



INTERNATIONAL ASSOCIATION FOR DANUBE RESEARCH

Scientific Report 2023

During 2023, the IAD members were involved in numerous limnological studies in the Danube River Basin, awareness-raising activities, environmental education, and continuous dialogue with stakeholders and decision-makers concerning the importance of aquatic biodiversity and nature conservation. Many experts contributed to the elaboration of the Danube book coordinated by IAD entitled “Danube River and Western Black Sea Coast: Complex Transboundary Management”, which will be published by Elsevier in autumn 2024. Also, the IAD members were involved in a high number of projects and authored numerous scientific reports and publications. The 44th IAD conference was organized in February 2023, in Krems, Austria. More information is available on the IAD homepage – www.danube-iad.eu.

Science – Policy interactions

The scientific support for national authorities, the International Commission for the Protection of the Danube Region (ICPDR) and the EU Strategy for the Danube Region (EUSDR) continued also in 2023. At national level, IAD members contributed to the implementation of the EU environmental policies in several Danube countries. At international level, IAD experts provided scientific input to several ICPDR Expert Groups and topics such as: River Basin Management, Pressures and Measures, Biodiversity Conservation, Monitoring and Assessment, Hydromorphology, Microbiology, Invasive Alien Species (IAS) and Sturgeon conservation. The cooperation with ICPDR took place also in the frame of several projects, such as We Pass 2, aiming to restore fish migration at the Iron Gate dams or Horizon Europe projects such as Danube4all and DALIA. IAD continued to contribute to the implementation of the EU Strategy for the Danube Region Action Plan via the Danube Sturgeon Task Force (DSTF), the Danube network for Invasive Alien Species (DIAS), and the Danube: Landscapes Task Force.

Project implementation

In 2023, the IAD experts were actively involved in numerous international research projects funded by the European Commission, Horizon 2020, Horizon Europe, Danube Transnational Program, LIFE Program, as well as in national projects supported by Danube countries authorities and European funding programs.

These projects contribute to key topics in the Danube and Black Sea Regions, such as water quality improvement, assessment and reduction of plastic contamination, sustainable management of river systems, ecological restoration of freshwater-related ecosystems, evaluation of biological communities using e-DNA methods, investigation of the aquatic circuit of antibacterial biocides, biological control of invasive alien species, antimicrobial resistance in the Danube River and major tributaries, assessment of ecological status of intermittent streams based on different biotic components, biological diversity and ecological status of the Danube River and adjacent wetlands, integrative floodplain management, ichthyological monitoring at large dams along the Danube (Iron Gates, Gabčíkovo) to enable data gathering for restoring fish migration, protection and conservation of aquatic endangered species, supporting biodiversity conservation in urban areas, improvement of the hydrological conditions in the aquatic habitats, tackling hazardous substances

pollution and faecal contamination in the Danube River Basin, wastewater based epidemiology, long term observations of marine coastal biodiversity, etc.

In 2023, a summer school was organized in Slovenia between 25-30 September with the support of the CEEPUS network EcoManAqua on the topic “Environmental History and Historical Ecology of the Dinaric Karst”. A second summer school was organized between 15-20 October 2023 in Hungary with the aim to train international engineering students on the implementation of nature-based solutions to tackle climate and especially flood risk impacts.

The most important projects carried out in 2023 with the support of IAD experts are presented in Annex 1.

Editorial activities and publications

Awareness raising on environmental problems in the Danube Region and dissemination of scientific information to experts, policy makers and the general public represent a constant part of IAD activity. The two new issues of the IAD Bulletin, Danube News, published in 2023 (DN 47 and DN 48) are available for download on the IAD website.

Numerous book chapters and scientific articles emerging from the projects and research activities carried out in the Danube Basin were published also this year. A selection of the most relevant titles (book chapters, scientific articles and reports) is available in Annex 2.

Other activities

In 2023, the IAD members organized different scientific events and participated to different forums, symposiums and conferences to exchange knowledge and disseminate project results to stakeholders. The 44th IAD Conference “Tackling Present and Future Environmental Challenges of a European Riverscape” was organized between 6-9 February 2023, in Krems, Austria, and was attended by 101 participants from 12 countries. National BioBlitz surveys in the Danube and Black Sea regions were co-organized in Bulgaria as part of the European BioBlitz surveys of invasive alien species. The Joint ESENIAS and DIAS Scientific Conference and 12th ESENIAS Workshop ‘Globalisation and invasive alien species in the Black Sea and Mediterranean regions – management challenges and regional cooperation’ were organized between 11–14 October in Varna, Bulgaria. A mini-symposium on the topic of landscape reconstruction around Lake Neusiedler and the Lacken in Seewinkel was co-organized by the Center for Environmental History, BOKU and IAD on May 11, 2023. A detailed list of these events is presented in Annex 3.

Many IAD members are involved in education activities, such as lectures for undergraduates, coordination of PhD programs and master theses in the affiliated universities, environmental education activities and presentations on nature conservation and environmental protection during public events.

Projects

- Adaptation of the River Ecosystem Service Index (RESI) methodology on Hernád River, Hungary
- A quantitative concept to study human-derived antibiotic resistance in rivers along the human wastewater path (RIVAR)
- Assessment of ecological status of intermittent streams according to different biotic components
- Assessment of the level of study of foreign economically important pests of agricultural crops in Bulgaria
- Biological Control of Dreissenid Mussels: Use of novel Eurasian parasites to control North American dreissenid populations
- Biological diversity and ecological status of the Danube River and adjacent wetlands, optimal use of their ecosystem functions and services, sustainable development and achieving good ecological status
- Climatically promoted homogenization of aquatic invertebrates tested on three model lotic systems and historical data
- Conducting biological analyses before, during and after the implementation of the activities to remove silt, cut reeds and build a western canal in Srebarna Nature Reserve
- Conservation of freshwater mussels on the Balkan Peninsula
- Consultations and development of Action plans on priority pathways for unintentional introduction and spread of invasive alien species of concern to the European Union according to Art. 13 of Regulation (EU) No 1143/2014
- CONtrolling TEMPerature and Oxygen in rivers with diversion power plants (CONTEMPO₂)
- Development of ‘Strategy for protection of biodiversity of Sofia Municipality for 2030 and Action plan for protection of biodiversity of Sofia Municipality for 2030’
- Development of the Migratory Fish Monitoring Station - Isaccea (ANADROM)
- Development of technology to minimize environmental risks in conditions of climatic and war-induced water shortages to ensure food and biological security in Ukraine
- Development of national system for early detection and warning of invasive alien species. Bulgarian National Science Programme ‘Protecting the environment and reducing the risk of adverse events and natural disasters’, Task I.7.3.
- Faecal pollution routes of antibiotic resistance along the whole Danube River
- H2020 COST Action CA18239 „Conservation of freshwater mussels: a pan-European approach” (CONFREMU)
- H2020 COST Action “The eLTER Preparatory Phase Project” (eLTER PPP).
- H2020 MARine COastal BiODiversity Long-term Observations (MarcoBolo)
- H2020 Modelling RESTORation of wEtlands for Carbon pathways, Climate Change mitigation and adaptation, ecosystem services, and biodiversity, Co-benefits (Restore4C)
- H2020 Science for Evidence-based and sustainabLe decIsions about NATural capital" (SELINA).
- H2020. The Advanced Community Project for the eLTER Research Infrastructure.
- H2020: Mainstreaming Ecological Restoration of freshwater-related ecosystems in a Landscape context: INnovation, upscaling and transformation (MERLIN)
- H2020: Securing biodiversity, functional integrity and ecosystem services in DRYing rivER networks (DRYVER)
- H2020: Restarting the Economy in Support of Environment, through Technology (RESET)
- H2020: Managing resilient nexus systems through participatory systems dynamics modelling (REXUS)
- Horizon Europe - Danube Region Water Lighthouse Action – Restoration of fresh and transitional water ecosystems (DALIA).
- Horizon Europe - ECOsystem-based governance with DANube lighthouse Living Lab for sustainable Innovation processes (EcoDaLLi)

- Horizon Europe - Building a resilient ecological network of conserved areas across Europe for nature and people (NaturaConnect)
- Horizon Europe - Restoration of the Danube River Basin waters for ecosystems and people from mountains to coast (DANUBE4all)
- Horizon Europe - Restoration of Wetland Complexes as Life Supporting Systems in the Danube Basin (Restore4Life)
- Horizon Europe - Resilience-centric Smart, Green, Networked EU Inland Waterways (RENEW)
- Horizon Europe - Supporting Stakeholders for Adaptive, Resilient and Sustainable Water” Management (Stars4Water)
- Importance and protection of floodplains as an environment for the fulfilment of the landscape eco-stabilisation function
- Improved knowledge about epidemiology and distribution of priority invasive and (re)emerging arthropod pests in fruit crops and grapevines (e.g. *Aromia bungii*, *Popillia japonica*, *Halyomorpha halys*).
- Improving the data basis for river restoration at national scale in Switzerland
- Investigating and developing restoration measures by improving understanding of the interplay between structure and function of restored river systems
- Hydrological models to simulate the change in the discharge of alpine creeks and rivers to understand the coupling to different ecological factors.
- Influence of the global climate changes on the fish species of resource significance in river ecosystems impacted by hydromorphological pressure. Bulgarian National Science Programme ‘Protecting the environment and reducing the risk of adverse events and natural disasters’, Task I.7.4–3.
- Infrastructure for Marine and Inland Water Research (AquaInfra)
- Integrated research and sustainable solutions to protect and restore Lower Danube Basin and coastal Black Sea ecosystems (ResPonSE)
- Integration of Aquatic Nematodes into the catalogue “Fauna Aquatica Austriaca“
- Interdisciplinary Connectivity - Marie Curie International Training Network (i-CONN)
- Investigation of the spawning ecology of the black-mouthed goby in the Upper Danube
- LIFE City River
- LIFE CONTrolling TEMPerature and Oxygen in rivers with diversion power plants (CONTEMPO₂)
- LIFE Living Rivers. Implementation of the river basin management plan in selected river sub-basins in Slovakia.
- LIFE Integrated application of innovative water management methods at river basin by coordination of local governments (LIFE LOGOS 4 WATERS)
- Linking climate warming to increasing invertebrate species richness in running waters: from historical data to experiments
- Making the Iron Gate Dams passable for Danube Sturgeon – We Pass 2
- Masterplan for Preservation and Consolidation of Biodiversity along the Bavarian Danube
- Mechanisms of biodiversity formation of fish and other aquatic organisms in ecotone zones of river systems as a basis for developing scientific principles for the conservation of aboriginal flora and fauna in the context of intensification of the invasion of alien species.
- Meta ecosystem dynamics in Riverine Landscapes (MERI)
- Microplastics in surface waters - identification, quantification and pathway analysis
- Monitoring of Ecological Processes and Control of Restoration Measures in Floodplains (MONDAU II)
- National Laboratory for Water Science, Water Security and Sustainable Technologies in Hungary
- Optimizing the sustainable use of natural resources, increase of water security and ecosystems resilience in the Lower Danube Basin, affected by climate changes and anthropogenic interventions.

- Potential threats to environmental and economic sustainability in the Danube and Black Sea region: Danube River as invasive alien species corridor
- Predicting future trends in health-related microbiological water quality of rivers in a vastly changing world (FUTURE DANUBE)
- Preparedness in biological control of priority biosecurity threats.
- Protection strategies for the Huchen (*Hucho hucho*) in the context of climate change
- Riverine vertebrate metacommunities using eDNA (RIMECO)
- Science for Evidence-based and sustainable decisions about Natural capital" (SELINA).
- Supporting a sustainable management of river systems by contributing to solutions to reconcile conservation and exploitation of river systems.
- Technical and Scientific Support in Relation to the Implementation of Regulation 1143/2014 on Invasive Alien Species.
- The aquatic circuit of antibacterial biocides – integrated approach for the assessment and management of risks associated with antibio-resistance (BIOCIDE).
- The analysis of the sustainable use potential of the vegetation specific to the Danube – Danube Delta – Black Sea system
- The impact of anthropogenic and climatic changes, vulnerabilities and adaptation measures to increase resilience in the lakes of the Danube Delta Biosphere Reserve.
- Validation of catchment-scale contaminant transport models using stable isotopes and multi-element measurements
- Vertebrate eDNA survey of selected floodplains along the Danube – *Emys orbicularis*
- Wastewater Based Epidemiology (WBE)

Scientific publications

Books and book chapters

Altamirano, M., A., de Rijke, H., Arellano, B., Nanu, F., Angulo, M., Benítez Ávila, C., Dartée, K., Peña, K., Mayor, B., Pengal, P., Scriciu, A. (2023). Chapter 9. Closing the Implementation Gap of NBS for Water Security: Developing an Implementation Strategy for Natural Assurance Schemes. In: Lopez Gunn, E., Van der Keur, P., Van Cauwenbergh, N., Coent, L., Giordano, R. (eds.). *Greening Water risks: natural assurance schemes*, Springer Nature, Series on water security.

Book of Abstracts. (2023). 44th IAD Conference ‘Tackling Present & Future Environmental Challenges of a European Riverscape’ 6–9 February, Krems, Austria

Scriciu, A., Rotaru, S., Alexandrescu, B., Nanu, F., Marchal, R., Pagano, A., Giordano, R. (2023). Chapter 10. Reducing water-related risks in the Lower Danube through Nature Based Solution design. A stakeholder participatory process. In: Lopez Gunn, E., Van der Keur, P., Van Cauwenbergh, N., Coent, L., Giordano, R. (eds.). *Greening Water risks: natural assurance schemes*, Springer Nature, Series on water security. <https://doi.org/10.1007/978-3-031-25308-9>

Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.). (2023). Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop ‘Globalisation and invasive alien species in the Black Sea and Mediterranean regions – management challenges and regional cooperation’, 11–14 October 2023, Varna, Bulgaria, 152 pp.

Scientific articles

Afanasyev S., Hupaló O., Tymoshenko N., Lietytska O., Roman A., Manturova O., Bănăduc D. (2023). Morphological and trophic features of the invasive Babka gymnotrachelus (Gobiidae) in the plain and mountainous ecosystems of the Dniester Basin, spatiotemporal expansion and possible threats to native fishes, *Fishes* (8) 427: 2-16.

Aminat K. Alieva, Botagoz M. Nasibulina, Shima Bakhshalizadeh, Tatyana F. Kurochkina, Nikolai N. Popov, Bekzhan I. Barbol, Bănăduc D., Nurgul M. Jussupbekova, Gulnur A. Kuanysheva and Attaala M. A. (2023). The Low Ontogenetic Diet Diversity and Flexibility of the Pike-Perch, *Sander lucioperca* (Linnaeus, 1758) (Osteichthyes, Percidae): A Case Study, *Fishes* (8): 395

Baldan, D.; Cunillera-Montcusí, D.; Funk, A.; Piniewski, M.; Cañedo-Argüelles, M.; Hein, T. (2023). The effects of longitudinal fragmentation on riverine beta diversity are modulated by fragmentation intensity, *Science of the Total Environment* 903.

Baranya, S.; Fleit, G.; Muste, M.; Tsubaki, R.; Józsa, J. (2023). Bedload estimation in large sand-bed rivers using Acoustic Mapping Velocimetry (AMV). *Geomorphology*, 424, Paper: 108562.

Bănăduc D., Afanasyev S., Akeroyd J.R., Năstase A., Năvodaru I., Tofan L., Curtean-Bănăduc A. (2023). The Danube Delta: The Achilles Heel of Danube River–Danube Delta–Black Sea Region. Fish Diversity under a Black Sea Impact Scenario Due to Sea Level Rise—A Prospective Review. *Fishes*, 8 (7), art. no. 355

Bănăduc D., Barinova S., Cianfaglione K., Curtean-Bănăduc A. (2023). Editorial: Multiple freshwater stressors. Key drivers for the future of freshwater environments, *Frontiers in Environmental Science*, 11:1143706, 1-3.

Bănăduc D., Ceaușu M., Mărginean M., Dobre A., Curtean-Bănăduc A. (2023). *Romanogobio banaticus* (Bănărescu, 1960) in the Nera River (Danube Basin), *Transylvanian Review of Systematical and Ecological Research*, volume 25.2, 87-104.

Bănăduc D., Bakhshalizadeh S., Curtean-Bănăduc A. (2023). Natura 2000 a Panacea? Natura 2000 Site Oltul Mijlociu-Cibin-Hârțibaciu (ROSCI132) – A local extinction of a native fish species and a new alien fish arrival case study. *Transylvanian Review of Systematical and Ecological Research*, volume 25.1, 81-100.

Bilous O.P., Wojtal A.Z., Ivanova, N.O., Burova, O.V., Barinova, S., Maystrova, N.V., Polishchuk, O., Curtean-Bănăduc A., Tsarenko P.M. (2023). Indication of Long-Term Changes of Algae Communities in a Hydrologically Transformed Estuary Sasyk, Black Sea, Ukraine. *Water*, 15 (11): 2078.

Crago, R.D.; Szilagyi, J.; Qualls, R.J. (2023). What is the Priestley-Taylor wet-surface evaporation parameter? Testing four hypotheses. *Hydrology and Earth System Sciences* 27: 3205-3220.

Curtean-Bănăduc A., Mihaș C., Burcea A., McCall G. S., Matei C., Bănăduc D. (2023). Screening for Microplastic Uptake in an Urbanized Freshwater Ecosystem: *Chondrostoma nasus* (Linnaeus, 1758) Case Study, *Water*. Special Issue Recent Advances in the Aquatic Biodiversity, 15, 1578.

De Keukelaere, L., Moelans, R., Knaeps, E., Sterckx, S., Reusen, I., De Munck, D., Simis, S. G. H., Constantinescu, A. M., Scriciu, A., Katsouras, G., Mertens, W., Hunter, P. D., Spyraeos, E., & Tyler, A. (2023). Airborne Drones for Water Quality Mapping in Inland, Transitional and Coastal Waters—MapEO Water Data Processing and Validation. In *Remote Sensing* (Vol. 15, Issue 5, p. 1345). MDPI AG. <https://doi.org/10.3390/rs15051345>

Derx J, Kiliç Hs, Linke R, Cervero-Aragó S, Frick C, Schijven J, Kirschner Akt, Lindner G, Walochnik J, Stalder G, Sommer R, Saracevic E, Zessner M, Blaschke AP, Farnleitner AH. (2023). Probabilistic faecal pollution source profiling and microbial source tracking for an urban river catchment. *Science of the Total Environment*. 857: 159533

Derx J, Müller-Thomy H, Kılıç HS, Cervero-Arago S, Linke R, Lindner G, Walochnik J, Sommer R, Komma J, Farnleitner AH, Blaschke AP. (2023). A probabilistic-deterministic approach for assessing climate change effects on infection risks downstream of sewage emissions from CSOs. *Water Research* 1;247:120746.

Djikanovic, V., Skoric, S., Mickovic, B., Nikolic, D. (2023). Diet analysis of the Amur sleeper (*Perccottus glenii*) from the Danube River drainage channel (Serbia). *Turkish Journal of Fisheries and Aquatic Sciences* 23 (12).

Ermilov, A.A.; Benkő, G.; Baranya, S. (2023). Automated riverbed composition analysis using deep learning on underwater images. *Earth Surface Dynamics* 11: 1061-1095.

Erős, T.; Petrovszki, J.; Mórocz, A. (2023). Planning for sustainability: Historical data and remote sensing-based analyses aid landscape design in one of the largest remnant European floodplains. *Landscape and Urban Planning* 238 Paper: 104837.

Fekete, J.; Torma, P.; Szabó, A.; Balogh, M.; Horváth, Cs.; Weidinger, T.; Szabó, G.; Bozóki, Z. (2023). Open photoacoustic cell for concentration measurements in rapidly flowing gas. *Photoacoustics* 30 Paper: 100469, 6 p.

Fontaine L, Pin L, Savio D, Friberg N, Kirschner AKT, Farnleitner AH, Eiler A. (2023). Bacterial bioindicators enable biological status classification along the continental Danube river. *Commun Biol*. 6:862.

Funk, A.; Baldan D.; Bondar-Kunze, E.; Recinos Brizuela, S.; Kowal, J.; Hein, T. (2023). Connectivity as a driver of river-floodplain functioning: A dynamic, graph theoretic approach, *Ecological Indicators* Vol. 154.

Füstös, V.; Sály, P.; Szalóky, Z.; Tóth, B.; Vitál, Z.; Specziár, A.; Fleit, G.; Baranya, S.; Józsa, J.; Erős, T. (2023). Effects of a nuclear power plant warmwater outflow on environmental conditions and fish assemblages in a very large river. (the Danube, Hungary) *Ecohydrology* 16: 3 Paper: e2512.

Grabner M, Hohensinner S, Köstelbauer F, Mader I, Tintner-Olifiers J, Wächter E. (2023). Nahe am Wasser gebaut . Überblick über und erste Erkenntnisse aus den Forschungsergebnissen zur Vorstadt vor dem Werdertor. *Beiträge zur Mittelalterarchäologie in Österreich* 39: 137-86.

Guti, G. (2023). Action plan for the conservation of sterlet (*Acipenser ruthenus*) in Hungary. English version.

Haase P., Bowler D.E., Baker N.J., Bonada N., Domisch S., Garcia Marquez J.R., Heino J., Hering D., Jähnig S.C., Schmidt-Kloiber A., Stubbington R., Altermatt F., Álvarez-Cabria M., Amatulli G., Angeler D.G., Archambaud-Suard G., Jorrín I.A., Aspin T., Azpiroz I., Bañares U., Ortiz J.B., Bodin C.L., Bonacina L., Bottarin R., Cañedo-Argüelles M., Csabai Z., Datry T., de Eyto E., Dohet A., Dörflinger G., Drohan E., Eikland K.A., England J., Eriksen T.E., Evtimova V., Feio M.J., Ferréol M., Floury M., Forcellini M., Forio M.A.E., Fornaroli R., Friberg N., Fruget J.-F., Georgieva G., Goethals P., Graça M.A.S., Graf W., House A., Huttunen K.-L., Jensen T.C., Johnson R.K., Jones J.I., Kiesel J., Kuglerová L., Larrañaga A., Leitner P., L'Hoste L., Lizée M.-H., Lorenz A.W., Maire A., Manzanos Arnaiz J.A., McKie B.G., Millán A., Monteith D., Muotka T., Murphy J.F., Ozolins D., Paavola R., Pařil P., Peñas F.J., Pilotto F., Polásek M., Rasmussen J.J., Rubio M., Sánchez-Fernández D., Sandin L., Schäfer R.B., Scotti A., Shen L.Q., Skuja A., Stoll S., Straka M., Timm H., Tyufekchieva V.G., Tziortzis I., Uzunov Y., van der Lee G.H., Vannevel R., Varadinova E., Várбірó G., Velle G., Verdonschot P.F.M., Verdonschot R.C.M., Vidinova Y., Wiberg-Larsen P., Welti E.A.R. (2023). The recovery of European freshwater biodiversity has come to a halt. *Nature* 620: 582-588.

Haidvogel G., Szabó P. (2023). Editorial: Non-native species and biodiversity change in river ecosystems: a historical perspective. *Frontiers in Ecology and Evolution* 11.

Haidvogel G. (2023). The history of the Lobau in the 19th and 20th century: Land use change, diversification of human uses and long-term conflicts between conservation and utilization. *Acta ZooBot Austria* 159: 5-19.

Haidvogel G., Bloesch J., Cyffka B., Hein T., Sandu C., Teubner K. (2023). Research Cooperation in the Danube River Basin: The International Association for Danube Research (IAD). *Der Donauraum*, 63(3):65-73.

Hauer F., Hohensinner S. (2023). Durchstich, Kai und Häusergerümpel – Die Donauregulierung 1870–1876 als landschafts- und städtebauliches Großprojekt. *Jahrbuch des Vereins für Geschichte der Stadt Wien* 79: 171-22.

Honti, M.; Zsugyel, M.; Seller, C.; Fenner, K. (2023). Benchmarking the Persistence of Active Pharmaceutical Ingredients in River Systems. *Environmental Science & Technology* 57: 14684-14693.

Januschke, K., Hering, D., Stammel, B., Brunzel, S., Scholz, M., Rumm, A., Sattler, J., Fischer-Bedtke, C., Makiej, A. & Foeckler, F. (2023). Biozönotische Erfolgskontrolle von Renaturierungsmaßnahmen an Gewässerufeln und in Auen - Typologische Grundlagen und Bewertungsverfahren. *BfN-Schriften* 655.

Jojic, V., Bajic, A., Barisic-Klisaric, N.R., Bugarski-Stanojevic, V., Snoj, A., Miljanovic, B., Askeyev, O., Askeyev, I., Maric, S. (2023). Exploring the phylogenetic signal in the cranial variation of European populations of grayling (*Actinopterygii*, *Salmonidae*). *Contributions to Zoology* 92 (5): 510-532.

Jovicic, K., Jankovic, S., Nikolic, D., Djikanovic, V., Skoric, S., Krpo-Cetkovic, J., Jaric, I. (2023). Prospects of fish scale and fin samples usage for nonlethal monitoring of metal contamination: a study on five fish species from the Danube River. *Knowledge and Management of Aquatic Ecosystems* 424 (4)

Jupke J.F., Birk S., Apostolou A., Aroviita J., Baatrup-Pedersen A., Baláži P., Barešová L., Blanco S., Borrego-Ramos M., van Dam H., Dimitriou E., Feld C.K., Ferreira M.T., Gecheva G., Gomà J., Hanžek N., Haslev I.M., Isheva T., Jamoneau A., Jyrkänkallio-Mikkola J., Kahlert M., Karaouzas I., Karjalainen S.M., Olenici A., Panek P., Pařil P., Peeters E.T.H.M., Polásek M., Pont D., Pumputyte A., Sandin L., Sochuliaková L., Soininen J., Stanković I., Straka M., Šušnjara M., Sutela T., Tison-Rosebery J., Udovič M.G., Verhofstad M., Žutinić P., Schäfer R.B. (2023). European river typologies fail to capture diatom, fish, and macrophyte community composition. *Science of The Total Environment* 896: 165081.

Kaden, U., Scholz, M., Buijse, A. D., Cvijanović, D., Froese, I., Diack, I., Duffield, S., Ibáñez, C., Jähnig, S., Januschke, K., Ludewig, K., Mueller, P., Rodríguez-González, P., Schulz-Zunkel, C., Stadler, J., Stammel, B., Wantzen, K., Weber, A., Wulf, S., Bonn, A. (2023). Riverine and coastal wetlands in Europe for biodiversity and climate – State of knowledge, challenges and opportunities. *BfN-Discussion paper*.

Kazakov S. A., Vancheva N. V., Pehlivanov L. Z. (2023). First report on natural reproduction of rainbow trout *Oncorhynchus mykiss* (Walbaum, 1792) (Actinopterygii: Salmonidae) in Bulgaria. *Acta Zoologica Bulgarica*, 75 (4): 505–5111.

Kostic-Vukovic, J., Kolarevic, S.M., Sunjog, K., Subotic, S., Visnjic-Jeftic, Z., Raskovic, B.S., Poleksic, V., Vukovic-Gacic, B.S., Lenhardt, M. (2023). Combined use of biomarkers to assess the impact of untreated wastewater from the Danube River, Serbia. *Ecotoxicology* 32, 583-597.

Kozma, Z.; Decsi, B.; Ács, T.; Kardos, M.K.; Hidy, D.; Árvai, M.; Kalicz, P.; Kern, Z.; Pinke, Z. (2023). Supposed Effects of Wetland Restoration on Hydrological Conditions and the Provisioning Ecosystem Services - A Model-Based Case Study at a Hungarian Lowland Catchment. *Sustainability* 15: 11700.

Laky, D., Ács, T., Bódi, G., Buzás, K., Clement, A., Darabos, P., Decsi, B., Fülöp, R., Jolánkai, Zs., Juhász, E., Kardos, M. K., Knolmár, M., Koncsos, L., Koncsos, T., Kozma, Zs., Licskó, I., Murányi, G., Musa, I., Raum, L., Somlyódy, L., Szilágyi, F., Varga, L., Patziger, M. (2023). The history, activity and future plans of the BME Department of Sanitary and Environmental Engineering. *Hungarian Journal of Hydrology*, 103: 4-56.

Leopold M, Krlovic N, Schagerl M, Schelker J, Kirschner AKT. (2023). Short-term impacts of a large cultural event on the microbial pollution status of a pre-alpine river. *J Water Health*. 21:1898-1907.

Liashenko A.V., Zorina-Sakharova K. Ye (2023). Communities of Benthos Invertebrates of the Kiliya Delta of the Danube River. *Hydrobiol. J.* 59 (6): 3–19.

Loskotová B., Straka M., Perneckner B., Dostálová A., Csabai Z., Polášek M., Pařil P. (2023). Combined effect of stream drying and nutrient enrichment on macroinvertebrate community: experimental study from artificial stream mesocosms. *Aquatic Sciences* 85: 23.

Lynch, A. J., Cooke, S. J., Arthington, A. H., Baigun, C., Bossenbroek, L., Dickens, C., ... Schinegger, R., Jähnig, S. C. (2023). People need freshwater biodiversity. *Wiley Interdisciplinary Reviews: Water*, 10(3), e1633.

Milačić, R.; Marković, K.; Marković, S.; Ščančar, J.; Jolánkai, Zs.; Clement, A.; Musa, I.; Kardos, M.K.; Zoboli, O.; Zessner, M. (2023). Changes in concentrations of potentially toxic elements during storage of hard river water samples at low temperatures using different sample preservation procedures. *J Soils Sediments* 23: 4173–4186.

Miloskovic, A.M., Simic, V.M. (2023). Bioaccumulation of potentially toxic elements in fish species of Serbia: a review. *Environmental Science and Pollution Research*, 30 (12): 32255-32277.

Mojgan Zare-Shahraki, Yazdan Keivany, Eisa Ebrahimi-Dorche, Karen Blocksom, Andreas Bruder, Joseph Flotermersch, Bănăduc D. (2023). Distribution and expansion of alien fish species in the Karun River basin, Iran, *Fishes*. Special Issue Recent Advances in the Aquatic Biodiversity, 8, 11, 538.

Muste, M.; You, H.; Kim, D.; Fleit, G.; Baranya, S.; Tsubaki, R.; Abraham, D.; McAlpin, T. O.; Jones, K.E. (2023). On the Capabilities of Emerging Nonintrusive Methods to Estimate Bedform Characteristics and Bedload Rates. *Water Resources Research* 59: 6 Paper: e2022WR034266, 20 p.

Nagel, C., Droll, J., Kroemer, K., Pander, J., Geist, J. (2023). Testing the effects of passive integrated transponder (PIT) tags on survival, growth, and tag retention of common nase (*Chondrostoma nasus L.*) and European barbell (*Barbus barbus L.*). *Animal Biotelemetry*.

Nikolic, D., Poleksic, V., Tasic, A.M., Smederevac-Lalic, M., Djikanovic, V., Raskovic, B. (2023). Two age groups of adult pikeperch (*Sander lucioperca*) as bioindicators of aquatic pollution. *Sustainability* 15 (14), 11321.

Öktener A., Bănăduc D. (2023). Pollution, fish parasites and fish ecological interdependences in freshwater ecosystems of Turkey, *Water*. Special Issue Recent Advances in the Aquatic Biodiversity, 15, 1385.

Pander, J., Casas-Mulet, R., Geist, J. (2023). Contribution of a groundwater-influenced hinterland drainage system to the restoration of salmonid spawning grounds at the upper river Danube Front. *Environ. Sci.* 11.

- Pavel, A. B., Gheablau, C., Kreuter, S., Catianis, I., Scrieciu, A., & Enache, A. (2023). The Spatio-Temporal Distribution of the Freshwater Bivalves *Corbicula fluminea* and *Dreissena polymorpha* in the Lower Sector of the Danube River and the Danube Delta. In *Sustainability* (Vol. 15, Issue 11, p. 8526). MDPI AG. <https://doi.org/10.3390/su15118526>
- Pont, D., Meulenbroek, P., Bammer, V., Dejean, T., Eros, T., Jean, P., Lenhardt, M., Nagel, C., Pekarik, L., Schabuss, M., Stieckle, B.C., Stoica, E., Zornig, H., Weigand, A., Valentini, A. (2023). Quantitative monitoring of diverse fish communities on a large scale combining eDNA metabarcoding and qPCR. *Molecular Ecology Resources* 23: 396-409.
- Preuß, J.; Fleit, G.; Baranya, S. (2023). CFD analysis of environmentally friendly wave mitigation measures in river waterways. *River Research and Applications*, Early View
- Rizac, A., Toma, A., Rotaru, S., & Scrieciu, A. (2023). A new method for measuring meander parameters. the lower Jiu River case study, Romania. *Zenodo*. <https://doi.org/10.5281/ZENODO.7494734>
- Sánchez-Campaña C., Múrria C., Hermoso V., Sánchez-Fernández D., Tierno de Figueroa J.M., González M., Millán A., Moubayed J., Ivković M., Murányi D., Graf W., Derka T., Mey W., Sipahiler F., Pařil P., Polášková V., Bonada N. (2023). Anticipating where are unknown aquatic insects in Europe to improve biodiversity conservation. *Diversity and Distributions* 29: 1021-1034.
- Sándor, B.; Torma, P.; Szabó, K.G.; Kalmár-Nagy, T. (2023). Interaction between depth variation and turbulent diffusion in depth-averaged vorticity equations. *Theoretical and Computational Fluid Dynamics* 37: 681-706.
- Schachner-Gröhs I, Strohhammer T, Frick C, Campostrini L, Linke RB, Zarfel G, Farnleitner AH, Kirschner AKT. (2023). Low antimicrobial resistance in *Escherichia coli* isolates from two large Austrian alpine karstic spring catchments. *Sci Total Environ* 894:164949.
- Scheiblechner U, Teubner K (2023). Visitor management and wildlife trapping in the Danube floodplain Wachau. In: Teubner K., Trichkova T., Cvijanovic D., eds. *Tackling present and future environmental challenges of a European riverscape*. IAD Proceedings, 1:8076291.
- Schmid, M. (2023). Der industrialisierte Fluss: Umwelthistorische Narrative zur Donau. In: Anton Holzer, Edit Király, Christoph Leitgeb, Olivia Spiridon (Hg.): *Der montierte Fluss – Donaunarrative in Text, Film und Fotografie*. Tübingen: Steiner Verlag, pp. 17-33. Open Access Book:
- Schmid, M., Haidvogel, G., Friedrich, T., Funk, A., Schmalzfuss, L., Schmidt-Kloiber, A., & Hein, T. (2023). The Danube: On the environmental history, present, and future of a great European river. In K. M. Wantzen (Ed.), *River Culture – Life as a dance to the rhythm of the waters*, p. 637-671. UNESCO Publishing.
- Scrieciu, A., Rotaru, S., & Toma, A. (2023). Review Article: Nature-Based Solutions for Climate Resilience Through Innovative Approaches and Stakeholder Engagement. *Zenodo*. <https://doi.org/10.5281/ZENODO.10366041>
- Shcherbak V.I., Semeniuk N.Ye., Lutsenko D.A. (2023). Diversity and ecological characteristics of algae in the water column in the subbasin of the large Danube lakes during the autumn-winter period (Ukraine). *International Journal on Algae*. 25 (1): 71–94.
- Shcherbak V.I., Liashenko A.V., Semeniuk N.Ye., Zorina-Sakharova K.Ye., Lutsenko D.A. (2023). Continuity and discreteness of the communities of hydrobionts in the lotic-lentic ecosystem of the Danube River Delta: Phytoplankton. *Hydrobio. J.*, 59 (3): 3–27.
- Stecher G, Hohensinner S, Herrnegger M. (2023). Changes in the water retention of mountainous landscapes since the 1820s in the Austrian Alps. In: Wenlong J, Jay L, Pengyan Z, Songshan Y, Herausgeber. *Hydrology, water resources, and ecosystem sustainable development [Internet]*. Frontiers Media SA., Lausanne, Schweiz.
- Sukačová K., Szotkowski M., Pařil P., Mareš J., Touš M., Vícha D., Polášek M., Márová I., Zavřel T. (2023). Simultaneous production of γ -linolenic acid and carotenoids by a novel microalgal strain isolated from the underexplored habitat of intermittent streams. *Algal Research* 71: 103055.

Szilagyi, J.; Crago, R.D. (2023). A thermodynamics-based versatile evapotranspiration estimation method of minimum data requirement for water resources investigations. *Journal of Hydrology* 624, Paper: 129917

Üblacker, M. M., Infante, D. M., Cooper, A. R., Daniel, W. M., Schmutz, S., Schinegger, R. (2023). Cross-continental evaluation of landscape-scale drivers and their impacts to fluvial fishes: Understanding frequency and severity to improve fish conservation in Europe and the United States. *Science of the Total Environment*, 897, 165101.

Varadinova E., Gecheva G., Tyufekchieva V., Milkova T. (2023). Macrophyte- and macrozoobenthic-based assessment in rivers: Specificity of the response to combined physico-chemical stressors. *Water*, 15, 2282.

Varadinova E., Georgieva G., Ihtimanska M., Vidinova Y., Evtimova V., Tyufekchieva V., Todorov M. (2023). Macrozoobenthos in mountain standing water bodies in Bulgaria. *Acta Zoologica Bulgarica*, Supplement 16: 49–60.

Vidinova Y., Tyufekchieva V., Ihtimanska M., Evtimova V., Varadinova E., Todorov M., Georgieva G. (2023). Benthic macroinvertebrate assemblages in karst springs ecosystems in Bulgaria. *Acta Zoologica Bulgarica*,

Abstracts

Evtimova V., Varadinova E., Tyufekchieva V., Georgieva G., Vidinova Y., Todorov M., Kenderov L., Soufi R., Trichkova T. (2023). Invasive alien species of benthic macroinvertebrates in Bulgarian reservoirs. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) *Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop*, p. 121.

Fazacaş, B., Toma, A., Rotaru, S., Scriciu, A. (2023). Unraveling Flood Zones Dynamics with Spatio-Temporal Analysis Using Earth Observation Data: A Case Study of the Danube Delta. „Deltas & Wetlands” DDNI Scientific Event Community, 30th edition.

Kazakov S., Vancheva N., Trichkova T., Pehlivanov L. (2023). First report on natural reproduction of rainbow trout *Oncorhynchus mykiss* in Bulgaria based on DNA analysis of red material from the Ogosta River. In: *Conference Book. 44th IAD Conference*, p. 68.

Nikova P. N., Todorov M., Trichkova T. (2023). Pathways of introduction and spread of a recent invader *Micropterus salmoides* (Lacépède, 1802) in Bulgaria. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) *Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop*, p. 57.

Popova T., Semerdjiev D., Tomov R. (2023). Study of the microflora of the ladybug *Harmonia axyridis* in order to assess its role as a carrier of pathogenic microorganisms. Pp. 101. In: Trichkova T., Kalcheva H.,

Rotaru, S., Scriciu, A., Toma, A. (2023). Short-term Evolution of A River Sandbar in The Lower Danube: Sedimentation Patterns Under Fluctuating River Discharge. *ICFS 2023 - 12th International Conference on Fluvial Sedimentology*.

Scriciu, A., Rotaru, S., Toma, A. (2023). Annual Riverbed Changes in The Lower Danube: Human Impact Versus Morphodynamic Feedbacks. *ICFS 2023 - 12th International Conference on Fluvial Sedimentology*.

Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) *Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop*, p. 101.

Tomov R. (2023). First report of *Cupressatia siskiyou* gall midge in Bulgaria. Pp. 107. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) *Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop*, p. 107.

Tomov R. (2023). Alien species in European horticulture – what we do not know? In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) *Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop*, p. 38.

Tomov R., Ciceoi R. (2023). Biocontrol of crop pest by alien biological control agents in Bulgaria and Romania – state of art. Agriculture For Life International Conference, 8–10 June 2023, Bucharest, Romania.

Tomov R., Plashkova B. (2023). Alien economically important insect crop pests in Bulgaria – knowledge gap analysis. Agriculture For Life International Conference, 8–10 June 2023, Bucharest, Romania.

Tomov R., Plashkova B. (2023). Presence of the Asian walnut moth, *Garella musculana* (Erschov, 1874) (Lepidoptera, Nolidae), in the Sofia Region, Bulgaria. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop, pp. 1008.

Tomov R., Vasileva T. (2023). The invasion of *Neodryinus typhlocybae* (Ashmead) (Hymenoptera: Dryinidae) in Sofia Region. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop, p. 53.

Trichkova T., Csanyi B., Skoka M., Kvach Y., Ivanova P., Kalcheva H., Paunović M. (2023). Contribution of regional networks (ESENIAS, DIAS, IAD) to the invasive alien species management: Danube River Basin case study. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop, p. 36-37.

Trichkova T., Tomov R., Vladimirov V., Todorov M., Tsvetkova E., Tyufekchieva V., Kalcheva H., Nikova P. K. (2023). Collecting data on invasive alien species through BioBlitz surveys in the Danube and Black Sea basins in Bulgaria. In: Conference Book. 44th IAD Conference, p. 55.

Trichkova T., Tomov R., Vladimirov V., Todorov M., Tsvetkova E., Tyufekchieva V., Kalcheva H., Nikova P. K. (2023). BioBlitz surveys on invasive alien species in Sofia and Varna regions: collection of data and raising of public awareness. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop, p. 77.

Tyufekchieva V., Varadinova E., Vidinova Y., Evtimova V., Georgieva G., Todorov M., Soufi R., Kenderov L., Trichkova T. (2023). Invasive alien species of benthic macroinvertebrates in Bulgarian rivers: Results within the validation of the typology and classification system of the surface water bodies. In: Trichkova T., Kalcheva H., Tomov R., Vladimirov V., Tyufekchieva V. (Eds.) Book of Abstracts, Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop, p. 122.

Vidinova Y., Varadinova E., Tyufekchieva V., Todorov M., Evtimova V., Trichkova T. (2023). Assessment of the macroinvertebrate invasion in water bodies of the Danube River Basin, Bulgaria. In: Conference Book. 44th IAD Conference, p. 69.

Conferences, workshops, events, presentations

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44th IAD Conference ‘Tackling Present & Future Environmental Challenges of a European Riverscape’, Krems, Austria, 6-9 February 2023.

18th Steering Group Meeting of Priority Area 06 of the EU Strategy for the Danube Region: Key Topic: Danube Region Invasive Alien Species (DIAS) Task Force, 21 April 2023 (online)

Lech River Research 2050+ – Research association for the promotion of research and teaching of river and mountain ecosystems (Lech Forschung 2050+), 22 April 2023.

National BioBlitz surveys in the Danube and Black Sea regions in Bulgaria, as part of European BioBlitz, co-organised by DIAS: Alien CSI Bioblitz: a citizen science project to engage society in invasive species monitoring

Joint ESENIAS and DIAS Scientific Conference 2023 and 12th ESENIAS Workshop ‘Globalisation and invasive alien species in the Black Sea and Mediterranean regions – management challenges and regional cooperation’, 11–14 October 2023, Varna, Bulgaria

ConTempO₂ Project Presentation, Environmental Science Center Augsburg, 26 April 2023.

ICPDR 21th Standing Working Group Meeting, June 2023

Kick-off event of the project Restore4Life, 27 July 2023

2nd DALIA Project Meeting, Győr, Hungary, 6-7 September 2023

Danube restoration project, IESASET Conference Tokyo, 5-12 September 2023

Kick-off Meeting Restore4Life, Bucharest/Romania, 12-15 September 2023

SOS-WATER Workshop, Vienna, 21-23 November 2023

Donaukongress Bund Naturschutz (Danube Congress Friends of the Earth Bavaria), Ingolstadt, Germany, 2 December 2023

26th ICPDR Ordinary Meeting, Vienna, Austria, 12-13 December 2023.

Presentations

Farnleitner AH. (2023) Guiding future demands on microbial drinking water safety management along a large human wastewater impacted river: A risk-based modelling approach. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Haaser D., Kainrath S. (2023). Antibiotic resistance of *Escherichia coli* isolated from water and biofilm samples of the Kamp River. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Kirschner AKT. (2023). Joint Danube Survey 1-4: Concepts, lessons learned and future visions on faecal pollution and antimicrobial resistance. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Kolarevic S. (2023). Applicability of wastewater-based epidemiology on countries with poor wastewater treatment – COVID-19 case study in Serbia. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Koller M, Dielacher I, Schachner-Groehs I, Leopold M, Stefan J, Savio D, Kolarevic S, Kračun-Kolarević M, Tóth E, Farnleitner AH, Kittinger C, Kirschner AKT, Zarfel G. (2023). Analysis antibiotic resistant Enterobacteriaceae in a large river water system, considering longitudinal and temporal effects. 33rd European Congress of Clinical Microbiology and Infectious Diseases, ECCMID, Copenhagen, Dänemark, 15 - 18 April 2023

Leopold M. (2023). High levels of total suspended solids in the Danube flood water samples as a factor for reduced DNA extraction efficiency and potential bias in molecular detection approaches. 44th IAD Conference, Krems, Austria, February 6-9, 2023.

Oudega T. (2023). Transport and removal of *Bacillus subtilis* endospores in an alluvial gravel aquifer at different flow rates and implications for setback-distances. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Rotaru, S., Olariu, C., Stanica, A. (2023). Modern Danube river delta front evolution: geomorphic adjustments under anthropogenic pressures. 36th International Meeting of Sedimentology, Dubrovnik, Croatia, 12–16 June 2023

Rotaru, S., Scricciu, A., Toma, A. (2023). Annual riverbed changes in the Lower Danube: Human impact versus Morphodynamic feedbacks. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Rotaru, S., Scricciu, A., Toma, A. (2023). Short-term evolution of a river sandbar in the Lower Danube: sedimentation patterns under fluctuating river discharge. ICFS 2023 - 12th International Conference on Fluvial Sedimentology, Riva del Garda, Italy, 2–7 July 2023.

Schachner-Gröhs I. (2023). Occurrence of antibiotic resistance genes along gradients of faecal pollution in water and biofilm samples from the whole Danube River. 44th IAD Conference, Krems, Austria, February 6-9, 2023.

Schmid, M. (2023). Riverscapes as socio-natural sites: Environmental History observations on the Danube. Keynote Lecture at Central Europe Theoretical Archaeology Group (TAG) 2023 Conference: The Role of Rivers, Frontiers, mobility corridors, or central place ecosystems, Bratislava, Slovakia, November, 9, 2023.

Scricciu, A., Rotaru, S., Pagano, A., Giordano, R. (2023). Natural Assurance Scheme Development in The Lower Danube: From Nbs Design Processes To Co-Benefits Capitalization. 44th IAD Conference, Krems, Austria, February 6-9, 2023.

Scricciu, A., Rotaru, S., Toma, A. (2023). Annual riverbed changes in the Lower Danube: human impact versus morphodynamic feedbacks. ICFS 2023 - 12th International Conference on Fluvial Sedimentology, Riva del Garda, Italy, 2–7 July 2023.

Scricciu, A., Rotaru, S., Toma, A. (2023). Annual riverbed erosion rates in the Lower Danube during the last decade. 36th International Meeting of Sedimentology, Dubrovnik, Croatia, 12–16 June 2023.

Smederevac-Lalic, M., Cvijanovic, G., Nikolic, D., Lenhardt, M. (2023). Common work of researchers and stakeholders on acoustic telemetry investigation on the Danube River with the main aim to make Iron Gate I and II dam passable. Izmir, Turkey. 2nd May 2023

Steinbacher S, Ameen A, Lun D, Lindner G, Derox J, Sommer R, Demeter K, Linke R, Heckel M, Perschl A, Blöschl G, Blaschke AP, Kirschner AKT, Farnleitner AH. (2023). Fecal pollution of the Danube River - emission pathways from shipping and municipal wastewater treatment plants. Lifeline Danube River, Dürnstein, Austria, June 21, 2023

Steinbacher S. (2023). A new monitoring data driven approach to evaluate the impact of ships on the faecal pollution level of the Danube River in Lower Austria. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Steinbacher S. (2023). A new monitoring data driven approach to evaluate the impact of ships on the faecal pollution level of the Danube River in Lower Austria. 44th IAD Conference, Krems, Austria, February 6-9, 2023

Teubner K. (2023). Alien plankton species and macrophytes introduced to Danubian countries over decades and their significance for freshwater ecology.

Teubner K. (2023). International Association for Danube Research (IAD): How our focus has changed over time. "Deltas & Wetlands", Deltas & Wetlands International Symposium, Tulcea, June 5-9, 2023

Teubner K., Kettner K., Rauchwarter B., Márton L., Brandstaetter A., Zechmeister T. (2023). Wetland dynamics of Lake Neusiedel and soda pans measured by using high resolution probes. Krems, 44 IAD conf, February 6-9, 2023

Teubner K., Teubner I.E., Pall K., Tolotti M., Kabas W., Drexler S.-S., Waidbacher H., Dokulil M.T. (2023). Macrophyte habitat architecture and lake restoration: Photic demand for sustained macrophyte development. Krems, 44 IAD conf, February 6-9, 2023.

Trichkova T., Csanyi B., Skolka M., Kvach Y., Ivanova P., Kalcheva H., Paunović M. (2023). Contribution of regional networks (ESENIA, DIAS, IAD) to the invasive alien species management: Danube River Basin case study.

Zarfel G. (2023). The Danube's water and biofilms: antimicrobial resistance in the Enterobacteriaceae populations. 44th IAD Conference, Krems, Austria, February 6-9, 2023