MEET DR. EMILY BARBOUR, AUSTRALIAN WATER PARTNERSHIP

Meet Dr. Emily Barbour, Mekong Program Lead, Australian Water Partnership

The drive to find answers and new ways of working to solve complex environmental challenges has always been a key

driver in Dr Emily Barbour's career. Her curiosity and her openness to sharing her knowledge and expertise with all – her colleagues and our partners – has always been apparent, from the very beginning.

As the Australian Water Partnership's Mekong Program Lead, Dr. Emily Barbour has been leading the way in delivering climate-resilient water policies, practices, and tools in the Mekong region since joining AWP and eWater in 2022.

Dr Barbour brings more than 15 years of prior experience working in the water sector within Australia and internationally. Her previous work as CSIRO Senior Research Scientist included co-leading the Commonwealth

Environmental Water Office’s Basin-scale Monitoring and Evaluation program, which evaluates the ecological outcomes delivered by Australia’s investment in environmental water within the Murray-Darling Basin.

With a Doctor of Philosophy in Hydrology and Water Resources from the ANU, and Undergraduate degrees in Environmental Engineering and Science from the University of Newcastle, Emily has worked on water resource modelling projects in South Asia and the Pacific, chaired the CSIRO Land and Water Science Council, and taught at the University of Oxford’s within its Master of Science degree program in Water Science, Policy, and Management. She also undertook an undergraduate exchange program in Norway.

Well before she thought of joining the Australian Water Partnership, a division of the eWater Group, Emily had a strong connection to eWater as she deployed her professional expertise in water policy and scientific research with CSIRO. In her time there, Emily held a number of roles including a River System Modeller and worked on Australia’s sophisticated software-based National Hydrological Modelling

Platform, *eWater Source*.

As Mekong Program Lead at AWP, her focus is on designing and delivering development cooperation activities on behalf of the Australian Government (through the Department of Foreign Affairs and Trade), and in partnership with international governments and institutions in the Mekong region. As part this key role, Emily is leading the way in knowledge exchange with governments which highly value Australia's water management expertise – and our willingness to both share our experience and learn from others.

Emily has worked with our experienced AWP partners to deliver on the priorities of important partner governments in Vietnam, Thailand, Lao PDR, and Cambodia, through innovative programming, dialogue, training, deployment of tools and processes to support quality decision-making, and policy dialogue.

“I am always interested in pursuing and understanding the different perspectives of our partners and stakeholders from Australia and internationally; I believe that knowledge-building and capability development can only be successful if shared both ways.

“Through our partnership with DFAT, we have opportunities to observe and learn how our programs have impact, explore new ways to improve implementation, and identify how to respond to what we have learned in a meaningful way, which also enhances our effectiveness in the future.”

“I am interested in the interface between AWP and international governments, how they operate, how decisions are made, and what is useful [in terms of data and tools]. What we do feels like meaningful work to me and my team.”

“I am interested in how we can use data and technical tools to support higher quality, more evidence-based decision-making in water policy and management, and how this can improve the lives and opportunities of communities that rely on secure supplies of good quality water.”

Emily’s passion for water and the sector cannot be contested. Her commitment to finding solutions to working with water scarcity and promoting sustainability in water management in Australia, in the Mekong region and beyond is so clear when you hear her talk about her work.

For Emily, some of the biggest challenges facing the water sector is the need for a greater focus on working collaboratively to find practical and pragmatic solutions that can be realistically implemented, and which will be reliably

maintained after the initial activity concludes. Infrastructure is only part of the solution to coping with the impacts of climate change. Often policy settings, community awareness and political will are far more important to achieving lasting success.

“Having a long-term plan is of course necessary, but also we need to consider the importance of meeting people wherever they are on their journey right now and hear their advice on how we might most usefully collaborate.”

“I believe that data and technology can be powerful when engaging with governments and institutions that demand results, but relationship-building with our partners and communities is even more important, because information-enabled solutions must be trusted and continually fine-tuned. There is such power in connection between people who are committed to learning together and trusting each other.”

FROM OUR CHAIR: AUSTRALIAN WATER SOLUTIONS

Australian Water Solutions and the role of eWater Group in Australia and internationally

Greg Claydon, Chair and Independent Director, eWater Limited Board, deep dives into the challenges ahead for the water industry next year and the role of eWater Group in Australia and internationally.

As we move into our twelfth year of operation as eWater Limited, this past year has provided an opportunity to refresh the strategic direction of the organisation, including strong custodianship of a modernised national hydrological modelling platform that is fit-for-purpose, now and into the future.

No other organisation can ensure the safe custody and prudent ongoing development of this critical national asset.

eWater Source, used appropriately, greatly assists those tasked with the sensible and sustainable management of Australian water resources to make high-quality, informed, confident, transparent, equitable and wise decisions.

This past year was also an opportunity for the Australian Water Partnership and Mekong Water Solutions to further strengthen our international efforts and our partnerships to build water security, resilience, equality and understanding in the face of climate change, population growth, demographic shifts, poverty reduction and other challenges.

Through these efforts and partnerships, we aim to support and further develop Australia’s world-class water management and modelling products, services, and capabilities.

We also aim to deliver operational excellence and capacity building as a trusted adviser to international governments, demonstrating and exhibiting strong capabilities in international development program management.

Most importantly, we finish 2023 in a stronger financial

position than we started – this was no easy feat. It means we are going from strength to strength as we can continue our work in pursuit of better water management both in Australia and with our partners overseas and that is what eWater is all about.

This year, like many other water advocating organisations in Australia and around the world, we have seen some challenges, all of which we can address through strong cooperation, collaboration, and commitment.

For the wider water industry first, the all-encompassing challenge is how do we come to grips with our changing climate – preparing for and dealing with the increased variability, the bigger floods and the longer droughts, the higher temperatures and higher sea-levels, and less rainfall in many areas. That, combined with continued population growth and changing demographics, including expanding cities, puts tremendous pressure on water security for the environment, for industry and for communities. These all-impact people’s lives and livelihoods.

At the same time, there are imperatives to better manage

available water supplies more efficiently and get the best outcomes from water for the environment, while recognising the importance of meeting cultural water provisions and the needs and aspirations of First Nations people in water management.

And concerns continue to grow about threats to water quality and the distressing impacts of poor water quality on people and the environment.

So, there is still a lot to do to have an efficient and sustainable water industry. It continues to be important to invest in science and knowledge, skills and capacity and decision-support tools, to exercise leadership and good governance and to support initiatives like a refreshed National Water Initiative and overseas aid programs that seek climate resilience, poverty reduction and equity of opportunity.

All the above actually present tremendous opportunities for eWater Group.

The challenge is to make those opportunities a continuing integral part of our business by way of partnerships, investments, commitments, and innovation.

That is why, for example, eWater Group is determined to modernise eWater Source as the National Hydrological Modelling Platform that is fit-for-purpose for 2030 and beyond. Not only is eWater Source a focus, but we are also looking to update the science underpinning the eWater MUSIC modelling platform, to further improve information and decisions about water sensitive urban design and improved water quality in urban settings.

That is also why eWater Group is keen to deliver phase 3 of the Australian Water Partnership, building on the tremendous achievements of the first two phases managed by eWater. And we also would like to continue our great work in the Mekong, including with the Mekong River Commission, which has been a valuable partnership over many years.

I think it is fair to say that we all desire greater certainty in these uncertain times. eWater Group can provide the

strategies, the skills, and the tools to help with that.

NATIONAL SCIENCE WEEK 2023

Celebrating Australian science and technology and the power of people

The sustainable management of water is critical for all life on earth and the wellbeing of our society. As the driest inhabited continent on earth, Australia is well-placed to understand the complexity of protecting and managing our water resources and has become an internationally recognised leader in water policy and management.

We are marking National Science Week 2023 by acknowledging and celebrating the people and science behind the work we do at eWater Group.

We are committed to the pursuit of sustainable management of water resources through the development and sharing of best practices, capabilities, and knowledge of Australian

water expertise, nationally and internationally.

Our people are hydrologists, academics, software developers, sales and project managers public policy and water industry experts and innovators who are all here to find water management solutions for the benefit of all people and their communities.

We develop and deliver Australia's National Hydrological Modelling Platform on behalf of all Australian governments through eWater Solutions; and deliver international development programs on behalf of the Department of Foreign Affairs and Trade, including through the Australian Water Partnership and Mekong Water Solutions.

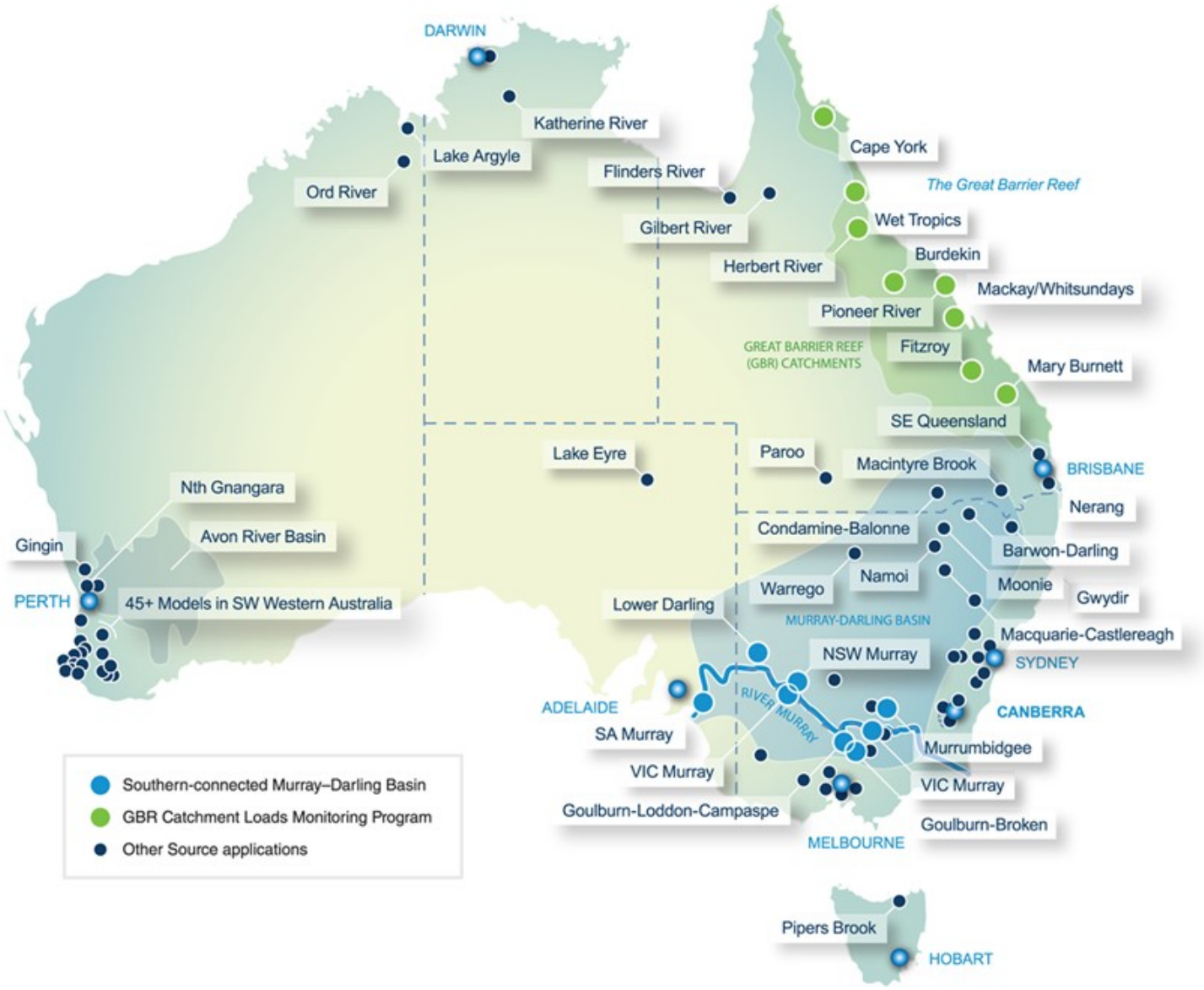
We provide creative, science-based, and trusted water management expertise, products and services for people,

communities, livelihoods, and environment impacted by many factors, including climate change.

From our beginnings as a Cooperative Research Centre Program to the organisation we are today; eWater Group has evolved to occupy a unique place in Australia’s water management and international cooperation ecosystem, including custodianship of the eWater Source platform.

eWater Source supports integrated planning, operations, and governance from urban to catchment to river basin scales including taking human and ecological influences into account. It accommodates diverse climatic, geographic, water policy and governance settings for both Australian and international climatic conditions.

eWater Source is the largest scientific software in use by the Australian Government, blending science insights with technological innovation to maintain the National Hydrological Modelling Platform.



Our world-class platform translates water-science outcomes into software to enable all Australian governments and our partners to harness data-derived insights and use scientific outputs in their decision making.

eWater Source has been applied extensively in a wide range of real-world water use situations, both in Australia and

internationally, supporting the management of rivers in Australia, the Mekong region, across South Asia, Africa, and the Middle East.

Alongside eWater Source, we also have eWater MUSIC and Urban Developer models which are designed to manage the interaction between various water supply systems as well as capture all water cycle components including rainfall and stormwater runoff, potable water, and the recycling / reuse of wastewater. These tools enable robust and reliable decision-making for secure urban water supplies.

To achieve positive outcomes across all sectors – food security, energy security, climate resilience, biodiversity and ecosystem health, and disaster management – water security is paramount. And as climate change accelerates the challenges, international cooperation to share learning is increasingly important.

A key part of Australia’s support for climate resilient water management in South-East Asia, South Asia, and the Pacific, is through our work within the Australian Water Partnership, which works closely with the Department of Foreign Affairs

and Trade and over 200 Australian partners across the public and private sectors.

The Australian Water Partnership supports a range of activities that draw on Australian expertise to respond to assistance from our international partners and governments, including on river basins, irrigation modernisation, integrated

urban water management and environmental water.

This week gives cause for us to acknowledge this collective commitment as an organisation, and individuals, to finding water management solutions which is why we want to acknowledge and celebrate National Science Week.

As the impacts of climate change and other environmental factors continue to grow and exacerbate water security, eWater Group is best placed to provide support, program delivery and training for the protection of our most precious resource.

Who are we?

eWater Group is owned by the Australian Federal, State and Territory governments to further develop Australia's world-class modelling tools and to provide support and training nationwide and internationally.

Our organisation is comprised of three divisions – eWater Solutions, the Australian Water Partnership and the Mekong Water Solutions to deliver water management solutions for

communities in Australia and overseas.

We also partner with the Australian Department of Foreign Affairs and Trade, and research groups and institutions to provide expertise and support for sustainable water management solutions in Australia and internationally, now and into the future.