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ICE WaRM was established in 2004 to provide a portal between Australian expertise and the global water community. This connection is more critical now than ever. Australia’s water expertise evolved in response to the extreme challenges of drought, floods and climate change, coupled with the political and social realities of water sharing and transboundary management of surface water and groundwater. Our journey is informed by world leading science, supported by cooperative federalism and inspired by visionary leaders. The story spans over one hundred years of innovation and reform. A living laboratory of success, failures and false trials.

Meeting the challenge of achieving water security and mitigating water-related risks involves many stakeholders. Successful management requires a multidisciplinary, systems approach to water quality and quantity, health impacts, livelihoods, communities (rural and urban), economic development (energy, agriculture and mining) and the environment. The global sharing of water knowledge, expertise and decision support tools is the key to fast tracking innovation in policy and practice.

ICE WaRM has implemented phase one of our digital strategy. In 2018-2019 ICE WaRM presented thought leaders from Australia, and globally, through the Australian Water School webinar programme and on-line short courses. Our webinars commenced in June 2016, and there have been over 10,000 registrants from 100 countries. These free webinars have informed, inspired and challenged the global water sector. This engagement has seeded the ICE WaRM Communities of Interest which cover thematic areas including Sustainable Development Goals, inclusion and diversity, water and climate change, water modelling, groundwater, and resilient and liveable cities. Online short courses commenced in July 2018 and have become a regular offering of innovative learning at your device. ICE WaRM’s reach extends to nearly 15,000 individuals, 30% of whom are from outside of Australia.

The year has also seen outstanding success in strengthening international relationships, especially with the governments of Nepal and India through developing excellence in global water leadership at national, and subnational levels, giving confidence to embark upon deep, and sustained reforms.

Looking forward, ICE WaRM will strengthen our digital platform and channels to support capacity development and knowledge sharing. Our focus is the human right to water and sanitation, realisation of the Sustainable Development Goals including water security and mitigation of climate induced water-risks. We will continue to support a greater focus on inclusion in water sector engagement, and facilitate in country access to water ambassadors, coaches and mentors, through our partnership model, built on trust, respect and long term commitment.

Thank you to our dedicated team of staff and subject experts who have provided innovative leadership in delivering such a professional learning programme which has been highly commended by the global water sector. It is a pleasure and a privilege to work with such a motivated team within a culture of integrity and respect.

Thank you also to the Directors of the Board who continue to provide inspiration, valuable insight and direction in leading ICE WaRM’s contribution to the advancement of the Sustainable Development Goals.

Message from the Chair & Managing Director

Karlene Maywald
Chair

Darryl Day
Director
POLICY, GOVERNANCE AND REGULATION

Conducted Joint Advisory Committee on Water Resources Management in Nepal.


Delivered a workshop in Nepal, Centre Province Relationship in Water Resources Development and Management in Federalism, to engage in dialogue on new water policy.

Hosted the Australian Ambassador to Nepal to assess water planning and policy, cooperative irrigation trusts and private sector led innovations in South Australia.

ICE WaRM approved as a member of the Asia-Pacific Water Forum and the Managing Director attended the Asia-Pacific Water Forum Council Meeting.

ATTENDED THE GLOBE

ICE WaRM and CSIRO jointly supported Dr Fawzia Tarannum to attend the 2019 Seeds of Change Conference, Gender Equality Through Agricultural Research for Development, in Canberra.

SPONSORSHIP

Sponsored the City of Salisbury Watershed Art Prize for the 11th year running.

Sponsored Rashmi Shrestha, through the WaRM Trust, to present on Cultural Flow and Hydropower Development at the 2018 International River Symposium held in Sydney.

ICE WaRM and CSIRO jointly supported Dr Fawzia Tarannum to attend the 2019 Seeds of Change Conference, Gender Equality Through Agricultural Research for Development, in Canberra.

Joining the International Centre for Integrated Mountain Development (ICIMOD).

Established a partnership agreement with Hohai University, a research institution in Nanjing, China.

Signed a memorandum of understanding with Asian Confluence, a not for profit organisation in India.

Signed a memorandum of understanding with Manipal University Jaipur, India.
Our story

The International Centre of Excellence in Water Resources Management was established in December 2004, by a consortium of partners including five universities (University of South Australia, Adelaide University, Flinders University, Central Queensland University and Deakin University), together with financial support from the South Australian Government through Federal Government funding from the Department of Education, Science and Training.

WaterEd Australia Pty Ltd (trading as ICE WaRM) was incorporated with an independent Board of Directors and is governed by a Shareholders’ Agreement and Constitution.

ICE WaRM’s first initiative was developing and launching the nested Master of Water Resources Management programme delivered through partner universities. Further academic programmes followed, offering support for research students and exchange opportunities for post-graduate students with partner universities.

In line with Australia’s reputation for excellence in water resources management, ICE WaRM has gone on to develop extensive international alliances and create customised education and training courses for overseas governments and water organisations.

In 2008 an environmental trust, the Water Resources Management (WaRM Trust) was established to provide a scholarship and visits and exchange programme for water research management scholars. The trust continues to receive funding and donations for this purpose.

In recent years, major funding has been provided by the Australian Government via the Department of Foreign Affairs and Trade, for the Sustainable Development Investment Portfolio programme. ICE WaRM was a founding partner when the initial four-year phase one programme commenced in 2013 and was again selected as a partner in 2017 for phase two which concludes in June 2020.

Major funding has also been provided by the South Australian Government since 2013 to support international water engagement. In June 2018, the Department of Environment and Water again funded ICE WaRM to support international water engagement, trade and investment and to provide a resource as South Australian Strategic Adviser, International Water Opportunities.

ICE WaRM is recognised globally for leadership and innovation in collaborative approaches to capacity development for water management and sustainable economic development.

Our purpose is to promote and facilitate access to Australian expertise in water resource management through training, education, research and consulting. The result being that water leaders are inspired and empowered to influence change for the sustainable management of water resources and improve livelihoods, and the health of communities and the environment.

The people we strive to benefit are current and emerging water leaders, water professionals, governments, civil society and communities, dependent on the water economy.

ICE WaRM is governed by a shareholder appointed Board of Directors, whose experience and expertise within the water sector, guides the strategic direction of the organisation and is guided by the Sustainable Development Goals. 7 Board meetings, 2 Audit Committee meetings and 1 Shareholders’ meeting were held over the last financial year.

The values which define our culture, relationships and approach are:

- **Respect** – we value diversity, social inclusion and gender equity
- **Integrity** – we are honest and truthful in our relationships and actions
- **Trust** – we are reliable as a friend, mentor, partner and collaborator
- **Innovation** – we encourage innovation in our programmes and services
- **Accountable** – we are accountable for everything we say and do

### Australian Water School

The Australian Water School (AWS) is an ICE WaRM initiative which delivers training programmes to the global water sector. The school works with over 150 advisors and presenters who are professionals from leading industry, government, education and research organisations.

### Water Resources Management Trust

The Water Resources Management Trust, and its public fund, the Water Training, Education and Research Fund, manages fellowships for professional and personal development.

### Shareholders

[Logos of Shareholders]
Partnerships

ICE WaRM values the outstanding thought leadership and expertise that partnerships contribute to our work. As one of the founding partners of the Goyder Institute for Water Research in 2010, ICE WaRM is the managing partner of the Institute, providing administration support and more recently, strategic communications and knowledge transfer activities.

Over the last financial year, ICE WaRM signed four new memoranda of understanding with leading research and academic institutions which aim to strengthen our capacity in the countries of China, India and Nepal. Recognising the value of supporting the equitable and sustainable use of water for people in the Hindu Kush Himalayas, ICE WaRM signed a partnership agreement with the International Centre for Integrated Mountain Development (ICIMOD), in September 2018.

In December 2018, ICE WaRM and Hohai University in China agreed to work together to establish a Research Centre in both countries, to promote and facilitate innovative river basin research and provide a ‘think tank’ for international river basin governance. In January 2019, Asian Confluence, a not for profit organisation in India which focuses on strengthening economic, technical and political ties with neighbouring countries, signed an agreement with ICE WaRM to undertake cooperative activities to improve water resources management.

Sharing a commitment to improving water management, ICE WaRM and the Manipal University Jaipur (MUIJ) in India, signed an agreement in June 2019, to provide capacity development through the international exchange of staff and students in the water sector. Research in water quality undertaken by MUIJ Associate Professor, Dr Monika Sogani, in particular her work on micropollutants, is of considerable mutual interest in both India and Australia.

SDIP PARTNERS
Our work

ICE WaRM has extensive experience operating as an independent, trusted and reliable partner, supporting governments, and government agencies in their water reform journey, and enabling water governance and regulation, by developing excellence in water leadership through capacity development, mentoring, collaboration and the sharing of water knowledge.

In 2018-19 our international work focussed on projects in the Asia Pacific region including Bangladesh, Nepal, India, China and Pakistan, addressing regional challenges such as transboundary water management, groundwater management, river basin planning and sustainable agriculture.

With over 500 alumni since 2004, ICE WaRM continues to support communities of interest and leaders in water.
The Australian Water School (AWS) is an ICE WaRM initiative which delivers online training and free webinars to the global water sector, connecting countries from the developing and developed world, to address critical water challenges and inform on a wide range of water related topics.

Since June 2016, the School has been delivering a free Webinar Programme, producing 33 webinars this financial year, attracting over 6000 registrants across 105 countries. Presented by highly regarded professionals who are experts in their field, these webinars contribute to the advancement of the SDGs by providing an independent platform for live discussion. The Programme facilitates access to Australian and international expertise, thought leadership and best practice, and is unique in the world for its scope, frequency and relevance to international communities.

In June 2018, in response to global economic challenges, the Australian Water School moved away from face to face training and began delivering short courses online, to allow water professionals from around the world, access to affordable, high quality training and experts. During this financial year the school delivered 14 courses to attendees from 19 countries, indicating the successful transition to a digital model.

The Australian Water School is significant to ICE WaRM’s strategic direction in providing excellence in sustainable water management, globally, and will remain a focus for investment in innovative approaches to further develop the School and its programmes.

“The highly interactive nature of the session works well, allowing time for questions but also proceeding at a decent speed.”

“Thanks for organising and conducting par excellence webinar, you and your team deserve standing ovations for arranging this important webinar.”
Gender, equity and water management

Since 2015, ICE WaRM has been working with TERI School of Advanced Studies (TERI SAS) in New Delhi, India, to co-develop and deliver a programme for water professionals on gender, equity and water management.

Funding by the Australian Government through the Sustainable Development Investment Portfolio allowed the development and delivery of five courses around India. The first Management Development Programme was held in Delhi in 2016, followed by another four programmes held around India in Guwahati, Hyderabad, Gurugram and Jaipur.

This partnership has broadened our understanding on the complexity of gender and equity in India, and enabled ICE WaRM to support the Australian Government’s gender equality and women’s empowerment strategy, through these courses. The intensive two-day programme reached out to both men and women’s empowerment strategy, through these courses. The intensive two-day programme reached out to both men and women water leaders from government, NGOs and professionals in the water sector. The programme design introduced a new appreciation of development with respect to gender equity and water management, emphasising that one of the main inefficiencies in water management is that not all available infrastructure is used. Gender and equity are seen to bring the role of women in water management to the forefront.

ICE WaRM is actively pursuing further funding opportunities to continue developing and running the Management Development Programme through TERI SAS in India. The specific design of the course also allows its application across the water sector, globally.

Through these programmes, ICE WaRM has seen a substantial shift from reluctant participation in water management capacity development programmes, to a desire for knowledge that embraces new thinking on gender and social inclusion. Active involvement in the programme increased from 44 participants in Hyderabad in August 2018, to 65 participants in the final course held in Jaipur in May 2019.

A follow-up impact study has revealed that the course significantly changed participant’s views on gender, equity and water management, so that projects now include the perspective of women and address the deep-rooted stereotypes around gender in agriculture that question female authority in the absence of men. These new understandings were shared with colleagues, as well as the greater community, bringing the role of women in water management to the forefront.

ICE WaRM aims to continue developing and running the Management Development Investment Portfolio, to increase water, food and energy security in South Asia, through better regional cooperation, policy reforms, technology transfer and capacity building targeting the poorest and most vulnerable.

SDIP is an Australian government programme, which aims to increase water, food and energy security in South Asia, through better regional cooperation, policy reforms, technology transfer and capacity building targeting the poorest and most vulnerable.

The Sustainable Development Investment Portfolio is an Australian government programme, which aims to increase water, food and energy security in South Asia, through better regional cooperation, policy reforms, technology transfer and capacity building targeting the poorest and most vulnerable.

ICE WaRM joined the 12-year programme in 2013 and has continued into Phase 2 which concludes in June 2020. During Phase 2, ICE WaRM aims to provide capacity building programmes for key actors in South Asia’s water resources management in support of the overall SDIP objective: to improve the integrated management of water, energy and food in the major Himalayan river basins while addressing climate change and the interests of women and girls.

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Through this strategy, in collaboration with CSIRO, we have developed basin-wide scenarios for the Kamala basin in Nepal, built capacity in technical and senior levels in water agencies to prepare them for cross-border discussions, engaged in cross-border forums, and shared Australia’s experience in water sharing.

Our work aimed at an improved enabling environment within the policies, regulations, market systems and investment conditions for cross-border management of shared water, food and energy resources, further developed policy skills in key agencies in Nepal and assisted in the implementation of a new National Water Policy. This was achieved by bringing together key agencies for discussion and learning, including scientists, social scientists, lawyers, educators and policy actors for multidisciplinary dialogue, and engage local institutions in the development and implementation of our programme.

SDIP is delivered through Australian and South Asian partners:
- Australian Centre for International Agricultural Research
- Commonwealth Scientific and Industrial Research Organisation
- International Centre of Excellence in Water Resources Management
- International Centre for Integrated Mountain Development
- World Bank—South Asia Water Initiative Phase II
- International Finance Corporation
- The Asia Foundation
ICE WaRM continues to convene the Nepal – Australia Joint Advisory Committee (JAC) on Water Resources Management in Nepal under a memorandum of understanding between the two governments. In this role, ICE WaRM brings together stakeholders in water management and associated agencies of both countries for the improved planning and management of Nepal’s water resources.

The committee met twice in the year with discussions focussed on river basin planning, ecosystem management, and policy options for water management, and a close working cooperation between Nepal and Australian scientists and government officials was acknowledged. River basin planning efforts in the Kailali Basin are being assisted by Australian research organisation, CSIRO, and ICE WaRM continues to provide policy support to Nepal officials in preparing the National Water Resources Policy and associated legislation. The Australian Ambassador to Nepal and Chair of the Committee, Mr Pete Budd, indicated that Australia was a strong supporter of the partnership.

Other key discussions included the need for the Government of Nepal to develop capacity in water management and associated agencies of both countries, for the improved planning and management of Nepal’s water resources.

In June 2019, ICE WaRM and Primary Industries and Regions SA (PIRSA) hosted the Australian Ambassador to Nepal, HE Pete Budd, to South Australia’s thriving agriculture sector to assess water planning and regulation, cooperative irrigation models, and private sector led innovations, in the interest of food security.

Through personal stories told by practitioners in government policy, researchers, farmers and investors, the Ambassador gained useful insights into what has been successfully done and why. The Ambassador visited the Renmark Irrigation Trust which services 600 irrigators and demonstrates the efficiency and sustainability of a co-operative model, backed by growers in the region. The Trust not only provides water to growers, but by agreement with Commonwealth Environmental Water Holder, it also delivers environmental water for rejuvenating flood plains and ecosystems.

Another highlight was a tour of P’Petual Holdings advanced technology greenhouses in the Northern Adelaide region and one of the largest greenhouse vegetable growers in Australia. The Ambassador saw this as an important visit given that advanced technology greenhouses have transformed agribusinesses in Europe and Australia and expect to play a major role in food security in Asia.

Meetings with irrigators and successful intensive farming practitioners in South Australia provided useful case studies which can inform policies in Nepal, and highlighted the possibilities of future collaboration in education, research, capacity development.

ICE WaRM has been supporting Nepal to advance policies and practical plans for water, food and energy security since 2012, through the Australian Government’s South Asia Sustainable Development Investment Portfolio and bilateral support.

**Nepal Workshop**

Since transitioning to a federation and electing the country’s first three-tier government in 2017, Nepal has looked towards new approaches to water policy and legislation. In 2017, ICE WaRM organised a High-Level Study Programme on water management for Parliamentarians from Nepal, initiating a strong interest in Australia’s political experience in water policy and governance as a federation.

This led to two key workshops which were held in Kathmandu and attended by the Australian Ambassador to Nepal, HE Pete Budd. On the 29th April, 60 political leaders from the Federal and Provincial parliament convened at a workshop Centre-Province Relationship in Water Resources Development and Management in Federalism, to engage in dialogue on new water policy. This workshop was jointly hosted by the Agriculture, Cooperatives & Natural Resources Committee (Federal Parliament) and the Ministry of Energy, Water Resources and Irrigation (through the Water & Energy Commission Secretariat, WECs) of Nepal.

On 20th April 2019, WECs, with the support of the Australian Government through the Australian Water Partnership and ICE WaRM, hosted a workshop for government officials, particularly those involved in the drafting of provincial water-related legislation. Sharing Australia’s experience in water resources management, promoted discussions on possible pathways for drafting provincial water-related legislation. ICE WaRM, legal expert Ms Megan Dyon, and policy expert Ms Di Favier, contributed to the programme and produced high quality written advice to WECs to assist them with implementation of the new policy framework.

It was recognised that some policy issues would require further development before any law could be drafted. Overall, participants showed broad support for exploring the development of a model water law that could provide a consistent approach across provinces and allow for different rules to address unique circumstances.

**Bangladesh**

In September 2018, ICE WaRM hosted a delegation of senior officials from the Bangladesh agriculture and water sectors to Australia, to learn from Australia’s irrigation techniques, challenges and management expertise.

The agriculture sector in Bangladesh is the largest consumer of water, requiring highly developed management, to ensure the sustainable use of water to meet the country’s future food security needs.

Dr Kelvin Montagu for ICE WaRM and Dr Mohammed Mainuddin from CSIRO, led a 5-day High Level Study Programme which addressed policy and legal issues, research on efficiency and management approaches, and up to date technical tools and solutions with a focus on irrigation.

The programme provided opportunities for Bangladesh leaders from both the agriculture and water sectors to discuss the integrated issues facing the country. Senior officials from the Australian Department of Agriculture and Water Resources as well as the Murray-Darling Basin Authority, shared Australia’s national water management strategies. The visit also included discussions with public administrators at State and District level, specialised units for water management and field visits to operations across Canberra, Sydney and rural New South Wales.

This programme was supported by CSIRO and ICE WaRM through the Sustainable Development Investment Portfolio and the Australian High Commission in Dhaka through the Australia Awards programme.
Collaboration with CSIRO

During the year, ICE WaRM has collaborated with CSIRO Land and Water on programmes in Australia, South Asia and Latin America, with a focus on the opportunity for knowledge transfer, capacity development, and pathways to impact on water and land policy and practice.

Collaboration included support for the development of Basin Futures, a decision support modelling tool for rapid and exploratory basin planning. This cloud-based platform brings together global and local datasets to support water planning. Once developed, Basin Futures will provide an enabling environment for planning, cooperation and participation in water management.

ICE WaRM and CSIRO Land and Water co-supported Dr Fawzia Tarannum, Assistant Professor and Programme Coordinator from TERI School of Advanced Studies in India, to attend the 2019 Seeds of Change Conference held in Canberra 2-4 April under the theme Gender Equality Through Agricultural Research for Development. The inaugural event was jointly funded by SDIP partner, Australian Centre for International Agricultural Research and the Collaborative Platform for Gender Research, and the University of Canberra.

Following the conference, CSIRO and ICE WaRM hosted a workshop in Canberra where Dr Tarannum presented the Management Development Programme on Gender, Equity and Water Management to CSIRO, the Australian Government Department of Foreign Affairs and Trade, the Department of Agriculture and AWP, with a key message to integrate gender in resource management as part of the training curriculum at all levels, to enable societies and authorities to plan and develop gender responsive programmes.

Strategic Advisor

To support the South Australian water sector in identifying international trade opportunities, and to further develop collaborative networks, the South Australian Department of Environment and Water appointed ICE WaRM to provide Strategic Advisory services for 12 months until 30 June 2019.

A joint agency steering committee, with representation from the Department of Environment and Water and the Department of Trade, Tourism and Investment, endorsed the appointment of Hon Karlene Maywald to provide the services of the Strategic Adviser.

Key achievements from July to January 2019 under the Grant Agreement “Supporting South Australian International Water Engagement, Trade and Investment”, were centered around building and strengthening relationships in India, China and Hong Kong.

Water cooperation with Jiangsu Province, China, was facilitated through a memorandum of understanding between the Jiangsu Environment Protection Department and South Australia Department for Environment and Water. This led to a pilot capacity development and training program on basin management held in October 2018, and the establishment of a China-Australia International Basin Management, Research and Training Centre with Hohai University.

In Hong Kong, through the Water Supplies Department, Hong Kong Drainage Services Department, Hong Kong Productivity Council and Hong Kong University of Science and Technology, the South Australian water sector worked on several collaborative initiatives related to urban watercourse rehabilitation, smart water networks and small-scale wastewater treatment and re-use.

In India, the Strategic Advisor worked with the Rajasthan Centre of Excellence in Water Resources Management (RaCE WaRM) to establish joint research, industry and government projects in groundwater, and collaborated with the Maharashtra Water Resources Regulatory Authority for the establishment of a Centre of Excellence to address water challenges. The Strategic Advisor also led an Australian delegation to the 4th Confederation of Indian Industry – Water Innovation Summit where she gave a keynote address, chaired and participated in panel discussions, and led the business to business round table.

In June 2019 the Strategic Adviser and ICE WaRM Managing Director met with the Pakistan High Commissioner to Australia and Minister David Spiers to explore collaboration opportunities between South Australia and Pakistan.

The Strategic Adviser meets regularly with departments that are key to supporting the State’s export objectives in the water sector including SA Water, the Department of Environment and Water, the Department of Trade, Tourism and Investment, The Department of Primary Industries and Regional SA, the Department of Foreign Affairs and Trade, the Department of Agriculture, the Australian water Authority, and the Murray Darling Basin Authority.
China

In July 2018, ICE WaRM participated in the Smart Water Mission to China which was facilitated through South Australia’s Department for Trade, Tourism and Investment and led by the Department of Environment and Water. The success of the Mission built on relationships at a government to government level and opened opportunities with academic institutions and the private sector.

The Department for Environment and Water signed a memorandum of understanding and action plan to work together with Jiangsu Department of Environment Protection to Improve the health of the Taihu Basin. ICE WaRM is now working with the South Australian Government to develop new approaches to water and basin management in South Eastern China.

A pilot program was delivered during the Jiangsu International Summit in Nanjing on 12 and 13 October, targeting individuals with roles in Government management that involve oversight of the basins of Tai Lake, Poyang Lake, Dongting Lake and Cao Lake. ICE WaRM has further developed the programme which is planned for basins of Tai Lake, Poyang Lake, Dongting Lake and Cao Lake. ICE WaRM has also been involved in a joint research, industry and education projects with Australian and Chinese partners, addressing flood warning systems, environmental water, remote sensors and monitoring, treated wastewater re-use for agricultural production and water system optimisation. This is a joint initiative between Jiangsu Provincial Government, Hohai University, South Australian Government and ICE WaRM.

The purpose of the Centre is to bring multiple government agencies, industry and research institutes together to improve water management and reduce infant mortality as a result of water borne related disease. Drawing from the Australian experience of government, research, academia and the private sector working together, this concept resonated with political and policy leaders in India. ICE WaRM has facilitated the collaboration with RaCE WaRM on behalf of the South Australian Government, also drawing on other strategic and operational funding activities from the Australian Government’s Australia Awards Programme, SDIP and collaboration with CSIRO and ACIAR programmes in India.

In June 2019 Manipal University, Jaipur, signed a memorandum of understanding with ICE WaRM, to build stronger connections with RaCE WaRM and to link with other Australian partners working with Manipal University including CSIRO and Flinders University. The collaboration is focused on key priority projects which address water security and water quality, capacity development and training, exchanges, and business to business connections.

Centres of Excellence

In 2015, South Australia established a Sister-State relationship with Rajasthan, India, and in August 2016 signed an agreement to collaborate on the establishment of a Centre of Excellence and an action plan. Through this collaboration the Rajasthan Centre of Excellence in Water Resources Management (RaCE WaRM) was established and opened its doors in a new building with the Water and Sanitation Support Organization (WSSO) in November 2017.

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In February 2019, Mr Arun Shrivastava, Director at WSSO and Member Secretary of the Steering Committee, RaCE WaRM, visited Australia and shared the story in Canberra and Adelaide of the value of collaborations through centres of excellence. Briefings were provided on Rajasthan’s immense challenge of providing access to safe water for 76 million people, in a water scarce state, along with the challenge of meeting water needs for food security and economic development.

In his report to the Australian Government “An India Economic Strategy to 2035” Mr Peter Varghese AO, identified Joint Australia India Centres of Excellence as a key economic engagement strategy, which is now being realised through the pathway created in water.

The Maharashtra Government engaged with the governments of South Australia and Rajasthan to explore the centre of excellence model. On 12 February 2018 the South Australian Government signed a memorandum of understanding with the State of Maharashtra and the Maharashtra Water Resources Regulatory Authority. The agreement allows for a long-term relationship on water in many key areas, facilitated through ICE WaRM as the Strategic Adviser for International Water Opportunities.

Extending the model of centres of excellence, the Maharashtra Water Resources Regulatory Authority established the Maharashtra Centre for Innovation, Progressive Regulation and Awareness in Water (M-CIPRWA). Australia is providing support through the Government of South Australia and ICE WaRM which will provide two-way learning between India and Australia, including the evaluation and adoption of new technologies and innovative approaches to policy and practice. The Managing Director of ICE WaRM, Mr Darryl Day, has been appointed as a member of the M-CIPRWA Advisory Committee to deepen and extend the collaboration.

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Confederation of Indian Industry (CII) Triveni Water Institute Water Innovation Summit

Australia was sole Partner Country at the 4th Confederation of Indian Industry Triveni Water Institute Water Innovation Summit held in New Delhi 4th to 5th October 2018. This was made possible through the support of the Australian Water Partnership (AWP), the Australian Government and the South Australian Government.

The ICE WaRM Strategic Adviser of International Water Opportunities to the South Australian Government, Ms Karlene Maywald, led an Australian delegation to the event and gave an inspirational address highlighting the importance of the partnership between the two countries.

The Australian High Commissioner to India, H.E. Harinder Sidhu, gave a special address which acknowledged the support of the AWP as Country Partner, their activities in India, and the work of the South Australian Government and ICE WaRM in establishing RaCE WaRM through an agreement between the South Australian and Rajasthan Governments. The speech also highlighted the recent Australian Awards Fellowship programme in which ICE WaRM delivered a programme in Australia on Integrated Groundwater Management to 14 engineers from the Rajasthan Public Health Engineering to Australia.

Ms Maywald also led the business to business round table Round table with Australia on New Technologies and Innovative decision making for Water Security, which provided an opportunity to explore technologies and approaches. A common area of discussion was the need for capacity development in policy, governance and practice. The summit reinforced the leading role that the private sector needs to play in driving water reform and the necessity of structural adjustments to improve water security and economic development.

Australia’s participation was facilitated by ICE WaRM and Mr Steve Morton from the South Australian Department for Environment and Water, who led the programme development and participation by the Australian delegation and RaCE WaRM.

Iraq delegation

In 2018, the Minister of Water Resources in Iraq, Dr Hassan Janabi, and the Australian Department of Foreign Affairs and Trade (DFAT) held discussions in Baghdad which included water resources management. This led to the Australian Water Partnership (AWP) inviting ICE WaRM to facilitate a study tour to Australia in February 2019, for personnel from the Ministry of Water Resources in Iraq.

Having worked in the water sector in Australia, Minister Janabi believed that Iraq could learn a lot from Australian water industry practice.

The delegation of 10 began their programmes in Melbourne, where they met with representatives from the Victorian water sector to learn about water allocation and accounting before travelling to the Snowy Scheme at the National Museum. The tour included visits to environmental sites and agricultural areas where modern irrigation technologies are used, Integrity Farms, Barmah Forest and the Hume Dam. The programme completed in Canberra with meetings with Australian government officials and visited the Snowy Scheme at the National Museum.

Over the 7 day visit Iraqi officials were exposed to current water management practices and provided with opportunities to discuss approaches to sustainable development and lessons learned with Australian water management practitioners.

Singapore International Water Week

Singapore International Water Week (SIWW) 2018, held 8 to 12 July, was attended by ICE WaRM’s Chair, the Hon Karlene Maywald, Managing Director, Darryl Day and Director Robert Skinner, strengthening Australia’s engagement for research, capacity development and business in water security, resilience and liveability in urban centres.

The SIWW Water Convention is presented through a partnership between the International Water Association and PUB, and since the first event in 2008, has become an iconic event in the Asian Pacific region and internationally. The Water Convention focuses on urban water solutions for the Asia Pacific region, drawing together global leaders in research, innovation, policy and practice to advance the Sustainable Development Goals. Since 2009, Dr Harry Seah, Chief Engineering and Technology Officer at PUB, and Darryl Day have co-chaired the SIWW Water Convention Programming Committee successfully.

Rob Skinner was the Water Convention Theme Leader for the Livable and Resilient Cities, drawing from his multiple roles as Chair of the IWA Cities of the Future Programme, and the Deputy Chair of the Cooperative Research Centre for Water-Sensitive Cities. He delivered an outstanding programme which addressed challenges in the region caused by rapid population growth and urbanisation.

In her capacity as the South Australian Strategic Adviser to the International Water Opportunities, Ms Maywald led a Water Business Delegation with Mr Steve Morton, Manager of International Business Opportunities with the Department for Environment and Water in South Australia. The South Australian government provided an open doorway for business to business engagement and opportunities. Ms Maywald and Mr Morton participated in the Water Leaders’ Summit providing an opportunity to build connections with International Leaders.

SIWW provides a global platform for the water sector to share and co-create innovative water solutions. The biennial event gathers stakeholders from the global water industry to share best practices, showcase the latest technologies and identify business opportunities. It is one of the preeminent regional events for the water sector. Australia was well represented by Federal and State Governments, Industry, water utilities, research entities, and Centres of Excellence. South Australia’s participation was also strong, supported by the Water Industry Alliance which organised a trade stand for South Australian businesses.
Adelaide’s Women in Water breakfast series began in 2017 to bring awareness to the low representation of women in the water sector, especially in leadership roles. This is a concern for the future of the global water sector as women provide a valuable and alternative contribution to decision making, through skills knowledge and expertise, to an industry traditionally led by men.

In October 2018, the Water Industry Alliance held the third breakfast in the series, “Unconscious bias in the workplace”, as a joint initiative with ICE WaRM and other water industry organisations based in South Australia.

The event attracted more than 120 people and was opened by Keynote speaker, Arman Abrahimzadeh OAM from the Zahrah foundation, who led a powerful and confronting conversation on domestic violence.

A panel comprising of industry experts including Andrew Culley from Deloitte, Rachel Barratt from the Water Industry Alliance and Bronwyn Gillan from the University of Adelaide continued the discussion and were invited to share their experiences and thoughts on tackling unconscious bias in the workplace.

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**Awards**

**Darryl Day awarded Water Professional of the Year and Distinguished Fellow**

ICE WaRM’s Managing Director, Darryl Day was awarded Water Professional of the Year by the Australian Water Association at the 2019 Ozwater Gala Dinner in Melbourne.

Darryl has dedicated his life to the water sector, as a committed and passionate participant for nearly 40 years, 35 of which have been in service to the Northern Territory Government. During this time, he has improved the performance of organisations, companies and government departments across the water sector through his transformational leadership style.

As ICE WaRM’s Managing Director, Darryl leads the development and implementation of collaborative approaches for capacity development to international organisations in realising the Sustainable Development Goals.

Earlier in September, Darryl was recognised as a Distinguished Fellow of the International Water Association (IWA) at the 2018 World Water Congress.

The IWA Distinguished Fellows are outstanding water professionals, recognised for their unique contributions to advancing water science and management and to supporting the IWA’s mission and objectives.

**Professor Rob Skinner awarded a Member of the Order of Australia**

ICE WaRM Director, Professor Rob Skinner, was awarded a Member of the Order of Australia in the 2019 Queen’s birthday honour list. Recognised for “significant service to environmental water management”, Professor Skinner, Chair of WaterAid Australia and WaterAid International, is an inspirational leader of the water sector both internationally and locally.

In 2015 Rob joined the ICE WaRM Board, contributing his extensive experience in organisational leadership to support strategic direction toward developing global excellence in water resources management. Rob has been a generous mentor and enthusiastic supporter of many people across the water sector and he has led the critical work on understanding the challenges and practical solutions to advancing the Sustainable Development Goals.

**Women in Water Breakfast**

Adelaide’s Women in Water breakfast series began in 2017 to bring awareness to the low representation of women in the water sector, especially in leadership roles. This is a concern for the future of the global water sector as women provide a valuable and alternative contribution to decision making, through skills knowledge and expertise, to an industry traditionally led by men.

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**Highlights**

Christina Tonkin, ANZ with Darryl Day, ICE WaRM and Francois Gouws, AWA President

Professor Rob Skinner, Director at ICE WaRM

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**Womens in Water Breakfast**

Women in Water Breakfast
Our People

The Board
ICE WaRM is governed by an independently appointed Board of Directors.

Karlene Maywald
Chair
FTSE GICD, DUNIV(Flin)

Karlene Maywald is the Strategic Advisor, International Water Opportunities with the South Australian Government and the Managing Director of Maywald Consultants Pty Ltd, providing water policy and government relations advisory services. Ms Maywald has been Chair since 2016.

Judith Bradsen
Deputy Chair
LLB, BA, Dip T, LLM, Law, Arts, Teaching (University of Adelaide, University of Melbourne)

Judith Bradsen joined the Board in 2014 and retired from her legal practice in December 2016. Judith now provides consulting services relating to environmental and sustainability subjects.

Darryl Day
Director
BE (Civil) University of Adelaide, GAICD, Fellow IEA, Fellow International Water Association

Darryl joined the Board in 2014 and became Managing Director in September 2016. He Chairs the International Water Association – Australian National Committee and is Co-Chair of the Programme Committee for the Singapore International Water Week – Water Convention. Darryl is also Chair of the Industry Advisory Board of the School of Engineering and Information Technology of Charles Darwin University.

Robert Skinner
Director
BE (Civil), MSc, FIEAust, FIWA, MAICD

Robert Skinner joined the Board in 2014 and is Professorial Fellow and Director of the Monash Water for Liveability Centre at Monash University in Melbourne, Chair of WaterAid Australia, Chair of WaterAid International and Deputy Chair of the Cooperative Research Centre for Water Sensitive Cities.

Distinguished Professor Cynthia Mitchell
Director
FTSE, FIEAust, FICDA, Hon D’Tech (CTH, SE), PhD, BE, Dip Bus

Cynthia Mitchell is Deputy Director of the Institute for Sustainable Futures at the University of Technology Sydney, Chair of FoodSwell Ltd, and Chair of the UKCRC International Advisory Board. Cynthia joined the Board in January 2017.

Dr Peter Wallbrink
Director
BSc (Honors), PhD, MAICD

Dr Peter Wallbrink joined the Board in 2017 and is a Senior Principal Research Scientist at CSIRO Land and Water. He is also a member of the Gas Industry Social and Economic Research Association (GIPSA) Regional Research Advisory Committee (RAC).

Our team

Darryl Day
Managing Director

Joel Voortman
Business Development Manager

John Howard
International Water Executive Advisor

Cameron Miller
Chief Financial Officer

Kristy McCormick
Administration Officer

Pradeep Mathur
Partnership Support Adviser, Water Sector, Rajasthan, India

Ian Reid
Chief Academic Officer

Molly Sng
Administration Officer

Keshab Dhoj Adhikari
Executive Sector Specialist, Nepal

Trevor Pillar
National Partnerships Manager

Claudia Alfaro
Senior Project Coordinator

Risënya Sukarma
Partnership Support Adviser, Indonesia

Michelle Ha
Marketing Communications Manager

Danielle Cooper
Partnerships Officer

Andrew Johnson PSM
Executive Sector Specialist
Sponsorship

Watershed Art Prize

ICE WaRM proudly supported the City of Salisbury Watershed Art Prize for the 11th year running by sponsoring the 2019 winning prize of $5000, which was presented to artist Lyn Lovegrove Niemz for “The Wonders of the Coorong” by ICE WaRM’s Managing Director, Darryl Day. Lyn’s cultural background which includes Ngarrindjeri, the traditional Aboriginal people of the lower Murray River, western Fleurieu Peninsula, and the Coorong of southern central Australia, significantly influenced her submission.

This annual community event encourages the awareness of water as a precious resource and invites South Australian artists to explore water conservation and the role it plays in creating a more liveable environment. Salisbury’s Mayor, Gillian Aldridge OAM, gratefully acknowledges ICE WaRM’s support as principle sponsor of the South Australian event which raises awareness of the value of water throughout the community.

WIA Smart Water Awards

The Water Industry Alliance is unique in Australia, providing a connection between water services and solutions domestically and internationally. ICE WaRM has been a member of WIA since 2006 and a continuous sponsor of the WIA Smart Water Awards for the past 13 years. ICE WaRM congratulates 2019 winner of the AWA Leadership Award, Melissa Bradley, Programme Manager of Water Sensitive SA, and the Goyder Institute for Water Research for receiving the Minister’s Award for Excellence. In July 2017 Andrew Johnson PSM, Executive Sector Specialist, was awarded the SA Water Leadership Award.

WaRM Trust sponsorship

Through the WaRM Trust, ICE WaRM sponsored Rashmi Shrestha, an independent research consultant from Nepal, to present on Cultural Flow and Hydropower Development at the 2018 International River Symposium held in Sydney in October. Scientific study is urgently needed to understand the cultural flow requirements of the Bhilangana river basin in India so that existing and future conflicts can be avoided. The WaRM Trust receives and allocates funding to support a series of initiatives such as making this opportunity available for Rashmi.