

MST 1
Biomass and carbon capture of algal forests of *C. chamissoi*

August 2021							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	8 567.07	4.4 ± 1.20	37 757.41	3 775.74	0.11	973.66	1.14
La Isla	13 072.16	3.93 ± 2.31	51 329.39	5 132.93	0.10	1 325.85	1.01
Bajada de León	24 572.78	3.47 ± 3.94	85 267.55	8 526.75	0.09	2 202.46	0.90
Bocana	5 818.37	3.45 ± 1.52	20 083.46	2 008.35	0.09	518.76	0.89
Mean		3.81 ± 2.53	48 609.45	4 860.94	0.10	1 255.18	0.98
Total			194 437.81	19 443.77	0.39	5 020.74	*
Total (t)			194.44	19.44	0.000394	5.02	3.94
Sea Surface Temperature (°C)					17.8		
September 2021							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	8 567.07	6.20 ± 3.65	53 109.60	5 310.96	0.16	1 371.82	1.60
La Isla	13 072.16	3.86 ± 2.18	50 495.89	5 049.59	0.10	1 304.31	1.00
Bajada de León	24 572.78	15.52 ± 7.91	381 431.62	38 143.16	0.40	9 852.38	4.01
Bocana	5 818.37	3.29 ± 2.66	19 126.57	1 912.66	0.08	494.04	0.85
Mean		7.22 ± 6.77	126 040.92	12 604.09	0.19	3 255.64	1.86
Total			504 163.68	50 416.37	0.75	13 022.55	*
Total (t)			504.16	50.42	0.00	13.02	7.46
Sea Surface Temperature (°C)					18.9		
October 2021							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	14 130.63	3.62 ± 2.039	51 167.75	5 116.78	0.09	1 321.66	0.94
La Isla	24 935.00	1.52 ± 0.84	37 901.20	3 790.12	0.04	978.99	0.39
Bajada de León	24 572.00	3.61 ± 1.83	88 668.94	8 866.89	0.09	2 290.25	0.93
Bocana	2 552.10	2.72 ± 2.62	6 941.44	694.14	0.07	179.30	0.70
Mean		2.87 ± 2.23	46 169.83	4 616.98	0.07	1 192.55	0.74
Total			184 679.33	18 467.93	0.30	4 770.20	*
Total (t)			184.68	18.47	0.00	4.77	2.96
Sea Surface Temperature (°C)					16.9		
November 2021							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹

Criadero	1 118.69	4.14 ± 3.54	4 636.70	463.67	0.11	119.63	1.07
La Isla	11 812.80	4.85 ± 2.96	57 258.51	5 725.85	0.13	1 479.11	1.25
Bajada de León	24 572.80	2.55 ± 1.55	62 660.64	6 266.06	0.07	1 618.52	0.66
Bocana	3 242.80	4.44 ± 2.33	14 389.38	1 438.94	0.11	371.68	1.15
Mean		3.99 ± 2.78	34 736.31	3 473.63	0.10	897.23	1.03
Total			138 945.24	13 894.52	0.41	3 588.94	*
Total (t)			138.95	13.89	0.00	3.59	4.13
Sea Surface Temperature (°C)					21.2		
December 2021							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	3 759.78	1.13 ± 0.88	4 266.81	426.68	0.03	109.74	0.29
La Isla	344.05	2.49 ± 1.50	855.36	85.54	0.00	1.34	0.04
Bajada de León	24 572.80	0.26 ± 0.43	6 388.93	638.89	0.00	9.98	0.00
Bocana	5 818.37	0.00	0.00	0.00	0.00	0.00	0.00
Mean		1.29 ± 1.31	2 877.78	287.78	0.01	30.26	0.08
Total			11 511.10	1 151.11	0.03	121.06	
Total (t)			11.51	1.15	0.00	0.12	0.33
Sea Surface Temperature (°C)					19.4		
January 2022							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	8 567.07	0.16 ± 0.1	1 391.29	139.13	0.00	35.94	0.04
La Isla	13 072.16	0.17 ± 0.89	2 174.51	217.45	0.00	56.17	0.04
Bajada de León	24 572.78	0.12 ± 0.17	2 996.18	299.62	0.00	74.81	0.03
Bocana	5 818.37	0.00	0.00	0.00	0.00	0.00	0.00
Mean		1.15 ± 0.43	1 640.50	164.05	0.00	41.73	0.03
Total			6 561.99	656.20	0.01	166.92	
Total (t)			6.56	0.66	0.00	0.17	0.12
Sea Surface Temperature (°C)					21.8		
February 2022 – No algae registered							
Sea Surface Temperature (°C)					23.2		
March 2022 – No algae registered							
Sea Surface Temperature (°C)					24.8		
April 2022 – No algae registered							
Sea Surface Temperature (°C)					17.8		
May 2022 – No algae registered							
Sea Surface Temperature (°C)					19.8		
June 2022 – No algae registered							
Sea Surface Temperature (°C)					18		

September 2022							
Sampling zone	Area (m ²)	Wet biomass (kg/m ²)	Wet biomass total (kg)	Dry biomass total (kg)	C capture per unit area (C kg/m ²)	Total carbon (kg)	C capture per hectare t C ha ⁻¹
Criadero	2 848.33	0.86 ± 0.85	2 458.98	245.90	0.02	63.52	0.22
La Isla	2 047.92	2.62 ± 1.75	5 370.62	537.06	0.07	138.72	0.68
Bajada de León	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bocana	2 709.32	2.79 ± 2.02	7 547.75	754.77	0.07	194.96	0.72
Mean		1.57 ± 1.84	3 844.34	384.43	0.04	99.30	0.40
Total			15 377.35	1 537.73	0.16	397.20	
Total (t)			15.38	1.54	0.00	0.40	1.62
Sea Surface Temperature (°C)					17		

The sea surface temperature (°C) was retrieved from the Oceanographic Daily Bulletin (IMARPE, 2021-2022).