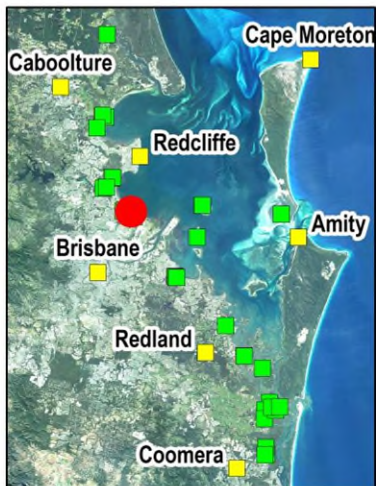
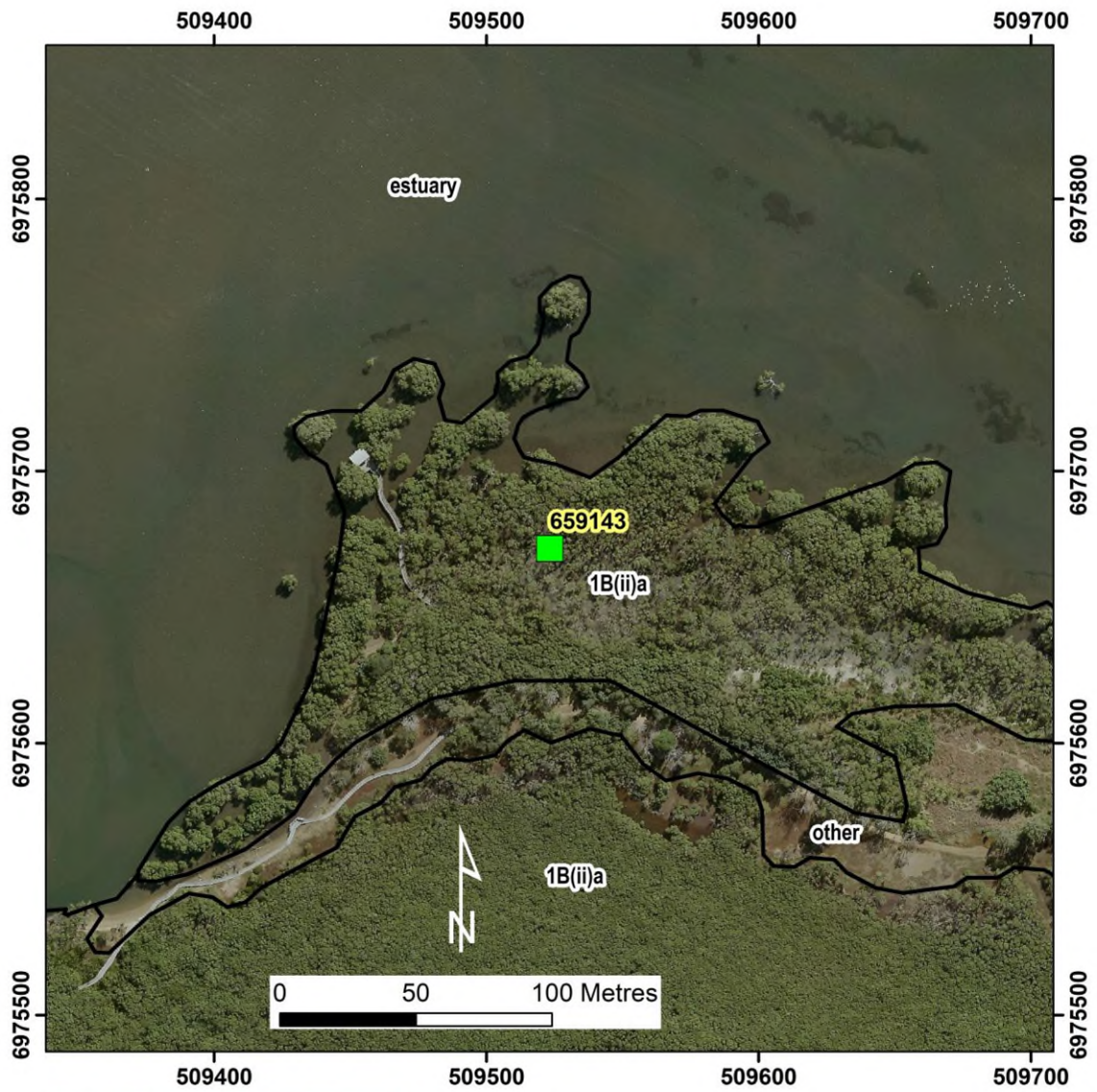


Nudge Beach (site ID = 659143) Low Open Forest



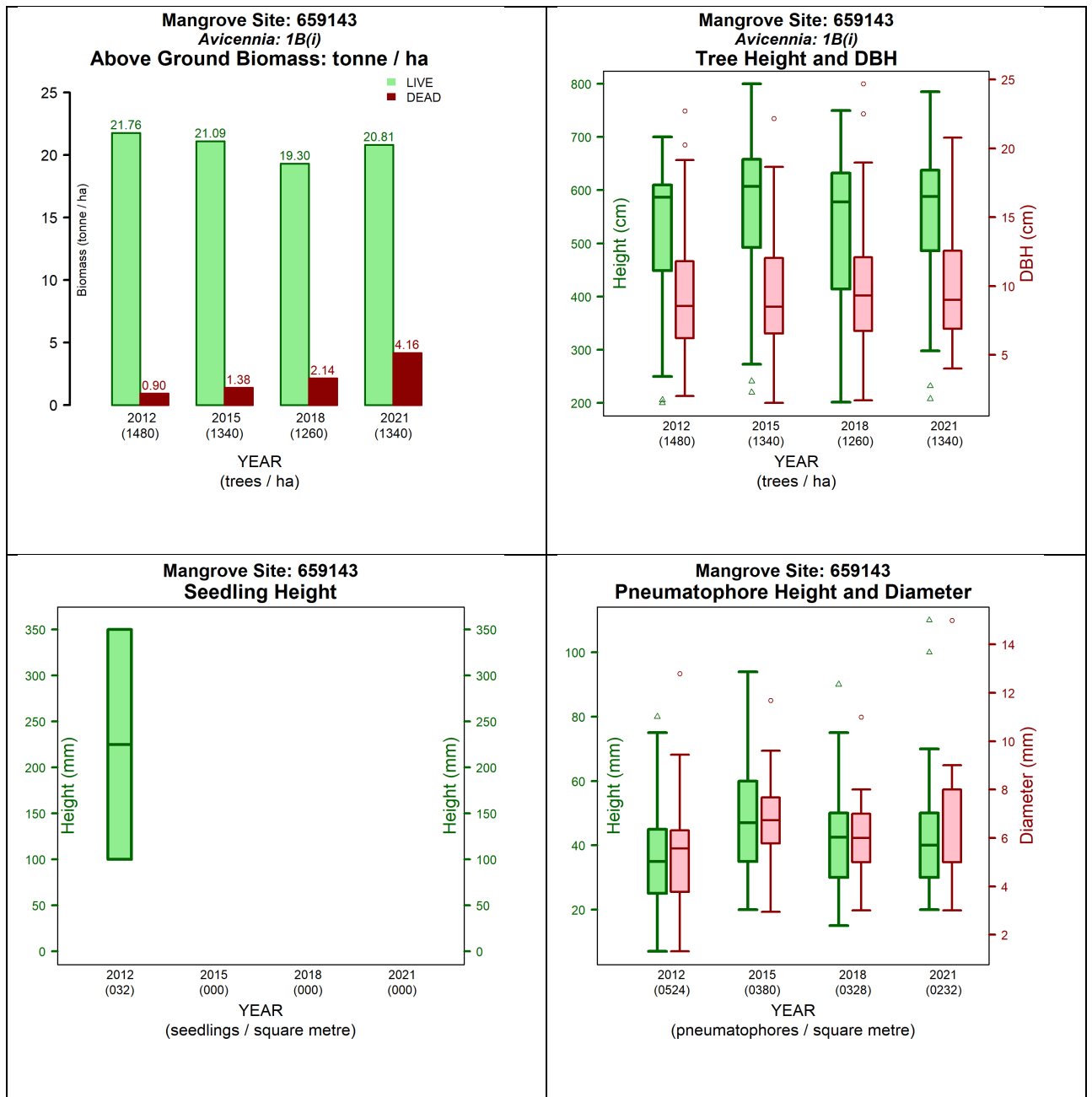


Figure 1. Measurements at site 659143 between 2012 and 2021 (left to right and top to bottom):

- 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.

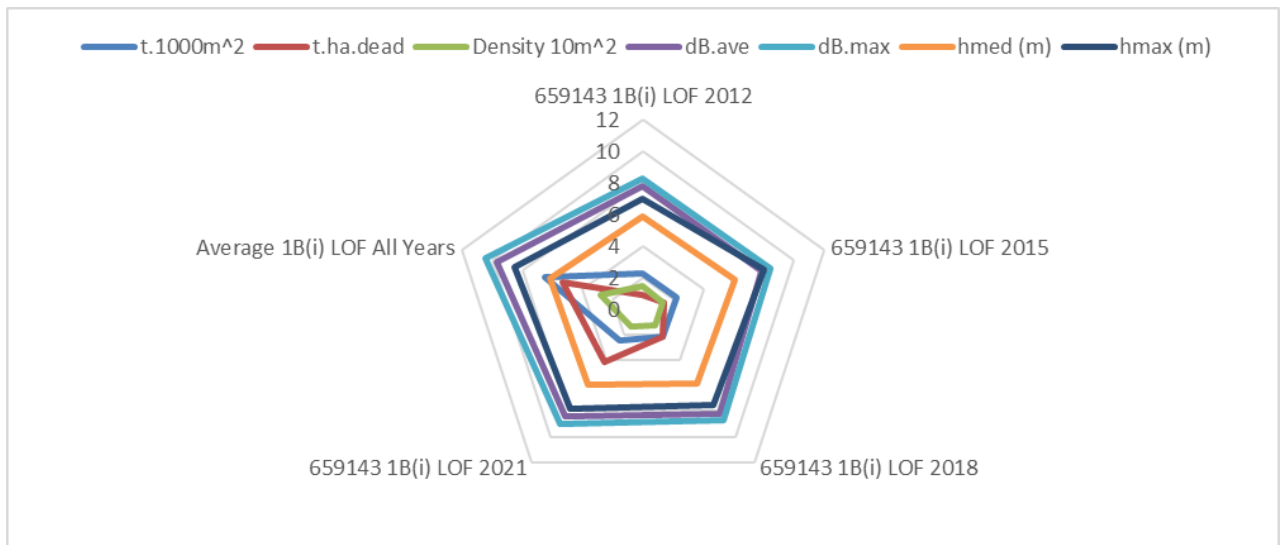


Figure 2. Structural changes over the years for Site 659143 in comparison to average of all sites of vegetation community type 1B(i) by structural formations. The graph indices: t.1000m² is the tonne of live biomass (tonnes) in 1000m square; t.ha.dead is the dead biomass (tonnes) in a hectare; Density 10m² is the number of trees in 10m 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 659143

Date	2.04.2012	17.03.2015	12.04.2018	21.04.2021
E Spp.				
T1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; Dead tree	<i>Avicennia marina</i> subsp. <i>australasica</i> ; Dead tree	<i>Avicennia marina</i> subsp. <i>australasica</i> ; Dead tree
T1 Med Canopy Height	6	7	7	7
T1 Range low	5.5	6	6	6
T1 Range High	6.5	8	8	8
T1 Crown Cover	70	70	62	39
T1 Stem Count	73	70; 5	55; 13	48; 25
T2 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>			
T2 Med Canopy Height	3			
T2 Range low	2.5			
T2 Range high	3.5			
T2 Crown Cover	<1			
T2 stem count	4			
S1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Aegiceras corniculatum</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Aegiceras corniculatum</i>
S1 Med Canopy Height	1.8	1.8	1.5	1.5
S1 Range low	1.5	1.5	1	1
S1 Range high	2.2	2	1.5	2.0
S1 Crown Cover	10	1	5	9
S1 stem count	?	4	9; +; 1	8, 7, 10
S2 Spp.		<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Aegiceras corniculatum</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Aegiceras corniculatum</i>
S2 Med Canopy Height		1	1	1
S2 Range low		1	0.5	0.5
S2 Range high		1.5	1	1
S2 Crown Cover		2	10	16
S2 stem count				
G Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Suaeda arbusculoides</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Aegiceras corniculatum</i> ; <i>Suaeda arbusculoides</i> ; <i>Suaeda australis</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Rhizophora stylosa</i> ; <i>Suaeda arbusculoides</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Aegiceras corniculatum</i> ; <i>Rhizophora stylosa</i> ;

G Med Canopy Height	0.8	0.3	0.4	0.3
G Range low	0.5	0.1	0.1	0.1
G Range high	1	0.8	0.5	0.5
G Cover	5	10	10	10
Individual Covers	5; +	5; 1; 5; <1; <1	5; 2; +	8; 2; +

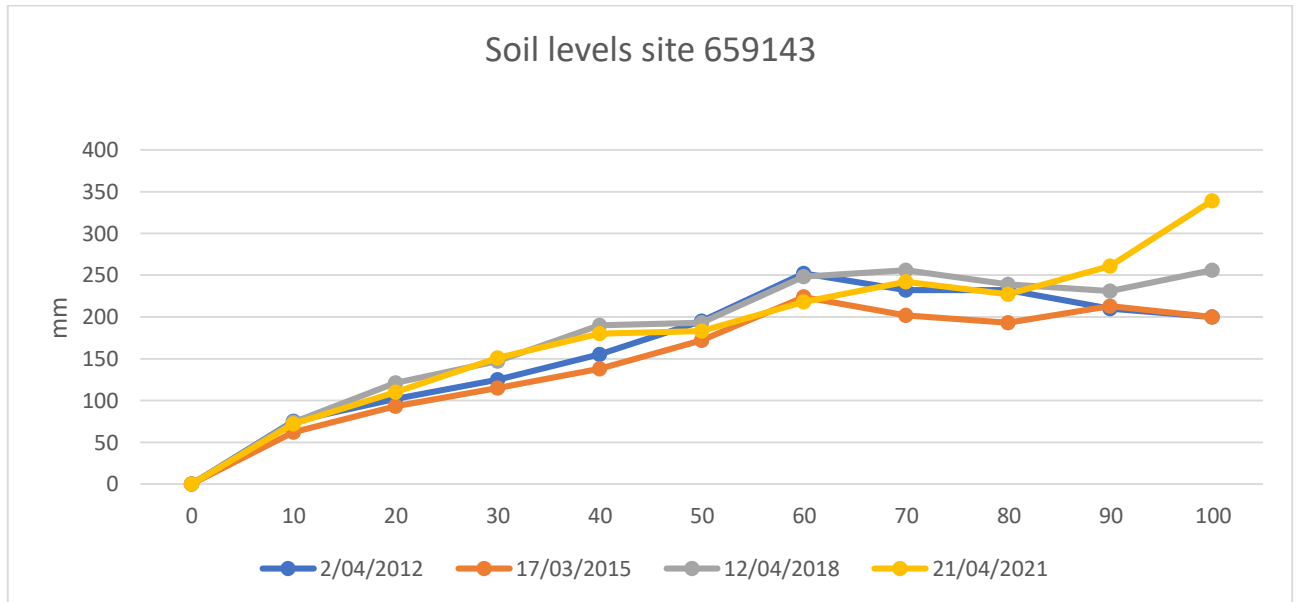


Figure 3. Soil surface elevation measurements (mm) are taken across the QBEIS sites using dumpy level.

Summary

1. Stable species composition in T1 with more dead trees in the later years and large reduction of crown cover from 70% in 2012 and 2015 to 62% in 2018 to 39% in 2021; T2 has merged with T1 in the later years and fluctuation in species composition in S1, S2 and Ground layer.
2. Stable T1 tree heights while reduction in S1 shrub heights and cover and ground height and cover.
3. Stable mean tree heights and mean DBH while densities are slightly reduced leading to 5% reduction in above ground biomass in the site.
4. Increase (from 4% in 2012 to 10% in 2018) of the proportion of dead to live biomass within the site.
5. Pneumatophores mean height and girth has slightly fluctuated over the years, but the range has narrowed.
6. Seedlings reducing in density, no seedlings were recorded in 2015, 2018 and 2021 in the quadrats but are present during these years across the site.
7. Soil max range level fluctuated to reach similar levels in 2012 and 2018.
8. Soil levels have accreted over the period.



Figure 4. Photograph of Site 659143 *Avicennia marina* subsp. *australasica* community type 1B(i) Low Open Forest.