

AMERICAN WATER RESOURCES ASSOCIATION
AND THE
UNIVERSITY OF DUNDEE
INTERNATIONAL SPECIALTY CONFERENCE
“GLOBALIZATION AND WATER MANAGEMENT:
THE CHANGING VALUE OF WATER”
FINAL PROGRAM



August 6-8, 2001
UNIVERSITY OF DUNDEE
West Park Centre, Dundee, Scotland

Welcome to Dundee . . .



DR. DAVID W. MOODY
CONFERENCE ORGANIZING COMMITTEE CO-CHAIR
INTER-AMERICAN WATER RESOURCES NETWORK (IWRN)
WASHINGTON, D.C., USA



DR. PATRICIA K. WOUTERS
CONFERENCE ORGANIZING COMMITTEE CO-CHAIR
INTERNATIONAL WATER LAW RESEARCH INSTITUTE (IWLRI)
DEPARTMENT OF LAW, UNIVERSITY OF DUNDEE
DUNDEE, SCOTLAND, UK

We extend a warm welcome to each of our colleagues from around the world who have journeyed to the City of Dundee for the first American Water Resources Association (AWRA) Conference held outside of North America. Some of you are well familiar with the meetings of our host, the International Water Law Research Institute (IWLRI) in the University of Dundee's Department of Law and have participated in the water law seminars in previous years. Others may be in Scotland for the first time. We urge you to take some time to relax and enjoy the wonderful countryside, the historic and cultural resources, and especially the people, while you are here.

This International Specialty Conference on "Globalization and Water Management: The Changing Value of Water" will examine a number of critical issues that will directly affect the success to which integrated land and water resources management is implemented throughout the world and the degree to which we are able to work together to address the growing global water crisis. How do we address the new challenges facing the international community in the management of its rapidly diminishing fresh water? What are the issues arising out of the current emerging trend of globalisation? To move forward, we first must have responsive and responsible national, transnational, and international legal frameworks and associated regulations that effectively identify, allocate and provide mechanisms to manage water (and land) resources and which seek to avoid conflicts over water.

Second, we need financial resources to develop water infrastructures that will allow societies to meet the water needs of their people. It is now evident that governments cannot do this alone. It will take private-public partnerships and access to financial markets to achieve sustainable development. The mechanics of how this will be done is very controversial, especially the premise that water must be treated as an economic good. The "rules of the game" need to be defined and new funding mechanisms developed to meet the growing demands of water.

Third, scientific understanding and information about a particular watershed is crucial to choosing the right management tools that will successfully meet water demands and protect aquatic ecosystems. Too often, managers are out of touch with recent management technologies available from the scientific community and the scientific community is unaware of the technical needs of water managers.

Finally, education at all levels, including the education of citizens and an effective mechanism to ensure long term capacity-building in-country, is necessary to develop and improve the skills needed to manage water and land resources in today's environment. Education is a life long journey and new approaches must be implemented to deliver information and knowledge to those who need it. One of the goals of this meeting is to seek innovative solutions that might address this crucial need.

Addressing these elements will no doubt require political will and commitment. However, the process is complex, with necessary interface between and among a myriad of disciplines and areas of expertise. It is hoped that the Dundee meeting will help us all to find new ways forward in the difficult challenge of operationalising an interdisciplinary approach capable of meeting global water issues.

This conference has oral and poster papers that will address each of these issues and more. In addition to the oral presentations and poster sessions, we have scheduled plenary presentations about the Hydrology, Environment, Life, and Policy (HELP) initiative and a morning workshop on "The Essential of Private Sector Participation" in water projects. Each session will have a rapporteur who will summarize the high points of discussions during each session and the Conference will conclude with a panel discussion of the critical issues raised and addressed during the meeting and an open discussion by participants.

Welcome again to Dundee and enjoy your stay. We are very pleased to share this unique experience with you!

AMERICAN WATER RESOURCES ASSOCIATION / UNIVERSITY OF DUNDEE
INTERNATIONAL SPECIALTY CONFERENCE
"GLOBALIZATION AND WATER MANAGEMENT: THE CHANGING VALUE OF WATER"

AWRA

Sponsored By The
AMERICAN WATER RESOURCES ASSOCIATION
And The

INTERNATIONAL WATER LAW RESEARCH INSTITUTE
DEPARTMENT OF LAW, UNIVERSITY OF DUNDEE



CONFERENCE ORGANIZING COMMITTEE CO-CHAIRS

DR. DAVID W. MOODY
Inter-American Water Resources Network (IWRN)
Organization of American States (OAS)
Washington, D.C., USA

DR. PATRICIA K. WOUTERS
International Water Law Research Institute (IWLRI)
Department of Law, University of Dundee
Dundee, Scotland, UK

CONFERENCE ORGANIZING COMMITTEE MEMBERS

FAYE ANDERSON
AWRA International Activities Committee
Carbondale, Illinois, USA

RANJI DHILLON
International Water Law Research Institute (IWLRI)
Department of Law, University of Dundee
Dundee, Scotland, UK

American Water Resources Association (AWRA) . . . The American Water Resources Association is a professional association dedicated to the advancement and application of integrated land and water management to watersheds and river basins. For over 36 years AWRA has provided a forum for networking among engineers, hydrologists, biologists, economists, attorneys, and other members of the water resources community committed to improving the understanding of water resources. It accomplishes this through the publication of a peer-reviewed scientific journal, The Journal of the American Water Resources Association, a magazine titled Water Resources IMPACT, and three specialty conferences a year with proceedings from those conferences. Continuing Education Credits (CEUs) are also offered for attendance at the conferences as well as the Short Courses conducted by AWRA. Membership is offered at various levels including: individual, student, institutional, and corporate. AWRA has members in the United States, Canada, Mexico, and in 57 nations worldwide. For more information log onto the AWRA website at www.awra.org or contact us at AWRA, P.O. Box 1626, Middleburg, Virginia, 20118-1626 USA (phone: +1-540-687-8390, fax: +1-540-687-8395, e-mail: info@awra.org).

International Water Law Research Institute (IWLRI) . . . The International Water Law Research Institute, Department of Law, University of Dundee, Scotland, promotes academic research, postgraduate teaching, advisory services, and professional training in the area of international and national law of water resources. As part of its international program, the IWLRI convenes annual seminars on International and National Water Law and Policy and is pleased to co-convene the meeting this year with AWRA. Past seminars have attracted internationally renowned experts to address current water law issues, including: "Equitable and Sustainable Access to Water," "Regulatory Issues," and "Securing Water Rights and Managing Water Scarcity." These topics have been considered in light of the UK international development policy of achieving poverty eradication through the effective management of water resources worldwide. A key research theme – operationalizing an interdisciplinary approach to water resources management including water law – is central to all of the activities of IWLRI. The University of Dundee offers postgraduate degrees, including water law and policy, and provides specialized LLM degrees in Environmental Regulation and Corporate Governance (for lawyers and non-lawyers). A flexible training program, coordinated with the postgraduate program, can be tailor-made for delivery in Dundee or elsewhere. Recent training has been conducted in Cambodia, China, Central and Eastern Europe, Laos, Namibia, Riga, Russia, Thailand, Uganda, and Vietnam. For more information see www.dundee.ac.uk/law/water, or, contact Mrs. Fiona Clark at f.j.clark@dundee.ac.uk, Department of Law, University of Dundee, Dundee, Scotland, DD1 4HN, The UK, +44 1382 34 4461, Fax: +44 1382 226 905.

AWRA and the University of Dundee Greatly Appreciate the Financial and In-Kind Contributions Provided by the Following Organizations

ALLEN & OVERY



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INTER-AMERICAN WATER
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PLEASE NOTE . . . Lunch each day will be served in the Dining Room adjacent to the West Park Hall. You MUST PRESENT a ticket for each luncheon and for the Conference Dinner, Tuesday evening. There will be a special presentation during the luncheon on Tuesday (please see "Special Events" on pg. 22).

AWRA FUTURE CONFERENCES 2001 & 2002

NOVEMBER 12-15, 2001 • ALBUQUERQUE, NEW MEXICO, USA
ANNUAL WATER RESOURCES CONFERENCE

MAY 13-15, 2002 • NEW ORLEANS, LOUISIANA
SPRING SPECIALTY CONFERENCE
"COASTAL WATER RESOURCES"

JULY 1-3, 2002 • KEYSTONE, COLORADO, USA
SUMMER SPECIALTY CONFERENCE
"GROUND WATER/SURFACE WATER INTERACTIONS"

NOVEMBER 4-6, 2002 • PHILADELPHIA, PENNSYLVANIA, USA
AWRA'S ANNUAL WATER RESOURCES CONFERENCE

DAY-AT-A-GLANCE / MONDAY / AUGUST 6, 2001

NOTE . . . ALL TECHNICAL SESSIONS ARE HELD IN THE BALBEGGIE, KINNAIRD, OR LIBRARY ROOMS IN THE WEST PARK HALL (WPH) OR THE AUDITORIUM IN THE CONFERENCE CENTRE

SPEAKERS' PREPARATION ROOM OPEN
0700 HOURS- 1700 HOURS / ROOM A- CONFERENCE CENTRE

REGISTRATION DESK OPEN
0730 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

BOOK & JOURNAL EXHIBIT OPEN
0730 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

CONFERENCE OPENING PLENARY SESSION
0830 HOURS- 1000 HOURS / AUDITORIUM- CONFERENCE CENTRE

POSTERS ON DISPLAY
0900 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

MORNING NETWORKING BREAK
1000 HOURS- 1030 HOURS / CONFERENCE CENTRE FOYER

CONCURRENT SESSIONS 1, 2, 3 / 1030 HOURS- 1200 HOURS / ROOMS IN WEST PARK HALL (WPH)

SESSION 1
FORMULATING WATER
POLICY DURING RAPID
GLOBALIZATION
BALBEGGIE ROOM- WPH

SESSION 2
INNOVATIVE LEGAL
FRAMEWORKS: RESPONDING
TO CHANGE
KINNAIRD ROOM- WPH

SESSION 3
ENVIRONMENTAL VALUATIONS
OF WATER ECOSYSTEM
FUNCTIONS AND VALUES
LIBRARY- WPH

LUNCH BREAK
1200 HOURS- 1315 HOURS / DINING ROOM

CONCURRENT SESSIONS 4, 5, 6, 7 / 1330 HOURS- 1500 HOURS

SESSION 4
EVOLVING WATER
MGMT. STRATEGIES IN
DEVELOPING COUNTRIES- I
AUDITORIUM- CONF. CTR.

SESSION 5
INTERNATIONAL AND
COMPARATIVE WATER
LAW: CURRENT ISSUES
BALBEGGIE ROOM- WPH

SESSION 6
VALUING WATER IN
URBAN AND RURAL
SETTINGS
KINNAIRD ROOM- WPH

SESSION 7
USING INFORMATION
TECHNOLOGY TO SUPPORT
WATER MANAGEMENT
LIBRARY- WPH

AFTERNOON NETWORKING BREAK
1500 HOURS- 1530 HOURS / CONFERENCE CENTRE FOYER

CONCURRENT SESSIONS 8, 9, 10 / 1530 HOURS- 1700 HOURS

SESSION 8
THE ROLE OF SCIENCE IN A
GLOBALIZING WORLD:
INTEGRATING SCIENCE ...
BALBEGGIE ROOM- WPH

SESSION 9
THE ROLE OF CIVIL
SOCIETY IN
WATER MANAGEMENT- I
KINNAIRD ROOM- WPH

SESSION 10
VALUING WATER FOR
AGRICULTURE AND THE
ENVIRONMENT
LIBRARY- WPH

CIVIC RECEPTION AT THE DUNDEE CITY CHAMBERS
1800 HOURS- 1930 HOURS (SEE "SPECIAL EVENTS" FOR DETAILS)

MONDAY / AUGUST 6, 2001

CONFERENCE OPENING PLENARY SESSION

0830 HOURS-1000 HOURS
AUDITORIUM – CONFERENCE CENTER

WELCOME AND OPENING REMARKS

Dr. John S. Grounds III
President, American Water Resources Association
Brown and Gay Engineers, Inc., Houston, Texas, USA

Dr. Patricia K. Wouters
Conference Organizing Committee Co-Chair
Director, International Water Law Research Institute (IWLRI)
Department of Law
University of Dundee, Dundee, Scotland, UK

Dr. David W. Moody
Conference Organizing Committee Co-Chair
Inter-American Water Resources Network (IWRN)
Organization of American States (OAS)
Washington, DC, USA

PLENARY SPEAKERS

“Welcome on Behalf of the University of Dundee”

Ms. Fiona Raitt
Head of Department of Law
University of Dundee , Dundee, Scotland, UK

“Developing a Sustainable Water Industry in a Competitive Environment”

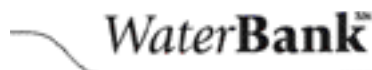
Dr. Jon Hargreaves
Chief Executive, East of Scotland Water
Edinburgh, Scotland, UK

“From Here to Where? – Managing Water in a Sustainable Way”

Professor Michael Hamlin
CBE, FREng, FICE, Hon. LLD (Dundee), Hon. Deg. Eng. (Birmingham)
Former Principal and Vice Chancellor
University of Dundee, Dundee, Scotland, UK

(1000 HOURS-1030 HOURS / MORNING NETWORKING BREAK – CONFERENCE CENTRE FOYER)

THIS NETWORKING BREAK IS SPONSORED BY



ALBUQUERQUE, NEW MEXICO, USA

Please Note . . . Throughout the Technical Program the PRESENTER of each paper is in BOLD type immediately following the paper title. The affiliation given is that of the Presenter – co-authors are then listed in parentheses.

CONCURRENT SESSIONS 1, 2, 3
1030 HOURS-1200 HOURS

SESSION 1
FORMULATING WATER POLICY DURING RAPID GLOBALIZATION
BALBEGGIE ROOM – WEST PARK HALL

William Turner – Moderator
WaterBank/Westwater Resources, Albuquerque, New Mexico, USA

Rachel Anne Cordone – Rapporteur
Columbia University, New York City, New York, USA

- 1030 HOURS Global Public Policy Arena – The World Commission on Dams - Jeremy Bird, World Commission on Dams Secretariat, Cape Town, South Africa
- 1100 HOURS Globalization and Water Management in Developing Arid Countries – Walid A. Abderrahman, Manager, Water Section, Research Institute, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia
- 1130 HOURS Water: A Basic Human Right – the Debate is Not Over - Robyn Stein, Mandela Institute, School of Law, University of the Witwatersrand, Johannesburg, South Africa (co-author: P. Bond)

SESSION 2
INNOVATIVE LEGAL FRAMEWORKS: RESPONDING TO CHANGE
KINNAIRD ROOM – WEST PARK HALL

Salman Salman – Moderator
Senior Legal Advisor, World Bank, Washington, D.C., USA

Isabel Dendauw – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1030 HOURS Conflicts Between Sectorial and Transboundary Water Users: Cause, Prevention, and Dispute Settlement - Branko Bosnjakovic, United Nations Economic Commission for Europe (UNECE), Geneva, Switzerland
- 1100 HOURS Tradable Water in GATT/WTO Law: Need for New Legal Frameworks? – Katsumi Matsuoka, Department of Law and Business, Fuji University, Iwate, Japan
- 1130 HOURS Adaptive Management: How Water Laws Need to Change – Janet C. Neuman, Northwestern School of Law, Lewis and Clark College, Portland, Oregon, USA

SESSION 3
ENVIRONMENTAL VALUATIONS OF WATER ECOSYSTEM FUNCTIONS AND VALUES
LIBRARY – WEST PARK HALL

Ray Herrmann – Moderator
Colorado State University, Fort Collins, Colorado, USA

Elijah Ngurare – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1030 HOURS Comparing Ecosystem Restoration Approaches: The Baltic Sea and Upper Mississippi River - Bruce D. Carlson, Institute of Water Resources, U.S. Army Corps of Engineers, Alexandria, Virginia, USA
- 1100 HOURS The Value of Freshwater Wetlands in the Zambezi Basin - Ismail Seyam, International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE), Delft, The Netherlands (co-authors: A.Y. Hoekstra, G.S. Ngabirano, H.G. Savenije)
- 1130 HOURS Ord River Allocation Planning – Environmental Valuations Past, Present and Future - Russell King, Water and Rivers Commission, East Perth, Western Australia, Australia (co-author: Kerry Trayler)

(1200 HOURS-1315 HOURS / LUNCH BREAK – DINING ROOM)

CONCURRENT SESSIONS 4, 5, 6, 7
1330 HOURS-1500 HOURS

SESSION 4
EVOLVING WATER MANAGEMENT STRATEGIES IN DEVELOPING COUNTRIES-I
AUDITORIUM – CONFERENCE CENTRE

Chris Rogers – Moderator
Senior Research Fellow, University of Dundee, Dundee, Scotland, UK

Ina Tatiana Porras – Rapporteur
International Institute for Environment and Development, London, England, UK

- 1330 HOURS Conflict and Co-operation Over Fresh Water: International and National Dimension – Albert Mumma, Center for Environmental Policy and Law in Africa, Nairobi, Kenya
- 1400 HOURS The Impact of Globalization on Water Management in Small Island States: The Case of Jamaica - Belal Ahmed, University of the West Indies, Kingston, Jamaica, West Indies
- 1430 HOURS Water Resource Management in the Southern Africa Region - Francisco Alvaro, Direcção Nacional de Águas, Maputo, Mozambique (co-authors: Custodio Vicente, Adriano Nhamona)

SESSION 5
INTERNATIONAL AND COMPARATIVE WATER LAW: CURRENT ISSUES
BALBEGGIE ROOM – WEST PARK HALL

Patricia Jones – Moderator
PhD Candidate, Department of Law, University of Dundee, Dundee, Scotland, UK

Sylvester Matemú – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Globalisation, International Watercourses and the Sources of International Law - Alistair Rieu-Clarke, IWLRI, University of Dundee, Dundee, Scotland, UK
- 1400 HOURS The United States Supreme Court and the Concept of “Equitable” Apportionment: A Century of Experience - George W. Sherk, School of Engineering and Applied Science, George Washington University, Washington, DC, USA
- 1430 HOURS New Thinking in Regional International Water Laws? - Paulo Jorge Canelas de Castro, Faculty of Law, University of Coimbra, Coimbra, Portugal (co-authors: Cheryl D. Feigum, Jerry Bennett)

SESSION 6
VALUING WATER IN URBAN AND RURAL SETTINGS
KINNAIRD ROOM – WEST PARK HALL

Melvin Woodhouse – Moderator
LLM Candidate, University of Dundee, Dundee, Scotland, UK

John Nyaoro – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Drawers of Water II: 30 years of Changes in Domestic Water Use in East Africa – Ina Tatiana Porras, International Institute for Environment and Development (IIED), London, England, UK (co-author: John Thompson)
- 1400 HOURS Water Market Participation and Effective Water Prices in Jordan - Maria Iskandarani, Center for Development Research (ZEF), Bonn, Germany
- 1430 HOURS Valuing Water in Rural Puerto Rico - H.A. Minnigh, RHI, Northeast RCAP, Lajas, Puerto Rico, USA (co-author: Graciela I. Ramirez Toro)

MONDAY / AUGUST 6, 2001 / TECHNICAL SESSIONS

CONCURRENT SESSIONS 4, 5, 6, 7 (CONT'D.)
1330 HOURS-1500 HOURS

SESSION 7
USING INFORMATION TECHNOLOGY TO SUPPORT WATER MANAGEMENT
LIBRARY – WEST PARK HALL

John S. Grounds III – Moderator
President, American Water Resources Association
Brown and Gay Engineers, Inc., Houston, Texas, USA

Praveen Martis – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Helping Internet Users Find Water Information - Kenneth J. Lanfear, Gateway to the Earth Program Coordinator, U.S. Geological Survey, Reston, Virginia, USA
- 1400 HOURS Narrowing the Digital Divide: Creating Opportunities for Water Resource Management in the Information Age - U. Sunday Tim, Department of Agriculture and Biosystems Engineering, Iowa State University, Ames, Iowa, USA
- 1430 HOURS Water Conservation Using Satellite Technology for Irrigation Scheduling – William J. Carlos, Nevada Cooperative Extension, University of Nevada-Reno, Reno, Nevada, USA (co-authors: W.W. Miller (NAES), D.A. Devitt(NCS/NAES), G.C.J. Fernandez (NAES))

(1500 HOURS-1530 HOURS / AFTERNOON NETWORKING BREAK – CONFERENCE CENTRE FOYER)

CONCURRENT SESSIONS 8, 9, 10
1530 HOURS-1700 HOURS

SESSION 8
THE ROLE OF SCIENCE IN A GLOBALIZING WORLD:
INTEGRATING SCIENCE INTO WATER MANAGEMENT
BALBEGGIE ROOM – WEST PARK HALL

Dan Tarlock – Moderator
Chicago-Kent College of Law, Chicago, Illinois, USA

Patricia Jones – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1530 HOURS What Science Can Contribute for Future Cooperation in the Middle East: The Jordan River – Avner Vengosh, Department of Geological and Environmental Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel (co-authors: Efrat Farber, Uri Shavit, Ran Holtzman, Michal Segal, Ittai Gavrieli, Tom Bullen, Bernhard Mayer)
- 1600 HOURS Competing, Complimentary, and/or Replacement Strategies for Watershed Restoration in the Klamath River Basin, USA – Robert A. Gearheart, Department of Engineering, Humboldt State University, Arcata, California, USA (co-author: Brad Finney)
- 1630 HOURS An Impacts Assessment Toolbox to Aid Water Resources Contingency Planning Under Global Climate Change in the San Joaquin River Basin, USA – Nigel W. T. Quinn, Center for Environmental Biotechnology, University of California-Berkeley, Berkeley, California, USA (co-author: Meri M. Miles)

MONDAY / AUGUST 6, 2001 / TECHNICAL SESSIONS

CONCURRENT SESSIONS 8, 9, 10 (CONT'D.)
1530 HOURS-1700 HOURS

SESSION 9
THE ROLE OF CIVIL SOCIETY IN WATER MANAGEMENT-I
KINNAIRD ROOM – WEST PARK HALL

Mimi Larsen Becker – Moderator
University of New Hampshire, Durham, New Hampshire, USA

Jason Kuiken – Rapporteur
University of Wisconsin, Madison, Wisconsin, USA

- 1530 HOURS Democratising Down Under - Maria Comino, Healthy Rivers Commission, Sydney, New South Wales, Australia
- 1600 HOURS The Transition to Alternative Sources of Water Supply in East Central Florida (USA) – Ometrias D. Long, St. Johns River Water Management District, Palatka, Florida, USA
- 1630 HOURS Scotland's Water – Open for Business? – Sarah Hendry, University of Abertay-Dundee, PhD Candidate, Department of Law, University of Dundee, Dundee, Scotland, UK

SESSION 10
VALUING WATER FOR AGRICULTURE AND THE ENVIRONMENT
LIBRARY – WEST PARK HALL

Jeremy Bird – Moderator
World Commission on Dams, Cape Town, South Africa

Ina Tatiana Porras – Rapporteur
International Institute for Environment and Development (IIED), London, UK

- 1530 HOURS Dollars and Sense: Water Allocation Decision-Making, Tropical Western Australia - Russell King, Water and Rivers Commission, East Perth, Western Australia, Australia (co-authors: Ian Loh, Simon Rodgers)
- 1600 HOURS Valuing Water for Agriculture: Application to the Zambezi Basin Countries - J. I. Agudelo, International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE), Delft, The Netherlands (co-author: Arjen Y. Hoekstra)
- 1630 HOURS Costs and Benefits of Instream Flows in an International Basin – Frank A. Ward, New Mexico State University, Las Cruces, New Mexico, USA (co-author: James F. Booker)

SPECIAL EVENT
CIVIC RECEPTION AT THE DUNDEE CITY CHAMBERS
MONDAY / AUGUST 6 / 1800 HOURS-1930 HOURS

SPONSORED BY THE CITY OF DUNDEE

This event is included in the Registration Fee. All Conference Delegates are invited to attend this reception. The Honorable John R. Letford, the Lord Provost of the City of Dundee, will host a Welcoming Civic Reception for all Conference Delegates at the Dundee City Chambers. Meet in front of the West Park Hall at 1730 hours for coach departure.

POSTER SESSION

POSTERS ON DISPLAY MONDAY-6 AUGUST, TUESDAY-7 AUGUST,
AND WEDNESDAY-8 AUGUST IN THE CONFERENCE CENTRE FOYER
0900 HOURS-1700 HOURS

- No. 1 Anglers' Perceptions About PCB-Contaminant Risks From Sport-Caught Fish Consumption - Carol Perenchio, Sherman Hospital, Crystal Lake, Illinois, USA
- No. 2 A Case Study in Bottled Water Trends as a Commodity in Merter, Istanbul - Anya Butt, Fatih University, Istanbul, Turkey (co-authors: Muhammet Memduh Osmanoglu, Murat Basaran)
- No. 3 A Decision Support System for Drought Prediction and Water Resources Management in Semiarid Regions - Marcos Airton de Suosa Freitas, Associacao Brasileira de Recursos Hidricos, Ceara, Brazil
- No. 4 Discrepancy in Access and Use to Water in Mongolia - Tsetsgee Amgalan, Governmental Agency of Urban Services, Ulaanbaatar 13, Mongolia
- No. 5 Innovative Processes in Small Scale Agricultural Production for Economic and Effective Use of Water and Land: Indian Experiences - Lalit P. Chaudhari, Institute for Sustainable Development and Research, Bombay, India
- No. 6 Land Use Effects on Coastal Waters and Infrastructure in Puerto Rico - Graciela I. Ramirez Toro, CECIA, Universidad Interamericana de Puerto Rico, Puerto Rico, USA (co-authors: H.A. Minnigh, Heidi Hertler)
- No. 7 Managing Public Comments With a Web-Based Computer Program - Christine D. Karas, U.S. Bureau of Reclamation, Salt Lake City, Utah, USA
- No. 8 Pastureland Impacts on Water Quality of Two Small Streams, Ozark Region, USA - Kenneth F. Steele, University of Arkansas, Fayetteville, Arkansas, USA (co-authors: P.F. Vendrell, M.A. Nelson, R.G. Roggio)
- No. 9 Patterns of Urban Growth and Water Consumption Trends in the Metropolitan Region of Barcelona - Monica Rivera Escrich, Autonomous University of Barcelona, Barcelona, Spain (co-authors: Merce Capellades Vidal, David Sauri Pujol)
- No. 10 Public Preferences for Managing the Upper Mississippi River System - Bruce D. Carlson, Institute of Water Resources, U.S. Army Corps of Engineers, Alexandria, Virginia, USA
- No. 11 A Review of Emergent Precipitation Enhancement Techniques and the Rights to Developed Water - David J. Gochis, University of Arizona, Tucson, Arizona, USA
- No. 12 A Review of the Ganges Treaty of 1996 - Md. Fayzul Kabir Pasha, The National University of Singapore. Singapore (co-author: A. Nishat)
- No. 13 The Subsidization of Water Supply and Sewage Treatment - Steven Renzetti, Department of Economics, Brock University, St. Catharines, Ontario, Canada (co-author: Joseph Kusner)
- No. 14 The Value of Water in Manufacturing - Steven Renzetti, Department of Economics, Brock University, St. Catharines, Ontario, Canada (co-author: Diane Dupont)
- No. 15 Water Allocation in Zambia - Managing the Water Demand in Kafue River Basin - Jonathan M. Kampata, Department of Water Affairs, Lusaka, Zambia (co-author: Andrew Mondoka)
- No. 16 Water Cost for Agriculture Activities in Kuwait - Mabdi Abdal - Kuwait Institute for Scientific Research, Kuwait (co-authors: M. Suleiman, S. Al-Ghawas)

DAY-AT-A-GLANCE / TUESDAY / AUGUST 7, 2001

NOTE . . . ALL TECHNICAL SESSIONS ARE HELD IN THE BALBEGGIE, KINNAIRD, OR LIBRARY ROOMS IN THE WEST PARK HALL (WPH) OR THE AUDITORIUM IN THE CONFERENCE CENTRE

SPEAKERS' PREPARATION ROOM OPEN
0700 HOURS- 1700 HOURS / ROOM A- CONFERENCE CENTRE

REGISTRATION DESK OPEN
0730 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

BOOK & JOURNAL EXHIBIT OPEN
0730 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

CONFERENCE PLENARY SESSION - HELP PROGRAMME
0830 HOURS- 1000 HOURS / AUDITORIUM- CONFERENCE CENTRE

POSTERS ON DISPLAY
0900 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

MORNING NETWORKING BREAK
1000 HOURS- 1030 HOURS / CONFERENCE CENTRE FOYER

CONCURRENT SESSIONS 11, 12, 13 / 1030 HOURS- 1200 HOURS/ROOMS IN WEST PARK HALL (WPH)

SESSION 11
CHALLENGES IN
TRANSBOUNDARY WATER
MANAGEMENT
KINNAIRD ROOM- WPH

SESSION 12
WATER MGMT. IN
TRANSITIONAL ECONOMIES
(CENTRAL ASIA)
BALBEGGIE ROOM- WPH

SESSION 13
EVOLVING
MANAGEMENT
OF UTILITIES
LIBRARY- WPH

LUNCH BREAK
1200 HOURS- 1315 HOURS / DINING ROOM

CONCURRENT SESSIONS 14, 15, 16, 17 / 1330 HOURS- 1500 HOURS

SESSION 14
CHALLENGES IN
TRANSBOUNDARY RIVER
BASIN MANAGEMENT
KINNAIRD ROOM- WPH

SESSION 15
EVOLVING WATER MGMT.
STRATEGIES IN
DEVELOPING COUNTRIES- II
BALBEGGIE ROOM- WPH

SESSION 16
WATER UTILITIES IN A
GLOBAL ECONOMY: RECENT
EXP. WITH PRIVATIZATION
LIBRARY- WPH

SESSION 17
SEEKING COLLABORATION,
COOPERATION, &
PARTNERSHIPS
AUDITORIUM- CONF. CTR.

AFTERNOON NETWORKING BREAK
1500 HOURS- 1530 HOURS / CONFERENCE CENTRE FOYER

CONCURRENT SESSIONS 18, 19, 20 / 1530 HOURS- 1700 HOURS

SESSION 18
THE ROLE OF CIVIL
SOCIETY IN WATER
MANAGEMENT- II
KINNAIRD ROOM- WPH

SESSION 19
CHANGING WATER
LAW
REGIMES
LIBRARY- WPH

SESSION 20
THE POLITICAL ECONOMY
OF WATER OWNERSHIP
AND CONTROL
BALBEGGIE ROOM- WPH

CONFERENCE DINNER
1830 HOURS- 2100 HOURS (SEE "SPECIAL EVENTS" FOR DETAILS)

TUESDAY / AUGUST 7, 2001

CONFERENCE PLENARY SESSION

0830 HOURS-1000 HOURS

AUDITORIUM – CONFERENCE CENTER

HEALTH, ENVIRONMENT, LIFE, AND POLICY (HELP) PROGRAMME

Mike Bonell – Moderator
International Hydrological Programme, UNESCO, Paris, France

Rapporteurs
Jason Kuiken
University of Wisconsin, Madison, Wisconsin, USA
and
Alistair Rieu-Clarke
University of Dundee, Dundee, Scotland, UK

HELP is a new initiative of the United Nations Education, Scientific, and Cultural Organization (UNESCO) and the World Meteorological Organization (WMO) to establish a global network of catchments to improve the links between hydrology and the needs of society. HELP's goal is to deliver social and environmental benefits to stakeholders through the sustainable and appropriate use of water, by providing a framework that will allow water law and policy experts, water resources managers, and water scientists to work together on water related problems and to improve integrated catchment management – "Real People, Real Catchments, Real Answers."

The Help Programme: Overview
Mike Bonell
International Hydrological Programme, UNESCO, Paris, France

Interdisciplinary Research: Problems and Issues for HELP Basins
James Wallace
Centre for Environment and Hydrology, Wallingford, Oxon, England, UK

Effective Water Resources Management: Operationalizing Interdisciplinarity: The Case for Law
Patricia K. Wouters
International Water Law Research Institute, Department of Law
University of Dundee, Dundee, Scotland, UK

Legal Regulation and Integrated Water Resources Management: Questions for Scientists
Sergei Vinogradov
University of Dundee, Dundee, Scotland, UK

Practical Issues of Hydrology for the Environment, Life and Policy:
Examples from the Thukela Basin in South Africa
Valerie Taylor and Roland Schultze
School of Bio Resources Engineering and Environmental Hydrology
University of Natal, Pietermaritzburg, South Africa

Managing International Waters: Implementing an Integrated
Approach in a HELP Basin – The Aral Sea Basin
Victor Dukhovny and Vadim Sokolov
Scientific Information Centre, Interstate Water Commission
Tashkent, Uzbekistan

(1000 HOURS-1030 HOURS / MORNING NETWORKING BREAK – CONFERENCE CENTRE FOYER)

THIS NETWORKING BREAK IS SPONSORED BY



CONCURRENT SESSIONS 11, 12, 13
1030 HOURS-1200 HOURS

SESSION 11
CHALLENGES IN TRANSBOUNDARY WATER MANAGEMENT
KINNAIRD ROOM – WEST PARK HALL

James Wallace – Moderator
Centre for Environment and Hydrology, Wallingford, England, UK

Andreas Gunst – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1030 HOURS Water Security from Middle East to Central Asia: The Road From Conflict to Co-operation in a Changing World - Daphne Biliouri, Independent Environmental Policy Consultant, Aberystwyth, Wales, UK
- 1100 HOURS Managing International Waters: The Challenge for Zambia - Andrew Mondoka, Water Board of Zambia, Zambia
- 1130 HOURS Operationalising Equitable and Reasonable Utilisation: Practice on the Columbia River - Patricia A. Jones, PhD Candidate, Department of Law, University of Dundee, Dundee, Scotland, UK

SESSION 12
WATER MANAGEMENT IN TRANSITIONAL ECONOMIES (CENTRAL ASIA)
BALBEGGIE ROOM – WEST PARK HALL

Walid Abderrahman – Moderator
Water Section, King Fahd University, Dhahran, Saudi Arabia

Praveen Martis – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1030 HOURS New Riparian Central Asia's States vis-à-vis International Water Law - Vadim Sokolov, Scientific Information Centre, Interstate Water Commission, Tashkent, Uzbekistan
- 1100 HOURS Institutional Environment and Water Reform Advancement in Transitional Economies: Azerbaijan Case Study - Ibraghim Mamedzadeh, ASPI Consulting Engineers Inc., Baku, Azerbaijan
- 1130 HOURS Water Problems in Moslem Central Asia - Igor Hadjamberdiev, Institute of Oriental Languages and Cultures, Bishkek, Kyrgyzstan

SESSION 13
EVOLVING MANAGEMENT OF UTILITIES
LIBRARY – WEST PARK HALL

Falko Josef Sellner – Moderator
TBW International, London, England, UK

Sylvester Matemu – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1030 HOURS Risk Taking by Incumbents in a Competitive Water Industry - Gordon Downie, Shepherd & Wedderburn WS, Edinburgh, Scotland, UK
- 1100 HOURS A Risk Management Strategy for a Water Distribution Network - Patrick A. Crocket, Kaverner Oil & Gas Limited, Stockton-on-Tees, England, UK
- 1130 HOURS Water Law and the Liberalized European Thermal Energy Market - Melvin Woodhouse, University of Dundee, Dundee, Scotland, UK

(1200 HOURS-1315 HOURS / LUNCH BREAK – DINING ROOM / SPECIAL PRESENTATIONS – SEE PG. 22)

CONCURRENT SESSIONS 14, 15, 16, 17
1330 HOURS-1500 HOURS

SESSION 14
CHALLENGES IN TRANSBOUNDARY RIVER BASIN MANAGEMENT
KINNAIRD ROOM – WEST PARK HALL

Robert G. Varady – Moderator
University of Arizona, Tucson, Arizona, UK

Rachel Anne Cordone – Rapporteur
Columbia University, New York City, New York, USA

- 1330 HOURS Globalization, Sovereignty, and Transboundary River Basin Cooperation in Central Europe - Valerie J. Assetto, Department of Political Science, Colorado State University, Fort Collins, Colorado, USA
- 1400 HOURS The Hudson Bay Drainage System: Conflicts and Cooperation in Transboundary Water Quantity and Quality, A Continuing Saga - W.H.N. Paton, Botany and Biology Department, Brandon University, Brandon, Manitoba, Canada
- 1430 HOURS Multi-Criteria Decision Tool for Allocating the Waters of the Jordan Basin Between All Riparian Parties - Bassam I. Sawalhi, Civil Engineering Department, Birzeit University, Palestine (co-author: Ziad A. Mimi)

SESSION 15
EVOLVING WATER MANAGEMENT STRATEGIES IN DEVELOPING COUNTRIES-II
BALBEGGIE ROOM – WEST PARK HALL

George W. Sherk – Moderator
George Washington University, Washington, D.C., USA

Elijah Ngurare – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Federal Republic of Yugoslavia - Prospective of Changes in Water Management System - Slavko Bogdanovic, Novi Sad, Federal Republic of Yugoslavia
- 1400 HOURS Historical Overview and Current Trends in Istanbul's Water Supply Development – Anya Butt, Fatih University, Istanbul, Turkey (co-author: Ali Demirci)
- 1430 HOURS Legal Aspects of Interstate Cooperation for Transboundary Water Resources Management in the Aral Sea Basin – Bakhtiyor R. Mukhamadiev, Scientific Information Center, Interstate Water Commission, Tashkent, Uzbekistan

SESSION 16
WATER UTILITIES IN A GLOBAL ECONOMY: RECENT EXPERIENCES WITH PRIVATIZATION
LIBRARY – WEST PARK HALL

Sergei Vinogradov – Moderator
Senior Research Fellow, University of Dundee, Dundee, Scotland, UK

Melvin Woodhouse – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Record Privatisations in Eastern Europe: Lessons for the West? – Falko Josef Sellner, International Legal Counsel, Solihull, England, UK, and Christian Leyroutz, Legal Counsel for Private Sector Participation in the Germanic Western Europe, Villach, Austria

CONCURRENT SESSIONS 14, 15, 16, 17 (CONT'D.)
1330 HOURS-1500 HOURS

- 1400 HOURS Deregulation in Water Management – Cross-Country Comparison and Lessons Learned from the Electricity Sector – Dieter Rothenberger, Limnological Research Center, Swiss Federal Institute for Environmental Science and Technology, Kastanienbaum, Switzerland (co-authors: Jochen Markard, Bernhard Truffer)
- 1430 HOURS The Water Distributor-Client Relationship: A Revolution in Water Management – Loïc Fauchon, Société des Eaux de Marseille, Marseille, France

SESSION 17
SEEKING COLLABORATION, COOPERATION, AND PARTNERSHIPS
AUDITORIUM – CONFERENCE CENTRE

Fadia Daibes – Moderator
Palestinian Water Authority, East Jerusalem

Isabel Dendauw – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Designing Cooperative Programs to Resolve Water Resource Conflicts – Christine D. Karas, U.S. Bureau of Reclamation, Salt Lake City, Utah, USA
- 1400 HOURS Societal Participation in Water Management: The Egyptian SFD's Approach – M. Mokhles Abou-Seida, General Public Works Program, Social Fund for Development, Cairo, Giza, Egypt
- 1430 HOURS Bridging the Gap: A Model for Building Trust and Collaboration Between Marine Resource Regulators and Stakeholders – Mimi Larsen Becker and John R. Coon, Department of Natural Resources, University of New Hampshire, Durham, New Hampshire, USA

(1500 HOURS-1530 HOURS / AFTERNOON NETWORKING BREAK – CONFERENCE CENTRE FOYER)

CONCURRENT SESSIONS 18, 19, 20
1530 HOURS-1700 HOURS

SESSION 18
THE ROLE OF CIVIL SOCIETY IN WATER MANAGEMENT-II
KINNAIRD ROOM – WEST PARK HALL

Kenneth J. Lanfear – Moderator
U.S. Geological Survey, Reston, Virginia

Sarah Hendry – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1530 HOURS One Resource, Two Visions: The Prospects for Israeli-Palestinian Water Cooperation - Erika Weinthal, Department of Political Science, Tel Aviv University, Tel Aviv, Israel (co-author: Amer Marei)
- 1600 HOURS Watershed Councils Along the US-Mexico Border: The San Pedro Basin – Robert G. Varady, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, Arizona, USA (co-authors: Anne Browning-Aiken, Margaret Ann Moote)
- 1630 HOURS An International Watershed Management Council in the Mexican North Border - Patricia Herrera Ascencio, Mexican Institute of Water Technology (IMTA), Morelos, Mexico (co-author: Jaqueline LaFragua Contreras)

CONCURRENT SESSIONS 18, 19, 20 (CONT'D.)
1530 HOURS-1700 HOURS

SESSION 19
CHANGING WATER LAW REGIMES
LIBRARY – WEST PARK HALL

Jennifer McKay – Moderator
University of South Australia, Adelaide, South Australia, Australia

Ina Tatiana Porras – Rapporteur
International Institute for Environment and Development (IIED), London, England, UK

- 1530 HOURS Dams and Global Climate Change: Implications for International Water Law -
A. Dan Tarlock, Chicago-Kent College of Law, Chicago, Illinois, USA
- 1600 HOURS Rules and Tools on Non-navigational Uses of International Watercourses -
Mohamed Asheesh, Institute of Environmental Engineering and Biotechnology, Tampere University
of Technology, Tampere, Finland
- 1630 HOURS Consensus or Court? Examining Australian and US Legal Water Regimes -
M. David Coffman, Faculty of Law, University of Wollongong, Wollongong, New South Wales,
Australia

SESSION 20
THE POLITICAL ECONOMY OF WATER OWNERSHIP AND CONTROL
BALBEGGIE ROOM – WEST PARK HALL

Sarah Hendry – Moderator
University of Dundee, Dundee, Scotland, UK

Praveen Martis – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1530 HOURS Privatising Water in England and Wales: Evolving Approaches to Equity in Water Pricing -
Karen Bakker, Oxford Centre for Water Research, Oxford University, Oxford, England, UK
- 1600 HOURS Private to Public - International Lessons of Water Remunicipalisation in Grenoble, France -
David Hall and Emanuele Lobina, Public Services International Research Unit, University of
Greenwich, London, England, UK
- 1630 HOURS Specific Legal Rights of Indigenous Peoples in Canada in Relation to the Commodification
of Water - Merrell-Ann S. Phare, Centre for Indigenous Environmental Resources, Winnipeg,
Manitoba, Canada

SPECIAL EVENT
CONFERENCE DINNER
TUESDAY / AUGUST 7
1830 HOURS-2100 HOURS

GUEST SPEAKER
"MEANDERINGS AMONG MYTHS AND WATER RESOURCES"
DR. CHARLES W. WELBY
DEPARTMENT OF MARINE, EARTH, AND ATMOSPHERIC SCIENCES
NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NORTH CAROLINA, USA

This event is included in the Registration Fee.
All Conference Delegates are invited to attend this
dinner. It will be held at the Invercarse Hotel, a short
walk down Perth Road from the West Park Centre
(see "Special Events" for details).

SHEPHERD &
WEDDERBURN WS



IS THE SPONSOR OF THIS EVENT.

DAY-AT-A-GLANCE / WEDNESDAY / AUGUST 8, 2001

NOTE . . . ALL TECHNICAL SESSIONS ARE HELD IN THE BALBEGGIE, KINNAIRD, OR LIBRARY ROOMS IN THE WEST PARK HALL (WPH) OR THE AUDITORIUM IN THE CONFERENCE CENTRE

SPEAKERS' PREPARATION ROOM OPEN
0700 HOURS- 1700 HOURS / ROOM A- CONFERENCE CENTRE

REGISTRATION DESK OPEN
0730 HOURS- 1500 HOURS / CONFERENCE CENTRE FOYER

BOOK & JOURNAL EXHIBIT OPEN
0730 HOURS- 1200 HOURS / CONFERENCE CENTRE FOYER

WORKSHOP - PART I
0830 HOURS- 1000 HOURS / AUDITORIUM- CONFERENCE CENTRE

POSTERS ON DISPLAY
0900 HOURS- 1700 HOURS / CONFERENCE CENTRE FOYER

MORNING NETWORKING BREAK
1000 HOURS- 1030 HOURS / CONFERENCE CENTRE FOYER

WORKSHOP - PART II
1030 HOURS- 1200 HOURS / AUDITORIUM- CONFERENCE CENTRE

LUNCH BREAK
1200 HOURS- 1315 HOURS / DINING ROOM

CONCURRENT SESSIONS 23, 24, 25 / 1330 HOURS- 1500 HOURS

SESSION 23
REFORM AND SOCIAL
ACCOUNTING IN WATER
MANAGEMENT
BALBEGGIE ROOM- WPH

SESSION 24
COMPARISON OF
SELECTED NATIONAL
WATER LAWS
KINNAIRD ROOM- WPH

SESSION 25
LESSONS LEARNED
FOR WATER
MANAGEMENT
LIBRARY- WPH

AFTERNOON NETWORKING BREAK
1500 HOURS- 1530 HOURS / CONFERENCE CENTRE FOYER

CLOSING PLENARY SESSION
1530 HOURS- 1700 HOURS / AUDITORIUM- CONFERENCE CENTRE

SPECIAL WHISKY TASTING EVENT
1730 HOURS- 1830 HOURS (SEE "SPECIAL EVENTS" FOR DETAILS)

DAY-AT-A-GLANCE / THURSDAY / AUGUST 9, 2001

FIELD TRIP TO KILLIECRANKIE WATER TREATMENT PLANT
0900 HOURS- 1300 HOURS (SEE "SPECIAL EVENTS" FOR DETAILS)

TOUR OF RRS DISCOVERY, BUFFET, AND EDINBURGH MILITARY TATTOO
1500 HOURS - 2330 HOURS (SEE "SPECIAL EVENTS" FOR DETAILS)

WEDNESDAY / AUGUST 8, 2001

SESSION 21 / WORKSHOP / PART I

0830 HOURS-1000 HOURS

AUDITORIUM – CONFERENCE CENTER

THE ESSENTIALS OF PRIVATE SECTOR PARTICIPATION:
FROM STRUCTURING THE PROJECT TO REGULATION

Organized By

Jeffrey Delmon
Allen & Overy, London, England, UK

Cledan Mandri-Perrott
P.A. Consulting Group, Birmingham, England, UK

Falko Josef Sellner
International Legal Counsel, Solihull, England, UK

Andreas Gunst and Melvin Woodhouse
Rapporteurs
University of Dundee, Dundee, Scotland, UK

Water projects involving private sector participation raise a complex series of financial, commercial, legal and technical issues for the public or private sector entity letting the project and for private sector companies interested in undertaking or providing finance for the project. Led by experienced commercial and legal specialists, this highly interactive workshop will focus on the essential issues that arise and practical solutions available for private sector participation in water projects. The Workshop will focus on pre-and post privatization assistance. Participants will be divided into groups and given a scenario to work with and to develop a structure that meets with specific project requirements. The Workshop will be continued in Session 22 from 1030 hours–1200 hours.

(1000 HOURS-1030 HOURS / MORNING NETWORKING BREAK – CONFERENCE CENTRE FOYER)

SESSION 22 / WORKSHOP / PART II

1030 HOURS-1200 HOURS

AUDITORIUM – CONFERENCE CENTER

THE ESSENTIALS OF PRIVATE SECTOR PARTICIPATION:
FROM STRUCTURING THE PROJECT TO REGULATION

Alistair Rieu-Clarke – Rapporteur
University of Dundee, Dundee, Scotland, UK

The Workshop from Session 21 will be continued in this hour and a half. Participants will reassemble from the groups to discuss with the Workshop leaders the solutions identified.

(1200 HOURS-1315 HOURS / LUNCH BREAK – DINING ROOM)

CONCURRENT SESSIONS 23, 24, 25
1330 HOURS-1500 HOURS

SESSION 23
REFORM AND SOCIAL ACCOUNTING IN WATER MANAGEMENT
BALBEGGIE ROOM – WEST PARK HALL

Steven Renzetti – Moderator
Brock University, St. Catharines, Ontario, Canada

Sarah Hendry – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS Embedding Social Capital in the Construction of Water Markets - May Isaac, School of Political Science and International Studies, University of Queensland, Brisbane, Queensland, Australia
- 1400 HOURS The European Water Framework Directive: A New Regional Model for the Application of Economic Measures - Ranji Dhillon, International Water Law Research Institute, Department of Law, University of Dundee, Dundee, Scotland, UK
- 1430 HOURS Environmental Conditions and the Cost of Municipal Water Supply - Steven Renzetti, Department of Economics, Brock University, St. Catharines, Ontario, Canada

SESSION 24
COMPARISON OF SELECTED NATIONAL WATER LAWS
KINNAIRD ROOM – WEST PARK HALL

Alistair Rieu-Clarke – Moderator
IWLRI, University of Dundee, Dundee, Scotland

John Nyaoro – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS The Role of International Law in Resolving Israeli/Palestinian Water Conflict – Fadia Daibes Murad, LLM Candidate, University of Dundee, and Palestinian Water Authority, East Jerusalem
- 1400 HOURS Australian Water Reform Process in the Last Five Years: Legal Issues and Emerging Legal Issues - Jennifer McKay, Water Policy and Law Group, School of International Business, University of South Australia, Adelaide, South Australia, Australia
- 1430 HOURS Trading Water, Trading Places: Water Marketing in Chile and the Western United States – Joe Mentor, Jr., Mentor Law Group, PLLC, Seattle, Washington, USA

SESSION 25
LESSONS LEARNED FOR WATER MANAGEMENT
LIBRARY – WEST PARK HALL

David W. Moody – Moderator
Inter-American Water Resources Network, Washington, D.C., USA

Sylvester Matemu – Rapporteur
University of Dundee, Dundee, Scotland, UK

- 1330 HOURS The Myth of Multi-Stakeholder Partnerships in Sustainable Water Resources Management - Nigel Watson, Department of Geography, Lancaster University, Lancaster, England, UK
- 1400 HOURS Integrating Ecological, Socioeconomic and Water Resources Issues Through Rule-Based Frameworks - Kent W. Thornton, FTN Associates Limited, Little Rock, Arkansas, USA
- 1430 HOURS Learning From Fifty Years of United States Water Pollution Legislation - Kenneth M. Murchison, Paul M. Hebert Law Center, Louisiana State University, Baton Rouge, Louisiana, USA

(1500 HOURS-1530 HOURS / AFTERNOON NETWORKING BREAK – CONFERENCE CENTRE FOYER)

CLOSING PLENARY SESSION

1530 HOURS-1700 HOURS

AUDITORIUM – CONFERENCE CENTER

SUMMARY REPORTS, CONCLUSIONS AND RECOMMENDATIONS:
SETTING THE FUTURE AGENDA

Faye Anderson
Moderator

American Water Resources Association, Middleburg, Virginia, USA

Guest Panelists

Walid A. Abderahman
King Fahd University, Dhahran, Saudi Arabia

Jeremy Bird
World Commission on Dams Secretariat
University of Dundee, Dundee, Scotland, UK

Mike Bonell
International Hydrological Programme, UNESCO
Paris, France

Jeffrey Delmon
Allen & Overy
London, England, UK

David W. Moody
Inter-American Water Resources Network (IWRN)
Organization of American States (OAS)
Washington, D.C., USA

Patricia K. Wouters
Director, International Water Law Research Institute (IWLRI)
Department of Law, University of Dundee
Dundee, Scotland, UK

SPECIAL EVENT
SPECIAL WHISKY TASTING EVENT
WEDNESDAY / AUGUST 8 / 1730 HOURS-1830 HOURS

THIS SPECIAL EVENT IS BEING SPONSORED BY
ABERLOUR WHISKY
(A RELATION OF THE EDRADOUR DISTILLERY)

All Conference Delegates are invited to attend this event. Nestled in a pocket glen in the hills above Pitlochry in the Southern Highlands lies Edradour, the smallest distillery in Scotland. The neat cluster of buildings – virtually unchanged in the last 150 years – houses equipment capable of producing commercial quantities only. Indeed, only 12 casks a week are produced, making Edradour Single Malt Whisky a rare pleasure for a fortunate few. There will be a short video (approximately 10 minutes) followed by a tutored tasting of their Aberlour 10-year old, 15-year old sherrywood finish, and the A'Bundah (a cask strength malt). There is no charge for this event, and items will be available for purchase.

GENERAL INFORMATION

REGISTRATION – All persons, INCLUDING PRESENTERS, are required to register for this meeting and must pay the appropriate registration fee.

REFUNDS – Cancellations must have been received in writing at the AWRA HQ by Friday, July 20, 2001. No refunds will be issued after July 20, 2001. All cancellations are subject to a penalty of 25% of total registration fees. No refunds will be given for ticketed events purchased after July 20, 2001.

AWRA REGISTRATION DESK HOURS – The Registration Desk will be located in the Foyer of the West Park Conference Centre. Hours of operation are as follows:

SUNDAY, 5 AUGUST	1600 HRS-1800 HRS
MONDAY, 6 AUGUST	0730 HRS-1700 HRS
TUESDAY, 7 AUGUST	0730 HRS-1700 HRS
WEDNESDAY, 8 AUGUST	0730 HRS-1500 HRS

BADGES – It is important that the official badge supplied at the time of registration be worn at all times. This practice is a courtesy to your fellow registrants. It also indicates that you have completed registration and may participate in the scheduled events. Admission to all technical sessions and breaks will be by badge only. Please wear your badge on your RIGHT lapel.

INFORMATION DESK – Please consult the staff at the AWRA Registration Desk if you have any questions regarding the events at the meeting.

SESSION PARTICIPANTS – Authors, panelists, and moderators are requested to meet in their respective meeting rooms 10 minutes prior to the start of their session. All participants are required to register PRIOR to their sessions.

SPEAKERS' PREPARATION ROOM – Room A in the Conference Centre will be available during the meeting as the Speakers' Preparation Room for presenters to review slides. This room will be open from 0700 hours to 1700 hours on Monday, 6 August; Tuesday, 7 August; and Wednesday, 8 August.

BOOK AND JOURNAL EXHIBITORS CONFERENCE CENTRE FOYER

During the Conference there will be a display of publications from a variety of publishers on numerous aspects of water resources. Hours for the Book Display will be from 0730 to 1700 on Monday, August 6, and Tuesday, August 7, and from 0730 to 1200 on Wednesday, August 8. The display copies may be purchased at a discounted price, and picked up by 1200 on Wednesday, August 8. The following are confirmed exhibitors at the time of this printing of the final program.

A.A. BALKEMA
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OXON, ENGLAND, UK

SPECIAL EVENTS

MONDAY • 6 AUGUST • 1800 HRS-1930 HRS

CIVIC RECEPTION AT THE DUNDEE CITY CHAMBERS

SPONSORED BY THE CITY OF DUNDEE

This event is included in the Registration Fee. All Conference Delegates are invited to attend this reception. The Honorable John R. Letford, the Lord Provost of the City of Dundee, will host a welcoming civic reception for all Conference Delegates at the Dundee City Chambers. Please meet in front of the West Park Hall at 1730 hours for Coach departure.

TUESDAY • 7 AUGUST • 1200 HRS-1315 HRS

LUNCHEON PRESENTATIONS

During the luncheon on Tuesday, 7 August, we will have the following presentations:

“THE OBJECTIVES AND ACTIVITIES OF THE WORLD WATER COUNCIL”
M. LÖIC FAUCHON

Governor and Special Advisor to the President at the World Water Council
Marseilles Water Supply Group
Marseilles, France

“THE THIRD WORLD WATER FORUM”
MS. SHINOBU FUKUMOTO

Chief Officer
The Secretariat of the Third World Water Forum
Tokyo, Japan

TUESDAY • 7 AUGUST • 1830 HRS-2100 HRS

CONFERENCE DINNER

SPONSORED BY SHEPHERD WEDDERBURN, EDINBURGH, SCOTLAND, UK

GUEST SPEAKER
“MEANDERINGS AMONG MYTHS AND WATER RESOURCES”
DR. CHARLES W. WELBY

Professor Emeritus
Department of Marine, Earth and Atmospheric Sciences
North Carolina State University
Raleigh, North Carolina, USA

This event is included in the Registration Fee. All Conference Delegates are invited to attend the Conference Dinner. The evening will begin with a Scottish Piper ushering you into the ballroom overlooking the beautiful private gardens and the river Tay. The Piper will then do an address to the Haggis, which will be followed with entertainment by traditional Scottish dancers. The meal will be a sumptuous Scottish menu. At the conclusion of the dinner the Conference Delegates will be provided with an outstanding presentation by Dr. Charles W. Welby, Professor Emeritus, Department of Marine, Earth and Atmospheric Sciences, North Carolina State University, Raleigh, North Carolina. Dr. Welby's talk will provide an intriguing view of the role water has played in our history. Additional tickets for accompanying guests may be purchased on site (if available) at the AWRA Registration Desk. The cost is US\$29.00 per ticket. This dinner will be held at the Invercarse Hotel, a short walk down Perth Road from the West Park Centre.

SPECIAL EVENTS

WEDNESDAY • 8 AUGUST • 1730 HRS-1830 HRS

SPECIAL WHISKY TASTING EVENT

THIS SPECIAL EVENT IS BEING SPONSORED BY
ABERLOUR WHISKY

(A RELATION OF THE EDRADOUR DISTILLERY)

All Conference Delegates are invited to attend this event. Nestled in a pocket glen in the hills above Pitlochry in the Southern Highlands lies Edradour, the smallest distillery in Scotland. The neat cluster of buildings – virtually unchanged in the last 150 years – houses equipment capable of producing commercial quantities only. Indeed, only 12 casks a week are produced, making Edradour Single Malt Whisky a rare pleasure for a fortunate few. There will be a short video (approximately 10 minutes) followed by a tutored tasting of their Aberlour 10-year old, 15-year old sherrywood finish, and the A'Bundah (a cask strength malt). There is no charge and items will be available for purchase.

THURSDAY • 9 AUGUST • 0900 HRS-1300 HRS

FIELD TRIP TO KILLIECRANKIE WATER TREATMENT WORKS

The Killiecrankie Water Treatment Works is in a registered National Scenic Area and borders sites of special scientific interest as well as nature reserves and woodlands. It was carefully designed to ensure that it blended in with the scenic beauty and wildlife habitats. The works cost £4.5 million to build, and replaced 15 different sources with a single, reliable supply for 20,000 people from the Allt Girnaig Burn. The geology of the area makes the water complicated to treat. During dry weather, the water flows over limestone turning it hard and when it rains, the water picks up peat making it acidic. There is no charge for this field trip. Please re-confirm your attendance at the AWRA Registration Desk by 1200 hours, Wednesday, 8 August. Meet in front of the West Park Hall at 0845 hours on Thursday Morning.

THURSDAY • 9 AUGUST • 1500 HRS-2330 HRS

TOUR OF RRS DISCOVERY, BUFFET, AND EDINBURGH MILITARY TATTOO

LIMITED TO 35 REGISTRANTS

Coaches will depart West Park Centre at 1500 hrs and transport guests to Discovery Point, home of Captain Scott's famous ship, the RRS Discovery. The Discovery was one of the last wooden three-masted ships to be built in Britain and the first to be constructed specifically for scientific research. Launched in 1901, it was the beginning of an adventure that would take her deep into the unknown waters of Antarctica and secure her a place in the Age of Polar Exploration. After the tour of the RRS Discovery (1700 hrs) guests can enjoy a sumptuous buffet at their leisure at Discovery Point.

Last – but certainly not least – to cap off the evening, guests will be taken to Edinburgh, capital of Scotland, to enjoy the incredible Edinburgh Military Tattoo! Acclaimed by many as the “greatest show on earth” and undeniably one of the world's most breathtaking and spectacular shows, the Edinburgh Tattoo is a dazzling and compelling celebration of music, dance, and drama. Set against the magnificent backdrop of Edinburgh Castle, this colorful and historic pageant is attended each year by a huge cosmopolitan audience. Pomp and ceremony from the finest military bands in the land, the world-renowned Massed Pipes & Drums, along with acts from across the globe are featured. A sensational Finale brings the show to an emotional climax as everyone is invited to join with hands across the world, in that well loved song, Auld Lang Syne. As the lights fade on the lone piper high on the Castle ramparts, wish a wish and “Haste Ye Back.”

The cost of this memorable, once-in-a-lifetime afternoon and evening is \$85.00 per person and includes transportation (from the West Park Centre to Discovery Point and on to Edinburgh and return to West Park Centre), Admission Fee and Tour of the RRS Discovery, Buffet Dinner, and Admission Fee to the Edinburgh Military Tattoo. A limited number of tickets are available at the AWRA Registration Desk. Participants should meet in front of the West Park Hall at 1445 hours on Thursday, 9 August.

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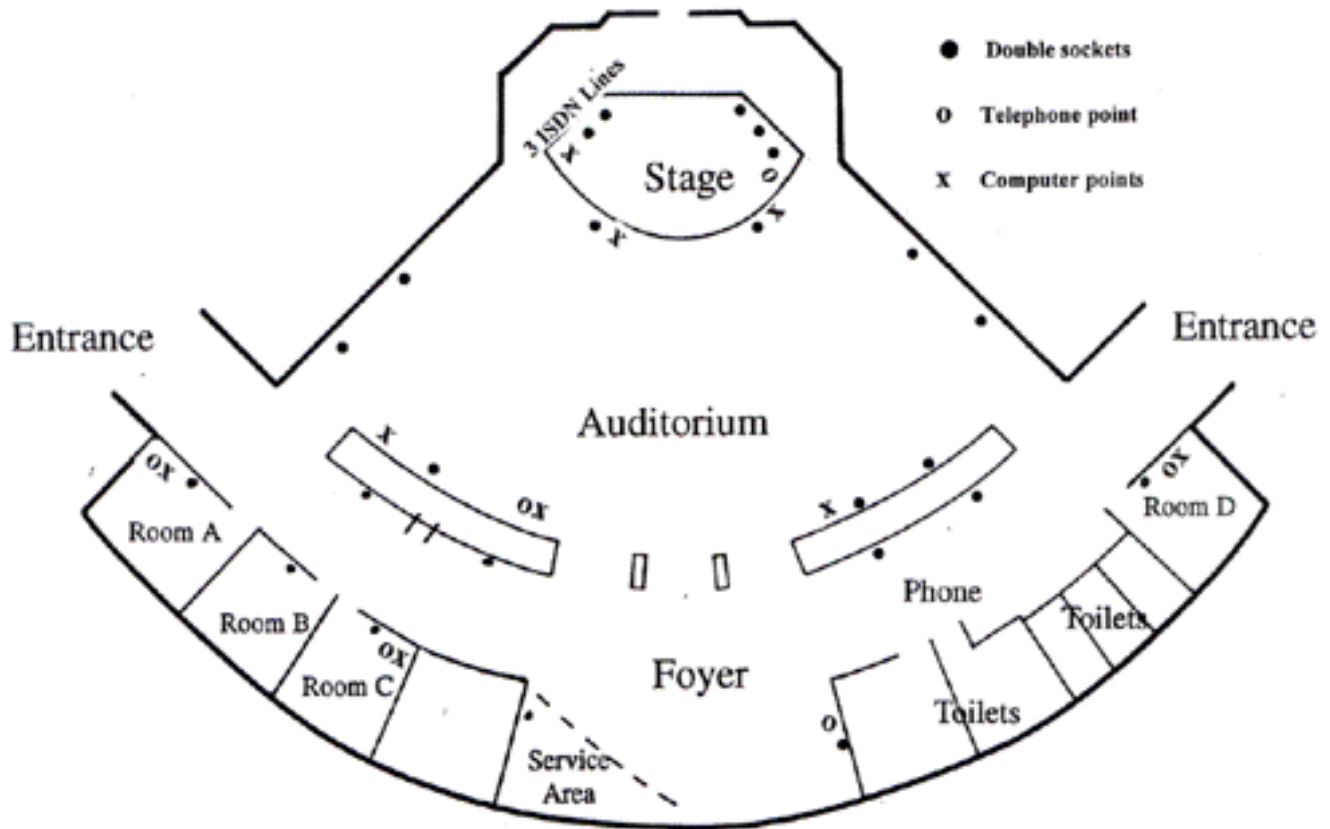
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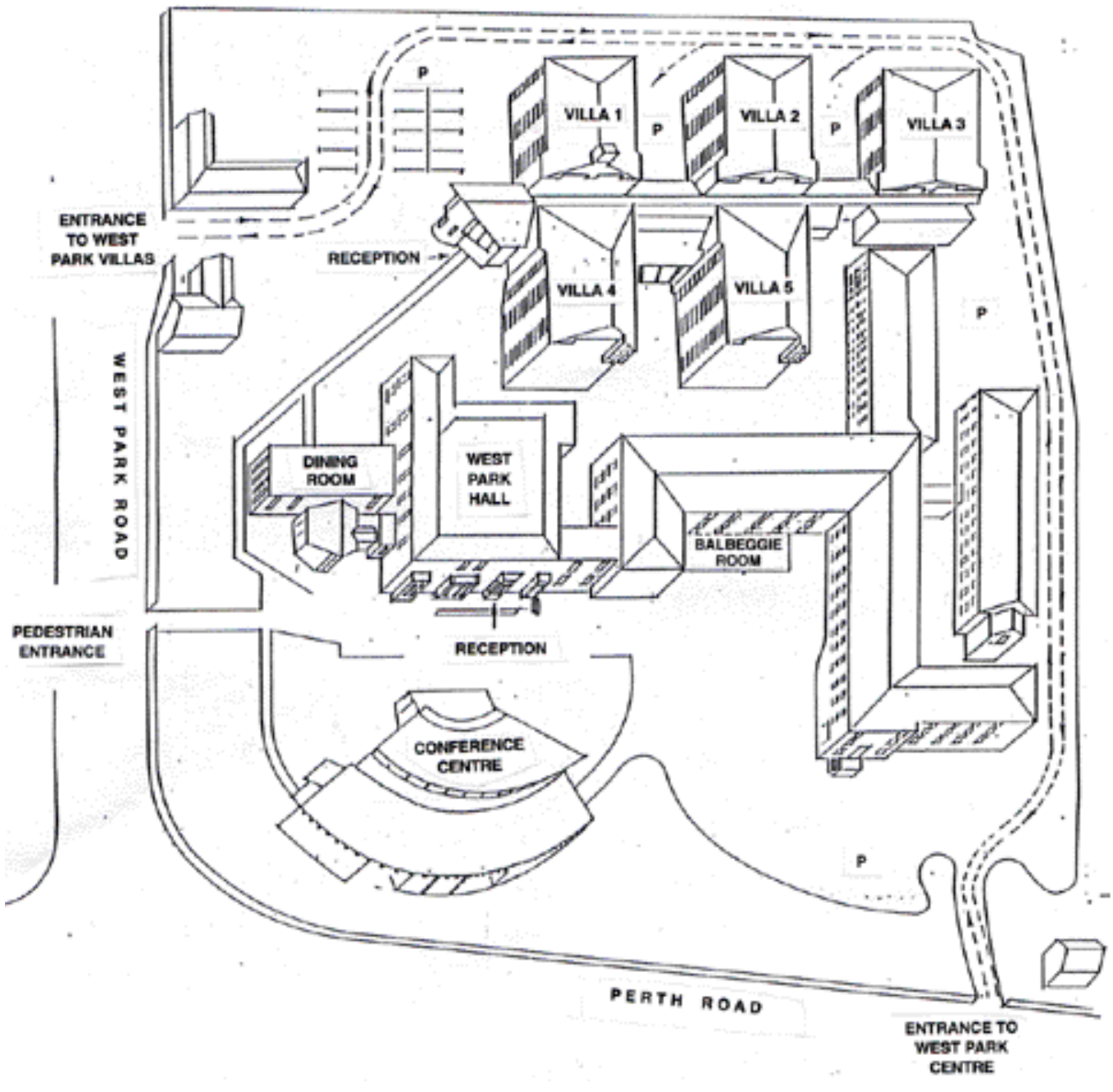
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