Foreword

M. Ramón Llamas, Luis Martínez-Cortina & Aditi Mukherji

INTRODUCTION

The *Third Marcelino Botin Foundation Water Workshop* took place in Santander (Spain) from 12 to 14 June 2007. The topic was *Water Ethics*. The list of the twenty participants, including their *curricula vitae* is given at the end of this book. The draft manuscripts had been previously shared among all the participants and were orally presented and discussed during the workshop. After this debate the participants sent their final manuscripts which constitute the chapters of this book.

Two previous *Marcelino Botin Foundation Water Workshops* dealing with fundamental and critical contemporary issues of water have been conducted in 2001 and 2004. The topics of these were: *Intensive Use of Groundwater: Challenges and Opportunities* (published in 2003 by Taylor & Francis), and *Water Crisis: Myth or Reality?* (also published by Taylor & Francis in 2006). Both books have been already sold out.

SCOPE AND AIM OF THE WORKSHOP

The main goal of this *Third International Workshop* was to discuss the role of ethics in the deep roots, values, and the potential commonalities of the global water policy. To achieve this goal the invited participants were selected from different professional, cultural, geographic, and religious backgrounds. The selection of the participants was done by the coordinator of the workshop in agreement with the three cooperating institutions, namely: *Division of Water Sciences of UNESCO*, *United Nations University*, and *Transparency International*.

From the inception of the activity, all the participants took the stance that no idea or position was politically correct or incorrect. Freedom of speech and rigor were strongly recommended to all of them. Therefore, it was clear that the intention of the workshop was not to produce some kind of common declaration or moral blueprint which would have universal validity. Consequently, different opinions can be found in the different chapters of this book written by different authors. However, the organizers think that all the participants got a better understanding of the others' ethical points of view, independently of their agreement or disagreement with them. As such, the book intends to contribute to and enhance the debate of how ethical considerations can play a more significant and explicit role in water development and management today.

U.N. 1948 HUMAN RIGHTS DECLARATION AS A COMMON PRINCIPLE

All the workshop participants considered that the UN Declaration of 1948 was a common ground for most of the existing codes of behaviour related to water management. The two basic aspects of the UN Declaration in relation to water ethics are: 1) the dignity of every human being; and 2) the necessity of solidarity among all the human beings, present and future.

However, the UN Declaration does not pay adequate attention to the relations of human being and nature. This was possibly because in 1948 the impact of the modern technology on some ecosystems was small and/or unknown.

SOCIAL ETHICS AND ENVIRONMENTAL ETHICS

Today most of the discourse on freshwater ethics is related to social ethics, i.e. to the moral aspects concerning the relations among human beings and their access to water and related services. Under this concept may be included at least the current debates about: a) the *right to water and the right to food*; b) the *public-private partnerships in water management*; c) the *Millennium Development Goals* (MDGs) related to water and food; and d) the need of improving people's participation and of integrating a top-down approach with a bottom-up one. These topics usually are covered in most water conferences and also in this book.

Nevertheless, since the 1960s or 1970s the problems related to the impact of human developmental activities on the environment became more important and the need was felt for new codes of behaviour. In most industrialized countries, one consequence of this new situation is the requirement of an environmental impact assessment before the sanctioning of any new water related developmental project. However, in most developing or poor countries, the problems related to social ethics still override those related to environmental ethics.

THE ROLE OF SCIENCE AND TECHNOLOGY IN WATER ETHICS

The advances in Science and Technology during the last century have contributed to solve many water problems or conflicts in ways that were unthinkable just a few decades ago. Among the advances that are now cheap and easily available in most countries are: 1) the technology of membranes (reverse osmosis) that may, *inter alia*, solve the urban water problems in most coastal cities; 2) the development of a maritime transport system which is fast and cheap, facilitates virtual water trade,[1] and is changing the former paradigms of water and food security; 3) the intensive use of groundwater facilitated by the relatively cheap drilling and pumping technologies; 4) the Internet that facilitates the transfer of knowledge and technology, and the participation of the concerned stakeholders in water management.

Other probable advances with future relevant impact in water policy are biotechnology and solar energy, but today they are not cheap and easily available in developing countries. Science and Technology can contribute to dispel some pervasive obsolete or false paradigms, such as relevance of climate change *versus* global change, groundwater scarcity or groundwater over-exploitation, which often prejudice policy makers and general public.

However, in spite of tremendous contribution of Science and Technology in solving many problems, it is not realistic to expect that these advances alone would be enough to solve all the water related problems.

THE ROLE OF RELIGION TO PROMOTE WATER ETHICS

The goal of the *International Conference on Water, Ethics and Religion* (Stockholm, August 14, 2007) was to foster greater cooperation between the leaders of religious groups and the UN family, in order to improve the achievement of the MDGs in relation to drinking water, sanitation

[1] Virtual water trade refers to the facility of transferring water equivalents embedded in commodities, typically food grains and other foods. By doing so, water-scarce countries may alleviate stress on water by importing water-intensive food products.

and malnourishment. This conference was organized by *UNESCO International Hydrological Programme*, jointly with the *International Water Academy*, the *Stockholm International Water Institute*, and the *European Council of Religious Leaders*. The basic point of this initiative was that in 2007 the political and scientific leaders were conscious that without the cooperation of these religious leaders it will not be possible to achieve these (modest) development goals.

It is too early to assess the results of that conference but in any case it emphasizes the relevance of the ethical and moral issues in water resources management.

THE BOOK

Before the 19 chapters of the book, distributed along eight sections (each dealing with a specific aspect of *Water and Ethics*), it is included a keynote address by Ana Palacio. She was *Senior Vice President and World Bank Group General Counsel* at the moment of the workshop. In her text, written for the inauguration of the workshop, Ana Palacio discusses about the different facets of the water crisis, the need of an ethics code for water, and the role of the World Bank in the global response to water problems and its contribution to this water ethics code.

The first section of the book deals with *Some Cultural Traditional Approaches on Water Ethics*. It contains three chapters. In the first one, Sison analyzes the ethics of human action involving water, taking the teachings and work by the ancient philosopher Thales of Miletus as a starting point. In the next chapter, Gyawali explores the link between the ethical system of South Asia in general and Hinduism in particular and the water conflicts therein. The third chapter, by Magdy Hefny, tries to understand Islamic water ethics within the general framework of environmental ethics and apply it as a tool for sustainable water resources management.

The second section of the book is related to *Some Ethical Aspects of New Water Management*. Sampford's chapter is devoted to water rights and water governance. He focuses on considering some lessons that might be learned for water governance using Australia as an example. Kindler examines the ethical questions related to uncertainty that affect most the decisions related to water resources management. He discusses this issue considering an *Integrated Water Resources Management* approach. Kindler also deals with these ethical issues and uncertainty in transboundary water management. In the last chapter of this section, Villholth deals with the issue of water ethics from the point of view of food production and food security. In particular she pays special attention to the huge influence and responsibility that the developed countries have in ensuring food security for the poorer nations.

The third section of the book deals with the issue of *Water as a Human Right and as an Economic Resource*. Veiga da Cunha analyses these two aspects of water: the human right approach, particularly in the context of the *Millennium Development Goals*, and the water as an economic resource, in order to ensure a balanced consideration of water. Marín *et al*. address the same topic, but focusing on the shortfalls of adopting water as a human right for marginalized communities. Their chapter describes an example of water governance in the State of Guanajuato, Mexico.

Water and Poverty is specifically considered in the fourth section of the book. Sullivan discusses in her chapter the ethical dimensions of development and the links between water and poverty. In this regard she provides an example of the *Water Poverty Index*. Jiménez *et al*. contribute to this issue with the vision from development practitioners. Their chapter focuses on the need of an adequate monitoring of water poverty and water access, considering the increased investments expected for the next decade in the water and sanitation sector for developing countries. In their chapter, Polak & Fry discuss the challenge of feeding the increasing population of the world and ending rural poverty, and in the process refute some existing poverty eradication myths. They suggest some solutions for ensuring easy access to water for the poor, and illustrate case where such access had a very positive impact on the lives of the rural poor.

The fifth section of the book is related to *Groundwater Use and its Ethical Aspects*. Llamas & Martínez Cortina deal with the spectacular increase of the use of groundwater during last decades (which they call a *silent revolution*), and some associated ethical aspects, including

its socio-economic benefits (frequently ignored) and the also existing problems (frequently exaggerated). Mukherji focuses on the role of groundwater irrigation in sustaining high agricultural growth rates in countries like India, paying special attention to the economic and politic aspects. She shows practical examples in India of how political decisions about groundwater regulation are often inadequate in relation to the resource conditions.

Section 6 of the book is devoted to the *Ethics of Water Ownership and Management*. The chapter from Lock & Shandling examines emerging business, legal and institutional models, such as public-private partnerships, in addressing the challenges facing both public sector providers and private operators in providing adequate, reliable and sustainable water services. Moss, in the other chapter of this section, examines the relative roles and boundaries of the areas of activity related to water and wastewater management that are appropriate for governments, businesses and civil society. He combines practical and ethical considerations in order to clarify questions about private ownership and management of water.

The seventh section of the book deals with *Corruption, Transparency and Participation in the Water Sector*. In his chapter, O'Leary focuses on identifying the sources of corruption in the sector and the best practices for combating it. He shows, with several examples, the importance of multi-stakeholder approaches involving government, regulators, utilities, private sector and civil society organizations to fight corruption. Cosgrove deals with the importance of the public participation in order to promote transparency and reduce corruption in the water sector. Starting from the ethical considerations that *water is different and humans are different*, and using some practical examples of Canada, he examines how public participation can be encouraged in order to help in the process of decision-making in the water sector.

The last section of the book contains two chapters that tackle the *Ethical Aspects of Unforeseen and Extreme Events Management such as Floods and Droughts*. In his chapter, Bogardi explores ethics in the context of water disaster. He analyzes if there is a comprehensive and common ethics to cope with disasters and establishes some practical principles of water disaster management. The chapter from Cabrera & Roldán is devoted to droughts. Taking an example from Spain, the authors discuss different aspects related to impacts of droughts and try to promote actions and strategies designed to mitigate or reduce these impacts.