

Accordingly, discharge volumes and times that are as flexible as possible and orientated towards ecological functionality, should be granted at the approval planning stage. This is the only way to react promptly to monitoring results without further authorisation procedures.

Even in heavily anthropogenically modified floodplain landscapes, as presented herein on the Danube, dynamisation measures were able to induce positive effects in terms of structural diversity (especially deadwood), lateral and longitudinal connectivity and the dynamics of discharge volumes. The monitoring showed that the improvements were only effective for some species groups or in some sections, not in the entire watercourse or across the entire floodplain. The positive experience and knowledge gained from the dynamisation project along the impounded Danube should be applied to other impounded floodplain areas. Of course, the specific local hydrological and ecological conditions and situations must always be taken into account when planning dynamisation measures. However, the large-scale expansion of successful measures of this kind is essential in order to achieve a significant turnaround in the biodiversity crisis in rivers and floodplains.

45th IAD Conference ‘Innovative solutions and cooperation to protect and restore biodiversity and ecosystems in the Danube River Basin’

The conference held from 9 –12 April 2025 in Sofia, Bulgaria, was, after those in 1966, 1976, 1990 and 2014, the 5th IAD Conference hosted by the Bulgarian section of IAD, represented by the institutes of the Bulgarian Academy of Sciences. The conference was organised by the Institute of Biodiversity and Ecosystem Research, BAS (IBER-BAS), Climate, Atmosphere and Water Research Institute, BAS (CAWRI-BAS), the General Secretariat of IAD, Danube Region Invasive Alien Species Network (DIAS) and Union for Conservation of Nature Bulgaria (UCNB). The conference was funded by IAD and co-funded by IBER-BAS and the projects DANUBE4all, DaWetRest and DANSER, in the frame of the EU Mission ‘Restore our Oceans and Waters’ Danube and Black Sea Lighthouse.

The event was attended by 120 participants from 15 countries. The majority of participants came from the host country, Bulgaria (more than 70 participants), followed by Romania, Serbia, Ukraine, Austria, Hungary, Germany, Czech Republic, North Macedonia, and participants from Croatia, France, Ireland, Slovakia, Slovenia, and Türkiye. About 35 of them were young scientists, PhD- and undergraduate students. A total of 83 communications (nine keynote, 39 oral presentations, 35 posters) were given and allowed insights into the rich and diverse research on the Danube River Basin and the Danube and Black Sea Region.

The conference provided an exchange forum for long-term multidisciplinary research and activities on various topics,

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highlighting the importance of building innovative solutions and cooperation to protect and restore biodiversity and ecosystems in the Danube River Basin. This year's IAD Conference aimed to showcase the significant achievements made in the Danube and Black Sea Lighthouse by scaling up sustainable solutions related to the main threats to the Danube River Basin as hydromorphological alterations, water pollution, ecosystem degradation, invasive alien species and effects of climate change. The Conference objectives were covered by, but not limited to, 12 scientific



Figure 1. Co-chairs of the Organising and Scientific Committees; from left to right: Cristina Sandu, IAD Vice-President, Teodora Trichkova, IAD Country representative Bulgaria, Katrin Teubner, IAD General Secretary, and Bernd Cyffka, IAD President. Photo: Milcho Todorov.

topics in compliance with major international and regional policies, commitments, and initiatives (for details <http://www.iber.bas.bg/sites/default/files/IAD45/>).

The event was opened by Teodora Trichkova, National representative of IAD for Bulgaria and the conference participants were welcomed by Bernd Cyffka, IAD President, Dr. Vladimir Vladimirov, Director of IBER-BAS, Corresponding Member Ekaterina Batchvarova, Director of CAWRI-BAS, Dr. Ina Aneva, Scientific Secretary of Biodiversity, Bioresources and Ecology Division of BAS, and Ms. Iliyana Todorova, Director of Water Management Department of the Ministry of Environment and Water of Bulgaria. In her introductory speech, Ms. Ivelina Vasileva, Member of the Mission Board of EU Mission 'Restore our Ocean and Waters', Danube and Black Sea Lighthouse Leader, talked about the European Ocean policies and Mission 'Restore Our Ocean and Waters' in support of research and innovation for the Danube and Black Sea Region. She presented the aims and objectives of the Mission and highlighted the new initiatives of the EC related to the ocean and waters, as the new European Oceans Pact and preparation of the 'Water Resilience Strategy (WRS): A step towards a water-smart society' and future EU Oceans Research and Innovation Strategy.

In a first keynote presentation, Cristina Sandu, Bernd Cyffka, and Katrin Teubner introduced 'The International Association for Danube Research – Past and future of a scientific network in the Danube River Basin'. Birgit Vogel, Executive Secretary of ICPDR, talked about 'International cooperation in the Danube River Basin: Current key activities including the Joint Danube Survey 5'. Further keynote talks were dedicated to water management and restoration, and specific Danube and Black Sea Lighthouse projects. A central element of the conference was the introduction of four new expert groups, whose leaders contributed keynote presentations on their topics, visions and expertise (for more details, see this DN volume).

Special sessions were dedicated to three Danube and Black Sea Lighthouse projects, with the participation of IAD and

its members (DANUBE4all, DaWetRest, DANSER). Students from the IAD Summer School in August 2024 (Danube News volume 50) presented two posters on vegetation cover and the impact of water stress on plants in Letea Forest, Danube Delta, Romania. This research was developed primarily under the supervision of Duška Cvijanović, who also participated in the Summer School as a lecturer.

The Conference concluded with an impressive excursion to the Upper Iskar River (tributary of the Danube River) and the Rila Mountains. Case studies related to river connectivity and restoration activities were presented. The programme included a visit to sites at the Iskar River and Iskar Reservoir; a visit to Dragushinovo Village to learn about a restoration project, using a river bypass, to provide potential habitats of native crayfish populations; a tour of a fish farm in Mala Tsarkva Village to learn about native fish populations and farmed fish; and a breathtaking winter scenery at the Borovets Mountain Resort, including the historic Tsarska Bistritsa Palace and Park. Altogether, the excursion left an unforgettable impression of the work being done by the Bulgarian colleagues and their collaboration, especially with partners from Romania and Ukraine, while also offering a rich and friendly exchange of knowledge in a spirit of genuine camaraderie.

The conference abstracts are available at <http://www.iber.bas.bg/sites/default/files/IAD45/>. Selected contributions will be published in the peer-reviewed journals *Acta Zoologica Bulgarica*, *Phytologia Balcanica* and *Transylvanian Review of Systematical and Ecological Research*.

The 45th IAD Conference was dedicated to the memory of the eminent and highly respected IAD colleagues and friends, who have made valuable contributions to the study of the Danube River Basin: Dr. Angela Curtean-Bănăduc from Romania (1971–2023), Dr. Artem Liashenko from Ukraine (passed away in 2024), and Ing. Ivan Botev from Bulgaria (1943–2024).

Teodora Trichkova, Katrin Teubner



Figure 2. Participants in the 45th IAD Conference in Sofia. Photo: Ivan Yanchev