Preface

Conceptually and technically, a river or a lake basin is a natural unit for the management of water and associated natural resources. However, the borders of the river and lake basins are seldom identical to the political and administrative boundaries between nations, or within nations. Currently, there are over 260 river and lake basins in the world, which are shared by two or more countries.

An issue that has received only limited attention thus far is how best to coordinate the management activities based on hydrological boundaries with those that are based on administrative boundaries. It is a complex issue, especially for the management of transboundary water bodies.

Rivers and lakes often cross several administrative and jurisdictional boundaries, which mostly have different priorities, objectives and interests, even when they are within one single country. The problem becomes more complex when two or more nations are involved. Inspite of the political and institutional complexities, water resources of a single basin cannot be managed rationally on a long-term basis, until and unless some form of coordinating agreement can be reached between the various administrative jurisdictions sharing the same basin. In addition to an overall agreement, a functional coordinating mechanism is necessary between the institutions of the different jurisdictions so that water resources of the same basin can be efficiently used and managed to maximise human welfare and to protect the environment.

In recent years, some water professionals and political analysts have raised the spectre of water wars. A main hypothesis of this book is that through proper inter-institutional coordinating mechanisms, the countries sharing the same basin will benefit more through cooperation rather than through conflicts. Even though management of transboundary rivers and lakes are considered important at present, a comparative and objective study of the efficacy of the institutions to manage such basins efficiently is still conspicuous by its absence. It is thus necessary to conduct systematic and comprehensive objective analyses of the existing transboundary river and lake basin organisations in order to determine their relative successes and failures, and the reasons thereof.

Many international summits and high-level events related to development policies have been organised in the water sector in recent years. The Earth Summit in Rio, in 1992, did not manage to put water higher up in the international political agenda. Fortunately, this situation started to change after the mid-1990s when several high profile events gave water an increasing consideration. The four World Water Forums, the Bonn Freshwater Conference in 2001, the Johannesburg Summit in 2002 and many other events have highlighted water's roles in sustainable development of societies, poverty alleviation and environmental conservation, though much more remains to be done.

The World Summit on Sustainable Development, held in Johannesburg, in 2002, had a strong focus on water. The Summit considered water to be one of its ten focal areas. It considered water at much greater depth than in Rio. The Johannesburg

Framework for Action included many water-related recommendations. The two of its most important goals were to:

- halve the number of people with no access to safe drinking water and improved sanitation by 2015; and
- develop integrated water resources management (IWRM) and efficiency plans by 2005.

These goals are in accord with the UN Millennium Goals. This book focuses on the latter one of the two goals because the sponsor of this book, Finland, has defined clear policies with respect to the former one but none for the latter. However, efficient water management in major transboundary basins is a very complex issue, and not enough serious and objective studies have been carried out to draw appropriate general lessons which could be used in the management of similar water bodies in different parts of the world.

It should, however, be noted that each transboundary basin has its own special characteristics and boundary conditions, and thus a process which may work well in one location may not be the most appropriate for another. While consideration of the general lessons are likely to be a useful first step to formulate a management strategy for any specific basin, each basin is likely to have enough special characteristics so that the final plan is likely to be unique for any large basin. In the area of transboundary water management, it is highly unlikely that one size will fit all.

The overall scope of the book is to provide a comprehensive and objective analysis of the roles and modalities of operation of transboundary river and lake basin organisations in a global perspective. By identifying and analysing what works and what does not work within the overall context of the institutions that manage such basins, the analyses in the book are likely to provide a useful road map in terms of institutional arrangements and their modalities of operation so that the related water, land and associated natural resources of a transboundary basin can be efficiently managed.

The various case studies selected for this book will provide a macro global view. Basins and regions were carefully selected to give an overall perspective on a broad variety of the world's regions. These case studies provide the maximized experience from situations that prevail in high, middle and low income countries.

After the intensive and extensive discussions of the commissioned case studies, and subsequent overall analysis, many important issues were raised, among which were the following:

- It is unrealistic to intercompare management of transboundary water bodies with a single criterion. Different river basins have different physical and environmental characteristics; political, institutional and legal frameworks; water demand and use patterns and water use efficiencies; and economic and management capacities. In addition, power relationships are asymmetrical. This means that transfer of knowledge and experience from one basin to another should always be handled with caution, and that management plans for specific basins should be formulated with proper consideration of their own

specific requirements, rather than direct adoption of an imported model. Management experiences from different transboundary water bodies could be useful as background information. Some of these experiences, when considered appropriate and relevant, may have to be specially tailored to fit the local conditions in order to formulate an appropriate institutional model.

- While the consideration of integrated river basin management has some merit, it should be noted that many times it may neither be practical nor realistic to expect inter-country agreements on large international basins, like the Ganges-Brahmaputra-Meghna system to consider a basin-wide management plan. Sub-basin level plans and agreements may be more realistic and implementable. Sometimes, it may be advisable to consider agreements between the upper riparian countries and a separate one between lower riparian countries, particularly if a basinwide treaty is likely to be out of reach in the foreseeable future for an entire, large river basin.
- Institutions for managing transboundary water bodies generally have limited enforcement authority and have not been very effective as implementing agencies. However, they have often proved useful as channels for communications and discussions, and also for exchange of data and information. Some of these institutions are often overloaded by various diplomatic and administrative tasks and their achievements in water management mostly have not been extensive. Thus, their major contributions may sometimes go outside the water sector.
- The existing literature on management of transboundary water bodies often focuses on conflicts and risks. These analyses are mostly academic and often full of misconceptions and misunderstandings, since the authors generally have limited knowledge and understanding of the background situations and the politics behind the issues. Lack of appreciation of the social-cultural-political-institutional contexts of the overall inter-country relationships, limited availability of data and analyses which are generally considered to be sensitive by many of the co-basin countries concerned and thus are kept confidential, and limited access to the real decision-makers, have ensured that the real situations are seldom analysed. These misconceptions and misunderstandings are often repeated by various authors, which gives the general impression that these are correct interpretations of actual facts, which of course is not the case.
- Treaties and institutional arrangements cannot remain static. Factors like water requirements, use patterns and efficiency of management change with time, as do water management paradigms, practices and processes. In addition, technology improves continually, social perceptions are dynamic and human-knowledge base, like the universe, is steadily expanding. Thus, the need for dynamic treaties is likely to be increasingly required in the future. It may not be an easy task to formulate dynamic treaties, but one that must be considered very seriously in the coming years.
- History generally shows that treaties function better if they result in visible benefits to all the parties concerned, irrespective of the overall inter-country relationships. A good example is the Indus Basin Treaty, where inter-country

conflicts have remained outside the water issue, and these conflicts, though very substantial, have not noticeably affected the functioning of the Treaty.

- Success in negotiating treaties over transboundary water bodies is often greater without intermediaries. The countries need to develop their own road maps based on their own requirements and expectations, and then negotiate the best possible agreement from their own perspectives as well as the needs of their neighbours. The overall agenda for cooperation between the countries concerned often encircle many issues, some of which could be political, and is likely to extend well beyond water. A good example is the recent window of opportunity between Bangladesh and India to resolve their inter-country water issues. The main driver for this change has not come from the water sector but from the energy sector. In a world that is becoming increasingly interdependent and globalised, many of the developments from outside the water sector may have major impacts on the water sector, including management of transboundary water bodies. These developments could provide new opportunities for negotiating inter-country agreements on transboundary water basins.
- The inter-country relationships between the co-basin countries invariably have historical roots. These are complex and extend well beyond water. The exact nature of these intricate relationships is mostly too nuanced to be understood only in terms of geography or a single issue like water. Any study or analysis that exclusively focuses on the river basin level is likely to miss this complex reality. Accordingly, it is essential for the analysts and decision-makers to understand the overall nuances in terms of patterns of cooperation and competition that exist in transboundary river and lake basins.
- The Johannesburg Plan of Implementation recommended that all major river basins of the world should have an IWRM and water efficiency plans by the end of 2005. The case studies clearly show that approaching the myriad of dimensions, problems and challenges of the world's major river basins, many of which are transboundary in nature, with a simplistic one-shot approach of management within the context of IWRM is far too simplistic to be useful, or applicable. It may be an attractive idea but is not an implementable approach. Not surprisingly, the Johannesburg recommendation to formulate such IWRM management plans by 2005 was not only met, but also is highly unlikely to be met in the foreseeable future.

The project on which the current book is based was carried out by the Helsinki University of Technology and the Third World Centre for Water Management. Leading authorities were carefully selected and then invited to prepare the case studies, which were presented and then extensively discussed at an International Workshop in Espoo, Finland, on August 17–19, 2005. A complex international project and a very high level meeting such as this one could not have been organised without the strong support of several institutions and individuals. The funding came from the Ministry of Foreign Affairs of Finland. Our special thanks go to Mr. Eero Kontula and Mr. Matti Nummelin for their insight in conceptualising and planning the project, as well as to Ms. Krista Napola, Ms. Silja Sukselainen and Ms. Kirsi Brolén for managing all possible organisational matters within the

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