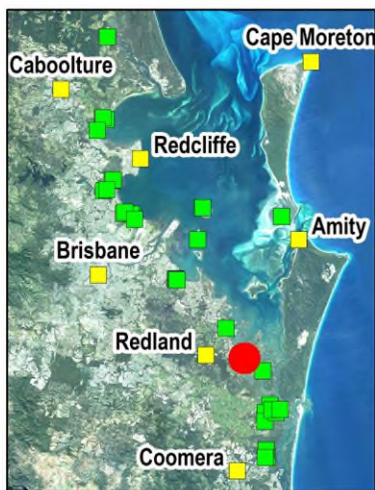
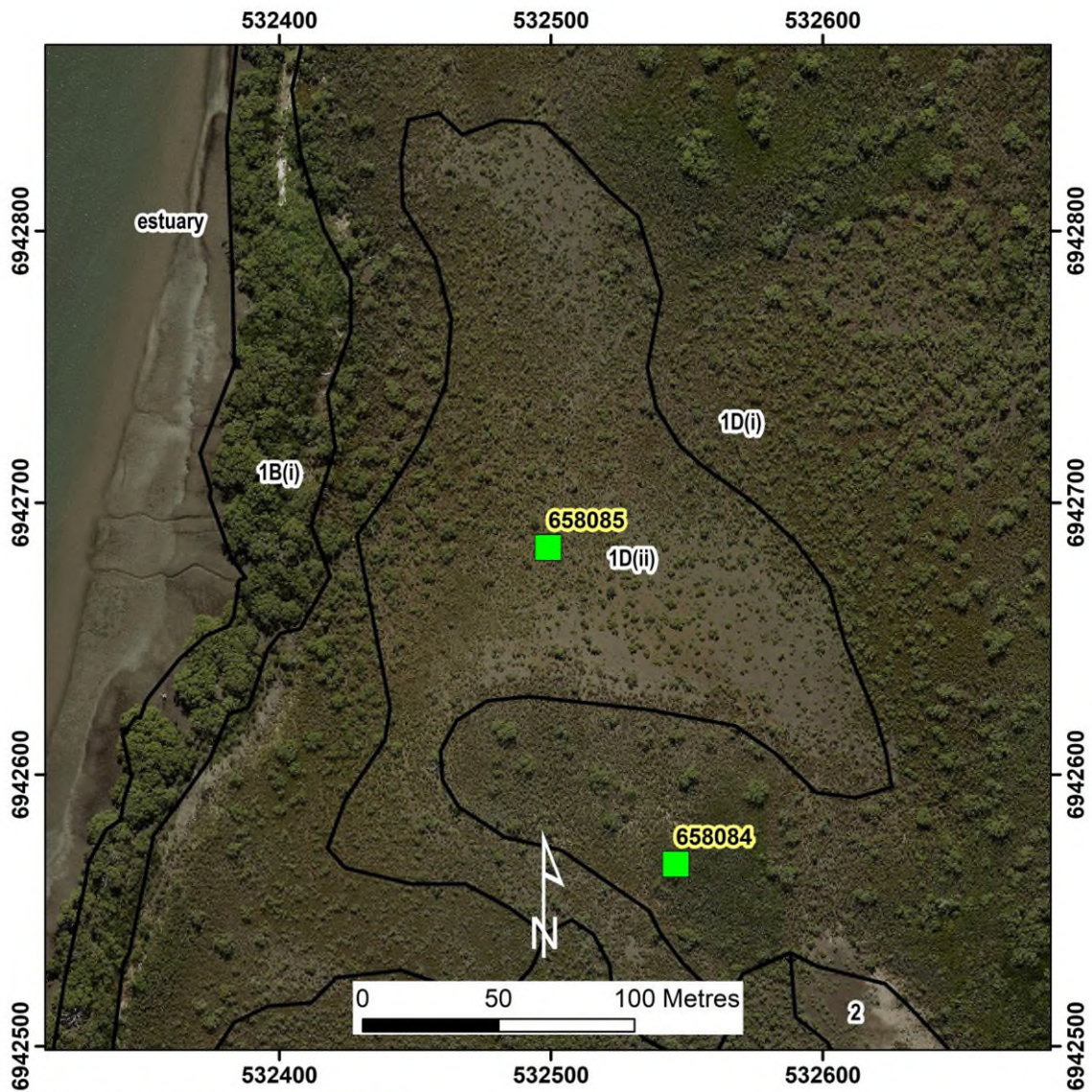


Pannikin Island (site ID = 658085) Low Shrubland



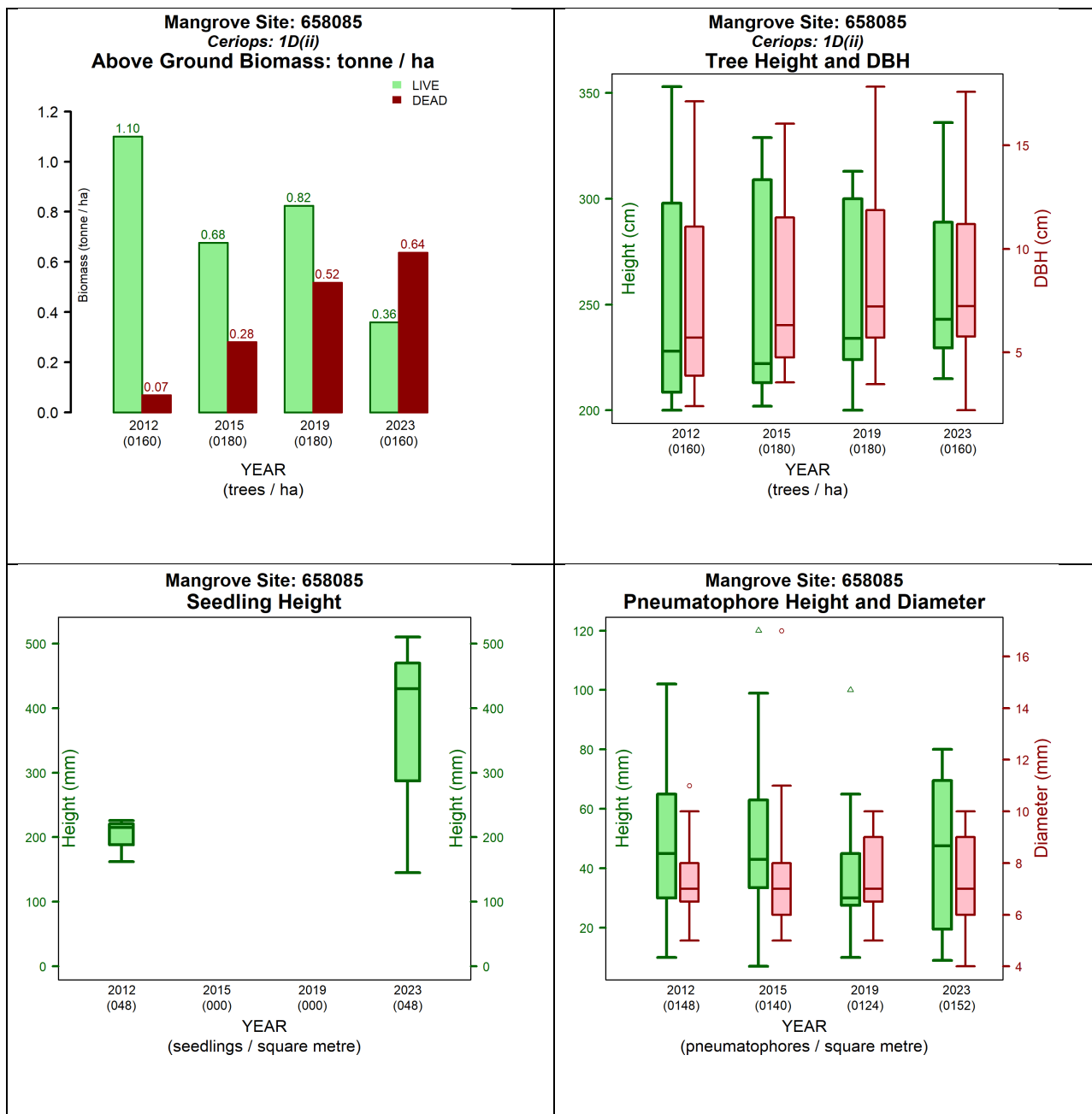


Figure 1. Measurements at site 658085 between 2012 and 2023 (left to right and top to bottom):

- Above ground biomass and density temporal assessment
- Tree height, diameter at breast height (DBH) and stem density temporal assessment
- Pneumatophores height, diameter, and density temporal assessment
- Seedling height and density temporal assessment.

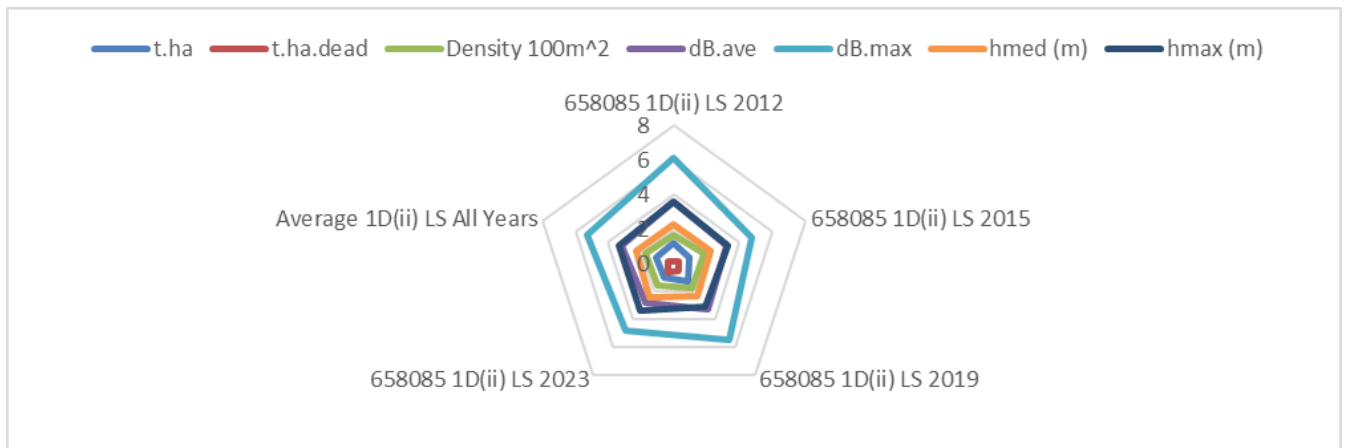


Figure 2. Structural changes over the years for Site 658085 in comparison to average of all sites of vegetation community type 1D(ii) by structural formations. The graph indices: t.ha is the live biomass (tonnes) in a hectare; t.ha.dead is the dead biomass (tonnes) in a hectare; Density 100m² is the number of trees in 100m square; dB.ave is the average diameter at breast height in centimetres; dB.max is the maximum diameter at breast height in centimetres; hmed (m) is the median tree height (meters); hmax (m) is the maximum tree height (meters).

Table 1. Queensland Biodiversity Ecological Information System (QBEIS) temporal assessment for site 658085.

Date	25.10.2012	8.10.2015	29.04.2019	01.03.2023
E Spp.				
T1 Spp.				
T1 Med Canopy Height				
T1 Range low				
T1 Range High				
T1 Crown Cover				
T1 Stem Count				
T2 Spp.				
T2 Med Canopy Height				
T2 Range low				
T2 Range high				
T2 Crown Cover				
T2 stem count				
S1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i>
S1 Med Canopy Height	3	3	3	3
S1 Range low	2.5	2.5	2.5	2.5
S1 Range high	3.5	3.5	3.5	3.5
S1 Crown Cover	8	9	8	13
S1 stem count	6	6	6	13
S2 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ;	<i>Avicennia marina</i> subsp.	<i>Avicennia marina</i> subsp.

			<i>australasica</i> ; <i>Dead tree</i>	<i>australasica</i> ; <i>Dead tree</i>
S2 Med Canopy Height	2	2	2	2
S2 Range low	1.5	1.5	1.5	1.5
S2 Range high	2.5	2.5	2	2
S2 Crown Cover	10	10	10	10
S2 stem count	252	42	42; 1	41; 2
G Spp.	<i>Ceriops australis</i> ; <i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Ceriops australis</i> ; <i>Avicennia marina</i> subsp. <i>Australasica</i> ; <i>Suaeda arbusculoides</i>	<i>Ceriops australis</i> ; <i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Ceriops australis</i> ; <i>Avicennia marina</i> subsp. <i>australasica</i>
G Med Canopy Height	0.8	0.8	0.8	0.8
G Range low	0.3	0.3	0.2	0.2
G Range high	1.5	1.5	1.5	1.5
G Cover	30	30	30	25
Individual Covers	20, 10	20, 10, +	20, 10	20; 5

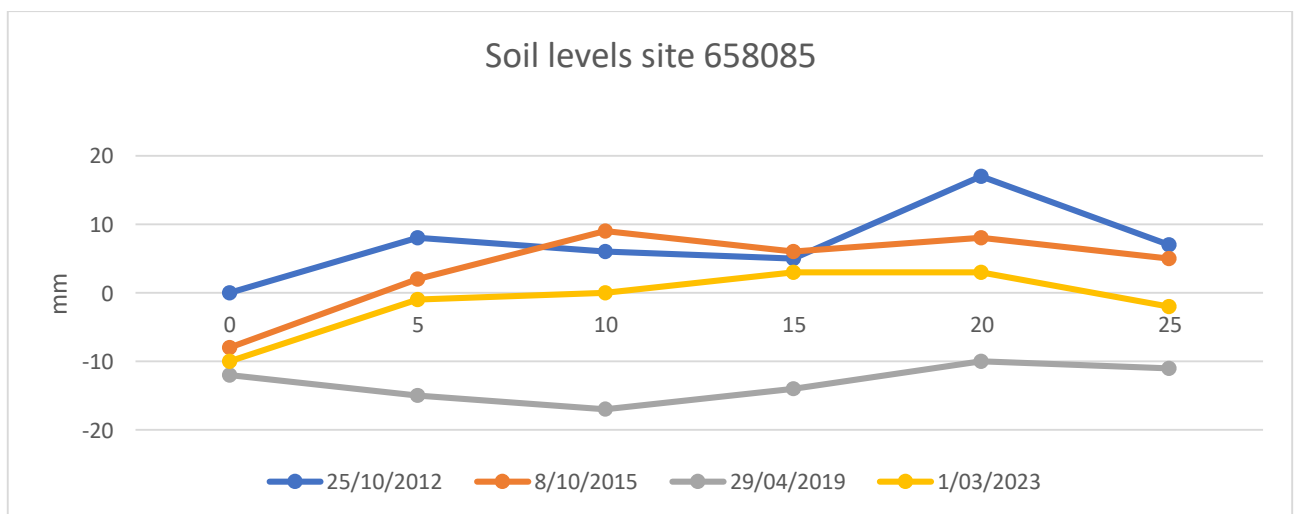


Figure 3. Soil surface elevation measurements (mm) are taken across the QBEIS sites using dumpy level.

Summary

1. S1 and S2 layers with *Avicennia marina* subsp. *australasica*; ground layer with *Ceriops australis* and *Avicennia marina* subsp. *australasica*.
2. S1 shrub heights and cover are stable; S2 shrub heights and cover are stable while stem count largely reduced; ground cover and height and cover are stable.

3. Mean tree height and mean DBH have slightly increased. Densities have increased by 12.5% leading to an increase of 14.7% in above ground biomass in the site.
4. Increase (from 5.8% in 2012 to 64% in 2023) of the proportion of dead to live biomass within the site.
5. Pneumatophores reduced in mean height and in range while mean girth remained stable but increased in range over the years.
6. Seedlings have been recorded only in 2012 and 2023 in the quadrats but are present during all years across the site.
7. Soil max range level reduced by 10mm to 7mm with erosion of up to 13mm
8. Soil levels over the period have eroded.



Figure 4. Photograph of Site 658085 *Ceriops australis* community type 1D(ii) Low Shrubland.