TABLE S1. Post hoc tests (*p-values*) to determine if there are significant differences for green turtle densities in surveyed islands across different years.

Years	Agatti*	Kadmat	Kalpeni*
2013-2016	0.6241	N.A.	N.A.
2013-2018	1.0000	0.00492	N.A.
2013-2019	1.0000	0.00015	N.A.
2016-2018	1.0000	N.A.	0.4275
2016-2019	0.3590	N.A.	0.4275
2018-2019	1.0000	0.4128	0.0801
Islands	Agatti-Kadmat	Kadmat-Kalpeni	Kalpeni-Agatti
2013	0.0016	N.A.	N.A.
2016**	N.A.	N.A.	0.9705
2018	0.3842	0.0028	0.0564
2019	0.2136	0.0187	0.3577

*Agatti and Kalpeni did not show significant differences across years (Kruskal-Wallis=3.79, df=3, p-value>0.05 and Kruskal-Wallis=4.93, df=2, p-value>0.05)
**2016 did not show significant differences across islands (Kruskal-Wallis=0.001, df=1, p-value>0.05)
N.A.- Data not available for one of the islands/years

TABLE S2. Post hoc tests to determine if there are significant differences for seagrass densities in surveyed islands across different years.

Years	Dunn's test of multiple comparison	Agatti	Kadmat	Kalpeni
2013-2016	Mean rank difference	-7.805769		
	p value	1.00000	N.A.	N.A.
2013-2018	Mean rank difference	-29.930769	-82.900974	
	p value	1.00000	5.0e-08 ***	N.A.
2013-2019	Mean rank difference	-22.480769	-76.446429	
	p value	1.00000	0.00037 ***	N.A.
2016-2018	Mean rank difference	-22.125000		-57.382353
	p value	1.00000	N.A.	0.00423 **
2016-2019	Mean rank difference	-14.675000		-70.049020
	p value	1.00000	N.A.	0.00437 **
2018-2019	Mean rank difference	7.450000	6.454545	-12.666667
	p value	1.00000	1.00000	1.00000

N.A.- Data not available for one of the islands/years

TABLE S3. Variation in different seagrass species densities (shoots/m^2) measured in Agatti, Kadmat and Kalpeni islands. There are clear reductions in *Thalassia* and *Cymodocea* densities. Highlighted boxes indicate a decline in individual seagrass densities in particular islands.

Island	Year	*Cymodocea*		*Thalassia*		*Halophila*		*Syringodium*	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Agatti	2013	201.05	41.82	91.33	49.84	248.80	195.09	N.O.	N.O.
	2016	87.66	39.91	N.O.	N.O.	161.59	64.42	N.O.	N.O.
	2018	48.62	45.14	N.O.	N.O.	98.66	36.43	18.00	22.62
	2019	35.25	21.57	N.O.	N.O.	121.78	57.06	27.50	9.29
Kadmat	2013	737.18	680.09	274.73	239.82	N.O.	N.O.	N.O.	N.O.
	2018	40.13	19.33	27.54	19.01	N.O.	N.O.	N.O.	N.O.
	2019	52.00	5.65	27.40	13.85	N.O.	N.O.	N.O.	N.O.
Kalpeni	2016	55.52	19.59	479.82	645.65	135.58	80.80	61.25	2.16
	2018	N.O.	N.O.	43.36	49.89	N.O.	N.O.	33.58	3.72
	2019	N.O.	N.O.	13.47	9.5	N.O.	N.O.	44.60	23.47
Differences across islands in surveyed years		Kruskal-Wallis	*p-value*	Kruskal-Wallis	*p-value*	Kruskal-Wallis	*p-value*	ANOVA F value	*p-value*
		26.45	*p<0.001*	50.15	*p<0.001*	5.34	*P = 0.254*	11.72	*P = 0.009*

*N.O.=Not observed on the surveys

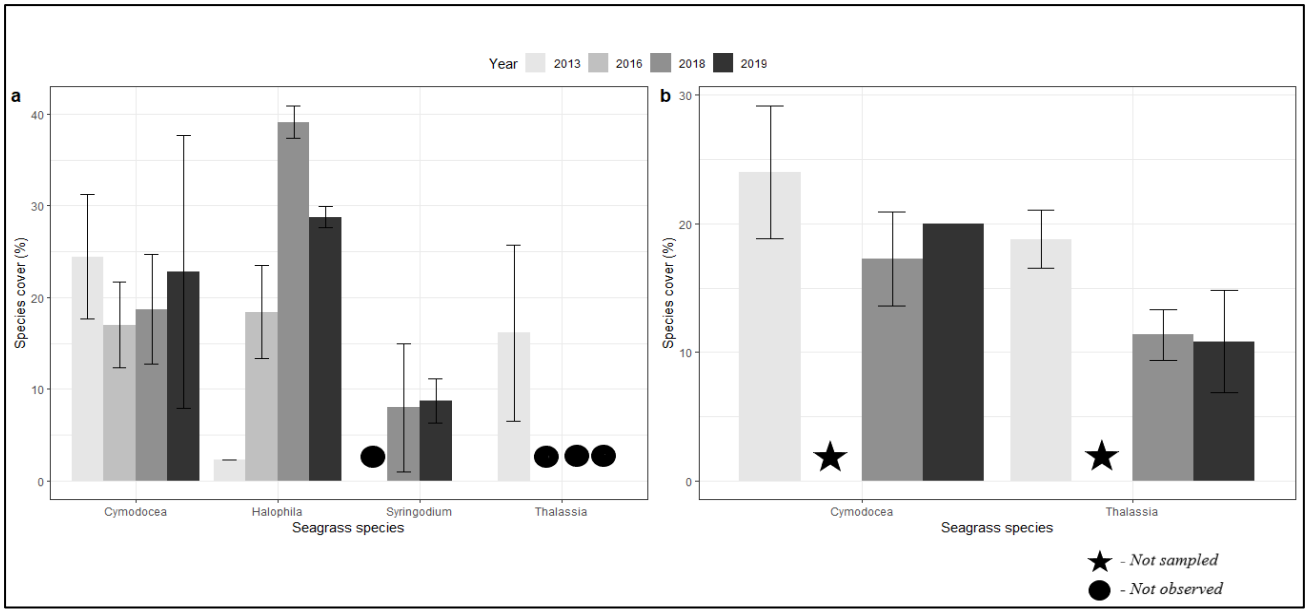

Figure S1. (a) Variation in cover of four seagrass species in all islands across the years with *Cymodocea* and *Halophila* cover fluctuating, and *Thalassia* showing no cover after 2013; (b) Variation in seagrass cover in Kadmat; *Thalassia* cover reduces over time, while *Cymodocea* cover fluctuates.

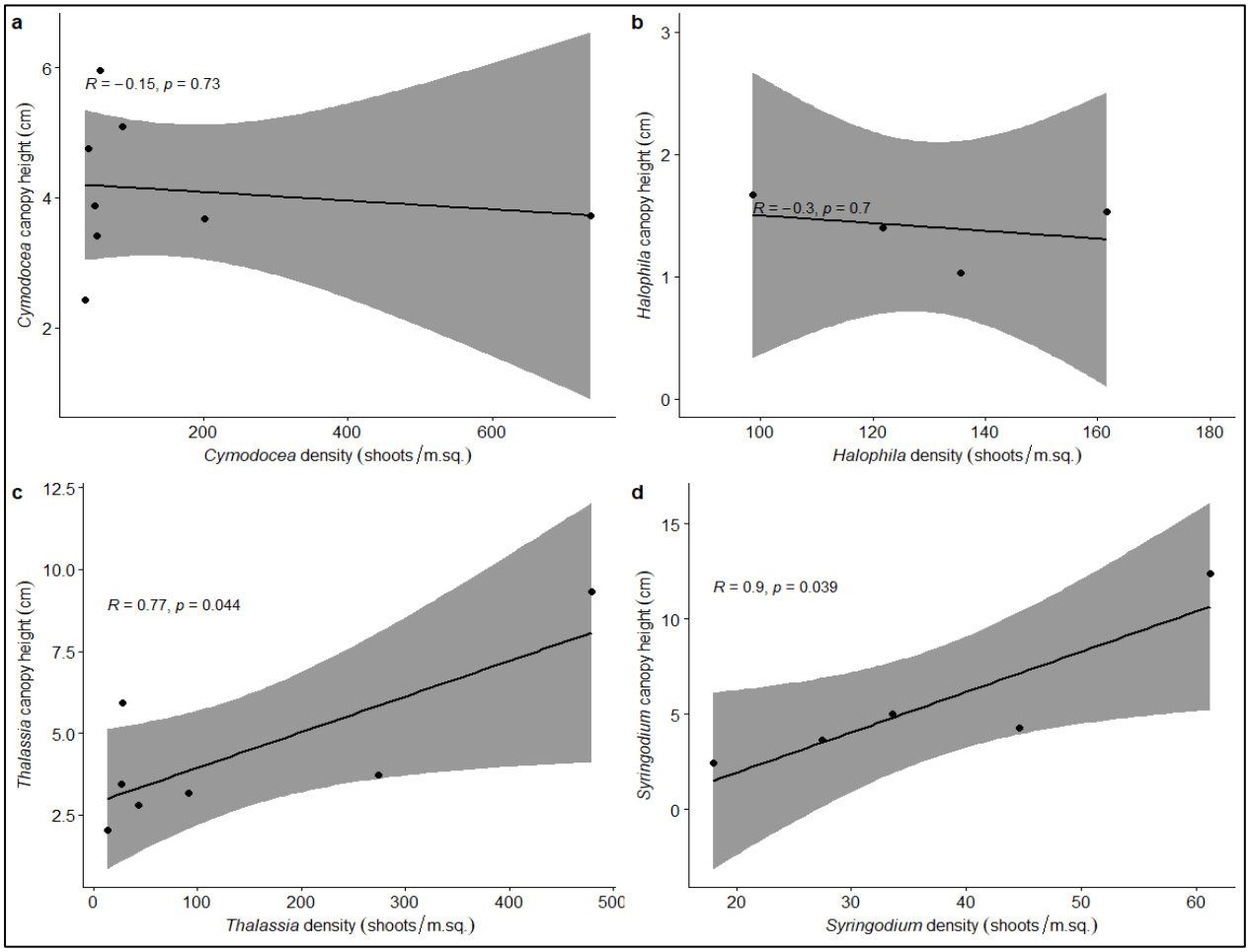

Figure S2. (a) and (b) Weak correlations between seagrass density and canopy height for *Cymodocea* and *Halophila* spp. respectively. (c) and (d) Strong association between seagrass density and canopy height for *Thalassia* and *Syringodium* spp. over different years. The black line in the graphs shows a "line of best fit" or linear relation between the points, whereas the gray shaded area represents a 95% confidence interval around the line of best fit.