

## River: A new multidisciplinary, multisectoral, and multi-issues journal exploring all aspects of rivers from sources to seas

*River* is a new open access international peer-reviewed journal. One may ask why a new journal is necessary when there are at least 150 water-related journals published from different parts of the world in the English language alone. There are several reasons why we believe such a journal can play important roles in promoting sustainable management and development of rivers, including all the ecosystems linked with them, as well as their direct and indirect economic, social, political, environmental, and cultural impacts.

First, early human civilizations grew and thrived around some of the major rivers of the world. Among them are the ancient Egyptian civilization which grew and thrived around the banks of the Nile, as well as the Sumerian civilization in southern Mesopotamia on the banks of the Tigris and Euphrates rivers. Similarly, the Indus or Harappan civilization developed in the Indus Valley. The birthplace of the ancient Chinese civilization was the Huang He (Yellow River) Valley. Not surprisingly, many in China call it the “Mother River.” All these civilizations go back at least 4000–5000 years. Thus, rivers have played important roles during the entire human civilization.

Second, the Industrial Revolution started again on the banks of important rivers in Europe and the United States which contributed to their unprecedented economic and social transformation. Rivers provided easy availability of water, as well as a medium to transport goods from factories to other population centers. Equally, they also provided an easy medium to which waste products were discharged.

Third, the growth of the American West was possible because of the diversion of Colorado River waters through major technical and engineering advances. Steamboats and steamships were widely used for the transportation of people and goods. Many of the Western states would not have been the same without the diversion of the Colorado River waters.

Even now, rivers continue to play an important role in the economic and social development of most countries. Major economic activities occur all over the world in population centers located around the banks of rivers and their deltas.

Rivers have thus played an important role throughout the history of human development and will continue to do so for decades, or even centuries, to come. Yet, there is no single journal that considers not only hydrological and technical aspects of rivers, but also numerous activities and/or processes where rivers affect them, and, in turn, are affected by them. These include, in addition to major issues related to economic and social development, important issues like forests, biodiversity, desertification, navigation, hydropower development, and health of ecosystems.

As we enter the second quarter of the 21st century, it is becoming increasingly evident that all the major water-related issues can be solved on a long-term basis only by considering them objectively on a multidisciplinary, multisectoral, and multi-issues basis. For example, water, energy, and food are absolutely essential for civilizations to survive and thrive. It is thus essential that all macro- and meso-scale river-related issues are approached on a holistic basis, where all major issues and challenges facing humankind are connected in one way or another. Food cannot be produced without water, nor can energy, or any industrial activity.

*River* will thus be a journal that will explore not only the interrelationships between water, food, energy, environment, and development but also water's direct and indirect relationships with other important human activities like health, education, and inter-modal transportation.

*River* will also explore water-related implications of population increase/decrease, urbanization, tourism, advances in technology, and a host of other issues that affect the rivers. It will provide information on the latest developments in knowledge, in terms of climate change and fluctuations. These will include, inter alia, how best individual societies can manage future extreme events like droughts, floods, wildfires, and intense heat, and make all water-related activities, including hydraulic structures, carbon-neutral within the next 3–4 decades.

*River* will also provide a forum for the exchange of knowledge and ideas in terms of progress of water-related targets of the Sustainable Development Goals, both globally and nationally. It would provide comprehensive and objective assessments of what is working in terms of SDGs water-related issues, where and why, and also

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provide case studies of why certain approaches are not working, where, and why.

A major megatrend of the post-2025 world is likely to be intensive and extensive digitalization. This will generate billions and billions of data. How can these enormous datasets be analyzed through artificial intelligence, machine learning, and other means by continually improve water management processes and practices? All these and other associated issues will be covered by *River*.

It is now evident that as the world changes rapidly, uncertainties of various types will increase, knowledge and technology will advance significantly, and issues will become increasingly complex, certainly more than ever witnessed in human history. Equally, the boundary conditions of all water-related problems will also change. Thus, concepts and solutions of the past will no longer be as effective, some even may need complete rethinking. *River* welcomes all types of future-oriented papers on any water-related issues.

Finally, the great sage Confucius once said: “The essence of knowledge is having it, to apply it.” *River* will give special emphasis on how research results can be applied to improve life on the earth as well as its environment.

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