

Girringun TUMRA Seagrass Update 2025

*Alex Carter, Douglas Bulmer, Shantaishe Congoo,
Jade Pryor, Lucas Langlois, Embla Settli and Rachel Groom*

Lucinda

Area 2025: 0.01 ha
Area 2024: 6.45 ha

Sites with seagrass
present: 15%
(84% in 2024)

Dugong feeding trails:
Absent

Severe decline

Cardwell

Area 2025: 4.98 ha
Area 2024: 6.11 ha

Sites with seagrass
present: 71%
(50% in 2024)

Dugong feeding trails:
Present

Stable

Meunga Creek

Area 2025: 9.6-10.0 ha

Sites with seagrass
present: 65%

% cover range: 2-35%

Dugong feeding trails:
Present

New site

Seagrass results explained

The 2024–25 wet season was the wettest in 12 years, with record rainfall in February 2025. Flood plumes reduced light and resuspended sediment around Hinchinbrook Island, suppressing seagrass. Satellite imagery shows the plume lingered longer near Lucinda than Cardwell and Meunga Creek, which is consistent with the greater decline there. The pattern at Lucinda mirrors losses recorded after Cyclone Yasi in 2011.

What this means for Country

Seagrass is an important value of the Girringun TUMRA. Dugongs, turtles, and fish depend on healthy meadows and are species of cultural importance to Djiru, Gulngay, Girramay, Bandjin, Warrgamay, and Nywaigi people. Where seagrass has declined, animals must travel further to forage, placing more pressure on remaining meadows such as those at Cardwell and Meunga Creek.

Reason for hope

Seagrass can and does recover. Large meadows remain at Cardwell and Meunga Creek, with dugongs still foraging. Seagrass has recovered before after Cyclone Yasi, and Lucinda still had some seagrass remaining in 2025. Continued monitoring means we can measure how long recovery will take.



How did we monitor seagrass in the Girringun TUMRA?

Girringun Rangers flew a DJI Mavic 3 Enterprise drone over meadows at low tide, capturing imagery. Images were stitched into orthomosaics and seagrass area was mapped by visual interpretation or machine learning. Spot-check images taken 1 m above the seabed confirmed species composition and cover at each site.