The following supplement accompanies the article

Exploring the effects of landscape configuration on the exchange of materials in seagrass ecosystems

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Supplement.

Table S1. Complete outcome of the 2-way mixed effects ANOVA's, with landscape configuration (Conf) as fixed factor and site as random factor. (a) Comparisons for dry weight of detrital fractions and sediment data (b) Comparisons for elemental composition of living leaves and epiphytes (c) Comparisons for shoot density. (*) Data were fourth root transformed to meet ANOVA assumptions. The random factor site significantly influenced the amount of detrital leaves and N content of seagrass leaves, but did not alter the significant effects of landscape configuration (non-significant configuration x site interactions).

(a) Detrital fractions biomass and sediment data

		df	SS	F	*P*
P.oceanica detrital leaves (*)	Conf	2	10.39	64.62	**<0.001**
	Site	2	2.67	16.62	**<0.001**
	Conf*Site	4	0.32	0.43	0.783
	Error	36	6.66		
P.oceanica belowground fraction (*)	Conf	2	0.10	0.15	0.869
	Site	2	1.45	2.04	0.245
	Conf*Site	4	1.42	0.72	0.583
	Error	36	17.74		
Terrestrial fraction (*)	Conf	2	1.64	1.20	0.390
	Site	2	3.29	2.41	0.206
	Conf*Site	4	2.73	1.87	0.138
	Error	36	13.18		
Macroalgae (*)	Conf	2	1.39	0.48	0.640
	Site	2	6.26	2.16	0.231
	Conf*Site	4	5.78	3.97	**0.009**
	Error	36	13.10		
Fine fraction	Conf	2	32182.60	1.15	0.404
	Site	2	57533.80	2.05	0.244
	Conf*Site	4	56143.60	2.20	0.080
	Error	36	230018.20		
Sediment OM	Conf	2	0.02	0.01	0.986
	Site	2	3.13	2.53	0.194
	Conf*Site	4	2.47	2.52	0.060
	Error	36	8.84		

(b) *P.oceanica* leaves and epiphytes variables

N content		**df**	**SS**	**F**	***P***
P.oceanica leaves (*)	Conf	2	0.02	10.37	**0.026**
	Site	2	0.03	20.90	**0.008**
	Conf*Site	4	0.00	1.65	0.1833
	Error	36	0.02		
Epiphytes	Conf	2	0.25	0.69	0.554
	Site	2	0.02	0.06	0.947
	Conf*Site	4	0.72	7.52	**<0.001**
	Error	36	0.85		
C content		**df**	**SS**	**F**	***P***
P.oceanica leaves	Conf	2	2.01	0.15	0.869
	Site	2	17.59	1.27	0.373
	Conf*Site	4	27.63	3.65	**0.014**
	Error	36	68.16		
Epiphytes	Conf	2	1.43	0.13	0.885
	Site	2	5.48	0.48	0.649
	Conf*Site	4	22.69	5.54	**0.001**
	Error	36	36.87		

(c) Shoot density

		df	**SS**	**F**	***P***
Shoot density	Conf	2	438541.00	6.18	0.060
	Site	2	84615.00	1.19	0.392
	Conf*Site	4	141990.00	1.96	0.123
	Error	35	635357.00		

Table S2. Relative contributions of potential sources to *Holothuria* spp. diet requirements per site and landscape configuration (CO, continuous meadow; PR, patches in a rock matrix; PS, patches in a sand matrix) as modeled by SIAR. Mean and lower and upper 95% credible interval (CI95) for all the range of feasible solutions in each bayesian mixing model.

Source	Posidonia+Epiphytes			Macroalgae			SPOM		
	mean	CI95		mean	CI95		mean	CI95	
Aiguablava									
CO	**0.50**	0.28	0.75	**0.36**	0.01	0.65	**0.15**	0.05	0.25
PR	**0.51**	0.28	0.77	**0.32**	0.00	0.61	**0.16**	0.08	0.25
PS	**0.54**	0.29	0.81	**0.35**	0.00	0.65	**0.12**	0.03	0.19
Giverola									
CO	**0.54**	0.34	0.76	**0.30**	0.00	0.59	**0.15**	0.06	0.25
PR	**0.41**	0.03	0.73	**0.32**	0.00	0.62	**0.27**	0.00	0.57
PS	**0.55**	0.31	0.82	**0.33**	0.00	0.63	**0.11**	0.02	0.21
Rustella									
CO	**0.60**	0.39	0.87	**0.36**	0.03	0.60	**0.04**	0.00	0.11
PR	**0.63**	0.42	0.85	**0.29**	0.00	0.54	**0.09**	0.02	0.15
PS	**0.60**	0.37	0.87	**0.34**	0.01	0.61	**0.06**	0.00	0.12

Table S3. Carbon and nitrogen stable isotopic and elemental values and C:N ratios in sources and consumers collected in each site and landscape configuration (CO, continuous meadow; PR, patches in a rock matrix; PS, patches in a sand matrix). n: number of replicates. sd: standard desviation

Site	Landscape configuration		n	d13C	sd	d15N	sd	C	sd	N	sd	C:N	sd
Aiguablava	CO	Epiphytes	5	-16.29	0.52	6.34	0.28	5.87	1.43	0.64	0.03	9.12	2.22
		P. oceanica detrital leaves	5	-11.58	0.48	3.58	0.14	32.07	1.42	0.73	0.09	44.36	3.66
		Macroalgae	5	-19.45	2.17	4.21	0.14	6.34	3.92	0.81	0.32	7.38	1.78
		SPOM	3	-24.37	1.03	3.10	0.71	na	na	na	na	8.50	2.41
		Holothuria spp.	5	-15.99	0.43	9.11	0.09	44.85	6.29	13.24	1.67	3.38	0.09
	PR	Epiphytes	5	-16.84	0.53	6.99	0.55	4.64	0.95	0.70	0.14	6.68	1.03
		P. oceanica detrital leaves	5	-12.16	0.38	3.65	0.20	30.34	2.62	0.78	0.05	38.82	2.29
		Macroalgae	5	-17.33	1.81	4.45	0.28	11.39	4.35	0.87	0.18	13.25	5.47
		SPOM	3	-24.37	1.03	3.10	0.71	na	na	na	na	8.50	2.41
		Holothuria spp.	5	-16.41	0.32	9.17	0.43	45.38	2.04	13.26	0.69	3.42	0.03
	PS	Epiphytes	5	-16.91	0.79	6.73	0.32	5.91	1.57	0.77	0.18	7.92	2.45
		P. oceanica detrital leaves	5	-12.41	0.18	3.85	0.25	27.66	1.14	0.71	0.07	39.36	4.30
		Macroalgae	5	-17.53	1.93	4.48	0.37	16.09	5.62	0.93	0.28	17.19	2.51
		SPOM	3	-24.37	1.03	3.10	0.71	na	na	na	na	8.50	2.41
		Holothuria spp.	5	-15.96	0.46	9.14	0.36	46.44	3.02	13.62	0.84	3.41	0.05
Giverola	CO	Epiphytes	5	-17.17	0.48	5.03	0.79	5.16	0.58	0.75	0.09	7.02	1.32
		P. oceanica detrital leaves	4	-11.52	0.39	2.75	0.17	26.93	1.11	0.61	0.02	44.44	1.80
		Macroalgae	5	-21.14	0.31	3.08	0.27	6.86	2.70	0.69	0.12	9.70	2.71
		SPOM	3	-25.03	0.25	4.30	0.26	na	na	na	na	9.56	2.82
		Holothuria spp.	5	-16.71	0.21	8.77	0.32	48.02	8.02	13.86	2.36	3.47	0.02
	PR	Epiphytes	5	-16.69	0.23	5.97	0.31	5.03	0.73	0.63	0.11	7.96	0.44

		P. oceanica detrital leaves	5	-10.44	0.64	2.88	0.19	24.17	1.40	0.67	0.03	36.00	1.61
		Macroalgae	5	-21.29	2.78	3.01	0.46	8.15	3.41	1.06	0.34	7.68	2.79
		SPOM	3	-25.03	0.25	4.30	0.26	na	na	na	na	9.56	2.82
		Holothuria spp.	2	-16.27	2.04	8.24	0.16	38.46	4.34	10.73	1.64	3.60	0.15
	PS	Epiphytes	5	-17.67	0.46	6.71	0.93	4.60	0.38	0.58	0.07	8.00	0.54
		P. oceanica detrital leaves	5	-12.05	0.82	3.64	0.16	27.18	2.24	0.68	0.04	39.96	3.29
		Macroalgae	5	-20.05	1.08	3.61	0.28	5.40	2.15	0.65	0.17	8.33	3.11
		SPOM	3	-25.03	0.25	4.30	0.26	na	na	na	na	9.56	2.82
		Holothuria spp.	5	-16.18	0.83	8.03	0.71	49.88	2.72	13.53	1.11	3.69	0.16
Rustella	CO	Epiphytes	5	-18.08	0.58	6.72	0.91	4.49	0.89	0.48	0.07	9.36	1.06
		P. oceanica detrital leaves	5	-10.60	0.33	3.21	0.07	25.84	0.95	0.64	0.07	40.80	3.11
		Macroalgae	5	-21.05	1.54	3.69	0.33	12.01	1.63	1.19	0.28	10.30	1.46
		SPOM	3	-24.53	0.46	3.13	0.35	na	na	na	na	10.74	1.40
		Holothuria spp.	5	-14.21	0.68	8.11	1.00	41.22	5.59	12.11	1.77	3.41	0.13
	PR	Epiphytes	5	-17.13	0.29	6.25	0.31	7.17	1.34	1.02	0.36	7.40	1.42
		P. oceanica detrital leaves	5	-11.85	0.26	2.94	0.19	28.17	1.44	0.71	0.06	39.93	3.14
		Macroalgae	4	-19.44	2.08	3.25	0.29	12.41	2.92	0.84	0.18	14.93	2.95
		SPOM	3	-24.53	0.46	3.13	0.35	na	na	na	na	10.74	1.40
		Holothuria spp.	5	-15.27	0.37	8.51	0.55	53.68	5.57	13.83	1.67	3.89	0.09
	PS	Epiphytes	5	-19.29	0.70	6.51	0.50	5.66	0.43	0.55	0.06	10.39	1.30
		P. oceanica detrital leaves	5	-11.96	0.39	3.00	0.19	25.27	2.31	0.59	0.05	43.12	5.25
		Macroalgae	5	-19.31	0.87	3.03	0.59	8.36	1.70	0.80	0.12	10.39	0.92
		SPOM	3	-24.53	0.46	3.13	0.35	na	na	na	na	10.74	1.40
		Holothuria spp.	5	-15.55	0.43	8.19	0.80	48.08	4.60	13.37	1.54	3.60	0.18