

WATER MANAGEMENT IN ISLAM.

Faruqui, Naser I, Asit K Biswas and Murad J Bino. 2001. United Nations University Press and International Development Research Centre, Ottawa, Canada.

This volume presents Islamic perspectives on a number of proposed water-management policies, including water-demand management, wastewater reuse, and higher tariffs. The book opens avenues for a wider dialogue amongst researchers working at identifying the most promising water-management policies, adds to our knowledge of some of the influences on formal policy and informal practice, and makes these ideals available to a broader public. *Water Management in Islam* will interest researchers, scholars, and students in natural resource management, Islamic studies, Middle Eastern studies, development studies, and public policy.

VISITE D'ETUDE ET ATELIER INTERNATIONAL SUR LA RÉUTILISATION DES EAUX USÉES EN AGRICULTURE URBAINE: UN DÉFI POUR LES MUNICIPALITÉS EN AFRIQUE DE L'OUEST ET DU CENTRE

2002 CREPA, ETC-RUAF. CTA. (In French: English Title, Study Visit and International Workshop on the Reuse of Wastewater for Urban Agriculture). Proceedings of the study visit cum workshop held in Ouagadougou, Burkina Faso from 3-7 June 2002. This report contains ten papers (three general subjects and seven city case studies) and a detailed description of the workshop and the study visits in and around Ouagadougou. All activities are reported from three angles, which reflect the main themes: socio-economical aspects, health and environmental aspects and institutional, juridical and financial aspects. The working group findings are presented together with a set of recommendations to various groups of stakeholders. The represented cities are Cotonou, Benin; Kumasi, Ghana; Dakar, Senegal; Nouakchott, Mauretania, Bamako, Mali; Yaounde, Cameroon and Ouagadougou, Burkina Faso.

A FRAMEWORK FOR ANALYZING SOCIOECONOMIC, HEALTH AND ENVIRONMENTAL IMPACTS OF WASTEWATER USE IN AGRICULTURE IN DEVELOPING COUNTRIES

Hussain, I, L Raschid, MA Hanjra, F Marikar and W van der Hoek. 2002. IWMI Working Paper 26. International Water Management Institute, Colombo, Sri Lanka.

www.cgiar.org/iwmi/pubs/working/WOR26.pdf
The biggest challenge faced by policy-makers at present, is how best to minimise the negative effects of wastewater use, while at the same time obtain the maximum benefits from this resource. While most of the impacts of wastewater use, both negative as well as positive, are generally known, a

comprehensive evaluation of the benefits and costs of these impacts has not as yet been attempted. Conventional cost-benefit analysis is not adequate to evaluate wastewater impact due to its environmental and “public good” nature. To fill this gap in knowledge, this paper attempts to develop a comprehensive assessment framework applying available and tested techniques in environmental economic analysis, for the comprehensive evaluation of the costs and benefits of wastewater. The periurban area of Faisalabad, Pakistan is chosen to represent this context.

GUIDELINES FOR WASTEWATER REUSE IN AGRICULTURE AND AQUACULTURE: RECOMMENDED REVISIONS BASED ON NEW RESEARCH EVIDENCE

Blumenthal, Ursula J, Anne Peasey, Guillermo Ruiz-Palacio and Duncan D Mara. 2000. Report summary of WELL Task No. 68 (Part 1). London School of Hygiene & Tropical Medicine, Loughborough University, UK (67 pp). www.lboro.ac.uk/well/resources/well-studies/summaries-htm/task0068i.htm

WELL is the DFID-funded resource centre promoting environmental health and well-being in developing and transitional countries. WELL is designed to coordinate and provide services for water, sanitation and environmental health programmes to DFID and other agencies. The WELL website is a focal point of information about water and environmental health and related issues in developing and transitional countries. This study reviews the WHO (1989) Guidelines for Wastewater Reuse in Agriculture and Aquaculture in the light of recent epidemiological studies.

ÉPURATION DES EAUX USÉES ET L'AGRICULTURE URBAINE (WASTEWATER TREATMENT AND URBAN AGRICULTURE)

M Gaye and S Niang. 2002. ENDA Tiers Monde, Dakar, Sénégal (354 pp). (In French)

This book gives detailed insights into wastewater research and treatment in Senegal. It has three parts: 1) Sanitation policies in Senegal and participation of the inhabitants in the demand management; 2) making use of wastewater for urban agriculture in Dakar; 3) treatment efficiency of wastewater through stabilisation ponds. It gives an overview of water and sanitation in Africa and Senegal in particular: relevant institutions, existing policies and treatment efforts. A project of ENDA Senegal is described in more detail, discussing the revolving fund, the involvement of the population as well as the collection and treatment of domestic wastewater. Part two reviews the use of wastewater in urban agriculture; one source is real wastewater, the other comes from shallow natural wells (*Céans*) from which the water is seen as clean but in fact contains much the same pollutants as wastewater. Part three describes the treatment plants of Castors and Diokoul and their efficiency in removing pollutants and pathogens. Thanks to the details and description of methodologies in this book, it can serve well for anybody wanting to undertake a similar wastewater-treatment *cum* -reuse research in another sub-Saharan country.

THE MANGO CITY: URBAN AGRICULTURE IN BELÉM

Isabel Maria Madaleno. 2002. In Portuguese: *A Cidade das Mangueiras: Agricultura Urbana em Belém do Pará*, which can be purchased through www.gulbenkian.pt, educa@gulbenkian.pt, or directly from FUNDAÇÃO CALOUSTE GULBENKIAN – Av. De Berna, 45 A – 1067-001 Lisboa, Portugal. The wettest city in Brazil, Belém – also known as the “mango city” – has more than one million inhabitants. Its natural environment is dominated by islands, deep rivers and narrow green waterways, and by plain alluvial soils suitable for almost any kind of vegetable crops. This book describes the evolution of the metropolis, explaining how what we see in the very many illustrations is deeply intertwined with the history of the country, about the human occupation and devastation of Amazonia, focusing in particular on Brazilian Pará. It is a tribute paid to a hard-working and ingenious people, who against all odds survive in one of the poorest metropolises in Latin America, frequently complementing

their monthly income with fruits, herbs, spices, medicinal plants, and all sorts of animals.

TIERRA VACANTE EN LAS CIUDADES LATINOAMERICANAS

(Vacant Land in Latin American Cities) Nora Clichevsky (ed.). 2002. (*In Spanish*). Lincoln Institute of Land Policy Information Services, Cambridge, USA (144 pp). US\$15.00. ISBN 1-55844-149-2 (Fax: 617-661-7235 or 800-526-3944; e-mail: help@lincolninst.edu; or website: www.lincolninst.edu)

This book identifies the many problems related to vacant urban land, as well as the opportunities that it presents. It is the culmination of a research project coordinated by the editor between 1997 and 1999, in which the issues around vacant land in five cities (Buenos Aires, Argentina; Rio de Janeiro, Brazil; Quito, Ecuador; Lima, Peru; and San Salvador, El Salvador) were analysed and compared. A great variety of vacant land situations coexist in Latin American cities, but there are common threads throughout the region. The problems derived from vacant lots include increased costs for the provision of infrastructure in low-density areas, as well as long commutes and high transportation costs related to growth further from the urban centre. The essays suggest that, at this moment when urban planning and management are being refined in many Latin American countries, vacant land could play an important role in the dynamics of cities and metropolitan areas. The creative use of vacant land could be beneficial to all social sectors.

Selected Publications by IWMI

(www.cgiar.org/iwmi/pubs)

- **Urban Wastewater: A Valuable Resource for Agriculture: A Case Study from Haroonabad, Pakistan** Van der Hoek, Wim, Mehmood UllHassan, Jeroen Ensink, Sabiena Feenstra, Liqa Raschid-Sally, Sarfraz Munir, Rizwan Aslam, Nazim Ali, Raheela Hussain and Yutaka Matsuno. Research Report 63. International Water Management Institute.
- **Use of Untreated Wastewater in Periurban Agriculture in Pakistan: Risks and Opportunities** Ensink, HJ Jeroen, Wim van der Hoek, Yutaka Matsuno, Sarfraz Munir and M. Rizwan Aslam. Forthcoming. Research Report 64. International Water Management Institute.
- **Health Risks of Irrigation with Untreated Urban Wastewater in the Southern Punjab, Pakistan** Feenstra, Sabiena, Raheela Hussain and Wim van der Hoek. 2000. The Institute of Public Health, Lahore, Pakistan and Pakistan Program, International Water Management Institute.
- **Urban-Wastewater Reuse for Crop Production in the Water-Short Guanajuato River Basin, Mexico** Scott, C.A., J. Antonio Zarazua and G. Levine. 2000. Research Report no. 41, International Water Management Institute, Colombo, Sri Lanka (34 pp).
- **Wastewater Reuse in Agriculture in Vietnam: Water Management, Environment and Human Health Aspects - Proceedings of a Workshop held in Hanoi, Vietnam, 14 March 2001** Raschid-Sally, Liqa, Wim van der Hoek and Mala Ranawaka (eds). 2001. IWMI Working Paper 30. International Water Management Institute, Colombo, Sri Lanka (48 pp).
- **For us, this Water is Life: Irrigation Under Adverse Conditions in Mexico.** In: Buechler, S., *Water and Guanajuato's Ejido Agriculture: Resource Access, Exclusion and Multiple Livelihoods* Buechler, Stephanie. 2001. PhD dissertation. Sociology. Binghamton University, Binghamton, New York, USA.
- **Wastewater Use in Agriculture: Review of Impacts and Methodological Issues in Valuing Impacts.** Hussain, Intizar, Liqa Raschid, Munir A Hanjra, Fuard Marikar and Wim van der Hoek. 2002. Working Paper no. 37. International Water Management Institute. Colombo, Sri Lanka.

www.cgiar.org/iwmi/

A major source of information on the topic of water is the International Water Management Institute, whose mandate is "improving water and land resources management for food, livelihoods and nature. Their site provides a number of updates, policy papers, publications as well as a free subscription to their electronic bulletins.

www.iwapublishing.com/template.cfm?name=water_intelligence_online

International Water Association (IWA-) Publishing provides information services on all aspects of water, wastewater and related environmental fields. It includes *Water21*, the IWA membership magazine, and a broad range of journals, books, scientific & technical reports, manuals, newsletters and electronic services. *Water Intelligence Online* is a new online service providing access to a wide selection of valuable information. Also available are the abstracts of the papers from the Workshop: "Use of Appropriately Treated Domestic Wastewater in Irrigated Agriculture", Wageningen University, The Netherlands (April 24, 2002).

www.cleanh2o.com/ww/

This wastewater engineering virtual library (VL) is part of the VL, which is one of the oldest web-based catalogues. Unlike commercial catalogues, it is run by a loose confederation of volunteers, who compile pages of key links for particular areas in which they have expertise. This part of the VL is focused on the USA.

www.sandec.ch

SANDEC is the Department of Water and Sanitation in Developing Countries at the Swiss Federal Institute for Environmental Science and Technology (EAWAG www.eawag.ch/e_welcome.html) in Duebendorf, Switzerland. Its activities centre on problems of sustainable development in economically less developed countries. Its mandate is to assist in developing appropriate and sustainable water and sanitation concepts and technologies adapted to the different physical and socio-economic conditions prevailing in developing countries. The SANDEC research activities focus on use of waste, wastewater and as a recent topic: urban agriculture.

www.cepis.ops-oms.org

The website of the Centro Panamericano de Ingeniería Sanitaria y Ciencias del Ambiente (the Pan American Centre for Sanitary Engineering and Environmental Sciences) is in Spanish and English and focused on Latin America. It contains a wealth of information on publication, events, training materials, etc.

weather.nmsu.edu/hydrology/wastewater/

The *Middle East Wastewater Use Clearinghouse* is a site established to promote knowledge about the use of wastewater on agricultural land to increase the limited water resources available in the Middle East. The project is a cooperative effort of San Diego State University's Middle East Development programme, the Peres Centre for Peace and the International Arid Lands Consortium, and is supported by USAID. The site has information on the project and related issues.

www.ihia.org.uk/

The International Health Impact Assessment Consortium (IMPACT) is a multi-agency partnership formed to help further the research, study and practice of Health Impact Assessments.