

Preface

The Sava River is the major drainage basin of the Southeastern Europe and the greatest tributary to the Danube River. It is 945 km long, and with 97,713 km² large catchment area, it is extended over Slovenia, Croatia, Bosnia and Herzegovina and Serbia. The Sava River and its main tributaries have significant ecological and socioeconomic impact on the Danube River Basin. In Slovenia, the Sava is alpine river, which turns at the Slovenian-Croatian border into a typical lowland river.

The climate within the Sava watershed varies from alpine, pannonian to continental. Floods are typical for the springtime. A great part of the basin is covered by forest and agricultural areas. In the upper Sava region, hydroelectric power plants are located, while in the flat land area, the Sava is navigable for 593 km from Sisak to Belgrade. In the middle and lower Sava Basin, heavy industry, oil refineries and untreated municipal waste discharges cause environmental pollution. The human activities have significant influence on flow, morphology, climate changes and ecological status of the river, which affected the biodiversity.

To maintain sustainable development of the region, International Sava River Basin Commission was established in 2006. It successfully supports transboundary cooperation of the riparian countries.

The book on *The Sava River* gathered the available knowledge on the functioning of the Sava River Basin. It is based mainly on the previous investigations within the European Union (EU) FP6-funded project SARIB (2004–2007), the project of bilateral cooperation between Croatia and Serbia entitled “Assessing the scale of biocontamination of large rivers in Croatia and Serbia” (2011–2012) and other national research projects.

The book contains 17 chapters covering topics related to transboundary water cooperation within the Sava River Basin, climate change impact on flood hazards and climate change projections, evaluation of chemical dynamics and anthropogenic pollution sources, chemical pollution of sediments (metals, persistent organic pollutants), assessment of the metal bioavailability and accumulation of metals in fish tissues, determinations of surfactants in water and ecotoxicological characterization of the river. Microbiological status of the considerable stretch of the Sava

River is also evaluated. The biology part of the book deals with all quality elements related to aquatic ecosystems (algae, macrophytes, zooplankton, macroinvertebrates and fish), including the life of riparian ecosystems (amphibian, reptiles, birds and mammals). The assessment of the general state of biodiversity along the Sava River, conservation practice, status assessment based on biological quality elements as well as review of protected areas within the basin area are presented. Invasive aquatic species are also covered by the book, as the issues of growing concern.

Authors hope that the book content will attract the interest of environmental chemists, geologists, biologists, students, river basin managers and stakeholders and that it will be of interest to the general public, as well. The book on *The Sava River* provides also the overview of the most important stressors within the basin, which will serve as a database for the further research within the ongoing EU FP7-funded project GLOBAQUA. We would like to thank all authors of this book for their valuable contributions and the time and efforts devoted to create the book chapters. Finally, we would like to thank Prof. Damia Barcelo for his kind invitation to prepare *The Sava River* book.

Ljubljana, Slovenia
Ljubljana, Slovenia
Belgrade, Serbia

Radmila Milačič
Janez Ščančar
Momir Paunović

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Milačić, R.; Scancar, J.; Paunović, M. (Eds.)

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