Supplementary materials for Fish and Fisheries manuscript

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Supporting Information

Entity relationship diagram

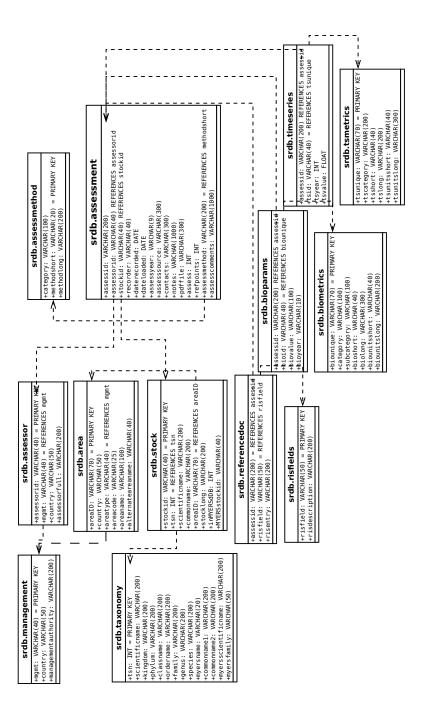


Figure 1: Entity relationship diagram of the RAM legacy database.

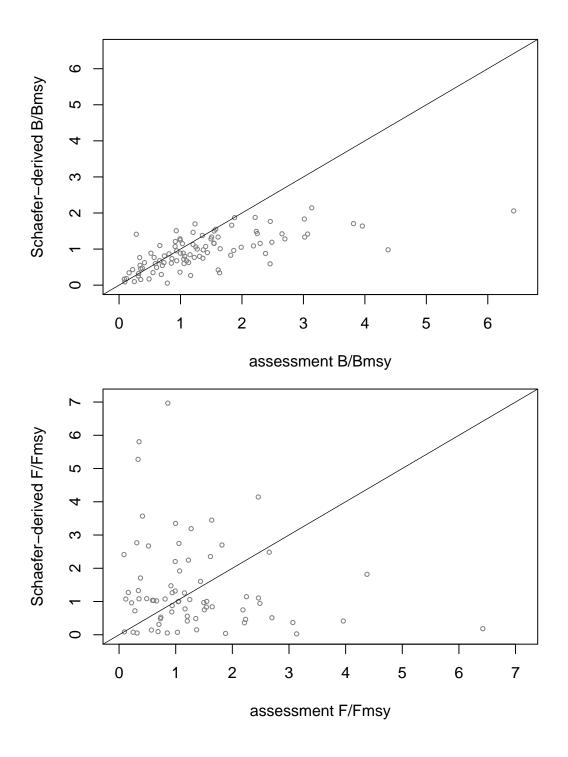


Figure 2: Comparison of assesment BRPs and Schaefer-derived BRPs.

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
AFMA	Bight redfish Southeast Australia	Centroberyx gerrardi	Integrated Analysis	1958-2007					[1]
AFMA	New Zealand ling Eastern half of Southeast Australia	Genypterus blacodes	Integrated Analysis	1968-2007	2007	0.60	2.20	no	[2]
AFMA	New Zealand ling Western half of Southeast Australia	$Genypterus\ blacodes$	Integrated Analysis	1968-2007					[2]
AFMA	Orange roughy Cascade Plateau	Hoplostethus atlanticus	Integrated Analysis	1987-2006	2006	1.76	0.34	no	[3]
AFMA	Orange roughy Southeast Australia	Hoplostethus atlanticus	Integrated Analysis	1978-2007	2006	0.89	0.29	no	[4]
AFMA	Jackass morwong Southeast Australia	Nemadactylus macropterus	Integrated Analysis	1913-2007	2007	0.25	1.80	no	[5]
AFMA	Tiger flathead Southeast Australia	Neoplatycephalus richardsoni	Integrated Analysis	1913-2006	2006	1.05	0.00	no	[6]
AFMA	Northern Australia brown tiger shrimp	Penaeus esculentus	Biomass dynamics model	1970-2006					[7]
AFMA	Northern Australia grooved Tiger Prawn	Penaeus esculentus	Biomass dynamics model	1970-2006					[7]
AFMA	Deepwater flathead Southeast Australia	Platycephalus conatus	Integrated Analysis	1978-2007	2006	1.33	0.61	no	[1]
AFMA	Tasmanian giant crab Tasmania	Pseudocarcinus gigas	Unknown	1990-2007	2007	0.50	1.71	no	[8]
AFMA	common gemfish Southeast Australia	Rexea solandri	Integrated Analysis	1966-2007	2007	0.10	0.39	no	[9]
AFMA	Blue Warehou Eastern half of Southeast Australia	Seriolella brama	Integrated Analysis	1984-2006	2006	0.17	0.84	no	[10]
AFMA	Blue Warehou Western half of Southeast Australia	Seriolella brama	Integrated Analysis	1984-2006	2006	0.62	2.04	no	[10]
AFMA	Silverfish Southeast Australia	Seriolella punctata	Integrated Analysis	1978-2006	2006	1.15	0.79	no	[11]
AFMA	School whiting Southeast Australia	Sillago flindersi	Integrated Analysis	1945-2007	2007	1.10	0.82	no	[12]
CCAMLR	Antarctic toothfish Ross Sea	Dissostichus mawsoni	Integrated Analysis	1995-2007	2007	1.76	1.09	no	[13]
CFP	Argentine anchoita Northern Argentina	$Engraulis\ anchoita$	VPA	1989-2007	2007	1.37	0.17	yes	[14]
CFP	Argentine anchoita Southern Argentina	$Engraulis\ anchoita$	Biomass dynamics model	1992-2007	2007	3.13	0.04	yes	[15]
CFP	Patagonian grenadier Southern Argentina	Macruronus magellanicus	VPA	1983-2006	2006	1.82	0.60	yes	[16]
CFP	Argentine hake Northern Argentina	Merluccius hubbsi	VPA	1985-2007	2007	0.16	1.26	yes	[17]
CFP	Argentine hake Southern Argentina	Merluccius hubbsi	VPA	1985-2008	2008	0.34	1.49	yes	[18]
CFP	Southern blue whiting Southern Argentina	Micromesistius australis	VPA	1985-2007				y	[19]
DETMCM	Patagonian toothfish South Africa Subantarctic Prince Edward Islands	Dissostichus eleginoides	Biomass dynamics model	1960-2008					[20]
DETMCM	Anchovy South Africa	Engraulis encrasicolus	Statistical catch at age model	1984-2006	2006	0.97	0.36	no	[21]
DETMCM	Kingklip South Africa	Genypterus capensis	Biomass dynamics model	1932-2008	2008	1.13	0.55	no	[22]
DETMCM	South African abalone South Africa	Haliotis midae	Statistical catch at age model	1951-2008					[23]
DETMCM	South African west coast rock lob- ster South Africa Areas 1-2	$Jasus\ lalandii$	Statistical catch at age model	1910-2008					[24]
DETMCM	South African west coast rock lob- ster South Africa Areas 3-4	$Jasus\ lalandii$	Statistical catch at age model	1910-2008					[24]
DETMCM	South African west coast rock lob- ster South Africa Areas 5-6	$Jasus\ lalandii$	Statistical catch at age model	1910-2008					[24]
DETMCM	South African west coast rock lob- ster South Africa Area 7	$Jasus\ lalandii$	Statistical catch at age model	1910-2008					[24]
DETMCM	South Africa Area 7 South African west coast rock lob- ster South Africa Area 8	$Jasus\ lalandii$	Statistical catch at age model	1910-2008					[24]
DETMCM	Shallow-water cape hake South Africa	Merluccius capensis	Biomass dynamics model	1917-2008	2008	1.16	0.40	no	[25]
DETMCM	Deep-water cape hake South Africa	Merluccius paradoxus	Biomass dynamics model	1917-2008					[26]
DETMCM	Southern spiny lobster South Africa South coast	Palinurus gilchristi	Statistical catch at age model	1973-2008	2008	0.51	1.50	no	[27]
DETMCM	Sardine South Africa	Sardinops sagax	Statistical catch at age model	1984-2006	2006	0.75	0.55	no	[28]

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
DETMCM	Cape horse mackerel South Africa South coast	Trachurus capensis	Biomass dynamics model	1950-2007	2007	1.47	0.76	no	[29]
DFO	Herring Scotian Shelf and Bay of Fundy	Clupea harengus	VPA	1965-2006					[30]
DFO	Herring NAFO 4R fall spawners	Clupea harengus	VPA	1973-2003					[31]
DFO	Herring NAFO 4R spring spawners	Clupea harengus	VPA	1965-2004					[32]
DFO	Herring NAFO 4T fall spawners	Clupea harengus	VPA	1978-2007					[33]
DFO	Herring NAFO 4T spring spawners	Clupea harengus	VPA	1978-2007					[34]
DFO	Pacific herring Central Coast	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.30	0.11	no	
DFO	Pacific herring Prince Rupert Dis- trict	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.16	0.32	no	[?] [?]
DFO	Pacific herring Queen Charlotte Islands	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.20	0.00	no	[?]
DFO	Pacific herring Straight of Georgia	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.91	0.40	no	[?]
DFO	Pacific herring West Coast of Van- couver Island	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.03	0.00	no	[?] [?]
DFO	Pacific cod Hecate Strait	Gadus macrocephalus	Biomass dynamics model	1956-2005	2004	0.37	0.25	no	[?]
DFO	Pacific cod West Coast of Vancouver Island	Gadus macrocephalus	Biomass dynamics model	1956-2002	2001	0.28	0.61	no	[?] [?]
DFO	Atlantic cod NAFO 5Zjm	Gadus morhua	VPA	1978-2003	2002	0.34	0.45	no	[35]
DFO	Atlantic cod NAFO 2J3KL inshore	Gadus morhua	VPA	1959-2006	2002	1.60	0.14	no	[36]
DFO	Atlantic cod NAFO 3Ps	Gadus morhua	VPA	1959-2004	2004	0.49	0.41	no	[37]
DFO	Atlantic cod NAFO 3Fs Atlantic cod NAFO 3Pn4RS	Gadus morhua	VPA	1964-2007	2004	0.49	0.79	no	[38]
DFO	Atlantic cod NAFO 37 h41t3	Gadus morhua Gadus morhua	VPA	1965-2007	2006	0.09	0.79	no	[39]
DFO	Rock sole Hecate Strait	Lepidopsetta bilineata	Statistical catch at age model	1945-2001	2000	1.03	0.32 0.45	no	[40]
DFO			VPA						[40]
DFO	Haddock NAFO-4X5Y	Melanogrammus aeglefinus	VPA VPA	1960-2003 1969-2003	2003 2002	$0.85 \\ 1.00$	0.33 0.65	no	[41] $[42]$
	Haddock NAFO-5Zejm	Melanogrammus aeglefinus						no	[42]
DFO	English sole Hecate Strait	Parophrys vetulus	Statistical catch at age model	1944-2001	2001	1.23	0.37	no	
DFO	Pollock NAFO-4VWX5Zc	Pollachius virens	VPA	1974-2007	2006	0.56	0.30	no	[43]
IATTC	Yellowfin tuna Eastern Pacific	Thunnus albacares	Statistical catch at age model	1975-2007					[44]
IATTC	Bigeye tuna Eastern Pacific	Thunnus obesus	Integrated Analysis	1975-2007	0000		0.05		[45]
ICCAT	Skipjack tuna Eastern Atlantic	Katsuwonus pelamis	Biomass dynamics model	1950-2006	2006	1.71	0.27	no	[46]
ICCAT	Skipjack tuna Western Atlantic	Katsuwonus pelamis	Biomass dynamics model	1952-2006	2006	1.72	0.27	no	[46]
ICCAT	Albacore tuna North Atlantic	Thunnus alalunga	VPA	1929-2005	2005	0.81	1.49	yes	[?]
ICCAT	Yellowfin tuna Atlantic	Thunnus albacares	VPA	1970-2006	2006	1.07	0.81	yes	[47]
ICCAT	Bigeye tuna Atlantic	Thunnus obesus	Biomass dynamics model	1950-2005	2005	0.90	0.86	no	[48]
ICCAT	Bluefin tuna Eastern Atlantic	Thunnus thynnus	VPA	1969-2007	2007	0.34	9.38	yes	[49]
ICCAT	Bluefin tuna Western Atlantic	Thunnus thynnus	VPA	1969-2007	2007	0.57	1.33	yes	[49]
ICCAT	Swordfish Mediterranean Sea	Xiphias gladius	Biomass dynamics model	1968-2006	2006	0.94	1.27	yes	[50]
ICCAT	Swordfish North Atlantic	Xiphias gladius	Biomass dynamics model	1978-2007	2005	1.03	0.82	no	[51]
ICCAT	Swordfish South Atlantic	$Xiphias\ gladius$	Biomass dynamics model	1950-2005	2005	1.18	0.69	no	[51]
ICES	Sandeel North Sea	Ammodytes marinus	VPA	1983-2007	2007	0.92	0.24	no	[52]
ICES	Herring ICES 22-24-IIIa	Clupea harengus	Statistical catch at age model	1991-2006	2006	0.73	1.02	no	[53]
ICES	Herring Northern Irish Sea	Clupea harengus	Statistical catch at age model	1960-2006	2006	0.72	0.34	no	[53]
ICES	Herring North Sea	Clupea harengus	Statistical catch at age model	1960-2007	2006	0.65	1.32	no	[53]
ICES	Herring ICES VIa	Clupea harengus	Statistical catch at age model	1957-2006	2006	0.18	1.59	no	[53]
ICES	Herring ICES VIa-VIIb-VIIc	Clupea harengus	VPA	1969-2000	2000	0.50	1.04	no	[53]
ICES	Herring ICES 25-32	Clupea harengus	VPA	1973-2006	2006	0.69	0.79	no	[54]
ICES	Herring ICES 30	Clupea harengus	VPA	1972-2007	2006	1.19	1.10	no	[54]
ICES	Herring ICES 31	Clupea harengus	VPA	1979-2006	2006	0.29	1.60	no	[54]
ICES	Herring Iceland (Summer spawners)	Clupea harengus	VPA	1983-2007	2006	1.00	0.79	no	[55]
ICES	Herring ICES 28	Clupea harengus	VPA	1976-2007	2006	1.21	0.87	no	[54]
ICES	Anchovy ICES VIII	Engraulis encrasicolus	Biomass dynamics model	1986-2007					[56]
ICES	Atlantic cod coastal Norway	Gadus morhua	VPA	1982-2006	2006	0.27	2.17	no	[57]
ICES	Atlantic cod Northeast Arctic	Gadus morhua	VPA	1943-2006	2006	0.56	1.42	no	[58]
ICES	Atlantic cod Faroe Plateau	Gadus morhua	VPA	1959-2006	2006	0.26	1.52	no	[55]
ICES	Atlantic cod Iceland	Gadus morhua	Statistical catch at age model	1952-2006	2006	0.46	1.17	no	[55]
ICES	Atlantic cod Baltic Areas 22 and 24	Gadus morhua	VPA	1969-2007	2006	0.36	1.43	no	[54]

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
ICES	Atlantic cod Baltic Areas 25-32	Gadus morhua	VPA	1964-2007	2006	0.16	1.46	no	[54]
ICES	Atlantic cod Kattegat	Gadus morhua	VPA	1970-2006	2006	0.19	0.31	no	[54]
ICES	Atlantic cod Irish Sea	Gadus morhua	VPA	1968-2006	2006	0.15	0.56	no	[59]
ICES	Atlantic cod West of Scotland	Gadus morhua	Statistical catch at age model	1977-2006	2006	0.12	0.42	no	[59]
ICES	Atlantic cod North Sea	Gadus morhua	VPA	1962-2007	2006	0.19	0.80	no	[52]
ICES	Fourspotted megrim ICES VIIIc- IXa	Lepidorhombus boscii	VPA	1986-2006	2006	0.70	1.01	no	[60]
ICES	Megrim ICES VIIIc-IXa	Lepidorhombus whiffiagonis	VPA	1985-2007	2006	0.43	1.07	no	[60]
ICES	Capelin Barents Sea	$Mallotus \ villosus$	Unknown	1965-2007	2006	0.17	0.00	no	[57]
ICES	Capelin Iceland	$Mallotus \ villosus$	Survey index	1977-2007	2006	0.49	0.85	no	[55]
ICES	Haddock Northeast Arctic	$Melanogrammus\ aegle finus$	VPA	1947-2006	2006	1.10	1.06	no	[57]
ICES	Haddock Faroe Plateau	Melanogrammus aeglefinus	VPA	1955-2006	2006	0.85	1.07	no	[55]
ICES	Haddock Iceland	Melanogrammus aeglefinus	VPA	1977-2007	2007	0.98	1.23	no	[55]
ICES	Haddock West of Scotland	Melanogrammus aeglefinus	Statistical catch at age model	1977-2006	2006	0.58	0.73	no	[59]
ICES	Haddock ICES IIIa and North Sea	Melanogrammus aeglefinus	VPA	1963-2006	2006	0.62	0.25	no	[52]
ICES	Haddock Rockall Bank	Melanogrammus aeglefinus	VPA	1990-2007	2006	1.10	0.52	no	[59]
ICES	Haddock ICES VIIb-k	Melanogrammus aeglefinus	VPA	1993-2006	2006	1.37	0.41	no	[61]
ICES	Haddock Irish Sea	Melanogrammus aeglefinus	Survey index	1972-2006	0000	0.00	1.04		[59]
ICES	Whiting ICES IIIa, VIId and North Sea	Merlangius merlangus	VPA	1979-2006	2006	0.33	1.04	no	[52]
ICES	Whiting ICES VIIe-k	Merlangius merlangus	VPA	1982-2007	2006	0.44	1.25	no	[61]
ICES	Whiting ICES VIa	Merlangius merlangus	Survey index	1984-2007					[59]
ICES	Hake Northeast Atlantic North	Merluccius merluccius	VPA	1977-2007	2006	1.04	0.74	no	[60]
ICES	Hake Northeast Atlantic South	Merluccius merluccius	VPA	1982-2007					[60]
ICES	Whiting Northeast Atlantic	$Micromesistius\ pout as sou$	Integrated Analysis	1980-2007	2006	0.67	1.66	no	[62]
ICES	European Plaice Irish Sea	Pleuronectes platessa	Statistical catch at age model	1962-2006	2006	1.07	0.23	no	[59]
ICES	European Plaice ICES VIIf-g	Pleuronectes platessa	VPA	1976-2006	2006	0.65	0.41	no	[61]
ICES	European Plaice ICES VIIe	Pleuronectes platessa	VPA	1975-2006	2006	0.51	1.39	no	[61]
ICES	European Plaice ICES VIId	Pleuronectes platessa	VPA	1979-2006					[52]
ICES	European Plaice ICES IIIa	Pleuronectes platessa	VPA	1976-2006					[52]
ICES	European Plaice North Sea	Pleuronectes platessa	VPA	1956-2006	2000				[52]
ICES	Pollock Northeast Arctic	Pollachius virens	VPA	1957-2006	2006	1.70	0.60	no	[57]
ICES	Pollock Faroe Plateau	Pollachius virens	VPA	1958-2006	2006	0.99	1.52	no	[55]
ICES	Pollock ICES IIIa, VI and North Sea	Pollachius virens	VPA	1964-2006	2006	0.57	0.97	no	[52]
ICES ICES	Greenland halibut Northeast Arctic	Reinhardtius hippoglossoides	VPA	1959-2007 1978-2007	2006	0.36	1.20	no	[57] [63]
ICES	European pilchard ICES VIIIc-IXa	Sardina pilchardus	Statistical catch at age model		0000	0.98	0.73		
ICES	Mackerel ICES Northeast Atlantic	Scomber scombrus	Statistical catch at age model	1972-2007 1986-2006	2006 2006	0.98	$\frac{0.73}{2.65}$	no	[63] [57]
ICES	Golden Redfish Northeast Arctic common European sole ICES Kat-	Sebastes norvegicus Solea vulgaris	Statistical catch at age model VPA	1986-2006	2006	1.25	0.54	no	[54]
	tegat and Skagerrak	-						no	
ICES	common European sole Bay of Bis- cay	Solea vulgaris	VPA	1982-2006	2006	0.76	1.00	no	[60]
ICES	common European sole Irish Sea	Solea vulgaris	VPA	1968-2006	2006	0.36	1.16	no	[59]
ICES	common European sole Celtic Sea	Solea vulgaris	VPA	1970-2006	2006	0.90	0.95	no	[61]
ICES	common European sole Western English Channel	Solea vulgaris	VPA	1968-2006	2006	0.51	1.74	no	[61]
ICES	common European sole North Sea	Solea vulgaris	VPA	1956-2006					[52]
ICES	common European sole ICES VIId	Solea vulgaris	VPA	1981-2006					[52]
ICES	Sprat ICES Baltic Areas 22-32	Sprattus sprattus	VPA	1973-2007	2006	1.13	1.27	no	[54]
ICES	Sprat North Sea	Sprattus sprattus	Statistical catch at age model	1995-2007					[53]
ICES	Norway pout North Sea	Trisopterus esmarkii	VPA	1983-2007	2006	0.90	0.33	no	[52]
IOTC	Bigeye tuna Indian Ocean	Thunnus obesus	Biomass dynamics model	1957-2006	2004	1.23	0.97	yes	[64]
IPHC	Pacific halibut North Pacific	$Hippoglossus\ stenolepis$	Statistical catch at age model	1988-2009	2008	0.54	2.01	no	[65]
MFish	Black oreo West end of Chatham Rise	Allocyttus niger	Integrated Analysis	1973-2007	2007	0.99	0.82	yes	[?]
MFish	Australian salmon New Zealand	Arripis trutta	Integrated Analysis	1975-2006	2006	1.64	0.33	yes	[?]
MFish	New Zealand snapper New Zealand	Chrysophrys auratus	Integrated Analysis	1931-2005	2005	0.35	2.50	yes	[?] [?]
-	Area 8	v 1 y							

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
MFish	New Zealand ling New Zealand Areas LIN 3 and 4	Genypterus blacodes	Integrated Analysis	1972-2007	2007	3.07	0.09	yes	[?]
MFish	New Zealand ling New Zealand Areas LIN 5 and 6	Genypterus blacodes	Integrated Analysis	1972-2007	2007	3.96	0.10	yes	[?]
MFish	New Zealand ling New Zealand Area LIN 6b	$Genypterus\ blacodes$	Integrated Analysis	1980-2006	2006	2.19	0.11	yes	[?]
MFish	New Zealand ling New Zealand Area LIN 72	$Genypterus\ blacodes$	Integrated Analysis	1972-2007	2007	2.49	0.32	yes	[?]
MFish	New Zealand ling New Zealand Area LIN 7WC - WCSI	Genypterus blacodes	Integrated Analysis	1972-2008	2008	2.21	0.13	yes	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5A	Haliotis iris	Integrated Analysis	1964-2006	2006	0.72	2.83	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5B	Haliotis iris	Integrated Analysis	1963-2007	2007	1.02	0.59	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5D	Haliotis iris	Integrated Analysis	1964-2006	2006	0.44	2.10	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 7	Haliotis iris	Integrated Analysis	1964-2008	2008	0.87	0.94	no	[?]
MFish	Orange roughy New Zealand Mid East Coast	Hoplostethus atlanticus	Integrated Analysis	1981-2004	2004	1.20	0.35	yes	[?]
MFish	Red rock lobster New Zealand area CRA1	Jasus edwardsii	Unknown	1945-2001	2001	1.14	0.88	no	[?]
MFish	Red rock lobster New Zealand area CRA2	Jasus edwardsii	Unknown	1945-2001	2001	0.53	2.12	no	[?]
MFish	Red rock lobster New Zealand area CRA4	Jasus edwardsii	Unknown	1945-2005	2005	0.67	1.33	no	[?]
MFish	Red rock lobster New Zealand area CRA5	Jasus edwardsii	Unknown	1945-2002	2002	0.59	1.68	no	[?]
MFish	Red rock lobster New Zealand area CRA7	Jasus edwardsii	Unknown	1976-2005	2005	0.73	0.43	no	[?]
MFish	Red rock lobster New Zealand area CRA8	Jasus edwardsii	Unknown	1976-2005	2005	0.69	0.49	no	[?]
MFish	Red rock lobster New Zealand area CRA3	Jasus edwardsii	Unknown	1945-2007					[?]
MFish	Hoki Eastern New Zealand	$Macruronus\ novaezelandiae$	Integrated Analysis	1972-2007	2007	1.11	0.33	no	[66]
MFish	Hoki Western New Zealand	$Macruronus\ novaezelandiae$	Integrated Analysis	1972-2007	2007	0.51	0.57	no	[66]
MFish	Southern hake Chatham Rise	Merluccius australis	Integrated Analysis	1975-2006	2006	1.77	0.12	yes	[?]
MFish	Southern hake Sub-Antarctic	Merluccius australis	Integrated Analysis	1975-2007	2007	2.91	0.11	yes	[?]
MFish	Southern blue whiting Campbell Island Rise	Micromesistius australis	Integrated Analysis	1979-2006	2006	1.15	0.92	yes	[?]
MFish	Trevally New Zealand Areas TRE 7	$Pseudocaranx\ dentex$	Integrated Analysis	1944-2005	2005	1.44	0.83	yes	[?]
MFish	Smooth oreo Chatham Rise	Pseudocyttus maculatus	Integrated Analysis	1979-2006	2006	2.25	0.38	yes	[?]
MFish	Smooth oreo West end of Chatham Rise	Pseudocyttus maculatus	Integrated Analysis	1973-2004	2004	1.25	0.53	yes	[?]
MFish	common gemfish New Zealand	$Rexea\ solandri$	Integrated Analysis	1952-2007	2006	1.64	0.43	yes	[?]
NAFO	Atlantic cod NAFO 3NO	Gadus morhua	VPA	1953-2007	2006	0.02	0.27	no	[67]
NAFO	Atlantic cod NAFO 3M	Gadus morhua	VPA	1959-2008					[68]
NAFO	American Plaice NAFO-3LNO	Hippoglossoides platessoides	VPA	1955-2007	2006	0.08	0.77	no	[69]
NAFO	American Plaice NAFO-3M	Hippoglossoides platessoides	VPA	1960-2007	2007	0.13	0.00	no	[70]
NAFO	Yellowtail Flounder NAFO 3LNO	Limanda ferruginea	Biomass dynamics model	1960-2007	2007	1.62	0.00	no	[71]
NAFO	Redfish species NAFO 3LN	Redfish species	Biomass dynamics model	1959-2008	2007	1.88	0.13	ves	[72]
NAFO	Redfish species NAFO 3LN	Redfish species	Biomass dynamics model	1959-2007	2006	1.95	0.04	no	[73]
NAFO	Redfish species NAFO 3M	Redfish species	VPA	1989-2007	2006	0.93	0.01		[74]
NAFO	Greenland halibut NAFO 23KLMNO	Reinhardtius hippoglossoides	VPA VPA	1960-2006	2006	0.39	1.73	no no	[74] [75]
NMFS	Sablefish Eastern Bering Sea / Aleutian Islands / Gulf of Alaska	$An oplopoma\ fimbria$	Statistical catch at age model	1956-2008	2008	1.05	0.66	yes	[?]
NMFS	Sablefish Pacific Coast	Anoplopoma fimbria	Integrated Analysis	1900-2007	2007	0.84	1.09	no	[76]

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NMFS	Ocean quahog Atlantic Coast	$Arctica\ islandica$	Biomass dynamics model	1978-2008					[77]
NMFS	Gray triggerfish Gulf of Mexico	Balistes capriscus	Biomass dynamics model	1981-2004					[78]
NMFS	Gulf menhaden Gulf of Mexico	Brevoortia patronus	Statistical catch at age model	1964-2004	2004	1.08	0.48	no	[?]
NMFS	Atlantic menhaden Atlantic	Brevoortia tyrannus	Statistical catch at age model	1940-2005	2005	0.47	0.97	no	[79]
NMFS	Blacknose shark Atlantic	Carcharhinus acronotus	Biomass dynamics model	1950-2005					[80]
NMFS	Finetooth shark Atlantic	Carcharhinus isodon	Biomass dynamics model	1976-2005					[80]
NMFS	Blacktip shark Atlantic	Carcharhinus limbatus	Biomass dynamics model	1981-2004					[81]
NMFS	Blacktip shark Gulf of Mexico	Carcharhinus limbatus	Biomass dynamics model	1981-2004					[81]
									[81]
NMFS	Sandbar shark Atlantic	Carcharhinus plumbeus	Biomass dynamics model	1975-2004	200	1.01	0.05		
NMFS	Black sea bass Mid-Atlantic Coast	Centropristis striata	Statistical catch at age model	1968-2007	2007	1.21	0.67	no	[82]
NMFS	Snow crab Bering Sea	Chionoecetes opilio	Biomass dynamics model	1979-2008	2008	0.35	1.49	no	[83]
NMFS	Atlantic herring Northwestern At- lantic Coast	Clupea harengus	Statistical catch at age model	1960-2005					[84]
NMFS	Pacific herring Prince William Sound	Clupea pallasii	Statistical catch at age model	1980-2006					[?]
NMFS	Pacific herring Sitka	Clupea pallasii	Statistical catch at age model	1978-2007					[?]
NMFS	Weakfish Atlantic Coast	Cynoscion regalis	VPA	1980-2008	2008	0.06	1.49	no	[85]
NMFS	Petrale sole Northern Pacific Coast	$Eopsetta\ jordani$	Integrated Analysis	1910-2005	2004	0.96	1.26	no	[?]
NMFS	Petrale sole Southern Pacific Coast	Eopsetta jordani	Integrated Analysis	1874-2005	2004	0.63	0.61	no	[?]
NMFS	Red grouper Gulf of Mexico	Epinephelus morio	Statistical catch at age model	1986-2005	2005	1.00	0.88	no	[86]
NMFS	Snowy grouper Southern Atlantic coast	Epinephelus niveatus	Statistical catch at age model	1961-2002	2002	0.19	3.08	yes	[?]
NMFS	Pacific cod Bering Sea and Aleutian Islands	$Gadus\ macrocephalus$	Integrated Analysis	1964-2008	2007	0.89	0.93	no	[?]
NMFS	Pacific cod Gulf of Alaska	Gadus macrocephalus	Integrated Analysis	1964-2008	2007	1.07	0.84	no	[?]
NMFS	Atlantic cod Georges Bank	Gadus morhua	VPA	1960-2008	2007	0.18	0.72	no	[87]
NMFS	Atlantic cod Gulf of Maine	Gadus morhua	VPA	1893-2008	2007	1.46	0.29	no	[88]
NMFS	Witch Flounder NAFO-5Y	Glyptocephalus cynoglossus	VPA	1982-2008	2007	0.30	1.45	ves	[?]
NMFS	Rex sole Gulf of Alaska			1979-2008	2001	0.30	1.40	yes	
NMFS		Glyptocephalus zachirus	Statistical catch at age model						[?] [89]
	Kelp greenling Oregon Coast	Hexagrammos decagrammus	Integrated Analysis	1979-2005	2000	1 00	0.10		
NMFS	Flathead sole Bering Sea and Aleu- tian Islands	$Hippoglossoides\ elassodon$	Statistical catch at age model	1977-2008	2008	1.66	0.18	no	[?]
NMFS	Flathead sole Gulf of Alaska	$Hippoglossoides\ elassodon$	Statistical catch at age model	1978-2008					[?]
NMFS	American Plaice NAFO-5YZ	Hippoglossoides platessoides	VPA	1960-2008	2007	0.55	0.30	no	[?]
NMFS	Atlantic Halibut NAFO-5YZ	Hippoglossus hippoglossus	Unknown	1800-2007					[?]
NMFS	American lobster Georges Bank	Homarus americanus	Biomass dynamics model	1981-2007					i ? i
NMFS	American lobster Gulf of Maine	Homarus americanus	Biomass dynamics model	1981-2007					[?] [?]
NMFS	American lobster Southern New England	Homarus americanus	Biomass dynamics model	1981-2007					[?]
NMFS	Northern shortfin squid Northwest- ern Atlantic Coast	$Illex\ illecebrosus$	Biomass dynamics model	1967-2005					[90]
NMFS	Northern rock sole Eastern Bering Sea and Aleutian Islands	$Lepidop setta\ polyxystra$	Statistical catch at age model	1971-2008	2007	3.02	0.21	yes	[?]
NMFS	Yellowfin sole Bering Sea and Aleu- tian Islands	$Limanda\ aspera$	Statistical catch at age model	1959-2008	2008	1.94	0.62	yes	[?]
NMFS	Yellowtail flounder Cape Cod / Gulf of Maine	$Limanda\ ferruginea$	VPA	1935-2008	2007	0.25	1.73	yes	[91]
NMFS	Yellowtail flounder Georges Bank	Limanda ferruginea	VPA	1935-2008	2007	0.22	1.14	yes	[92]
NMFS	Yellowtail Flounder Southern New	Limanda ferruginea	VPA	1935-2008	2007	0.13	1.61	ves	[93]
	England-Mid Atlantic	Limanaa jerraginea		1933-2008	2007	0.13	1.01	yes	
NMFS	Golden king crab Aleutian Islands Eastern segment	$Lithodes\ a equispinus$	Statistical catch at length model	1990-2007					[83]
NMFS	Golden king crab Aleutian Islands Western segment	Lithodes aequispinus	Statistical catch at length model	1989-2007					[83]
NMFS	Monkfish Gulf of Maine / Northern Georges Bank	Lophius americanus	Unknown	1964-2006	2006	1.73	0.38	no	[94]
NMFS	Monkfish Southern Georges Bank / Mid-Atlantic	Lophius americanus	Unknown	1964-2006	2006	1.72	0.30	no	[95]

Management	Stock ID	Scientific name	${f Methodology}$	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
NMFS	Tilefish Southern Atlantic coast	Lopholatilus chamaeleonticeps	Statistical catch at age model	1961-2002	2002	0.94	1.55	yes	[?]
NMFS	Tilefish Mid-Atlantic Coast	Lopholatilus chamaeleonticeps	Biomass dynamics model	1973-2008	2005	0.72	0.61	no	[96]
NMFS	Mutton snapper Southern Atlantic coast and Gulf of Mexico	Lutjanus analis	Statistical catch at age model	1981-2006					[97]
NMFS	Red snapper Eastern Gulf of Mexico	Lutjanus campechanus	Statistical catch at age model	1872-2003					[98]
NMFS	Red snapper Southern Atlantic coast	Lutjanus campechanus	Statistical catch at age model	1945-2006					[99]
NMFS	Red snapper Western Gulf of Mex- ico	Lutjanus campechanus	Statistical catch at age model	1880-2003					[98]
NMFS	Haddock NAFO-5Y	Melanogrammus aeglefinus	VPA	1956-2008	2007	0.36	1.21	no	[100
NMFS	Haddock Georges Bank	Melanogrammus aeglefinus	VPA	1930-2008	2001	0.30	1.21	110	[100
NMFS		Merluccius bilinearis							[101
NWFS	Silver hake Gulf of Maine / North-	Meriuccius viimearis	Survey index	1955-2005					[102
NMFS	ern Georges Bank Silver hake Southern Georges Bank / Mid-Atlantic	Merluccius bilinearis	Survey index	1955-2005					[102
NMFS	Pacific hake Pacific Coast	Merluccius productus	Integrated Analysis	1966-2008	2008	1.61	0.73	yes	[103
NMFS	Atlantic croaker Mid-Atlantic	Micropogonias undulatus	Biomass dynamics model	1973-2002	2002	1.42	0.73	yes	[?]
	Coast		·						
NMFS	Dover sole Pacific Coast	Microstomus pacificus	Integrated Analysis	1910-2005	2004	1.33	0.45	no	[1]
NMFS	Dover sole Gulf of Alaska	Microstomus pacificus	Statistical catch at age model	1978-2010					[?] [?] [?]
NMFS	Striped bass Gulf of Maine / Cape Hatteras	Morone saxatilis	Statistical catch at age model	1982-2006					
NMFS	Gag Gulf of Mexico	$Mycteroperca\ microlepis$	Unknown	1963-2004	2004	1.00	2.44	yes	[104
NMFS	Gag Southern Atlantic coast	Mycteroperca microlepis	Statistical catch at age model	1962-2005	2005	0.94	1.31	yes	[105
NMFS	Yellowtail snapper Southern At- lantic Coast and Gulf of Mexico	Ocyurus chrysurus	Statistical catch at age model	1962-2001	2001	1.14	0.61	yes	[?]
NMFS	Lingcod Northern Pacific Coast	Ophiodon elongatus	Integrated Analysis	1956-2005					[?]
NMFS	Lingcod Southern Pacific Coast	Ophiodon elongatus	Integrated Analysis	1956-2005					[?]
NMFS	Red porgy Southern Atlantic coast	Pagrus pagrus	Statistical catch at age model	1972-2004	2004	0.61	0.39	yes	[106
NMFS	Northern shrimp Gulf of Maine	Pandalus borealis	Statistical catch at age model	1960-2009	2008	1.58	0.56	no	[?]
NMFS	Summer flounder Mid-Atlantic Coast	Paralichthys dentatus	Statistical catch at age model	1940-2007					[107
NMFS	Red king crab Bristol Bay	$Paralithodes\ camts chaticus$	Statistical catch at length model	1960-2008	2008	1.27	1.05	yes	[83
NMFS	Red king crab Norton Sound	$Paralithodes\ camts chaticus$	Statistical catch at length model	1976-2008					[83
NMFS	English sole Pacific Coast	Parophrys vetulus	Integrated Analysis	1876-2007	2006	2.06	0.14	no	[108
NMFS	Atlantic butterfish Gulf of Maine / Cape Hatteras	Peprilus triacanthus	Unknown	1965-2005	2000	2.00	0.11		[109
NMFS	Sea scallop Georges Bank	$Placopecten\ magellanicus$	Statistical catch at length model	1964-2006	2006	1.59	0.78	no	[11
NMFS	Sea scallop Mid-Atlantic Coast	$Placopecten\ magellanicus$	Statistical catch at length model	1964-2006	2006	1.00	0.36	no	[110
NMFS	Starry flounder Northern Pacific Coast	Platichthys stellatus	Integrated Analysis	1970-2005	2004	0.68	0.33	no	[?]
NMFS	Starry flounder Southern Pacific Coast	Platichthys stellatus	Integrated Analysis	1970-2005	2004	1.15	0.12	no	[?]
NMFS	Atka mackerel Bering Sea and Aleu- tian Islands	$Pleurogrammus\ monoptery gius$	Statistical catch at age model	1976-2009	2008	1.50	0.55	no	[?]
NMFS	Alaska plaice Bering Sea and Aleu- tian Islands	$Pleuronectes\ quadrituber culatus$	Statistical catch at age model	1972-2008	2008	2.46	0.07	yes	[?]
NMFS	Pollock NAFO-5YZ	Pollachius virens	Survey index	1963-2007					[11]
NMFS	Bluefish Atlantic Coast	Pomatomus saltatrix	Statistical catch at age model	1981-2007	2007	0.81	1.25	no	1112
NMFS	Winter Flounder NAFO-5Z	Pseudopleuronectes americanus	VPA	1982-2007	2006	1.41	0.25	no	1113
NMFS	Winter Flounder Southern New	Pseudopleuronectes americanus	VPA	1940-2007	2007	0.17	1.10	no	[114
NMFS		Pseudonleuron ectes americanos	Unknown	1082 2009					[11
NMFS	England-Mid Atlantic Winter Flounder NAFO-5Y	$Pseudopleuronectes\ americanus$	Unknown	1982-2008					

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
NMFS	Longnose skate Pacific Coast	Raja rhina	Integrated Analysis	1915-2007	2007	1.56	0.40	no	[?]
NMFS	Greenland turbot Bering Sea and Aleutian Islands	$Reinhard tius\ hippoglossoides$	Statistical catch at age model	1960-2009	2009	1.48	0.05	yes	[?]
NMFS	Arrowtooth flounder Pacific Coast	Reinhardtius stomias	Integrated Analysis	1916-2007	2007	3.81	0.21	yes	[?]
NMFS	Arrowtooth flounder Bering Sea and Aleutian Islands	Reinhardtius stomias	Statistical catch at age model	1970-2008	2008	1.28	0.31	no	[?]
NMFS NMFS	Arrowtooth flounder Gulf of Alaska Atlantic sharpnose shark Atlantic	Reinhardtius stomias Rhizoprionodon terraenovae	Statistical catch at age model Biomass dynamics model	1958-2010 1950-2005	2007	1.33	0.28	no	[?] [80]
NMFS	Vermilion snapper Southern At- lantic coast	Rhomboplites aurorubens	Statistical catch at age model	1946-2008	2007	0.86	1.27	yes	[?]
NMFS	Vermilion snapper Gulf of Mexico	Rhomboplites aurorubens	Biomass dynamics model	1981-2004					[115]
NMFS	Pacific sardine North Pacific	Sardinops sagax	Statistical catch at age model	1981-2008	2006	1.73	0.37	no	[?]
NMFS	Pacific sardine Pacific Coast	Sardinops sagax	Integrated Analysis	1981-2007	2006	1.36	0.41	no	[116]
NMFS	Pacific chub mackerel Pacific Coast	Scomber japonicus	Statistical catch at age model	1929-2008					[117]
NMFS	King mackerel Gulf of Mexico	Scomberomorus cavalla	VPA	1992-2001	2001	1.51	0.44	no	[118]
NMFS	King mackerel Southern Atlantic Coast	Scomberomorus cavalla	VPA	1981-2001	2001	1.38	0.56	no	[118]
NMFS	Spanish mackerel Southern Atlantic Coast	$Scomberomorus\ maculatus$	Statistical catch at age model	1950-2008	2007	0.38	0.91	yes	[119]
NMFS	Atlantic mackerel Gulf of Maine / Cape Hatteras	Scomber scombrus	VPA	1960-2005					[120]
NMFS	Windowpane flounder - Gulf of Maine / Georges Bank	$Scophthalmus\ aquosus$	Survey index	1975-2007					[121]
NMFS	Windowpane Southern New England-Mid Atlantic	$Scophthalmus\ aquosus$	Survey index	1975-2007					[111]
NMFS	California scorpionfish Southern California	Scorpaena guttata	Statistical catch at age model	1990-2005					[122]
NMFS	Cabezon Northern California	Scorpaenichthys marmoratus	Integrated Analysis	1916-2005	2004	0.89	0.99	no	[?]
NMFS	Cabezon Southern California	$Scorpaenichthys\ marmoratus$	Integrated Analysis	1932-2005	2004	0.81	0.53	no	[?] [?]
NMFS	Rougheye rockfish Bering Sea and Aleutian Islands	Sebastes aleutianus	Statistical catch at age model	1974-2009					
NMFS	Rougheye rockfish Gulf of Alaska	Sebastes aleutianus	Statistical catch at age model	1974-2007					[?]
NMFS	Pacific ocean perch Gulf of Alaska	Sebastes alutus	Statistical catch at age model	1959-2008	2008	1.16	0.73	yes	[?]
NMFS	Pacific ocean perch Pacific Coast	Sebastes alutus	Statistical catch at age model	1953-2007	2007	0.69	0.00	yes	[?] [?]
NMFS	Pacific Ocean perch Eastern Bering Sea and Aleutian Islands	Sebastes alutus	Statistical catch at age model	1974-2009	2008	1.70	0.26	no	
NMFS	Shortraker rockfish Bering Sea and Aleutian Islands	Sebastes borealis	Statistical catch at age model	1977-2008					[?]
NMFS	Gopher rockfish Southern Pacific Coast	Sebastes carnatus	Integrated Analysis	1965-2005	2004	0.88	0.62	no	[?]
NMFS	Darkblotched rockfish Pacific Coast	Sebastes crameri	Integrated Analysis	1928-2007	2007	0.73	0.31	yes	[?]
NMFS	Widow rockfish Pacific Coast	Sebastes entomelas	Statistical catch at age model	1955-2006	2006	0.91	0.07	no	[123]
NMFS	Acadian redfish Gulf of Maine / Georges Bank	Sebastes fasciatus	Statistical catch at age model	1913-2007					[124]
NMFS	Yellowtail rockfish Northern Pacific Coast	Sebastes flavidus	Integrated Analysis	1967-2005	2005	0.75	0.51	no	[?]
NMFS	Chilipepper Southern Pacific Coast	Sebastes goodei	Integrated Analysis	1892-2007	2006	1.43	0.04	no	[?]
NMFS	Shortbelly rockfish Pacific Coast	Sebastes jordani	Integrated Analysis	1950-2005					[?]
NMFS	Cowcod Southern California	Sebastes levis	Integrated Analysis	1900-2007	2007	0.09	0.07	yes	[?]
NMFS	Black rockfish Southern Pacific Coast	Sebastes melanops	Integrated Analysis	1915-2007	2007	2.23	0.33	yes	[?]
NMFS	Black rockfish Northern Pacific Coast	Sebastes melanops	Integrated Analysis	1914-2006	2006	1.37	0.57	no	[?]
NMFS	Blackgill rockfish Pacific Coast	$Sebastes \ melanostomus$	Integrated Analysis	1950-2005	2004	0.80	1.20	no	[?] [?]
NMFS	Blue rockfish California	Sebastes mystinus	Integrated Analysis	1916-2007	2007	0.75	1.19	yes	
NMFS	Bocaccio Southern Pacific Coast	Sebastes paucispinis	Integrated Analysis	1951-2006	2006	0.32	0.10	yes	[?]
NMFS	Canary rockfish Pacific Coast	Sebastes pinniger	Integrated Analysis	1916-2007	2007	0.85	0.02	yes	[125]
NMFS	Northern rockfish Gulf of Alaska	Sebastes polyspinis	Statistical catch at age model	1959-2008	2008	1.50	0.66	yes	[?]

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Management	Stock ID	Scientific name	${\bf Methodology}$	Timespan	Current year	B ratio	U ratio	From assess- ment	Ref.
NMFS	Northern rockfish Bering Sea and Aleutian Islands	Sebastes polyspinis	Statistical catch at age model	1974-2009	2008	1.07	0.13	no	[?]
NMFS	Yelloweye rockfish Pacific Coast	Sebastes ruberrimus	Integrated Analysis	1923-2006	2006	0.38	0.34	no	[126]
NMFS	Dusky rockfish Gulf of Alaska	Sebastes variabilis	Statistical catch at age model	1973-2008	2007	1.54	0.54	yes	[?]
NMFS	Shortspine thornyhead Pacific Coast	$Sebastolobus\ alascanus$	Integrated Analysis	1901-2005	2004	1.55	0.93	no	[?]
NMFS	Longspine thornyhead Pacific Coast	$Sebastolobus\ altivelis$	Integrated Analysis	1962-2005	2005	2.65	0.23	yes	[?]
NMFS	Greater amberjack Gulf of Mexico	Seriola dumerili	Biomass dynamics model	1986-2004	2004	0.46	1.52	no	[127]
NMFS	Greater amberjack Southern Atlantic coast	Seriola dumerili	Statistical catch at age model	1946-2006					[128]
NMFS	Bonnethead shark Atlantic	Sphyrna tiburo	Biomass dynamics model	1950-2005					[80]
NMFS	Atlantic surfclam Mid-Atlantic Coast	$Spisula\ solidissima$	Biomass dynamics model	1965-2008	1994	1.85	0.00	no	[129]
NMFS	Spiny dogfish Atlantic Coast	Squalus acanthias	Unknown	1962-2006	2005	1.61	0.15	no	[130]
NMFS	Scup Atlantic Coast	Stenotomus chrysops	Statistical catch at age model	1960-2007					[131]
NMFS	Walleye pollock Aleutian Islands	Theragra chalcogramma	Statistical catch at age model	1976-2008	2008	0.86	0.02	yes	[?]
NMFS	Walleye pollock Eastern Bering Sea	Theragra chalcogramma	Statistical catch at age model	1963-2008	2008	0.68	0.85	no	[?]
NMFS	Walleye pollock Gulf of Alaska	Theragra chalcogramma	Statistical catch at age model	1964-2008					[?]
NMFS	White hake Georges Bank / Gulf of Maine	Urophycis tenuis	Biomass dynamics model	1963-2007	2007	0.35	0.80	yes	[132]
RFFA	Walleye pollock Northern Sea of Okhotsk	$The ragra\ chalcogramma$	Biomass dynamics model	1985-1994	1992	1.11	0.87	no	[133]
RFFA	Walleye pollock Western Bering Sea	Theragra chalcogramma	VPA	1994-2004	2004	2.16	0.26	no	[134]
SPRFMO	Chilean jack mackerel Chilean EEZ and offshore	Trachurus murphyi	Unknown	1975-2007	2006	0.52	1.20	no	[135]
UNKNOWN	Shortfin mako Nothwest Pacific Ocean	Isurus oxyrinchus	VPA	1990-2003					[136]
US State	American lobster Rhode Island	Homarus americanus	Biomass dynamics model	1959-2007	2006	0.53	0.67	no	[?]
US State	Winter flounder Rhode Island	Pseudopleuronectes americanus	Biomass dynamics model	1959-2007	2006	0.25	1.59	no	[?]
US State	Tautog Rhode Island	Tautoga onitis	Biomass dynamics model	1959-2007	2006	0.84	0.59	no	ļ ? j
WCPFC	Skipjack tuna Central Western Pa- cific	Katsuwonus pelamis	Statistical catch at age model	1972-2006	2006	4.38	0.30	yes	[137]
WCPFC	Albacore tuna South Pacific Ocean	Thunnus alalunga	Statistical catch at age model	1959-2006	2006	2.46	0.90	ves	[138]
WCPFC	Yellowfin tuna Central Western Pa-	Thunnus albacares	Statistical catch at age model	1952-2005	2005	1.22	0.80	ves	[139]
WCPFC	cific Bigeye tuna Western Pacific Ocean	Thunnus obesus	Statistical catch at age model	1952-2006	2006	1.06	1.38	V	[140]
WOLLC	bigeye tuna western Facilic Ocean	Thunnus obesus		1952-2006	2000	1.00	1.36	yes	[140]

Table 1: Summary of population-dynamics model based assessments in the RAM Legacy database, including the management body (acronyms from Table 1), assessment method, timespan of their longest time series data, estimated ratios of current biomass to the biomass at MSY and current harvest rate to the harvest rate that results in MSY. Estimated ratios were preferentially obtained directly from the assessment document or derived from surplus production models. When both SSBmsy and Bmsy reference points were available, SSB was chosen preferentially.

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