Table S1. Locations with dugong feeding trails and total seagrass coverage (m^2) detected using machine-learning in Saco West and Saco East during all months surveyed.

Dates	Location	Occurrence of dugong feeding trails	Seagrass coverage (m^2)
04-Jun	Saco West	42	170829,8
05-Jun	Saco East	85	205970,5
09-Jul	Saco West	58	194255,2
10-Jul	Saco East	73	242834,2
08-Aug	Saco West	58	221167,7
09-Aug	Saco East	88	261265,9
10-Sep	Saco West	38	170829,8
09-Sep	Saco East	58	272857,3
19-Oct	Saco West	107	221291,5
20-Oct	Saco East	128	327116,3
13-Dec	Saco West	82	170829,8
12-Dec	Saco East	106	205970,5
	Sum West	385	
	Sum East	538	

Table S2. Table of GLM analysis using Poisson distribution.

a) **GLM (formula = Feeding_trails ~ Sites + Distance_.fishing.stakes + stakes_area, family = Poisson, data = fishingGLM)**

Source	Parameter estimates	S. E	p(>│z│)
Frequency of dugong trails (Intercept)	1.973e+00	9.758e-02	< 2e-16 ***
Site Saco West (reference)			
Site Saco East	1.628e+00	7.472e-02	< 2e-16 ***
Distance fishing stakes 50m(reference)			
Distance fishing stakes 100m	1.669e-01	6.267e-02	0.00774 **
Distance fishing stakes 150m	-2.797e-02	6.746e-02	0.67847
Distance fishing stakes 200m	-2.132e-02	7.406e-02	0.77342
Distance fishing stakes 250m	-7.501e-02	7.858e-02	0.33977
Distance fishing stakes 300m	-7.525e-01	8.522e-02	< 2e-16 ***
Distance fishing stakes 350m	-1.356e+00	1.152e-01	< 2e-16 ***
Distance fishing stakes 400m	-2.346e+00	1.653e-01	< 2e-16 ***
Stakes_area	7.775e-05	4.674e-06	< 2e-16 ***
Null deviance: 2362.05 on 95 degrees of freedom			
Residual deviance: 776.53 on 86 degrees of freedom			
AIC: 1175.6			

b) **GLM (Feeding_trails ~ Months + Sites + Distance_.fishing.stakes + stakes_area, family = Poisson, data=fishingGLM)**

| Source	Parameter estimates	S. E	p(>│z│)
Frequency of dugong trails (Intercept)	1.986e+00	1.067e-01	< 2e-16 ***
Months June(reference)			
Months July	-1.218e-01	7.196e-02	0.09061
Months Aug	-3.102e-02	7.159e-02	0.66480
Months Sept	7.508e-02	6.979e-02	0.28197
Months Dec	-5.329e-01	8.003e-02	2.76e-11 ***
Site Saco West (reference)			
Site Saco East	1.653e+00	7.418e-02	< 2e-16 ***
Distance fishing stakes 50m(reference)			
Distance fishing stakes 100m	1.719e-01	6.267e-02	0.00609 **
Distance fishing stakes 150m	1.409e-03	6.771e-02	0.98340
Distance fishing stakes 200m	3.263e-02	7.493e-02	0.66326
Distance fishing stakes 250m	-4.580e-02	7.885e-02	0.56132
Distance fishing stakes 300m	-7.826e-01	8.548e-02	< 2e-16 ***
Distance fishing stakes 350m	-1.345e+00	1.154e-01	< 2e-16 ***
Distance fishing stakes 400m	-2.342e+00	1.655e-01	< 2e-16 ***
Stakes_area	8.267e-05	4.711e-06	< 2e-16 ***
Null deviance: 2362.05 on 95 degrees of freedom			
Residual deviance: 689.52 on 81 degrees of freedom			
AIC: 1098.6			
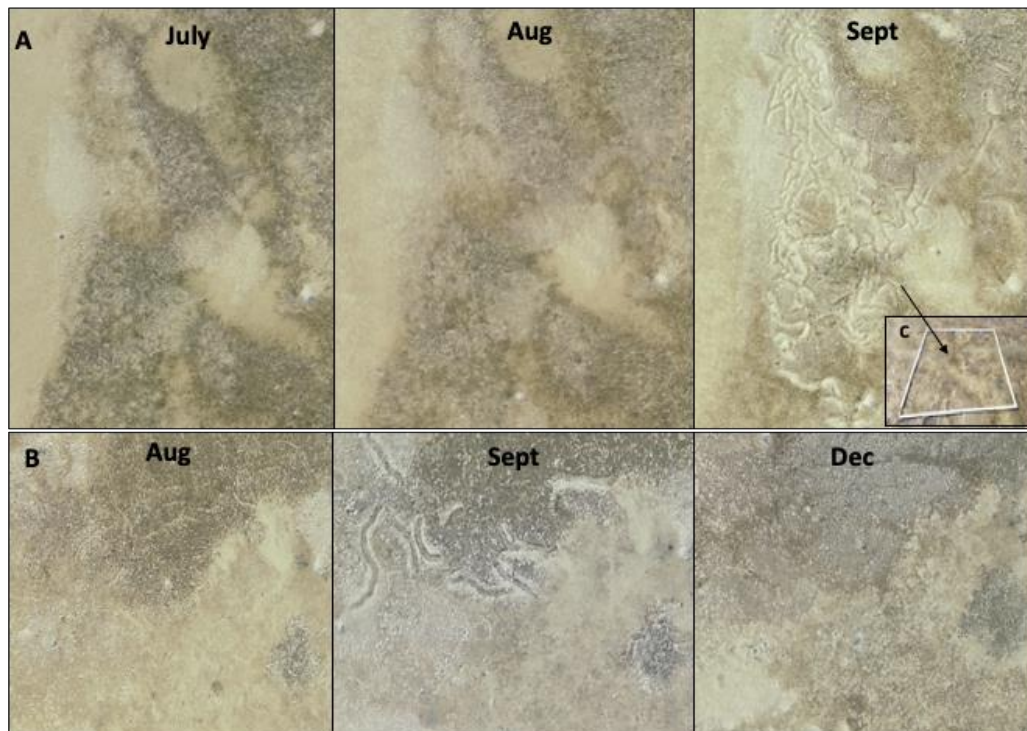
Figure S1. A. Example of changes in the seagrass bed caused by dugong feeding trails from July to September using drone images, where trails can be seen and **B.** when feeding trails are no longer visible on the seagrass (September to December). **C.** Dugong feeding trails recorded during groundtruthing using 1x1 m quadrats. Image from Yudmila Chunguane.
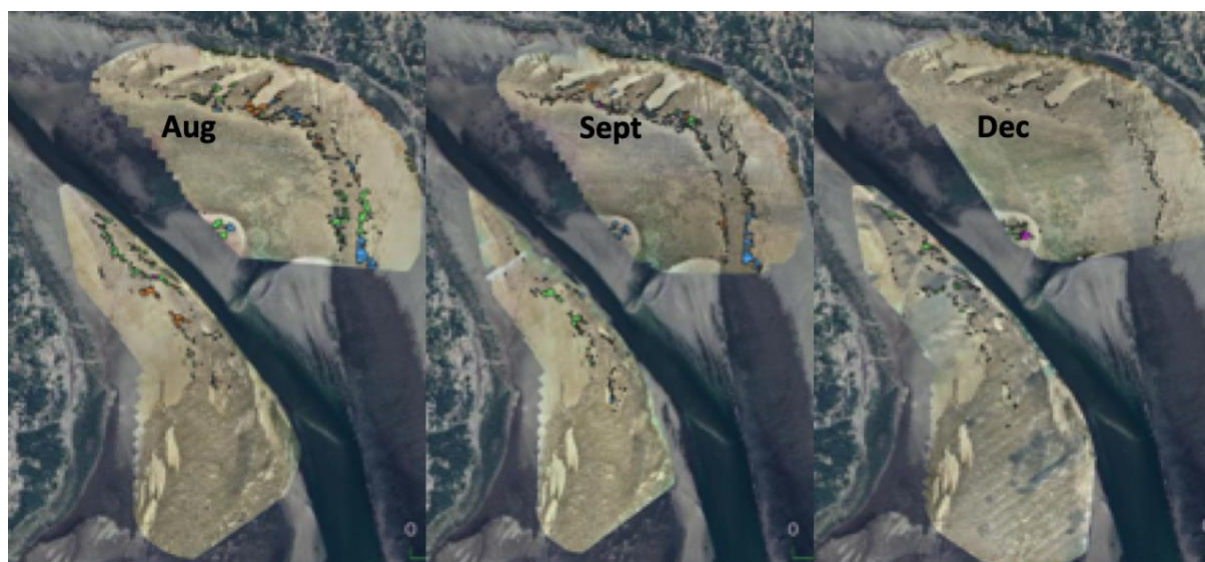

Figure S2. Example of a visual census conducted in August, September, and December to survey dugong feeding trails using orthomosaics. The manually-drawn polygons, represented by different colors, were used to map the trails.
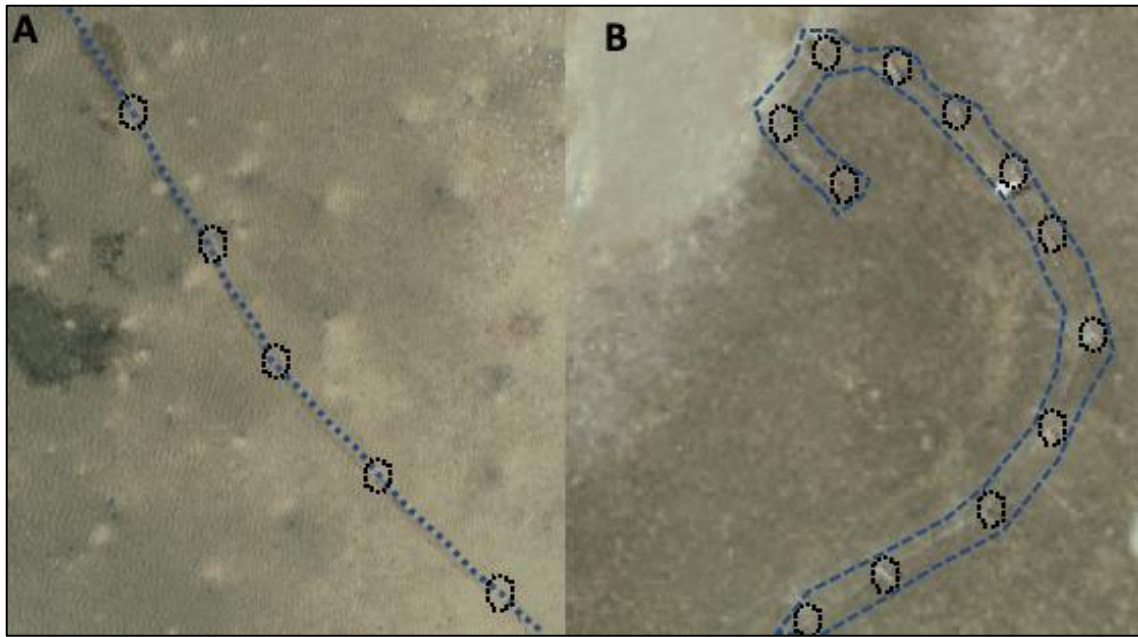
Figure S3. Drone images with gillnets stretched over the seagrass meadow using stakes in study site. **A**. Illustrates the method for measuring the perimeter of gillnets by drawing a line along the stakes of the nets and **B.** Illustrates the process of measuring the area of gillnet stakes by manually drawing polygons outside the perimeter of the nets.