43rd IAD Conference

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

June 9 – 11, 2021

– Proceedings –

Edited by:

Aueninstitut Neuburg/Donau
Schloss Grünau
86633 Neuburg/Donau
Germany
aueninstitut@ku.de

Preface

Dear Participants of the 43rd IAD Conference,

Living in pandemic time it is not easy to organize an international conference. However, such conferences are very important for the scientific community, especially if this community is so diverse regarding countries and topics as IAD is.

This year, IAD celebrates a special event: 65 years since its establishment and its continuous presence in limnological research in the Danube River Basin. For many decades, IAD was among the very few scientific fora ensuring connectivity between the Western and Eastern research teams, facilitating knowledge exchange, as well as joint projects and publications in the region.

The IAD Conference always was a 'jour fixe' to meet colleagues of the IAD family from the entire Danube Basin. However, this year we have to celebrate IAD anniversary in a virtual way, as unfortunately, it is still not possible to meet personally due to the particular situation of our countries, with lockdowns and travel restrictions still in place.

Our hope is that the upcoming event – carried out as an online conference – can at least partly substitute the usual way of meeting and foster active exchanges between the participants.

The number of registered participants, over 100 persons, makes us hopeful! Furthermore, there are 41 presentations (39 oral and 3 posters) which show the wide thematic range on the one hand, and the interest of the scientists working within IAD to present their work on the other hand. Additionally it proves the interest of all of us to listen to the latest scientific developments in aquatic ecology research in the Danube Region.

We hope that this 'special' conference will be successful and interesting for IAD and will represent the transition to normal times in the future!

Cristina Sandu (President of IAD)

Bernd Cyffka (Head of Conference)

Scientific Committee

- Grigore Baboianu, Romania
- Florian Betz, Germany
- Bernd Cyffka, Germany
- Edith Durisch-Kaiser, Switzerland
- Marion Gelhaus, Germany
- Gertrud Haidvogl, Austria
- Thomas Hein, Austria
- Vera Istvánovics, Hungary
- Georg Janauer, Österreich
- Roumen Kalchev, Bulgaria ✝
- Vladimír Kováč, Slovakia
- Artem Lyashenko, Ukraine
- Melita Mihaljević, Croatia
- Petr Paril, Czech Republic
- Snežana Radulović, Serbia
- Barbara Stammel, Germany
- Katrin Teubner, Austria
- Ion Toderaş, Moldova

Organising Committee

- Florian Betz, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt
- Tim Borgs, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt
- Bernd Cyffka, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt
- Marion Gelhaus, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt
- Thomas Hein, IAD Vice President, Vienna
- Cristina Sandu, IAD President, Bucharest
- Barbara Stammel, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt
- Katrin Teubner, IAD General Secretary, Vienna
- Michaela Walter-Rückel, Aueninstitut Neuburg/ CU Eichstaett-Ingolstadt

Mapping of the microbiological water quality of surface waters in Serbia overlooked by the National monitoring programme

Jovana JOVANOVIĆ MARIĆ[a, b], Stoimir KOLAREVIĆ[a,b], Margareta KRAČUN-KOLAREVIĆ[a], Jelena ĐROĐEVIĆ[b, c], Momir PAUNOVIĆ[a],Branka VUKOVIĆ-GAČIĆ[b]*

[a] Institute for Biological Research"Siniša Stanković"- National Institute of Republic of Serbia, Department of Hidroecology and Water Protection, University of Belgrade, Belgrade, Serbia
[b] Faculty of Biology, Center for Genotoxicology and Ecogenotoxicology, University of Belgrade, Belgrade, Serbia
[c] Institute for Multidisciplinary Research, Department of Natural Resources and Environmental Sciences, University of Belgrade, Belgrade, Serbia

** Corresponding author: jovana_jovanovic992@yahoo.com*

Surface waters in Serbia are under high anthropogenic pressure. One of the major problems is untreated municipal and industrial wastewaters. Unfortunately, Serbia processes only 5 % of wastewaters before discharging. As a consequence, pollutants such as metals and metalloids from industrial wastewaters, pharmaceuticals, compounds from personal care products, etc. directly endure into surface water. Microbial faecal pollution, as an indicator of presence of human or/and animal pathogens, due to health hazard limits water usage for drinking, recreation, irrigation, etc. In regulations, faecal coliforms, with *Escherichia coli* as dominant representative, are widely used as faecal indicator bacteria The aim of this study was to investigate the microbiological al water quality in the Republic of Serbia at the sites which are not routinely investigated within the national monitoring programme. In this purpose 78 sites situated on canals, mountain springs, as well as lowland rivers were selected. Defined Substrate Technology was used for determination Most Probable Number (MPN) of *E. coli* using Colilert-18 System. The water classification system, developed for the Danube River (Kavka et al., 2006) was used.

The results indicated that more than 47 % of selected sites are under critical (21.79 %) or strong (25.64 %) faecal pollution. On the other hand, about 32 % (32.05 %) of sites are little polluted and 20.51 % of sites showed moderate pollution. The increasing levels of faecal pollution detected on sites situated downstream of settlements indicated discharge of untreated municipal wastewaters directly into surface water. In further research, the focus will be placed on the determination of the origin of pollution by the employment of microbial source tracking technique. Obtained data will be used for modelling and predicting the effect of detected contamination on the water quality of the major water bodies in the Republic of Serba.