

From Secretary General's Desk...

Dear Colleagues,

Through this corner, I would like to dwell upon certain topics that I consider are indicators of things to come in the irrigation sector. Firstly, the role of data-driven decision-making is gaining traction around the world if we look at the dedicated research and development of applications that enable us "precision irrigation". Through ICID's WatSave Awards program, every year we receive several nominations from National Committees, demonstrating accurate measurement of crop water needs, precise water application, and then close monitoring of crop growth through on-farm instrumentation and/or remote sensing by satellite or drone technology. Secondly, I would like to



identify water harvesting and storage as an emerging response to minimize spatial-temporal variability of water availability for irrigation. Capturing excess rainfall is the first choice for making additional water available during the dry season, obviously due to the historical evolution of rain-fed agriculture all over the world. Dams, rivers, streams, canals, and natural or man-made reservoirs are some of the waterscapes that have traditionally been used for precipitation storage and agricultural irrigation. As water scarcity becomes the normal part of present-day life, our attention is focused more on creating water banks around major agricultural regions of a country or sub-regions. The two most recent webinars which ICID organized in collaboration with Irrigation Australia, our active national committee and host for ICID events next year, covered the above two topics in great detail.

Our next major event later this year, the 72nd International Executive Council meeting of ICID and the 5th African Regional Conference - Theme

"Sustainable Management Of Irrigation For Improved Resilience Of Agriculture In Africa" 23-30 November 2021, Marrakech, Morocco, is approaching fast and let me assure you that we are in very close contact with the host national committee (ANAFIDE) for making the event productive and successful. We also hope that by then the COVID-19 situation will be mitigated to a great extent, allowing all of us to engage in dialogue and capacity building for stronger resilience of the irrigation community.

I look forward to meeting you in Morocco to further our common agenda on water and food security for all.

With best wishes,



Ashwin Pandya
Secretary-General, ICID

ICID Hosted Webinars on:

1

Webinar on Organizations of Irrigation Automation Systems

The Webinar was organized by ICID in collaboration with Irrigation Australia on "Irrigation Automation Systems" on 22 July 2021. The speakers and panelists of the events were: Dr. Iva Mareels - Director of the Centre for Applied Research, IBM Australia, Dr. Danlu Guo - Research Associate at the Infrastructure Engineering Department at the University of Melbourne, Er. Paul Byrnes - Director of PAQUA Consulting, and Er. Damien Pearson - Global Business Development Manager with Rubicon Water. ICID was represented by the President, Dr. Ragab Ragab, and the Secretary-General, Eng. Ashwin B. Pandya.

ICID Secretary-General, emphasizing the role of technology interventions in the irrigation sector, welcomed the speakers, panelists, and participants, and then invited the President to give a brief keynote speech. President also highlighted the importance of the irrigation

sector in ensuring water and food security. Due to precarious water resources, Australia has been a pioneer in many different ways in irrigation science, technology, and engineering.

Webinar Background

In October 2020, the Australian Government announced the successful completion of the largest irrigation modernization project in Australia's history. The modernization of water distribution networks in the Goulburn-Murray Irrigation District was achieving 429 gigalitres of water savings each year. Australia's Federal Minister for Resources, Water and Northern Australia described this investment as "one of the most significant infrastructure projects



ever undertaken in this country when it comes to delivering water savings and benefits for farmers, communities and the environment."

Water losses in unmodernized irrigation systems predominantly result from a lack of measurement and poor control. By solving these problems, enormous water savings are being achieved through precise scheduling, delivery,

and application of water to crops. These considerable agricultural water savings are being achieved by precision on-demand water delivery systems that provide flexible irrigation start times and durations to deliver the precise volumes required by crops.

The irrigation distribution infrastructure in Australia is very similar to that of many irrigated agricultural regions in the world, and so a review of the Australian modernization journey can provide useful insights for water resource managers considering options to improve the management and efficient use of their water resources.

This webinar will host key contributors to the Australian modernization journey, including the University of Melbourne who developed the required innovations in canal control algorithms, Rubicon Water who delivered much of the control and measurement technology, and a manager of distribution assets from one of the major irrigation districts who oversaw the adoption of this technology.

Speakers and Panelists

Dr. Iven Mareels is the Director of the Centre for Applied Research, IBM Australia / NZ, and honorary Professor at the University of Melbourne. Earlier, he was the Director, IBM Research in Australia (2018-2020), and Dean of Engineering at the University of Melbourne (2007-2018). He received the Ph.D. in Systems Engineering from the Australian National University in 1987, and the Master of Engineering (Electromechanical) from Gent University in 1982. Iven is a Commander in the Order of the Crown of Belgium, a Fellow of The Academy of Technology and Engineering Australia; The Institute of Electrical and Electronics Engineers (USA), the International Federation of Automatic Control, Engineers Australia (FIEAust

CPEng EngExec NER APEC) and he is a Foreign Member of the Royal Flemish Academy of Belgium for Science and the Arts for his contributions to the modeling and control of large scale systems.

Dr. Danlu Guo currently works as a Research Associate at the Infrastructure Engineering Department at the University of Melbourne. Danlu has 8 years of research experience that extend to multiple areas centred on environmental and hydrological engineering. Her past work spans climate change impact assessment, catchment hydrology, and water quality modelling, as well as irrigation and soil water modelling. Danlu received her Ph.D. from the University of Adelaide in hydro-climatology in 2017. Since 2019, Danlu started working on an ARC Linkage Project (LP170100710) in collaboration with Rubicon Water, which aims to develop an integrated irrigation scheduling, benchmarking, and forecasting capability. Her recent work focuses on developing an uncertainty-based framework to inform irrigation scheduling using ensemble weather forecasts.

Er. Paul Byrnes is the Director of PAQUA Consulting, specialising in developing ways to reduce water balance uncertainty to provide confidence and awareness of risks for decision-makers. Paul's career covers over thirty-five years in the water sector. His career has spanned a period of constant industry reform. He has played a key role in transforming old-fashioned irrigation systems, supporting policy reforms and changes to business practices to better manage water, increase water value, and contain costs. Paul acted as General



Manager Technical Services for Southern Rural Water throughout their successful irrigation modernisation projects, which have changed old systems with poor service levels and excessive water losses, to systems that meet modern irrigation needs, are highly efficient, and provide the data to prove their performance. As well as his engineering degree, he has both a Graduate Diploma in GIS and Remote Sensing and a Graduate Certificate in Water Engineering.

Er. Damien Pearson is the Global Business Development Manager with Rubicon Water. Damien has more than 20-years' experience in global irrigation canal networks and methods to increase their distribution efficiency. His career has focused on the development and deployment of technologies to improve agricultural water use efficiency. His professional experience includes managing the development of Rubicon's flow measurement and control solutions and designing and implementing irrigation modernization projects. In his present role, Damien is focused on developing global irrigation modernization projects throughout the Americas, Europe, Africa, and Eurasia.

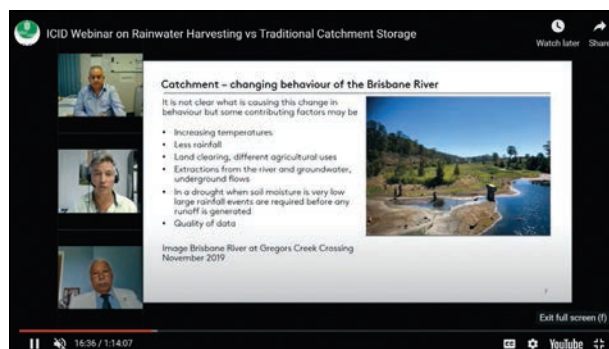


2 Webinar on 'Rain Water Harvesting vs Traditional Catchment Storage'

The ICID organized a webinar on 'Rain Water Harvesting vs. Traditional Catchment Storage' in collaboration with 'Kingspan Water and Energy, Australia' on 15 July 2021. The speakers and panelists of the event were Er. Michael Smit - Technical and Sustainability Manager at Kingspan Water and Energy, Australia, and Er. Geoff Harvey - Head Working Group on Rain Water Harvesting (WG-RWH). The ICID was represented by President Prof. Dr. Ragab Ragab and

Executive Director Eng. Harish Varma.

In his opening remarks, President Ragab shared the experiences of earlier droughts in the UK and Europe, and suggested clear legislation and policy on rainwater harvesting are key to promote it not only in agricultural fields but also in building structures of various kinds. Governments



are also promoting Public-Private partnerships for scaling up the rainwater harvesting structures and systems.

Webinar Brief

In the webinar Er. M. Smit talked about the importance of design, quality, and maintenance of rainwater harvesting systems. He also presented data on the relative efficiencies of a traditional rural catchment and rainwater harvesting based on similar volumes and frequencies of rain. In this context rainwater harvesting is rainfall captured from the roof of a building. The data suggests that in dry conditions rainwater harvesting is much more efficient at catching small rain events and storing small amounts of local water than traditional catchments.

However, in wet conditions catchments can catch large rainfall events and store large amounts of water.

Speaker

Er. Michael Smit is the Technical and Sustainability Manager at Kingspan Water and Energy, an Australian company manufacturing made-to-order rainwater tanks and part of the multinational building materials Kingspan Group. Michael has a science background and professional experience in rainwater harvesting, water conservation, natural resource management, and strategic and statutory

land use planning. Michael believes Cities are integrated environmental, social, and economic systems and all our actions should improve how urban systems perform. Michael has an Honours degree in Urban Planning including majors in economics and transport engineering and postgraduate qualifications in urban design. Michael is deputy chair of Rainwater Harvesting Australia and the co-chair of the AWA Water Efficiency Specialist Network.



President of the Moroccan National ICID Committee (ANAFIDE) Writes an Open Letter about the Morocco Events

The 72nd International Executive Council meeting of ICID and the 5th African Regional Conference - Theme "Sustainable Management of Irrigation for Improved Resilience of Agriculture in Africa" 23-30 November 2021, Marrakech, Morocco

Irrigation has been practiced in Morocco for many centuries. Water distribution is governed by embedded rules particularly in southern Morocco where scarce soil and water resources are valued. During the sixties, Morocco initiated plans to irrigate one million ha of agricultural land along with the "Dams Policy". Thanks to this rewarding orientation the country has managed to build more than one hundred and forty dams and supply with irrigation water close to a million and a half hectares.

Presently, the country continues to devote major attention to promote irrigated agriculture and enhance water-saving systems within the framework of the "Green Morocco Plan". Large as well as small and medium irrigation schemes are being irrigated with surface water from dams or rivers and/or from groundwater. At present, irrigation is contributing to a large share of gross domestic product in several African countries. To value the efforts made in this area, Morocco is continuing its south-south cooperation with African countries particularly in the framework of "the Triple A Initiative", aiming at a better adaptation of African Agriculture to Climate Change.

Although substantial progress has been accomplished to develop irrigation, there are still several challenges related to increasing water scarcity, low irrigation efficiency, constraints from climate change, insufficient resilience of small farms, low agricultural productivity, and degradation of natural resources. Most of the African countries are confronted with similar common problems to varying degrees within the agriculture sector. Irrigation represents and remains a great potential towards a better resilience of agriculture in Africa.

To cover these issues and exchange experiences about lessons drawn, innovative technologies, irrigation development strategies to reduce negative impacts of Climate Change on African agriculture, ANAFIDE is organizing under the auspices of ICID and in collaboration with IAV Hassan II and the African Regional Working Group (AFRWG) of ICID, the 5th Regional African Conference on irrigation and drainage with the main topic: "SUSTAINABLE MANAGEMENT OF IRRIGATION FOR IMPROVED RESILIENCE OF AGRICULTURE IN AFRICA". This conference will take place at the Water Museum, Marrakech, Morocco from November 23 to 30, 2021. It will bring together stakeholders, decision-makers, professionals as well as researchers, and donors. ANAFIDE is a long-time active member of ICID and has already organized the 30th IEC meeting in 1979 in Rabat as well as the 38th IEC and the 13th International ICID Congress in 1987 in Casablanca. It will spare no effort to make this coming conference very successful.



The Moroccan national committee of ICID is pleased to invite you to attend and contribute to this important regional conference that will be held in Morocco at the Water Museum in Marrakech, famous for its historical sites and its parks, especially the Menara olive grove and the Agdal Gardens. An irrigation system built under the Almoravids dynasty is still used to water the city's gardens. Your participation in this conference will also allow you to visit Moroccan achievements in modernized irrigated agriculture and appreciate historical attractive places in the country.

Aziz FERTAH
President
Moroccan National Committee of ICID (ANAFIDE)

welcome



A Message from Irrigation Australia

COVID-19 disrupted events on a global scale and Irrigation Australia was not immune from the impact of this pandemic. We were very disappointed not to hold the 24th Congress & 71st IEC Meeting, combined with the biennial Irrigation Australia Conference & Exhibition as scheduled in 2020. After our efforts to win the right to host this event and the extensive planning and work undertaken, we 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 organising committee has not.

Accordingly, on behalf of Irrigation Australia and the ICID Australian National Committee (IACID) we extend a warm invitation to you to participate in the 73rd IEC Meeting & 24th ICID Congress combined with the Irrigation Australia National Conference & Exhibition to be held in Adelaide, Australia from 3 October to 10 October 2022.

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

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

The event will be hosted in Adelaide, which is Australia's 5th largest city and home to a vibrant culture of arts, culture and great food. It is renowned for its fantastic places to visit and close proximity to some of the leading agricultural production in Australia. The famous wine producing region of the Barossa Valley is easily accessible on a day trip from the city and here you can experience some of the finest wines and cellar doors in Australia, and in fact the world.

The organising committee will be arranging a selection of interesting and informative study tours and further details on these will be released during 2021. Registrations and an invitation to submit abstracts will re-open in 2021 but you are welcome to register your interest now to ensure you receive communications to keep you updated with what will be an exciting and important event on the international irrigation calendar.

It is a great privilege to be awarded the opportunity to host the International Congress, which is being held in southern hemisphere for the first time since its inception in 1951. We hope that you plan well ahead to attend this event and take this long-awaited opportunity to catch up with old acquaintances, make new friendships and enjoy some 'true blue' Australian hospitality.

If you have any questions or require assistance, please do not hesitate to contact us via email at icid2022@irrigation.org.au.

We look forward to seeing you in 2022 in Adelaide.



Andrew Ogden

Chairman
Irrigation Australia



Momir Vranes

Chairman
IACID Australian
National Committee



Bryan Ward

Chief Executive Officer
Irrigation Australia

ICID President's Activities – July 2021

1	Working Group on Institutional and Organizational Aspects of Irrigation/ Drainage System Management (WG-IOA) Chairman: Dr. A. Hafied A. Gany	Jul 23, 2021
2	Asian Regional Working Group (ASRWG) Chairman: Prof. Dr. Tsugihiko WATANABE	Jul 23, 2021
3	ICID Webinar on Organization of Irrigation Automation System	22 July 2021
4	Working Group on Sustainable Development of Tidal Areas (WG-SDTA) Chairman: Dr. Ruey Chy Kao	20 July 2021
5	ICID Webinar on Rainwater Harvesting vs Traditional Catchment Storage	15 July 2021
6	Growing with effective & efficient Irrigation – Accepting Modernization and Systematic Management	8 July 2021
7	Committee on Congresses / Conferences (C-CONGR) Chairman: Mr. Bryan Ward	6 July 2021
8	Working Group on Irrigation Development and Management (WG-IDM) Chairperson: Mrs. Mary Jean M. Gabriel	2 July 2021

News from National Committees

Bangladesh (BANCID)

Engineer Mr. Fazlur Rashid has been appointed as the new chairman of Bangladesh National Committee of Irrigation and Drainage. He also took over the charge of the Director-General of Bangladesh Water Development Board (BWDB). His contact details are:



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UN Report: Pandemic Year Marked by Spike in World Hunger

There was a dramatic worsening of world hunger in 2020, the United Nations said today – much of it likely related to the fallout of COVID-19. While the pandemic's impact has yet to be fully mapped¹, a multi-agency report estimates that around a tenth of the global population – up to 811 million people – were undernourished last year.

The number suggests it will take a tremendous effort for the world to honour its pledge to end hunger by 2030.

This year's edition of The State of Food Security and Nutrition in the World is the first global assessment of its kind in the pandemic era. The report is jointly published by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the UN World Food Programme (WFP), and the World Health Organization (WHO).

Previous editions had already put the world on notice that the food security of millions – many children among them – was at stake. "Unfortunately, the pandemic continues to expose weaknesses in our food systems, which threaten the lives and livelihoods of people around the world," the heads

of the five UN agencies² write in this year's Foreword.

They go on to warn of a "critical juncture," even as they pin fresh hopes on increased diplomatic momentum. "This year offers a unique opportunity for advancing food security and nutrition through transforming food systems with the upcoming UN Food Systems Summit, the Nutrition for Growth Summit, and the COP26 on climate change." "The outcome of these events," the five add, "will go on to shape the [...] second half of the UN Decade of Action on Nutrition" – a global policy commitment yet to hit its stride.

Hunger in Numbers

Already in the mid-2010s, hunger had started creeping upwards, dashing hopes of irreversible decline. Disturbingly, in 2020 hunger shot up in both absolute and proportional terms, outpacing population growth: some 9.9 percent of all people are estimated to have been undernourished last year, up from 8.4 percent in 2019.

More than half of all undernourished people (418 million) live in Asia; more than a third (282 million) in Africa; and a smaller proportion (60 million) in Latin America and the Caribbean. But the sharpest rise in hunger was in Africa,

where the estimated prevalence of undernourishment – at 21 percent of the population – is more than double that of any other region.

On other measurements too, the year 2020 was somber. Overall, more than 2.3 billion people (or 30 percent of the global population) lacked year-round access to adequate food: this indicator – known as the prevalence of moderate or severe food insecurity – leaped in one year as much in as the preceding five combined. Gender inequality deepened: for every 10 food-insecure men, there were 11 food-insecure women in 2020 (up from 10.6 in 2019).

Malnutrition persisted in all its forms, with children paying a high price: in 2020, over 149 million under-fives are estimated to have been stunted, or too short for their age; more than 45 million – wasted, or too thin for their height; and nearly 39 million – overweight.³ A full three billion adults and children remained locked out of healthy diets, largely due to excessive costs. Nearly a third of women of reproductive age suffer from anaemia. Globally, despite progress in some areas – more infants, for example, are being fed exclusively on breast milk – the world is not on track to achieve targets for any nutrition indicators by 2030.

Other Hunger and Malnutrition Drivers

In many parts of the world, the pandemic has triggered brutal recessions and jeopardized access to food. Yet even before the pandemic, hunger was spreading; progress on malnutrition lagged. This was all the more so in

nations affected by conflict, climate extremes or other economic downturns, or battling high inequality – all of which the report identifies as major drivers of food insecurity, which in turn interact.⁴

On current trends, The State of Food Security and Nutrition in the World estimates that Sustainable Development Goal 2 (Zero Hunger by 2030) will be missed by a margin of nearly 660 million people. Of these 660 million, some 30 million may be linked to the pandemic's lasting effects.

What can (still) be done

As outlined in last year's report, transforming food systems is essential to achieve food security, improve nutrition and put healthy diets within reach of all. This year's edition goes further to outline six "transformation pathways". These, the authors say, rely on a "coherent set of policy and investment portfolios" to counteract the hunger and malnutrition drivers.

Depending on the particular driver (or combination of drivers) confronting each country, the report urges policymakers to:

- Integrate humanitarian, development and peacebuilding policies in conflict areas – for example, through social protection measures to prevent families from selling meagre assets in exchange for food;
- Scale up climate resilience across food systems – for example, by offering smallholder farmers wide access to climate risk insurance and forecast-based financing;

- Strengthen the resilience of the most vulnerable to economic adversity – for example, through in-kind or cash support programmes to lessen the impact of pandemic-style shocks or food price volatility;
- Intervene along supply chains to lower the cost of nutritious foods – for example, by encouraging the planting of biofortified crops or making it easier for fruit and vegetable growers to access markets;
- Tackle poverty and structural inequalities – for example, by boosting food value chains in poor communities through technology transfers and certification programmes;
- Strengthen food environments and changing consumer behaviour – for example, by eliminating industrial trans fats and reducing the salt and sugar content in the food supply, or protecting children from the negative impact of food marketing.

The report also calls for an "enabling environment of governance mechanisms and institutions" to make transformation possible. It enjoins policymakers to consult widely; empower women and youth, and expand the availability of data and new technologies. Above all, the authors urge, the world must act now – or watch the drivers of hunger and malnutrition recur with growing intensity in coming years, long after the shock of the pandemic has passed. <https://www.ifad.org/en/web/latest/-/sofi-2021>



Exposure to drought: The French Government Launches the 'Varenne de l'Eau' Project

It was a particularly wet May in France, but those drab and dreary hours should now be behind us, as the next three months will be "warmer and drier than normal", according to Météo France. A scorching summer will be nothing new for France, which has already experienced successive and increasingly lengthy heatwaves over the last few years. Whereas 10 years ago, only the southern regions experienced temperatures of close to 40°, today, there are few regions of France that are spared this phenomenon. According to the map presented by the Ministry of Ecological Transition, with the assistance of Météo France, which forecasts the risks of drought for this summer, there is a "very

probable" risk of the whole country experiencing spells of drought, apart from the North.

Depleted groundwater resources

Although the rainfall was very heavy in May, during which records were broken in several cities, it was not enough to wet the soils that had lacked water in March and April. Despite the quantity that fell, the water did not infiltrate the soil, rather it remained on the surface, making it particularly soft and sticky. This did not make it any



easier for the market gardeners, who are afraid that their harvests will be poor this year. The government is taking these concerns very seriously, after the frosts that affected more than half of the French vineyards and market gardens. In

a desire to address this issue of water and crop management, the Minister of Agriculture, Julien Denormandie, and Bérangère Abba, Secretary of State to the Minister of the Environment and responsible for Biodiversity, inaugurated the "Varenne de l'Eau" project on Friday 28th May, whose task is to find suitable ways, by January 2022, of facilitating "the collection and use of rainwater for farmers to be able to deal with spells of drought." In addition to the droughts, people are worried about increased seasonal contrasts, with heavy rainfall in the winter and hot dry air in the summer. These climatic variations are also causing crops to change their growing patterns.

The 'Varenne de l'eau' project

"Protecting against the perils of climate change and looking for ways of providing access to water for use in agriculture" is the aim of the 'Varenne de l'Eau' project launched on 28th May by Julien Denormandie and Bérangère Abba. There are high hopes at the grassroots level

and the players involved are expecting something concrete to happen in the long term. The goal of the 'Varenne de l'eau' project is as follows: Collectively finding the concrete solutions required for adapting agriculture to the challenges faced by climate change. As far as Bérangère Abba is concerned, the aim is to be "proactive" with "no taboos". This work will be "science-based" while "building on existing projects to implement new systems and devices". It thus follows on from the Assises de l'eau Water Conferences held in 2018 and 2019. Although it is a project of great ambition, it is very tightly scheduled. The work must result in the production of an "operational roadmap" by January 2022 for the three topics targeted as part of this Varenne project. Each of these will be supported by leading officials commissioned by the ministers, who will be responsible for establishing working groups with the parties participating voluntarily (farmers, elected representatives, NGOs, and others).

The first topic relates to risk management, with the government wanting to proceed quickly because the first tools must be implemented during the summer. The second activity seeks to strengthen "the resilience of agriculture as part of a global approach". The main levers of action will focus, in particular, on soils, varieties, crop cultivation and breeding practices, agro-ecological infrastructures, and the efficiency of irrigation water. Diagnoses will be carried out by the relevant sector via INRAE (National Research Institute for Agriculture, Food and the Environment) and other technical institutions, as well as at the regional level by the chambers of agriculture to visualise the effects of climate change at the national level. Lastly, but of no less importance, we have the topic of water resources. This is an extremely sensitive issue that puts farmers in conflict with environmental organisations.



SDGs Report 2021: COVID-19 Led to First Rise in Extreme Poverty in a Generation

The 'Sustainable Development Goals Report 2021' highlights the impacts of COVID-19 on SDG implementation and identifies areas that require urgent and coordinated action. The report was launched on the first day of the 2021 session of the High-level Political Forum on Sustainable Development (HLPF).

The report is prepared annually by the UN Department of Economic and Social Affairs (UN DESA) using data and estimates in the Global SDG Indicators Database. The Global SDG Indicators Database contains global, regional, and country data and metadata on the official SDG indicators. The database uses

information from custodians for each SDG indicator, and specifies whether the national data were adjusted, estimated, modelled, or are the result of global monitoring.

The report indicates there has been progressing in the availability of internationally comparable data on the SDGs, with the number of indicators included in the global SDG database having increased from 115 in 2016, to around 160 in 2019 and 211 in 2021. Despite this increase in the number of indicators, the report notes the global pandemic disrupted data operations, such as population censuses, around

the world. A survey of national statistical offices indicates about 42% of countries had to postpone censuses scheduled for 2020 or 2021 for at least one year.

In a forward to the report, António Guterres, UN Secretary-General, notes the report's findings that the global extreme poverty rate rose for the first time in over 20 years, 119 to 124 million people were pushed back into extreme poverty in 2020, and an additional 101 million children have fallen below the minimum reading proficiency level.



ICID Forthcoming Events

5th African Regional Conference (ARC) and 72nd International Executive Council (IEC) - Theme "Sustainable Management Of Irrigation For Improved Resilience Of Agri-Culture In Africa" to be held b/w 23-30 November 2021, Marrakech, Morocco. Website: <http://5arcid.ma/en/>

73rd IEC Meeting & 24th ICID Congress combined with the Irrigation Australia National Conference & Exhibition to be held in Adelaide, Australia from 3 October to 10 October 2022. Website: <https://www.icid2022.com.au/icid-home/>

74th IEC Meeting and 4th World Irrigation Forum (WIF4) will be held during 16-22 April 2023 in Beijing, China.

75th IEC Meeting and 25th ICID Congress will be held in November 2023, Visakhapatnam (Vizag), Andhra Pradesh State, India

76th IEC and 9th Asian Regional Conference (AsRC) will be held from 27 April-2 May 2024 in Sydney, Australia

Other Events Update

5th Arab Water Forum - 21 - 23 September 2021 in Grand Hyatt, Dubai under the patronage of the United Arab Emirates' Ministry of Energy & Infrastructure and supported by

the League of Arab States (LAS) and the Ministry of Water Resources and Irrigation of Egypt (MWR1), in collaboration with national, regional and international partners. <https://arabwaterforum.org/>

9th World Water Forum March 22 - 27, 2022, Diannadio (Dakar) – Senegal: The Ninth World Water Forum is scheduled to take place in Dakar, Senegal, from 22-27 March 2022. The event will fo-cus on the theme, 'Water Security for Peace and Development,' and will consider four priorities: water security and sanitation; cooperation; rural development; and means tools.



XV World Aqua Congress - 2021, International Conference & Exhibition Schedule 14 - 17 September 2021; Aqua Foundation's World Aqua Congress (Conference & Exhibition) brings together water, environment, and related professionals from around the world and offers new insights into how cutting edge research, technological innovation, and leading practices shape the major transformation in water management. The conference provides a unique opportunity to learn about the latest trends in best practices, innovative technologies, and cutting-edge research.

FAO World Water Week! Online! 23 - 27 August 2021. This year, World Water Week will be held as a full-scale digital event on 23-27 August. Join the FAO Land and Water team for an intensive week of learning and collaboration on the overall theme of 'Building Resilience Faster'. Together we can develop solutions to address climate change and other water-related challenges. Click the link for more information <http://www.fao.org/sustainable-development-goals/events/detail/en/c/1418762/>

17th IWRA World Water Congress, 29 November - 3 December 2021, Daegu, Republic of Korea. <https://www.worldwatercongress.com/index.php>

IWRA organises and supports international water congresses and events related to advancing water resources knowledge, policy and management around the world. Since 1973, IWRA has held a World Water Congress every three years in various locations around the world.

The objective of the World Water Congress is to provide a meeting place to share experiences, promote discussion, and to present new knowledge, research results and new developments in the field of water sciences around the world. For almost four decades the World Water Congresses have been excellent events for the identification of major global themes concerning the water agenda, and for the bringing together of a large cross-section of stakeholders for the development and implementation of decisions in the field of water.

39th IAHR World Congress, 19 - 24 June 2022 - From Snow to Sea, Granda, Spain

The International Association for Hydro-Environment Engineering and Research (IAHR), founded in 1935, is a worldwide independent organisation of engineers and water specialists working in fields related to the hydro-environmental sciences and their practical application. Activities range from river and maritime hydraulics to water resources development and eco-hydraulics, through to ice engineering, hydro-informatics and continuing education and training. IAHR stimulates and promotes both research and its application and by doing so it strives to contribute to sustainable development, the optimisation of world water resources management and industrial flow processes. For more information click the link <https://iahrworldcongress.org/>

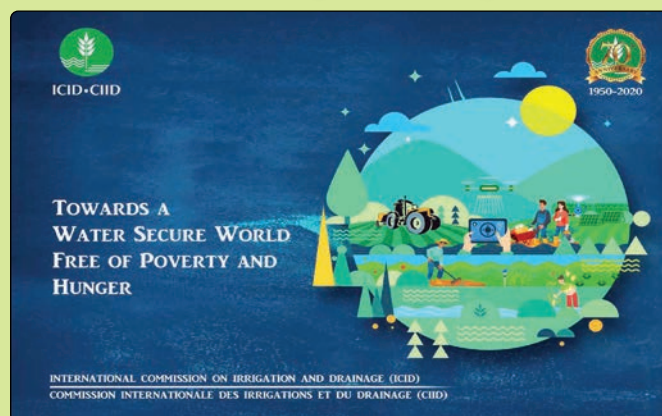


ICID's 70th Anniversary Commemorative Volume (1950-2020)

The ICID@70 Coffee Table Book was released as part of the ICID's 70th Anniversary Celebration concluded during the 71st International Executive Council Meeting held virtually in two sessions on 7-8 December 2020.

The publication showcases key milestones achieved by the Commission in its efforts to make a water secure world free of poverty and hunger through sustainable rural development. The book is also a house of information about the global status of irrigation and drainage and professionals will find it very useful.

Highlights of the publication: [Congratulatory messages](#), [Foreword](#), [Preface](#), [History: Irrigation & Drainage](#) (VP Dr. Kamran Emami & Madhu Mohanan), [ICID, Awards & Recognitions](#), [Office Bearers](#) (Past and Present), [ICID Central Office](#); [Membership](#): [National Committees](#), [Brief country profiles of the National Committees](#), [Direct Members](#); [Brief Articles on the ICID Vision 2030](#): (1) [ICID Vision 2030: An Overview](#) (Avinash C Tyagi, Secretary General Hon., ICID), (2) [The Global Framework on Water Scarcity in Agriculture in a Changing Climate: A Collaborative Commitment to Transform Water Scarcity into an Opportunity](#) (Ruhiza Jean Boroto (WASAG Team Leader, Senior Land and Water Officer, Land and Water Division, FAO), (3) [Role of Agriculture Water Management in Rural Transformation for Alleviating Poverty](#) (Naoki Hayashida, Vice President, ICID), and (4) [Rural Transformation for Alleviating Poverty](#) (Dr. Sang Bong Im, Principal Researcher, Rural Research Institute, Korea Rural Community Corporation); [Brief Articles on Marching Towards 21st Century](#): (1) [Marching Towards Sustainable Development and Management of Flood Prone Areas](#) (Prof. Em. Dr. Bart Schultz, President Hon., ICID), (2) [Software or Hardware: The Next Revolution](#) (Peter S Lee, President Hon., ICID), (3) [Evolution of Water Management Systems and Research and Planning Needs in International Project Implementation](#) (Prof. Dr. Chandra Madramootoo, President Hon., ICID), (4) [New Technologies for Efficient Agricultural Water Management](#) (Dr. Gao Zhanyi, President Hon., ICID), (5) [Water, Energy, Food Nexus: A Framework](#)



for Implementation (Dr. Saeed Nairizi, President Hon., ICID), (6) [Modernization of Irrigation and Drainage Projects](#) (Ian W. Makin, Vice President Hon., ICID), (7) ["Technological" Advances in Managing Water and Land for Irrigation and Drainage](#) (Dr. Brian Wahlin, Vice President, ICID; Ricardo Aguirre, Director of Land Management and Security, WEST Consultants, Inc., USA), (8) [Sustainable Use of Water Resources and Food Security](#) (Dr. Marco Arcieri, Vice President, ICID), (9) [Climate Adaptation for Sustainable Agriculture](#) (Dr. K. Yella Reddy, Vice President, ICID), and (10) [Gender role in Agricultural Water Management](#) (Ms. Prachi Sharma, Knowledge Officer, ICID Central Office); [International Cooperation](#), [Insight of ICID Events and Activities](#); [Infographics](#); and [Glimpses of the past; and Acknowledgement](#).

ICID Central Office has already started dispatching this important publication to all National Committees and partner organizations. The digital version of this publication is now made available on the ICID website: https://icid-ciid.org/inner_page/161

