



# Preface

Clean water and the many products and services of aquatic ecosystems are necessities for human welfare. Water connects human societies and ecological systems by providing food and energy. The hydrological cycle maintains the health and stimulates the productivity and diversity of all ecosystems.

Wherever rivers, lakes and aquifers, as well as coastal current systems and marine fish stocks, are shared by two or more nations, these transboundary resources are interlinked by a complex web of environmental, political, economic and security interdependencies. Throughout history, while water has generally been shared peacefully, competition for scarce water resources can invoke conflict between nations sharing international waters. Today, global trade, migration and tourism, as well as global climate change, have created worldwide dimensions to many water related issues.

Over the past 20 years, the international community has increasingly recognised and asserted the urgent need for concerted actions to reverse the negative societal trends that adversely affect the world's aquatic systems and to achieve sustainability in the use of water resources.

Short-term commercial interests are often prioritised over long-term sustainable development. This is due to the false assumption that environmental protection and sustainability can only be achieved at the expense of economic development and social well-being. On the contrary, by investing in environmental improvements significant economic returns can be achieved through, for example, increased ecosystem and resource productivity, improvements in public health and poverty alleviation. Sustainable development is only possible by enhancing environmental management.

Achieving sustainability in international waters requires the development and implementation of practical policies within an ecosystem-based management framework, including the following components:

- Political and societal commitments to tackle water-related challenges in a concerted and cooperative manner;

- Sound scientific assessments of the current state of all freshwater and coastal marine resources and their aquatic ecosystems;
- Informed dialogue between governments, stakeholders and experts, based on the assessments;
- Technological support and capacity enhancement; and
- Adequate financing for projects and programmes related to water resources and aquatic ecosystems.

In recognition of these needs, UNEP has implemented the Global International Waters Assessment (GIWA) project, funded by the Global Environment Facility (GEF) and by national donors, in particular Nordic countries. GIWA is a holistic and globally comparable assessment of the world's transboundary waters, based on the recognition that inextricable links exist between the freshwater and coastal marine environment. GIWA integrates environmental and socio-economic information to determine the impacts of a broad range of influences on the world's aquatic environment. A global perspective of the world's transboundary waters was achieved by conducting regional assessments in many of the major international drainage basins and marine shelf ecosystems. The project focused on developing regions, regions with economies in transition and small island states eligible for funding by the GEF. GIWA identifies the priority concerns of each region, determines their societal root causes and, in most regions, considers options to resolve or mitigate these causes.

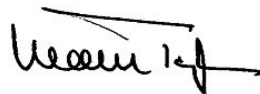
In addition to GIWA regional assessment reports, the project developed a new assessment methodology and adopted a bottom-up approach involving multidisciplinary regional teams. About 1 500 experts from around the world conducted the assessments in collaboration with the GIWA Core team, hosted by the University of Kalmar, Sweden. The GIWA approach can serve as a platform for further assessments and for the surveillance of aquatic systems.

This GIWA Final Report provides a global synthesis of the GIWA regional assessments. The multitude of aquatic transboundary environmental problems are discussed under the concerns of freshwater shortage, pollution, overfishing and habitat modification. The report summarises the current and predicts the future state of transboundary water resources and associated aquatic ecosystems, the societal root causes and driving forces that engender adverse environmental pressures, and the causal relationships that underpin the deterioration of aquatic environments and their resources. The report identifies gaps in knowledge and presents conclusions relevant to the sustainable management of transboundary waters. This final report of the GIWA project, includes annexes describing the GIWA

methodology and its theoretical background. It also acknowledges the regional teams, focal points and core team who have contributed considerable effort towards this global assessment.

Policy makers at all levels of government, global and regional non-governmental organisations, and other stakeholders involved in the use, development and management of transboundary water basins and their aquatic resources will find the results of this global synthesis invaluable.

It is my hope that “Challenges to International Waters – Regional Assessments in a Global Perspective” will assist in the development of a roadmap to environmental sustainability and will inspire actions necessary to overcome the global challenges to aquatic resources and ecosystems.



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