Food Production Under Conditions of Water Scarcity, Increasing Population and Environmental Pressures

FINAL BULLETIN - PROGRAMME
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FOR ANY FURTHER INFORMATION PLEASE CONTACT:
The Secretariat, Montreal 2002, ICID 18th Congress and 53rd IEC
3333 Boulevard Cavendish, Bureau 475, Montreal, QC, H4B 2M5, Canada
Phone : +1 (514) 286-1050  Fax : +1 (514) 484-5298
E-mail: montreal2002@cancid.org  Website of Congress: http://www.cancid.org
Website of ICID: http://www.icid.org

THE 18TH CONGRESS
AND THE 53RD INTERNATIONAL EXECUTIVE COUNCIL MEETING
INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE

FOOD PRODUCTION UNDER CONDITIONS OF WATER SCARCITY, INCREASING POPULATION AND ENVIRONMENTAL PRESSURES

MONTREAL, CANADA
JULY 21 – 28, 2002

FINAL BULLETIN-PROGRAMME
The International Commission on Irrigation and Drainage (ICID) is an international scientific, technical, professional, and voluntary not-for-profit, non-governmental organization (NGO). ICID is dedicated to enhancing the worldwide supply of food and fiber through the improvement of water and land management and the productivity of irrigated and drained lands. This is achieved through the appropriate management of water, environment and the application of irrigation, drainage and flood control techniques. ICID has been in operation since 24 June, 1950.

ICID-CDID

The Mission of the Commission is to stimulate and promote the development of the art and science of irrigation and drainage. Simultaneously, the techniques of engineering, agriculture, economics, ecology and social sciences are applied towards the management of water and land resources for irrigation, drainage, flood control and river training applications which includes research, development and capacity building all of which adopt comprehensive approaches for sustainable worldwide agriculture.

The Commission has the objectives to:

(a) study the planning, financing, socio-economic and environmental aspects of irrigation, drainage and flood control; to undertake the reclamation and improvement of lands and the design, construction and operation of appurtenant engineering works which includes dams, reservoirs, canals, drains and other related infrastructure for storage, conveyance, distribution, collection and disposal of water;

(b) study the planning and financing of environmental schemes for river training, flood control and protection against sea water intrusion onto agricultural lands with the exception of the design and construction of large dams, navigation works and basic hydrology;

(c) promote research, development; training and capacity building in areas related to basic and applied science, technology, management and design, operation and maintenance of irrigation, drainage, flood control, river training and land reclamation;

(d) facilitate international inputs as required by developing countries, particularly those lagging in the development of irrigation and drainage;

(e) promote the development and systematic management of sustainable irrigation and drainage systems;

(f) pool international knowledge on topics related to irrigation, drainage, flood control, and make it available worldwide;

(g) address international problems and challenges posed by irrigation, drainage and flood control;

(h) adopting other measures as may be considered necessary within its field of activities.

(f) cooperating with other international, national and regional organizations the interests and activities of which are related to the mission of ICID, and

(g) adopting other measures as may be considered necessary within its field of activities.

The Commission accomplishes its mandate by:

(a) exchanging information among its National Committees;

(b) sponsoring periodic meetings and conferences, symposia, workshops, exhibits, training and study tours;

(c) organizing studies and experiments;

(d) publishing research journals, conference proceedings, reports, guidelines and other material to assist irrigation, drainage and flood control workers;

(e) publishing newsletters, bulletins, periodicals, pamphlets, posters, magazines and teaching and extension aids associated with irrigation, drainage and flood control;

(f) cooperating with other international, national and regional organizations the interests and activities of which are related to the mission of ICID, and

(g) adopting other measures as may be considered necessary within its field of activities.

ACTIVE MEMBER COUNTRIES, YEAR OF JOINING AND IRRIGATED AREA IN MILLION HA

<table>
<thead>
<tr>
<th>Country</th>
<th>Code</th>
<th>Year</th>
<th>Irrigated Area (Million Ha)</th>
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For further information contact any of the following persons:

Mr. K.N. Sharma, Executive Secretary , Mr. S.P. Goyal, Deputy Secretary , Dr. S.A. Kulkarni, Director (I) and Dr. V.K. Labhsetwar, Director (II) At ICID , Central Office , 48 Naya Marg, Chanakyapuri, New Delhi 110021, INDIA Tel: +91-11-611 5679/61 6837; Fax: +91-11-611 5962; E-mail: icid@icid.org , Website: http://www.icid.org
INVITATION FROM THE PRESIDENT OF ICID

From 21 - 28 July, 2002 the ICID family will come together in Montreal, Canada for its 18th Congress and 53rd International Executive Council Meeting. We all know the very devoted and skilled contributions of our Canadian friends to the activities of our Commission. Therefore we have full confidence that CANCID will offer us a very interesting and pleasant stay in the Western Hemisphere.

The new millennium is being ushered in with great promises and new challenges for the security of water and food. The second half of the last century witnessed the rapid expansion of the application of the sciences and the art of water and land management for service to mankind to provide of the food and fibres needs of the burgeoning population of 6 billion. We have seen irrigated lands reach 17% of all cropped areas, producing 40% of all output and providing for the livelihood of 2 billion rural poor.

Despite this impressive success, we are still faced with the burden of more than 800 million people who sleep hungry every night, more than one million of whom live in absolute poverty earning less than one dollar per day and twice as many who live only twice as much. Water is becoming scarcer than ever, its quality is deteriorating rapidly and the financial resources to support new infrastructures as well as to maintain and operate existing systems are in continuous decline. Urbanization is accelerating in the developing world, placing more pressure to produce more food at cheaper costs for the billions of rural and new urban populations in developing countries.

The main theme of the Congress is Food production under conditions of water scarcity, increasing population and environmental pressure. We believe that it aptly reflects the challenges that we will face in the years ahead, and the environment in which we will operate.

I look forward to seeing you in Montreal and wish you all the best with your preparations.

Professor Dr. Bart Schultz
President
International Commission on Drainage and Irrigation (ICID)

Welcome to Montreal

It is a great honor and privilege for the Canadian National Committee of ICID to host the 53rd IEC and 18th Congress in the cosmopolitan city of Montreal.

Demand on the world’s fresh water resources is increasing at a rapid rate. Coupled with a surging population, massive urbanization and increased agricultural activities, developing countries the world over are facing serious problems in meeting this increasing demand for water. Other constraints are of equal importance and magnitude. They include: environmental sustainability, the demand for sound social and economic development, the expanded dynamics of political will and cultural aspects along with additional dimensions to the tapestry that make up our world today. Under such conditions it is important to bear of the successes and failures of our efforts. The ICID 18th Congress is the ideal forum for presenting new ideas and sharing the results of our collective experiences in face of these challenges.

The program outlined here is a reflection of the interest expressed by many members of the ICID family and associated organizations through the submission of papers, the organization and sponsoring of sessions, events, and activities that address the themes and topics of the Congress. At the same time, it reflects the calibre of the information that will be disseminated. All together, this Congress promises to deliver an excellent technical program for participants and an array of activities, study tours, social and cultural events for accompanying family members and other persons. On this note, we would like to extend the invitation to you and your family members to come to Montreal and to share with us the splendor of this city, la joie de vivre, and the company of all the ICID family.

Montreal is a bustling cosmopolitan city of European flare. Its cultural charms are uniquely its own in Canada. Summer in this city adds to the effervescence and energy, with its scores of cultural, sports and artistic events. Nature lovers will revel in the surrounding lakes and forest covered Laurentian or Appalachian Mountains. Canada’s capital, Ottawa, lies barely two hours away by car and also offers a plethora of activities.

Our staff has done their utmost to facilitate your participation, and to ensure that your stay here is a memorable one. See you in Montreal this July.
THE CONGRESS

The ICID Congress is a triennial event held in one of its member countries. The event draws professionals in water resources from around the world to deliberate on global issues of thematic, generic and time-relevant interests related to irrigation, drainage and other similar subject fields.

The main objectives of the Congress are to:
1. Raise the awareness of the public and decision-makers to major water-related issues,
2. Exchange knowledge and information on topics related to the two Questions that will be addressed at the Congress, and to
3. Provide a forum to address these issues (Questions and Topics).

THE INTERNATIONAL EXECUTIVE COUNCIL, (IEC)

The International Executive Council (IEC) manages the affairs of the International Commission on Irrigation and Drainage. The 53rd meeting of the IEC will take place in Montreal on Saturday, July 27, during the 18th ICID Congress.

The main objective of the IEC is to approve reports, recommendations, and work plans from the working bodies of the Commission. At the same time, it considers all policy matters that may be initiated or sponsored by any member National Committees or Office-Bearers or by the Management Board. All matters which affect the executive or administrative functions and the financial liabilities of ICID must come up before the IEC. Decisions are final and conclusive.

KEY DATES

18th ICID Congress and 53rd IEC Meeting: July 21-28, 2002

Important dates to remember:
- Sunday July 21, 2002: Registration starts
- Thursday July 25, 2002: Congress Opening Ceremony
- Saturday July 27, 2002: IEC meeting
- Monday July 29, 2002: Start of Study Tours

VENUE

All Congress activities will take place in the Palais des Congrès de Montréal, located at the heart of the city business centre.

Palais des Congrès de Montréal
201 Viger Avenue West
Montreal, QC, H2Z 1X7, CANADA
Tel: +1 (514) 871-8122 or 1-800-268-8122
Fax: +1 (514) 871-9389
Email: pcmcomm@congresmtl.com
Website: http://www.congresmtl.com

EXHIBITS

Exhibit space will be available during the Congress to include commercial and information displays. Interested parties should contact the Secretariat for details. The Irrigation Association will organize a complete exhibition, courtesy of the irrigation industry, during the Congress. For further information contact:

Tom Kimmell, Executive Director, The Irrigation Association
6450 Arlington Blvd., Falls Church, VA 22042-6638, USA
Tel: +1 (703) 536-7080
Fax: +1 (703) 536-7019
E-mail: tom@irrigation.org
Website: http://www.irrigation.org

LIST OF PAST ICID CONGRESSES – VENUE AND YEAR

<table>
<thead>
<tr>
<th>Congress</th>
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<th>Month and year</th>
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<td>1st Congress</td>
<td>Delhi, India</td>
<td>Jan 1951</td>
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<td>2nd Congress</td>
<td>Algiers, Algeria</td>
<td>Apr 1954</td>
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<tr>
<td>3rd Congress</td>
<td>San Francisco, USA</td>
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<td>4th Congress</td>
<td>Madrid, Spain</td>
<td>June 1960</td>
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<td>5th Congress</td>
<td>Tokyo, Japan</td>
<td>May 1963</td>
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<td>6th Congress</td>
<td>Delhi, India</td>
<td>Jan 1966</td>
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<td>7th Congress</td>
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<td>8th Congress</td>
<td>Varna, Bulgaria</td>
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<td>9th Congress</td>
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<td>11th Congress</td>
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<td>12th Congress</td>
<td>Fort Collins, USA</td>
<td>May-Jun 1984</td>
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<td>13th Congress</td>
<td>Casablanca, Morocco</td>
<td>Sep 1987</td>
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<td>14th Congress</td>
<td>Rio de Janeiro, Brazil</td>
<td>Apr-May 1990</td>
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<td>15th Congress</td>
<td>The Hague, The Netherlands</td>
<td>Sep 1993</td>
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<td>16th Congress</td>
<td>Cairo, Egypt</td>
<td>Sep 1996</td>
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<td>17th Congress</td>
<td>Granada, Spain</td>
<td>Sep 1999</td>
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THE 18TH CONGRESS
AND THE 53RD INTERNATIONAL EXECUTIVE COUNCIL Meeting
MONTREAL, CANADA • JULY 21 – 28, 2002

Program Outline

CONGRESS THEME: Food Production under Conditions of Water Scarcity, Increasing Population and Environmental Pressures

SCOPE OF CONGRESS TOPICS
During the Congress, papers will be presented and discussed for two Questions, along with the Special Session, a Symposium, Special Event, and Seminar.

The topics for the Congress events are:

A. Question 50
   Food production, poverty alleviation and environmental challenges as influenced by limited water resources and population growth

   Question 51
   Integration and management of irrigation, drainage and flood control

B. Special Session
   Research and development in irrigation, drainage and flood control

C. Symposium
   Private sector participation in irrigation and drainage

D. Special Event
   The world vision for water, food and rural development for the year 2025

E. Seminar
   History of Irrigation: Lessons learned from failures in irrigation, drainage, and flood control systems

F. Feature Sessions
   (F-1) Irrigation efficiency in large river basins - Panel Discussion.
   (F-2) Professional women in water and engineering - Roundtable.
   (F-3) Malaria in irrigated agriculture.
   (F-4) Benchmarking in irrigated agriculture.
   (F-5) Crop water management for food production under limited water supplies - international workshop.
   (F-6) Water and soil quality management (CANCID).
   (F-7) Irrigation advisory service workshop.
   (F-8) Global irrigation development.
   (F-9) Farmers’ expectations from ICID.
   (F-10) International workshop on sustainable development of tidal areas.
   (F-11) Water management in monsoon regions.
   (F-12) Water development for food and rural development in India.
   (F-13) Water development for food and rural development for China.
   (F-14) Central Asia water and food issues, challenges and opportunities in the Aral Sea Basin States.
   (F-15) Emerging critical water issues for the Americas.
   (F-17) Third World Water Forum (WWF3) - Progress and ICID contribution
   (F-18) Fourth World Water Forum (WWF4) consultation
   (F-19) Dialogue for water for food and environment, and application of the POGUID model for water policy development.
   (F-20) International Programme for Technology and Research in Irrigation and Drainage (IPTRID) achievements and prospects.
   (F-21) ICID Young Professional Forum
   (F-22) ToolBox for integrated water resources management (GWP)

The Congress Programme is presented in collaboration with following organizations.
Food Production under Conditions of Water Scarcity, increasing Population and Environmental Pressures

The global demand for food production will rise over the next 25 years, as the world’s population increases by roughly 2 billion people. This will place an enormous burden on existing agricultural production systems, including irrigated agriculture, for meeting the food requirements of this planet’s growing population. The provision of water for irrigation will be further exacerbated by the fact that over the next 25 years, some 15 countries will suffer from severe to acute water scarcity. Many of these countries are located in the Middle East, North and Southern Africa, and parts of Asia, with high rates of population growth. The picture is not totally bleak because there is potential to expand the existing land resource base and water storage capacity for food production. However, that means increasing food demands will have to be met mainly from the present infrastructure expanded to the fullest extent possible, along with greater efficiency in land and water resources.

The key to increasing future food production will largely depend on increasing withdrawals where the potential exists; through better water and land management in irrigated areas, and an increase in water and land productivity. However, all these components will add further pressures on the environment. In terms of an increasing population and higher economic development levels. If the development and management of water and land resources is not done prudently, then increasing food production levels may be unsustainable. On the topic of these sustainability issues, there is an urgency to reduce agricultural-related pollutants and to restore water quality through the recycling of poor quality waters from agriculture, domestic and industrial sectors. Issues such as these only serve to compound the challenges of food production and adversely affect the resource base. The challenge to professionals working in the field of irrigation and drainage is, the ability to design and operate a new generation of efficient agricultural water management systems – to meet environmental requirements while filling the demands for food production under conditions of water scarcity.

A. Question 50: Food production, poverty alleviation and environmental challenges as influenced by limited water resources and population growth

General Reporter
Mr. Brent Paterson Canada

Panel of Experts
Dr. King, Shao-Hsing Chinese Taipei
Dr. Hussam Fahmy Egypt
Dr. Bruno Molle France
Dr. Saeed Nairizi Iran
Dr. David J. Molden IWMI
Dr. Masayoshi Sato Japan
Ir. P. Ankum Netherlands

In the past, irrigation increased land productivity, which in turn, helped maintained global food sufficiency in the face of population growth, while triggering economic growth and reducing poverty levels. This has been possible due to the conversion of rainfed areas into irrigated lands; resulting in an increase withdrawal of both surface and groundwaters.

While a globally stable population may be achieved by middle of the 21st century, irrigation and drainage professionals are under enormous pressure to increase land and water availability per capita, in the face of raising poverty levels and environmental issues. Such challenges can only be met through the adopting of new technologies, the harnessing of existing technologies, and institutional reforms that bring about faster implementation with greater economic payoffs.
Contributors providing answers to the Question 50 will be therefore be presented under following subtopics:

50.1 Projections and trends in water availability for agriculture up to the year 2020
Assessing national and regional food needs; assessing water needs to grow the required food both crop and animal products, preparing water resources inventories – present level of withdrawals, wastage, loss; need for increasing withdrawals and reducing losses; possibility for crop diversification; use of saline or poor quality waters for growing more food; possibility of improvement in water use efficiency; conjunctive use of surface and ground waters.

50.2 Economic policy and legal instruments for managing scarce water resources
Private and public sector mechanisms for channelising capital investments in water projects; mechanisms for water pricing to cover operation and maintenance; cost recovery schemes; regulatory frameworks for operating and managing irrigation system and drainage schemes; water laws and water rights; governance issues in water resources; water markets; assignments of water rights.

50.3 Technologies for improved irrigation efficiencies and conservation
Low energy pressurized irrigation systems; drip, micro-sprinkler and sub-irrigation; water table management; rotational water supply; deficit irrigation; alternate wet and dry irrigation; precision irrigation; WatSave technologies including water conservation measures; evaporation control; automated irrigation systems; on-farm water management; improved canal and delivery control; and improved irrigation scheduling methodologies.

50.4 Participatory management in irrigation and drainage
Mechanisms for private and public sector participation in the construction, operation and maintenance of irrigation and drainage projects; devolution of power to water users; formation and sustainability of water users associations; experiences in farmers’ management of tubewells and large scale irrigation and drainage projects.

50.5 Handling competition for water among various economic sectors and the environment
In the context of river basin management will further minimize conflicts in water allocations between users, hopefully lead to a more sustainable land and water resources management at the river basin level. An integrated approach to the design and operation of irrigation, drainage and flood control projects in the context of river basin management will further minimize conflicts in water allocations between users, and drainage systems to effectively influence established patterns in irrigation water management becomes difficult when left too late. Irrigation and drainage projects are usually managed without adequate consideration of watershed characteristics. More diligence needs to be placed on integration of irrigation, drainage and flood control projects within the context of improved and integrated management of river basins. Such approaches will

50.6 Augmenting irrigation water supplies with lower quality water
Reuse of drainage water; wastewater irrigation; recycling of industrial water for irrigation; irrigation by using saline and brackish water; impact of using low quality irrigation water on crop yields, crop quality and soil quality; health and environmental implications of using low quality water for irrigation; guidelines for irrigating with low quality water; experiences and limitations of blending fresh water with low quality water.

Question 51:
Integration and management of irrigation, drainage and flood control

General Reporter
Dr. Takeshi Hata
Japan

Panel of Experts
Mr. Hugh Turral Australia
Dr. J. Plantey France
Dr. Lee, Nam-Ho Korea
Mr. Muhammad N. Bhutta Pakistan
Mr. W.P. Field United Kingdom
Mr. Bruce C. Moore USA

Irrigation systems and flood control projects are largely designed and installed on a needs-based basis. However, drainage systems are deferred until salinization and waterlogging occurs; usually several years down the road. While there have been attempts to integrate irrigation system design and operation with potential future drainage needs, more often than not, designing drainage systems to effectively influence established patterns in irrigation water management becomes difficult when left too late. Irrigation and drainage projects are usually managed without adequate consideration of watershed characteristics. More diligence needs to be placed on integration of irrigation, drainage and flood control projects within the context of improved and integrated management of river basins. Such approaches will hopefully lead to a more sustainable land and water resources management at the river basin level. An integrated approach to the design and operation of irrigation, drainage and flood control projects in the context of river basin management will further minimize conflicts in water allocations between users, infuse higher water use efficiencies, reduce flood damage, minimize water quality degradation, and protect ecosystems, among other benefits. Contributions will be presented under the following sub-topics.

51.1 Elements of national and regional policies
National plans for integrated water resources planning, development and management; examples of regional cooperation in the management and operation of water resources systems; integrated management for improved efficiency of irrigation, drainage and flood control systems at river basin level.

51.2 Integrated land and water resources development and management
Land capability assessment and land-use planning for irrigation; management and protection of irrigated lands; design and operation of irrigation, drainage and flood control projects to protect lands; decision-making tools, including GIS for integrated land and water resources development and management; runoff control on sloping lands; and matching irrigation water applications to soil suitability.

51.3 Implementing irrigation, drainage and flood control strategies within the water sector
Development of integrated water resource policies; integration of irrigation, drainage and flood control needs into national, regional and basin-wide water resources development and management; decision-making tools for water sector planning; models for financing the implementation of irrigation, drainage and flood control projects within the financial context of the overall water sector; need for adequate O&M; modernizing and replacement of existing infrastructure.

51.4 Ensuring stakeholder participation in decision making
Stakeholders’ participation in setting national water policies and priorities; participation in the planning, design, financial aspects and operation of irrigation, drainage and flood control systems by users and affected populations; participatory irrigation management; drainage and flood control systems; decision-making groups; techniques and methodologies for soliciting the views and needs of stakeholders, decision makers, and water users; and the public consultation process.

51.5 Demographics for water resources development
Shifts in rural to urban populations which affect water requirements and the agriculture workforce; development of water supplies for peri-urban irrigation; water requirements for food production in light of changing food consumption patterns and sophisticated diets; multiple uses of irrigation water in rural communities; linking irrigation water supply and availability to human health, drinking water, and sanitation in rural areas; water use patterns of women irrigators; mechanisms for meeting the increased urban demands for water from irrigation reservoirs.
B. SPECIAL SESSION:  
Research and development in irrigation, drainage and flood control

General Reporter  
Mr. Alain Vidal  
France

Panel of Experts  
Dr. M.H. Amer  
Egypt  
Dr. Abbas Ghaheri  
Iran  
Dr. Yoshisuke Nakano  
Japan  
Dr. Lee, Keun-Hoo  
Korea  
Dr. John A. Replogle  
USA

Water research, especially in the developing countries, have not been able to attract the same level of financial and institutional support as agricultural research. In many of these countries, water research is carried out primarily by public institutions. At the same time, universities have not made significant enough impacts on improving the performance of the water sector. As well, the private sector has not played major roles in water research. Moreover, water research institutions suffer from such constraints as a lack of sustained core funding for innovative, large scale, research projects from national governments; to the inability of operational agencies to undertake research. Adding fuel to the fire, research institutes are not driven by strong peer review or a culture of competition and excellence. Consequently, this has all led to complacency and weak institutional performance. Given the urgency of problems confronting the water sector, research institutes and universities, the private sector has a particular role to play in resolving some of these issues. Contributions will be presented under the following issues:

- priority areas for action
- developing and financing the research agenda
- client driven research programs
- capacity building and HRD
- dissemination of results
- participatory research
- improving institutional management and performance

C. SYMPOSIUM:  
Private sector participation in irrigation and drainage schemes

Coordinator:  
Dr. Hector Malano  
Australia

Traditionally, irrigation and drainage development has been largely the domain of governments the world over. Significant reductions in the capacity of governments to finance infrastructure development, along with competing demands from other government sectors have reduced government’s ability to finance the development of new irrigation and drainage schemes, and the operation of existing ones. The perception of past inadequate performance has also contributed to the contraction in public funding and from international donors.

Currently, a variety of institutional and organizational arrangements are used around the world to develop new schemes and to manage existing ones, with the participation of the private sector. These range from built-operate-transfer (BOT) schemes for new projects to the transfer of existing infrastructure assets to users and other shareholders of the system. Complete transfer of asset ownership to users or other stakeholders, and concessions to use and operate assets are some of the arrangements that have been used. Privatization of irrigation and drainage systems can occur in different scales ranging from privatization of the farm or tertiary system to the main supply system and headworks. Furthermore, different arrangements for ownership of assets may be used for different parts of the system.

Important institutional and legal issues concerning ownership of assets arise from the transfer of water. Shareholding may be limited to users or open to the public. These arrangements can have important implications for the cost of service provision, as financial returns to shareholders are often warranted.

Special management and legal issues arise from changes in infrastructure ownership, in relation to service obligations to users, due diligence, compliance with labour, safety and environmental regulations. Of critical importance is a consistent water resources management framework with clear water allocation entitlements to bulk users and individual users supported by clearly defined water property rights.

This symposium will cover the physical, institutional and social issues related to the privatization of irrigation and drainage infrastructure in their broadest sense. It will aim to discuss a variety of arrangements and their advantages and disadvantages and experiences illustrated by relevant case studies with a view to presenting the state of science or art arriving at conclusions or making suggestions for the future studies etc.

The symposium will also provide a forum where these and other relevant issues and experiences, illustrated by case studies can be discussed. The Symposium will include papers on the following topics:

- Undertaking and financing of new irrigation and drainage infrastructure: Different forms of financing and operation
- Financial and contractual arrangements for development of new irrigation and drainage infrastructure
- Financing of service provision costs including O&M and other costs.
- Water resources management issues associated with privatization of irrigation and drainage; water property rights and compliance with environmental regulations.
- Institutional and legal aspects associated with infrastructure transfer and ownership at all system levels
- Regulatory framework necessary for the functioning of organizations engaged in development and operation of irrigation and drainage infrastructure
- Role of the private sector in the provision of design, equipment and consulting services
- Human resources development program to support effective privatization of irrigation and drainage services
- Case studies

D. SPECIAL EVENT:  
The world vision for water, food and rural development for the year 2025

Coordinator:  
President Hon. Aly M. Shady  
Canada

The World Water Council has begun the undertaking of the major activity of defining the Long-term Vision on World Water for Life and the Environment for the 21st Century. This mandate is to examine the availability of fresh water resources, future demands, potential conflicts and the opportunities for conflict resolution; all with the aim of defining a clear vision for global action. The Vision was developed from consultations at both regional and sectoral levels. Water for Food and Rural Development was one of the sectors considered, and ICID played a major role in organizing a national consultation and assisting with regional consultations for the sector. The overall Vision was released in The Hague on March 2000, at the Second World Water Forum and Ministerial Meeting. Two years after the Vision presentation, National Committees are expected to present papers on the progress and action plans on various aspects of the Vision
Lessons from failures in irrigation, drainage, and flood control systems
Co-ordinator: Dr. H. Fahlbush  Germany

The Working Group on the History of Irrigation, Drainage and Flood Control Projects is currently soliciting papers from National Committees on case studies of lessons drawn from the failures of irrigation, drainage and flood control projects. This exercise is an examination of past mistakes made, for future avoidance.

FEATURE SESSIONS
(F-1) Professional Women in water and Engineering - Roundtable
Coordinator: Dr. Fatma A. Attia  Egypt

The objective of this Roundtable Session is to analyze the role of women professionals in the field of interest of ICID and develop a policy to for its enhancement.

The field of water management (including irrigation, drainage and flood control) is not a new field for professional women. For example, in Egypt, around the mid-nineteen sixties, women began to flock to the technical fields; particularly in the field of research. However, careers in management, implementation and operation were and still are dominated by men. For women, the career hurdles are many. Some are related to culture with others due to the juggling of family and professional demands. However, experiences have shown that women can play important roles in the field as if these demands are accommodated and sufficient opportunities are presented to them. This topic bears further discussion and analysis in an open forum in order to reach and accommodate the skill sets of women while enhancing their roles in the field of irrigation, drainage and flood control.

The Special Session will be in the form of an international “Roundtable Meeting” with women professionals in the field of irrigation, drainage and flood control, representative of their countries. The same for the Lead Panellists, representing a range of countries and continents. As well, the Panellists will be requested to prepare a summary of their own experiences or that of others that reflect both positive and negative examples and lessons learned. Following from that, there will be a discussion to share views and challenges faced, and an assessment of future prospects and opportunities for professional women. Participants will be encouraged to take part in open discussions, which will follow the Panellists’ presentations. Following from that, the Chair will provide a summation of the highlights of the discussions.

(F-2) Panel On: Irrigation efficiency concept in the major river basins.
Chair: Dr. Mona El-Kady  Egypt

There are many definitions of irrigation efficiency. In turn, this gives rise to misconceptions and misleading statements for both scientists and the public at large. The purpose of this session is to demystify the Efficiency Concept, and demonstrate the application of various definitions, drawing on real data and examples from various parts of the world. Speakers will be invited from the following basins: the Amazon, Colorado, Colorado, Euphrates, Indus, The River Nile, Niger, Senegal, Yangtze, Yellow, and Zambezi. Speakers will be asked to present data, analyses and information on various efficiency concepts, including but not limited to: losses from reservoirs, intermediate storage, conveyance and distribution and on farm applications, evapotranspiration and water requirement calculations and estimates versus actual, withdrawal efficiency, plant production per unit of water efficiency, basin-wide efficiency versus system efficiency and salt and water balance.

This session will include a keynote speaker presenting state of the art in definitions, literature reviews, and the identification of areas needing further research. An invited panel will lead the discussion on this subject.

(F-3) Malaria in Irrigated Agriculture - A workshop
Co-Ordinator Dr. Eline Boelee IWMI - SIMA

The purpose of the new CGIAR System-wide Initiative on Malaria and Agriculture ( SIMA) is to strengthen existing global efforts in malaria control. This is achieved through the development and promotion of the integration of preventive measures with curative approaches, based on improved agricultural practices, and the sustainable management and utilization of natural resources. In this workshop, contributions from engineers and water managers, as well as from biomedical scientists, health or agricultural economists, will address three research themes:

1. Interaction between irrigation/drainage/flood control and malaria: Irrigation design, drainage and other water management practices, and how they change the ecology of diseases. Malaria transmission may increase due to a wider availability of breeding sites for mosquitoes. Migrant workers may bring malaria into areas where malaria was previously unknown. Papers are welcomed; particularly those that delve into the analysis of the exact interaction mechanisms between malaria and irrigated agriculture.

2. Best practices to control malaria in irrigated agriculture: Environmental measures have been suggested as a way to control malaria since ancient times and have received renewed attention over the last 15 years. However, few actual applications have been reported. Adaptations of irrigation design, drainage works or water management practices for the purpose of malaria control. Original field studies will receive priority.

3. Linkages between malaria and agricultural productivity: The economic impact of malaria on farming households and on agricultural productivity is not insignificant. Days lost at work or in school may reduce household food security and hamper rural development. This in turn often leads to reduced benefits from irrigation. Little is known about the cost of reduced agricultural productivity caused by malaria. Papers are thus welcome that focus on the cost of malaria control; whether it be conventional through medical treatment or through environmental management of irrigation or drainage.

(F-4) Bench marking on irrigation and drainage projects.
Chair : Dr. Hector Malano  Australia

Benchmarking of irrigation and drainage projects is a process whereby organisations pursue enhanced performance of their projects by learning about their own projects through comparison with their own historical performance and with the practices and outcomes of other projects.

The specific objectives of the workshop are: (i) To enable the participating countries to share their experience and value of the benchmarking activities, (ii) To provide and opportunity for new countries to join the program, and (iii) To discuss strategies for the future direction of the program and integration of best management practices into the participating organizations.

ICID has identified benchmarking as one of the key activities to be supported within the Strategy for the Sector Vision “Water for Food and Rural Development”. As a result, a Task Force (TF) was created and launched at the Cape Town 2000 meeting. The purpose of the TF is: (1) To promote the participation of irrigation and drainage organizations in ICID member countries in the benchmarking programme, (2) To provide support to National Committees for the implementation and monitoring of the benchmarking programme and the exchange of best management practices, (3) To provide support and liaise with IPRID, IWMI and The World Bank for the implementation of the benchmarking initiative.

The benchmarking programme is a joint initiative of IPRID, World Bank, IWMI and ICID. IPRID is responsible for overall co-ordination of implementation of the programme at the request of the World Bank. IWMI has developed and hosting a website to post and analyze the data pertaining to the benchmarking. ICID is promoting the programme through its National Committees and by holding workshops and establishing a Task Force.

The joint programme has now entered its second year following the initial discussions held at the Roma workshop in 2000. Several countries have commenced their benchmarking activities in line with the guidelines of the programme. These include China, India, Mexico, Sri Lanka and Australia. Other countries have indicated their intention to join the program including France, Spain, Iran, Egypt, USA and Malaysia.
The world’s population is expected to grow from 6 billion today to at least 8 billion by the year 2025, with about 90 per cent of the increase occurring in the developing world. It is, therefore, clear that achieving food security and improving the quality of life, while preserving the environment, will continue to pose major challenges to scientists, decision makers and technicians in the coming decades. Expanding agricultural production in a sustainable manner, and henceforth contributing to an increase in rural incomes, will be crucial in responding to these challenges.

In the past, demand for growth in food and fibre production has been met by increasing land under irrigated agriculture. Nowadays the availability of new land is limited. As well, existing water is degraded both in terms of quantity and quality. Adding to this, water is often unavailable to agriculture due to competing demands by urban and industrial needs. Therefore to achieve a proper balance between economic development, food security, rational use of natural resources and environment protection, it is imperative to conceive a more integrated and multiple approach for land and water use.

The main objective of this Workshop is to bring together eminent international experts, professionals and practitioners. All participants can then share data, technology and experiences, and offer recommendations on methods and strategies to overcome the regional extreme yield variability in deficit water conditions while trying to maximize food production with an appropriate water allocation.

The main topics addressed in the Workshop will include:

- Analyses to identify factors which influence regional variations in crop productivity.
- Water saving practices in rice cultivations and the optimization of productivity in upland and lowland conditions.
- Adoption of drainage and scheduled irrigation to prevent waterlogging and salinity risks.
- Biotechnology to develop new cultivars which are bred for drought and pest resistance, high yield quality that are also well suited to climate and irrigation conditions.
- Improved technologies to overcome adverse environmental impacts of poor quality irrigation water.
- Strategies to be adopted in rainfed areas to increase food production.

**CROP WATER MANAGEMENT FOR FOOD PRODUCTION UNDER LIMITED WATER SUPPLIES - AN INTERNATIONAL WORKSHOP**

Co-Chairs: Dr. Ragab Ragab, United Kingdom
Dr. Martin Smith, FAO
Laurie Tollefson, Canada

(F-5)

The great challenge in the coming decades will be: how to increase food production with less water, particularly in countries with limited water and land resources. The effective and sustainable use of water for agriculture has become a global priority, and one of vital importance, requiring urgent and immediate solutions in view of the intensifying competition.

The problem is not new. At the same time, much research and investment has been made to develop more refined techniques and practices to increasing the accuracy of water application to crops according to their requirements. However, there still exists a large gap between the availability of technologies for effective water use and the adoption of these technologies. One of the reasons is that relatively little attention is paid in establishing effective support systems to assist farmers in the adoption and proper operation of new techniques and technologies. As a result, the impact of these investments in many irrigation projects is considerably reduced in terms of production, water savings, sustainability, economics and environment.

Irrigation advisory services can play an important role in assisting users to adopt new techniques for more efficient water use and increased production. Such services can be provided by private, public or co-operative agencies. Commercial agencies can take over the traditional role of the public agencies but this bears further discussion regarding the lucrative components of irrigation sector. Also critical in the promotion of irrigation advisory services is the financial sustainability of such institutes; particularly in developing countries with inadequate funding to finance public services.

In order to focus attention on the vital role irrigation advisory services play in achieving more effective water use for sustainable crop production, the workshops will present relevant experiences from a range of selected case studies:

- The overall objectives of the workshop will be to provide advice to ICID national committees on the introduction of irrigation advisory services for more efficient and sustainable water use for food production.
- The workshop, through a range of case studies from different member countries, will highlight the role of irrigation advisory services. More specifically the workshop will review the specific function of advisory services in the:
  - • selection, installation and use of irrigation equipment at the farm level
  - • irrigation, scheduling and advice services to farmers
  - • use of simulation models and computers for irrigation management at the farm level
  - • use of simple irrigation management advice and irrigation calendars
  - • evaluation and performance of farm irrigation
  - • promotion of participatory water management and water users associations, and in the
  - • integration of agricultural and irrigation extension services.

**Irrigation Advisory Services and Participatory Extension in Irrigation Management**

Chair: Dr. Ragab Ragab, United Kingdom

(F-7)

Global Irrigation Developments

Co-Chairs: Dr. Ramesh Rudra and Dr. Peter Enright, Canada

While there are many challenges facing the irrigation sector, there are also considerable opportunities to improve the performance of water management systems through the use of new technologies. Water and energy efficient devices are in demand by irrigators. Irrigation agencies are also interested in new construction methods and water delivery systems. Computer simulation models and GIS are excellent tools for improving the design, operation and evaluation of water management systems, along with the widespread use of computer modeling by irrigation and drainage specialists. Given all of the above, complex systems demand a need for a new generation of water specialists.
The monsoon regions of China, parts of India and Pakistan, and South East Asia face particular water management problems due to excessively high rainfalls and severely damaging rainstorms, during the monsoon period. Severe flooding often leads to loss of property, loss of life and devastating crop failures. However, providing drainage and flood control infrastructures for monsoons is capital intensive. As well, these regions experience severe water shortages during the dry parts of the year. Adding to this equation is the demand for water during crop production. What is needed are special water management systems that must be designed and operated for sustainable food production and food security in monsoon regions.

In some regions of the world, empirical methods are applied to measure environmental changes from tideland reclamation projects. However, these methods are not enough to draw together all the parameters for estimating environmental impacts. Therefore, an advanced managerial system needs to be developed to properly evaluate environmental changes for the sustainable agricultural and aqua-cultural development projects in tidal areas. For engineers and practitioners, advanced mitigation schemes are needed for the planning and design of dikes and sweet water reservoirs, to minimize the negative impacts in reclaimed areas and create easy access and space for human, flora and fauna. Experts with relevant experience and planning and design of dikes and sweet water reservoirs, to minimize the negative impacts in reclaimed areas and create easy access and space for human, flora and fauna.

A set of recommendation will be drawn up for consideration by ICID. The main objective of this session is to bring together experts, professionals, and practitioners of sustainable development in tidal areas to share their experiences and technology. The increasing demand for food and water, pressured by rising populations everywhere, has placed pressure for more agricultural development projects, particularly in the last few decades. Due to the demand for more arable land for food production, a number of large-scale projects are being implemented at river mouths and in the shallow flats of tidal zones. In some places, tidal zones are protected and developed in a sustainable manner. The development of these tidal areas should be in harmony with natural processes in order to avoid excessive environmental and socio-economical impacts.

Concluding address. Invitation to China, the host of the 19th ICID Congress and 56th IEC meeting in Beijing in 2005.

The five states of the Aral Sea Basin in Central Asia face common water problems because they rely heavily on the water resources of two shared river basins - the Syr Darya in the north and the Amu Darya in the south. Much of the river flow is regulated through dams, diversions, and other hydraulic structures. About 80 reservoirs were created with a total gross storage capacity of 60 B m3. Some 45 Hydropower plants were installed in this system to provide a sizable portion of the electrical energy, with a potential capacity to meet 70% of the region’s needs. Extensive irrigation schemes were introduced which transformed the economies of the region. Agriculture became the mainstay of the economy. Of the 40 M inhabitants of the Basin, about 62% live in the rural areas. About 10 M ha is devoted to crop cultivation of which about 8 M ha are under irrigation. Faced with a continued rise in water demands and water scarcity, a growing population and its needs for more food and economic opportunities, these nations now face tremendous challenges for planners and decision and policy makers alike. While attempts have been made within national and regional cooperative settings to resolve these issues, this session will explore some of these attempts and other prospects and opportunities that lie ahead. Speakers from the regions, and comments from others will lay the platform for discussions and exchange among the participants.

This Session will discuss the critical emerging issues for the beginning of the Third Millennium. To date, it has received inadequate attention. The main issues for discussion will include, but will not be limited to, the following: impacts of the September 11th incident on the water sector; assuring clean water supply and proper wastewater disposal systems for small and medium size cities; relevance, appropriateness, and correctness of the present debate on the water crisis, desirability of current philosophies on groundwater management; contributions of new technologies to resolve the coming water crisis, and any issues participants and stakeholders wish to raise.

A number of invited speakers will make presentations and case studies from the Americas Region followed by a panel discussion with participation from the floor.
The World Water Council initiated the Vision for World Water Life and the Environment for the Twenty First Century. The Vision, Making Water Everybody’s Business, was presented along with the Framework For Action at the 2nd World Water Forum (WWF2) and Ministerial Meeting held in The Hague on March 2000. At the Hague, the World Water Council made the commitment to ensure the continuity of the Vision for the period leading to the third World Water Forum, which is scheduled to take place in Kyoto, Japan, in March 2003. The Council, with the support of the Secretariat of the 3rd World Water Forum (WWF3), launched a monitoring system for actions to be undertaken toward the implementation of the Vision. The “Water Action Unit (WAU)” was established at the headquarters of the World Water Council. The main function of WAU is to collect data, information and conduct analyses related to the implementation of the World Water Vision. The WAU shall prepare an analytical report, which will provide the world water community with a documented view of what has happened since the WWF2. This report will significantly contribute to the quality of the debates held during the WWF3 in 2003. Examples of actions being taken around the world will make WWF3 a major milestone in the development of a new paradigm of water management. Expectations raised during WWF2 will be measured against the actual progress made. The Session will feature presentations of the preliminary report on the World Water Actions. The report will thus comprise of: background, themes, cross-sectoral issues, regions including a chapter for each country, an action survey, a synthesis underlining the main evolutions, innovations and gaps, and commitments made since WWF2. All this will mainly focus on the “Actions” taken around the world in the period between WWF2 and WWF3. The Session will feature staff presentations, key speakers and open discussion.

The International Programme for Technology and Research in Irrigation and Drainage (IPTRID) – achievements and prospects.

Chair: Peter Lee, Chairman, IPTRID Consultative Group

United Kingdom

The International Programme for Technology and Research in Irrigation and Drainage (IPTRID) aims to enhance the standard of irrigation and drainage research and development in and by developing countries. It does this by promoting knowledge and technology innovations to its stakeholders involved in agricultural water management to improve livelihoods and reduce poverty. IPTRID was first established in the early 1980s and was proposed by the Water Council (WWC) and the World Water Council. The IPTRID Secretariat is now located at the Land & Water Development Division of FAO in Rome.

The objective of this Session is to ensure a better visibility of IPTRID among the ICID Community by sharing views on IPTRID’s achievements and future. The aim is to stimulate a debate on how IPTRID can address the major issues facing the sustainability of irrigated agriculture and how ICID, its membership and its working bodies can help and collaborate with IPTRID.

The Session will include presentation of two key note papers from Doug Merrey, IWMI and from Hervé Plusquellec, France, reviewing the last few years and putting IPTRID’s work into perspective with regard to smallholder irrigated agriculture and modern approaches to irrigation management. The key-note papers / presentations will (a) discuss the issues facing irrigation and drainage now and in the future, (b) demonstrate the impact that IPTRID has had, and (c) outline what IPTRID is and what it does. Reference will be made in the papers to projects, country involvement and networks when and where appropriate. The papers should also look forward to the future. The priority of IPTRID as a multi-partner programme can do. The key-note papers / presentations will be discussed and enlarged upon by a facilitated discussion session where representatives of the IPTRID Secretariat, Partner Institutions and “client countries” will be available to discuss the issues. This will then give the participants the opportunity for a:

- Q&A session, including presentations from selected IPTRID Partners; and
- An “Information Village” where different activities of IPTRID (including its partner institutions) will be displayed: WCA infoNET, PODIUM, DRAIN, the Benchmarking Website, etc.
- Computer demonstration on models and web sites

The Session is open to all professionals making the best presentation.

ICID is one member of the Consortium engaged in the dialogue for food and environment. This session will present the plan for the dialogue concept, along with other plans and their progress to date. Also presented will be tools for conflict resolution among water users, application of water budgets, water management, and the use of social learning. The role of National Committees through dialogue activities will also be explored. This session will also include expert presentations, panel discussions and contributions from participants.

The presentation on PODIUM will feature a demonstration for the Model and results of its application in participating countries for water policy applications.

The 3rd World Water Forum (WWF3) will provide an opportunity for technical and regional organizations that are actively involved with water problems to present their perspectives in free discussions. At the same time, other experts participating in technical and regional discussions at the 2nd World Water Forum (WWF2) in the framing of the World Water Vision (WWV) are expected to make substantial comments and contributions. WWF3 is the most important coming water event in terms of providing a platform for communicating with decision makers and the general public. It will be the occasion to inform the world on actions taken to improve the water situation on the planet since the 2nd Forum.

ICID has formed a Task Force to prepare for the ICID input to the WWF3 and the Japanese National Committee is taking part in organizing and in participating in the preparatory work of the WWF3. This Session will report on the progress on the preparatory work for WWF3. It will also provide a forum to present, review and discuss ICID input to the forum.

The World Water Council organized the World Water forums. The first took place in Marrakech, Morocco, in 1997. The second in The Hague, Netherlands in 2000, while the third forum is scheduled in 2003 for Kyoto, Japan. Canada will host the fourth in Montreal, in 2006. Congress participants will be asked by the organizers to participate in shaping the agenda for the WWF4 through submission of proposals for themes and topics. A special town hall meeting will be organized to present the summary of proposals and to provide a platform for public discussion and debates on the key issues identified.
Saturday 27 July, 2002

09.00 – 10.30 Concluding Session of Question 50

09.00 – 12.30 International Executive Council (IEC) Meeting – Session I

09.00 – 12.30 Special Session – Research and development in irrigation, drainage and flood control

Keynote Address for Special Session, General Report for Special Session, Paper Presentation and Open Discussions

12.30 – 13.30 Lunch Break

13.30 – 18.00 International Executive Council (IEC) Meeting – Session II

19.00 – 21.00 Reception to be Announced

Sunday July 28, 2002

09.00 – 10.30 Concluding Session of Question 50

10.30 – 11.00 Coffee Break

11.00 – 12.30 Concluding Session of Question 51

12.30 – 13.30 Lunch Break

13.30 – 15.35 Closing Ceremony

13.30 – 13.40 Presentation of Conclusions and Recommendations of 18th Congress by Secretary General

13.40 – 13.45 Presentation of Montreal Declaration

13.45 – 13.55 Presentation of Awards, Plaques, and Recognition

13.55 – 14.05 Bob Rangeley

14.05 – 14.20 Video Film

14.20 – 14.25 Best National Committee Award

14.25 – 14.45 Address by President, ICID

14.45 – 15.00 Address by President Elect

15.05 – 15.15 Address by Chairman of National Organizing Committee

15.05 – 15.35 Farewell Cultural Show

Schedule of Preliminary Program

Thursday 25 July, 2002

09.00 – 17.00 Registration

09.00 – 17.00 Exhibition Opening

09.00 – 12.30 Opening Ceremony

09.00 – 09.30 Cultural Show

09.30 – 11.00 Keynote Speaker: Dr. Brian E. Harvey (Aus)

11.00 – 11.30 Coffee Break

11.30 – 12.30 ICID Distinguished Lecturer

12.30 – 13.30 Lunch Break

13.30 – 17.00 Question 50 – Discussion in Parallel Sessions on Sub-topics

Q 50.1 Projections and trends in water availability for agriculture up to 2020

Q 50.2 Economic policy and legal instruments for managing scarce water resources

Q 50.3 Technologies for improved irrigation efficiencies and conservation

Q 50.4 Participatory management in irrigation and drainage

Q 50.5 Handling competition for water among various economic sectors and the environment

Q 50.6 Augmenting irrigation water supplies with lower quality water

13.30 – 17.00 Question 51 – Poster Session

09.00 – 17.00 Feature Session: CG-IPTRID

12.30 – 17.00 Feature Session: Farmers Expectations

13.30 – 17.00 India Session

17.00 Closing of Exhibition

17.00 Office Bearers Committee (OBC)

Saturday 27 July, 2002

09.00 – 10.00 Registration

09.00 – 10.30 International Executive Council (IEC) Meeting – Session I

10.30 – 11.00 Coffee Break

11.00 – 12.30 Concluding Session of Question 51

12.30 – 13.30 Lunch Break

13.30 – 15.35 Closing Ceremony

13.30 – 13.40 Presentation of Conclusions and Recommendations of 18th Congress by Secretary General

13.40 – 13.45 Presentation of Montreal Declaration

13.45 – 13.55 Presentation of Awards, Plaques, and Recognition

13.55 – 14.05 Bob Rangeley

14.05 – 14.20 Video Film

14.20 – 14.25 Best National Committee Award

14.25 – 14.45 Address by President, ICID

14.45 – 15.00 Address by President Elect

15.05 – 15.35 Farewell Cultural Show

Schedule of Preliminary Program

Friday 26 July, 2002

09.00 – 17.00 Registration

09.00 – 17.00 Exhibition

09.00 – 12.30 Question 50 – Discussions in Parallel Sessions on Sub-topics

Q 50.1 Projections and trends in water availability for agriculture up to 2020

Q 50.2 Economic policy and legal instruments for managing scarce water resources

Q 50.3 Technologies for improved irrigation efficiencies and conservation

Q 50.4 Participatory management in irrigation and drainage

Q 50.5 Handling competition for water among various economic sectors and the environment

Q 50.6 Augmenting irrigation water supplies with lower quality water

09.00 – 12.30 Question 51 – Poster Session

09.00 – 17.00 Feature Session: CG-IPTRID

12.30 – 13.30 Lunch Break

13.30 – 18.00 Feature Session: CG-IPTRID

13.30 – 18.00 Feature Session: Farmers Expectations

17.00 Closing BBQ Dinner & Cultural Show

17.00 Office Bearers Committee (OBC)

Sunday July 28, 2002

09.00 – 10.30 Concluding Session of Question 50

10.30 – 11.00 Coffee Break

11.00 – 12.30 Concluding Session of Question 51

12.30 – 13.30 Lunch Break

13.30 – 15.35 Closing Ceremony

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13.40 – 13.45 Presentation of Montreal Declaration

13.45 – 13.55 Presentation of Awards, Plaques, and Recognition

13.55 – 14.05 Bob Rangeley

14.05 – 14.20 Video Film

14.20 – 14.25 Best National Committee Award

14.25 – 14.45 Address by President, ICID

14.45 – 15.00 Address by President Elect

15.05 – 15.35 Farewell Cultural Show

Schedule of Preliminary Program

Thursday 25 July, 2002

09.00 – 17.00 Registration

09.00 – 17.00 Exhibition Opening

09.00 – 12.30 Opening Ceremony

09.00 – 09.30 Cultural Show

09.30 – 11.00 Keynote Speaker: Dr. Brian E. Harvey (Aus)

11.00 – 11.30 Coffee Break

11.30 – 12.30 ICID Distinguished Lecturer

12.30 – 13.30 Lunch Break

13.30 – 14.00 Keynote Speaker for Question 50

14.00 – 15.15 Presentation of General Report by the General Reporter for Question 50

15.15 – 15.45 Coffee Break

15.45 – 16.15 Keynote Speaker for Question 51

16.15 – 17.15 Presentation of General Report by the General Reporter for Question 51

19.00 – 21.00 Reception to be Announced

19.00 – 21.00 Closing BBQ Dinner & Cultural Show
### ACCOMMODATION

#### GENERAL INFORMATION

Several hotels are within close proximity to the Palais des Congres. Keep in mind that summer is a busy tourist season in popular Montreal, so it would be wise to make your reservation early to ensure your preferred accommodation. The toll free “1-800” numbers may be used within Canada only. The web pages of hotels contain reservation information.

For more hotel listing visit the web site at: [http://www.tourisme-montreal.org](http://www.tourisme-montreal.org)

Kindly consult our web site for the latest update at: [http://www.canci.org](http://www.canci.org)

### HOTELS

#### HOTELS LIST

<table>
<thead>
<tr>
<th>Hotel Name</th>
<th>Address</th>
<th>Tel.</th>
<th>Toll Free.</th>
<th>Rate: Cdn $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta Centre-ville</td>
<td>777 University Avenue, Montreal</td>
<td>1-514-879-1330,</td>
<td>1-800-268-1133</td>
<td>178.00</td>
</tr>
<tr>
<td>Holiday Inn Select Montreuil</td>
<td>99 Viger Avenue West, Montreal</td>
<td>1-514-878-9888</td>
<td>1-800-456-4329</td>
<td>175.00</td>
</tr>
<tr>
<td>Hotel Wyndham Montreal</td>
<td>1255 rue Jeanne Mance Street,</td>
<td>1-514-852-8390,</td>
<td>1-800-361-3234</td>
<td>170.00</td>
</tr>
<tr>
<td>La Tour Centre Ville</td>
<td>490 Rene Levesque Blvd. West,</td>
<td>1-514-866-7275</td>
<td>1-514-849-4529</td>
<td>130.00</td>
</tr>
<tr>
<td>Holiday Inn Select Montreal</td>
<td>1415 rue St. Hubert, Montreal</td>
<td>1-514-842-4881</td>
<td>1-888-910-1111</td>
<td>85.00</td>
</tr>
<tr>
<td>Inter-Continental Montreal</td>
<td>366 rue St. Antoine, Montreal</td>
<td>1-514-353-3388</td>
<td>1-800-329-7466</td>
<td>141.00</td>
</tr>
<tr>
<td>Hôtel Renaissance Montréal</td>
<td>3625 Park Avenue , Montreal</td>
<td>1-514-288-6066</td>
<td>1-800-363-0735</td>
<td>141.00</td>
</tr>
<tr>
<td>Days Inn Montréal Centre Ville</td>
<td>215 Rene Levesque Blvd. East,</td>
<td>1-514-393-3388</td>
<td>1-800-329-7466</td>
<td>141.00</td>
</tr>
<tr>
<td>Hôtel Intercontinental Montréal</td>
<td>360 rue St. Antoine, Montreal</td>
<td>1-800-361-3600</td>
<td>1-800-325-3535</td>
<td>141.00</td>
</tr>
<tr>
<td>Le Centre Sheraton and Towers Montreal</td>
<td>1201 Rene Levesque Blvd. West, Montreal</td>
<td>1-514-878-2080,</td>
<td>1-800-325-3535</td>
<td>141.00</td>
</tr>
</tbody>
</table>

Rates are shown for selected hotels based on double occupancy and confirmed reservation prior to May 21, 2002. Participants are requested to choose the hotel and make their reservation directly with selected hotel. All hotels listed are within walking distance from the Congress venue of Palais des Congres.

### HOW TO GET TO MONTREAL

Montreal is served by many international airlines connecting to European and North American cities. Connection from the Far East is through Vancouver or Toronto. Most Asian and African cities are connected to Montreal by air through Europe or New York. South American cities can reach Montreal through Miami, New York or Los Angeles.

#### VISA REQUIREMENTS

A visa to enter Canada may be required for citizens of other countries. Please consult your nearest Canadian Embassy, High Commission or Consulate. If you need further assistance please contact the Secretariat of the National Organizing Committee of the Congress as soon as possible.

#### INSURANCE

The Congress organizers will not assume any liabilities for loss of property and personal injury. Health care can be expensive for non-residents. You are advised to carry your own accident, health and medical insurance.

#### ELECTRIC CURRENT

The standard North American electric current of 115v, 60hz is in use. Electric outlets will accept only receptacles of North American style. You may wish to bring a wall adaptor suitable for North American electric outlet.

#### THE WEATHER

The Canadian climate varies widely across the country, from humid to semi-arid, with precipitation varying from as little as 350 mm/year to over 2000 mm/year. Our climate provides us with comfortable warm summers and correspondingly long daylight hours, and cold winters with short daylight hours that are characteristic of northern latitudes. The weather in Montreal in July can be quite warm, reaching highs of between 27 to 33°C. Summer rain can cool down temperatures. Light summer clothing is suitable, as is light rainwear.

### VISA REQUIREMENTS

For details on each hotel and for more listings, check with Tourism Montreal at: [http://www.tourisme-montreal.org](http://www.tourisme-montreal.org)

To obtain a recent map for the downtown area check with: [http://www.ville.montreal.qc.ca/mtlcarte](http://www.ville.montreal.qc.ca/mtlcarte)
Study Tours Program

General Information

• For multi-day tours, the fee includes the cost of hotel accommodation, all meals, buses, tour guides, and facility entrance fees.
• All tours are open to both Congress delegates and Accompanying persons.
• The description for each study tour names major terminal cities.
• Select the tour of your choice by reviewing the outline and detailed descriptions.
• Contact the congress Secretariat to book reservations through e-mail: montreal2002@cancid.org

You will be informed of method of payment.

Participants in Tours A, B, and C should book reservations before June 1, 2002 to guarantee hotel accommodations for the Tours.

AIRLINE TICKET

Persons planning to take study tours A, B, C or F may wish to check out two options for their overall airplane flight Schedule, in order to reduce on air travel costs.

Option 1: Home to Montreal - Study tour travel - Home from last major city on the study tour.
Option 2: Part a) Home to Montreal to home. Part b) Montreal - Study tour travel - return to Montreal to connect to travel home.

Option (1) is recommended. Check with your travel agent before you purchase your ticket.

VISA REQUIREMENTS

A visa to enter Canada may be required for citizens of other countries. Please consult your nearest Canadian Embassy, High Commission or Consulate. If you need further assistance please contact the Secretariat of the National Organizing Committee of the Congress as soon as possible. For participants in Tour “A”, a valid visa to USA is also required.

THE WEATHER

The Canadian climate varies widely across the country, from humid to semi-arid, with precipitation varying from as little as 350 mm/year to over 2000 mm/year. Our climate provides us with comfortable warm summers and correspondingly long daylight hours, and cold winters with short daylight hours that are characteristic of northern latitudes. The weather in Montreal in July can be quite warm, reaching highs of between 27 to 33 °C. Summer rain can cool down temperatures.

Light summer clothing is suitable, as is light rainwear.

Visit Tour Desk at the Congress to check your reservation and latest updates of the tour program.

Tour “A” Visit Ontario, Canada - see Niagara Falls. Check out irrigation, drainage, and flood control systems in Eastern Canada, southwestern USA and California, in addition to attractions of locations en route (six-day tour).

Tour “B” Visit southwestern Quebec and eastern Ontario to see some of Canada’s best dairy, vegetable and maize productions. And interesting drainage and water management projects. See Canada’s Parliament Buildings in Ottawa, the Great Lakes, and Niagara Falls (three-day tour).

Tour “C” Visit Western Canada. The Prairies - the heartland of grain production- starting in Saskatoon, Saskatchewan, and visit the magnificent Rocky Mountains, Banff, and Lake Louise. In Alberta, check out cereal and oilseed crops, Canada’s most important beef production and modern irrigation systems. (Four-day tour).

Tour “D” Visit the sights in Montreal: organic soils management on vegetable producing farms, the Casino, the Biodome, the Olympic site, the St. Lawrence River and the Seaway (two options of one-day tour each).

Tour “E” Visit historic Quebec City, and interesting cranberry production plants. (one-day tour).

Tour “F” Visit Eastern Canada, Quebec, New Brunswick, and Prince Edward Island. Check out tourism and food production systems, advanced soil conservation and wetland management systems. (Four days tour)

Tour “G” Two options for half-day tour to visit Montreal and the region.
Tour “A” For sites in Ontario, Canada and California, USA.

Cost Cdn $1985.00 Prices do not include airfare. See note above for details on airfare.


Monday July 29, 2002. Depart for Niagara Falls from hotel in Toronto at 8:00 A.M. View Hamilton Harbour from Skyway bridge; pass through Orchards and vineyards of the Niagara peninsula and view irrigation and drainage in these intensive agricultural systems; view Niagara Falls and International Rapids section of Niagara River; see power canal and electric generation facility at Queenston, and the Welland Canal that conveys ocean-going ships around Niagara Falls on return to Toronto. Buffet lunch on route, dinner in Toronto, evening stroll and overnight at Toronto Hotel.

Tuesday July 30, 2002. Visit: Holland Marsh Flood Control and Garden Development with regional and individual water management in the morning. Buffet lunch at Bradford; see flood control facilities enroute to Toronto Pearson Airport. Depart for San Francisco on Air Canada Flight 755 or other flight, at approximately 16:00 hr. Dinner on plane. Evening arrival at San Francisco Airport (SFO). Stay at Hotel or at near SFO.

Wednesday July 31, 2002. Drive across the Golden Gate Bridge to the US Corps of Engineers Bay-Delta Physical Model in Sausalito, CA. Drive to Napa Valley; cross the Richmond-San Rafael Bridge; tour irrigated vineyard and winery. Drive to Sacramento Valley past Lake Berryessa through irrigated areas and through the University of California, Davis campus to hotel in Sacramento Valley.

Thursday August 01, 2002. Briefing on the US Bureau of Reclamation and California Department of Water Resources Operations. See part of the Glenn-Colusa Irrigation District; visit District's Diversion and large fish screen. Learn about problems related to rice irrigation in arid climates. Lunch enroute and special tour and dinner in evening.

Friday August 02, 2002. Drive through Delta past the delta Cross Channel; tour the Banks Pumping Plant and Skinner Fish facility; picnic lunch; visit irrigated farm in Delta on way back to San Francisco. 17:00 arrive San Francisco. Tours ends. Participants could depart for home country on evening of August 02 or stay over to visit San Francisco on their own. If staying, participants will have to make their own hotel and other arrangements for Saturday August 03, 2002 and later.

Saturday August 03, 2002. Depart for home country from hotel, or free day in San Francisco or elsewhere in California.

Tour “B”

Quebec and Ontario, including Ottawa, Toronto, Niagara Falls.

One night in Ottawa, two nights in Toronto; hotels, buffet breakfasts, lunches and dinners provided. Cost Cdn $980.00.

Monday, July 29, 2002. Depart congress 9:00 A.M. stop at LaSalle Hydraulic Laboratory; stop and view water management research plots, farmer operated subsurface irrigation at St. Emmanue, Arnett plastic pipe factory, Carrillon powerhouse on the Ottawa River Centre pivot, traveling gas gun irrigation of potatoes and beans at Curran. Lunch on route, dinner and overnight in Ottawa. Walk to see Parliament Building, Ottawa River, Rideau Canal, etc.

Tuesday, July 30, 2002. Depart Ottawa Hotel 8:15 AM pass through Central Experimental Farm, then through Eastern Ontario farmlands to stop to look at Thousand Islands on the Saint Lawrence River; short stop at Trent River to view powerhouse and canal, on to Holland Marsh Flood Control and Garden Development, Toronto Hotel for overnight.

Wednesday, July 31, 2002. Depart for Niagara Falls from Hotel at 8:15 AM. View Hamilton Harbour from Skyway bridge, pass through Orchards and vineyards of the Niagara peninsula and view the irrigation and drainage in these intensive agricultural systems, view Niagara Falls and International Rapids section of Niagara River, see power canal and electric generation facility at Queenston, see Welland Canal on return to hotel in Toronto.

Thursday, August 01, 2002. Persons are on their own for sights not on itinerary. Departure for home from Toronto International Airport, or return to Montreal on the bus.

Tour “C”

Tour to Western Canada, see major irrigation facilities in Saskatchewan and Alberta, and the Majestic Rocky Mountains. Maximum 35 persons, minimum 20 persons.

Tour fee includes 5 nights at hotels, all meals for 5 days, tour bus, tour guide fees, and facility entrance fees but no airfares. Cost Cdn $1500.00

If round trip airfare Montreal - Saskatoon - Calgary is Montreal, is required, the full fare will be Can. $3492 + taxes. If one stays as a tourist in The Calgary, Rocky Mountain area until Sunday August 04 then round trip airfare reduced to Can $1014 + taxes.

If Congress delegates and accompanying persons reserve air travel to the Congress, with travel to Montreal - Toronto - Saskatoon on July 28; Saskatoon to Calgary on July 30 and Calgary to home on August 01 or earlier, then the extra cost for the airfare for the tour may be very little. This option is recommended.

Tour finishes at Calgary Thursday August 01, 2002 at 17:00 hr. Persons can proceed with their holiday weekend agenda. Hotel accommodation is reserved at Calgary for the night of August 01 - August 02, 2002. Sight seeing in Calgary area if desired on August 02 prior to personal flight departure.

Sunday July 28, 2002. Depart Congress Centre or Hotel at 15:30 hr. for Airport to get flight to Toronto with connection to Saskatoon, arrive Saskatoon approximately 21:28 hr. on Wednesday July 27.

Monday July 29, 2002. Tour of the Canada-Saskatchewan Irrigation and Diversification Centre (CSIDC) in outlook to view various Research and Development activities. View the Gardiner Dam, power station and Lake Diefenbaker, on the South Saskatchewan River. At Birsay pumping station, view the turbine pumps and buried pressurized systems taking water to the farm gate. Discuss pricing of water, and the formation of Water User Associations. See potatoes, timothy, beans, cereal grains and canola at a field scale.

Tuesday July 30, 2002. 8:00 AM depart hotel for Saskatoon Airport fly to Calgary Alberta on Air Canada Flight 8575 or equal. July 30, 31 and August 01, 2002, Alberta Tour (3 days). Alberta is the largest irrigation province in Canada with over 1.2 M acres of land under irrigation. A total of 7.500 km of canals and pipeline convey water stored from both on-stream and off-stream reservoirs, supplied by five major rivers and several smaller streams. In Alberta, given the high cost of energy, water rights are fully allocated and therefore irrigators are interested in gains in water use efficiency and energy conservation. Electricity is generated at some of the irrigation storage reservoirs.

Program includes visiting these sites:

- Buffel National Park, in the Magnificent Rocky Mountains, source of irrigation water
- St. Mary's Dam, headworks and canals.
- The Blood Tribe 25.000 acre irrigation project and processing plant. Brooks Aqueduct.
- Bussan Dam and Eastern Irrigation District.
- Old Man dam and Lethbridge Northern Irrigation District.

Tour “D”

Tour D-1 Repeated Wednesday July 24, Friday July 26, Saturday July 27 and Monday July 29, 2002. Cost Cdn $75.00.

Depart Congress Centre 9:00 A.M. cross the Saint Lawrence River on the Mercier Bridge, pass through Kanhawake Mohawk Indian Village to visit Saint Lawrence Seaway Locks and Hydro Quebec power station at Beaucharnois. See Beaucharnois Canal with discharge of 5000 m³/s, lunch at Valleyfield, or Coteau du Lac, after lunch see Sondelang Canal, visit drainage and irrigation research plots near Route 20, stop at La Salle Hydraulic Laboratory, return to conference centre by 5:00 PM


Depart Congress Centre 9:00 AM, cross Champlain Bridge, view Ice Control Structure, take Routes 10 and 35, cross Richelieu River via plastic pipe production near Irvire, water management research near Pike River, buffet lunch at Les Portes au Ciel at Lacolle. After lunch see intensive vegetable production on organic soils with soil plant and water management near Sherrington and St. Remi, return through Kanhawake Mohawk Indian Village and Mercier Bridge to the Congress Centre at 5:00 PM.
Tour “E”
Tour E-1 Wednesday July 24, Saturday July 27 and Monday July 29, Cost CDN $150.00.
To La Ville de Québec (Québec City). Depart Congress Centre 8:00 AM Return 9:30 PM, Lunch and snacks on route and dinner in Montréal on return. Pass through same excellent cropland, stops to see some construction work, water management for cranberry production, the Chaudière Falls, Historic Québec Bridges, outstanding tourist items in Québec Capital City.

Tour “F”
Tour, Moncton-New Brunswick and Prince Edward Island with tourism food production and soil conservation features.

Four days Tour, Cost CDN $1200.00.
One night in Quebec City, one night in Grand Falls New Brunswick, two nights in Moncton New Brunswick, departs on day 5 from Moncton Airport, or return to Montreal in bus. Some persons could stay on if they wish for further technical and tourist observations in Nova Scotia.

Monday July 29, 2002. Depart Montreal 8:00 AM, stops near St. Hyacinthe to observe soils and crops and wind and water erosion control features. Stop to see water management facilities for cranberry production near St. Louis de Blainville; Chaudiere Falls; Historic Bridges at Quebec City, Montmorency Falls, Tourism at Quebec, overnight at Québec.

Tuesday July 30, 2002. Travel to New Brunswick, one night stay in Grand Falls, visit soil and water conservation projects, Research and Development Partnership Projects with the Potatoes New Brunswick and the Industry, erosion research progress and watershed studies. Grand Falls attraction: Falls and Gorge. Pontoon tour on the St. John River including BBQ.

Wednesday July 31, 2002. Travel to Moncton, tour the Upper Saint John River Valley with a stop in Hartland to view the Hopewell Rocks Oceans Tidal Exploration site and the world’s highest tides. Continuing to Moncton, overnight in Moncton.

Thursday August 1, 2002. Depart to tour Prince Edward Island (PEI) scenic agricultural landscape, stop to view New Brunswick Aboiteau & Dykeland Systems, the famous PEI Confederation Bridge, and view soil conservation activities such as strip cropping, terracing and supplemental irrigation in the Summerside area; stop at the Tourist Centre and return to Moncton Hotel for overnight.

Friday August 2, 2002. Depart to Moncton Airport to their respective countries or return by bus to Montreal.

NATIONAL ORGANIZING COMMITTEE (NOC)
Honorary Chairman: Dr. Tom Anstey
Ambassadors of Goodwill: Mrs. Lorraine and Dr. Harry Hill
Chairperson: Jean-Marcel Laferrière, CIDA, Hull, QC
Technical Program: Chandra Madramootoo, McGill University. Sainte-Anne-de-Bellevue, QC
Organization and Exhibits: Aly M. Shady, CIDA, Hull, QC
Publicity and Media: Laurie Tollefsen, FPRA, Outlook, SK
Finance and Logistics: Omar Aly-Hassan, Consultant, Pierrefonds, QC
Study Tours: Robert S. Broughton, McGill University. Sainte-Anne-de-Bellevue, QC
Accompanying Persons: Ramiro Mayor-Mora, Montréal, QC

SPONSORS
The Canadian National Organizing Committee acknowledges the assistance, financial contribution, sponsoring of participants, supporting organizers, sponsoring of events and sessions, in-kind contribution as well as the moral support provided by the following organizations:

**SPONSORS**

- Agriculture and Agri-food Canada
- AAS Group
- Alberta Agriculture
- Alberta Irrigation Projects Association
- AMEC
- Asian Development Bank
- Brace Centre for Water Resources Management
- Canadian National Committee on Irrigation and Drainage (CANCID)
- Canadian Water Resources Association (CWRA)
- Canadian International Development Agency (CIDA)
- CIAR, System-wide Initiative on Malaria and Agriculture (SIMA)
- Environment Canada
- Food and Agriculture Organization of the United Nations (FAO)
- Fourth World Water Forum (WWF4)
- Geodex and Associates
- Heritage Canada
- HydroSult Inc.
- International Centre for Agricultural Research in Dry Areas (ICARDA)
- International Programme for Technology and Research in Irrigation and Drainage (iPREDIT)
- International Water Management Institute (IWMI)
- International Water Association (IWA)
- Macdonald College of McGill University
- Ministère de la Recherche, de la Science et de la technologie du Québec
- Nova Scotia Agriculture College
- Pears Farm Rehabilitation and Administration (PFRA)
- Third World Centre for Water Management
- Tourism Québec
- The Irrigation Association
- United States Bureau of Reclamation
- University of Guelph
- University of British Columbia
- Western Hemisphere Bureau of the World Water Council
- World Water Council
- World Bank

**MEMBERS:**

Pierre Auger, Ministre de l’Environnement du Québec, Montréal, QC
Yvan Bernier, Group HBA, Québec, QC
Russell Bois, Environment Canada, Regina, SK
Guy Carrier, CIDA, Hull, QC
Sietan Chang, University of British Columbia, Vancouver, BC
Manuel Contijoch, President, Mexican National Committee of ICID, D.F., México, Mexico
Jean Louis Daigle, Agriculture and Agri-Food Canada, Saint-André, NB
Urgel Delisle, Urgel Delisle et Associés, Saint-Charles-sur-Richelieu, QC
Abdel Ghaly, Dalhousie University, Halifax, NS
Peter Havard, Nova Scotia Agricultural College, Truro, NS
John Henderson, Spider International, Fredericton, NB (Deceased)
John Johnson, Land Improvement Contractor Ass. of Ontario, London, ON
Thomas H. Kimmel, Irrigation Association, Virginia, U.S.A.
Robert Lagacé, Université Laval, Ste-Foy, QC
Edwin Lake, Adelac Inc., Orleans, ON
Gréme Linkletter, Linkletter Engineering Ltd., Charlottetown, PEI
Don I. MacIntyre, Klosh-Crippen Consultants Ltd., Calgary, AB

**Accompanying Persons:** Ramiro Mayor-Mora, Montréal, QC

**Honorary Chairman:** Dr. Tom Anstey

**Chairperson:** Jean-Marcel Laferrière, CIDA, Hull, QC

**Technical Program:** Chandra Madramootoo, McGill University. Sainte-Anne-de-Bellevue, QC

**Organization and Exhibits:** Aly M. Shady, CIDA, Hull, QC

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**Finance and Logistics:** Omar Aly-Hassan, Consultant, Pierrefonds, QC

**Study Tours:** Robert S. Broughton, McGill University. Sainte-Anne-de-Bellevue, QC

**Accompanying Persons:** Ramiro Mayor-Mora, Montréal, QC
### Social and Cultural Events

A number of social and cultural events are planned for the participants at the Congress.

**Coffee Breaks:** Refreshment will be served free to all participants daily at 10:15 to 10:45 hrs and from 15:15 to 15:45 hrs in the Exhibition Halls.

**Lunch:** Lunch is available at the Cafeteria as self-serve service and pay your own basis, or at the many nearby restaurants.

**Ice Breaking Cocktail:** Welcoming reception in open to all participants on Sunday July 21, 2002, at 18:30 at the Palais des Congres.

**Opening Ceremony:** Congress opening ceremony will take place in the main hall at the Palais des Congres on Thursday July 25, 2002 starting at 9:00 hrs. It will feature folklore music and dance displaying the multicultural nature of Canada. Bring your video and photographic equipment

**Closing BBQ Dinner and Cultural Show:** The event will be held at the main location at the Palais des Congres on Saturday July 27, 2002 starting at 13:30 hrs. It will feature a farewell music show, distribution of awards and recognitions.

**Refreshment:** Will be served free to all participants daily at 10:15 to 10:45 hrs and from 15:15 to 15:45 hrs in the Exhibition Halls.

**Exhibition Hall:** Lunch is available at the Cafeteria as self-serve service and pay your own basis, or at the many nearby restaurants.

**Cultural Show:** Welcoming reception in open to all participants on Sunday July 21, 2002, at 18:30 at the Palais des Congres.

### Awards and Recognition

**Dr. Hassan Ismail Memorial International Award 2002**

ICID presents every year Dr. Hassan Ismail Memorial International Award in order to encourage young professionals, especially from Africa for carrying out creative work in water management and sustainable development of agriculture. Late Dr. Hassan Ismail was Professor of Hydraulics and Dean, Faculty of Engineering, Cairo University. He was also the Chairman of the Egyptian National Committee on Irrigation and Drainage (ENCID), in whose memory this award has been instituted since 1996.

The award is given to young professionals, below 40 years of age, for their work, which has wide applicability and brought to the notice of irrigation and drainage community through technical papers on African issues contributed to or presented at ICID Congress or Afro-Asian Regional Conference/African activities and judged as the best paper by a Selection Committee composed of Chairpersons of Permanent Committee on Technical Activities (PCTA), Working Group on Research and Development (WG R&D), African Regional Working Group (AIPWRG), Egyptian National Committee of ICID (ENCID) and the Secretary General, ICID.

The award consists of a cash honorarium of US$1000 and a citation and is presented at the annual meeting of the International Executive Council of ICID. This year, the award will be presented at the 53rd IEC meeting scheduled to be held in Montreal, Canada on 27 July 2002. All original papers which are not submitted or published anywhere before and are exclusively by young professionals, connected with the broader field of irrigation and drainage, and contributed at Seminars/Symposia/Workshops organized in the African context such as Nile 2002 Conference or any other African event, are eligible for consideration.

**ICID WatSave Awards 2002**

ICID instituted the WatSave Awards in the year 1997 to recognize outstanding contribution of professionals to water saving/conservation for sustainable irrigated agriculture. There are three categories of awards viz., (1) WatSave Technology Award – for promoting and encouraging best technological applications or research, leading to substantial savings in water applications or uses, (2) WatSave Innovative Water Management Award – for promoting non-technological interventions and/or innovative land and water management/techniques for increasing availability of water for agricultural and/or development of new policies/approaches for water savings leading to cost effective and sustainable use of water, and (3) WatSave Young Professionals Award – for promoting water saving technologies, innovative water management practices, original research leading to substantial water savings etc. by “Young Professionals” below the age of 40 years. The awards are presented at the annual meetings of the International Executive Council (IEC) of ICID.

Each award carries a prize money of US$ 2000 and a citation. The Awards for the year 2002 are sponsored by the Canadian National Committee (CANCID) which will be presented at the 53rd meeting of the International Executive Council (IEC) scheduled to be held on 27 July 2002. So far eight professionals have been honoured with WatSave Awards.

Nominations for the WatSave Awards are invited from individuals/teams through the concerned National Committees/Committee of ICID for consideration. The work of the nominee should be original, having present or potential national/international impact.

Nominations received for the three categories of awards are reviewed by a renowned international panel of five judges appointed by the President, ICID. In the event of the award being made to a team, the amount is presented to the nominated leader of the team.

**First Best Performing National Committee Award (BPNCA)**

The 52nd International Executive Council of ICID held at Seoul in September 2002, decided to institute a new ICID Award viz., Best Performing National Committee Award (BPNCA) to recognize National Committees’ excellent performance and contribution to ICID activities. The award will be made based on the performance of a candidate National Committee during the three-year period between the 17th and 18th Congresses (1999-2002). The various facets/elements for rating of excellence in performance of a National Committee includes status of broadbasing, technical events organized, publications brought out, participation and hosting of various ICID events, membership on various workbodies, contribution to ICID’s financial resources etc.

The first award will be presented during the 53rd IEC meeting scheduled to be held on 27 July 2002. The Award comprises a Rolling Trophy and a Memento. The Rolling Trophy will be kept by the awardee National Committee for a period of 3 years and then passed on to the next winner National Committee. The next award will be made based on performance during the years 2002 to 2005 i.e. between the 18th and 19th Congress.

**WEB SITES**

<table>
<thead>
<tr>
<th>Web sites for more information</th>
<th>Canada general site: <a href="http://www.canada.ca">www.canada.ca</a></th>
<th>Agriculture and Agri-Food Canada: <a href="http://www.agr.ca">www.agr.ca</a></th>
</tr>
</thead>
</table>
**REGISTRATION FORM**

**PERSONAL DETAILS**

- **Mr.**
- **Ms.**
- **Dr.**
- **Prof.**

First Name: ______________________ Middle Name: _________________ Last Name: ______________________

Nationality: ______________ Position: ______________________ Organization: ______________________

Postal Address: ________________________________________________________________________________

Street and Number City State/Province Postal Code Country:

Phone: __________________________________________ Fax: __________________________________________

Country Code Regional Code Number        Country Code Regional Code Number

E-mail: __________________________________________ Web : __________________________________________

Accompanying Person’s : First Name: ______________________ Middle Name: _________________ Last Name: ______________________

Mark as appropriate :
- ❑ I intend to participate
- ❑ I intend to present a paper
- ❑ I intend to exhibit
- ❑ I intend to participate in study tour (select as appropriate):
  - A  ❑ B  ❑ C  ❑ D  ❑ E  ❑ F  ❑ G
- ❑ I am an accompanying person
- ❑ I will require arrangement for hotel accommodation
- ❑ I am planning to arrive on : Date: _________________

**B. REGISTRATION FEES**

<table>
<thead>
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<th>Classification</th>
<th>Fees in CDN$</th>
<th>Add Taxes (GST + PST)</th>
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<tbody>
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<td>Full Participant</td>
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<td>CDN$ (70.00 + 8.03)</td>
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<td>Accompanying Person</td>
<td>No Fee</td>
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<tr>
<td>Students</td>
<td>CDN$ 100.00</td>
<td>CDN$ (7.00 + 8.03)</td>
</tr>
</tbody>
</table>

**C. PAYMENT**

- ❑ Bank Draft I enclose a bank draft equivalent to CDN$ ________ which will be made payable to CANCID
- ❑ Credit Card Please charge to my: 
  - Visa Card
  - Master Card
  - American Express Card

Card No.: ___________________________ Expiry Date: ___________________________

Cardholder’s Name: ___________________________ Signature: ___________________________

- ❑ Bank Transfer
  - Bank Name: Royal Bank of Canada , 360 St. Jacques Street West Branch, Montreal , QC , Canada.
  - Account Name: Montreal2002
  - Branch Number 5341
  - Transit Number 003
  - Account No: 100-701-2
  - Bank Address: 360 St. Jacques Street West, Montreal , QC, Canada.

*Please attach a copy of the remittance. All bank charges must be paid by the delegate.*

Please fill out this form and send it to:

The Secretariat of the National Organizing Committee, ICID 18th Congress and 53rd IEC Meeting (Montreal 2002) 3333 Boulevard Cavendish, Suite 475, Montreal, Quebec, H4B-2M5, Canada.

Phone: +1 (514) 286-1050,    Fax :+1(514) 484-5298

E-mail: montreal2002@cancid.org Web: http://www.cancid.org

Secretariat Use Only Registration No.