

nities, remains an essential factor in understanding carbon turnover, bacterial mortality rates, and ecosystem resilience. Additionally, changes in bacterial community composition due to top-down controls, such as enhanced flagellate grazing, may modulate the balance between bacterial production and viral-induced mortality, affecting overall trophic interactions in this ecotone.

By integrating these perspectives, the expert group seeks to advance our understanding of microbial-driven processes in the coastal Black Sea and their implications for ecosystem stability and biogeochemical cycles.

Expert group leader:
Dr. Markus G. Weinbauer

Affiliation: Laboratoire d'Océanographie de Villefranche, Sorbonne University and the French National Research Institute (France)

Main research field:
Viruses & Microbiology

Interests: My background is a master in the ecology and biology of gorgonian corals, i.e. population dynamics and skeletal-based biomarkers. Then I moved for my PhD to the ecology of viruses (still my main topic) and microorganisms.

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New IAD Expert Group: Sediment dynamics & Hydromorphology

The Danube River Basin (DRB) is one of Europe's most dynamic fluvial systems, where sediment dynamics and hydromorphological processes shape land- and riverscapes, sustain biodiversity, and impact socio-economic activities. Growing pressures from human interventions and climate change on sediment dynamics and hydromorphology underscore the need for sustainable river basin management. This newly established EG aims to:

- Advance the understanding of sediment dynamics and hydrogeomorphic changes
- Assess the impacts of human activities and climate change on sediment connectivity and river morphology
- Explore the ecological implications of altered sediment regimes on riverine habitats and biodiversity
- Enhance public awareness regarding the importance of sediment balance in sustaining river health
- Develop science-based recommendations for integrated river and catchment management
- Promote interdisciplinary and transdisciplinary collaborations among hydrologists, geomorphologists, ecologists, engineers, policymakers, and stakeholders
- Support river restoration efforts by providing knowledge on sediment transport processes and sustainable management practices



The expert group envisages to organise workshops, seminars, and scientific sessions within IAD conferences, to conduct collaborative research projects and synthesise knowledge on sediment-related issues, to develop guidelines and policy recommendations for sustainable sediment management, to establish a platform for knowledge exchange among scientists, practitioners, and decision-makers, and to engage with local communities and stakeholders to foster participatory river and catchment management.

The establishment of this expert group aligns with IAD's mission to promote interdisciplinary research and foster sustainable management of the DRB. By bridging scientific knowledge with practical applications, this initiative will significantly contribute to addressing current and future challenges in sediment dynamics and hydromorphology. I kindly seek interested IAD members and look forward to further discussions and future collaborations.

Expert Group leader:
Dr. Ronald E. Pöppel

Dr. Ronald Pöppel is a Senior Researcher at the Institute of Hydrobiology and Aquatic Ecosystem Management (IHG), BOKU University, Vienna, Austria, former Senior Lecturer for Physical Geography and Geoecology (Department of Geography and Regional Research), University of Vienna. Main research fields are fluvial dynamics, sediment transport, connectivity, hydromorphology and river (basin) management.

My research focuses on sediment dynamics and hydromorphology, with a particular interest in the role of humans as (dis)connecting agents in fluvial systems. I explore new concepts and applications in fluvial geomorphology and landscape research to better understand how human activities influence fluvial processes and connectivity. Since 2020, I have led the Human Impact and Connectivity (HI-CONN) research



group, investigating the effects of land use, management practices, and climate change on water, sediment, and nutrient/contaminant fluxes. Our work aims to assess and quantify human-induced changes in fluvial systems, further providing insights for sustainable river basin management.

I am author of more than 30 papers in scientific journals, first author of one book, and further contributed to 10 book

chapters; Board work and speakership in 9 organisations such as the 'IAG/AIG Internat. Assoc. of Geomorphologists (working group leader 'Connectivity in Geomorphology')', the EGU/European Geoscience Union (scientific officer), and the ÖK-IAD - Austrian Committee Danube Research (management committee).

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New IAD Expert Group: Danube River education

The Danube River and its tributaries are facing significant ecological challenges, affecting the ecological status of the river as well as biodiversity in the river and its floodplains. However, there remains a gap in **effectively communicating such environmental knowledge and awareness to a broader public**. The International Association for Danube Research (IAD), a key player in promoting sustainable management of the Danube River Basin, can expand its impact by enhancing public environmental education efforts.

To bridge this gap, an Environmental **Danube River Education Expert Group (DEEG)** within IAD has been established. This expert group is dedicated to raising public awareness, fostering emotional connections of local residents and tourists with the Danube, and empowering local communities to participate in the protection and restoration of the river and its ecosystems. The European Commission's initiative to reconnect citizens with freshwater ecosystems aligns closely with this objective, positioning IAD to contribute to wider EU goals.

While IAD has traditionally focused on research and policy, the value of these insights is limited without public communication and involvement. An Environmental Education Task Force could **transform complex scientific data into engaging, accessible content for a wider audience**. The aim is to support a broad range of educational initiatives, including programs for schools, community outreach, exhibitions, workshops, and multimedia campaigns. By collaborating with local stakeholders such as schools, NGOs, nature parks, and governments, this effort envisages far-reaching effects across the entire Danube region.

The environmental Danube River Education Expert Group hence serves as a catalyst for coordinated educational efforts, ensuring that local activities are linked and scaled throughout the basin. By initiating and developing timely educational projects, the DEEG enables the creation of an interlinked se-

ries of initiatives that foster community-driven conservation efforts. This would include a variety of educational formats, such as school programs, interactive exhibitions, and public events, aimed at diverse audiences across different regions.

In summary, the DEEG will help IAD to significantly increase its visibility and strengthen its role in promoting sustainable practices and synergies among the projects. The **Environmental Danube River Education Expert Group (DEEG)** will bridge the gap between scientific research and public engagement, creating a lasting, community-focused movement for the conservation and protection of the Danube River Basin. This initiative would ensure that the association's efforts reach beyond the scientific community and foster a deeper connection between people and the river based on environmental knowledge and emotional linkages to the Danube's unique nature.



**Expert Group leader:
Dr. Gabriela Costea**

Dr. Gabriela Costea is a research associate at the Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) in Berlin, specialising in aquatic ecology and the ecosystem services of rivers and floodplains. She has previously

worked for 16 years as a curator at the Natural Science Museum Complex in Galati, Romania, where she developed exhibitions and environmental education programs that made scientific knowledge about the Danube's biodiversity accessible to the public. Her work bridges science, education, and community engagement, focusing on ecosystem services of rivers and floodplains, stakeholder involvement, participatory processes, and creative outreach tools such as a children's book, exhibitions and educational programs. She co-leads the Danube Nature Guides project, promoting intergenerational learning and emotional connections to the river, and is currently active in two EU Horizon projects—Restore4Life and Danube4all—also developing innovative educational packages and tools for wetland conservation. Her interdisciplinary background combines scientific expertise with a passion for communication and awareness-raising in support of sustainable river management.

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