MANAGING WATER FOR SUSTAINABLE AGRICULTURE

2012 | FIRST QUARTER

MESSAGE FROM THE PRESIDENT

Dear Friends,

Four months have passed since our Tehran Congress where ICID fraternity deliberated at length on the challenges that we face and the opportunities they provide for improvement of water and land productivity for achieving food security. This is especially a matter of concern in view of the rapidly increasing world population which is expected to grow from the present 7 billion to 9 billion by 2050. Furthermore, the standard of living in the emerging countries is rapidly rising, resulting in changes in dietary habits. It is estimated that an increase in cereal production of 70 - 100% in the next 25 - 30 years will be required, and 80 - 90% of this increase will have to come from existing cultivated land. Water for food has already become the global agenda.

Africa is one of the hotspot areas where the development of irrigation, be it in the form of small-scale or large-scale interventions, is crucial for achieving sustained food production and security. During our 3rd African Regional Conference held in Bamako, Mali in last December, I was very happy to see that many African countries have been deeply engaged in enhancing irrigation facilities and there are many successful examples and pilot projects for increasing water use efficiency and land productivity. I believe that ICID will have to play an active role for further boosting the development of irrigation in the region by supporting its National Committees.

For successful development and improvement of irrigation and drainage systems, enabling key attributes like - strong leadership at various levels, development of national vision; integrated planning; financial and technical capabilities; establishment and enforcement of legal framework; and appropriate institutional mechanism for management are required. For adaptation and extension of new farming technologies, supportive policy, finance and capacity building aspects are the key factors. Therefore, a framework of integrated thinking and comprehensive measures have to be taken up to stimulate and promote the development and application of the arts, sciences and techniques of engineering, agriculture, economics, ecological and social sciences in managing water and land resources for irrigation, drainage, flood management for achieving sustainable irrigated agriculture as enshrined in the ICID mission.

Global food security and water scarcity problems have to be considered and handled at local. national and international levels. Recent initiatives by some leading international institutions are very encouraging. Last December, the World Bank and OECD organized a workshop in Bogor, Indonesia with the theme 'Sustainable water management for food security: An international policy dialogue on progressing water policy reform in agriculture', with a focus on Indonesia. I attended the workshop and made a presentation on the 'Reforms for Agricultural Water Management in China'. The 35th session of IFAD's Governing Council with the theme 'Sustainable smallholder agriculture: Feeding the world, protecting the planet' was held on February 22 to 23, 2012 in Rome. The ADB is planning to host the first Asian Irrigation Forum in April 2012 in Manila.

The 6th World Water Forum is only a few days away. As you are aware, ICID and FAO jointly coordinating the theme 2.2: Contribute to Food Security by Optimal Use of Water. Pres. Hon. Bart Schultz has been working hard and steering the ICID contributions to the Forum. You can find the updates and the various ICID related sessions which will be held at Marseille in this issue. Our Australian National Committee/ IAL is also gearing up to host the 63rd IEC



meetings. 7th Asian Regional Conference besides Irrigation Australia's own Annual Conference and Trade Show in coming June. I am sure that it is going to be the largest irrigation event ever held in Australia and you are planning to be part of this event.

Friends, this is an opportune time for ICID to rededicate itself and push its mission further. As the only leading international organization on irrigation and drainage, we need to further accelerate our activities and improve our presence in global and national deliberations to better serve the farming community worldwide. I am pleased to inform you that the new Secretary General Er. Avinash C. Tyagi has already taken over the charge of the Central Office and together we have been interacting on various issues with the objective of making ICID stronger and responsive. We plan to explore more opportunities to mobilize the resources and strengthen our network including that of our national committees and work bodies, besides liaisoning with affiliated international organizations for the sustainable development of irrigation and drainage.

Best regards to all.

Yours truly,

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Gao Zhanji

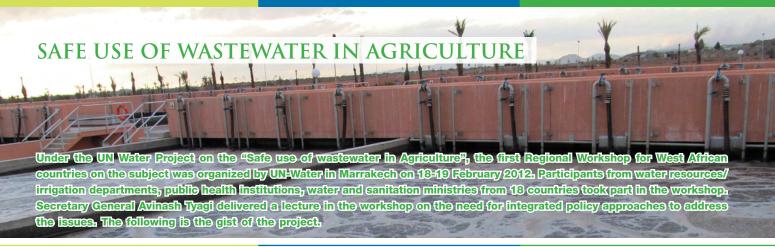
Dr. Gao Zhanyi President, ICID



International Commission on Irrigation and Drainage (ICID) was established in 1950 as a scientific, technical and voluntary not-for-profit non-governmental international organization. The ICID News is published quarterly by ICID ICID•CIID Central Office, New Delhi, India.

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With the increasing coverage of population under sanitation and growing volumes of wastewater, it is fast becoming an important resource of increasing global importance, particularly in urban and peri-urban areas. Wastewater already irrigates approximately 20 million ha of cropland, and 10 per cent of the world's population would starve if they didn't have access to food grown that way.

In majority of the urban areas, the activities in the wastewater sector are focused mostly on wastewater disposal rather than recycle and reuse. Direct benefits of wastewater use are driven from recycling and reuse of water and In addition communities living in the vicinity of areas irrigated by wastewater are exposed to the polluted top soil and the entry of aerosols in atmosphere. Peri-urban areas, generally the users of wastewater, are habited by the most vulnerable sections of society and being adjunct to rivers, low lying are exposed to frequent flooding.

As receptor of flood waters they have the potential to spread the contaminated wastewater used for irrigation to the downstream areas. However, the benefits of wastewater farming far outweigh the drawbacks.

partially treated, diluted or raw wastewater? How do we manage health risks that are posed by use of each one of them? What kind of land management practices do we need to make its successful and minimized risks? What are the economic considerations? Is it socio-culturally acceptable?

ICID, through its Working Group on Use of Poor Quality Water in Irrigation (WG-PQW) has been looking into the use of wastewater issues for more than a decade. With these inputs ICID has joined the UN Water Project on the "Safe Use of Wastewater in Agriculture". The project brings together the combined expertise of the



WORKSHOP PARTICIPANTS

nutrients, thereby reducing the need for farmers to invest in chemical fertilizers. It provides a reliable water supply alternative to farmers particularly in low-income dry areas. Indirectly, it prevents pollution of rivers, canals and other surface water bodies that would otherwise be used for the disposal of the wastewater, and provides a means for disposal of municipal wastewater in a low cost and hygienic way.

Using wastewater has its associated health risks. It poses hazards in terms of bacterial infection; viral infection; protozoan infection; and helminthes. The industrial wastewater contains heavy metals such as Arsenic, Mercury, Lead, Cadmium, Barium, Copper, Cyanide, Manganese etc. A variety of human population is exposed to these health hazards such as farm workers through contact with wastewater; consumers who use the products - vegetables and salads eaten uncooked, and individuals using sports fields and public parks.

Wastewater treatment to acceptable standards, restriction of crops grown in wastewater irrigated areas, application of the wastewater to the crops through appropriate irrigation techniques, thereby minimize human exposure are some of them which have to be weighed from health risk management principles.

Reuse of wastewater has not received much attention by the policy/decision makers due to lack of viable models with necessary research and technology support. Strong policies and legal framework at the national and state levels and sufficient trained manpower in the urban local bodies are required.

The questions that need to be answered are whether wastewater is a viable new resource as compared to other means of augmenting the water supplies through alternative means such as water transfer, desalination etc. Do we use fully treated wastewater or can we accept

networks of FAO, WHO, UNEP, UNU-INWEH, IWMI and ICID. After the inception workshop bringing experts from 12 countries in November 2011 in Bonn, a series of regional workshops are planned during the rest of the year and in the first quarter of next year. This stage of the project will culminate in a wrap up workshop sometime in May 2013.

ICID has been honoured to organise the second workshop for the central, western and south Asian countries. The workshop is scheduled to be held in May 2012 in New Delhi. The National Committees of countries in these sub-regions will be requested to coordinate with other institutions within the countries and participate in the workshop.

ICID AND FAO TO COORDINATE DEBATE ON FOOD SECURITY BY OPTIMAL USE OF WATER AT 6TH WORLD WATER FORUM, MARSEILLE

The 6th World Water Forum aims to be the forum of solutions. It addresses 12 thematic priorities intended to cover issues of financing, governance, and knowledge related to water management. ICID and FAO are coordinating the preparations for the Thematic Priority 2.2 "Contribute to food security by optimal use of water". Through a series of surveys and stakeholder consultations, 9 Targets have been identified and will be debated during the Forum to move from "targets" to "solutions". Pres. Hon. Prof. Bart Schultz, Chairman, ICID Task Force on WWF6 and Co-coordinator of the Priority 2.2 provides updates.



The 6th World Water Forum (WWF6) is scheduled to be held during 12-17 March 2012 in Marseille, France. The goal of the Forum is to raise water issues higher on global agenda. The focus of WWF6 is on targets and solutions. There is a thematic process, a regional process, and a political process. Twelve Thematic Priorities are addressed (see box 1).

Box 1. Twelve Thematic Priorities		
1.1	Guarantee access to water for all and the right to water	
1.2	Improve access to integrated sanitation services for all	
1.3	Contribute to hygiene and health through water and sanitation	
1.4	Prevent and respond to water-related risks and crises	
1.5	Contribute to cooperation and peace through water	
2.1	Balance multiple uses through IWRM	
2.2	Contribute to food security by the optimal use of water	
2.3	Harmonise water and energy	
2.4	Promote green growth and value ecosystem services	
3.1	Improve the quality of water resources and ecosystems	
3.2	Adjust pressures and footprints of human activities on water	
3.3	Respond to climate and global changes in an urbanizing world	

Under each theme, a series of targets translate the identified issues into concrete and achievable objectives, and workable solutions will be proposed at the Forum.

ICID jointly with the FAO is involved in the preparations of the Thematic Priority 2.2 on 'Contribute to Food Security by Optimal Use of Water' as well as in 2.1 on 'Balance Multiple Uses through IWRM'. Under the Theme 2.2, nine Targets have been firmed up (see box 2) and will be presented at the Forum besides the opening session, a multi-stakeholder panel, and a synthesis session (See box 3).

Box 2. Targets under Thematic Priority 2.2			
T-1	Increasing rainfed land productivity (15% to 25%)		
T-2	Sustainably increase water productivity of irrigated agriculture (15%)		
T-3	Sustainably increase productivity and lower costs of water management for food security at affordable prices for all		
T-4	Increase safe use of non-conventional water of lower quality for agriculture and aquaculture (25%)		
T-5	Increasing capacity of water storage in support of irrigated agriculture		
T-6	Adopt macro-regional visions for optimizing water use for food security		
T-7	Develop national strategic action programmes for over exploited aquifers		
T-8	by intensive agricultural use		
T-9	Improve food supply chain efficiency and promote sustainable diets (50%)		
	Improve water management for more food production for smallholder farmers		

High level political leaders / officials of Ministries of China, France, India and representatives of as many as 28 international organizations/ NGOs, financing institutions are expected to participate in the Theme 2.2 deliberations.

For Theme 2.2, the Coordinator of the Core Group is FAO (Pasquale Steduto) and the Co-

Box 3. Schedule of Theme 2.2 Sessions

Date	Time (hours)	Session
March 14	11.00 - 13.00	Opening
(Wednes- day)	14.30 – 16.30	Target V
uuy)	14.30 – 16.30	Target VII
	17.00 – 19.00	Multi-stakeholder
March 15 (Thursday)	08.30 – 13.00	Target VIII (Combined with Target 3.2.4)
	08.30 - 10.30	Target III
	11.00 - 13.00	Target IV
	14.30 – 16.30	Target IX
	14.30 – 16.30	Target I
	17.00 – 19.00	Target II
	17.00 – 19.00	Target VI
March 16 (Friday)	11.00 – 13.00	Synthesis

coordinator is ICID (Bart Schultz). Francois Brelle (AFEID) is the Co-coordinator for Theme 2.1. For each Target, Coordinators / Co-coordinator and Solution Group Members have been constituted. Target III "Increase sustainable productivity and lower costs of water management (yield per ha, per m³ of water and per unit production cost) in such a way that by year 2025 there is food security at affordable prices for all" is coordinated by Jacques Plantey and Bart Schultz; while the Target V "Increasing capacity of water storage in support of irrigated agriculture in an environmentally sufficient and socially sound management" is coordinator by Pres. Hon. Chandra Madramootoo and Jinsheng Jia, President ICOLD.

Since January 2011, FAO and ICID have been engaging a growing number of experts in the preparation process through online surveys and sessions at high level conferences. Efforts are made to engage on experts both online before the Forum and face to face during the Forum to ensure that interested people have an opportunity to influence action plans and recommendations on water and food security on the water agenda.

All ICID members are encouraged to participate in WWF 6 and join the sessions related to themes 2.2 and 2.1.

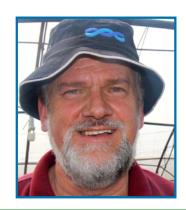
The Forum Secretariat has invited solutions to various Targets. Solutions submitted by ICID and others as published on the Forum website can be viewed at http://www.solutionsforwater. org. A draft Core Group Sessions Proposal Report on Theme 2.2 has been prepared and circulated among all National Committees, Chairs of workbodies, Office Bearers and other core group stakeholders. The report, updated session proposals, metaplan and presentations made during the TF meetings/ Special Session can be accessed at http://www.icid.org/wwf6. The details of registration and updates of the WWF6 can be accessed at www.worldwaterforum6.org.

For further information please contact Prof. Bart Schultz <schultz1@planet.nl>/ Dr. S.A. Kulkarni <kulkarni@icid.org>.



IRRIGATION, DRAINAGE AND FLOOD MANAGEMENT IN AUSTRALIA

ICID and Irrigation Australia Limited (IAL) will host the largest irrigation event in Adelaide, Australia during 24-29 June 2012. This includes ICID's 63rd IEC meetings, 7th Asian Regional Conference, Irrigation Australia Conference, a large irrigation Trade Show, many international workshops and study tours. Dr. Willem F. Vlotman, Chairman, Irrigation Australia's Committee on Irrigation and Drainage (IACID) and Vice President, ICID provides a brief on the latest irrigation, drainage and flood management initiatives in Australia.



Climate Variability

Australia is the driest inhabited continent on the earth. Rainfall can be extremely variable and droughts and floods at various scales are common occurrences (Figure 1). Since reliable climate records began in the 1820s, Australia has experienced 10 significant drought periods and 11 major floods in various parts resulting in an extremely challenging environment for agricultural production.

resources have been estimated at 336 billion m³ (BCM). A storage capacity of about 84 BCM has been created through dams.

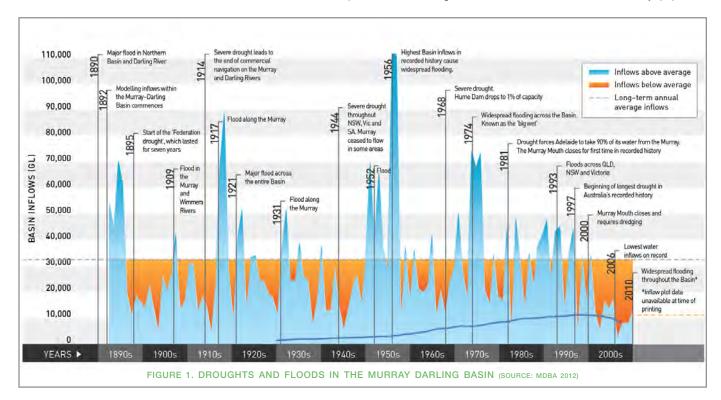
Irrigated agriculture

The agriculture industry is a major water consumer in the Australian economy, accounting for 65% (7,359 million m³) of the total water consumption by various sectors. In 2009-10, 1.84 million ha of land was irrigated consuming 6,596 million m³ of water. Sprinkler and micro irrigation

these irrigators are supported by professional irrigation services such as engineers, rural water providers, and irrigation agronomy consultancies, and irrigation design, installation and training services.

Water Act 2007

In response to long and severe droughts across most of the country and with new climate change modelling projecting further rainfall declines across the more heavily populated



During the 20th century, the response to climate variability was mostly to build water storage dams for use in drought periods, with less focus on flood mitigation and response. Irrigation areas expanded significantly during 1930–1990, when at last a cap on diversions was established in the Murray Darling Basin.

Since records began many systems throughout Australia have received some form of regulation, whether it is for drainage or irrigation.

Australia's current population is 22.8 million and the country's average annual renewable water

is adopted on about 38% of the irrigated area. Drained area is about 2.2 million ha. Pasture for grazing accounted for the largest share of irrigated land (542,000 ha) consuming 26% of the total volume of irrigation water applied. About 10% of the agriculture water is used for livestock drinking, and dairy and piggery cleaning purposes.

Irrigated agricultural production is valued at between AUS\$ 9 -11 billion a year, producing 30% of all agricultural production value on less than 5% of agricultural land in Australia. There are about 41,000 irrigators across Australia, and

and farmed southern half of the country, the Australian Government established the 'Water Act' in 2007 as a national level response to improving long term water management. Until this time, states were solely responsible for managing water resources. Emphasis of the Water Act is on restoring health of the various rivers sustainably. Many of Australian rivers are rated to be in poor ecological health due to drought and over extraction of water for consumptive use and agricultural production. Australia is leading the way in responding to various extremes in the climate through a

range of water sector policy reforms with the Murray-Darling Basin being a major pilot area for these new initiatives.

Modernization of Irrigation

Even before the latest round of improvements to sustainable Integrated Water Resources Management (i.e. the Water Act 2007 and subsequent 2008 intergovernmental agreement for the Basin Planning to proceed) many water efficiency projects were already well under way. For instance, the Victorian State Government in 2002-03 commenced a major project using Total Channel Control as new irrigation management technology. This technology includes channel lining, computer controlled operation, improved metering accuracy (Figure 2), and optimization of channel layout which was subsequently rolled out across the entire 6,500 km long GMW channel network. The Victorian Government announced additional modernization projects in 2006, 2007, and 2008 to save estimated 500 million m³ of water to be shared equally among the environment, the irrigators and the Melbourne urban community. The investment was based on the premise that delivery efficiency could be increased from 70% to 85%.

The average off-farm efficiency (from the storages to the farms) and the system efficiency (from storage to plants) of large irrigation schemes in Australia are about 70% and 50%, respectively. The Australian government has allocated AUS \$12 billion to invest in water projects and strategic programs across the nation including infrastructure investment to help water users adapt to a future with less water, purchasing

water for the environment, and a renewed commitment to water reform nationally with the idea of making the environment healthier.

Australia being a water-scarce country has instituted markets for trading water - the term used to describe transactions (between a buyer and a seller) involving water access entitlements. Trading can occur on a permanent or temporary basis. Since the reforms began large volumes of water have been bought and sold both within and outside the Murray-Darling Basin. This water market remains the centrepiece of national water reform. The unavoidable fact of Australia's irrigation industry is that there will probably be a lot less water available in future for irrigated agriculture.

Murray-Darling Basin Plan

Almost a guarter (24%) of all agricultural land in Australia is located in the Murray-Darling Basin (MDB). In 2009 -10 the MDB accounted for 37% of Australia's irrigated agriculture businesses, 53% of all irrigated agricultural land, and 54% of irrigation water applied. In December 2011, the draft Basin Plan was released for public consultation. The primary focus of the Basin Plan is to set binding 'sustainable diversion limits' on water use across the Basin to ensure sufficient water to meet environmental needs, after also taking into account socio economic considerations. Sustainable Diversion Limits will set new constraints of extractions for consumptive use for all basin. Assumptions about minimum inflows are core to planning and seasonal water allocations.

To meet the challenge of reduced water availability in the future, the Government has committed more than AUS\$ 4 billion so far to upgrade and modernise water and irrigation infrastructure in the Murray-Darling Basin. As part of its support for irrigators to modernise their infrastructure, the Government has invested more than AUS\$ 4.6 million to assist 18 water providers to develop modernisation plans for irrigation districts and covering about 75% of total irrigation entitlements in the Murray Darling Basin.

Flood Management

River Murray System Operators are required to observe the Emergency Action Plan (EAP) which includes annual flood training. The EAP is regularly reviewed to ensure currency. MDBA uses flood software (MIKE) to establish hydraulic models for icon sites and has contingency plans for managing episodic river salinity following flood events. Flood plain management plans for basin creeks and rivers are developed by each state by adopting community owned strategies to manage flood risk and support the requirements of the floodplain environment. The focus is upon 'a floodplain managed for the socioeconomic interest of the community that provides a healthy and sustainable environment for floodplain ecosystems'.

Situations in the Murray Darling are experienced in other regions and states as well. For instance, in Queensland, over 70% of the state was in drought for around 6 years and then in 2010-11 saw most of the state either affected by flood or by a major cyclonic event. Queensland has

a suite of demand management tools which were effectively used in south-east Queensland during the Millennium drought to cut residential water usage by more than half. The Queensland Government invoked the International 'Charter for Space and Major Disasters' during this event resulting in a large amount of spatial information being captured.

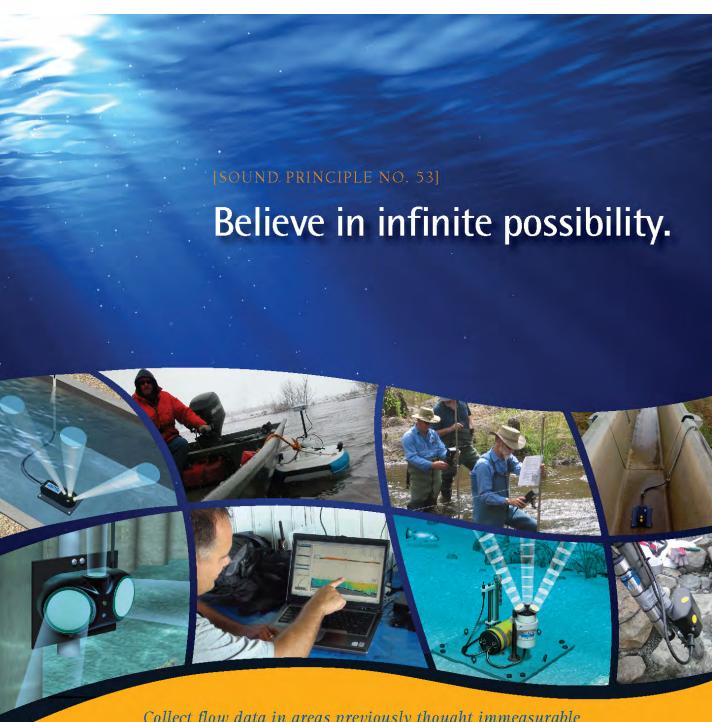
The National Water Commission is responsible for driving national water reform under the National Water Initiative - Australia's blueprint for how water will be managed into the future. For more information on current Australian Government programs, please access 'Water for the Future' at www. environment.gov.au/water/.

Reference

MDBA 2011/2012. Proposed Murray Darling Basin Plan. Murray Darling Basin Authority (MDBA), www.mdba.gov.au/draft basin plan.



FIGURE 2. MODERNIZATION IN NORTHERN VICTORIA IRRIGATION SYSTEMS (SOURCE: WILLEM VLOTMAN)

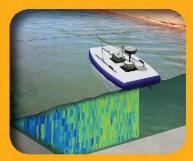


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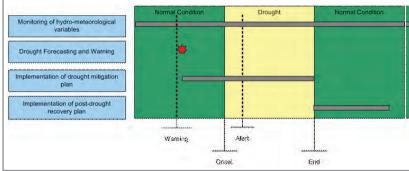
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DROUGHT EARLY WARNING FOR AFRICA

xtreme events such as floods and droughts are visiting the globe regularly. While floods are dramatic and draw immediate attention, droughts are slow creeping monsters which go unnoticed till they start adversely impacting the socio-economic activities. Drought Early Warning for Africa, in short DEWFORA, a three year applied research project launched in January 2011, under Seventh Framework Program (EU-FP7) is designed to bring the state-of-the-art in drought forecasting and warning into the operational domain and thereby:

- Improve performance of methods used for forecasting droughts in Africa through (seasonal) meteorological, hydrological and agricultural forecasting,
- Improve early warning of droughts through appropriate thresholds for initiation of mitigation activities,
- Establish strategies to increase resilience to drought at seasonal and longer time scales,
- Develop and apply a methodology to downscale and adapt existing hydrological model to regional conditions,
- Develop and apply methods for forecasting agricultural stress and managing demand of scarce water through water allocation models, and
- Transfer knowledge to practitioners and building capacity to ensure that knowledge developed is sustainably applied beyond the project.



The objective of this project is to warn against the impending drought before it actually manifests (as shown in the above diagram) rather than wait after its adverse impacts start.

The project will showcase its research outcomes and apply them in decision making through four regional case studies in Eastern Nile Basin, Oum-er-Rbia Basin, Upper Niger River basin and Limpopo Basin.

DEWFORA consortium brings together leading research institutes and universities; institutes that excel in application of state-of-the-art science in the operational domain; operational agencies responsible for meteorological forecasting, drought monitoring and famine warning; and established knowledge networks in Africa.

It targets to promote and organize stakeholder participation and facilitate knowledge exchange between stakeholders and the project with the aim to build capacity in the region through dissemination of the results of collaborative research between European and African partners and to embed knowledge gained in this project in existing knowledge networks and communities of practice. Drought early warning and seasonal hydrologic predictions have the potential to improve agriculture water use efficiency. Irrigation authorities and various National Committees in Africa have the potential to make use of the outcomes of the DEWFORA project and should explore the possibility of participating in these stakeholders' forum at the national level.

More information can be obtained from Dr. Micha Werner, DEWFORA Project Coordinator, E-mail: micha.werner@deltares.nl or visit their website at http://www.dewfora.net

Contributed by Secretary General Avinash C. Tyagi



ICID INVITES NOMINATIONS FOR THE WATSAVE AWARDS 2012

CID instituted 'WatSave Awards' in 1997 to recognize 'outstanding, contribution to water saving/conservation in agriculture' annually, across the world. Entries for the nominations for the 2012 awards are now open.

The Awards are only made in respect of actual realised savings and not for promising research results, plans and/ or good ideas/intentions to save water.

The WatSave awards are given in four categories: (i) Technology; (ii) Innovative Water Management; (iii) Young Professionals; and (iv) Farmer.

The awards will be presented at the 63rd IEC meeting scheduled to be held during 24-30 June 2012 at Adelaide, Australia.

Nominations are invited for the 'WatSave Awards 2012' from individuals/team through National Committees/Committee. The entries are open to all professionals / teams from ICID member

Mr. Pieter S van Heerden & Mr. Charles T Crosby (South Africa)

Mr. Pieter S van Heerden & Mr. Graph (USA)

countries as well as non-member countries. In case of an entry from a 'non-member' country, the nomination has to be routed through and validated by an active National Committee of ICID, who should be in touch with the nominee and is aware of his/her work. The contact coordinates of the active National Committees/Committee, the 'Nomination Form', 'Conditions and Criteria', and 'Check list' of the documents to be submitted by the nominee / National Committee are available at <www.icid.org/awards.html>.

The deadline for receipt of the entries from the National Committees (NC) along with a completed 'Nomination Form' etc. to the ICID Central Office, New Delhi is **30 March 2012**.

The interested person(s) should submit entries electronically to respective National Committee well in advance of the deadlines to facilitate timely processing by the NC. The nominations sent directly to the Central Office, ICID will not be entertained. The selection of the winners

from amongst the nominations received will be made by an International Panel of Judges.

All National Committees are urged to give a wide publicity to these awards in their country among actual farming communities and persons actively engaged in water savings/conservation practices. For further information, please contact Dr. Vijay K. Labhsetwar, Director, ICID at Email: <icid@icid.org>.

63^{RD} IEC MEETING, 7^{TH} ASIAN REGIONAL CONFERENCE, IRRIGATION AUSTRALIA ANNUAL CONFERENCE AND TRADE SHOW, 24-30 JUNE 2012, ADELAIDE, AUSTRALIA



Irrigation Australia
Limited (IAL)/
Irrigation Australia's
Committee on
Irrigation and
Drainage (IACID) will
host the the largest
irrigation event ever
to be held in Australia

in June 2012. The event comprise the 63rd International Executive Council meetings of the ICID (24-28 June), 7th ICID Asian Regional Conference (26-28 June) alongside Irrigation Australia's Annual Conference and Trade Show (26 -28 June). This will be followed by post conference technical tours from 29 June to 2 July 2012.

The theme of the 7th Asian Regional Conference is 'Regional Cooperation for Water and Food

Security' and will be deliberated on - (a) Integrated water management at basin and district level, (b) Horticulture, (c) Agriculture, (d) Drainage and flood management, (e) Water for the environment, and (f) Regional cooperation. Concurrently, three International Workshops on (1) Adaptive Flood Management (24 June), contact: Workshop Chair Dr. Kamran Emami < kkemami@ gmail.com>, (2) Country Policies and Developments of Water for Bio-Energy and Food (25 June), Contact: Workshop Chair Mr. Laurie C. Tollefson laurie.tollefson@agr. gc.ca>, and (3) Irrigation, Water Quality and Environmental Flows (26 June). Contact: Dr. Ragab (Rag@ceh.ac.uk) and Dr. Sylvain (sylvain. perret@cirad.fr) will also be held.

Australia is recognised as the world leader in irrigation management and water reforms. The theme of the IAL Conference is 'Drought, Floods,

Environment, managing Consumptive Water Needs Sustainably' and will offer seminars on essential irrigation topics with key speakers from government, agriculture, and horticulture, as well as environmental and landscape industries. The Trade Show will feature companies such as irrigation equipment suppliers, importers, distributors and retailers all showcasing their products and services to the irrigation industry.

For registration, accommodation, technical tours, etc., please visit http://online. saneevent.com.au/ial2012. For more information, please contact: Mr. Ian Atkinson, Chief Executive Officer, Irrigation Australia Limited (IAL), P.O. Box, 863 Mascot, NSW 1460, Australia. Tel: +61-(0)2-8335 4000, E-mail: IACID@ irrigation.org.au, ian.atkinson@irrigation.org.au or SANE Event Group, Tel: +61 2 9553 4820, E-mail: IAL2012@saneevent.com.au.

11[™] INTERNATIONAL DRAINAGE WORKSHOP (IDW), SEPTEMBER 2012, CAIRO, EGYPT



The Egyptian National Committee on Irrigation and Drainage (ENCID) jointly with National Water Research Centre (NWRC) is organizing the 11th International Drainage Workshop (IDW11) from 23 to 27 September 2012 in

Cairo. Egypt is one of the leading countries in implementation of sub-surface drainage and has a world class technical know-how and expertise in agriculture drainage.

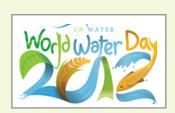
The theme of the workshop is "Agricultural Drainage Needs and Future Priorities". The key topics to be discussed under this theme are – Planning and Design of Drainage Systems, Improvement of Drainage Technology and Techniques, Drainage Management, Environmental Aspects and Climate Change, and Research Development and Capacity Building.

Scientists, engineers, and water managers are invited to submit extended abstracts (1-2) pages on the workshop topic(s) in electronic form in English. Deadline for submission of the abstracts is 30 April 2012 and submission of full length papers is 30 June 2012. Online

registration is available through the workshop website (www.encid.org.eg/idw11).

For more information, please contact: Workshop Secretariat, c/o Prof. Dr. Mohamed Hassan Amer, ENCID Chairman, Coastal Protection Building, Fum Ismailiya Canal, Shoubra El-Kheima 13411, P.O. Box 40, Cairo, Egypt. Tel: (+202) 44464505 / 010-16419861, E-mail: encid@link. com.eg, ENCID website: www.encid.org.eg, IDW website: http://www.encid.org.eg/home. htm or NWRC, Tel: +202 44447353, E-mail: idw11@nwrc-egypt.org.

WORLD WATER DAY 2012



International World Water Day is held annually on 22 March as a means of focusing attention on the importance of freshwater and advocating for the sustainable management of freshwater resources. This year, the theme of the World Water Day (WWD) 2012 is "Water and Food Security" and is coordinated by the Food and Agriculture Organization (FAO) 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. The topic of the WWD 2012 is very close to ICID mission and all national committees/ committee are encouraged to celebrate the event in a big way. More information on the event is available at http://www.unwater.org/worldwaterday/.

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