

The Hyderabad Declaration on Wastewater Use in Agriculture
14 November 2002, Hyderabad, India

1. Rapid urbanization places immense pressure on the world's fragile and dwindling fresh water resources and over-burdened sanitation systems, leading to environmental degradation. We as water, health, environment, agriculture, and aquaculture researchers and practitioners from 27 international and national institutions, representing experiences in wastewater management from 18 countries, recognize that:
 - 1.1 Wastewater (raw, diluted or treated) is a resource of increasing global importance, particularly in urban and peri-urban agriculture
 - 1.2 With proper management, wastewater use contributes significantly to sustaining livelihoods, food security and the quality of the environment
 - 1.3 Without proper management, wastewater use poses serious risks to human health and the environment.

2. We declare that in order to enhance the positive outcomes while minimizing the risks of wastewater use, there exist feasible and sound measures that need to be applied. These measures include:
 - 2.1 Cost-effective and appropriate treatment suited to the end use of wastewater, supplemented by guidelines and their application
 - 2.2 Where wastewater is insufficiently treated, until treatment becomes feasible:
 - (a) Development and application of guidelines for untreated wastewater use that safeguard livelihoods, public health and the environment
 - (b) Application of appropriate irrigation, agricultural, post-harvest, and public health practices that limit risks to farming communities, vendors, and consumers
 - (c) Education and awareness programs for all stakeholders, including the public at large, to disseminate these measures
 - 2.3 Health, agriculture and environmental quality guidelines that are linked and implemented in a step-wise approach
 - 2.4 Reduction of toxic contaminants in wastewater, at source and by improved management.

3. We also declare that:
 - 3.1 Knowledge needs should be addressed through research to support the measures outlined above
 - 3.2 Institutional coordination and integration together with increased financial allocations are required.

4. Therefore, we strongly urge policy-makers and authorities in the fields of water, agriculture, aquaculture, health, environment and urban planning, as well as donors and the private sector to:

Safeguard and strengthen livelihoods and food security, mitigate health and environmental risks and conserve water resources by confronting the realities of wastewater use in agriculture through the adoption of appropriate policies and the commitment of financial resources for policy implementation.

Background to *The Hyderabad Declaration on Wastewater Use in Agriculture*

The use of urban wastewater in agriculture is a centuries old practice that is receiving renewed attention with the increasing scarcity of fresh water resources in many arid and semi-arid regions. Driven by rapid urbanization and growing wastewater volumes, wastewater is widely used as a low-cost alternative to conventional irrigation water; it supports livelihoods and generates considerable value in urban and peri-urban agriculture despite the health and environmental risks associated with this practice. Though pervasive, this practice is largely unregulated in low-income countries, and the costs and benefits are poorly understood.

The Hyderabad Declaration on Wastewater Use in Agriculture is a result of a workshop entitled “Wastewater Use in Irrigated Agriculture: Confronting the Livelihood and Environmental Realities” held 11-14 November 2002 in Hyderabad, India and sponsored by the International Water Management Institute (IWMI, based in Colombo, Sri Lanka) and the International Development Research Centre (IDRC, based in Ottawa, Canada). The workshop had the following objectives:

- To critically review experience worldwide in the use of wastewater for agriculture
- To present lessons learned from specific field-based case studies, including the environmental and health impacts and risks of wastewater use in agriculture
- To refine a methodology developed and applied by IWMI for selected countries that seeks to assess the global extent of wastewater use in agriculture
- To evaluate the institutional arrangements, constraints, and policy implications for sustained livelihoods based on wastewater use in agriculture
- To build a wastewater “community of practice” integrating a variety of research, implementation and policy institutions and partners.

In the 14 November 2002 plenary session of the workshop, *The Hyderabad Declaration on Wastewater Use in Agriculture* was adopted by the following:

Signatories to *The Hyderabad Declaration on Wastewater Use in Agriculture*

Christopher Scott

International Water Management Institute, India

Richard Carr

World Health Organization, Geneva, Switzerland

Felix Amerasinghe

International Water Management Institute, Sri Lanka

Gayathri Ramachandran

Environment Protection Training Research Institute,
India

Gordon Prain

CGIAR Strategic Initiative on Urban and Peri-urban
Agriculture, Peru

Samson Agodzo

Nkrumah University of Science & Technology, Ghana

Naser Faruqui

International Development Research Centre, Canada

Ursula Blumenthal

London School of Hygiene & Tropical Medicine, UK

Mark Redwood

International Development Research Centre, Canada

Shihab Najib Al-Beiruti

Inter-Islamic Network on Water Resources
Development and Management, Jordan

M.G. Gopal

Hyderabad Metropolitan Water Supply & Sewerage
Board, India

Frans Huibers

Wageningen University, The Netherlands

Signatories to *The Hyderabad Declaration on Wastewater Use in Agriculture* (continued)

Torben Madsen

DHI Water & Environment, Denmark

Paula Silva

Hydraulic Engineer - Irrigation & Drainage, Mexico

Seydou Niang

Institut Français d'Afrique Noire (IFAN), Senegal

Boghas Ghougassian

Middle East Centre for the Transfer of Appropriate
Technology, Lebanon

Shobha Shetty

World Bank, India

A.K. Sengupta

World Health Organization, India

Rene van Veenhuizen

Urban Agriculture Programme, ETC, The Netherlands

Bernard Keraita

International Water Management Institute, Ghana

Moataz Shalabi

Technical University of Hamburg-Harburg, Germany

Sue Hainsworth

Editorial & Publishing Services, India

Stephanie Buechler

International Water Management Institute, India

Peter McCornick

International Water Management Institute, USA

Neeltje Kielen

HR Wallingford Limited, United Kingdom

Rama Devi

International Water Management Institute, India

Nitai Kundu

Institute of Wetland Management and Ecological
Design, India

Sarath Abayawardana

International Water Management Institute, Sri Lanka

Jetske Bouma

International Water Management Institute, India

Madhumita Mukherjee

Dept. of Fisheries, Govt. of West Bengal, India

Gez Cornish

HR Wallingford Limited, United Kingdom

P.S. Minhas

Central Soil Salinity Research Institute, India

Nader Al Khatib

Water and Environmental Developmental
Organization, Palestine

Pay Drechsel

International Water Management Institute, Ghana

Michael Blummel

International Livestock Research Institute, India

Yutaka Matsuno

Kinki University, Japan

Andy Hall

Natural Resources Institute, Univ. of Greenwich, India

Rob Simmons

International Water Management Institute, Thailand

Hammond Murray-Rust

International Water Management Institute, India

Vithal Rajan

Thinksoft Consultants Private Limited, India

Uma Maheshwar Reddy

Osmania University, India

Gayathri Devi

International Water Management Institute, India

Jeroen Ensink

International Water Management Institute, India

Wim van der Hoek

International Water Management Institute, The
Netherlands

Max Haan

International Water Management Institute, India

P. Narayana

International Water Management Institute, India