

News Update

Managing water for sustainable agriculture

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December 2011



INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE (ICID)

The Farewell Message...

Dear Friends,

It was wonderful to come before you each month since January 2004 when I assumed the onerous responsibility of my position as



ICID Secretary General. I shall be relinquishing my position on 31 December 2011 and it is time for me to seek your kind support for the incoming Secretary General A.C. Tyagi.

I entirely owe my successful completion of my term to each one of you. My sincere acknowledgement from the bottom of my heart for your excellent support during the past 8 years.

I consider myself as one of the luckiest Secretary Generals of ICID. Looking back to the history and the length of the term one had served, mine appears to be a longer one, ranking next only to Mr. K.K. Framji. I consider that I am really fortunate to contribute to the ICID mission and be benefitted more, in the process. I had learnt a lot working with you that will remain my treasure.

I had a rare opportunity to work with four Presidents hailing from varied settings, around the globe - for example, PH Keizrul bin Abdullah (Malaysia), PH Peter Lee (U.K), PH Madramootoo (Canada) and President Gao Zhanyi (China). It was great to be associated with a few more PHs – like PH Bart Schultz, PH Aly Shady, PH John Hennessy and in fact, the list could get longer! I am indebted to the support I had from all of them and as many as 30 Vice Presidents, over 300 expert members contributing to specialised workbodies and their Chairs - all with varied and unmatched experience. Besides, I had the fortune to visit many of you in your places, interact personally with nearly a half of our active National Committee Chairs, and their membership, visit a few of the impressive works in their countries that amply illustrated the significant contributions to the irrigation and drainage sector with its own local signature. ICID's great strength through its distributed global network system around the Globe, unique of its own kind, was reassuring and enhanced my confidence that this organisation can contribute to its global commitments in a dynamic and responsive manner.

Well, going beyond our own fraternity, I cherish having had the privilege of interacting, on behalf of ICID, with impressive leaders in sister organisations that deal with water. ICID has mutually beneficial association with many

organisations contributing to water sector. To mention a few, we have very useful association with WWC, GWP, IWMI, IUCN, UNDP, UNEP, World Bank, ADB, UN-Water and its members like FAO, WMO, WHO, UNESCO, WWAP; bodies like IWALC, SIWI etc. My contacts with them during my tenure were cheishable. I strongly felt that it promoted the growth of excellent organisational relationships, helped in synergising our strengths to address agenda of mutual interest like the food security.

As I bid 'adieu', let me once again express my deep gratitude to everyone in our ICID family for their kind support to me and my colleagues in Central Office. I thank everyone in Central Office for standing by me through thick and thin but for which the achievements could have lagged behind. They are dedicated and committed to fly the ICID flag high. It was a joy to work with them in a cordial environment all along.

Wish you all a Merry Christmas and Happy New Year.

Good Bye,

M. Gopkrishnan
Secretary General

News from ICID National Committee

AUNCID, Austria

The General Assembly of the Austrian National Committee on Irrigation and Drainage (AUNCID) has nominated new Office-Bearers for AUNCID. HR Dipl. Ing.

Peter Strauß has become the new Chairman; Mr. Frederick M. CATE, Mr. Drago PLESCHKO and Mr. Manfred ASSMANN – the new Vice Chairman; and Dr. Peter Cepuder has become the new Secretary of the AUNCID.

Chairman: HR Dipl. Ing. Peter Strauß, Institute for Land and Water Management Research, Federal Agency for Water Management, A-3252 Petzenkirchen, Tel: +43 7416 52108 14, Fax: +43 7416 521083, E-mail: peter.strauss@baw.at

Season's Greetings and Best Wishes for a Happy, Prosperous & Fruitful New Year - 2012

Vice-Chairman: Mr. Drago PLESCHKO, Tel: +43 1 71100 7135, Fax: +43 1 71100 7159, E-mail: drago.pleschko@lebensministerium.at

Secretary: Ass. Prof. Dipl. Ing. Dr. Peter Cepuder, Department of Hydraulics and Rural Water Management, University of Agricultural Sciences, Muthgasse 18, A-1190 Vienna, Tel.: +43 1 47654 5471, Fax: +43 1 47654 5499; E-mail: peter.cepuder@boku.ac.at

ICID fraternity extends its warm welcome to all the new Office-Bearers and looks forward to work with them in close association.

IRNCID, Iran

Iranian National Committee on Irrigation and Drainage (IRNCID) has published two books in Persian language titled - (i) Farm Irrigation Distribution Systems and (ii) Water Measurement Manual. Congratulations of IRNCID for this wonderful effort. Contact: irncid@gmail.com.

President visits to Thailand

Since last August to October this year, Thailand had witnessed severe floods in several large areas. During the 21st Congress and 62nd IEC meeting held at Tehran, Iran, October 2011 presentations and discussions brought to the fore the country's calamitous situation due to floods. Responding to the invitation of Mr. Chalit Damrongsak, Director General of the Royal Irrigation Department and Vice President Chaiwat Prechawit and their colleagues, President Gao visited Thailand on 9-11 December 2011.



Accompanied by VP Chaiwat Prechawit, President Gao paid a visit to the five flood prone areas. The severe flood has taken a heavy toll on human lives (*680 people lost their lives*) and properties (*about 712,000 ha of cultivated land were affected*). It is estimated that this year rice production could be reduced by 25

to 30% on account of these major floods during the Monsoon season in Thailand.

The Royal Irrigation Department and THAICID presented to ICID President a detailed introduction on the recent floods and its damages, and the enormous efforts which they have undertaken to minimize the losses of property and life. On behalf of ICID family, President Gao expressed his sympathy to the Government and people of Thailand through Royal Irrigation Department and THAICID for the heavy losses induced by the devastating flood.

Braving all these difficulties, THAICID actively participated in 21st ICID Congress

and 62nd IEC meeting held at Tehran in October 2011. This shows the commitment of THAICID towards ICID and its activities. During his visit, President was very much pleased to know that some of ICID's latest publications had been translated in Thai language for wider dissemination.

President Gao took this opportunity to invite Mr. Chalit Damrongsak, Director General of the Royal Irrigation Department to attend ICID's forthcoming 63rd IEC meeting and make a presentation to share their experience, knowledge, solutions and the lessons which they learnt from the flood fighting this year.

3rd African Regional Conference, Mali – A Report

The 3rd African Regional Conference of ICID was held in Bamako Mali from 29 November to 5 December. The theme of this conference was Food Security and Climate Change: Improve the Contribution of Irrigation and Drainage. More than 200 participants from 25 countries attended the conference, including the representatives from the World Bank, FAO, IFPRI, IWMI and African Development Bank. Dr. Gao Zhanyi, the President of ICID and Mr. Adama Sangare, Vice President of ICID attended the conference.

Mr. Abou Sow, Minister delegate for Integrated Development Office du Niger of Mali attended the opening ceremony and made a speech with the highlight of importance to develop irrigated area in Mali to increase food production for food security and poverty alleviation in Mali. Mr. Agatham Ag Alassane, Minister of Agriculture attended and addressed the closing ceremony. Minister Agthon expressed his thanks to ICID and all participants for attending the conference and sharing the experience, knowledge and information on food security and climate change. He also gave a detailed introduction on the vision of Mali Government for development of irrigation in the country.

The participants actively involved in the conference providing high quality presentations, questions, comments and suggestions. The topics of the sessions nearly covered all issues related to food security, like development of irrigation and drainage including policy, technical, social,

economic and investment, management, environmental and climate change issues. The good news is that in the African Region actions to enhance irrigation development do take place. There are many successful examples and pilots schemes demonstrating increasing water and land use efficiency and productivity.

A special session was conducted in this conference for presenting the preparation of input for the Theme 2.2 of the 6th WWF, Contribute to Food Security by Optimal Use of Water. Group discussion was organized with the active involvement of the participants and many solutions were proposed for the African region. To continue the work, a Committee for Solutions in African is being set up with representative from ICID, FAO, the World Bank, IFPRI and African regional organizations.

Taking this opportunity President Gao invited the participants from African region to attend ICID future events and conferences to share experience, knowledge and information. Several countries in the region have shown their interests to join ICID as active members and follow up actions will be taken.

ICID President Dr. Gao Zhanyi expressed his sincere thanks to the Government of the Republic of Mali, Ministry of Agriculture, Mali National Committee of ICID, and members of the Organizing Committee of the conference, and Vice President Adama Sangare and all the professionals and volunteers for organizing a successful conference in Mali.

ICID Gets India Power Awards

It is with great pleasure, we inform that ICID is one of the recipients of 4th India Power Awards 2011 instituted by Council of Power Utilities (CPU). On behalf of ICID, the Award was received by Secretary General Gopalakrishnan at the hands of the Chief Guest, Hon'ble Dr. C. Rangarajan, Chairman, Economic Advisory Council to the Prime Minister of India at a special function held on 24



November 2011 at India Habitat Centre, New Delhi. The Award was given to ICID in recognition of the excellent work done for the development of sustainable energy.

In a special mail, President Gao congratulated ICID for receiving the Award. He has felt that the Award reflects the excellent work carried out by ICID and the Central Office and acknowledges SG's leadership of Central Office.

Workbody activities emerging from Tehran Congress

- ❖ Working Group on History of Irrigation, Drainage and Flood Control (WG-HIST) proposes to organize a workshop on "Historical Water Sustainability" in Adelaide, Australia 2012.
- ❖ Editorial Board Journal: Two Special Issues of ICID Journal on Irrigation and Drainage will be published in 2012.
- ❖ Working Group on Use of Poor Quality Water for Irrigation (WG-PQW) and Working Group on Environment (WG-ENV) jointly proposes to organize a workshop on "Irrigation, Water Quality and Environment Flows" during the 63rd IEC at Adelaide, Australia in June 2012.
- ❖ Working Group on Water and Crops (WG-CROP) proposes to organize one-day

Call for Papers –

International Workshop on 'Irrigation, Water Quality and Environmental Flows'

An International Workshop on 'Irrigation, Water Quality and Environmental Flows' is planned to be organized by ICID's Working Groups on Environment (WG-ENV) and Working Group on Use of Poor Quality Water for Irrigation (WG-PQW) during ICID's upcoming 63rd International Executive Council (IEC) and 7th Asian Regional Conference (ARC) to be held on 24-30 June, 2012 at Adelaide, Australia.

The workshop will focus on both input and output waters in irrigation, as key interfaces between irrigation systems and the environment. The first sub-theme concerns the quality of input water in irrigation, with a special focus on poor quality water, and related issues. The second sub-theme refers to drainage waters, as return flow and the potential contribution to Environmental Flow Requirements, EFR. This Workshop will bring together experts from all over the world to discuss their experience with using different types of poor quality water and how these should be managed to minimise environmental impacts and promote sustainable practices. The state-of-the-art, and experiences on Requirement for Environmental Flow assessment, interactions with irrigation, impacts of REF implementation will be discussed. A multidisciplinary perspective with many dimensions of the interactions between irrigation, REF and other uses will be debated.

Poor quality water is increasingly used as a source of irrigation water. This is due to a general deterioration in fresh water quality associated with its more intensive use and re-use, the allocation of better quality water to "more economic" uses and the recognition that irrigation can often extract value from water with a quality too poor for other uses.

Traditionally irrigators have been more concerned with crop production objectives, with less focus on reducing the environmental impact of irrigation activities. This narrow approach is no longer adequate and the success of irrigation is increasingly evaluated by determining its long-term sustainability and its broader environmental impacts.

Irrigation remains by far the largest freshwater user and interacts crucially with river ecosystems. Indeed, massive river water extractions for irrigation contribute to depriving river ecosystems of the minimum flow required for their healthy functioning. Drainage and return flow from irrigation potentially contributes significantly to EFR, but this is often not accounted for by practitioners. As a result, irrigators and irrigation systems are sometimes blamed for excessive extractions, yet hardly recognized for return flow, as a positive

externality and a contribution to EFR. In turn, meeting EFR may impose restrictions on extractions for irrigation. Policies on EFR are yet to be developed & implemented in many countries. Further, such requirements remain basically unknown in many basins, despite plethora methodologies available to assess EFR. Finally, EFR establishes the environment as an additional water user, among other sectors, therefore increasing competition for water at the basin level. Economic & social consequences of EFR remain to be established in most basins.

The following subtopics will be dealt with under two main sub-themes.

Sub Topic Themes (Water Quality)

- Irrigation with poor quality water as a means to reduce environmental impacts (reduced salinity and plant nutrients)
- Health aspects associated with irrigation with poor quality water
- Environmental impacts associated with using poor quality water for irrigation
- Management practices that promote sustainable use of poor quality water for irrigation
- Institutional issues arising from poor water quality irrigation impacts on the environment
- Management of poor quality water to reduce salinization of water resources
- Management of poor quality water to reduce salinization of water resources.
- Management of poor quality water to reduce eutrophication (enrichment with plant nutrients) of water resources

Sub Topic Themes (Environmental Flows)

- Irrigation Return Flow: positive or negative externality? Experiences, case studies; quantitative and qualitative aspects, contribution to EFR
- Water quality of irrigation return flow: standards, regulations, monitoring systems
- Assessment of EFR: methodologies, experiences, case studies
- Impacts of implementing EFR on irrigation water use; techno-economic analyses
- Implementing EFR in context of off-stream / in-stream multiple uses
- Case studies on EFR policy & implementation
- Ecosystem Services provided by irrigation drainage: case studies and experiences, policy mechanisms.

The deadline for acceptance of abstracts (600 words) in word file is 15 February 2012.

Please contact VP Dr. Ragab Ragab, Chair, WG-PQW (E-mail: rag@ceh.ac.uk) or Dr. Sylvain-Roger Perret, Chair, WG-ENV (E-mail: sylvain.perret@cirad.fr) for more details. The website of the workshop is <http://online.saneevent.com.au/ial2012/>.

workshop on "Management of Agriculture under Climate Change" in Adelaide, Australia 2012.

- ❖ Working Group on Comprehensive Approaches to Flood Management (WG-CAFM) proposes to organize a workshop on "Adaptive Flood Management" at Adelaide, Australia 2012.
- ❖ Task Force on Financing Water for Agriculture (TF-FIN) proposes to organize a full-day workshop in Adelaide, Australia 2012.
- ❖ Working Group on Water Saving for Agriculture (WG-WATS) proposes to organize an internal workshop on "Water Saving Achievements" in 2012 at Adelaide, Australia.
- ❖ Working Group on Modernization of Irrigation Services (WG-MIS) proposes to organize a Special Session in Adelaide, Australia 2012.
- ❖ Task Force on Water for Bio-Energy and Food (TF-BIO-ENERGY) proposes to organize a workshop in 2012 at Adelaide, Australia.

Forthcoming Events

ICID Events

The 63rd IEC Meeting and 7th Asian Regional Conference, 24-30 June 2012, Adelaide, Australia. Contact: Mr. Ian Atkinson, Chief Executive Officer, E-mail: IAL2012@saneevent.com.au, Website: www.irrigation.org.au/2012.

Other Events

4th International Conference on Water Resources and Renewable Energy Development in Asia, 26-27 March 2012, Shangri-La Hotel, Chiang Mai, Thailand. Contact: Mrs. Margaret Bourke, Conference Project Manager, Aqua-Media International Ltd., E-mail: mb@hydropower-dams.com

India Water Week, New Delhi, April 10-14, 2012. Contact: Director General, NWDA, Email: dg_nwda@nic.in; dgnwda@vsnl.com. Conference website: <http://mowr.nic.in/iww> or Secretary, CBI&P, Email: cbip@cbip.org; sunil@cbip.org, Website: <http://mowr.nic.in/iww>

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Note: link to the renewed Wiley website: <[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1531-0361](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1531-0361)>

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Viktor A. Dukhovny and Dinara Ziganshina
Ways to improve water governance

Murat Kilic and Gokhan I. Tuylu
Determination of water conveyance loss in the ahmetli regulator irrigation system in the lower Gediz Basin Turkey

M. Janga Reddy and S. Adarsh
Slope-stability-constrained design of irrigation canals using particle swarm optimization

Usman Khalid Awan, Mirzakhayot Ibrakhimov, Bernhard Tischbein, Pulat Kamalov, Christopher Martius and John P.A. Lamers
Improving irrigation water operation in the lower reaches of the Amu Darya River – current status and suggestions

Lennart Woltering, Dov Pasternak and Jupiter Ndjeunga
The African market garden: The development of a low-pressure drip irrigation system for smallholders in the Sudano Sahel

G.E. Van Halsema, Beshir Keddi Lencha, Mengistu Assefa, H. Hengsdijk and J. Wesseler

Performance assessment of smallholder irrigation in the central rift valley of Ethiopia

Teklu Erkossa, Michael Menker and Getnet D. Betrie

Effects of bed width and planting date on water productivity of wheat grown on vertisols in the Ethiopian Highlands

Eskinder Zinabu

Assessment of the impact of industrial effluents on the quality of irrigation water and changes in soil characteristics: The case of Kombolcha town

Lambert K Smedema

Drainage development: Driving forces, conducive conditions and development trajectories

B. Hassanpour, M. Parsinejad, M.R. Yazdani, F. Salahshour Dalivand and H. Kossari

Evaluation of modified DRAINMOD in predicting groundwater table fluctuations and yield of canola in paddy fields under snowy conditions (case study: Rasht Iran)

Esmaeel Bayat, Salah Kouchakzadeh and Rasoul Azimi

Evaluating the carrying capacity of a subsurface drainage network based on a spatially varied flow regime

Walter Bausch, Thomas Trout and Gerald Buchleiter

Evapotranspiration adjustments for deficit-irrigated corn using canopy temperature: A concept

R.K. Panda, C.P. Arora, K.P. Gore, P. Jakhar and B.K. Dash

Managing terraced lowland and medium sloping land for sustainable agriculture: A study from the eastern ghat region of India

Book review

Daniele de Wrachien

Water in Central Asia: Past, present and future, Victor A. Dukhovny and Joop L.G. de Schutter. CRC Press/Balkema, Taylor & Francis Group, London, UK, 2011. ISBN 978-0-415-45962-4 (hardback), 410 pp.

ICID

Groundwater resource management

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