



ANNUAL REPORT 2022

OF

THE ACADEMIA EUROPAEA BUDAPEST KNOWLEDGE HUB

INTRODUCTION

2022 was the second year of operation of the Budapest Hub, which launched its activities on January 1st, 2021.

During the last twelve months, each of the four thematic missions of the Budapest Hub – “Widening European Participation”, “Danube Region”, “Methodology of Science Education” and “Urban Sustainability” – was busy recovering from the setbacks caused by the Covid pandemic and started organizing in-person events for larger audiences. In this context, the collaborations that are worth mentioning were the one with EASAC (European Academies Science Advisory Council), the one with SAPEA (Science Advice for Policy by European Academies), or the one with the Young Academy of Europe (YAE).

At the “Building Bridges Barcelona 2022” event, that is, the annual meeting of Academia Europaea hosted by the Barcelona Hub in October, the Budapest Hub was represented by Dr Katalin Solymosi (Co-chair for the Danube Region thematic mission of the AE Budapest Hub), who attended the programme in her capacity as Recruitment Vice-Chair of the Young Academy of Europe, the organization which held its General Assembly in Barcelona in parallel with the Building Bridges conference of AE. In preparation for the Building Bridges event, the Budapest Hub staff provided administrative assistance to the Class C (Life Sciences) of Academia Europaea for the inauguration of new Members of the Class covering the years 2021 and 2022.

Towards the end of the year two members of the Budapest Hub leadership had the opportunity to speak at the World Science Forum 2022, held in Cape Town, South Africa, for the first time ever on the African continent: Hub Academic Director László Lovász and Widening Co-Chair Éva Kondorosi were speakers at one of the Forum’s thematic sessions, entitled “What If? Is Curiosity Still the Main Driving Force Behind Revolutionary Ideas in Science?”.

The output of the Budapest Hub in 2022 is presented below in the context of its four thematic missions:

Widening European Participation thematic mission

Co-chairs of the thematic mission:

Professor Éva Kondorosi, Member of AE and MTA

Dr Gergely Toldi, Alumnus of GYA, Member of HYA

3

AIMS:

1. Monitor the growth of AE membership from Danube countries;
2. Establish close collaborations with a representative AE member and an early-career researcher from each Danube country;
3. Identify the strength of countries and potential common scientific interests (in association with the other three thematic missions of the Hub);
4. Involve AE members in mentoring programs;
5. Collaborate with other AE Hubs and the Young Academy of Europe

ACTIVITIES IN 2022

Improving Cancer Screening in the European Union – an event co-organized by SAPEA, the Hungarian Academy of Sciences and the AE Budapest Knowledge Hub, held on 19 May 2022 (carried out under Aim 3)



Photo by mta.hu / Tamás Szigeti

SAPEA's report on "Improving Cancer Screening in the European Union", published in March 2022, was presented at this conference by those involved in its preparation. FEAM acted as the lead network for this project and FEAM Past President and Board Member, Professor George Griffin, gave a presentation and joined the roundtable discussion. Eva Kondorosi, Co-chair for the Widening European Participation thematic mission of the AE Budapest Hub, was also among the speakers and the panellists as member of the European Commission's Group of Chief Scientific Advisors.

4

The full recording of the event can be viewed here:

<https://www.youtube.com/watch?v=fPkSzy0gqbY&t=2s>

Webinar on the Young Academy of Europe and the Global Young Academy, 22 August 2022 (carried out under Aim 5)



Young Academy of Europe

GLOBAL
YOUNG
ACADEMY



The Young Academy of Europe and the Global Young Academy and their application procedures

webinar hosted by the Hungarian Young Academy
and the Academia Europaea Budapest Hub



Date: 22 August 2022, 11:00-12:00 (CET)

Registration:

<https://us02web.zoom.us/join/zoom/register/tZ0kc-igqjwqGtA8v-MS8YkyxVkqSdYDI40z>



THE ACADEMY OF EUROPE
BUDAPEST KNOWLEDGE HUB

A webinar was organized by the Hungarian Young Academy (HYA) and the AE Budapest Hub with the aim of encouraging young Central European researchers to apply for membership in two international young academies: the Young Academy of Europe and the Global Young Academy. Speakers sought to highlight the benefits of membership in these organizations. The speakers for YAE were Gemma Modinos (Chair) and Katalin Solymosi (YAE Recruitment Vice-Chair, HYA Co-Chair and Co-chair of "The Danube Region" thematic mission of the AE Budapest Hub). The GYA was represented by Gergely Toldi (GYA alumnus and former member of GYA's Selection Committee, Co-chair of the "Widening European Participation" thematic mission of the AE Budapest Hub) and Éva Dékány (GYA member). The speakers gave an outline of the activities and application procedures of the two international young academies respectively and gave useful tips to future applicants.

Visegrad Group Academies Forum at the Hungarian Academy of Sciences – 26-27 May 2022 (carried out under Aim 5)

5



Photo by mta.hu / Tamás Szigeti

The Visegrad Group Academies Forum held its annual meeting at the Headquarters of the Hungarian Academy of Sciences on 26-27 May 2022. The heads of the academies of the Visegrad countries had met informally every year since 1999 to discuss current issues and strategies affecting science and their institutions. The two-day meeting focused on the leading role of regional academies in the fight against the coronavirus, the broadest possible involvement of young researchers in academic programmes, and the support provided by the national academies in hosting researchers fleeing Ukraine and preserving Ukrainian scientific and cultural values. This year's forum also included a workshop discussion on improving the effectiveness of participating in European Research Council (ERC) grant schemes. As part of this workshop, Katalin Solymosi, AE Budapest Hub Co-chair for the Danube Region thematic mission, this time in her capacity as Recruitment Vice-Chair of the Young Academy of Europe, gave an account of the Young Academy of Europe's mentoring activities related to ERC applications. The open discussion at the end of the workshop was moderated by Eva Kondorosi, former ERC Vice-President. The closing programme element of the V4 Academies Forum was an "Academia Europaea



Budapest Hub” event, where all the four thematic missions of the Budapest Hub presented themselves and invited the V4 Academies to find synergies with the Budapest Hub for future collaborations.

The MTA website covered the Forum’s 2-day event in two articles:

<https://mta.hu/english/sympathy-and-solidarity-presidents-of-visegrad-academies-issue-joint-declaration-at-budapest-meeting-in-support-of-ukrainian-people-scientists-and-science-condemning-russias-military-aggression-112206>

<https://mta.hu/english/strategies-to-boost-the-performance-of-v4-countries-in-the-grant-schemes-of-the-european-research-council-112225>

The full recording of the ERC-workshop as part of the Forum’s programme can be viewed here:

<https://www.youtube.com/watch?v=5ImXiJNZavo&t=3s>

Danube Region thematic mission

Co-chairs of the thematic mission:

Professor András Báldi, Member of AE

Dr Katalin Solymosi, Member of YAE and HYA

AIMS:

1. Facilitate networking and interdisciplinary collaboration between scientists (especially AE and YAE members) working in the Danube region.
2. Highlight the natural values of the Danube region from an “artistic” perspective to strengthen the interdisciplinary and “Arts and Science” aspects of the Hub
3. Support and involve early-career researchers from the region in the activities of the Hub
4. Foster participation of researchers from the region in science policy

ACTIVITIES IN 2022

Operation Mayfly – Online film club event on 10 March 2022 (carried out under Aim 2)

The Danube Region thematic mission of AE Budapest Hub launched its Danube Film Club event series: co-organized by the AE Budapest Hub and the MTA Hungarian Water Science Programme, the first edition was meant to present "Operation Mayfly", a Hungarian documentary co-written by Gergely Balázs and Balázs Lerner and directed by Gergely Balázs. As part of the programme, the two of them were talking about the great moments and challenges of making this film, which is a wildlife documentary depicting the fate of Danube mayflies in our modern-day setting and efforts to save this protected species from being trapped by artificial streetlights.



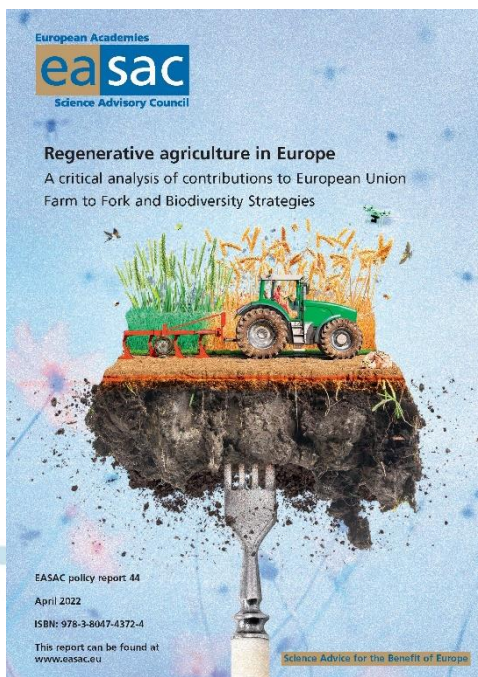
Photo by Imre Potyó

One of the aims of the Danube Region thematic mission is to organise “Arts and Science” events in order to reach a broader audience with scientific topics related to the Danube river. Documentary films have long fulfilled a role in science communication, and are also useful to trigger discussions, share knowledge and best practices among scientists and naturalists, and also provide a great time to spend. This first Danube Film Club event included a panel discussion on the documentary entitled “Operation Mayfly” with the film-makers (Gergely Balázs and Balázs Lerner), an early-career researcher involved in the scientific research and development related to it (Ádám Egri), as well as a member of Academia Europaea (András Báldi). The film presents how hundreds of thousands of protected Danube mayflies (*Ephoron virgo*) get trapped each year by the polarised artificial streetlights reflected from the bridge surfaces, which they mistakenly identify as water, where they lay their eggs in vain and then perish. The research group led by Gábor Horváth and György Kriska at Eötvös Loránd University and the Institute of Aquatic Ecology, Centre for Ecological Research, ELKH, successfully tested a biophysical method for saving the mayflies and helping them to lay their eggs into the river as it naturally should happen. The film was shortlisted at several scientific and nature film festivals and won several jury and category prizes (e.g. at the Gödöllő International Nature Film Festival, Hungary, 2017; International Scientific Film Festival, Hungary, 2017; and BAIKAL IFF "People and Environment", Russia, 2018).

The full recording of the event can be viewed here:

<https://www.youtube.com/watch?v=mLM4H35yZhU>

Open session on EASAC’s report “Regenerative Agriculture in Europe”, on 6 April 2022, Palace of MTA, Budapest (carried out under Aim 4)



EASAC's "Regenerative Agriculture" project, according to the organization's website, "takes as a point of departure the recent shifting agricultural and biodiversity policy arena in Europe and the recent increasing interest, internationally, in Regenerative Agriculture as an umbrella concept for sustainable and resilient food systems. Regenerative agriculture is defined as a system of farming principles and practices that e.g. maintain agricultural productivity, increase biodiversity, enrich soils, restore watersheds, and enhance ecosystem services, including carbon sequestration" (source: <https://easac.eu/projects/details/regenerative-agriculture/>).

At the open session, EASAC's experts delivered presentations about the report which was due to be released in the early days of April. Potential policy outcomes and the report's relevance for climate was also explored. The session was moderated by AE Budapest Hub's Co-chair for Urban Sustainability, Professor Gábor Stépán. A summary of the key messages in English is available on MTA's website: <https://mta.hu/english/the-intensively-raised-goat-and-the-organic-cabbage-can-we-have-our-cake-and-eat-it-new-report-on-regenerative-agriculture-presented-at-mta-by-the-scientific-advisory-board-of-the-european-academies-112084>

The full recording of the event can be viewed here: <https://www.youtube.com/watch?v=SL6c6J-W8xk>

Student Conference on Conservation Science in Balatonvilágos (Hungary) on 14-17 September 2022 – co-organized by the Centre for Ecological Research (Hungary) and the AE Budapest Hub



The "Student Conference on Conservation Science" (SCCS) series started in Cambridge 21 years ago. Hungary joined as an organizer hosting the event in 2015, when the first SCCS took place at Lake Balaton, in Tihany. With sister conferences at locations such as Cambridge, Brisbane, Beijing, Bangalore, New York and Tihany, the SCCS is an international series of conservation conferences aimed at students and early-career scientists.

This year's SCCS at Lake Balaton was held in Balatonvilágos, a new venue after a couple of events already held at Tihany over the past few years. The head of the organizing and scientific committee for the conference was András Báldi, MAE, Co-chair of the AE Budapest Hub's "Danube Region" thematic mission. Among this year's keynote speakers, the AE Budapest Hub was pleased to welcome Tibor

Hartel, a newly-elected member of Academia Europaea from Romania, who is an Associate Professor at the Faculty of Environmental Science and Engineering, Babeş-Bolyai University, Cluj-Napoca. His background is in animal ecology, but he has grown increasingly interested in social-ecological systems, ecosystem services and human-nature connections and a close collaboration with decision-makers and the civil society to protect ancient wood-pastures, large carnivores and urban biodiversity. At the SCCS he was delivering a plenary speech entitled "Nature conservation as a transdisciplinary adventure: insights from Romania".

Website of the event: <https://sccs.ecolres.hu/>

Methodology of Science Education thematic mission

Co-chairs of the thematic mission:

Professor Csaba Pléh, Member of AE and MTA

Dr Eszter Gselmann, Member of HYA

AIMS:

1. Develop and promote new methodologies in science education to help the transfer of scientific knowledge at all stages of education, from primary school to university science curricula.
2. Identify the new challenges of distance education, brought to the forefront by the COVID pandemic.
3. Contribute to more social and gender equality in access to science education and STEM careers.
4. Promote the exchange of ideas and experience at all levels of education among countries in the region and in Europe

ACTIVITIES IN 2022

The lectures of the workshop of 2021 organized by the Methodology of Science Education thematic mission were published in the Hungarian journal "Magyar Tudomány" ("Hungarian Science") in November 2022. Towards the end of the year, preparations were made for the third edition of the workshop series, due to take place in the early months of 2023.

Urban Sustainability thematic mission

Co-chairs of the thematic mission:

Professor Gábor Stépán, Member of AE and MTA

Professor Péter Török, Member of YAE and HYA

11

AIMS:

1. Discuss historical drivers, special opportunities and challenges of urban sustainability in the Visegrad countries and other parts of Central Europe;
2. Integrate and assess the specific sets of goal functions and constraints used by the different research areas related to urban sustainability;
3. Define the possible synergies and unavoidable trade-offs while entering the era of smart cities, digital transportation systems, and clean energy;
4. Organize thematic regional workshops and public lectures in urban sustainability;
5. Develop regular and European-wide knowledge exchange and transfer in urban sustainability with the involvement of other AE Hubs.

ACTIVITIES IN 2022

Preparations were made by this thematic mission for an event due to take place in the early months of 2023, under the title of “Frontlines of Urban Conservation and Restoration”, a special session on the issues of urban greening (carried out under Aim 4).

One-off event that did not belong to any of the Hub's thematic missions:

“What If? Is Curiosity Still the Main Driving Force Behind Revolutionary Ideas in Science?” – a thematic session co-organized by MTA and ANSO as part of the 2022 World Science Forum in Cape Town, South Africa

12



Photo by MPI, South Africa

Do scientists still cherish that curiosity behind revolutionary ideas in science which has always spurred them on in their quest for the unknown? With today's growing expectations over the accountability and the directly noticeable societal benefits of science funding, how can we reconcile these with the academic freedom that has always been so dear to the most outstanding figures of basic research? – these were the main points discussed at the thematic session, which was moderated by Stephan Kuster (Frontiers), and two prominent Hungarian scientists, the mathematician László Lovász and the plant biologist Éva Kondorosi were in attendance as MTA's delegates, while Nils Christian Stenseth (University of Oslo) was representing the Alliance of International Science Organizations (ANSO) as its Science Ambassador. They were joined by Himla Soodyall, the Executive Officer of the Academy of

Science of South Africa (ASSAf) and Antoine Petit, the Chairman and Chief Executive Officer of CNRS (the French National Research Centre).

The session had two parts: first, the panellists gave a short presentation of their own scientific background and an answer to the question raised in the title of the session. The second part was a panel discussion, where panellists could take questions from the moderator and from the audience.

13



Photo by MPI, South Africa

A report on the session appeared on MTA's English-version website: <https://mta.hu/english/world-science-forum-curiosity-an-essential-factor-in-science-112631>

14



Photo by MPI, South Africa

Finance:

Under the Collaboration Agreement between Academia Europaea and the Hungarian Academy of Sciences (MTA) signed in December 2020 for a period of 4 years, MTA provides the administrative services required for the operation of the Hub, as well as the agreed annual funding to support the Hub activities.

AE Budapest Hub staff:

László Lovász, Academic Director

Gergely Böhm, Hub Manager

Katalin Borvölgyi, Hub Officer

Katalin Fodor, Head of International Relations Department of the Secretariat of MTA

Co-chairs of the thematic missions:

Éva Kondorosi and Gergely Toldi: Widening European Participation

András Báldi and Katalin Solymosi: The Danube Region

Csaba Pléh and Eszter Gselmann: Methodology of Science Education

Gábor Stépán and Péter Török: Urban Sustainability

Academia Europaea Budapest Knowledge Hub

Hungarian Academy of Sciences

9, Széchenyi István tér, 1051 Budapest, Hungary

<https://mta.hu/aebudapest>

aebudapest@office.mta.hu

Phone: +36-1-411-6242

About Academia Europaea

Founded in 1988. Now has more than 5000 leading scientists and scholars as members, including over 70 Nobel laureates. Operates through a network of knowledge hubs in Barcelona, Bergen, Budapest, Cardiff, Munich, Tbilisi and Wrocław.