Message from the President

Dear Friends and members of ICID family,

I am pleased to write this message from the 2012 World Water Week in Stockholm. This year’s theme is ‘Water and Food Security’ and ICID is participating in a big way. As you know, this year, water for food security has been the major focus of many international events. Paradoxically, this year many regions of the world are also experiencing the extreme drought and flood situation, pushing the world food price at a new high level. Water, food and energy nexus under climate change condition further complicates the water for food security. While policy makers are seeking the practical ways to increase food production, researchers are discussing sustainability and integrated management, farmers are hoping to increase productivity and profitability, etc.

As the largest professional organization involved in managing water for food production, ICID must play an important role to bring together all major stakeholders engaged with water for food security to share information. During the 63rd annual council meeting of ICID held on 28 June at Adelaide, Australia, the Council discussed and identified key issues to be addressed and actions to be taken by ICID. I am glad to apprise you some of the key decisions taken by the council as follows:

- **Admission as Direct Members:** Besides the country membership through the National Committees/Association, there will be Direct Membership to the individuals, institutions and companies. With this initiative we hope to rope in all stakeholders under ICID fold.

- **Organization of World Irrigation Forum (WIF):** World Irrigation Forum will be held as part of ICID’s triennial meetings in the year preceding the Congress year, and the first WIF will be organized by Turkish National Committee (TUCID) in 2013 together with the 64th IEC meeting.

- **Setting up of Irrigation Achievement Award:** To recognize and encourage the outstanding contribution made by individuals in developing/promoting irrigation, drainage and flood management an ‘Irrigation Achievement Award’ will be established. The Award will be presented during each World Irrigation Forum commencing from the first WIF. The Government of China has come forward to provide the seed money for the Award.

- **Recognizing Historic Structures for Irrigation, Drainage and Flood Control Works:** ICID not only promotes the development and application of modern technologies, but also learns and appreciate the philosophy and knowledge from the historic structures for irrigation, drainage and flood control. The protection of such historical structures is of importance to save this heritage. ICID will set up a new award for recognizing the protection of such historic structures.

- **Seeking ways to support LDCs and YPs:** In order to encourage active participation of Least Developing Countries (LDCs) and Young Professionals (YPs) in ICID, ways and means to extend support to them will be established and implemented.

I am pleased to inform you that the ICID Management Board is working on to implement the above decisions made by 63rd IEC. With the broad basing of ICID, we are looking forward in getting full spectrum and involvement of all stakeholders, including researchers, professionals, policy makers, donors/bankers, managers, farmers, manufactures, international agencies/organizations, etc. I am sure that with active participation of all stakeholders, ICID can realize its mission of ‘managing water for sustainable agriculture’ towards achieving food security and poverty alleviation.

I would like to take this opportunity to heartily welcome our three newly elected Vice Presidents - Mr. Laurie C. Tollefson (Canada), Dr. Hüseyin Gündoğdu (Turkey), and Mr. François Brelle (France).

Best regards to all,

Yours truly,

Dr. Gao Zhanyi
President, ICID

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President Dr. Gao Zhanyi said that undernourishment and rising food prices are the major challenges before us. The world currently has about 925 million undernourished population, most of them are in Asia (62%) and Africa (26%). As regards the international food market prices, they have increased sharply simultaneously with the global financial crisis. World’s population is likely to increase from 7 billion in 2010 to 9 billion in 2050 and so also the rate of urbanization. Due to increasing living standards of urban population and changing diets, the food demand has been increasing. So making water available for increased food production is becoming crucial. Paradoxically, there exists both physical water scarcity and economic water scarcity where most of the undernourished population lives.

Prof. Gao informed the gathering about ICID’s active participation in some of the key global and regional events. In March 2012, FAO and ICID coordinated the Theme 2.2 “Contribute to food security by optimal use of water” at the 6th World Water Forum held at Marseilles, France; ICID also participated in the FAO Workshop on ‘Revitalizing Irrigation and Drainage Agricultural Water Governance in Asia’ in April 2012 in Bangkok, the First Asian Irrigation Forum held at ADB Headquarters in Manila in April 2012, and in Rio+20 UN Conference on Sustainable Development held at Rio de Janeiro, Brazil in June 2012. President Gao referring to the discussion at Rio said that there is a pressure to reduce global water use by agriculture from 70% to 60%; which can be achieved by deploying innovative technologies, modernization of irrigation infrastructure and services, increasing water productivity, reclamation of waterlogged and salt affected lands, and innovative management measures. However, this will require more funds and incentives to irrigation agencies and farmers for their application. The Government should provide financial and service supports to farmers, especially to smallholder farmers.

HIGHLIGHTS OF ADELAIDE MEETINGS AND CONFERENCE

The 7th Asian Regional/ Irrigation Australia Conference and 63rd International Executive Council (IEC) meeting of ICID was held during 24-29 June 2012 at the grand Adelaide Convention Centre. More than 500 delegates from 56 countries were gathered in Adelaide - the wine capital of Southern Australia. Parallel with the conference an impressive trade show displaying over 100 irrigation related companies, equipment suppliers, distributors, showcasing their products and services was organized. Technical tours were organized during and post conference.

At the opening plenary session of the Conference, Mr. Tony Burke, Minister for Sustainability, Environment, Water, Population and Communities addressed the gathering through pre-recorded video. President Dr. Gao Zhanyi delivered the keynote speech on ‘Water and Irrigation for Food Security’. Mr. Hon Jay Weatherill, Premier of South Australia, Mr. Peter Toome, Chair IAL, Mr. Ian Atkinson, CEO IAL, and Mr. Thierry Facon of FAO gave speeches on the occasion. In the Conference, over 200 speakers discussed pertinent issues related to irrigation including, integrated water management, modernization, drainage, environment, agriculture, horticulture, economics, flood management.

President Dr. Gao Zhanyi reiterated that “the world needs a strong ICID, which is based on the strength of the national committees with the involvement of all irrigation and drainage professionals, especially young professionals”. Secretary General Avinash Tyagi said that the ICID at its 63rd meeting has taken certain ground-breaking decisions (see elsewhere) to engage various stakeholders in irrigation, drainage, water and land management working for food and water security. These efforts will go a long way in supporting green economy and the decisions taken by the world leaders at the Rio+20 meeting to achieve the “Future we want”.

The following is the gist of speeches delivered by the Conference key speakers:

Mr. Tony Burke, Minister for Sustainability, Environment, Water, Population and Communities addressed the gathering through prerecorded video. He said that the work ICID is doing is incredibly important. “We talk all the time about the importance of food production and food security, and being more efficient with our irrigation. The truth is all the bad delivery comes back to the experts people like you. In Australia, a lot of focus on irrigation has gone into the reforms in the Murray-Darling Basin which are difficult to get through because we are dealing with the real environmental challenges making sure that we only take environmental assets to the limits they can work with, making sure that we actually preserve the health of whole system. It does create other challenges. The government is involved in the improvement and expansion of the irrigation area, in opening new dams, improving dams, in the opening the irrigation footprints in Tasmania, and to support sustainable use of water,” said the Minister.
Mr. Jay Weatherill, Premier of South Australia spoke on the challenges of management of water resources in Murray-Darling basin. It was a concern that highlighted the complexity of development and the increasing realization of the existence of planetary boundaries, a struggle between over-allocation of resources and the crying need of the environment.

“South Australia is in the downstream of basin and we have to fight because the state of health of the river touches almost every aspect of life in the State” said Premier Weatherill. He further stated that over extraction of water of the Murray-Darling Basin by upstream States is affecting the culture, business, economy and environment of South Australia. For many people, the river has a special place for families who are engaged for the whole day fishing and recreation at the river. The river is also a source of water supply for many towns. Thus environmental, social, cultural and productive aspects are truly inseparable”.

Premier said that South Australia has taken just 7% of the water extracted from the river system, while the upstream States have taken 93% of the river water. The upstream states have increased their uptake by about 3.5 billion cubic meters (BCM) of water a year. The Murray-Darling Basin Authority (MDBA) has proposed limiting surface water use in the basin to 10.9 BCM per year and 2.75 BCM of water for environmental flows, which would require a reduction of 2.8 BCM compared with 2009 levels of water use.

Mr. Weatherill said that South Australia Irrigators invested their own money in modernization of irrigation infrastructure – replacing the channels by pipes and to pressurized irrigation systems to improve the efficiency of irrigation. He said that people must not corrupt or pollute the river and must not place it in a way that prevents downstream use. Reasonable use means having regard to all of the legitimate uses of water including the environment. The South Australia has come up with new and better management approach, a sustainable approach to the water resources of the basin.

“The health of the river in South Australia is determined by our decisions, but also the upstream state’s decisions and policies. If you are an irrigator from an upstream state, I have to be frank with you, your state has taken too much water and you’ll have to give some back. A viable future for our Murray-Darling Basin relies on all Australians standing together,” said Premier Weatherill.

ICID Opens its Doors to Private Sector for Membership

ICID focus is not just limited to the engineering aspects of irrigation and drainage. Its technical workbodies deal with all aspects of irrigation, drainage and flood management including agronomic, social, financial and environmental.

Recognizing that the benefit of science and technology can only be realized through innovation and moving with the changing technologies, ICID brings all stakeholders in its core activities under one umbrella. Thus, the decision of granting membership in ICID through Direct Membership to companies, institutions, individuals associated with irrigation, drainage and flood management for sustainable agriculture and rural development. The proposal was approved at its 63rd Council meeting held at Adelaide earlier this June 2012. This means that individuals, businesses and organizations from countries that do not have a National Committee can now join directly and receive the benefits of ICID membership. This new opportunity has great potential to enhance the working of ICID and hopefully will result in greater global exchanges of experiences and multi-/inter-disciplinary innovation.

What are the benefits of Direct Membership?

By Joining ICID, individuals, companies and institutions working or dealing with irrigation, drainage and flood-related issues would:

- be part of an international platform which offers opportunities to exchange knowledge and experience with others and to establish partnerships.
- make their voice heard and contribute to improved understanding between stakeholders, while enabling new ideas on water policy.
- benefit from worldwide exposure of their organization’s activities by using the Commission’s name, logo and communication tools and by participating in the Commission’s activities.
- stay informed on recent irrigation, drainage and flood management news and events through Commission’s publications.
- influence policy makers to develop sound irrigation-related policies and give it higher priority in the political agenda.
- avail the opportunity to engage in professional networking and information exchange activities through participation in National Committees and Regional Working Groups, and in international programmes and processes as representatives of ICID.

Other benefits from ICID membership include:

- In addition, receiving copies of the ICID Journal on Irrigation and Drainage at concessional price based on the type of company or institution,
- Special discount on all ICID publications,
- Special advertisement rates in ICID publications and on website, etc., and
- Special exhibition rates and registration fees during ICID events.

For details of categories of Direct Membership and procedure for application and subscription amount, etc., please access <http://www.icid.org/dir_mem.html> or contact: Dr. S.A. Kulkarni, Executive Secretary, ICID, New Delhi, India at icid@icid.org, <kulkarni@icid.org>
Controlled Irrigation Technology of Rice Cultivation

Rice is a major staple food crop in China and is presently grown on 30 million ha. With rapidly growing water demand by industrial, power, and domestic sectors, the Chinese Government has been significantly investing and promoting various water saving technologies and measures in irrigated agriculture. The country has been at the forefront in researching water saving methods in rice irrigation and in adopting those on large-scale. Prof. Peng Shizhang and his team at Hoai University have researched and promoted a Controlled Irrigation Technology. The technology saves irrigation water, increases grain yield, enhances rice quality, reduce agricultural non-point pollution and greenhouse gases emission from paddy fields. Prof. Shizhang was honoured with ICID WatSave Technology Award 2012 at its annual Council meeting held at Adelaide, Australia in June 2012. The following is a brief of the outstanding water saving contribution.

How Controlled Irrigation (CI) technology is different from Alternate Wetting and Drying (AWD) of Rice Irrigation?

The CI technology is quite different from Alternate Wetting and Drying (AWD) later developed by the International Rice Research Institute (IRRI). In case of AWD, irrigation is applied to maintain a ponding water depth of 5 cm in the field and the lower threshold for irrigation is 15 cm water level beneath the field surface. In the controlled irrigation technology, 10-30 mm water depth is maintained in regreening stage. In other stages, the upper threshold of irrigation is the saturated soil moisture in observed root zone, the lower threshold are the combination of 60-80% of saturated soil moisture at different rice growth stages. Irrigation is applied only when the soil moisture approaches the threshold for irrigation so as to keep the soil saturated.

Besides water saving, improvement in the fertilizer use efficiency and reduction in the non-point source pollution from paddy fields compared to traditional irrigation were observed. Since 1990, the controlled irrigation technology has been adopted over 3 million ha of rice grown area, saved about 9 BCM of water and increased the rice grain production by about 1.6 million tones, annually. There is a potential to expand the controlled irrigation technology to over 50% of China’s rice grown area.

Prof. Peng Shizhang can be contacted at <szpeng@hhu.edu.cn>
The Northern Victoria Irrigation Renewal Project (NVIRP) was initiated by the Victorian Government to improve the region’s inefficient irrigation network, capture transmission water lost to the system and share these water savings between irrigators and the environment. The 6300 km irrigation channel network has been in operation for around 100 years and inefficiencies were compounded by record low rainfalls and long term drought.

The NVIRP is an enabling project, providing a modernized irrigation system that offers improved levels of service to its customers who can leverage further on-farm efficiencies and increased productivity and profitability.

The NVIRP is responsible for planning, designing and delivering a program of works including new irrigation technology developed by Rubicon Systems, Australia, including innovative regulator gates such as FlumeGates™ and a Total Channel Control (TCC®) system. This technology is being installed throughout the extensive irrigation channel network and adjacent farms and enables unprecedented water delivery, measurement and management accuracy as well as a fully automated process to deliver water and monitor water use. The modernized system is also providing water to irrigator’s near on demand and at higher and consistent flow rates facilitating increased opportunities to optimize on- farm water use efficiency and productivity.

The project is being delivered with the cooperation of multiple stakeholders including three tiers of government, NVIRP is working closely with local governments and the local government water authority (Goulburn Murray Water) to deliver the project on the ground to produce the water savings and is also working closely with the Australian Commonwealth Government, which has last year committed over AUD $1 billion to the project.

So far, NVIRP has led the installation of over 2716 Rubicon gates and major control structures, as well as the installation of 117 km of channel lining and decommissioning of over 1000 metered outlets. From 2008 until now, water savings have been mainly realized from the main trunk “backbone” works, where around 3000 km of the main channels have been modernized with automatic SCADA controlled regulators, new mag meters and a small amount of channel remediation works. Removing largely redundant assets assists in reducing system water losses, increases operational efficiency and reduces ongoing operations and maintenance costs - increasing the overall affordability of the scheme for current and future generations of irrigators.

The program has already shown evidence of achieving water savings through the reduction of channel seepages and leakages, meter error, inefficient operation and exceeded savings targets in its first independent audit in 2009. Visitors from all over Australia and the world have commented on the advanced nature of the irrigation technology and they hope to develop similar systems in their home countries.

Water savings generated by the NVIRP project are in turn being independently audited in conformance with a Technical Manual which itself has established world’s best practice in terms of providing a methodology for reliably quantifying water savings as a result of specific works and measures. Management Authority to support other water savings projects such as on-farm efficiency programs which leverage off the benefits of a modernized distribution system. It is expected that Irrigation modernization works over the ten year program will reduce system water losses and generate savings to benefit both the environment and consumptive water users.

Mr. Peter McCamish can be contacted at <peter.mccamish@nvirp.com.au>
IQ™

Pronunciation: /ˈɪ-ˈkyʊuml}/
Function: n
Definition: [ i - intelligent q - flow ]

- A term used to express the superior intelligence in an acoustic Doppler measurement device;
- A score on a standardized intelligence test determined by extraordinary data collection capabilities relative to the average performance of other flow meters.

Irrigation
flow-control
TOTAL VOLUME
Designed for Turnouts
simple installation
Save water. Save money.

Scientific papers, technical notes and SonTek-IQ specifications at sontek.com/iq.
Questions? E-mail: inquiry@sontek.com or call +1.858.546.8327.
See the SonTek-IQ in action: youtube/sontekysi
More than 2400 participants gathered at the 21st Stockholm World Water Week from 26-31 August 2012 expressed their grave concerns at the unseemly fact that a large fraction of the food produced by farmers, is lost, degraded in quality and wasted in the entire supply chain from production to the beneficial intake. This adds to the well-known fact that a significant fraction of the food grain is used as animal feed and to produce biofuels and is blatantly wrong in a world suffering from hunger and malnutrition. It is also a misuse of finite and variable water resources, investments, and missed opportunities of improved income for farmers.

Through 100 sessions and exhibitions (workshops, seminars, side events and special poster sessions), many aspects of the connections between water and food security, including sustainable diets, to energy, environmental issues, etc. were elaborated.

ICID, together with SIWI, FAO and IWMI co-convened a workshop on “Best Use of Blue Water Resources for Food Security” on 28th August. President Honoraire Prof. Chandra Madaramootoo delivered a keynote address on “Renewed Emphasis on Water Storage for Food Production” while Dr. Toru Watanabe participated in the Panel discussions. SG Er. Avinash C. Tyagi chaired the session with Dr. Peter McCormick, Dy. Director General, IWMI. Another keynote was presented by Dr. Charlotte de Fraiture, UNESCO-IHE. A number of lively presentations and discussions ensued.

President Dr. Gao Zhanyi participated in a number of panel discussions: “Governance for Water and Food Security” and Seminar on “Eye on Asia - Food and Water Security”, to name a few. Secretary General represented ICID at the GWP Consulting Partners’ meeting and expressed ICID’s interest in participating in the Integrated Drought Management Program (IDMP) being coordinated by WMO jointly with GWP. ICID has earlier participated in the early phases of inception of the IDMP. President Dr. Gao, Pres. Hon. Chandra Madramootoo and SG Er. Tyagi were joined by VP Dr Francois Molle in various side meetings with a number of partners and solicited their participation in First World Irrigation Forum scheduled to be hosted by Turkish National Committee of ICID in Mardin from 29 September to 5th October, along with the 64th IEC meeting.

Earlier, President and SG participated in the 22nd UN-Water meeting held in Stockholm from 23-25 August. While introducing the food security issue among the members the President invited all the UN-Water members and partners to join the First World Irrigation Forum. A number of possible collaborative activities jointly with other UN-Water members were explored.

**Workshop on Best Use of Blue Water Resources for Food Security**

The participants were unanimous that -

- There are many options for harnessing, storing and using blue water to increase agricultural systems’ output. From buckets to large multipurpose schemes, there is a dynamic development in the harnessing, storing and using blue water resources. As the volumes of water used inevitably increase the challenge of governing individual and collective water allocation decisions becomes a true challenge.

- Large collective irrigation schemes need to modernise and respond to the changing needs of rapidly transforming agricultural production systems in order to improve resource use efficiency. Small, individual water harnessing is booming and is very productive, but it poses pressure on limited resources and grows uncontrolled. New approaches for the governance of water quantity and quality in river basin are needed.

- Water savings are possible when increasing irrigation efficiency but policy makers need to give clear guidance on how to use the water saved. Farmers’ investment decisions depend on perceptions of pay-back. Good data, water accounting and auditing, and information sharing are essential to overcome this.

- Trade/retail consumer interests and innovation and new technology, are important in these decisions. Institutional arrangements, including legal provisions that define the rules and stimulate partnerships between that promote resource stewardship are essential.

**Congratulations to IWMI**

ICID family congratulates International Water Management Institute (IWMI) for being awarded the Stockholm Water Prize for its work in agricultural water management that has “led to new policies and investments in agriculture that have not only more productive use of water, but have enhanced food security, economic development and environment health around the world.”
11th International Drainage Workshop (IDW), September 2012, Cairo

The workshop is hosted by the Egyptian National Committee on Irrigation and Drainage (ENCID). The main theme of the Workshop is “Agricultural Drainage Needs and Future Priorities”. Agricultural drainage can be seen as part of the integrated land and water resources management approach, where environmental aspects play an important role. Advances in the science of drainage address the impact of the system on both productivity and environmental aspects.

The workshop will deliberate on five main topics with 28 subtopics for paper submission. The main topics are:
(i) Planning and design of drainage systems;
(ii) Improvement of drainage technology and techniques;
(iii) Drainage management;
(iv) Environmental aspects and climatic change;
(v) Research, development and capacity building. So far participation from 30 countries and international organizations has been confirmed.

Contacts: Prof. Dr. Mohamed Hassan Amer, Chairman, ENCID Tel: (+2 02) 444 64505 / 010-16419861; E-mail: encid@link.com.eg, Website: http://www.encid.org.eg/idw11

International Training Course on Water Saving Irrigation, September 2012, Beijing

China Research and Training Center is organizing a one-week training course on “Water Saving Irrigation Technology and Participatory Irrigation Management (PIM)” from 20 to 26 September 2012 at Beijing, China. The workshop is fully sponsored by the China Research and Training Centre and Ministry of Water Resources, People’s Republic of China.

For more information, please contact - Mr. Hao Zhao, Deputy Secretary General, Chinese National Committee on Irrigation and Drainage (CNCID), Director, Department of International Cooperation, Ministry of Water Resources of P.R. of China, 1242, A1, Fuxing Road, Beijing 100038, China. Tel: +86-10-68781153, Fax: +86-10-68781153, E-mail: cncid_office@sina.cn

To provide a push to inter-disciplinary activities in the irrigation and drainage sector, ICID envisions facilitating a multi-disciplinary platform with a view to attract various stakeholders engaged in the sector. To this effect the International Executive Council (IEC) at its meeting in Adelaide in June 2012, decided to organize a World Irrigation Forum (WIF) in a triennial cycle starting from the year 2013. First World Irrigation Forum (WIF) will be held at the historical city of Mardin (Turkey) from 29 September to 5 October 2013. The objective of the forum is to bring together all the stakeholders involved in irrigation and drainage of all types and all scales. It would include the policy makers, experts, research institutions, non-governmental organizations, and farmers. The objectives of the WIF are to:

- Develop liaison/ collaboration among various national / international institutions/ organizations/ private sector working for irrigated agriculture,
- Explore and formulate concrete inter-disciplinary proposals, and
- Advocate political commitments.

Mardin as the venue provides opportunity to see irrigation systems acting as facilitators in GAP (South Eastern Anatolian Project), a multi-sectoral and integrated regional development project based on the concept of sustainable development with its basic aim to eliminate regional development disparities by raising people’s income level and living standards.

The 1st World Irrigation Forum will focus on the four themes, viz., (1) Irrigation Management under Drought Conditions, (2) Environmental Impacts of Irrigation and Drainage Projects, (3) Modernization of Infrastructure and Services, and (4) Conflicting Water Use in Different Sectors.

Technical papers sharing experiences on the above themes and sub-themes are invited as per the following schedule:
- Submission of paper abstract(s): 01 November 2012
- Notification of acceptance of abstracts: 15 January 2013
- Receipt of full text of accepted papers: 15 January - 15 April 2013

For details contact the WIF Secretariat:
Devlet Su İşleriGenel Müdürlüğü,
DişilişkilerMüşavirliği,
DevletMahallesininönüBulvan No:16, 06100 YüceltepeÇankaya Ankara, Türkiye, Tel: +90-312-425-4614, Fax : +90-312-425-2059, E-mail:icid2013@dsi.gov.tr,
Website: www.icid2013.org, www.worldirrigationforum.org, Or
WIF Coordinator: Dr. Vijay K. Labhsetwar, Director, ICID Central Office, New Delhi, India. E-mail: icid@icid.org