Water Pollution Control - A Guide to the Use of Water Quality Management Principles

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Water Pollution Control
Foreword

Publication of this book is a milestone for the Water Supply and Sanitation Collaborative Council. It demonstrates the Council's unique capacity to bring together water and sanitation professionals from industrialised and developing countries to formulate practical guidance on a key issue of the day.

Industrialised countries have extensive experience of the problems caused by water pollution and the strategies and technologies available to control it. In the developing world, although pollution is increasing rapidly with urbanisation and industrialisation, most countries have very limited experience of pollution control measures or of the institutional and legislative frameworks needed to make such measures effective. On the other hand, the Collaborative Council's developing country members have the specialist knowledge and skills with which to adapt the practices of the industrialised nations to their own circumstances.

This synergy among members is at the heart of the Council's approach to sector issues. By mandating specialist working groups to seek out good practices, to analyse them and to reach agreement on the best way forward, the Council is able to give its members authoritative guidance and tools to help them face their own particular challenges.

Water pollution control is clearly one of the most critical of those challenges. Without urgent and properly directed action, developing countries face mounting problems of disease, environmental degradation and economic stagnation, as precious water resources become more and more contaminated. At the Earth Summit in Rio de Janeiro in June 1992, world leaders recognised the crucial importance of protecting freshwater resources. Chapter 18 of Agenda 21 sees "effective water pollution prevention and control programmes" as key elements of national sustainable development plans.

At its second Global Forum, in Rabat, Morocco, in 1993, the Collaborative Council responded to the Rio accord by mandating a Working Group on Water Pollution Control, convened jointly with the World Health Organization and the United Nations Environment Programme. We were fortunate that Richard Helmer from the World Health Organization agreed to co-ordinate the Working Group. Richard had been a prime mover in the preparation of the freshwater initiatives endorsed in Rio de Janeiro and so was particularly well placed to ensure that the Group's deliberations were well directed. Experts from developing countries, UN agencies, bilaterals, professional associations,
and academic institutions have all contributed over the last three and a half years. The Council is grateful to them, and I want to express my own personal appreciation for the voluntary time and effort they have devoted to the task.

The result is a comprehensive guidebook which I know will be a valuable tool for policy makers and environmental managers in developing and newly industrialised countries as they seek to combat the damaging health, environmental and economic impacts of water pollution. The council will play its part in advocacy and promotion. We all owe a duty to future generations to safeguard their water supplies and to protect their living environment.

Margaret Catley-Carlson,
Chair, Water Supply and Sanitation Collaborative Council
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The work was directed by a core group of staff from the World Health Organization (WHO), the United Nations Environment Programme (UNEP), the United Nations Centre for Human Settlements (UNCHS), the Food and Agriculture Organization of the United Nations (FAO) and experts from bilateral agencies who are members of the Water Supply and Sanitation Collaborative Council, WHO collaborating centres and experts from developing and newly industrialising countries. The activities have been implemented together with UNEP, the Danish Water Quality Institute (VKI), the Institute for Inland Water Management and Wastewater Treatment in the Netherlands (RIZA), the International Institute for Infrastructural, Hydraulic and Environmental Engineering of the Netherlands (IHE), the World Bank, the WHO Collaborating Centre for Water Quality Control, and the WHO European Centre for Environment and Health/Nancy Project Office. Other international organisations, in particular the International Association for Water Quality (IAWQ) and the International Water Resources Association (IWRA) have provided support to the Working Group. Additional support has also been received from bilateral and other external support agencies, particularly the Ministry of Foreign Affairs/DGIS of the Netherlands. Financial support for the activities undertaken by the Working Group has been provided by UNEP and by the Government of the Netherlands.

The Working Group brought together a group of experts who contributed individually or collectively to the different parts of the book. It is difficult to identify adequately the contribution of each individual author and therefore the principal contributors are listed together below:

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the author and do not necessarily represent those of the Task Force or any of its members.

The basic information and data for Case Study XII were gathered for the development of a Water Management and Conservation Plan for the country of Jordan by the author, in the year 1992, during a consulting assignment with the Chemonics International Consulting Division, Inc. of Washington, D.C. under a contract with the US Agency for International Development USAID). The assistance of others connected with the project is gratefully acknowledged. The views and opinions cited in this case study are those of the author and the named references and do not necessarily reflect the views and opinion or policies of USAID.

The draft text for this book was reviewed by the Working Group members through meetings and written comments and amendments. The broad range of issues and the wide geographical scope covered by the Working Group can best be demonstrated through complete listings of all members as given in the Appendix. In this way the co-sponsoring agencies and the editors would like to express their great appreciation for the dedication given by all participants to this project. The book would, however, not have been possible without the editorial assistance of Dr Deborah Chapman who undertook technical and language editing as well as layout and production management, in collaboration with the publisher. As the editor of the UNEP/WHO co-sponsored series of guidebooks dealing with various aspects of water quality management, she was responsible for ensuring compatibility with Water Quality Assessments and Water Quality Monitoring, two of the other books in the series.