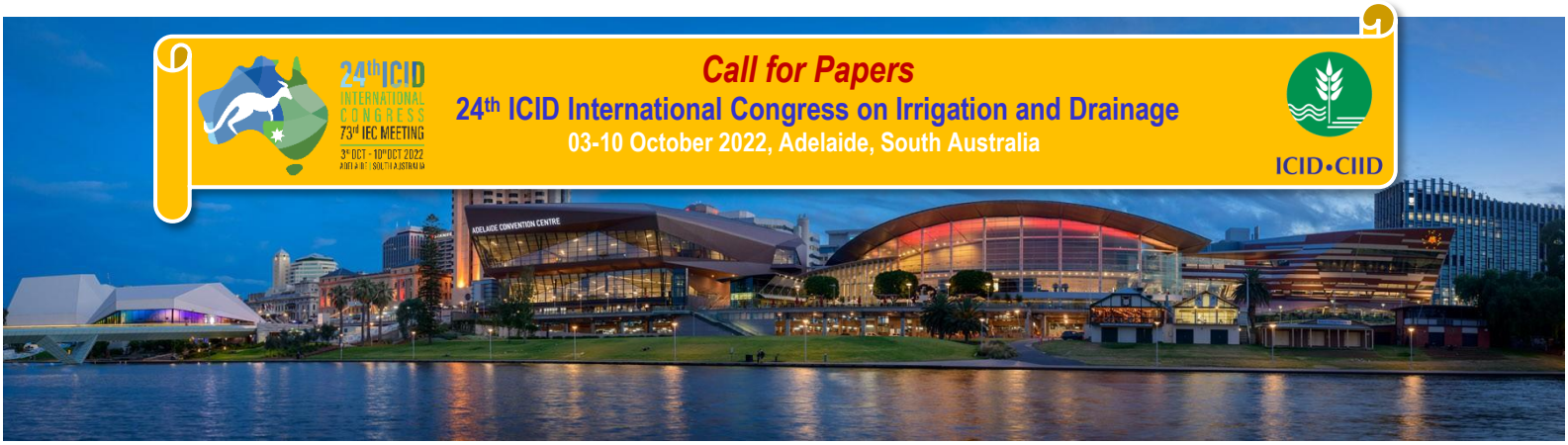

The International Commission on Irrigation and Drainage (ICID) was established on 24 June 1950 at New Delhi, India. ICID is a leading scientific, technical, and professional international not-for-profit network of experts from the fields of irrigation, drainage, and flood management working together with the mission 'Sustainable agriculture water management'.

ICID is a knowledge sharing platform dedicated to issues related to entire spectrum of agricultural water management practices ranging from rain-fed agriculture to supplemental irrigation, land drainage, deficit irrigation to full irrigation, etc. In addition, drainage of agricultural lands forms the core theme of our activities. Floods and drought; the two extremes of increasingly variable climate as a result of potential climate change, also form the focus of activities. [*For more details log on to* <**http://www.icid.org**>]

ICID has been organizing its flagship triennial event International Congress on Irrigation and Drainage since 1951. The 1st ICID Congress was held in 1951 at Delhi and so far ICID has held 23 Triennial Congresses. The **24th International Congress on Irrigation and Drainage and the 73rd International Executive Council meeting** is being organised by Irrigation Australia's Committee on Irrigation and Drainage (IACID) on the theme '**Innovation and Research and In Agricultural Water Management to Achieve Sustainable Development Goals**' from **03-10 October 2022, in Adelaide, South Australia** at the Adelaide Convention Centre. ICID triennial Congresses focus on the upcoming issues that need to be addressed in irrigation, drainage and flood management. The Congresses also provide a platform for reviewing a number of contentious issues concerning the future of irrigation water vis-à-vis increased demands for competitive uses.

CONGRESS THEME: Innovation and Research in Agricultural Water Management to Achieve Sustainable Development Goals

The congress aims to provide a platform for irrigation and drainage professionals and the broad range of other stakeholders to share their knowledge and experience in sustainable agriculture water management focusing on irrigation management and its related/integrated aspects. The congress will deliberate on various aspects related to the following topics:

(i) Current status of national irrigation sectors
(ii) Future investment in irrigation infrastructure modernization and management
(iii) National factors affecting irrigation management, including water policy, institutions, and capacities
(iv) Prospective areas for future management: resource management, supply and demand management, infrastructure management, on-farm water management, climate change adaptation and disaster risk reduction, institutional and policy reforms, data management, technological interventions, capacity development, gender issues, among others specific to local-contexts

Attention shall be directed to the different levels of technology and modernization practices to present a general perspective and global comparative review amongst the related organizations and institutions.

Theme of 24th ICID Congress 'Innovation and Research in Agricultural Water Management to Achieve Sustainable Development Goals' is expected to address these issues in the form of two questions.

CONGRESS QUESTIONS (TOPICS / SUB-TOPICS)

QUESTION 62: What role can information and communication technology play in travelling the last mile (i.e. the greater adoption of research outputs)?

Research has given the irrigation community many new technologies and continues to deliver new and innovative approaches to how to use water in irrigation to produce more to meet the adage "more crop per drop", whilst minimizing

environmental impacts. Meeting this objective is becoming more critical as the world's population increases and the impacts of climate change become more visible.

However, the gap between the development of these new and innovative technologies and the widespread use of these technologies in systems and management continues to grow. This 'last mile' must be travelled if we are to meet the growing demands of the world's population for food and natural fibre. The efficiency with which we travel this last mile will have many components; this theme question addresses just one of these components.

Information and communication technology offer tools and systems which may be used to speed up the adoption of research and development outcomes to produce more crop per drop and to minimise the impacts of irrigation in and to the environment. There are a range of other components to the adoption process including the policy environment, financial assistance and various types of incentives (both financial and nonfinancial), along with social and cultural influences. Information and communication technology have a role to play in all these and the diverse communities and individuals may adopt different processes and seek potentially different step outcomes.

How can this tool be used effectively within different socio-economic environments? We need to ensure that the appropriate tools are used for the different environments in which irrigation is carried out and for the desired outcomes. Will different tools be used for different desired outcomes within the same local environment/location?

SUB-QUESTION 62.1: Technical – Technology Aspects

Technology improvements are critical to sustained improvements in production of food and fibre but without information and communication technology its uptake is slow. These technologies also need to be researched and outputs implemented, at various level, to ensure that water for irrigation is used most effectively.

(a) State (government) versus Non-State (private sector)

- *State - Government level Hydromet services, high level technology including satellites, telemetry of data and availability of (free/) data to end-users, etc.*
- *Non-State - utilizing the above data, through user-friendly software, apps, assisting farmers and other involved making decisions on (irrigation, drainage) water management.*

(b) State versus Individual:

- *Making data available and accessible in remote areas – availability of technological tools (information and communication).*

(c) Open access platforms for freely interchanged data streams in standardized formats.

SUB QUESTION 62.2: Social side - socio-economic Infrastructure Context: appropriate technology for appropriate resources (for diverse groupings of people) including using social media

Advances in irrigation technology will be adopted quicker when the human side of adoption is better understood and facilitated. The role of information and communication technology in this aspect of the adoption process needs further enhancement and experiences transferred to a broader audience.

(a) Developed versus countries-in-development and /or country regional diversity and in-country industry sector diversity

(b) Best practices, existing and possible, including technological training and support.

(c) Engaging women and families

(d) Common communities / industries e.g., cotton, dairying, rice etc.

SUB-QUESTION 62.3: Water Trading

In more mature irrigation regions where water flows to higher value uses through water trading information and communication technology play a critical part in creating effective markets. Open markets require information for all potential buyers and sellers. How effective are these processes, how can they be improved and what technologies are facilitating these markets?

(a) Net-based availability of water, water exchange and comparison platforms e.g., "Waterfind", waterexchange.com.au, etc.

QUESTION 63: What role is played by multi-disciplinary dialogue to achieve sustainable development goals?

In the past, research was undertaken by research organizations (universities, research focused government departments, etc.); policy development and implementation was the realm of government and their departments; ag extension was undertaken by Departments of Agriculture and Universities; and farmers and end-users were expected to just respond to the inputs from these outside of the end-use of irrigation water for crop production. Environmental impacts were only considered when they could no longer be catered for within the production system.

The insular/silo approach had its downside with agronomic research not always being relevant to the needs of the end-users, implications of policy changes not fully understood or even anticipated, adoption of new and more effective ways of crop production was often slow and farmer lead research and adoption not being recognised as pathways to improved production.

It is now recognised and better understood that previous approach to industry extension and achieving sustainable development goals was not always effective.

Multi-disciplinary dialogue engages, by its definition, more than one discipline in design and implementation of policy, research, extension and adoption/use of processes that lead to sustainable development.

How can this multi-disciplinary approach be enhanced with improved interactions and new layers to more effectively engage in the attainment of sustainable development goals?

This Question seeks to draw out approaches that are being used and to stimulate thoughts on further enhancements to make the dialogue between all engaged in sustainable development more effective.

SUB-QUESTION 63.1: Social, Consumer, Supply Chain QA, Reputation & Regulatory Dialogue

Achieving sustainable development goals occurs within a complex framework of interactions with various interactions occurring at potentially different stages along the production/consumption continuum. An awareness of these interactions, particularly by producers, will result in them being more effectively incorporated into production systems. Some of these sets of interactions could be:

(a) Influence of supply-chain assurance (private, proprietary, national, international) on the production system-irrigation, drainage, water access and allocation, environmental impact including food security, at a national scale

(b) Social license, market access, enhance/protect reputation, managing crises

(c) Demonstrating environmental credentials and effective sustainable development, avoiding "green wash" etc.

SUB-QUESTION 63.2: Technical level dialogue vs other "levels"

Technical dialogue is critical to the achieving SDGs, but how do we ensure that other components are effectively integrated. Each will have its own integration issues and a 'one size fits all' approach' will not achieve the goal. What are some of the issues that need to be addressed as we try to include interactions along the horizontal axis (i.e. within each level or aspect) and vertically with respect to interactions between/across each level. Many "enablers" or "blockers" are based on, or derived from the diverse cultures, expectations, issues, resourcing and experiences of the relevant interacting parties:

(a) Economic level
(b) Policy/Government level
(c) Legal level
(d) Technological (tools, devices, systems) level
(e) Safeguards (Environment, cybersecurity and social) level

SUB-QUESTION 63.3: What parties should be addressing SDG: 12 'Responsible Consumption and production'

The completeness of the SDG 12 'Responsible Consumption and Production' implies that all are involved in meeting this goal. As well as producers and consumers, how are others in this multi-disciplinary dialogue being involved, with particular reference to:

(a) Supply Chain
(b) Social Licence
(c) Environmental Credentials

SPECIAL SESSION

THEME: Developing the future tools for managing uncertainty in irrigation water supply

Current projections around the impacts of climate change and climate variability, reinforced by ongoing experience are clear indicators that variability in rainfall, runoff, water availability and changes in the frequency of extreme weather events shall be key factors in the management of established catchments and the development of any future expansion.

Variability and the related uncertainty in availability, access to and pricing of water resources adds considerably to the risk associated with national and regional development. This further exacerbates concerns for food security and elevates pressures on healthy, viable ecosystems and services that they provide. Inevitably, increased costs and risks in the financing and socio-political commitment to maintenance of irrigation water supply systems and their further development then arise. This may then have impacts on crop mix away from staple food crops to higher return crops as farmers seek to remain viable in this high cost scenario.

Conflicting demands for water to ensure reliable supply of affordable high quality food, maintain threatened ecosystems, meet the needs of secondary industry and to satisfy the demands of increasingly urbanised populations seeking urban amenity shall require much thoughtful analysis and planning to inform and support appropriate policy and effective strategy. Likewise, this shall require the development of community education, engagement and public communications to secure broad-based support for and belief in actions which are seen to be fair, equitable and effective.

Effective future policy, regulation and practice in the development, allocation and management of water for environment, industry, human needs, urban and amenity purposes shall require deep understanding of all options, to mitigate variability in supply and quality of water supplies. This may entail the integrated use of fresh, saline and degraded resources, with the considerable complexity arising from the challenges of variability in volumes and quality of those sources, energy inputs, scale and end-user requirements.

Prior experience, ongoing R&D efforts and evolving practices should afford a sound base for addressing these future challenges and to establish strategic initiatives intended to deliver tools and approaches to the management of uncertainty in irrigation water supply.

This “Special Session” presents an opportunity to broadly evolve a future approach to the very fundamental challenges at the base of all water and irrigation-dependent systems. No matter what the geography, all presenters and participants in this session should gain enormous benefit from the presentation of the diverse experiences, research and development activity, policy and regulatory approaches underpinning future adaptation and mitigation of variability in irrigation water supply.

Given above, experts/professionals are invited to submit their abstracts/papers on the following sub-topics:

1. **Institutional arrangements**; both standard, precautionary and emergency arrangements for allocation and pricing for water: These may include policy and regulatory arrangements for a range of water availability/security situations and emerging scenarios involving predicted or projected weather patterns, anticipated runoff, reservoir status and groundwater reserves etc.
2. **System modelling**, scenario planning, prediction, contingency planning for interrupted and variable supply and delivery: Presentations of such modelling should demonstrate the realistic scoping of a range of prospective scenarios (ranging from extreme wet to extreme dry), stress-test alternative management strategies to mitigate risk and manage adverse impacts to sustainability of systems and their dependent communities or businesses, and rank priority responses which can be costed in fiscal, social and environmental terms
3. **Crop agronomic and social adaptation**; crop choice as per irrigation, “Supplementary” vs “full” irrigation, Economic analysis of perennial orchards and plantations as per informed decisions, and marketing, financing, staffing implications: Adaptation shall inevitably entail engagement with stakeholders across multiple fronts as catchment communities contemplate the prospects of refurbishing, replacing, relocating or even the retiring/exiting from systems and businesses. Papers are invited which demonstrate models, tools and case studies of regional and broader community consultations and engagement on irrigation water access, allocation and sustainable returns

STUDENT AWARDS FOR PAPER/POSTER PRESENTATION

The Irrigation Australia's Committee on Irrigation and Drainage (IACID) has established 'Student Awards' for paper/poster presentation. The competing students must tick mark their online submission at the time of registration for abstract/paper submission. The purpose, the criteria and the process of 'Student Awards' is available at https://www.icid2022.com.au/student-awards/

SCHEDULE OF SUBMISSION OF ABSTRACTS/FULL PAPERS

The abstracts/ papers are invited from the policy makers, professionals, academicians, researchers, experts, and scientists from private and government sectors as per following deadlines.

(a)	Submission of 'Extended Abstracts' (500-600 words):	**15TH DECEMBER 2021**
(b)	Notification of Acceptance of Extended Abstracts:	**15TH JANUARY 2022**
(c)	Submission of Full papers:	**15TH MARCH 2022**
(d)	Notification to Authors (oral/poster/presentation):	**15TH APRIL 2022**

ONLINE PAPER SUBMISSION

(a) Online 'Extended Abstract' submission is now open. New Users are expected to create their own account. The procedure for creating a new account is available at https://icidevents.org/techmanagement/

(b) Please note that only the 'Extended Abstracts' of the papers are required in first stage of submission to enable peer review by an International Review Committee. **PLEASE DO NOT SUBMIT THE FULL PAPERS AT THIS STAGE** as they would not be reviewed now.

(c) Upon receiving acceptance letter from ICID Central Office, authors are required to provide/upload an electronic version of the full length papers in Microsoft Word format by strictly following the guidelines available at http://www.icid-ciid.org/icid_data_web/24cong_guidelines.pdf

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