

Editorial

Cristina Sandu: President of IAD, email: cristina.sandu@danube-iad.eu



Dear Reader,

We are pleased to announce that the International Association for Danube Research (IAD) and the Floodplain Institute Neuburg (Catholic University of Eichstätt-Ingolstadt) will organize the **43th IAD conference** focused on “**Rivers and Floodplains in the Anthropocene – Upcoming Challenges in**

the Danube River Basin” from June 9-11, 2021. Due to the corona pandemic, the event will take place in a virtual format, allowing us to exchange ideas and research results in a safe way. With this opportunity, we invite all IAD members to participate in the General Assembly meeting and elect the **new IAD president**, the person who will coordinate our activities for the next six years. Please check the conference homepage iad2020.ku.de for the latest updates.

This issue of Danube News presents an overview of the role of hydropower plants and their ecological impacts, the threats posed by new development plans and the lessons learned from the past years.

Long considered as a “clean” energy source due to their low emission of greenhouse gases, hydropower plants proved to have a highly negative impact on river systems. For decades these impacts were not properly prevented/mitigated, and hence, the costs of hydropower energy remained low and attractive to consumers. However, the real price was paid by the aquatic communities, numerous species being brought near extinction, such as the migratory freshwater fish. Without subsidies and with real environmental costs included, the hydroenergy will not remain as attractive anymore as other renewables, such as wind, solar, geothermal, wave energy, become increasingly affordable.

The EU Green Deal, aiming to protect, conserve and enhance EU’s natural capital, the EU Biodiversity 2030 Strategy goal to restore 25,000 km of EU rivers to the free-flowing state, the Water Framework Directive, aiming to achieve good ecological status/potential by 2027, and the Habitats Directive, supporting among others habitat restoration for endangered species, provide a key legal frame for river restoration in the EU. In this context, instead of constructing new hydropower dams and altering new river sections, the focus should be shifted to restoration and where feasible dam removal, while refurbishing and upgrading of existent plants must strictly ensure full compliance with the environmental legislation.

We hope that our articles will contribute to raise awareness on the numerous environmental challenges posed by hydropower dams and solutions to mitigate their impacts. Enjoy reading!

Hydropower balancing between global climate change and regional water protection

Jürg Bloesch: Emeritus Eawag-ETH Dübendorf (1970-2005), IAD President (1998-2004) and Honorary Member, Editor Danube News (2006-2012), Zürich, Switzerland, e-mail: juerg.bloesch@emeriti.eawag.ch

Hydropower has been a human use for a long time. In many countries, it is a major pillar of electrical production. The consumption of energy is continuously increasing in parallel with population growth as well as quantitative and qualitative demands. In the emerging debate about global climate change and “sustainable” development,

hydropower has gained increasing attendance. On the one hand, it is almost free of greenhouse gases (mainly CO₂, but some hydropower plants emit CH₄). On the other hand, it causes significant and often irreversible damage to freshwater ecosystems. Therefore, the advantages and disadvantages of hydropower plants must be balanced. This article provides a general overview and develops recommendations to mitigate impacts from hydropower.



Danube backwaters between Neuburg and Ingolstadt (Bavaria/Germany)

43rd IAD Conference 2021 - a virtual conference (postponed from 2020)

Rivers and Floodplains in the Anthropocene – Upcoming Challenges in the Danube River Basin

9–11 June 2021

Postponed as a virtual conference

Important Dates

Deadline for latest registration: 04.06.2021

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For further information
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www.iad2020.ku.de

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Hydrological catchment of the River Danube



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