fishes

Supplementary Material

Species Distribution Models as Tools for Community Empowerment and Informed Decision Making in Colombia's Chocó Pacific Coast Fisheries

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Performance of individual models by species

Table S1. Performance of individual models applied to the species *Acanthocybium solandri*.

Models	GLM	GBM	GAM	CTA	ANN	FDA	MARS	RF	MAXENT
0 m depth									
January	0.79	0.97	0.76	0.92	0.84	0.76	0.87	1	0.68
February	0.84	0.79	0.66	0.68	0.71	0.79	0.76	0.87	0.58
March	0.84	1	0.74	0.82	0.92	0.87	0.92	1	0.76
April	0.68	0.82	0.84	0.71	0.71	0.79	0.79	0.92	0.66
May	0.89	0.97	0.95	0.95	0.95	0.90	0.90	0.97	0.82
June	0.76	0.92	0.76	0.66	0.79	0.82	0.82	0.92	0.47
July	0.84	0.92	1	0.84	0.92	0.90	0.92	0.95	0.82
August	0.76	0.89	0.87	0.71	0.74	0.84	0.76	0.92	0.74
September	0.66	0.92	0.76	0.5	0.74	0.79	0.79	0.90	0.68
October	0.68	0.95	0.76	0.82	0.90	0.76	0.87	0.95	0.53
November	0.89	0.97	0.92	0.82	0.84	0.84	0.84	0.97	0.68
December	0.87	0.97	0.79	0.58	0.89	0.92	0.84	0.97	0.61
22 m depth									
January	0.82	0.94	0.85	0.74	0.85	0.88	0.91	0.94	0.79
February	0.82	0.94	0.97	0.65	0.88	0.77	0.80	0.97	0.62
March	0.76	0.91	0.94	0.82	0.97	0.91	0.91	0.94	0.53
April	0.82	0.97	0.82	0.91	1	0.97	0.88	0.94	0.71
May	0.71	0.88	0.79	0.62	0.71	0.77	0.82	0.91	0.47
June	0.94	0.88	0.91	0.71	0.97	0.91	0.94	0.94	0.68
July	0.91	0.94	0.94	0.76	0.91	0.79	0.77	0.94	0.68
August	0.85	0.97	0.88	0.88	0.85	0.88	0.97	1	0.74
September	0.85	0.94	0.94	0.65	0.91	0.94	0.82	0.94	0.65
October	0.91	0.94	0.88	0.74	0.91	0.91	0.94	0.97	0.53
November	0.77	0.94	0.79	0.88	0.85	0.85	0.74	0.97	0.68
December	0.85	0.97	0.80	0.74	0.77	0.82	0.83	0.98	0.65

			47 m depth						
January	0.82	0.95	0.86	0.77	0.68	0.81	0.86	0.95	0.41
February	0.86	0.95	0.82	0.59	0.91	0.86	0.91	0.95	0.64
March	0.91	0.91	0.91	0.68	0.68	0.86	0.82	1	0.42
April	0.91	0.95	0.91	0.73	1	0.91	0.86	1	0.77
May	0.91	0.91	0.86	0.64	0.95	0.86	0.95	0.95	0.68
June	0.91	0.86	0.91	0.77	0.86	0.77	0.95	0.86	0.64
July	0.91	0.95	0.86	0.95	0.95	0.91	0.86	0.95	0.77
August	0.73	0.95	0.82	0.64	0.91	0.95	0.91	0.95	0.82
September	0.95	0.95	1	0.86	0.95	0.91	0.91	0.95	0.82
October	0.95	1	0.95	0.86	0.91	0.95	0.95	1	0.82
November	0.77	0.91	0.91	0.82	0.86	0.91	0.86	1	0.68
December	0.86	0.91	0.95	0.59	0.95	0.95	0.95	0.91	0.59

Table S2. Performance of individual models applied to the species *Scomberomorus sierra*.

Models	GLM	GBM	GAM	CTA	ANN	FDA	MARS	RF	MAXENT
				2m depth					
January	0.92	0.96	0.95	0.94	0.94	0.92	0.94	0.97	0.88
February	0.95	0.96	0.96	0.95	0.95	0.95	0.95	0.97	0.91
March	0.95	0.95	0.95	0.94	0.94	0.95	0.95	0.97	0.93
April	0.95	0.96	0.95	0.96	0.95	0.94	0.95	0.97	0.94
May	0.95	0.97	0.96	0.96	0.96	0.95	0.95	0.97	0.92
June	0.95	0.97	0.96	0.95	0.96	0.96	0.96	0.98	0.93
July	0.95	0.96	0.97	0.94	0.96	0.96	0.97	0.97	0.93
August	0.95	0.95	0.95	0.94	0.95	0.94	0.95	0.97	0.92
September	0.95	0.96	0.95	0.95	0.95	0.95	0.95	0.97	0.93
October	0.95	0.96	0.96	0.95	0.95	0.95	0.96	0.97	0.92
November	0.94	0.96	0.94	0.94	0.94	0.94	0.95	0.96	0.91
December	0.96	0.97	0.97	0.96	0.95	0.96	0.96	0.97	0.93
				34 m depth					
January	0.93	0.95	0.91	0.91	0.95	0.93	0.94	0.96	0.91
February	0.95	0.95	0.94	0.91	0.96	0.95	0.94	0.97	0.92
March	0.94	0.94	0.90	0.91	0.95	0.94	0.94	0.96	0.93
April	0.95	0.95	0.95	0.90	0.95	0.94	0.93	0.97	0.89
May	0.95	0.96	0.92	0.93	0.96	0.95	0.96	0.97	0.94
June	0.95	0.95	0.92	0.92	0.92	0.94	0.94	0.96	0.91
July	0.94	0.94	NA	0.92	0.93	0.93	0.94	0.95	0.93
August	0.95	0.96	0.95	0.95	0.95	0.95	0.96	0.97	0.94
September	0.95	0.96	0.94	0.94	0.94	0.95	0.95	0.96	0.94
October	0.97	0.98	0.94	0.95	0.97	0.96	0.97	0.98	0.96
November	0.95	0.95	0.92	0.94	0.94	0.94	0.95	0.96	0.94
December	0.95	0.95	0.94	0.94	0.95	0.95	0.95	0.97	0.94
				78 m depth					
January	0.91	0.97	0.89	0.94	0.94	0.95	0.94	0.99	0.92
February	0.87	0.96	0.90	0.89	0.92	0.83	0.91	0.98	0.90
March	0.90	1.00	0.94	0.93	0.98	0.96	0.95	1.00	0.89
April	0.92	0.96	0.92	0.87	0.95	0.94	0.95	0.98	0.89
May	0.95	0.96	0.82	0.93	0.92	0.95	0.92	0.97	0.80
June	0.92	0.96	0.89	0.96	0.95	0.95	0.95	0.98	0.82

July	0.94	0.98	0.90	0.96	0.95	0.94	0.97	0.99	0.96
August	0.95	0.99	0.99	0.95	0.97	0.97	0.97	1.00	0.97
September	0.96	0.98	0.90	0.96	0.95	0.96	0.97	0.99	0.97
October	0.95	0.98	0.91	0.97	0.96	0.94	0.95	0.99	0.95
November	0.96	1.00	0.86	0.96	0.91	0.96	0.95	0.99	0.91
December	0.95	0.97	0.94	0.92	0.97	0.96	0.92	0.99	0.92

Table S3. Performance of individual models applied to the species *Euthynnus lineatus*.

Models.	GLM	GBM	GAM	CTA	ANN	FDA	MARS	RF	MAXENT
0 m depth									
January	0.68	0.93	0.75	0.86	0.74	0.65	0.74	0.95	0.64
February	0.80	0.93	0.83	0.85	0.84	0.84	0.85	0.95	0.33
March	0.74	0.91	0.79	0.73	0.86	0.84	0.83	0.95	0.79
April	0.76	0.88	0.85	0.76	0.84	0.83	0.80	0.90	0.73
May	0.79	0.93	0.93	0.89	0.78	0.80	0.90	0.95	0.79
June	0.79	0.95	0.85	0.86	0.83	0.88	0.90	0.95	0.78
July	0.83	0.95	0.90	0.90	0.90	0.84	0.83	0.98	0.79
August	0.75	0.94	0.88	0.80	0.85	0.83	0.81	0.95	0.79
September	0.70	0.89	0.85	0.75	0.73	0.81	0.80	0.95	0.49
October	0.69	0.88	0.78	0.79	0.78	0.84	0.75	0.95	0.70
November	0.74	0.85	0.83	0.76	0.76	0.79	0.81	0.88	0.78
December	0.76	0.94	0.88	0.76	0.91	0.88	0.88	0.99	0.75
22 m depth									
January	0.68	0.90	0.81	0.73	0.84	0.81	0.90	0.92	0.71
February	0.77	0.87	0.79	0.76	0.68	0.79	0.81	0.89	0.66
March	0.76	0.94	0.92	0.85	0.84	0.89	0.87	0.95	0.76
April	0.74	0.86	0.81	0.79	0.74	0.81	0.77	0.89	0.68
May	0.68	0.81	0.66	0.66	0.61	0.69	0.69	0.86	0.60
June	0.77	0.97	0.84	0.87	0.89	0.82	0.84	0.95	0.76
July	0.82	0.92	0.89	0.86	0.89	0.92	0.90	0.92	0.81
August	0.87	0.98	0.94	0.94	0.97	0.94	0.94	0.95	0.89
September	0.73	0.84	0.84	0.69	0.76	0.77	0.82	0.89	0.68
October	0.77	0.92	0.89	0.86	0.84	0.97	0.94	0.92	0.74
November	0.89	0.95	0.84	0.84	0.85	0.82	0.84	0.98	0.74
December	0.84	0.94	0.89	0.82	0.82	0.76	0.79	0.92	0.73
47 m depth									
January	0.78	0.93	0.85	0.83	0.78	0.83	0.85	0.95	0.63
February	0.60	0.90	0.80	0.83	0.80	0.68	0.75	1.00	0.65
March	0.60	0.90	0.85	0.73	0.83	0.78	0.78	0.93	0.58
April	0.73	0.93	0.78	0.75	0.73	0.73	0.68	0.93	0.65
May	0.68	0.90	0.78	0.50	0.83	0.88	0.75	0.93	0.48
June	0.68	0.90	0.83	0.70	0.70	0.78	0.78	0.90	0.65
July	0.65	0.83	0.75	0.48	0.83	0.70	0.65	0.88	0.50
August	0.58	0.73	0.78	0.63	0.70	0.73	0.73	0.80	0.38
September	0.75	0.90	0.65	0.75	0.75	0.85	0.88	0.93	0.65
October	0.68	0.88	0.83	0.88	0.83	0.80	0.80	0.88	0.70
November	0.75	0.88	0.70	0.65	0.68	0.70	0.68	0.85	0.73
December	0.73	0.88	0.80	0.90	0.85	0.98	0.88	0.88	0.58

Table S4. Performance of individual models applied to the Species *Thunnus albacares.*

Models	GLM	GBM	GAM	CTA	ANN	FDA	MARS	RF	MAXENT
0 m depth									
January	0.83	0.88	0.86	0.85	0.89	0.85	0.84	0.91	0.86
February	0.84	0.89	0.88	0.86	0.87	0.88	0.87	0.92	0.83
March	0.88	0.89	0.87	0.88	0.89	0.89	0.88	0.92	0.82
April	0.85	0.91	0.88	0.87	0.89	0.87	0.88	0.93	0.85
May	0.88	0.92	0.89	0.90	0.89	0.89	0.89	0.93	0.87
June	0.85	0.91	0.87	0.89	0.87	0.88	0.86	0.91	0.83
July	0.85	0.89	0.89	0.84	0.88	0.87	0.88	0.92	0.83
August	0.89	0.91	0.89	0.87	0.88	0.88	0.89	0.93	0.78
September	0.85	0.89	0.87	0.86	0.87	0.87	0.88	0.92	0.80
October	0.86	0.92	0.92	0.90	0.88	0.90	0.89	0.95	0.72
November	0.87	0.92	0.89	0.91	0.89	0.89	0.89	0.93	0.80
December	0.88	0.90	0.88	0.88	0.88	0.88	0.88	0.92	0.83
110 m depth									
January	0.75	0.84	0.72	0.73	0.84	0.82	0.83	0.86	0.48
February	0.84	0.90	0.84	0.82	0.84	0.88	0.84	0.90	0.72
March	0.76	0.89	0.78	0.80	0.84	0.82	0.81	0.90	0.82
April	0.82	0.89	0.69	0.81	0.80	0.82	0.78	0.88	0.78
May	0.73	0.84	0.75	0.77	0.76	0.80	0.84	0.92	0.75
June	0.80	0.88	0.75	0.76	0.82	0.83	0.80	0.88	0.73
July	0.84	0.89	0.74	0.84	0.77	0.82	0.84	0.92	0.82
August	0.81	0.90	0.70	0.83	0.77	0.85	0.81	0.91	0.80
September	0.83	0.92	0.80	0.82	0.72	0.84	0.86	0.93	0.82
October	0.83	0.92	0.88	0.76	0.67	0.82	0.85	0.92	0.80
November	0.80	0.88	0.72	0.78	0.77	0.82	0.81	0.92	0.80
December	0.73	0.89	0.78	0.77	0.68	0.82	0.82	0.90	0.75
222 m depth									
January	0.71	0.81	0.69	0.72	0.76	0.78	0.74	0.83	0.71
February	0.86	0.88	0.74	0.76	0.86	0.90	0.83	0.86	0.74
March	0.71	0.78	0.72	0.62	0.74	0.69	0.74	0.78	0.59
April	0.83	0.76	0.74	0.64	0.57	0.76	0.78	0.78	0.64
May	0.71	0.76	0.64	0.64	0.72	0.74	0.72	0.79	0.71
June	0.76	0.83	0.59	0.55	0.69	0.64	0.67	0.85	0.76
July	0.81	0.86	0.79	0.81	0.74	0.81	0.79	0.85	0.79
August	0.72	0.81	0.62	0.60	0.69	0.72	0.72	0.79	0.78
September	0.76	0.74	0.67	0.67	0.78	0.71	0.72	0.85	0.74
October	0.79	0.83	0.72	0.62	0.62	0.78	0.76	0.79	0.71
November	0.81	0.86	0.71	0.78	0.72	0.79	0.85	0.88	0.71
December	0.69	0.76	0.69	0.72	0.69	0.69	0.76	0.76	0.62