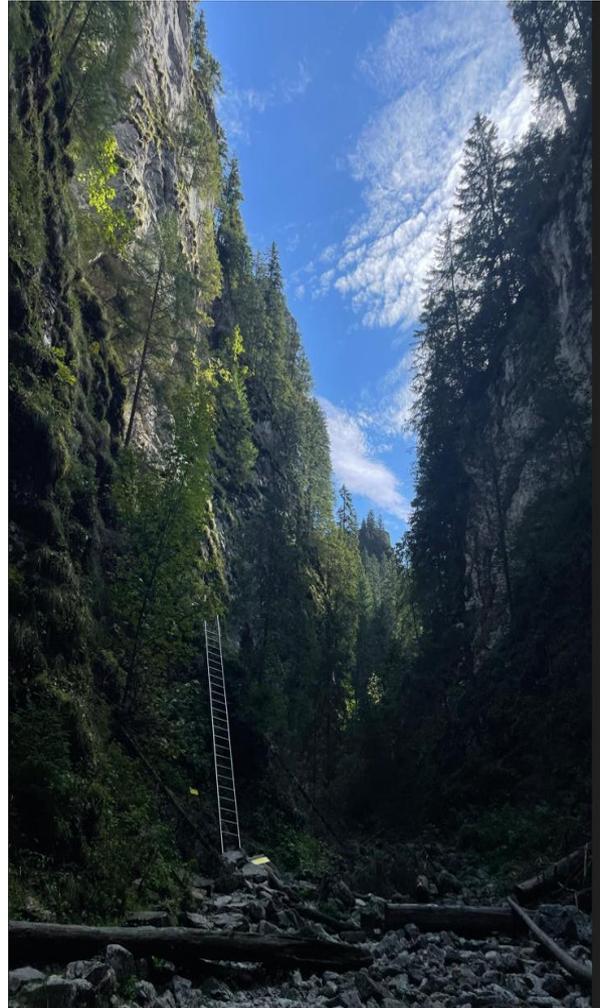
The excursion began at Kiry, the entrance to the **Kościeliska Valley**, one of the largest and most scenic valleys in the Tatra Mountains. As we hiked through the valley, we saw the traditional pastures where Polish Highlanders (Górale) continue to practice sheep grazing, demonstrating the deep-rooted connection between the local landscape and sustainable agriculture.

Along the route, we visited the **Mroźna Cave**, a limestone cave known for its unique geological formations. This stop allowed us to experience the natural beauty of the region while learning about the area's geologic history, which contributes to the fertile environment that supports local agriculture.

The excursion concluded with a visit to the **Tatra National Park's Earth Archive**. This facility provided us with insights into the geology and biogeography of the region, highlighting how natural processes have shaped the landscape and influenced local agricultural practices over time.

Overall, the excursion offered a comprehensive understanding of how traditional agriculture, nature conservation, and cultural heritage are intertwined in the Tatra Mountains. We discussed challenges such as climate change, the declining interest in traditional farming among younger generations, and the role of ecotourism.

To improve future excursions, more interactive elements like a hands-on oscypek workshop or sheep herding demonstration could provide participants with a more immersive experience. Additionally, offering background materials on the region's agricultural history and conservation efforts would enhance understanding before the excursion.



#2 Mass tourism high above: Morskie Oko (medium hike)

The Mass tourism high above: Morskie Oko excursion, part of the EGEA Annual Congress 2024, focused on exploring Poland's **most iconic mountain lake** and addressing the **challenges of balancing tourism with environmental conservation** in a fragile ecosystems like the Tatra Mountains.

Our journey began with a drive to **Palenica Białczańska**, followed by a hike along the **Białka Valley** and **Rybi Potok river**, the natural border between Poland and Slovakia. We passed through **Rówień Waksmundzka** and **Roztoka Valley**, where we learned about the **Mickiewicz Waterfalls** and the region's natural beauty. Along the way, we stopped at **Włosienica pasture**, discussing the environmental pressures caused by mass tourism in the area. The hike's final, more challenging section through **Żleb Żandarmerii** rewarded us with a breathtaking view of **Morskie Oko**, framed by the highest peaks of the Tatra Mountains.

Throughout the excursion, we discussed the environmental risks of tourism, such as erosion and wildlife disturbance, emphasizing the need for sustainable practices. Future excursions could benefit from more educational stops on local flora and fauna and providing responsible tourism guidelines to participants.



Overall, the Morskie Oko excursion provided a beautiful yet thought-provoking experience, highlighting the importance of balancing nature conservation with the increasing demands of tourism.

#3 Into the Forest: Grzybowiec & Siklawica (medium-hard hike)

The Into the Forest: Grzybowiec & Siklawica excursion's main focus was to let participants experience the **beauty of nature** and how important it is for the general **well-being of the community**. In addition it was the perfect opportunity to take a break from the usual congress-related activities.

This excursion made us look at the **importance of nature and forests** for our future as they are the "green lungs" of our planet in terms of oxygen production and as a sink for greenhouse gasses. They are further key in regulating local hydrogeology and are a home for many wildlife species. It needs to be pointed out that forests can be the place to rest for many people tired of the urban hustle and bustle.

The hike started directly from our accommodation, where we headed south and entered the Tatra National Park. Moving along the **Mała Łąka Valley** and **Nad Regłami Path**, we were able to see and hear the beauty of the Podhale forests. We reached the **Grzybowiec peak** (1417 m a.s.l.), where we could admire the view of the Tatras. On the way back we got the chance to see the three-part **Siklawica waterfall**. Following the **Strążyska Valley** and the **Pod Regłami Path**, we got back to the Dom Wczasowy Harnaś II, i. e. our accommodation.

Our external partner was Tatra National Park that let us enter for free and guaranteed the official tour guides without which the excursion would not happen. The source we used for planning the route of the excursion was the website www.mapaturystyczna.pl where we could control all the factors like elevation difference, length and time needed to accomplish the hike.

The main advice for the future is that without the external guides due to the disease crisis we would not be able to make that excursion happen, so please get yourselves guides from the outside that can lead the excursion if no one from the OrgaTeam is able to.



#4 Glacial relief of the Tatras: Czarny Staw Gąsienicowy (hard hike)

The main goal of the excursion was to get familiar with the topic of the **Tatra glaciation** that occurred because of the last Weichselian glaciation. Glaciers made a huge impact on the Tatra mountains landscape but one feature is especially visible – **glacial lakes**. The excursion was also a challenge for the best hikers as it was the hardest one of them all.

The knowledge of the climate change that happened in the history of our planet provides a better understanding of what we have to deal with nowadays. Furthermore, we are able to differentiate natural changes from anthropogenic ones. The additional benefit from this excursion was the awareness of the natural heritage that needs to be protected for future generations.

The first stage was a walk through **Kuźnice** – the part of Zakopane known in the past for iron ore extraction. Later on, we went through **Przełęcz między Kopami**, passed the meteorological station, straight to **Czarny Staw Gąsienicowy**, the biggest lake in the Tatra Mountains. On our way back we got some rest at **Schronisko Murowaniec** in Hala Gąsienicowa with beautiful mountainous landscape and finally we got on a bus that took us back to the accommodation.



Our external partner was Tatra National Park that let us enter for free and guaranteed the official tour guides without which the excursion would not happen. The source we used for planning the route of the excursion was website www.mapaturystyczna.pl where we could control all the factors like elevation difference, length and time needed to accomplish the hike.

The main advice for the future is that you have to inform your participants about the equipment that they need to bring with them. Additionally you can create hikes that have different levels of difficulty, so everyone will be satisfied with their excursion.

Scientific entries in the Daily Geographer

Don't you just love the thrill of reading all the juicy gossip of last night in your morning copy of the Daily Geographer? So do we, but this year we wanted to enrich the much beloved newspaper with a brand new section, dedicated to the recent scientific achievements of members of our association, just like you.

With that in mind, we wanted to publish **abstracts of your papers** (be it diploma theses, scientific articles or conference proceedings), along with some figures and short information about the author.

Before the congress we held an open call and managed to collect 10 applications. We published two abstracts per day, allowing all applicants to share their work with others. We published the abstracts along with QR code with more information about the work – below (tab. 4) are said QR codes for you to explore at your own pace.

Tab. 4. Additional information on the scientific entries

#	QR code	#	QR code
1		6	
2		7	
3		8	
4		9	
5		10	



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