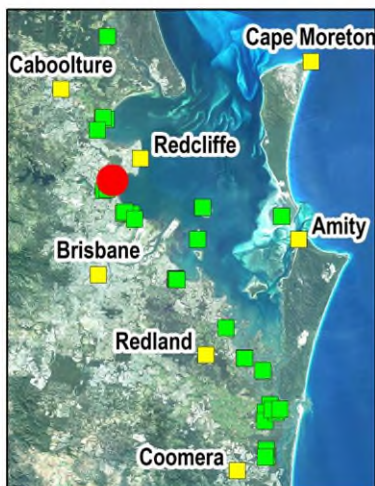
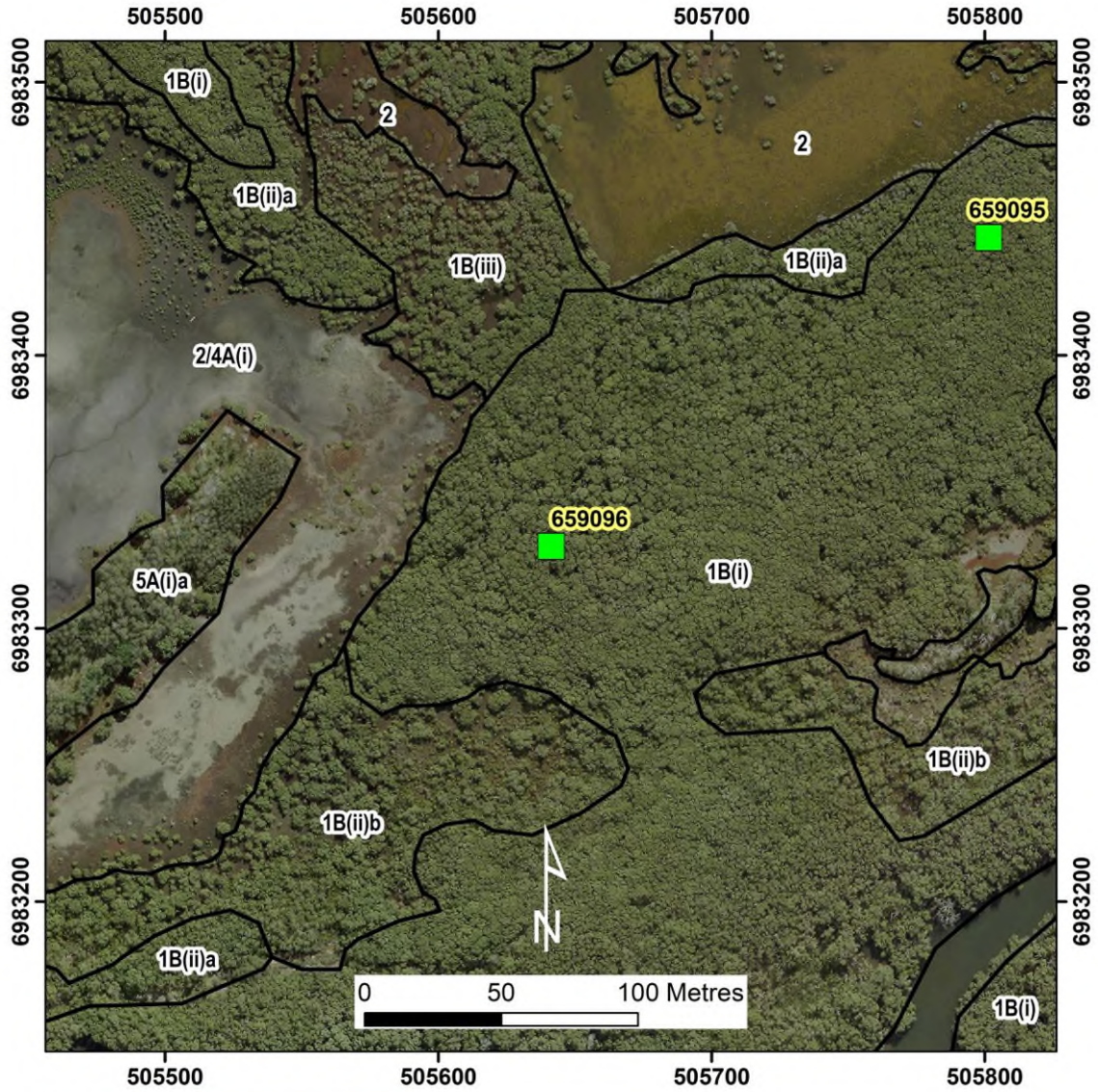


Hays Inlet Doyles Rocks (site ID = 659096) Low Closed Forest



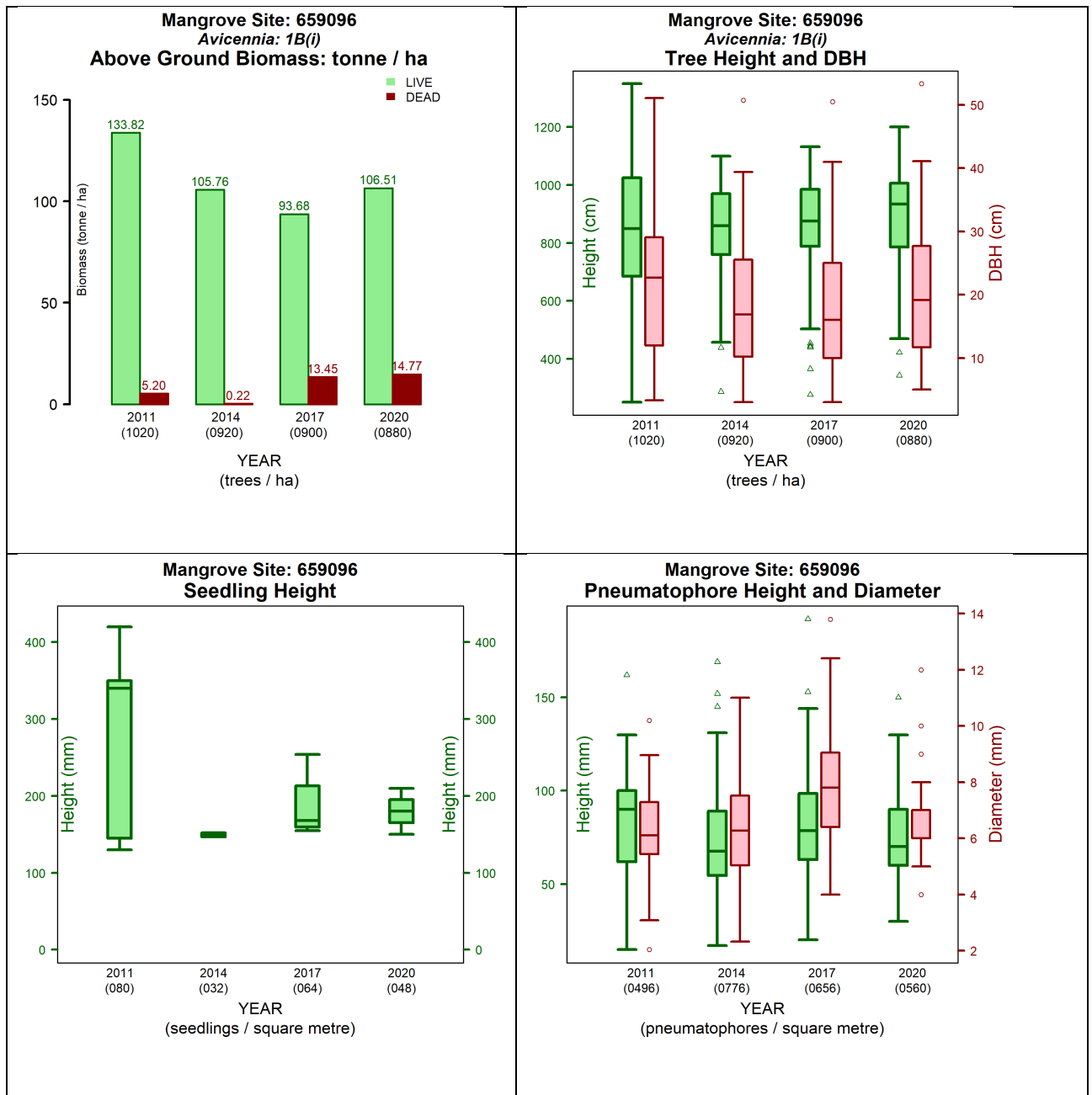


Figure 1. Measurements at site 659096 between 2011 and 2020 (left to right and top to bottom):

- 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.

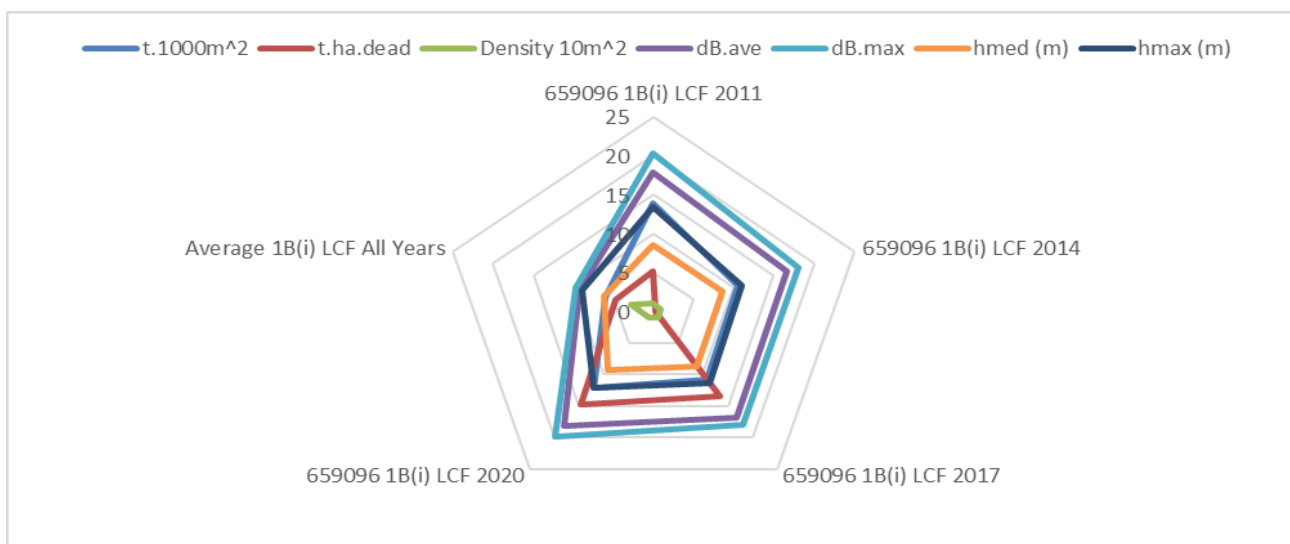


Figure 2. Structural changes over the years for Site 659096 in comparison to average of all sites of vegetation community type 1B(i) by structural formations. The graph indices: t.1000m² is the tonne of live biomass (tonnes) in 1000m square; t.ha.dead is the dead biomass (tonnes) in a hectare; Density 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 659096

Date	10.08.2011	04.09.2014	03.08.2017	14.08.2020
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	9	10.5	11	11
T1 Range low	8	10	10	10
T1 Range High	11	11	12	12
T1 Crown Cover	88	90	86	88
T1 Stem Count	33	36; 5	21; 5	31; 2
T2 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>
T2 Med Canopy Height	6	7	8	8
T2 Range low	5	6	7	7
T2 Range high	7	8	10	10
T2 Crown Cover	5	5	5	5
T2 stem count	5	13	13	12
S1 Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Ceriops australis</i>	<i>Ceriops australis</i>	<i>Ceriops australis</i>
S1 Med Canopy Height	3	1.5	1.5	1.5
S1 Range low	2.5	1	1	1
S1 Range high	3.5	2	2	2
S1 Crown Cover	5	5	+	+
S1 stem count	5	1	+	+
S2 Spp.				

S2 Med Canopy Height				
S2 Range low				
S2 Range high				
S2 Crown Cover				
S2 stem count				
G Spp.	<i>Avicennia marina</i> subsp. <i>australasica</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Aegiceras corniculatum</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Ceriops australis</i>	<i>Avicennia marina</i> subsp. <i>australasica</i> ; <i>Suaeda australis</i>
G Med Canopy Height	0.15	0.3	0.2	0.3
G Range low	0.1	0.2	0.1	0.1
G Range high	0.25	0.5	0.5	0.4
G Cover	20	20	5	5
Individual Covers	20	5; <1	5; +	5; +

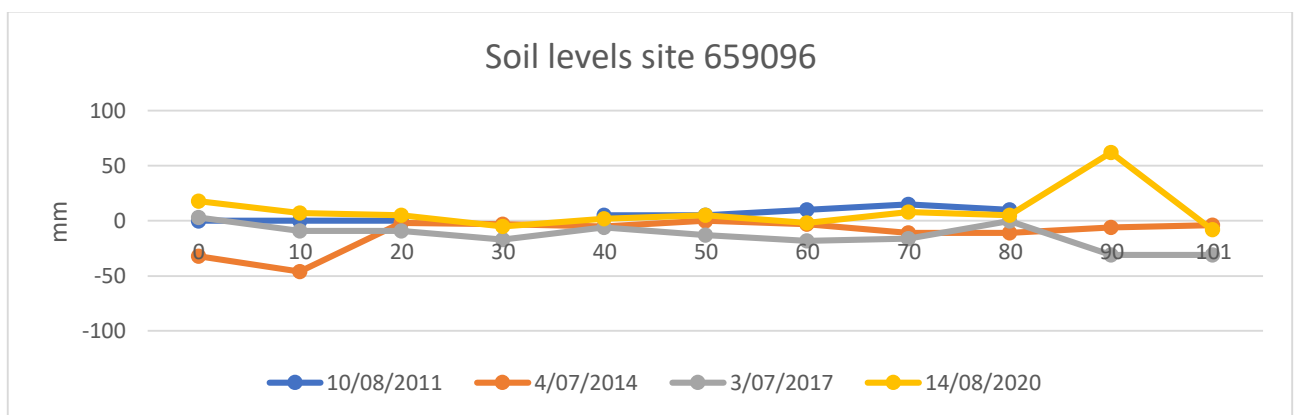


Figure 3. Soil surface elevation measurements (mm) are taken across the QBEIS sites using dumpy level.

Summary

1. Stable species composition in T1 while S1 has changed from *Avicennia marina* subsp. *australasica* to *Ceriops australis* in 2014 and 2017; Ground layer including *Avicennia marina* subsp. *australasica* in 2011; *Avicennia marina* subsp. *australasica* and *Aegiceras corniculatum* in 2014 and *Avicennia marina* subsp. *australasica* and *Ceriops australis* in 2017.
2. Increase in T1 height (2m) but reduction in stem counts; T2 increase in height (2m) and increased stem count while S1 reduction in height by 1.5m. That is 2.5 m S1 shrubs in 2011 have grown and moved to T2 in subsequent years.
3. Stable mean tree heights; reduction in mean DBH and densities result in about 30% reduction in site above ground biomass.
4. Increase (from 3.7% in 2011 to 12.6% in 2017) in the proportion of dead to live biomass within the site.
5. Pneumatophores mean height has fluctuated and overall decreased slightly
6. reduction in seedling density and height over the years.
7. Soil max range level has fluctuated over the years.

8. Soil levels have accreted over the period.



Figure 4. Photograph of Site 659096 *Avicennia marina* subsp. *australasica* community type 1B(i) Low Closed Forest