



III INTERNATIONAL EXPERTS' MEETING "WATER QUALITY MANAGEMENT: CHALLENGES AND EXPECTATIONS"

**International Centre for Water and Environment (CIAMA)
Zaragoza, 9-11 November 2009**

An objective analysis of the global water situation indicates that the world is facing a major crisis because of continuing deterioration of water quality. The water quality conditions of rivers, lakes, estuaries and groundwater have become already a serious problem all over the world, in some places more but in other places somewhat less.

In developing countries, most of the water bodies located in or near urban centres are heavily contaminated. This is not surprising. Research carried out by the Third World Centre for Water Management indicates that currently only about 10% of the point sources of pollution in Latin America are properly treated and then disposed in an environmentally safe way. The situation is likely to be similar in developing Asian countries and probably worse in Africa.

The non-point sources of pollution have become a serious issue in both developed and developing countries. Even in the United States, where the dead zone in the Gulf of Mexico has increased to 22,126 km² due to the steady leaching of agrochemicals to the Mississippi River and then to its estuary. In 2003, the United Nations Environment Programme estimated that there were 146 dead zones in the world. In 2008, this number had increased to 405.

The water quality pollution entails high social costs, including those related to health. The total economic costs of deteriorating water quality are unknown at present. However, it is likely that globally it exceeds thousands of millions of dollars per year.

Due to the seriousness of the global water quality situation, the International Centre for Water and Environment (CIAMA), the International Water Resources Association (IWRA) and the Third World Centre for Water Management are organising a meeting of international experts on water quality management. The main objectives of this workshop are to assess the current situation; analyse the alternatives available to improve the current and the future water quality problems in a cost-effective and timely manner; consider the possible impacts of emerging pollutants on humans and ecosystems; analyse the way in which laws, regulations and institutions can be used more efficiently to improve water quality; and learn from some successful cases where it has been possible to improve water quality in a limited number of years.

Participation in this workshop is by invitation only. Renowned international experts from different disciplines are participating in this event to learn from each other and share their experiences. This III International Meeting of Experts represents a concerted attempt by Ministry of Environment of the Government of Aragon to promote the sharing and dissemination of knowledge on water, environment and sustainability-related issues, as well

as to encourage collaboration between public and private institutions and national and international associations. The executing agency of the Government of Aragon is the International Centre for Water and Environment (CIAMA La-Alfranca), which now hosts the Water Tribune that was established for EXPO Zaragoza 2008 on "Water and Sustainable Development".

PROGRAMME

Monday, 9 November

9.00 Opening (Open to the public)

H.E. Dr. Alfredo Boné-Pueyo
Minister of Environment
Government of Aragon

Prof. Asit K. Biswas
President
Third World Centre for Water Management

10.00 Keynote Lecture

Prof. Malin Falkenmark, Senior Scientist, Stockholm International Water Institute (SIWI), Stockholm, Sweden.

"Water: a reflection of land use. Understanding of water pathways and quality genesis".

10.45 Coffee break

Session I. Global considerations on water quality management

Chair: Dr. Rafael Izquierdo-Aviñó, Director, Aragon Water Institute

11.15 Prof. Asit K. Biswas, President, Third World Centre for Water Management, Atizapan, Mexico.

"Water quality management: a global perspective".

12.00 Mr. Antonio Serramía-Bruxola, President, Spanish Water and Irrigation Manufacturers Association (Afre)

"Efficient Management of water quality".

12.45 Dr. Josefina Maestu, Coordinator, United Nations Office to Support the International Decade for Action "'Water for Life' 2005-2015 UN-Water, Decade Programme on Advocacy and Communication, Zaragoza.

"The role of the UN Office and the global changes in terms of water quality"

13.15 Discussions

14.00 Lunch

Session II. Water and health

Chair: Dr. Hussam Fahmy, Vice-Chair, National Water Research Centre, Ministry of Water Resources and Irrigation, Egypt

- 15.30 Dr. Patricia Burkhardt-Holm, Professor, Basel University, Switzerland.
“Health and water quality management: the case of endocrine disruptors”.
- 16.15 Dr. Damià Barceló, Director, Catalan Institute for Water Research (ICRA), Barcelona, Spain.
“Aquatic contamination by pharmaceuticals in the Ebro river”.
- 17.00 Discussions on the overall topic
- 18.00 End of the working day
- 20.30 Welcoming dinner

Tuesday, 10 November

Session III. Impacts of nonpoint sources

Chair: Prof. Dogan Altinbilek, Professor, Middle East Technical University, Ankara

- 9.00 Dr. Kevin Parris, Senior Economist, Organisation for Economic Cooperation and Development (OECD), Paris.
“Impacts of OECD agriculture on water pollution: Recent trends and future prospects”.
- 9.45 Dr. Robert J. Díaz, Researcher, Virginia Institute of Marine Science, USA.
“Hypoxic areas or dead zones: Economic, social and environmental impacts at the global level”.
- 10.30 Mr. Adam Schempp, Staff Attorney, Environmental Law Institute, Washington, USA.
“Regulating nonpoint source pollution in a federal government: Four case studies”.
- 11.15 Discussions
- 12.00 Coffee break

Session IV. Wastewater management

Chair: Rafael Izquierdo Aviñó, Director, Instituto Aragonés del Agua

- 12.30 Mr. Luis Marruedo-Espeja, Deputy Minister of the Environment, Government of Aragon, Spain.
“Wastewater Management Plan of Aragon and public-private partnership for its implementation”.
- 13.15 Mr. Manuel Rodríguez-Chesa, President, Aragon Chamber of Commerce, Spain.
“Role of the private sector in the Wastewater Management Plan of Aragon”.
- 14.00 Lunch

Session V. Water quality management: Experiences from Aragon

Chair: Dr. Damià Barceló, Director, Catalan Institute for Water Research (ICRA), Barcelona

- 15.30 Dr. Manuel Omedas-Margelí, Head, Office of Water Planning, and Dr. Concepción Durán, Head, Office of Ecological Management, Ebro River Basin Authority, Spain.
“Water quality issues in the new Hydrological Plan of the Ebro river”.
- 16.15 Mr. Javier Celma-Celma, Director, Agency of Environment and Sustainability, Government of Zaragoza, Spain.
“Water quality and adaptation to climate change: the experience of Zaragoza”.
- 17.00 Dr. José Albiac-Murillo, Researcher, CITA-DGA, Zaragoza, Spain.
“Water Framework Directive: challenges for Aragon on water quality management”.
- 17.45 Discussions
- 19.00 End of the working day
- 20.00 Dinner

Wednesday, 11 November

Session VI. Water quality management: International experiences

Chair: Dr. Safwat Abdel-Dayem, Secretary General, Arab Water Council, Cairo

- 9.00 Prof. Dogan Altinbilek, Professor, Middle East Technical University, Ankara, Turkey.
“Rehabilitation of the Golden Horn, Istanbul”.
- 9.45 Prof. James E. Nickum, Professor, Tokyo Jogakkan College and Asian Water and Resource Institute (AWARI), Tokyo, Japan.
“Water quality management of lakes and lakes basins”.
- 10.30 Dr. Cecilia Tortajada, Scientific Director, International Centre for Water and Environment (CIAMA).
“Water quality management in Mexico”.
- 11.15 Coffee break

Session VII. Water quality management: International experiences

Chair: Prof. Asit K. Biswas, President, Third World Centre for Water Management, Mexico

- 11.45 Dr. Jun Xia, Director and Leading Professor, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS), Beijing.
“Water quality management in China: the case of the Huai basin”.
- 12.30 Dr. Safwat Abdel-Dayem, Secretary General, Arab Water Council, Cairo.
“Water quality management in Egypt”.
- 13.15 Discussions
- 14.00 Lunch

Session VIII. Panel session: Challenges for innovation on water quality management
Chair: Mr. Carlos Franco-Uliaque, CIAMA

Panel members:

- 16.00 Dr. Jesús Antonio Insausti-López, Director, International Centre for Water and Environment (CIAMA).
“The legacy of ‘Tribuna del Agua’”.
- 16.20 Dr. Arturo Daudén-Ibáñez, Director, Area of New Technologies, SODEMASA.
“Proper management of animal solid waste to prevent nonpoint source pollution”.
- 16.40 Dr. Cristina Nerín-de la Puerta, Director, GUIA Group, Engineering Research Institute of Aragon, Zaragoza University.
“Water quality: Diagnosis and control”.
- 17.00 Dr. Rosa Pino-Otín, Director, Institute of Environment, San Jorge University.
“Experiences of the San Jorge University on water quality management”.
- 17.20 Dr. Manuel Fariñas-Iglesias, Director, Technology, Research and Development areas, Acciona Agua.
“Innovative technologies for treatment of water in the future”.

Closing session (Open to the public)

- 18.00 Prof. Asit K. Biswas, Summary of the experts’ meeting, President, Third World Centre for Water Management, Mexico.
- 18.30 Closing Remarks, chaired by Dr. Alfredo Boné-Pueyo, Minister of Environment, Government of Aragon