



Figure 1: Participants of the ESENIAS & DIAS Conference 2019, photo: Milcho Todorov

ferences (Sofia 2017, Bucharest 2018, Ohrid 2019); IAD conferences (Sibiu 2016, Smolenice 2018), and other events;

- Joint publications: abstract books and proceedings, guides on IAS, articles in peer review journals, and leaflets; and
- Development of the DIAS strategy and work plan.

In the future, with the support of IAD, we envisage to continue and further develop the research activities and at the same time to integrate more effectively the knowledge and management tools related to IAS in the Danube Region. This will include improved exchange of information and tools between scientists and managers, consideration of successes and challenges for different management options and improved collaboration on IAS between authorities and different stakeholder groups in transboundary and transnational context. In the frame

of IAD, we envisage also to collaborate more actively with the responsible European and regional authorities (EU Strategy for the Danube Region, Danube Commission, Sava Commission) and IAS networks (ESENIAS), in order to facilitate the implementation of the DIAS strategy and European legislation related to IAS at regional level.

In this respect, IAD offers an important and effective platform for cooperation as well as exchange and spread of knowledge and tools on IAS among scientists, authorities and stakeholders concerned with the biodiversity preservation in the Danube Region. Personally, through my membership and work within IAD throughout the years, I have gained valuable international scientific and organisational experience and skills, had the opportunity to meet and work with wonderful scientists and experts from the Danube countries, and received full support for my research ideas and activities.

IAD for the Blue Heart of Europe



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The Blue Heart of Europe is threatened by a heart attack caused by the aggressive development of mini-hydropower plants on streams and small rivers in the region (by 300% in the last two years), endangering the whole dense network of pristine rivers which host many threatened and endemic species in this part of the Danube subregion. Diverting water away from the river through pipelines, leaving behind empty

channels where rivers have been, will directly lead towards losing one of the most important natural river gems of the whole Danube catchment, but also of the entire continent.

Water resources are shared across borders, going far beyond any national interests. This implies a much wider regional approach to environmental protection and the crucial conservation of biodiversity. Within the Western Balkans, this need has increased due to difficult time for society and the scientific community in the recent past. Nevertheless, management efforts and initiatives addressing these issues are extremely rare in the Mid-

dle Danube Basin within the Western Balkan Region. Due to the time and expense of fieldwork, freshwater biodiversity in wetland areas is neglected in the routine monitoring program in this part of the Danube Basin. Although adequate biodiversity data are required for successful ecosystem conservation, a systematic inventory of these habitats does not exist, being omitted from the appropriate conservation management. Moreover, it is not surprising that the entire process of implementing EU environmental legislation in the region is delayed, including the EU Water Framework Directive and the EU Habitat Directive. Over the past two decades, a number of high-profile research projects and papers dealing with burning environmental issues at the Danube Basin level have been conducted, yet without a fully compiled database for the

Western Balkans. Therefore, filling these regional data gaps is the urgent need of the integrated Danube River Basin Management.

I am firmly convinced that the International Association for Danube Research (IAD) is a network capable and eligible to facilitate a fast and fruitful connection among young researchers, inevitably supporting capacity building and development of new research groups for restoration ecology of aquatic ecosystems and wetlands in the entire Danube Region, but especially in the Western Balkans. This is the challenging task but also the great opportunity, particularly in order to apply for research grants, manage nature conservation, mitigate human impact and ultimately save the Blue Heart of Europe.

Managing a shared river



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Here at the ICPDR, our organisation is currently celebrating the 25th year of activity, bringing together all the countries within the Danube River Basin for the purposes of managing our unique shared waterway. The work of the

IAD goes back even further, but it has been one of our key observers since 1998, with delegates participating in our various Expert Groups and helping us to develop necessary means to conserve, regenerate, and protect the Danube River. We are united behind a shared goal, as laid out in the EU's Water Framework Directive (EU-WFD), of creating an ongoing system of sustainable management for our river basin.

The ICPDR is positioned as a conduit for the many cross-sectoral interests in the Danube River Basin – navigation, fisheries, water treatment, hydropower – and the IAD remains one of our key partners, representing the invaluable input of the scientific community. One of our key achievements has been the four completed Joint Danube Surveys. The most recent of these took place this year, and organisations such as the IAD, providing key input via our expert groups, have made these vast and vital health checks for the river basin possible. Without the likes of the Joint Danube Surveys, it would be impossible for the ICPDR and our partners in the Danube River Basin to plot a way forward which continues to see the status of the river waters

protected, and continues to see constant improvement in the sustainability of the river. The input of the IAD and its scientists is essential to achieving the ICPDR's three 'pillars of action' to improve the lives of citizens in the Danube River Basin (DRB):

- 'Cleaner' water
- A 'Healthier' home for aquatic animals and plants
- A 'Safer' environment for people to live without the fear of floods

The most recent Joint Danube Survey – JDS 4 – took place this very year, here in 2019, and saw the pioneering usage of new and underexplored methods for monitoring water status in the Danube River Basin. Environmental DNA (eDNA) was detected as a matter of standard for the first time in a JDS; effect-based monitoring was also a key method deployed for the first time, aiming to compare old and new chemical analyses in fruitful new ways; and following results from various other studies on European waters showing their ubiquitous presence, microplastics became a key substance subject to monitoring in the Danube and its tributaries in 2019. This all goes to show the speed at which monitoring methods and the science behind river basin management is progressing.

While a central international managing body such as the ICPDR is vital for communicating with the public, and coordinating disparate partners, knowledge bases such as the IAD provide much-needed expertise and guide our innovations. Such organisations are the keys to unlocking a sustainable future.