

# NSW DPI Estuarine Habitat Dashboard

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[www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au)

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## Estuarine Macrophytes in NSW



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## Threats to these habitats



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## Historical context

- Mapping
  - 1980s – Estuarine Inventory
  - 2000s – Comprehensive coastal assessment
  - Seabed mapping project
  - Numerous LGA projects
  - NSW MER
  - Marine Estate Management Strategy
    - Initiative 2

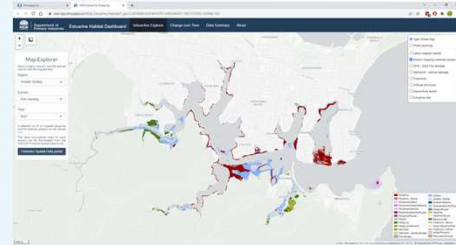


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## Need for the Dashboard

<https://bit.ly/3HP2KdH>

- Various reporting paths
  - State of Environment
  - Reports, Papers etc
- Fisheries Spatial Data Portal
- Dashboard
  - Complete historic dataset
  - Analysis of change
  - Overview of temporal change
  - Display all estuarine related habitat and disturbance data
  - Developed as a part of MEMS Initiative 2



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shinyapps.io | NSW Estuarine Mapping | nsw-dpi.shinyapps.io/NSW\_Estuarine\_Habitat/?\_ga=2.24746449.10.816416701.1645344507-1861175505.1628462147

Department of Primary Industries | Estuarine Habitat Dashboard

Map Explorer  
Select a region, estuary and the desired year to view the mapped data

Region: Greater Sydney  
Estuary: Tuggerah Lake  
Year: 2005

A detailed list of all mapped estuaries and the features present can be viewed here.  
The latest macrophyte maps for each estuary can be downloaded from the NSW DPI Fisheries Spatial Data Portal.

Fisheries Spatial Data portal

Department of Primary Industries

### Mapping the estuarine habitats of NSW

This dashboard compares the extent of mapped estuarine habitats in NSW over time since the 1990s. The habitats mapped include seagrasses, mangroves and saltmarshes. Other features including foreshore type and disturbances to habitats have been mapped in selected estuaries.

Mapping methods have changed considerably over time, leading to increases in accuracy and detail. Consequently some of the earliest maps may over- or under-represent habitat extent. Changes relatively to 1990 are indicative only and comparisons of time periods after 2000 are considered the most reliable.

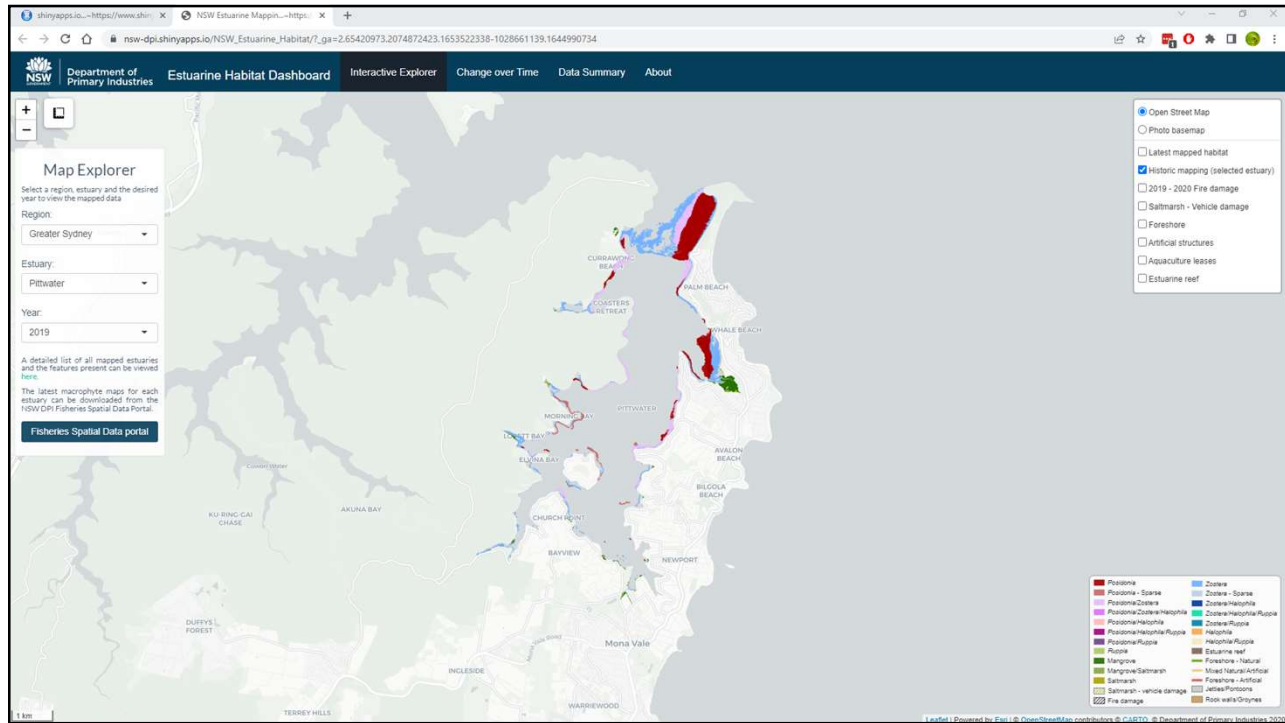
The extent of some seagrass species changes over short time periods meaning the most recent maps may not represent the current extent of all species in an estuary.

OK

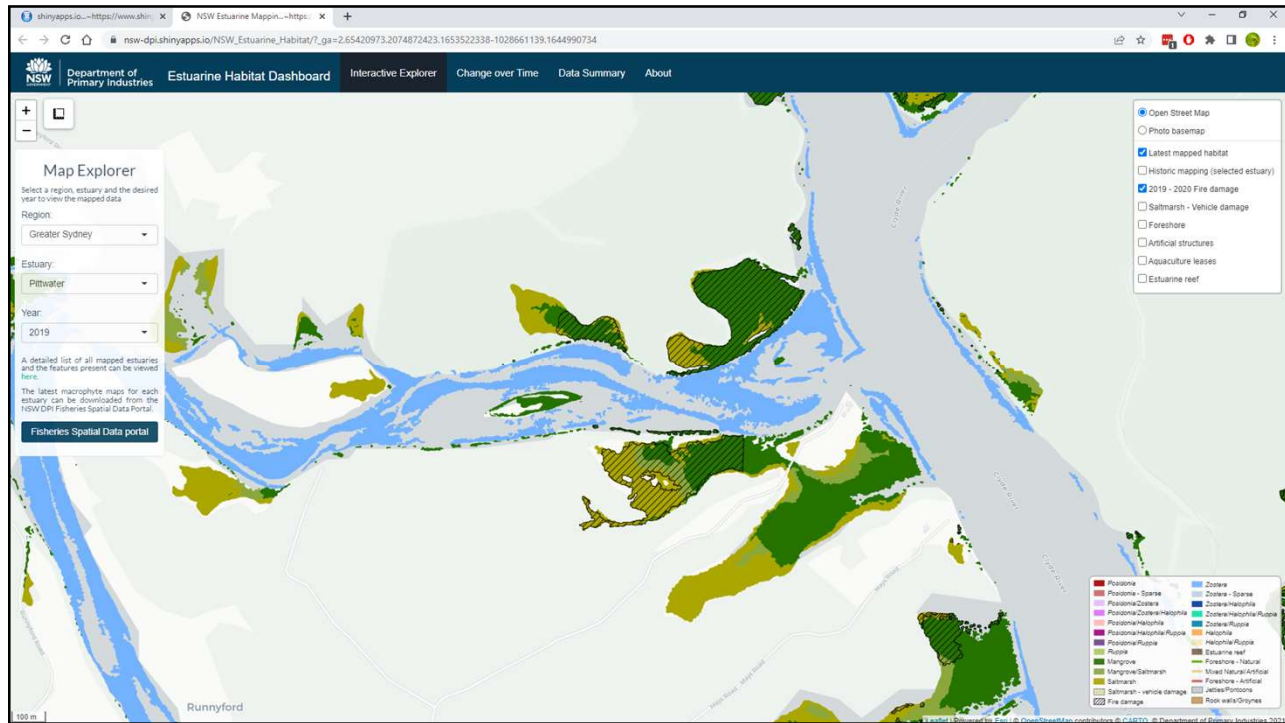
Open Street Map  
Photo basemap  
Latest mapped habitat  
 Historic mapping (selected estuary)  
 2019 - 2020 Fire damage  
 Saltmarsh - Vehicle damage  
 Foreshore  
 Artificial structures  
 Aquaculture leases  
 Estuarine reef

Legend (Powered by Esri) | © OpenStreetMap contributors | © CC-BY, © Department of Primary Industries 2019

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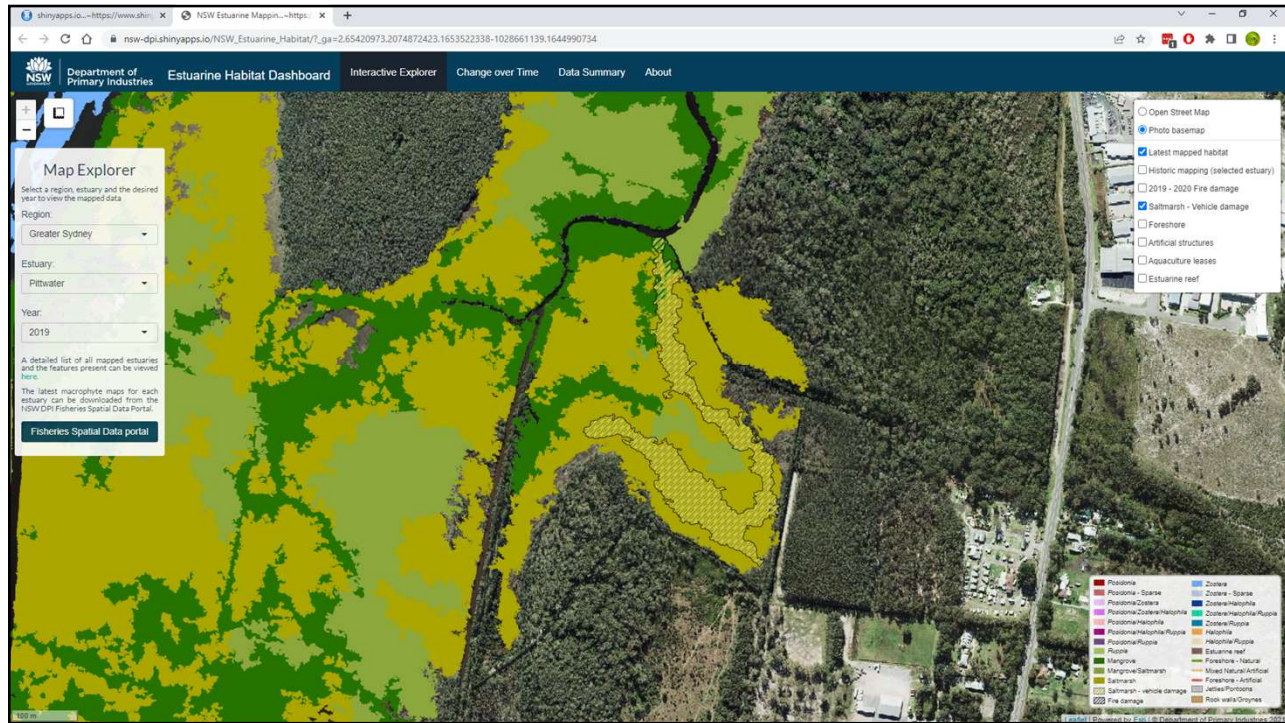


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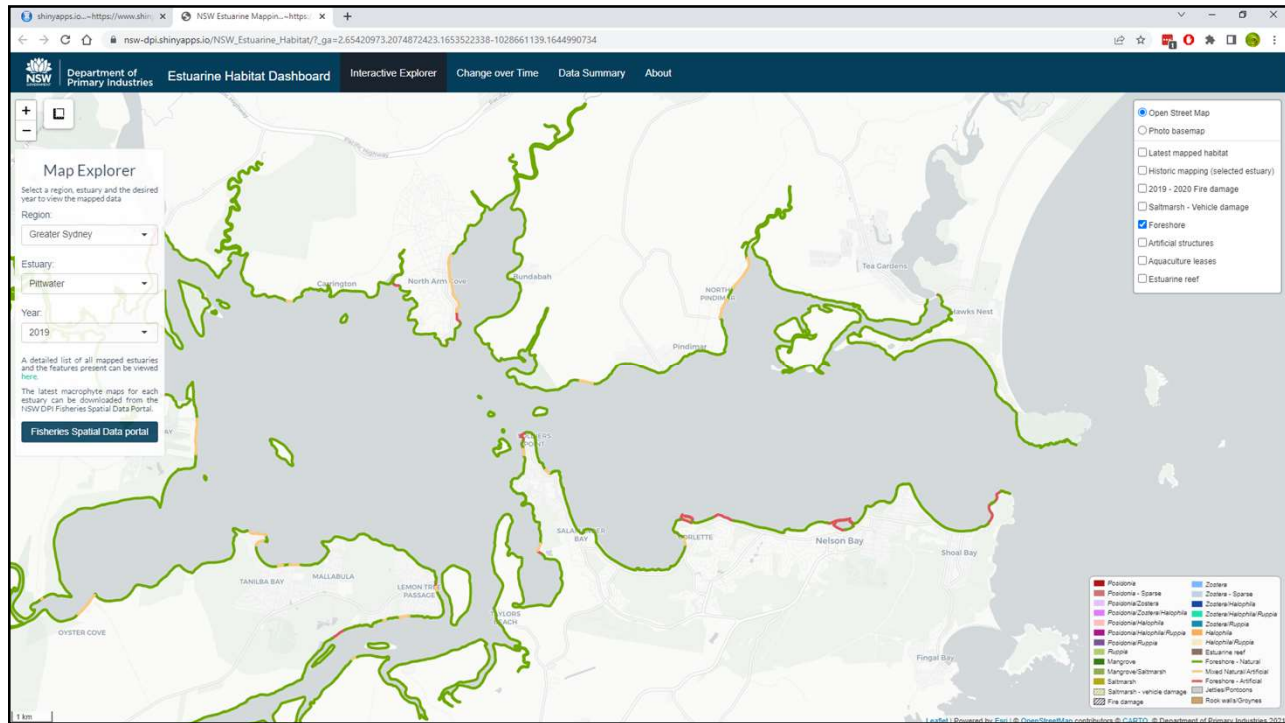


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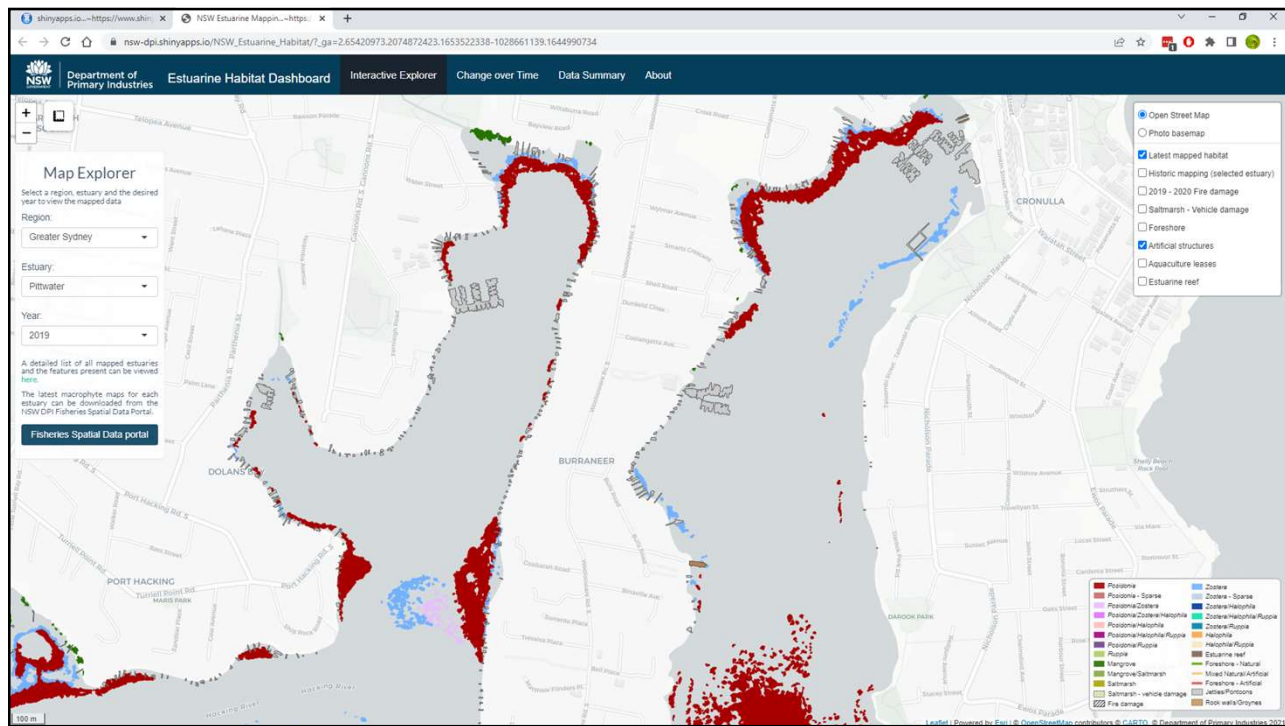




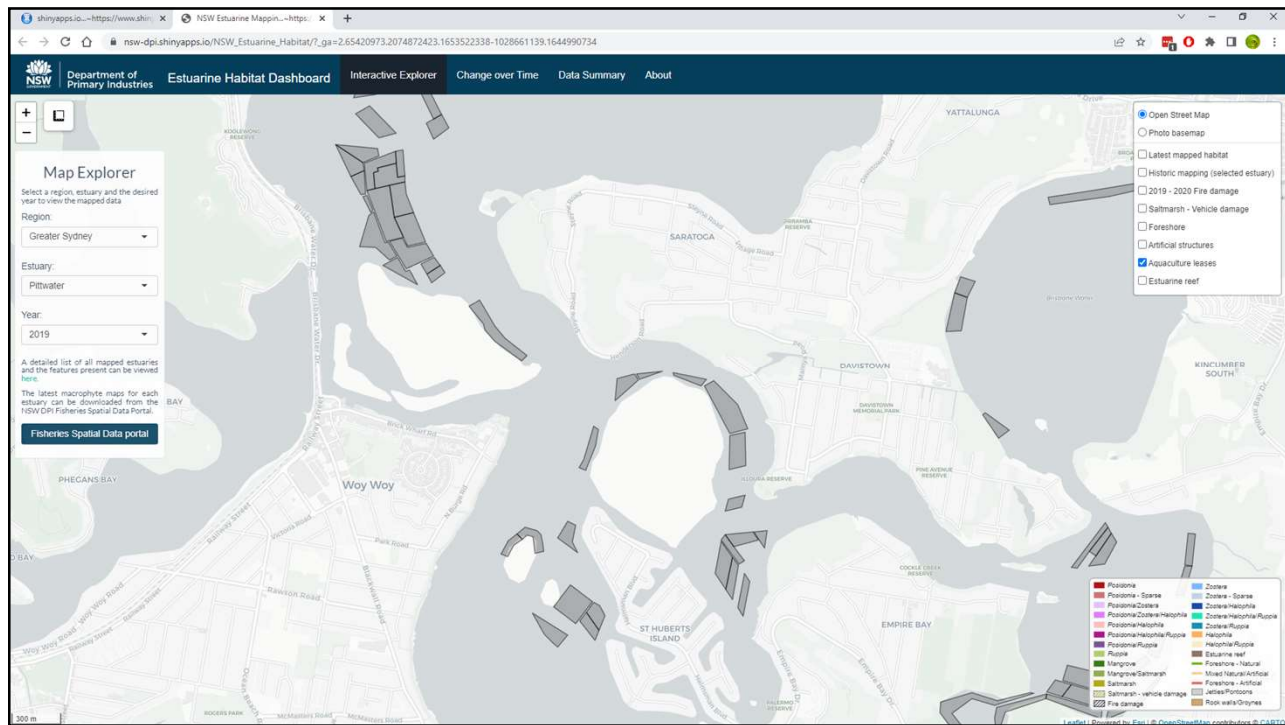
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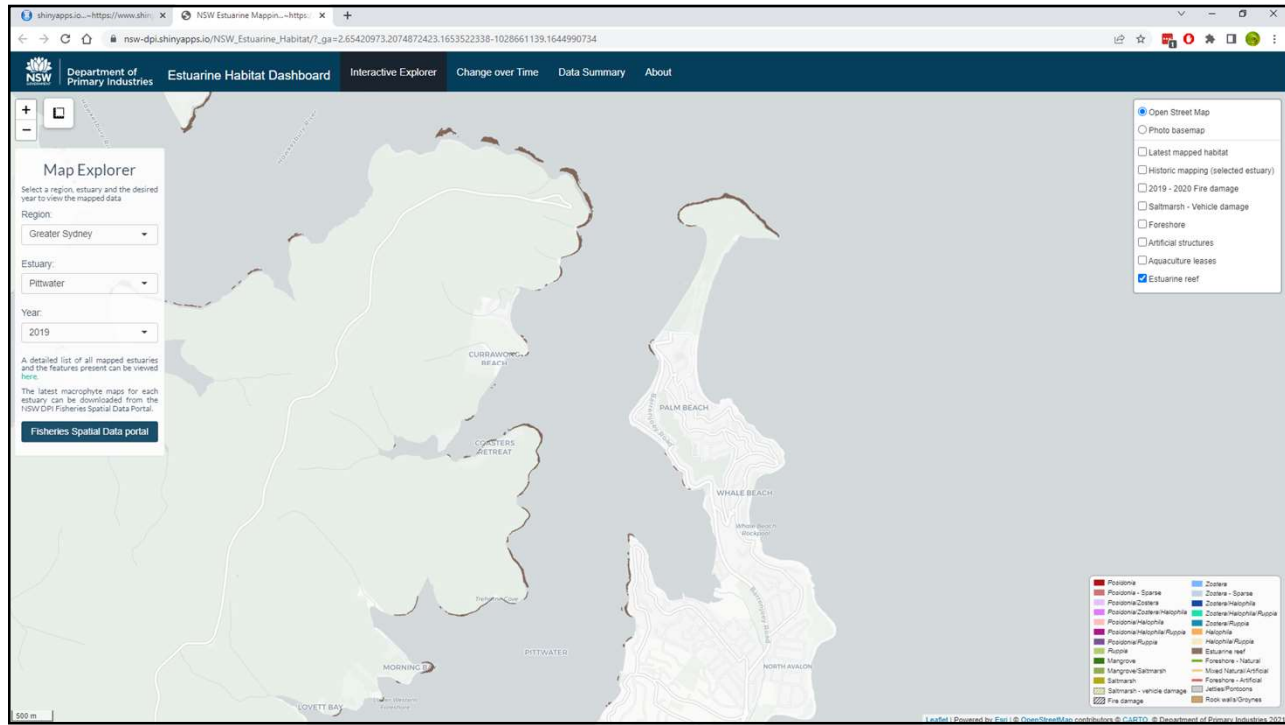


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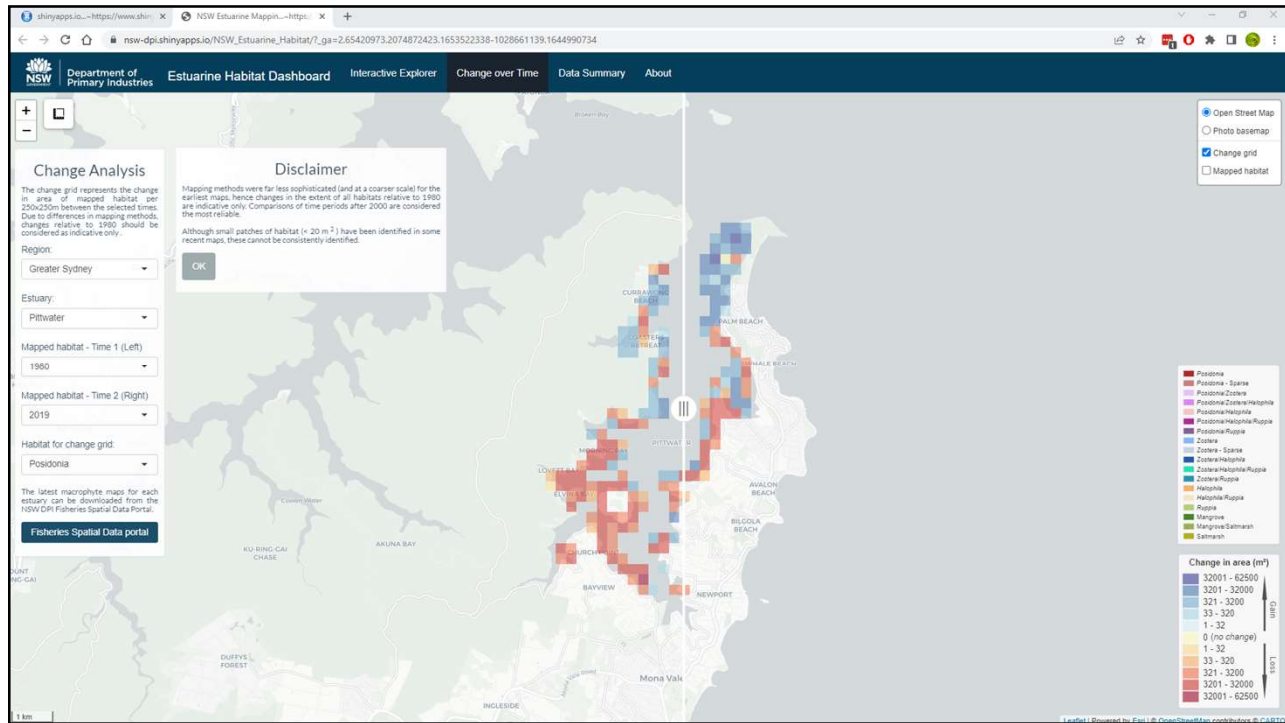


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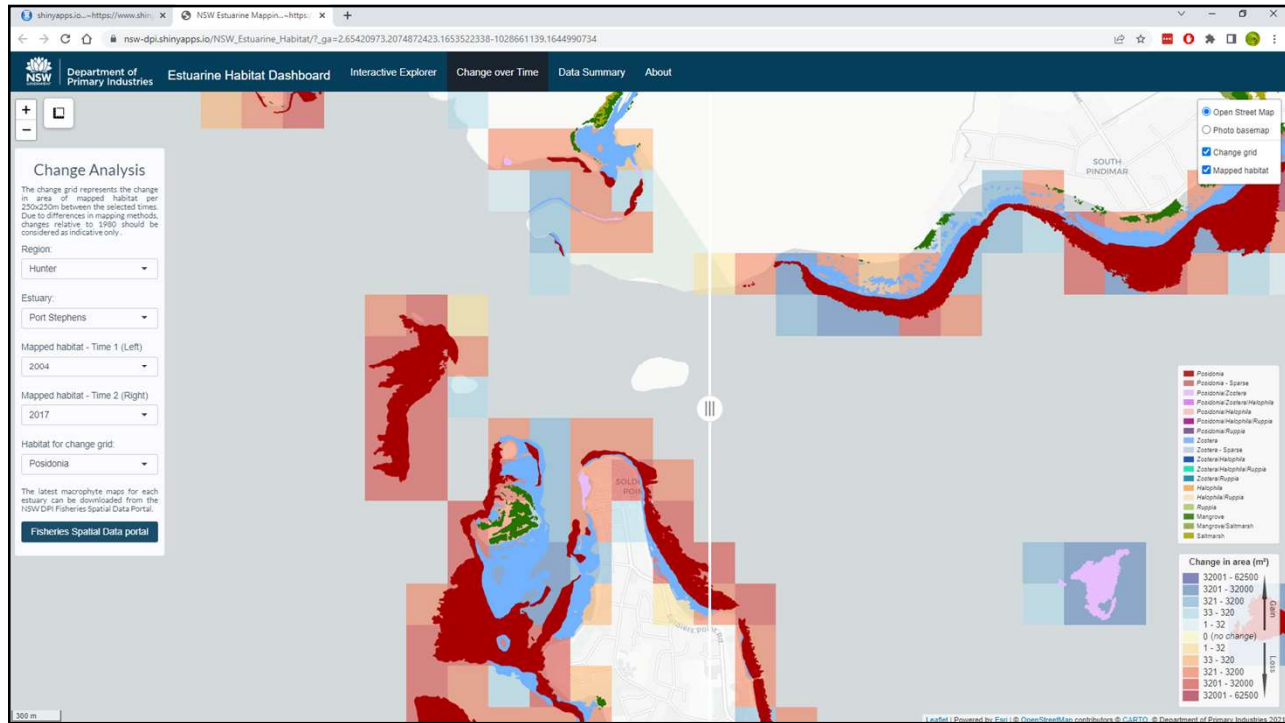




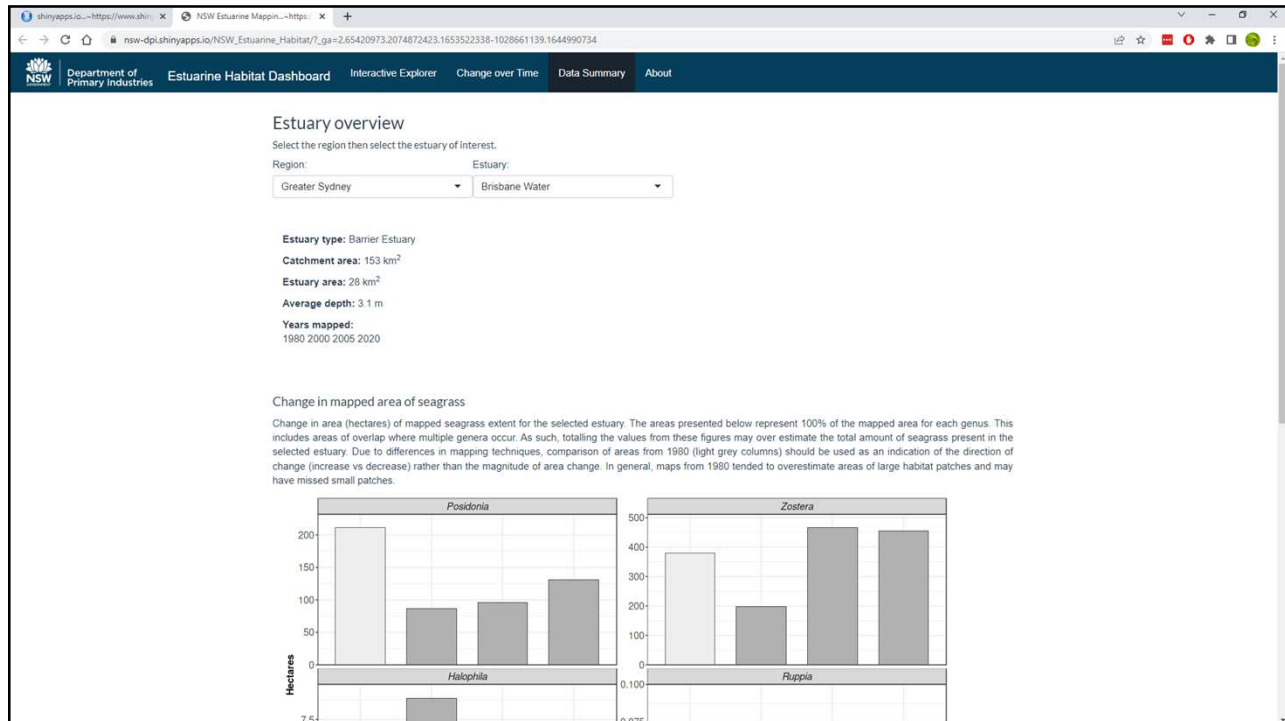
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Department of Primary Industries Estuarine Habitat Dashboard Interactive Explorer Change over Time Data Summary About

### Disclaimer

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### Overview

This website and the most recent maps were developed as part of the NSW Marine Estate Management Strategy (Initiative 2.5 'Delivering healthy coastal habitats with sustainable use and development'), which was funded by the NSW Government.

More details on the estuarine habitats of NSW can be found on the [NSW DPI Website](#).

A detailed list of all mapped estuaries can be viewed [here](#).

A full list of changes and updates to the dashboard can be viewed in the [Changelog](#).

Macrophyte maps for the latest time of mapping can be downloaded from the [NSW Fisheries Spatial Data Portal](#).

### Mapping Details

Methods used for mapping are described in [Creese et al. \(2009\)](#) and [West & Glasby \(2021\)](#). Mangrove and saltmarsh species have not been distinguished in these maps. Saltmarshes include the low-marsh species described in [Sainty \(2012\)](#) and exclude higher-marsh species such as *Phragmites australis* and *Baumea juncea*.

The 2019 - 2020 Fire Damage layer represents an estimate of areas of mangrove and saltmarsh damaged in affected estuaries due to the 2020 NSW bushfires. Imagery was sourced from Nearmap and fire damage was mapped using eCognition. The layer may contain omissions or additional damage not present. More details can be found [here](#).

Foreshore mapping was completed as part of the Mapping the habitats of NSW estuaries project. Details on the estuaries mapped can be found in [Creese et al. \(2009\)](#). Artificial structures (pontoons and jetties) and habitat disturbances are currently being mapped and will be updated when available.

### Acknowledgements

The data used here is derived from many decades of work by DPI Fisheries staff. The earliest macrophyte mapping project was led by Ron West and maps were created by Trudy Walford and Carol Thorogood. See [West et al. 1985](#).

Subsequent mapping projects were led by Rob Williams, Bob Creese, Greg West and Tim Glasby. We thank the many staff involved in producing these maps, including, but not limited to: Peter Gibson, Roger Laird, Isabelle Thiebaud, Brooke McCartin, Chris Gallen, Danielle Morrison, Joe Neilson and Trudy Walford.

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**Concept/design:** Tim Glasby & Greg West  
**Shiny App development:** Greg West & Joel Williams

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NSW Estuarine Habitat Dashboard - Overview of Estuaries

Below is an overview of estuaries mapped in NSW, the years mapped, and the features present are indicated by X. Years in blue are available for download from the [Fisheries Spatial Data Portal](#).

Region	Estuary	Years Mapped	Posidonia	Zostera	Halophila	Ruppia	Mangrove	Saltmarsh	Artificial structures	Fire damage	Saltmarsh damage	Foreshore	Estuarine Reef
North Coast	Tweed River	1980 2003		X			X	X					
North Coast	Cudgen Creek	1980 2003		X			X	X					
North Coast	Cudgera Creek	1980 2003		X			X	X					
North Coast	Mooball Creek	1980 2003		X			X	X					
North Coast	Brunswick River	1980 2004 2010		X			X	X					
North Coast	Belongil Creek	1980 2004					X	X					
North Coast	Tallow Creek	1980 2004						X					
North Coast	Broken Head Creek	1980 2004						X					
North Coast	Richmond River	1980 2004 2020		X			X	X	X		X		
North Coast	Evans River	1980 2004		X			X	X					
North Coast	Jerusalem Creek	1980 2004						X					
North Coast	Clarence River	1980 2004 2010		X	X	X	X	X					
North Coast	Cakora Lagoon	1980 2005		X			X	X					
North Coast	Sandon River	1980 2005		X			X	X					
North Coast	Woolli Woolli River	1980 2005		X			X	X					
North Coast	Station Creek	1980 2005					X	X					
North Coast	Corindi River	1980 2005 2011		X			X	X					
North Coast	Arrawarra Creek	1980 2005 2011		X	X		X	X					
North Coast	Darko Creek	1980 2005 2011			X		X	X					
North Coast	Woolgoolga Lake	1980 2005 2011					X	X					
North Coast	Hearns Lake	1980 2004 2011					X	X					
North Coast	Moonee Creek	1980 2004 2011		X	X		X	X					
North Coast	Coffs Harbour Creek	1980 2004 2011		X			X	X					
North Coast	Boambee Creek	1980 2004 2011		X	X		X	X					
North Coast	Bonville Creek	1980 2004 2011		X			X	X					
North Coast	Bellinger River	1980 2004 2011		X	X		X	X					
North Coast	Dalhousie Creek	1980 2004 2010		X	X		X	X					
North Coast	Oyster Creek	1980 2004					X	X					

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**LATEST UPDATES AND CHANGES**

## Changelog

- 1.0.5 (February 15th, 2022)

**ADDED** New mapping has been added for Macleay River, South West Rocks, Hastings River, Nambucca River, Port Hacking and St Georges Basin. This mapping includes up-to-date estuarine macrophytes, artificial structures and damage to saltmarsh.
- 1.0.4 (January 13th, 2022)

**UPDATED** Minor updates to the scale and measure tools in both the Interactive explorer and Change over time tabs, moved measure tool to top left near Zoom tool.
- 1.0.3 (January 11th, 2022)

**UPDATED** Updated the legend in the Interactive Explorer tab to include more classes and minimise overlap with map layer control
- 1.0.2 (December 14th, 2021)

**UPDATED** Updated the estuary mapping table and added the other mapped features including artificial structures and fire damage. The updated table indicates in which estuaries these features have been mapped. A link to this table has also been added to the left panel of the Interactive Explorer
- 1.0.1 (December 6th, 2021)

**ADDED** Added a link to a new [seagrass paper](#) on the About tab