



Towards continental-scale mapping of supratidal forests to support blue carbon initiatives for Australia

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Australia's coastal wetlands include a diversity of vegetation structures and compositions across intertidal and supratidal elevations. While there have been significant recent advances in continental-wide information on mangrove and saltmarsh, neighbouring supratidal forests represent a significant missing link in knowledge of the distribution of coastal ecosystems in Australia. Without the ability to classify supratidal forests using remotely sensed imagery, it is currently not possible to identify where this ecosystem exists across Australia or to track changes over time, including increases in extent from restoration projects. This knowledge gap impacts a range of end-users, including federal and state/territory government portfolios responsible for monitoring and managing coastal wetland sites across Australia. In addition, the Clean Energy Regulator and project developers require access to current and historic coastal wetland extent to track and report on changes of supratidal forest extent for new Blue Carbon methods under Australia's Emissions Reduction Fund. Access to publicly available, nationally consistent supratidal forest maps would further benefit coastal wetland managers, including state and territory governments, NRM groups and local councils across Australia.

We have developed an initial ecosystem extent workflow and associated maps of supratidal forest distribution, with the view to develop a continental scale national supratidal forest mapping workflow for Australia. This workflow and associated maps are based upon an emerging conceptual understanding of supratidal forest characteristics and biophysical drivers from multiple settings around the country. New field measurements will be used to calibrate and validate an improved workflow and national map products. The final outputs from this project will align with Australia's Ocean Accounts, providing a missing piece in national mapping and reporting on Australia's ocean-based natural assets. Addressing this data gap is crucial for effective management and protection of coastal wetland ecosystems and their associated services.