18th International

RIVER SYMPOSIUM

EXCELLENCE – COLLABORATION – INTEGRATION

PROGRAM

HEALTHY RIVERS – HEALTHY ECONOMIES

Brisbane Convention and Exhibition Centre
Brisbane, Australia

21–23 September 2015

MANAGED BY

INTERNATIONAL RIVERSYMPOSIUM
www.riversymposium.com

INTERNATIONAL RiverFoundation

WELCOME

I take great pleasure in welcoming you to the 18th International River*symposium*, which promises to be an extraordinary and enriching experience.

With its diverse sessions, superb presentations, uplifting social program and prestigious river awards, we hope to promote global conversations around the wise management of water, rivers and economies.

Again in 2015, we bring together some of the world's leading environmental professionals in our keynote program to electrify, challenge and stimulate delegates across a wide range of topics. Our 2015 River*symposium* keynote speaker is Professor András Szöllösi-Nagy, a global leader in water resource management.

New this year is the Emerging Water Professionals Program, engaging aspiring graduates and professionals in an unparallelled event that will undoubtedly bring about opportunities for professional development, networking and leadership building.

The overarching theme of 'Healthy Rivers—Healthy Economies' is topical around the world as water resource development continues at a staggering pace, propelled by such diverse drivers as clean energy, hydropower, water scarcity crises and climate-change-induced flood mitigation. Increasingly, governments are looking to corporate institutions to 'lend a hand' in times of financial stringency while the business sector is recognising scarcity of water resources as a key risk to global stability.

It's edifying to appreciate the number of economic sectors reliant on clean and healthy waterways for their prosperity—tourism, sports, recreation, river transport, ports, fisheries, forestry, irrigation, power and mining to name a few. Capturing the interest of these sectors is challenging, but our integrated approach—bringing together expertise in rivers, science, policy, planning, community education, Indigenous affairs and business—is at the core of our ambitions.

River*symposium* is truly a meeting place for all river professionals, providing a unique forum to encourage and foster debate, innovation, collaboration and future direction.

Our program will delight delegates, with 18 outstanding keynote speakers, seven international fora and nine special sessions. The high standard of oral presentations, speed talks and posters will ensure a world-class program with 'something for everyone'. Our re-energised River*Expo* will entertain delegates with display booths, posters, photographic exhibitions and book launches.

A special highlight of the River*symposium* is the awarding and celebration of the Thiess International River*prize*, the Australian River*prize*, the inaugural Morgan Foundation New Zealand River*prize* and the Emerging River Professional Award at the fabulous conference Gala Dinner. This 'must-do' event recognises the best efforts in river restoration world-wide.

River*symposium* is above all a friendly meeting place and networking opportunity for river professionals, practitioners and simply interested parties. With the event attracting delegates from more than 40 countries, relax into the simple joy of learning within an atmosphere of art, film and culture. I hope you enjoy Brisbane—Australia's extraordinary new world river city—and find the symposium as inspiring and valuable as I anticipate.

N.J. Schofield

Dr Nick Schofield
Program Committee Chair,
International River*symposium*
CEO, International
RiverFoundation

COVER IMAGE: ATMOSPHERE PHOTOGRAPHY

FOUNDING SPONSOR

BRISBANE CITY

Dedicated to a better Brisbane

PRINCIPAL SPONSOR

Australian Government
Department of Foreign Affairs and Trade

RIVER*PRIZE* GALA DINNER SPONSOR

CSIRO

BEVERAGE SPONSOR

JACOB'S CREEK

WELCOME FUNCTION SPONSOR

Griffith UNIVERSITY
Australian Rivers Institute

STUDY TOUR SPONSOR

seqwater
WATER FOR LIFE

18th International

RIVER *SYMPOSIUM*

EXCELLENCE – COLLABORATION – INTEGRATION

CONTENTS

River*symposium* Twitter
@riversymposium

River*symposium* mobile app
http://eventmobi.com/riverapp

River*symposium* LinkedIn
http://www.linkedin.com/groups/International-Riversymposium-4277268

River*symposium* Facebook
https://www.facebook.com/InternationalRiversymposium

PROGRAM

Sunday 20 September 2015

1200	Set up activities
1700	Women in Rivers (by **Murray-Darling Basin Authority**)

Monday 21 September 2015

700	**REGISTRATION OPEN**
900	IRF CEO Nick Schofield welcome and housekeeping
905	Welcome to country – **Songwoman Maroochy**, of the Turrbal People
920	Symposium opening by **The Hon. Dr Steven Miles**, Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef
940	**Mr Peter Varghese AO**, Secretary, Department of Foreign Affairs and Trade
1000	**CONFERENCE KEYNOTE:** *From river engineering to sustainable rivers: Health, wealth and what else?* **András Szöllösi-Nagy**
1030	**Morning tea**

THEMES	THEME 1: Linking people, rivers and business *Room: P11*	THEME 2: Sustainable development of rivers *Room: P10*	THEME 3: Restoring rivers and their multiple values *Room: P9*	THEME 4: Adapting to change *Room: P8*	THEME 5: Integrated river basin management *Room: Auditorium*
1100	*Variation in the capacity of river networks to deliver ecosystem services* **Michael Stewardson** (Australia)	*Development of Eco-Heart Indicators for water quality status and riverine community awareness* **Azizi Abu Bakar** (Malaysia)	**KEYNOTE PRESENTATION:** *Multiple benefits of river restoration* **Alastair Driver** (UK)	*Will climate change impact water availability in the Hindu Kush Himalaya?* **Arun B. Shrestha** (Nepal)	**LARGE RIVER BASINS FORUM (Murray-Darling Basin Authority)** **Rhondda Dickson**, (Murray-Darling Basin Authority), **Tony McLeod** (Murray-Darling Basin Authority), **Rory Treweeke** (Basin Community Committee), **Dr Truong Hong Tien** (Director of the Technical Support Division, Mekong River Commission), **Eduardo Antonio Ríos Villamizar** (National Institute of Amazonian Research)
1120	*Managing aquatic values in the Burdekin Irrigation Area – lessons for future northern development* **Damien Burrows** (Australia)	*Safe water for the future through the Indo-Oz Network* **Anu Kumar** (Australia/India)		*Transboundary river basins assessment* **Paul Glennie** (Australia)	
1130			*Riverbank erosion stabilisation, ecosystem service enhancement and infrastructure protection. Can you always get what you want?* **Tom Alletson** (Australia)		
1140	*Understanding the public value of Melbourne's waterways* **Peter Morison** (Australia)	*The mighty Burdekin river – catchment to the sea* **Bill Lowis** (Australia)		*Impact of climate change on river discharge in Nam Sane River Basin, Lao PDR* **Ketsana Xaiyasarn** (Laos)	
1150			*Adaptive management strategies – making it work* **Brian Kemp** (Canada)		
1200	**KEYNOTE PRESENTATION:** *Ecotourism – If it's not your business it should be!* **Rod Hillman** (Australia)	*Shaping the future development of SEQ rivers for sustainable drinking water supply* **Cameron Wearing** (Australia)		*Design outcomes of the land use polices of the City Plan 2014* **Phil Young** (Australia)	
1210			*Restoring the banks of the Cooks River – concrete channel to natural waterway* **Dan Cunningham** (Australia)		
1220		**Speed talks:** *Heterogeneous flows foster heterogeneous assemblages* **James Lawson** (Australia); *An economic analysis of riparian vegetation restoration in South East Queensland* **Jacqui Reid** (Australia)		**Speed talks:** *Analysis of runoff and sediment regimes changes in the Yellow River* **Wenyi Yao** (China); *Analysis and evaluation of the Heihe River water diversion plan scheme adaptability* **Xiaohui Jiang** (China)	
1230	**Lunch** RiverExpo & posters				
1400	**KEYNOTE PRESENTATION:** *Catchments, mines and communities – an integrated catchment management imperative for mining* **Roger Higgins** (Australia)	*The Murray-Darling Basin Environmental Water and Knowledge and Research Project* **Ben Gawne** (Australia)	**THIESS INTERNATIONAL RIVERPRIZE FINALISTS** Lake Eyre Basin, Australia; River Mur, Austria; Jordan River, Jordan, Palestine & Israel	*Improved system for flood warning* **Scott Walker** (Australia)	**LARGE RIVER BASINS FORUM (Murray-Darling Basin Authority)**
1420		*The importance of environmental flows for coastal fisheries* **Michele Burford** (Australia)		*Recovering from the 2013 Floods, Burnett and Kolan Rivers* **Cathy Mylrea** (Australia)	
1430	*Evaluation of modelling approaches to assess long-term impacts of valley floor mining* **Krey Price** (Australia)				
1440		*Development and implementation of environmental flow policy to protect livelihoods and ecosystem health in Lao PDR under the situation of rapid hydropower development* **Christopher Gippel** (Australia/China)		**KEYNOTE PRESENTATION:** *Scattered blues: recovering resilience of stressed water ecosystem* **Ajaya Dixit** (Nepal)	
1450	*Monitoring bioavailability of metals and metalloids in river water receiving mine water discharge* **Trang Huynh** (Australia)				
1500		*A framework for rapid appraisal of environmental flow requirements amid emerging development pressures* **Nick Bond** (Australia)	**IRF AUSTRALIAN RIVERPRIZE FINALISTS** Macquarie River, NSW; Murray River, SA; Lake Mealup, WA		
1510	*Capacity for mining impacts on rivers* **Neil Mcintyre** (Australia)			*Risk-benefit assessment for Integrated Flood Management: supporting sustainable livelihoods in Candaba, Philippines* **Andrea Juarez** (Philippines)	
1520		**KEYNOTE PRESENTATION:** *Contributions of e-flows science to river conservation and restoration* **Angela Arthington** (Australia)			
1530	*Global mining* **Chris Moran** (Australia)			*Mary River – understanding processes and values to inform planning and restoration* **Misko Ivezich** (Australia)	
1550	**Speed talks:** *Karnali River bank, more activity for income* **Thark Bahadur Shah** (Nepal); *IRF's challenges and strategies of aggregating actors in Addalam River catchment* **Abdula Bansuan** (Philippines)	**Speed talks:** *Valuing the social benefits of Victorian waterway management – environmental works and watering* **Tamara Boyd** (Australia); *Fish abundance and distribution in a modified mangrove forest in Northern NSW, Australia* **Jan-Olaf Meynecke** (Australia)		**Speed talks:** *Operational sediment basins: more than just water quality devices* **Lara Dark** (Australia); *The role of naturally functioning ecosystems in improving in-stream water quality in urban areas* **Kholosa Magudu** (South Africa)	
1600	**Afternoon tea**				
1630	*Environmental stewardship on the NamMo River, Laos* **Bernie Wardle** (Australia / Laos)	*Umbrella environmental assets: establishing environmental water requirements in the Murray-Darling Basin* **Matthew O'Brien** (Australia)	**MORGAN FOUNDATION NEW ZEALAND RIVERPRIZE FINALISTS** Aorere River, Tasman; Lake Taupō, Waikato; Manawatū River, Manawatū; Project Twin Streams, Waitakere	**SPECIAL SESSION: The Australian Water Partnership: what is it, strategic directions and outcomes** **Dr Colin Chartres**, **Professor Jane Doolan** (Australian Water Partnership); **Mr Russell Rollason** (Australian Government Department of Foreign Affairs and Trade / Australian Water Partnership)	*New insights into the limnological classification of major Amazonian rivers: subsidies for water resources management* **Eduardo Antonio Ríos-Villamizar** (Brazil)
1650	*Environmental values in the Finniss River downstream of the former Rum Jungle Mine* **Andy Markham** (Australia)	*Environmental flows: a realistic goal for Africa?* **Mahala McLindin** (Australia / UK)			*Facilitating transboundary rivers towards sustainability in Asian mainland* **Prof He Daming** (China)
1710	*Can transboundary basins shared with China and Russia withstand Mongolia's mining boom?* **Evgeny Simonov** (China)	*Efficient environmental monitoring of a large and variable Australian river basin* **Nicole Flint** (Australia)			*Ngarrindjeri speaking as country: innovations in Indigenous engagement in water* **Steve Hemming** (Australia)
1730	Free time				
1815	Welcome function				
2000	IRF VIP Dinner (Invitation only)				

PROGRAM

Tuesday 22 September 2015

700	**REGISTRATION OPEN** Breakfast event: *Waterways stewardship for healthy communities* (by the **Global Change Institute**, The University of Queensland) ***Room: P11***				
830 900 930	**KEYNOTE PRESENTATIONS**	*Healthy economies – healthy rivers?* **A/Prof Caroline Sullivan** *A sustainable water future* **Prof Charles Vorosmarty** *State of global wetlands and implications for the Sustainable Development Goals* **Prof Max Finlayson**			
1000	**Morning tea**				
THEMES	**THEME 1: Linking people, rivers and business** ***Room: P11***	**THEME 2: Sustainable development of rivers** ***Room: P10***	**THEME 3: Restoring rivers and their multiple values** ***Room: P9***	**THEME 4: Adapting to change** ***Room: P8***	**THEME 5: Integrated river basin management** ***Room: Auditorium***
1030	**KEYNOTE PRESENTATION** – *Collective action on the Yangtze* **Greg Koch** (USA)	**SPECIAL SESSION: Sustainable Water Future Program (Future Earth and Griffith University)** **Dr Anik Bhaduri**, **Professor Claudia Pahl-Wostl**, **Professor Charles Vörösmarty** (GWSP); **Professor Stuart Bunn** (Griffith University); **Dr Mark Stafford Smith** (Future Earth Scientific Committee)	**EMERGING RIVER PROFESSIONAL AWARD FINALISTS** **Nitin Kaushal** (India); **Joachim Ezeji** (Nigeria); **Tom Scarborough** (Australia)	**SPECIAL SESSION: Wetland futures: economies and social justice** **Max Finlayson** (Environment Agency), **Professor Pierre Horwitz** (School of Natural Sciences, Edith Cowan University), **Dr Siwan Lovett** (Director, Australian River Restoration Centre), **Professor Peter Gell** (Professorial Research Fellow, Federation University Australia), **Geoff Lipsett-Moore** (The Nature Conservancy, Australia), **Adrian Wells** (Murray-Darling Wetlands Working Group / Petaurus), **Kathy Ridge** (Murray-Darling Wetlands Working Group), **Cassie Price** (WetlandCare Australia), **Tyler Farrow**, (Water Witness International), **Alastair Driver** (Environment Agency)	*Indigenous co-management of freshwater fisheries resources in Aotearoa, New Zealand* **Erina Watene-Rawiri** & **Erica Williams** (New Zealand))
1050					*Seeking water justice: Aboriginal economic entitlements and basin management* **Darren Perry** (Australia)
1100	*Applying a values-based stewardship model to river management* **Michael Pescott** (Australia)				
1110					*Moving beyond ownership – the benefits of applying Indigenous values* **Susan Guthrie** (New Zealand)
1120	*Assessing water risk and corporate water stewardship* **Oliver Maennicke** (Australia)				
1130			**SPECIAL SESSION: Restoring by sharing – the IRF Twinning workshop (IRF Alumni Network)** **Alastair Driver** (Environment Agency UK), **Amos Brandeis** (Architect, River Restoration Planner and Manager, Israel), **Johnny Sundstrom** (Siuslaw Institute, USA)		**SPECIAL SESSION: Best practice for engaging Indigenous people in water management and planning: the AWI experience (NSW Aboriginal Water Initiative)** **Bradley Moggridge**, **Claire Evans**, **Stephen Allen**, **Marcus Leslie**, **Rene Woods**, **Amardeep Grewal** (NSW DPI Water); **Erica Williams**, **Erina Watene-Rawiri** (NZ)
1140 1150	*Grower-focussed extension to deliver water quality and profitability outcomes* **Rob Milla** (Australia)				
1200 1210 1220	**KEYNOTE PRESENTATION:** *Leaders making healthy rivers* **Matt Linnegar** (Australia)				
1230	**Lunch**				
1300	**LITERATURE KEYNOTE:** *RAIN – A history for stormy times* **Cynthia Barnett**				
1330	River*Expo* and posters				
1400	*Embedding native fish recovery within a vibrant irrigation district* **Anna Parker** (Australia)	*Water for life: setting priorities* **Russell Rollason** (Australia)	**SPECIAL SESSION: River restoration in Asia (Asian River Restoration Network)**	**SPECIAL SESSION: Wetland futures: economies and social justice**	**KEYNOTE PRESENTATION:** *Integration through engagement: building bridges between people & their cultures* **Katherine Daniell** (Australia)
1420 1430	*Resolving over-allocation in a small catchment – the Maerewhenua story* **Elizabeth Soal** (New Zealand)	*Essential ingredients of Integrated River Basin Management and how it applies to the Mekong River Basin* **Truong Hong Tien** (Viet Nam)			**SPECIAL SESSION: Protecting the Great Barrier Reef through its rivers (Queensland Government Department of Environment and Heritage Protection)**
1440	*Dumb growth damages rivers* **Andrew Gawith** (New Zealand)	*SDIP and South Asia* **Peter Wallbrink** (Australia / Asia)			
1500	*The challenge for irrigated farmers sharing limited water resources from Monkul Borey River* **Sophak Seng** (Cambodia)	*Student goes to river's role in Yogyakarta River Restoration Movement* **Surani Hasanati** (Indonesia)			
1520 1530	*Carbon neutral cotton farms – valuing riparian environments* **Stacey Vogel** (Australia)	*Issues and challenges of wastewater treatment and their impact on river systems in Malawi* **Victor Chipofya** (Malawi)	**KEYNOTE PRESENTATION:** *The European experience in restoring rivers, providing water services and ensuring multiple uses and values: The case of the Danube* **Philip Weller** (Austria)		
1540	*River basin management: actions at field level are necessary* **Shrikant Limaye** (India)	*Dealing with climate change in the 2012 Basin Plan and into the future* **Tony McLeod** (Australia)			
1600	**Afternoon tea**				
1630	*Northern Australia water infrastructure* **Michelle Lauder** (Australia)	**SPECIAL SESSION: Seconds to seasons – predicting the many FACES of water movement in the Brisbane River Basin (BMT WBM)**	**KEYNOTE PRESENTATION:** *River restoration in the Middle East: no politics – just sewage* **Amos Brandeis** (Israel)	*Multiple benefits of a constructed stormwater treatment wetland* **Peter Adkins** (Australia)	*Bridging the silos of land use planning and floodplain management* **Carrie Dearnley** (Australia)
1650 1700	*Reporting on the livelihood benefits of South East Queensland's waterways* **James Udy** (Australia)		*Rehabilitating the Pasig River and its tributaries: strategies and challenges* **Reynaldo Ramos** (Philippines)	*Wetlands: sentinels of long-term trade-offs in ecosystem services* **Peter Gell** (Australia)	*Holistic framework for management of rivers, estuaries and wetlands at the regional level* **Greg Peters** (Australia)
1710 1720	*Community input on the role of water in local economies* **Phil Townsend** (Australia)		**Speed talks:** *The Nerang River – can improvements in both water security and environmental outcomes be achieved?* **Andy Markham** (Australia); *The cumulative benefits of multiple river restoration strategies enhance Murray cod* **Scott Raymond** (Australia)	*Journey of Melbourne's stormwater quality wetlands – a positive but cautionary tale* **Hannah Pexton** (Australia)	*The Bremer River Fund – an alternative partnership mechanism for the delivery of waterway improvement* **Philip Smith** (Australia)
1730	Free time				
1830	Gala dinner				
2330	Close				

PROGRAM

Wednesday 23 September 2015

700	REGISTRATION OPEN				
820 840 900	PLENARY KEYNOTES	Australian River*prize* winner Morgan Foundation NZ River*prize* winner Thiess International River*prize* winner			
930	KEYNOTE PRESENTATION: *Evolution of strategic environmental assessment to inform hydropower development in the Greater Mekong Region* **Dr Tarek Ketelsen**				
1000	Morning tea				
THEMES	THEME 1: Linking people, rivers and business *Room: P11*	THEME 2: Sustainable development of rivers *Room: P10*	THEME 3: Restoring rivers and their multiple values *Room: P9*	THEME 4: Adapting to change *Room: P8*	THEME 5: Integrated river basin management *Room: Auditorium*
1030 1050 1100 1110 1120 1130 1140 1150 1200 1210 1220	ASIA PACIFIC WATER STEWARDSHIP FORUM (Alliance for Water Stewardship & Water Stewardship Australia) **Dr Jamie Pittock**, Chair, Water Stewardship Australia; **Michael Spencer**, Alliance for Water Stewardship; **Dr Zhu Donglin**, Asst. Chief Engineer, Jiangsu Civil Engineering Consulting; **Declan Hearne**, Project Officer, International WaterCentre; **Michele Akeroyd**, Goyder Institute	KEYNOTE PRESENTATION: *The imperative of demonstrating progress* **Jane Doolan** (Australia) *Decentralised water resources management in Mozambique: Challenges of implementation at the river basin level* **Ronaldo Inguane** (Mozambique) *Inclusive water governance – hearing women and downstream Mekong communities* **Michael Simon** (Australia Mekong) *It's more than adding water – the Tri-State Southern Connected Basin Alliance* **Chris Norman** (Australia) *The Mighty Waikato River: the new co-governance approach to managing a national resource* **Paula Southgate** (New Zealand) **Speed talks**: *Governing for sustainability in a changing environment: lessons from the Lachlan River* **Jess Schoeman** (Australia); *Achieving water and energy nexus: who and how to persuade?* **Bounthavivanh Mixap** (Laos)	SPECIAL SESSION: Waste to Resource as a way of improving the river environment (Queensland Urban Utilities) **Lavanya Susarla, Colin Chapman, Robert Perrons** (Queensland Urban Utilities) *Macroinvertebrate traits – or taxonomic-based approach for evaluating the effects of urban wastewater* **Nqobizitha Siziba** (Nigeria) *Urban river restoration and flood risk management in Styria/Austria* **Rudolf Hornich** (Austria) *Corridors of opportunity: embedding waterways into the social fabric of Melbourne* **Virginia Harris** (Australia)	SPECIAL SESSION: Waterway Health Report Cards (Department of Environment and Heritage Protection, Healthy Waterways & University of Maryland) **James Udy**, Healthy Waterways Nyssa Henry, Office of the Great Barrier Reef, EHP; **Paul Birch**, Fitzroy Basin Association, Fitzroy Partnership for River Health; **Nathan Johnston**, Fitzroy Basin Association; **Kim Delaney**, Reef Catchments	*Social learning IRBM* **Jennifer Marie S Amparo** *Perceptions of environmental watering in the Murray-Darling Basin* **Jacki Schrimer** & **Sandra Walpole** (Australia) *Understanding links between waterway management and community health* **Anne Cleary** (Australia) *Communicating for success in environmental programs* **Jaana Dielenberg** (Australia) KEYNOTE PRESENTATION: *Citizen science and digital earth technology for river resuscitation* **Tim Foresman** (Australia) **Speed talks:** *Earth-observation-based technologies to assist algal management in rivers and lakes* **Tim Malthus** (Australia); *Systems thinking as a tool in managing conflict, cooperation, and collective action in Integrated River Basin Management* **Jennifer Amparo & Caroline Pinon** *(Australia)*
1230	Lunch				
1340	River*Expo* and posters				
1400 1420 1430 1440 1450 1500 1510 1520 1530	ASIA PACIFIC WATER STEWARDSHIP FORUM **Chris Norman**, Chief Executive Officer, Goulburn Broken Catchment Management Authority; **Tyler Farrow**, International Program Officer, Water Witness (UK/Africa); **Elizabeth Soal**, Policy Manager, Waitaki Irrigation Collective (NZ); **Lance Lloyd**, Water Stewardship Program Officer, Westernport Biosphere; **Megan McLeod**, Project Officer, Water Stewardship Australia; **Caren Martin**, President South Australian Murray Irrigators **Michael Spencer**, Chair Alliance for Water Stewardship; **Hudson Cameron**, AWTP Manager, Inghams Enterprises Pty Limited; **Tang Dengyong**, Associate Professor, Nanjing University of Information Science and Technology; **Xin Hao**, Green Zhejiang, China	*An overview of the Bureau's operational AWRA River model for sustainable development of river systems across Australia* **Mohsin Hafeez** (Australia), *National water accounts* **Sunil Dutta** (Australia) *Using the Geofabric in decision support for wetlands, modelling and accessing water observations data* **Mathew Brooks** (Australia) *Best practice implementation of river basin models to support Integrated Basin Management* **Geoff Podger** (Australia) **Speed talks:** *A state model of river ecosystem health for evaluating riparian vegetation restoration options* **Zuzanna Graszkiewicz** (Australia); *Finbox – the Demonstration Reach Toolbox for waterway managers* **Pam Clunie** (Australia); *Land, air, water Aotearoa: a world first in national water reporting* **Sean Hodges** (New Zealand); *Open River* **Sarah Richmond** (Australia)	*Restoration of upper Wannon River floodplain wetlands in the southern Grampian, Victoria* **Mark Bachmann** (Australia) *Urban stream corridors: environmental status and restoration strategies – the case of three tributaries in Upper Mahaweli River Sri Lanka* **Lalitha Dissanayake** (Sri Lanka) *A strategic approach to basin-scale river restoration in China* **Robert Speed** (Australia)) *The potential to increase riverine ecosystem services in high-density Asian cities* **Kuei-Hsien Liao** (Hong Kong) *The value of waterway health to the residential community in two urban Sydney catchments* **Phillip Birtles** (Australia)	KEYNOTE PRESENTATION: *People of many rivers: tales from the riverbanks* **Imtiaz Ahmed** (Sri Lanka) *Water quality scorecards* **Simon Toze** (Australia) *Winning the war against salinity in the Murray-Darling river system* **David Dreverman** (Australia) *Myanmar Healthy Rivers Initiative – Thalwin and Ayeyarwady Rivers* **Robyn Johnston** (Myanmar/Sri Lanka) **Speed talks:** *Managing river bank erosion – a strategy for the South Pine River* **Richard Sharpe** (Australia); *Achieving wetland restoration through community participation and effective planning at council reserves* **Jessica Mowat** (Australia)	SPECIAL SESSION: Promoting leadership (Peter Cullen Trust) **Sandy Hinson** (CEO Peter Cullen Trust), **Emma Carmody** (Policy and Law Reform Solicitor, EDO NSW), **Tanzi Smith**, **Kaye Cavanagh** (Principal Officer (Natural Resources), Ipswich City Council Qld) *Risk and opportunities for decision-making for healthy river* **Quentin Grafton** (Australia) *Trading water delivers social and environmental outcomes at reduced economic cost* **Bill Moulden** (Australia)
1540	Afternoon tea				
1610	ASIA PACIFIC WATER STEWARDSHIP FORUM	ContRIVERsy – debate / Q&A			
1710	Closing ceremony, **Emerging Water Professionals symposium feedback**				
1720	Closing ceremony, poster and presenter awards, intro to 19th International River*symposium*				
1730	Symposium close				
1900	Film night: *Watermark*				

Thursday 24 September 2015

Conference study tour 1 – Moreton Bay Conference study tour 2 – Brisbane region	Conference workshop 1 – Coal seam and shale gas extraction (by ICE WaRM) Conference workshop 2 – River modelling for managers (by ICE WaRM)

Brisbane City Council is proud to be a founding sponsor of the 18th International River*symposium*.

We are the largest local government in Australia and were named Australian Sustainable City for 2014.

Water is integral to Brisbane's relaxed, subtropical lifestyle. That's why we are focussed on improving the health of our waterways and increasing visitation and use of our creeks, the Brisbane River and Moreton Bay by 2031.

I ♥ BNE
That's why I care for our waterways

brisbane
australia's new world city

BRISBANE CITY

KEYNOTE SPEAKERS

Professor András Szöllösy-Nagy

From river engineering to sustainable rivers: health, wealth and what else?

This contemporary global perspective on rivers, embedded in an historical context, will identify major future challenges and potential solutions. Projected demand for water and the future impacts of a changing climate mean that the present trajectory of global water use is not sustainable. Political recognition that freshwater is a major global issue is now evident.

The presentation will identify the technical and social challenges that need to be addressed to establish sustainable river development and management practices for the future. I will examine the catchment-scale hydrological impacts arising from the changing climate and climatic variability, population patterns including migration from rural to urban areas, and land use change. All these changes imply strong non-stationarity.

The big questions are: are we really dealing with the most important issues? What is indeed the major driver that will determine how rivers will be managed two generations from now? What are the precautionary measures humanity should take to adapt to changing social and environmental conditions? In the case of transboundary rivers, where nearly half of humanity lives, who calls the shots? How effective is international cooperation? Why do we need that to start with? Is river management an ethical and cultural issue or simply a matter of engineering by more structures? Isn't water just a matter of quick technical fixes by applying more technology? Is water a source of conflict or that of cooperation?

Some of the potential responses to these questions will be outlined along with an assessment of new relevant global action initiatives of the United Nations, notably the Sustainable Development Goals and their relevance to river-related health, wealth and ecosystems.

Professor Imtiaz Ahmed

Regional Centre for Strategic Studies (RCSS), Colombo, Sri Lanka

People of many rivers – tales from the riverbanks

Epistemology or sources of knowledge (whether perception, reason, introspection, memory or testimony) has always been problematic and contentious. This is not only with reference to the issue of hegemony, when the empowered tends to impose its 'knowledge' on the disempowered but also with reference to the political contamination of disciplinary quests and treatment of space, which often tends to distort knowledge itself. Antonio Gramsci probably succeeded the most in highlighting this issue in the clearest terms: "Everything is political, even philosophy or philosophies and the only 'philosophy' is history in action, that is, life itself." If this is the case then there is good reason to hold the view that the treatment of space, whether 'land' or 'water' or, for that matter, sources of knowledge, cannot remain *apolitical*. On the contrary, focus on 'land' is as political as the focus on 'water.' Epistemology otherwise is hardly devoid of politics: 'whose perception,' 'whose reasoning' or 'whose testimony' is as vital as the 'hegemonic apparatus' within which perception or testimony is reproduced.

Tales from the riverbanks are no different. Indeed, a deliberate attempt has been made to focus on rivers and, at the same time, collect stories from those residing on the riverbanks, mainly to understand the intricate relationship between water and people and recover 'lost' or 'hidden' knowledge. In fact, 'oral history' tends to focus on groups of individuals who might otherwise have been 'hidden from history,' mainly to have a sense of the living experience and not a reconstructed one via secondary sources or through opinions of the out-of-place experts! This helps not only to challenge the current 'land-centric' understanding of things, often a distorted form of knowledge when it comes to 'water,' but also to venture on the alternatives and see the possibilities of mitigating the dismal conditions faced by the riverbank dwellers and the people of many rivers of Bangladesh.

Professor Angela Arthington

Australian Rivers Institute, Griffith University

Contributions of e-flows science to river conservation and restoration

The 10th International River*symposium* and environmental flows conference held in Brisbane in 2007 produced the Brisbane Declaration—a set of principles and an action agenda to promote and consolidate the role of river flow management (e-flows) as a global priority for ecological sustainability and social well-being. This presentation will review contributions of e-flows science and assessment methods to river conservation and river restoration—from habitat methods to ecosystem approaches, such as the Building Block Methodology (BBM), DRIFT (Downstream Response to Imposed Flow Transformation) and ELOHA (Ecological Limits of Hydrologic Alteration). Looking to the future, climate change and anticipated alterations to river flow regimes and aquatic ecosystems will challenge the science and practice of environmental flows, and make freshwater ecosystem protection and restoration even more urgent as well as more complex. The science of e-flows is robust enough to generate scenarios and inform river flow management in changing environments, and will undoubtedly continue to produce innovations on many fronts. The greatest urgency is to expand the implementation of e-flows and monitor their ecological outcomes in diverse climatic settings, so that the e-flow scientists and managers of the future inherit detailed records of ecological change that will fortify their efforts to protect and restore rivers in changing environments.

Ms Cynthia Barnett
Journalist & Author

RAIN: A history for stormy times

Cynthia Barnett's latest book, *Rain: A Natural and Cultural History*, aims to draw new readers to climate change with engaging storytelling and insights from the past. This keynote speaker will take the audience on a thought-provoking natural and cultural tour of RAIN, from the European witch trials of the Little Ice Age when thousands of people were hanged for conjuring storms; to the suicide of the embattled scientist who invented forecasting and was castigated for it; to our successes combatting acid rain with cap-and-trade. Ultimately, the book and the talk find rain to be a unifying force in a fractured world. Its history has much to tell us about coming together to work on climate change, and living in stormy times.

Mr Amos Brandeis
River Restoration Planner and Manager

River restoration in the Middle East: no politics – just sewage

The Alexander River flows from the Palestinian city of Nablus to the Mediterranean Sea, north of the Israeli city of Tel Aviv. It has become a unique bridge between Israelis and Palestinians, enabling cooperation between neighbours, on the local level, regarding environmental issues which know no political borders. This 'one of a kind' cooperation survived even during the most difficult times in the Middle East, and had 'ups and downs' over the last 20 years. The Alexander River Restoration Project, launched in 1995, demonstrates a comprehensive project with on-the-ground results concerning removal of pollutants, water supply, development of river parks, ecological rehabilitation, public participation, education, drainage, flood defense, river maintenance, etc. In 2003 it received the Thiess International River*prize*, which made a huge difference to the project. Thousands of people come every weekend to watch the unique Soft Shelled Nile Turtles and enjoy seven parks and paths along the river. The project has still to face many challenges in coming years. One major challenge is the planning and development of the 'Alexander River Peace Park' on both sides of the border between the Israelis and Palestinians. This unique story demonstrates how leadership and collaboration can even put aside major political conflicts, and concentrate on local issues concerning healthy rivers and economies. Can this project demonstrate 'hope' and 'normal life' in the Middle East? Can it create a better environment along a heavily polluted river, and produce a new groundwater aquifier that people in this area so desperately need?

Dr Katherine Daniell
The Australian National University

Integration through engagement: building bridges between people and their cultures in river basin management

The inherent complexity of river basin management means that any one governance or disciplinary approach is unlikely to lead to successful and acceptable basin management outcomes. It is thus vital to engage people across and beyond basins in a variety of collective management initiatives. This ensures that adequate bridges and understanding or acceptance can be built across numerous spatial, administrative, organisational and cultural boundaries to drive more holistic management practices. This presentation examines how appreciation of different people and their cultures can be used to design and understand more effective river basin management-related engagement process, drawing on examples from Australia, Bulgaria and beyond.

Mr Ajaya Dixit
Institute for Social and Environmental Transition

Scattered Blues: recovering resilience of stressed water ecosystem

Rivers in the Ganga Basin which have their origin in the Himalayan mountain ranges are fed by moisture laden rains that come from the Bay of Bengal and the Westerlies. Snow is stored in the high mountain slopes as glacier and ice packs to be released gradually as run off. In the mountains and hills, rains, after they are intercepted by vegetation reach the landscape, begin the processes of infiltration, interflow, percolation and surface runoff. Interactions among these processes lead to emergence streams and rivers on one hand while groundwater storage and springs on the other. Springs and streams serve as the primary sources for meeting drinking water and livelihood needs of thousands of settlements spread across Nepal's mid hills. In recent times stories of springs and streams being depleted abound with implications on availability of water for meeting basic needs as well as river ecosystem. Anthropogenic activities further alter these dynamics. This paper will discuss an effort that brought scientists and members of local communities together in two selected sites in hills of Nepal to better understand the dynamics. The lessons serve as a useful starting point for recovering resilience of these systems to maintain ecosystem integrity and community's well being as climate change becomes an additional layer of stress.

Dr Jane Doolan
University of Canberra

The imperative of demonstrating progress – new thinking and simple approaches

One of the key problems besetting river managers is the inability to demonstrate significant improvements in environmental condition as a result of undertaking river rehabilitation works and/or either acquiring environmental water. Despite producing MERI (monitoring, evaluation, review and improvement) plans for all government-funded projects, there is a general perception in NRM investment circles that we cannot show we are making a difference. NRM investors consistently raise this issue and it provides the basis for questioning the need and rationale for further investment. There are a number of factors contributing to this including undertaking multiple actions as part of a river restoration program, long lag times between work and expected ecological improvements and the scale of actions undertaken. However, unless this issue is addressed with a different approach, it remains one of the biggest risks to river managers in the long term. In this discussion, the key audiences for this information and their actual needs are examined. A new, very simple approach is put forward for reporting on progress. Its implications for monitoring and evaluation are then examined and the science requirements to support it are identified. This sets up the basis for a new take on the relationship between science and river management.

Mr Alastair Driver
Environment Agency

Multiple benefits through river and wetland restoration

Working with natural processes is an essential element of sustainable catchment management in the face of climate change. This presentation summarises a wide range of practical solutions which the Environment Agency and its many partners have implemented in England in recent years, working from source to sea. It also reveals some of the early measured benefits of these practical solutions, focussing on those which are transferable to other similar situations across the world. Examples discussed, include restoration of upland bogs to hold back water and store carbon, tree-planting and catchment sensitive farming in upper catchments to reduce surface run-off and diffuse pollution, reconnection of rivers with their floodplains to provide improved flood risk management, physical restoration of rivers and realignment of the coastline to help cope with sea level rise. These solutions provide a wide range of ecosystems services i.e. 'multiple benefits', and assist with climate change. Several of the projects showcased have been monitored by academic institutions and the results are now emerging. These results are now being promoted widely to ensure that where applicable they are utilised as part of the project approval procedures for other similar projects in the UK.

Professor Max Finlayson

Charles Sturt University

State of global wetlands and implications for the Sustainable Development Goals

The importance of wetlands for people has been highlighted on many occasions and yet the state of wetlands continues to decline. Recent data has confirmed both the importance of wetlands for food and fresh water and for regulating services across the wider environment, as well as the ongoing loss, not just degradation of many wetlands. The loss of wetlands means the loss of ecosystem services, and many of these cannot be (readily) replaced. Yet, there are benefits from the destruction of wetlands, although this can shift the balance between beneficiaries. There is no blueprint for finding the balance either between development and wetland conservation or between beneficiaries. The sustainable development goals proposed for water and sanitation have specific targets for restoring and maintaining ecosystems to provide water-related services. These targets explicitly address the need to integrate ecosystem values into strategies for reducing poverty. To realise these outcomes we need to keep or restore the wetlands, and consider how to design, plan and manage 'portfolios' of natural and built infrastructure to maximise the full suite of benefits. A simple question – can our societies do this? The past suggests we will struggle.

Dr Timothy Foresman

Queensland University of Technology

Citizen science and digital earth technology for river resuscitation

Fresh water demands are overreaching the finite and threatened supplies throughout the globe. Industrial pollution is further exacerbating these alarming trends, with estimate of approximately 50% of China's water supplies contaminated. A lot of people will need to act to regain control, clean up, and preserve the world's multipurpose river systems. A compelling shift in our capacity to evaluate, resuscitate, and sustainably protect our riparian ecosystems and their fluvial flux energy systems is to ensure that citizen stewardship is tightly coupled with both government and industry interactions. As demonstrated with the Open Street Maps and other crowdsource methods, along with education and advocacy initiatives (e.g. Save Our Streams, etc), the purposeful inclusion of our citizens is critical and mandatory if we expect to improve the situation. A considered view will be presented of citizen science as a force multiplier to affect the necessary and positive change in these conditions.

Dr Roger Higgins

International RiverFoundation

Catchments, mines and communities – an integrated catchment management imperative for mining

Mining is an intensive land use for which facilities and supporting infrastructure directly impact only a small area on a regional or national scale. Changes to communities and indirect impacts on other land uses can be more extensive—mining is often the catalyst for regional development and infrastructure, can change the character of host communities, and can bring economic growth through support services and demands for community facilities often in new or small towns. Mining developments and operations require supplies of water and may result in discharges into mine-area watercourses. Mining developments may locally alter catchment drainage patterns, and draw-down aquifers. Modern mines are subject to rigorous environmental legislation, assessments and reviews, and water recycling is high for reasons of both economic and environmental sustainability. The cumulative impact of multiple mines in a catchment, usually developed at different times by different mine operators, is of increasing interest to communities and regulators. These factors combined suggest a nexus between mining and integrated catchment management that encompasses past, present and future land and water uses. Miners, governments, communities and researchers can collaborate in the development and operations of mining projects, enabling responsible economic growth and enhancements to quality of life at an international and regional scale, while recognizing the inherent value of local environments, encompassed in their catchments and waterways.

Mr Rod Hillman

Ecotourism Australia

Ecotourism – if it's not your business, it should be

Ecotourism was once a small niche market with limited marketing and customer appeal. Now nearly all national, state and local tourism bodies use nature imagery, products and themes to promote their destinations. The latest research is clear and the rise of sustainable, responsible, volunteer and ethical tourism all point to the fact that ecotourism is now the norm not the niche. The past decade has seen tour operators re-evaluating their products and marketing to take advantage of this customer shift to position themselves for success.

Mr Tarek Ketelsen

International Centre for Environmental Management

Evolution of SEA to inform hydropower development in the Greater Mekong Region

The Mekong River Basin is a region of rich diversity—of landscapes, biodiversity and ethnic and cultural diversity. The region has more than 70 distinct ethnic and linguistic groups, and is the second most bio-diverse region globally for aquatic species. The uniting force of this diversity is the river itself, which rises in Tibet, flows through China, Myanmar, Lao PDR, Thailand, and Cambodia and enters the sea in the Mekong Delta of Vietnam.

For hundreds of years the Mekong's hydrological regime has remained in dynamic equilibrium with its climate and landscape, which has resulted in a stable and predictable flood-pulse hydrograph with distinct hydrological seasons. In recent decades, human development in one sector—hydropower—began transforming the hydrology of the Mekong as it emerged as a preferred development strategy of Lower Mekong Basin (LMB) countries to stimulate economic growth and provide domestic options for meeting growing power demand and energy security. More recently, the private sector has emerged as an important force behind large-scale hydropower contributing to a project-centered trend in hydropower development. The combined effects of these proposed and existing hydropower dams are changing the fundamental characteristics of the river system, project by project, with pervasive repercussions for natural and social systems and economies which are often difficult to understand and reconcile at the strategic regional level.

This presentation examines the role of Strategic Environmental Assessments (SEAs) as a sustainability tool to shape decisions on hydropower development in transboundary context, drawing on findings, conclusions and experience from an SEA of mainstream hydropower undertaken by ICEM for the Mekong River Commission. The presentation demonstrates the role SEAs can play in hydropower decision making, helping Mekong governments, civil-society and local communities answer two critical questions: (i) what are the cross-sectoral impacts of large hydropower development on the surrounding ecosystems, communities and economies; and (ii) what are the alternatives to large hydropower which will continue to support growth without the high cost to natural systems and other sectors.

Experience from the Mekong demonstrates that answers are needed to both these questions in order for SEAs to be constructive inputs into the decision making process. In addition they must be participatory, process-based assessments which facilitate discussion and build an evidence base of understanding on both of these questions.

Mr Greg Koch
The Coca-Cola Company

Collective action on the Yangtze: is China's 'Silent Spring' enabling water security?

Starting with China's 12th Five-year Plan (2011-2015) and accelerating as the 13th plan is under development, the government has strongly focused on the environment tied to economic development under the principle of 'quality growth.' Water, in particular has been a focus, with targets on reductions in pollution and increases in efficiency and productivity (such as 'more crop per drop'). Alongside these efforts, the government has been more strict issuing pollution fines and broadening the remit of the courts, including civil tort reform. The media has followed suit giving the public greater transparency. Awareness of water challenges, growing concern of pollution and scarcity, and demand for action by the public has brought China into their own 'Silent Spring.' In this setting, The Coca-Cola Company and their conservation partner WWF, are building on their eight-year history of work on the Yangtze River to significantly scale the scope and intended impact of efforts toward a secure Yangtze. Progress and challenges to date will be reviewed followed by on-going and planned work. The critical theme of collective action will be highlighted across actors from government, civil society and the public, to industry and agriculture. Two key questions will be addressed throughout: (1) can this fast-maturing 'silent spring' catapult actions on the Yangtze? and (2) what unique role can industry play?

Mr Matt Linnegar
Chief Executive, Australian Rural Leadership Foundation

Leaders making healthy rivers

History has demonstrated that it is leadership, by either individuals or groups, that determines the prosperity or success of a region, initiative or community. Yet there are a plethora of views, values and debates that underpin different strategies and efforts around rivers, river management, and water use more broadly, and the perception of 'success'. Through a glimpse into the values and views of the people who lead within their community or sector, we can gain a greater understanding of the importance of rivers and water to communities, not just as a resource but as an integral part of life. The members of the Australian Rural Leadership Foundation provide a platform to do this. They live throughout Australia, with many engaged in debates around water, from various viewpoints and value positions. It is through insight into the significance of water to rural, regional and remote communities and their industries that a broader understanding of healthy 'economies' can be formulated beyond the objective, generalisable values attributed from afar. These insights provide a more generous and community-based proposition, which accounts for values and interests that are often under-represented in policy and centralised decision-making.

PHOTO: SIMON HARTLEY

Associate Professor Caroline Sullivan
Southern Cross University

Healthy economies – healthy rivers?

There has been much literature generated over the last three decades about the relationship between economic development, and levels of resource conservation and environmental protection. A common observation is that the links between poverty and environmental degradation form a vicious circle, where degradation leads to poverty, and poverty leads to degradation. At the other end of the financial spectrum, it is argued that better economic performers put in place stricter environmental legislation, implement tighter regulations and thus have better environmental conditions. This paper examines these linkages, and in the context of river basins, considers to what extent economic development can be shown to have contributed to better environmental quality. Sectoral variation in impacts is also considered, and evidence from a variety of river basins across the world is provided for illustration, with consequences for human wellbeing, discussed.

Professor Charles Vörösmarty
Global Water System Project

A rich history of research at the local scale dating back more than a century shows the planet's hydrology rapidly transformed during the Anthropocene, with human interactions with fresh water characterised by mismanagement and ecosystem impairment. The countless human decisions and resulting actions that seek to optimise water security for humans at the local scale today accumulate as global syndromes of increasing environmental stress. In addition, global climate change has clear ramifications for global hydrology as does the transformation to a highly interactive global economy. A common feature of this globalisation of water problems is the legacy of poor governance, which is deeply embedded into the fabric of contemporary hydrologic and material cycles. This presentation will briefly explore the evolution of global-scale studies of the hydrologic cycle and the pivotal role that humans play in shaping modern water systems. I will review key concepts that emerged over the last one-to-two decades that have motivated acceptance of the legitimacy of a fully global-scale perspective. Advances in diagnosing the broad-scale syndromes today set the stage for a next phase of study, crafting science-based solutions for sustainable water development as part of the broader Rio+20 agenda, in particular with regard to the Sustainable Development Goals.

Mr Philip Weller

The European experience in restoring rivers, providing water services and ensuring multiple uses and values: the case of the Danube

Since the year 2000 when Europe adopted the European Water Directive extensive efforts have been underway to improve water management and to ensure the sustainability of the multiple services including water supply that rivers in Europe provide.

Significant progress has been achieved in restoring good status of waters throughout Europe. Important restoration initiatives have been undertaken and a stronger awareness of the need for cooperation and dialogue between users has been achieved. The progress is reflected in the data collected from the EU and in the awarding in recent years of international river prizes to three major European rivers (the Danube, the Thames and the Rhine).

The EU Accession process (expansion of Europe) is also facilitating improvement outside the original EU boundaries by providing funding for waste water treatment, and involving countries further to the east in river basin planning. The results of a recent State of the Sector Study of Water services prepared by the Danube Water Program (a joint initiative of the World Bank and IAWD) for the countries of the Danube and South East Europe has however, highlighted the challenges that remain in this part of Europe– particularly in securing safe supply of water and achieving integrated water management.

OPENING PLENARY

9:05am, MON 23 SEP

Songwoman Maroochy

Songwoman Maroochy is the Songwoman & Law-woman of the Turrbal People—the original inhabitants of Brisbane. She is a direct descendant of Daki Yakka—Chief of the Old Brisbane tribe—a man nicknamed "the Duke of York" by the European settlers in the Moreton Bay area in the 1830s when Brisbane was a penal settlement.

In 1989 Maroochy became the first Aborigine to perform on the Australian operatic stage when she made her debut in Black River. She also became the first Australian to perform at the United Nations in New York, in honour of the International Year for the World's Indigenous Peoples in 1993. Over the years Maroochy has also appeared in numerous television programs including *The Flying Doctors*, *Winner Take All and Women of the Sun*, as well as films including Bran *Nue Dae*.

The Traditional Blessing performed by Songwoman Maroochy is *Monda Barita*—a song of prayer asking the Almighty and our ancestors to be with us all at the gathering.

Maroochy has received many awards (both in Australia and overseas), including an Honorary Senior Fellowship of the University of the Sunshine Coast in 2000 for her outstanding and sustained contributions to the community.

9:20am, MON 23 SEP

The Hon. Dr Steven Miles

Queensland Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef

Dr Steven Miles is the Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef.

Steven has a PhD in Political Science and a bachelor's degree in Political Science and Journalism from the University of Queensland. Prior to entering Parliament, Steven was Managing Director of Reveille Strategy, a Market Research and Communications company.

He was a senior advisor to the Treasurer and Deputy Premier on trade, innovation and economic development matters in the former Bligh government, and has worked in senior roles at the public sector union and United Voice.

He co-founded national parent advocacy organisation The Parenthood.

Steven and wife Kim are raising their three children Sam, Aidan and Bridie.

It was the pending arrival of his first child that led Steven to think more deeply about protecting Queensland's environment, including the Great Barrier Reef, for future generations. He joined Al Gore's Climate Leadership Program to tackle climate change and inspire communities to take action.

Together with his cabinet colleagues, Steven is also committed to tackling unemployment through job creation, listening to and acting upon the concerns of Queenslanders, and restoring integrity and accountability to government in Queensland.

9:40am, MON 23 SEP

Mr Peter Varghese AO

Secretary of the Department of Foreign Affairs and Trade

Mr Varghese took up his position as Secretary of the Department of Foreign Affairs and Trade on 3 December 2012.

Prior to this appointment, Mr Varghese was Australia's High Commissioner to India from 2009 to 2012. Between 2004 and 2009, he was Director-General of the Office of National Assessments. Before that he was the Senior Adviser (International) to the Prime Minister. Mr Varghese was Australia's High Commissioner to Malaysia from 2000 to 2002. He has also served overseas in Tokyo (1994), Washington (1986-88) and Vienna (1980-83).

Mr Varghese has held a wide range of senior positions in the Department of Foreign Affairs and Trade in Canberra, including as Deputy Secretary (2002-2003), First Assistant Secretary of the International Security Division (1997), Head of the White Paper Secretariat (1996-97) which drafted Australia's first white paper on foreign and trade policy, First Assistant Secretary of the Public Affairs Division (1994-96), and Assistant Secretary of Staffing (1991-92). He was seconded to the Department of the Prime Minister and Cabinet as First Assistant Secretary of the International Division (1998-1999).

Mr Varghese was appointed an Officer in the Order of Australia (AO) in 2010 for distinguished service to public administration, particularly in leading reform in the Australian intelligence community and as an adviser in the areas of foreign policy and international security. He was awarded a Doctor of Letters *honoris causa* by the University of Queensland in July 2013 in recognition of his distinguished service to diplomacy and Australian public service.

Mr Varghese was born in 1956 in Kenya to Indian born parents. He migrated to Australia as a young child in 1964. Mr Varghese is a graduate and university medalist in history from the University of Queensland. He is married with one adult son.

10:00am, MON 23 SEP

Professor Andras Szollosi-Nagy

For details see page 11 (Keynote speakers)

Investing in rivers, investing in life

www.riverfoundation.org.au

INTERNATIONAL
RiverFoundation

RIVER*EXPO*

VENUE

Brisbane Convention & Exhibition Centre

Plaza level, BCEC

We would like to thank the following organisations for participating:

Company	Booth
ALS Global	12 & 13
Australian Department of Foreign Affairs and Trade	3
Australian Water Partnership	9
Brisbane Catchments Network	10
Brisbane City Council	7
Bureau of Meterology	6
Buredekin Water Futures Group	5
Floodplain Management Australia	11
Griffith University	4
International RiverFoundation	8
Jacob's Creek	14
Murray-Darling Basin Authority	1
National Environment Research Program	2

RIVER*EXPO* EXHIBITORS

ALS Monitoring & Technical Services

ALS Monitoring & Technical Services designs and implements solutions for clients. We expertly manage monitoring projects in Australia, SE Asia and the Pacific, across a range of hydrological and environmental parameters. For more information, call 07 3243 8629 or visit **www.alsglobal.com**

Australian Water Partnership

The Australian Water Partnership vision is to manage water resources effectively and equitably in the Indo-Pacific region to support sustainable economic development, improve water security for all, and reduce environmental and social impacts and regional tensions. For more information, call 02 6206 8320 or visit **www.waterpartnership.org.au**

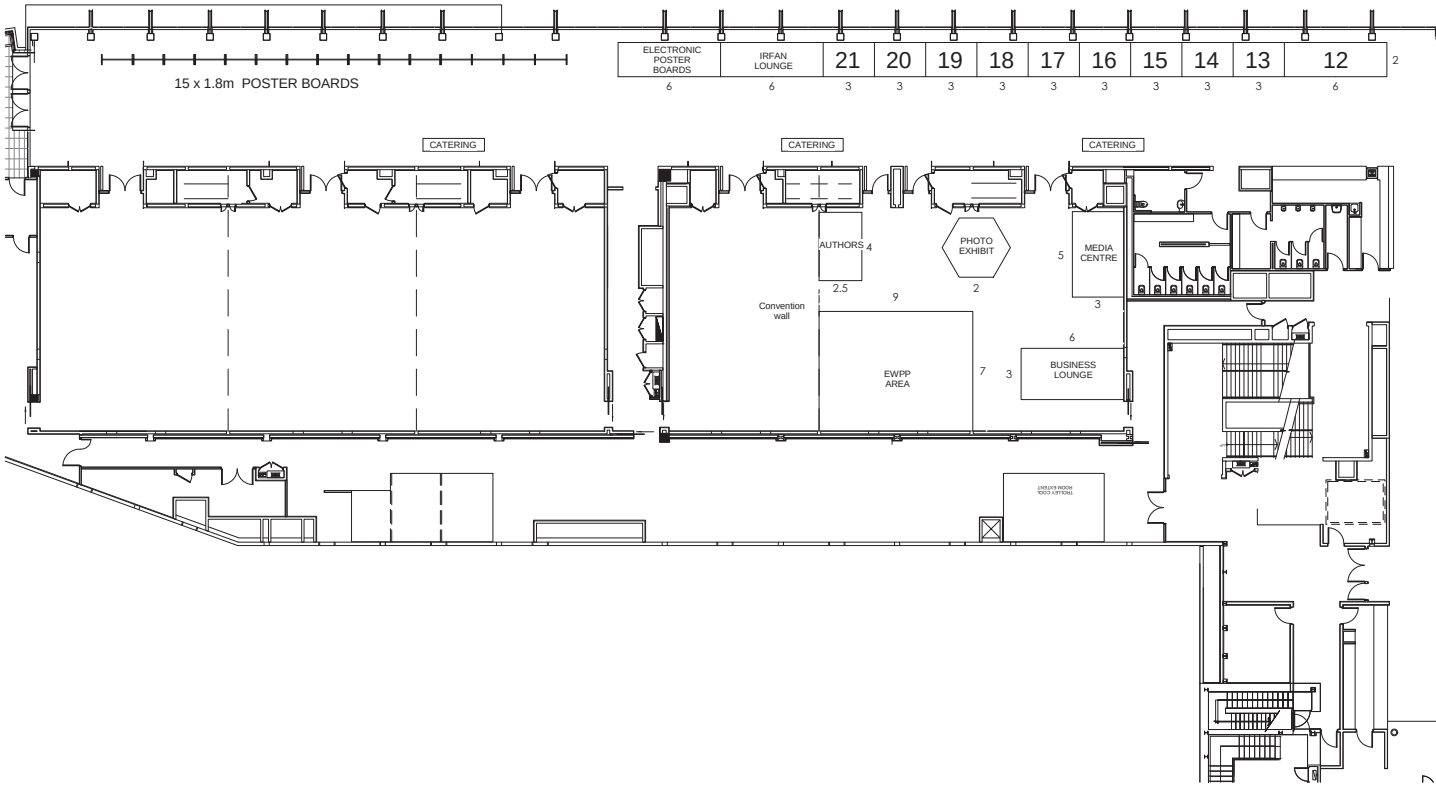
Department of Foreign Affairs and Trade

DFAT provides foreign, trade and development policy advice to the government. We work with other government agencies to ensure that Australia's pursuit of its global, regional and bilateral interests is coordinated effectively. For more information, phone +61 2 6261 1111 or visit **www.dfat.gov.au/Pages/contact-us.aspx**

Brisbane Catchments Network

Brisbane Catchments Network is an independent not-for-profit organisation that represents the 11 community creek catchment groups across Brisbane. For more info, call 044 806 9226 or visit **www.brisbanecatchments.net.au**

RIVER*SYMPOSIUM* FLOOR PLAN



Brisbane City Council

Brisbane City Council manages Brisbane's waterways and natural environment to ensure it is a great place to live, work and invest. For more information, phone 07 3403 8888 or visit **www.brisbane.qld.gov.au**

Dedicated to a better Brisbane

Bureau of Meteorology

The Improving Water Information Programme is led by the Bureau of Meteorology, and supported by water agencies around Australia. The programme aims to ensure Australia is better equipped to manage water scarcity, water quality and flood risk through ready access to high-quality water information at the national level. For more information, phone 03 9669 4000 or visit **www.bom.gov.au/water**

Australian Government
Bureau of Meteorology

Burdekin Water Futures

Burdekin Water Futures facilitates a more strategic approach to water management in the Burdekin River region, by bringing water resource management bodies together so there is greater coordination between them. For more info, phone 07 4783 9812 or email Dianne.schultz@burdekin.qld.gov.au

Floodplain Management Australia

Floodplain Management Australia (FMA) is committed to promoting wise development within floodplain areas, and helping reduce the risks of flooding to life and property. To find out more, visit www.**floods.org.au**

Griffith University

The Australian Rivers Institute is Australia's largest university aquatic ecosystem research group with globally recognised expertise in river, catchment and coastal ecosystems and the interaction with these systems in society. For further information visit our website **www.griffith.edu.au/environment-planning-architecture/australian-rivers-institute**

Australian Rivers Institute

International RiverFoundation

The International RiverFoundation (IRF) is an independent, apolitical, not-for-profit organisation committed to protecting, restoring and managing rivers sustainably. IRF runs programs which work collaboratively with communities, governments, businesses, NGOs and scientists to facilitate, fund and promote the sustainable management of river basins. For more information, call 07 3026 0823 or visit **www.riverfoundation.org.au**

Jacob's Creek

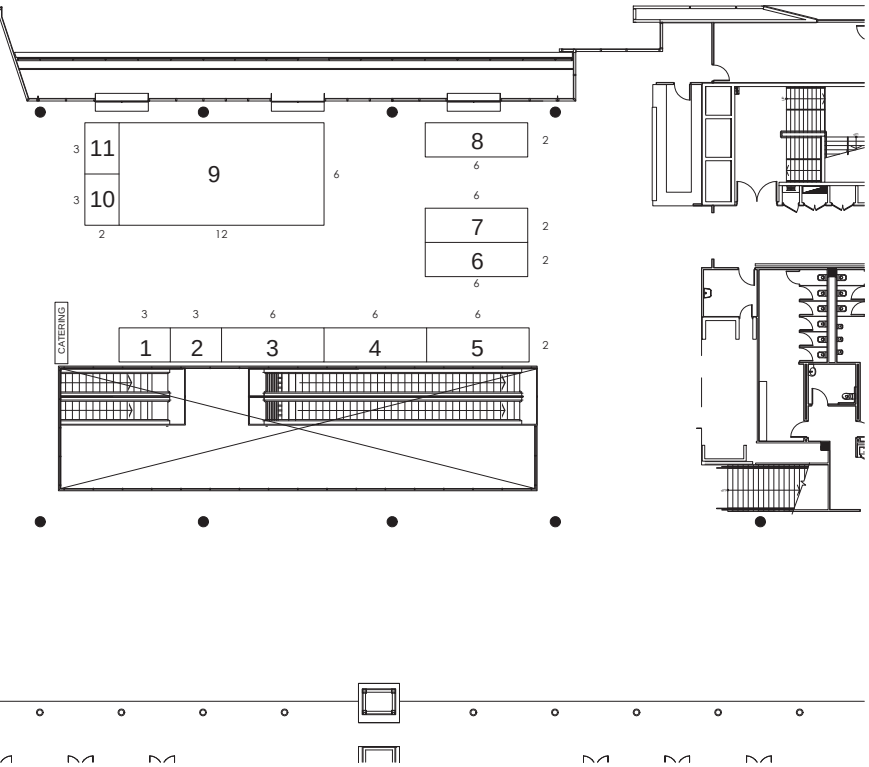
Pernod Ricard Winemakers has produced a co-branded wine with the International RiverFoundation. The 2014 vintage of the Jacob's Creek Earth Vine Grape Shiraz Cabernet which focuses on organic viticulture & growth is the perfect match with the IRF's sustainability position. An essential component of grape growing and winemaking, water is a precious and often precarious resource. We have invested heavily in infrastructure and technology to optimise water use at every stage and worked hard to preserve and regenerate the waterways on and around our landholdings, including Jacob's Creek in the Barossa. For more information, call 08 8521 3000 or visit **www.jacobscreek.com**

Murray–Darling Basin Authority

The Murray–Darling Basin Authority (MDBA) is an independent expertise-based Australian Government agency. Our role is to support the sustainable and integrated management of water resources of the Murray-Darling Basin in a way that best meets the social, economic and environmental needs of the Basin and its communities. For further information, please contact MDBA on 1800 230 067, email engagement@mdba.gov.au or visit our website **www.mdba.gov.au**

National Environment Research Program, Northern Australia Hub

The Northern Australia Hub of the Australian Government's National Environmental Research Program has been a four-year initiative to improve our capacity to understand, manage and conserve Northern Australia's unique biodiversity and ecosystems through world-class research. For more information, phone 08 8946 6761 or visit **www.nerpnorthern.edu.au**



Preparation Lounge

Presentation Lounge located on the Concord Level provides a centralised service for the easy transfer of presentation materials. In the Speakers' Preparation Lounge an experienced audio-visual technician will be available to make small changes to your presentation. If you were unable to send your presentation to LOUD events prior to the conference you will need to arrive **either the day prior or two hours prior** to your speaking session to allow the technician to upload and check your presentation in the speakers' lounge.

SPECIAL SESSIONS

INTERNATIONAL FORUMS

5:00pm, SUN 20 SEP

WOMEN IN RIVERS

Museum of Brisbane

Tickets: AUD $65
Dress: Smart casual

Building on the success of 2014's sell-out Women in Rivers breakfast, the Women in Rivers special event is on again for 2015. The Murray–Darling Basin Authority are demonstrating their support for this initiative as the 2015 Women in Rivers sponsor.

Based on feedback drawn from a survey of last year's attendees, the 2015 session has been designed to allow more time for networking, informal discussion and including different perspectives. This extended format will be facilitated through an evening, cocktail style event. The evening will also feature a Q&A session where attendees can interact directly with a panel of river leaders drawn from across different sectors and different countries. This event is not limited to a female only audience, but builds on discussions around the role of women in management, decision making and gender in water related issues around the world.

This exciting event will be held in the beautiful Museum of Brisbane at the top of City Hall. The Museum is also currently hosting the exhibition 'The River', providing a relevant and relaxed space for attendees to come together, meet new people, be inspired and discuss ideas away from the traditional structure of a conference. The event is open to anyone who wants to attend, not just those also attending the River*symposium*.

The Women in Rivers event was introduced to River*symposium* for the first time in 2014, providing a forum for delegates to hear different perspectives on the significance of rivers to gender, culture and more. Through the feedback process we are growing and shaping the event based on what people have said they want and need. This will continue into the future as it continues to grow and evolve.

Chair: Dr Deborah Nias (CEO Murray-Darling Wetlands Working Group Ltd)

Speakers:
Dr Rhondda Dickson (Chief Executive, Murray-Darling Basin Authority); Deb Alexander (Curator, Women of the River Country exhibition); Michelle Ramsay (Member, Murray-Darling Basin Authority Northern Basin Advisory Committee; Cynthia Barnett (Journalist & Author)

Australian Government | MURRAY–DARLING BASIN AUTHORITY | INTERNATIONAL RiverFoundation

11:00am – 4.00pm, MON 21 SEP

LARGE RIVER BASINS

Plaza Auditorium

This session is sponsored by the Murray-Darling Basin Authority. The forum will be split into two sessions, looking at basin management at a local scale before moving on to an international scale.

Session 1 – Essential Ingredients for Basin Management

This session will feature three keynote speakers presenting on:

History of Australian water reform: how did we get to the Basin Plan? – Rhondda Dickson, Chief Executive, Murray-Darling Basin Authority

The Murray-Darling Basin perspective: essential ingredients in relation to the Basin Plan and perspectives on the Colorado – Tony McLeod, acting Executive Director, Murray-Darling Basin Authority

The local perspective on the Northern Basin – Rory Treweeke, Chair, Basin Community Committee

Session 2 – International Perspectives

In the second session, international speakers will reflect on the presentations from the first session on the applicability to their basin. Speakers will include Dr Truong Hong Tien, Director of the Technical Support Division, Mekong River Commission Secretariat and Eduardo Antonio Ríos-Villamizar, researcher at the National Institute of Amazonian Research.

These reflections will be followed by a 30-minute audience interactive Q&A.

Australian Government | MURRAY–DARLING BASIN AUTHORITY

4:30pm – 5.00pm, MON 21 SEP

THE AUSTRALIAN WATER PARTNERSHIP: STRATEGIC DIRECTIONS AND OUTCOMES

P8

Living on a dry continent, over the past three decades Australia has developed many innovative policy, governance, and management approaches to deal with water scarcity. Much of the Indo-Pacific region, given population growth and consequent food demand, industrialisation, urbanisation and climate change, is also grappling with problems of water scarcity and quality. The Australian Water Partnership (AWP) is an exciting initiative (funded by the Australian Department of Foreign Affairs and Trade) aimed at helping the Australian water sector, including academia and the private sector, to strategically engage in the Indo-Pacific region. The AWP's main objective is to share our water reform experiences in partnership with countries and institutions in the region and to assist with development and implementation of their own solutions to critical water issues. This will mean determining what aspects of the Australian water reform process will work in different socio-political environments and how our approaches and capabilities might be tailored to suit local conditions. The AWP will focus on the fostering of long term relationships and knowledge sharing, and the formation of a strong 'peer to peer' network, at individual, organisational and sectoral levels.

This session will include short presentations on the key water issues in the Indo-Pacific, regional views in terms of demand for Australian knowledge and partnerships, defining the strategic focus of the Australian Water Partnership, and how the AWP will work in practice. These will be followed by a question and answer session.

Presenters:
Dr Colin Chartres (Australian Water Partnership) Professor Jane Doolan (Australian Water Partnership); Mr Russell Rollason (Australian Government Department of Foreign Affairs and Trade / Australian Water Partnership)

AUSTRALIAN WATER PARTNERSHIP
– HELPING TO MANAGE WATER SCARCITY IN THE INDO-PACIFIC –

7:00am, TUE 22 SEP

BREAKFAST EVENT: WATERWAYS STEWARDSHIP FOR HEALTHY COMMUNITIES

P11, Brisbane Conference & Exhibition Centre

Venue: TBC
Tickets: AUD $35
Dress: Smart casual / Casual business

A key dimension of water resource management is considering the health and well-being of communities living near riparian environments. Stewardship of a water catchment requires consideration of the water needs, uses and waste outputs of these communities for long term sustainability of both the water resource and local population.

This breakfast offers a stimulating discussion that brings together both catchment managers as well as community-focused water sanitation and hygiene proponents to consider the 'whole picture' of a waterway that supports human and ecological communities. Integrated into this conversation will be consideration of the United Nations' Sustainable Development Goal, to be introduced this year, to 'ensure availability and sustainable management of water and sanitation for all'.

Facilitated by Associate Professor Eva Abal, Program Director of the Sustainable Water Program at UQ's Global Change Institute, the panel discussion will feature practitioners, researchers and managers from both Australia and the Asia Pacific to detail the combined needs in this human-ecology intersection, and the opportunities to respond. An active discussion with audience members will be facilitated at each table over a buffet breakfast. To encourage full participation to all interested IRS participants, The University of Queensland has sponsored this event to minimise the cost to participants.

10:30am – 4:00pm, TUE 22 SEP

WETLAND FUTURES – ECONOMIES AND SOCIAL JUSTICE

P8

This special session will consider how government, science and communities can contribute to economies and social justice through wetland restoration.

Presentations will focus on market based and institutional instruments, on-the-ground outcomes, health and well-being and long-term strategic thinking and planning for wetlands.

Wetlands play an important role in the global economic development and the well-being of communities that live within these areas. Economic value of wetlands in both developed and developing countries is increasingly being recognised and has been shown through many global and local assessments.

The Secretary General of the Ramsar Convention on Wetlands recently stated "Water sustains life and wetlands are the source of water and of sustainable development, but by 2050 global water demand is projected to increase by 55%". Despite its importance, many wetlands are still being degraded and converted to other land use. It is estimated that between 64-71% of wetland areas have been lost in the 20th century.

As an important source of water and to meet the growing demands for water, we need to restore wetlands to ensure that water is available in the right quantity and quality for our future needs. At the same time, we need to ensure that the benefits derived from healthy wetlands will flow to the people most connected to them, which includes supporting their well-being and enabling equitable outcomes.

Presenters:
Max Finlayson (ILWS, Charles Sturt University); Professor Pierre Horwitz (School of Natural Sciences, Edith Cowan University); Dr Siwan Lovett (Director, Australian River Restoration Centre); Professor Peter Gell (Professorial Research Fellow, Federation University Australia); Geoff Lipsett-Moore (The Nature Conservancy, Australia); Adrian Wells (Murray-Darling Wetlands Working Group / Petaurus); Kathy Ridge (Murray-Darling Wetlands Working Group); Cassie Price (WetlandCare Australia); Tyler Farrow, (Water Witness International); Alastair Driver (Environment Agency)

10:30am – 12:30pm , TUE 22 SEP

SUSTAINABLE WATER FUTURE PROGRAM

P10

This session will launch the Sustainable Water Future Program, transitioning the great work conducted by the Global Water System Project (GWSP) over the last 10 years.

Following the presentations, there will be a panel discussion where the following key questions will be discussed:

1. What kind of knowledge should theories and approaches of global water research produce in the next decade to support the economy and society and move on a trajectory which ensures resource-efficiency, sustainability and well-being?
2. How can research results gained from a global perspective be transferred to regional and local levels for practical solutions?
3. How can we better conceptualise and explain the interaction of functioning of global water system and socio-ecological systems to assess the success of Sustainable Development Goals?
4. What changes in water governance are required at different (global, regional, local) levels to support sustainable development?

Moderated by Professor András Szöllösi-Nagy, former rector of UNESCO-IHE, this session will provide the first glimpses into the Sustainable Water Future Program while focussing on the knowledge gaps and global water issues that may be relevant in the next decade for this new global water program. There will be opportunity for the audience to question our world-leading experts through a lively panel discussion.

Presenters:
Dr Anik Bhaduri (Executive Officer, GWSP); Professor Claudia Pahl-Wostl (Co-chair, GWSP); Professor Charles Vörösmarty (Co-chair, GWSP); Professor Stuart Bunn, (Griffith University); Dr Mark Stafford Smith (Chair, Future Earth Scientific Committee)

11:30am – 12:30pm, TUE 22 SEP

BEST PRACTICE FOR ENGAGING INDIGENOUS PEOPLE IN WATER MANAGEMENT AND PLANNING: THE AWI EXPERIENCE

Plaza Auditorium

This special session will celebrate the connection Indigenous people have with water. This connection with water has been the case for thousands of generations, primarily to ensure healthy waterways and their survival in a dry landscape. Indigenous people place protecting and managing water landscapes as a high priority as it is a cultural obligation to do so.

The New South Wales (NSW) Department of Primary Industries' (DPI) Aboriginal Water Initiative (AWI) is currently the only Aboriginal water unit in Australia. This session will further discuss how water dependent cultural values are identified and protected in a modern day water planning and management sense and look forward on how to address the challenges identified. The AWI is challenged by having to walk in two worlds between government and culture to engage with many complex and diverse NSW Aboriginal communities from different landscapes—salt water, the mountains, desert, floodplains and river country (muddy water)—as well as negotiating with water planners and Government. NSW DPI Water staff work closely in identifying opportunities to collaborate in progressing the reforming of water legislation and also water quality management with the AWI and this must also be celebrated.

The session will consist of a series of activities, presentations, visual experiences and audience participation.

Presenters:
Bradley Moggridge (Moderator NSW DPI Water AWI); Claire Evans (NSW DPI Water – Water Quality); Stephen Allen (NSW DPI Water – Water Planner); Marcus Leslie (NSW DPI Water AWI); Dr Erica Williams (NZ), Erina Watene-Rawiri (NZ) – New Zealand Maori Water Specialists

11:30am – 12:20pm, TUE 22 SEP

RESTORING BY SHARING – THE IRF TWINNING WORKSHOP

P9

In a world where there is increasing demand on water supply, and over 780 million people still do not have access to clean water, it is important that we learn from each other to sustainably manage this vital resource. International RiverFoundation's unique Twinning program has an extraordinary impact on people and communities around the world. By pairing river restoration experts with those who will benefit from knowledge sharing and peer-to-peer learning, Twinning overcomes geographic boundaries to guide others towards independence in water management and, in doing so, delivers life-changing results for communities around the world. IRF's program is focused on sharing best practice, where River*prize* winners and finalists form a partnership with another organisation, usually in a developing country, and help them to achieve their river restoration goals. There is no more effective way to build capacity, transfer skills and support restoration efforts than through sharing expertise. In this session a few short presentations of twinning projects will summarise successes and challenges, including solutions to those that have been overcome, as well as summaries of those not yet resolved. The presentations will include US-Russian and Israeli-Burkina Faso twinnings. An open facilitated discussion will lead to a summary and conclusions.

Panel members:
Alastair Driver (Environment Agency UK; IRF Ambassador and River*prize* Alumni); Amos Brandeis (Architect, River Restoration Planner and Manager, Israel; IRF Ambassador and River*prize* Alumni); Johnny Sundstrom (Siuslaw Institute, USA; IRF Ambassador and River*prize* Alumni)

2:00pm – 3:30pm, TUE 22 SEP

RIVER RESTORATION IN ASIA

P9

This session will combine presentations from a range of river experts in Asia. Presentation topics include collaboration, science, infrastructure, development and extreme weather events. There will be particular emphasis on the practical aspects of river restoration practices, effectiveness, capacity, policy and research in Asia region.

Collaborative nature restoration of river towards community development: Cases in Japan

Speakers: Akira Wada (Researcher / CTI Engineering Co., LTD, Japan), Katsuhiro Goto (Researcher / Japan Riverfront Research Center)

Photocatalytic evaluation of buoyant titanium dioxide (TiO2) – embedded expanded polypropylene (EPP) balls to inhibit the algal growth in natural river

Speakers: Jin ChulJoo (Professor, Hanbat National University), Saeromi Lee (Researcher, Korea Institute of Civil Engineering and Building Technology)

River Bed and Water Stage Change Along The Submerged Weir Construction and Tides Effect in Han

Speakers: Suk-Hwan Jang (Professor, Civil Engineering, Daejin University), Jihwan Oh (PhD Candidate, Civil Engineering, Daejin University), Suhee Han (PhD Candidate, Civil Engineering, Daejin University), Jongmin Oh (Professor, Kyunghee University), Dalsik Woo (President, Institute of KG Research)

Memory of lost river and canal network in Tokyo

Speakers: Nobuyuki Tsuchiya (Director, Japan Riverfront Research Center), Katsuhiro Goto (Researcher / Japan Riverfront Research Center)

The role of typhoons as drought busters in South Korea

Speakers: Hyun-Han Kwon (Professor, Chonbuk National University), Ji-Young Yoo (Research Professor, Chonbuk National University)

4:30pm – 5:30pm, TUE 22 SEP

SECONDS TO SEASONS – PREDICTING THE MANY FACES OF WATER MOVEMENT IN THE BRISBANE RIVER BASIN

Plaza Auditorium

The use of decision support tools for river basin management has grown over the last decade however the use of these tools is highly dependent on the questions needing to be answered, temporal and spatial scales of data sources, and the capability of the tools themselves. As part of ongoing modelling efforts in the Brisbane River basin, the use of decision support tools has focussed around the FACES of water, where FACES is an acronym for Flooding, Aquatic processes, Catchments, Estuaries and Sediment. The understanding of these issues has required the application of a number of purposely constructed numerical models using both in-house developed models and proprietary software.

In this session, we discuss the way these tools have been developed and applied in the Brisbane River basin with a particular focus on how to integrate the models in a way that delivers a comprehensive assessment of the FACES of water. We will also show how these tools can be adapted to river basin management across a range of applications, from flood management, green infrastructure investment, future town planning and ecosystem health assessment. In applying the models across these applications, it is necessary to examine the relevant issues across a range of time and space scales, from short duration single flood events to long-term, multi-annual assessments.

The use of these tools is also heavily dependent on the formulation of the key questions that they need to answer and we will discuss the way that models such as the ones developed for the Brisbane River basin have been procured, and the requirements for having a comprehensive modelling suite able to provide robust, accurate and practical answers. This will also show the benefits of having a long-term approach to model development and application through on-going model custodianship, and capacity building of the modelling fraternity in the region.

Presenters:
Dr Tony Weber, Dr Michael Barry, Dr Ian Teakle

2:30pm – 4:00pm, TUE 22 SEP

PROTECTING THE GREAT BARRIER REEF THROUGH ITS RIVERS

P10

The Australian and Queensland governments have released a new 35-year plan to secure the health and resilience of the Great Barrier Reef for generations to come. This session will outline the latest approaches to managing the Great Barrier Reef, including the new Reef 2050 Long-Term Sustainability Plan which provides an overarching framework for managing the World Heritage Area to the year 2050.

The Plan identifies the Reef Water Quality Protection Plan as the foundation of its Water Quality theme. This session will explore some of the exciting projects underway to improve Reef water quality and what progress has been made to date in reducing runoff to the Reef.

Presenters:
Dr Peter Mumby, Elisa Nichols, Rachel Parry, Dr Eva Abal, Paul Birch, Matt Kealley, Sean Hoobin Nyssa Henry, Claire Andersen

10:30am – 11:30pm, WED 23 SEP

WASTE TO RESOURCE AS A WAY OF IMPROVING THE RIVER ENVIRONMENT

P9

Join Queensland Urban Utilities on a journey into the future as we look at our progress and plans for turning the waste from sewage treatment into energy. We're changing the way we take care of business and moving our sewage treatment plants from treat and dispose systems to plants where we recover the next generation of resources from our sewage stream.

Come and find out how we're doing this and the positive collaboration, environmental and financial outcomes of our approach. In particular we'll be focusing on the benefits to Moreton Bay and our local catchments. There will also be an opportunity to share ideas and learnings.

Presenters:
Lavanya Susarla, Colin Chapman, Robert Perrons (Queensland Urban Utilities)

10:30am – 12:30pm, WED 23 SEP

WATERWAY HEALTH REPORT CARDS

P8

Report cards can communicate complex information in a way that is accessible to broad audiences. While report cards originally were intended as tools for communicating ecosystem health status, they have evolved in powerful ways to also include assessments of social and economic considerations as well as assessments of the forces that are affecting the current status, and activities designed to improve condition. These advances provide decision makers with powerful tools to track progress toward achieving multiple objectives. These advances also provide a platform for engaging multiple stakeholders in developing a common vision and shared objectives for progress. We will explore how to achieve these benefits through examination of several case studies, including the Great Barrier Reef, South-East Queensland waterways, the Mississippi River, Coastal India, and previous winners of the Thiess International River*prize*.

Presenters:
James Udy (Healthy Waterways); Nyssa Henry (Office of the Great Barrier Reef, EHP); Paul Birch (Fitzroy Basin Association, Gladstone Healthy Harbour Partnership); Nathan Johnston (Fitzroy Basin Association, Fitzroy Partnership for River Health); Kim Delaney (Reef Catchments, McKay-Whitsunday Healthy Rivers to Reef); Bill Dennison, Heath Kelsey (University of Maryland)

10:30am – 5:10pm, WED 23 SEP

ASIA-PACIFIC WATER STEWARDSHIP FORUM

P11

The first Asia-Pacific Water Stewardship Forum will be held in conjunction with this year's International River*symposium*. The Forum will bring together practitioners from across the region to update their knowledge and advance their understanding of water stewardship as well as share experiences with the application of the Alliance for Water Stewardship (AWS) International Water Stewardship Standard.

The full day program will be split into four sessions, covering system-wide issues such as developments with verification and accreditation, assessing water stewardship impacts and building the value proposition for good water stewardship. Sets of case studies will be examined on the application of water stewardship by processing industries and in agricultural situations. The Forum will conclude with a special session looking at priorities for further development of water stewardship in 2016.

This will be the first time water stewardship practitioners have been brought together in a specific forum such as this since the launch of the process to develop the International Water Stewardship Standard in 2010. It promises to be an exciting day examining this innovative approach to engaging major water users in addressing catchment challenges.

Presenters:
Dr Jamie Pittock (Chair, Water Stewardship Australia); Michael Spencer (Alliance for Water Stewardship); Dr Zhu Donglin (Asst. Chief Engineer, Jiangsu Civil Engineering Consulting); Declan Hearne (Project Officer, International WaterCentre); Michele Akeroyd (Goyder Institute); Chris Norman (Chief Executive Officer, Goulburn Broken Catchment Management Authority); Tyler Farrow (International Program Officer, Water Witness, UK/Africa); Elizabeth Soal (Policy Manager, Waitaki Irrigation Collective, NZ); Lance Lloyd (Water Stewardship Program Officer, Westernport Biosphere); Megan McLeod (Project Officer, Water Stewardship Australia); Caren Martin (President, South Australian Murray Irrigators); Michael Spencer (Chair, Alliance for Water Stewardship); Hudson Cameron (AWTP Manager, Inghams Enterprises Pty Limited); Tang Dengyong (Associate Professor, Nanjing University of Information Science and Technology); Xin Hao (Green Zhejiang, China)

2.00pm – 3.00pm, WED 23 SEP

PROMOTING LEADERSHIP – MULTIPLE PATHS LEADING IN ONE DIRECTION

Plaza Auditorium

The Peter Cullen Trust brings together stakeholders from across sectors of the water industry, and from across Australia.

The Trust's mission—'Bridging Science, People and the Environment'—reflects the philosophy that respectful, informed and meaningful collaboration is the key to responsible and sustainable water management, now and in the future.

The core purpose of the Trust is to carry on the legacy of Prof. Peter Cullen AO through the Science to Policy Leadership Program. This innovative and forward-thinking program is instrumental in identifying and supporting mid-career 'rising stars' within Australia's water sector.

The Leadership Program challenges participants to stretch themselves personally and professionally, thereby enabling them to make a difference in their chosen water-related field.

Now in its sixth successful year, the Leadership Program has inspired the formation of the Peter Cullen Trust National Fellows Network (PCTNFN). The network brings together passionate, intelligent and motivated people dedicated to developing their leadership skills with a view to improve water and catchment management in Australia.

Three Fellows from the PCTNFN will discuss their current projects and case studies as well as the role the Leadership Program has played in their approach to work. The Fellows will demonstrate that with the right support and opportunities, people can achieve greatness by building upon the strengths of their networks and inspiring new proactive ideas.

Presenters:
Sandy Hinson (CEO, Peter Cullen Trust); Emma Carmody (Policy and Law Reform Solicitor, EDO NSW); Tanzi Smith (Mary River Catchment Coordinating Committee); Kaye Cavanagh (Principal Officer (Natural Resources), Ipswich City Council Qld)

AWARDS

PROGRAM HIGHLIGHT

Thiess International River*prize* Finalists
Session: 1400–1540, Mon 21 Sep

THIESS INTERNATIONAL RIVER*PRIZE* FINALISTS

Lake Eyre Basin, Australia

The Lake Eyre Basin is one of the world's great free-flowing river basins, a globally iconic desert river basin. Ever-changing rivers flow freely across a sixth of Australia, incorporating three states and one territory, to the impressive Kati Thanda-Lake Eyre. Its diverse human communities and incredible cultural and natural values depend on this 'boom-bust' ecology of its desert rivers.

In the mid-1990s, water resource development threatened, galvanising communities to protect its magnificent rivers. A national groundswell of community stakeholder concern culminated in the Lake Eyre Basin Intergovernmental Agreement, focusing state, territory and the Australian governments on protecting its free-flowing rivers. This framework provided the institutional governance for an already united community. Ministers focussed their agencies and formalised a Community Advisory Committee and Scientific Advisory Panel. These integrated with community-driven catchment groups and regional natural resource management organisations. The resulting enduring partnership built a shared vision and protected the rivers over an extensive area of the continent, a river basin of global significance.

The partnership protected the Basin using its cohesive network of community, river people, scientists, industry and government. Threats known to degrade rivers around the world (e.g. water resource development, mining and pollution) were resisted by the engaged Lake Eyre Basin community, supported by strong scientific investment in understanding the system and its risks, and recently focused on transformative adaptive management. This 20 year partnership avoided costly expenditures incurred in restoration of many rivers around the world, but allowed economic sustainable growth, particularly in tourism and organic beef production.

River Mur, Austria

The River Mur is a transboundary stream in Central Europe, flowing from Austria to Slovenia and along the border between Hungary and Croatia into the River Drava. Through the systematic river regulation at the end of the 19th century and severe industrial effluents until the 1970s the River Mur was altered significantly. Straightened and massively polluted, the River Mur was classified as one of Europe's dirtiest rivers.

In collaboration with the Styrian Government (Department of Water Management, Resources and Sustainability) and the Slovenian Ministry of the Environment, Spatial Planning and Energy, freiland Environmental Consulting Civil Engineers Ltd. has been working on many programs to restore the river system. In addition to improving water quality, activities have focused on restoring natural river structures and habitats, natural water retention measures, solutions for urban river integration and the enhancement of public awareness.

Due to these efforts in the last 30 years, the River Mur is now considered to be one of Austria´s most ecologically valuable rivers, with long stretches now part of the Natura 2000-European nature protection network. Outstanding developments include the natural reproduction of the highly endangered Danube salmon in the Upper Mur and the species-richness in Austria's second largest alluvial forest along the border to Slovenia.

Today, the biggest threat to the river's ecology is hydropower development. To safeguard ecosystem enhancements, a management plan was developed in 2014 which includes designations for the future use and protection of the river.

Jordan River, Jordan, Palestine & Israel

In 2004, EcoPeace launched its Jordan River Rehabilitation Project to address the major challenges facing the Lower Jordan River Valley: diversion of 96% of its freshwater; the discharge of untreated sewage and agricultural run-off into the river; and the lack of cooperative mechanisms promoting sustainable development for residents of the valley to benefit and prosper from its natural and cultural heritage.

Effective management of the water basins shared between Israelis, Palestinians and Jordanians is challenged not only by natural water scarcity in the region, but also of historical relations of political animosity, armed conflict and occupation. EcoPeace Middle East is a Palestinian, Israeli, and Jordanian environmental peacebuilding organisation working to further sustainable development, environmental security and peace in this region.

EcoPeace has implemented an innovative regional approach to rehabilitate the Lower Jordan River system through widespread advocacy efforts, the building of diverse constituencies in support of the River, and the advancement of high level political will in support of policy decisions to water transfers to the River.

EcoPeace has led more than a decade of research, advocacy, engagement of local stakeholders and developed successful mechanisms for cross border cooperation, resulting in the creation of a Regional NGO Masterplan for rehabilitation of the Jordan River Valley. EcoPeace has helped create the necessary political will to advance rehabilitation efforts among Ministries of Environmental, Water, and drainage authorities in the region, who have resultantly advanced the construction of three wastewater treatment plants, ensured the release of freshwater back into the river, and implemented concrete ecological restoration projects along the river's banks.

Awarded annually by the International RiverFoundation, River*prize* 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.

More than 30 River*prizes* 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 HIGHLIGHT

Australian River*prize* Finalists
Session: 1300, Mon 21 Sep

AUSTRALIAN RIVER*PRIZE* FINALISTS

Macquarie River, NSW

The Macquarie RiverSmart initiative in the central west of NSW was launched in 2008. It operates along close to 500 river-kilometres of the Macquarie River, from the base of Burrendong Dam to the (partly) Ramsar-listed Macquarie Marshes. It is designed to improve river sustainability through rehabilitation works, education programs and activities designed to empower community stakeholders.

Detailed mapping of the underwater and riparian habitats helps guide the on-ground works. Through the NatureLinks project weed, erosion and feral animal control has taken place along more than 110 riparian-kilometres by private landholders.

On-going community consultations shape the broad range of education and empowerment activities. Among these are outdoor and floating classrooms for schools and our catch and release fishing competition, carp muster and river cleanup attended by up to 500 participants each year. In early June a Window on the Wetlands Centre in Warren was opened, as a gateway to the Macquarie Marshes and an education, training and community space.

The unique Macquarie River Trails initiative now sees close to 150 sites along the river identified for camping, fishing, bird watching, heritage, art and other purposes. This is helping to stimulate a stronger stewardship ethic among locals and visitors.

Murray River, SA

In 2008, the Ngarrindjeri Regional Authority (NRA) established a Caring for Country Program named the Ngarrindjeri Yarluwar-Ruwe Program (NYR) to implement and further develop the visions of the Yarluwar-Ruwe Plan. This program articulates a vision for caring for this country, emphasising that the river, lakes, wetlands/nurseries, Coorong estuary and sea have sustained the Ngarrindjeri culturally and economically for tens of thousands of years.

The work of the NYR is ground-breaking and is based on cultural values and principles and supported by national and international research partnerships. Through this work, the Ngarrindjeri have a demonstrated long-term engagement in integrated river basin management in the South Australian Murray-Darling Basin region. The engagement is characterised and underpinned by the Ngarrindjeri's Kungun Ngarrindjeri Yunnan Agreement (KNYA), which established a new and equitable relationship between the Ngarrindjeri and the South Australian (SA) Government.

Historical barriers to Aboriginal involvement in integrated river basin management have been effectively overcome by this innovative work. Ngarrindjeri voices are now being heard, their interests are being recognised, and their contribution and knowledge is being valued. The history, values and objectives of the Ngarrindjeri are being incorporated into river and wetland management planning and monitoring programs. The program has also brokered opportunities to develop Aboriginal-led wetland management plans for land owned by the Ngarrindjeri. An ongoing partnerships with the Office of Indigenous Strategy and Engagement, Flinders University and support from the Commonwealth Murray Futures Program have been important to the program's success. Importantly, this work would have not been possible without the close working relationship with the SA Department of Environment, Water and Natural Resources (DEWNR), and that partnership would not have been possible without the space created by the KNYA.

Lake Mealup, WA

Lake Mealup, part of the Ramsar listed Peel-Yalgorup System, is a large freshwater wetland on the eastern side of the Harvey Estuary in south-western Australia. The Lake Mealup Recovery Program (LMRP) restored Lake Mealup to a healthy wetland, providing habitat for resident and migratory waterbirds. Without intervention the lake was becoming a bulrush-choked, acid scald.

Detailed studies highlighted the causes of Lake Mealup's deterioration. A solution using diverted surface drainage water was designed to reinstate more natural hydrological conditions. While the lake was dry, the bulrush was mechanically crushed.

In June 2012, drainage water diversion using a purpose-built adjustable-height weir commenced. Biological decay of bulrush residue also helped neutralise the acidity in the lake. Within two months water quality improved dramatically. The pH increased from below 3 to 7 and has stabilised.

Bulrush was completely eliminated from the lake and native plant species have naturally re-colonised the fringes.

Waterbird use of the lake substantially increased. Typically less than 100 waterbirds were present. Now, up to 2,000 waterbirds are regularly observed. Since water diversion began 43 species, including seven species of trans-equatorial migratory wading birds have been observed.

The LMRP has demonstrated the effectiveness of adaptive management. Its success is a result of a diverse range of stakeholders working collaboratively towards the common goal of restoring Lake Mealup to a healthy, productive wetland.

MORGAN FOUNDATION NEW ZEALAND RIVER*PRIZE* FINALISTS

Aorere River, Tasman

The Aorere River Initiative is a farmer-led catchment project in the Tasman District of New Zealand's South Island. With the catchment home to over 13,000 cows and 35 dairy farms, the Aorere River has suffered from serious bacterial contamination. This contamination has in turn had a negative impact on aquaculture including the mussel and cockle farms in the Ruataniwha estuary.

New Zealand Landcare Trust (NZLT) played a lead role in bringing different stakeholders together and supporting farmers in the region to set up the Aorere Catchment Group. NZLT worked with farmers to develop on-farm environmental plans, provide project coordination and act as brokers, facilitators and supporters to the farming community.

A major achievement of the Aorere River Initiative was the willingness of dairy farmers to tackle issues caused by their practices—with 24 farms developing farm plans and over $1.6 million invested in on-farm best management practices. The Aorere River Initiative not only improved the ecological health of the river and coastal environment but also created community cohesion, assisting dairy and marine farmers to coexist and maintain their livelihoods sustainably. The initiative has also transferred knowledge to others by Twinning with the nearby Rai catchment and developing a toolkit to apply in other catchments across New Zealand.

Lake Taupō, Waikato

Lake Taupō is the largest lake in New Zealand, valued highly for its crystal blue water and dramatic vistas. These features support an international tourist mecca, a world class fishery and a locally preferred recreation and retirement centre. The lake is the cultural and spiritual heart of the local Indigenous people, Ngāti Tūwharetoa.

Lake Taupō's excellent water quality derives from extremely low levels of plant nutrients and phytoplankton. The lake's sensitivity to nutrient inflows and soil erosion was recognised early in the development of the lake catchment when Indigenous vegetation was converted to pasture and urban growth around the lake. During the 1970s and 1980s, extensive catchment control schemes and lake shore reserves were established to protect the lake. However, increasing nutrient flows from rural intensification and urban development resulted in declining water quality which was becoming apparent to the local community.

In early 2000, Waikato Regional Council established a project to protect the lake in response to community concerns. At its heart it was a partnership between Government, Ngāti Tūwharetoa, Taupō District Council and Waikato Regional Council, supported by extensive, genuine engagement with rural land owners. The Protecting Lake Taupō Project has successfully generated political support, engaged numerous sector interests and established policies to protect the lake and retain a vibrant rural community, whilst incorporating the role of Ngāti Tūwharetoa, providing solutions and opportunities for rural land owners and developing a public fund to support on-farm change. The Lake Taupō project is the first in a range of unique management responses brokered to sustainably manage New Zealand's most used and regulated waterbody—the Waikato River—from its source at Lake Taupō to where it joins the Tasman Sea.

Manawatū River, Manawatū

In early 2010 the Manawatū River hit national headlines as 'among the worst in the Western World'. It has since become a beacon for all the challenges facing freshwater quality in New Zealand and the focus of the Manawatū River Leaders' Accord. These media reports provided an impetus for change at a time when freshwater management was already under intense litigation through the development of Horizons Regional Council's One Plan.

In August 2010, key leaders in the region signed an Accord publically pledging to work together to improve the health of the Manawatū River. The Manawatū River Leaders' Accord unites over 34 diverse stakeholders under the common goal of improving the Manawatū River and the mauri (lifeforce) of the Manawatū River Catchment, so that it sustains fish species, is suitable for recreation and balances the social, cultural and economic activities of the community. Initiated amid intense media scrutiny and fierce legal battles regarding freshwater quality, the Accord has moved the community from finger-pointing and blame to positive action and progress.

By banding together, signatories to the Accord secured $5.2 million funding from Central Government as part of a $30 million clean-up package. The balance was funded by local government, DairyNZ and landowners within the Region. Funds were put towards extensive upgrades to six wastewater treatment plants; working with farmers to exclude sheep and cattle from over 200km of waterways through fencing; restoring native fish and whitebait habitats; working with dairy farmers to implement 98 Environmental Farm Plans and supporting 14 community projects working to improve the River's health and mauri. Recognising its great success, other groups in New Zealand have begun replicating the Manawatū River Leaders' Accord model.

PROGRAM HIGHLIGHT

Morgan Foundation New Zealand River*prize* Finalists
Session: 1630, Mon 21 Sep

Project Twin Streams, Waitakere

Project Twin Streams (PTS) is a large-scale environmental restoration project in Auckland, New Zealand, which begun in 2003. Working to improve water quality in streams throughout the Huruhuru and Henderson Creek catchments (twin catchments) 56 kms of streamside has been revegetated and properties within the flood plain have been purchased for removal. Looking beyond stream restoration and property purchases, the Council has since implemented a sustainable community development approach that recognises the interconnectedness of social, cultural, spiritual, economic and environmental wellbeing.

PTS seeks to restore the mauri, or life force, of its waterways, weaving together integrated stormwater management with environmental, cultural and social objectives. At the heart of this project are the local communities that these streams flow through. Project Twin Streams' unique approach engages local residents by partnering with community organisations to deliver the planting programme. Project Twin Streams is a local project with regional benefits—it works with both nature and people to improve the health of its waterways.

While the current focus of the project is on stream bank restoration, the aims and objectives are much wider. Project Twin Streams examines how land is used, how households can become more sustainable, and how the cycle and walkways created can influence public health. Stream quality and environments are improving, and communities are becoming more cohesive, as they work together to change their behaviours and improve their local environment.

PROGRAM HIGHLIGHT

Emerging River Professional Award finalists
Session 1: 1030, Tue 22 Sep

EMERGING RIVER PROFESSIONAL AWARD FINALISTS

Mr Nitin Kaushal

Mr Nitin Kaushal is Associate Director of Sustainable Water Management & Wild Rivers with WWF India. For the past 6 years he has been leading WWF-India's work about Environmental Flows (E-Flows), including the assessment of E-Flows for the Upper Ganga basin. He has also contributed to the E-Flows group established for assessment of the E-Flows for Ganga River under the preparation of the Ganga River Basin Management Plan. This formal assignment has been entrusted by the National Ganga River Basin Authority.

Mr Kaushal started his professional journey as a field researcher in irrigation management transfer and worked on aspects related to participatory irrigation management and water users associations. He has contributed to consulting assignments for World-Bank-funded irrigation reform projects in northern and central India, and has also worked in the capacity of Water Resources Management Expert and Environment Expert.

Mr Kaushal is nominated as a finalist for the 2015 Emerging River Professional Award for his work on Environmental Flows at Triveni Sangam on the Ganga River during crucial cultural festivals with a larger goal to promote the concept of E-Flows in critical river systems. He is currently involved in E-Flows assessment for Ramganga River with a multidisciplinary group. He has contributed to a number of reports, research papers and publications.

Dr Joachim Ezeji

Dr Joachim Ezeji is a social entrepreneur with a track record in innovations and change management in development, as well as the founder of Rural Africa Water Development Project, which currently retains a special consultative status with the United Nations. He is a leader in adaptive water management, including bolstering urban water systems to reduce the impact of climatic extremes.

Dr Ezeji utilises the principles of system thinking, network mapping and system dynamics to effectively address wicked problems such as assisting more than 10,000 households to access improved latrine installations in the Niger Delta and supporting over 30,000 households to improve drinking water quality. He also advocates for the adoption of proactive disaster prevention by establishing appropriate disaster management institutions, building capacity of citizens to assess and respond to disasters, and mapping and maintaining disaster-related data.

Dr Ezeji is nominated as a finalist for the 2015 Emerging River Professional Award for his work developing and implementing an initiative to restore water quality in water bodies within the Imo River Basin, Nigeria. His work focuses on reducing the vulnerability of water bodies to diffuse nitrate and phosphate pollution through the promotion of catchment sensitive farming, and use of knowledge sharing and awareness raising activities. Dr Ezeji trained as a geologist at the University of Calabar, later earning a Master of Science in Water and Environmental Management and a Doctor of Philosophy in Adaptive Water Management (Loughborough University).

Tom Scarborough

Mr Tom Scarborough works as an Estuary Planning Coordinator for the Corangamite Catchment Management Authority. His work focuses on balancing the environmental, social, economic and cultural factors associated with management decisions to artificially open estuaries or allow natural flooding processes to occur.

Mr Scarborough is passionate about river and marine environments and has worked on numerous river restoration projects including building relationships with communities and landholders to complete restoration works on degraded waterways.

Mr Scarborough is nominated as a finalist for the 2015 Emerging River Professional Award for his work in developing and implementing a new process to improve community scientific knowledge of prominent river issues (e.g. acid events causing fish deaths) and increase the effectiveness of river management outcomes of the Anglesea River and estuary in Victoria, Australia. He has a Bachelor of Environmental Science in Marine Biology (Deakin University) and a Graduate Certificate in River Health Management (University of Melbourne), and is currently completing a Master of Integrated Water Management at The University of Queensland.

PRESENTER AND POSTER AWARD

BEST PRESENTER & BEST POSTER AWARD

In the River*symposium* closing plenary, awards will be given to the best presenter and the best poster as voted by conference delegates.

All presenters—whether keynotes, concurrent presenters or speed talkers—will be eligible for the best presenter award, with posters judged in a category of their own.

To vote for your favourite, simply download RiverApp (see page 31) and hit the button for the presenter/poster of your choice. You can give any presenter or poster up to five 'stars'. The presenter and poster with the highest number of stars submitted through the conference app by 4pm, Wednesday 23 September wins!

The best presenter and best poster awards are proudly sponsored by the University of Canberra.

UNIVERSITY OF CANBERRA | INSTITUTE FOR APPLIED ECOLOGY

EMERGING WATER PROFESSIONALS PROGRAM

As part of the International RiverFoundation's vision to foster education, innovation and support future water leaders, the inaugural Emerging Water Professionals Program is being held at this year's River*symposium*. The The Emerging Water Professionals Program (EWPP) is open primarily to post-graduate students and to anyone who identifies as an emerging water professional. Participants from any discipline related to integrated river basin management are invited, including those with background in science, policy, planning, community, private sector, governance, aid and development and many more.

The International River*symposium* provides an ideal platform to allow emerging professionals to network and support each other, and to engage with advanced career professionals.

Emerging Water Professionals Program delegates have access to the full River*symposium* program as well as a series of tailored events, aimed at bringing together professionals from a range of countries and disciplines to work with DFAT to create a global water knowledge network. Some of the key activities include:

- Networking with conference keynotes
- Activities to provide insight into professional pathways
- Peer to peer learning and engagement
- Introduction and design of the new Australian Water Knowledge Network
- Building strategic linkages between Australia and other countries in support of improved water management
- Designing a short presentation for the closing plenary

The Emerging Water Professionals Program is generously sponsored by the Australian Department of Foreign Affairs and Trade.

Australian Government
Department of Foreign Affairs and Trade

The following program demonstrates how the EWPP interacts with the main River*symposium* program and outlines the additional activities open to EWPP delegates.

There will also be a special meeting place in the River*Expo* (P6-P7) where EWPP delegates can meet and relax.

A special Facebook group is up and running for EWPP delegates to connect—check out 'International Riversymposium EWPP 2015'.

Day & time	Activity
Sunday 20 September	
16:00-18:00	EWPP informal meet and greet
1800-2200	Women in Rivers special event at Brisbane Museum (additional cost: $65 – ticket holders only)
Monday 21 September	
0700-0900	Registration
0800-0900	EWPP 'meet and greet' in the EWPP Meeting Place (P6-P7)
0900-1230	River*symposium* program
1315-1345	DFAT Scholarship Awardees – Alumni Connect (P11)
1400-1730	River*symposium* program
1800-1930	River*symposium* Welcome Function (cost $65 – ticket holders only)
1930-2100	EWPP workshop (P11) • The role of a water knowledge network to build and share knowledge for better results • Exploring ideas for EWP Leadership Initiative with Peter Cullen Trust Leadership Program • Meeting young and inspiring Asian professionals • Preparing the EWPP symposium statement at the final plenary
Tuesday 22 September	
0830-1230	River*symposium* program
1300-1350	Meet the keynotes
1400-1730	River*symposium* program
1830-2330	River*symposium* Gala Dinner (cost $160 – ticket holders only)
Wednesday 23 September	
0830-1230	River*symposium* program
1300-1350	Meet industry and community leaders
1400-1730	River*symposium* program
1700-1715	EWPP presentation to closing plenary
1900-2200	EWPP dinner
Thursday 24 September	
All day	Study tour (2 options – must be registered)

SOCIAL PROGRAM

WOMEN IN RIVERS

5:00pm, SUN 20 SEP

Venue: Museum of Brisbane
Tickets: AUD $65
Dress: Smart casual

For more details see page 16 (Special sessions)

BREAKFAST EVENT:

WATERWAYS STEWARDSHIP FOR HEALTHY COMMUNITIES

7:00am, TUE 22 SEP

Venue: Brisbane Convention & Exhibition Centre
Tickets: $35
Dress: Smart casual / Casual business

For more details see page 17 (Special sessions)

WELCOME FUNCTION

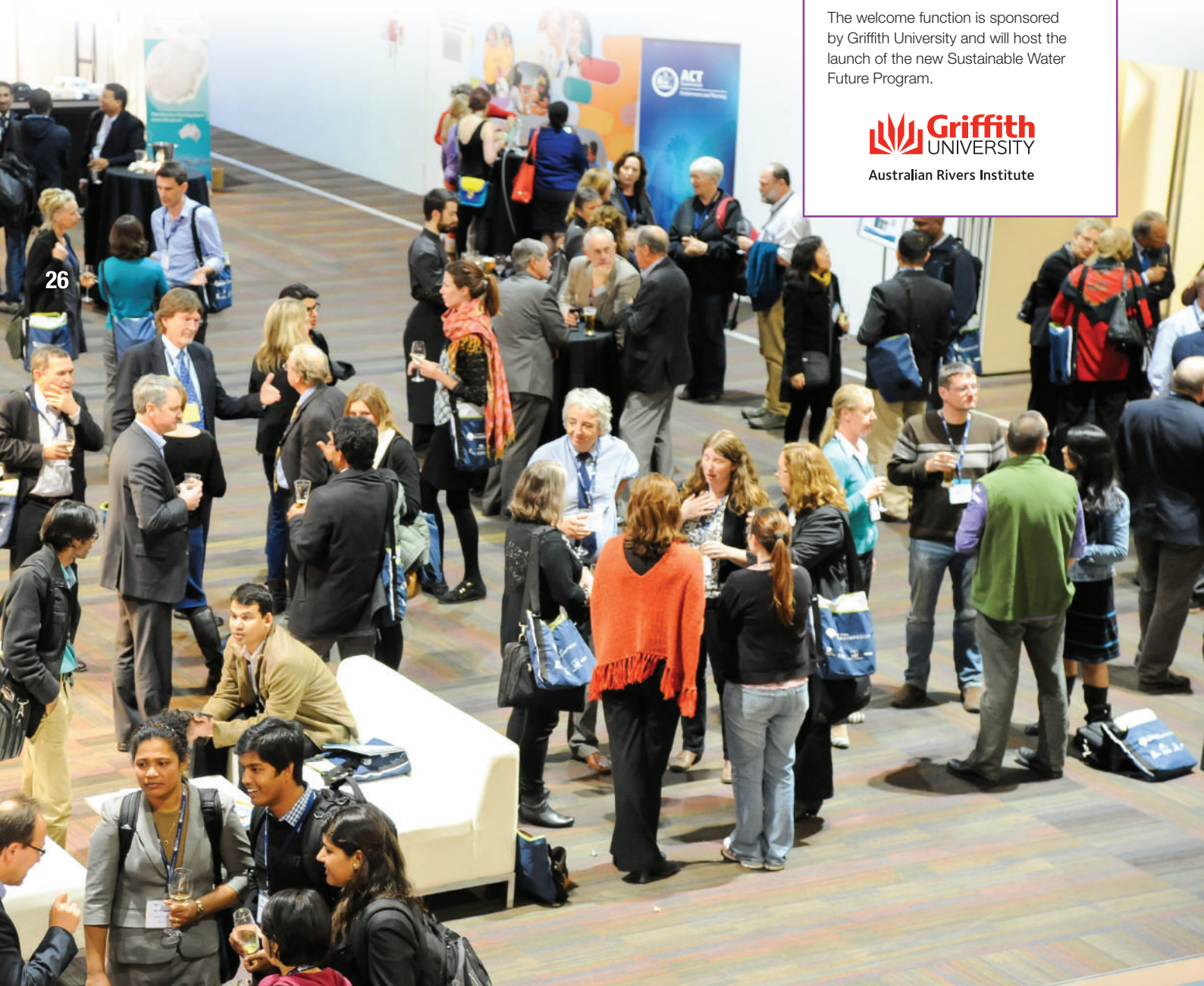
6:15pm, MON 21 SEP

Venue: Brisbane Convention & Exhibition Centre, Plaza
Tickets: $65
Dress: Smart casual / Casual business

After the conclusion of sessions on day one, join fellow delegates in the River*Expo* area for an informal and warm welcome to the 18th International River*symposium*. Canapés and beverages will be served whilst guests network.

The welcome function is sponsored by Griffith University and will host the launch of the new Sustainable Water Future Program.

Griffith UNIVERSITY
Australian Rivers Institute



RIVER*PRIZE* GALA DINNER

6:30pm, TUE 22 SEP

Venue: Plaza Terrace Room,
Brisbane Convention & Exhibition Centre
Tickets: $160
Dress: Cocktail

River*prize* is the world's most prestigious river award, giving recognition to those who have developed and implemented outstanding, visionary and sustainable programs in river management and restoration,

This year, the 2015 Thiess International River*prize* winner, the 2015 Australian River*prize* winner and the inaugural New Zealand River*prize* winner will all be announced at the River*prize* Gala Dinner, held on the evening of Tuesday 22 September.

The River*prize* Gala Dinner is the highlight of the River*symposium* social program, bringing award finalists, conference delegates, IRF partners and VIPs together for a night of networking, entertainment and great food and wine.

The 2015 River*prize* Gala Dinner is sponsored by CSIRO.

Special Guest

Graham Quirk
Lord Mayor of Brisbane

Following his appointment as Lord Mayor of Brisbane in April 2011, Graham Quirk was elected as Lord Mayor in the 2012 Brisbane City Council election.

Graham has a long record of service to Brisbane, celebrating 30 years with Council in 2015. As a member of Civic Cabinet for over a decade, he has overseen key portfolios of infrastructure and finance.

Over the course of his career and as part of the Council Administration, Graham has been responsible for delivering many positive outcomes and ongoing projects for the city, including:

Easing traffic congestion with major infrastructure projects across the city—including the TransApex network of cross city tunnels and bridges along with the Road Action Program which has fast-tracked 15 years of urgent road works into just four years;

Improving public transport with 500 new buses, 11 new CityCats, and introducing the CityGlider bus service and free CityHopper ferries.

A green city with the planting of 2 million new trees, purchasing 500 hectares of bushland for preservation and using 100% renewable energy within Council;

Enhancing Brisbane's capacity for long-term economic growth and supporting measures that will attract more events, visitors and investment to the city.

Graham grew up in Doomben, on Brisbane's northside and currently lives in Eight Mile Plains with his wife, Anne, and three daughters.

As Lord Mayor of Brisbane, Graham Quirk is committed to delivering for the residents of Brisbane and making this city a better place to live, work and invest in.

Master of Ceremonies

Professor Suzanne Miller BSc (Hons), PhD, FGS, FMinSoc, FAIMM, FGSA

Chief Executive Officer and Director, Queensland Museum Network

Professor Miller commenced as CEO and Director of the Queensland Museum Network on 2 July 2013 after six years leading the South Australia Museum as Director. Previously the Edinburgh native spent 12 years with National Museums Scotland, latterly as Keeper of Natural Sciences. Suzanne has previously held positions as Research Fellow at the Universities of Lancaster and Oxford, Lecturer in Earth Sciences at the University of Aberdeen and the Open University and as Geologist with the British Antarctic Survey.

Professor Miller received her PhD from Imperial College London and an Honorary D. Univ from Griffith University. Professor Miller is a Fellow of the Geological Society of London, Fellow of the Mineralogical Society, Fellow of the Royal Society of South Australia, Fellow of the Australian Institute of Mining and Metallurgy, and Fellow of the Geological Society of Australia.

Suzanne is a University of Queensland Honorary Professor, Deputy Chair and the Australian Representative on the Board of Scientific Collections International (an OECD Global Science Forum initiative), and a member of the National Cultural Heritage Committee and the Queensland Advisory Committee for the Commemoration of the Anzac centenary.

STUDY TOURS

DISCOVER MORETON BAY: RESILIENT WATERWAYS AND ECOTOURISM

THU 24 SEP

Board a private boat to Moreton Bay. Learn about catchment management from source to sea, including rural and urban initiatives to improve waterway health in the region, seagrass recovery and the economic value of the bay. Experience Moreton Bay's ecotourism firsthand as you learn about the history of Moreton Island, spot marine wildlife such as dolphins, dugongs and turtles and an optional guided snorkeling tour and fish feeding through the Tangalooma wrecks. There will also be networking opportunities with River*symposium* delegates throughout the day.

This study tour is fully sponsored by Brisbane City Council.

Cost: Free for River*symposium* delegates
Time: 7:30am – 5:00pm
Departs:
Brisbane Convention & Exhibition Centre
Inclusions:
Morning tea, lunch and afternoon tea
Please bring: Sun-smart attire and sunscreen, and towel and swimwear if you wish to participate in the optional guided snorkelling tour.

Strictly limited to 50 people.

BRISBANE CITY

Dedicated to a better Brisbane

CATCHMENT TO TAP WITH SEQWATER

THU 24 SEP

Seqwater ensures a safe, secure, resilient and reliable water supply for South East Queensland, as well as providing essential flood mitigation services and managing catchment health. Seqwater manages more than $10 billion of water supply assets and the natural catchments of the region's major water supply sources.

Wivenhoe Dam and Mt Crosby Water Treatment Plant are critical infrastructure in Seqwater's bulk water supply network. Delegates are invited on a journey from catchment to tap to better understand the source, store and supply of water in South East Queensland.

The tour offers delegates the opportunity to meet engineering, catchment and water quality experts from Seqwater and take a first-hand look at assets in operation—from catchment to tap.

Cost: Free for River*symposium* delegates
Time: 8:30am – 4:30pm
Inclusions: Morning tea and lunch
Please bring: Hat, sunscreen, closed in shoes, long pants and long-sleeved shirts, water bottle.

seqwater
WATER FOR LIFE

FURTHER INFORMATION

Conference organizers

C/- LOUD events
PO Box 411
Hamilton QLD 4007
Email: 18RS@loud.events
Tel: +61 7 3200 8299

Conference office

Registration will be at the Plaza Level of the Brisbane Convention & Exhibition Centre.

The office will be open during the following times:

Monday 21 Sep	8:30am – 5:00pm
Tuesday 22 Sep	8:30am – 5:00pm
Wednesday 23 Sep	8:30am – 5:00pm

Conference managed by

International RiverFoundation
Level 8, 200 Creek St
Brisbane
QLD 4000
Australia

2015 Program Committee

- Dr Nick Schofield (Chair), CEO, IRF
- Prof Angela Arthington, IRF Specialist Advisor
- Prof Stuart Bunn, Griffith University & Australian Rivers Institute
- Trish Dalby, IRF Marketing & Communications Manager
- Alastair Driver, Environment Agency UK, IRF Ambassador
- Marianne Edmonds, LOUD Events
- Dr Phil Haines, BMT WBM
- Julie McLellan, Healthy Waterways Ltd
- Vahn Mixap, IRF Ken Thiess and GWP scholar
- Russell Rollason, DFAT
- Mary Ann McDonald-Russell, Brisbane Marketing
- Charlotte Spliethoff, IRF Business Development and Programs Manager
- Greg Swain, Brisbane City Council
- Prof Ross Thompson, University of Canberra; ASL
- Warwick McDonald, CSIRO
- Dr Bill Young, World Bank

WiFi

Free Wifi is available at BCEC for delegates to check emails and for web browsing.

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 River*symposium* 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 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 RiverApp or on the Riversymposium website (www.riversymposium.com)

Smoking

All buildings within the BCEC 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 code

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

Climate

Brisbane has a subtropical climate with warm or hot weather for most of the year. In summer (Dec – Feb), maximum temperatures average around 30°C. The city experiences its highest rainfall in summer which sometimes brings thunderstorms and occasional floods. This is also the most humid time of the year in Brisbane. Autumn (Mar – May) signals the end of hot summer temperatures and the start of cooler crisp days and nights. While still experiencing warm days, the average daily temperature is between 15-25°C. Winter (Jun – Aug) time is generally dry and mild. Most winter days are sunny with average temperatures of around 17°C. The average monthly rainfall over the year is around 96 mm. Spring (Sep – Nov) is one of the best seasons to be in Queensland with warm, sunny days tempered by cool sea breezes. The climate is similar to autumn, with average temperatures around 15-25°C. The evenings are pleasant but can be cool. It's a good time of year to enjoy days at the beach or take a sightseeing cruise on the Brisbane River. The Brisbane Festival, the city's major arts festival, runs from mid-September to early October.

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 social events including Women in Rivers, the Welcome Function, Waterways Stewardship Breakfast and River*prize* Gala Dinner 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

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 LOUD events 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

Brisbane prides itself on being green, so it's no wonder that getting around South East Queensland using public transport is easy. On the TransLink website you'll find timetables, maps and destinations, plus everything you need to know about catching a bus, train, ferry and tram including information about late night services and safety and security.

go Card

Want to know the easiest way to get around town? Pick up a TransLink *go* card and travel seamlessly on all TransLink bus, ferry and rail services across South East Queensland. The perfect travel companion, *go* cards are available from Queensland Rail stations, online, over the phone or selected retailers. Top up the card balance like a prepaid mobile phone whenever it suits. Find out more on the TransLink website.

Free transport

Hail a bus for free in the inner city. The City Loop and Spring Hill Loop bus services circle the city every 10 minutes and stop at destinations in the CBD and Spring Hill precincts between 7am to 6pm weekdays. Glide between Brisbane's inner-city precincts by hopping on the free CityHopper ferry service, which travels along the river from North Quay to Sydney St, New Farm. For any inquiries regarding public transport, please contact Translink on 13 12 30 or visit the website.

Ferries

Let the river be your guide. Brisbane's ferries, affectionately known as CityCats, are one of the most enjoyable ways to explore The City. Glide along the river with CityCat and CityFerry services, perfect for sight-seeing and accessing key city spots. Tickets can be bought on board the services, at most newsagents and selected retail outlets, or make use of a *go* card. Hop on board the free CityHopper ferry service to getround inner-city precincts for free. For any inquiries regarding public transport, please contact Translink on 13 12 30 or visit the website.

Buses

Explore Brisbane's neighbourhoods through a comprehensive bus service that runs throughout the city, connecting the outer and inner suburbs to the CBD, major shopping centres, entertainment and dining precincts, railway stations and ferry terminals. Take advantage of special NightLink bus services running after midnight on Fridays and Saturdays for late-night travellers. Or get around the inner city with the free City Loop and Spring Hill Loop. Plan your trip now on Translink's journey planner. For any inquiries regarding public transport, please contact Translink on 13 12 30 or visit the website.

Trains

Brisbane's speedy network of electric trains has the Greater Brisbane region covered and provides direct access to the city, quirky neighbourhood precincts and outer suburbs. There is also a handy Airtrain service that is completely integrated into the Queensland Rail suburban network, with regular trains running from Brisbane Airport directly to Brisbane City and the Gold Coast. Travel on a single ticket from any station in South East Queensland to Brisbane Airport. For any inquiries regarding public transport, please contact Translink on 13 12 30 or visit the website.

Taxi

Taxi ranks are available at the Brisbane international and domestic airports, as well as throughout The City and inner-city precincts. Jump in a taxi to be assured of a quick and efficient way of getting around. A standard taxi will cater for four passengers or fewer. For wheel-chair access or to transport five to 10 passengers, it's best to order a maxi-taxi. Contact Black & White Cabs on 133 222 and Yellow Taxi 13 19 24.

Driving

You are permitted to drive in Queensland if you hold a valid Australian or foreign licence. If your licence is in a language other than English, you should carry an English translation of it when driving.

Bikes

Make the most of Brisbane's wonderful outdoor climate by biking around town. There are extensive bicycle paths running throughout the city and pedal-power offers a healthy and inexpensive way of getting around. Hire a Brisbane City Council CityCycle bike at key inner-city destinations and set off to explore. Courtesy helmets are available with many of the bikes at stations across the network. To join the CityCycle program, visit the website or call 1300 229 253.

DOWNLOAD THE OFFICIAL RIVERAPP

for the 18th International River*symposium*!

- Access the latest conference program
- Peruse abstracts
- Navigate BCEC
- Create a customised schedule
- Chat with other delegates
- Connect on social media
- Rate speakers & posters
- Get notifications of events and changes

AVAILABLE ON:

- App Store
- Google Play
- Desktop & Mobile Web

Visit the website to download or scan the QR Code

riverapp.eventapp.com.au

For your unique access code, email tanushree@riverfoundation.org.au

FOUNDING SPONSOR

Dedicated to a better Brisbane

PRINCIPAL SPONSOR

Australian Government

Department of Foreign Affairs and Trade

RIVER*PRIZE* GALA DINNER SPONSOR

WELCOME FUNCTION SPONSOR

WOMEN IN RIVERS & LARGE RIVER BASINS SPONSOR

BEVERAGE SPONSOR

SUPPORTING SPONSORS

IRF SILVER SPONSOR

EMERGING RIVER PROFESSIONAL AWARD SPONSOR

NEW ZEALAND RIVER*PRIZE* SPONSOR

STUDY TOUR SPONSOR

AWARD SPONSOR

ART AND CULTURE SPONSOR

SPECIAL SESSION SPONSORS