



GOLD COAST WATERWAYS

2017 & BEYOND

Resilience. Climate Change. Coastal Environments.



8.30 am - 5.00 pm Monday 22 May 2017

The Arts Centre Gold Coast
135 Bundall Road
Surfers Paradise QLD 4217



PROGRAM

22 May 2017

GOLD COAST WATERWAYS

2017 & BEYOND



Identifying the risks, challenges and actions to plan for a resilient Gold Coast waterways.

8.30am	Registration	Facilitators
9.00am	Welcome, Welcome to Country and insight to the day	Mara Bún, Chair GCWA & Hal Morris, CEO
9.20am	Keynote speaker address: Our international guest will address 'Lessons from Miami - How Florida coastal cities are building resilience' Q&A session	Susanne M. Torriente, Chief Resiliency Officer, City of Miami Beach
10.00am	Session 1 – History of the Waterways, what can we expect in the future? Panel speakers: <ul style="list-style-type: none"> Professor Rodger Tomlinson, Griffith University David Rissik, National Climate Change Adaptation Research Facility Jeff Callaghan, Retired Senior Forecaster, Bureau of Meteorology 	Moderator Mara Bún
10.30am	Morning tea	Facilitators
10.50am	Session 2 – Setting the Social and Economic Scene Panel speakers: <ul style="list-style-type: none"> Jim Binney, NCEconomics Naomi Edwards, Griffith University 	Moderator Mara Bún
11.20am	Session 3 – Funding resilience, the financial climate Panel speakers: <ul style="list-style-type: none"> Emma Herd, CEO, Investor Group on Climate Change David Jenkins, Director of Global Markets, National Australia Bank 	Moderator Mara Bún
11.50am	Session 4 – Resilient Natural Waterways Panel speakers: <ul style="list-style-type: none"> Dr Richard Fuller, FullerLab University of Queensland Associate Professor Kylie Pitt, Griffith University 	Moderator Leslie Shirreffs, Chair, GCWA Science and Innovation Advisory Committee (SIAC)
12.20pm	Priority actions from the GCWA Resilience Plan	Lisa McKinnon and Greg Fisk, BMT WBM
12.40pm	Lunch + poster display	Facilitators
1.40pm	Concurrent workshop session on key actions items:	
	<ul style="list-style-type: none"> Room 1: Driving economic benefits and enhancing social values Room 2: System health and resilience Room 3: Mapping critical values; environment, community and economic Room 4: Funding resilience - What to Finance 	<ul style="list-style-type: none"> Lisa McKinnon and Greg Fisk, BMT WBM Leslie Shirreffs, Chair GCWA SIAC Jessica Bournier, GCWA and Kylie Pitt Mara Bún, Emma Herd and David Jenkins
2.40pm	Afternoon tea	Facilitators
3.10pm	<ul style="list-style-type: none"> Room 1: Driving economic benefits and enhancing social values Room 2: System health and resilience Room 3: Mapping critical values; environment, community and economic Room 4: Funding resilience 	<ul style="list-style-type: none"> Lisa McKinnon and Greg Fisk Leslie Shirreffs Jessica Bournier, GCWA and Kylie Pitt Mara Bún, Emma Herd and David Jenkins
4.10pm	The key actions and challenges	Dr Mark Gibbs, Qld University of Technology
4.30pm	Closing remarks	Mara Bún and Hal Morris



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Welcome!

Gold Coast Waterways Authority (GCWA) recognises that the existing values the community places on Gold Coast waterways will be challenged in the future through **population growth**, a **changing climate** and **other pressures**.



Our vision is that Gold Coast waterways can readily adapt and thrive in the face of future challenges.

Resilience Plan: To look ahead and examine the ways we can make the waterways and their values more resilient, we have developed a draft Resilience Plan which:

- addresses our **aspirations** and **specific actions** to tackle future challenges
- builds upon existing research, plans and strategies
- is guided by **Rockefeller Foundation's 100 Resilient Cities Program** methodology

We have consulted with government agencies, local experts and the broader community to identify our key challenges and prepare to meet these.

This symposium is a key action out of the draft Resilience Plan.

The Gold Coast is a **water city**; infrastructure and investment are linked to the **resilience** of our waterways.



The conversation starts now.



International Keynote Speaker

Susanne M. Torriente | Chief Resiliency Officer, City of Miami Beach

Susanne joined the City of Miami Beach in September 2015 as Assistant City Manager (ACM) and Chief Resiliency Officer (CRO). Her sustainability and resiliency portfolio includes planning, building, code compliance, green space and environmental management.



The City of Miami Beach is a leader and pioneer in adaptation efforts in South Florida. As CRO she will build on that foundation to develop an action-oriented citywide strategic resiliency plan for all city operations.

While in Fort Lauderdale she was lead staff to the city's visioning process producing Fast Forward Fort Lauderdale: Our City, Our Vision 2015. She also co-chaired the Infrastructure & Growth Leadership Pillar for Broward's Six Pillars Planning process. She was selected as a Fellow for the 2012 ICMA Sustainable Communities Fellowship and is a member of the State of Florida Department of Economic Opportunity Community Resiliency Focus Group.

Susanne was appointed Miami-Dade County's first Sustainability Director in July 2009. She spearheaded the planning effort to develop the County's first sustainability plan, GreenPrint, which includes the County's first climate action plan. Susanne has been a member of the Southeast Florida Regional Climate Compact staff steering committee since its inception in 2009. This regional collaboration has afforded her the opportunity to share the South Florida story around the world.

Emma Herd CEO, Investor Group on Climate Change

ICGG is a collaboration of Australian and New Zealand investors focussing on the impact that climate change has on the financial value of investments.

The IGCC represents institutional investors, with total funds under management of over \$1 trillion, and others in the investment community interested in the impact of climate change on investments. Prior to IGCC, Emma spent 15 years at Westpac Banking Corporation where she had a range of roles across carbon finance and emissions trading, ESG Risk assessment, public policy and sustainability strategy development.

Professor Rodger Tomlinson Griffith University

Professor Tomlinson is the City of Gold Coast Professor of Coastal Management and Foundation Director of the Griffith Centre for Coastal Management at the Gold Coast Campus of Griffith University.

He also convenes the Coastal Node of the Australian Climate Change Adaptation Research Network for Settlements and Infrastructure. He has over 35 years of experience in applied research and specialist consultancy in the fields of coastal and water engineering.

His research interests are in the area of: tidal inlet dynamics; effluent dispersion and disposal strategies; the implications for open coastline and coastal waterway dynamics of extreme events; climate variability and climate change, and urban catchment management.

Panel Speakers

David Jenkins Director, Investment Grade Originations (ESG)

David is responsible for developing and originating innovative financing solutions for NAB and its customers including green and social bonds, plus structured funding of renewables, clean energy and infrastructure.

He has led the development of NAB's green bond capabilities since 2010 and has 15 years of financial markets experience across a range of product solutions, origination, structuring and execution roles for several banks in Sydney, Hong Kong, London and New York.

David has been responsible for all 7 green bond transactions NAB has brought to market including green bonds for NAB, Treasury Corporation of Victoria, Queensland Treasury Corporation and Flexigroup. David works closely with NAB's Corporate Responsibility, Governance & Risk and Environmental Sustainability teams on a range of sustainability focused initiatives and holds an MBA (Finance) from London Business School and a BE (Civil) from the University of Queensland.



Jeff Callaghan Retired Senior Forecaster, Bureau of Meteorology

Jeff is the key collaborator behind Green Cross Australia's award winning disaster resilience portal "Harden Up – Protecting Queensland". He is the recipient of the following Australian Meteorological and Oceanographic Society awards: The 2016 Gibbs Medal and the 2008 Christopher Taylor award; as well as Bureau of Meteorology Outstanding Service Awards (1999, 2007).

He also was awarded the Royal Humane Society Bronze medal and the SLSA Bravery Award for an incident during Category 4 Tropical Cyclone Dinah (1967) off the Gold Coast.

Dr Richard Fuller Associate Professor in conservation and biodiversity, University of Queensland

After gaining his PhD from the University of Durham in 2004, he worked at the University of Sheffield as a postdoc in Kevin Gaston's Biodiversity and Macroecology group. He then moved to Hugh Possingham's Spatial Ecology Lab at the University of Queensland in 2008, before forming his own research group at the beginning of 2010.

His central research interest lies in the relationship between people and biodiversity, studying how people have affected the natural world around them, and how their destructive effects can be reversed.

Dr Mark Gibbs Director, Knowledge to Innovation Institute for Future Environments, IFE Directorate, Queensland University of Technology

A seasoned international coastal and climate science and infrastructure practitioner and researcher, Mark has developed and led major studies and teams of scientists, engineers, economists and business consultants in Australia, New Zealand and Europe.

Mark is frequently called upon to provide Expert Witness and review services for coastal management issues. Mark's role at QUT focuses on innovation management and the delivery of scientific research to the community and industry. Mark is also the Chair of Green Cross Australia and past Deputy Chief of CSIRO Division of Marine and Atmospheric Research.

Prior to joining QUT in September 2015, Mark was a Technical Director (Coastal infrastructure science and management) at AECOM, a Fortune 100 global infrastructure consultancy. A member of GCWA SIAC.

Dr David Rissik Dep. Director, National Climate Change Adaptation Research Facility, Griffith University

Dave is an environmental scientist with 25 years' experience in water quality, estuarine and marine ecology, natural resource management, and more recently in climate change adaptation. He has a strong interest in the use of science to inform management and policy and works hard to ensure that this occurs. Dave has a PhD in biological sciences from the University of NSW, and is a board member of Greencross Australia.

Dr Kylie Pitt Associate Prof., Griffith School of Environment

Kylie is a marine ecologist with more than 20 years' experience in researching coastal waterways. Kylie research expertise is diverse and includes the ecology of jellyfishes, ecosystem resilience, water quality and nutrient cycling, and using stable isotopes to trace sewage plumes.

Kylie has undertaken several studies within Gold Coast waterways, including understanding how carbon cycles within the canal systems, understanding how fish use jetties as habitat, and currently I am assessing the effectiveness of the tidally-staged release of sewage through the Seaway using stable isotopes. A member of GCWA SIAC

Jim Binney Natural Capital Economics

Jim is a resource and environmental economic practitioner with over 20 years of experience. Since starting his consulting career in 2006, Jim has successfully undertaken over 150 assignments across Australia, the Pacific and Southeast Asia for clients ranging from small irrigation businesses through to the Organisation for Economic Co-operation and Development (OECD) and the United Nations.

Much of Jim's work has focused on delivering economic and market approaches to achieve environmental objectives at the lowest economic cost to the community.

Naomi Edwards Griffith University

Naomi's work is now focused on how to rethink the practice of coastal and natural resource management. She is currently researching a PhD on the culture, conflict and consensus of coastal professionals in Australia at Griffith University. A community and environment champion, in 2016 she was awarded as a National Young Landcare champion and ambassador for her commitment to social and environmental justice.





Workshop Sessions

Driving economic benefits and enhancing social values



Facilitators: Lisa McKinnon and Greg Fisk, BMT WBM

This workshop session is focused on identifying the social and economic benefits of Gold Coast waterways.

It is targeted at exploring how Gold Coast waterways, and its users, are prepared for extreme weather events both now and in the future and will investigate actions to provide equitable access to waterways and the services they provide, enhance the capacity of GCWA and its partners to respond to key challenges and facilitate increased economic value derived from waterways.

Mapping critical values; environment, community and economic



Facilitators: Jessica Bourner, GCWA and Kylie Pitt, Griffith University

The Gold Coast waterways are altered landscapes that have seen significant change over the last 50 years or so, this shifting landscape has created pressure on coastal ecosystems and infrastructure needs. Notwithstanding, Gold Coast waterways continue to support many valuable environmental, social and economic needs of its users.

This workshop will identify what are the critical economic, social and environmental values of the Gold Coast waterways and what are the pressures they are facing in the next 30 years? Participants will explore the influence of multiple stressors on critical values and discuss the importance of maintaining connectivity and trophic structure.

System health and resilience



Facilitators: Leslie Shirreffs, GCWA

How do we improve the resilience of our vulnerable ecosystems and species and maintain waterways health? Looking at the goals and actions from the draft resilience plan, this session will identify impacts of climate change and population growth; explore our understanding of ecosystems vulnerability and workshop ways we can invest in Green infrastructure.

Gaining an early understanding of the risks faced by key ecosystems, allows GCWA and its partners time to monitor changes to ecosystem health and implement resilience measures that in some instances, may take a number of years to become effective

Funding resilience



Facilitators: Mara Bún, GCWA, Emma Herd, IGCC and David Jenkins, NAB

New models for funding resilient physical and social infrastructure are emerging. Join the Investor Group on Climate Change CEO and NAB's Global Head of Lending to explore how Gold Coast resilient infrastructure can be funded by leveraging incentives that advance the interests of insurance, property, local government and ratepayers.

Queensland Treasury Corporation's currently emerging green bond and social bond programs support Queensland's transition to a low carbon and climate resilient economy. This workshop will explore how Gold Coast waterways can leverage innovative finance models to build resilient infrastructure. Projects explored through an investment lens will cultivate natural and social capital, building in foresight by taking into account population growth, ecosystem conservation imperatives, social and economic priorities, and climate models.

Gold Coast Waterways Scientific Research and Management Strategy

The Gold Coast Waterways Scientific Research and Management Strategy (SRMS) was introduced in 2015 and aims to identify scientific investment priorities for achieving strategic objectives under the:

- Gold Coast Waterways Management Strategy (2014-2023)
- Environmental Management Framework (EMF)
- Sand Management Plan (SMP)
- Relevant projects that may be funded through the delivery of projects under the Scientific Research and Management Program (SRMP).

4 research & management streams:



GCWA's **Science and Innovation Advisory Committee (SIAC)** is established under the SRMS to provide strategic advice related to scientific, technical and innovation directions for the GCWA and provide oversight to the implementation of programs under the Environmental Management Framework (EMF) for managing sand resources in Gold Coast waterways and other matters related to the management of Gold Coast waterways.

Members

Dr Aysin Dedekorkut-Howes, Griffith University
Professor Rod Connolly, Griffith University
Dr Mark Gibbs, QUT Associate Professor
Associate Professor Kylie Pitt, Griffith University
Dr Mike Raybould, Bond University
Dr Steve Whalan, Southern Cross University
Ms Kathy Baker, City of Gold Coast, Manager, Service Sustainability at Gold Coast Water.

Two GCWA Board members are part of SIAC:

Ms Leslie Shirreffs as SIAC Chair
Professor Rodger Tomlinson, Griffith University



Science and Innovation Advisory Committee

SIAC members bring expertise across the fields of coastal management, **marine ecology**, **planning**, **climate adaptation**, **environmental economics**, **tourism** and **natural resource management**.

Photo credit: Bob Westerman

The Resilience Plan is a project being delivered through the SRMP



Thank you for joining the conversation.

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