

Partner Workshop

17 June 2020



Travel & Tourism



Fisheries & Aquaculture



Port & Harbour Authorities



Fed., State & Local Gov't. Agencies

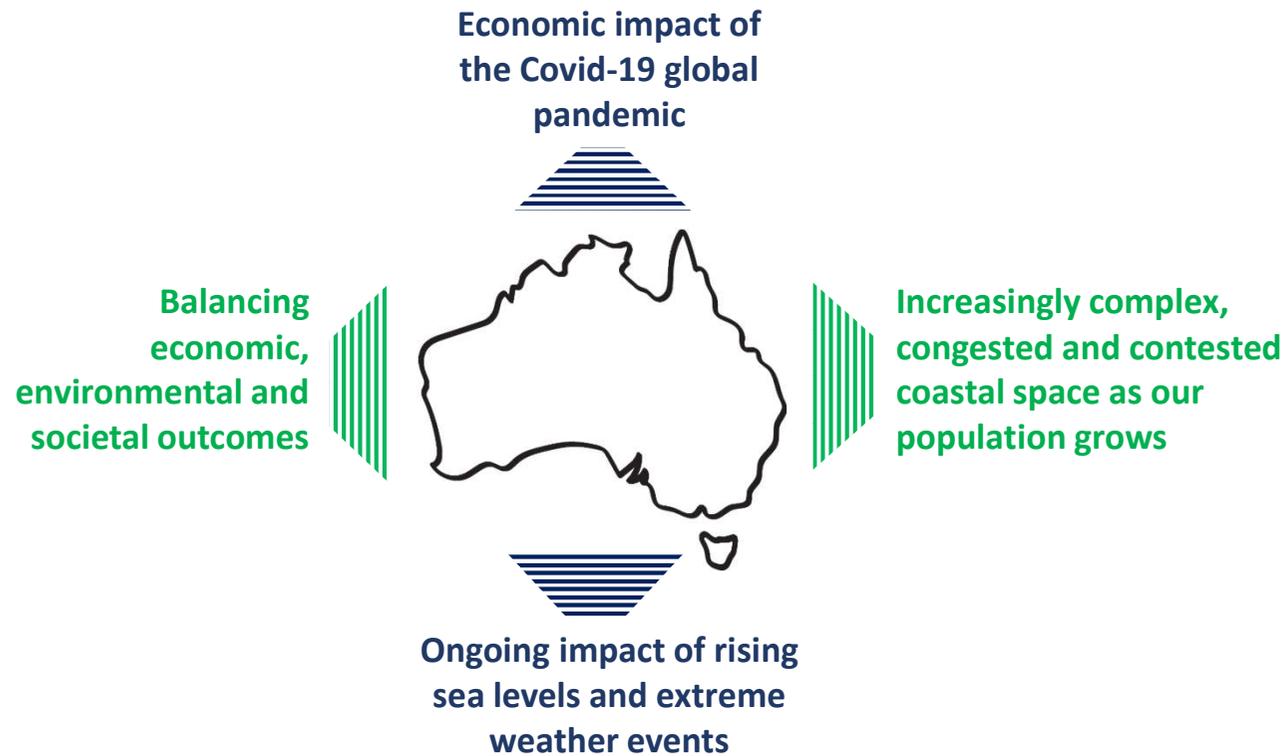


Coastal Engineering & Services



Water Utilities

Australia's coastal industries, ecosystems and communities are under critical threat from four key forces





Our vision

Driving economic growth and recovery, advancing productive and sustainable industries, and build long-term resilience in Australia's vital coastal communities

In collaboration with industry, the *Thriving Coasts CRC* will help:

- **Reboot** Australia's world-class tourism sector devastated by the impact of Covid-19
- **Reposition** Australia's aquaculture and fisheries sector and place it on a globally competitive growth trajectory
- **Protect** Australia's critical coastal infrastructure and population centres with more efficient and cost-effective technologies and solutions
- **Enable** Australian technology, engineering and other coastal service SME's to grow their businesses and pursue significant export opportunities
- **Provide** governments at all levels with better science for decision making, policy development, risk assessment, and monitoring
- **Help** develop effective alternatives and opportunities of carbon offset
- **Secure** the health, restoration and integrity of our coastal environment for future generations

Key research program themes

Program 1:

Advancing coastal industries and recovery

Providing integrated solutions that fast-track and streamline decision-making across jurisdictions to boost industry development, tourism and economic recovery.

Program 2:

Boosting productivity and sustainability

Providing coastal industries with new tools, solutions and technologies to increase their production and catalyse new business opportunities and ventures in sustainable ways

Balancing economic, environmental & societal outcomes



Economic impact of the Covid-19 global pandemic

Increasingly complex, congested and contested coastal space as our population grows

Program 3:

Quantifying and realising value

Quantifying the cumulative benefits of coastal solutions using market-based tools, policy instruments and community engagement to realise the value of environmental stewardship and sustainable growth.

Ongoing impact of rising sea levels and extreme weather events

Program 4:

Building long-term coastal resilience

Providing tools, solutions and technologies to better manage and plan for the impacts of extreme weather events and future changes on critical infrastructure and population centres in the coastal zone.



Key partner benefits



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- ✓ Better data for strategic planning & investment
- ✓ International competitive advantage
- ✓ Industry recovery and innovation
- ✓ New tourism ventures and developments



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- ✓ Streamlined decision making
- ✓ New and advanced technologies
- ✓ Industry supply chain growth
- ✓ New export opportunities



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- ✓ Production and yield improvements
- ✓ Restoration & restocking solutions
- ✓ Adoption of new technologies
- ✓ Industry growth and export opportunities
- ✓ Product diversification and price premiums



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- ✓ More efficient risk assessment
- ✓ Improved infrastructure planning
- ✓ Robust investment decision making
- ✓ Carbon, waste and nutrient offsets



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- ✓ More efficient risk assessment
- ✓ Improved infrastructure planning
- ✓ Optimised dredging activity
- ✓ Robust investment decision making



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- ✓ Greater decision making confidence
- ✓ More efficient risk assessment
- ✓ More integrated planning frameworks
- ✓ Economic recovery and growth
- ✓ Ensuring the health, restoration and integrity of our environment for future generations

Our team



Professor Paul Burton
Griffith University

Program 1



Leader: Dr Sarah Gardiner
Griffith University
Deputy Leader: Professor Rod
Connolly

Program 2



Leader: Professor Nicholas Paul
University of the Sunshine Coast
Deputy Leader: Professor Bronwyn
Gillanders

Program 3



Leader: Dr Abbie Rogers
University of Western Australia
Deputy Leader: Associate Professor
Melissa Nursey-Bray

Program 4



Leader: Prof. Rodger Tomlinson
Griffith University
Deputy Leader: Professor Ryan
Lowe



Program 1: Advancing coastal industries and recovery

- Dr Sarah Gardiner
 - Deputy Director - Griffith Institute for Tourism, Griffith University
- Professor Rod Connolly
 - Director - Global Wetlands program (GLOW), Griffith University



Program 1: Advancing coastal industries and recovery

Providing integrated solutions that fast-track and streamline decision-making across jurisdictions to boost industry development, tourism and economic recovery.

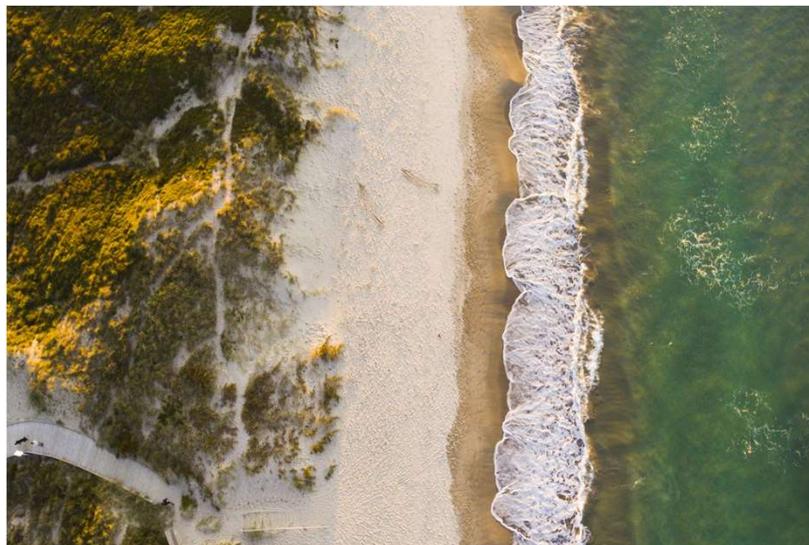
Research focus for Program 1:

1. **New decision support tools to accelerate recovery following the COVID-19 pandemic and other major disaster events, and support more integrated longer term coastal zone management and industry development**
2. **More usable data and greater sharing of data across organisations and jurisdictions to identify market opportunities and improve the competitiveness of coastal destinations and economies**
3. **Improve data on coastal visitation to support economic and tourism development, encourage investment and inform better management practices**



Potential projects:

- Growing Australia's market share of coastal and aquatic tourism
- Integrated tourism destination management, planning and performance measurement
- Development of coastal Indigenous tourism experiences



Research focus for Program 1:

4. More effective environmental monitoring using advanced technologies to improve efficiency and create more integrated and productivity outcomes

5. Improved capacity to measure the cumulative environmental impacts of industry

Potential projects:

- Disentangling cumulative impacts to enhance environmental stewardship for coastal industries
- Automation for rapid industrial and environmental monitoring
- Land-use planning for populous coastal regions
- Streamlined approval for coastal development

Example project:

Integrated tourism destination management, planning and performance measurement

This research would help destinations improve:

- Visitor statistics
- Market analysis, demand studies and brand audits
- Consumer sentiment analysis
- Community and industry barometer studies
- Environmental and carbon measurement and monitoring
- Land-use planning and streamlined approval for coastal developments
- Other research to inform decision-making to improve destination competitiveness and sustainability
- Consultation and development of tourism destination management plans



The suite of research will be designed in consultation with the CRC partner to ensure it achieves their specific destination management and marketing priorities.

Program 1: Advancing coastal industries and recovery

Providing integrated solutions that fast-track and streamline decision-making across jurisdictions to boost industry development, tourism and economic recovery.

Areas of research focus:

- new decision support tools to accelerate recovery following the COVID-19 pandemic and other major disaster events, and support more integrated longer term coastal zone management and industry development;
- more usable data and greater sharing of data across organisations and jurisdictions to identify market opportunities and improve the competitiveness of coastal destinations and economies;
- improve data on coastal visitation to support economic and tourism development, encourage investment and inform better management practices;
- more effective environmental monitoring using advanced technologies to improve efficiency and create more integrated and productivity outcomes; and
- improved capacity to measure the cumulative environmental impacts of industry.

Potential research projects:

- 1.1 Growing Australia's market share of coastal and aquatic tourism
- 1.2 Rebooting Australia's cruise tourism industry
- 1.3 Rebuilding aviation and cruise routes
- 1.4 Development of coastal Indigenous tourism experiences
- 1.5 Integrated tourism destination management, planning and performance measurement
- 1.6 Disentangling cumulative impacts to enhance environmental stewardship for coastal industries
- 1.7 Automation for rapid industrial and environmental monitoring
- 1.8 Land-use planning for populous coastal regions
- 1.9 Streamlined approval for coastal development



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Program 2. Boosting productivity and sustainability

Providing coastal industries with new tools, solutions and technologies to increase their production and catalyse new business opportunities and ventures in sustainable ways

Research focus for Program 2:

1. Innovative options for managing constrained space for coastal aquaculture activities in sea and on land

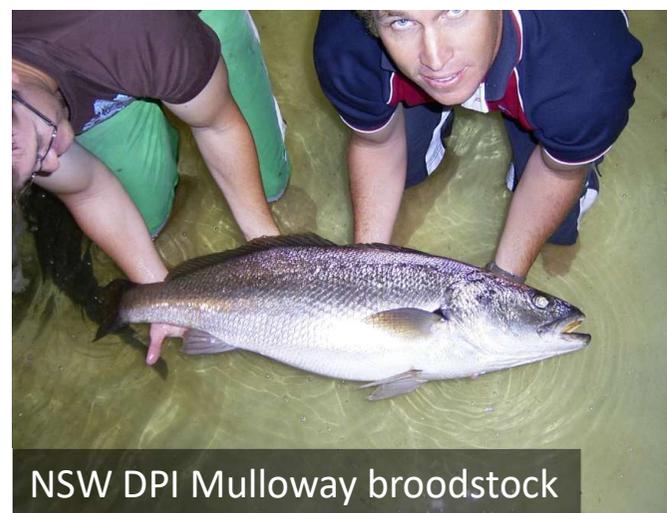


Potential projects:

- Refreshing aquaculture priorities through diversification and better waste management

Research focus for Program 2:

2. Improved technical and regulatory capacity to arrest degradation of fisheries and habitats



Potential projects:

- Stock enhancement solutions for commercial and recreational fisheries
- Utilisation and development impacts for natural resources

Research focus for Program 2:

3. Improved capacity and methodologies to restore coastal water quality and secure blue carbon



Oyster Restoration (Dr Ben Gilby USC)



Seaweed Restoration (Photo: John Turnbull)

Potential projects:

- Restoring our living coastlines to offset development
- National guidelines for coastal developments, habitat restoration, stock enhancement of fisheries and aquaculture expansion

Research focus for Program 2:

4. Creation of circular economies linking coastal and catchment industries

- Waste and water treatment
- Stormwater runoff
- Urban development
- Restoration of coastal habitats
- Enhancement of natural resources
- Restorative aquaculture
- Cropping in catchments
- Livestock production in catchments
- New business development



Potential projects:

- New products, services and business linkages to boost sustainable production and create jobs



Program 2: Boosting productivity and sustainability

Providing coastal industries with new tools, solutions and technologies to increase their production and catalyse new business opportunities and ventures in sustainable ways.

Areas of research focus:

- innovative options for managing constrained space for coastal aquaculture activities in sea and on land;
- improved technical and regulatory capacity to arrest degradation of fisheries and habitats;
- improved capacity and methodologies to restore coastal water quality and secure blue carbon; and
- creation of circular economies linking coastal and catchment industries.

Potential research projects:

- 2.1 Refreshing aquaculture priorities through diversification and better waste management
- 2.2 Restocking solutions for commercial and recreational fisheries
- 2.3 Utilisation and development impacts for natural resources
- 2.4 Restoring our living coastlines to offset development
- 2.5 National guidelines for coastal developments, habitat restoration, restocking fisheries and aquaculture expansion
- 2.6 Circular economy of catchment to coast - new products, services and business linkages to boost sustainable production and create jobs



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Program 3: Quantifying and realising value

Quantifying the cumulative benefits of coastal solutions using market-based tools, policy instruments and community engagement to realise the value of environmental stewardship and sustainable growth.

Unlocking financial value



Quantifying intangible value



Growing opportunity for communities

Unlocking financial value

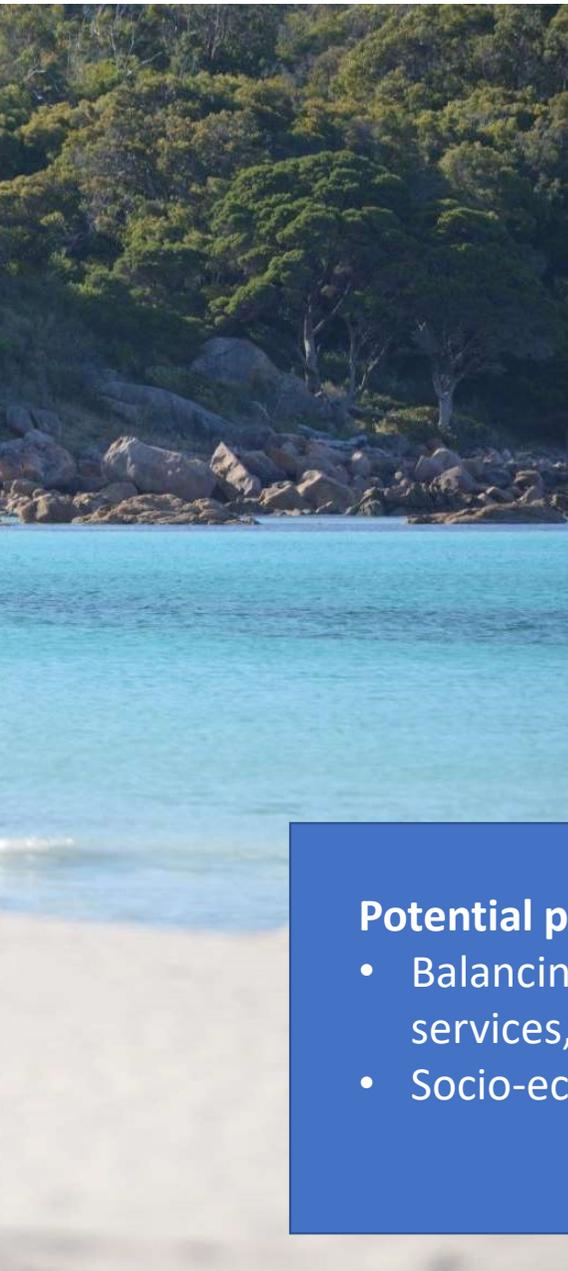
To recognise where the financial value is in coastal solutions

- ‘Benefit stacking’ from holistic, multi-stakeholder approaches
- Understanding preferences for environmental stewardship



Potential projects:

- Identifying appropriate price premiums for green (or ‘blue’) branding
- Developing decision support tools to measure economic viability of new initiatives/developments, and prioritise investment



Quantifying intangible value



To quantify the 'non-market' values for social and environmental outcomes

- Enabling direct trade-offs between social, environmental and economic outcomes
- Understanding social licence to operate, acceptability

Potential projects:

- Balancing impacts for coastal developments (ports, water/wastewater infrastructure and services, tourism developments, aquaculture zones)
- Socio-economic layers for cumulative impact models

Growing opportunities for communities

Identifying opportunity for Indigenous Corporations and regional community groups

- Explicit integration of Traditional and local knowledge in decision making
- Mapping the way for partnerships in new coastal aquaculture and tourism enterprises

Potential projects:

- Economic feasibility (tapping into 'benefit-stacking', for growth enterprises e.g. surf tourism), and Indigenous leadership
- Cultural value indicators for decision making



Program 3: Quantifying and realising value

Quantifying the cumulative benefits of coastal solutions using market-based tools, policy instruments and community engagement to realise the value of environmental stewardship and sustainable growth.

Areas of research focus:

- developing a better understanding of consumer demands and values for coastal products and services;
- understanding changing preferences for coastal protection and restoration;
- improving measurements of true returns and risks (ecological, social, economic) of coastal adaptation and development;
- development of better functioning markets for coastal solutions to deliver carbon, waste and development offsets; and
- creating new business opportunities for Indigenous Corporations and regional community groups.

Potential research projects:

- 3.1 Establishing the demand side of the seafood value chain
- 3.2 Social impact of wastewater management and desalination
- 3.3 Targeting investment in coastal defence
- 3.4 Balancing environmental health and community wealth for port development
- 3.5 Removing the roadblocks for trading 'blue' offsets
- 3.6 Sustainable regional economies - new business ventures in ecotourism and seafood production
- 3.7 Engaging Indigenous business in coastal enterprise
- 3.8 Integrated models to determine the ROI in new major tourism developments
- 3.9 Insurance for tourism enterprises in the face of changing environmental conditions



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Program 4: Building long-term coastal resilience

- Professor Rodger Tomlinson
 - Director, Griffith Centre for Coastal Management
- Professor Ryan Lowe
 - Oceans Graduate School and School of Earth Sciences, UWA Oceans Institute

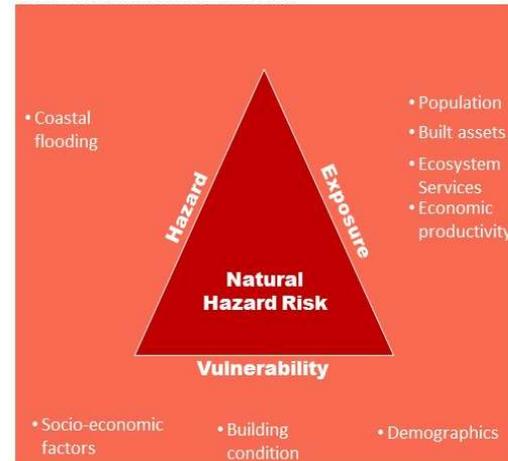
Providing tools, solutions and technologies to better manage and plan for the impacts of extreme weather events and future changes on critical infrastructure and population centres in the coastal zone.



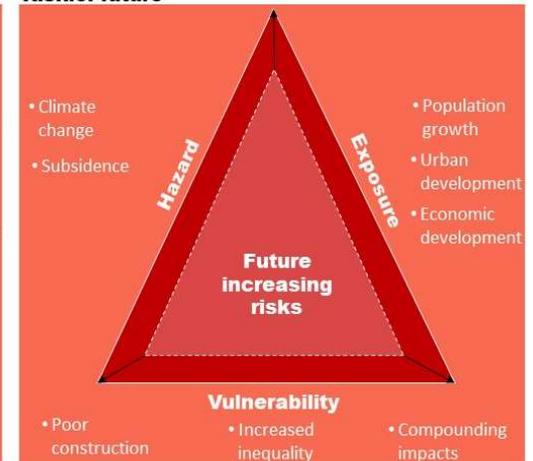
- Program objectives:
 - Boosting capacity for industry and government to implement efficient and cost-effective infrastructure and coastal protection strategies
 - Increasing technology and service industry competitiveness for Australian industries within global markets
 - Developing innovative monitoring and modelling tools to support decision making and minimize risk



Current natural hazard risk



Riskier future



- developing innovative tools to better assess and predict the vulnerability of critical built infrastructure, to inform decisions about investment and insurance in protection measures
 - DSS to optimise environmental social and economic trade-offs under future climate
 - Predictive modelling of coastal and waterway dynamics



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- helping extend coastal defence strategies from 'grey' to 'green' and hybrid approaches such as living shorelines to protect coastal assets and restore resilience across coastal seascapes
 - National guidelines for innovative techniques and materials
 - Life cycle assessments



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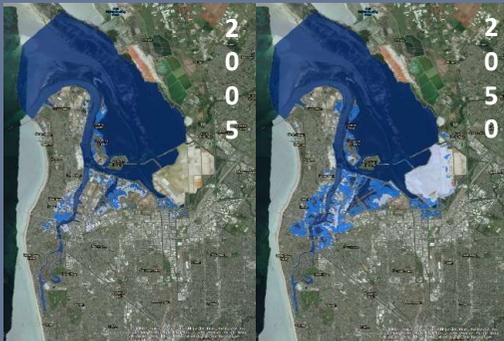
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- optimising the design, planning and management of urban infrastructure for long-term resilience, taking into account uncertain future conditions and trade-offs between competing objectives
 - Impact assessment and optimisation approaches to develop and prioritise pre-emptive adaptation strategies
 - Integrated planning and long-term viability of waterway transport corridors



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- developing new technologies and models to efficiently monitor coast, waterway and estuary dynamics
 - Real-time continuous monitoring systems
 - Automated high-resolution surveys
 - Integrated eco-tourism and monitoring networks



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Program 4: Building long-term coastal resilience

Providing tools, solutions and technologies to better manage and plan for the impacts of extreme weather events and future changes on critical infrastructure and population centres in the coastal zone.

Areas of research focus:

- developing innovative tools to better assess and predict the vulnerability of critical built infrastructure, to inform decisions about investment and insurance in protection measures;
- helping extend coastal defence strategies from 'grey' to 'green' and hybrid approaches such as living shorelines to protect coastal assets and restore resilience across coastal seascapes;
- optimising the design, planning and management of urban infrastructure for long-term resilience, taking into account uncertain future conditions and trade-offs between competing objectives; and
- developing new technologies and models to efficiently monitor coast, waterway and estuary dynamics.

Potential research projects:

- 4.1 Development of a national framework for implementation of nature-based coastal protection initiatives
- 4.2 Application of broad scale coastal monitoring technologies to quantify changes
- 4.3 Integrated decision support system for improving productivity and long-term resilience
- 4.4 Development of optimal climate adaptation and mitigation strategies for infrastructure
- 4.5 The Blue Boomerang - placing Australia at the forefront of dive ecotourism
- 4.6 Waterway management decision support – navigating our way to a blue highway



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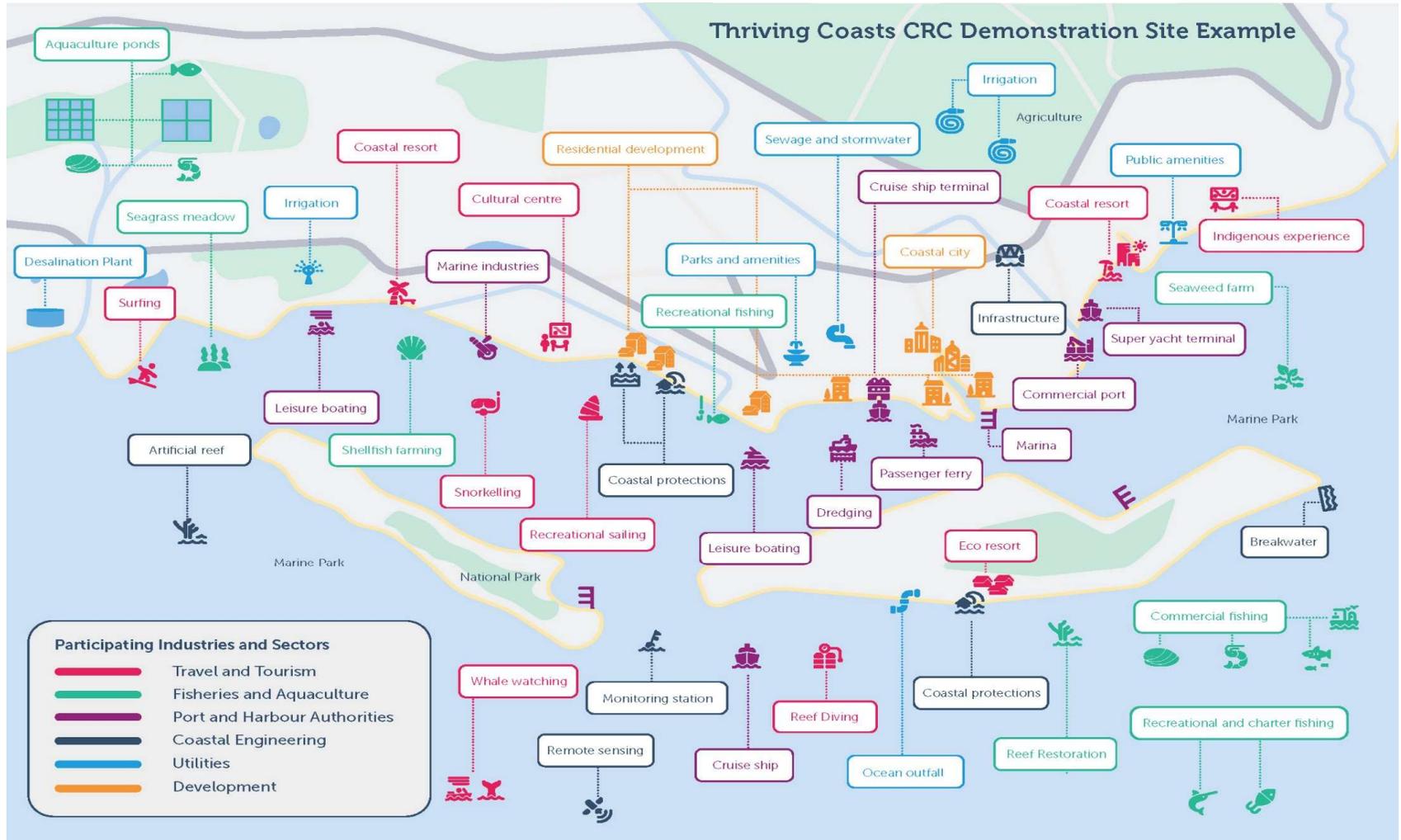
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Coastal Demonstration Sites

Focal points for the CRC's R&D in contested and congested coastal spaces.

Bringing together government, community and industry interests and expertise to create & test integrated and innovative solutions.



What is a CRC?



- A Commonwealth Government program providing grants for up to 10 years
- CRCs are independent entities, established and governed as incorporated companies limited by guarantee and comprise industry-led collaborations between industry, researchers and the community
- The focus is on research and development that will have commercial uses
- The CRC program aims to improve the competitiveness, productivity and sustainability of Australian industries, especially in government priority areas, use high quality research to solve industry-identified problems, and encourage SMEs to take part in collaborative research
- With more than 226 CRCs being funded since the program's commencement, the Australian Government has committed more than \$4.5B in CRC funding

What are the advantages of the Thriving Coasts CRC



1. **Leverage** – for every dollar invested partners will typically receive 2-3 times the research value
2. **Access** - to an expected \$100 million to \$150 million of resources
3. **Breakthroughs** – in process, policy and decision making capabilities
4. **Technologies** – tools and solutions to increase productivity and catalyse new ventures
5. **Protection** – from the risk of rising sea levels and extreme weather events
6. **Profile** – inside the nation’s largest coastal recovery and resilience collaboration
7. **Networking** - build valuable connections and access world-leading researchers
8. **Workforce** – skills and knowledge development, and job creation in coastal communities
9. **Influence** - the direction of resources and be at the forefront of change
10. **Potential** - R&D tax concession eligibility

Thriving Coasts CRC Structure





Board Structure

The Thriving Coasts CRC Board of Directors will comprise of a Chair and 6 Directors who are independent of the CRC Partners.

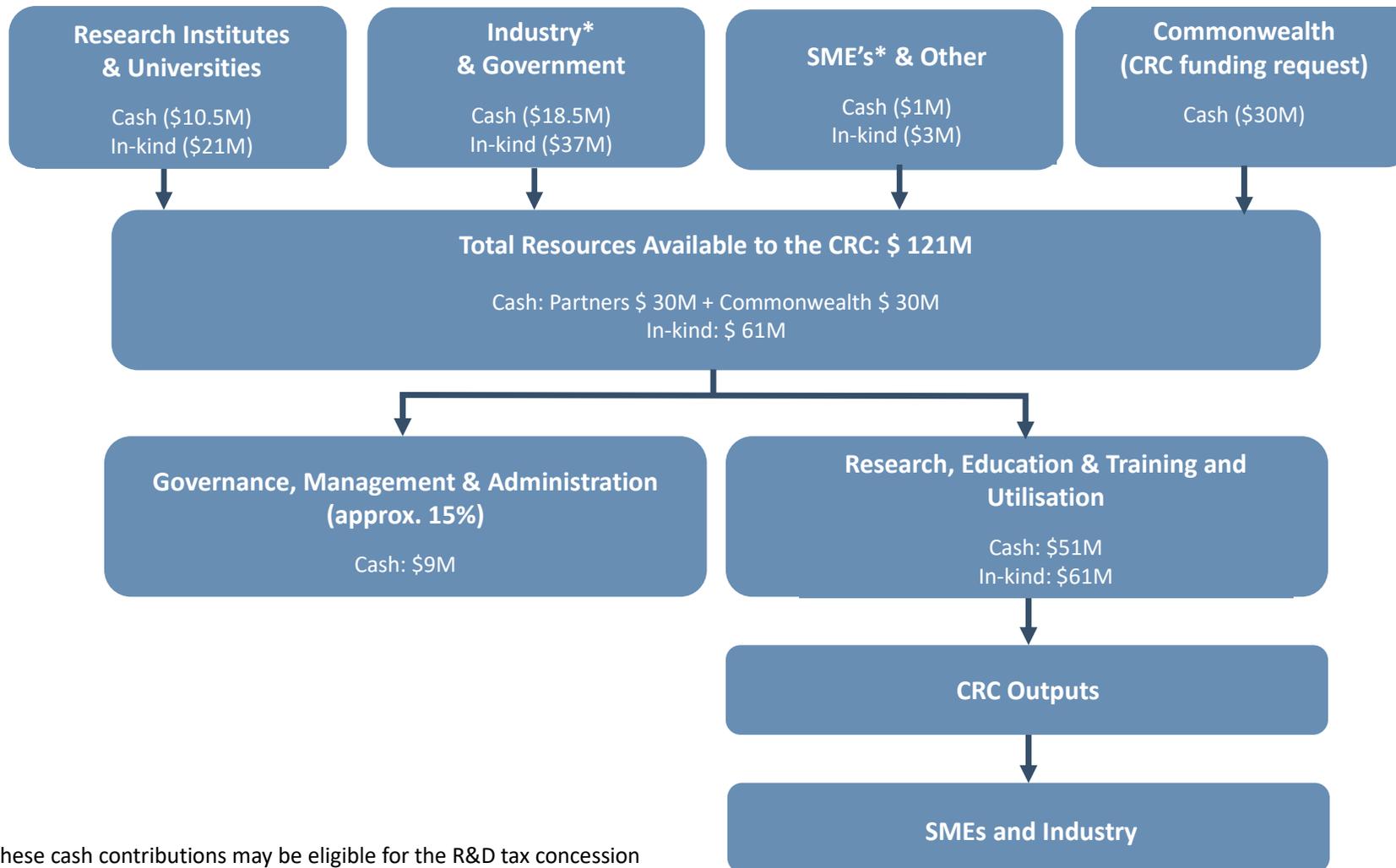
The recruitment of the Board Directors will be coordinated by a third party and managed by the Nominations, Remunerations and Performance Committee. The Board will be voted in by Core and Supporting Partners of the CRC at the inaugural annual general meeting. Core Partners will have 3 votes and Supporting Partners will have 1 vote. The Board will meet on a monthly basis for the first 6 months of the CRC before reverting to a quarterly meeting schedule.

Board Sub-Committees

- The Research Advisory and Commercialisation Committee
- The Partners Committee
- The Audit, Risk, Privacy and Finance Committee
- The Nominations, Remunerations and Performance Committee

The Sub-Committees will comprise of expertise from the Board, CRC Partners and independent experts, and will be responsible for providing expert advice and recommendations to the Board and CEO. Sub-Committee appointments will be for a one-year or two-year term.

Participation and Funding



*These cash contributions may be eligible for the R&D tax concession

Partner Categories

All partners must contribute to the CRC. Contributions made depend largely on the value of research sought and the rights partners seek from this research. Contribution tiers and benefits include:



Cash contributions of \$100k or above p.a.

- One project being undertaken at all times
- Rights to IP in relevant fields of use and geographies
- Technology transfer support
- Embedded PhD for entire CRC
- Nomination and 3 votes for Directors.
- Participation on sub-committees
- Lead pilot projects

Cash contributions of \$50k or above per year

- One priority project
- Rights to IP in relevant fields and geographies for priority project.
- Technology transfer support for priority project.
- One embedded PhD
- Nomination and voting rights for Directors.
- Lead priority project pilot

Cash contributions of \$10k or above per year

- Participation in research projects
- Rights to IP benefits in proportion to research contribution.
- Access to pilot projects
- Networks and branding

Cash contributions < \$10k per year and in-kind

- Inclusion in research
- Access to research outputs
- Networks and branding
- Input into CRC decision making

Partner benefits



Benefits	Tier 1 (+\$100k) Core Partner	Tier 2 (+\$50k) Supporting Partner	Tier 3 (+\$10k) Affiliate Partner	Tier 4 (in-kind) Associate Partner
Membership of CRC company	✓			
Nomination of Board Members	✓	✓	✓	
Voting Rights	✓ (3 votes)	✓ (2 votes)	✓ (1 votes)	
Representation on a Sub-Committee	✓	✓		
Priority research project guaranteed	✓ (entire CRC)	✓ (1 project)		
Access to priority pilot project and CRC facilities	✓ (entire CRC)	✓ (1 project)		
Commercial returns from priority project(s)	✓ (full)	✓ (full)	✓ (proportion)	
Input into decision making	✓	✓	✓	✓
Technology transfer support	✓	✓	✓	
Early awareness of emerging technologies	✓	✓	✓	✓
Linkages to research outputs and partners	✓	✓	✓	✓

Next Steps - Partner Pack



Forms for partners to complete and send back to us:

1. Partner Declaration

A declaration of intent by partners to confirm to the Commonwealth their intention to participate in the Thriving Coasts CRC should the application be successful. Refer CRC Program Fact Sheet for more information on the purpose of the declaration and the legal implications.

2. Partner Contribution Form

A form to confirm the participant's cash and in-kind contributions to the Thriving Coasts CRC. Jennifer's contact details are provided at the bottom of this form for any enquiries and support.

3. Partner Involvement Section

A Word version of the partner involvement section in the contribution form. Partners can return the partner involvement section in Word format if this is easier for them to type and manage the character count.

For reference only:

1. Information Brochure

A document providing information on Thriving Coasts CRC, its proposed research program and the bid development process.

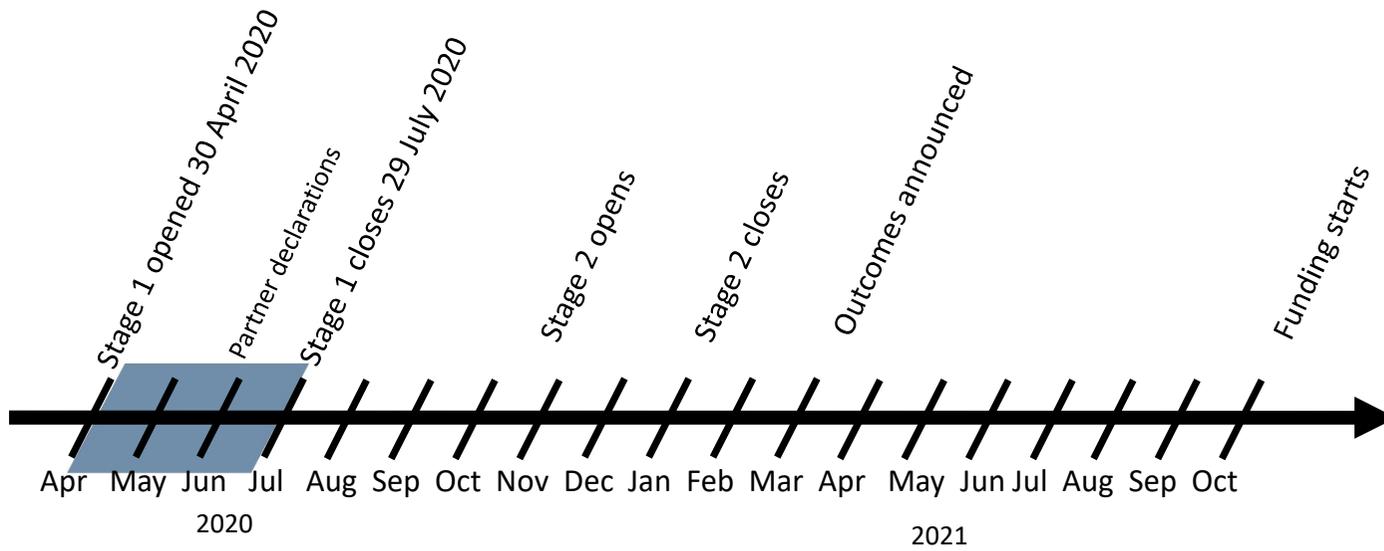
2. CRC Program Guidelines

Information on the operation and administration framework of the CRC program including funding rules and eligibility guidelines. As part of the declaration Partners will have to confirm they have read the Guidelines.

3. CRC Declaration Fact Sheet

Information Round 22 of the CRC program including, at the very end of the document, the purpose of the partner declaration and the legal implications.

Process and Timing



Contact details



- **Professor Paul Burton**
- Bid Director
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Please see our new website: www.thrivingcoastscrc.com