GLOBAL BENEFITS OF MARINE PROTECTED AREAS SUPPLEMENTAL MATERIAL

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1. Syntax for Geocoding

Stock assessments in the RAM database are associated with named areas. We estimated coordinates and bounding boxes for each of these areas, using country EEZs and fishing area shapefiles when appropriate. In addition, we developed a simple language to encode the GIS shapes of the areas, along with an interpreter to translate these codes into polygons. The syntax supports using political entities, shapefile regions, circles and rectangles, clipped versions of these, and combinations of these.

The various cases handled by the syntax are shown below:

Region Type	**Syntax and Example**
FAO regions	Space-delimited sequence of FAO fishing subareas or major areas followed by `*`
Example:	Labrador - NE Newfoundland (Canada-DFO-23K)
	`2G 2H 2J 3K`
Example:	Indian Ocean (multinational-IOTC-IO)
	`51* 57*`
FAO Regions Restricted	Major area number followed by `:` for subareas or `::` for divisions
Example:	Eastern Baltic (multinational-ICES-25-32)
	`27: 25 26 27 28.1 28.2 29 30 31 32`
Example:	Baltic Sea (multinational-ICES-IIId)
	`27::27.III.d`
Shapefile regions	Shapefile or region designator, followed by [sub]region names
Example:	New Zealand Areas LIN 6b (New Zealand-MFish-LIN6b)
	`NZ: 607 608 609 613 614 615 621 622`
Circular Disc	Latitude, Longitude, Radius (in km)
Example:	Queen Charlotte Islands (Canada-DFO-QCI)
	`52.683043, -131.791992, 100`
Bounding Boxes	$\pm$Latitude$_1$ $\pm$Longitude$_1$ $\pm$Latitude$_2$ $\pm$Longitude$_2$
Example:	Cascade Plateau (Australia-AFMA-CASCADE)
	`-43.83 +150.38 -44.02 +150.54`
Political Entities	Quoted name of entity, or country followed by `#`
Example:	Macquarie Island (Australia-AFMA-MI)
	`"Australia (Macquarie Island)"`
Clipped Regions	Region designations, followed `\~` for NE, `~/` for NW, `/~` for SE, `~\` for SW of the following latitude, longitude point
Example:	California (USA-NMFS-CAL)

Region Type	**Syntax and Example**
	`77 \~ 32 -177.714844`
Combinations	Space-separated sequences of above commands
Example:	South Africa South coast (South Africa-DETMCM-SASC)
	`47: 1.6 2.1 2.2 51: 8 ~\ -25 +36`

The following table shows all RAM database regions as coded, as well as their calculated size and centroid.

Region Name	Encoding	Size (km^2)	Latitude	Longitude
Argentina-CFP-ARG-N	41: 2.3	979766	-36.33	-56.93
Argentina-CFP-ARG-S	41: 3.1 3.2	2924714	-50.00	-59.28
Australia-AFMA-CASCADE	-43.83 +150.38 -44.02 +150.54	271	-43.92	150.46
Australia-AFMA-ESE	-37.71859, 150.556641, 600	894716	-37.72	150.56
Australia-AFMA-MI	-54.72305, 158.86208, 370	247031	-54.72	158.86
Australia-AFMA-GAB	-35.746512, 131.308594, 1000	2557954	-35.75	131.31
Australia-AFMA-GAB-SESSF	-35.746512, 131.308594, 1000	2557954	-35.75	131.31
Australia-AFMA-NAUST	57: 5.1 71:_71.5 71:_71.8	8355535	-17.24	133.18
Australia-AFMA-SESSF	6:57.6 81:_81.1	3041179	-35.27	157.28
Australia-AFMA-TAS	-42.032974, 146.601563, 500	581887	-42.03	146.60
Australia-AFMA-SE	Australia# /~ -24.5 +129 Australia:Lord_Howe_Island#	5430238	-34.03	147.02
Australia-AFMA-WSE	-36.879621, 138.691406, 700	1232722	-36.88	138.69
Canada-DFO-23K	2G 2H 2J 3K	1228864	54.40	-54.66
Canada-DFO-2J3KL	2J 3K 3L	1004991	51.43	-51.89
Canada-DFO-2J3KLNOPs	2J 3K 3L 3N 3O 3Ps	1556983	48.97	-51.74
Canada-DFO-3Pn4RS	3Pn 4R 4S	505847	50.38	-65.12
Canada-DFO-3Pn4RSTVn	3Pn 4R 4S 4T 4Vn	913775	49.10	-65.88
Canada-DFO-3Ps	3Ps	125784	46.50	-55.89
Canada-DFO-4R	4R	70600	49.81	-58.02
Canada-DFO-4RST	4R 4S 4T	858583	49.22	-66.22
Canada-DFO-4T	4T	364842	47.51	-67.57
Canada-DFO-4TVn	4T 4Vn	399488	47.41	-66.87
Canada-DFO-4Vn	4Vn	35668	46.39	-59.58
Canada-DFO-4VsW	4Vs 4W	570694	41.86	-58.22
Canada-DFO-4VWX	4Vn 4Vs 4W 4X	816503	42.41	-60.11
Canada-DFO-4VWX5	4Vn 4Vs 4W 4X 5Y 5Zc 5Zu 5Zw	1076868	42.27	-62.39
Canada-DFO-4VWX5Zc	4Vn 4Vs 4W 4X 5Y 5Zc	944464	42.56	-61.27
Canada-DFO-4X	4X	218106	43.14	-65.16
Canada-DFO-4X5Y	4X 5Y	329151	43.36	-66.54
Canada-DFO-4X5YZ	4X 5Y 5Zc 5Zu 5Zw	511800	42.41	-67.30
Canada-DFO-5Zejm	40.5, -68, 200	92253	40.50	-68.00
Canada-DFO-5Zjm	40.5, -68, 200	92253	40.50	-68.00
Canada-DFO-ATL	2G 2H 2J 3K 3L 3M 3N 3O 3Ps 4Vn 4Vs 4W 4X	3171572	48.34	-53.94
Canada-DFO-CC	52.375599, -129.023437, 200	74251	52.38	-129.02
Canada-DFO-HS	53.120405, -130.825195, 150	39969	53.12	-130.83
Canada-DFO-PCOAST	Canada# ~\ 57 -120	1114534	52.18	-126.97
Canada-DFO-PRD	53.120405, -130.825195, 250	115649	53.12	-130.83
Canada-DFO-QCI	52.683043, -131.791992, 100	17952	52.68	-131.79
Canada-DFO-SOG	49.353756, -123.859863, 100	19260	49.35	-123.86
Canada-DFO-WCVANI	49.639177, -126.694336, 200	78771	49.64	-126.69
Iran-Iran-CS	+47.115 +46.625977 +36.244273 +55.480957	885906	41.68	51.05
multinational-CCAMLR-RS	-75.050354, -174.726562, 600	10060140	-75.05	-174.01
multinational-CCSBT-SO	88* 48* 58*	46033059	-70.49	-0.85
multinational-GFCMED-BLACKW	42.747012, 37.880859, 400	366951	42.75	37.88
multinational-IATTC-EPAC	61 71 81	35180027646	3.56	71.62
multinational-IATTC-NEPAC	61	8589330178	42.74	120.79
multinational-ICCAT-NATL	21* 27* 31* 34*	56168545	49.41	-22.72
multinational-ICCAT-WATL	21* 31* 41*	4730204	5.19	-50.66
multinational-ICCAT-MED	37: 1.1 1.2 1.3 2.1 2.2 3.1 3.2	5423167	37.04	15.86
multinational-ICCAT-EATL	27* 34* 47*	38136898	33.96	-1.26

multinational-ICCAT-SATL	41* 47*	23416509	-30.52	-24.68
multinational-ICES-22-24	22 23 24	98290	54.75	12.06
multinational-ICES-22-24-IIIa	22 23 24 IIIa	239628	57.04	10.99
multinational-ICES-22-32	27: 22 23 24 25 26 27 28.1 28.2 29 30 31 32	1104398	61.16	21.50
multinational-ICES-25-32	27: 25 26 27 28.1 28.2 29 30 31 32	1002955	61.68	22.26
multinational-ICES-28	28.1 28.2	84998	57.46	21.71
multinational-ICES-29	29	73469	59.63	20.42
multinational-ICES-30	30	234862	62.17	23.00
multinational-ICES-31	27: 31	295786	65.91	23.16
multinational-ICES-32	32	115565	59.92	26.76
multinational-ICES-I	Ia Ib	2566804	77.14	46.78
multinational-ICES-IIa	IIa1 IIa2	1824009	67.90	6.29
multinational-ICES-IIa-IIIabd-IV-Vb-VI-VII-VIIIabcde-XII-XIV-Ixa	IIa1 IIa2 IIIa 23 27::27.III.d IVa IVb IVc Vb1a Vb1b Vb2 VIa VIb1 VIb2 VIIa VIIb VIIc1 VIIc2 VIId VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2 VIIIa VIIIb VIIIc VIIId1 VIIId2 VIIIe1 VIIIe2 XIIa1 XIIa2 XIIa3 XIIa4 XIIb XIIc XIVa XIVb1 XIVb2	11045306	65.32	-12.56
multinational-ICES-IIb	IIb1 IIb2	1180643	81.75	9.50
multinational-ICES-I-II	Ia Ib IIa1 IIa2 IIb1 IIb2	5629995	76.92	26.36
multinational-ICES-IIIa	IIIa	141326	58.49	10.31
multinational-ICES-IIIa-IV	IIIa IVa IVb IVc	1066012	56.84	3.91
multinational-ICES-IIIa-IV-VI	IIIa IVa IVb IVc VIa VIb1 VIb2	1580319	56.98	-1.01
multinational-ICES-IIIa-IV-VIId	IIIa IVa IVb IVc VIId	1137714	56.47	3.67
multinational-ICES-IIIa-IV-VI-VII-VIIIabd	IIIa IVa IVb IVc VIa VIb1 VIb2 VIIa VIIb VIIc1 VIIc2 VIId VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2 VIIIa VIIIb VIIId1 VIIId2	2842784	54.14	-3.86
multinational-ICES-IIIb(23)	23	5693	55.73	12.57
multinational-ICES-IIIc(22)	22	47945	54.84	10.62
multinational-ICES-IIId	27::27.III.d	1050714	61.43	21.96
multinational-ICES-II-IIIa-IV-VI-VII-VIIIabc	IIa1 IIa2 IIb1 IIb2 IIIa IVa IVb IVc VIa VIb1 VIb2 VIIa VIIb VIIc1 VIIc2 VIId VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2 VIIIa VIIIb VIIIc	5810170	70.74	5.13
multinational-ICES-I-II-III-IV-V-VI-VII-VIII-IX-XII-XIV	Ia Ib IIa1 IIa2 IIb1 IIb2 IIIa 23 22 27::27.III.d IVa IVb IVc Va1 Va2 Vb1a Vb1b Vb2 VIa VIb1 VIb2 VIIa VIIb VIIc1 VIIc2 VIId VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2 VIIIa VIIIb VIIIc VIIId1 VIIId2 VIIIe1 VIIIe2 IXa IXb1 IXb2 XIIa1 XIIa2 XIIa3 XIIa4 XIIb XIIc XIVa XIVb1 XIVb2	16299447	70.38	5.30
multinational-ICES-IV	IVa IVb IVc	921642	56.58	2.88
multinational-ICES-IVa	IVa	347372	59.77	1.92
multinational-ICES-IVb	IVb	376667	55.40	3.40
multinational-ICES-IVc	IVc	197903	52.19	3.84
multinational-ICES-IXa	IXa	350956	39.41	-8.35
multinational-ICES-IXb	IXb1 IXb2	467680	39.50	-14.50
multinational-ICES-Va	Va1 Va2	485043	65.11	-19.26
multinational-ICES-Vb	Vb1a Vb1b Vb2	193507	61.52	-9.58
multinational-ICES-Vb1	Vb1a Vb1b	173007	61.61	-9.66
multinational-ICES-Vb2	Vb2	20853	60.77	-8.84
multinational-ICES-VIa	VIa	285871	57.29	-8.18
multinational-ICES-VIa-VIIb-VIIc	VIa VIIb VIIc1 VIIc2	427820	56.12	-9.74
multinational-ICES-VIb	VIb1 VIb2	221241	57.25	-15.00
multinational-ICES-VIIa	VIIa	134226	53.46	-4.98
multinational-ICES-VIIb	VIIb	52721	53.54	-10.20
multinational-ICES-VIIb-k	VIIb VIIc1 VIIc2 VIId VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2	773580	50.81	-9.72
multinational-ICES-VIIc	VIIc1 VIIc2	88531	53.50	-15.00
multinational-ICES-VIId	VIId	74116	50.34	-0.25
multinational-ICES-VIIe	VIIe	94165	49.58	-3.36
multinational-ICES-VIIe-k	VIIe VIIf VIIg VIIh VIIj1 VIIj2 VIIk1 VIIk2	557231	50.13	-10.03
multinational-ICES-VIIf	VIIf	34479	51.04	-4.52
multinational-ICES-VIIf-g	VIIf VIIg	85513	51.10	-6.16
multinational-ICES-VIIg	VIIg	50945	51.14	-7.26

multinational-ICES-VIIh	VIIh	57089	48.89	-7.14
multinational-ICES-VIII	VIIIa VIIIb VIIIc VIIId1 VIIId2 VIIIe1 VIIIe2	793200	45.40	-9.07
multinational-ICES-VIIIa	VIIIa	88259	47.15	-3.53
multinational-ICES-VIIIb	VIIIb	65318	44.72	-1.54
multinational-ICES-VIIIc	VIIIc	150420	43.57	-6.21
multinational-ICES-VIIIc-IXa	VIIIc IXa	501146	40.69	-7.69
multinational-ICES-VIIId	VIIId1 VIIId2	181917	45.99	-7.71
multinational-ICES-VIIIe	VIIIe1 VIIIe2	305209	45.50	-14.50
multinational-ICES-VIIj	VIIj1 VIIj2	106942	50.25	-10.50
multinational-ICES-VIIk	VIIk1 VIIk2	213068	50.25	-15.00
multinational-ICES-X	Xa1 Xa2 Xb	2746301	42.00	-30.00
multinational-ICES-XII	XIIa1 XIIa2 XIIa3 XIIa4 XIIb XIIc	2085132	54.29	-29.05
multinational-ICES-XIVa	XIVa	1403557	79.37	-25.20
multinational-ICES-XIVb	XIVb1 XIVb2	982556	64.38	-35.53
multinational-IOTC-IO	51* 57*	27809007	-15.25	80.65
multinational-IPHC-NPAC	+66 +120 +20 +180 +66 -180 +20 -105	3664874159	43.00	-12.50
multinational-NAFO-01ABCDEF	0A 0B 1A 1B 1C 1D 1E 1F	2732505	69.30	-57.46
multinational-NAFO-1	1A 1B 1C 1D 1E 1F	1884144	69.27	-52.54
multinational-NAFO-23K	2G 2H 2J 3K	1228864	54.40	-54.66
multinational-NAFO-23KLMNO	2G 2H 2J 3K 3L 3M 3N 3O	2278723	50.32	-51.88
multinational-NAFO-3L	3L	208594	47.63	-50.35
multinational-NAFO-3LN	3L 3N	492042	44.81	-49.45
multinational-NAFO-3LNO	3L 3N 3O	633125	44.56	-50.13
multinational-NAFO-3M	3M	409464	44.12	-44.25
multinational-NAFO-3NO	3N 3O	426476	42.92	-50.01
multinational-NAFO-3O	3O	140834	43.66	-52.55
multinational-SPC-WPO	67 77 87*	12970145	2.70	-124.65
multinational-SPRFMO-CH	87* /~ -18.33 -90	8150045	-38.87	-79.31
multinational-TRAC-5Z	5Zu 5Zc 5Zw	185058	40.67	-68.69
multinational-UNKNOWN-NWPAC	+66 -180 +20 -105	29420870	43.00	-142.50
multinational-WCPFC-SPAC	81 87* /~ +25 -120	7308057451	-35.02	-70.33
New Zealand-MFish-8	NZ: 037 039 040 041 801	67280	-39.17	173.30
New Zealand-MFish-CR	NZ: 020 021 022 023 401 402 403 404 405 406 407 408 409 410 411 412 049 050 051 052	879324881	-44.09	-26.98
New Zealand-MFish-CRA1	NZ: 046 102 \~ -36 -165 047 048 103 104 105 001 002 003 106	399295	-33.63	172.65
New Zealand-MFish-CRA2	NZ: 004 005 006 007 008 009 009H 010 011 107 201	26699684693	-36.10	95.66
New Zealand-MFish-CRA3	NZ: 012 013 202 203 204 205 402 403	2303671631	-40.32	6.76
New Zealand-MFish-CRA4	NZ: 014 015 016 017 039 019 401	74563	-41.66	176.21
New Zealand-MFish-CRA5	NZ: 018 020 021 022 023 407 301	142860	-44.38	174.66
New Zealand-MFish-CRA7	NZ: 024 026 302 303	84814	-46.55	171.90
New Zealand-MFish-CRA8	NZ: 027 028 029 030 031 032 033 501 502 503 504 601 602 603 610 616 617 618 619 623 624 625 705 706	941730	-49.64	166.95
New Zealand-MFish-CIR	NZ: 618 619 620 624 625	227989	-53.16	171.32
New Zealand-MFish-ENZ	-38.203655, 176.044922, 600	45518619	-38.14	151.71
New Zealand-MFish-LIN3-4	-42.391009 +171.386719 -45.39845 +180 -42.391009 -180 -45.39845 -172.441406	275920239	-43.89	11.21
New Zealand-MFish-LIN5-6	NZ: 501 502 503 504 032 031 030 029 028 027 025 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625	28354047681	-49.90	113.86
New Zealand-MFish-LIN6b	NZ: 607 608 609 613 614 615 621 622	815277624	-49.07	-5.69
New Zealand-MFish-LIN72	NZ: 701 702 703 704 705 706 801 041 040 039 038 037 036 035 034 033 201 202 203 204 205 206 011 012 013 014 015 016 017	45764801564	-40.11	71.68
New Zealand-MFish-LIN7WC-WCSI	NZ: 704 705 706 035 034 033	203793	-42.51	167.45
New Zealand-MFish-NZMEC	NZ: 014 015 016 017 018 019 203 204 205 206	44232957484	-40.89	-14.94
New Zealand-MFish-PAU5A	NZ: 030 031 032	54984	-45.68	166.37
New Zealand-MFish-PAU5B	NZ: 025 027 029 030	59787	-47.11	167.39
New Zealand-MFish-PAU5D	NZ: 024 026	31421	-45.99	171.20
New Zealand-MFish-PAU7	NZ: 036 /~ -40.5 -171.5 038 017 018	24269	-41.62	173.67
New Zealand-MFish-NZ	7	4094877028	-35.70	32.11

New Zealand-MFish-SA	New_Zealand# ˜\ -46 +200	1665563263	-49.70	116.74
New Zealand-MFish-TRE7	NZ: 701 702 703 704 705 706 036 035 034 033	309307	-41.56	168.36
New Zealand-MFish-WECR	NZ: 020 021 022 023 401 402 403 407 408 409	5463743046	-44.09	150.18
New Zealand-MFish-WNZ	-44.087585, 169.453125, 600	812793	-44.09	169.45
Peru-IMARPE-NC	Peru# ˜/ -13 -76	2592119	-6.11	-79.14
Russia-RFFA-NSO	59.534318, 149.414063, 700	783976	59.53	149.41
Russia-RFFA-WBS	58.813742, 174.726563, 800	1541792552	58.81	146.09
South Africa-DETMCM-1-2	-28.5 +16 -31.25 +18	58895	-29.88	17.00
South Africa-DETMCM-3-4	-31.25 +16 -32.5 +18.5	32801	-31.88	17.25
South Africa-DETMCM-5-6	-32.5 +16 -33.25 +18.5	19468	-32.88	17.25
South Africa-DETMCM-7	-33.25 +16 -33.6 +18.5	9029	-33.42	17.25
South Africa-DETMCM-8	-34.05 +16 -36 +19.5	69157	-35.02	17.75
South Africa-DETMCM-PEI	South_Africa:Marion_Island#	120905	-46.88	37.20
South Africa-DETMCM-SA	10	3259438	-29.62	25.21
South Africa-DETMCM-SASC	47: 1.6 2.1 2.2 51: 8 ˜\ -25 +36	2389559	-34.33	27.53
USA-NMFS-5Y	5Y	111362	43.78	-69.21
USA-NMFS-5YCHATT	5Y 6C	302113	39.12	-72.47
USA-NMFS-5YZ	5Y 5Zc 5Zu 5Zw	296009	41.87	-68.89
USA-NMFS-5YZSNE	5Y 5Zc 5Zu 5Zw	296009	41.87	-68.89
USA-NMFS-5Z	5Zc 5Zu 5Zw	185058	40.67	-68.69
USA-NMFS-5ZSNE	5Zc 5Zu 5Zw	185058	40.67	-68.69
USA-NMFS-AI	+52 -175 +55 -160	331067	53.50	-167.50
USA-NMFS-AIES	+52 -167.5 +55 -160	165872	53.50	-163.75
USA-NMFS-AIWS	+52 -175 +55 -167.5	165845	53.50	-171.25
USA-NMFS-ATL	5Y 5Zc 5Zu 5Zw 6A 6B 6C 6D 6E 6F 6G 6H 31:_31.1 31:_31.5	4001904	34.74	-65.83
USA-NMFS-ATLC	5Y 5Zw 6A 6B 6C 31:_31.1	1237104	35.70	-75.55
USA-NMFS-BB	52.05249, -173.496094, 200	74842	52.05	-173.50
USA-NMFS-BS	57.657158, -178.242187, 1000	805634758	57.65	-45.42
USA-NMFS-BSAI	57.657158, -178.242187, 1200	1153939761	57.64	-36.03
USA-NMFS-CAL	77 \˜ 32 -130	1426282	35.11	-118.35
USA-NMFS-CBS	57.657158, -178.242187, 500	7143841	57.66	-85.62
USA-NMFS-CCOD5Y	5Y	111362	43.78	-69.21
USA-NMFS-CWPAC	77 \˜ 36 -130	428462	38.25	-125.03
USA-NMFS-EBSAIGA	67 ˜/ +50 -130	4196827	57.87	-152.56
USA-NMFS-EBSAI	67 ˜/ +50 -160	1539692	57.92	-167.54
USA-NMFS-EBS	67 ˜/ +54.5 -160	1032738	60.17	-167.55
USA-NMFS-EBSGA	67 ˜/ +54.5 -130	2710608	60.12	-152.58
USA-NMFS-EGM	31::_31.2.2 31::_31.2.3 31::_31.2.4 31::_31.2.5 31::_31.2.6	1009201	27.54	-87.61
USA-NMFS-GA	57.984808, -146.689453, 700	819151	57.98	-146.69
USA-NMFS-GM	31::_31.2.1 31::_31.2.2 31::_31.2.3 31::_31.2.4 31::_31.2.5 31::_31.2.6 31::_31.3.1 31::_31.3.2 31::_31.3.3	2496985	24.95	-91.62
USA-NMFS-GOMNGB	5Y	111362	43.78	-69.21
USA-NMFS-MATLC	6A 6B 6C	496532	38.02	-74.36
USA-NMFS-NATL	5Y 5Zu 5Zw	282174	41.88	-69.03
USA-NMFS-NCAL	+42 -125 +37.07271 -121.311035	173215	39.54	-123.16
USA-NMFS-NPAC	67	10811935	52.91	-147.62
USA-NMFS-NPCOAST	67 /˜ +55 -130	1206543	47.75	-125.00
USA-NMFS-NWATL	1F 2G 2H 2J 3K 3L 3M 3N 3O 3Pn 3Ps 4R 4S 4T 4Vn 4Vs 4X 4W 5Y 5Zc 5Zu 5Zw 6A 6B 6C 6D 6E 6F 6G 6H	6290311	46.62	-57.41
USA-NMFS-NWATLC	2G 2H 2J 3K 3L 3Pn 3Ps 4R 4S 4T 4Vn 4X 4W 5Y 5Zu 5Zw 6A 6B 6C	3815571	48.47	-61.32
USA-NMFS-NS	63.849, -164.269, 150	29408	63.85	-164.27
USA-NMFS-ORECOAST	+46.195042 -125.408936 42 -123.401184	74853	44.10	-124.41
USA-NMFS-PCOAST	67 /˜ +55 -130 77 \˜ +30 -130	3246712	39.54	-120.48
USA-NMFS-PI	56.824933, -169.980469, 300	153069	56.82	-169.98
USA-NMFS-SATL	31:_31.1	564206	31.09	-78.64
USA-NMFS-SATLC	31:_31.1 ˜/ +32 -75 31:_31.1 ˜\ +32 -79	392932	31.55	-79.34
USA-NMFS-SATLCGM	31:_31.1 ˜/ +32 -75 31:_31.1 ˜\ +32 -79 31::_31.2.1 31::_31.2.2 31::_31.2.3 31::_31.2.4 31::_31.2.5 31::_31.2.6 31::_31.3.1 31::_31.3.2 31::_31.3.3	2894673	25.90	-89.85

USA-NMFS-SCAL	+35 -125 +32.5 -117	205759	33.75	-121.00
USA-NMFS-SGBMATL	5Zu 6D	317858	38.39	-67.71
USA-NMFS-SMI	60.408611, -172.72, 400	247659	60.41	-172.72
USA-NMFS-SNE	+43 -74 +41.5 -68	82498	42.25	-71.00
USA-NMFS-SNEMATL	5Zc 5Zw 5Zu 6A 6B 6C 6D 6E 6F 6G 6H	1700861	37.68	-62.50
USA-NMFS-SNEMATLB	5Zc 5Zw 5Zu 6A 6B 6C	685280	38.76	-72.78
USA-NMFS-SPCOAST	+35 -125 +32.5 -117	205759	33.75	-121.00
USA-NMFS-WATL	4Vs 4X 4W 5Y 5Zc 5Zw 5Zu 6A 6B 6C 6D 6E 6F 6G 31:_31.1 31:_31.5 31:_31.4	8685164	29.67	-67.18
USA-NMFS-WGM	31::_31.2.1 31::_31.2.2 31::_31.2.5 ~/ 0 -90 31::_31.3.2	1147829	24.97	-93.16
USA-US State-ATKINS	33.5984422, -92.0468047, 0.2	0	33.60	-92.05
USA-US State-HUNT	44.860052, -84.153192, 0.5	1	44.86	-84.15
USA-US State-KAB	48.472921, -92.991028, 10	196	48.47	-92.99
USA-US State-MIN	47.36935, -122.697458, 1.2	3	47.37	-122.70
USA-US State-NIMROD	34.949554, -93.218307, 4	39	34.95	-93.22
USA-US State-OKA	32.514394, -88.80249, 5	62	32.51	-88.80
USA-US State-PWS	60.615, -147.168, 100	14542	60.62	-147.17
USA-US State-RI	41.664705, -71.499023, 50	5518	41.66	-71.50
USA-US State-ROSS	32.479646, -90.009613, 14	488	32.48	-90.01
USA-US State-SHAL	47.6378593, -124.2526924, 8	127	47.64	-124.25
USA-US State-SITKA	57.053, -135.33, 100	16107	57.05	-135.33
USA-US State-SKY	47.755021, -121.46347, 2	8	47.76	-121.46
USA-US State-SNAH	47.761389, -124.133333, 5	50	47.76	-124.13
USA-US State-SNOW	48.345411, -124.552517, 1	2	48.35	-124.55
USA-US State-SPRI	42.674863, -121.891766, 1	2	42.67	-121.89
USA-US State-TAYU	47.45, -124, 8	128	47.45	-124.00
USA-US State-WILD	47.601996, -124.285583, 6	72	47.60	-124.29

Table 2: RAM Regions and characteristics

2. Treatment and Control Matching

It is difficult to create matching pairs of "treated" stocks that have had increases in their protection a "control" stocks that have not. Four factors have considerable importance for matching stocks for comparison: their stock sizes and their surpluses during a "baseline" period, their locations, and the size of their assessment regions. The baseline is determined by the treated stock, and includes all of the years in which the protected area portion did not increase significantly (as described in section).

We construct four measures of how well each of these features matches between any two stocks, and treat the final match as a product of the four test measures. For stock size and year-to-year surpluses, we construct distributions for each assessment in the "baseline" years before the increase in protected region. We use the Mann-Whitney Wilcoxon tests to compare these distributions, and take the logarithm to ensure that the results of this test do not always dominate the other factors. The distributions of stock and year-to-year surpluses reflect the bioeconomic dynamic of each stock: some stocks are very stable due to both their biology and management, while other stocks are highly variable.

The four features measures are shown below, along with the 50-percentile, 75-percentile, and maximum feature comparison value between any pair of treatment and control regions.

Feature	Test Measures
Stock Distribution	$(-\log WilcoxonTestP-value(BaselineStocksA, BaselineStocksB))^{-1}$
Surplus Distribution	$(-\log WilcoxonTestP-value(Base.SurplusesA, Base.SurplusesB))^{-1}$
Location	$10/\left(10+\sqrt{(LatitudeA-LatitudeB)^2+(LongitudeA-LongitudeB)^2}\right)$
Region Size	$Min(RegionSizeA, RegionSizeB)/Max(RegionSizeA, RegionSizeB)$

Feature	50%	75%	100%
Stock Distribution	0.02694446	0.06184597	272.07847106
Surplus Distribution	0.03735511	0.14421754	139.66341320
Location	0.04216678	0.09633013	0.74351009
Region Size	0.0002629865	0.1197303684	0.9955717441

To match treated and control regions, we find the optimal match under which if a treatment region A is not matched to a control region B, it must be because B is more closely matched to a different control region (the Stable Marriage solution). The matched regions are shown in figure 1 for two cases: when only the stock distribution is used, and when all four features are used.

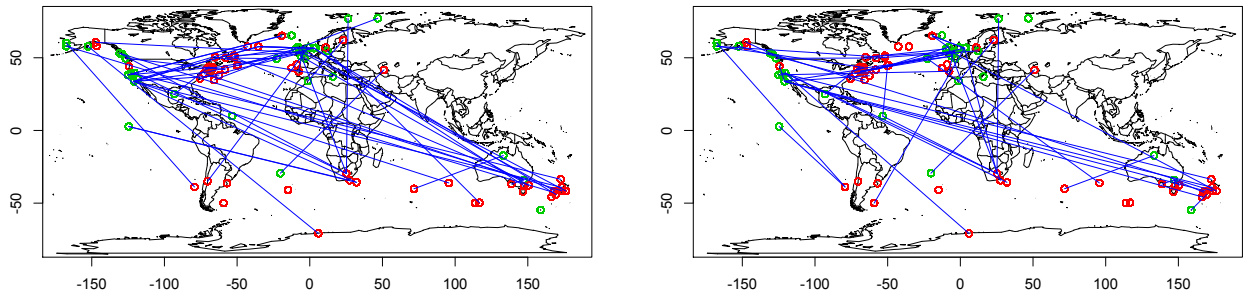

Figure 1: Treatment (green) and control (red) assessment regions, and their pairing (blue). **Left** shows the matches when only the stock distributions are used, **right** shows the matches when all four features are used.

The results from this analysis are unstable, so we provide a collection of test combinations below. The control and treatment change measured relative to each assessments own baseline.

	N	Control Base.	Treated Base.	Control Chg.	Treated Chg.	P Value
stock	65	72119.66	92111.7	1.016591	1.023715	0.9948
stock, dynamics	65	97817.81	90624.1	-36.749505	1.147481	0.3305
stock, dynamics, dist.	63	98041.74	90837.06	1.367975	1.143872	0.7749
stock, dynamics, size	57	95000.75	89967.56	0.01151843	1.02446723	0.627
all	55	106892.4	67605.45	1.9238180	0.9740837	0.2367

In most cases, the treated stock change exceeds the control stock change, but under none is it significant.

3. Catch Regressions

Regressions between country catches and country MPAs show positive marginal effects (see table 3), while regressions between country stock growth and country MPAs show negative effects (see table 4). Combined with the observation that regressions between stock growth and local MPAs show positive effects, this suggests the following consequences:

- The effects of MPAs are local, so country averages are misleading.
- MPA designation corresponds to increases in exploitation. Stocks have decreased while MPAs have increased.

$$C_{it} = \alpha + \beta MPA_{it}$$
$$C_{it} = \alpha_{0i} + \alpha_{1i}t + \alpha_{2i}t^2 + \alpha_{3i}t^3 + \alpha_{4i}t^4 + \beta MPA_{it}$$

	Totals Only	All Regions	Country P(4)
(Intercept)	204119.15***	163321.54***	
	(7498.53)	(10156.04)	
Total	2.72***	14.36***	1.03***
	(0.21)	(2.02)	(0.32)
Marine		0.26	
		(1.15)	
No Take		−3.52	
		(2.40)	
R^2	0.02	0.03	0.93
Adj. R^2	0.02	0.02	0.92
Num. obs.	9405	2166	9405

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 3: Regressions between total MPA area and catch. The first column uses the equation at top. The second includes into this equation total yearly sizes of marine-only and no-take potions of MPAs. The third column uses a country-specific fourth-order polynomial, to capture the rise and fall characteristic of many country's catch series.

	Total	Marine	No Take	Combined
(Intercept)	14789.9231***	13944.1925***	13820.7312***	14965.0093***
	(2042.3211)	(1946.0383)	(1934.4529)	(2102.3685)
Total	−0.0316***			−0.0440
	(0.0117)			(0.0419)
Marine		−0.0311**		0.0300
		(0.0130)		(0.2410)
No Take			−0.0968**	−0.0495
			(0.0417)	(0.6772)
R^2	0.0021	0.0016	0.0015	0.0021
Adj. R^2	0.0018	0.0013	0.0013	0.0012
Num. obs.	3500	3500	3500	3500

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Table 4: Simple regressions between country-wide stock surplus and protected areas show negative relationships. This is because the effects of MPAs are largely local, and over this period stocks have diminished despite the increase in MPAs.

4. Gompertz Model

The Gompertz model has also been shown to provide a plausible description of stock dynamics in the absense of age classes and other ecosystem features.

The Gompertz growth model is,

$$S_{it} - S_{i,t-1} + C_{i,t-1} = rS_{i,t-1} \log\left(K/S_{i,t-1}\right)$$

We estimate this using the following reduced form,

$$S_{it} - S_{i,t-1} + C_{i,t-1} = \left(\alpha_i + \beta \frac{MPA_{it}}{Area_i} + \gamma_{1,i} T_{i,t-1} + \gamma_{2,i} T_{i,t-2}\right) S_{i,t-1} + \kappa_i S_{i,t-1} \log S_{i,t-1} + \delta_i + \epsilon_{it}$$

The results are similar to the logistic model results, and are shown in table 6.

Growth Model. We also consider a model which describes growth and the effect of MPAs in relative terms.

$$log\left(\frac{S_{it} + C_{i,t-1}}{S_{i,t-1}}\right) = \beta\ log\left(\frac{MPA_{it}}{Area_i}\right) + \alpha_i + \epsilon_{it}$$

As before, β is the coefficient of interest, and α_i is an assessment FE. The left-hand side is the log of the fractional growth of the stock. The independent variable is the protected area, divided by the total assessment area. This formulation better handles the long tails in the data, but has less theoretical justification for adding stock-dependent controls.

	Timeless	Stock Trends	Year FE	Trends-Year
Data: MPA variables represent Total MPA areas				
β	1.0537	1.5525**	1.1955*	1.5205**
	(0.6593)	(0.5464)	(0.6055)	(0.5490)
R^2	0.5839	0.6291	0.5878	0.6314
Adj. R^2	0.5155	0.5534	0.5170	0.5534
Data: MPA variables represent Marine-only MPA areas				
β	2.0210	1.5245	2.3513*	1.4315
	(1.4454)	(1.8279)	(1.3156)	(1.8166)
R^2	0.5839	0.6279	0.5878	0.6303
Adj. R^2	0.5154	0.5520	0.5169	0.5520
Num. obs.	10093	10093	10093	10093

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 5: Estimated marginal change in growth rate for a Gompertz model; the columns are analogous to the Logistic regression model table.

	No Controls	Timeless	Stock Trends	Year FE	Trends-Year
Data: MPA variables represent Total MPA areas					
β	0.0058	−0.0095*	0.0054	0.0037	0.0036
	(0.0034)	(0.0041)	(0.0044)	(0.0042)	(0.0043)
R^2	0.6947	0.8251	0.8608	0.8293	0.8620
Adj. R^2	0.6850	0.8005	0.8354	0.8039	0.8357
Num. obs.	9208	9208	9208	9208	9208
Data: MPA variables represent Marine-only MPA areas					
β	0.0042	−0.0084*	0.0047	0.0047	0.0029
	(0.0026)	(0.0034)	(0.0048)	(0.0042)	(0.0053)
R^2	0.4751	0.6737	0.7201	0.6808	0.7233
Adj. R^2	0.4575	0.6252	0.6661	0.6303	0.6672
Num. obs.	7633	7633	7633	7633	7633

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 6: Estimated marginal change in growth rate for a Gompertz model; the columns are analogous to the Logistic regression model table.

In the first model, we include only assessment FE. In the remaining models, we modify the model to include the same controls as the logistic model:

$$log\left(\frac{S_{it}+C_{i,t-1}}{S_{i,t-1}}\right) = \beta\ log\left(\frac{MPA_{it}}{Area_i}\right) + \gamma_{1,i}T_{i,t-1} + \gamma_{2,i}T_{i,t-2} + \kappa_i S_{i,t-1} + \alpha_i + \epsilon_{it}$$

The coefficient for the time FE model of total MPA area suggests that a doubling of the protected area results in a .25% increase in growth rate. Given the low median portion protected, this is roughly similar to the results above.

5. Estimated Economic Surplus

Below are the estimated break-even points for economic gain, comparing the additional surplus due to protecting a given area against the cost of maintaining the area's protection.

Country	EEZ (km^2)	Landed Value ($)	Break-even	Current	Status
Australia	6362934	543693004.2	0.00097	0.08219	Gain
Canada	6006154	2737412009.7	0.00013	0.04152	Gain
France (French Polynesia)	4767242	86125454.7	0.00906	0.00000	Loss
Alaska (USA)	3770021	1397534333.2	0.00026	0.05939	Gain
Indonesia (Eastern)	3617349	954862067.2	0.00042	0.00000	Loss
Kiribati	3437345	236619168.7	0.00236	0.00011	Loss
New Zealand	3423231	643402311.5	0.00068	0.00153	Gain
Russia (Pacific)	3419202	3826290884.8	0.00007	0.00000	Loss
Russia (Siberia)	3277292	4539086.3	0.32657	0.00000	Loss
Mexico	3269386	1007118228.4	0.00038	0.02436	Gain
Brazil	3179693	979543861.2	0.00039	0.01293	Gain
Micronesia	2992597	158507960.2	0.00376	0.00001	Loss
Japan (outer islands)	2625750	unknown	unknown	0.00000	unknown
Indonesia (Western)	2462028	975240581.1	0.00037	0.00000	Loss
Papua New Guinea	2396214	1287686363.6	0.00026	0.00147	Gain
Denmark (Greenland)	2353703	909030201.6	0.00040	0.00000	Loss
China	2285872	10694332164.1	0.00002	0.00367	Gain
Philippines	2265684	1439761734.5	0.00022	0.00729	Gain
Chile	2009299	705281172.9	0.00053	0.00039	Loss
Marshall Isl.	1992232	264785476.1	0.00179	0.00035	Loss
Cook Isl. (New Zealand)	1960135	1571840.9	> 1.0	0.00001	Never
Japan (main islands)	1843270	3984907914.1	0.00006	0.00000	Loss
India (mainland)	1630356	3138268241.2	0.00008	0.00238	Gain
Solomon Isl.	1597492	588690954.3	0.00062	0.00007	Loss
Hawaii Northwest Islands (USA)	1579538	13023173.5	0.07287	0.00000	Loss
South Georgia & Sandwich Isl. (UK)	1449532	8700818.3	0.11808	0.00000	Loss
France (New Caledonia)	1422543	130801478.8	0.00397	0.00053	Loss
Viet Nam	1396299	1616696874.3	0.00017	0.00183	Gain
Norway	1395753	1142401125.6	0.00026	0.00091	Gain
Seychelles	1332031	31784906.9	0.02289	0.00033	Loss
Russia (Barents Sea)	1308140	293911196.5	0.00141	0.03733	Gain
Fiji	1281122	169546952.1	0.00280	0.00016	Loss
Mauritius	1272787	67251289.8	0.00887	0.00007	Loss
Madagascar	1198722	169513299.5	0.00275	0.00008	Loss
Taiwan	1149189	566041498.4	0.00060	0.00116	Gain
Argentina	1084386	812527743.4	0.00038	0.00661	Gain
South Africa	1066655	219220885.1	0.00194	0.00428	Gain
Azores Isl. (Portugal)	1056156	19953068.3	0.03866	0.00078	Loss
Maldives	916189	506513914.1	0.00065	0.00000	Loss
United States, East Coast	915763	1579438872.5	0.00016	0.00000	Loss
Peru	906454	899263509.8	0.00032	0.00373	Gain
Hawaii Main Islands (USA)	895346	11965997.8	0.07029	0.00000	Loss
Pitcairn (UK)	836108	111140	> 1.0	0.00000	Never
Ecuador (Galapagos Isl.)	835936	44349275.7	0.01344	0.15910	Gain
Somalia	830389	45892536.7	0.01285	0.00402	Loss
Vanuatu	827891	62274746.1	0.00877	0.00008	Loss
United States, West Coast	825549	295949493.7	0.00125	0.00000	Loss
Colombia	817816	40714538.7	0.01487	0.09516	Gain
Cape Verde	796840	24693700.9	0.02760	0.00000	Loss
United Kingdom	773676	1178934670.4	0.00022	0.06691	Gain
Iceland	772218	824516895	0.00034	0.00454	Gain

Country	EEZ (km^2)	Landed Value ($)	Break-even	Current	Status
Tristan da Cunha Isl. (UK)	754720	1690228.9	0.77771	0.00017	Loss
Tuvalu	751797	36846142	0.01649	0.00005	Loss
Northern Marianas (USA)	749268	19562416.6	0.03637	0.00002	Loss
Chile (Easter Isl.)	720395	8481587.2	0.10235	0.00000	Loss
United States, Gulf of Mexico	707832	996652396.1	0.00026	0.00000	Loss
Kermadec Isl. (New Zealand)	678402	18599547	0.03778	0.01103	Loss
Tonga	664853	757239.6	> 1.0	0.01509	Never
Andaman & Nicobar Isl. (India)	659912	77748126.8	0.00628	0.00081	Loss
Chagos Archipel., Brit. Ind. Oc. Terr. (UK)	638568	9438790.2	0.08689	0.00000	Loss
Bahamas	629293	69291996.6	0.00716	0.00415	Loss
Palau	604289	46007371.9	0.01183	0.00043	Loss
Crozet Isl. (France)	574558	1292128.5	> 1.0	0.00000	Never
Costa Rica	572014	17084086	0.04026	0.01114	Loss
Mozambique	571955	37015048.9	0.01532	0.03313	Gain
France (Kerguelen Isl.)	567732	9534078	0.08332	0.00000	Loss
Namibia	560152	310171606.9	0.00107	0.00000	Loss
Spain	551874	601671090.8	0.00047	0.01251	Gain
Falkland Isl. (UK)	550872	193000798.2	0.00193	0.00000	Loss
Yemen	544416	198976657.7	0.00185	0.00666	Gain
Australia (Lord Howe Isl.)	543346	11083702.5	0.06827	0.00984	Loss
Italy	537932	311236023.1	0.00105	0.17279	Gain
Oman	535912	204900908.2	0.00177	0.00900	Gain
Sri Lanka	530684	53828676.7	0.00941	0.00353	Loss
Myanmar	520262	896792699.6	0.00028	0.00196	Gain
Amsterdam & St Paul Isl. (France)	509015	1962912.4	0.58460	0.00000	Loss
Chile (J. Fernandez, Felix and Ambrosio Isl.)	502490	52579771.9	0.00956	0.00019	Loss
Angola	501050	191824218.5	0.00190	0.05808	Gain
Greece	494605	395639171.5	0.00076	0.00524	Gain
Australia (Macquarie Isl.)	475847	1305098.9	0.95745	0.34241	Loss
Korea (South)	475469	989486809	0.00024	0.00000	Loss
Prince Edward Isl. (South Africa)	473380	383784.5	> 1.0	0.00000	Never
Venezuela	471507	206481342.1	0.00170	0.04585	Gain
Brazil (Trindade & Martin Vaz Isl.)	468615	10250676.7	0.07254	0.00000	Loss
Australia (Cocos (Keeling) Isl.)	467249	4350981.1	0.21157	0.00006	Loss
Canary Isl. (Spain)	455397	193939814.7	0.00183	0.00165	Loss
Madeira Isl. (Portugal)	454495	16083770.9	0.04099	0.00007	Loss
Bermuda (UK)	450370	628381.8	> 1.0	0.00033	Never
Chile (Desventuradas Isl.)	449805	47405474.1	0.01059	0.00000	Loss
Saint Helena (UK)	444916	37633.2	> 1.0	0.00000	Never
Johnston Atoll (USA)	442635	2687159.7	0.38124	0.00029	Loss
Ascension Isl. (UK)	441658	2400455.8	0.43874	0.00000	Loss
Bouvet Isl. (Norway)	441163	0.9	> 1.0	0.00013	Never
Howland & Baker Isl. (USA)	434921	4992301.9	0.17500	0.00060	Loss
Clipperton Isl. (France)	431263	3158639.6	0.30947	0.00000	Loss
Australia (Norfolk Isl.)	431121	12137797.5	0.05751	0.00000	Loss
Norway (Svalbard Isl.)	426119	159320438.1	0.00230	0.54444	Gain
Australia (Heard & McDonald Isl.)	417015	32470303.4	0.01667	0.15491	Gain
Ireland	410534	483248826.6	0.00057	0.00007	Loss
USA (Wake Isl.)	407241	7588759.9	0.10199	0.00000	Loss
American Samoa	404391	5044339.4	0.16963	0.00050	Loss
Cuba	365448	108726150.4	0.00356	0.01250	Gain
Libya	355120	9649092.1	0.07299	0.00000	Loss
Palmyra Atoll & Kingman Reef (USA)	352300	2852513.2	0.33419	0.01150	Loss
France (Mozambique Channel Isl.)	352117	9406607.8	0.07519	0.00000	Loss
France	334604	394308193.5	0.00070	0.00950	Gain
Panama	331465	100779952.4	0.00382	0.02083	Gain
Portugal	322197	121468768.1	0.00300	0.00494	Gain
New Zealand (Tokelau)	319031	220169.5	> 1.0	0.00000	Never
Jarvis Isl. (USA)	316665	2330525.8	0.41892	0.00048	Loss
New Zealand (Niue)	316629	78006.3	> 1.0	0.00000	Never
France (Runion)	315058	4136782	0.20421	0.00000	Loss
Nauru	308502	62556863.9	0.00681	0.00000	Loss
Equatorial Guinea	308337	3707631.8	0.23291	0.00426	Loss
Thailand	306365	411391553.9	0.00065	0.02011	Gain

Country	EEZ (km^2)	Landed Value ($)	Break-even	Current	Status
Jan Mayen Isl. (Norway)	292567	29051493.2	0.01753	0.00000	Loss
Australia (Christmas Isl.)	277345	3655500.4	0.23087	0.00031	Loss
Morocco	272059	248203847.5	0.00118	0.00514	Gain
France (Tromelin Isl.)	270455	6397200.6	0.11398	0.00000	Loss
Denmark (Faeroe Isl.)	269866	308363022.7	0.00090	0.00000	Loss
Dominican Republic	269285	29872601	0.01659	0.11071	Gain
Jamaica	263283	46214990.3	0.00956	0.00839	Loss
Egypt	261824	21432399.3	0.02494	0.17686	Gain
France (Wallis & Futuna Isl.)	258269	9278631.7	0.07079	0.00000	Loss
Liberia	246152	10487808.2	0.06001	0.00225	Loss
Tanzania	241541	19278086.9	0.02791	0.01745	Loss
Honduras	240240	20218567.4	0.02626	0.01033	Loss
Ghana	224908	82934991.3	0.00442	0.00000	Loss
Guam (USA)	221504	9705916.5	0.06440	0.00079	Loss
Pakistan	221435	336894390.9	0.00076	0.00985	Gain
Nigeria	216789	192676108.5	0.00153	0.00000	Loss
Gabon	193627	37911124.6	0.01134	0.01539	Gain
Barbados	186107	527244.5	> 1.0	0.00001	Never
Saudi Arabia (Red Sea)	185882	61175272.9	0.00617	0.01782	Gain
Puerto Rico (USA)	177685	18662252.6	0.02692	0.01568	Loss
Cte d'Ivoire	174545	35156605.9	0.01214	0.00169	Loss
Turkey (Black Sea)	172199	275927241.9	0.00092	0.00000	Loss
Sweden	170086	198703319.8	0.00138	0.03180	Gain
Sao Tome & Principe	165364	5336083.1	0.12644	0.00000	Loss
Comoros Isl.	164691	4589363	0.15250	0.00245	Loss
Iran	164051	325867282.9	0.00074	0.04577	Gain
Sierra Leone	159744	57490736.6	0.00642	0.00000	Loss
Senegal	157550	256383603.4	0.00099	0.00430	Gain
Malaysia (Sarawak)	155938	427121026.3	0.00052	0.01692	Gain
Mauritania	155422	272112304.2	0.00091	0.07854	Gain
Turks & Caicos Isl. (UK)	154068	22999891.1	0.02000	0.00461	Loss
Ukraine	144038	25897642.7	0.01696	0.02102	Gain
Guyana	135900	145304993.4	0.00194	0.00000	Loss
France (French Guiana)	133949	19927104	0.02311	0.00000	Loss
Malaysia (Peninsula East)	132973	485624690.6	0.00043	0.01569	Gain
Uruguay	132286	84170617	0.00380	0.00049	Loss
Samoa	131812	680531.6	> 1.0	0.00079	Never
Algeria	128865	28936373.9	0.01436	0.00743	Loss
Suriname	128318	71198861.3	0.00465	0.00938	Gain
Nicaragua	127488	61752338.2	0.00555	0.00631	Gain
Cayman Isl. (UK)	119137	102438.3	> 1.0	0.00087	Never
Guatemala	117743	11890021.7	0.04266	0.00157	Loss
Korea (North)	115649	186670920.8	0.00136	0.00000	Loss
Haiti	112025	16279701.1	0.02845	0.00000	Loss
Kenya	111999	2860471.4	0.25007	0.02725	Loss
Guinea	109456	92581341.3	0.00322	0.00000	Loss
Antigua & Barbuda	107914	5748819.7	0.10354	0.00111	Loss
Denmark	107579	346659442.8	0.00062	0.03747	Gain
Guinea-Bissau	106117	31149015.7	0.01247	0.02792	Gain
Tunisia	102362	146446726	0.00179	0.00063	Loss
Cyprus	98550	12728921.7	0.03747	0.00016	Loss
France (Guadeloupe)	95978	20254230.4	0.02083	0.00093	Loss
El Salvador	93761	38600587.3	0.00925	0.00000	Loss
Anguilla (UK)	92178	864911.8	> 1.0	0.00000	Never
Finland	90828	51254750.8	0.00644	0.01329	Gain
Malaysia (Sabah)	89618	276404172.1	0.00078	0.07784	Gain
Sudan	88067	21853404.6	0.01854	0.00014	Loss
Turkey (Mediterranean Sea)	83588	215268466.5	0.00105	0.05506	Gain
British Virgin Isl. (UK)	80117	2023876.5	0.35441	0.00063	Loss
Eritrea	78703	4329718.5	0.13637	0.00000	Loss
Bangladesh	78538	196356430.5	0.00116	0.00583	Gain
Trinidad & Tobago	77502	9753437.8	0.04922	0.00103	Loss
Timor Leste	77256	17100051.4	0.02438	0.00000	Loss
Aruba (Leeward Netherlands Antilles)	68783	310468.9	> 1.0	0.00000	Never

Country	EEZ (km^2)	Landed Value ($)	Break-even	Current	Status
Malaysia (Peninsula West)	68747	471486066.9	0.00037	0.00291	Gain
Russia (Black Sea)	66854	7277784.7	0.06840	0.00000	Loss
Netherlands	63912	123944516.6	0.00196	0.01105	Gain
France (Mayotte)	63078	3268143.3	0.18340	0.00073	Loss
Germany	57259	69436839.6	0.00392	0.00000	Loss
United Arab Emirates	57194	119719077.2	0.00199	0.07440	Gain
Croatia	56374	111077500.2	0.00217	0.00767	Gain
Malta	55556	15015987	0.02641	0.00024	Loss
Cambodia	47827	75262345.2	0.00339	0.04021	Gain
France (Martinique)	47640	4117730.4	0.12808	0.03127	Loss
Congo, R. of	40499	10004148.5	0.04055	0.02469	Loss
Estonia	39940	18101522.8	0.01925	0.03627	Gain
Saint Vincent & the Grenadines	36314	415179.7	> 1.0	0.00107	Never
Belize	35995	11187250.4	0.03423	0.07094	Gain
Bulgaria	35156	884747.8	0.81148	0.00041	Loss
Saudi Arabia (Persian Gulf)	34023	126260050.7	0.00163	0.00000	Loss
US Virgin Isl.	33744	7065866	0.05983	0.00512	Loss
Latvia	32021	23338382	0.01326	0.00470	Loss
Qatar	31870	10324998.3	0.03671	0.00427	Loss
Poland	31600	31907446.3	0.00894	0.01928	Gain
Benin	30024	3537087.1	0.13799	0.00000	Loss
Dominica	28626	4891975.9	0.09092	0.00019	Loss
Israel	27346	5392390	0.07958	0.01884	Loss
Grenada	26158	1450827.3	0.40615	0.00004	Loss
Brunei Darussalam	25427	2925266.7	0.16785	0.00670	Loss
Georgia	22765	211080.2	> 1.0	0.00164	Never
Gambia	22630	27703809.6	0.00981	0.00704	Loss
Romania	20598	491163.1	> 1.0	0.31368	Never
Lebanon	19196	8988387.3	0.03846	0.00026	Loss
Saint Lucia	15484	2901099.7	0.14982	0.00053	Loss
Togo	15375	2982049.8	0.14450	0.00059	Loss
Cameroon	14693	56889333.8	0.00358	0.26462	Gain
Russia (Baltic Sea, St. Petersburg)	12759	6772495.5	0.04947	0.00000	Loss
France (Saint Pierre & Miquelon)	12334	387016.9	> 1.0	0.00000	Never
Kuwait	12236	23491809.7	0.01034	0.02207	Gain
Netherlands Antilles (Windward)	12169	255936	> 1.0	0.00000	Never
Channel Isl. (UK)	11658	37867644.6	0.00563	0.00000	Loss
Russia (Baltic Sea, Kaliningrad)	11634	14285703.9	0.01902	0.00000	Loss
Haiti (Navassa Isl.)	11494	3068267.5	0.12966	0.12850	Loss
Albania	11138	9906014	0.02973	0.02568	Loss
Syria	10222	5352484.4	0.06280	0.00489	Loss
Saint Kitts & Nevis	10201	922963.9	0.56491	0.00000	Loss
Bahrain	8884	47661301.9	0.00394	0.06545	Gain
Montserrat (UK)	7582	98135.3	> 1.0	0.00004	Never
Montenegro	7415	10708857.9	0.02436	0.00000	Loss
Djibouti	6947	170800.8	> 1.0	0.00187	Never
Lithuania	6104	6780329.9	0.04108	0.09186	Gain
Belgium	3453	5100763.3	0.05085	0.00076	Loss
Gaza Strip	2584	3983355.5	0.06443	0.00000	Loss
China (Hong Kong)	2097	59922763.2	0.00206	0.00000	Loss
Congo (ex-Zaire)	1072	1521463.2	0.17220	0.00000	Loss
Singapore	823	25302203.2	0.00480	0.01369	Gain
Iraq	597	695604.3	0.39568	0.00000	Loss
Slovenia	186	687470.5	0.29999	0.00640	Loss
Jordan	95	256661.4	0.86903	0.42105	Loss
Bosnia & Herzegovina	14	1744323.1	0.04907	0.00000	Loss
Ecuador		36230183.3	unknown		unknown
Morocco (Western Sahara)		255936	unknown		unknown