



Climate change threats to mangrove and saltmarsh

Initiative 3

Online Forum - June 2021

Climate change threats to mangrove and saltmarsh

Project description

Identify mangrove/saltmarsh communities most at threat from SLR, and model areas of land suitable for retreat and those that should be prioritised for protection. Apply this information in decision-making.

Objectives:

- Use vulnerability assessment principles to prioritise estuaries and wetlands for detailed investigation and management
- Develop and apply bespoke models to identify and stress-test potential management actions to facilitate mangrove/saltmarsh adaptation to climate change



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Intended outcomes:

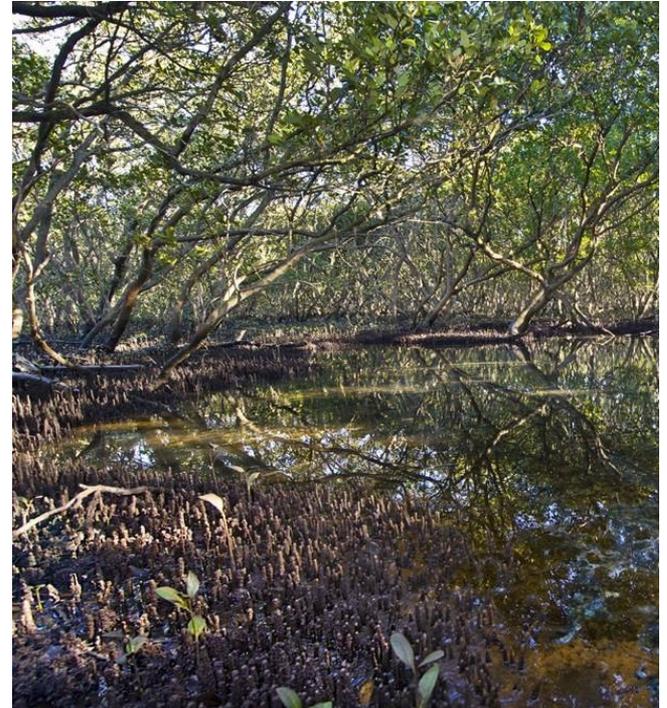
- Improved understanding of climate change threats to mangrove/saltmarsh across the NSW marine estate
- Prioritisation of estuaries and wetlands for detailed investigation and management
- Improved capability to plan for migration of mangrove/saltmarsh under SLR
- Improved capability to manage in situ protection of mangrove/saltmarsh under SLR



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Intended outputs:

- A state-wide, first-pass assessment of mangrove/saltmarsh response to sea level rise (only consider potential migration pathways)
- A targeted, second-pass assessment of mangrove/saltmarsh response to sea level rise (include CC impacts on catchment hydrology)
- A wetland (eco-morphodynamic) CC response model for identifying and stress-testing management options at an individual estuary and wetland scale
- Decision support tools



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Threats addressed:

Direct consideration of:

- Sea level rise
- Changing entrance and estuary hydraulics
- Climate change impacts on catchment hydrology

Indirect consideration of:

- Agricultural pressure
- Urban development
- Recreational activities



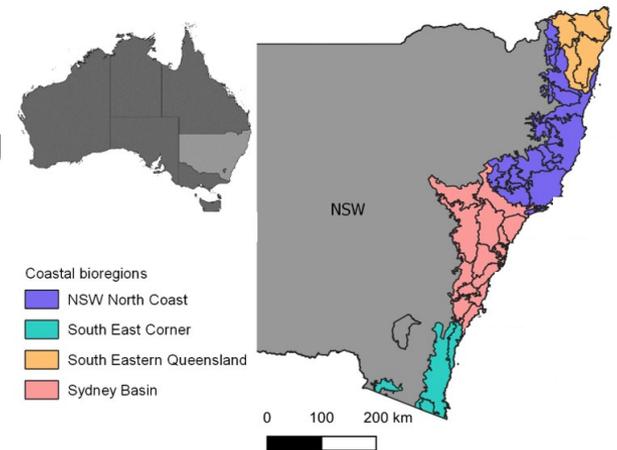
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Status of project:

- Commenced in MEMS Stage 2
- First-pass vulnerability assessment complete
- Currently finalising publication of underlying mapping from above

Current project locations

- First-pass vulnerability assessment is state-wide
- Future stages of the project will target examples of specific estuary types across the bio-regions
- Models and decision support tools will be developed to be suitable for all NSW estuaries



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Relevance to LG and CMPs:

- Nearly all mangrove and saltmarsh areas are mapped as part of the *NSW SEPP Coastal Management (2018)*
- All mangroves and saltmarsh areas are managed under the *NSW Fisheries Management Act (1994)*
- NSW coastal saltmarsh is listed as an EEC and protected under the *NSW Biodiversity Conservation Act (2016)*

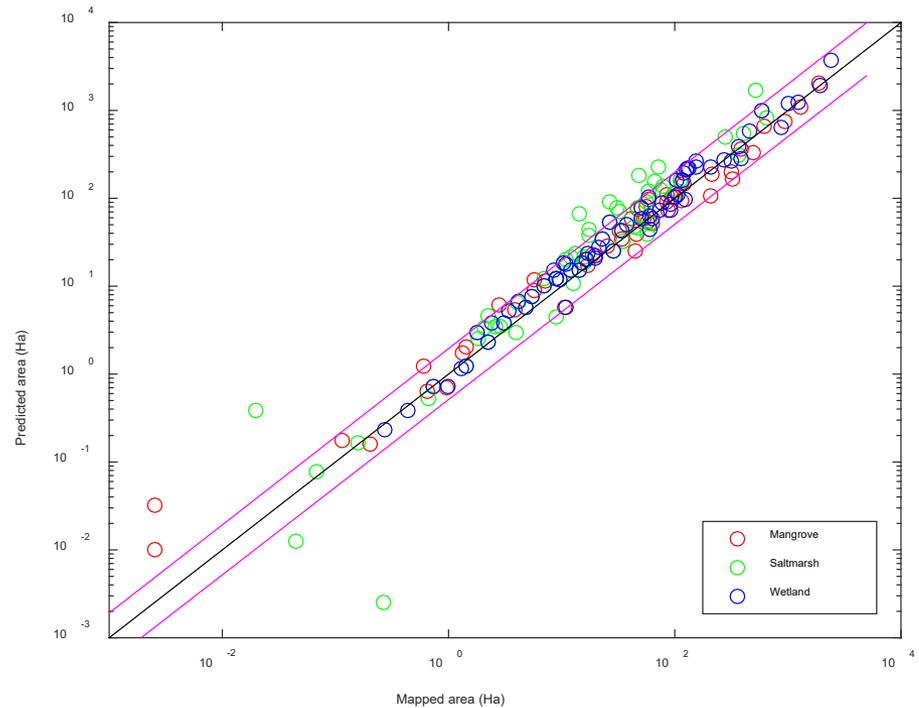


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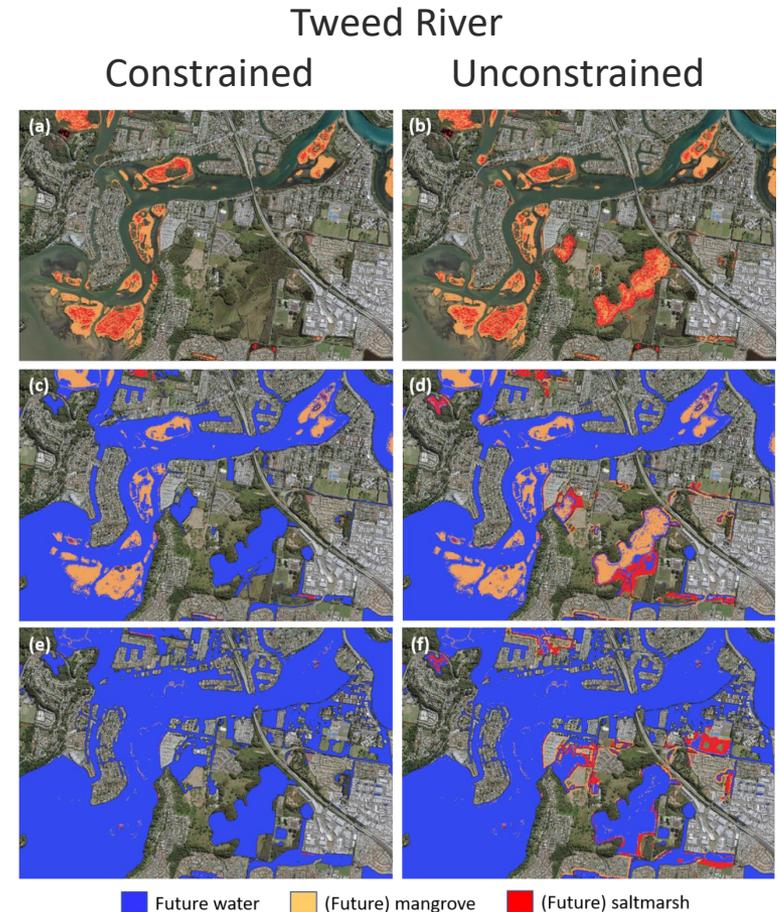
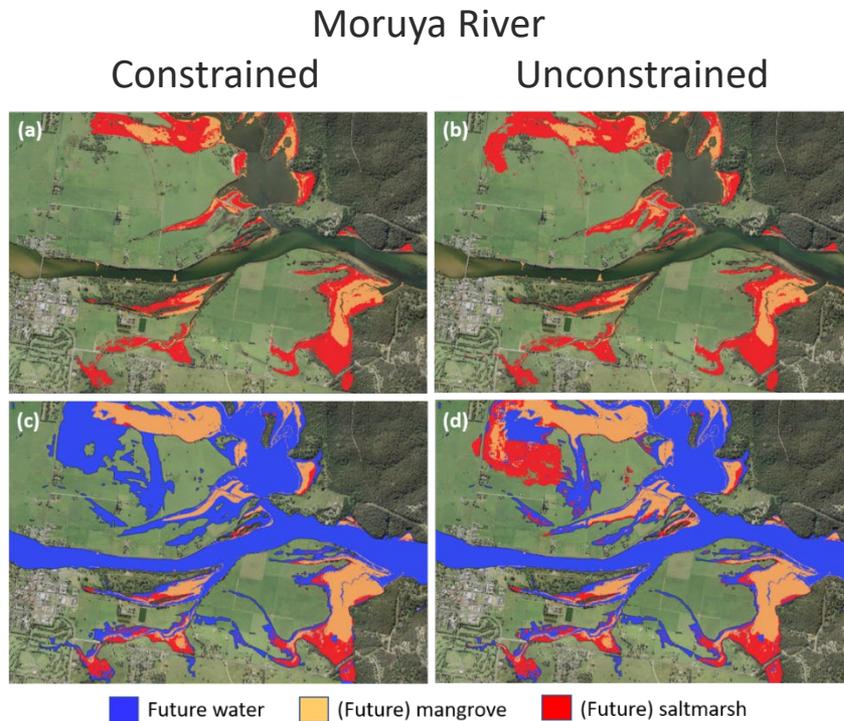
Mapped areas



Predicted areas



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Where to find out more

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Project profile page www.marine.nsw.gov.au

