



INTERNATIONAL
RIVERSYMPOSIUM

www.riversymposium.com

*LARGE RIVER
BASINS*

RIVER

PROGRAM

MANAGED BY



17th International

RIVERSYMPOSIUM

EXCELLENCE – COLLABORATION – INTEGRATION

National Convention Centre
Canberra, Australia
15–18 September 2014

PRINCIPAL SPONSOR



PRINCIPAL PARTNERS



Dedicated to a better Brisbane

FELLOW SPONSORS



CONTRIBUTING SPONSOR



PARTICIPATING SPONSOR



STUDY TOUR



RIVERPRIZE GALA DINNER SPONSOR



GALA DINNER BEVERAGE SPONSOR



EMERGING RIVER PROFESSIONAL AWARD SPONSOR



WELCOME FUNCTION SPONSOR



WELCOME

The 17th International *Riversymposium* will be one of best ever held with a superb, diverse program and first class presentations. The integrated programming brings together river practice, science, policy, planning, community, education, Indigenous and much more. It is truly a meeting place for all river professionals, providing a unique forum to encourage and foster debate, innovation and collaboration and set future directions.

The overarching theme of 'Large River Basins' has proven popular, being supremely located in the iconic Murray-Darling Basin – a globally leading region for environmental water planning and use of market-based approaches to water scarcity.

Our program will delight delegates with no less than 20 keynote speakers of international standing and ten special sessions on topical subjects presented by leading organisations. The theme of Large River Basins is supported by three plenary case studies from the Rhine, Mekong and Murray-Darling Basins and a Professional Day. A re-energised *RiverExpo* will entertain delegates with display booths, posters, photographic exhibition, Indigenous art, wine tasting and book launches.

A special highlight of *Riversymposium* is the awarding and celebration of the Thiess International *Riverprize*, the Australian *Riverprize* and the new Emerging River Professional Award at the fabulous

conference Gala Dinner. This 'must-do' event recognises the best in river restoration world-wide.

For the first time, in 2014 the *Riversymposium* will be supported by our Global Partnership to Advance River Basin Management, culminating in a significant forward-looking statement to set the future global agenda. Seminal presentations may also be submitted for publication in the *Solutions Journal*.

Riversymposium will be an extraordinary and enriching experience through its ground-breaking content, uplifting social program, diversity of voices, extensive networking opportunities and the simple joy of learning within an atmosphere of art, film and culture.

I look forward to meeting you this week in Canberra, the nation's capital.



N.J. Schofield

Dr Nick Schofield
Program Committee Chair,
International *Riversymposium*
CEO, International RiverFoundation

-  **Riversymposium Twitter Account**
[@riversymposium](#)
-  **Riversymposium Facebook Page**
<https://www.facebook.com/InternationalRiversymposium>
-  **Riversymposium LinkedIn Account**
<http://www.linkedin.com/groups/International-Riversymposium-4277268>
-  **Riversymposium mobile app**
<http://eventmobi.com/riverapp>

CONTENTS

Program	2	Special sessions	14
Monday 15 September	2	Awards	21
Tuesday 16 September	3	Thiess International <i>Riverprize</i>	21
Wednesday 17 September	4	Australian <i>Riverprize</i>	22
Keynote speakers	6	Emerging River Professional Award	25
RiverExpo	10	Social Program	27
Professional day	12	Welcome Function	27
Study tour	12	<i>Riverprize</i> Gala Dinner	27
Poster presentations	13	Breakfast: Women in Rivers	27
		Breakfast: Positive partnerships: The solution for healthy waterways	27
		Art and Culture	27
		Advanced Screening – RiverBlue	27
		Further information	28
		Acknowledgements	29

PROGRAM*

Monday 15 September 2014

0700–1800	Registration Open				
	A1 Chair: Nick Schofield				
0900–1030	Introduction – Nick Schofield Welcome on behalf of International RiverFoundation – Sallyanne Atkinson AO Interim Chairman, International RiverFoundation Indigenous Welcome to Country – Aunty Laura Bell and the Wiradjuri Echoes . Conference Opening and Welcome to Canberra – Minister Mick Gentleman MLA , ACT Minister for Planning Conference keynote: Rivers Running Dry: Seeking Sustainability in a World of Change – Brian Richter (USA)				
1030–1100	Morning Tea				
Theme	Large River Basin Management	Science and Knowledge for River Policy and Management	Rivers for Industries	Rivers and Communities	River restoration and management practice
Room	Royal Theatre	Bradman Theatre	Menzies Theatre	Nicholls Theatre	Sutherland Theatre
	A2A Chair: Brian Richter	A2B Chair: Richard Kingsford	A2C Chair: Own Chair	A2D Chair: Peter O'Brien	A2E Chair: Shahbaz Khan
1100	SPECIAL SESSION – Water security in large river basins Presented by Global Network to Advance International River Basin Management	<i>Delivery of environmental water under contentious water reform. Learning by doing to improve water delivery within the Edward-Wakool system</i> – John Conallin (The Netherlands)	SPECIAL SESSION – Food – Energy – Water Presented by Australian National University and UNESCO Keynote Presentation: From IWRM to the "Nexus" and back again: How robust and relevant is the concept of Integrated Water Resources Management in dealing with land, energy and water issues combined? Karen Hussey (Australia) Quentin Grafton (Australia) John Williams (Australia) Pamela Katic (Australia)	<i>The D'Entrecasteaux & Huon Collaboration: supporting the waterway through local partnership</i> – Immojen Fullagar (Australia)	<i>Evaluating Long Term Riparian Rehabilitation Outcomes from a Socio-Political Perspective</i> – Lori Gould (Australia)
1120	Convenors: The Nature Conservancy (TNC); International RiverFoundation (IRF); International Network of Basin Organizations (INBO), US Water Partnership (USWP), Global Water Partnership (GWP) and World Wildlife Fund (WWF)	<i>Like water and oil? Modelling and governance in the Koshi River Basin</i> – Tira Foran (Australia)		<i>Sharing the River Stories of North East Victoria</i> – Fern Hames (Australia)	<i>Integrated trans-disciplinary analysis: How can we better prioritise environmental watering for restoration?</i> – Brenda Dyack (Australia)
1140		Keynote Presentation: Future boom in hydropower dam construction will change the global map – Klement Tockner (Germany)		<i>FitzCAM: A United Voice in River Protection and Management – Case Study</i> – Caitlin Pilkington (Australia)	<i>Gifts of the Goddess Ganga – lessons learned from the Thames and Ganges Twinning Programme</i> – Robert Oates (UK)
1200		<i>The River Condition Index Impact Assessment Tool – Implementing the NSW Aquifer Interference Policy</i> – Julie-Anne Harty (Australia)		<i>An integrated, participatory and stakeholder engagement process to managing water quality in a large South African River</i> – O. Nelson Odume (South Africa)	<i>Restoring the ancestral Darling River in the Murray-Darling Basin, Australia</i> – Deborah Bogenhuber (Australia)
1220		<i>Turning science into answers: The complex dimensions of using science to evaluate policy</i> – Ben Gawne (Australia)		Rivers and Communities Speed Poster presentations: Breanna Pinner, Julie Imrie, Jenny Staples (Australia); Mandy Home (New Zealand)	Keynote Presentation: Does every little bit help? Scales of action in restoration of river systems – Ian Rutherford (Australia)
1240–1400	Lunch				
	1300-1400 – Students meet the Keynotes 1315 – Short film presentation: River Dog. Directed by Daniel Oscar Hunter & James Muir				
	A3A Chair: Ian Rutherford	A3B Chair: Bob Naiman	A3C Chair: Chris Moran	A3D Chair: Own Chair	A3E Chair: Stuart Bunn
1400	<i>Sustainability of engineered rivers in arid lands</i> – Jurgen Schmandt (USA)	The Science – Policy Interface Speed Poster presentations: Ian Perdrisat, Jess Schoeman, Carlos E. Gonzalez-Orozco, Brany Iezzi (Australia)	Keynote Presentation: Positioning Agriculture-Environment Sustainability at the Heart of IWRM in Large River Basins – Shahbaz Khan (Indonesia)	SPECIAL SESSION – Basin Champions and interactive learning Janna Randell (Australia)	SPECIAL SESSION – Thiess International Riverprize Presented by the International RiverFoundation Glenelg River (Australia) Petitcodiac River (Canada) San Antonio River (USA) River Rhine (Europe – all countries within catchment)
1420	<i>Water markets: growth and sustainability</i> – Peter Emmerton (Australia)	<i>The Probfo method – Bayesian network probability modelling and risk assessment for environmental flow management</i> – Chris Dickens (South Africa)	<i>What lessons from Tasmania – Australia's irrigation frontier?</i> – Jason Alexandra (Australia)		
1430				SPECIAL SESSION – MYRiveR Bremer: River and Basin Education Presented by OzGreen Sue Lennox, Phil Smith (Australia) Rosewood State High School: Zachary Small, Lewis Ball Bundamba State Secondary School: Shian Zammit, Teah Helce, Pinja Metala, Chloe Pearson, Madalyn Coles, Hannah Ross St Edmund's College: John Osborne, Jacob Johnston, Lachlan Walsh, Jacob Pennell	
1440	<i>Cheers for Weirs; Redeeming an Environmental Pest</i> – Marcus Cooling (Australia)	Keynote Presentation: <i>Environmental Flows: Training and implementation in developing countries</i> – Jay O'Keefe (South Africa)	<i>The Gilbert River system: at the frontline of the food bowl fantasy</i> – Karen Touchie (Australia)		
1500	<i>Managing water in the Dry Zone of the Irrawaddy Basin, Myanmar</i> – Robyn Johnston (Sri Lanka)	<i>Delivering on the Murray-Darling Basin Plan</i> – James Trezise (Australia)	<i>Designing water reform to benefit irrigators as well as achieve environmental outcomes</i> – Jacki Schirmer (Australia)		
1520	<i>Corporate Water Stewardship: Water Risk Assessment, Basin & Mitigation strategies</i> – Oliver Maennicke (Australia)	<i>Risk of flow alterations due to the Polihali Dam on the Senqu River, Lesotho</i> – Gordon O'Brien (South Africa)	<i>Whole farm nutrient mapping helping agriculture and rivers</i> – David Rogers (Australia)	Rivers and Communities Speed Poster presentations: Anne Clarke OAM (Australia) Takehiro Watanabe (Japan)	
1540–1610	Afternoon Tea				
	A4 Chair: Anne Schulte-Wülwer-Leidig				
1610–1730	CASE STUDY 1 – THE RIVER RHINE Restoration of a transboundary River: River Rhine – from the "sewer" of Europe to restored, ecological health Presented by International Commission for the Protection of the Rhine (ICPR) Gustaaf Borchardt, Anne Schulte-Wülwer-Leidig, Klement Tockner (Germany); Andre Bannink (Netherlands)				
1730–1900	WELCOME RECEPTION IN THE RIVEREXPO Presented by MDBfutures				

* Please note: program is correct at time of printing and is subject to change.

For most up to date program, please download the RiverApp at <http://eventmobi.com/riverapp>

Tuesday 16 September 2014

0800–1730	Registration Open				
0700–0830	Breakfast Session – Women in Rivers Cultures and currents – going with the flow (Tickets \$35) Presented by the International RiverFoundation Speakers: Kate Auty (Australia); Aunty Rochelle Patten (Australia)				
	B1 Chair: Diana Gibbs				
0830–1000	Bob Naiman (USA) <i>Incorporating science into fisheries management: scientific advice, decision-making and the Columbia river basin fish and wildlife program</i> Stuart Bunn (Australia) <i>Water security in the Anthropocene: are we doing enough to protect and revive river ecosystems?</i> Peter Varghese (Australia) <i>Global water security in the Indo-Pacific</i>				
1000–1030	Morning Tea				
Theme	Large River Basin Management	Science and Knowledge for River Policy and Management	Rivers for Industries	Rivers and Communities	River restoration and management practice
Room	Royal Theatre	Bradman Theatre	Menzies Theatre	Nicholls Theatre	Sutherland Theatre
	B2A Chair: Russell Rollason	B2B Chair: Barry Hart	B2C Chair: Rod Cameron	B2D Chair: David Young	B2E Chair: Deb Nias
1030	<i>The wash up on water efficiency, – an overview of the Computer Aided River Management (CARM) Project</i> – Dan Berry (Australia)	<i>7 Years On – Evaluating Environmental Watering Outcomes in NSW</i> – Justen Simpson (Australia)	SPECIAL SESSION – World Harbour Project Presented by the Sydney Institute of Marine Science	Keynote Presentation: <i>Recognising and providing indigenous cultural association with freshwater ecosystems</i> – Gail Tipa (New Zealand)	SPECIAL SESSION – Australian Riverprize Presented by the International RiverFoundation
1050	<i>Integrated River Basin Management to Prevent and Mitigate Drought in Northwest Mexico</i> – Tony Miguel (New Zealand)	<i>Understanding the impact of environmental water releases on multiple ecological assets</i> – Alice Brown (Australia)	Peter Steinberg (Australia) Paul Gribben (Australia) Hua Wang (Australia)	<i>Aboriginal Water Initiative</i> – Bradley Moggridge (Australia)	Margaret River (Western Australia) Bannister Creek (Western Australia) Lake Eyre Basin (Qld, NT, NSW, SA) Boorowa River (New South Wales)
1110	SPECIAL SESSION Chair: Jane Doolan – Water and wellbeing: Part 1 Presented by MDBfutures Understanding Water and Wellbeing	Environmental Flows Speed Poster presentations: Carmel Pollino, Danial Stratford, Durga Kandel (Australia); Nick Rivers-Moore (South Africa)		<i>Speaking to the Listening: Murray-Darling Basin First Nations Claiming Back their Water</i> – Cheryl Buchanan (Australia)	
1130	Introduction to Water for Wellbeing – an holistic view of wellbeing – Jacki Schirmer (Australia); <i>Bio-regionalisation for wellbeing</i> – Bernd Gruber (Australia); <i>Recreational values of wellbeing from water</i> – Brenda Dyack (Australia); <i>Ground Water and Climate Change</i> – Fiona Dyer and Jarrod Kath (Australia);	<i>Eavesdropping on frogs: Citizen-Science Guiding Catchment Health Management</i> – Anka Maria Hoefler (Australia)	Oral Presentations: Keynote Presentation: The Cumulative dimensions of impacts of mining on rivers and the wicked problems that arise as a result – Chris Moran (Australia)	<i>Indigenous River Voices: Water Story from the Kimberley</i> – Anne Poelina (Australia)	
1150	<i>Sustainability and education</i> – Philip Roberts (Australia); <i>Synthesiser & discussion moderator</i> – Jane Doolan (Australia)	<i>Estuaries of South West WA – key challenges, lessons learnt and a critical future</i> – Kath Lynch (Australia)	<i>Finding clarity in murky waters: Working with uncertainty in Queensland's CSG industry</i> – Jessica Grinter (Australia)	<i>Impacts of Human Intervention on water availability to Indigenous women in Bangladesh</i> – Priyangbada Chakma (Australia)	
1210		Keynote Presentation: Arid zone wetlands: important refugia in a changing world – Jenny Davis (Australia)	<i>To BMP or not to BMP – Developing a management practice framework for Ag, Urban and Mining industries on the Condamine River</i> – Carl Mitchell (Australia)	Indigenous Speed Poster presentations: Breanna Pinner (Australia) Marnie Ireland (Australia)	
1230–1400	Lunch				
	1300–1330 Lunch Keynote Presentation <i>Little Dogs with Big Tails – tributaries informing the standards of main stems</i> – David Young (New Zealand) 1230–1400 Lunch Time Special Session <i>Emerging River Professionals (IWCAN)</i>				
	B3A Chair: own chair	B3B Chair: Nathan Johnson	B3C Chair: Kaye Cavanagh	B3D Chair: Tom Calma	B3E Chair: Peter Wallbrink
1400	SPECIAL SESSION Chair: Neil Byron – Water and wellbeing: A new frontier Part 2	<i>Estuary Condition and Change – the value of long term datasets and the challenges of report card approaches</i> – Malcolm Robb (Australia)	<i>Changing Land Use and Impact on Water – Goulburn River, Hunter Valley NSW</i> – Julia Imrie (Australia)	SPECIAL SESSION – Indigenous Water rights – What is the future? Panel session will include:	Keynote Presenter: Northern Australia: water, water everywhere, but how much can be drunk? – Peter Stone (Australia)
1420	Presented by MDBfutures Decision making with Water and Wellbeing <i>Introduction to Futures with Water for Wellbeing (including Macquarie Marshes)</i>	<i>Emerging deltas in regulated rivers: Contribution to riparian vegetation diversity</i> – Malia Volke (USA)	<i>Fast Food Wetlands: Developer, WSUD Consultant and Environmental NGO perspectives</i> – Damon Cusack (Australia)	Cheryl Buchanan (Australia) Darren Perry (Australia)	<i>Setting course and travelling together – lessons from 15 years of collaboration</i> – Andrew O'Neill (Australia)
1440	– Leonie Pearson (Australia) <i>External shocks on wellbeing</i> – Maheshwar Rao and Yogi Vidyattama (Australia)	<i>Measuring and tracking climate change resilience</i> – Bill Dennison (USA)	Keynote Presentation: Security of the Urban water cycle for an inland city – Amanda Lewry (Australia)		<i>Integrated Assessment and modelling for river basin management: synthesis of recent studies</i> – Tony Jakeman (Australia)
1500	<i>Community and farmer adjustments for wellbeing</i> – Huong Dinh (Australia)	<i>Building resilience to climate change in the Lake Simcoe watershed, Ontario, Canada</i> – Michael Walters (Canada)	<i>Renewing 11 Urban Drains into Living Waterways on Perth's Swan Coastal Plain</i> – Julie Robert and Amy Warner (Australia)		<i>The importance of managing riparian zones for saving the Great Barrier Reef</i> – Andrew Brooks (Australia)
1520	<i>Water Allocations and optimisations</i> – Susan Nichols and Sue Powell (Australia) <i>Sustainable Communities and Governance of Water for Wellbeing</i> – Lain Dare (Australia) <i>Synthesiser & discussion moderator</i> – Neil Byron (Australia)	Keynote Presentation: How and why hydrological risk changes over time: climate change is only part of the story – Anthony Kiem (Australia)	Urban Poster presentations: Simon DeSmet (UK) Anne Simi (Australia) Diaswati Mardiasmo (Australia)		
1540–1610	Afternoon Tea				
	B4 Chair: Craig Knowles				
1610–1730	Case Study 2 – THE MURRAY-DARLING BASIN <i>The Murray-Darling Basin – Looking ahead</i> Presented by the Murray-Darling Basin Authority				
1830–2330	RIVERPRIZE GALA DINNER IN THE BALLROOM <i>Sponsored by the University of Queensland</i>				

Wednesday 17 September 2014

0800–1730	Registration Open				
0700–0830	Breakfast Session – Positive Partnerships: The solution for healthy waterways (Tickets \$35) <i>Presented by Fitzroy Partnership for River Health and Gladstone Healthy Harbour Partnership</i>				
	C1 Chair: Bill Dennison				
0820–1000	Riverprize Award Winner Presentation: Australian and Thiess International Bob Costanza (Australia) <i>Challenges and opportunities for engaging the business community around Natural Capital</i> Dipak Gyawali (Nepal) <i>Seductive Concept Meets Clumsy Reality: Impacting Policy in a World Not Run By Hydrologists and Watershed Experts</i>				
1000–1030	Morning Tea				
Theme	Large River Basin Management	Science and Knowledge for River Policy and Management	Rivers for Industries	Rivers and Communities	River restoration and management practice
Room	Royal Theatre	Bradman Theatre	Menzies Theatre	Nicholls Theatre	Sutherland Theatre
	C2A Chair: Jenny Davis	C2B Chair: Anne Simi	C2C Chair: Chris Chesterfield	C2D Chair: Brian Richter	C2E Chair: Jay O'Keeffe
1030	Keynote Presentation: Degrading and restoring rivers – two sides of the same coin – Richard Kingsford (Australia)	Drought Emergency Framework for Lakes Alexandrina and Albert – Aaron Matsinos and Kerri Muller (Australia)	Special Session: Future River Cities <i>Presented by Melbourne Water</i>	Keynote Presentation: Sharing river knowledge to promote collaboration and inspired communities – Siwan Lovett (Australia)	River Restoration Speed Poster presentations: Stephen Ryan (Australia) Julie Robert (Australia) Simon Costanzo (USA) Yoshi Tsuzuki (Australia)
1050	Special Session: Improving Trade and Livelihoods in South Asia through Integrated Basin Partnerships <i>Presented by CSIRO</i> Peter Wallbrink (Australia)	Science & Knowledge Speed Poster presentations: Judith O'Neil (USA) Yuqi Wang (Australia)		<i>Development of the Mississippi River Report Card: A communications approach</i> – Jane Thomas (USA)	
1100	Geoff Podger (Australia)	Integrated River Basin Management Speed Poster presentations: James Udy, Jennifer Bellamy, Jie Chen, Britt Rogers, Dushmanta Dutta, Mark Hamstead, David Winfield, Karl Hennig, Kim Piercy, Monika Muschal, Susan Nicholls (Australia); Dr Shrikant Limaye (India); Mary Beech (New Zealand); R. Heath Kelsey (USA)		<i>Our turtles have had a gutful of plastic!</i> – Andrew O'Neill (Australia)	Special Session: Basins without Boundaries – Sharing Stories to Save Our Rivers <i>Presented by Peter Cullen Trust</i> Matthew Fullerton (Australia) Anne Poelina (Australia) Emma Carmody (Australia)
1110				<i>The use of social media in the Murray-Darling Basin: Interactive communication for better water management</i> – Raechel Johns (Australia)	
1130				<i>Perceptions of the Murray-Darling Basin Plan: Understanding how communities experience water reform</i> – Jacki Schirmer (Australia)	
1150				Communicating Rivers Speed Poster presentations: Jason Menzies, (Australia), Woo O'Reilly and Evan Harrison (Australia); Hilary Kuhn (Australia) Kevin Graham (Australia)	
1210		Large River Basin Management Speed Poster presentations: Dushmanta Dutta (Australia) Ben Gillespie (Australia) Danial Stratford (Australia) Rebecca Kelly (Australia)			
1230–1400	Lunch				
	C3 Chair: John Dore				
1400–1540	CASE STUDY 3 – MEKONG BASIN <i>Presented by a Mekong Delegation</i> Mekong River Commission senior officials, including CEO Hans Guttman, Yao Jinxian (China), Nguyen Huu Thien (Vietnam), Chayanis Krittasudthacheewa (Thailand), Anoulak Kittikhoun (Laos), Pech Sokhem (Cambodia), Swe Swe Aye (Myanmar), Dipak Gyawali (Nepal)				
1540–1610	Afternoon Tea				
	C4 Chair: Ross Thompson				
1610–1730	Integrated Approaches To Large River Basins – The Way Forward <i>Business as usual cannot continue: making the case for change</i> Jean Francois Donzier (France) – INBO guest lecture; Facilitated by Ross Thompson				

Thursday 18 September 2014

0845–1700	Study Tour <i>presented by ACTEW Water</i> Buses depart from NCCC
0900–1700	Professional Day <i>Presented by Global Network to Advance Integrated River Basin Management</i>

* Please note: program is correct at time of printing and is subject to change.
 For most up to date program, please download the RiverApp at <http://eventmobi.com/riverapp>

Investing in rivers, investing in life



www.riverfoundation.org.au


INTERNATIONAL
RiverFoundation

KEYNOTE SPEAKERS



Mr Brian Richter
Conference Keynote

Rivers Running Dry: Seeking Sustainability in a World of Change

Cities, farms, and businesses around the world are running out of water. Worsening water shortages – caused by growing demands and competition for limited water supplies, inefficient and wasteful use of water, and exacerbated by climate change – are undermining economic productivity, human health, food supplies, political stability, and freshwater ecosystems. Some of the most promising solutions – including urban-rural partnerships for water sharing and local stakeholder involvement in water planning – will be highlighted.



Professor Stuart Bunn
Plenary Keynote

Water security in the Anthropocene: are we doing enough to protect and revive river ecosystems?

River ecosystems around the world are in trouble and the situation will undoubtedly worsen as human demands for water, food and energy rise, and by the impacts of climate change. There is much that can be done to reduce the impact of human activity on freshwater ecosystems, and significant advances have been made. Despite this, there is limited evidence of adoption at the appropriate scale to address existing problems, or to inform catchment and water resource planning to minimise future impacts. The global water debate remains firmly focused on safe supply and sanitation. The natural environment is largely missing from water-energy-food discussions. The environment must have a more central role in these debates if we are to halt the rapid decline in freshwater biodiversity and revive the world's rivers. There is also a clear need to better communicate our knowledge about river protection and restoration to decision makers and the broader community.



Dr Robert Costanza
Plenary Keynote

Challenges and opportunities for engaging the business community around Natural Capital

Natural capital and the ecosystem services it provides is increasingly being recognised as a critical but undervalued asset, supporting diverse aspects of sustainable human well-being. Rivers and their watersheds are some of the most important and valuable forms of natural capital. This presentation will explore how accounting for and valuing natural capital can engage the agriculture and business communities by putting environmental assets and liabilities in a language they can understand. It will discuss the challenges and opportunities of natural capital accounting for a range of uses, including full-cost accounting for business activities, land and water use planning, comprehensive and integrated modelling, payment for ecosystem services and common asset trusts.



Professor Jenny Davis
Wetlands & Estuaries

Arid zone wetlands: important refugia in a changing world

The arid zone covers more than 70% of Australia and generates more than 40% of Australia's wealth through resource extraction, pastoralism and tourism. The region has great cultural value for both indigenous and non-indigenous Australians and is also biologically rich, supporting 'boom and bust' ecosystems well adapted to water scarcity and extreme climatic variability. The importance of refugia for the conservation of arid zone biological diversity has long been recognised but scientific advances have increased our understanding of the scales over which arid zone wetlands can operate as climatic refugia and other wetlands that cannot, but are important for regional connectivity and sustaining ecosystems. Diverse scientific tools will help provide the knowledge needed for the conservation, management and restoration of arid zone biodiversity and 'boom and bust' ecosystems in an era of major global environmental change.



Mr Jean-Francois Donzier

Integrated Approaches to Large River Basins

Key principles and best practices in Basin Management from INBO

members field experiences

Climate change, floods, droughts, pollution, wastage, water-related diseases, food shortage, and destruction of ecosystems pose serious threats to many countries. Comprehensive, integrated and consistent management of water resources, aquatic ecosystems and land must be implemented to prepare for the future, meet increasing needs and adapt to global changes. Global warming now seems to be unavoidable: freshwater resources will quickly be directly affected. Some countries now have more than 50 years of successful experience, and since the 1990s, water management at this level has positively experienced a quick development in many countries and regions who have made it the basis of their national or regional legislation or tested it in pilot river basins. The International Network of Basin Organizations (INBO) was created to exchange its members' field experiences in order to develop and improve basin management and transboundary cooperation in the world. We may now recommend key principles and good examples which are successful and on which water resources management should now be organized.



Mr Dipak Gyawali
Plenary Keynote

Seductive Concept Meets Clumsy Reality: Impacting Policy in a World Not Run By Hydrologists and Watershed Experts

Like motherhood and apple pie, "integrated management" and "basin planning" are notions few would be foolish enough to speak against. They are inherently good, but the failure over the decades to achieve that nirvana should be reason to pause and reflect. It is history that shapes institutions, that guides collective human behavior; geography has been a critical determinant—but only up to a point. The forces that concentrate people in large

numbers in inhospitable places, forces such as market expansion as well as coercive or persuasive counter reactions to it, are rarely guided by “natural hydrological units”. Using examples from the upper Ganga basin, ranging from failures of grand “strategic basin plans” promoted by international aid agencies to desperate village attempts to protect their dying spring sources, this talk will first attempt to unpack the “wickedness” of the water problem. It will then examine how different types of power are exercised by different social solidarities to advocate solutions at wide variance in management styles and hence open to intractable conflicts. It will close with conjectures of how the hydro community should and should not go about trying to influence policies of the various social solidarities.



Dr Karen Hussey
Food, Energy & Water

From IWRM to the “Nexus” and back again: How robust and relevant is the concept of Integrated Water

Resources Management in dealing with land, energy and water issues combined?

In recent years, scholars, policy-makers and the media have increasingly focused attention on the interconnections between the water, energy and food sectors, recognising that what happens in one sector will almost inevitably have consequences for the other sectors. Commonly referred to as the “nexus”, in many ways this new conceptual framing is a natural extension of the earlier, well known concept of Integrated Water Resource Management (IWRM). IWRM is, by its very definition, combining nexus language with the broader objectives of sustainable development. However, like sustainable development, IWRM is a somewhat nebulous concept that has proven hard to implement in practice. It is perhaps not surprising then that much of the research and literature on the nexus has been generated from the water sector, which has recognised that while there is evidence of broad acceptance of IWRM principles, success has been limited and a fresh approach is needed. Dr Hussey explores the extent to which the concept of IWRM can effectively inform contemporary policy, and ultimately, whether it should endure.



Dr Shahbaz Khan
Agriculture

Positioning Agriculture-Environment Sustainability at the Heart of IWRM in Large River Basins

Agriculture productivity and environmental sustainability have largely been dealt as competing interests in large river basins. Recent water resources management is emphasising integrated approaches including measures such as infrastructure renewal, crop insurance, forecasting water allocations, hazard warning and land use planning. Infrastructure for irrigation – comprising of reservoirs, canal networks, drainage works and delivery systems—is created at a huge financial cost and need to provide additional services for better environmental management. For multiple uses of irrigation infrastructure and better water management practices there is a need to develop non-structural measures through scientific knowledge base for participatory water resources management. The non-structural measures can also be viewed within the wider context of development of more risk based approaches towards sustainable integrated water resources management. This presentation will highlight how a combination of structural and non-structural measures through UNESCO’s spiral approach for stakeholder empowerment can help harmonise irrigation productivity improvements and environmental sustainability concerns at the river basin level.



Dr Anthony Kiem
Climate Extremes

How and why hydrological risk changes over time – climate change is only part of the story

Floods and droughts always have and always will occur, especially in Australia. Both natural climate variability and anthropogenic change influence flood and drought risk but their exact roles, and proportional importance, are not yet properly understood or quantified. To address these challenges and to move towards a more resilient, well adapted Australia, a paradigm shift is required that accepts and accounts for the non-linear and non-stationary nature of the processes that drive hydroclimatic risk. This

talk summarises recent work which investigates whether or not the instrumental hydroclimatic records (which cover only 100 years at best for most parts of Australia) capture the full range of flooding and drought that is possible. The talk will also discuss the implications of the realisation that hydroclimatic risk changes over time and also the fundamental, but as yet unanswered, questions of whether flood and drought risk in Australia will increase or decrease in the future, and how decision makers can robustly deal with such uncertainty.



Professor Richard Kingsford
Developing Northern Australia

Degrading and restoring rivers – two sides of the same coin

The world’s population continues to increase, with many goods and services derived from the water in our rivers. Australia leads the world in the large scale restoration of rivers in the Murray-Darling Basin but we are also poised to develop or stuff, depending on your viewpoint the rivers of northern Australia. Informed decision making is required for both. What form should this take and how do we know if we are actually achieving goals and objectives? Much of this depends on understanding the impacts of water resource developments and outcomes of environmental flow restoration. These are simply reflected in the responses of dependent organisms and processes which reflect impacts of water resource developments and options for restoration. We need to provide improved evidence, governance and management linked through adaptive management frameworks to make sense of how much we can degrade or restore our rivers.



Ms Amanda Lewry
Urban Rivers

Security of the Urban water cycle for an inland city

Why should we be concerned about the security of the entire urban water cycle for an inland city? What are the unique challenges faced by Australia’s Capital City in this endeavour?

KEYNOTE SPEAKERS *CONTINUED*



Dr Siwan Lovett
Communicating
Rivers

Sharing river knowledge to promote collaboration and inspire communities

When we think about the term 'knowledge' we

tend to think about the range of information presented to us in publications and workshops that outline how particular parts of our environment function, for example: nitrogen processes in riparian areas; or in-stream temperature and its importance for river health. The knowledge contained in these publications can be described as 'cognitive', that is, knowledge based on what we define as 'rational' or 'logical'. We assert that people will be able to make informed decisions when they have a sound technical base upon which they can weigh various options and select the one that is appropriate to their needs. Our modern world supports and favours cognitive ways of knowing, and we are more likely to be successful in gaining funding when we can present arguments based on fact rather than feeling.



Professor Chris Moran
Rivers & Mining

The Cumulative dimensions of impacts of mining on rivers and the wicked problems that arise as a result

Environmental approvals, mine environmental operating conditions and mining company focus is overwhelmingly at the level of the individual operations. It is unsurprising that if the unit for regulation is the operation, that mines manage themselves at that level as well. Over recent years, some companies have come to the realisation that there are potential synergies in joint planning. It is possible to have joint planning and still overlook the effects that accumulate as a result of having multiple operations in place. Fortunately, in principle, humans have the ability to take on the perspective of the river and reformulate regulations and operational procedures to match the realities of river systems. In this talk, I will describe a framework that allows the cumulative dimensions of impacts to be understood and which provides a basis for an "environmentally sensible" regulatory approach.



Dr Robert J Naiman
Plenary keynote

Incorporating Science into Fisheries Management: Scientific Advice, Decision-Making and the Columbia River Basin Fish and Wildlife Program

While science is effective in influencing decisions in the Columbia River, the process is complex. Once home to large salmonid populations, the Columbia has seen significant declines in native fishes, and is undergoing a massive restoration effort. The Northwest Power and Conservation Council is charged with protecting, mitigating, and enhancing fish and wildlife through the Fish and Wildlife Program. The Program is implemented by federal agencies managing the hydrosystem, and seeks to establish an abundant, productive, and diverse community of fish and wildlife using science-based approaches. Two groups provide advice: the Independent Scientific Review Panel reviews projects and the Independent Scientific Advisory Board offers advice on contemporary issues. This presentation describes the effectiveness of science in resolving fish and wildlife issues. Examples include habitat restoration, implementing a landscape-scale restoration approach (emphasising social engagement) and guiding principles that enhance resilience and promote adaptive capacity within complex social-ecological systems, ones that continue to evolve.



Professor Jay O'Keeffe
Environmental
Flows

Environmental Flows: Training and implementation in developing countries

Since 2004, a team initiated by WWF and UNESCO-IHE has organised and facilitated more than 20 Environmental Flow assessments and training courses for rivers in 14 countries in Central and South America, Eastern Europe, East and southern Africa, and Asia. All these countries have their own priorities and constraints for the use and protection of water resources, and these are often very different from those in more developed countries. This presentation will describe a training process which has been developed and applied to build capacity for Environmental Flow assessment and implementation, not only among the scientific communities, but among water managers, government officials, and non-specialist stakeholders. Case studies from different parts of the world will be described and analysed to illustrate lessons learned for the future promotion of Environmental Flows globally.



A/Prof Ian Rutherford
River Restoration

The recovering aquatic patient: Preventative health for rivers: working hard to leave the rivers alone

An army of dedicated people across the world are working to reverse the decline of aquatic systems, and see them recover. Former winners of river prizes have been able to demonstrate the recovery of some aspects of their systems – such as fish populations. However, the great majority of advances instead involve incrementally reducing some past practice (such as digging drains or constructing levees). In practice, recovery is a long interaction between (a) the rate at which natural processes undo past human impacts, and (b) the constant political struggle to stop old practices from re-emerging. The idea of recovery, using examples of large wood loads in rivers, and reconnecting rivers to floodplains will be discussed. For restoration of aquatic systems we need a balance between radical surgery and the grind of preventative behaviours.



Dr Peter Stone
River Restoration

Northern Australia

Water, water everywhere, but how much can be drunk?

Northern Australia comprises around 40 per

cent of Australia's continental land mass and covers the area north of the Tropic of Capricorn, a total of nearly 300 million hectares. The region receives about 50 per cent of Australia's annual rainfall and is home to around 1 million people.

Water resources are central to the character of the region's environment, which enables a wide range of cultural and recreational pursuits and industries such as fisheries and tourism. The same water resources are also critical to the region's growing mining, energy and agricultural industries, upon which many hopes for development are pinned.

Is there enough water for all these uses and users? How would we know?

The evidence suggests that the total water resource is considerable, but the volume available for capture, storage and alternative use is modest. Understanding the distinctive dynamics of northern Australia's water resources, their current uses and the consequences of different uses is a critical step for securing the greatest value from a finite resource.

These and other themes are explored in a quantitative assessment of the north's water resources and their possible future trajectories.



Ms Gail Tipa
Indigenous Voices

Indigenous community in freshwater management especially the setting of environmental flows

This presentation describes methods for engaging

Maori in freshwater flow regime discussions at both management and governance levels. The Cultural Opportunity Mapping and Assessment process (COMAR) that Maori have applied in a number of catchments in New Zealand will be presented. Examples where we have integrated the data gathered from Cultural Flow Studies with data gathered from environmental assessment processes will also be presented. We will demonstrate how whānau have used the data collected from their Cultural Flow Preference Studies to assist in their management of customary fisheries. Finally, the specific outcomes delivered to indigenous communities and how they impact their health and wellbeing will be presented. Included in this will be an analysis of how decision makers have responded to the data resulting from a Cultural Flow Preference Study.



Professor Klement Tockner
Science-Policy Interface

Future boom in hydropower dam construction will change the global map

Economic development, human population growth, and the goal to close the so-called electricity gap jointly lead to a strong rise in the global energy demand. Concurrently, climate change calls for an increased production of renewable energy, with hydropower as the most approved renewable source. Within the coming decade, we will face an unprecedented boom in hydropower construction. Globally, a total of 3,704 major hydropower dams are either planned or under construction. These dams will almost double the total electricity production from hydropower, from actually 900 GW to more than 1600 GW. Most dams will be built in developing countries and emerging economies in SE Asia, South America and Africa. Likewise, the Balkan, Anatolia, and the Caucasus are hot spots of future dam construction. Dam construction will lead to a major reduction of currently free-flowing large rivers and impact some of the most biologically sensitive and diverse regions globally. The construction and operation of dams may cause major social, economic, and ecological impacts, but many of these impacts can be avoided, minimized or mitigated through proper planning and management.



Mr Peter Varghese AO
Plenary keynote

Global water security in the Indo-Pacific

Water security will be a persistently challenging issue of the 21st Century.

While not always credited with the same importance as traditional geopolitical threats or the major economic trends that have reshaped the international order, water security is one of the most urgent questions we face. Across the Indo-Pacific, water is now a critical constraint.

Australia's experience in managing complex water challenges in the face of water scarcity, and our strong policy and technical expertise is globally recognised. Our experience in managing our largest river basin, the Murray-Darling, draws international interest.

Australia wants to be a leader in helping build international water security. Our region is one in which community tensions over access to water can and do cross borders, which is why the Government has made agriculture, fisheries and water one of the six priorities for our aid program.



Mr David Young
River Writers Keynote

Little Dogs with Big Tails – tributaries informing the standards of main stems

In a conference about

big catchments this paper inverts the theme to examine three very different examples of small New Zealand rivers attached to much larger systems. Each provides insights into and contrasts with standards either lost or at risk. The first case study, the Manganui-o-te-ao flows out of one of the world's earliest national parks, Tongariro, into its 'parent', the Whanganui. All three landscapes are steeped in Maori history. After a proposal to erect two hydroelectric dams in the 1980s, the Manganui-o-te-ao was protected by an early Water Conservation Order. However, as from 2014, after 135 years of litigation, the more compromised Whanganui is significantly protected by an agreement between local iwi (tribes) and the Crown in which the river is now technically a legal personality that both parties will work to enhance and protect. Case two, the Makopua is a tiny tributary of the Rangitikei, a central North Island river also protected by a Water Conservation Order for its outstanding recreation – rafting, trout fishing – and unique landscapes. Today a Water Conservation Order is only as good as the pressure local environmentalists can apply and council's ability to monitor, manage and enforce standards. This is an example of why the word "balance" has no place in political discussions on the environment. Case three concerns the Hakataramea River. One hundred and ten years ago the Hakataramea was chosen for its purity as the site for an ambitious Government salmon hatchery. While the commercial plans were never quite realised, today the wild salmon stock run a number of South Island east coast rivers. Major hydro dams built on the 'parent' Waitaki River from the 1930s impacted the entire braided river system, but not the "Haka". However, as indigenous rights have emerged, a remarkable reconciliation has occurred between the North American guardians of these salmon, the Winnemen Wintu and their long-lost 'signature species' in New Zealand.

RIVEREXPO

VENUE

National Convention Centre Exhibition Hall

RiverExpo is a new and revitalised approach to the traditional trade exhibition. This part of Riversymposium will live and breathe vitality and act as a meeting place for ideas and innovation. RiverExpo will be a magnet to delegates and a real opportunity for exhibitors to demonstrate their services and wares.

The RiverExpo space includes numerous seating areas, booths, posters, interactive activities and creative art displays.

National Convention Centre

31 Constitution Avenue
 Canberra ACT 2601
 PO BOX 1013
 Civic Square ACT 2608
 T +61 2 6276 5200
 F +61 2 6276 5276

Opening hours

Monday 15 Sep 8:00am – 7:00pm
 Tuesday 16 Sep 8:00am – 5:30pm
 Wednesday 17 Sep 8:00am – 4:10pm

We would like to thank the following organisations for participating:

Company	Booth
ACIAR	5
Brisbane City Council	8
NERP Northern Australia Hub	2
Department of Conservation (NZ)	3
Ginninderra Catchment Group	4
International RiverFoundation	9
MDBfutures Research	1
Murray Darling Basin Authority	7
Riverspace	12
Thiess	10
Mekong River Commision et al	11

Speakers Preparation Room

All presenters must check in at the speakers preparation room to load their presentation on to the system at least two hours before their allocated presentation time.

The speaker preparation room is located in the Riversymposium Boardroom. This is can be found on the ground level behind the Royal Theatre.

Speakers info, social media



Riversymposium Twitter Account
 @riversymposium



Riversymposium Facebook Page
<https://www.facebook.com/InternationalRiversymposium>

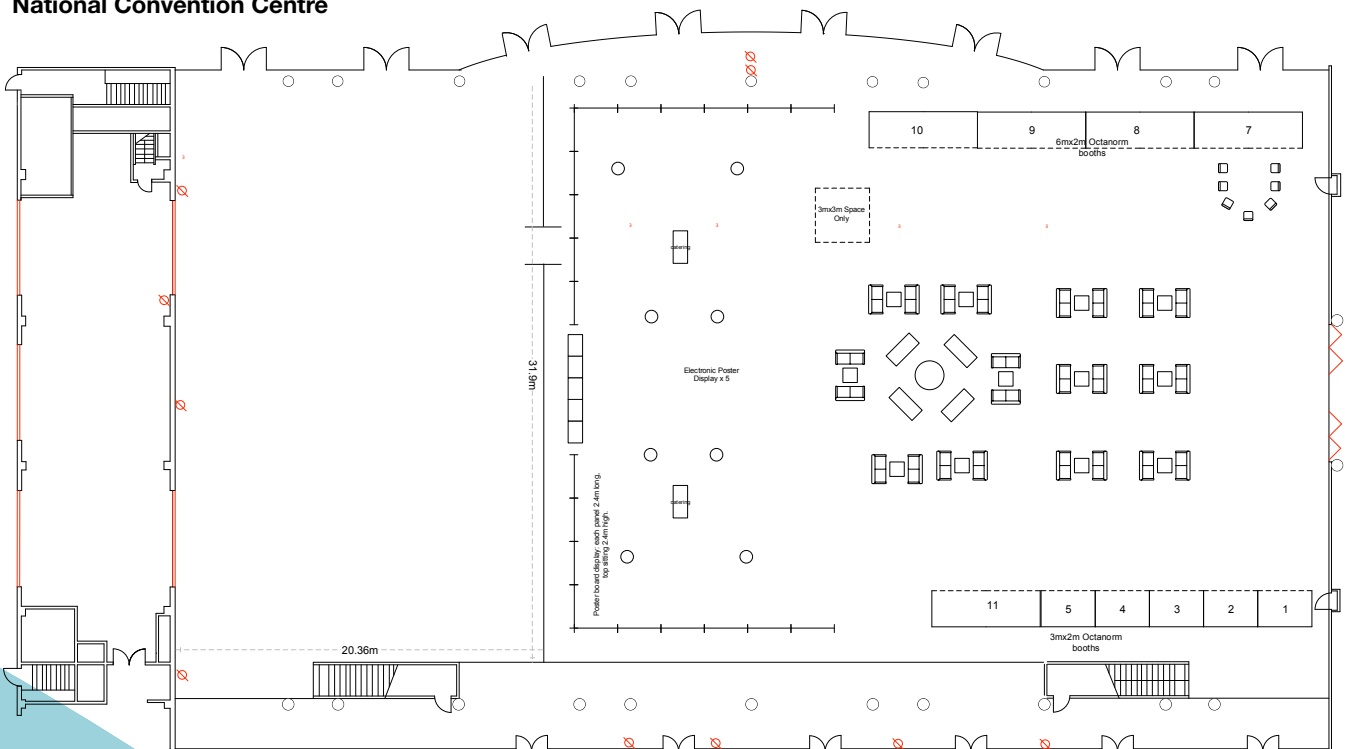


Riversymposium LinkedIn Account
<http://www.linkedin.com/groups/International-Riversymposium-4277268>

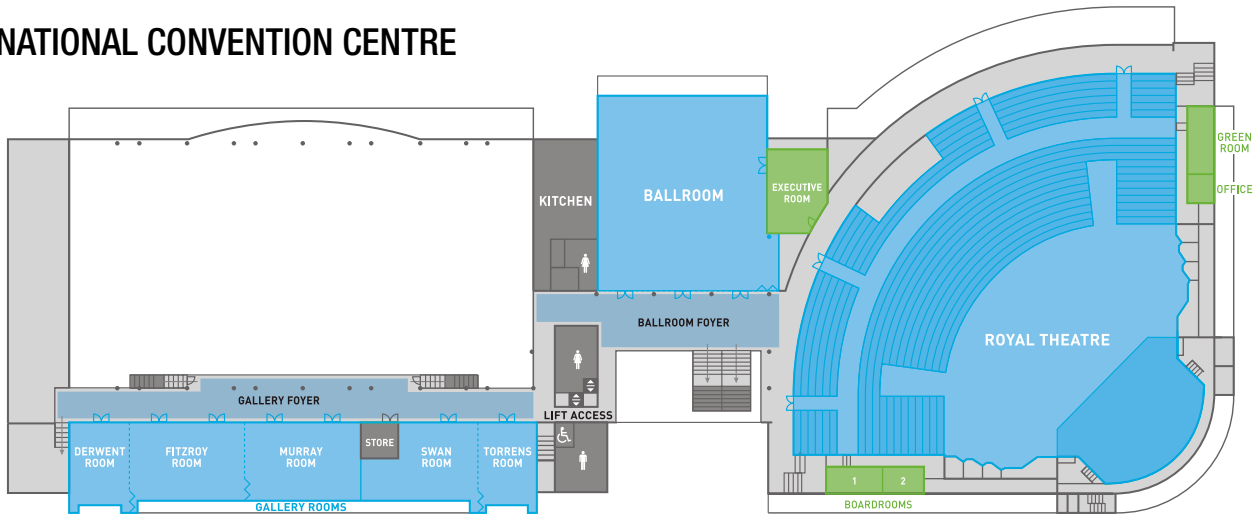


Riversymposium mobile app
<http://eventmobi.com/riverapp>

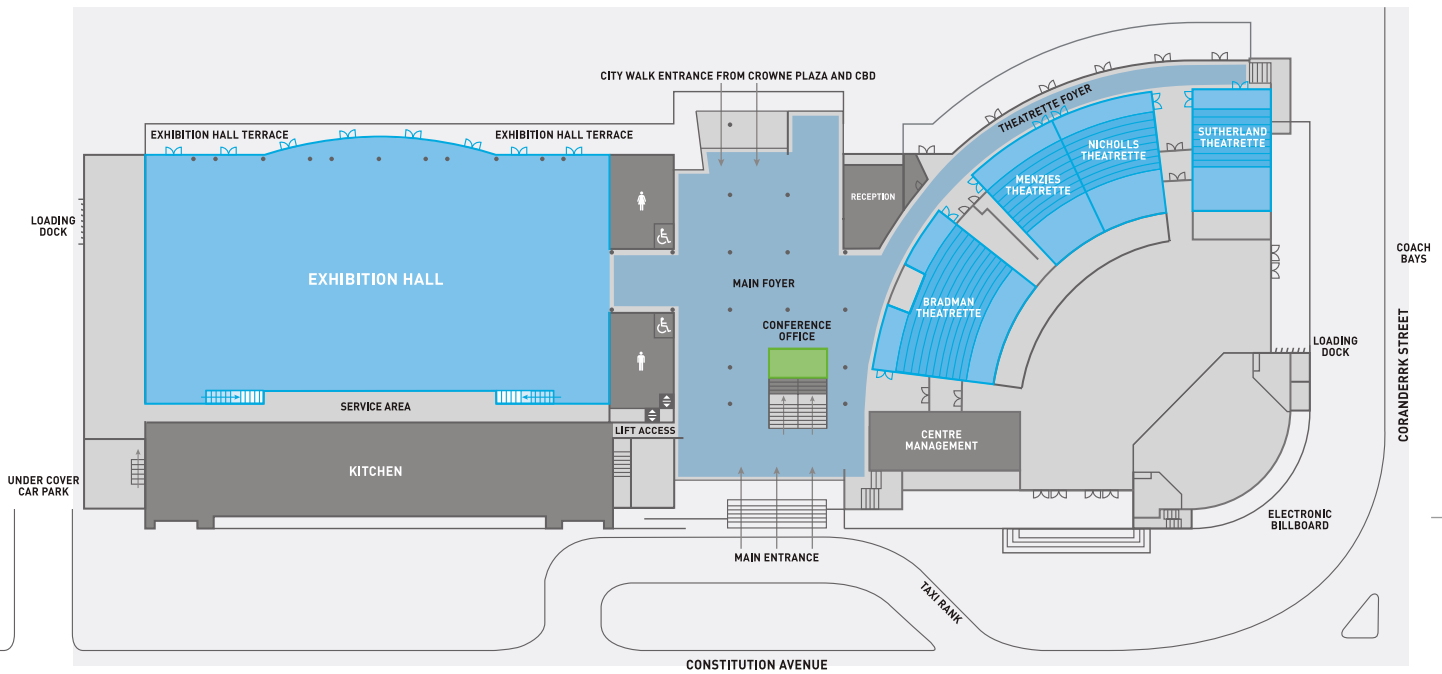
RIVERSYMPIOSIUM FLOOR PLAN National Convention Centre



NATIONAL CONVENTION CENTRE



FIRST FLOOR



GROUND FLOOR



Dedicated to a better Brisbane



PROFESSIONAL DAY

INTEGRATED RIVER BASIN MANAGEMENT

9:00am–5:00pm, Thu 18 Sep
\$100

The International River Foundation is a member of the Global Partnership to Advance Integrated River Basin Management. This Partnership currently includes The Nature Conservancy (TNC) (including the Great Rivers Partnership – GRP), World Wide Fund for Nature (WWF), the Global Environment Facility (GEF) (via IWLEARN), the International Union for the Conservation of Nature (IUCN), the Global Water Partnership (GWP), the International Network of Basin Organisations (INBO) and the International Commission for the Protection of the Danube River as a supporting partner (ICPDR). The Partnership is seeking to align its international programs and collaborate for meaningful, global action. In particular, it is attempting to create an international agenda for major river and basin conferences, enabling one conference to feed into the next. This would reinforce world-wide efforts and emphasise a forward-looking agenda.

The 2014 International *Riversymposium* is the first conference solely focussed on rivers to be designed with input from the Partnership. The overall conference theme 'Large River Basins' and various sub-topics address aspects of this theme while incorporating the integrated approach to river basin management in discussions. A special emphasis in the conference has been devoted to three large river basin plenary case studies, which aim to inspire by demonstrating real-world scenarios involving innovative practices and successes, while highlighting the challenges ahead.

By coincidence the Australian Capital Territory has commenced the first phase of the ACT Basin Priority Project which sees up to \$85m to improving long term water quality in the ACT and the Murrumbidgee River System. The IRBM project is aimed at improving the water quality and health of its six representative sub catchments. The monitoring and modelling analysis to come out of Phase One of the project will help to better understand the water quality issues in the different types of catchments. Phase Two will involve the development and design of infrastructure options, which will be informed by the analysis

of data collected from the monitoring from phase one. The ACT Environment Minister, Simon Corbell, has endorsed a special session to bring our best global minds to answer the hypothetical question "what would you do with \$85m in 5 years". Local project leaders will facilitate this session and provide background to this project prior to the Professional Day.

The Professional Day aims to draw on the presentations at the *Riversymposium* and consolidate learnings into a 'statement on the way forward for IRBM'. Should the statement have sufficient merit, it may be fashioned as a 'Canberra Declaration'. The Professional Day is designed for delegates with a special interest in Integrated River Basin Management who want to dig deeper on issues, reflect on the conference presentations, and help design a future global or local agenda. Fashioning a forward-looking statement should be inclusive of all river voices – communities, Indigenous, scientists, managers, policy developers, business and industry representatives.

STUDY TOUR

CANBERRA REGION

8:45am–5:00pm, Thu 18 Sep

Join ACTEW Water on a journey around the ACT to learn about its diverse waterways. The Territory boasts clear mountain streams, rushing waterfalls and majestic rivers only a short distance from the city.

Come face-to-face with Canberra's new Cotter Dam, which stands as high as the flagpole on Parliament House and has more than two times the capacity of

Lake Burley Griffin. Then meet some of the people who work to take care of the ACT's aquatic environments; balancing the needs and impacts of urban areas with environmental water management, protecting habitat for native species, and ensuring a safe and secure supply of drinking water for the nation's capital.

Sponsored by



POSTER PRESENTATIONS

In 2014, *Riversymposium* poster presenters have been given the opportunity to present their poster as both an electronic and a hard copy poster. Posters will be set up in the revitalised *RiverExpo* area with hard copy posters available on the poster boards and electronic posters on the designated computer terminals located behind the catering. Please take your time to view the posters and ask the authors any questions you may have.

Poster Award

The poster award will be peer judged this year, voting is open on Monday and Tuesday of the conference. Complete the voting form in your delegate satchel and drop it into the ballot boxes in the poster area or at the registration desk.

First Name	Last Name	Sub Theme	Paper Title	Country
Ben	Gillespie	Environmental Flows	Stream water quality response to artificial floods	UK
Mandy	Home	River nexus—integrating river perspectives	Determining the contaminant health risk to an indigenous community from wild foods sourced from rivers, before identifying river restoration priorities	New Zealand
Tony	Miguel	Climate Extremes	Strategic Plan to Prevent and Mitigate Drought in Three Large Mexican Catchments	New Zealand
Tony	Miguel	Integrated River basin management	Integrated Water Plan for Developing Basins: identifying, repairing and mitigating impacts	New Zealand
Marnie	Ireland	Indigenous River Voice	The National Cultural Flows Research Project	Australia
Simon	Costanzo	River Restoration	Nitrogen source tracing in the Choptank River Watershed, USA—a globally applicable approach	USA
Hilary	Kuhn	Communicating Rivers	Enabling the catchment to speak for the river	Australia
Britt	Rogers	Integrated River basin management	Working together towards river recovery in Logan City	Australia
Peter	Unmack	River Restoration	Using molecular techniques to determine management units in four aquatic species from the Murray-Darling Basin	Australia
Jason	Menzies	Communicating Rivers	RiverWise Bennett Springs—a river-focused behaviour change pilot program	Australia
Stephen	Ryan	River Restoration	Glennelg River Judas Carp project	Australia
Carlos E	Gonzalez-Orozco	The science—policy interface	Phylogenetic Diversity of biota among river catchments of the Murray-Darling Basin region, Australia	Australia
Jarrod	Kath	Climate Extremes	The importance of groundwater for the health of river landscapes	Australia
Alana	Wilkes	Integrated River basin management	Classifying aquatic ecosystems in the Murray-Darling Basin	Australia
Woo	O'Reilly	Communicating Rivers	The value of Waterwatch data—involving the community in understanding waterway health	Australia
Kim	Piercy	Integrated River basin management	Sampling Channel Form and Riparian Vegetation Across Murray Darling Basin Using Remote Sensing	Australia
James	Udy	Integrated River basin management	Monitoring to shape the future	Australia
Carmel	Pollino	Environmental Flows	Dynamic Ecological Modelling Tools for Water Resource Planning: A Demonstration	Australia
Mark	Hamstead	Integrated River basin management	Improving integrated water resource planning	Australia
Jennifer	Bellamy	Integrated River basin management	Enabling collaboration for multilevel river basin management: The Lake Eyre Basin experience	Australia
Jacki	Schirmer	Agriculture	Designing water reform to benefit irrigators as well as achieve environmental outcomes	Australia
Danial	Stratford	Environmental Flows	Environmental flows in a data poor basin	Australia
Danial	Stratford	Environmental Flows	Modelling fish population response to flow.	Australia
Susan	Nichols	Environmental Flows	Development of flow-invertebrate response functions and modelling eco-hydrology for environmental flows	Australia
Cameron	Wearing	Integrated River basin management	Steps Toward Transformational Change in South East Queensland	Australia
Simon	DeSmet	Urban	Dilution as an in-river mitigation strategy for water quality management	United Kingdom
Sakthivel	Ponnumamy	Integrated River basin management	Groundwater Extraction and Sand Mining across Cauvery Basin: IWRM and Policy Options	India
R. Heath	Kelsey	Integrated River basin management	Development of the Mississippi River Report Card: Balancing society, economy, and environment	United States
Judith	O'Neil	Wetlands And Estuaries	Toxic Cyanobacterial Blooms in River Reaches of the Chesapeake Bay: Management Challenges	USA
Julia	Imrie	River nexus—integrating river perspectives	The Drip Gorge—a window into surface and groundwater connectivity, Goulburn River NSW	Australia
Mwinyi Selemani	Malisawa	Integrated River basin management	Relationships between precipitation and evapotranspiration in the Congo and Okavango River basins of southern Africa	South Africa
Everisto	Mapedza	Integrated River basin management	Benefit sharing in the Blue Nile River Basin	South Africa
Jenny	Staples	River nexus—integrating river perspectives	Water knows no boundaries	Australia
Brany	Iezzi	The science—policy interface	Shaping Brisbane's Built Form to Increase Resilience to Flooding	Australia
Julie	Robert	River Restoration	Transforming an Urban Drain to a Living stream using a community driven process	Australia
Kevin	Graham	Communicating Rivers	Telling your story—the tilapia tale	Australia
Yuj	Wang	Climate Extremes	Hydrological change in the Upper Murrumbidgee River, South-eastern Australia	Australia
Mary	Beech	Integrated River basin management	Freshwater ecosystems with complex management: Awarua—Waituna, New Zealand	New Zealand
Jie	Chen	Integrated River basin management	Developing conceptual glacial-hydrological response processes component in the Koshi Basin integrated model	Australia
Dushmanta	Dutta	Integrated River basin management	A process-based river system model for large scale applications	Australia
Yoshi	Tsuzuki	River Restoration	Water quality changes of the Brisbane River in 40 years	Australia
Breanna	Pinner	Indigenous River Voice	Expanding Indigenous engagement opportunities for waterways management in South East Queensland	Australia
Md Jahangir	Alam	Integrated River basin management	Modelling water demand on the Murray and Lower Darling rivers	Australia
Pamela	Katic	The science—policy interface	Targeting shallow groundwater irrigation innovations in the White Volta Basin	Ghana
David	Winfield	Integrated River basin management	The Murray-Darling Basin Plan: Adaptive Integrated Water Planning	Australia
Monika	Muschal	Integrated River basin management	Long term water quality monitoring in the Intersecting Streams, Murray-Darling Basin	Australia
Durga	Kandel	Environmental Flows	Assessing Salt Export from the River Murray System over the Barrages	Australia
Jess	Schoeman	The science—policy interface	Managing water adaptively within rules-based governance: some lessons from the Lachlan	Australia
Takehiro	Watanabe	Communicating Rivers	River Basin as Resource for an Interdisciplinary Education at a Japanese University	Japan
Nicholas	Rivers-Moore	Environmental Flows	Aspects of the ecological costs of large dams in South Africa	South Africa
Rebecca	Kelly	Integrated River basin management	A Plan for Water Quality Improvement in the Tamar Estuary and Esk Rivers Catchments	Australia
Diaswati	Mardiasmo	River nexus—integrating river perspectives	Water Erodes Property Values and Suburb Growth: an Australian Example	Australia
Anne	Clarke OAM	River nexus—integrating river perspectives	Securing Industry Support and Involvement in Catchment Management	Australia
Oghenekaro Nelson	Odume	River Restoration	Macroinvertebrates-based biomonitoring in an effluent impacted river—a comparison of approaches	South Africa
Karl	Hennig	Integrated River basin management	Avon Basin hydrological and nutrient modelling	Australia
Dushmanta	Dutta	No Sub-Theme Allocated	Real-time inundation modelling in large floodplains	Australia
Breanna	Pinner	River nexus—integrating river perspectives	Peoples values from catchment to coast in South East Queensland	Australia
Dushmanta	Dutta	Integrated River basin management	Innovative Calibration Approaches for Large River Streams	Australia
Ian	Perdrisat	The science—policy interface	From Science to Policy: Evidence based Participatory Planning in the west Kimberley	Australia
Aaron	Matsinos	Climate Extremes	Drought Emergency Framework for Lakes Alexandrina and Albert	Australia
Anne	Simi	Urban	Urban Waterways / Maximising Value	Australia

Note: quick reference guide and abstract book available online

SPECIAL SESSIONS

MONDAY 15 SEPTEMBER

WATER SECURITY IN LARGE RIVER BASINS

11:00am–12:40pm, 15 Sep

Convenors: The Nature Conservancy (TNC); International RiverFoundation (IRF); International Network of Basin Organizations (INBO), US Water Partnership (USWP), Global Water Partnership (GWP) and World Wildlife Fund (WWF)

Water security is considered in general terms as the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies. Large river basins, many of which are highly diverse, complex and transboundary in character, are typically the engines of domestic and regional socio-economic development. They also harbour some of the world's highest aquatic biodiversity. Today, such basins illustrate the full spectrum of existing and emerging issues associated with water security, from fundamental water scarcity, to human security and future conflict prevention. Novel partnership models are being sought to sufficiently address the complex water security challenges such environments pose globally.

The objectives of this session are to use on-the-ground studies from large river basins in different biophysical and socioeconomic development contexts to:

1. Open a dialogue on the various dimensions of water security of particular importance in large river basins.
2. Highlight water security science or policy areas which require immediate and targeted attention.
3. Identify any new or emerging concerns, and the partnerships to help address them.

Welcome and opening
Session chair: Brian Richter

Case 1: Water and security – river infrastructure and conflict prevention in the Niger Basin

Presenter: Dr Rebecca Tharme, GRP, TNC (with Dr John Kelly, National Defense University, USA, Mr Gregory Copley, International Strategic Studies Association, US Army Reserve, and Mr Chuck Chaitovitz, GETF/US Water Partnership).

Case 2: The role of river basin organizations in water security around the world: best experiences

Presenter: Mr Jean-François Donzier, INBO

Case 3. Environmental water and water markets in the Murray-Darling Basin

Presenter: Mr David Papps

Case 4: Water Security in the Hindu Kush Himalayan Region

Presenter: Dr David Molden, ICIMOD (with Dr Shahriar Wahid, ICIMOD)

Roundtable discussion

Roundtable facilitator: Bounthavivanh (Vahn) Mixap (GWP-IRF)

Panel closing reflections

Panel moderator and closing remarks: Ms Melanie Ryan (IRF)

Panelists

Ms Bounthavivanh Mixap, GWP- IRF Ken Thiess Memorial Scholarship holder
– Water security, consumption, and the tourism nexus

Prof. Jay O'Keeffe, Environmental Learning Research Centre, Rhodes University, South Africa

– A role for environmental flows in water security: ecosystem services of the River Ganga

Oliver Mainnicke, WWF Australia

– Water Stewardship

FOOD – ENERGY – WATER

By the Australian National University and UNESCO

11:00am–12:30pm, Mon 15 Sep

Presenters: Karen Hussey, Quentin Grafton, John Williams, Pamela Katic

11:00am–11:30am Keynote presentation
Karen Hussey – Framing the Nexus: Climate, Energy and Water

11:30am-12:30pm Panel presentations and questions

Quentin Grafton and John Williams – Food, Energy, Environment, Water: Baselines, trends and drivers

- (1) Framing the challenge. Synthesise a baseline understanding of current conditions, and also gaps in understanding, of a 'reasonable worst case' global scenario with possible risks and trade-offs out to 2050 in terms of food, energy, environment and water using the best available evidence.
- (2) Identifying the drivers and consequences. Explore and discuss the key drivers of current vulnerabilities and the reasonable worst case at a global, and at an appropriate continental and national level, with the help of case studies. Identify three key drivers that are susceptible to change both now and over the next 30 years as a result of resilient public policy reform.
- (3) Acting strategically. Identify short-term (1-3 years), medium term (3-5 years) and longer-term (5-10 years) actions that could support transformative change that reduces the likelihood and/or consequence of the adverse outcomes associated with a reasonable worst case.
- (4) Next steps. Identify what unique actions the participants individually, and also jointly as part of the FE2W network, can value add to existing activities to support transformative change to adapt and to mitigate against current vulnerabilities and a reasonable worst case.



Pamela Katic – Case study: Targeting shallow groundwater irrigation innovations in the White Volta Basin

In West Africa, shallow groundwater irrigation systems are estimated to contribute about US\$1.2 million annually to the economy of the poor communities of the White Volta Basin and to greatly enhance food security. This type of irrigation leads to a significant reduction in poverty levels only when motorized water lifting devices are used in high-yielding wells. However, introduction of petrol pumps may not be suitable in all areas where shallow groundwater irrigation is practiced and may result in higher energy use. The purpose of this paper is to enable an initial scoping of target geographical areas for potential successful uptake of smallholder petrol pumps in the White Volta Basin.

The paper adapts a Bayesian based decision-support tool (Targeting AGwater Management Interventions, or TAGMI) developed by the Stockholm Environment Institute to petrol pumps used for shallow groundwater irrigation. TAGMI uses readily-available data and expert knowledge to assess the likelihood that a project intervention introducing a technology to a new location will be successful, based on the existing contextual conditions across the region. The model is applied to the Upper East Region of Ghana and yields a spatial output for probabilities of adoption success of petrol pumps.

The study serves to inform investors and policy-makers of the spatial pattern of likely successful petrol pumps uptake and its determinants. This information supports key spatial planning decisions to advance sustainable and pro-poor development interventions and balance trade-offs between water and energy use and food production.

This paper has not been presented before. It will be presented by one speaker in a standard power point and handouts format. However, to engage delegates in an interactive manner a live demonstration of the web-interface will be conducted. Delegates will be invited to change the relationships between socio-economic and biophysical suitability variables on the likelihood of success of pumps and assess how this change influences the resulting map of adoption success.



BASIN CHAMPIONS AND INTERACTIVE LEARNING

**Janna Randell, Education Officer,
Murray-Darling Basin Authority**

2:00pm–2:30pm, Mon 15 Sep

The Murray-Darling Basin Authority (MDBA) is using interactive technologies to help provide information to school students from across the Basin. Not only does this reach into remote areas, but it makes learning about water and rivers engaging and exciting! This session will explore MDBA's Basin Champions videoconferencing program which officially launched this year, and MDBA's free smart device app Run the River – a water sharing challenge.

The 2014 Basin Champions program is linked to the Australian School Curriculum and requires school students to develop and conduct an investigation on their local waterway. Their investigations are supported by weekly videoconferences throughout the school term, presented by MDBA experts and scientists, allowing students to speak face-to-face and ask questions. Including experiments, demonstrations, and real-time conversation, the Basin Champions program engages students in a range of topics from salinity, to river operations, to communities and the economy.

Run the River – a water sharing challenge is a smart device game designed to give players a real-world experience of river management. It has been developed using over 100 years of historic and modelled data from the Murray-Darling Basin, making it surprisingly challenging and addictive! The free game aligns with the Grade 7 Australian Curriculum but will appeal to a much broader audience both young and old, so give it a go and see for yourself!

Come along to the session and discover first-hand how exciting the topic of water management can be!



MYRiveR BREMER – RIVER AND BASIN EDUCATION

By OzGREEN

2:30pm–3:30pm, Mon 15 Sep

Presenters: Rosewood State High School Students – Zachary Small and Lewis Ball; Bundamba State Secondary Students – Shian Zammit, Teah Helce, Pinja Metala, Chloe Pearson, Madalyn Coles and Hannah Ross; St Edmund's College Students – John Osborne, Jacob Johnston, Lachlan Walsh, and Jacob Pennell.

MYRiveR Bremer – Young people caring for our land, our rivers, our future MYRiveR is a whole river basin youth engagement and environmental education program. The program enables young people to become citizen scientists, test the health of the environment; identify key environmental threats and values; develop their own vision and implement their own action plans to sustain the health of their local waterways. During 2014, OzGREEN has been working in partnership with Ipswich City Council, the Bremer River Fund and the International RiverFoundation to engage young people in the Bremer river basin.

OzGREEN has involved over 60 regional communities and 6,000 young people in MYRiveR in Murray-Darling Basin, Hunter River basin, Cooks, Nepean & Georges River basins (Sydney), Onkaparinga River (Adelaide), Yarra River (Melbourne), Derwent River (Hobart) and also in India, Pakistan, Guatemala, El Salvador, Colombia, East Timor and Papua New Guinea.

OzGREEN educates people around the world, enabling them to take action to improve their environment. For over 20 years OzGREEN's has involved hundreds of thousands of people who go on to take leadership roles in their schools, communities and workplaces. OzGREEN's unique approach focuses on citizen science, sustainability education, community development and participatory leadership, enabling people to innovate sustainability solutions themselves.

OzGREEN has won numerous awards, including the Eureka Prize, Banksia Awards, UN Media Peace Awards and Best Practice Case Study for the Australian Association for Environmental Education (NSW). OzGREEN's CEO and Co-Founder Sue Lennox was named as one of Sydney's Top 100 Most Influential People by The Sydney Magazine



SPECIAL SESSIONS *CONTINUED*

MONDAY 15 SEPTEMBER

CASE STUDY 1

RESTORATION OF A TRANSBOUNDARY RIVER: RIVER RHINE – FROM THE “SEWER” OF EUROPE TO RESTORED, ECOLOGICAL HEALTH

4:10pm–5:30pm, Mon 15 Sep

Presenters: Gustaaf Borchart, President of the ICPR; Anne Schulte-Wülwer-Leidig, Deputy Head of the Secretariat; Prof Klement Tockner, Leibniz Institute of Freshwater and Ecology and Inland Fisheries, Germany; and André Bannink, International Association of Waterworks in the Rhine, Netherlands.

Overview

Formally known as the “Sewer” of Europe, the River Rhine once hit rock bottom in terms of ecological health, river management and meeting the needs of both human and animal communities reliant on the river. Over the last half a century, the International Commission for the Protection of the Rhine (ICPR), has evolved to a transboundary river management organisation through collaboration, persistence, planning and a vision for a healthy River Rhine. Transboundary river management is notoriously difficult. In the instance of the Rhine, it was some of the greatest natural disasters that proved the uniting factor, the countries along the Rhine came together to bring an ecologically dead river back to life and to return this natural resource to a state fitting to support the 58 million people who inhabit the catchments reliant on this waterway. This panel discussion will give a brief “tour down the river” through geography and time, showing how the ICPR has managed to put the pieces of transboundary river management together. Time will be allowed for teasing out some of the key issues related to species restoration, transboundary collaboration, lessons from the past, disaster planning and mitigation and a step-by-step approach to integrated river basin management.

Session structure

Analyzing the River Rhine and the success and challenges of transboundary river basin management has many aspects. This session will be presented by leaders who bring their different expertise and experiences to the discussion. Each speaker will look at a particular component of the journey down the river and the audience will be invited to participate via questions and answers.

Introduction and Overview – beginning the journey towards transboundary river basin cooperation

Historical overview, challenges, overview of session/framing the discussion and inviting audience to ask questions, be part of the session.

Looking beneath the surface – species, water quality, sediment

Salmon – why fish? Sediment, Water quality. What do these things tell us about a healthy river and how do you do it in transboundary river management.

Looking beyond the river – flood and drought, climate challenges

Flood, drought; Habitat connectivity; Disaster mitigation and planning; Communities and the river; Turning the river from “sewer” to an asset to people.

Putting all the pieces together – step by step towards integrated river basin management

High level overview of what integrated river basin means in the case of the Rhine; What was hard? What was easy? Management by disaster; The future.

TUESDAY 16 SEPTEMBER

WATER AND WELLBEING

By *MDBfutures*

(Part 1) 11:10am–12:30pm
(Part 2) 2:00pm–3:40pm, Tue 16 Sep

Governments, communities and scientists are often asked to manage water to maximise benefits for ‘wellbeing’. What best achieves wellbeing is contested, and changes with shifting values, beliefs, knowledge and needs. In Australia’s Murray-Darling Basin, major dams and irrigation developments that were nation building a generation ago are now seen to have enabled over-allocation of water and contributed to significant environmental damage. Driven by changed community values, knowledge and expectations, the Australian government is implementing expensive, contentious reform to reallocate water to the environment.

What do we know about wellbeing in the MDB today? What are the interactions between ecological, social and economic processes that contribute to wellbeing? What lessons are there for the future and for other basin communities?

This special *MDBfutures* session examines these questions through the lens of *Understanding and Decision making in Water for Wellbeing*. In two sessions that showcase the work of *MDBfutures* research fellows, we combine integrated presentations from ecological, social and economic researchers with practitioner moderated discussions. The sessions will examine:

- Wellbeing – what is it and what do we know? Exploring issues around:
 - How species and ground water distribution affect wellbeing
 - Why local recreational and sustainability values affect water for wellbeing
- Decision making: how can we include water for Wellbeing into the Future?
 - How do farmers and communities cope with trade-offs in water and wellbeing
 - What are water and community needs for wellbeing

MDBfutures is a collaborative research network led by the University of Canberra building social, environmental and economic research capacity and applying it to the challenges of sustainable development in the Murray-Darling Basin.

MDBfutures

Collaborative Research Network

WORLD HARBOUR PROJECT

By Sydney Institute of Marine Science

10:50am–11:50am, Tue 16 Sep

Presenters: Dr Paul Gribben – ARC Future Fellow, University of NSW and Sydney Institute of Marine Science

A/Prof. Hua Wang – Director, Sino-Australian Research Centre for Coastal Management (SARCCM) UNSW Australia

Peter Steinberg – Director & CEO, Sydney Institute of Marine Science and University of New South Wales

Many of the world's major cities are situated on the coast or on large estuaries. These waterways are part of the fundamental fabric of these cities, and indeed for billions of people, the river and marine experience is primarily an urban one. The interaction among the cities' residents, urban development and the marine and estuarine environment is critical to the functioning of these urban centres, and managing this interaction is fundamental to our use and interaction with oceans, estuaries, rivers and their basins globally. The Sydney Institute of Marine Science in partnership with other global cities built around marine and estuarine waterways (Sydney, Qingdao, Shanghai, Singapore, Rio de Janeiro, Jakarta, Auckland, Abu Dhabi plus cities in Europe, North America and the Caribbean) is developing a global project on the science, health, use and management of urban harbours – the World Harbour Project. The World Harbour Project seeks to integrate, on a global scale, approaches used by cities in understanding and managing the interaction with their harbours and waterways. Initially we are establishing a global network of interacting scientists, institutions and agencies focused on urban waterways; this phase will be the focus at the *Riversymposium*. However, the World Harbour Project will then expand its activities to targeted workshops, coordinated exchange of students and researchers, and explicit research, rehabilitation or policy projects structured on a global scale. Given that many of the cities involved in the World Harbour Project are estuarine, situated at the mouth of rivers, we thought it would be desirable to engage with groups interested in the conservation and management of rivers, to explore potential synergies. We thus look forward to introducing the World Harbour Project to the participants of the International *Riversymposium*.



INDIGENOUS WATER RIGHTS – WHAT IS THE FUTURE?

2:00pm–3:20pm, Tue 16 Sep

This session will consist of a discussion panel including a facilitator and 3–4 Indigenous panellists discussing the future of Indigenous Water Rights.

The panel will include Cheryl Buchanan, Chair, Northern Basin Aboriginal Nations (NBAN) and National Cultural Flows Research Project committee member and Darren Perry, Chair, Murray Lower Darling Rivers Indigenous Nations (MLDRIN).

The session will also feature pre-recorded videos from International Indigenous Representatives who will contribute to the discussion regarding the extent to which Indigenous Water Rights are recognised and implemented in their countries.

What are water rights?

Indigenous water rights are not currently recognised by Australian law and policy. Indigenous people's relationship with water, land and its resources is crucial to health, cultural and spiritual vitality and resilience.

Aboriginal people from across the Murray-Darling Basin are asking for water rights through cultural flows to sustain their on-going cultural practices and relationship with Country. Cultural flows have potential benefits for Aboriginal people, such as improved health, wellbeing and empowerment from being able to care for their Country and undertake cultural activities.

"Cultural flows are water entitlements that are legally and beneficially owned by the Indigenous Nations and are of a sufficient and adequate quantity and quality to improve the spiritual, cultural, environmental, social and economic conditions of those Indigenous Nations. This is our inherent right." (MLDRIN and NBAN)

The Murray-Darling Basin Plan does not require water allocation for the purposes of cultural flows. However, the Basin Plan does include a definition of cultural flows, as endorsed by the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN), signifying the potential for future progress in this area.

How do other countries facilitate Indigenous water rights?

What can Australia learn from these experiences?

The Murray-Darling Basin Authority is supporting this session and offers its deep appreciation and respect for Aboriginal peoples' continued guardianship of the land and waters of the Basin and their unique role in the life of the Murray-Darling Basin.

CASE STUDY 2

THE MURRAY-DARLING BASIN – LOOKING AHEAD

4:10pm–5:30pm, Tue 16 Sep

Planning and management of the water resources of the Murray-Darling Basin has been controversial and furiously debated for nearly a century. In the midst of an extreme drought in 2007 a landmark agreement was reached to manage the Basin as a whole. The basin plan and supporting water reform package which flowed from this agreement is one of the most significant pieces of public policy in the Australian water sector in the last 100 years.

There are many lessons to be learned from Australia's experience, but what of the future?

Several key factors were fundamental to the water reform and there is opportunity to develop them further. The panel session will consider; the future of water trading, environmental water management and the opportunities for people to drive and implement change. What could water markets look like in ten years? How will environmental water be managed in the future and what outcomes can we expect? What part will different people play in managing water? How relevant are these issues and opportunities to other large River Basins around the world?

Please join facilitator, Craig Knowles, Chair of the Murray-Darling Basin Authority, as he gets the panel to look forward, to the future of water management in the Murray-Darling Basin.



SPECIAL SESSIONS *CONTINUED*

WEDNESDAY 17 SEPTEMBER

IMPROVING TRADE AND LIVELIHOODS IN SOUTH ASIA THROUGH INTEGRATED BASIN PARTNERSHIPS

10:50am–12:30pm, Wed 17 Sep

By CSIRO

This session will provide an overview of the South Asia Sustainable Development Investment Portfolio (SDIP) which represents a unique partnership approach to managing the water, energy and food nexus across South Asia.

Funded by the Australian Department of Foreign Affairs and Trade (DFAT), the partnership brings together key institutions operating in the area which includes World Bank (SAWI), ICIMOD, DFID, and Australian partners CSIRO, eWater, ICEWaRM and ACIAR. The intent of the partnership is to establish a coherent and integrated portfolio of activities that assist governments and communities to understand the linkages and trade-offs between water management decisions and economic growth, energy security and food security.

The specific project activities include:

- Technical assistance in hydrological modelling to the ICIMOD Koshi Basin Programme
- Water resources management capacity building in the Brahmani-Baitarni Basin – a component of the India-Australia MOU on Water Resources Management
- Bangladesh sustainable water resources for food security
- Basin scale water resource planning Indus, Pakistan

Using a panel of representatives from across the partnership, the session will also explore the challenges of working both in-country and in Australia to achieve the project outcomes.

Overview

Introduction to policy need – Mr Bryce Hutchesson

Framing

Broader SDIP goals, impact challenges

- Mr Bryce Hutchesson
- In-country engagement
- Water management for trade, livelihoods & gender

Response

Team Australia, journey so far, role of collaboration – Dr Peter Wallbrink

- Water reform in Australia and its relevance to South Asia

Partnership Stakeholder

International perspective – Dr Dave Molden

- Collaboration with ICIMOD
- Benefits to ICIMOD
- Benefits to basin

In-Country Policy Stakeholder

How it helps. In-country meaning for high level policy – Asima Rabbani

Panel Discussion Q&A – All

Exploring Australia's contribution to Integrated Water Resource management in South Asia

Panel members

- Mr Bryce Hutchesson (Branch Head, South Asia, DFAT) (TBC)
 - Dr David Molden (Director General, ICIMOD)
 - Dr Peter Wallbrink (Integrated Water Resource Management CSIRO)
 - Mr Richard Hopkins (CEO IceWARM)
 - Professor Ashvin Gossain (IIT Delhi)
 - Ms Asima Rabbani (Deputy High Commissioner, Pakistan) (TBC)
- Moderator: Professor Gary Jones (CEO eWater)



FUTURE RIVER CITIES

10:30am–12:30pm, Wed 17 Sep

By Melbourne Water

The Melbourne Water 'Future River Cities' Special Session will be Chaired by Chris Chesterfield, Director Strategic Engagement at the Cooperative Research Centre for Water Sensitive Cities. Chris will draw on his almost 15 years of water industry experience to lead participants and delegates through this inter-disciplinary, interactive and outcome focussed session.

The session will feature a number of Victorian water industry and government leaders, presenting on how whole-of-water cycle-management can transform thinking on the way that city waterscapes and waterways can be better valued and managed for both ecological and liveability outcomes. Recognising that Melbourne has always been a river city, this special session will highlight the leadership role of Melbourne Water and our key partners in transforming how urban water planning in cities can deliver on the vision of Enhancing Life and Liveability and provide perspective and lessons learnt from delivery of the River Cities concept. This session will also explore the ongoing connection of the community to our waterways and that waterways play a central role in many aspects of daily life.

The session will allow participants to interact with a range of Victoria's water industry and government leaders in an open dialogue to explore the key challenges to water reform required to deliver on the River Cities concept.



BASINS WITHOUT BOUNDARIES – SHARING STORIES TO SAVE OUR RIVERS

11:00am–12:00pm, Wed 17 Sep

By Peter Cullen Trust

Peter Cullen is remembered for his superb capacity to synthesise and communicate complex ideas, simply and clearly, to local communities, policy makers and politicians in a way that supported them to make decisions and take action. The Peter Cullen Trust (PCT) builds on this legacy by strengthening the bridges between science, policy and stakeholders in water-system management through the Science to Policy Leadership Program. The Leadership Program is an innovative and inspirational approach to building leadership and communication skills specifically geared to bringing about positive change in water and catchment management in Australia.

This sponsored session is designed to engage the audience with stories of communities and stakeholders taking action in river basins – great and small. Three presentations, given by Fellows of the Peter Cullen Trust Leadership Program, will showcase current projects that exemplify how we can share stories, research and understanding within a participatory planning framework to inform decisions and policy-making. A key aspect of the presentations will be the examination of 'how we can use the learnings from one basin to make better decisions in another basin'. The presenters will demonstrate how engaging multiple stakeholders and communities is leading towards a change in the way catchments are managed and how this can be used to encourage multi-stakeholder engagement and increase river management policy and on-ground outcomes.

Presentation 1. Matthew Fullerton – Urban River Recovery. Taking a look at a changing focus to urban stream networks in South East Queensland to reconnect communities to their local waterway under the guise of social and economic improvement leading to sustainable environmental outcomes.

Presentation 2. Anne Poelina – Communicating Rivers. A conversation between the Meuse River of France and the Mardoowarra (Fitzroy River) in the Kimberley Region of Australia.

Presentation 3. Emma Carmody – Interactions between science and water law in Australia.



CASE STUDY 3

MEKONG BASIN

By Mekong Delegation

2:00pm–3:40pm, Wed 17 Sep

Future quality of life in the Mekong Basin is strongly linked to the choices made about sharing, developing and managing water to produce food and energy, maintain vital ecosystems and sustain livelihoods. Many water resource projects have been completed, are underway or are being planned. Dams, river diversions, inter-basin transfers, thirsty cities and irrigation expansion are all in the mix. While some projects have been celebrated, others are subject to disputes and protests. The transboundary and interconnected nature of the Mekong's waters adds a critical dimension. The basin covers about 800,000 km² and is home to 70 million people. It is shared by China, Myanmar, Lao PDR, Thailand, Cambodia and Vietnam.

The Mekong plenary session is being prepared by a Mekong delegation comprising government and non-state actors from all six Mekong countries. After some context-setting at the outset, expect an engaging session that will move back and forth between the panel and the floor, probing issues such as:

- Transformation of the basin – optimising development, minimising negative impacts?
- Changing regional demographics
- Dams and infrastructure
- Fisheries
- Climate change
- Governance & institutional arrangements
- Seeking to understand the whole Mekong system
- Data democratisation
- Normalising dialogue (multi-track, multi-level, multiple convenors, increasingly deliberative)

Catalytic presenters and panelists will be drawn from the following confirmed attendees:


- Mekong River Commission senior officials, including CEO Hans Guttman
- Yao Jinxian (China), Shan Shui and Peking University
- Nguyen Huu Thien (Vietnam), Mekong Delta scientist and citizen
- Chayanis Krittasudthacheewa (Thailand), Stockholm Environment Institute
- Anoulak Kittikhoun (Laos), basin development planner
- Pech Sokhem (Cambodia), M-POWER governance network
- Swe Swe Aye (Myanmar), National Water Resources Committee
- Dipak Gyawali (Nepal), Mekong – South Asia contrasts

ACTEW
WATER

Sustaining the Capital's Water



Ph: 6248 3111 | actew.com.au | [@ACTEWWater](https://twitter.com/ACTEWWater)



We pour a great deal
of resources into saving
our most precious one.

As one of Australia's leading mining contractors, Thiesse understands the importance of protecting and preserving fresh water resources while delivering productive mining operations.

Over the past 70 years, we've amassed a depth of experience in mine site water management for operations in different countries, with varying pit complexities, in flood and drought conditions ... and everything in between.

From integrated mine planning, to the design and construction of water management infrastructure, real-time water monitoring and reporting, to dynamic modelling - we help our clients deliver best practice and maintain their licence to operate.

Through our 15 year association with the International RiverFoundation, we have helped others deliver best practice in the sustainable restoration and management of river basins. In 2014, we are proud to be a principal sponsor of the International RiverSymposium - **IT'S A PARTNERSHIP THAT HELPS US EXTEND OUR ENVIRONMENTAL REACH ACROSS AUSTRALIA AND BEYOND.**

AWARDS



Awarded annually by the International RiverFoundation, *Riverprize* is the world's most prestigious river award, giving recognition, reward and support to those who have implemented outstanding, visionary and sustainable programs in river management.

The 2014 Thies International and Australian *Riverprize* winners will be announced during the *Riverprize* Gala Dinner on Tuesday 16 September.

Over 29 *Riverprizes* have been awarded since 1999, with winners ranging from large rivers such as the Mekong in South-East Asia to smaller rivers such as the Alexander in Israel.

PROGRAM HIGHLIGHTS

Thies International *Riverprize* Finalist session

Session A3E: 1400–1540, Mon 15 Sep

Australian *Riverprize* Finalist session

Session B2E: 1030–1230, Tue 16 Sep

THIESS INTERNATIONAL RIVERPRIZE FINALISTS



Petitcodiac River, Canada (Petitcodiac Riverkeeper)

A remarkable campaign brought about the restoration of the Petitcodiac River, situated on the Bay of Fundy in the province of New Brunswick, Canada. In 1999, the battle to restore free flow to the Petitcodiac by opening the gates of the controversial causeway was in its fourth decade. The local community was bitterly divided and elected officials, just as content to leave matters alone, mostly avoided getting involved or tended to side with the more affluent lobby of residents living along the 21 km long artificial headpond, created in 1968 when the Petitcodiac causeway was built. By the year 2000, massive silt deposits covered 95 percent of the river near the City of Moncton and extended 35 kilometres downstream to Shepody Bay.

Between 1999 and 2013, Riverkeeper set out to reverse the situation by implementing a series of ground-breaking actions in environmental communications and environmental law enforcement. Ultimately, these efforts prevailed, leading to the end of Canada's longest environmental battle, the resolution of numerous historic pollution issues and the commencement of North America's largest river restoration project. Since the opening of the Petitcodiac causeway gates in April 2010, hundreds of thousands of fish are now migrating yearly to the Petitcodiac, the river channel has tripled in width and the renowned Petitcodiac tidal bore has begun its miraculous recovery. A tidal bore surfing culture has since taken root in the river.



Glenelg River, Australia (Glenelg Hopkins Catchment Management Authority)

Rural and urban communities in the Glenelg River Basin have rallied with landholders, conservation groups, Indigenous groups and industry to carry out what has become the biggest river fencing protection program in Australia's history. Six hundred and fifty nine property owners and community groups have helped construct 1725km of fencing, planted more than half a million trees and direct seeded 796km of waterway frontage. The restoration program has also completed 2784ha of weed control, re-instated 870 pieces of large wood, opened 977km of the Glenelg River and its tributaries to fish movement and established and delivered an environmental flows entitlement.

The River was at the point of ecological collapse during the mid-2000s due to low flows, poor water quality, loss of habitat, weed and carp invasion. However, as a result of an integrated works program, flows have been restored and bare gullies have been stabilised under a mantle of vegetation. The resulting river health improvements can be demonstrated by the recovery of native fish populations which have increased by over 150% in restored reaches. The project has resulted in several native fish species extending their range by hundreds of kilometres. The project has pushed the boundaries of conventional river management and its original and innovative approaches have drawn interest globally.

THIESS INTERNATIONAL RIVERPRIZE FINALISTS



San Antonio River, USA (San Antonio River Authority)

As recently as the 1980s, the San Antonio River was highly polluted by inadequately treated wastewater and the urban portion of the river was ecologically degraded due to previous decades of channelization for flood control. Numerous collaborative watershed studies and projects have been implemented since then resulting in significant water quality and ecosystem health improvements to the San Antonio River Watershed. As the positive reputation of the river's successful restoration grows, the San Antonio River Authority (SARA) regularly hosts foreign and domestic visitors and gives presentations regarding watershed sustainability and the San Antonio River Improvements Project (SARIP).

In 2010, the World Bank invited SARA to speak about the San Antonio River Watershed in New Delhi and Chennai, India. The U.S. Secretary of Interior commented in 2011 that the Mission Reach project was leading the nation in urban ecosystem restoration. In 2012, SARA presented about SARIP at the River Rally in Portland, Oregon, World River Forum in Deagu, South Korea and as a keynote speaker at the World Canals Conference & World Canal Cities Expo in Yangzhou, China. The San Antonio River is also highlighted in the World Heritage Site nomination for five Spanish Colonial missions that line the river. Certainly, there is more work to be done, but great improvements have already been realised and reflect the dedication to river improvement as well as community engagement and a strong vision for the future of the river.



River Rhine, all countries in catchment (International Commission for the Protection of the Rhine)

In 1986, a horrendous blaze at the Sandoz agrochemical storehouse in Basel caused tonnes of pollutants to be spilled into the River Rhine. This great river system of Europe was turned blood red and all biological life wiped out. This disaster provided the impetus for the International Commission for the Protection of the Rhine (IKSR) to accelerate actions already being undertaken in managing the river.

Bringing the Rhine back to life was not achieved overnight. For the best part of a century, people have worked together at the Commission to deliver river restoration, transboundary river management and cooperation. As a result of investments by the states, municipalities and industry, more than 96% of the 58 million inhabitants of the Rhine catchment are today connected to urban wastewater treatment plants and many industrial sites dispose of wastewater via modern wastewater treatment plants. As a result, water quality has improved considerably and oxygen levels are back to normal. Chemical status of most groundwater bodies is good and inventories show that fish species composition in the Rhine is almost complete now. However, more needs to be done to restore sustainable populations of migratory fish species like salmon and eel. Due to the relocation of dikes and the deepening of river forelands in the Rhine delta, 55 km² of former floodplains along the Rhine have been regained. Along other sections of the Rhine, the security of dikes and local flood protection has been increased in order to improve the protection of goods and people.

AUSTRALIAN RIVERPRIZE FINALISTS



Margaret River, WA (Cape to Cape Catchments Group)

The Margaret River is the healthiest river in the south west of Western Australia in an agricultural and urban setting. A biodiversity hotspot on the western edge of Gondwana Link and home to critically endangered endemic fauna its competing uses include public drinking and agricultural water supply. It is also a key recreational area for the 10,000 residents and 500,000 tourists annually.

Dairy farmers, viticulturists, students, fishermen, traditional owners, scientists and neighbours have all been involved in protecting and enhancing the Margaret River. The cooperation of this broad range of stakeholders has excluded stock from 95% of the main channel, removed all fish passage barriers, eradicated carp, drastically reduced the extent of weeds of national significance and improved water quality. Environmental education and community capacity building activities have provided the foundation of the projects and has left a legacy of motivated and engaged communities.

Strategic and integrated planning developed with stakeholders has guided activities in the catchment. These significant outcomes have rebuilt the resilience of the Margaret River and the surrounding community to face the threats of a constantly and rapidly growing population and climate change, which has seen a 40% decline in stream flow in the last 20 years.



Bannister Creek, WA (SERCUL)

While only being a 4km stretch of river, this project has breathed vital ecological life into a highly complex and urbanised steep sided waterway and continues to restore its catchment. Some of the key achievements include the planting of three quarters of a million/ 750,000 plants and 35,000 volunteer hours from those dedicated to the restoration of this waterway. These works have been undertaken over an eighteen year period and represent persistence, engagement, passion and real-world outcomes for Bannister Creek.

Additionally, this project has ecologically restored 19 ha densely weed infested paperbark wetlands that had 50 year old 6m high walls of blackberry and vine thicket smothering a fragile ecosystem; created 10.5ha upstream wetland/waterway and fully restored 650 metres of lawned, concreted drain in the upstream catchment. To complement these on-ground activities, multiple catchment wide education programs have been implemented which have resulted in significantly reduced nutrient flow, included a 44% reduction in Nitrogen and a 50% reduction in Phosphorus.

Bannister Creek is also now home to an increasingly diverse range of species with bird and frog numbers growing and plant species diversity increasing by up to 70%. As an urban waterway, the activities in Bannister Creek have also had a beneficial impact on the local communities and economies representing a truly integrated set of outcomes from these persistent actions to bring this creek back to life.



Boorowa River, NSW (Greening Australia Capital Region)

Boorowa River Recovery (BRR) is a whole of catchment collaborative partnership project located between Yass and Boorowa in NSW. The project is implemented via a co-investment model, encompassing a range of sub-projects and funding sources. BRR is improving biodiversity and water quality (and quantity) in the Boorowa Catchment (an identified high priority for salinity and poor water quality in the Lachlan Catchment) by improving native riparian vegetation management on farms, and promoting sustainable land management practices more broadly.

Ecological, socio-political, human engagement and economic outputs and outcomes have been evaluated in association with a six year intensive monitoring program which demonstrates the project's success in relation to integrated water resources management. 70 landholders have (so far) undertaken riparian rehabilitation along 80 km of waterways encompassing 700 ha of riparian lands. Ecological indicators are trending in a positive direction, fish populations are breeding and the project model is considered successful in terms of governance and community engagement. The project improved flow and water quality to the town water supply (up to one quarter of its capacity) from removal of problem willows. BRR involves hundreds of stakeholders and members of the broader community in events such as river and farm walks, school activities, tours, workshops, presentations, fish surveys, revegetation, seed collection activities and a major science forum.



Lake Eyre Basin, Qld, NT, NSW & SA (Lake Eyre Basin Partnership)

The Lake Eyre Basin (LEB) is one of the last naturally free-flowing river basins in the world, occupying a large part of semi-arid Australia (1.2 million km²) including parts of three states and one territory. Its diverse human communities and incredible cultural and natural values are underpinned by highly variable cross-border rivers (including Georgina and Diamantina Rivers and Cooper Creek) supporting a 'boom-bust' desert ecology.

In the mid-1990s, the threat of water resource development galvanised communities and governments to protect these magnificent rivers, flowing freely over hundreds of kilometres to the iconic Kati Thanda-Lake Eyre. Community concern catalysed the Lake Eyre Basin Intergovernmental Agreement, focusing state, territory and federal governments on the overarching goal of cross-border protection of river flows and catchments.

This produced a transforming governance framework which united communities, governments and other players. It was realised through creation of an intergovernmental Ministerial Forum, its supportive agencies, the multi-stakeholder Community Advisory Committee and the multi-disciplinary Scientific Advisory Panel. Together with community driven catchment management groups and regional natural resource management bodies, this enduring partnership has built a shared vision and identity for Australia's unique, natural, desert river system: healthy environments, sustainable industries, vibrant communities and adaptive cultures.

Key achievements include sustained, constructive community engagement in a cooperative framework; collaboration for research and management focusing on values, monitoring and adaptive management; and communications to connect communities over a large part of the continent. This two-decade partnership kept LEB rivers healthy, compared with arid zone rivers globally, particularly the Murray-Darling Basin rivers.

WE ARE PROUD TO BE A FOUNDING SPONSOR OF THE 17TH INTERNATIONAL RIVERSYMPIOSIUM.

Brisbane is a great city to live and work and a destination of choice for visitors and investment.

Water is integral to Brisbane's relaxed, subtropical lifestyle.

Brisbane City Council is the largest local government in Australia. We aim to improve waterway health and increase visitation and usage of our creeks, the Brisbane River and Moreton Bay by 2031.





2014
EMERGING RIVER PROFESSIONAL
AWARD

EMERGING RIVER PROFESSIONAL AWARD

The International Riversymposium is proud to partner with OceanaGold Corporation and the International WaterCentre Alumni Network (IWCAN) to sponsor the first ever Emerging River Professional Award.

The Emerging River Professional Award (ERPA) is an initiative of the International RiverFoundation and has been established to recognise and foster those in the early stages of their careers in rivers.

The award is open to all river professionals who have been working in their field for ten years or less, and have demonstrated exceptional and measurable achievements in rivers, basins or river-dependent communities. A wide range of professionals contribute to the future of our rivers and this award is open to professionals of all disciplines – whether scientists, policy makers or on-ground river managers.

This important initiative identifies and rewards individuals in the early stages of their careers who have demonstrated innovation, excellence and leadership in river, basin or river-dependent community management. Whilst teams are essential in all facets of river management, this award focusses on individual achievements and contribution, rewarding dedication, innovation and leadership.

ERPA finalists will be afforded the opportunity to present the outcomes of their work at the Riversymposium, and the winner will be announced during the Riverprize Gala Dinner on Tuesday 16 September.

If you feel that you have undertaken noteworthy work in this area, we encourage you to consider entering this prestigious award in future and let your achievements and passion speak for themselves.

PROGRAM HIGHLIGHT

Emerging River Professional Award Finalists
1230-1400, Tue 16 Sep
Sutherland Theatre



Dymphina Andima

Dymphina is from India and has a Bachelor degree in Social Sciences and a Master's degree in Sociology. She has had a long career as a trainer and facilitator in Agricultural technology which has

been applied and adopted for farming. She has significant experience in the design, application and management of monitoring and evaluation frameworks as well as quantitative, qualitative, mixed and trans-disciplinary research. Dymphina now utilises these skills in mobilising communities to manage land and water resource issues.

Dymphina's project is titled "Mobilising communities to manage Land And Water Resources in Kenya". It entails the identification of existing and creation of new Community Based Organizations to mobilise communities to manage land and water resources effectively through a range of options.



Alberto Rodriguez

Alberto was born and educated in Honduras. After completing his studies in Biology, Alberto undertook a variety of activities including teaching, jaguar research, environmental projects

coordination, divemaster, sea turtle rescue, whale shark research and queen conch nursery. Alberto has also undertaken various environmental work for organizations in the United states. He is currently employed as the Education and Outreach Program Manager for the Duwamish River Cleanup Coalition / Technical Advisory Group in Seattle U.S.

In 2010, after discovering "community organising", Alberto pursued an internship to coordinate community engagement and education around toxic sediment cleanup.

That's when he realised that certain groups in the U.S. are discriminated against, ignored and disproportionately affected by many different factors and that the only way to effect change was an organised, educated, and empowered community. He took matters in his own hands and has never stopped since.

His current project is titled "A River For All" which is a community engagement plan designed to organise, engage, educate and empower vulnerable communities who demanded a comprehensive cleanup of the Duwamish river running through Seattle.



Oghenekaro Nelson Odume

Dr Odume was born and educated in Nigeria. In 2009 he undertook a Master's degree in Water Resource Science in South Africa followed by a Doctorate degree

with which he graduated in 2014. His PHD study explored the effects of industrial-sewage effluent on river health. The results of the study provided a new early warning system to improve effluent management, in relation to river health, ecological structure and function.

Dr Odume has a strong passion for the sustainable management of natural resources, particularly freshwater resources. He has a strong desire to contribute to the intellectual pool of freshwater management through developing new methods and approaches for monitoring human impacts on freshwater resources, co-creation of knowledge and improving livelihoods of riparian communities that depend on water resources.

His recent project is titled "Two South African Rivers water quality management: an integrated approach" which is aimed at stimulating a new trans-disciplinary research practice that places ethics and value systems at the centre of research, recognising river basin as a complex social-ecological system.



Australian Government



PLAY ▶▶▶ 'Run the River' App

Play this interactive game that brings the challenges of water resource management alive. You will find it on display in the exhibition area at Riversymposium.

With the increased use of smartphone and tablet devices in schools and homes, it was only fitting to create an interactive water management game for all to enjoy. The game uses actual and modelled river and rainfall data from the Murray-Darling Basin at different points over the last hundred years.

Players must deliver sufficient water to the different water consumers while facing the challenges of flood and drought, evaporation, seasonal changes, salinity, a rising water table, and increasing water demand.

As you progress from one era to the next, the towns get bigger, the demands get bigger, there are more farms and your job of making sure everyone gets their share of water becomes a lot harder.

The game is pitched at school groups, although it is appropriate for a much broader audience. It reflects the challenges faced in managing any river system—keeping the river and its ecosystems healthy and managing water sustainably to continue supporting the industries and communities that rely on that water.

Run the River is available to download FREE at www.mdba.gov.au under Education.

THE RIVERSYMPOSIUM PROGRAM



SOCIAL PROGRAM

WELCOME FUNCTION

5:30pm–7:00pm, Mon 15 Sep

RiverExpo

National Convention Centre Canberra

After the conclusion of sessions on day one, join fellow delegates in the revitalized RiverExpo area for an informal and warm welcome to the 17th International Riversymposium. Canapes and beverages will be served whilst guests network.

Tickets: AUD \$60

Dress: Casual Business

Sponsored by

MDB*futures*

Collaborative Research Network

WOMEN IN RIVERS BREAKFAST

7:00am–8:30am, Tue 16 Sep

The Crossing

Crowne Plaza Hotel

Speakers

Professor Kate Auty, Vice Chancellor's Fellow, University of Melbourne

Aunty Rochelle Patten, Senior Yorta Woman, Murray River

Chair – Dr Rebecca Tharme, Director for Partnerships, Great Rivers, The Nature Conservancy

Tickets: AUD \$35

Sponsored by



RIVERPRIZE GALA DINNER

6:30pm–11:30pm, Tue 16 Sep

Ballroom

National Convention Centre Canberra

Riverprize is the world's most prestigious environmental award, giving recognition, reward and support to those who have developed and implemented outstanding, visionary and sustainable programs in river management.

International RiverFoundation awards the Thies International Riverprize and the Australian Riverprize annually at the Riverprize Gala Dinner, in conjunction with the International Riversymposium.

The first Emerging River Professional Award will also be presented at the 2014 Gala Dinner.

Riversymposium delegates and invited guests will enjoy gourmet dining and live entertainment at the Riverprize Gala Dinner, with exciting visual presentations of the Riverprize finalist projects shown throughout the evening.

Rod Quantock, an award-winning comedian who has been researching, writing and performing shows about the environment and sustainability for 10 years, will MC the dinner and provide hours of laughter and entertainment.

Please note that Riverprize Gala Dinner tickets are not automatically included in your registration and will incur an additional cost. In 2014, the Riverprize Gala Dinner is sponsored by the University of Queensland and Jacob's Creek.

Tickets: AUD \$150

Dress: Cocktail

Sponsored by



JACOB'S CREEK

POSITIVE PARTNERSHIPS: THE SOLUTION FOR HEALTHY WATERWAYS

7:00am–8:30am, Wed 17 Sep

The Crossing, Crowne Plaza Hotel

Speakers

Mr Paul Birch, Chair of Gladstone Healthy Harbour Partnership/CEO of Fitzroy Basin Association

Mr Jon Black, Director-General, Department of Environment and Heritage Protection

Tickets: AUD \$35

Sponsored by



ART AND CULTURE

Art and culture has been embedded in to the 2014 Riversymposium program to enrich the experience for all conference delegates, and to highlight the diverse approaches to celebrating rivers and raising awareness of the issues at hand.

ADVANCED SCREENING – RIVERBLUE

7:30pm–9.00pm, Wed 17 Sep

Bradnam Theatre, National Convention Centre

'RiverBlue', a new film created by passionate river advocate Mark Angelo, will premier at the Sundance Film Festival in 2014, and a special work-in-progress cut of the feature documentary will be shown at the National Convention Centre in Canberra on the evening of Wednesday 17 September.

Mark Angelo is a passionate storyteller and river advocate who has paddled for over 40

years all around the world and watched the steady decline of many rivers due to Jeans manufacturing. In his journeys throughout the film, Mark demonstrates how one of our favorite products has destroyed many rivers due to chemical manufacturing processes and the irresponsible disposal of toxic chemical waste

Riversymposium delegates are invited to this special, work-in-progress cut of the feature documentary.

Tickets: AUD \$15

FURTHER INFORMATION

Conference Organisers

Ozacom+ Conference Services
PO Box 104
RBH Post Office
Brisbane QLD 4029
T: +61 (0)7 3854 1611
F: +61 (0)7 3854 1507
E: riversymposium@ozacom.com.au
W: <http://riversymposium.com/>

Conference Office

Registration will be in the main foyer of the National Convention Centre, Canberra.

The office will be open during the following times:

Monday 15 Sep	7:00am–5:30pm
Tuesday 16 Sep	8:00am–5:30pm
Wednesday 17 Sep	8:00am–5:30pm

Conference Managed By

International RiverFoundation
Locked Bag 12
Milton Post Office
Milton QLD 4064 Australia
For general enquiries, please contact us on info@riverfoundation.org.au, or +61 7 3037 5370

WIFI

The National Convention Centre offers wireless internet access for visitors throughout the Centre.

Free Wifi is available for delegates to check emails and for web browsing. Internet codes are available for purchase from the NCCC Reception desk if you require a faster connection.

Mobile Phones

As a courtesy to fellow delegates and speakers, please ensure mobile phones are switched to silent during conference sessions.

Delegate Feedback

Please take the opportunity to complete the evaluation form in your delegate satchel or on the conference app. We seek to continue building the International *Riversymposium* as a major national and international annual event highlighting the importance of river health. We appreciate your feedback and treat information collected with the utmost confidence. Please return your completed form to the registration desk prior to the closing plenary on Wednesday.

Sponsor Materials

To endeavour to reduce waste and excessive printing, sponsors handouts have not been included in delegate satchels. These materials are available in the delegate's lounge should you wish to collect them.

Abstracts

For environmental purposes, the quick reference guide and abstracts have not been printed in the program book. They are available on the *Riversymposium* website www.riversymposium.com

Smoking

All buildings within the NCCC are smoke-free environments. Australian law dictates that smoking is prohibited within 5m of the entrance of a public building. Smoking zones are marked accordingly.

Dress

Casual business attire is appropriate for the conference sessions and the welcome reception. The *Riverprize* gala dinner is cocktail dress. A jacket may be required for air-conditioned session rooms and evening social functions.

Climate

The climate in Canberra has distinct seasons, with sunny, hot summers and cool winters. Generally it is fairly dry during the summer months of December, January and February, with these months all featuring extremely hot and sunny days. Temperatures are affected by Australia's subtropical ridge pressure systems, which bring exceptionally warm and fine weather to Canberra during the summer, with mild easterly and north-westerly winds.

As the subtropical front moves away from the Australian Capital Territory in the autumn, the climate in Canberra begins to change. During the autumn months of March, April and May, temperatures start to become cooler, particularly at night, with many cold fronts arriving. Snowfall of any description is extremely unusual during the winter and if snow does fall here, it usually melts very quickly, before it even starts to settle.

Special Diets

All special dietary requirements have been passed on to the venue and will be catered for accordingly. Delegates who have advised special dietary requirements should identify themselves to the serving staff at functions. Please note, we cannot guarantee 100% nut free ingredients as some ingredients from external suppliers and may contain traces of nuts.

If you have not advised us of your requirements, please see the registration staff as soon as possible. Special meals cannot be guaranteed for delegates who have not pre-booked at least 72 hours prior to a meal.

Tickets

Attendance at the welcome reception, *Riverprize* gala dinner and study tour is by ticket only. If tickets are misplaced, please advise staff at the

registration desk. A limited number of function tickets will be available for purchase onsite from the registration desk. Please check with the registration staff as to the availability of tickets.

Cancellation Policy

Social Functions and Study Tour

The conference reserves the right to cancel or vary optional activities if minimum numbers are not reached. Regrettably, optional social functions and additional ticket cancellations cannot be refunded if participation is cancelled less than fifteen (15) days prior to the event.

Disclaimer

The International RiverFoundation and Ozacom+ Conference Services and their agents act only as organisers of these activities and do not accept responsibility for any act or omission on the part of the service providers. No liability is accepted for any inaccuracy, misdescription, delay, damage, death or personal injury.

Locality and Transport Information

The National Convention Centre is a fully accessible venue, delivering to each of our guests the high quality services and facilities they have come to expect

- Ramps are located at the Constitution Avenue and Glebe Park entrances to the Centre.
- All function rooms, including all 5 theatres, accommodate wheelchairs.
- A passenger lift provides access to both levels of the Centre, and to the top level of the car park.
- Hearing loops have been installed in the Centre's 5 Theatres and Ballroom.
- Easy access toilets and baby change stations are available on both levels of the Centre.
- The National Convention Centre has wheelchair access to all public areas.

Directions and Transport

With a range of air, road and rail services, travelling to Canberra and the Convention Centre is easy

Once in Canberra, visitors can ride on public buses, catch a taxi or drive themselves on the city's efficient road network. Delegates will find that Canberra is a straightforward and stress-free city to drive around.

Once you are here you will discover the ease of travelling around a planned city. Take a self-guided driving tour and learn more about the Australian Capital Territory.

Taxi

A taxi rank is located at the National Convention Centre entrance as well as a convenient Cab Spot destination. This can be booked by our complimentary taxi phone.

ACKNOWLEDGMENTS

2014 PROGRAM COMMITTEE

- Dr Nick Schofield, International RiverFoundation (Chair)
- Mr Pat Bourke, Brisbane City Council
- Mr Rod Cameron, Thiess
- Dr Peter Wallbrink, CSIRO
- Ms Katrina Maguire, Murray-Darling Basin Authority
- Dr Deborah Nias, Murray Darling Wetlands Working Group Ltd.
- Prof Peter O'Brien, MDBfutures Collaborative Research Network
- Mr Peter Rowley, International RiverFoundation
- Marcus Howard and Russell Rollason, Australian Government Department of Foreign Affairs and Trade
- Mr Johnny Sundstrom, IRF Ambassador USA
- Dr Rebecca Tharme, The Nature Conservancy
- Prof Ross Thompson, University of Canberra
- Dr Selina Ward, University of Queensland
- Ms Trish Dalby, International RiverFoundation
- Ms Melanie Ryan, International RiverFoundation
- Ms Georgia Townsend, Ozaccom+ Conference Services

SPONSORS

Principal Sponsor

Murray-Darling Basin Authority



The Murray-Darling Basin Authority (MDBA) is an independent, expertise-based government agency, working in collaboration with Basin state governments, communities, industries, environmental groups and other organisations. We are responsible for the planning and management of both surface water and groundwater across the Basin. We operate the River Murray system to deliver water to users in a fair and efficient manner. Over the next 10 years we will implement the Murray-Darling Basin Plan, an integrated management plan which balances the social, economic and environmental demands on the Basin's water resources.

Principal Partners

Thiess

THIESS

Over the past 80 years, Thiess has been one of Australia's most pre-eminent construction, mining and services contractors. In that time we have developed a large and diverse portfolio of work across Australia's urban and regional centres, Indonesia, India and New Caledonia. Founded by five brothers in 1934, a start in agriculture and earth moving set the foundation to deliver some of the country's most complex infrastructure and resources projects.

Brisbane City Council



Dedicated to a better Brisbane

Fellowship Sponsors

Department of Foreign Affairs and Trade



Australian Centre for International Agricultural Research



Albrecht Foundation



Contributing Sponsor

CSIRO



Participating Sponsor

ACT Government



Study Tour

ACTEW Water



ACTEW Water is responsible for the provision of water services for the Australian Capital Territory region. We effectively own and operate the ACT's network of dams, water treatment plants, sewerage treatment plants, reservoirs, water and sewerage pumping stations, mains and other related infrastructure. We pride ourselves on consistently delivering safe drinking water and reliable sewerage services to our community.

Riverprize Gala Dinner Sponsor

The University of Queensland



Gala Dinner Beverage Sponsor

Jacob's Creek



JACOB'S CREEK

Welcome Function Sponsor

MDBfutures



Emerging River Professional Award Sponsor

OceanaGold Corporation

IWCAN



Special Session Sponsors

City of Ipswich

OzGREEN



Melbourne Water



Australian National University, UNESCO



Sydney Institute of Marine Science



Peter Cullen Trust



Media Partner

The Water Network



In Kind Sponsors

AXCEN



World Nature Organisation



Australian Council For International Development



