ICID News 2010/3
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Managing water for sustainable agriculture
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Message from the President

ICID and Irrigation and Drainage Research

It is projected that world food production will have to double in less than 20 years to meet the demands of a growing population. This increased production will have to be undertaken under scenarios of diminishing land and water resources. Per capita water availability is expected to shrink by 25-30% over the next 40 years. By 2025, some 1.8 billion people will be living in regions of water scarcity, and nearly two-thirds of the world population could be living under water stressed conditions. Lack of water will seriously restrict food production in these dry, heavily populated regions of the world. Food inaccessibility and unavailability would therefore set back global developmental programs. As we are currently seeing in Pakistan, the opposite situation of heavy and prolonged floods also impedes food security.

There is no doubt that the global irrigation community, and particularly ICID, must refocus and redouble its research, technology transfer, capacity building and information dissemination efforts to combat the problems of water scarcity, floods, and food production plaguing billions of people.

ICID has had workbodies on research, capacity building, and knowledge transfer. ICID was the creator and initial steward of the International Programme for Technology and Research in Irrigation and Drainage (IPTRID). The time has come for ICID to reinvigorate those workbodies, give them more prominence, and breathe new life into IPTRID. I am therefore requesting that Central Office and PCTA re-examine the functioning of those particular workbodies with a view to bringing forward recommendations to IEC for strengthening their performance.

In the case of a renewed IPTRID, I am pleased that based on discussions with several National Committees and some key Ministers of Water, there is a growing consensus that ICID should

establish and lead an International Programme, which is accountable to IEC. We have already seen some early winners in that the Government of Iran signed an MoU with ICID last December in Delhi to lead research in specific areas of irrigation and drainage. The Government of China has also expressed interest in playing a pivotal role in a restructured IPTRID.

I am therefore actively working with our Secretary General to bring forward a proposal at our IEC meetings in Jogyakarta, that will outline an approach to have our National Committees more involved in setting the research agenda, and implementing a work programme that is approved annually by IEC. This proposal builds on the strengths of our National Committees, national and regional research institutions, and the support of various international partners and donors. There is an emphasis on networking and twinning arrangements, and the use of new electronic media to deliver the most up to date information.

I am very excited about what the future holds for these bold new research initiatives that are emerging, and by the interest being shown by various National Committees. I look forward to discussing this with you in more detail in Jogyakarta, and to receiving your inputs.

I close by once again inviting everyone to our IEC in Indonesia, October 10-16, 2010.

Pakistan and China Floods

Dear Friends,

We cannot but be deeply moved at this time by the major flooding in Pakistan and China, the catastrophic damage and more significantly, the loss of human lives. Both Pakistan and China are stalwarts in the ICID family, and have contributed significantly to ICID over the years. Many of us have been fortunate to visit these countries and experience first hand the generosity and friendship of our colleagues.

Therefore as with all families, our hearts go out to our brothers and sisters in Pakistan and China at this time of such immense personal and devastating loss. On behalf of ICID, I extend my sympathies to both countries and their National Committees.

I further take this opportunity to extend the willing hand of ICID to the National Committees of Pakistan and China, during this time of need and solidarity. We stand ready to support these National Committees as they work hard to rebuild their countries.

Many of the great water projects in the world originate in Pakistan and China. This gives hope that the strength and resolve of all the decision makers, technicians and citizens will rise and prevail. I call on all ICID National Committees support our colleagues and friends in Pakistan and China in ways that you deem most appropriate.

Chandra A. Madramootoo, President

It promises to be an exciting event with a well planned technical programme and many side events for shopping, sightseeing, and culture.

I ask you to turn out in record numbers in order to support our Indonesian friends and colleagues, and to participate in many deliberations. ICID is your organization, and it will only succeed through your involvement.

Yours truly,

Chandra A. Madramootoo
President

Indonesian Irrigated Agriculture Boosts Food Self Sufficiency

During October, Indonesia will host the 61st International Executive Council (IEC) meeting and the 6th Asian Regional Conference at the scenic city of Yogyakarta. The Conference theme is 'Improvement of irrigation and drainage efficiency under the small land holding condition'. More than 600 delegates around the world are expected to attend the event. Dr. A. Hafied A. Gany, Vice President, ICID provides a brief on the country's stride in irrigation development.

Land and water resources

Indonesia is an archipelago country comprising 17,505 islands and covering a land area of about 192 million ha. The major islands are Sumatra, Java, Nusa Tenggara, Kalimantan, Sulawesi, Maluku and Irian Jaya. Of the countrys' population of 240 million, three-fifths live in Java. Indonesia has a hot and humid climate. Rainfall occurs during six months (October to April) and varies from 3500 mm to 750 mm. Average annual rainfall is 2670 mm. The country is endowed with some 5,886 main rivers. The total renewable water resources are estimated at 2,838 km^3/ annum, of which about 157 km^3/annum are withdrawn for various uses. By the end of 2009, the country had 137 large dams in operation. The total cultivated area of the country is 35.6 million ha and the total potential area for irrigation was estimated at 11 million ha. Presently 7.4 million ha have been equipped for irrigation. Water withdrawal for agriculture is about 127 km^3 accounting about 81% of the total freshwater withdrawals.

Irrigated agriculture

In Indonesia, irrigation systems have existed since the 8th and 9th centuries. During the mid 19th century, the Dutch colonial government built modern irrigation systems to support development of sugar-cane and tobacco industries. In some other regions of Indonesia traditional village irrigation systems like 'Subak' in Bali and 'Takuak' in West Sumatera still exist.

After independence in 1945, the Government continued to support irrigation management in the country. During the period from 1969 to 1994, the intensive rehabilitation and development of irrigation systems have been carried out. Rehabilitation covered about 2.6 million ha, while on-farm development was carried out on 2 million ha. Modernization of both technical and managerial aspects of irrigation systems were carried out. This included the use of upstream/ downstream controls, computerized asset management plan for irrigation infrastructures, etc.

The goal of irrigation management shifted from the policy of increasing production of rice to a policy to support farmer's prosperity and income. According to the new Government Policy, the priorities to be implemented are; (i) improved performance of irrigation agency services and Water User Associations (WUAs), (ii) improved fiscal sustainability of public irrigation schemes, (iii) increased agricultural productivity and family incomes, through better water availability, facilitated agricultural support services and access to micro-credit.

Paddy rice is grown on about 12.9 million ha. The farmers in Java grow most of Indonesia's rice and produce two rice crops a year. On other islands, farmers practice slash-and-burn agriculture. Farm holdings are quite small; almost 60% of the landholdings are less than 0.5 ha. Since 2007, Indonesian Government has set a goal of boosting rice production. The national average yield of rice is 4.97 t/ha. Consequently, the country once again has achieved a self sufficiency in rice production. Maize, soybean and peanut are other important crops grown.

Challenges and the way forward

Fragmentation of landholdings has resulted in smaller farm sizes of 0.3-0.5 ha per household. As holdings growing progressively smaller, farming tends to become inefficient in scale, as in such small holdings it is difficult to adopt improved agricultural/ irrigation practices.

Inadequate main system conveyance infrastructure and lack of on-farm irrigation works have deterred expansion of irrigated area. Inefficient irrigation water management practices, sea water intrusion due to over pumping of groundwater in some areas, weak water user associations (WUAs) are some other concerns needing attention.

In Indonesia, despite abundant availability of water and land resources, these have not been fully and properly exploited. The Indonesian government has launched a set of general and specific policies on land and water resources development. These include among others: the water saving mission to change the attitudes, habits of all levels of the community as well as government employees in order to use water more efficiently. The policy also includes reforestation and re-greening in upper catchments and to implement soil conservation farming in sloppy areas, improvement in the operation and maintenance of all irrigation infrastructure for optimal functioning, increasing the efficient use of irrigation water by adopting improved techniques like sprinkler/ drip methods and intermittent irrigation to paddy crop, instead of continuous flooding or submersion.

In view of the rapid increase in population and the growing food demand in the coming decades, Indonesian Government need to invest significantly in the agricultural sector including land and water resources development and management.

Irrigated paddy fields in the low-lying plain areas

Rice terraces in hilly and/or mountainous areas

ICID partners ASIA 2010 – Hydropower and Dams Conference, Sarawak, Malaysia

International Journal of Hydropower & Dams organised the 3rd International Conference and Exhibition on "Water Resources and Renewable Energy Development in Asia" (ASIA 2010) at Kuching, Sarawak, Malaysia on 29-30 March 2010. The event was hosted by Hydropower & Dams and Sarawak Energy and was partnered by global agencies such as the UN Economic and Social Commission for Asia and Pacific, World Bank, ICOLD, ICID and others. ICID was a supporting Organization for ASIA 2010. Following is an excerpt from the Conference plenary session.

ICID Secretary General Gopalakrishnan appraised the gathering of the Commission's mission, vision and current activities aimed at ensuring food security for the ever increasing population.
He pointed out that ICID during the past sixty years has been dedicated to enhancing the core sector of water for food through development and management of resources which are increasingly scarce. ICID was established before the present awareness of scarcity in food availability. ICID is a unique international organization striving to secure water for food and to promote efficient agricultural water management with due concerns for protecting the environment. Enhancing productivity from lands calls for international cooperation.

ASIA 2010 was inaugurated by Rt. Hon. Pehin Seri Haji Abdul Taib Mahmud, Chief Minister of Sarawak in the presence of other dignitaries from international organizations

The focus in ensuring water for food production has been receiving increasingly important attention since 2004 from the funding agencies including the World Bank. For better productivity, a change in the concept of managing irrigated and drained lands is needed to get more out of less and less. But the growing demand in the near future seeks a nearly doubling of the production levels and this cannot come singularly from efficient management of available resources in many developing countries. These countries need to complete the requisite development targets. New water resources development is inevitable in these cases. One cannot withdraw from dams and water storage to meet the requirements of teeming populations in Asia and in Africa.

ICID's membership network includes nearly 110 countries. ICID's role has been sizeable in global discussions on water that has led to major initiatives like Agenda 21, World Water Vision, The Comprehensive Dialogue on Water and Food etc. Issues facing the water sector are dynamic; these are all the more challenging with the new drivers like climate change as well as conventional ones like population pressures. ICID's role also shapes and reshapes keeping these broader external influences which compels one to look beyond just the land and water.

From our early works that concentrated on bringing out guidelines on best practices for the design and construction of irrigation and drainage projects, we in ICID, have shifted to broader areas during the last few decades. There is a fresh focus on improvement of system efficiency, rehabilitation and modernization of the vast irrigation and drainage infrastructure. The age old thrust of flood control has changed to new approaches to flood management. The concerns to protect the environment have increasingly been relevant. Sustainable options and developments that are green sensitive are more important.

The growing concern for food security in the light of global commitment, like MDG1 and the need for committing water to this end, was seen when World Water Forum took this up during its last year meetings in Istanbul. ICID was privileged to be invited to form a consortium involving interested global organizations, sensitive to this major issue and coordinate its outcome. The onus of bringing out the way forward is enormous. ICID took on this challenge. The exercise led to a global recognition for the need for doubling food production to meet the growing needs by 2050. The need for increasing storage to mitigate climate change impacts was widely acknowledged.

More external drivers control future water decisions. These could be varied. Apart from population pressure for feeding a growing multitude, the climate change compulsions, bio-fuel policies and energy options, international trade restrictions, etc., have now significant roles in molding the decisions in water sector in many country policies.

Soon after the release of the World Commission on Dams report on Dams and Development in 2000, one realized the necessity for the scientific and technical water organizations to unite to develop positions that are soundly founded on proper S&T footing. ICID was one that joined hands with ICOLD, IWRA and others to jointly develop a voice defending dams and their continuing role as an efficient tool for development, at a time when there were tremendous efforts to dampen development options using storage dams for multi objectives. The compulsions with climate changes ask for a speedy action to over come this dampened spirit; the creation of more dams and storages, wherever a good scope exists assume greater importance in Africa and several arid and semi arid situations in Asia, too. This must be a global agenda. ICID is ready to promote a coordinated water action to ensure sustainability.

Australian Irrigation Conference and Expo Most Successful Ever

The Irrigation Australia 2010 Conference & Exhibition, with its theme 'One Water Many Futures', was organized by Irrigation Australia Limited at Sydney in June 2010. The event has certainly delivered to conference delegates and exhibitor visitors. Ms. Anne Currey, Editor-in-Chief of the 'Irrigation Australia Journal', provides a brief report of the mega event.

According to Irrigation Australia Limited (IAL) Chief Executive Officer, Chris Bennett, all the feedback about both the conference and the expo has been extremely positive.

"All the different activities at *Irrigation Australia 2010* were really well attended," said Chris. "As well as the exhibition and conference, there were a number of different activities like technical workshops, the forum, special interest group meetings and meetings organised by suppliers and manufacturers. These all added to the buzz and are the reason why *Irrigation Australia* is the most important event for the industry," he said.

Delegate record for conference

The conference this year was a joint activity between IAL and the Cooperative Research Centre for Irrigation Futures (CRC IF). With the CRC IF winding up in August, this was, in effect, the organisation's swan song. Many people who worked on CRC IF projects gave presentations, and a record number of delegates gave them the thumbs' up. The first day of the conference got off to a flying start with a keynote presentation by Professor Kader Asmal, University of Western Cape, South Africa.

In an indication of the event's success, there was nearly a full house attend the forum, the last event on Day 3 of the Irrigation Australia 2010 Conference. Delegates weren't disappointed by a lively discussion that was moderated by Ticky Fullerton, from the Australian Broadcasting Commission and CRC IF board member.

ICID President a distinguished guest

Among visitors to Irrigation Australia was ICID President Professor Chandra Madramootoo, who gave a keynote presentation. Prof. Madramootoo also officially presented the ICID Watsave award to the 2009 winner, Dr Malcolm Gillies, at the conference dinner and spoke about the importance of ICID at this time and the opportunity and importance of Australia becoming more involved with ICID as one of the original founding members. He also took the opportunity while in Australia to meet with the Organising Committee for the 7th Asian Regional Conference to be held in June 2012, Adelaide.

Earlier, President Madramootoo visited Goulburn-Murray Water of northern Victoria and met the Goulburn Murray Water (G-MW) Board to understand modernisation and the change taking place in water policy, markets and delivery. Professor Madramootoo said while the technology utilised by many modernisation projects in northern Victoria was innovative and exciting, it was the collaboration of agencies and customer consultation that was the real success.

(L to R): Kelvin Montagu (CRCIF and conference chair); Chris Bennett, (IAL CEO); Scott Barber (IAL National Board director and conference chair), Prof Asmal; Ian Robinson (Commonwealth Water Holder, who opened the conference on behalf of the Hon. Tony Burke, MP); and Ian Atkinson, CEO of the CRC for Irrigation Futures

Forum speakers were (L to R) Richard Stirzaker, Commonwealth Scientific and Industry Research Organisation; Mary Harwood, Department of Environment, Water, Heritage and the Arts; Murray Smith, CEO of the Northern Victoria Irrigation Renewal Project; Sandra Postel, Global Water Policy Project; Geoffrey Kavanagh, irrigator from Emerald in Queensland and CRC IF board member; and Senator Bill Heffernan, Chair, Senate Select Committee on Agriculture and Related Industries

Scenes from the exhibition

This year's *Irrigation Australia Exhibition* was the perfect venue for industry professionals to catch up with the latest technology, as well as with colleagues and suppliers in the industry.

More than 2,700 visitors from all around Australia, as well as overseas, kept exhibiting companies busy with their enquiries. Of the trade visitors, 54% traveled from interstate or overseas to attend, a 3% increase on the previous Sydney event. All reports back from the exhibitors are that they're very pleased with the quality of the visitors.

According to Rob Keen, event director from Exhibitions & Trade Fairs, there were 116 exhibitors at Sydney 2010, an increase on the previous Melbourne 2008 of three exhibitors. Exhibitors came from Australia, France, Italy, Israel, India, USA, Korea and New Zealand.

"Given the softness of the marketplace at present, this was a great result," said Rob. "Another pleasing aspect was the fact we managed to attract thirty-eight brand new exhibitors, six of these being from overseas."

More than 2,700 visitors, who came from all around Australia as well as from overseas, attended the exhibition.

Modern Hose Reel Machines: A Step Forward in Sprinkler Irrigation Technology

The new generation hose reel sprinkler machines have embraced technological innovations and improvements related to field operation, water application efficiency, energy requirement and economic profitability. Modern hose reel machines can be equipped with wireless and GPS technologies and have the potential to be used as the precision irrigation technology in the coming future. Dr. Graziano Ghinassi of the University of Florence, Italy, and Member, ICID Working Group on On-Farm Irrigation Systems briefly describes the innovative features of the modern hose reel machines.

Travelling sprinklers are of two types, those using flexible supply hose to reel in the sprinkler, and those using a wire cable and winch to pull a small wheeled carriage on which a rain-gun is mounted. The former type uses stiff-walled hose and is called as 'hose reel machine' and are popular in Europe; while winched machines use lightweight lay flat hose and are used in USA and other regions. Usually the operating pressure is between 400 and 600 kPa at the gun, but friction losses in the hose add some 200-300 kPa at the hydrant. Travelling sprinklers wet a strip up to 120 m wide and up to 700 m long, depending upon the length of hose. Rewinding speed of the hose/sprinkler unit is usually chosen in due consideration of the irrigation depth and the application rate Correct overlap of consecutive strips is essential to achieve uniform application. Water application uniformity generally achieved is from 70% to 85%.

Historical development

Hose reel machines were first introduced in France during early 70s. First models were quite simple and were deployed for irrigating cereals and fodder crops, cultivated in large and regular fields. However, owing to low uniformity of distribution and the impact of big drops on crop and soil, high operating pressure, high and skilled labour requirement, and consequent high operating cost, travelling sprinklers were mostly used for supplemental irrigation.

Towards the end of the 80s, rain gun machines were equipped with simple control units, in order to regulate some working parameters such as the rewinding speed of the hose. At the beginning of the 21st century, control units developed more functions enabling farmers to get further working information and improved the management of irrigation parameters.

Towards the end of the current decade, new plastic quality allowed bigger and longer polyethylene pipes increasing the working capacity of the machines. Today, polyethylene pipes ranging from 125 to 160 mm diameters and 700 to 500 meters long are in common use.

Modern hose reel sprinkler machines

Technological progress led to overcoming of most of the limitations which affected the performance of the earlier hose reel machines. The modern hose reel sprinkler machines are user friendly, and needs minimal human labor for operation. The new rain-gun and boom sprinklers apply irrigation water much more uniformly and with minimal impact on crop and soil making it suitable for irrigating most field crops and irregular field shapes. Hose reel machines can be equipped with tools for precise applications of fertilizers. A broad range of rain-guns delivering from 10 lps to 70 lps are available. The hose reel machines are manufactured in a wide range commencing from as small as 2 ha farm to as large as 50-60 ha farms. Thus the technology could be very useful for small land holdings in developing countries. The new version of the hose reel machine use spray booms which requires relatively low pressure (about 1.5 bar at the nozzle) and found to be quite useful for close growing crops like potatoes, tomatoes, fodder etc. Typically, a hose reel machine irrigates 4 to 6 ha per day.

The new machines have electronic control units, improved quality of polyethylene pipes, increased efficiency of pumps, hydraulic turbines and transmission systems resulting in substantial reduction in energy requirement. Global Positioning System (GPS) and wireless communication technologies allow users monitoring/ interfacing during the irrigation operations like adjusting sprinkler rotation speed and wetting angle, hose pipe rewinding speed, adjustment of working pressure and also starting/stopping/restarting of irrigation. Control units can display the machine working speed and working time, the scheduled water application depth, the time delay at start and end position, the water flow and other information. Connecting the unit with a GSM modem, information on problems related to pressure, working speeds and other mechanical or setting failures can be sent to preset mobile phone numbers.

Hose real machine using spray boom

Hose real machine using rain gun

Hose real machine for small fields

Owing to improved features, the new generation hose reel machines have become popular not only in Europe but in other regions across the world.

Dr. Graziano Ghinassi can be contacted at <graziano.ghinassi@unifi.it>

Forthcoming ICID Events

61st International Executive Council Meeting (IECM) and 6th Asian Regional Conference (ARC), 10-16 October 2010, Yogyakarta, Indonesia

The theme of the conference is **'Improvement of irrigation and drainage efficiency through participatory irrigation development and management under the small land holding conditions'**.

Several side events like Workshop on 'Nutrient leaching from agricultural soils'; Seminar on 'History of Irrigation in Eastern Asia' ; Workshop on "Water saving practices in agriculture,"; India-Indonesia - Special session will be held during the above period. Preceding the ICID meetings, a FAO/UNW-DPC/ICID workshop on 'Improving farm management strategies through Aquacrop: worldwide collection of case studies', will be held on 8-9 October. Contact: Ms. Elisabeth Mullin Bernhardt <bernhardt@unwater.unu.edu>.

Online registration facility is available at http://icid2010.org/register/. Accommodation can be booked at http://icid2010.org/accomodation/. The event will be held at Seraton Mustika, Yogyakarta Resort and Spa in the heart of beautiful Java Island. The final announcement giving details of registration, programme, accommodation, study tours, technical exhibition, etc. can be accessed at http://www.icid2010.org. For more information, please contact: The Indonesian National Committee of ICID (INACID), 8th Floor of the New Building, Directorate General of Water Resources (DGWR), Ministry of Public Works, Jalan Pattimura No. 20/ Perc. No.7, Kebayoran Baru, Jakarta Selatan, 12067, Indonesia; Tel: +62-21-723-0318, Fax: +62-21-723-0317, E-mail: secretariat@icid2010.org; inacid_indonesia@yahoo.co.id.

24th European Regional Conference, 14-16 March 2011, Orleans, France

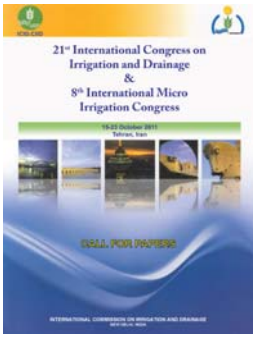
The title of the conference is **"Groundwater resource: An essential resource to be saved and managed"**. The French national Committee of ICID (AFEID) is co-organising this event with four French research institutes viz. Environmental Science and Technology Research Institute (Cemagref), the French Geological Survey (BRGM), the Centre of Agricultural Research for Development (Cirad), and the Institute of Research for Development (IRD). Two farmers' associations of the Beauce region will host the conference. For details, please contact: Mr. Sami BOUARFA, Chair of the 24th ERC, Secrétaire Général, Association Française pour l'Eau l'Irrigation et le Drainage (AFEID), 361 rue Jean-François Breton, 34090 Montpellier–France. Tel: +33.4.67.16.64.09, Fax: +33.4.67.16.64.40, E-mail: afeid@cemagref.fr, sami.bouarfa@cemagref.fr, Website: http://www.groundwater-2011.net/.

25th European Regional Conference, 16-20 May 2011, Groningen, The Netherlands

The title of the conference is ***"Integrated water management for multiple land use in flat coastal areas"***. The event is hosted by the Netherlands National Committee of ICID (NETHCID) and co-hosted by the German National Committee of ICID (GECID). For more details, please contact: Bert Toussaint, Chairman of Organizing Committee, Ministry of Transport, Public Works and Water Management, Rijkswaterstaat Centre for Corporate Services, P.O. Box 2232, 3500 GE Utrecht, The Netherlands. Tel: +31 6 207 91 372, E-mail: bert.toussaint@rws.nl or contact Mr. Pol Hakstege, Secretary, NETHCID, Tel: +31 88 7972316, E-mail: pol.hakstege@rws.nl. Nethcid2011@rws.nl, Website: http://www.nethcid.nl.

3rd African Regional Conference, 12-18 September 2011, Mali

3rd African Regional Conference will be held from 12-18 September 2011 at Bamako (MALI). For details, please contact: Dr. Adama Sangare, President, Association Malienne des Irrigations et du Drainage (AMID), Au Modibo Keita, Im Sulla and Fils, BP 1840, BAMAKO, Mali. Tel: (223) 202 87521, Mobile No: (223) 6674 08 94, Fax: (223) 223 48 82, E-mail: a.sangare@betico.net; betico@betico.net.



21st International Congress on Irrigation and Drainage, 62nd IEC Meeting, and 8th International Micro irrigation Congress, 15-23 October 2011, Tehran, Iran

The theme of the 21st Congress is **"Water productivity towards food security"**. The last date for submission of summary and conclusions (500-600 words) has been extended to **30 November 2010** and the receipt of the full text of the accepted papers as **01 March 2011**. For details, please contact: Dr. S.A. Assadollahi, Secretary General, Congress Secretary, Iranian National Committee on Irrigation and Drainage (IRNCID), No. 1, Shahrsaz Alley, Kargozar St., Zafar Ave., Tehran, Iran, Postal Code: 19198-34453. Tel: (+9821) 2225 7348 – 22250162, Fax: (+9821) 2227 2285, E-mail: irncid@gmail.com, icid2011@gmail.com. Please download the Second Announcement of the 21st Congress at http://www.icid2011.org

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61st IEC Meeting & 6th Asian Regional Conference – Program at a Glance

10-16 October 2010 , Yogyakarta, Indonesia

Day/Date	Sunday 10 October	Monday 11 October		Tuesday 12 October		Wednesday 13 October		Thursday 14 October		Friday 15 October		Saturday 16 October		Sunday 17 October
Time (Hours)	REGISTRATION	09.00-12.30	13.30-17.00	09.00-12.30	13.30-17.00	09.00-12.30	13.30-17.00	09.00-12.30	13.30-18.00	09.00-12.30	13.30-17.00	09.00-12.30	13.30-18.00	POST CONFERENCE TOURS
Theme `Knowledge'		Registration		Registration Start of NCs Display		Registration NCs Display		Registration EXHIBITION		EXHIBITION		EXHIBITION		
		WG-HIST	WG-TRUE and WS	C-PR&P	FAO-ICID ROUNDTABLE	EB-JOUR	TF-SEDIMENTATION	6th Asian Regional Conference Opening Ceremony (09.30-10.30) Exhibition Inauguration (10.30-10.45)		Technical Sessions (3 & 4)		Technical Session 5 (09.30-12.30)		
					TF-WWF 6	MT-JOUR		Technical Sessions (1 & 2) (11.00-18.00)						
Theme `Basin'		WG-ENV	WG-DROUGHT	WG-CLIMATE and WS	WG-CAFM		WG-SDTA	PCTA (11.00-18.00)		INTERNATIONAL EXECUTIVE COUNCIL (IEC)		Conclusion of Meetings and Conference (13.30-15.00)		
Theme `System'		WG-DRG		WG-YPF	WG-MIS	WG-WATS	WG-POVERTY and WS	61st IECM and 6th ARC of ICID ICID • CIID						
Theme `On-Farm'				C-CONGR	WG-CROP	WG-ON-FARM	WG-PQW							
RWGs		ASRWG	AFRWG	ERWG	AMRWG	PCSPOA								
Task Forces		ST-LCB	WG-IDSST	TF-BIO-ENERGY	TF-FIN and WS	CROP WS						Closing Ceremony (15.15-18.00)		
Side Meetings	SC (16.00-18.00) MB (18.00-20.00)		Mtg. NCs with President (17.15-18.15)		PFC		Mtg. NCs – VPs (17.00-17.30) Mtg. OBC (17.30-18.30)							
Seminars/ Special Sessions				WG-ENV Workshop		History Seminar		Special Session: India-Indonesia (13.30-17.00)						
Receptions						Royal Welcome Reception (19.00-21.00)		Dinner by IRNCID (19.00-21.00)		Farewell Dinner (19.00-22.00)				

6th Asian Regional Conference | PCSPOA Workbodies | Task Forces | Side Meetings | PCTA Workbodies | Workshop/Seminars/Special Sessions

Tea/ Coffee Breaks: 10.30 to 10.45 hours and 15.00 to 15.15 hours; **Lunch**: 12.30 to 13.30 hours