

News Update

March 2012

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INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE (ICID)

Managing Water for Sustainable Agriculture



Irrigation is all about resilience against climate variability...



Dear Friends,

Fresh from the 6th edition of the World Water Forum in Marseille, from 12-17 March 2012, with its focus on solutions, and having the chance to meet so many National Committee members,

I feel satisfied by the time well spent. The quality of discussions in some of the sessions at the forum, that I happen to attend, was reassuring. It is amazing how many interesting sessions were there and so little time. Like a feast in front of a hungry person. There was a voice for everyone. The debates are becoming more inclusive and moving away from rhetoric. The integrating nature of water, after all appears to be sinking.

Irrigation is all about application of water to the land or soil fulfilling the water needs of the plant and meeting its requirements of extracting nutrients from soil. It's for the agriculture scientists and engineers to debate on its nomenclature, either based on the way water is applied to the plant or type of the storage from where it is drawn. In a nutshell water has to be provided artificially for use by the plants when it requires, for which rain has to be stored.

Why am I labouring on this trivial issue? Like at other forums meetings and symposia, at the recently concluded 6th World Water Forum also the issues cropped up again. For the sake of smallholder farmers, who have been deprived of the benefits of technological breakthroughs in the past due to this silo attitude, among others, it is high time that

we stop arguing on this moot point. Rainfed agriculture also needs supplemental irrigation if it is to be made resilient to increasing climate variations.

The future of food security, particularly at the farm, family and village level is highly dependent on graduating the smallholder farmers from the subsistence level endeavour to a surplus income generation enterprise. If we really want to help the smallholders, those responsible for providing various inputs to small holders - technology, water, seeds and markets - have to modify their concepts and take an integrated approach.

Having attended last three versions of the WWFs I got the impression that at this Forum ICID was very visible and its leadership in Theme 2.2 was pivotal to the quality of debate. It is regrettable that ICID could not afford to put up an exhibition booth through which we could convey our message to a wider audience present there, but more importantly to meet so many National Committee members that we bumped by chance. The offer of AFEID to provide the meeting point for all ICID NCs was much appreciated but was perhaps not sufficient. JNC-ICID put up a stall within the Japanese pavilion. I apologize to our members who were there but I could not connect with them. Better luck next time. I will fail in my duty if I do not thank PH Bart Schultz for his untiring efforts in successfully coordinating Theme 2.2 along with our extremely close friends in FAO and particularly Dr. Pasquale Steduto. You can find the outcome of the theme in a separate article in this edition of the News Update.

The World Water Day, 22nd of March, later this week this year has the focus on "Water and Food

Security", a topic that is synonymous with the objectives of ICID. FAO is coordinating the activities of World Water Day 2012. With a billion people in the world suffering from chronic hunger and water resources coming under pressure we all have a duty to re-dedicate ourselves to produce more food, of better quality, with less water? You may like to download the material produced by UN-Water on this occasion and raise awareness on this important issue.

In the end I would like to share with you all some positive developments that are taking place in Africa. After a successful Regional Conference in Mali last November-December, VP Sangare, together with Chairman ARID has invigorated some of the NCs in West Africa, while earlier this month, VP Backeberg, along with President of SARIA organised its steering committee meeting and set out a plan of action for capacity building in Africa. But of course you are all preparing to be in Adelaide in June and will be able to shape this initiative a bit more.

Continuing our efforts after successful beginning of e-Bulletin last month, the e-Bulletin in French has been started this week. ICID is also now present on Facebook to improve communication among members.

I look forward to meet you in Adelaide and seek your feedback on this and other issues to meet the objectives of ICID.

Best regards,

Avinash C. Tyagi
Secretary General



International World Water Day is held annually on 22 March as a means of focusing attention on the importance of freshwater and advocating the sustainable management of freshwater resources.

This year, the theme of the World Water Day 2012 is "Water and Food Security" and is coordinated by the Food and Agriculture

Organization on behalf of UN-Water. The World Water Day in 2012 is intended to draw the international attention on the relationships between water & food security. "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" and water is one of the fundamental input to the food production. The main event will take place in Rome, Italy, but celebrations are being held around the world.

Coping with population growth and ensuring access to nutritious food to everyone calls for a series of actions we can all help with: (i) follow a healthier, sustainable diet; (ii) consume less water-intensive products; (iii) reduce the scandalous food wastage: 30% of the food produced worldwide is never eaten and the water used to produce it is definitively lost; and (iv) produce more food, of better quality, with less water.

For more information visit at <http://www.unwater.org/worldwaterday/>

Contribute to Food Security by Optimal Use of Water



Theme 2.2 “Contribute to Food Security by Optimal Use of Water” was one of the twelve key priorities of the 6th World Water Forum (WWF6) held at Marseille from 12 -17 March 2012. The theme was jointly coordinated by ICID and FAO involving more than 28 international organizations and many experts world over. In all nine targets were identified under the theme which were debated during the forum.

The opening session of the Theme was addressed by Mr. Chen Lei, Minister of Water Resources, PR of China and Mr Agatham Ag Alassane, Minister of Agriculture of Mali. They pointed out that adequate and sustainable crop/food production using less water is a key challenge for the 21st century. In rain fed areas, supplementary irrigation boosts the crop yields significantly and requires enhanced investment. Implementing conservation systems for land and water, making smallholder agriculture sustainable and profitable for millions of farmers across the world is a daunting task as they have to face many risk factors - unfavorable weather, fluctuating and low market prices.

For optimal use of water, appropriate interventions (technological, institutional/policy) are needed in food chain from producers to consumers. Although a range of agriculture water management options are available but their implementation is a challenging task. In some emerging countries, there will be sizable expansion of irrigated area for achieving increased food production for the growing population. Area under water saving irrigation systems like micro and sprinkler irrigation, piped water

conveyance is likely to increase faster in coming years. Water use efficiency/productivity of most public canal irrigation schemes is quite low and can be enhanced by adopting modern irrigation technologies, they suggested.

Participants at the eight sessions devoted to each target (see ICID News, 2012/1) concluded that there is a need to gather precise and localized data related to weather, soil conditions and cultural practices in order to provide guidance for producers and policy makers about steps to increase productivity. Such scientific data should be made available to small holders as well as medium and large producers. For example, groundwater information, which is complex, has to be presented in a clear and easily accessible form to users.

The term “Affordable” with respect to pricing of irrigation water should be linked to effectiveness in costs and sustainability in production not to lower costs. Incentives for farmers must address economic revenue or gains for themselves. Private sector involved in food products is actively engaging and investing in increasing water use efficiency of crops and supporting farmers in many countries. It was observed that today the use of non-conventional water is more accepted and widely used in many countries across the world taking advantage of its environmental benefits

otherwise wastewater would become an environmental contaminant.

There is a role for all types of storage including groundwater and soil water storage. A vision for optimal use of water for food security with small scale farmers at its centre should be a part of a broader IWRM plan and take into consideration the other water uses. While formulating food security plans, focus should be on developing and adopting action plans at the sub-regional level rather than visions at the macro-regional level. Commitment for developing vision and action plan primarily the responsibility of the governments at the highest level. Where applicable, river basin authorities are the appropriate level to develop action plans.

It was proposed to develop by 2018 national strategic action programmes for key ‘hotspot’ aquifers exploited by intensive agricultural use through user engagement, which is both critical but as well as a challenge. High levels of food waste in rich countries contribute to higher prices on food commodities with multiple implications Linkage of post-harvest losses and food waste to water waste and sustainable diets was recognized.

ICID committed to continue its work in line with the actions and milestones as described in the various action plans, specifically intensifying the monitoring of progress made, publish about the results in our media, renew our Task Force on storages and look forward to continue its cooperation with FAO and other partners. The 7th WWF is scheduled to be organized by South Korea in 2015. The French and Korean National Committees of ICID have signed an MOU during the forum for taking forward the work and commitments forward until WWF7.

Debate on Storages

This time WWF at Marseille on “Target V on by year 20yy increased by xx% the capacity of water storages in support of irrigated agriculture” fewer but session participants. There were some lively debates and meeting of minds on a number of issues such as the key role of water in adaptation to Climate Change. A very satisfying aspect of this meeting of minds was evident in the session organized jointly by ICID and ICOLD on Storages. For all those who feel that these two organizations stand for only large Storages, there were sufficient pleasant surprises. The invited panelists

consisted of representatives from farmers' organizations, the national policy makers and environment organizations.

There was convergence on the need to consider the entire spectrum of means of Storages available - from soil moisture to small dug outs or ponds, to more organized rain water harvesting water tanks, to groundwater storage, to small, medium and large dams.

The panel agreed that storages are just tools to deal with the climate variability and the climate change looming large on the horizon. They help in developing climate resilience for food security. Depending on whether the

goal is to ensure local livelihoods, local to national food security or it is to generate surpluses for large scale food exports; one can choose the right combination of options. In addition, choice on the means of storage is guided by many given factors such as the topography, geology, and hydrology. But on the ultimate analysis the choice is governed by the enabling mechanisms that are available to give effect to these plans: the available technical knowhow, the existing institutional mechanism, the policy on equity of development and last but not the least the financial capacity.

Food Security Solutions by Africans for Africa

Southern Africa Regional Irrigation Association (SARIA) provides the leadership, resources, expertise and solidarity to find solutions to food security challenges. Member countries of SARIA, a sister organization of ICID, has started a process that will lead to more productive water use and higher food production in African countries.

Members of SARIA held a successful meeting from 14 to 16 March 2012 near Pretoria in South Africa. Representatives of Botswana, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe were present. ICID was represented by VPH Felix Reinders and VP Backeberg. This meeting was made possible by financial support of the Department of Agriculture, Forestry and Fisheries with organisational support by the Water Research Commission, through much appreciated inputs by

Dr. Andrew Sanewe, Chairman of the African Regional Working Group.

The Steering Committee discussed the plan of action to develop a strategy for capacity building in Africa in the field of irrigation. According to this strategy workshops will be organised and presented over the next 3 years under the theme of "Improving water use productivity for increased food production" with priority focus areas as follows:

- (i) homestead garden water use;
- (ii) rain-fed crop water use;
- (iii) irrigation crop water use; and
- (iv) aquaculture.

The aim is to support/capacitate different participants to strengthen/enhance capabilities to systematically increase household food security. Target groups would be mainly (a) officials in government departments; (b) lecturers/trainers, advisors and extension officers; (c) farmers, mainly women, who are responsible for crop cultivation.

It was also agreed to make concerted efforts to form National Committees (NCs) and join ICID. During the next 12 to 18 months the following countries intend to organise NCs: Zambia, Zimbabwe, Malawi, Mozambique and Madagascar. As a first step, all countries represented will identify and/or confirm "champions", who will drive the process of forming teams and organising NCs. This will be followed by lobbying political support and liaison between countries. In this process it will be important to highlight what are the benefits for the membership in joining ICID.

The broad strategy has been set and details will be formulated in co-operation with the Chairpersons of SARIA and the African Regional Working Group to be finalised during the ICID meetings in June 2012. This will enable us to hopefully mobilise additional human and financial resources. The meeting also included a visit to the ARC Vegetable and Ornamental Plant Research Institute and a presentation on Drip Irrigation by Felix Reinders.

ICID on facebook

You can now use the facebook for informal communication between members with common interest and thereby promote their activities. ICID Central Office, after starting the weekly e-Bulletin earlier this month and a French version of e-Bulletin on an experimental basis is taking another step by making use of the latest technology and establishing a "Facebook page" with a discussion area for its members.

All are invited to actively join this group and enrich the newly created platform by registering on the "Want to, like or comment on this page?" box item that appears on the right side of the ICID Facebook page <<http://www.facebook.com/icidat>>.

Please let us know your views and suggestions to make this new "Facebook" section more useful for ICID community. As a starter, let the young professionals join the group and take lead in making these communication means more fruitful.

Meeting between SGs of ICID and ANAFIDE

Avinash C Tyagi, Secretary General of ICID attended the UN-Water First Regional Workshop on 'Safe Use of wastewater for Agriculture' for West African countries, organized during 18-19 February 2012 by UN-Water at Marrakech in Morocco. Participants from water resources / irrigation departments, public health institutions, water and sanitation ministries from 18 countries took part in the workshop.

SG delivered a lecture in the workshop on the need for integrated policy approaches to address the issues.

SG took this opportunity to meet office bearers of Association Nationale des Améliorations Foncières de l'Irrigation, du Drainage et de l'Environnement (ANAFIDE). The meeting was held at ANAFIDE office and was attended by Dr. Abdellahfid Debbah, The Secretary General of ANAFIDE and Director General, Ministry of Agriculture, Morocco. Mr. Tyagi encouraged ANAFIDE to resume their highly active role in the ICID Working Groups as in the past.

Possibility of establishing a Technical Support Unit for Irrigation Project Development for presenting technoeconomically viable proposals to the funding agencies. ANAFIDE expressed its willingness to provide full support, particularly, to the African Francophone countries. ANAFIDE brings out publication on Trimestrielle "Hommes, Terre & Eaux". Morocco has been an active National Committee of ICID since 1959. It has provided one President and two Vice Presidents in the past. We felicitate ANAFIDE on its great achievements.

Meeting with Vice Minister of Vietnam

Secretary General met Prof. Dao Xuan HOC, Vice Minister, Ministry of Agriculture & Rural Development, Vietnam during the WWF6. Tremendous progress being made by Vietnam in developing irrigation



facilities that has turned around Vietnam from a food importing country into the second highest exporter of rice came up for discussions. Minister assured to look into the circumstances leading to the Vietnam National Committee becoming deemed inactive.

11th ICID International Drainage Workshop – Extended deadlines

ICID's 11th International Drainage Workshop (IDW) will be hosted by the Egyptian National Committee of ICID (ENCID) in Cairo, Egypt from 23-27 September 2012. The main theme of the Workshop is "Agricultural Drainage Needs and Future Priorities". The workshop has five main sub-topics:

1. Planning and Design of Drainage Systems
2. Improvement of Drainage Technology and Techniques
3. Drainage Management
4. Environmental Aspects and Climatic Change
5. Research Development and Capacity Building

ICID WatSave Awards 2012

Nominations have been invited for the 'WatSave Awards 2012' in four categories viz. (i) Technology; (ii) Innovative Water Management; (iii) Young Professionals; and (iv) Farmer. The deadline for the receipt of the entries from the National Committees along with a completed 'Nomination Form' in the ICID Central Office, New Delhi is 30 March 2012. Please visit <www.icid.org/awards.html> for other details. For further information, please contact Dr. Vijay K. Labhsetwar, Director, ICID at <icid@icid.org>.

The workshop website <<http://www.encid.org.eg/idw11>> provides more details.

Extended Deadlines: Abstracts of paper(s) submission – **30 April 2012** and submission of full length papers – **30 June 2012**.

Contacts: Prof. Dr. Mohamed Hassan Amer, ENCID Chairman, E-mail: encid@link.com.eg

Call for Papers – International Workshop on 'Adaptive Flood Management'

An International Workshop on "Adaptive Flood Management" (AFM) is being organized by ICID's Working Group on Comprehensive Approaches to Flood Management (WG-CAFM) on 25 June 2012 during ICID's upcoming 63rd International Executive Council (IEC) and 7th Asian Regional Conference (ARC) at Adelaide, Australia.

Following are the sub-themes for paper submission – (i) Hydro-system Changes, (ii) Adaptation strategies to climate change, (iii) Coping with uncertainties in flood managements, (iv) Evolution and Strategies of Adaptive management, (v) Adaptive management in Water resources planning, and (vi) Case studies on AFM Effectiveness and efficiency of AFM, Success Stories of AFM, Lessons learned (in the absence of AFM), and benefits and costs.

Deadlines: Abstracts in 600 words (in word file) to be submitted for acceptance by 31st March 2012 and full length papers submitted: 30 April 2012

Contacts: Dr. Kamran Emami (Iran), Workshop Chair, E-mail: emami@

kuritkara.com, kkemami@gmail.com and Dr. Vijay K. Labhsetwar, Workshop Coordinator, E-mail: icid@icid.org

News from ICID National Committees

ETCID (Ethiopia)

Mr. Teshome Atnafie Guyo has taken over as new Chairman of the Ethiopian Committee on Irrigation and Drainage (ETCID). The contact details are –

Mr. Teshome Atnafie Guyo, Chairman of Ethiopian Committee on Irrigation and Drainage of ICID (ETCID), Ministry of Water and Energy, P.O. Box: 5744/5673, Addis Ababa, Ethiopia, E-mail: teshome987@yahoo.com

ICID fraternity extends its warm welcome to the new Chairman of ETCID, Mr. Teshome Atnafie Guyo and expresses thanks to Mr. Mekonnen Loulseged, former Chairman of ETCID for his contributions to ICID.

GECID (Germany)

The Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) has informed that Mr. Theo Augustin will be the new Chairman of GECID. He replaces VPH Dr. Eiko Lübbe. ICID fraternity extends warm welcome to Mr. Theo Augustin and expresses thanks to VPH Dr. Eiko Lübbe, former Chairman of GECID for his contributions to ICID. Mr. Theo Augustin's contact details are:

Chairman, German National Committee of ICID (GECID), Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, Ref. 415, Ländliche Infrastruktur, Rochusstrasse 1, 53123 Bonn, Germany. Tel: +49(0) 228 99 529 4365; Fax: +49(0) 228 99 529 4262, Email: 415@bmelv.bund.de

JNC-ICID (Japan)

Dr. Shigetaka Taniyama, Vice President Hon. ICID, has informed that his new contact coordinates are :

Postcode 336-0021, 4-8-15, besho, Minami-ku, Saitama-city, Japan. Tel: +048-863-2343 and E-mail address <taniyama@msc.biglobe.ne.jp>

New leadership in KCID (Korea)

President Gao and Secretary General met Dr. Park, Jae-Soon (Korea), who



has taken over as the President and Chairman of Korean National Committee on Irrigation and Drainage (KCID) and other office bearers (including VP Kim Cheol) during the WWF6 in Marseilles and had fruitful discussions regarding the organization of 22nd Congress. ICID fraternity extends a warm welcome to Dr. Park, Jae-Soon in his new role as President and Chairman and thank profusely Mr. Hong Moon-Pyo, the former Chairman for his valuable contributions to ICID. Dr. Park's contact details are –

Dr. Park, Jae-Soon, President and Chairman of Korean National Committee on Irrigation and Drainage (KCID), Korean National Committee on Irrigation and Drainage (KCID), 1031-7 Sa-dong, Sangnok-gu, Ansan-Si, Gyeonggi-do 425-170, Republic of Korea. Tel: +82 31 400 1755/1758, +82 31 400 1759; Fax: +82 31 406 7278; E-mail: kcidkr@gmail.com, kcid@ekr.or.kr

Change of Guards at THACID (Thailand)

The Thai National Committee on Irrigation and Drainage (THACID) has informed that Mr. Lertviroj Kowattana and Mr. Suthep Noipairoj have taken over the new Chairman and Secretary General of the THACID respectively. The contact coordinates are as follows:

Mr. Lertviroj Kowattana, Director General, Mr. Suthep Noipairoj, Deputy Director General of Royal Irrigation Department and Chairman of Thai National Committee on Irrigation and Drainage (THACID), 811 Samsen Road, Dusit, Bangkok 10300, Tel: +662 243 6963, Fax: +662 243 1739, E-mail: thaicid123@gmail.co; and Website: <http://www.rid.go.th/Thaicid>

ICID fraternity extends its warm welcome to the new team and expresses its thanks to Mr. Chalit Damrongsak and Mr. Vira Vongsangnak, former Chairman and Secretary General of THACID for their contributions to ICID

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César González-Cebollada and Bibiana Macarulla

Comparative analysis of design methods of pressurized irrigation networks

N. Dercas and J. D. Valiantzas

Two explicit optimum design methods for a simple irrigation delivery system: comparative application

Sarfraz Munir, Bart Schultz, F.X. Suryadi and Luna Bharati

Evaluation of hydraulic performance of downstream-controlled Maira-PHLC irrigation canals under crop-based irrigation operations

Seied Mehdy Hashemy and Mohamad Javad Monem

Facilitation of operation and maintenance activities of irrigation networks using a

k-means clustering method: case study of the Ghazvin Irrigation Network

Wafa Ghazouani, Serge Marlet, Insaf Mekki, Larry W. Harrington and Alain Vidal

Farmers' practices and community management of irrigation: why do they not match in Fatnassa Oasis?

Aliasghar Montazar and Behzad Azadegan

Effects of seasonal water use and applied n fertilizer on wheat water productivity indices

Kaushal K. Garg, Luna Bharati, Anju Gaur, Biju George, Sreedhar Acharya, Kiran Jella and B. Narasimhan

Spatial mapping of agricultural water productivity using the SWAT model in Upper Bhima Catchment, India

Mahdi Sarai Tabrizi, Masoud Parsinejad and Hossein Babazadeh

Efficacy of partial root drying technique for optimizing soybean crop production in semi-arid regions

A. R. Kiani and S. M. Mirlatifi

Effect of different quantities of supplemental irrigation and its salinity on yield and water use of winter wheat (*Triticum Aestivum*)

S.M. Kashefipour, M.K. Sadr and A.A. Naseri

Modelling drainage water salinity for agricultural lands under leaching using artificial neural networks

Meng Hu, Shaozhong Kang, Jianhua Zhang, Fusheng Li, Taisheng Du and Ling Tong

Potential use of saline water for irrigating shelterbelt plants in the arid region

Shazia Afreen and Faqir Muhammad

Flood frequency analysis of various dams and barrages in Pakistan

G. N. Pradeep Kumar and P. Srinivas

Evaluation of groundwater resources and estimation of stage of groundwater development in a basin – a case study

Er. M. Gopalakrishnan

21st ICID Congress 2011, Tehran, Iran: water productivity towards food security

Guest editors and referees 2011



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