

## Series Preface

Water is a fundamental constituent of life and is essential to a wide range of economic activities. It is also a limited resource, as we are frequently reminded of by the tragic effects of drought in certain parts of the world. Even in areas with high precipitation, and in major river basins, over-use and mis-management of water have created severe constraints on availability. Such problems are widespread and will be made more acute by the accelerating demand on freshwater arising from trends in economic development.

Despite the fact that water-resource management is essentially a local, river-basin-based activity, there are a number of areas of action that are relevant to all or significant parts of the European Union and for which it is advisable to pool efforts for the purpose of understanding relevant phenomena (e.g. pollution and geochemical studies), developing technical solutions and/or defining management procedures. One of the keys for successful co-operations aimed at studying hydrology, water monitoring, biological activities, etc. is to achieve and ensure good water quality measurements.

Quality measurements are essential to demonstrate the comparability of data obtained worldwide and they form the basis for correct decisions related to the management of water resources, monitoring issues, biological quality, etc. Besides the necessary quality control tools developed for various types of physical, chemical and biological measurements, there is a strong need for education and training related to water quality measurements. This need has been recognized by the European Commission which has funded a series of training courses on this topic, covering aspects such as monitoring and measurements of lake recipients, measurements of heavy metals and organic compounds in drinking and surface water, use of biotic indexes, and methods to analyse algae, protozoa and helminths. In addition, a number of series of research and development projects have been or are being developed.

This book series will ensure a wide coverage of issues related to water quality measurements, including the topics of the above mentioned courses and the outcome of recent scientific advances. In addition, other aspects related to quality control tools (e.g. certified reference materials for the quality control of water analysis) and the monitoring of various types of waters (river, wastewater, groundwater, etc.) will also be considered.

This book on ‘Biological Monitoring of Rivers: Applications and Perspectives’ is the fifth one of the series. It has been written by leading scientific experts in river monitoring and offers the reader an updated and integrated view of river ecology, the application of biotic indices using the more common biological indicators and the interpretation and future development of river monitoring in different parts of the world.

**The Series Editor – Philippe Quevauviller**