



News Update

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INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE

Established 1950

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From Secretary General's Desk...

Dear Friends,

The year 2009 is indeed special for ICID as it connotes our Diamond Jubilee Year and signifies the richness of the institution having experienced many swings in its cherished mission to contribute for Global Peace and Prosperity. With the decision to hold the 60th IEC together with 5th ARC in New Delhi by expanding the schedule for nearly a week spanning between December 6 and 11, 2009, you would have the advantage of benefiting from both the Regional Congress and IEC workbodies.

In his Presidential message (please see the adjoining box), President Chandra had flagged the opportunities that New Delhi offers for a productive workbody and Council meetings by larger attendance. These meetings are being organized at short notice by hosts, INCID as the decision in shifting IEC venue was just recent. Our website brings out the full details of the first information bulletin which will also be available in an exclusive website for the ARC / 60 IEC, being designed by INCID.

It is my pleasure to join President Chandra and INCID Chairman Bajaj in extending a hearty welcome to New Delhi, home for your Central Office. We look forward to the golden opportunity of receiving you with family in your Central Office during the occasions which is not far from the venue for the conference given its central location amidst the embassies and high commissions of the Diplomatic corps.

Best regards,

M. Gopalakrishnan
Secretary General, ICID

An Update on Topic 2.3 of 5th World Water Forum

ICID is the Coordinator for Topic 2.3 *Water for Food for Ending Poverty and Hunger* of Theme 2 - *Advancing Human Development and the Millennium Development Goals (MDG)* for the 5th

Dear Colleagues and Friends,

I take this opportunity to invite you to the 5th Asian Regional Conference and 60th IEC meeting to be held in New Delhi from 6-11 December 2009.

I am indeed grateful that the Indian National Committee (INCID) with the support of Govt. of India, Ministry of Water Resources and Central Water Commission have agreed to host these two concurrent events which are of highest importance within ICID and to the Asia region as well.

The theme of the 5th Asian Regional Conference is **Improvement in Efficiency of Irrigation Projects through Technology Upgrading and Better Operation and Maintenance**. This theme is very significant given that the largest irrigated region in the world lies in Asia, and some of the oldest irrigation schemes are also found in Asia. Not coincidentally is also the fact the largest number of mouths to feed reside in Asia, and the number is growing! How to feed and clothe this burgeoning population is a challenge for the world community, considering the enormous pressures on land and water resources in Asia, dwindling supplies of water, and the extensive pollution. Current irrigation infrastructure cannot sustain the demands for food and fibre. Productivity and sustainability will require not just improvements in efficiency, technology, and better



President's Message



operation and maintenance, but new irrigator and professional skills. New knowledge, new ways of doing business, and new thinking lie at the heart of the advances required.

By coming together as a world body in Delhi in December, we will have a unique opportunity to put our minds to work collectively on the most severe challenges facing the irrigation and agri-food sectors at this point in history.

I therefore invite you to jot the dates of December 6-11, 2009 on your calendars, and New Delhi as the place to be. Let us avail ourselves of the richness, diversity and culture of India. Let us explore together this land of ancient civilization, wonder and excitement - the home to the Taj Mahal, and our own ICID Central Office. In addition to the business side of the meetings, there is sightseeing, shopping of gold, silver, precious gems, silk, spices, and handicrafts, and visits to some of the finest water resources projects in the world.

Please come with your families and experience some of the finest hospitality of our hosts, INCID and CWC, as well as the ICID Central Office, who I know will go all out to provide a most pleasant and fruitful IEC and Asian Regional Conference.

I look forward to welcoming you to Delhi.

Yours truly,

Chandra Madramootoo
President, ICID

World Water Forum to be held in Istanbul, Turkey from 16-22 March 2009. A Draft Topic Scoping Paper and a Draft Session Plan is continuously reviewed, updated and circulated to the Consortium Partners / Consultative Partners through various channels including Virtual Meeting Space (VMS) of WWF-5 and ICID website. The

latest Draft Topic Scoping Paper and Draft Session Plan are also available on VMS of WWF-5 and on the ICID website. The Scoping Paper for Topic 2.3 will form the basis for the presentations and discussions to be organized under four sessions addressing the following key questions:

Session I - How to achieve the required food production to meet the growing demand?

Session II - How can food market measures boost rural development and poverty alleviation?

Session III - Water for bioenergy or food?

Session IV - How can better water management reduce poverty and hunger? - A synthesis. (Wrap-up Session)

A total of 14 hours have been allocated by the Forum Organizers for Topic 2.3, during which Sessions I, II and III will be organized in parallel with a duration of 4 hours each while Session IV will be a plenary session with 2-hour duration. Session I will act as the introductory session, followed by Sessions II and III whereas in Session IV the findings of previous three sessions will be integrated. Each Session will be handled by a Convener, Co-Convener and a Reporter besides the panelists chosen from Consortium Partners and Consultative Partners for Topic 2.3.

For further details please visit ICID website as well as on VMS of WWF-5 website.

Dr. Saeed Nairizi on the Strategy Theme 'On-Farm'

ICID workbodies are grouped under four Strategy Themes, namely, Knowledge, Basin, Systems and On-Farm. During 59th IEC meeting at Lahore, Pakistan, Vice President Hon. S. Nairizi (Iran) Theme Leader – 'On-Farm' made his presentation on 'On-Farm'. In brief, the presentation brought out key issues.

There are statistics showing that more than a billion people of world don't have access to adequate food for their survival and another billion people are undernourished due to the existing gap between the food demand and supply. However, there is a great potential to increase the agricultural production to meet this demand. How this potential can be realized through irrigated and non-irrigated agriculture is the question which many researchers, scientists and organizations have been trying to address during the past few decades.

Non Irrigated Agriculture

Sixty percent of the agricultural production is coming from non-irrigated farms covering 1.2 billion hectares of land. We can add to these six billion hectares of natural grass land and pastures which are contributing to human food chain. In spite of such a relatively vast rain fed cultivated and non cultivated areas within the human access to be utilized for its welfare, its contribution to the human food basket is limited.

The productivity of rainwater, (also referred by some as green water), in these regions is relatively low. There is considerable scope for improvements, which could enhance the world food supplies. ICID in cooperation with other international agencies, concerned with global food security, may bring the issue within their working group activities to play an important role in this endeavor which would certainly contribute to the enhancement of food security and more importantly to improve livelihoods in rural areas.

The scattered researches show that non irrigated agricultural production, particularly the grain production, can be doubled by : better management of rainfall, some agro-technical improvements, investments in infrastructures and technology, biotechnological enhancements and farmers'.

Irrigated Agriculture

The world irrigated agriculture with area covering 18% of cropped land is producing 40 percent of world's harvested food production.

This demonstrates importance of irrigated agriculture where obviously much attention has been devoted. The expansion of area under irrigation and increase in yield per hectare has taken place in many parts of the world during last 50 years. But it seems that we are approaching the upper limit of global water resources development to be allocated to agriculture, hence limited opportunities exists for expansion of irrigated farming. However, great potential exists in water productivity enhancement.

ICID as the major NGO focusing on the irrigation and drainage worldwide

addresses this challenge and endeavours to demonstrate effective irrigation practices in its member countries. Our contribution would be through knowledge development and technology transfer.

ICID working groups under theme ON-FARM advocate a paradigm shift in knowledge and practices related to irrigation :

- Irrigation principles and practices.
- Appropriate technology.
- Modern irrigation practices.

• Irrigation principles and practice

It has been more than half a century since the scientific approach to the concepts of irrigation water management has commenced and yet, many basic principle of irrigation science remain in ambiguity. The basic concepts of irrigation such as irrigation water requirement and irrigation efficiencies are being questioned.

Potential Evapo-transpiration, which is usually calculated indirectly from meteorological data, is used as an indirect reference for crop water requirement. There are considerable over estimations involved in this procedure due to assumptions made in this context. This includes evaporation from bare land, which is not consumed by crops, the full land coverage by crop canopy, which is not normally the case, and no constraint on availability of moisture for evaporation. There is also over estimation resulting from using meteorological data which are mainly collected from synoptic weather stations, whereas the crop may experience less temperature in the field. So, less evapo transpiration may occur in real world.

Efficiencies are another misconception in irrigation practices. Irrigation water loss is quite a vague concept, depending on the angle and scale you look at it. They differ from farm level to basin level. There may be considerable losses of water due to deep percolation and run off at farm level, which are the main elements causing poor farm irrigation efficiency. But, if irrigation efficiency is considered at basin level, there may not be any losses at all. In large basins, losses of water upstream would be a hopeful

resource for downstream water users. So conventional recommendation and approaches for irrigation efficiency improvement, appeared in many text book and other documents should be reviewed accordingly. Here again, ICID can contribute to clarify this ambiguity.

Deficit irrigation is another promising management practice for productivity improvement. It has been demonstrated that the maximum water productivity for grains at farm level may be accomplished at around 50% of conventional irrigation water requirement. ICID work bodies can orchestrate concerted research actions to provide a guideline for proper technical and managerial approaches to deficit irrigation practices.

The treated wastewater could be a reliable source of water for agriculture. In spite of the relatively long history of using wastewater effluent for agricultural purpose, there are not many source books available to provide the users with the appropriate techniques and management practices for wastewater reuse. These topics could be considered by ICID Working Groups.

• **Appropriate Technology**

Seventy percent of world irrigated land uses surface irrigation systems, particularly in developing and emerging countries. It is therefore very important to define the shortcomings and problems which are limiting the agricultural production in these regions.

The farmers in these regions are typically under educated, have low capacity to invest and obsessed with traditional farming systems. The basic irrigation knowledge and practices such as when and how much water to apply are not exercised. The historical management experiences actually govern their behavior. They have no access to data providing mechanism or agencies for setting up an appropriate irrigation schedule for their farms. Simple flow measuring devices are not available.

Lack of proper education and available funds should be the limits for any advance technology to make significant impact on crop production increases. In this respect ICID On-Farm WG can focus on appropriate and low cost technology development to meet such challenges.

• **Modern Irrigation Practices**

It is very unfortunate that after such a long history of modern irrigation practices, majority of farmers in developing countries are still suffering from low crop yields due to their unawareness of proper irrigation practices. The low investment support, restricts use of modern irrigation concepts.

It is, of course, the responsibility of the governments to construct a vital bridge to transfer the accessible knowledge of irrigation practices to the farmers to improve their livelihood. Presumably the extension services, which are normally designated to act as such a bridge, have limited effectiveness to do so.

ICID as a 'knowledge base NGO' may consider these issues as a strategic commitment and use its capacity through all work bodies and find solutions to communicate with the poor irrigation water users.

Ministerial Conference on Water

The Ministerial Conference on Water held on 22 December 2008 on the shores of the Dead Sea in Jordan marked the speeding up of the issue of water management and the first important step for the implementation of the decisions made by Heads of State and Government on 13 July 2008 in Paris for the Union for the Mediterranean.

Firstly, the Ministers adopted the guidelines of a Strategy for Water in the Mediterranean, permitting the challenges of climate change and its impacts to be met and tackled. This Strategy, which will be submitted to the same Ministers in 2010 will make it possible to handle problems exceeding the means of action of any single country or organisation.

Secondly, the Ministers drew the attention of governance bodies of the Union for the Mediterranean, in view of the rapid development of new equipment projects in the domain of water, consistent with the Strategy. From this perspective, they have already identified an initial series of projects which will be discussed as from January 2009. These projects will be completed during the Fifth World Forum on Water to be held in Istanbul in March

New Additions to ICID's TDS Database (December 2008)

The additions during the months to the TDS Database are:

Article Section – 53 additions (Articles / Papers)

- (i) Irrigation and Drainage – The Journal of the ICID, December 2008, Vol. 57, No. 5 (8 nos.)
- (ii) Canadian Journal of Plant Science, 2008, Vol. 88, No. 3 (7 nos.); Vol. 88, No. 4 (4 nos.); and Vol. 88, No. 5 (3 nos.)
- (iii) WMO Bulletin, April 2008, Vol. 57, No. 2 (7 nos.)
- (iv) Hydropower & Dams, 2008, Vol. 15, No. 5, Special Issue on HYDRO 2008: Progressing World Hydro Development (6 nos.)
- (v) Mausam, October 2008, Vol. 59, No. 4 (5 nos.)
- (vi) Rural 21 – The International Journal for Rural Development, 2008, Vol. 43, No. 5 (5 nos.)
- (vii) Indian Journal of Power and River Valley Development, September-October 2008, Vol. 58, Nos. 9 & 10 (2 nos.)

Book Section – 11 additions; till date 31124 additions have been made to TDS database. The Text Delivery Service (TDS) has received one request during the period from India.

The Text Delivery Service (TDS) database can be accessed by visiting ICID website: www.icid.org.

2009 and the first funds will be finalised for the ministerial conference on sustainable development in Monaco before the end of March 2009.

Please contact Mr. Omar Salameh, E-mail : omar_salameh@mwi.gov.jo for more information.

New IUCN President elected

Mr. Ashok Khosla from India has been elected as the new President of International Union for Conservation of Nature (IUCN). Mr. Khosla once held the position of Director in the United Nations Environment Programme and is Chairman of a Delhi-based Development

Alternatives. The social enterprise promotes commercially-viable, environmentally-friendly technologies for rural communities of the southern hemisphere. He succeeds Mr. Valli Mossa, who has served as IUCN president since the IUCN world conservation congress in Bangkok 4 years ago.

Facts and figures about water and natural disasters

- ◆ The world is experiencing a dramatic increase of suffering from the effects of disasters, ranging from extreme droughts to huge floods, caused by the poor water and land management and possibly by climate change.
- ◆ The burden of loss, of course, is greatest in poor countries than in rich ones, where 13 times more people die from such events than in rich ones.
- ◆ Some 75% of the world's population lived in areas affected at least once by earthquake, tropical cyclone, flood or drought between 1980 and 2000.
- ◆ As a result of disasters triggered by earthquake, tropical cyclone, flood or drought more than 184 deaths per day are recorded in different parts of the world.
- ◆ Floods accounted for over 65% of people affected by natural disasters, while famine affected nearly 20%.
- ◆ Between 1973 and 1997 an average of 66 million people a year suffered flood damage, making flooding the most damaging of all natural disasters.
- ◆ From 1991 to 2000, drought has been responsible for over 280,000 deaths and cost tens of millions of US dollars in damage.
- ◆ The Indian state of Orissa experienced massive flooding in 2000, followed in

2001 by the worst drought in a decade. Out of a population of 32 million in the State, some 27 million people were affected.

(Source: UNESCO Water Portal bi-monthly Newsletter No. 209, October 2008 at <http://www.unesco.org/water/news/newsletter/209.shtml>)

International Agricultural Training Centre (IATC)

The International Agricultural Training Centre in Israel has announced their programmes scheduled between 19 March - 06 April 2009 :

• Water and Crop Production Management

The Crop Production Management programme focuses on developing the tools needed by transitional countries to improve local conditions in supplying food for their country.

• The Role of Agro-technology in Poverty Alleviation and Food Security

Increasing population, desertification, deforestation and draught are some of the reasons to improve the management of crop production methods and systems in order to supply the worlds growing need for food and food related products.

IATC announces that tuition scholarships (which greatly reduce the total cost) are limited, calling for early registration.

For further information about the programmes please visit their website [www :galilcol.ac.il](http://www.galilcol.ac.il), or contact the Programme Director, Ms. Carmel Barouk at cbarouk@galilcol.ac.il.

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60th International Executive Council Meeting (IEC) and 5th Asian Regional Conference (ARC)

The 60th International Executive Council will be hosted by the Indian National Committee on Irrigation and Drainage (INCID) in India together with the 5th Asian Regional Conference (ARC) during **6-11 December 2009** at New Delhi (India).

The theme of the 5th ARC is **“Improvement in Efficiency of Irrigation Projects through Technology Upgradation and Better Operation and Maintenance”**. The sub-topics included are:

- (i) Supply management including pipe distribution system;
- (ii) Organizational management;
- (iii) Demand management;
- (iv) Irrigated area drainage;
- (v) Command area improvement, water conservation, technology improvement, and
- (vi) Legal aspects and gender issues.

Deadlines (revised):

Submission of “Summary and Conclusions” (450-550 words) – **30 April 2009**, Intimation of acceptance – **31 May 2009**, and Receipt of full text of accepted papers – **31 August 2009**

Contact: Member Secretary, Indian National Committee on Irrigation and Drainage (INCID), C/o Central Board of Irrigation and Power (CBI&P), Malcha Marg, Chanakyapuri, New Delhi 110021, India. Tel: 91-11-2611 5984, 91-11-2611 1294, Fax: 91-11-2611 6347, E-mail: sunil@cbip.org, cbip@cbip.org

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