



# **Water for the Future :** An Annotated Bibliography for World Water Day and the International Year of Freshwater

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IN COLLABORATION WITH OTHER UN AGENCIES

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## FOREWORD



The title of this bibliography - Water for the Future - is particularly apt. It reflects the international recognition that the sustainable use of water resources is vital to the economic and social well-being of the human population and that water-related problems have been recognised as the most immediate and serious threat to humankind.

Billions of people still lack adequate supplies of clean water or sanitation services and as a result, millions die every year. To secure their future and the future of our environment - which is the basis of water resources - the Millennium Development Goals and the targets set at the World Summit on Sustainable Development must be achieved.

To achieve these targets, the UN System is determined to work together more effectively. To do so requires, *inter alia*, a clearer understanding of what each agency is doing and what resource materials are available.

Therefore, this bibliography has been compiled to provide an easily accessible resource on materials on water. This bibliography brings together a list of publications from relevant UN System agencies and is a valuable resource for water practitioners everywhere. While World Water Day 2003 and the International Year of Freshwater provided the catalyst for this publication, UNEP intends to update it on a regular basis.

I would like to thank all the UN agencies for contributing to this, and to invite, indeed urge, the submission of additions, comments and suggestions.

A handwritten signature in black ink, appearing to read 'Klaus Toepfer'. The signature is fluid and cursive, with a long horizontal stroke at the top and a vertical stroke at the end.

**Klaus Toepfer**  
**Executive Director,**  
**United Nations Environment Programme**



## Drinking Water

001

**BOURBIGOT, Marguerite**  
**UNESCO**

Access to drinking water and an efficient wastewater treatment system  
.- Paris : UNESCO ; 2000 .- p. 354-355

002

**WORLD HEALTH ORGANIZATION**

Guidelines for drinking-water quality. Volume 1: recommendation: WHO ; 1993  
.- 188 p.

**ABSTRACT** : Sets out guideline values for a large number of water contaminants relevant to the quality of drinking-water. The book also provides an explanation of how the guideline values should be applied, the criteria used in selecting the various chemical, physical, microbiological, and radiological contaminants considered, a description of the approaches used to derive the guideline values, and brief summary statements supporting the values recommended or explaining why no health-based guideline value is necessary at present.

The guideline values are intended to be used as a basis for the development of national standards that, if properly implemented, will ensure the safety of drinking-water supplies through the elimination, or reduction to a minimum concentration, of constituents of water that are known to be hazardous to health. The book emphasizes that the guideline values recommended are not mandatory limits. In order to define such limits, the guideline values need to be considered in the context of local or national environmental, social, economic, and cultural conditions. The provision of microbiologically safe drinking-water is given the highest priority. The book also provides advice on specific procedures for monitoring the microbiological quality of drinking-water and for selecting appropriate treatment processes for the removal of pathogens.

003

**WORLD HEALTH ORGANIZATION**

Guidelines for drinking-water quality. Volume 2: health criteria and other supporting information.-2nd ed.  
.- Geneva : WHO ; 1996 .- 973 p.

**ABSTRACT** : Reviews and interprets the extensive toxicological, epidemiological, and clinical evidence that shaped the determination of guideline values for drinking-water quality. Organized to parallel and extend the coverage of volume 1, which presented the recommended guideline values and brief summary statements supporting these values, this second work communicates the scientific rationale for individual recommendations based on a critical review of data linking health hazards to specific exposure levels. In so doing, it aims to establish an authoritative basis for national water-quality standards that are consistent with the goal of providing wholesome, safe drinking-water in a sufficient quantity. Well over 3000 references to the literature are included.

The book has 17 chapters presented in three parts. The first, on microbiological aspects, addresses the common and widespread health risks associated with the direct or indirect contamination of drinking-water with human or animal excreta, particularly faeces. The second and most extensive part, which contains almost 800 pages, provides evaluations, supported by toxicological monographs, for each of 36 inorganic constituents and physical parameters, 27 industrial chemicals, 36 pesticides, four disinfectants, and some 23 disinfectant by-products. The final part explains application of the reference level of dose for radiological contaminants in drinking-water. The volume concludes with a list of the hundreds of experts who collaborated in the evaluations, a convenient tabular presentation of the guideline values, and a comprehensive index.

004

**WORLD HEALTH ORGANIZATION**

Guidelines for drinking-water quality. Volume 3: surveillance and control of community water supply.-2nd

.- Geneva : WHO ; 1997 .- 238 p.

**ABSTRACT** : A comprehensive guide to all practical procedures and technical measures required to ensure the safety of drinking-water supplies in small communities and periurban areas of developing countries. Now in its second edition, the book has been vastly expanded in line with broadened appreciation for the many factors that influence water quality and determine its impact on health. Revisions and additions also reflect considerable new knowledge about the specific technical and social interventions that have the greatest chance of success in situations where resources are scarce and logistic problems are formidable.

Since quality controls may be especially difficult to implement in small communities, the book concentrates on the most essential requirements, emphasizing the crucial need to ensure microbiological safety. Details range

from advice on how to design simple pictorial reporting forms for sanitary inspections, to guidance on setting priorities for remedial action, from a comparison of different methods for the analysis of coliform bacteria, to drawings of measures for protecting water sources. Throughout, numerous checklists, charts, diagrams, and model forms are used to enhance the volume's practical value.

The book has eight chapters organized to reflect the key stages in the development of surveillance. Chapter one explains how the basic principles of surveillance and control apply to small-community supplies and alerts readers to several unique problems that need to be overcome. Planning and implementation are discussed in the second chapter, which gives particular attention to the distinct yet complementary responsibilities of the water supply agency and the public health protection agency. Subsequent chapters offer advice on the nature, scope, and timing of sanitary inspections, describe the most appropriate methods for sampling water and assessing its hygienic quality, and explain how the resulting data can be used to improve the quality, coverage, quantity, cost, and continuity of the water supply.

The most extensive chapter describes and illustrates numerous technical interventions for preventing or correcting hazards associated with water from different sources, procedures for water treatment, and methods used to treat and store water in households. Additional strategies for improvement are covered in the remaining chapters, which outline methods of hygiene education in communities and discuss the important role of legislation and regulation.

Further practical guidance is provided in a series of annexes, which give examples of sanitary inspection and hazard scoring forms for 11 different types of water supply, list responsibilities for different categories of surveillance staff, and provide illustrated step-by-step instructions for several sampling methods and analytical tests for use in laboratories and the field.

## Freshwater Resources

005

**AHMED, Feroze M.; ASHRAF, Ali M.; ADEEL, Zafar**  
**UNITED NATIONS UNIVERSITY**

Technologies for arsenic removal from drinking water: preprints of BUET-UNU International workshop, Dhaka, May 2001, Bangladesh .- Tokyo : UNU Press ; 2001

006

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Vital water graphics: an overview of the state of the world's fresh and marine waters: UNEP/GRID-Arendal ; 2002

**ABSTRACT** : UNEP has compiled this report in order to provide an easily accessible resource on the state of the world's waters. The goal of this publication is to produce a clear overview, through a set of graphics, maps and other illustrations, of the state of the world's fresh and marine waters. It also illustrates the causes, effects, trends and threats facing our water sources, with examples of areas of major concern and future scenarios for the use and management of fresh, coastal and marine waters.

It is hoped that this information will assist water users and professionals to make informed decisions in order to protect water resources for future generations.

ISBN 9280722360

007

**CLAIN, Jean**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Sudan; study for potable water and salt production in Um safari; technical report .- Vienna : UNIDO ; 1983 .- 120 p.

**ABSTRACT** : Expert report on potable water and salt production in Sudan - covers (1) the present situation of salt production and fresh water requirement (2) description of factory at Um Safari (3) studies on improving production process, geological survey, meteorological data (4) appropriate technology. Recommendations. Appends instructions for weather station and study on drinking water plant. Statistics, diagrams. Additional references: water utilization, evaporation, salt water, pumps, solar energy. Tables, graphs, diagrams, ill. No : SI/SUD/82/804

008

**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Regulacion de la industria de agua potable. Volumen I: Necesidades de informacion y regulacion estructural

.- Santiago : CEPAL ; 2001 .- 68 p.

(Serie recursos naturales e infraestructura; No. 36)

**ABSTRACT** : Drinking Water; Water Management; Regulations; Water Supply; Water Quality; Privatization; Latin America; Caribbean  
ISBN 92-1-321968-7  
No : LC/L.1671/Add.1-P

009

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Better freshwater fish farming: raising fish in pens and cages  
.- Rome : FAO ; 1990 .- 83 p. (Better Farming Series)  
ISBN 9251027439

010

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Freshwater fish farming. How to begin  
.- Rome : FAO ; 1979 .- 43 p. (Better Farming Series)  
ISBN 9251006067

011

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Freshwater prawn farming: a manual for the culture of *Macrobrachium rosenbergii*  
.- Rome : FAO ; 1989 .- 125 p.  
(FAO Fisheries Technical Papers)  
ISBN 925102250X

012

**GOPALAKRISHNAN, V. ; COCHE, A.G.  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Handbook of small-scale freshwater fish farming  
.- Rome : FAO ; 1999 .- 215 p.  
(FAO Training Series)  
ISBN 9251031630  
No : FAO1900

013

**GOPALAKRISHNAN, V., ; COCHE, A. G.  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Handbook on small-scale freshwater fish farming (Arabic version)  
.- Rome : FAO ; 1995 .- 216 p.  
(FAO Training Series)  
ISBN 9256031639  
No : FAO101016

014

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Potential for nuclear desalination as a source of low cost potable water in North Africa  
.- Geneva : IAEA ; 1998  
(IAEA TECDOC Series; No. 917)

015

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Thermodynamic and economic evaluation of co-operation plants for electricity and potable water  
.- Geneva : IAEA ; 1997  
(IAEA TECDOC Series No. 942)

016

**KOTTELAT, M.; WHITTEN, T.  
WORLD BANK**

Freshwater biodiversity in Asia: with special reference to fish .- Washington, D.C. : World Bank ; 1996 .- 59p (World Bank Technical Paper; No. 343)

017

**NIGAM, A. ; GUJJA, B. ; BANDYOPADHYAY, J. ; TALBOT, R.  
UNITED NATIONS CHILDREN'S FUND ; WORLD WIDE FUND FOR NATURE**

Fresh water for India's children and nature  
.- New York : UNICEF ; 1998 .- 81 p.

018

**UNESCO**

Address by Mr Koichiro Matsuura, Director-general of UNESCO, on the occasion of the international seminar on freshwater; Dushembe, 1 November 2002

.- Paris : UNESCO ; 2002 .- 3 p.

019

**UNESCO**

Reports on the planned IHP activities pursuant to UN-GA resolution A/RES/55/196 proclaiming 2003 as international year of freshwater

.- Paris : UNESCO ; 2003 .- 5 p.

No : SC.2002/CONF.205/CLD.20; IHP/IC/XV/Inf.5

020

**UNESCO**

Report on the planned IHP activities pursuant to UN-GA Resolution A/RES/55/196 proclaiming 2003 as international year of fresh water

.- Paris : UNESCO ; 2001 .- 3 p.

021

**UNESCO**

High-level expert meeting for Arab States: solar energy for freshwater, culture and environment .- Paris : UNESCO ; 1996 .- 1 vol. (High-level expert meeting for Arab States on Solar Energy for freshwater, culture and environment; Muscat; 1996)

022

**UNITED NATIONS**

Planning and management of lakes and reservoirs

.- New York : United Nations ; 2000 .- 392 p.

(An integrated approach to eutrophication)

**ABSTRACT** : This book is the result of the work of 26 experts involved with the management of freshwater resources from Africa, Europe, North and South America, Asia and Oceania. Their experiences on the causes and possible ways to prevent eutrophication have been assembled here.

023

**UNITED NATIONS**

Transboundary freshwater dispute resolution: theory, practice and annotated references

.- New York : United Nations ; 2000 .- 336 p.

**ABSTRACT** : This publication reviews the literature on water disputes and related water treaties. It focuses on transboundary freshwater, political and social aspects, and on the skills for dispute resolution. Transboundary Freshwater Dispute Resolution presents a survey of international watersheds, providing some bibliographical and general data collected from over 200 transboundary watersheds.

024

**UNITED NATIONS**

Fresh water resources in arid lands

.- New York : United Nations ; 1997 .- 108 p.

**ABSTRACT** : Fresh water is a critical resource for all aspects of human existence and development. Demand for fresh water is growing rapidly worldwide and since the beginning of this century its consumption has increased almost ten-fold. This publication focuses on the limited freshwater resources in arid lands. The issues covered include historical perspectives on how people in dry environments have developed ingenious survival strategies; and modern technologies and the impact of global warming on freshwater resources.

025

**UNITED NATIONS**

International waste management practices to protect freshwater resources: case studies from West Asia, the Mediterranean and Arab Region

.- New York : United Nations ; 2002 .- 108 p.

ISBN 9280720198

026

**UNITED NATIONS**

Sourcebook of alternative technologies for freshwater augmentation in small island developing states

.- New York : United Nations ; 1999 .- 232 p.

**ABSTRACT** : Freshwater resources have been dwindling over the years, while the demand for high quality water has been steadily increasing. Aimed particularly at water resource planners and managers, this reference document presents a comprehensive overview of the technologies for the augmentation of freshwater supplies. The book is divided into three main parts: part one introduces the topic; part two deals specifically with the alternative technologies and offers detailed technology profiles; and part three presents case studies of selected technologies successfully adopted in the region.

027

**UNITED NATIONS**

Sourcebook of alternative technologies for freshwater augmentation in Latin America and the Caribbean

.- New York : United Nations ; 1999 .- 258 p.  
(Technical Publication Series; No. :8D)

028

**UNITED NATIONS**

Sourcebook of alternative technologies for freshwater augmentation in East and Central Europe

.- New York : United Nations ; 1999 .- 134 p.  
(Technical Publication Series No.:8C)

029

**UNITED NATIONS**

Sourcebook of alternative technologies for freshwater augmentation in some Asian Countries

.- New York : United Nations ; 1999 .- 192 p.  
(Technical Publication Series; no.8B)

030

**UNITED NATIONS**

Sourcebook of alternative technologies for freshwater augmentation in Africa

.- New York : United Nations ; 1999 .- 182 p.  
(Technical Publication Series; No.:8A)

031

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Atlas of international freshwater agreements

.- Nairobi: UNEP; 2002.- 183 p.

**ABSTRACT** : Water is one of the most widely shared resources on the planet, and the most vital for human survival after oxygen. It has a capacity to unite people that share a source of water, or to incite conflict among them as they compete for it. The latter, reaching the point of 'water wars' has become increasingly common in the media, but the contents of this Atlas show that treaties, not wars, are the norm.

The Atlas is a step in the consolidation and dissemination of information about shared water treaties. This systematic and thorough compilation of the available historical record of the very many treaties and agreements concluded in regard to the water being an agent of cooperation rather than of conflict. Moreover, the thematic maps featured in the Atlas help understand why this is so, and add new perspective to that of the legal records which make up most of the Atlas.

Thanks to its double feature as reference book and an original instrument of analysis of water-related treaty-making, the Atlas will be of value not only to those who study the practice of states in this matter but also, and above all, to those who fashion such practice and articulate the negotiating positions which eventually inform it.

032

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Integrated waste management practices to protect freshwater resources: case studies from West Asia, The Mediterranean and the Arab region

.- New York : UNEP ; 2001 .- 97 p.  
ISBN 9280720198

033

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview on land-based sources and activities affecting the marine, coastal and associated freshwater environment in the Upper Southwest Atlantic Ocean

Nairobi : UNEP, [s.d].- [multiple pagination]  
(UNEP Regional Seas Reports and Studies No. 170)

034

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the marine, coastal and associated freshwater environment in the wider Caribbean region (French)  
.- Nairobi : UNEP ; 1999 .- 123 p.  
(Regional Seas Reports and Studies; No. 172)

035

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of Land-based sources and activities affecting the marine, coastal and associated freshwater environment in the wider Caribbean region  
.- Nairobi : UNEP ; 1999 .- 133 p.  
(Regional Seas Reports and Studies; No. 172)

**ABSTRACT** : Assessment of Land-based Sources and Activities Affecting the Marine, Coastal and Associated Freshwater Environment in the Wider Caribbean Region

036

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Technology needs for lake management in Indonesia case studies: Lakes Rawa Danau and Rawa Pening, Java .- Nairobi : UNEP ; 1999 .- 127 p.  
(Regional Seas Reports and Studies; No. 172)

**ABSTRACT** : Assessment of Land-based Sources and Activities Affecting the Marine, Coastal and Associated Freshwater Environment in the Wider Caribbean Region  
ISBN 9280715100

037

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Sourcebook of alternative technologies for freshwater augmentation in Africa  
.- Nairobi : UNEP ; 1998 .- 182 p.

**ABSTRACT** : The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies are best described as 'still experimental'. The authors supply contact names and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years

ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse.

As we approach the 21st century, many countries face increasing shortages of freshwater. Even traditionally water-rich countries in Europe and North America are feeling the effects of past abuses of freshwater supplies, while in the water-poor countries of the inter-tropics, critical shortages are developing into incipient or actual crises. As a result, water resource managers are increasingly looking to the past, not in a spirit of nostalgia, but to blend technologies born out of a traditional need to conserve water with futuristic materials and techniques. The United Nations Environment Programme (UNEP) has responded by drawing up a compendium of traditional and modern approaches to protecting, rehabilitating and harvesting freshwater sources. They include techniques for obtaining freshwater from saline water, waste-water and even fog, and draw on concepts and methods dating back to the earliest days of humankind. The series of books, a joint effort from UNEP's International Environmental Technology Centre and Water Branch, is being published under the title, Alternative Technologies for Freshwater Augmentation. So far, UNEP has completed source books for five regions: Africa, Asia and the Pacific, Central and Eastern Europe, Latin America and the Caribbean, and Small Island Developing States (SIDS). A sixth volume for Western Asia is under way. The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies are best described as 'still experimental'. The authors supply contact names and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse.  
ISBN 9280715088

038

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Sourcebook of alternative technologies for freshwater augmentation in East and Central Europe  
.- Nairobi : UNEP ; 1998 .- 247 p.

**ABSTRACT** : The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies are best described as 'still experimental'. The authors supply contact names

and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse.

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ISBN 9280714756

039

#### **UNITED NATIONS ENVIRONMENT PROGRAMME**

Sourcebook of alternative technologies for freshwater augmentation in Latin America and the Caribbean .- Nairobi : UNEP ; 1998 .- 125 p.

**ABSTRACT** : The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies

are best described as 'still experimental'. The authors supply contact names and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse.

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ISBN 9280714772

040

#### **UNITED NATIONS ENVIRONMENT PROGRAMME**

Sourcebook of alternative technologies for freshwater augmentation in small island developing states

.- Nairobi : UNEP ; 1998 .- 173 p.

**ABSTRACT** : The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies are best described as 'still experimental'. The authors supply contact names and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse.

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ISBN 9280714764

041

#### **UNITED NATIONS ENVIRONMENT PROGRAMME**

Sourcebook of alternative technologies for freshwater augmentation some Asian countries

.- Nairobi : UNEP ; 1998 .- 223 p.

**ABSTRACT** : The source books emphasize methodologies that work - old and new, engineered and non-engineered, high-tech and appropriate-tech. All have been tried and tested in the field, even if some of the alternative technologies are best described as 'still experimental'. The authors supply contact names and addresses of agencies and individuals who are willing to discuss a range of technologies and traditions, many of which were abandoned more than 50 years ago in favour of highly engineered sources. Their practical experience demonstrates once again that old is not always worse

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ISBN 9280714748

042

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the marine, coastal and associated freshwater environment in the West and Central African region  
 .- Nairobi : UNEP ; 1999 .- 110 p.  
 (Regional Seas Reports and Studies; No.171)  
 ISBN 9280718003

043

**ROZANSKI, Kazimierz; FROEHLICH, Klaus; MOOK, Willem  
 UNESCO**

Preliminary proposal by the Director-general concerning UNESCO's programme of activities for the international year of freshwater  
 .- Paris : UNESCO ; 2002 .- 7 p.  
**ABSTRACT** : Freshwater; water resources; management; scientific programmes  
 No : 164EX/12

044

**SELBORNE, Lord  
 UNESCO**

The ethics of freshwater use: a survey  
 .- Paris : UNESCO ; 2000 .- 49 p.

045

**SHIKLOMANOV, Igor  
 UNESCO**

World freshwater resources  
 .- Paris : UNESCO ; 2002 .- 1 CD-ROM  
**ABSTRACT** : Water resources; water supply; water consumption; Hydrological data; Hydrological forecasting

046

**STRZEPEK, K. ; BOWLING, P.  
 UNITED NATIONS INDUSTRIAL DEVELOPMENT  
 ORGANIZATION**

(R) Industry, sustainable development and water programme formulation: global assessment of the use of freshwater resources for industrial and commercial purposes

.- Vienna : UNIDO ; 1996 .- 92 p.  
 (UNIDO-ISED/R.53)

**ABSTRACT** : Forecast of industrial and commercial water use up to the year 2025 to identify nations and regions that may be facing critical situations with regard to industrial and commercial water management - covers (1) methodology for the industrial and commercial water use models (2) forecasting using four scenarios of mid- to long-term global economic development prepared by the Central Planning Bureau of the Netherlands (3) conclusions. Statistics. Additional references: water utilization, water treatment, water pollution, pollutants. Restricted. Tables, graphs.  
 No : XP/GLO/96/062

## Groundwater

047

**CARDY, Franklin ; CHILTON, John; SCHIFFLER, Manuel [et al...]  
 WORLD BANK**

Groundwater in rural development: facing the challenges of supply and resources sustainability  
 .- Washington, D.C. : World Bank ; 2000 .- 124 p.  
 ISBN 0-8213-4703-9

048

**COUGHANOWR, Christine  
 UNESCO**

Groundwater; water-related issues of the humid tropics and other warm humid regions  
 .- Paris : UNESCO ; 1994 .- 48 p., ill.  
 No : SC.95/WS/2

049

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
 UNITED NATIONS**

Groundwater seminar, Granada  
 .- Rome : FAO ; 1976 .- 298 p.

(FAO Irrigation and Drainage Papers)

**ABSTRACT :**  
ISBN 9251003904  
No : FAO492

050

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Groundwater models  
.- Rome : FAO ; 1983 .- 198 p.  
(FAO Irrigation and Drainage Papers)  
ISBN 9251006725  
No : FAO607

051

**FOSTER, Stephen  
WORLD BANK**

Groundwater quality protection: a guide for water utilities, municipal authorities, and environment agencies  
.- Washington, D. C. : IBRD ; 2002 .- 103 p.: ill.

052

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotope based assessment of groundwater renewal in water scarce regions  
.- Geneva : IAEA ; 2001  
(IAEA TECDOC)

053

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Technical options of the remediation of contaminated groundwater  
.- Geneva : IAEA ; 1999  
(IAEA TECDOC Series No. 1088)

054

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotope field application for groundwater studies in the Middle East  
.- Geneva : IAEA ; 1996  
(IAEA TECDOC Series; No. 872)

055

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Interpretation of environment isotope and hydrochemical data in groundwater hydrology (Vienna, 27-31 Jan. 1975)  
.- Geneva : IAEA ; 1976  
(Panel proceedings Series)

056

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotope techniques in groundwater Hydrology 1974 (Vienna, 11-15 March 1974)  
.- Geneva : IAEA ; 1974  
(Proceedings Series)

057

**JACOBY, Hanan G.; MURGAI, Rinku; REHMAN, Saeed Ur  
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Monopoly power and distribution in fragmented markets: the case of groundwater  
.- Washington, D.C. : World Bank ; 2001 .- 46 p.: ill.

058

**KAHNERT, Friedrich; LEVINE, Gilbert  
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Groundwater irrigation and the rural poor: options for development in the Gangetic basin  
.- Washington, D.C. : World Bank ; 1993 .- 222 p.: ill., maps

059

**SAIMAN, M. A.  
WORLD BANK**

Groundwater: legal and policy perspectives: proceedings of a World Bank seminar .- Washington, D.C. : World Bank ; 1999 .- 276 p.  
(World Bank Technical Paper; No. 456)

**ABSTRACT** : “Water is becoming an increasingly scarce resource for most of the world’s citizens. The current trends indicate that the overall situation is likely to deteriorate further, at least for the next decade, unless the water profession eschews ‘business as usual’ practices, which can only allow incremental changes to occur.” Groundwater is the least understood and least appreciated, yet the most important, natural resource available to mankind. Groundwater represents about 97  
ISBN 0-8213-4613-

060

**UNESCO**

Proceedings of the Regional Workshop on Ground Water and Soil Salinity related damage to the Monuments and sites in Central Asia, Samarkand/Bukhara, Uzbekistan, 14-18 June, 2000  
.- Paris : UNESCO ; 2000 .- 141 p.: ill.

061

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

Groundwater quality control and conservation in the ESCWA region  
.- Amman : ESCWA ; 1999  
No : E/ESCWA/ENR/1999/1

062

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

Groundwater resources in paleogene carbonate aquifers in the ESCWA region: preliminary evaluation  
.- Amman : ESCWA ; 1999  
No : E/ESCWA/ENR/1999/6

063

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR WESTERN ASIA**

Implications of groundwater rehabilitation on water resources protection and conservation: artificial recharge and water quality improvement in the ESCWA region  
.- Amman : ESCWA ; 2001 .- 54 p.  
No : E/ESCWA/ENR/2001/12

064

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Groundwater a threatened resource .- Nairobi : UNEP ; 1996 .- 36p. (GEMS Environment Library; No. 15)  
**ABSTRACT** : This publication is intended to explain to readers how important groundwater is, the extent of the threat to it, and the actions that can be taken to protect it.

The world’s water is one of our most precious resources. Lack of water is one of the principal causes of delayed development. Polluted water is one of the biggest killers we know, responsible for up to 27000 deaths a day in the world’s poorest countries. Of the limited volume of freshwater that is available to us, some 97 percent (excluding permanently frozen water) is stored underground. More than 1500 million people rely on this groundwater for their drinking water. Farmers all over the world use it to irrigate their crops. In arid areas, where rainfall is low or virtually non-existent, groundwater may be the only source of water for the human population. As populations grow and their need for water increases, the pressures on our groundwater resources also increases. In many areas of the world, groundwater is now being over-abstracted, in some places massively so. The result is falling water levels and declining well yields, more expensive supplies, land subsidence, the intrusion of salt water into freshwater supplies and ecological damage such as the drying out of wetlands. Groundwater is also being polluted. Cities with poor sanitation systems are allowing foul water to seep into underground aquifers, whence it eventually contaminates the boreholes and wells that supply drinking water.

Industries accidentally spill or release their effluents into the ground or into surface water courses whence pollution is carried deep underground. Chemical fertilizers and pesticides are leached through the soil and down into the aquifers as a result of the intensification of agriculture. The end result is a serious deterioration of groundwater quality. It is always extremely difficult

and very costly to clean up a polluted aquifer. Often it is simply impossible. Because water flows so slowly underground, it takes many years or decades for pollution to show up. Many of the aquifers from which we are currently abstracting pure water may already be contaminated. It is therefore urgent that we protect our groundwater supplies with diligence, and that everyone understands the importance of doing so. This publication is intended to explain to readers how important groundwater is, the extent of the threat to it, and the actions that can be taken to protect it.

065

**UNITED NATIONS**

Groundwater quality and monitoring in Asia and the Pacific

.- New York : United Nations ; 1992 .- 230 p.

(Water resources; no. 70)

**ABSTRACT** : This publication offers an in-depth discussion of state-of-the-art water quality monitoring programmes in the region. Included are status reports by country, technical and scientific reports on current developments in quality monitoring strategies and recommendations for strengthening national programmes in quality management.

066

**UNITED NATIONS**

Groundwater in Western and Central Europe

.- New York : United Nations ; 1990 .- 363 p.

(Natural resources/water; no. 27)

**ABSTRACT** : This volume deals not only with ground-water occurrences and availability in European countries, but also provides information on the conditions of groundwater development and related problems. Apart from data on technologies and methods used in the investigation, assessment and development of ground-water are also included.

067

**UNITED NATIONS**

Groundwater and society: resources, tensions and opportunities-themes in groundwater management for the twenty-first century

.- New York : United Nations ; 1999 .- 180 p.

**ABSTRACT** : This publication takes stock of the development and abuse of groundwater and presents approaches to groundwater management against the reality of declining water tables and polluted aquifers. It goes on to discuss the impact this problem has on people, their livelihood and their environment and addresses the prospects for sustainable development.

068

**UNITED NATIONS**

Groundwater and society: resources, tensions and opportunities : themes in groundwater management for the 21st century

.- New York : United Nations ; 2001 .- 180 p.

ISBN 9211044855

069

**UNITED NATIONS**

Groundwater software for windows, four diskettes and user's manual

.- New York : United Nations ; 1995 .- 375 p.

ISBN 9211044456

070

**VAN LANEN, Henny A. J.**

**UNESCO**

Monitoring for groundwater management in semi-arid regions

.- Paris : UNESCO ; 1998 .- 224 p., ill., maps

071

**WORLD BANK**

Groundwater regulation and management

.- Washington, D.C. : World Bank ; 2000 .- 110 p.

ISBN 0-8213-4461-7

## *Inland Waters*

072

### **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The Inland waters of Africa  
.- Rome : FAO ; 1972 .- 117 p.  
(CIFA Technical Papers)  
ISBN 9250019157  
No : FAO73

073

### **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The Inland waters of Latin America  
.- Rome : FAO ; 1979 .- 179 p.  
(COPESCAL: Technical Papers)  
ISBN 9250007809  
No : FAO20

074

### **UNITED NATIONS**

Training of trainers manual for inland water transport, supplement to training modules for inland water transport  
.- New York : United Nations ; 1998 .- 216 p.  
**ABSTRACT** : Seven papers focusing on China's experiences in the field of Inland Water Transport (IWT) are presented in this Manual. Prepared by local experts in China, the papers cover: reform in IWT; waterway design; environmental impact of dredging and IWT development; maintenance of inland waterway and aids to navigation; inland port planning and cargo handling operation; professional education and training of IWT; and IWT training management.

075

### **PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT**

Le bassin conventionnel du lac Tchad : une étude diagnostique de la dégradation de l'environnement  
.- Nairobi : PNUE, 1989 .- 241 p.  
**ABSTRACT** : Ce rapport constitue un résumé des symptômes liés aux "maladies" de l'environnement tels que les sujets suivants : l'érosion de terres jadis productives, la surexploitation des eaux souterraines, la perte des espèces animales végétales sauvages, les migrations forcées des populations durant des périodes de famine et de sécheresse. Ce rapport essaie de mettre l'accent sur les causes de la dégradation des sols, de l'eau, de l'air, des plantes, et de la vie animale - l'intérieur du Bassin conventionnel. Il vise aussi - suggerer et classifier par ordre de priorité des stratégies qui pourraient contribuer - soigner les plaies béantes de l'environnement du Bassin.

076

### **RANGELEY, Robert ; KIRMANI, Syed S. WORLD BANK**

International inland waters: concepts for a more active World Bank role  
.- Washington, D.C. : World Bank ; 1994 .- 31 p.  
(World Bank Technical Paper; No. 239)  
ISBN 0-8213-2799-2

## *Marine Aquaculture*

077

### **MATSUURA, K. UNESCO**

Address by Mr Koichiro Matsuura, director-general of UNESCO, at the closing session of the second world water forum, world day for water: water for the 21st century; The Hague, 22 March 2002  
.- Paris : UNESCO ; 2000  
No : DG/2000/13

078

**UNITED NATIONS**

Marine aquaculture in the Black sea region: current status and development options

.- New York : United Nations ; 1995 .- 200 p.

079

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Reducing environmental impacts of coastal aquaculture

.- Nairobi : UNEP ; 1991 .- 35 p.  
(GESAMP Reports and Studies; No. 47)

## *Marine Environment*

080

**PROGRAMME DES NATIONS UNIES POUR  
L'ENVIRONNEMENT**

Protocole relatif aux aires spécialement protégées et à la diversité biologique en Méditerranée

.- Nairobi : PNUE ; 1995 .- 46 p.

081

**PROGRAMME DES NATIONS UNIES POUR  
L'ENVIRONNEMENT**

Etat du milieu marin et littoral de la région Méditerranéenne:

.- Nairobi : PNUE ; 1996 .- 148 p.  
(MAP Technical Report Series; No. 101)

082

**UNITED NATIONS; UNESCO; UNITED NATIONS  
ENVIRONMENT PROGRAMME**

Marine and coastal area development in the East African region

Nairobi : UNEP, 1982.- 58 p.  
(UNEP Regional Seas Reports and Studies No. 6)

083

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview of land-based sources and activities affecting the marine, coastal and freshwater environment in the Eastern African region .- Nairobi : UNEP ; 1998 .- 31 p.

(Regional Seas Reports and Studies; No. 167)

084

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the marine environment in the Red Seas and Gulf of Aden

.- Nairobi : UNEP ; 1997 .- 62 p.  
(Regional Seas Reports and Studies; No. 166)

085

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Status of sea turtle conservation in the Western Indian ocean

.- Nairobi : UNEP ; 1996 .- 162 p.  
(Regional Seas Reports and Studies; No. 165)  
ISBN 9280716204

086

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines for integrated management of coastal marine areas

.- Nairobi : UNEP ; 1995 .- 80 p.  
(Regional Seas Reports and Studies; No.161)

087

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Environmental economics for integrated coastal area management

.- Nairobi : UNEP ; 1995 .- 165  
(Regional Seas Regional and Studies; No. 164)  
ISBN 9280714880

088

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment monitoring of climate change impacts on mangrove ecosystems  
.- Nairobi : UNEP ; 1994 .- 62 p.  
(Regional Seas Reports and Studies; No. 154)

089

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Aspects of coastal and marine areas management in the Pacific  
.- Nairobi : UNEP ; 1994 .- 87 p.  
(Regional Seas Reports and Studies; No. 157)  
ISBN 9280714937

090

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview of the coastal and marine environment and environmental problems  
in the Northwest Pacific region .- Nairobi : UNEP ; 1994/1994 .- 43 p.

091

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Maziwi Island off Pangani (Tanzania): history of its destruction and possible  
causes  
.- Nairobi : UNEP ; 1992 .- 44 p.  
(Regional Seas Reports and Studies; No. 139)

092

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Potential impacts of expected climate change on coastal and near-shore  
environment  
.- Nairobi : UNEP ; 1992 .- 18 p.  
(Regional seas reports and studies; No. 140.)

093

**UNITED NATIONS ENVIRONMENT PROGRAMME**

A review of the geology of coral reefs in the Red Sea.  
.- Nairobi : UNEP ; 1992 .- 36 p.  
(Regional seas reports and studies; No. 152 )

094

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Implications of expected climate change in the ROMPE region (RSRS155)  
.- Nairobi : UNEP ; 1992  
(Regional seas reports and studies; No. 155.)

095

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Environmental impact assessment: Sewage treatment plant for Port Said  
.- Nairobi : UNEP ; 1991 .- 32 p.  
( Regional seas reports and studies; No. 133.)

096

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Choosing priority organochlorines for marine hazard assessment  
.- Nairobi : UNEP ; 1990 .- 10 p.  
(Regional seas reports and studies; No. 120:)

097

**UNITED NATIONS ENVIRONMENT PROGRAMME**

State of the marine environment in the Mediterranean region  
.- Nairobi : UNEP ; 1990 .- 166 p.  
(Regional seas reports and studies; No. 132)

098

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Implications of expected climate change in the Mediterranean region: an  
overview  
.- Nairobi : UNEP ; 1989 .- 46 p.  
(Regional seas reports and studies; No. 103.)

099

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The Maldives and expected climate changes  
.- Nairobi : UNEP ; 1989 .- 84 p.  
( Regional seas reports and studies; No. 104.)

100

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Coastal and marine environmental problems of the United Republic of Tanzania  
.- Nairobi : UNEP ; 1989 .- 30 p.  
( Regional seas reports and studies; No. 106.)

101

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Achievements and planned development of UNEP's Regional Seas Programme  
and comparable programmes sponsored by other bodies  
Nairobi : UNEP, 1982.- 64 p.  
(UNEP Regional Seas Reports and Studies No. 1)

102

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Methodology for assessment and control of coastal erosion in West and Central  
Africa  
.- Nairobi : UNEP ; 1989  
(Regional seas reports and studies; No. 107.)

103

**UNITED NATIONS ENVIRONMENT PROGRAMME**

State of the marine environment: West and Central African region  
.- Nairobi : UNEP ; 1989 .- 34 p.  
(Regional seas reports and studies; No. 108.)

104

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Arsenic, mercury and selenium in the marine environment.  
.- Nairobi : UNEP ; 1988 .- 172 p.  
(Regional seas reports and studies; No. 092.)

105

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Environmental management problems in resource utilization and survey of  
resources in the West and Central African Region  
.- Nairobi : UNEP ; 1984 .- 82 p.  
(Regional seas reports and studies; No. 037.)

106

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Action Plan for the protection of the marine environment and coastal areas of  
the South-East Pacific  
.- Nairobi : UNEP ; 1983 .- 27 p.  
( Regional seas reports and studies; No. 020.)

107

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Action Plan for the Caribbean environment programme.  
.- Nairobi : UNEP ; 1983 .- 24 p.  
(Regional seas reports and studies; No. 026.)

108

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The state of the environment in the South Pacific.  
.- Nairobi : UNEP ; 1983 .- 30 p.  
(Regional seas reports and studies; No. 031.)

109

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Action plan for the protection of the marine environment and the coastal areas  
of Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab  
Emirates.  
.- Nairobi : UNEP ; 1983 .- 18 p.  
(Regional seas reports and studies; No. 035.)

110

**UNITED NATIONS ENVIRONMENT PROGRAMME**

River inputs to the West and Central African marine environment.  
Nairobi : UNEP, 1982.- 19 p.  
(UNEP Regional seas reports and studies No. 003)

111

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Development and environment in the wider Caribbean region: a synthesis.  
.- Nairobi : UNEP ; 1982 .- 74 p.  
( Regional seas reports and studies; No. 014.)

112

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The health of the oceans.  
.- Nairobi : UNEP ; 1982 .- 111 p.  
(Regional seas reports and studies; No. 016. )

113

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Interactions of marine turtles with fisheries in the Mediterranean  
.- Nairobi : UNEP ; 1999 .- 59 p.  
ISBN 9973992660

114

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Climatic change and the Mediterranean, Vol 2  
.- Nairobi : UNEP ; 1996

**ABSTRACT** : This is the second volume in a series of books recording the results of studies on the impact of climate change on the ecological systems and socio-economic structures of the Mediterranean region. Incorporating the detailed results of five entirely new case studies, the book explores the likely effect of climate change on eleven vulnerable sites along the Mediterranean coastline and the available options to avoid, mitigate or adapt to these foreseeable impacts. The regional and site-specific climate scenarios and the methodology used for the analysis of impacts is described, and general conclusions are drawn about the predictable changes on the Mediterranean region as a whole.  
ISBN 0340645652

115

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The state of the marine and coastal environment in the Mediterranean region  
.- Nairobi : UNEP ; 1996 .- 142 p.  
(MAP Technical Reports Series; No. 100)  
ISBN 928071578X

116

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Protocol concerning specially related areas and biological diversity in the Mediterranean  
.- Nairobi : UNEP ; 1995 .- 46 p.

117

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Thermal discharges in the marine environment  
.- Nairobi : UNEP, 1984 .- 46 p.  
(Regional seas reports and studies No. 45)

118

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Etat du milieu marin et littoral de la région Méditerranéenne:  
.- Nairobi : UNEP ; 1996 .- 148 p.  
(MAP Technical Report Series; No. 101)

119

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The state of the marine and coastal environment in the Mediterranean region  
.- Nairobi : UNEP ; 1996 .- 142 p.  
(MAP Technical Reports Series; No. 100)  
ISBN 928071578X

120

**UNITED NATIONS ENVIRONMENT PROGRAMME**

State of the marine environment in the Mediterranean region .- Nairobi : UNEP ; 1990 .- 166 p.  
(Regional Seas Reports and Studies; No. 132)

121

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The state of the marine environment

.- Nairobi : UNEP ; 1990 .- 111 p.

(Regional seas reports and studies; No. 115.)

## *Marine Pollution*

122

**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

La contaminacion de los rios y sus efectos en las areas costeras y el mar

.- Santiago : CEPAL ; 2002

(Serie recursos naturales e infraestructura No. 50)

123

**THOMPSON, G. B.**

**INTERNATIONAL OCEANOGRAPHIC COMMISSION;  
UNITED NATIONS FOOD AND AGRICULTURE  
ORGANIZATION; UNITED NATIONS ENVIRONMENT  
PROGRAMME**

Report on marine pollution problems in Hong Kong

.- Paris : UNESCO ; 1976 .- 25 p.

(International workshop on marine pollution in East Asian waters; Penang, Malaysia; 1976)

No : IOC/IWMPEAW/7;SC.76/WS/10

124

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Long-term consequences of low-level marine contamination: an analytical approach

.- Nairobi : UNEP ; 1990 .- 14 p.

(UNEP.GESAMP; Regional seas reports and studies; No. 118 )

125

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Long-term programme for pollution monitoring and research in the Mediterranean (MED POL) - Phase II.

.- Nairobi : UNEP ; 1986 .- 26 p.

(Regional seas reports and studies; No. 028, Rev. 1)

126

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Environmental capacity: an approach to marine pollution prevention.

.- Nairobi : UNEP ; 1986 .- 54 p.

(Regional seas reports and studies; No. 080.)

127

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Marine pollution

.- Nairobi : UNEP ; 1983 .- 12 p.

128

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The status of oil pollution and oil pollution control in the West and Central African Region.

.- Nairobi : UNEP ; 1982 .- 190 p.

(Regional seas reports and studies; No. 004.)

129

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Industrial sources of marine and coastal pollution in the East African Region.

.- Nairobi : UNEP ; 1982 .- 33 p.

(Regional seas reports and studies; No. 007. )

130

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Marine pollution in the East African Region.

.- Nairobi : UNEP ; 1982 .- 54 p.

(Regional seas reports and studies; No. 008.)

131

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Marine Pollution in the East African Region  
 .- Nairobi : UNEP ; 1982 .- 35 p.  
 (Regional seas reports and studies; No. 009. )

132

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Oil pollution control in the East African Region  
 .- Nairobi : UNEP ; 1982 .- 50 p.  
 (Regional seas reports and studies; No. 010.)

133

**UNITED NATIONS ENVIRONMENT PROGRAMME**

National reports on marine pollution preparedness and response in the Northwest Pacific Region  
 Nairobi : UNEP, [s.d].- [multiple pagination]  
 (NOWPAP Publication; No. 4)

134

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines and principles for the preparation and implementation of comprehensive action plans for the protection and development of marine and coastal areas of regional seas.  
 .- Nairobi : UNEP ; 1982 .- 15 p.  
 (Regional seas reports and studies; No. 015.)

## *Marine Resources*

135

**LAMENDOUR, Pierre ; BEHM, Karl Heinz**  
**UNITED NATIONS INDUSTRIAL DEVELOPMENT**  
**ORGANIZATION**

(R) Micronesia; assessment of the present and future conditions for the

establishment of a fishmeal industry in the FSM; Technical report  
 .- Vienna : UNIDO ; 1990 .- 33 p.  
 (UNIDO-IO/R.178)

**ABSTRACT** : Expert report on conditions for establishing a fish meal industry in Micronesia - covers (1) location and geography; marine natural resources; fish meal production methods (2) fish meal factory: equipment (3) capital investment; costs: unskilled workers; electric power; diesel fuel; fresh water; investment (4) employment; profitability; labour costs (5) quality control. Recommendations. Statistics. Restricted. Tables, graphs, map.  
 No : UC/MIC/89/184

136

**UNITED NATIONS**

Integrated coastal zone management and non-living marine resources development in Asia and the Pacific  
 .- New York : United Nations ; 1999 .- 328 p.

**ABSTRACT** : The lack of an integrated approach is still a key problem in coastal zone management. It has led to coastal habitats being increasingly degraded through pollution and natural resources being overexploited with growing conflicts between competing resources users. This publication addresses the complex issue of integrated coastal zone management and non-living resources development in Asia and the Pacific at the local, national, subregional and regional levels.  
 No : ST/ESCAP/1978

137

**UNITED NATIONS**

Oceanic circle, the: governing the seas as a global resource  
 .- New York : United Nations ; 1999 .- 266 p.

**ABSTRACT** : The Oceanic Circle discusses the importance of the oceans within the global life support system, the cultural dimension of ocean space, the oceans and warfare, the wealth of the ocean and its market value and the ethical and spiritual dimension of the emerging economics of sustainable development in the oceans. It also analyzes the United Nations Convention on the Law of the Sea and tries to capture the emerging shapes of ocean governance, examining the regimes established by the various post-United Nations Conference on Environment and Development (Rio de Janeiro, 1992), agreements and action programmes.  
 No : UNUN-1013

138

**UNITED NATIONS ENVIRONMENT PROGRAMME**

**PORTER, Gareth**

Fisheries subsidies and overfishing: towards a structured discussion  
.-Nairobi: UNEP; 2001.- 46 p.

**ABSTRACT** : This paper is aimed at providing the basis for such a structured approach to the next phase of international discussions of the issue of fisheries subsidies and sustainable fisheries management. The paper has three main sections. Section I provides a brief historical overview of the issue of fisheries subsidies in the context of world trade negotiations and the evolution of WTO treatment of trade and environment issues. Section II is an analysis of the state of knowledge of the relationship between fisheries subsidies and overfishing. Section III presents a set of procedural and substantive issues that should be discussed in a more structured and systematic way in order to develop greater international consensus on the need for and feasibility of a new disciplines on fisheries subsidies. The section discusses a range of options for resolving each of the issues discussed, with reference to the WTO and other relevant international organizations.

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

The ecosystems of small islands in the South West Pacific .- Nairobi : UNEP ; 1994 .- 220 p. (Regional seas reports and studies; No. 151)

140

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The West Indian Manatee in the Caribbean North, South Atlantic  
.- Nairobi : UNEP ; 1996

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Forum on the Caspian, Aral and Dead seas? Symposium on the Aral sea and the surrounding region - proceedings:  
.- Nairobi : UNEP ; 1995 .- 145 p.  
(IETC Technical Publication Series; No. 4)

**ABSTRACT** : Forum on the Caspian, Aral and Dead Seas/Symposium on the Aral Sea and Surrounding Region - Proceedings. The United Nations University invited scholars from the Eurasian region as well as from outside this region to participate in a forum on the Caspian, Aral and Dead Seas, held on 27 March 1995. To convene and strengthen the inputs of this forum, a follow-up of two days was scheduled on 28 and 29 March during which participants presented papers, of which this publication is a result. The papers presented in this publication are diverse in nature, technical emphasis, focus and methodology. However, considered together, these proceedings comprise a specialized body of knowledge that will hopefully contribute to sharing of scientific concepts and test results, within a social-political context.  
ISBN 9280715062

142

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The impacts of climate on fisheries  
.- Nairobi : UNEP ; 1994 .- 36 p.  
(GEMS Environment Library; No. 13)

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

The oceans, the convention and you  
.- Nairobi : UNEP ; 1991

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview on land-based sources and activities affecting the marine environment in the East Asian seas  
.- Nairobi : UNEP ; 2000 .- 74 p.  
(Regional Seas Reports and Studies; No.173)  
ISBN 9280719319

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview on land-based sources and activities affecting the marine environment in the ROPME Sea area  
.- Nairobi : UNEP ; 1999  
(Regional Seas Reports and Studies; No. 168)

146

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Ocean energy potential of the West and Central African Region

.- Nairobi : UNEP ; 1983 .- 59 p.

(Regional seas reports and studies; No. 030.)

147

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Conservation of coastal and marine ecosystems and living resource of the East African region

.- Nairobi : UNEP ; 1982 .- 68 p.

(Regional seas reports and studies; No. 011. )

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Conservation of coastal and marine ecosystems and living resource of the East African region.

.- Nairobi : UNEP ; 1982 .- 96 p.

(Regional seas reports and studies; No. 012. )

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Proceedings of the workshop on invasive caulerpa species in the Mediterranean, Heraklion, Crete, Greece, 18-20 March 1998:

.- Nairobi : UNEP ; 1999 .- 317 p.

(MAP Technical Report Series; No. 125 )

ISBN 9280717723

150

**UNITED NATIONS UNIVERSITY**

The oceanic circle

.- Tokyo : UNU ; 1998 .- 240 p.

ISBN 9280810138

151

**ZALEWSKI, M.; JANAUER, G. A.; JOLANKAI, Geza**

**UNESCO**

Ecohydrology: a new paradigm for the sustainable use of aquatic resources

.- Paris : UNESCO ; 1997 .- 58 p.: ill.

(Technical documents in hydrology)

No : SC.97/WS/12

## *Rivers*

152

**BISWAS, Asit; CORDERIO, Newton; BRAGA, Benedito P. F; TORAJADA, Cecilia**

**UNITED NATIONS**

Management of Latin American river basins: Amazon, Plata and San Francisco

.- New York : United Nations ; 1999 .- 354 p.

ISBN 9280810112x

153

**ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN**

Sharing responsibility for river basin management

.- Santiago : ECLAC ; 1994

**ABSTRACT** : River Basins; Water Management; Decentralization; Latin America; Caribbean

No : LC/R.1365

154

**HE, Daming; ZHANG, Cuoyou; HSIANG-TE, Kung**

**UNITED NATIONS UNIVERSITY**

Towards cooperative utilization and co-ordination management of international rivers

.- Tokyo : UNU Press ; 2001

155

**HORI, Hiroshi**

**UNITED NATIONS**

The Mekong: environment and development

.- New York : United Nations ; 2001 .- 398 p.

ISBN 9280809865

156

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Crue de référence pour les sites de centrales nucléaires voisins de cours d'eau

.- Vienna : IAEA ; 1984

(Collection sécurité No 50-SG-S10A)

157

**MILLER, Barbara A. ; REIDINGER, Richard B.**

**WORLD BANK**

Comprehensive river basin development: The Tennessee Valley Authority .- Washington, D.C. : World Bank ; 1998 .- 99 p (World Bank Technical Paper; No 416)

**ABSTRACT** : The Tennessee Valley Authority (TVA) in the United States represents one of the few successful examples of comprehensive river basin development. Established to guide the development of the resources within the Tennessee River Basin, TVA operates a wide variety of water, power, economic development, and environmental programs within the region. This report presents an overview of TVA's growth and development, its institutions, and its operational programs.

ISBN 0-8213-4308-

158

**MOIGNE, Gu Le ; KIRMANI, Syed**

**WORLD BANK**

Fostering Riparian cooperation in international river basins: The World Bank at its best in development .- Washington, D.C. : World Bank ; 1997 .- 32 p.(World Bank Technical Paper; No.335)

**ABSTRACT** : Describes the World Bank's successful interventions in three international river basins—the Indus, the Mekong, and the Aral Sea—to foster riparian dialogue, cooperation, and agreements. The paper highlights the Bank's

successes in these basins as model strategies to follow for avoiding the adverse impacts that riparian conflicts may have on economic development in other regions.

ISBN 0-8213-3732-7

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**UNEP-GLOBAL ENVIRONMENTAL FACILITY**

Mekong River Commission (Cambodia, Laos, Thailand and Vietnam): water utilization project

.- Nairobi : UNEP-GEF ; 2000 .- 81 p.

160

**UNITED NATIONS**

Guidelines and manual on the protection and rehabilitation of contaminated rivers

.- New York : United Nations ; 2000 .- 296 p.

(Water Resources Series; No. 78)

**ABSTRACT** : Rapid urban population growth and expansion of industrialization are factors that have resulted in indiscriminate discharging of industrial and human wastes into rivers. This publication presents guidelines on technical approaches as well as institutional, statutory, planning, administrative and regulatory approaches relevant to the protection and rehabilitation of rivers, and how to apply them. The guidelines cover the management of both point and diffuse sources of pollution from urban and rural areas. Country experiences in Australia, Japan, New Zealand, the Philippines, the United Kingdom and the United States.

No : ST/ESCAP/SER.F/78

161

**UNITED NATIONS**

Towards integrated coastal zone management in Asia: development and management of non-living resources in the coastal zones of the Asia-Pacific region series vol. 1

.- New York : United Nations ; 1999 .- 71 p.

**ABSTRACT** : Concern for the protection of the coastal environment, conservation of coastal resources and sustainable development of coastal areas is now at the centre of national and international agendas. This study discusses

the concept of integrated coastal zone management (ICZM) and focuses on translating such a concept into an ICZM effort at a national level. Discussions surround coastal zone issues; the ICZM concept; and plans and programmes towards ICZM especially in Asian countries.

This publication presents detailed case studies on the national experiences of protection and rehabilitation of selected rivers in Bangladesh, Cambodia, China, India, Indonesia, the Lao People's Democratic Republic, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam. Policy makers, planners, water resources managers and environmentalists will find this reference book invaluable in the formulation of plans and strategies for improving and protecting water quality in rivers.

162

**BISWAS, Asit; CORDERIO, Newton; BRAGA, Benedito, P. F., TORAJADA, Cecilia**

**UNITED NATIONS UNIVERSITY**

Management of Latin American river basins: Amazon, Plata and Sao Francisco Tokyo: UNU. ; 1999 .- 354 p.

**ABSTRACT** : This book gathers expert analysis of issues surrounding three of Latin America's largest and most important rivers, including inter-state and intra-state conflicts over their fair and sustainable use.

163

**UNITED NATIONS**

The Mekong: environment and development

.- New York : United Nations ; 2001 .- 424 p.

**ABSTRACT** : This informative account of the experience in planning for development of the water resources of the Mekong basin is unique in at least two respects: it describes the Mekong experience and demonstrates how international thinking on water management has evolved over the years. The Mekong describes what was done, and why, while encouraging evaluation of possible lessons for use elsewhere.

164

**UNITED NATIONS**

Guidelines and manual on the protection and rehabilitation of contaminated rivers

.- New York : UN ; 2000 .- 296 p.

(Water Resources Series; No. 78)

**ABSTRACT** : Rapid urban population growth and expansion of industrialization are factors that have resulted in indiscriminate discharging of industrial and human wastes into rivers. This publication presents guidelines on technical approaches as well as institutional, statutory, planning, administrative and regulatory approaches relevant to the protection and rehabilitation of rivers, and how to apply them. The guidelines cover the management of both point and diffuse sources of pollution from urban and rural areas. Country experiences in Australia, Japan, New Zealand, the Philippines, the United Kingdom and the United States.

ISBN 9211199336

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**UNITED NATIONS**

Guidelines and manual on the protection and rehabilitation of contaminated rivers

.- New York : United Nations ; 1999 .- 296 p.

ISBN 9211199336

166

**UNITED NATIONS ENVIRONMENT PROGRAMME**

River Cetina watershed and the adjacent coastal area : environmental and socio-economic profile

.- Nairobi : UNEP ; 2000 .- 176 p.

ISBN 9536429349

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Conceptual framework and planning guidelines for integrated coastal area and river basin management .- Nairobi : UNEP ; 1999 .- 80 p.

**ABSTRACT** : This book provides a conceptual framework for linking coastal areas and river basins from hydrological, environmental and socio-economic perspectives, based on the systems analysis approach. The second part of the book provides practical procedures decision makers can take in establishing an initial plan for managing coastal areas and river basins in an integrated manner. ISBN 9536429284

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Mekong River basin diagnostic study final report  
.- Nairobi : UNEP ; 1997

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Wetlands integrated river basin management - experiences in Asia and the Pacific  
.- Nairobi : UNEP ; 1997  
ISBN 9839663240

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Potential impacts of mining on the Fly River  
.- Nairobi : UNEP ; 1988 .- 119 p.  
(Regional seas reports and studies; No. 099)

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**UNITED NATIONS UNIVERSITY**

UNESCO IHP International symposium on rivers and people in Southeast Asia and the Pacific-partnership for the 21st century, at the United Nations University, Tokyo, Japan, October 23-27, 1995  
.- Tokyo : UNU Press/ UNESCO ; 1995

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**UNITED NATIONS UNIVERSITY**

Management of Latin American river basins: Amazon, Plata, San Francisco and Tokyo  
Tokyo : UNU ; 1999 .- 325 p.  
ISBN 928081012x

173

**UNITED NATIONS UNIVERSITY**

Hydropolitics along the Jordan River  
.- Tokyo : UNU ; 1995 .- 272 p.  
ISBN 9280808591

**WORLD BANK**

Multipurpose river basin development in China  
.- Washington, D.C. : World Bank ; 1994 .- 118 p.

**ABSTRACT** : This report examines China's development plans for seven main river basins and discusses the tremendous problems the country faces in scaling down water projects to match reduced funding. It also reviews the need to link water development to changes in the macroeconomy and the management of water institutions.

Water management specialists describe the benefits of an integrated system for developing river basins and suggest changes in China's water policies. They recommend actions to improve river basin commissions, make management more efficient, create a cost recovery system, enforce higher environmental standards, and provide resettlement and job training.  
ISBN 0-8213-2621-X

*Waste Water*

175

**BOLAND, John, ; MARINO, Manuel**  
**WORLD BANK**

An integrated approach to wastewater treatment: deciding where, when, and how much to invest  
.- Washington, D.C. : World Bank ; 1999 .- 60 p.

**ABSTRACT** : "Where, when, and how much to invest in wastewater treatment is a policy decision that presents many challenges and is not properly addressed in most situations worldwide. The most common situations are, unfortunately, those in which no treatment is provided at all..." The integration of wastewater management and pollution control interventions and policies within the broader water resources management policy are essential for achieving the efficient use of the scarce resource available. With that in mind, this paper has three objectives:  
\* Emphasize the need for systematic evaluation of wastewater management actions and investments as part of any water resources management initiative.  
\* Define the conceptual framework that should guide the analysis process.  
\* Identify and explore techniques appropriate to this analysis. The ultimate purpose of the paper is to provide a general approach to developing and implementing wastewater management interventions. Its scope is determined by two main

considerations: (i) the need to incorporate the general principles that determine water resources management policies into the design and selection of wastewater management and pollution control interventions; and (ii) the need to address water quality problems at the appropriate geographical scale.

ISBN 0-8213-4467-6

176

**HUBER, L.**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Russian Federation; high-level advisory services for the Baikal pulp and paper mill; assessment of the waste water situation at BPPM:

.- Vienna : UNIDO ; 1996 .- 48 p.

(UNIDO-DP/ID/SER.A/1748)

**ABSTRACT** : Expert report on industrial waste water management situation at pulp and paper factory in Russian Federation - covers (1) fresh water supply (2) waste water sources and quality, water pollution, pollutants, effluent from factory (3) waste water treatment, effluent treatment (4) sludge treatment (solid wastes) and incineration (5) analytical monitoring of the waste water. Recommendations. Statistics. Additional references: hazardous wastes, environment, pulp and paper industry. Tables. Federation No : SI/RUS/94/801

177

**IDELOVITCH, Emanuel ; RINGSKOG, Kla**  
**WORLD BANK**

Wastewater treatment in Latin America: old new options

.- Washington, D.C. : World Bank ; 1997 .- 80 p.

ISBN 0-8213-3969-9

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**INTERNATIONAL ATOMIC ENERGY AGENCY**

Use of irradiation for chemical and microbial decontamination of water, wastewater and sludge

.- Vienna : International Atomic Energy Agency ; 2001 .- IAEA TECDOC Series No. 1225

179

**MARA, D.; CAIRNCROSS, S.**

**WORLD HEALTH ORGANIZATION**

Guidelines for the safe use of wastewater and excreta in agriculture and aquaculture

.- Geneva : WHO ; 1989 .- vii-187 p.

**ABSTRACT** : Presents and explains the full range of practical and technical factors that need to be considered when planning, designing, and implementing schemes for the safe reuse of wastewater and excreta in agriculture and aquaculture. Emphasis is placed on the practical implications of new knowledge indicating that the recycling of wastewater and excreta can now be managed in ways that eliminate risks to health. In keeping with the need to conserve resources, the book also presents compelling arguments for the environmental advantages of reuse schemes, including increased crop yields, reduced requirements for artificial fertilizers, avoidance of surface water pollution, conservation of soil and freshwater resources, and desertification control.

Chapters in the first half of the book explain why human wastes are increasingly regarded as a safe and valuable resource for use in crop irrigation, soil fertilization, and aquaculture. Readers are given detailed information on both potential and actual health risks posed by each of 30 excreta-related pathogens. The second half of the book provides richly detailed guidance on technical options for health protection and on the legal and financial components of project planning and implementation.

The most extensive chapter describes and illustrates numerous technical interventions for preventing or correcting hazards associated with water from different sources, procedures for water treatment, and methods used to treat and store water in households. Additional strategies for improvement are covered in the remaining chapters, which outline methods of hygiene education in communities and discuss the important role of legislation and regulation.

Further practical guidance is provided in a series of annexes, which give examples of sanitary inspection and hazard scoring forms for 11 different types of water supply, list responsibilities for different categories of surveillance staff, and provide illustrated step-by-step instructions for several sampling methods and analytical tests for use in laboratories and the field.

180

**RIVERA, Daniel**  
**WORLD BANK**

Private sector participation in the water and wastewater sector: lessons from six Developing Countries  
.- Washington, D.C : World Bank ; 1997 .- 116 p.

181

**UNITED NATIONS**

Environmentally sound technologies for wastewater and stormwater management: an international sourcebook  
.- New York : United nations ; 2002 .- 638 p.  
ISBN 9280718207

182

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION**  
**FOR ASIA AND THE PACIFIC**

Wastewater management policies and practices in Asia and Pacific  
.- Bangkok : UN ESCAP ; 1999  
(Water Resources Series; No. 79)

## *Water and Education*

183

**CLASSEN-BAUER, Ingrid**  
**GERMANY. NATIONAL COMMISSION FOR UNESCO,**

Water in our life: textbook for teachers in environmental education  
.- Paris : UNESCO ; 1993 .- 300 p.: ill.

184

**GOODBODY, Ivan**  
**UNESCO**

An institute of aquatic sciences at the University of Guyana - (mission)  
.- Paris : UNESCO ; 1984 .- 46 P.  
No : FMR/SC/OCE/ROSTCAL/84/107; RP/1981-1983/2/7.4/04/Technical report

185

**MARGAT, Jean**  
**UNESCO**

Towards a new water culture = Vers une nouvelle culture de l'eau = Hacia una nueva cultura del agua  
.- Paris : UNESCO ; 2001 .- 87-89 p.

186

**SKOFTELAND, Eagil**  
**UNESCO**

Freshwater resources: environmental education module  
.- Paris : UNESCO ; 1995 .- 107 p.  
No : EPD.95/WS/1

187

**UNESCO**

Proposed establishment of the UNESCO-IHE institute for Water Education = Proposition d'établissement de l'Institut UNESCO-IHE pour l'éducation relative à l'eau = Propuesta de creación del Instituto UNESCO-IHE para la Educación relativa al Agua  
.- Paris : UNESCO ; 2001 .- 25 p.

188

**UNESCO**

Report on the planned UNESCO-IHE Institute of Water Education  
.- Paris : UNESCO ; 2001 .- 3 p.  
No : IHP/BUR-XXXI/INF.1

189

**UNESCO**

Proposed establishment of a Regional Centre for Training and Water Studies of Arid and Semi-arid zones, in Egypt, under the auspices of UNESCO = Proposition de création en Egypte, sous les auspices de l'UNESCO, d'un centre régional de formation et d'étude des problèmes de l'eau en zones arides et semi-arides = Propuesta de creación, en Egipto, bajo los auspicios de la UNESCO, de un centro regional de formación y estudios hidrológicos relativos a las zonas áridas y semiaridas  
.- Paris : UNESCO ; 2001 .- 27 p.  
No : 31 C/54 + CORR

190

**UNESCO**

Proposed establishment of the UNESCO-IHE Institute for Water Education = Proposition d'établissement de l'institut UNESCO-IHE pour l'éducation relative à l'eau = Propuesta de creación del Instituto UNESCO-IHE para la Educación relativa al Agua

.- Paris : UNESCO ; 2001 .- 26 p.

No : 31 C/47

191

**UNESCO**

Proposal for the establishment of a Regional Center for Training and Water Studies of Arid and Semi-Arid zones under the auspices of UNESCO = Proposition d'établir un centre régional de formation et d'études hydrologiques pour les zones arides et semi-arides sous les auspices de l'UNESCO = Propuesta de creación de un centro regional de formación y estudios hidrologicos relativos a las zonas aridas y semiaridas, bajo los auspicios de la UNESCO

.- Paris : UNESCO ; 2001 .- 26 p.

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**UNICEF; INTERNATIONAL WATER AND SANITATION CENTRE**

Towards better programming: a manual on school sanitation and hygiene

.- New York : UNICEF ; 1998 .- 60 p.

(Part of the "Water, Environment and Sanitation Technical Guidelines Series")

## *Water and Energy*

193

**INTERNATIONAL ATOMIC ENERGY AGENCY**

High - temperature on-line monitoring of water chemistry and corrosion control in water cooled power reactors

.- Vienna : IAEA ; 2002

(IAEA TECDOC Series No. 1314)

## *Water and Environment*

194

**DUPUY, Amelie; LEE, Cathy; SCHAAF, Thomas; WAUCHOPE, Samantha UNESCO**

International seminar on combating desertification: Freshwater resources and rehabilitation of degraded areas in the drylands, N'Djamena, Chad, 30 October to 4 November 2000; proceedings = Séminaire international sur la lutte contre la désertification: ressources en eau douce et réhabilitation des terres dégradées dans les zones arides, N'Djaména, Tchad, 30 octobre au 4 novembre 2000, actes du séminaire

.- Paris : UNESCO ; 2002 .- 135 p.

**ABSTRACT** : Desertification; arid zone; freshwater; water resources management; land use; Africa; Asia

195

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water and the environment

.- Rome : FAO ; 1975 .- 67 p.

(FAO Irrigation and Drainage Papers)

196

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Clear water, blue skies: China's environment in the new century

.- Washington, D.C. : World Bank ; 1997 .- 114 p.: ill., maps

197

**UNESCO**

Final plan of IHP-V: hydrology and water resources development in a vulnerable environment

.- Paris : UNESCO ; 1996 .- 57 p.

No : IHP/BUR/XXIII/10

198

**UNESCO**

Hydrology and water resources development in a vulnerable environment: detailed plan of the fifth phase (1996-2001) of the IHP = Hydrologie et mise en valeur des ressources en eau dans un environnement vulnérable: plan détaillé de la cinquième phase du PHI, 1996-2001= Hidrologia y desarrollo de los recursos hídricos en un medio ambiente vulnerable: plan pomenorizado de la Quinta fase (1996-2001) de PHI

.- Paris : UNESCO ; 1996 .- 57 p.

No : SC.96/WS/24

199

**UNITED NATIONS CHILDREN'S FUND**

Learning from experience (water and environmental sanitation in India)

.- New York : UNICEF ; 2000 .- 20 p.

200

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR WESTERN ASIA**

Proceedings of the expert group meeting on harmonization of environmental standards in the water sector of ESCWA members

.- Amman : ESCWA ; 1999

No : E/ESCWA/ENR/1999/20

201

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Climatic change in the intra-Americas seas

.- Nairobi : UNEP ; 1993 .- 402 p.

**ABSTRACT** : This book by oceanographers, meteorologists, ecologists and social scientists gives an account of the implications that global warming and sea-level rise will have on ecosystems and the socio-economic structure in the marine and coastal regions of the Caribbean, the gulf of Mexico, the Bahamas, Bermuda and the Northeast coast of south America. The topics covered include: modeling future climate change, physical process and effects, ecological effects, and socio-economic effect including the impact on human health. The regional studies that form the basis of this book were undertaken for UNEP and UNESCO

202

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Global marine biological diversity: a strategy for building conservation into decision-making

.- Nairobi : UNEP ; 1993 .- 383 p.

ISBN 1559632569

203

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Global strategies for marine environmental protection

.- Nairobi : UNEP ; 1991 .- 36 p.

(GESAMP Reports and Studies; No. 45)

204

**UNITED NATIONS ENVIRONMENT PROGRAMME**

State of the marine environment

.- Nairobi : UNEP

(Regional Seas Reports and Studies; No. 124)

205

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the marine, coastal and associated freshwater environment in the West and Central African region

.- Nairobi : UNEP ; 1999 .- 110 p.

(Regional Seas Reports and Studies; No. 171)

ISBN 0521804949

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the marine, coastal and associated freshwater environment in the Wider Caribbean region

.- Nairobi : UNEP ; 1999 .- 123 p.

(Regional Seas Reports and Studies; No. 172)

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Implications of expected climate change in the West African region

.- Nairobi : UNEP ; 1994 .- 42 p.

(Regional Seas Reports and Studies; No. 148)

208

**ROZANSKI, Kazimierz; FROEHLICH, Klaus; MOOK, Willem  
UNESCO**

Environmental isotopes in the hydrological cycle: Principles and applications, v. III: surface water

.- Paris : UNESCO ; 2001 .- 117 p.

(Technical documents in hydrology)

ABSTRACT : Isotopes; surface water; hydrological cycle; water chemistry; hydrological measurement

209

**WORLD METEOROLOGICAL ORGANIZATION**

Hydrology and water resources development in a vulnerable environment: an updated outline of the fifth phase (1996-2001) of the IHP = Hydrologie et mise en valeur des ressources en eau dans un environnement vulnérable: esquisse mise à jour de la cinquième phase du PHI (1996-2001) = Hidrologia y desarrollo de los recursos hídricos en un medio ambiente vulnerable: documento básico actualizado de la quinta fase (1996-2001) del PHI

.- Geneva : WMO ; 1993 .- 1 p.

No : SC.93/WS/34

## *Water and Health*

210

**BARTRAM, J.  
WORLD HEALTH ORGANIZATION**

Monitoring bathing water: a practical guide to the design and implementation of assessments and monitoring programmes

.- London : E FN Spon ; 1999

211

**BARTRAM, Jamie; THYSSEN, Niels; GOWERS, Alison  
UNESCO**

Water and health in Europe: a joint report from the European environment agency and the WHO regional office for Europe

.- Paris : UNESCO ; 2002 .- 222 p. .ill.

212

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS; UNITED NATIONS ENVIRONMENT  
PROGRAMME**

Legal aspects of protecting and managing the marine and coastal environment of the East African region.

.- Nairobi : UNEP, 1982 .- 53 p.

(Regional seas report and studies No. 38)

213

**HUNTER, Paul R.; WAITE, Mike; RONCHI, Elettra  
ORGANIZATION FOR ECONOMIC CO-OPERATION AND  
DEVELOPMENT**

Drinking water and infectious disease: establishing the links

.- Boca Raton, Fla. : IWA Publishing ; 2002

ISBN 1-84339-27-2

214

**JALAN, Jyotsna; RAVALLION, Martin  
INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

Does piped water reduce diarrhea for children in rural India?

.- Washington, D.C. : World Bank ; 2001 (Policy research working paper)

215

**SAADE, C. ; BATEMAN, M. ; BENDAHMANE, D.  
UNITED NATIONS CHILDREN'S FUND ; WORLD BANK  
GROUP**

(Handwashing for diarrheal disease prevention)

.- New York : UNICEF, [s.d.]

216

**UNITED NATIONS CHILDREN'S FUND**

Planning for health and socio-economic benefits from water and environmental sanitation programmes: a workshop summary  
.- New York : UNICEF ; 1993 .- 40 p., ill.

217

**UNITED NATIONS CHILDREN'S FUND**

Towards better programming: a manual on hygiene promotion  
.- New York : UNICEF ; 2003  
(Part of the "Water, Environment and Sanitation Technical Guidelines Series)

218

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Thalassogenic diseases.  
.- Nairobi : UNEP ; 1986 .- 44 p.  
(Regional seas reports and studies; No. 079.)

219

**WORLD HEALTH ORGANIZATION**

Toxic cyanobacteria in water: a guide to their public health consequences, monitoring and management  
.- Geneva : WHO ; 1999 .- 416 p.  
ISBN 0419239308

## *Water and Sanitation*

220

**ALMEDOM, A. ; BLUMENTHAL, ; MANDERSON, L.  
OVERSEAS DEVELOPMENT ADMINISTRATION ;  
INTERNATIONAL NUTRITION FOUNDATION FOR  
DEVELOPING COUNTRIES, LONDON SCHOOL OF  
HYGIENE AND TROPICAL MEDICINE ; UNICEF**

Hygiene evaluation procedures (approaches and methods for assessing water and sanitation related practices)  
.- New York : UNICEF ; 1997 .- 124 p.

221

**BIRON, Paul J.  
INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

Terminology of water supply and environmental sanitation  
= Terminologie de l'approvisionnement en eau et de l'assainissement du milieu  
.- Washington, D.C. : World Bank ; 1987 .- 171 p.

222

**ESREY, S. ; ANDERSSON, I. ; HILLERS, A. ; SAWYER, R.  
UNITED NATIONS DEVELOPMENT PROGRAMME ;  
SWEDISH INTERNATIONAL DEVELOPMENT  
COOPERATION AGENCY; UNICEF ; PAN AMERICAN  
HEALTH ORGANIZATION**

Closing the loop ecological sanitation for food security .- New York : UNICEF ; 2001 .- 90 p

223

**FRANCEYS, R.; PICKFORD, J.; REED, J  
WORLD HEALTH ORGANIZATION**

A Guide to the development of on-site sanitation  
.- Geneva : World Health Organization ; 1992 .- VIII-237 p.  
**ABSTRACT** : Provides detailed practical and technical advice intended to guide the selection, design, construction, and maintenance of on-site facilities for the removal of human excreta. Addressed to engineers, sanitarians, medical officers, and project planners, the book concentrates on technical options suitable for householders building their own latrines, whether in small communities, rural areas, or deprived urban settlements. Details range from line drawings illustrating features of design and construction, through a list of reasons why improved sanitation may elicit negative responses from users, to instructions for calculating the internal dimensions of a septic tank.

The book features eleven chapters in three parts. Chapters in the first part

introduce the foundations of sanitary practice, describe the links between excreta and disease, and explain the numerous social and cultural factors that must be considered at the planning phase. Chapters in the second and most extensive part provide a detailed technical guide to the design, construction, operation and maintenance of all the main options for on-site sanitation. Chapters describe how the different types of latrine work, discuss their relative merits, and set out detailed plans for the construction of latrines and their components. The final part features three chapters on the planning and development of on-site sanitation projects, underscoring the need for a thorough analysis of cultural as well as design features.

224

**FOSTER, Vivien; GOMEZ-LOBO, Andres; HALPERN, Jonathan**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND**  
**DEVELOPMENT**

Designing direct subsidies for water and sanitation services: Panama: a case study

.- Washington, D.C. : World Bank ; 2000 .- 29 p.: ill.  
 (Policy research working paper)

225

**IDELOVITCH, Emanuel; RINGSKOG, Klas**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND**  
**DEVELOPMENT**

Private sector participation in water supply and sanitation in Latin America

.- Washington, D.C. : World Bank ; 1995 .- 51 p.: ill.

226

**NARAYAN, Deep**  
**WORLD BANK**

Participatory evaluation: tools for managing change in water and sanitation

.- Washington, D.C. : World Bank ; 1993 .- 136 p.  
 (World Bank Technical Paper; No. 207)

**ABSTRACT** : Development projects that encourage direct community participation usually meet with greater success than those that do not. This guidebook describes ways of letting poor people help monitor and evaluate the water and sanitation programs that serve them. It provides simple shortcuts for building community participation and consensus.

Decision makers will learn the different risks posed by this approach, such as viewing community participation as a panacea. The study describes ways to set reasonable goals without discouraging unexpected progress. It provides a handy framework of key indicators that can be used to monitor progress. These indicators gauge a project's cost, sustainability, and effectiveness. They rate a community's ability to expand services and handle more operating responsibilities.

ISBN 0-8213-2477-2

227

**SIMPSON, M.; WOOD, S.**  
**WORLD HEALTH ORGANIZATION**

Sanitation promotion

.- Geneva : WHO ; 1998 .- XV-277 p.

**ABSTRACT** : A collection of original articles, case studies, checklists, worksheets, and stimulating ideas aimed at raising the profile of sanitation and thus attracting the assistance and investments needed to make progress. Noting that tremendous efforts over the past two decades have had little impact on sanitary conditions for much of the world, the book calls for a revolution in the way the sanitation sector defines its objectives and conducts its work. With this goal in mind, the book serves as a rich resource of new ideas, solid lessons based on past experience, guidance on "best practices" in meeting a range of difficult needs, and some innovative new tools for both promoting sanitation and introducing ecologically-friendly technologies. Although all areas of sanitation are considered, the major emphasis is on the management of human wastes.

The book contains 40 articles - most of which were written especially for this collection - presented in four chapters. The first introduces the magnitude of the challenge: human excreta is probably the world's number one pollutant; lack of sanitation is responsible for most of the diseases and deaths in developing countries; many conventional approaches are based on false assumptions that make failure inevitable. Past errors include a preoccupation with safe water supply and assumption that sanitation would follow, use of a restricted number of "good" technologies, the focus of engineering education on sewerage systems, and a failure to understand that consumers are more interested in the prestige, convenience, comfort and privacy of sanitary facilities than in theories about germs and disease.

Against this background, articles in chapter two provide ideas on promotional techniques that can be used to gain political will and secure

partnerships, whether at the government level or with nongovernmental organizations and the private sector. Noting that the future of sanitation rests more on the behaviour of politicians than of sanitary engineers, the chapter contains abundant practical advice on how to mobilize the media, engage the commitment of politicians, and take advantage of the self-interests of the private sector. Case studies from Uganda and India show how these guidelines and principles work in practice.

Chapter three, on programme design, addresses the need - in a sector marred by past failures and on the verge of stagnation - to produce good "showcase" programmes and projects. With this need in mind, the chapter sets out a number of principles, derived from an analysis of good sanitation programmes, as statements of "best practice" in this sector. These principles are illustrated through articles on gender, strategies for changing hygiene behaviour, participatory approaches, and the use of household financing. Principles and examples are then summarized in several checklists that can help field staff determine whether sanitation projects, including those designed for emergency situations, are in line with state-of-the-art "best practices".

The final chapter uses case studies to illustrate recent innovations that hold particular promise for the promotion of sanitation. These include a number of child-centred and participatory approaches as well as several new technologies. Pointing towards an exciting future, these technologies reflect an ecological approach to sanitation that aims to recycle nutrients and prevent water pollution and further water scarcity. All case studies also illustrate the importance of promoting sanitation through the use of participatory approaches that respect the consumer's wishes and conventional wisdom.

No : WHO/EOS/98.5

228

**UNICEF**

The Progress of nations, 1997: the nations of the world ranked according to their achievements in child health, nutrition, education, water and sanitation, and progress for women = Le Progrès des Nations, 1997 = El Progreso de las naciones, 1997.

.- Paris : UNICEF ; 1997 .- 68 p. , ill.

229

**UNICEF**

Better sanitation programming: a UNICEF Handbook

.- New York : UNICEF ; 1997 .- 150 p.

(Part of the "Water, Environment and Sanitation Technical Guidelines Series")

230

**UNICEF**

From handpumps to health: the evolution of water and sanitation programmes in Bangladesh, India and Nigeria

.- New York : UNICEF ; 1990 .- 133 p.

ISBN 92806000516

231

**UNICEF**

Learning from experience: evaluation of UNICEF's Water and Environmental Sanitation Programme in India, 1966-1998

.- New York : UNICEF ; 2000 .- 200 p.

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**UNICEF**

Towards better programming: a handbook on communication in WES

.- new York : UNICEF ; 1999

(Part of the "Water, Environment and Sanitation Technical Guidelines Series")

233

**UNICEF**

UNICEF Strategies in water and environmental sanitation

.- New York : UNICEF ; 1995 .- 65 p.

234

**UNICEF**

Water and sanitation in UNICEF, 1946-1986

.- New York : UNICEF ; 1987 .- 67 p.,

(UNICEF History Series, Monograph 8)

235

**UNICEF**

The water history: water and sanitation UNICEF 1946-1986  
 .- New York : UNICEF ; 1986 .- 172 p.  
 (UNICEF WET Monographs; No.2)

236

**WORLD BANK**

Toolkits for private participation in water and sanitation  
 .- Washington, D.C. : Worldbank ; 1997 .- 48 p.  
 ISBN 0-8213-4003-4

237

**WORLD HEALTH ORGANISATION**

Water and sanitation in Islam  
 .- Geneva : WHO ; 1996 .- 27 p.

**ABSTRACT** : Identifies Islamic teachings and rulings relevant to water and sanitation and interprets these in terms of healthy individual and community behaviours. The text, which responds to the strong influence of religion in Eastern Mediterranean countries, incorporates the views of a leading Muslim scholar, supported by the expertise of health professionals. Emphasis is placed on water-related behaviours that promote high standards of personal hygiene and thus help prevent disease. Main points covered include the importance of safe drinking-water, the prevention of water-borne diseases through community and personal measures, and the principles of personal cleanliness, including precise instructions, in line with Islamic teachings, for bathing and scrupulous routine cleaning and care of the body.

238

**WORLD HEALTH ORGANIZATION**

Financial management of water supply and sanitation: a handbook  
 .- Geneva : WHO ; 1994 .- 83 p.: ill.

239

**XU, Lixin Colin; ZULUAGA, Ana Maria**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Institutions, politics, and contracts: the attempt to privatize the water and sanitation utility of Lima, Peru  
 .- Washington, D.C. : World Bank ; 2000 .- 56 p.: ill.  
 (Policy Research Working Paper)

## *Water and Sustainable Development*

240

**BISWAS, Asit k.; UITTO, Juha K.**  
**UNITED NATIONS**

Sustainable development of the Ganges Barhamaputra-meghna Basins  
 .- New York : United nations ; 2001 .- 202 p.  
 ISBN 9280810413

241

**GREY, David ; GILGAN-HUNT, Edeltraut ; SHARMA, Narendra P. [et al...];**  
**WORLD BANK**

African water resources: challenges and opportunities for sustainable development  
 .- Washington, D.C. : World Bank ; 1996 .- 144 p.  
 (World Bank Technical Paper; No. 331)

**ABSTRACT** : Develops a strategy for water resources management in Sub-Saharan Africa based on the principles that water is a scarce resource and that access to it raises issues of economic efficiency, social equity, and environmental sustainability. The report recommends an integrated, cross-sectoral, catchment-area approach and identifies five development imperatives: household water security, protection of catchment areas and wetlands, food security, water quality and human health, and intranational and international  
 ISBN 0-8213-3711-4

242

**UNITED NATIONS**

Guidelines on water and sustainable development: principles and policy options  
.- New York : United Nations ; 1997 .- 144 p.

(Water resources series)

**ABSTRACT** : The multisectoral nature of water resources development in the context of socio-economic development, as well as the multi-interest utilization of water resources have made the planning of programmes and projects on water and sustainable development a highly complex task. The guidelines in this publication are presented with the hope that, in the future, water-resources development activities and socio-economic development activities would not adversely affect each other. The publication specifically outlines principles and policy options for guidelines on water and sustainable development.

243

**UNITED NATIONS**

Sustainable development of water resources in Asia and the Pacific: An overview  
.- New York : United Nations ; 1998 .- 167 p.

**ABSTRACT** : Arguing that the role of development and use of fresh water must not exceed certain limits if ecological balance is to be maintained, this publication reviews the situation of water resources development and use in the Asia-Pacific region. The findings presented on an individual country basis, will prove to be most useful to decision makers and professionals in the field of water development, management and academics.

ISBN 9211198267

244

**UNITED NATIONS DEVELOPMENT PROGRAMME**

Water, (strengthening the fabric of society. Capacity building for sustainable development)

.- New York : UNDP ; 1998 .- 47 p.

245

**ROTHMAN, Mitchell**

**WORLD BANK**

Measuring and apportioning rents from hydroelectric power developments

.- Washington, D.C. : World Bank ; 2000 .- 64 p.

ISBN 0-8213-4798-5

246

**UMALI, Dina**

**WORLD BANK**

Irrigation-induced salinity: a growing problem for development and the environment

.- Washington, D.C. : World Bank ; 1993 .- 94 p.

ISBN 0-8213-2508-6

## *Water Conservation*

247

**DAWSON, M. D. ; AHMAD, S.**

**INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT**

A field orientated approach to solving catchment problems: a working paper for soil and water conservation research monitoring

.- Rome : IFAD ; 1994

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**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS ; INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT**

Small-scale water control schemes in Sub-Saharan Africa

.- Rome : IFAD; FAO ; 1986

249

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Watershed development, with special reference to soil and water conservation

.- Rome : FAO ; 1985 .- 266 p.

(FAO Soils Bulletins)

ISBN 9251008590

No : FAO 677

250

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Soil and water conservation in semi-arid areas  
.- Rome : FAO ; 1995 .- 185 p.  
(FAO Soils Bulletins)  
ISBN 9251026068  
No : FAO1494

251

**UNITED NATIONS**

Water conservation: a guide to promoting public awareness  
.- New York : United Nations ; 2002 .- 104 p.  
ISBN 9211200482

## *Water Consumption*

252

**UNICEF**

India MARK III (VLOM) Deepwell handpump installation and maintenance manual  
.- New York : UNICEF ; 1991 .- 112 p., ill.

253

**UNICEF**

Rainwater harvesting and water use in the Barrios of Tegucigalpa  
.- New York : UNICEF ; 1991 .- 60 p.

## *Water Crisis*

254

**CLAYSON, Alison**  
**UNESCO**

World water crisis? = Une Crise mondiale de l'eau? = Una Crisis mundial del agua?  
.- Paris : UNESCO ; 2001 .- 5 p., ill.

255

**DOUROJEANNI, Axel; JOURAVLEV, Andrei**  
**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Crisis de gobernabilidad en la gestion del agua (desafios que enfrenta la implementacion de las recomendaciones contenidas en el capitulo 18 del programa 21  
.- Santiago : CEPAL ; 2001 .- 80 p.  
(Serie recursos naturales e infraestructura; No. 35)  
**ABSTRACT** : Water Resources; River Basins; Drinking Water; Water Supply; Water Management; Water Utilization; Governance; Latin America; Caribbean  
ISBN 92-1-321960-1  
No : LC/L.1660-P

256

**FAURE, Guy. O.; RUBIN, Jeffrey Z.**  
**UNESCO**

Culture and negotiation: the resolution of water disputes  
.- Paris : UNESCO ; 1993 .- 264 p.

257

**KOBORI, Iwao; GLANTZ, Michael H.**  
**UNITED NATIONS UNIVERSITY**

Central Eurasian water crisis: Caspian, Aral, and Dead Seas  
.- Tokyo : UNU Press ; 1998

258

**OGIER, Thierry**

**UNESCO**

Trees and water under siege = La forêt et l'eau menacées = Brasil: zonas húmedas en peligro

.- Paris : UNESCO ; 2000 .- 13-14 p.: ill.

259

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The Water crisis and population - Part 1: Water and the world; Part 2: Dimensions of the crisis; Part 3: Water for living; Part 4: Water and the future

.- Rome : FAO .- 255 p.

260

**INTERNATIONAL ASSOCIATION OF HYDROLOGICAL SCIENCES; WORLD WATER COUNCIL**

Summary of recommendations of the international conference on world water resources at the beginning of the 21st Century: Water: a looming crisis? Paris, 3-6 June 1998

.- Paris : UNESCO ; 1998 .- 28 p.

261

**PEREIRA, Luis S.; CORDERY, Ian; LACOVIDES, Lacovos UNESCO**

Coping with water scarcity

.- Paris : UNESCO ; 2002 .- 272 p .

No : SC.2002/WS/49

262

**SALMAN, Salman M. A. ; CHAZOURNES, Laurence Boisson de WORLD BANK**

International watercourses: enhancing cooperation and managing conflict = Cours d'eaux internationaux: renforcer la coopération et gérer les différends: actes du séminaire de la Banque mondiale) .- Washington, D.C. : World Bank ; 1999 .- 236 p. (World Bank Technical Paper; No. 414F.)

ISBN 0-8214-4605-9

263

**UNESCO**

Conference of water and world security: the role of the Netherlands in the water programmes of UNESCO and WHO, 17 January 2002, Delft, the Netherlands; programme and abstracts

.- Paris : UNESCO ; 2002 .- 18 p.

264

**UNITED NATIONS**

Central Eurasian water crisis: Caspian, Aral and Dead Seas

.- New York : United Nations ; 1998 .- 214 p.

**ABSTRACT** : Central Eurasian Water Crisis refers to the awareness by the global community that, in the 21st century, people in various regions around the world will likely face problems of water quality and quantity. These problems have already surfaced in several locations. This volume focuses on three of them: the Dead Sea, the Aral Sea and the Caspian Sea regions. It identifies the water-related problems and the prospects for resolving them.

No : UNUP-925

265

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The world's lakes in crisis : guidelines of lake management

.- Nairobi : UNEP ; 1997 .- Vol. 8, 184 p.

**ABSTRACT** : Both natural lakes and reservoirs are subject to similar problems. Examples are water pollution from municipal and industrial effluents and non-point source runoff, eutrophication, acidification and ecosystem disruption. Information and experiences on the effective management of such problems, therefore, is essential to ensure the maximum beneficial use of these water resources for human purposes. A major purpose of this report, therefore, is to facilitate this exchange of information and experience. Although, not exhaustive it provides information and guidance on relevant issues related to natural lakes and reservoirs, citing case studies to illustrate its major points.

ISBN 4906356230

266

**WORLD BANK**

International watercourses: enhancing cooperation and managing conflict  
.- Washington, D.C. : World Bank ; 1999 .- 308 p.  
(World Bank Technical Paper; No. 414A)  
ISBN 0-8213-4432-3

## *Water Damage*

267

**UNITED NATIONS**

Floods people at risk, strategies for prevention  
.- New York : United Nations ; 1997 .- 110 p.  
**ABSTRACT** : Floods are the most common of natural disasters and cause the greatest numbers of deaths, yet their danger is often underestimated. This book describes in non-technical terms the causes of floods and the strategies that can be used to mitigate their effects. Their emphasis throughout is on the need for soil and water conservation in the river basin to reduce the size of floods and for controlling the use of the flood plain to reduce their impact.

268

**UNITED NATIONS**

Urban flood loss prevention and mitigation  
.- New York : United Nations ; 1991 .- 92 p.  
(Water resources series; no. 68)  
**ABSTRACT** : This investigative report identifies the aspects of urban flooding common and peculiar to particular urban areas in Asia and gives recommendations on solving the consequential problems of flooding in each area  
ISBN 9211320216

269

**UNITED NATIONS**

Regional cooperation in the twenty-first century on flood control and management in Asia and the Pacific  
.- New York : United Nations ; 1999 .- 232 p.  
**ABSTRACT** : Floods continue to be one of the most severe annual disasters, particularly in Asia. The intensity of flood disasters appears to have increased in the region in the past decade, especially during the past few years. This publication discusses the process adopted for the formulation of a conceptual framework involving effective regional cooperation based on three main components: a review of flood control and management experiences in the region; the experience of regional cooperation and trends at the regional and international levels; and the current strategic planning techniques. In addition, case studies are presented on development and achievements in flood control and management in Thailand; the upper Parramatta River Catchment Trust in Australia; the Klang River Basin in Malaysia; flood control along the Mississippi in the United States; and new developments in flood control in the Rhine river in Germany.

270

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR WESTERN ASIA**

Harmonization of environmental standards in water sector of the ESCWA member countries  
.- Amman : ESCWA ; 1999 .- 60 p.  
No : E/ESCWA/ENR/1999/11

## *Water in Agriculture*

271

**AYRES, R.M.; MARA, D. D.  
WORLD HEALTH ORGANIZATION**

Analysis of wastewater for use in agriculture  
.- Geneva : WHO,1996 .- 31 p.

272

**BURT, Charles ; WOLTER, Hans W. ; PLUSQUELLEC, Herve  
WORLD BANK**

Modern water control in irrigation: concepts, issues, and applications  
.- Washington, D.C. : World Bank ; 1994 .- 116 p.  
(World Bank Technical Paper; No. 246)

**ABSTRACT** : Irrigation is the largest public investment in many countries in the developing world and accounts for 6 percent of World Bank lending. It will play a critical role in the world's continued ability to feed a growing population. This paper addresses system modernization—the first of many challenges facing the irrigation sector today.

The authors argue that modern irrigation design is a thought process that starts with the definition of a proper operational plan. They review various elements of irrigation design and present technological options for it. The paper also discusses design aspects related to maintenance, user participation, cost recovery, and sustainability.

The second half of the paper presents brief notes on the results of modernized irrigation schemes throughout the world, complemented by an annex on different water control methods  
ISBN 0-8213-2819-0

273

**DOORENBOS, J. ; KASSAM, A. H.  
FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Yield response to water  
.- Rome : FAO ; 1986 .- 193 p.  
(FAO Irrigation and Drainage Papers)  
ISBN 9251007446

274

**DOUGHERTY, T.C. ; HALL, A. W.  
FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Environmental impact assessment of irrigation and drainage projects  
.- Rome : FAO ; 1995  
(FAO Irrigation and Drainage Paper; No. 53)  
ISBN 9251037310

275

**INTERNATIONAL FUND FOR AGRICULTURAL  
DEVELOPMENT**

Mishqui-yacu, sweet water: the story of a development project carried out with the indigenous people of Ecuador  
.- Rome : IFAD ; 2001

276

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Soil erosion by water: some measures for its control on cultivated lands  
.- Rome : FAO ; 1978 .- 284 p.  
(FAO Land and Water Development Series)  
ISBN 9251004749  
No : FAO532

277

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Wastewater treatment and use in agriculture  
.- Rome : FAO ; 1992 .- 139 p.  
(FAO Irrigation and Drainage Papers)  
No : FAO1878

278

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Water harvesting for improved agricultural production  
.- Rome : FAO ; 1995 .- 430 p.  
(Water Reports)  
**ABSTRACT** : The Expert Consultation on Water Harvesting for Improved Agricultural Production focused on the exchange of experience gained in countries of the Near East and Maghreb Region in the application of water harvesting with regard to the various technical, agricultural, socio-economic and institutional aspects. Twenty-eight technical papers were presented and analysed and relevant conclusions and recommendations were drawn by working groups. These recommendations constitute a valuable set of guidelines for the

development, application and dissemination of water harvesting as a means to improve agricultural production in drought-prone areas.

No : FAO2191

279

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water for agriculture. Annotated bibliography

.- Rome : FAO ; 1974 .- 776 p.

(FAO Irrigation and Drainage Papers)

280

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water use

.- Rome : FAO ; 1976 .- 318 p.

(FAO Irrigation and Drainage Papers)

ISBN 9251019975

No : FAO 1116

281

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The use of saline waters for crop production

.- Rome : FAO ; 1992 .- 147 p.

(FAO Irrigation and Drainage Papers)

ISBN 9251032378

No : FAO 1946

282

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water harvesting for improved agricultural production

.- Rome : FAO ; 1995 .- 206 p.

(Water Reports)

283

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Irrigation water delivery models

.- Rome : FAO ; 1994 .- 319 p.

(Water Reports)

ISBN 9251035857

No : FAO2181

284

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Irrigation water needs - Arabic version

.- Rome : FAO ; 1994 .- 85 p.

(Irrigation Water Management. Training Manuals)

ISBN 9253040289

No : FAO8451

285

**GROENFELDT, David; SVENDSEN, Mark  
WORLD BANK**

Case studies in participatory irrigation management

.- Washington, DC. : World Bank ; 2000 .- 176 p.

**ABSTRACT** : WBI Learning Resources Series. "Water is a vital element for agricultural production and for economic development in general. However, the spatial and temporal distribution of water in Mexico restrains its use. Because of this distribution, it has been necessary to build a large infrastructure to capture, store, and allot this element among water users." Around the world, countries that once promoted more government involvement in irrigation management are adopting new policies that do just the opposite, creating incentives for farmers to take over the management of operations and maintenance, while government agencies focus on improving the management of water at the main system level. Is this just another management fad; or will the pendulum that is now swinging toward greater management control by farmers soon swing back the other way, toward greater state control? This volume reports on four countries where the state's role in irrigation management has undergone fundamental change and where the result has been a much greater management role for farmers. These

studies address the political antecedents of participatory irrigation management (PIM) policies, the process of implementing the policies, and the second-generation challenges of sustaining PIM. These experiences will prove useful to policymakers and irrigation professionals who are facing similar challenges in their own countries.

ISBN 0-8213-4540-0

286

**HASSANE, A., ; MARTIN, P., ; REIJ, C.**  
**INTERNATIONAL FUND FOR AGRICULTURAL  
DEVELOPMENT**

Water harvesting, land rehabilitation and household food security in Niger: IFAD's soil and water conservation project in Illela District

.- Rome : IFAD ; 2000

287

**JOHANSSON, Robert C.**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

Pricing irrigation water: a literature survey

.- Washington, D.C. : World Bank ; 2000

(Policy research working paper)

288

**PETER, J. Raymond ; OBLITAS, Keith Robert A.**  
**WORLD BANK**

Transferring irrigation management to farmers in Andhra Pradesh, India

.- Washington, D.C. : World Bank ; 1999 .- 196 p.

(World Bank Technical paper; No.449)

ISBN 0-8213-4577-X

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**UNITED NATIONS ENVIRONMENT PROGRAMME;**

Pesticide use in the South Pacific

.- Nairobi : UNEP, 1988 .- 418 p.

(Regional seas reports and studies No. 89)

290

**RICE, E. B.**  
**WORLD BANK**

Paddy irrigation and water management in Southeast Asia

.- Washington, D.C. : World Bank ; 1997 .- 84 p.

ISBN 0-8213-3914-1

291

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR WESTERN ASIA**

Progress achieved in the implementation of Chapter 18 of Agenda 21, with emphasis on water for sustainable agricultural production: case studies of Egypt, Jordan and Oman

.- Amman : ESCWA ; 1999 .- 81 p.

No : E/ESCWA/ENR/1999/22

292

**WESTCOT, D. W.**  
**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Quality control of wastewater for irrigated crop production

.- Rome : FAO ; 1997

(Water Reports; No.10)

ISBN 9251039941

## *Water in Armed Conflicts*

293

**GREEN CROSS INTERNATIONAL  
UNESCO**

From potential conflict to co-operation potential: water for peace; prevention and resolution of water-related conflicts in the context of integrated conflicts in the context of integrated water resource management

.- Paris : UNESCO ; 2002 .- 12 p.

294

**MURAKAMI, Masahiro**

**UNITED NATIONS UNIVERSITY**

Managing water for peace in the Middle East: alternative strategies  
.- Tokyo : UNU ; 1995 .- 309 p., ill., maps

295

**OHLSSON, Leif**

**UNESCO**

Hydropolitics: conflicts over water as a development constraint  
.- Paris : UNESCO ; 1995 .- 230 p., ill., maps

296

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Combating oil pollution in the Kuwait Action Plan region  
.- Nairobi : UNEP, 1982 .- 53 p.  
(Regional seas reports and studies No. 44.)

297

**WOLF, Aaron T.**

**UNITED NATIONS UNIVERSITY**

Hydropolitics along the Jordan River: scarce water and its impact on the Arab-Israeli conflict  
.- Tokyo : UNU ; 1996 .- 280 p.

**ABSTRACT** : The underlying premise in this study is that the inextricable link between water and politics in the Jordan River watershed can be harnessed to induce ever increasing cooperation in planning and project implementation between otherwise opposed riparians, thus leading to peace in the region.

“This book serves as an excellent international watershed case study for advanced undergraduates and graduate students. Additionally, it serves as a strong example of a thorough research project within an interdisciplinary framework.”  
- Water Resources Development

The book begins with a detailed description of the watershed and how human interaction has altered its hydrography. This is followed by a comprehensive history of water conflict and cooperation in the watershed, beginning with the origins of agriculture through to the hydropolitical intricacies of the twentieth century. The discussion next turns to an exploration of the possible usefulness

of the physical sciences, law, political science, economics, game theory, and alternative dispute resolution to the process of conflict resolution. The heart of the study follows, with proposals for an integrated model for water basin analysis and conflict resolution. The author stresses that both the hydroscientific and hydropolitical aspects of watershed development must be addressed if water is to be used successfully as a catalyst for peace.

This highly relevant and insightful study of water and politics in the Middle East will be indispensable to scholars, water-resource planners, and decision makers concerned with the Middle East Water situation, and will be of interest also to those working in relation to the approximately 200 international watersheds around the world.

ISBN 9280808591

## *Water in Industry*

298

**CARMICHAEL, Jack; STRZEPEK, Kenneth M.**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Industrial water use and treatment practices  
.- Philadelphia, Pa. : Cassell Tycooly for UNIDO .- 123 p  
(Water resources development series; v. 8)

299

**JALKANEN, Olli**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Russian Federation. High-level advisory services for the Baikalsk pulp and paper mill: pulp and papermaking ; technical report

.- Vienna : UNIDO ; 1996 .- 56 p.  
(UNIDO-DP/ID/SER.A/1751)

**ABSTRACT** : Expert report on the production of pulp and paper production in the Russian Federation - covers (1) the Baikalsk pulp and paper factory, engineering design, heat and power balances, power consumption, workers, fresh water consumption (2) the present pulp and paper factory.

Recommendations. Bibliography. Statistics, diagrams. Additional references: heat recovery, drying, bleaching, machinery, boilers, investment, water treatment, pulp and paper industry.  
No : SI/RUS/94/801

300

**PARISH, G. J.**

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Egypt; textile development centre, phase II; Terminal report

.- Vienna : UNIDO ; 1983 .- 117 p.

(UNIDO-DP/ID/SER.B/402)

**ABSTRACT** : Final report regarding assistance in water conservation in textile industry in Egypt - covers (1) present situation (2) water utilization; fresh water supply to boilers (3) reports of factory visits describing water usage in connection with singeing, bleaching, mercerization, printing, dyeing and spinning (4) water utilization and machinery (5) laboratory experiments (6) reports on seminars. Tables. Recommendations. Additional references: water treatment, textile development centre.

No : DP/EGY/77/008

301

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

Workshop on the role of industry in the development and rational use of water resources in the Arab region, 1996 Amman, Jordan, 13-15 May, 1996

.- Vienna : UNIDO ; 1996 .- 13 p.

## *Water in Rural Areas*

302

**BRIKKE, F.**

**WORLD HEALTH ORGANIZATION**

Operation and maintenance of rural water supply and sanitation systems

.- Geneva : WHO ; 2002 .- IV-292 p.

(WHO/SDE/WSH/00.2)

**ABSTRACT** : A spiral-bound collection of training materials and activities designed to help planners, managers, and engineers improve water supply and sanitation projects through the better management of their operation and maintenance. Addressed to course facilitators, the manual contains abundant notes, background information, overheads, work sheets, exercises, and fact sheets specific to conditions seen in rural areas of the developing world. Information ranges from fact sheets describing the strengths and limitations of specific technologies, through a list of factors that influence a community's willingness to pay for services, to a discussion of nineteen tools for planning and working with communities.

The manual is intended for use in a two-week course or workshop with 12 to 15 participants. Course content, which was developed following almost seven years of field testing and revision, draws on lessons learned from the failure of many projects to produce sustainable services. Foremost among these lessons is knowledge that social, managerial, institutional, financial, and environmental issues are as vital to success as the technical features of project design.

The manual has two parts. The first provides a trainer's guide for facilitators. Chapters explain the objectives of the course, provide a daily timetable, and offer tips on effective training tools, emphasizing the value of participatory methods such as field visits, case studies, brainstorming, role play, and games. A checklist for planning is also included.

Course contents are set out in the second and most extensive part, which is organized according to four modules. Modules are subdivided into units, each focused on a specific training goal. Module one introduces current concepts in the water supply and sanitation sector, and explains how water, health, sanitation, and environmental protection are interrelated. Module two, on situation analysis, focuses on ways to identify all actors involved in operation and maintenance, to assess constraints, and to identify and analyse objectives in a logical way.

The third and most extensive module addresses the range of factors that influence sustainable operation and maintenance, including technology choice.

Major attention is given to practical tools and procedures for working with communities and ensuring their participation. The final module covers planning tools, concentrating on use of the Objective Oriented Project Planning methodology.

303

**BRISCOE, John; DE FERRANTI, David**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Water for rural communities: helping people help themselves  
 .- Washington, D.C. : World Bank ; 1988 .- 32 p.

304

**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Derecho al agua de los pueblos indigenas en America Latina  
 .- Santiago : CEPAL ; 2001 .- 53 p.

(Serie recursos naturales e infraestructura; No. 38)

**ABSTRACT** : Water Resources; Water Utilization; Indigenous Population; Latin America

ISBN 92-1-321970-9

No : LC/L.1673-P

305

**UNESCO**

Hydrology and water resources for sustainable development in a changing: detailed plan for the fourth phase of the IHP, 1990-1995, as approved by the IHP Council; IHP-IV; IHP-IV;

.- Paris : UNESCO ; 1990 .- (55) p.

No : SC.91/WS/33

306

**UNESCO**

Frontiers in urban water management: deadlock or hope/ International symposium, Marseille, France, June 18-20, 2001

.- Paris : UNESCO ; 2002 .- 1 CD-ROM

307

**UNESCO**

Proposed establishment of the Regional Centre on Urban Water Management in Tehran under the auspices of UNESCO = Proposition d'établir le Centre régional sur la gestion de l'eau dans les zones urbaines à Téhéran, sous les auspices de l'UNESCO = Propuesta de creacion en Teheran, bajo los auspicios de la UNESCO, de un Centro Regional sobre la Gestion del Aqua en las Zonas Urbanas

.- Paris : UNESCO ; 2001 .- 31 p.

No : 31 C/48

308

**UNESCO**

Urban development and freshwater resources: small coastal cities; proceedings and recommendations = Développement urbain et ressources en eau: petites villes cotières .- Paris : UNESCO ; 1998 .- 111 p.

(International Seminar on Urban Development and Freshwater Resources: Small Coastal Cities; Essaouira, Morocco; 1997)

309

**UNICEF**

Urban example: prospective for the future: water supply and sanitation to urban marginal areas of Tegucigalpa, Honduras

.- New York : UNICEF ; 19092 .- 31 p.

310

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Proceedings of the international symposium on efficient water use in urban areas: innovative ways of finding water for cities

.- Osaka/Shiga : UNEP-IETC ; 2001 .- 538 p.

**ABSTRACT** : Recognizing the importance of freshwater, the UNEP International Environmental Technology Centre (UNEP-IETC) organized an International Symposium aimed at enhancing the capacity of urban managers and decision-makers in water resource management. This publication contains session summaries, technical papers presented and information materials produced for the symposium. It will be a valuable source of information for all who are involved or interested in water policy development and promoting sustainable water use.

311

**UNITED NATIONS UNIVERSITY**

Water for urban areas: challenges and perspective

.- Tokyo : UNU ; 1999 .- 264 p.

(Water resources management and policy)

**ABSTRACT** : By the year 2025, it is estimated that more than two-thirds of the world's population will be urban dwellers. In Water for Urban Areas, leading experts offer unique insights into varied issues of urban water management. In case studies from the South as well as the North, the authors seek solutions and identify strategies for sustainable management of water resources for burgeoning mega-cities. In such cities as Tokyo, Delhi and Mexico City, these experts consider both technical issues, such as waste water reuse, and management issues, including financial mechanisms for improved water sector management.

312

**UNITED NATIONS**

Towards efficient water use in urban areas in Asia and the Pacific

.- New York : United Nations ; 1998 .- 154 p.

**ABSTRACT** : All those concerned about or involved in establishing policies and developing frameworks for more efficient use of water in urban areas will find this publication invaluable. This book discusses policies and strategies for efficient water use in urban areas; incentives and measures for water conservation efforts; reduction and control of water losses; and use of non-potable water. Along with papers from more than 12 countries in the Asia-Pacific region, the publication presents recommendations for the strengthening of national capabilities for efficient use of water.

No : ST/ESCAP/1874

313

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR ASIA AND THE PACIFIC**

Guidelines for the establishment of pricing policies and structures for urban and rural water supply

.- Bangkok : UN ESCAP ; 1997

(Water and Mineral Resources)

No : 1738

314

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR WESTERN ASIA**

Development of freshwater resources in the rural areas of the ESCWA region by using non-conventional techniques

.- Amman : ESCWA ; 1999 .- 86 p.

No : E/ESCWA/ENR/1999/16

315

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Proceedings of the international symposium on efficient water use in urban areas - innovative ways of finding water for cities

.- Nairobi : UNEP ; 1999 .- 530 P.

(IETC Report 9)

ISBN 9280718150

316

**SALETH, Maria R.  
WORLD BANK**

Satisfying urban thirst: water supply augmentation and pricing policy in Hyderabad City, India

.- Washington, D.C. : World Bank ; 1997 .- 52 p.

(World Bank Technical paper; No. 395)

ISBN 0-8213-4146-4

317

**SHIRLEY, Mary M.; XU, Colin; ZULUAGA, Ana Maria  
INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

Reforming the urban water supply: the case of Chile

.- Washington, D.C. : World Bank ; 2000 .- 71 p.: ill.

318

**TEJADA-GUIBERT, Jose Alberto ; MAKSIMOVIC, Cedo  
FRANCE.WATER ACADEMY; WORLD WATER COUNCIL**

Frontiers in urban water management: deadlock or hope? Proceedings of the Symposium, 18-20 June, Marseille, France, 2001 = Frontières de la gestion de l'eau urbaine: impasse ou espoir? Actes du symposium, 18-20 juin, Marseille, France, 2001

.- Paris : UNESCO ; 2001 .- 364 p.: ill., maps  
No : SC.2001/WS/10

319

**UITTO, Juha I.; BISWAS, Asit K.  
UNITED NATIONS UNIVERSITY**

Water for urban areas: challenges and perspectives

.- Tokyo : UNU Press ; 2001

320

**WORLD HEALTH ORGANISATION**

Surface water drainage for low-income communities

.- Geneva : WHO ; 1991 .- V-88 p.

**ABSTRACT** : An illustrated practical and technical guide to the design, construction, rehabilitation, and maintenance of surface water drainage systems in low-income urban areas. Noting that drainage often figures first on the list of felt needs among the residents of such areas, the book concentrates on the many "do-it-yourself" measures that communities can undertake to construct a simple, effective, low-cost drainage system or to rehabilitate an existing system that has fallen into disrepair. Projects conducted with engineering assistance and municipal support are also thoroughly described.

The opening chapters provide a perspective on the risks associated with surface water, including the dangers of landslides, floods, and collapsing homes as well as numerous diseases. Readers are introduced to four principal phases of a typical neighbourhood drainage improvement programme and then given full details on the technical aspects of drainage design, construction, and maintenance, including the pros and cons of different technical options. Details range from a list of reasons why closed drains should rarely be used in developing countries, through the precautions and safety checks to be followed before entering a manhole, to advice on what to do when an existing drainage system has collapsed, become blocked, or needs repair and rehabilitation. Advice, warnings, and alerts to common pitfalls are supported by repeated reference to

real experiences with community drainage projects in different parts of the world. Throughout, emphasis is placed on the many - and often ingenious - things that can be done using inexpensive local materials and community skills.

321

**WORLD BANK**

Urban water supply and sanitation

.- Washington, D.C. : World Bank ; 2000 .- 165 p.  
ISBN 0-8213-4462-5

322

**WORLD BANK**

Rural water supply and sanitation

.- Washington, D.C. : World Bank ; 2000 .- 106 p.  
ISBN 0-8213-4463-3

*Water Law*

323

**BARBERIS, J. A.****FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

International groundwater resources law

.- Rome : FAO ; 1986 .- 74 p.

(FAO Legislative Studies)

ISBN 925102507X

No : FAO1421

324

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Water law in selected African countries (Benin, Burundi, Ethiopia, Gabon, Kenya, Mauritius, Sierra Leone, Swaziland, Upper Volta and Zambia)

.- Rome : FAO ; 1980 .- 273 p.

(FAO Legislative Studies)

325

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water law in selected European countries, Vol.II (Cyprus, Finland, the Netherlands, Union of Soviet Socialist Republics, Yugoslavia)

.- Rome : FAO ; 1983 .- 162 p.

(FAO Legislative Studies)

No : FAO1020

326

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water law in selected European countries. Vol.1 (Belgium, England and Wales, France, Israel, Italy, Spain and Turkey)

.- Rome : FAO ; 1979 .- 263 p.

(FAO Legislative Studies)

No : FAO394

327

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water laws in Moslem countries, Vol. 1

.- Rome : FAO ; 1976 .- 229 p.

(FAO Irrigation and Drainage Papers)

No : FAO385

328

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water laws in Moslem countries, Vol. 2

.- Rome : FAO ; 1978 .- 314 p.

(FAO Irrigation and Drainage Papers)

No : FAO560

329

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water Legislation in South American Countries

.- Rome : FAO ; 1983 .- 181 p.

(FAO Legislative Studies)

ISBN 9251008868

No : FAO 695

330

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The Freshwater-maritime interface: legal and institutional aspects

.- Rome : FAO ; 1990 .- 105 p. (FAO Legislative Studies)

ISBN 9251029253

No : FAO1729

331

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

The law of international water resources

.- Rome : FAO ; 1980 .- 335 p.

(FAO Legislative Studies)

ISBN 9251010366

No : FAO752

332

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Systematic index of international water resources treaties, declarations, acts and cases by basin

.- Rome : FAO ; 1984 .- 365 p.

(FAO Legislative Studies)

ISBN 9250021895

No : FAO107

333

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Systematic index of international water resources treaties, declarations, acts and case by basin

.- Rome : FAO ; 1978 .- 511 p.

(FAO Legislative Studies)

ISBN 9250006020

No : FAO13f

334

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Issues in water law reform

.- Rome : FAO ; 1999 .- 206 p.

(FAO Legislative Studies)

ISBN 9251042527

No : FAO100361

335

**WORLD BANK**

The legal framework for water users' associations: a comparative study

.- Washington, D.C. : World Bank ; 1997 .- 112 p.

(World Bank Technical Paper; No. 360)

**ABSTRACT** : Recent experience confirms that participation of farmers in managing parts of an irrigation system and collecting water charges usually results in a more efficient use of water. To be effective, farmers in the hydraulic unit would need to organize themselves by establishing a "water users' association." This paper presents a comparative study of the legal framework for these associations in Colombia, India, Mexico, Nepal, the Philippines, and Turkey. Building on the theory that participation of farmers in managing and operating parts of an irrigation system will result in an optimum use of water, the document analyzes in a comparative manner how each of these countries addresses the basic aspects related to the establishment and functioning of such associations. Additional emphasis is placed on the collection of water charges. ISBN 0-8213-3908-7

336

**WORLD BANK**

The legal framework for water users associations": a comparative study

.- Washington, D.C. : World Bank ; 1997 .- 104 p.

(World Bank Technical Paper; No. 360A )

**ABSTRACT** : Recent experience confirms that participation of farmers in managing parts of an irrigation system and collecting water charges usually results in a more efficient use of water. To be effective, farmers in the hydraulic unit would need to organize themselves by establishing a "water users' association." This paper presents a comparative study of the legal framework for these associations in Colombia, India, Mexico, Nepal, the Philippines, and Turkey. Building on the theory that participation of farmers in managing and operating parts of an irrigation system will result in an optimum use of water, the document analyzes in a comparative manner how each of these countries addresses the basic aspects related to the establishment and functioning of such associations. Additional emphasis is placed on the collection of water charges. ISBN 0-8213-4000-

337

**WORLD BANK**

The legal framework for water users associations": a comparative study

.- Washington, D.C. : World Bank ; 1997 .- 109 p.

(World Bank Technical Paper; No. 360R)

**ABSTRACT** : Recent experience confirms that participation of farmers in managing parts of an irrigation system and collecting water charges usually results in a more efficient use of water. To be effective, farmers in the hydraulic unit would need to organize themselves by establishing a "water users' association." This paper presents a comparative study of the legal framework for these associations in Colombia, India, Mexico, Nepal, the Philippines, and Turkey. Building on the theory that participation of farmers in managing and operating parts of an irrigation system will result in an optimum use of water, the document analyzes in a comparative manner how each of these countries addresses the basic aspects related to the establishment and functioning of such associations. Additional emphasis is placed on the collection of water charges. ISBN 0-8213-4287-8

338

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The Law of the sea and the Caribbean .- Nairobi : UNEP ; 1991 .- 32 p.

339

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The Law of the sea and the Indian Ocean .- Nairobi : UNEP ; 1991 .- 32 p.

340

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The Law of the Sea and the South Pacific

.- Nairobi : UNEP ; 1991 .- 24 p.

341

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The law of the sea and the Mediterranean

.- Nairobi : UNEP ; 1991 .- 24 p.

342

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The law of the sea and the Mediterranean

.- Nairobi : UNEP ; 1991 .- 24 p.

## *Water Policy*

343

**DUMOL, Mark  
WORLD BANK**

The Manila water concession: a key government official's diary of the world's largest water privatization

.- Washington, D.C. : World Bank ; 2000

ISBN 0-8213-4711-X

344

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Water policies and agriculture, special chapter of the State of food and agriculture 1993

.- Rome : FAO ; 1994 .- 73 p.

ISBN 9253039078

No : FAO 8270

345

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Water quality and fish health

.- Rome : FAO ; 1993 .- 73

(EIFAC Technical Papers)

ISBN 9251034370

No : FAO2090

346

**FOOD AND AGRICULTURE ORGANIZATION OF THE  
UNITED NATIONS**

Water sector policy review and strategy formulation a general framework

.- Rome : FAO ; 1995 .- 117 p.

(FAO Land and Water Bulletins)

**ABSTRACT** : In many countries, as a consequence of inadequate water policies and strategies, and institutions to implement them, the quantity or quality of fresh water resources is imposing limits on present water use and on economic development. With the purpose to provide a holistic approach to water sector policy review and strategy formulation the Framework delineates and elaborates on the elements to be included in the process.

Based on recent specific guidelines by FAO, UNDP and the World Bank and emphasising the importance of capacity building, the stage of review and adoption of water policy is consolidated with formulation of strategies to put the policies into practice. Components of the policy review include water resources assessment, identification of problems and issues and evaluation of available policy options. Strategy formulation for the definition of an action programme and an implementation schedule is concerned about the detailed organization of the interested parties - the stakeholders. Detailed considerations

are introduced on the key issues including: economic tools, information systems, environmental and health considerations, and international issues. A section on the recent experience in and outcomes of water resources reform in developing and industrialised countries is presented.

ISBN 9251037140

No : FAO 2275

347

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Methodology for water policy review and reform

.- Rome : FAO ; 1995 .- 172 p.

(Water Reports)

348

**UNITED NATIONS**

Protection of transboundary water guidance for policy and decision-making

.- New York : United Nations ; 1996 .- 43 p.

(Water series; No. 3)

ISBN 9211166586

349

**UNITED NATIONS**

Protection and sustainable use of waters: recommendations to ECE Governments

.- New York : United Nations ; 1995 .- 48 p.

(ECE water series; no. 2)

**ABSTRACT** : Examines the numerous recommendations which are being implemented or adapted at the Government levels, this publication also suggests an action plan for the protection and use of water in Europe and North America, including activities to be undertaken at the regional levels.

350

**UNITED NATIONS**

Principles and practices of water allocation among water-use sectors

.- New York : United Nations ; 2000 .- 366 p.

**ABSTRACT** : The Economic and Social Commission for Asia and the Pacific (ESCAP) has launched a project on regional cooperation on optimum water

resources allocation among water-use sectors. This study aims to assist policy makers, administrators and planners.

351

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Ecosystem-based management of fisheries : opportunities and challenges for coordination between marine regional fishery bodies and regional seas conventions

Nairobi : UNEP, [s.d].- [multiple pagination]

352

**UNITED NATIONS ENVIRONMENT PROGRAMME;**

Freshwater resources in Africa : proceedings of a workshop, Nairobi, Kenya, October 1999

.- Potsdam : BAHC, 2001.- 146 p.

353

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Current water policies and practices in selected ESCWA countries

.- Amman : ESCWA ; 1999 .- 10 p.

No : E/ESCWA/ENR/1999/15

354

**UNITED NATIONS ENVIRONMENT PROGRAMME**

UNSIWA water cluster: priorities and strategies for water in Africa

.- Nairobi: UNEP; 2002.- 36 p.

(United Nations System-Wide Initiative on Africa (UNSIWA)

Water cluster implementation strategy)

355

**UNITED NATIONS ENVIRONMENT PROGRAMME**

**MARSH, Helene, PENROSE, Helen, EROS, Carole, HUGUES, Joanna**

Dugong: status report and action plans for countries and territories

.- Nairobi: UNEP; 2002.- 162 p.

(Early Warning and Assessment Report Series No. UNEP/DEWA/RS.02-1)

356

**WORLD BANK**

Public water, private partners (NTSC Video)  
.- Washington, D.C. : World Bank Institute ; 2000 .-

357

**WORLD BANK INSTITUTE**

Public water private partners (PAL Video)  
.- Washington, D.C. : World Bank Institute ; 2000

358

**YOUNG, Robert A.**

**WORLD BANK**

Measuring economic benefits for water investments and policies  
: WORLD BANK ; 1996 .- 136 p.  
(WORLD BANK Technical Paper; No. 338)  
**ABSTRACT** : Reviews and assesses the concepts and methods for estimating the economic benefits of investment and allocation decisions involving water and describes the operational uses of these methods

## *Water Pollutants*

359

**UNITED NATIONS**

Atmospheric transport and deposition of pollutants into the Mediterranean Sea  
: final reports on research projects  
.- Athens : UNEP-MAP ; 2001 .- 132 p.  
(MAP technical report series; 133)  
ISBN 9280720708

360

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Pollutants from land-based sources in the Mediterranean.  
.- Nairobi : UNEP ; 1984 .- 99 p.  
(Regional seas reports and studies; No. 032)

**50**

361

**UNITED NATIONS ENVIRONMENT PROGRAMME;  
INTERNATIONAL MARITIME ORGANIZATION**

Oil pollution control in the East African region.  
.- Nairobi : UNEP, 1982 .- 50 p.  
(Regional seas reports and studies No. 10)

362

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The state of marine pollution in the wider Caribbean Region  
.- Nairobi : UNEP ; 1984 .- 45 p.  
( Regional seas reports and studies; No. 036.)

363

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Survey of Marine pollutants from industrial sources in the West and Central African Region.  
.- Nairobi : UNEP ; 1982 .- 120 p.  
(Regional seas reports and studies; No. 002. )

364

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Sources, levels and effects of marine pollution in the South-East Pacific  
.- Nairobi : UNEP, 1982 .- 50 p.  
(Regional seas reports and studies No. 21)

365

**UNITED NATIONS ENVIRONMENT PROGRAMME;  
WORLD HEALTH ORGANIZATION;  
WORLD METEOROLOGICAL ORGANIZATION;**

Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL) - Phase I: Programme description  
.- Nairobi : UNEP, 1983 .- 50 p.  
(Regional seas reports and studies No. 23)

## Water Pollution

366

### COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE

Instrumentos economicos para el control de la contaminacion del agua: condiciones y casos de aplicacion (version preliminar)

.- Santiago : CEPAL ; 2000

367

### FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Groundwater pollution: technology, economics and management .- Rome : FAO ; 1979 .- 149 p.

368

### FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Prevention of water pollution by agriculture and related activities

.- Rome : FAO ; 1993 .- 362 p.

(Water Reports)

ISBN 9251033803

No : FAO2041

369

### FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Prevenion de la contaminacion del aqua por la agricultura y actividades afines .- Rome : FAO ; 1994 .- 391 p.

(Informes sobre temas hidricos)

ISBN 9253033800

No : FAO4275

370

### HELMER, Richard; HESPANHOL, Ivanildo UNITED NATIONS ENVIRONMENT PROGRAMME; WORLD HEALTH ORGANIZATION

Water pollution control: a guide to the use of water quality management principles

.- London : E FN SPON ; 1997 .- 510 p.

**ABSTRACT** : 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.  
ISBN 0419229108

371

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Dispersion of radioactive materials in air and water and consideration of population distribution in site evaluation for nuclear power plants safety guide  
.- Vienna : International Atomic Energy Agency ; 2002  
(Safety standards series No 407)

372

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Application of isotope techniques to investigate groundwater pollution  
.- Vienna : IAEA ; 1998  
(IAEA TECDOC Series No. 1046)

373

**INTERNATIONAL ATOMIC ENERGY AGENCY**

The behavior of radium in waterway and aquifers (Results of a co-ordinated research programme)  
.- Vienna : IAEA ; 1984  
(IAEA TECDOC Series ; No. 301)

374

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Sediments and pollution in waterways: General considerations  
.- Vienna : IAEA ; 1984  
(IAEA TECDOC Series No. 302)

375

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Water chemistry and corrosion problems in nuclear power plants (Vienna, 22-26 Nov. 1982)  
.- Vienna : IAEA ; 1983  
(Proceedings series)

376

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Nuclear techniques in groundwater pollution research (Cracow, 6-9 Dec. 1976)  
.- Vienna : IAEA ; 1976  
(Panel proceedings series)

377

**ONGLEY, EDWIN D.**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Control of water pollution from agriculture  
.- Rome : FAO ; 1996  
(FAO Irrigation and Drainage Paper; No. 55)  
ISBN 9251038759

378

**UNEP-MAP**

Protecting the Mediterranean from land-based pollution  
.- Athen : UNEP-MAP ; 2001 .- 47 p.  
ISBN 9280720279

379

**UNEP-MAP**

Remedial actions for pollution mitigation and rehabilitation in cases of non-compliance  
.- Athen : UNEP-MAP ; 2001 .- 78 p.  
(MAP Technical Report Series 132)  
ISBN 9280720317

380

**UNITED NATIONS**

Soil and groundwater pollution: fundamentals, risk assessment and legislation  
.- New York : United Nations ; 2000 .- 178 p.

**ABSTRACT** : This publication focuses on soil and groundwater pollution in Central and Eastern Europe. The publication is addressed to scientists, engineers, lawyers, people from authorities and private enterprises to make recommendations for future developments in technology, science and regulations.

381

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Prospects for global ocean pollution monitoring  
.- Nairobi : UNEP, 1984 .- 49 p.  
(Regional seas reports and studies No. 47)

382

**UNITED NATIONS ENVIRONMENT PROGRAMME;  
INTERNATIONAL MARITIME ORGANIZATION**

Oil spills and shoreline clean-up on the coasts of the Eastern African region  
.- Nairobi : UNEP, 1985 .- 113 p.

383

**UNITED NATIONS ENVIRONMENT PROGRAMME**

The pollution of lakes reservoirs  
.- Nairobi : UNEP ; 1994  
(GEMS Environment Library; No. 12:)

384

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Groundwater contamination in Latin America  
.- Nairobi : UNEP ; 1993

385

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Freshwater pollution  
.- Nairobi : UNEP ; 1991 .- 36 p.  
(GEMS Environment Library; No. 06)

386

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Review of potentially harmful substances: carcinogens  
.- Nairobi : UNEP ; 1991 .- 56 p.  
(GESAMP Reports and Studies; No. 46)

387

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Marine pollution implications of ocean energy development  
.- Nairobi : UNEP ; 1984 .- 43 p.  
(GESAMP Reports and Studies; No. 20)

388

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Overview on land-based pollutant sources and activities affecting the marine, coastal, and freshwater environment in the Pacific islands region  
.- Nairobi : UNEP ; 2000 .- 43 p.  
(Regional Seas Reports and Studies; No. 174)

389

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Survey of tar, oil, chlordinated hydrocarbons and trace metal pollution in coastal waters of the Sultanate of Oman.  
.- Nairobi : UNEP ; 1982 .- 49 p.  
(Regional seas reports and studies; No. 005. )

390

**WORLD HEALTH ORGANIZATION**

The PHAST Initiative: Participatory hygiene and sanitation transformation .- Geneva : WHO ; 1997 .- VI-39 p.

**ABSTRACT** : Describes an exciting new approach, based on an innovative set of participatory techniques, that has demonstrated its ability to promote hygienic behaviour, sanitation improvements, and community management of water and sanitation facilities. Known as the Participatory Hygiene and Sanitation Transformation, or PHAST, initiative, the approach was carefully developed and tested in both urban and rural areas of four African countries: Botswana, Kenya, Uganda, and Zimbabwe. Results of these tests indicate an unprecedented involvement of communities, the particular suitability of PHAST techniques to resource-poor settings, and remarkable success in terms of environmental and behavioural improvements.

The initiative is described in five sections. The first explains how PHAST functions as a core set of concept-based tools, methods, and materials, which integrate basic epidemiological concepts with a participatory methodology. Central to the approach are a respect for people's innate ability to address and resolve their own problems, a creative learning approach based on active discovery by the community, and firm evidence that lasting change in human behaviour depends on understanding and believing. The document explains how the approach stimulates a very high degree of community involvement and enthusiasm while also allowing outsiders to appreciate the depth and breadth of local knowledge and intuition. Most important, results show that the approach works to transform the helpless mentality associated with ignorance or poverty into self-esteem and confident self-help, even in the absence of literacy or formal schooling.

Section two explains how the methodology was developed at workshops in African countries. These workshops developed an approach that relies heavily on both the training of extension workers and on the development of graphic materials in locally adapted sets, or "toolkits". These include posters depicting routes of oral-faecal contamination and various preventive measures, and drawings and photographs produced for a popular exercise in "three-pile sorting", where depicted situations are sorted as good, bad or in-between. Other tools include a pocket chart which serves as an investigative tool, visual materials that help distinguish between illnesses requiring curative attention and those that can be addressed through a preventive strategy initiated by the community, and instructions for preparing community maps.

Subsequent sections give examples of the impressive - and continuing - results of the initiative, whether involving behavioural change or the construction and maintenance of latrines, and set out lessons learned, particularly concerning the approach's capacity to help communities determine what they really need and are prepared to pay for in terms of money, resources, and time. A final

section gives advice on how the approach can be adopted more widely and discusses the enabling factors involved

391

**ZEHNDER, Alexander J. B. ;  
SCIENTIFIC COMMITTEE ON PROBLEMS OF THE  
ENVIRONMENT (SCOPE)  
UNITED NATIONS ENVIRONMENT PROGRAMME**

Proceedings of the SCOPE workshop on soil and groundwater pollution: fundamentals, risk assessment and legislation

.- Boston : Kluwer Publishers ; 1995 .- 164 p.: ill., maps

## Water Pricing

392

**DINAR, Ariel  
INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

The political economy of water pricing reforms

.- Washington, D.C. : World Bank ; 2000 .- 405 p.: ill.

393

**KEMPER, Karin E. ; SIMPSON, Larry D. ; AZEVEDO, Luiz Gabriel T.  
[et al...] ;  
WORLD BANK**

Management of water resources: bulk water pricing in Brazil

.- Washington, D.C. : World Bank ; 1999 .- 112 p.

(World Bank Technical Paper No. 432)

ISBN 0-8213-4437-4

394

**UNITED NATIONS**

Water pricing policies and structures and investment promotion in the water sector in Asia and the Pacific

.- New York : United Nations ; 1997 .- 220 p.  
(Water resources series)

**ABSTRACT** : Water demand management is recognized as being increasingly important in the Asia-Pacific region. One strategy towards effective water demand management is to establish and implement appropriate water pricing policies that encourage efficiency and discourage waste. Divided in two sections, section one presents the results and an analysis of a study undertaken in the Asia-Pacific region on pricing policies and structures. Section two, explores the options for mobilizing funding for construction of water supply and sanitation infrastructure and the role private sector investment can play.

No : ST/ESCAP/SER.F/76

## Water Quality

395

**ALLEY, E**  
**UNESCO**

Water quality control hand book  
.- Paris : UNESCO ; 2000 .- 1 V., ill.

396

**AYERS, R. S. ; WESTCOT, D. W.**  
**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Water quality for agriculture  
.- Rome : FAO ; 1994 .- 186 p.  
(FAO Irrigation and Drainage Papers)  
ISBN 9251022631

397

**UNITED NATIONS ENVIRONMENT PROGRAMME;**  
**INTERNATIONAL LAKE ENVIRONMENT COMMITTEE**

Data book of world lake environments : a survey of the state of world lakes : interim report  
.- Otsu : ILEC, 1987-1989

398

**BARTRAM, Jamie (ed.)**  
**UNITED NATIONS ENVIRONMENT PROGRAMME; WORLD**  
**METEOROLOGICAL ORGANIZATION; UNESCO; WORLD**  
**HEALTH ORGANIZATION**

Report of a workshop on water quality monitoring and assessment 15 - 26 November, 1993, Darwendale, Zimbabwe

.- Nairobi : UNEP ; 1994

(GEMS/WATER Workshops Report; 29)

NOTES : With project sponsorship from FINNDA and SAD/ELMS in collaboration with the ROBENS INSTITUTE, University of Surrey ; 15 - 26 November 1993)

**ABSTRACT** : The event had ambitious objectives. These included the review of the second draft of a new manual on "Freshwater Quality Monitoring" which was being field tested in Africa. Strengthening of national water also addressed and participants prepared plans of their own countries. Furthermore, it was intended that the event would provide impetus for GEMS/Water and the proposed Zambezi Environmental Monitoring System (ZEMS) in the region.

399

**BARTRAM, Jamie; BALLANCE, Richard**  
**UNITED NATIONS ENVIRONMENT PROGRAMME; WORLD**  
**HEALTH ORGANIZATION**

Water quality monitoring: a practical guide to the design and implementation of freshwater quality studies and monitoring programmes

.- London : EFN SPON; UNEP ; 1996 .- 383 p.

**ABSTRACT** : Freshwater is a finite resource as essential to agriculture and industry as it is to basic human existence. Water quality monitoring is a fundamental tool in the management of freshwater resources, and this book covers the entire monitoring process providing detailed guidance for implementing a monitoring network with step-by-step descriptions of field and laboratory methods. This essential work will be particularly relevant for field use in developing countries. Water Quality Monitoring is the outcome of a collaborative programme of activity between UNEP and WHO, with inputs from WMO and UNESCO, and draws on the international standards of the International Organization for Standardization. It has been comprehensively field tested in developing countries and reflects the experience resulting from those tests. It is a companion volume to Water Quality Assessments.

“The complex interconnectedness of freshwater systems demands that freshwater management be holistic (taking a catchment management approach) and based on a balanced consideration of the needs of people and the environment. The Mar del Plata Action Plan has already recognised the intrinsic linkage between water resource development projects and their significant physical, chemical, biological, health and socio-economic repercussions “.

The approaches and methods for water quality monitoring described in this handbook are based upon the experience gained, over two decades, with the design and establishment of the global freshwater quality monitoring network, GEMS/WATER. The GEMS/WATER programme is co-sponsored by the United Nations Environment Programme (UNEP) and the World Health Organization (WHO), together with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Meteorological Organization (WMO). One of the goals of GEMS/WATER is: “to strengthen national water quality monitoring networks in developing countries, including the improvement of analytical capabilities and data quality assurance

This handbook supports this goal by providing a practical tool for use in water quality management by national and local agencies and departments dealing with water quality issues. Water Quality Monitoring and its companion guidebook Water Quality Assessments. A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring, Second edition (edited by Deborah Chapman and published on behalf of UNESCO, WHO and LTNEP by Chapman Hall, London, 1996) constitute principal methodology guidebooks developed and used in the monitoring and assessment activities of GEMS/WATER. Together they make a direct contribution to capacity building in the area of water quality monitoring and assessment. This book brings together the information necessary to design and implement a water quality monitoring programme and provides a basis for water quality assessments and studies of the impact of pollution on the natural environment. Freshwater quality is addressed in a holistic way, considering both surface waters and groundwaters. Emphasis is given to monitoring the natural environment and to detecting and monitoring trends in water quality. The book outlines general considerations related to water quality monitoring, provides a general protocol for a monitoring programme and includes such elements as staff requirements, staff training and the equipping of analytical laboratories. It also includes consideration of the problems that may be encountered when implementing programmes in remote areas and developing countries and when establishing water quality monitoring programmes from scratch. It is hoped that the approaches and methods described will be useful for anyone concerned with water quality monitoring whether

they have a scientific, managerial or engineering background and including, particularly, field staff and those who may not be water quality experts. Potential users may be from local, regional or national government agencies, research groups, consulting firms or non-governmental organisations.

ISBN 0419217304

400

**BARTRAM, Jamie; BRIGGS, Ray**  
**UNITED NATIONS ENVIRONMENT PROGRAMME; WORLD**  
**HEALTH ORGANIZATION; WORLD METEOROLOGICAL**  
**ORGANIZATION; UNESCO**

Report of a workshop on analytical quality control for water quality monitoring and assessment 14-25 February, 1994, Entebbe, Uganda

.- Nairobi : UNEP ; 1994

(GEMS/WATER Workshops Report; 28)

NOTES : With project sponsorship from FINNID and in collaboration with the ROBENS Institute, University of Surrey, UK and TECCONILE, Entebbe, Uganda (Workshop on analytical quality control for water quality monitoring and assessment; Entebbe, Uganda; 14-25 February, 1994)

**ABSTRACT** : The objectives of the workshop were to: review progress with implementation of water quality monitoring since the 1992 Arusha workshop; introduce participants to the principles and practice of analytical quality control; provide participants with hands on experience of quality assurance, internal quality control and external quality assessment; to review experience with the handbook on water improvement of analytical quality control; and to make recommendations for the further development of water quality monitoring in the region

401

**BARTRAM, Jamie; NASH, Harriett**  
**UNITED NATIONS ENVIRONMENT PROGRAMME; WORLD**  
**HEALTH ORGANIZATION; WORLD METEOROLOGICAL**  
**ORGANIZATION; UNESCO**

Report of a workshop on water quality monitoring and assessment 4-14 June, 1994, Amman, Jordan

.- Nairobi : UNEP ; 1995

(GEMS/WATER Workshops Report; No. 30)

NOTES : With project sponsorship from FINNIDA and in collaboration with the ROBENS Institute, University of Surrey, UK and CEHA, Amman, Jordan (Workshop on water quality monitoring and assessment; Amman, Jordan

**ABSTRACT** : The meeting was organized jointly by the Robens Institute of the University of Surrey with CEHA on behalf of UNEP and WHO. The event had a number of objectives including: strengthening of national water quality monitoring and assessment and requirements to overcome them; preparation of action plans for improvement of water quality monitoring and assessment; raising awareness of the GEMS/Water programme and further reviewing of a manual on Water Quality Monitoring.

402

**CHAPMAN, Deborah**

**UNITED NATIONS ENVIRONMENT PROGRAMME;  
UNESCO; WORLD HEALTH ORGANIZATION**

Water quality assessments: a guide to the use of biota, sediments and water in environmental monitoring .-Second

.- Nairobi : UNEP ; 1996 .- 626 p.

**ABSTRACT** : The concerns expressed at these conferences, together with the feedback from readers and users of the first edition of this guidebook, have guided the editor and authors in preparing the second edition. Latest developments in strategies, as well as on technologies and methods, have been taken into account to make the book useful for water resources managers charged with the monitoring, assessment and control of water quality for a variety of purposes. Thus this guidebook should contribute to the capacity building initiatives launched in a number of countries in the aftermath of the Rio de Janeiro conference by supporting the scientifically-sound assessment of water resources which are tending to become more sparse and polluted.

Much has happened in the water sector at national and international level since the preparation of the first edition of this guidebook. One major event was the International Conference on Water and the Environment which was held in January 1992 in Dublin, Ireland. In dealing with the protection of water resources, water quality and aquatic ecosystems, the conference made rather specific requests regarding the need for more and better water quality assessments, including:

Purpose-orientated water assessments and predictions, taking into account the specificity of both surface and groundwaters, water quality and water quantity, and addressing all pollution types.

Assessments harmonised for natural basins or catchments (including station networks, field and laboratory techniques, methodologies and procedures, and data handling) and leading to basin-wide data systems.

New appropriate assessment and prediction techniques and methodologies, such as low-cost field measurements, continuous and automatic monitoring, use of biota and sediment for micro-pollution monitoring, remote sensing, and geographic information systems.

In June 1992 in Rio de Janeiro, Brazil, the United Nations Conference on Environment and Development resulted in an agreement on the action plan known as Agenda 21 which, in its chapter on freshwater, largely endorsed the recommendations from the Dublin conference. The stated objectives of Agenda 21 include issues which this guidebook aims to address, specifically: to make available to all countries water resources assessment technology that is appropriate to their needs, irrespective of their level of development, and to have all countries establish the institutional arrangements needed to ensure the efficient collection, processing, storage, retrieval and dissemination to users of information about the quality and quantity of available water resources, at the level of catchments and groundwater aquifers, in an integrated manner.

ISBN 0419216006

403

**CHAPMAN, Deborah**

**WORLD HEALTH ORGANIZATION; ; UNITED NATIONS  
ENVIRONMENT PROGRAMME**

Water quality assessments: a guide to the use of biota, sediments and water in environmental monitoring

.- Paris : UNESCO ; 1992 .- 585 p.: ill.

404

**FAETH, Paul**

**WORLD RESOURCES INSTITUTE**

Fertile ground: nutrient trading's potential to cost-effectively improve water quality

.- Washington DC : Water Resources Institute ; 2000 .- 57 p.

405

**FEWTREL, I.; BARTRAM, J.**

**WORLD HEALTH ORGANISATION**

Water quality: guidelines, standards and health

.- Geneva : WHO ; 2001 .- XIV-424 p.

**ABSTRACT** : The potential to increase consistency in approaches to assessment and management of water-related microbial hazards was tackled by an international group of experts concerned with drinking water, irrigation and wastewater use and recreational/bathing water. It included individuals with expertise in public health, epidemiology, risk assessment, risk management, standards and regulation, communication and economics. Subsequently, a series of reviews was progressively developed and refined, which addressed the principal issues of concern linking water and health to the establishment and implementation of effective, affordable and efficient guidelines and standards. This book is based on these reviews, together with the discussions of the harmonised framework and the issues surrounding it.

This book will prove invaluable to all those concerned with issues relating to microbial water quality and health, including environmental and public health scientists, water scientists, policy makers and regulators.

406

**FOSTER, Stephen; GOMES, Daniel; PARIS, Marta [et al...]**

**WORLD BANK**

Groundwater quality protection: a guide for water service companies, municipals authorities and environment agencies

.- Washington, DC. : World Bank ; 2002 .- 112 p.

**ABSTRACT** : Groundwater is an essential natural resource for the economic and secure provision of a potable water supply. In the past, aquifers have often been abandoned to chance, and those who rely on them for the provision of potable water supplies have done very little to protect their sources. Therefore, proactive campaigns and practical actions are urgently needed. Groundwater pollution hazard assessments are necessary to provide a clear understanding of the actions required to protect groundwater quality against deterioration.

Groundwater Quality Protection stresses that groundwater pollution hazard assessment and protection measures are an essential part of environmental best practice for water supply utilities. This book is organized into two parts. The first part consists of an Executive Overview that focuses on groundwater pollution hazard assessment and the development of groundwater protection strategy. The second part is a Technical Guide which concentrates on the detailed

work of mapping, aquifer pollution vulnerability, delineation of groundwater supply protection areas, inventory of subsurface contaminant load, and the assessment and control of groundwater pollution hazards  
ISBN 0-8213-4951-1

407

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water quality management and control of water pollution (includes a CD-ROM)

.- Rome : Food and Agriculture Organization of the United Nations ; 2000 .- 20 p.

(Water Reports)

**ABSTRACT** : In its recent examination of global water scarcity (1997) the United Nations system identified water quality as one of the key concerns in Asia in the next century. This concern is based on the fact that water quality degradation is so severe in many Asian countries that it is placing serious constraints on economic growth; it continues to be a serious problem for human health and it is causing widespread negative environmental effects. The problem of future management of water quality in Asia is a complex one, and requires re-examination of a number of key areas - including technical, institutional, legal and governance issues. Within this context, FAO organized a Regional Workshop on Water Quality Management and Control of Water Pollution which took place in Bangkok, Thailand from 26 to 30 October 1999. This publication contains the report and recommendations of the Workshop; the edited versions of 18 papers presented and discussed during the meeting are contained in the CD-ROM.

No : FAO101825

408

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water quality criteria for European freshwater fish: Report on nitrite and freshwater fish.

.- Rome : FAO ; 1984 .- 29 p.

(EIFAC Technical Series)

ISBN 9251021775

No : FAO 1191

409

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water quality criteria for European freshwater fish. Report on nickel and freshwater fish.

.- Rome : FAO .- 1984 .- 29 p.

ISBN 9251021767

No : FAO1190

410

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water quality criteria for European freshwater fish: Report on chromium and freshwater fish

.- Rome : FAO ; 1983 .- 37 p.

(EIFAC Technical Papers)

ISBN 9251013500

No : FAO 923

411

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Water quality criteria for European freshwater fish: Revised report on combined effects on freshwater fish and other aquatic life of mixtures of toxicants in water

.- Rome : FAO ; 1987 .- 87 p.

(EIFAC Technical Papers)

ISBN 9251025568

No : FAO 1460

412

**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION; UNITED NATIONS ENVIRONMENT PROGRAMME; FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

IOC/UNEP/FAO Training course on Nutrient Analysis and water Quality Monitoring:report

.- Paris : IOC ; 1994 .- Multiple pagination

413

**JOLANKAI, Geza UNESCO**

Basic river water quality models: computer aided learning (CAL) programme on water quality modelling (WQMCAL version 1.1)

.- Paris : UNESCO ; 1997 .- 53 p.

No : SC.97/WS/80

414

**MADRAMOOTOO, C. A. ; JOHNSON, W. R. ; WILLARDSON, L. S. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Management of agricultural drainage water quality

.- Rome : FAO ; 1997 .- 107 p.

(Water Reports)

415

**MORTON, John D ; STEWART, Macol M. ; ZWEIG, Ronald D. WORLD BANK**

Source water quality for aquaculture: A guide for assessment

.- Washington, D.C : World Bank ; 1999 .- 72 p.

ISBN 0-8213-4319-X

416

**PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT**

L'Afrique orientale : atlas des ressources côtière (République Fédérale Islamique des Comores)

.- Nairobi : PNUE, 2002 .- 154 p.

**ABSTRACT** : Ce manuel est conçu pour permettre une approche compréhensive de l'environnement côtier et marin des îles des Comores ainsi que de ses utilisations par l'homme. L'atlas et son complément, le Système d'Information Géoréférencé (SIG) mis en place à la Direction générale de l'Environnement constituent de surcroît un outil précieux d'aide à la décision en particulier celle relative à la promotion d'une politique de gestion intégré de l'environnement côtier et marin dont le pays a pleinement besoin.

417

**PALMER, Mervin D.**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Water quality modeling: a guide to effective practice  
.- Washington, D.C. : World Bank ; 2001 .- 157 p.: ill.

418

**UNESCO**

Water quality research on representative and experimental basins, a preliminary report  
.- Paris : UNESCO ; 1973 .- 27 P.  
No : SC/WS/544

419

**UNITED NATIONS**

Water quality of selected rivers in Asia: protection and rehabilitation  
.- New York : United Nations ; 2000 .- 136 p.  
**ABSTRACT** : This publication presents detailed case studies on the national experiences of protection and rehabilitation of selected rivers in Bangladesh, Cambodia, China, India, Indonesia, the Lao People's Democratic Republic, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam. Policy makers, planners, water resources managers and environmentalists will find this reference book invaluable in the formulation of plans and strategies for improving and protecting water quality in rivers.

This publication presents detailed case studies on the national experiences of protection and rehabilitation of selected rivers in Bangladesh, Cambodia, China, India, Indonesia, the Lao People's Democratic Republic, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam. Policy makers, planners, water resources managers and environmentalists will find this reference book invaluable in the formulation of plans and strategies for improving and protecting water quality in rivers.

No : ST/ESCAP/1956

420

**UNITED NATIONS**

Sources and nature of water quality problems in Asia and the Pacific  
.- New York : United Nations ; 1998 .- 174 p.  
**ABSTRACT** : This publication provides a clear picture of the state of water quality in rivers of countries in Asia and the Pacific. The study covers such areas as: identification of water quality problems; sources of pollution to rivers; impacts of water quality problems on availability and use of water; management of water quality in rivers; and activities planned for water quality protection and rehabilitation. Individual country case studies are presented and recommendations made.  
No : ST/ESCAP/1875

421

**UNITED NATIONS**

Water quality monitoring in the Asian and Pacific region  
.- New York : United Nations ; 1991 .- 345 p.  
(Water resources; no. 67)  
**ABSTRACT** : A state-of-the-art report on water quality monitoring programmes and an overview of monitoring water quality in the Asian and Pacific region. Country status reports on drinking water quality, pollution in rivers, water monitoring problems and regulatory measures are outlined. Also contained in this study are technical information on network design, field data collection techniques and equipment.

422

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Assessment of land-based sources and activities affecting the Marine, Coastal and associated freshwater environment in the South-East Pacific  
Nairobi : UNEP, [s.d].- [multiple pagination]  
(Regional seas reports and studies No. 169)

423

**UNITED NATIONS ENVIRONMENT PROGRAMME;  
PACIFIC INSTITUTE FOR STUDIES IN DEVELOPMENT,  
ENVIRONMENT AND SECURITY**

Threats to the World's freshwater resources  
.- Oakland, CA : Pacific Institute, 2001.- 59 p.

**ABSTRACT** : The management and protection of regional, national, and international freshwater resources have reached a crucial period. In the last several decades, it has become obvious to many that traditional water policies are not up to the task of meeting the challenges of the 21<sup>st</sup> century. New threats to the world's freshwater resources face water managers and policymakers.

424

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Sources and nature of water quality problems in Asia and the Pacific (Spanish)  
.- Nairobi : UNEP ; 1998 .- 174 p.  
ISBN 9211198488

425

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Principles for developing coastal water quality criteria  
.- Nairobi : UNEP ; 1984 .- 28 p.  
( Regional seas reports and studies; No. 042.)

426

**UNEP. GEMS**

Water quality of world river basins  
.- Nairobi : UNEP ; 1995 .- 40 p.  
(GEMS Environment Library; No.14)

**ABSTRACT** : Using examples drawn from the GEMS/WATER data bank, this volume demonstrates how natural processes interact with anthropogenic factors to create the observed water quality conditions. It is said that knowledge empowers the individual. One of the essential purposes of the UNEP/GEMS Environment Library series is to disseminate knowledge of environmental conditions to people around the world who are directly or indirectly affected by changes occurring in this global resource. It is my hope that this publication will contribute to our knowledge of the trends and conditions of water resources in diverse regions of our world.

The understanding of the dynamic nature of our global fresh water resource is a challenge that the United Nations Environment Programme (UNEP) and the World Health Organization (WHO), in cooperation with UNESCO and WMO, address through the water quality component of the Global Environment Monitoring System (GEMS/WATER). The dynamic nature of these resources reflects the continuous interplay between the natural processes of geochemistry,

hydrology, sedimentology and those activities associated with the human occupation of river basins. The Water Quality of World River Basins selectively summarizes data contributed by countries participating in the GEMS/WATER Programme over the period 1976-90. The book also includes information gathered from many other sources. It summarizes the results of analysis and interpretation for 82 major river basins around the world. Some of these river basins are located in highly populated and industrialized areas where human impacts can be clearly seen. Other watersheds represent more pristine areas that are currently not under extensive human stress. This publication contributes to the scientific investigation of global water resources. As global population increases and our demands on fresh water supplies grow, economic and development activities continue to increase the stress on natural ecosystems. Using examples drawn from the GEMS/WATER data bank, this volume demonstrates how natural processes interact with anthropogenic factors to create the observed water quality conditions. It is said that knowledge empowers the individual. One of the essential purposes of the UNEP/GEMS Environment Library series is to disseminate knowledge of environmental conditions to people around the world who are directly or indirectly affected by changes occurring in this global resource. It is my hope that this publication will contribute to our knowledge of the trends and conditions of water resources in diverse regions of our world.

ISBN 9280717553

427

**WORLD HEALTH ORGANIZATION**

A water quality assessment of the former Soviet Union  
.- Geneva : WHO ; 1998 .- 611 p.  
ISBN 0419239200

428

**WORLD HEALTH ORGANIZATION**

Food, water and family health  
.- Geneva : WHO ; 1994 .- 99 p.

**ABSTRACT** : An illustrated manual, for use in health education, that encourages poor rural communities to introduce simple environmental modifications to promote health and prevent disease. Particular attention is given to elements of basic hygiene and sanitation that protect children from diarrhoeal disease. Written in a simple yet lively narrative style, the manual uses vivid stories, dialogue, and drawings to make its vital health messages relevant to the community setting.

Information ranges from drawings illustrating the construction of filtration systems for drinking-water, through instructions for mixing oral rehydration salts, to advice on how fast-breeding fish species can be used to control mosquito larvae and improve nutrition.

The manual has four teaching units. The first, on healthy water and better sanitation, discusses problems associated with water, describes ways to keep the water supply safe, and sets out some simple "golden rules" for safe water. The unit also gives advice on how to construct and maintain latrines and how to ensure that water is safe to drink. Stories and activities presented in unit two explain how simple environmental modifications can help control several diseases, including diarrhoea, Guinea worm disease, schistosomiasis, and malaria and other mosquito-borne diseases. Information about HIV infection and the care of people with AIDS is also included.

Healthy food is covered in the third unit, which presents basic facts about nutrition, food safety, the multiple advantages of breast-feeding, appropriate weaning foods, and the protection of children's eyes through basic hygiene and adequate vitamin A intake. The unit also offers advice on healthy food choices when family income is limited. The final unit, on family health, covers nutrition and care during pregnancy, the importance of birth-spacing, and the value of immunization. A list of resources for further information concludes the manual.

## Water Resources

429

**BOGARDI, Janos; KUNDZEWICZ, Zbigniew. W.**

**UNESCO**

Risk, reliability, uncertainty, and robustness of water resources system  
.- Paris : UNESCO ; 2002 .- 220 p.: ill.

430

**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Recomendaciones de las reuniones internacionales sobre el agua: de Mar del Plata a Paris  
.- Santiago : CEPAL ; 1998 .- 87 p.

**ABSTRACT** : Water; Water Resources; Sustainable Development; Water Utilization; Water Supply; Water Quality; Water Conservation; Latin America; Caribbean  
No : LC/R.1865

431

**COSGROVE, William J. ; RIJSBERMAN, Frank R.**  
**WORLD WATER COUNCIL**

World water vision: making water everybody's business  
.- Paris : UNESCO ; 2000 .- 108 p. 1 CD-ROM

432

**CRUL, Ruud C. M.**  
**UNESCO**

Limnology and hydrology of lakes Tanganyika and Malawi: comprehensive and comparative study of Great lakes .- Paris : UNESCO ; 1997 .- 111 p.: ill., maps

433

**DESHPANDE, Sudhanva**  
**UNESCO**

Out of butter and water: the Hindu creation = Et si le monde n'avait pas eu de commencement? = De manteca y agua: la Creacion hindu  
.- Paris : UNESCO ; 2001 .- 35-36 p. ill.

434

**DINAR, A., ; SEIDL, P., ; OLEM, H. ; JORDEN, V.**  
**WORLD BANK**

Restoring and protecting the world's lakes and reservoirs  
.- Washington, D.C. : World Bank ; 1995 .- 85 p.  
(World Bank Technical Paper No.289)

435

**ECONOMIC COMMISSION FOR EUROPE**

Protection of water resources and aquatic ecosystems  
.- Brussels : ECE ; 1993 .- 50 p.

436

**FALKLAND, Anthony**  
**UNESCO**

Small tropical islands: water resources of paradises lost  
.- Paris : UNESCO ; 1992 .- 48 p.: ill.  
(IHP Humid Tropics Programme series (vol./issues) 2)

437

**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Water lifting devices  
.- Rome : FAO ; 1986 .- 308 p.  
(FAO Irrigation and Drainage Papers)  
ISBN 9251025150  
No : FAO 1427

438

**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Water resources of the near East Region: a review  
.- Rome : FAO ; 1997 .- 38 p.  
ISBN 9259032857  
No : FAO7932

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**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Water: where water comes from?  
.- Rome : FAO ; 1981 .- 31 p.  
(Better Farming Series)  
ISBN 9251010862  
No : FAO 771

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**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Corrosion and encrustation in water wells  
.- Rome : FAO ; 1980 .- 108 p.  
(FAO Irrigation and Drainage papers)  
ISBN 9251009333  
No : FAO709

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**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Remote sensing and water resources = Télédétection et ressources en eau  
.- Rome : FAO ; 1997 .- 104 p.  
(Water Reports)

442

**HUNTER, J. M.; REY, I.; CHU, I.; ADEKOLU, E. O.; MOTT, K. O.**  
**WORLD HEALTH ORGANIZATION**

Parasitic diseases in water resources development  
.- Geneva : WHO ; 1993 .- 152 p.

**ABSTRACT** : Issues a call for action to correct the gross neglect of the health consequences of water impoundment and irrigation projects. Arguments and proposed lines of action respond to the documented magnitude of human misery and incapacity that follow when water development projects make no provision for disease control. Concentrating on parasitic diseases as the most dramatic and reliable indicators of adverse effects on health, the book aims to persuade the financiers, planners, and managers of these projects to make health concerns a central part of the development dialogue.

To this end the book draws upon a large body of evidence to demonstrate both the magnitude of project-related health risks and the feasibility of their prevention and control. Citing the traditionally passive role of the health sector as a contributing factor, the book also aims to encourage health authorities to enter the project cycle with a more insistent voice. Throughout the book, emphasis is placed on recent knowledge about parasitic diseases that underscores the feasibility of formulating policies where the goal of economic progress is compatible with the protection and promotion of health.

443

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotope techniques in water resources investigation in arid and semi-arid regions  
.- Vienna : IAEA ; 2001  
(IAEA TECDOC Series No. 1203)

444

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Comparison of soil water measurement using the neutron scattering, time domain reflectometry and capacitance method  
.- Vienna : IAEA ; 2000  
(IAEA TECDOC Series No. 1137)

445

**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotope techniques in water resources development (Vienna, 30 March - 3 April 19987)  
.- Geneva : IAEA ; 1987  
(Proceeding series)

446

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Eastern Africa atlas of coastal resources : Kenya  
.- Nairobi : UNEP, 1998.- 119 p.  
**ABSTRACT** : Kenya has over 600 kilometres of coastline and this is one of the most important components of our nation's rich heritage. Until recently, the Kenya coast retained its predominantly trade-oriented focus. But in the last three decades there has been a distinct shift to service-oriented activities focused on the tourism and visitor industry. The process of development must be managed and environmental information is an essential ingredient for sound decision-making and sustainable resource use.

447

**KUNST, Sabine; KRUSE, Tanja; BURMESTER, Andrea**  
**UNESCO**

Sustainable water and soil management  
.- Paris : UNESCO ; 2002 .- 220 p.: ill., maps

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**LIBOR, Jansky; MIKIYASU, Nakayama; JUHA, Uitto**  
**UNITED NATIONS UNIVERSITY**

Lakes and reservoirs as international water systems : towards world lake vision  
.- Tokyo : UNU Press ; 2002

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**MATSUURA, K, UNESCO, Director-General, 1999**  
**UNESCO**

Address by Mr. Koichiro Matsuura, Director-General of UNESCO, on the occasion of the synthesis meeting for the World Water Development Report; Union internationale des chemins de fer, Paris, 15 May, 2002  
.- Paris : UNESCO ; 2002 .- 3 p.

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**MAYOR, F.**  
**UNESCO**

Water and civilization = L'eau et la civilisation = El Agua y la civilizacion  
.- Paris : UNESCO ; 1997 .- 36-37 p.

451

**MAYOR, F., Director-General, 1987-1999**  
**UNESCO**

Discours de M. Federico Mayor, Directeur général de l'UNESCO, au premier Forum mondial de l'eau et la civilisation; Marrakech, 22 mars 1997  
.- Paris : UNESCO ; 1997 .- 7 p.

452

**MILORADOV, Milorad; MARJANOVIC, Prvoslav**  
**UNESCO**

Guidelines for conducting water resources assessment  
.- Paris : UNESCO ; 1998 .- 120 p.  
(Studies and reports in hydrology)

453

**NACE, Raymond L.  
UNESCO**

Water and man: a world view; the international hydrological decade  
.- Paris : UNESCO ; 1969 .- 46 p .:ill, maps

454

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Eastern Africa atlas of coastal resources : Tanzania

.- Nairobi : UNEP, 2001.- 111 p.

**ABSTRACT :** The book underlines the importance of the coastal and marine environment, not only as an environmental concern, but also as a political, social and economic issue. This atlas is designed to raise the awareness and understanding of non-specialists, particularly decision makers, resource managers, students, and the general populace, on coastal and marine environmental issues and related challenges in Tanzania.

455

**UNESCO**

World Water Development Report

.-Paris: UNESCO, 2003

**ABSTRACT:** The principal goal of the World Water Development Report is to remind political decision-makers of the fundamental role of water and to provide reliable and up-to-date information so that effective policies can be developed. Seven pilot studies complement and illustrate the global picture thus revealed, each presenting different social, economic and water-related challenges.

The eleven themes covered by the report can be classed into two categories. The first deals with challenges to life and well-being (ranging from health to the protection of ecosystems to industrial production) while the second addresses management challenges (stewardship, governance and knowledge).

456

**REVENGA, Carmen, ; MURRAY, Siobhan, ; ABRAMOVITZ, Janet, ;  
HAMMOND, Allen****WORLD RESOURCES INSTITUTE**

Watersheds of the world

.- Washington DC : Water Resources Institute ; 1998

457

**RICH, Vera  
UNESCO**

Like water, like fire; an anthology of Byelorussian poetry from 1828 to the present day; UNESCO-sponsored programmes and publications  
.- Paris : UNESCO ; 1971 .- 347 p.

458

**SAAD, Kamal  
UNESCO**

Rational use of water resources in Oman -(mission)

.- Paris : UNESCO ; 1994 .- 39 p.

No : FMR/SC/HYD/94/109; PP/1992-1993/II/A/Assignment report

459

**SALMAN, M. A. Salman; DE CHAZOURNES, Laurence Boisson  
INTERNATIONAL BANK FOR RECONSTRUCTION AND  
DEVELOPMENT**

International watercourses: enhancing cooperation and managing conflict: proceedings of a World Bank seminar

.- Washington, D.C. : World Bank ; 1998 .- 223 p.

(World Bank Technical Paper No.414)

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**SHIKLOMANOV, Igor  
UNESCO**

Water resources to the year 2025 = Prospective de l'eau à l'horizon 2025 = Los Recursos hidricos hacia el año 2025

.- Paris : UNESCO ; 2001 .- 84-86 p.

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**SHIKLOMANOV, Igor A.  
UNESCO**

World water resources: a new appraisal and assessment for the 21st century

.- Paris : UNESCO ; 1998 .- 37p.: ill.

462

**SPALDING, Mark D.; RAVILIOUS, Corinna; GREEN Edmund P.**  
**UNEP-WCMC**

World atlas of coral reefs

.- Cambridge : UNEP-WCMC ; 2001 .- 424 p.

**ABSTRACT** : Coral reefs are one of the most biologically diverse habitats in the world, host to an extraordinary variety of marine plants and animals. They are also one of the world's most fragile and endangered ecosystems. The growth of mass tourism, combined with the boom in popularity of scuba diving, has brought these spectacular ecosystems to public attention across the planet. Coral reefs provide essential fish habitat, support endangered and threatened species, and harbor protected marine mammals and turtles.

They are a significant source of food, provide income and employment through tourism and marine recreation, and offer countless other benefits to humans, including supplying compounds for pharmaceuticals. Yet coral reefs around the world are rapidly being degraded by a number of human activities, such as overfishing, coastal development, and the introduction of sewage, fertilizer, and sediment. World Atlas of Coral Reefs provides the first detailed and definitive account of the current state of our planet's coral reefs. With its wealth of authoritative and up-to-date information, the finest maps available, and detailed descriptive texts and images by leading experts, this full-color volume will be a critical resource for anyone interested in these vital environments. World Atlas of Coral Reefs contains eighty four full-page newly researched and drawn color maps, together with more than two hundred color photos illustrating reefs, reef animals, and images taken from space by NASA astronauts during the 2000 and 2001 space shuttle flights. The authors provide a wealth of information on the geography, biodiversity, and human uses of coral reefs, as well as details about the threats to their existence. Prepared at the UNEP-World Conservation Monitoring Centre in Cambridge, England—the United Nations office responsible for providing authoritative information on the condition of global biodiversity—the Atlas will be a critical tool for scientists, students, policymakers, and planners at local, national, and international levels alike. Publication of the World Atlas of Coral Reefs is supported by international institutions including the United Nations Environment Programme; The Marine Aquarium Council, The International Coral Reef Initiative; ICLARM—The World Fish Center; the Professional Association of Diving Instructors, and the Aventis Foundation.

463

**UN. ADMINISTRATIVE COMMITTEE ON CO-ORDINATION.**  
**SUBCOMMITTEE ON WATER RESOURCES**

Report on the 21st and 22nd sessions of the ACC-Subcommittee on water resources: issues relevant to IHP

.- Paris : UNESCO ; 2002 .- 4 p.

No : SC.2002/CONF.205/CLD.25; IHP/IC-XV/Inf.25

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**UNESCO**

Great man-made rivers international water prize in water resources of arid and semi-arid areas

.- Paris : UNESCO ; 2000 .- 9 p.

No : SC.2000/WS/71

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**UNESCO**

Expert review workshop on data synthesis system (DSS) for Pan African water resources, Cairo, 11-12 April 2002: report

.- Paris : UNESCO ; 2002 .- 36 p.

No : SC.2002/WS/31

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**UNESCO**

Report on the involvement of IHP in the Third World Water Forum

.- Paris : UNESCO ; 2002 .- 4 p.

No : IHP/IC/XV/Inf.2

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**UNESCO**

Rehabilitation of Tawila water tanks, Aden Yemen - final report

.- Paris : UNESCO ; 2001 .- 52 p.: ill., maps, plans

No : FMR/UNESCO/CLT/CH/OPS/ARB/01/217 (UNDP); UNDP/YEM/93/009/Final report

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**UNESCO**

Water interactions: systems at risk and social challenges; draft strategic plan for the 6th phase 2002-2007

.- Paris : UNESCO ; 2002 .- 34 p.

No : SC.2002/CONF.205/CLD.29; IHP/IC-XV/Inf.29

469

**UNESCO**

Expert review workshop on data synthesis system (DSS) for Pan-African water resources, Cairo, 11-12 April 2002: report

.- Paris : UNESCO ; 2002 .- 36 p.

No : SC.2002/WS/31

470

**UNESCO**

Draft implementation plan of the sixth phase of IHP, 1st biennium (2002 -2003): water interactions, systems at risk and social challenges

.- Paris : UNESCO ; 2002 .- 53 p.

No : SC.2002/CONF.205/CLD.23; IHP/IC/XV/Inf.28

471

**UNESCO**

Report by the Director-General on the entry into operation of the UNESCO-IHE Institute for Water Education = Rapport du Directeur Général sur l'entrée en activité de l'institut UNESCO-IHE pour l'éducation relative à l'eau = Informe del Director General sobre el inicio de las actividades del Instituto UNESCO-IHE para la educación relativa al agua

.- Paris : UNESCO ; 2002 .- 2 p.

No : 164EX/11

472

**UNESCO**

Report on the implementation of the major decisions and resolutions adopted by the eleventh session of the intergovernmental Council of the IHP

.- Paris : UNESCO ; 1996 .- 7 p.

(Intergovernmental Council of the IHP; Paris; 1996)

No : IHP/IC.XII/7; SC.96/CONF.207/LD.9

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**UNESCO; WORLD WATER COUNCIL**

Water for the 21st century; World Water Day 2000, 22 March; World wide celebration reflecting on water for the 21st century = L'eau pour le XXIe siècle = Agua para el siglo XXI

.- Paris : UNESCO ; 2000 .- 2 v.

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**UNESCO**

Review of the decision and resolutions adopted by the Intergovernmental Council of the IHP at its eleventh session

.- Paris : UNESCO ; 1996 .- 7 p.

No : IHP/BUR/XXIII/5

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**UNESCO**

Report on co-operation with the United Nations and non-governmental organizations

.- Paris : UNESCO ; 2001 .- 4 p.

No : IHP/BUR-XXXI/12

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**UNESCO**

Extract from the report and recommendations of the eighth session of the IOC working committee on International Oceanographic data exchange

.- Paris : UNESCO ; 1975 .- 6 p.

(Joint FAO/OIC Panel of experts on ASFIS; IOC. Working committee on IODE; New York, Rome; 1975)

No : ASFIS/EP.1/75/8

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**UNESCO**

Address by Mr Koichiro Matsuura, Director-general of UNESCO, at the second World Water Forum: water in rivers; The Hague, 20 March 2000

.- Paris : UNESCO ; 2002 .- 5 p.

478

**UNESCO**

Progress report on the Great Man-Made River International Water Prize

.- Paris : UNESCO ; 2001 .- 2 p.

No : IHP/BUR-XXXI/INF.21

479

**UNITED NATIONS**

Sustainable development of water resources in Asia and the Pacific: an overview

.- New York : United Nations ; 1998 .- 167 p.

**ABSTRACT** : Arguing that the role of development and use of fresh water must not exceed certain limits if ecological balance is to be maintained, this publication reviews the situation of water resources development and use in the Asia-Pacific region. The findings presented on an individual country basis, will prove to be most useful to decision makers and professionals in the field of water development, management and academics.

480

**UNITED NATIONS**

Protection of water resources, water quality and aquatic ecosystems in Asia and the Pacific

.- New York : United Nations ; 1996 .- 324 p.

**ABSTRACT** : An extremely useful publication for all countries especially those in the ESCAP region, in their efforts towards national protection of their water resources and aquatic ecosystems.

481

**UNITED NATIONS**

Protection of water resources and aquatic ecosystems

.- New York : United Nations ; 1993 .- 50 p.

(ECE water series; no. 1)

**ABSTRACT** : Examines the principles of protection measures of water resources and aquatic ecosystems. Provides guidelines on the protection of water resources and aquatic ecosystems for the European region and North America.

482

**UNITED NATIONS**

Forecasting, preparedness and other operational measures for water-related natural disaster reduction in Asia and the Pacific

.- New York : United Nations ; 1992 .- 184 p.

(Water resources; no. 69)

**ABSTRACT** : This publication gives an in-depth assessment of current preparedness programmes, forecasting systems and operational methods for water-related natural disaster reduction in the ESCAP region. Numerous case studies are presented.

483

**UNITED NATIONS**

Water resources of Latin America and the Caribbean: planning, hazards and pollution .- New York : United Nations ; 1990 .- 260 p.(Estudios e informes de la CEPAL; no. 77)

**ABSTRACT** : Describes the formulation of national water resource plans in Latin America and the Caribbean countries; reviews natural hazards that affect the area and their effects on social and economic development; examines the disaster-mitigation measures adopted in the region and water pollution problems and the measures adopted by countries to combat them.

484

**UNITED NATIONS**

Assessment of water resources demand by user sectors in the Philippines

.- New York : United Nations ; 1999 .- 82 p.

**ABSTRACT** : Water resources assessment gives an overview of the physiographical and hydrological conditions and the availability of water resources in the different water resources regions in the Philippines. It identifies predominant issues affecting the water supply-demand situation and provides an overview of future water demand based on projected requirements for various sectoral uses.

No : ST/ESCAP/1945

485

**UNITED NATIONS ENVIRONMENT PROGRAMME;**

UNEP handbook on the development and implementation of a national programme of action for the protection of the marine environment from land-based activities

.- The Hague : UNEP-GPA, [s.d.] .- [multiple pagination]

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**UNITED NATIONS**

Environmentally sound technologies for wastewater and stormwater management : an international source book .- New York : United Nations ; 2002 .- 613 p. ISBN 9280718207

487

**UNITED NATIONS**

Protection of water resources, water quality and aquatic ecosystems in Asia and the Pacific

.- New York : United Nations ; 1996 .- 324 p.

**ABSTRACT** : An extremely useful publication for all countries especially those in the ESCAP region, in their efforts towards national protection of their water resources and aquatic ecosystems

ISBN 9211196779

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**UNITED NATIONS**

MAP camp projects "Israel" final international report and selected documents

.- New York : United Nations ; 2001 .- 70 p.

( MAP technical reports series; 134)

ISBN 9280721070

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**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Assessment of water resources and water demand by user sectors in Myanmar

.- Bangkok : UN ESCAP ; 1995

(Water and mineral resources)

No : 1573

490

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Trans-boundary water resources in the ESCWA region: utilization, management and cooperation

.- Amman : ESCWA ; 1997

No : E/ESCWA/ENR/1997/

491

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Development of non-governmental water resources

.- Amman : ESCWA ; 1997

No : /ESCWA/ENR/1997/9/Rev.1

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**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Expert group meeting on updating the assessment of water resources in the ESCWA member countries, Beirut, 20 - 23 April, 1999 ; report

.- Amman : ESCWA ; 1999

No : E/ESCWA/ENR/1999/4

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**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Updating the assessment of water resources in ESCWA member countries

.- Amman : ESCWA ; 1999

No : E/ESCWA/ENR/1999/13

494

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

Report of the expert group meeting on legal aspects of the management of shared water resources in the ESCWA region

.- Amman : ESCWA ; 2000

No : E/ESCWA/ENR/2000/1

495

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines of lake management Volume 6: management of inland saline waters  
.- Nairobi : UNEP ; 1998 .- 108

**ABSTRACT** : Almost a billion people, including some of the most disadvantaged of the human race, live in Dryland regions of the world - that part of our planet receiving on average less than about 500mm of rain annually. Drylands cover almost a third of the land area of the planet and include substantial regions of all continents, including all of Antarctica. Characteristic features of the natural environment and landscape are salt lakes: temporary or permanent bodies of salt or saline water. This book is a significant addition to the ILEC series of Guidelines of Lake Management and is recommended to all those interested in salt lakes, be they conservationists, scientists, or managers.  
ISBN 4906356249

496

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Water .- Nairobi : UNEP ; 1996 .- 35 p. (Our Planet; Vol.8, No.3)  
ISSN 10137394

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Water .- Nairobi : UNEP ; 1996 .- 35 p.(Our Planet; Vol. 8, No.3)  
ISSN 10137394

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

Water in the Mediterranean Region = L'eau en région Méditerranéenne  
.- Nairobi : UNEP ; 1997 .- 91 p.

499

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Deep water  
.- Nairobi : UNEP ; 1999  
ISBN 1899858792

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**UNITED NATIONS ENVIRONMENT PROGRAMME**

The Mesopotamian Marshlands: demise of an ecosystem  
.- Nairobi: UNEP; 2002.- 47p.  
(Early Warning and Assessment Reports Series No. UNEP/DEWA/TR.01-3)

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**UNITED NATIONS UNIVERSITY**

The Basin of Mexico  
.- Mexico : UNU ; 1999 .- 216 p.  
ISBN 9280810219

502

**UNITED NATIONS UNIVERSITY**

Asian water forum: summary report: 30 January-1 February, 1995, Bangkok, Thailand  
.- Tokyo : UNU Press ; 1995

503

**UNITED NATIONS UNIVERSITY**

Regional development for the Mekong basin: report of the international symposium, 1-2 December, 1994  
.- Tokyo : UNU Press ; 1996

504

**USSR. NATIONAL COMMITTEE FOR THE  
HYDROMETEOROLOGICAL SERVICE; UNESCO**

Atlas of world water balance = Atlas mirovogo vodnogo balansa  
.- Paris : UNESCO ; 1977 .- 1 v., maps

505

**VAKKILAINEN, P.; VARIS, O.  
UNESCO**

Will water be enough, will food be enough?  
.- Paris : UNESCO ; 1999 .- 38 p.  
No : SC.99/WS/37

506

**WORLD METEOROLOGICAL ORGANIZATION**

Joint UNESCO/WMO liaison committee for hydrology activities: report

.- Paris : UNESCO ; 1995 .- 9 p.

(Joint UNESCO/WMO liaison committee for hydrological activities; Paris; 1995)

No : SC.96/WS/25

507

**WORLD METEOROLOGICAL ORGANIZATION**

Evaluacion general de los recursos de agua dulce del mundo

.- Paris : UNESCO ; 1997 .- 33 p.: ill., maps

(UN Conference on Environment and Development; Rio de Janeiro; 1992)

508

**ZALEWSKI, Maciej; WAGNER, Iwona**

**UNESCO**

Advanced study course in ecohydrology: Ecohydrology concept as problem solving approach

.- Paris : UNESCO ; 2000 .- 65 p.

*Water Resources Management*

509

**AGENCIA NACIONAL DE AUGAS (Brazil); UNESCO**

The evolution of water resource management in Brazil = A Evolucao da gestao dos recursos hldricos no Brazil

.- Paris : UNESCO ; 2002 .- 64 p.: ill.

510

**AHENKORAH, Y.**

**UNITED NATIONS UNIVERSITY**

Soil and water resources of Ghana: their conservation, management and constraints to the utilization for sustainable

.- Tokyo : UNU/INRA ; 1993

511

**ALCAZAR, Lorena; ABDALA, Manuel A.; SHIRLEY, Mary M. INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

The Buenos Aires water concession

.- Washington, D.C. ; 2000 .- 62 p.: ill.

(Policy research working paper)

512

**AWAN, N. M.; LATIF, M.**

**UNITED NATIONS UNIVERSITY**

Technical, social, and economic aspects of water resources management in salinity control and reclamation project No.1 in Pakistan

.- Tokyo : Centre of Excellence in water resources engineering/ UNU Press ; 1982

(80/NR/12)

513

**BANQUE INTERNATIONALE POUR LA RECONSTRUCTION ET LE DEVELOPEMENT**

Gestion des ressources en eau

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Towards a strategy on human capacity building for integrated water resources management and service delivery: water-education-training

.- Paris : UNESCO ; 2002 .- 12 p.

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Multicriteria decision analysis in water resources management

.- Paris : UNESCO ; 1994 .- 469 p.

No : SC.94/WS/14

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Weather radar technology for water resources management

.- Paris : UNESCO ; 1997 .- 516 p.: ill.

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Education and training needs for future water resources management

.- Paris : UNESCO ; 1993 .- 3 p.

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Modern water control and management practices in irrigation. Impact on performance

.- Rome : FAO ; 1999 .- 244 p.

(Water Reports)

**ABSTRACT** : Water plays a critical role in food production. Irrigated agriculture will have an important role in helping to increase the production of food to meet future demand. This publication reviews irrigation schemes and modernization initiatives from around the world in order to assess and comment on the impact of modern water control and management approaches.

No : FAO100506

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The Blue revolution: land use and integrated water resources management

.- Paris : UNESCO ; 1999 .- 192 p.: ill., maps

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Design and operation of smallholder irrigation in South Asia

.- Washington, D.C. : World Bank ; 1995 .- 134 p.

(World Bank Technical Paper; No. 256)

**ABSTRACT** : World Bank lending contributes substantially to financing irrigation investments around the world. Asia has been the chief recipient of such World Bank lending, receiving 70 percent. India alone accounts for 27

percent of all irrigation borrowing. Domestic demand in the South Asia region for agricultural products is now largely met because of the investment in irrigation over the past 50 years. Problems still remain, usually because of poor management of the water resources in the unique smallholder environment of the South Asia region.

This paper presents the primary sociological, economic, and technical factors influencing the design and operation of smallholder irrigation in South Asia. The author identifies and defines the main problems without necessarily recommending solutions. Instead he describes the available options and possible direction of further development. The paper also presents many case studies of India.

ISBN 0-8213-2995-2

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Conflict and cooperation related to international water resources: historical perspectives

.- Paris : UNESCO ; 2002 .- 203 p .

No : SC.2002/WS/53

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Of rice and men: two thousand years of water management in Sri Lanka = Du riz et des hommes: deux mille ans de gestion de l'eau = De arroz y hombres: dos mil años de gestion del agua

.- Paris : UNESCO ; 2001 .- 4-9 p., ill., maps

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Gestion del agua a nivel de cuencas: teoria y practica

.- Santiago : CEPAL ; 2002 .- 79 p.

(Serie recursos naturales e infraestructura; No. 47)

**ABSTRACT** : Water Management; Water Resources; Resources Management; Environmental Management; Latin America; Caribbean

No : LC/L.1777-P

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Administracion del agua en America Latina y el Caribe en el umbral del siglo XXI

.- Santiago : CEPAL ; 2001 .- 73 p.

(Serie recursos naturales e infraestructura; No.27)

**ABSTRACT** : Water Resources; River Basins; Drinking Water; Water Management; Resources Management; Sanitation Services; Latin America  
No : LC/L.1564-P

528

**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Participacion privada en la prestacion de los servicios de agua. Volumen I. Modalidades para la participacion privada en prestacion de los servicios de agua

.- Santiago : CEPAL ; 1996 .- 70 p.

**ABSTRACT** : Drinking Water; Sanitation Services; Public Services; Private Sector; Water Management; Latin America; Caribbean  
No : LC/L.1576

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Tendencias actuales de la gestion del agua en America Latina y el Caribe (avances en la implementacion de las recomendaciones contenidas en el capitulo 18 del programa 21

.- Santiago : CEPAL ; 1999 .- 98 p.

**ABSTRACT** : Water Resources; Water Management; Water Quality; Water Law; Water Supply; Latin America; Caribbean  
No : LC/L.1180

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Progresos realizados en la privatizacion de los servicios publicos relacionados con el agua: resena por paises de Mexico, America Central y el Caribe

.- Santiago : CEPAL ; 1998 .- 552 p.

**ABSTRACT** : Drinking Water; Water Utilization; Water Supply; Sanitation; Privatization

No : LC/R.1697

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Progresos realizados en la privatizacion de los servicios publicos relacionados con el agua: resena por paises de Sudamerica

.- Santiago : CEPAL ; 1998 .- 59 p.

**ABSTRACT** : Privatization; Public Services; Drinking Water; Water Supply; Sanitation; Water UtilizationSouth America

No : LC/R.1697/Add.1

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**COMISION ECONOMICA AMERICA LATINA Y EL CARIBE**

Los precios, la propiedad y los mercados en la asignacion del agua

.- Santiago : CEPAL ; 1998 .- 59 p.

(Serie Medio Ambiente y Desarrollo ; No. 6)

**ABSTRACT** : Privatization; Drinking Water; Water Supply; Sanitation; Water utilization; irrigation; South America

No : LC/L.1097

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

La regulacion de la prestacion privada de servicios relacionados con el agua

.- Santiago : CEPAL ; 1997 .- 105 p.

**ABSTRACT** : Water; Water Management; Regulations; Water Quality; Public Services; Privatization; Latin America; Caribbean

No : LC/R.1635

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Contribuciones al Taller sobre aspectos de la privatizacion de las empresas de servicios publicos relacionadas con el agua en las Americas

.- Santiago : CEPAL ; 1997 .- 75 p.

**ABSTRACT** : Water; Public Services; Privatization; Water Supply; Environment Protection; Water Management; Sanitation Services; Case Study; Latin America; Caribbean

No : LC/R.1723

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

Participacion privada en la prestacion de los servicios de agua. Modalidades para la participacion privada en la prestacion de los servicios de agua

.- Santiago : CEPAL ; 1997

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No : LC/L.1024

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Mercados de derechos de agua: entorno legal

.- Santiago : CEPAL ; 1995

**ABSTRACT** : Water Law; Water Utilization; Regulations; Water Quality; Conservation; South Africa

No : LC/R.1485

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

La privatizacion de servicios publicos basados en agua

.- Santiago : CEPAL ; 1995

No : LC/R.1486

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**COMISION ECONOMICA PARA AMERICA LATINA Y EL CARIBE**

La regulacion de la prestacion privada de servicios relacionados con el agua  
.- Santiago : CEPAL ; 1997 .- 104 p.

**ABSTRACT** : Water; Water management; Water quality; Latin America; Caribbean

No : LC/L.1635/Rev.1

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Management and conservation of the African Great Lakes Victoria, Tanganyika and Malawi

.- Paris : UNESCO ; 1998 .- 107 p., ill, maps

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**DINAR, Ariel; OLSON, Douglas ; CUMMINGS, Ronald  
WORLD BANK**

New evaluation procedures for a generation of water-related projects

.- Washington, D.C. : World Bank ; 1996 .- 64 p.

(World Bank Technical Paper; No. 349)

**ABSTRACT** : The Bank's approach to water resources development has shifted from one of construction activities to one of improved management quality, creating a "new generation" of water-related projects and the need for new evaluation procedures. This paper addresses the methodology for economic evaluation of this new group of projects and draws on the experience of the recently approved Mexico Water Resources Management project.

ISBN 0-8213-3829-3

541

**DOUROJEANNI, Axel**

**ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN**

Water management at the river basin level: challenges in Latin America

.- Santiago : ECLAC ; 2001 .- 75 p.

(Serie recursos naturales e infraestructura ; No. 29)

**ABSTRACT** : River Basins Resources Management; Regional Development Water Management; Environmental Management; Water Resources; Latin America

ISBN 92-1-121321-5

No : LC/L.1583-P

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**DOUROJEANNI, Axel**

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.- Santiago : CEPAL ; 1999 .- 24 p.

**ABSTRACT** : Codes; Water; Water Resources; Legislation; Water Law

No : LC/R.1924

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**UNITED NATIONS**

Water management at the river basin level: challenges in Latin America

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El codigo de aguas de Chile: entre la ideologia y la realidad

.- Santiago : CEPAL ; 1999 .- 84 p.

(Serie recursos naturales e infraestructura No. 3)

**ABSTRACT** : Codes; Water; Water Resources; Legislation; Water Law; Chile

ISBN 92-1-321531-2

No : LC/L.1263-P

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The Manila water concession: a key government official's diary of the world's largest water privatization

.- Washington, D.C. : World Bank ; 2000 .- 137 p.: ill., maps

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Proceedings of the workshop on issues in the privatization of water utilities in the Americas (Santiago, Chile, October 4-6 1995)

.- Santiago : ECLAC ; 1997 .- 17 p.

**ABSTRACT** : Water; Privatization; Water Supply; Water Management; Latin America; Caribbean

No : LC/R.1722

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**ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN**

Proceedings of the workshop on issues in the privatization of water utilities in the Americas (Santiago, Chile, October 4-6, 1995). Contributions to the workshop on issues in the privatization of water utilities in the Americas. Addendum 1

.- Santiago : ECLAC ; 1997 .- 83 p.

**ABSTRACT** : Water; Public Services; Privatization; Water Supply; Environment Protection; Water Management; Case Studies; Latin America; Caribbean; United States; Canada; Europe

No : LC/R.1722/Add.1

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**ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN**

Progress in the privatization of water-related public services: a country-by-country review for Mexico, Central America and the Caribbean

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No : LC/R.1697

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Progress in the privatization of water-related public services: a country-by-country review for South America

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**ABSTRACT** : Drinking Water; Water Supply; Water Utilization; Sanitation; Central America; Caribbean

No : LC/R.1697/Add.1

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Water utility regulation: issues and options for Latin America and the Caribbean

.- Santiago : ECLAC ; 2000 .- 131 p.

**ABSTRACT** : Water; Water Management; Regulations; Water Supply; Water Quality; Sanitation Services; Latin America; Caribbean

No : LC/R.2023

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Identification of joint management, structures for shared aquifers: a cooperative Palestinian-Israeli effort .- Washington, D.C. : Worldbank ; 1998 .- 37 p.

(World Bank Technical paper; No. 415)

ISBN 0-8213-4307-6

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Management of upland watersheds: participation of the mountain communities

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ISBN 9251013373

No : FAO917

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Strategies, approaches and systems in integrated watershed management  
 .- Rome : FAO ; 1986 .- 238 p.  
 (FAO Conservation Guides)  
 ISBN 9251023522  
 No : FAO1309

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**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Irrigation water management - Training manual. Small scale pumped irrigation energy and cost  
 .- Rome : FAO  
 ISBN 9251043027

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**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Irrigation practice and water management  
 .- Rome : FAO ; 1988 .- 71 p.  
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 ISBN 9251014795  
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Land and water integration and river basin management  
 .- Rome : FAO ; 1995 .- 95 p.  
 (FAO Land and Water Bulletins)  
**ABSTRACT** : Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. The effective management links land and water resources across the whole of a catchment area or groundwater aquifer.

The Workshop addressed the broader issues of water management in the context of land use and the environment and within the framework of river basin management. More specifically, the Workshop dealt with: defining land and water linkages; developing a conceptual framework to predict land, water and plant nutrient interaction; establishing a landscape and river basin approach to integrated management of natural resources; and drafting a programme of action including applied research and modelling, education, extension and manuals and field projects aimed at promoting integrated management of natural resources. This publication contains the report and recommendations of the Workshop and edited versions of eight papers which were presented and discussed in the Workshop.

ISBN 9251036551

No : FAO2237

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**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Land and water resources information systems  
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 (FAO Land and Water Bulletins)  
 ISBN 9251041997  
 No : FAO100322

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**GORRIZ, Cecilia ; SIMAS, Jos WORLD BANK**

Irrigation management transfer in Mexico: process and progress  
 .- Washington, D.C. : World Bank ; 1995 .- 130 p.  
 (World bank Technical paper; No. 292)  
 ISBN 0-8213-3330-5

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**GREY, David ; GILGAN-HUNT, Edeltraut ; SHARMA, Narendra P. [et al...];**

**WORLD BANK**

African water resources: challenges and opportunities for sustainable development

.- Washington, D.C. : World Bank ; 1997 .- 184 p.

(World Bank Technical Paper; No. 331F)

**ABSTRACT** : Develops a strategy for water resources management in Sub-Saharan Africa based on the principles that water is a scarce resource and that access to it raises issues of economic efficiency, social equity, and environmental sustainability. The report recommends an integrated, cross-sectoral, catchment-area approach and identifies five development imperatives: household water security, protection of catchment areas and wetlands, food security, water quality and human health, and intranational and international conflict resolution.

ISBN 0-8213-3854-4

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Salinity management for sustainable irrigation: integrating science, environment and economics

.- Washington, D.C. : World Bank ; 2000 .- 104 p.

ISBN 0-8213-4773

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Approaches to integrated water resources management in humid tropical and arid and semi-arid zones in developing countries

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**INTERNATIONAL ATOMIC ENERGY AGENCY**

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.- Vienna : IAEA ; 2000

(IAEA TECDOC Series No. 1137)

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**INTERNATIONAL ATOMIC ENERGY AGENCY**

Management of nutrients and water in rainfed arid and semi-arid areas

.- Geneva : IAEA ; 1998

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**INTERNATIONAL ATOMIC ENERGY AGENCY**

Isotopes in water resource management

.- Geneva : IAEA ; 1996

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**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

The private sector in water: competition and regulation

.- Washington, D.C. : World Bank ; 1999 .- 71 p. ill.

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**INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE; WORLD BANK**

Planning the management, operation and maintenance of irrigation and drainage systems: a guide for the preparation of strategies and manuals (revised edition)

.- Washington, D.C. : World Bank ; 1998 .- 136 p.

(World Bank Technical Paper; No. 339. )

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Impact of climate variations on water management and related socio-economic systems: a review and reinterpretation of existing information

.- Paris : UNESCO ; 1995 .- 115 p. in various pagination

No : SC.95/WS/26

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**PROGRAMME DES NATIONS UNIES POUR  
L'ENVIRONNEMENT;  
NATIONS UNIES; COMMISSION DU BASSIN DU LAC-  
TCHAD**

Plan directeur pour le développement et la gestion écologiquement rationnelle  
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Do state holding companies facilitate private participation in the water sector?:  
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.- Washington, D.C. : World Bank ; 2000.- 33 p.: ill.  
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**LOUCKS, Peter ;  
UNESCO**

Water resource management: focusing on sustainability  
.- Paris : UNESCO ; 1994.- 46 p.  
No : SC.94/WS/15

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**MATSUURA, K.  
UNESCO**

Address by Mr Koichiro Matsuura, Director General of UNESCO, at the WSSD  
high level event: uniting for the oceans; oceans; people and stewardship,  
Johannesburg, Water Dome, 2 September, 2002  
.- Paris : UNESCO ; 2002.- 3 p .  
No : DG/2002/84

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UNESCO**

Address by Mr Koichiro Matsuura, Director General of UNESCO on the  
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monitoring global progress; water and globalization, Johannesburg, Water Dome,  
2 September 2002  
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No : DG/2002/88

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**MOIGNE, Gu Le ; KUFFNER, Ulrich  
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Using water efficiently: technological options  
.- Washington, D.C. : World Bank ; 1993.- 61 p.  
ISBN 0-8213-2455-1

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**MOIGNE, Guy Le ; XIE, Me ; SUBRAMANIAN, Sandra Giltner  
WORLD BANK**

A guide to the formulation of water resources strategy  
.- Washington, D.C. : World Bank ; 1994.- 122 p.  
(World Bank Technical paper No. 263)

**ABSTRACT** : Management of water resources is essential for long-term,  
environmentally sustainable human and economic development. Increasingly,  
the World Bank and other international organizations are called upon to provide  
support in the formulation of water resources strategies. This volume serves as  
a guide for developing countries in creating their strategies by outlining a general  
process. It also suggests ways for countries to build capacity through the process  
of designing and implementing such strategies.

The volume is divided into two parts. Part I covers the purpose and process  
of strategy formulation. The process consists of a water resource assessment  
and then the design and choice of options. Part II reviews such main concepts  
as institutional and human resources, stakeholder participation, information  
systems, economics, environment and health, and international issues. World  
Bank Technical Paper No. 263.  
ISBN 0-8213-3038-1

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**PITMAN, George Trevor Keith**

**WORLD BANK**

Bridging troubled waters: assessing the World Bank water resources strategy  
.- Washington, D.C. : World Bank ; 2002 .- 118 p.

**ABSTRACT** : Currently, 166 million people in 18 countries are affected by water scarcity and another 270 million people in 11 countries are “water stressed.” It is predicted that by 2025, the number of people affected will increase to approximately three billion or about 40 percent of the world’s population. This problem is now considered so severe that it requires a strategic approach that emphasizes equitable and sustainable management of water resources.

This report evaluates the World Bank’s implementation experience of the 1993 Water Resources Management Policy (Operational Policy 4.07) to determine the relevance and effectiveness of the World Bank’s overall water operations for its borrowers. It assesses the extent to which the issues identified in the guideline document Water Resources Management-A World Bank Policy Paper (1993) have been implemented by World Bank Operations. This report also makes recommendations for improving World Bank policy and strategy in the water sector.

ISBN 0-8213-5140-0

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**PLATE, Erich**

**WORLD HEALTH ORGANISATION; INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS**

Sustainable water resources development: a call for action by the international water related scientific and engineering association

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Water quality studies on selected South Pacific lagoons

.- Nairobi : UNEP, 1991 .- 99 p.

(Regional Seas Reports and Studies No. 136)

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**RINGSKOG, Kla ; SIMPSON, Lawrence**

**WORLD BANK**

Water markets in the Americas

.- Washington, D.C. : World Bank ; 1997 .- 60 p.

ISBN 0-8213-4088-3

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**UNESCO**

The control of eutrophication of lakes and reservoirs

.- Paris : UNESCO ; 1989 .- 314 p.: ill.

(MAB: man and the biosphere series; v.1)

580

**SALETH, R. Maria**

**WORLD BANK**

Evaluating water institutions and water sector performance .- Washington D.C. : World Bank ; 1999(World Bank Technical Paper; No. 447)

**ABSTRACT** : “Physical limits to fresh water expansion-an emerging reality in many parts of the world-make absolute water scarcity inevitable. The inability of the already developed water supply to meet an ever-growing demand for fresh water also makes the emergence of relative water scarcity unavoidable. Water scarcity-both in its absolute and relative forms-gets accentuated further by an increasing premium attached to water quality and ecological sustainability.” The water sector has undergone remarkable changes in recent years. While past achievements were associated mainly with investment in new physical structures, recent developments in the water sector are associated to a greater extent with improved management and institutional changes. Although both the nature and direction of these institutional changes vary by country specific economic, political, cultural and resource realities, there are clearly identifiable trends and patterns. This report suggests a new methodology to shed light on the process of institution-performance interaction. It demonstrates the use of the methodology by applying it to an extensive cross-country data set, and by deriving policy guidance based on the results. The authors aim to stimulate thought and debate about methodologies and strategies to be used in order to evaluate institutional change and institution-performance interactions in the water sector.

ISBN 0-8213-4561-3

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**SALETH, R. Maria; DINAR, Ariel**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Water challenge and institutional response: a cross-country perspective  
 .- Washington, D.C. : World Bank ; 1999 .- 51 p.: ill  
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Proceedings of the international workshop on non-structural measures for water management problems, London, Ontario, Canada, 18-20 October 2001  
 .- Paris : UNESCO ; 2002 .- 309 p .  
 No : SC.2002/WS/34

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**TALEBBEYDOKHTI, N; TELVARI, A.; HEYDARIAN, S. A.**  
**IRAN, ISLAMIC REPUBLIC. NATIONAL COMMISSION FOR UNESCO; UNESCO; UNESCO NEW DELHI OFFICE**

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 .- Paris : UNESCO ; 1992 .- 14 p.  
 No : SC.92/CONF.202/LD.10; IHP/IC/X/8

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Hydrology and water management in the humid tropical: proceedings of the

second international colloquium, 22-26 March 1999, Panama, Republic of Panama

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 .- Paris : UNESCO ; 2002 .- 10 p.  
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**UNESCO**

Report on IPH's involvement in the World Water Assessment Programme (WWAP) and the World Water Development Report (WWDR)  
 .- Paris : UNESCO ; 2002 .- 3 p.  
 No : IHP/IC-XV/inf.4

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**UNESCO**

Report on the UNESCO-IHE Institute of Water Education  
 .- Paris : UNESCO ; 2002 .- 4 p.  
 No : IHP/IC/XV/Inf.2

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**UNESCO**

Progress report on the preparation of the Pan-African Conference (on Water Resources Management, 2003)  
 .- Paris : UNESCO .- 2001, 6 p.  
 No : IHP/BUR-XXXI/INF.10

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**UNESCO**

Report on the IHP's involvement in the World Water Assessment Programme (WWAP) and the World Water Development Report (WWDR)  
 .- Paris : UNESCO ; 2001 .- 3 p.  
 No : IHP/BUR/XXXI/INF.5

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**UNESCO OFFICE FOR SCIENCE AND TECHNOLOGY FOR  
LATIN AMERICA AND THE CARIBBEAN (URUGUAY); ;  
UNITED NATIONS ENVIRONMENT PROGRAMME; ;  
INTERNATIONAL WATER RESOURCES ASSOCIATION; ;  
BRAZIL. WATER RESOURCES ASSOCIATION**

Water management of the Amazon basin

.- Paris : UNESCO ; 1991 .- 288 p., ill., maps

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**UNICEF**

Towards better programming: A water handbook

.- New York : UNICEF ; 1999 .- 103 p

(Part of the "Water, Environmental and Sanitation Technical Guidelines Series")

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**UNITED NATIONS**

Guidelines and manual on land-use planning and practices in watershed management and disaster reduction

.- New York : United Nations ; 1998 .- 141 p.

**ABSTRACT** : This publication consists of two parts: the Guidelines and the Manual. The Guidelines discuss the relationships between land-use planning, disaster reduction and watershed management, explain the categories of watershed degradation, the categories of water-related natural disasters. The Manual is concerned with data collection and evaluation for watershed management and natural hazard assessment. This publication was prepared to assist decision makers, planners and engineers to manage land and water resources in an integrated manner, in order to achieve better and sustainable watershed management . It will also serve as a reference for planners and professionals working in other sectors when dealing with watershed-related development projects.

ISBN 9211197724

594

**PROGRAMME DES NATIONS UNIES POUR  
L'ENVIRONNEMENT;**

Ecosystèmes de lagons de la Polynésie française

.- Nairobi : PNUE, 1991 .- 298 p.

(Regional seas reports and studies No; 137)

595

**UNITED NATIONS**

International Shiga forum on technology for water management in the 21st century

.- New York : United Nations ; 2001 .- 344 p.

**ABSTRACT** : Due to increasing population, changing lifestyles and escalating human activities, the total global demand for water resources is increasing. The Shiga International Forum on Water brought together scientists from all over the world to discuss the global water crisis. Scientists, government civil servants, international organizations and public decision-makers will find the materials of this Forum invaluable.

596

**UNITED NATIONS**

Urban water resources management

.- New York : United Nations ; 1993 .- 160 p.

(Water resources; no. 72)

**ABSTRACT** : The ever-increasing demand for water by a growing population and expanding industrial and agricultural activities are placing a heavy burden on existing water resources in the Asian and Pacific region. This publication contains the report on a regional seminar on water management in urban areas, background papers by experts in the field and country papers submitted by participants. It includes recommendations on the formulation and implementation of a national policy for sustainable and environmentally sound development of water resources.

597

**UNITED NATIONS**

Water management in Islam

.- New York : United Nations ; 2001 .- 176 p.

**ABSTRACT** : This publication presents Islamic perspectives on a number of proposed water-management policies, including water demand management, wastewater reuse, and higher tariffs. Water Management in Islam opens avenues for a wider dialogue amongst researchers working at identifying the most promising water management policies. It serves as a concrete example of the benefit of examining development in the context of values and culture and dispels common misconceptions about the Islamic view on water management practices.

598

**UNITED NATIONS DEVELOPMENT PROGRAMME**

Assistance to the National Water Resources Institute (phase III): Nigeria - (mission). Project findings and recommendations

.- New York : UNDP ; 1993 .- 16 p.

No : UNDP/NIR/87/004;FMR/SC/OPS/93/218(UNDP)/Terminal report

599

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Guidelines and manual on land-use planning and practices watershed management and disaster reduction

.- Bangkok : UN ESCAP ; 1997

(Water and Mineral Resources)

600

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Overview of water pricing policies and structures in the ESCAP region

.- Bangkok : UN ESCAP ; 1996

(Water and Mineral Resource )

601

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Guidelines for the establishment of irrigation water pricing policies and structures

.- Bangkok : UN ESCAP ; 1996

(Water and Mineral Resources)

602

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Report on the project on promotion of the role of women in the protection and management of water resources

.- Bangkok : UN ESCAP ; 1997

(Water and Mineral Resources)

603

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines of Lake Management; volume 2: Socio-economic aspects of lake reservoir management .- Nairobi : UNEP ; 1991 .- 229 p.(Guidelines of Lake Management; Vol. 2)

**ABSTRACT** : This is the second book in the series Guidelines of Lake Management and deals with the rapid rate in which socio-economic development in lake/reservoir basins has come to be increasingly recognised as a major threat to the quality of the lake environment. It should appeal to a wide range of readers from administrators to NGO's, practitioners to academics.

ISBN 878725165

604

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines of lake management, volume 3: Lake shore

.- Nairobi : UNEP ; 1990 .- 174 p.

(Vol.3, Lake Shore)

**ABSTRACT** : As a result of socio-economic development, the lake basins, lakes and lakeshores are becoming more and more complex in their structural, spatial and temporal dimensions as such development proceeds. This guidebook was prepared under a joint programme of UNEP and ILEC and is aimed at researchers and practitioners concerned with lakeshore management.

ISBN 8787257220

605

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines in Lake Management; volume 4: Toxic substance management in lakes and reservoirs

.- Nairobi : UNEP ; 1991 .- 170 p.

(Guidelines in Lake Management; Vol. 4)

**ABSTRACT** : This guidebook "Management of Toxic Substances in Lakes and Reservoirs", attempts to provide technical guidance to those concerned with toxicology, environment fate, and modelling of toxic substances in these important water resources. It also provides guidance to individuals and agencies responsible for managing the quality and safety of lakes and reservoirs. It is hoped that both technical and non-technical audiences will find this guidebook useful in their work related to toxic pollution of these aquatic ecosystems  
ISBN 49006356024

606

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines in Lake Management, volume 5: Management of lake acidification

.- Nairobi : UNEP ; 1993 .- 195 p.

(Guidelines in Lake Management; Vol. 5)

**ABSTRACT** : Acidification is a serious problem for many lakes in Northern Europe and Eastern North America. There are, however, clear indications that the problem of lake acidification also may become a problem in many developing countries in the coming decades. This guidebook explains in detail the relations between sources, i.e., air pollution caused by sulphur and nitrogen oxides, and their effects on lakes. Management possibilities and strategies are also discussed.  
ISBN 8787257246

607

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Guidelines of lake management, volume 7: Biomanipulation in lakes and reservoirs management

.- New York : United Nations ; 1995 .- 211 p.

(Guidelines of Lake Management; Vol. 7)

**ABSTRACT** : This volume of the ILEC/UNEP guideline series is expected to fill the need by offering a general introduction to the role of biomanipulation in lake management with emphasis on the control of excessive algal growth in

lakes suffering from eutrophication. The hope is that this new approach may give stimulative suggestions to lake environment managers worldwide.  
ISBN 490635615

608

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Co-operation for environmental protection in the Pacific

.- Nairobi : UNEP, 1988 .- 293 p.

(Regional seas reports and studies No. 97)

609

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Planning and management of lake and reservoirs: An integrated approach to eutrophication

.- Nairobi : UNEP ; 1999 .- 375 p.

(Technical Publication Series; No. 11)

ISBN 9280718193

610

**UNITED NATIONS ENVIRONMENT PROGRAMME**

International Shiga Forum on Technology for water management in the 21st century

.- Osaka/Shiga : UNEP-IETC ; 1998 .- 317 p.

(IETC Report 4)

**ABSTRACT** : International Shiga Forum on Technology for Water Management in the 21st Century - Proceedings. In November 1996, IETC together with Shiga Prefecture held an international forum on water management. This forum brought together scientists from all over the world, people from government and the general public, to explain about the global water crisis we now face. This proceedings cover four sessions and two panel discussions conducted during the forum: "Session 1: Water Management in Japan", "Session 2: Water Management in National Contexts", "Session 3: International Cooperation", "Session 4: Technology for Water Management", "1st Panel Discussion: Technology for Developing Countries" and "2nd Panel Discussion: Soft Options or Hard Choice".

ISBN 9280717367

611

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Coastal resources and systems of the Pacific basin: investigation and steps toward protective management

.- Nairobi : UNEP ; 1992 .- 308 p.  
(Regional seas reports and studies; No. 147.)

612

**UNITED NATIONS ENVIRONMENT PROGRAMME**

Action Plan for managing the natural resources and environment of the South Pacific Region

.- Nairobi : UNEP ; 1983 .- 17 p.  
( Regional seas reports and studies; No. 029.)

613

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR ASIA AND THE PACIFIC**

Study on assessment of water resources of member countries and demand by user sectors, China: water resources and the use

.- Bangkok : UN ESCAP ; 1997  
(Water and Mineral Resources)

614

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR ASIA AND THE PACIFIC**

Guidebook to water resources, use and management in Asia and the Pacific: water resources and water use

.- Bangkok : UN ESCAP ; 1995  
(Water Resources Series; No. 74)

615

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION  
FOR ASIA AND THE PACIFIC**

Integrated water resources management in Asia and the Pacific

.- Bangkok : UN ESCAP ; 1995  
(Water Resources Series; No. 75)

616

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

The role of non-governmental organizations in the water sector in the ESCWA countries

.- Amman : ESCWA ; 1997  
No : E/ESCWA/ENR/1997/10

617

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

Assessment of legal aspects of the management of shared water resources in the ESCWA region

.- Amman : ESCWA ; 2001 .- 14 p.  
No : E/ESCWA/ENR/2001/3

618

**UNITED NATIONS UNIVERSITY**

Long-distance water transfer: a Chinese case study and Chinese international experiences

.- Tokyo : Kexue Chubanshe/ UNU Press ; 1983

619

**UNITED NATIONS UNIVERSITY**

Water management in arid zones: proceedings of the international workshop, Medenine, Tunisia 18-22 October, 1999

.- Tokyo : UNU ; 2000

620

**THIAM, Bocar M. ; LYLE, Colin A. ; ANDERSEN, Randolph A. ;  
RANGELEY, R.  
WORLD BANK**

International River Basin Organization in Sub-Saharan Africa

.- Washington, D.C. : World Bank ; 1994 .- 90 p.

(World Bank Technical Paper; No.250)

ISBN 0-8213-2871-9

621

**VOROPAEV, G.V. ; ; ZAITSEVA, N.A.**

**UNESCO**

Environmental and socio-economic consequences of water resources development and management

.- Paris : UNESCO ; 1996 .- 232 p. ill.

No : SC.96/WS/45; IHP/V/PROJ.M-4-1/M-4-2

622

**WALKER, Ian et al.**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Pricing, subsidies, and the poor: demand for improved water services in Central America

.- Washington, D.C : World Bank ; 2000 .- 23 p.: ill.

(Policy research working paper)

623

**WHITE, Ian**

**UNESCO**

Water management in Mekong Delta: changes, conflicts and opportunities

.- Paris : UNESCO ; 2002 .- 75 p .

No : SC.2002/WS/49

624

**WORLD BANK**

Water Resources Management = Gestion des ressources en eau: document de politique générale de la Banque mondiale = La ordenacion de los recursos hidricos: El Banco Mundial. Documento de política del Banco Mundial

.- Washington, D.C. : World Bank ; 1993 .- 140 p.

NOTES : Also available in Arabic, French, and Spanish. World Bank Technical Paper No. 456.

**ABSTRACT** : This study examines new World Bank policies that deal with scarce water resources in developing countries. It provides a framework to help governments design effective water management programs.

Countries can tailor the framework to suit their needs. The study describes key policy goals that each country program should adopt. It discusses ways to make industry control pollution and conserve water. It suggests means of making water more accessible and sewage collection and treatment more efficient.

Practical ways to modernize irrigation techniques and hydropower systems, to protect ecosystems, minimize resettlement, and maintain biodiversity are outlined. Low-cost methods of providing drinking water for the rural poor and water for industry and agriculture are recommended.

The study also recommends institutional and regulatory reforms that use incentives to promote more efficient water use and services, employ new water conservation technology, and let communities join in water management.

The study describes the conditions that would affect World Bank lending to individual countries. It reviews the water management problems that would get urgent consideration. It also examines how Bank support is affected by a country's commitment to sound water management.

ISBN 0-8213-2636-8

625

**WORLD BANK**

Water Resources Management .- Washington, D.C : WORLD BANK ; 1993 .- 140 p.

**ABSTRACT** : This study examines new World Bank policies that deal with scarce water resources in developing countries. It provides a framework to help governments design effective water management programs.

Countries can tailor the framework to suit their needs. The study describes key policy goals that each country program should adopt. It discusses ways to make industry control pollution and conserve water. It suggests means of making water more accessible and sewage collection and treatment more efficient.

Practical ways to modernize irrigation techniques and hydropower systems, to protect ecosystems, minimize resettlement, and maintain biodiversity are outlined. Low-cost methods of providing drinking water for the rural poor and water for industry and agriculture are recommended.

The study also recommends institutional and regulatory reforms that use incentives to promote more efficient water use and services, employ new water conservation technology, and let communities join in water management.

The study describes the conditions that would affect World Bank lending to individual countries. It reviews the water management problems that would get urgent consideration. It also examines how Bank support is affected by a country's commitment to sound water management.

626

**WORLD BANK**

Inter-sectoral water allocation, planning and management  
 .- Washington, D.C. : World Bank ; 2000 .- 187 p.  
 (South Asia Rural Development Series)  
 ISBN 0-8213-4465-X

627

**WORLD BANK**

Initiating and sustaining water sector reforms .- Washington, D.C. : World Bank  
 ; 2000 .- 180 p.  
 (South Asia Rural Development Series)  
 ISBN 0-8213-4460-9

628

**WORLD BANK**

Irrigation sector  
 .- Washington, D.C. : World Bank ; 2000 .- 144 p.  
 ISBN 0-8213-4464-1

629

**WORLD BANK**

Water resources management: a World Bank policy paper  
 .- Washington, D.C. : World Bank ; 1994 .- 140 p.

630

**YAMAGUCHI, Aki; WESSELINK, Anna  
UNESCO**

An overview of selected policy documents on water resources management  
 that contributed to the design of HELP (Hydrology for the Environment, Life  
 and Policy)  
 .- Paris : UNESCO ; 2000 .- 50 p.

631

**ZAFAR ED, Adeel****UNITED NATIONS UNIVERSITY**

New approaches to water management in Central Asia : Proceedings of the  
 international workshop held in Aleppo, Syria 6-11 November 2002  
 .- Tokyo : UNU Press ; 2001

## *Water Rights*

632

**DINAR, Ariel (Ed.)****WORLD BANK**

The political economy of water pricing reforms  
 .- Washington, D.C : World Bank ; 2000 .- 412 p.

**ABSTRACT** : “This book should be on the must reading list for anyone  
 interested in water pricing and how to reform water rights systems to achieve  
 increased economic efficiency as well as a legitimate and equitable system of  
 property rights.” —Elinor Ostrom, Co-Director, Workshop in Political Theory  
 and Policy Analysis and Co-Director, Center for the Study of Institutions,  
 Population, and Environmental Change, Indiana University Lately our world  
 has witnessed massive changes and reforms in various sectors in many countries,  
 developing and developed alike. Institutional and pricing reforms in the water  
 sector are also part of that recent trend. They are led by the recognition of a  
 need to respond to increased scarcity and deteriorated quality. Is the water sector  
 different than other sectors, as some claim? Should reforms in the water sector  
 be designed and implemented differently than reforms of a similar type, in other  
 sectors? The Political Economy of Water Pricing Reforms answers these  
 questions by providing various analytical frameworks that allow comparison  
 across various conditions, and by actually comparing reform processes under  
 various conditions in different countries. This book demonstrates the common  
 threads that characterize pricing reforms in the water sector by analyzing various  
 aspects of the reforms in the irrigation and urban subsectors of 10 countries.  
 Cases from Morocco, Senegal, Honduras, Belgium, Australia, Brazil, Mexico,  
 Pakistan, Yemen, and the United States illustrate the difficulties of designing  
 and implementing “optimal” pricing reforms and explain how reform outcomes  
 fall short of the original objective. A Copublication of the World Bank and  
 Oxford University Press.

633

**QUIROZ, Jorg ; BREHM, Rios Monica**  
**WORLD BANK**

The market for water rights in Chile: major issues  
.- Washington, D.C : World Bank ; 1995 .- 40 p.  
(World Bank technical paper; no. 285)

**ABSTRACT** : Many economists back the view that a private market in tradable water rights would maximize the economic value of the resource by allocating it among alternative economic uses. Such a system would help reduce costly public infrastructure investment and foster private investment in irrigation. This paper reviews the major issues and controversies that have surrounded the practical implementation of a system of tradable water rights in Chile.

The paper contends that the system in Chile has worked reasonably well, although some amendments may be needed. The authors emphasize particular characteristics of the Chilean experience that have contributed to its adequate functioning

634

**VELASCO, Garduno H.**  
**FOOD AND AGRICULTURE ORGANIZATION OF THE**  
**UNITED NATIONS**

Water rights administration: experience, issues and guidelines  
.- Rome : FAO ; 2001 .- 192 p.  
(FAO Legislative Studies)

**ABSTRACT** : This publication illustrates “hands on” experience on, and offers preliminary guidelines for, the administration of systems of water rights and of the associated abstraction licensing and wastewater disposal permitting legislation. It is directed at policy-makers, law-makers and government administrators so that implementation and administration requirements are anticipated and taken into account in the drafting water rights legislation.

ISBN 9251045488

No : 101852

## Water Supply

635

**ARLOSOROFF, Saul et al.**  
**INTERNATIONAL BANK FOR RECONSTRUCTION AND**  
**DEVELOPMENT**

Community water supply: the handpump option  
.- Washington, D.C. : World Bank ; 1987 .- 202 p.: ill.

636

**EASTER, William ; HEARN, Robert R.**  
**WORLD BANK**

Water allocation and water markets: an analysis of gains-from-trade in Chile  
.- Washington, D.C. : World Bank ; 1996 .- 96 p.  
(World Bank Technical Paper; No. 315)  
ISBN 0-8213-3528-6

637

**ECONOMIC COMMISSION FOR LATIN AMERICA AND THE**  
**CARIBBEAN**

Report on the Second workshop on private participation in water supply and sanitation utilities in the Americas (San Jose, Costa Rica, 3-6 February, 1998)  
.- Santiago : ECLAC ; 1998 .- 82 p.

**ABSTRACT** : Drinking Water; Water Supply; Waste Waters; Water Conservation; Water Resources; Latin America; Caribbean; Central America; United States  
No : LC/R.1868

638

**FARLEY, Malcolm**  
**WORLD HEALTH ORGANIZATION**

Leakage management and control  
.- Geneva : WHO ; 2001 .- 173 p.

**ABSTRACT** : This training manual is aimed at professionals responsible for operation and maintenance of water supply systems, who already have some

experience of training. It will help the implementation of training activities and will be an important tool for trainers in the design, preparation and carrying out of training courses on leakage control.

639

**FONSECA, Catarina, ; BOLT, Eveline****INTERNATIONAL WATER AND SANITATION CENTRE**

How to support community management of water supplies: guidelines for managers

.- Delft : International Water and Sanitation Centre ; 2002 .- 144 p.  
(Technical Paper Series; No. 37)

640

**IDELOVICH, Emanuel; RINGSKOG, Kla****WORLD BANK**

Private participation in water supply and sanitation in Latin America

.- Washington D.C : World Bank ; 1995 .- 64 P.

**ABSTRACT** : This report discusses ways in which the public and private sectors can cooperate in providing improved water and sanitation services. The return of cholera in 1991 to the Latin America and Caribbean region was only a symptom of the deep-seated problems and the fragility and inadequacy of publicly operated water supply and sanitation systems. Consequently, the agencies that operate these systems are entering a crucial phase of deciding whether they can greatly improve their operations while remaining in the public sector or whether they should seek increasing private sector financing and participation in both operations.

This study consists of two chapters. The first analyzes the main problems of the public sector, explains the rationale behind private sector participation, and reviews an array of options for such participation. The second chapter highlights a case study of the Buenos Aires Concession—a large concession for the Greater Buenos Aires water supply and sewerage services awarded by the national government to a private consortium of foreign operators and local investors. The case study is an excellent example of how attention to the planning and contracting stages can ensure a successful transition from public to private management.

641

**JAGANNATHAN, Vijay N. ; MEINZEN-DICK, Rut****WORLD BANK**

User organization for sustainable water services

.- Washington : World Bank ; 1997 .- 178 p.

(World Bank technical paper; no. 354)

**ABSTRACT** : Water users' organizations are one example of community participation at work in the sectors of irrigation, drinking water supply, and sanitation. This paper looks at the conditions under which these organizations are most effective in managing water systems. It identifies key external factors and internal structures for sustainable user associations, as well as the conditions for partnership between government agencies and the associations.

642

**KEMPER, Karin E., ; MARINO, Manuel****WORLD BANK**

Institutional frameworks in successful water markets: Brazil, Spain and Colorado, USA

.- Washington, D.C. : World Bank ; 1999 .- 58 p.

**ABSTRACT** : Water is increasingly recognized as a scarce resource that must be managed more efficiently than in the past. In addition to physical scarcity, the cost of accessing these resources is climbing. This publication explores institutional frameworks in three case studies of long-standing and successful water markets. These cases demonstrate the common features and essential elements of water markets. They also show how to design markets that consider the local institutional, social, and political conditions and how to integrate those markets into existing water resource management arrangements. The papers are written for practitioners interested in how water markets operate, for decisionmakers faced with the challenge of selecting a water resource allocation system, and for academics interested in analytical-descriptive case studies that provide information on how to conceptualize the functioning of water markets from an institutional perspective.

ISBN 0-8213-4459-5

643

**MARINO, Manuel; KEMPER, Karin E.**

**WORLD BANK**

Institutional frameworks in successful water markets: Brazil .- Washington, D.C. : World Bank ; 1999 .- 43 p.: ill., maps (World Bank Technical Paper No. 427)

644

**MENARD, Claude; CLARKE, George R.G.**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

A transitory regime: water supply in Conakry, Guinea  
.- Washington, D.C. : World Bank ; 2000 .- 52 p.: ill.  
(Policy research working paper)

645

**MENARD, Claude; CLARKE, George R.G.**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Reforming water supply in Abidjan, Cote d'Ivoire: mild reform in a turbulent environment  
.- Washington, D.C. : World Bank ; 2000 .- 47 p.: ill.  
(Policy research working paper)

646

**NARAYA, Deepa**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

The contribution of people's participation: evidence from 121 rural water supply projects  
.- Washington, D.C. : World Bank ; 1995 .- 108 p.: ill.

647

**RINGSOG, Kla; SIMPSON, Lawrence**

**WORLD BANK**

Water markets in the Americas  
.- Washington, D.C : World Bank ; 1997 .- 60 p.

648

**RIVERA, Daniel**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Private sector participation in the water supply and wastewater sector: lessons from six developing countries  
.- Washington, D.C. : World Bank ; 1996 .- 83 p.: ill.

649

**SERAGELDIN, Ismail**

**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Water supply, sanitation, and environmental sustainability: the financing challenge  
.- Washington, D.C. : World Bank ; 1994 .- 35 p.

650

**SOBSEY, Mark D.**

**WORLD HEALTH ORGANIZATION**

Managing water in the home: accelerated health gains from improved water supply.  
.- Geneva : WHO ; 2002  
No : WHO/SDE/WSH/02.07

651

**UNICEF**

Global water supply and sanitation assessment: 2000 report  
.- Geneva : UNICEF ; 2002 .- 124 p.

**ABSTRACT** : Reports the findings, by country and by region, of a global assessment of the water supply and sanitation sector in 2000. Prepared by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, the report uses a new methodology that gives both a more accurate estimate of access to water supply and sanitation and a better understanding of the many factors that influence changes over time. The report also compares current findings with data from 1990 and assesses the feasibility of reaching targets set for 2015.

Unlike previous monitoring exercises, which relied on information from service providers, the 2000 report uses consumer-based data drawn from household surveys. By focusing on users rather than providers as the primary source of data, the report creates a platform for tracking the local initiatives that are now recognized as central to the attainment of sustained improvements. In another innovation, the report uses technology type as an indicator of access to improved water and sanitation. The definition of adequate coverage is now based on assumptions that certain technologies, such as public standpipes or pour-flush latrines, are better for health than others, such as unprotected springs and public latrines.

The report has eleven chapters. The first presents the main findings of the assessment, emphasizing issues that can aid decisions about the planning and management of services and the investment in priority needs. Chapter two shows the global and regional status of coverage for water supply and sanitation in 1990 and 2000, and discusses key trends within the context of rapid population growth. While noting some inroads into the backlog of people needing improved services, the report cites grim statistics: globally, 1.1 billion people remain without access to improved drinking-water services and 2.4 billion have no access to any form of improved sanitation facilities.

Chapter three, on sector performance, provides information on planning and management in the water supply and sanitation sector, including targets for the sector, constraints to sector development, sector investment, costs and tariffs, and quality of service. Four constraints to development are identified: logistics, funding limitations, inadequate cost-recovery, and inadequate operation and maintenance.

Subsequent chapters consider how the world's largest cities are coping with heavy demands for service coverage, and look at challenges, future needs, and prospects. As data in the report show, individual households are the primary actors in the extension of sanitation coverage, underscoring the need to set priorities and establish strategies that focus on results at the household level.

Chapters in the second half of the report present data on water supply and sanitation coverage for Africa, Asia, Latin America and the Caribbean, Oceania, Europe, and North America. For each region, urban and rural figures are shown, in tables and maps, by country, area, or territory for both 1990 and 2000. Graphs illustrate changes over time as well as coverage targets associated with projected changes in population. Experiences in individual countries are used to highlight typical problems and challenges for the future.

652

**UNICEF**

Community handpump water supply and sanitation guide for Afghanistan .- New York : UNICEF ; 1999 .- 100 p.

653

**UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

Guidebook on private sector participation in water supply and sanitation .- Bangkok : UN ESCAP ; 1997 (Water and Mineral Resources)

654

**WORLD BANK**

The Legal framework for water users' associations: a comparative study .- Washington D.C : WORLD BANK ; 1997 .- 104 p. (WORLD BANK technical paper; No. 360A.)

Recent experience confirms that participation of farmers in managing parts of an irrigation system and collecting water charges usually results in a more efficient use of water. To be effective, farmers in the hydraulic unit would need to organize themselves by establishing a "water users' association." This paper presents a comparative study of the legal framework for these associations in Colombia, India, Mexico, Nepal, the Philippines, and Turkey. Building on the theory that participation of farmers in managing and operating parts of an irrigation system will result in an optimum use of water, the document analyzes in a comparative manner how each of these countries addresses the basic aspects related to the establishment and functioning of such associations. Additional emphasis is placed on the collection of water charges.

Language editions also available:

ISBN 0-8213-4000-

655

**WORLD BANK**

The legal framework for water users' associations: a comparative Study .- Washington, D.C : WORLD BANK ; 1998 .- 109 p. (WORLD BANK Technical Paper; no 360R.)

656

### **WORLD HEALTH ORGANIZATION**

Financial management of water supply and sanitation

.- Geneva : WHO ; 1994 .- 83 p.

**ABSTRACT** : Describes a range of financial principles and methods for improving the management of water supply and sanitation services - whether large or small, urban or rural. Addressed to decision-makers, the book shows how financial mechanisms, such as cost recovery, cash raising, and cost containment, can be used to ensure that services are financially sustainable and able to meet users' needs. With this goal in mind, the book helps readers to think through all costs and responsibilities associated with each stage in a project's life span, and then to use this information to set objectives and calculate costs and benefits. Material in the handbook was tested in 20 countries and then further refined in seminars involving over 1000 participants.

The book has two parts. Part one introduces some of the underlying principles for ascertaining that all resources required for services are identified and available. Information ranges from a list of obstacles commonly encountered in developing countries to tips on how to reduce costs and increase revenue. The second and most extensive part provides a practical guide to methods of cost recovery. Using numerous checklists, charts, examples, and schedules for calculating projected costs, chapters offer a step-by-step explanation of the financial and related activities required to achieve cost recovery at each stage in a project's life span, moving from planning and construction, through operation and maintenance, to eventual replacement.

657

### **WORLD HEALTH ORGANIZATION**

Operation and management of urban water supply and sanitation systems

.- Geneva : WHO ; 1994 .- 102 p.

**ABSTRACT** : Describes a systems approach to the operation and maintenance of drinking-water and sanitation services in urban areas of developing countries. Addressed to managers and other personnel with decision-making responsibilities, the book responds to ample evidence that poor management has had the greatest single negative impact on the quality of water supply and sanitation services. The guide, which is intended to serve as a reference source and conceptual framework, covers virtually all the procedures, activities, projects, and areas of managerial responsibility, at different levels, needed to ensure that water supply and sanitation services function continuously,

efficiently, and to their full capacity. Emphasis is placed on procedures that can help control water losses.

The book has five parts. The first describes the use of the management systems approach to analyse the functions of drinking-water and sanitation agencies and to solve operation and maintenance problems. Part two, on management, provides a step-by-step account of the key responsibilities and functions involved in managing an agency's operation and maintenance activities. The third and most extensive part serves as a detailed guide to the planning and control of operation and maintenance procedures. While most attention is given to projects for controlling water loss, part three also covers programmes for controlling the production and quality of drinking-water, and for sewage collection, treatment, re-use, and disposal. The remaining chapters describe information systems and the procedures and stages of implementation. Of particular practical value is a five-page tabular presentation of performance indicators that can be used to assess the effectiveness of specific activities.

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### **WORLD HEALTH ORGANISATION**

Tools for assessing the operation and maintenance status of supply and sanitation in Developing Countries

.- Geneva : WHO ; 2000 .- IV-46 p.

**ABSTRACT** : Sets out a managerial framework, supported by specific assessment tools, for measuring and evaluating the status of operation and maintenance of water supply and sanitation services. Noting that problems with operation and maintenance have long been recognized as key constraints to sustainability, the book aims to encourage professional staff in utilities, local governments, and nongovernmental organizations to undertake performance assessments and use the results to introduce improvements. The book also aims to convince policy-makers that investments in water supply and sanitation will be optimized when management strategies give operation and maintenance a high profile. The assessment tools described can be applied to a wide range of activities carried out by utilities, governments, and communities in both rural and urban settings.

The book has two parts. The first introduces the concepts of monitoring and evaluation and explains how performance indicators can be used to expose problems and then formulate policies and plans which either correct the problems or avoid them. Part one also describes the advantages and limitations of three systems for the management of operation and maintenance: centrally managed

systems, the community managed approach, and household managed systems. Part one concludes with a list of management constraints that must be addressed before tools for improving specific aspects of performance can be applied.

Against this background, the second and most extensive part presents nine tools for assessing the operation and maintenance status of water supply and sanitation. The tools, which are presented as a series of steps, can be used to establish objectives, develop a framework for performance measurement, carry out the measurement and reporting of performance, and prepare and implement action plans. Particular attention is given to the use of 40 carefully selected performance indicators, which are set out in a series of tables supported by explanatory notes.

No : WHO/SDE/WSH/00.3

659

### **WORLD HEALTH ORGANIZATION**

Global water supply and sanitation assessment 2000 report

.- Geneva : WHO ; 2000 .- 80 p.

**ABSTRACT** : Reports the findings, by country and by region, of a global assessment of the water supply and sanitation sector in 2000. Prepared by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, the report uses a new methodology that gives both a more accurate estimate of access to water supply and sanitation and a better understanding of the many factors that influence changes over time. The report also compares current findings with data from 1990 and assesses the feasibility of reaching targets set for 2015.

ISBN 9241562021

## *Water Treatment*

660

**GONZALEZ, J. F.**

### **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Wastewater treatment in the fishery industry

.- Rome : FAO ; 1999 .- 60 p.

(FAO Fisheries Technical Papers)

**ABSTRACT** : This document presents fish processors with an introduction to the concepts of fisheries wastewater characterization and the various types of treatment utilised. The topics dealt with include characterization analysis, primary treatment, biological treatment, physicochemical treatment including disinfection, sludge treatment and disposal. Economic considerations are among the most important parameters that influence the final decision on which process should be chosen for wastewater treatment and these are presented in the final section.

No : FAO07505

661

### **INTERNATIONAL ATOMIC ENERGY AGENCY**

Nuclear desalination of sea water: proceedings of an international symposium on desalination of seawater with nuclear energy

.- Vienna : IAEA ; 1997 .- 557 p.: ill., maps

(Proceedings series)

662

### **INTERNATIONAL ATOMIC ENERGY AGENCY**

Floating nuclear energy plants for seawater desalination

.- Geneva : IAEA ; 1997 .- IAEA TECDOC Series No. 940

663

### **INTERNATIONAL ATOMIC ENERGY AGENCY**

Safety aspect of water chemistry in light water reactors

.- Geneva : IAEA ; 1989

(IAEA TECDOC Series No. 510)

664

**PESCOD, M.B.**

### **FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

Wastewater treatment and use in agriculture

.- Rome : FAO ; 1992

(FAO Irrigation and Drainage Paper No. 47)

ISBN 9251031355

665

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

The role of desalinated water in augmentation of the water supply in selected  
ESCWA member countries

.- Amman : ESCWA ; 2001 .- 72 p.

No : E/ESCWA/ENR/2001/19

666

**UNITED NATIONS ECONOMIC SOCIAL COMMISSION FOR  
WESTERN ASIA**

Energy options for water desalination in selected ESCWA member countries

.- Amman : ESCWA ; 2001 .- 77 p.

No : E/ESCWA/ENR/2001/17

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*Annex II:*  
**WATER RELATED WEBSITES**

[www.uneca.org](http://www.uneca.org)  
[www.unece.org](http://www.unece.org)  
[www.eclac.cl](http://www.eclac.cl)  
[www.unescap.org](http://www.unescap.org)  
[www.escwa.org.lb](http://www.escwa.org.lb)  
[www.fao.org](http://www.fao.org)  
[www.iaea.org](http://www.iaea.org)  
[www.un.org](http://www.un.org)  
[www.unep.org](http://www.unep.org)  
[www.giwa.net](http://www.giwa.net)  
[www.unesco.org](http://www.unesco.org)  
[www.unhabitat.org](http://www.unhabitat.org)  
[www.undp.org](http://www.undp.org)  
[www.unicef.org](http://www.unicef.org)  
[www.unccd.de](http://www.unccd.de)  
[www.unido.org](http://www.unido.org)  
[www.inweh.unu.edu](http://www.inweh.unu.edu)  
[http://worldbank.org](http://www.worldbank.org)  
[www.who.int](http://www.who.int)  
[www.wmo.ch](http://www.wmo.ch)  
[www.wssc.org](http://www.wssc.org)  
[www.wfp.org](http://www.wfp.org)  
[www.imo.org](http://www.imo.org)  
[www.ifad.org](http://www.ifad.org)  
[www.gpa.unep.org](http://www.gpa.unep.org)  
[www.earthtrends.wir.org](http://www.earthtrends.wir.org)  
<http://wwwga.usgs.gov/edu>  
[www.afrecawater.org](http://www.afrecawater.org)  
[www.angliawater.co.uk](http://www.angliawater.co.uk)  
[www.asn.au](http://www.asn.au)  
[www.bewwa.org](http://www.bewwa.org)  
[www.cwra.org](http://www.cwra.org)  
[www.cwwwa.ca](http://www.cwwwa.ca)  
[www.dams.org](http://www.dams.org)  
[www.ecoiq.com](http://www.ecoiq.com)  
[www.gewex.com](http://www.gewex.com)

[www.great-lakes.net](http://www.great-lakes.net)  
[www.gwpform.org](http://www.gwpform.org)  
[www.ilec.or.jp](http://www.ilec.or.jp)  
[www.irc.nl](http://www.irc.nl)  
[www.irrigation.org](http://www.irrigation.org)  
[www.mbnet.mb.ca](http://www.mbnet.mb.ca)  
[www.panda.org](http://www.panda.org)  
[www.pangea.org](http://www.pangea.org)  
[www.silsoe.carnfield.ac.uk](http://www.silsoe.carnfield.ac.uk)  
[www.thames-water.com](http://www.thames-water.com)  
[www.uwin.siu.edu](http://www.uwin.siu.edu)  
[www.water.org](http://www.water.org)  
[www.nilebasin.org](http://www.nilebasin.org)  
[www.globalwater.org](http://www.globalwater.org)  
[www.worldlakes.org](http://www.worldlakes.org)  
[www.thewaterpage.com](http://www.thewaterpage.com)  
[www.silsoe.carfield.ac.uk/iwe](http://www.silsoe.carfield.ac.uk/iwe)  
[www.wateraid.org.uk](http://www.wateraid.org.uk)  
[www.waterlife.org](http://www.waterlife.org)  
[www.waterworldcouncil.org](http://www.waterworldcouncil.org)  
[www.watermagazine.com](http://www.watermagazine.com)  
[www.waterinfo.org](http://www.waterinfo.org)  
[www.worldwater.org](http://www.worldwater.org)  
[www.irn.org](http://www.irn.org)  
[www.lah.org](http://www.lah.org)  
[www.icid.org](http://www.icid.org)  
[www.groundwater.org](http://www.groundwater.org)  
[www.cciw.ca](http://www.cciw.ca)  
[www.agu.org](http://www.agu.org)  
[www.wrplle.com](http://www.wrplle.com)  
[www.water.usgs.gov.edu](http://www.water.usgs.gov.edu)  
[www.watervision.org](http://www.watervision.org)  
[www.wef.org](http://www.wef.org)  
[www.lifewater.ca](http://www.lifewater.ca)  
[www.sandec.ch](http://www.sandec.ch)  
[www.watersave.org](http://www.watersave.org)  
[www.laws.org.uk](http://www.laws.org.uk)  
[www.unep.ch/seas/](http://www.unep.ch/seas/)  
[www.unep.ch/seas/](http://www.unep.ch/seas/)

*Annex III:*  
**SELECTED UNITED NATIONS RESOLUTIONS ON  
WATER UN RESOLUTIONS ON WATER**

Water resources development : resolution / adopted by the Economic and Social Council  
E/RES/1981/80, 1981

Water resources : resolution / adopted by the Economic and Social Council  
E/RES/1981/81, 1981

Follow-up to and implementation of the Mar del Plata Action Plan : resolution  
/E/RES/1979/70, 1979

Report of the follow-up to and implementation of the Mar del Plata Action Plan  
: E/DEC/1979/80, 1979

Water resources policy and planning : decision / adopted by the Economic and Social Council E/DEC/1980/115, 1980

Co-operation in the field of environmental protection and water resources. E/  
ECE/DEC/E(43), 1988

The situation in the Middle East : resolutions / adopted by  
the General Assembly, A/RES/43/54

Water resources development : progress E/RES/1983/57, 1983

Use of Special Programme Resources : [UNDP], DP/DEC/83/15

Chairmanship of the Intersecretariat Group for Water Resources, ACC/DEC/  
1985/12

Activities in the field of water resources, E/CEPAL/RES/461(XX)

Water resources development and follow-up to the Mar del  
Plata Action Plan. E/ECA/CM/10/RES/497(XIX), 1984

Water resources development and follow-up to the Mar del Plata Action Plan.  
E/RES/1984/73

International co-operation on shared water resources.  
E/ECE/DEC/D(XXXVII)

ECE declaration of policy on the rational use of water.  
E/ECE/DEC/C(XXXIX), 1984

Water resources and progress in the implementation of the Mar del Plata Action  
Plan.E/RES/1989/7

Israeli economic practices in the occupied Palestinian and other Arab  
territories.E/RES/1989/86

Countries stricken by desertification and drought.  
A/RES/39/208

Compendium of resolutions and decisions of the Economic Commission for  
Europe E/ECE/836/Add.1, 1990

Documents pertaining to natural resources.  
A/DEC/35/405, 1981

Water resources development.  
E/RES/1985/49

Rationalization of the work of the Committee on Natural Resources.  
E/RES/1985/54

International Drinking Water Supply and Sanitation Decade.  
E/DEC/1985/167

Protection of the quality and supply of freshwater resources.  
A/CONF.151/PC/DEC/1/21

International Drinking Water Supply and Sanitation Decade :  
resolution / adopted by A/RES/40/171

Countries stricken by desertification and drought :  
resolution / adopted by A/RES/40/175

Chairmanship of the Intersecretariat Group for Water Resources.  
ACC/DEC/1986/11

Activities in the field of water resources.  
E/LC/RES/484(XXI)

Protection of the quality and supply of freshwater resources  
A/CONF.151/PC/DEC/2/20

Chairmanship of the Intersecretariat Group for Water Resources.  
ACC/DEC/1986/25

International Conference on Water and the Environment.  
E/RES/1991/84

Water resources development and progress  
E/RES/1991/85

Coordination of programmes within the United Nations System  
in the field of natural resources  
E/RES/1991/90

Protection of the quality and supply of freshwater resources  
A/CONF.151/PC/DEC/3/22

Principles regarding co-operation in the field of transboundary waters. E/ECE/  
DEC/I(42)

Adoption of draft chapters of Agenda 21.  
A/CONF.151/PC/DEC/4/4

International co-operative action in support of the Mar del Plata Action Plan.  
DP/DEC/80/25

Water resources and progress in the implementation of the Mar del Plata Action  
Plan.  
E/RES/1987/7

Integrated water resources management.  
E/C.7/RES/2/1

Capacity-building in the field of water resources.  
E/C.7/RES/2/2

Activities of the United Nations System in the field of water  
and mineral resources,  
E/C.7/RES/2/9

Food and agricultural development : resolution / adopted by  
the General Assembly.  
A/RES/49/103

United Nations Water Conference.  
A/RES/32/158

UNICEF strategies in water and environmental sanitation.  
E/ICEF/DEC/1995/22

Development and strengthening of the Economic Commission for  
Africa's programme  
E/ECA/CM/20/RES/776(XXIX), 1994

Implementation of the New Delhi Action Plan on Infrastructure  
Development in Asia and E/ESCAP/RES/51/8

Follow-up to the Mar del Plata Action Plan on integrated  
water resources  
E/RES/2115(LXIII)

Report of the United Nations Water Conference.  
E/RES/2121(LXIII)

International river basin development.  
E/RES/1955(LIX)

Preparatory work for the United Nations Water Conference.  
E/RES/1979(LIX)

United Nations Water Conference.  
A/RES/31/185

Establishment of a Committee on Water Resources within the  
Economic and Social Council  
E/RES/1995/26

Water supply and sanitation.  
E/RES/1995/46

Water supply and sanitation : resolution / adopted by the  
General Assembly. A/RES/50/126

Establishment of a Committee on Water Resources in the  
Economic and Social Council  
E/ESCWA/RES/205(XVIII)

Strategy and Action Plan for Water Resources Assessment,  
E/ECA/CM/21/RES/800(XXX), 1995

International co-operation on water control and utilization  
and on the development  
E/RES/417(XIV)

International co-operation with respect to water resource  
development.  
E/RES/533(XVIII)

International Co-operation with respect to water resource  
development.  
E/RES/599(XXI) 1956

Economic development of under-developed countries: water resources.  
E/RES/675(XXV)

Economic development of under-developed countries: water  
resources.  
E/RES/759(XXIX), 1960

Water Resources Development Centre.  
E/RES/876(XXXIII), 1962

Proposals for a priority programme of co-ordinated action in  
the field of water  
E/RES/978(XXXVI)

Annual report of the Economic Commission of Asia and the Far East.  
E/RES/233(IX), 1949

Development of natural resources.  
E/RES/1033(XXXVII), 1964

Water desalination in developing countries.  
E/RES/1069(XXXIX), 1965

Co-ordinated action in the field of water resources.  
E/RES/1111(XL), 1966

Development of non-agricultural resources.  
E/RES/1113(XL), 1966

Water desalination.  
E/RES/1114(XL), 1966

Development of natural resources.  
E/RES/1127(XLI), 1966

Survey programme for the development of natural resources.  
E/RES/1287(XLIII), 1968

Non-geographical resources.  
E/RES/1316(XLIV), 1968

Water resources development.  
E/RES/1317(XLIV), 1968

Water desalination.  
E/RES/1204(XLII), 1967

Population and development.  
E/RES/1672(LII), 1972

Report of the Committee on Natural Resources.  
E/RES/1761(LIV), 1973

Report of the Committee on Natural Resources.  
E/RES/1572(L), 1971

Participation in the United Nations Water Conference.  
E/RES/1982(LX), 1976

Preparation for the United Nations Water Conference.  
E/RES/1983(LX), 1976

Activities of the United Nations System in the field of water  
and mineral resources,  
E/C.7/RES/3/1, 1996

Reports in the field of water resources submitted to the  
Committee on Natural  
E/C.7/1996/RES/3/7

Petition from the Arusha Citizen Union (T/PET.2/146)  
concerning Tanganyika.  
T/RES/484(XI), 1952

Integrated water resources development and management.

E/RES/1996/50

The activities of the Economic Commission for Europe.  
E/ECE/DEC/O(45), 1991

Cooperation in the field of environment and sustainable  
development.  
E/ECE/DEC/F(48), 1993

Change in the frequency of the meetings of the Committee on  
Water Resources  
E/ESCWA/RES/212(XIX), 1997

The environmental situation in the occupied Palestinian and  
other Arab territories. UNEP/GC/DEC/19/8, 1997

Change in the frequency of the sessions of the Committee on  
Water Resources  
E/RES/1997/10  
The right to food  
E/CN.4/RES/2001/25, 2001

Status of preparations for the International Year of  
Freshwater,  
A/RES/56/192, 2003

*Annex IV:*  
**EXTRACTS OF SELECTED UNEP  
GOVERNING COUNCIL DECISIONS CONCERNING WATER ISSUES**

<b>DECISION</b>	<b>CONTENT</b>
<p><b>Decision 10/19.</b> Environmental management for the protection and rehabilitation of freshwater ecosystems (inland waters) (31 May 1982)</p>	<p>The Governing Council ... 1. Urges the ED to highlight this topic in the activities identified within the</p>
<p>Resolutions of the Governing Council at its session of a special Character</p> <p><b>Resolution I.</b> The Environment in 1982: retrospect and prospect (18 May 1982)</p>	<p><u>The Governing Council</u> ... Part III - Major environmental trends, potential problems and priorities system-wide medium-term environment programme ..... for action for the United Nations system, co-ordination by the United Nations Environment Programme, during the period 1982-1992</p> <p>... (b) Oceans Trends and problems: Increasing pollution of the seas with oil and other substances from land-based sources and from ships; pollution of estuaries and coastal waters; overfishing; environmentally inappropriate exploitation of marine and coastal resources, despite expansion of mariculture and protected areas;</p> <p><u>Priority for action:</u> Development and application of methods for monitoring, assessing, reducing and preventing: (I) pollution of the seas, including oil pollution; (ii) degradation of natural resources including mangrove and coral areas; development of new and strengthening of existing programmes and conventions for the environmental protection of regional seas; further development of plans and procedures for the management of marine resources; further development of mariculture and the establishment of marine protected areas; and support for disaster mitigation;</p>

	<p>(c) <u>Water</u></p> <p><u>Trends and problems:</u> Depletion and deterioration of surface water and ground water increasing demand for drinking , agriculture and industry, and rising pollution in most countries; continued acidification and eutrophication of fresh water; environmental problems created by water development projects; inadequate water basin management; transboundary water pollution, and continued technical difficulties in management of surface water and ground waters shared by two or more states;</p> <p><u>Priority for action</u> ; Assistance in the implementation of the objectives of the International Drinking Water Supply and Sanitation Decade, and in the promotion of guidelines for environmentally sound water management, including transboundary water management and pollution and related environmental aspects; management of inland fisheries and aquaculture; promotion of techniques for rational water management including river basin management, pollution control, recycling of domestic and industrial waste water and flood control, prevention of water waste; promotion of assessment of environmental impact of water resources development projects;</p>
<p>Programme for the Development and Periodic Review of Environmental Law (Montevideo Programme) (adopted with <b>Decision 10/21.</b> Environmental Law) (31 May 1982)</p>	<p>I. CONCLUSIONS AND RECOMMENDATIONS OF MONTEVIDEO</p> <p>The Senior Government Officials Expert in Environmental Law, having met in Montevideo from 28 October to 6 November 1981 to establish a framework, methods and programme, including global, regional and national efforts, for the development and periodic review of environmental law, and to contribute to the preparation and implementation of the environmental law component of the system-wide medium-term environment programme,</p> <p>... 2. <u>Conclude:</u></p> <p>(a) principles or agreements should be developed in accordance with the agreed objectives and strategies set out in chapter II below as regards the following major subject areas:</p> <p>(i) Marine pollution ...</p> <p>(b) that the following subject areas also call for action in accordance with the agreed objectives and strategies set out in chapter II below:</p> <p>(ii) Coastal zone management ...</p> <p>(iii) Protection of rivers and other inland waters against pollution</p> <p>II. PROGRAMME FOR THE DEVELOPMENT AND PERIODIC REVIEW OF ENVIRONMENTAL LAW</p> <p>A. Subject areas, objectives and strategies</p> <p>1. The following subject areas are proposed as a non-exhaustive list of elements for the programme, referred to in Governing Council decision 9/19 A.</p> <p style="text-align: center;">1. Major subject areas</p> <p>(a) Marine pollution from land-based sources</p>

	<p><u>Objective</u></p> <p>To prevent, reduce and control pollution of the marine environment from land-based sources, including the effects of such pollution on coastal areas, and to minimize the adverse effects that have already occurred</p> <p>(b) Coastal zone management</p> <p><u>Objective</u></p> <p>To limit, reduce and prevent the harmful effects of activities with respect to the marine environment, in particular in coastal zones</p>
<p><b>Decision 11/7.</b> Programme matters (24 May 1984)</p>	<p>Part Five: <u>Water</u> The Governing Council</p> <p>Recalling its resolution I, section III C, adopted on 18 May 1982 at its session of a special character, ... 1. Requests the executive director to sharpen the focus of the water programme by promoting, through the involvement of the relevant agencies, attention to;</p> <p>(a) Water pollution control measures; (b) Waste water management, including recycling of wastewater; (c) Rational water management, including river basin management; (d) Support for the implementation of the objectives of the International Drinking Water Supply and Sanitation Decade, and support to Governments in order to achieve those objectives</p>
<p><b>Decision 12/12.</b> Environmental management (28 May 1984)</p>	<p>Part IV. <u>Water</u></p> <p><u>Notes</u> the progress made in the implementation of decision 11/7, part five, and in particular the establishment of the Advisory Group on Water Resources, the convening of the working group on large-scale water projects, and the active participation of the United Nations Environment Programme in the steering Committee for the International Water supply and Sanitation Decade.</p> <p>Part VIII. Marine pollution’ Part IX. Regional Seas</p>
<p><b>Decision 13/9.</b> State-of-the-environment reports (24 May 1985)</p>	<p>ANNEX</p> <p>Recommendations of the ED concerning the environment in the dialogue between and among developed and developing countries</p> <p>3. Some prerequisites for potential success in such consultations are:</p> <p>(b) Reaffirmation of a concept of development which acknowledges social elements in addition to pure economic growth, and which depends on the rational use of natural resources. This does not mean under-utilization or no utilization at all - rather, it means finding the best ways of exploitation that do not destroy the resource base itself in the process;</p>

	<p>... 4. Issues for such consultations may include:  (a) for co-operation among developed countries:  (ii) control of pollution of shared rivers;  (b) For co-operation among developing countries:  ...(ii) Management of large dams in tropical and arid regions;  (iii) Management of large basins and shared fresh-water lakes;  ...(v) Environmental problems of large cities.</p>
<p>Environmental perspective to the Year 2000 and Beyond (adopted with <b>Decision 14/13</b> of 19 June 1987).</p>	<p>II. SECTORAL ISSUES</p> <p><u>E. Health and human settlements</u></p> <p>1. Issue and outlook</p> <p>48. <u>Issue</u>: Despite considerable advances in dealing with problems of health and human settlements, the environmental basis for further improving the situation is deteriorating. Inadequate shelter and basic amenities, rural underdevelopment, over-crowded cities and urban decay, lack of access to clean water, poor sanitation and other environmental deficiencies continue to cause widespread disease and death, ill-health and intolerable living conditions in many parts of the world. Poverty, malnutrition and ignorance compound these problems. ...</p> <p>54. There are three main environmental aspects of urbanization, including: characteristics of the dwelling (living space, ventilation, sanitation, water supply, waste disposal, Recreation space, domestic energy); ambient environmental situation (air pollution, water pollution, environmental risks and hazards, noise, stress and crime); and environment of the area surrounding the urban centres (deforestation, soil erosion, changes in micro-climate). Between a quarter and a half of all urban residents in the developing countries live in unhealthy and degrade dwellings. ....</p> <p>2. Goal and recommended action</p> <p>58. <u>Goal</u>: Provision of improved shelter with access to essential amenities in a clean and secure setting conducive to health and to the prevention of environment-related diseases while alleviating serious environmental degradation. ...</p> <p>IV. INSTRUMENTS OF ENVIRONMENTAL ACTION</p> <p>...A. <u>Assessment</u></p> <p>88. Environmental rehabilitation and management depend upon availability of organized information on the state of the environment, its trends, and their made in ignorance of the changing state of the environment and its implications for human well-being. ...</p> <p>90. UNEP, working through the United Nations system, co-ordinates the collection, monitoring and assessment of selected environmental variables and distributes this information worldwide through: the Global Environmental Monitoring System (GEMS),</p>

	<p>encompassing the monitoring and assessment systems relating to climate, health and natural resources and the Global Resource Information Data Base (GRID); data bases and systems for the conservation and management of genetic resources; ....</p>
<p><b>Decision 14/22.</b> The Action Plan for the Environmentally Sound Management of the Common Zambezi River System (17 June 1987)</p>	<p><u>The Governing Council</u></p> <p>... 2. <u>Requests</u> the Executive Director to start immediate consultations with the Governments of the Zambezi basin countries, the Executive Secretary to the Southern African Development Co-ordination Conference, organizations of the United Nations system and donor agencies regarding the implementation of the Zambezi Action Plan and the raising of external finances to ensure the implementation of the Plan starts before the end of 1987.</p>
<p><b>Decision 15/27.</b> Precautionary Approach to Marine Pollution, including Waste-dumping At Sea (25 May 1989)</p>	<p><u>The Governing Council</u></p> <p>... <u>recommends</u> that all Governments adopt the “principle of precautionary action” as the basis of their policy with regard to the prevention and elimination of marine pollution</p> <p><u>urges</u> all governments eligible to do so, but who have not yet done so, to become contracting parties to all relevant conventions</p> <p><u>further urges</u> the international community to work actively towards the complete elimination of the practice of dumping of pollutants liable to endanger the marine environment</p>
<p><b>Decision 15/32.</b> Shared Natural Resources and Legal Aspects of Offshore Mining and Drilling (25 May 1989)</p>	<p><u>The Governing Council</u></p> <p>... 2. <u>Calls</u> upon Governments and international organizations to take further action to implement the principles of conduct in the field of the environment for the guidance of States in the conservation and harmonious utilisation of natural resources shared by two or more States, and the conclusions of the study of the legal aspects concerning the environment related to offshore mining and drilling within the limits of national Jurisdiction.</p>
<p><b>Decision 16/39.</b> Freshwater Resources (31 May 1991)</p>	<p><u>The Governing Council</u></p> <p>... <u>Concerned</u> about the increasing threats to freshwater resources in many parts of the world,</p> <p><u>Stressing</u> the urgent need for decisive action, interlay, to achieve integrated and efficient management of freshwater resources, in particular in arid and semi-arid areas, and to make available safe water and sanitation, particularly to people in poverty-stricken areas,</p> <p><u>Emphasizing</u> the important role of the United Nations Environment Programme in the field of freshwater resources, ...</p> <p>1. <u>Takes note</u> with appreciation of the contribution being made by the United Nations Environment Programme to the preparations for the Dublin Conference;</p>

	2. <u>Requests</u> the Executive Director to continue to give full support to the preparations for the Dublin Conference, including financial contributions within available resources.
<b>Decision 17/20.</b> Protection of the marine environment from land-based activities (21 May 1993)	Whole decision
Programme for the Development and Periodic Review of Environmental Law (adopted with <b>Decision 17/25</b> of 21 May 1993)	Programme areas, objectives, strategies and activities  N. Environmental protection and integrated management, development and use of inland water resources  <i>Objective:</i>  To prevent, reduce and control the degradation of inland water resources through the application, as appropriate, of an integrated approach to the development, management and use of water resources thereby assessing States to prevent disputes and ensure that adequate supplies of water of good quality are maintained for the entire population of this planet.
<b>Decision 18/31.</b> Protection of the Marine Environment from Land-Based Activities (25 May 1995)	Whole decision
<b>Decision 19/4.</b> Global Assessment (7 February 1997)	<u>The Governing Council</u>  <u>Requests</u> the executive director to improve the use of GEMS/Air and GEMS/Water programmes and the Global Resource Information Database in the preparation of the Global Environment Outlook assessments
<b>Decision 19/14.</b> Water Management (7 February 1997)	A. <u>Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities</u> .... B. <u>Institutional arrangements for implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities: strengthening of the regional seas programmes in Latin America and the Caribbean</u> ... C. <u>Oceans Management</u>

	<p style="text-align: center;">....</p> <p><u>D. Freshwater</u></p> <p><u>The Governing Council</u></p> <p><u>Recognizing</u> the growing global concern over the status of freshwater quality and quantity at the national, regional and global levels,</p> <p><u>Requests</u> the Executive Director to place a higher priority on freshwater in the next biennium, and to make more effective use of the inter-agency GEMS/Water programme, which is coordinated by the United Nations Environment Programme.</p>
<p><b>Decision 20/25</b> Freshwater</p> <p><b>Decision SS.V/4.</b> Freshwater (22 May 1998)</p>	<p>Whole Decision</p> <p><u>The Governing Council</u></p> <p>Recognizing that the following approaches can contribute to the environmental aspects of sustainable development and management of freshwater:</p> <p>(a) Water should be considered a finite resource which has economic, social and environmental dimensions; its management requires an integrated response;</p> <p>(b) Sufficient water should be available to maintain and ensure the existence of humankind and conservation of ecosystems, including the conservation and sustainable use of biological diversity;</p> <p>(c) Data on water resources availability, use and quality and quantity should be collected, analysed and made available to inform decision-making;</p> <p>(d) Water-quality standards should have regard to the location of the water resource and the uses to which the water is put;</p> <p>(e) Water management should be consistent with the precautionary principle so as not to threaten the long-term renewability of freshwater stocks and flows;</p> <p>(f) Particular attention should be given to the role of women in water planning and management;</p> <p>(g) Decision-making could be devolved to local communities, where possible,</p> <p>1. <u>Decides</u> to enhance the role of the United Nations Environment Programme in the environmental aspects of sustainable development and management of freshwater through providing environmental, technical and scientific advice, facilitating the transfer of technology to developing countries and assisting countries in this regard, especially developing countries, in developing and strengthening their ability to manage their water resources, strengthening their institutional capacities and developing tools for monitoring and analysing water quality and quantity, and means of enhancing public awareness of important environmental aspects of water-related issues;</p> <p>2. <u>Requests</u> the Executive Director to facilitate, within the existing programme of work of the United Nations Environment Programme, the provision of advice and assistance to States, on request, on strengthening integrated river basin management;</p> <p>3. <u>Also requests</u> the Executive Director, in consultation with Governments and other relevant organizations and programmes of the United Nations system, within the existing programme of work of the United Nations Environment Programme:</p>

	<p>(a) To assist countries, particularly developing countries, to establish methods of identifying environmental problems of freshwater in order to find the underlying causes of those problems;</p> <p>(b) To assist countries, particularly developing countries, to establish the capacity to collect, interpret and disseminate information relating to environmental aspects of water-management decisions;</p> <p>(c) To facilitate the surveying, development and dissemination of technologies and methodologies for the environmentally sound management of freshwater;</p> <p>(d) To promote the best use of water technology centres in developing countries for the purposes of South-South cooperation;</p> <p>(e) To examine how corporate voluntary agreements and initiatives could enhance the role that industry can play in the freshwater area;</p> <p>(f) To create mechanisms for assisting countries, in particular developing countries, in the identification of effective and appropriate practices in public participation in addressing environmental aspects of freshwater;</p> <p>4. <u>Further requests</u> the Executive Director to cooperate with other organizations and programmes of the United Nations system and other international bodies through the Subcommittee on Water Resources of the Administrative Committee on Coordination in promoting arrangements for cooperation on the environmental aspects of freshwater;</p> <p>5. <u>Calls upon</u> the Executive Director to present proposals on this work to the Governing Council at its twentieth session and to report on progress in the implementation of the present decision and on the environmental issues arising from it to the Governing Council at the same session.</p>
<p><b>Decision 20/25.</b> Freshwater (4 February 1999)</p>	<p><u>The Governing Council</u></p> <p>1. <u>Takes note</u> of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities;</p> <p>2. <u>Also takes note</u> of the report of the Executive Director on the work of the United Nations Environment Programme on freshwater issues;</p> <p>3. <u>Further takes note</u> of the Freshwater Strategy contained in the annex to the report of the Executive Director as a proposed framework for the United Nations Environment Programme, within its mandate, to address freshwater issues and carry out activities in the field of freshwater;</p> <p>4. <u>Stresses</u> the role of the United Nations Environment Programme in the environmental aspect of sustainable development and integrated management of freshwater;</p> <p>5. <u>Welcomes</u> the focus of the freshwater work of the United Nations Environment Programme on the environmental aspects of assessment and sustainable integrated management in accordance with national needs;</p> <p>6. <u>Requests</u> the Executive Director to intensify collaborative activities with Governments, upon request, as well as agencies and organizations both inside and outside the United Nations system, in the environmental aspects of freshwater consistent with the mandate of the United Nations Environment Programme and the priorities outlined in Governing Council decisions 19/14 D and SS.V/4;</p>

	<p>7. <u>Decides</u> that the United Nations Environment Programme, within its mandate, and taking into account national priorities, should place a high priority on the identification of expertise and knowledge resident in countries relating to freshwater quality, the establishment of partnership between those countries and countries in need of that expertise and knowledge and the promotion of intergovernmental collaboration;</p> <p>8. <u>Requests</u> the Executive Director to identify key policy issues for freshwater quality arising from the activities undertaken by the United Nations Environment Programme to date, in line with the decisions of the Commission on Sustainable Development at its sixth session and the Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme, 17/ and to propose policy options for debate and endorsement by the Governing Council at its twenty-first session;</p> <p>9. <u>Requests</u> the Executive Director to ensure that the United Nations Environment Programme, when undertaking its activities related to the environmental aspects of freshwater, takes into account the work carried out by other United Nations agencies and international organizations as well as by national Governments in order to avoid unnecessary duplication;</p> <p>10. <u>Requests</u> the Executive Director to promote the transfer of environmentally sound technologies for freshwater management through the International Environmental Technology Centre;</p> <p>11. <u>Requests</u> the Executive Director to report to the Governing Council, at its twenty-first session, on the progress in the implementation of the present decision and in related environmental issues.</p>
<p><b>Sixth Special Session</b> Water Policy and strategy of the United Nations Environment Programme. Report of the Executive Director (29-31 May 2000)</p>	<p>Whole report</p>
<p><b>Decision 21/10.</b> The Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (9 February 2001)</p>	<p>Whole report</p>

**Decision 21/11.**  
Water policy  
(9 February 2001)

1. Takes note of the report of the Executive Director on the work of the United Nations Environment Programme on water issues related to Governing Council decisions 20/25 and SS.VI/2;
2. Accepts in its present form the water policy and strategy of the United Nations Environment Programme as contained in document UNEP/GC.21/2/Add.1 which enhances the focus of the work of the United Nations Environment Programme on the environmental aspects of sustainable development and integrated management of water in accordance with national needs and subject to Governments' requests;
3. Expresses its appreciation to the Executive Director for the measures taken to implement Governing Council decisions 20/25 and SS.VI/2;
4. Also expresses its appreciation to the Executive Director for the progress reports submitted to the Committee for Permanent Representatives, respectively on: the Global International Waters Assessment; the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities; the regional seas conventions; and the water activities of the International Environmental Technology Centre;
5. Further expresses its appreciation for the establishment of an expert group on exchange of information on best practices in the freshwater management;
6. Decides that the United Nations Environment Programme, within its mandate, and taking into account national priorities, should place a high priority on the identification of expertise and knowledge available in countries relating to the environmental aspects of water quality, and facilitate the establishment of partnerships between those countries and countries in need of that expertise and knowledge and the promotion of intergovernmental collaboration upon requests of the Governments concerned;
7. Requests the Executive Director to enhance, through the International Environmental Technology Centre, the transfer of environmentally sound technologies for water management, with due attention to the use of local technologies, the identification and analysis of the costs, effectiveness and strengths and limitations of alternative technologies, and awareness-raising initiatives on technology development and transfer in the water sector;
8. Also requests the Executive Director to intensify collaborative activities with Governments, upon request, as well as with other organizations and agencies in furtherance of the implementation of the water policy and strategy;
9. Also requests the Executive Director to take the necessary measures in furtherance of the continued implementation of the water policy and strategy, consistent with the mandate of the United Nations Environment Programme and the priorities outlined in Governing Council decisions at its respective sessions and in line with the relevant chapters of Agenda 21;

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|  | <p>10. <u>Also requests</u> the Executive Director to ensure the review of the water policy and strategy at the twenty-second session of the Governing Council/Global Ministerial Environment Forum in 2003;</p> <p>11. <u>Also requests</u> the Executive Director to identify key policy issues for the environmental aspects of water, arising from the activities undertaken by the United Nations Environment Programme in line with the decisions of the Commission on Sustainable Development, the Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme and the Malmö Ministerial Declaration and the outcome of the comprehensive review of the implementation of Agenda 21, and to propose policy options to the Governing Council at its twenty-second session/Global Ministerial Environment Forum;</p> <p>12. <u>Also requests</u> the Executive Director to ensure that the United Nations Environment Programme, when undertaking its activities related to the environmental aspects of water, takes into account the work carried out by other United Nations agencies and international organizations as well as by national Governments to avoid duplication;</p> <p>13. <u>Further requests</u> the Executive Director to report to the Governing Council, at its twenty-second session, on the progress in the implementation of the present decision and in related environmental issues.</p> |
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