MESSAGE FROM
THE PRESIDENT

Dear Colleagues and Friends,

I sincerely hope that this message finds you all in the best of health and professional engagements!

The main keyword of my message in this issue of ICID News is “resilience” in its various forms as we are all currently battling on many fronts both personally and professionally. Resilience in its purest form is the inner strength of individuals or institutions facing profound challenges some of which can be life-threatening or simply existential. Resilience is not served to us on a silver platter or picked from a supermarket shelf, it is built from scratch over a lifetime by both individuals and institutions of all kinds.

Within the ICID network, 70+ years of preparation through a multitude of resolutions, initiatives and corresponding action on them has enabled us to deal with difficult situations as they emerge around us, sometimes even unannounced with no early warning signs. The ecosystems, whether natural or in the form of a human organization, develop diversity as a means to distribute large risks, taking advantage of individual strengths of comprising parts or components. This division of risk adds to the system’s resilience to deal with the risk as a whole. In practical terms, we can look at the examples from multi-disciplinary approaches and multi-stakeholder participation in governance and management, including in the water sector that we are all so familiar with. Now, please allow me to relate the above abstract discussion with the technical articles of this issue of the ICID News.

Traditionally, climate-change was considered a major challenge to the sustainability of agricultural water management and related food security issues of the rapidly expanding and urbanizing human population. However, the Covid-19 pandemic and its as-of-now unpredictable impacts have added yet another dimension to the future uncertainties in this sector due to restricted physical movements of all functioning stakeholders. We also celebrated the 72nd ICID Foundation Day on 24th June 2021, and organized a technical webinar, aptly themed “Sustainability of Agricultural Water Management under Difficult Circumstances,” by inviting the subject-matter experts, ICID members, partners and stakeholders for a timely stock-taking and then knowledge-sharing. The proceedings of the presentations and deliberations during the technical webinar, in an abridged version, constitute the first article. A live recording of the Webinar is also available on ICID website.

In another article (by ICID’s all-weather associate Dr. Herve Plusquellec essentially it is argued, based on a long-term observation of diverse discussions within the ICID community, that historical lack of multi-disciplinary thinking and multi-stakeholder participatory approaches are “The Causes of the Poor Performance of Irrigated Agriculture Worldwide: Raising the Voices of Agronomists” (the article title is quoted here). Dr. Herve has presented several arguments in the article to support his hypothesis.

The third technical article entitled “Climate Change and its Implications for Irrigation, Drainage and Flood Management” is the abridged version of a book chapter contributed by ICID for the upcoming COP26 dialogue. The article dissects the interplay between climate change and agricultural water management (AWM), identifies essential risk mitigation strategies for AWM, and presents how ICID as a professional body has been contributing to the cause of global food security.

I would like to encourage the ICID Working Groups, Task Forces, and Regional Working Groups to virtually meet before the next events in Morocco 2021 and Australia in 2022 to prepare for presenting their outputs during those events. Over the past months, I attended several virtual Working Groups and Regional Meetings to learn about their activities and when possible, to suggest new directions. I am planning to attend future meetings of the Workbodies as much as I possibly can.

In closing my message, I would urge all of us to focus on our upcoming events in Morocco later this year and in Australia next year, and participate technically for greater good of the science and engineering of our domain. General details of various thematic sessions and activities of these events are included in this issue of the ICID News as well for your ready reference.

I eagerly look forward to meeting you all in anticipation of our fruitful discussions in Morocco in 2021 and in Australia in 2022.

Ragab Ragab
President, ICID

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2-3 Sustainability of Agricultural Water Management under Difficult Circumstances – Proceedings of ICID 72nd Foundation Day Webinar
4-5 The Causes of the Poor Performance of Irrigated Agriculture Worldwide: Raising the Voices of Agronomists
6-7 Climate Change and its Implications for Irrigation, Drainage and Flood Management
8 5th African Regional Conference and 72nd International Executive Council Meeting, November 2021, Morocco; and 24th ICID Congress and 73rd International Executive Council Meeting, October 2022, Australia
Traditionally, climate-change has been considered as a major challenge to the sustainability of agricultural water management and related food security issues of rapidly expanding and urbanising human population. However, the COVID-19 pandemic and its unpredictable impacts have added yet another dimension to the future uncertainties. To celebrate the 72nd Foundation Day on 24 June 2021, ICID organized a technical webinar by inviting the subject-matter experts, its members, partners and stakeholders for stock-taking and knowledge-sharing.
Mr. S.K. Haldar, Chairman, Central Water Commission (CWC) and
Chairman, Indian National Committee on Irrigation and Drainage (INCID),
New Delhi, India was represented by Er. R. K. Gupta who made a detailed
presentation of various Government of India programs for the irrigation
and drainage sector. He outlined the Government of India’s broader
policy guidelines on a range of issues that influence agricultural water
management in the vastly diverse agro-ecological scenarios of India. Aging
irrigation and drainage infrastructure, conveyance losses, inefficient water use
on-farm, capacity building for technology adoption, rethinking management
practices and community participation are some of the major challenges in
the sector, and the Government is consciously designing policies and
programs to tackle the challenges. In the second part of the CWC-INCID
presentation, Er. Kushvinder Vohra, Member, CWC emphasized the need
for developments in the irrigation water delivery services and listed
the current progress of the various Irrigation Modernization projects of the
Government.

From International Water Management Institute (IWMI), Mr. Alok Sikka
the country representative made a presentation on the topic “Agricultural
Water Management: Building Resilience to Respond to Shocks and Risks.” He
covered various case studies from India, Sri Lanka, Myanmar and Afghanistan
on how the water availability and management was affected by COVID-19
pandemic in these countries. He concluded that as of now COVID19
had negligible influence on water use in agriculture and there is a very
strong case for higher investments in agricultural water management to
mitigate adverse future impacts.

Mr. Dan Alluf, Counsellor MASHAV, Embassy of Israel in India, New Delhi
made a comprehensive presentation on Israel’s holistic approach to the
water management in agriculture and other sectors as well. As is well known
that the freshwater availability is acute for farming in desert conditions and
hence the primary focus is water use efficiency. Israel has followed a “supply
chain integration” methodology making best use of drip-based micro-irrigation,
community-based water management and due consideration of research-
farmer-market linkages. The advanced data technologies are deployed to
make decision-making faster and need-based. Mr. Dan Alluf illustrated
the above through a presentation and also apprised the audience with the on-
going Indo-Israel cooperation initiatives where the above approach is being
scaled to various semi-arid and arid parts of India. A network of “Centers
of Excellence” are being established under this cooperation arrangement and
capacities are being developed through hands-on training programs for farmers, extension workers and water managers.

This was followed by presentations by selected ICID National Committees.
Mr Momir Vranes shared the experiences of Australia through a
presentation entitled “Sustainability of Agricultural Water Management Under
Difficult Circumstances – Keeping Ahead ...
...” which explained the approach “go the last mile.” It focuses on the
crop water requirements of individual users/clients and utilizes a feedback
mechanism in the water delivery services.

Representing Egyptian National Committee of ICID (ENCID), Dr Gamal
Elkassaar the Director of WMRI-NWRC and the Deputy Chairman of ENCID,
demonstrated ‘The Need for Branch Canal Rehabilitation and Modern
Irrigation Systems.’ Recognizing that the general deterioration of the irrigation
canals around the world is negatively affecting the overall irrigation system
efficiency, the rehabilitation and modernization are urgently needed for
maintaining water and food security.

VPH Dr. Yella Reddy, INCID-India informed the online gathering about the
25th ICID Congress and 75th International Executive Council (IEC) meeting to
be hosted by the State of Andhra Pradesh of India in November 2023. He
further added that the preparations are in full swing and enjoy the full
support of the Chief Minister of the state who has promised to make the
event a grand success. VPH Reddy also highlighted various tourist destinations of
the state that the delegates and their accompanying spouses and children can
take benefit of during the Congress and IEC meeting.

The floor was opened for discussions and a participant representing NENCID-Nepal remarked
that the technical webinar was very well organized and he found all the
technical presentations very useful for his work in the agricultural water sector of Nepal.

In concluding remarks, Er. Ashwin B. Pandya, Secretary General, ICID thanked
the President of ICID, keynote speaker Mr. Ashok Dalwai, ex-Office Bearers of
ICID, esteemed presenters, participants and the ICID Central Office staff for
their keen participation in the day’s activities and for making the event highly
successful. The webinar ended with a round of applause from all participants.

The entire webinar can be viewed at the link: https://icid-ciid.org/inner_ page/158
The Causes of the Poor Performance of Irrigated Agriculture Worldwide: Raising the Voices of Agronomists

Herve Plusquellec*

The focus of irrigated agricultural research activities is often to refine the crop requirements of a specific crop under certain climatic and soil conditions and with ideal water availability research environment down to 2-3 percent. It would be practical and useful to orient the agricultural research to the impact of improving water delivery in the farm fields presently with inflexible water deliveries and poor uniformity thus integrating agricultural research and modernization.

Background

After the peak in Irrigation development in the 1980s, it became evident that “Irrigation systems in many parts of the world were known to be performing well below their potential” (ICID Past President). In many regions in the world, the productivity and the production of irrigated agriculture were between half and two thirds of the potential.

Many analytical reports on the irrigation and drainage sector in the 1980-90 period started by a laudatory statement on the contribution of irrigation and drainage to the world food security during the last decades, attributed to the expansion of irrigated areas and the development of high-yielding varieties. That statement was followed by a discussion on the projected contribution of irrigation to meeting the food and fiber needs of world population at medium and long term. Next, was the observation that the overall performance of irrigation and drainage investments has too often fallen short of the expectations of planners, governments and financing institutions alike. The consensus between irrigation analysts ended at this point. Experts in disciplines related to irrigation differ on the causes of the poor performance of that sector.

A keynote speaker at an ICID Congress in 1992 declared “There is now a wide recognition that deficiencies in management and related institutional problems, rather than the technology of irrigation, were the chief constraints of poor performance of irrigation systems”. A discussant of that article went even further by stating that the technical solutions to the irrigation and drainage projects are trivial compared with the political, institutional and cultural problems.

Some analysts looked to the professional competence and capabilities of other experts to achieving high irrigation performance. Engineers were the first and obvious targets of these critics. However, irrigation agencies and donor organizations were also strongly criticized.

Critics of the engineer profession during the period 1980-90

An engineer retired from a donor agency blamed, the heads of the agencies in the client countries which typically are engineers, but often lacking the knowledge of critically important non-technical factors such as the social structure of the peasant farmers to be benefited, economic constraints at local and national levels, and environmental issues”.

Social scientists have generally been in the frontline of the critics against engineers. Diemer in 1996 stated that irrigation engineers know little about the actual principles of distribution of water on schemes in developing

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1 Burt (1999) from ITRC in California, strongly disagreed with this statement and commented that “such statements are common in part because traditional civil engineers have botched so many irrigation projects designs and modernization efforts. The result is now worldwide programs which are promoting the development of water user associations that ignore the relationship between technical and institutional worlds”. More details on the core areas of ICID available here http://icid-ciid.org/home
countries. They often assume that, on their schemes, there is no better way of distributing water than according to the rules they had in mind when they designed and built the irrigation systems. The design procedure focuses on cost and construction issues with the aim of reducing investment costs. The engineers usually base their design solely on physical data. The only social components likely to be considered are demographic information and the potential economic and financial yield of the scheme and plots.

A highly respected water resources expert joined the critics of engineers by stating: For all its impressive engineering modern water development has adhered to a fairly simple formula: estimate the demand for water and then build new supply projects to meet it. It is an approach that ignores concerns about human equity, the health of ecosystems, other species and the welfare of future generations. In a world of resource abundance, it may have served humanity adequately. In the new world of scarcity, it is fuelling conflict and degradation. Policy makers have vastly underestimated the influence of water scarcity on economics progress, food security, and regional peace and stability. Many have yet to realize that water problems can no longer be fixed by engineers alone. (Postel).

Foreign engineers are usually contracted by donor agencies to produce designs for new schemes or to supervise construction. They are rarely involved in the management of their schemes and so cannot incorporate feedback on the distribution practices into their design methods and their assumptions about management. This lack of feedback has led to many schemes deteriorating quickly and needing rehabilitation after only a few years.

Two decades later, a consensus has been reached that neither physical improvement or institutional reforms alone can boost durability the performance of irrigation systems if not associated.

The recognition of the need for better irrigation service through modern engineering

The voices of the critics of the engineers are now brought to an end. Social scientists and water resources experts are now populating donor agencies. However, the critics of engineers by social scientists and highly respected water resources experts were not fully unjustified. Further clarification is needed as engineering expertise is a too vague term. Engineers of different specialty are involved in the planning and design of irrigation systems. Hydraulics engineers play a key role in defining the principle of canal operation and therefore the quality of irrigation service to the end-users, the farmers. Civil engineers are the ones who prepare the detailed and construction drawings. They are specialized in soil mechanics, geology, concrete and more generally structural engineering. Designing irrigation systems without specialists in canal hydraulics is a cause for failure. Civil engineers may have basic hydraulic background but are not necessarily aware of the complexity of unsteady flows which is the norm in irrigation canals. They are not aware of the sensitivity of water flow and level control structures and of their combination to hydraulic perturbations. A weir structure- with water passing over- is much sensitive to a variation to the incoming flow than a structure equipped with orifice gates. A document prepared by the Bureau of Reclamation started with the sentence: “The irrigation systems we designed in the past cannot be operated efficiently”.

Release of water at the headworks has to be higher that the demand to be able to supply some low-level turnouts.

The explosive use of groundwater, a highly reliable and flexible source of water, mainly in large alluvial plains such as the Indu-Gangetic Plain, has compensated for the operational issue with canal water irrigation.

Sub-optimal application of agronomic research findings

The poor quality of irrigation service to farmers in terms of reliability and flexibility has considerable negative effects on the crop yields and on crop diversification. Results from agronomy research centers to improve the productivity of irrigated agriculture cannot be fully adopted. The best example to illustrate this point is the Alternate Wet and Dry irrigation technique (AWD) of rice. That technique results in substantial saving of water, increase of yields and reduction of emissions of greenhouse gases. Farmers would not adopt that technique and other costly inputs if they are not convinced about the reliability of water delivery. Farmers would maintain the practice of hoarding water in their paddies. About 40 percent of the rice cultivated area in China practice AWD. A number of local agriculture agencies claim that the farmers have adopted System Rice Intensification, known as SRI. The question is whether they have adopted all the five elements defining SRI or only the cultural practices about spacing and transplanting time.

Drip irrigation giving crop yields close to the potential requires on-demand irrigation; however, its application is limited worldwide to percent of irrigated lands and mostly in areas using groundwater.

Agronomists in irrigation and donor agencies have a key role to play during the preparation of upgrading or new projects to adapt the management of projects to the advances in irrigated agronomy. They should more forcefully insist on the flexibility and reliability of water delivery.
Climate Change and its Implications for Irrigation, Drainage and Flood Management

(Abridged version of a book chapter submitted by ICID for COP26)

Climate change is transforming the hydrological regime globally and one of the largest components is variations in the availability and distribution of water. Consequently, the impacts of climate change on water resources and agriculture, and subsequently food and water security, are increasingly dominating the sustainability debate. Essentially, these effects are a result of an imbalance between the availability of the resources versus the demands on them and our failure to put in alternative policies and measures for the restoration of such a sustainable balance. Hence, the climate change problem calls for climate friendly solutions in the form of risk mitigation, coping mechanisms and other adaptive strategies to ensure the sustainability of our agricultural systems. Keeping this in mind, this chapter discusses climate change and its repercussions on agricultural water management, correlation with flood management, the role that data plays in determining these impacts and accordingly how creative adaptation strategies may be adopted to cushion the impacts of climate change on agriculture and water. Additionally, this chapter also discusses the role of the International Commission on Irrigation and Drainage plays in contributing to the fight against climate change and global warming.

Introduction

For the agricultural sector, the marginal rise in temperature and concentration of CO2 in the air are both favourable to most crop plants, but their impact on pest and soil microbial populations are yet to be fully researched and understood. Other accompanying consequences of climate change are the unanswered ambiguous questions. For example, gradual temperature rise would most certainly make more water available due to faster melting of glaciers in the short run, but adequate replenishment of freshwater would be a cause of concern in the medium to long term due to changing patterns of precipitation and erratic behaviours of extreme events such as flood and drought. Desertification of river basins and rise of sea level in the coastal parts will certainly add to our difficulties by limiting the supply of both land area and fresh water, the two of the three essential physical natural resources for agriculture, besides air.

Climate Change and Agricultural Water

The water sector, especially in agriculture, has to migrate from the Cassandra approach and move towards the “Bhagirath” approach i.e., not stopping at merely conjectural problem announcement but also bringing out implementable solutions. Implementable solutions have to be based on the present state of the art technologies and quantitative science.

Water is principally used for agricultural operations which are the prime vehicles for providing food and fibre for mankind and domestic livestock. FAO estimates that about 70% of available freshwater resources are consumed by the agricultural sector. In certain countries, where agriculture dominates the economy, this percentage is even higher.

On the supply side, while climate change is putting pressure on freshwater resources and subsequently agriculture, on the demand side a host of factors compound the water crisis, which include rapid urbanisation, global economic growth, water-intensive dietary patterns, competing demand for natural resources, unsustainable agronomic practices, and virtual-water trade.

Climate change may bring additional land areas for cultivation due to warming effects on the cooler climates. Such areas can need special monitoring and management to prevent undesirable side effects as well as economic sustainability. Vice versa is also true. The areas rendered unusable for specified cropping patterns may need alternate strategies for their continuance as the source of livelihoods. In addition, an increase in average temperature will lead to higher evapotranspiration rates, affect effective rainfall and altered river discharges. This, in turn, would require structural changes in the irrigation infrastructure, affecting additional financial burden. Since agriculture is a prime livelihood source for least developed countries and also for some developing countries, it is necessary to forecast the potential areas and take timely ameliorative actions. The crisis may be acute at the local level as the climate change effects will spread across national boundaries and the economic models of the individual countries will have to change. Least developed countries need to be extra careful as they may not have adequate economic resilience for bringing more capital and also the subsistence level dependence on agricultural sector leaving little surplus towards investment.

1.1 Role of Irrigation in Achieving Global Food Security

Irrigation has been the prime mover of the green revolution and assurance of food security across the world. While irrigation is a prime source of agricultural sustainability, it is also the largest consumer of water. Since all sectors have to make adjustments, the burden of such adaptation on irrigation is equally high. Moreover, in all the projected scenarios of climate change and hydro-economic modelling, the overall demand for irrigation water is expected to increase, however since the availability of freshwater resources is limited, the ability to expand irrigation will also be constrained.

Efficient water management can partly contribute to averting the difficulties faced by agriculture because of water scarcity in terms of crop failure and income loss. In that pursuit, so far, irrigation has merely been considered a tool for improving productivity; however, moving forward, it will also be required to be considered as a tool for climate change mitigation and adaptation.

As water security and food security are inherently interlinked, so will their management need to be based on the multi-criteria analysis inclusive of all stakeholders. To ensure that irrigation development and management copes up with the climate change impacts, key actors need to be identified, their roles need to be tailored according
to the irrigation requirements and accordingly, climate friendly strategies need to be adopted. Decision-making needs to rely on purely scientific knowledge in coherence with the traditional practices applicable for suitable microclimates, maintaining the socioeconomic equilibrium.

Dependence on natural rainfall or precipitation does not assure a consistent output that can meet the growing needs of an expanding population. Thus, as an adaptation strategy, irrigation scheduling and management need to be incorporated to provide precise irrigation and on schedule to the newer varieties of crops. Initiatives such as integrated watershed management, implementation of on-farm water conservation techniques, irrigation based on storage, use of reclaimed water for irrigation may become a potential tool for coping with climate change. Many researchers have developed decision support systems for irrigation systems considering parameters such as air and soil humidity and temperature, plant evaporotranspiration, precipitation intensity, wind direction and speed, and relative pressure, to optimise the use of water and energy resources in agriculture. Additionally, institutional reforms in terms of policies and practices and concurrently enhancing the knowledge, skills and capacity of the irrigation and drainage service delivery practitioners will go a long way in achieving the goals of food security.

### 1.2 Land Drainage Requirements

As the methods of water application are changing, climate change may bring up differing drainage requirements, in terms of structures of practices. Irrigation without adequate drainage may result in land degradation via salinisation. Newer areas opening up for agriculture may need fresh drainage arrangements in different groundwater regimes. Management of drainage and drained water may require extra treatment for making the reuse and recycling of the same feasible.

### Flood Management

The frequent changes in the hydro-climatic regime brought about by global warming are becoming increasingly visible. The floods not only make the human settlements vulnerable but also pose a great threat to agriculture, endangering food security. To combat this, climate change adaptation strategies for flood protection and risk management need to be factored in and integrated for efficient flood management.

### Efforts at ICID

While dealing with issues as immense as climate change which has demonstrated global impact, the role of international institutions is as crucial as it is manifold. The International Commission on Irrigation and Drainage (ICID ), similarly, provides a platform and a network to the global community working within the irrigation and drainage domain. Working with government institutions, international organizations, multilateral establishments, private firms, and professional experts, the ICID network represents more than 95% of the global irrigated area. Through its various working groups, task forces, national committees and partners, ICID’s main activity is to promote three core areas viz, irrigation, drainage and flood management by addressing their engineering, agronomic, environmental, social, financial and institutional aspects. For more than seventy years ICID network has symbolized the share and exchange of knowledge and technology for agricultural water management (AWM). Under the limiting natural resources, climate change and rising conflicts, the task of the ICID network has become even more critical and daunting. The newly emerging and competing demands for water, coupled with the uncertainty of the impact of climate change on food productivity, have challenged the ICID stakeholders and partners to redouble their efforts.

Right from its inception, ICID has taken up the integration of haves and have-nots in bringing about a change in agricultural water management policies. A study of the composition of the membership at inception and after 70 years at present reveal that ICID has a well-balanced mix of highly developed countries and regions like the USA, Canada and Australia and extending to developing country like Somalia for example enabling the network to address problems at every level. ICID consists of several working groups enveloping the core areas of irrigation, drainage, flood management, climate change and agricultural water management, rural development and sustainable on-farm irrigation development.

### Conclusions and Way Forward

While talking about the future, it is inevitable to exclude climate change from the dialogue, be it agriculture or any other sector of the economy. Irrespective of the localised sources of greenhouse gas emissions, the impacts of climate change are pervasive and visible everywhere. Moving forward, planning for economic growth needs to consider climate change impacts and appropriate coping mechanisms to ensure avenues to mitigate the impacts of carbon emissions globally.

Solving the increasingly pervasive and inextricable global warming crisis does not entail a one-step resolution, rather it involves an integrated approach involving systematic implementation of measures. This entails the adoption of climate friendly technological solutions, using software and hardware tools available to manage the adverse impacts of climate change, especially to land and water resources, enriching knowledge, encouraging research and development and enhancing capacity development efforts across all institutions and generating mass awareness through climate education and activism.

As discussed before, in the era of rapidly changing climate, unprecedented changes are expected in the hydrological regime globally. As far as agricultural water management goes, the climate change effects will have to be integrated into the management practices and solutions so that the outputs and outcomes do not get disrupted by the change. The key action here is to devise pre-emptive strategies to maintain the output levels and wherever possible, find the options which can enable communities to grow out of excessive dependence on increasingly skewed inputs in terms of water. Developments in associated fields of technology like better ICT (information and communication technologies) and developments in biological systems have potential which have to be nurtured by recognizing them and propagating them to turn them into practices from being demonstrations. Newer challenges in disaster management and asset management due to extreme weather events randomly spread over space and time need continual reviews and fast responding approaches for managing the potential disasters.
A Message from Irrigation Australia

COVID-19 disrupted events on a global scale and Irrigation Australia was no reason from the impact of this pandemic. We were very disappointed not to hold the 24th Congress and 71st IEC Meeting, combined with the biennial Irrigation Australia Conference & Exhibition as scheduled in 2020. After all our efforts to see that this event and the exhibition planning and work underway, were very determined that the event could still be held in a post-pandemic environment. The date and location may have changed but the enthusiasm, commitment and warm hospitality of the event supporters and Event Supporter has not.

Accordingly, Irrigation Australia and the ICID Australian National Committee (AADC) are thrilled to officially announce that we have a new venue to participate in the 71st IEC Meeting and 24th Congress combined with the irrigators Australia National Congress & Exhibition to be held in Adelaide, Australia from 5th to 10th October 2021.

The Australian irrigation industry is delighted to have the opportunity to host this event and showcase our irrigated agriculture industry to the world. To add value to your participation in the International Congress, we have combined it with our biannual Irrigation Australia Congress and Exhibition, the biggest irrigation event in the southern hemisphere. AADC delegates will be able to attend to international congress sessions and our large international exhibition in addition to the comprehensive AADC program.

The theme for the 24th ICID Congress is Innovation and research in agricultural water management to achieve sustainable development goals. Australia is the world leader in the efficient use of water and the forefront of our efforts and strategies to expand our domestic production of food production and maintain our reputation as an exporter of high-quality food for a growing world population.

The event will be hosted in Adelaide, which is Australia’s third largest city and known for its cultural capital, arts, culture and food. It is renowned for its diminutive beauty to visit and clean environment, known for the irrigating agriculture production potential. The location of the meeting is at the heart of the city, easily accessible by a day trip from the city and also your hotel will be located within the heart of the city, allowing you to explore the city and countryside in this beautiful part of Australia.

The organizing committee will be ensuring a selection of interesting and informative early tours and further details of these will be released during 2022. Registration and inclusions in some abstracts will be open in early 2022 and you are welcome to register your interest now to secure your place in the event. You will be updated with all the latest and important events on the international irrigation calendar.

It is a great privilege to be awarded the opportunity to host the International Congress, which is being hosted in southern hemisphere for the first time this congress in Adelaide, Australia. We hope that you plan well ahead to attend this event and take this amazing opportunity to catch up with old acquaintances, make new friends and enjoy your stay in this beautiful Australian hospitality.

If you have any questions or require assistance, please do not hesitate to contact us at icid@icid.org.au.

We look forward to seeing you in 2022 in Adelaide.