

# Establishing priorities for Australia's Coastal Research Infrastructure

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## CoastRI

Research Infrastructure connecting land and sea

Coastal Research Infrastructure (CoastRI) is an initiative of the National Collaborative Research Infrastructure Strategy (NCRIS)

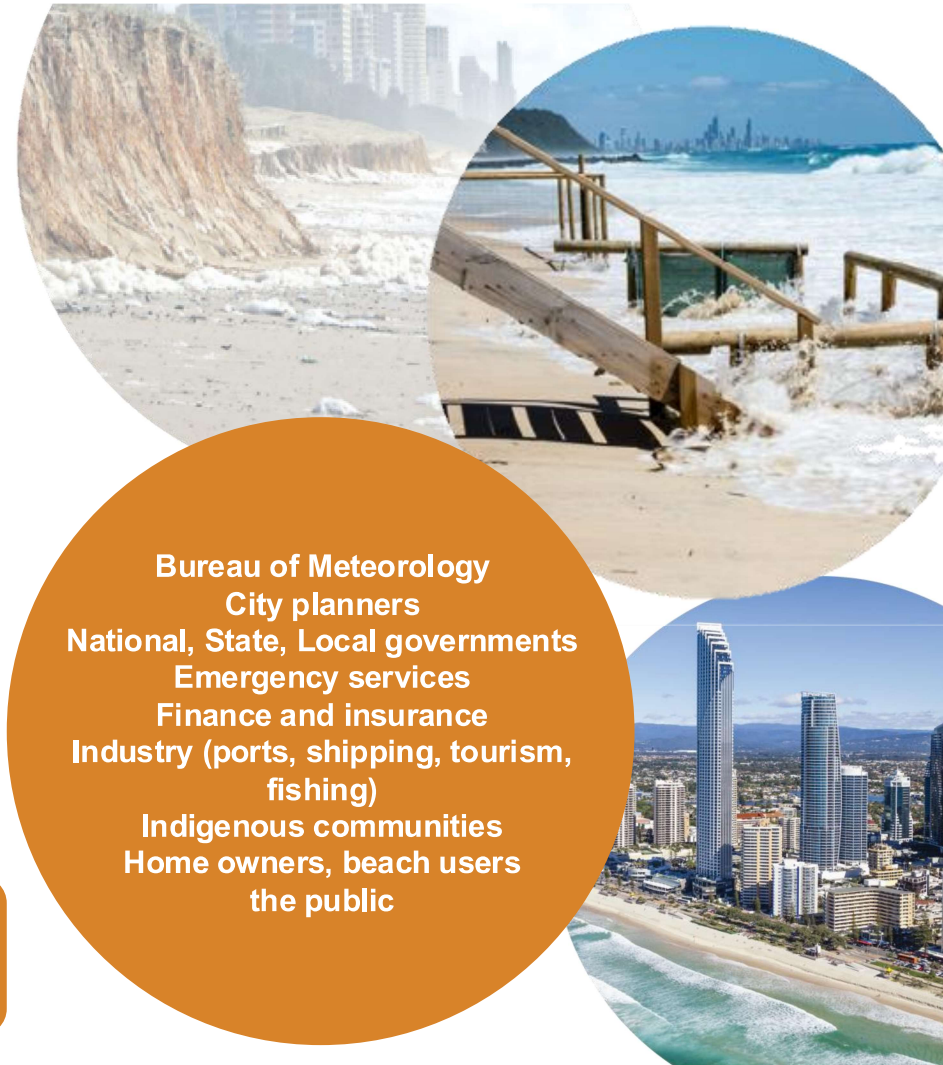


PIANC APAC 2024  
Sydney, 27-30 August 2024

# The Coastal Challenge

- Our climate and environments are changing at **unprecedented rates**.
- Over **50% of Australians live within 7 km of the coast** in addition to **billions of dollars of infrastructure**.
- To increase preparedness, sustainable use, and improve decision-making we **need more data to understand implications of change** to coastal areas.
- A broad suite of end-users **need data on coastal conditions and change**.

Australia lacks a national, cohesive approach to monitor, understand, predict, and adapt to these changes



Bureau of Meteorology  
City planners  
National, State, Local governments  
Emergency services  
Finance and insurance  
Industry (ports, shipping, tourism, fishing)  
Indigenous communities  
Home owners, beach users  
the public

# The Coastal Challenge

## Extreme coastal erosion prompts emergency demolition of Geraldton Marine Rescue building

ABC Midwest & Wheatbelt / By Piper Duffy, Francesca Mann, and Bransen Gibson

Posted Thu 13 Jun 2024 at 4:16pm



Coastal Risk



# Opportunities

A consortium of NCRIS capabilities is working to **establish national-scale coastal research infrastructure** to address these issues.

## CoastRI

Research Infrastructure Connecting Land and Sea



Proposed program for the 2024 NCRIS funding round

There is an opportunity to create societal benefit and impact for coastal populations through partnership and collaborative approaches

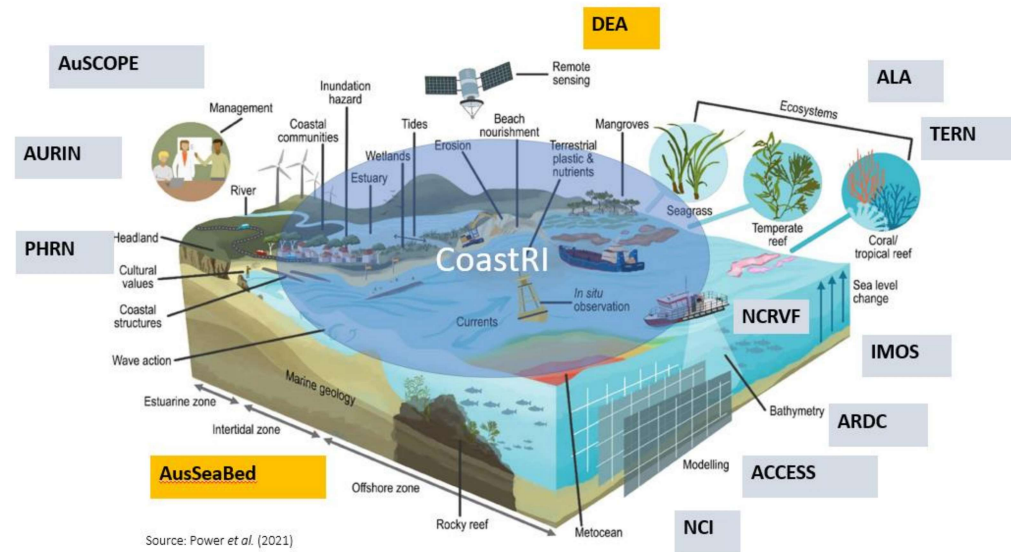


# Establishing a CoastRI

**Vision:** Research infrastructure connecting land and sea.

**Objective:** To gather comprehensive and integrated scientific data from diverse sources, enabling us to better understand, predict, and address the opportunities and imminent risks facing Australia's coast for all peoples.

Coastline monitoring is needed to answer critical questions about the future of Australia's coast



# Establishing a CoastRI



- Align with **NCRIS strategy** and strategic **national priorities**
- Creating a **national-scale step-change**
- Long-term, **sustained observations**
- **Collect new data and add value** to what is already being done
- **Avoid duplication** of effort/capability
- **Clear pathways to uptake and use of the data** to create impact
- **Benefits for multiple end-users or data uses**

## Challenges:

- Coastal erosion / change
- Implications of sea level rise
- Built environments resilience
- Impact of human activity on coastal regions

Observing coastal environments

Data management and integration

Predictive coastal modelling commons

Evidence-based coastal adaption and future proofing

## Users:

- Resource Managers
- Insurance Companies
- Planners

# Consultation

## Extensive consultation with end-users:

- **End-user driven** priority-setting process.
- **> 12 months of consultation:** online survey, various workshops, and in-person/virtual meetings.
- Identify areas where national-scale observation, data, and modelling gaps exist and there is an opportunity for national research infrastructure to create a **step-change** improvement in our understanding of coastal systems.

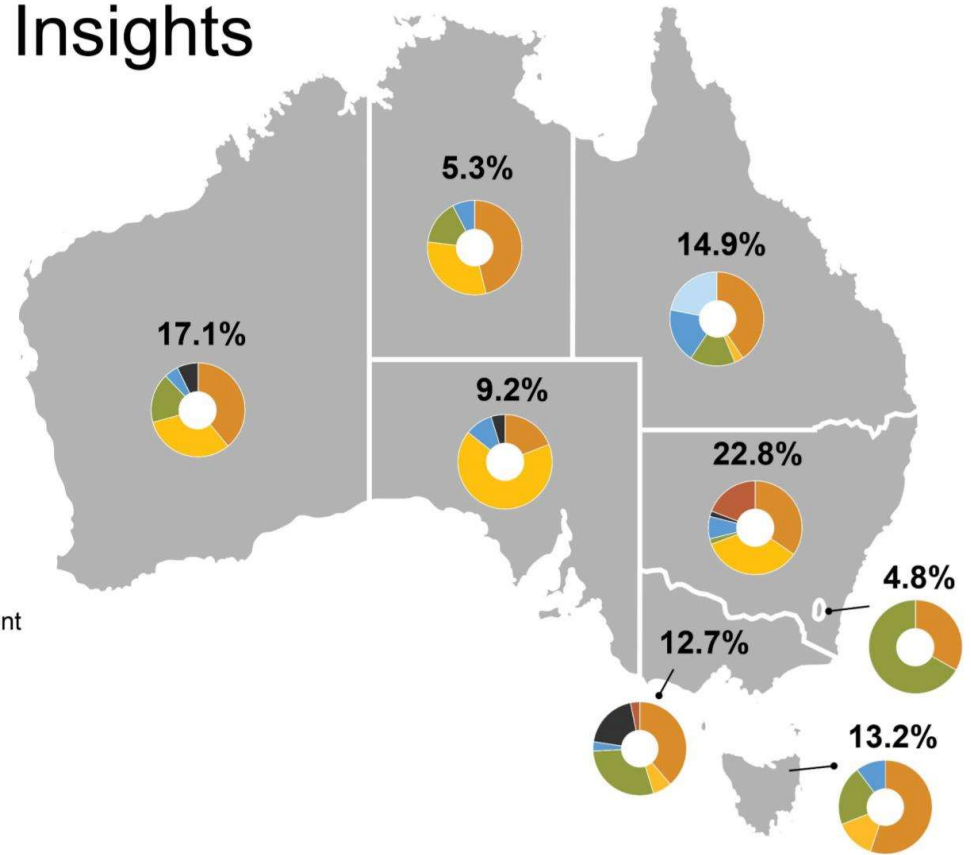
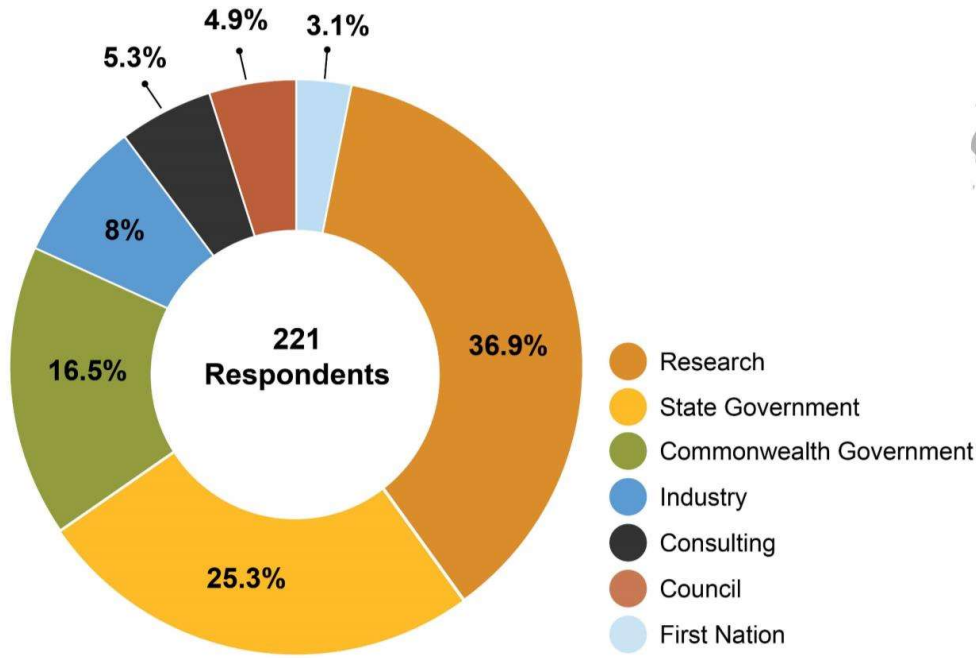
Consultation is ongoing and includes state and local government, industry, First Nations communities, and others.



# Consultation - Survey

## 2023 Consultation Survey Key Insights

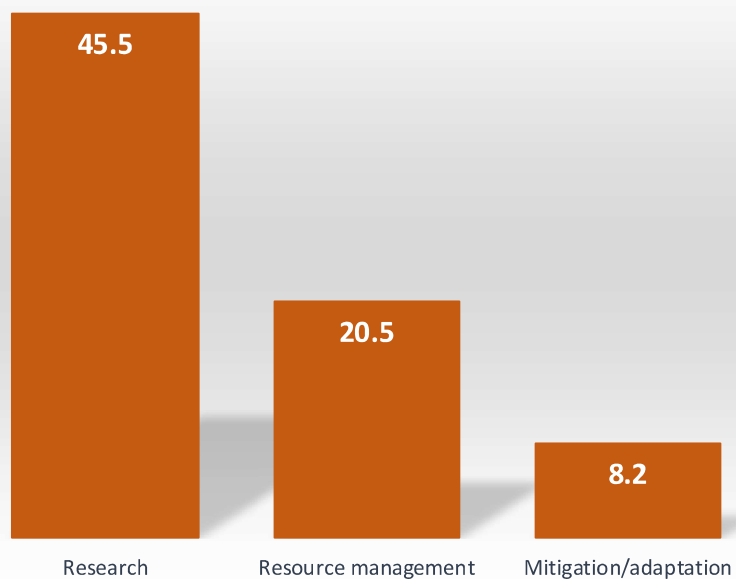
### Sectors and location of respondents



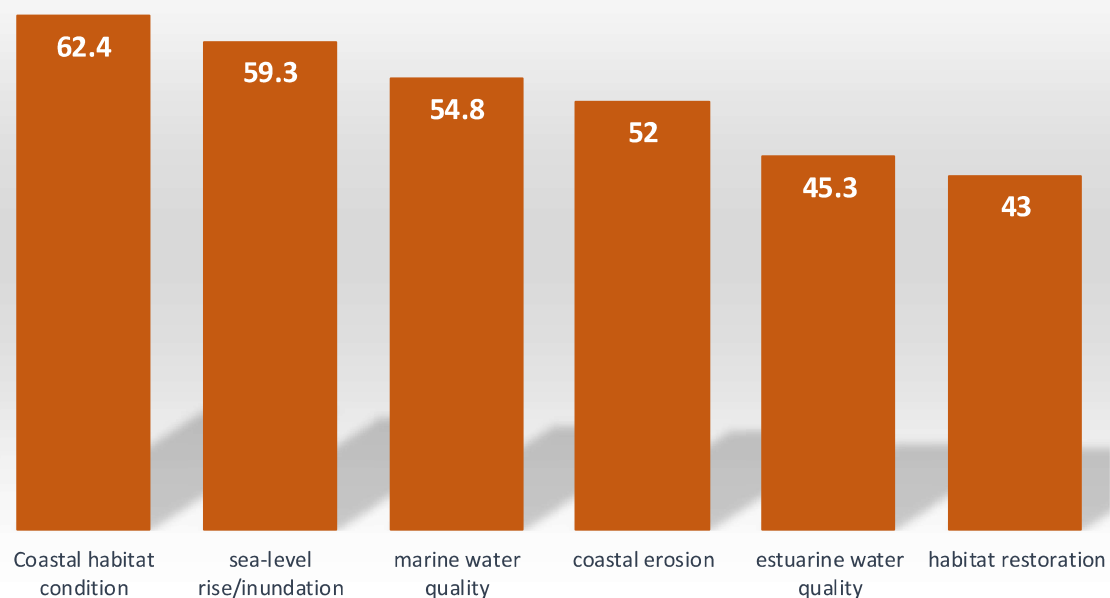


# Consultation - Survey

Primary area of interest/focus  
(% of respondents)



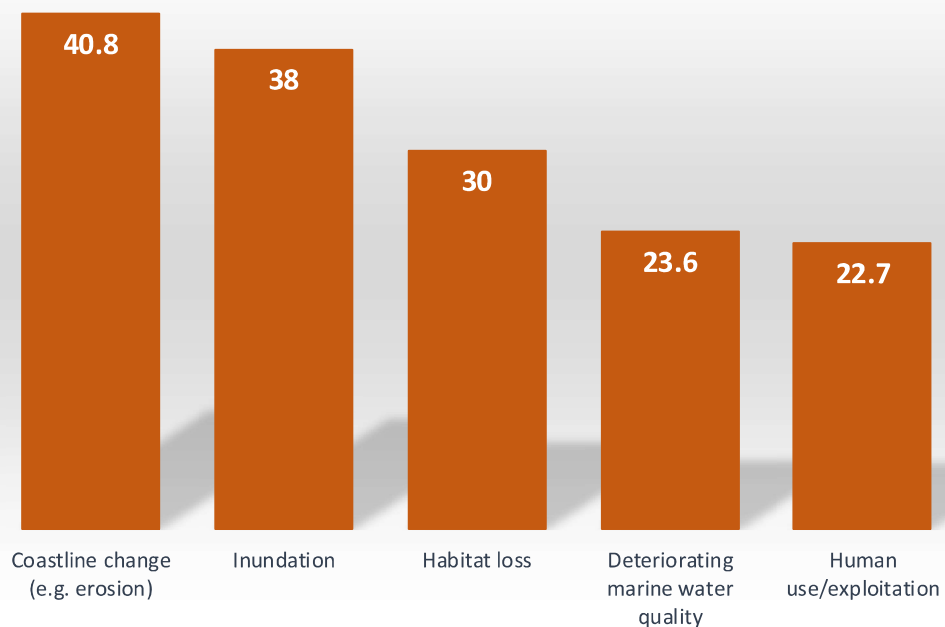
Coastal themes of interest  
(% of respondents)



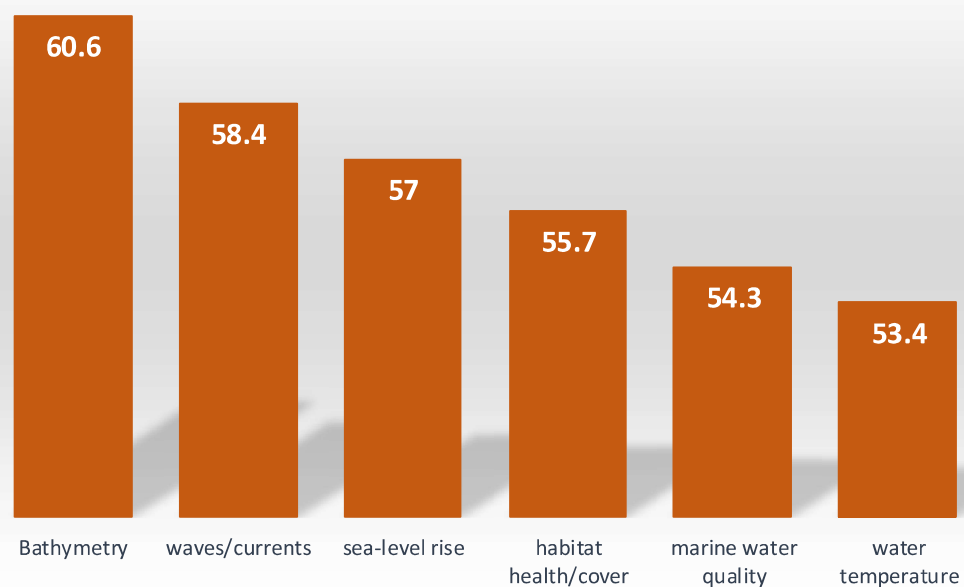
**NEEDS:** Water level and water quality within estuaries.

# Consultation - Survey

**Most pressing issues (ranked 1-2)**  
*(% of respondents)*



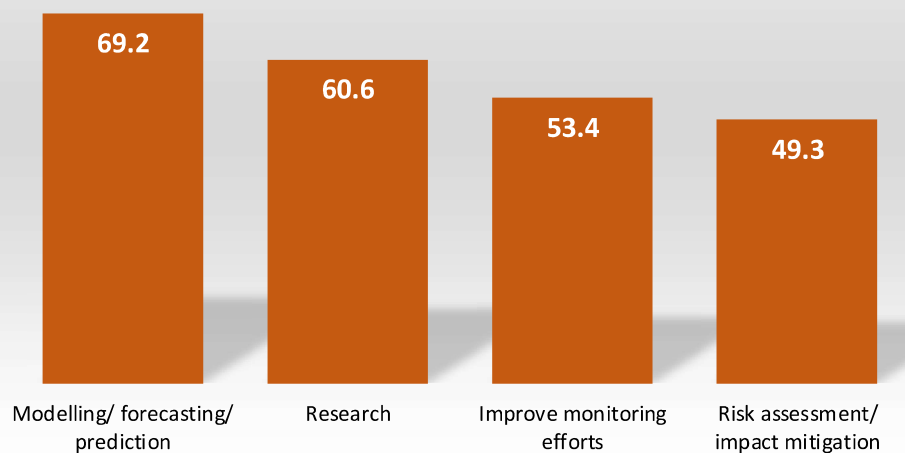
**Needed observation/information**  
*(% of respondents)*



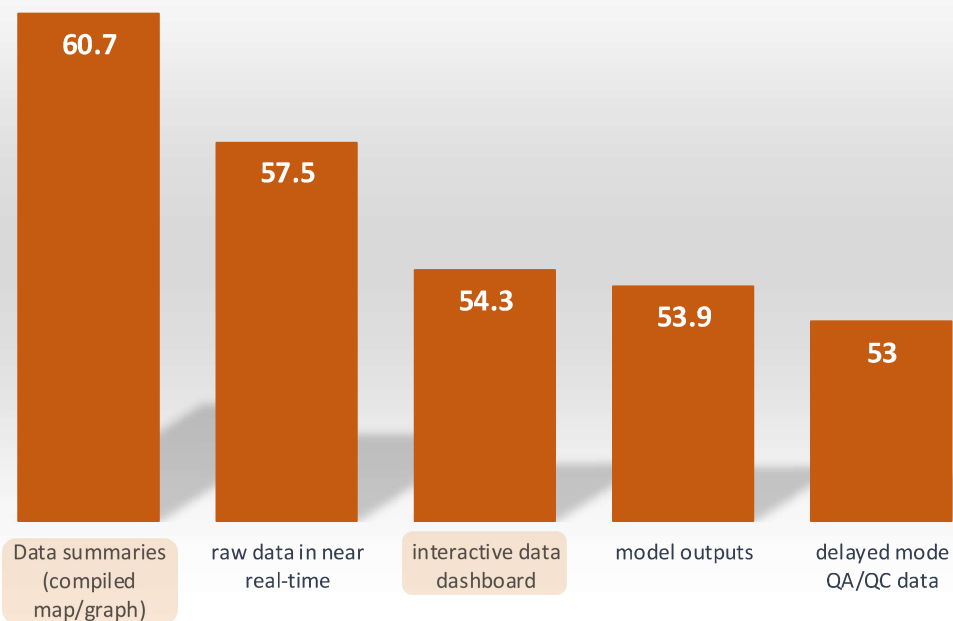
**NEEDS:** Collection and aggregation of existing data using standardised data formats

# Consultation - Survey

Why do you need this information  
(% of respondents)



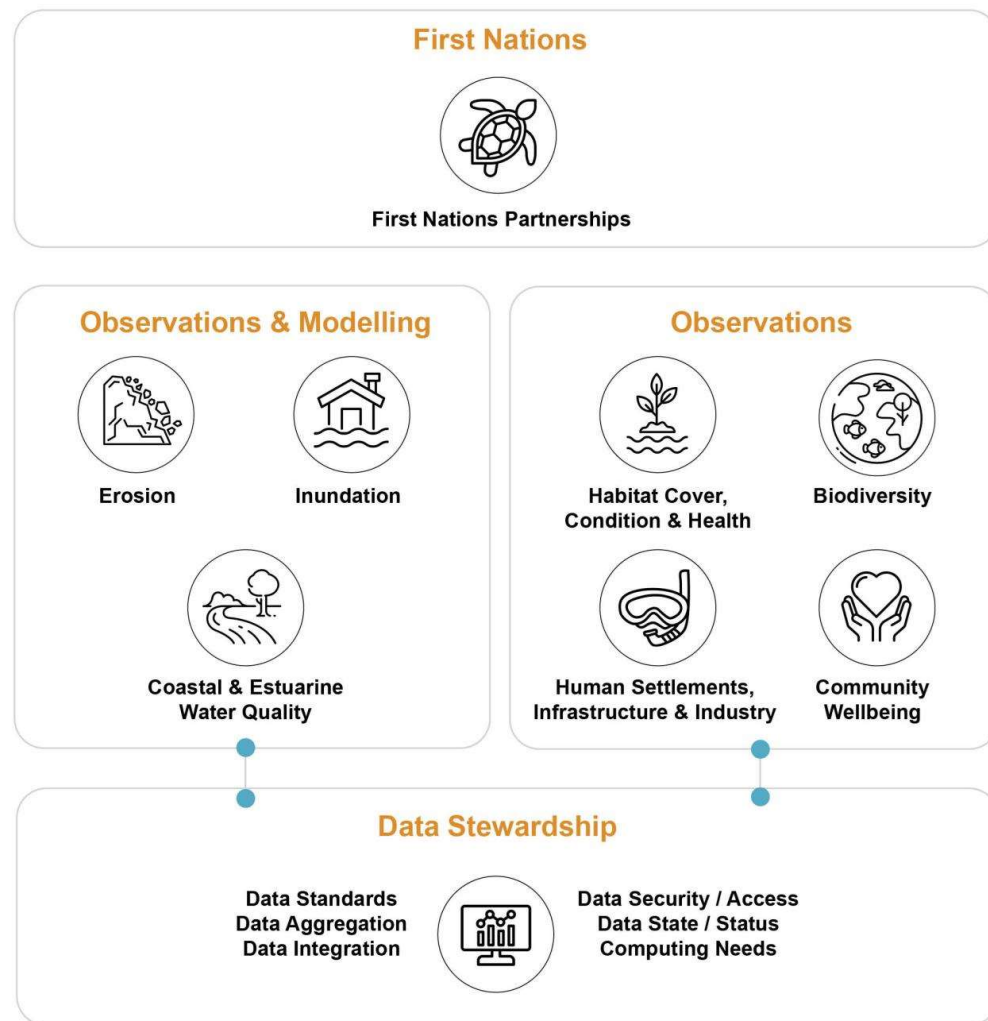
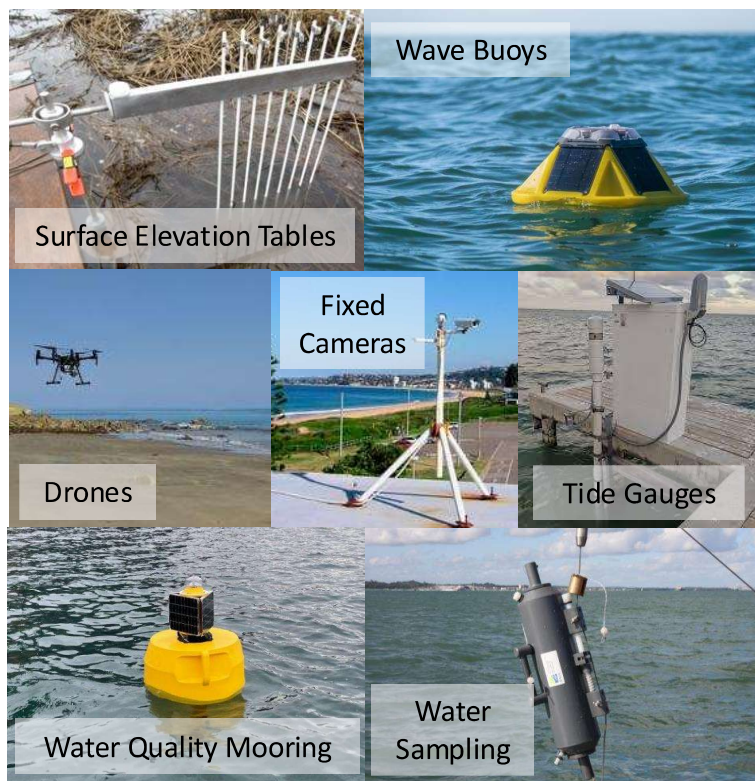
What format of data/information would you like?  
(% of respondents)



**NEEDS:** High-resolution, near real-time data streams for forecasting and prediction, and data products.

# CoastRI Elements

## Observations:



# Get Involved

## Opportunities for Partnership/Collaboration:

- Leveraging of existing activities
  - Consider **opportunities for linkage**, enhancement or **value-adding to existing programs** via CoastRI
- **Co-investment** (incl. data)

## Other Ways to Contribute

- Share your **expertise/experiences/knowledge**
- Help with **community building and co-design**
  - Provide names of key contacts in your Department or region who should be included in the CoastRI conversations



# Contact Us



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