Supplementary materials for Fish and Fisheries manuscript

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Supporting Information

Entity relationship diagram

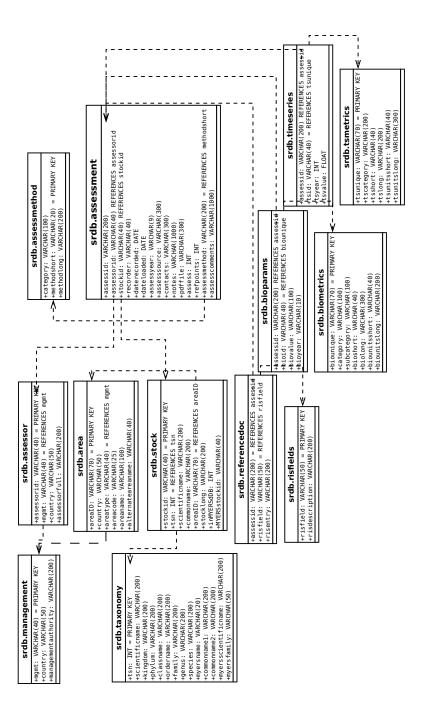


Figure 1: Entity relationship diagram of the RAM legacy database.

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
AFMA	Bight redfish Southeast Australia	Centroberyx gerrardi	1958-2007					[1]
AFMA	New Zealand ling East- ern half of Southeast Australia	Genypterus blacodes	1968-2007	2007	0.60	2.20	no	[2]
AFMA	New Zealand ling West- ern half of Southeast Australia	Genypterus blacodes	1968-2007					[3]
AFMA	Orange roughy Cascade Plateau	$Hop lost ethus\ at lanticus$	1987-2006	2006	1.76	0.34	no	[4]
AFMA	Orange roughy South- east Australia	$Hop lost ethus \ at lanticus$	1978-2007	2006	0.89	0.29	no	[5]
AFMA	Jackass morwong Southeast Australia	$Nemadactylus \ macropterus$	1913-2007	2007	0.25	1.80	no	[6]
AFMA	Tiger flathead South- east Australia	$Neoplaty cephalus \ richardsoni$	1913-2006					[7]
AFMA	Northern Australia brown tiger shrimp	Penaeus esculentus	1970-2006					[8]
AFMA	Northern Australia grooved Tiger Prawn	Penaeus esculentus	1970-2006					[8]
AFMA	Deepwater flathead Southeast Australia	Platycephalus conatus	1978-2007	2006	1.33	0.61	no	[9]
AFMA	Tasmanian giant crab Tasmania	Pseudocarcinus gigas	1990-2007	2007	0.50	1.71	no	[10]
AFMA	common gemfish South- east Australia	Rexea solandri	1966-2007	2007	0.10	0.39	no	[11]

Managemen	at Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
AFMA	Blue Warehou Eastern half of Southeast Aus- tralia	Seriolella brama	1984-2006	2006	0.17	0.84	no	[12]
AFMA	Blue Warehou Western half of Southeast Aus- tralia	Seriolella brama	1984-2006	2006	0.62	2.04	no	[12]
AFMA	Silverfish Southeast Australia	Seriolella punctata	1978-2006	2006	1.15	0.79	no	[13]
AFMA	School whiting Southeast Australia	Sillago flindersi	1945-2007	2007	1.10	0.82	no	[14]
CCAMLR	Antarctic toothfish Ross Sea	$Dissostichus\ mawsoni$	1995-2007	2007	1.76	1.09	no	[15]
CFP	Argentine anchoita Northern Argentina	Engraulis anchoita	1989-2007	2007	1.37	0.17	yes	[16]
CFP	Argentine anchoita Southern Argentina	Engraulis anchoita	1992-2007	2007	3.13	0.04	yes	[17]
CFP	Patagonian grenadier Southern Argentina	Macruronus magellani- cus	1983-2006	2006	1.82	0.60	yes	[18]
CFP	Argentine hake Northern Argentina	Merluccius hubbsi	1985-2007	2007	0.16	1.26	yes	[19]
CFP	Argentine hake Southern Argentina	Merluccius hubbsi	1985-2008	2008	0.34	1.49	yes	[20]
CFP	Southern blue whiting Southern Argentina	Micromesistius australis	1985-2007					[21]
DETMCM	Patagonian tooth- fish South Africa Subantarctic Prince Edward Islands	Dissostichus eleginoides	1960-2008					[22]

Managemen	t Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
DETMCM	Anchovy South Africa	Engraulis encrasicolus	1984-2006	2006	0.97	0.36	no	[23]
DETMCM	Kingklip South Africa	$Genypterus\ capensis$	1932 - 2008	2008	1.13	0.55	no	[24]
DETMCM	South African abalone	$Haliotis \ midae$	1951-2008					[?]
	South Africa							
DETMCM	South African west	$Jasus\ lalandii$	1910-2008					[25]
	coast rock lobster							
	South Africa Areas 1-2							
DETMCM	South African west	$Jasus\ lalandii$	1910-2008					[25]
	coast rock lobster							
	South Africa Areas 3-4							
DETMCM	South African west	$Jasus\ lalandii$	1910-2008					[25]
	coast rock lobster							
	South Africa Areas 5-6							
DETMCM	South African west	$Jasus\ lalandii$	1910-2008					[25]
	coast rock lobster							
	South Africa Area 7							
DETMCM	South African west	$Jasus\ lalandii$	1910-2008					[25]
	coast rock lobster							
	South Africa Area 8							
DETMCM	Shallow-water cape	$Merluccius\ capensis$	1917-2008	2008	1.16	0.40	no	[26]
	hake South Africa							
DETMCM	Deep-water cape hake	$Merluccius\ paradoxus$	1917-2008					[27]
	South Africa							
DETMCM	Southern spiny lobster	Palinurus gilchristi	1973-2008	2008	0.51	1.50	no	[28]
	South Africa South	-						
	coast							
DETMCM	Sardine South Africa	$Sardinops\ sagax$	1984-2006	2006	0.75	0.55	no	[29]

Managemen	at Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
DETMCM	Cape horse mackerel South Africa South coast	Trachurus capensis	1950-2007	2007	1.47	0.76	no	[30]
DFO	Herring Scotian Shelf and Bay of Fundy	Clupea harengus	1965-2006					[31]
DFO	Herring NAFO 4R fall spawners	Clupea harengus	1973-2003					[32]
DFO	Herring NAFO 4R spring spawners	Clupea harengus	1965-2004					[33]
DFO	Herring NAFO 4T fall spawners	Clupea harengus	1978-2007					[34]
DFO	Herring NAFO 4T spring spawners	Clupea harengus	1978-2007					[35]
DFO	Pacific herring Central Coast	Clupea pallasii	1951-2007	2007	0.30	0.11	no	[?]
DFO	Pacific herring Prince Rupert District	Clupea pallasii	1951-2007	2007	0.16	0.32	no	[?]
DFO	Pacific herring Queen Charlotte Islands	Clupea pallasii	1951-2007	2007	0.20	0.00	no	[?]
DFO	Pacific herring Straight of Georgia	Clupea pallasii	1951-2007	2007	0.91	0.40	no	[?]
DFO	Pacific herring West Coast of Vancouver Island	Clupea pallasii	1951-2007	2007	0.03	0.00	no	[?]
DFO	Pacific cod Hecate Strait	$Gadus\ macrocephalus$	1956-2005	2004	0.37	0.25	no	[?]
DFO	Pacific cod West Coast of Vancouver Island	Gadus macrocephalus	1956-2002	2001	0.28	0.61	no	[?]

Managemen	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
DFO	Atlantic cod NAFO 5Zjm	Gadus morhua	1978-2003	2002	0.34	0.45	no	[36]
DFO	Atlantic cod NAFO 2J3KL inshore	Gadus morhua	1959-2006	2005	1.60	0.14	no	[37]
DFO	Atlantic cod NAFO 3Ps	$Gadus\ morhua$	1959-2004	2004	0.49	0.41	no	[38]
DFO	Atlantic cod NAFO 3Pn4RS	Gadus morhua	1964-2007	2006	0.09	0.79	no	[39]
DFO	Atlantic cod NAFO 4TVn	Gadus morhua	1965-2007	2006	0.17	0.32	no	[40]
DFO	Rock sole Hecate Strait	$Lepidopsetta\ bilineata$	1945-2001	2001	1.03	0.45	no	[41]
DFO	Haddock NAFO-4X5Y	Melanogrammus aeglefi- nus	1960-2003	2003	0.85	0.33	no	[42]
DFO	Haddock NAFO-5Zejm	Melanogrammus aeglefi- nus	1969-2003	2002	1.00	0.65	no	[43]
DFO	English sole Hecate Strait	Parophrys vetulus	1944-2001	2001	1.23	0.37	no	[41]
DFO	Pollock NAFO- 4VWX5Zc	Pollachius virens	1974-2007	2006	0.56	0.30	no	[44]
IATTC	Yellowfin tuna Eastern Pacific	Thunnus albacares	1975-2007					[45]
IATTC	Bigeye tuna Eastern Pacific	Thunnus obesus	1975-2007					[46]
ICCAT	Skipjack tuna Eastern Atlantic	Katsuwonus pelamis	1950-2006	2006	1.71	0.27	no	[47]
ICCAT	Skipjack tuna Western Atlantic	Katsuwonus pelamis	1952-2006	2006	1.72	0.27	no	[47]
ICCAT	Albacore tuna North Atlantic	Thunnus alalunga	1929-2005	2005	0.81	1.49	yes	[?]

Managemen	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
ICCAT	Yellowfin tuna Atlantic	Thunnus albacares	1970-2006	2006	1.07	0.81	yes	[48]
ICCAT	Bigeye tuna Atlantic	Thunnus obesus	1950-2005	2005	0.90	0.86	no	[49]
ICCAT	Bluefin tuna Eastern Atlantic	Thunnus thynnus	1969-2007	2007	0.34	9.38	yes	[?]
ICCAT	Bluefin tuna Western Atlantic	Thunnus thynnus	1969-2007	2007	0.57	1.33	yes	[?]
ICCAT	Swordfish Mediter- ranean Sea	Xiphias gladius	1968-2006	2006	0.94	1.27	yes	[50]
ICCAT	Swordfish North Atlantic	Xiphias gladius	1978-2007	2005	1.03	0.82	no	[51]
ICCAT	Swordfish South Atlantic	$Xiphias\ gladius$	1950-2005	2005	1.18	0.69	no	[51]
ICES	Sandeel North Sea	$Ammodytes\ marinus$	1983-2007	2007	0.92	0.24	no	[52]
ICES	Herring ICES 22-24-IIIa	Clupea harengus	1991-2006	2006	0.73	1.02	no	[53]
ICES	Herring Northern Irish Sea	Clupea harengus	1960-2006	2006	0.72	0.34	no	[53]
ICES	Herring North Sea	Clupea harengus	1960-2007	2006	0.65	1.32	no	[53]
ICES	Herring ICES VIa	Clupea harengus	1957-2006	2006	0.18	1.59	no	[53]
ICES	Herring ICES VIa- VIIb-VIIc	Clupea harengus	1969-2000	2000	0.50	1.04	no	[53]
ICES	Herring ICES 25-32	Clupea harengus	1973-2006	2006	0.69	0.79	no	[54]
ICES	Herring ICES 30	Clupea harengus	1972-2007	2006	1.19	1.10	no	[54]
ICES	Herring ICES 31	Clupea harengus	1979-2006	2006	0.29	1.60	no	[54]
ICES	Herring Iceland (Summer spawners)	Clupea harengus	1983-2007	2006	1.00	0.79	no	[55]
ICES ICES	Herring ICES 28 Anchovy ICES VIII	Clupea harengus Engraulis encrasicolus	1976-2007 1986-2007	2006	1.21	0.87	no	[54] [56]

Managem	nent Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
ICES	Atlantic cod coastal Norway	Gadus morhua	1982-2006	2006	0.27	2.17	no	[57]
ICES	Atlantic cod Northeast Arctic	Gadus morhua	1943-2006	2006	0.56	1.42	no	[58]
ICES	Atlantic cod Faroe Plateau	Gadus morhua	1959-2006	2006	0.26	1.52	no	[55]
ICES	Atlantic cod Iceland	$Gadus\ morhua$	1952-2006	2006	0.46	1.17	no	[55]
ICES	Atlantic cod Baltic Areas 22 and 24	Gadus morhua	1969-2007	2006	0.36	1.43	no	[54]
ICES	Atlantic cod Baltic Areas 25-32	Gadus morhua	1964-2007	2006	0.16	1.46	no	[54]
ICES	Atlantic cod Kattegat	$Gadus\ morhua$	1970-2006	2006	0.19	0.31	no	[54]
ICES	Atlantic cod Irish Sea	$Gadus\ morhua$	1968-2006	2006	0.15	0.56	no	[59]
ICES	Atlantic cod West of Scotland	Gadus morhua	1977-2006	2006	0.12	0.42	no	[59]
ICES	Atlantic cod North Sea	$Gadus\ morhua$	1962-2007	2006	0.19	0.80	no	[52]
ICES	Fourspotted megrim ICES VIIIc-IXa	Lepidorhombus boscii	1986-2006	2006	0.70	1.01	no	[60]
ICES	Megrim ICES VIIIc- IXa	Lepidorhombus whiffiagonis	1985-2007	2006	0.43	1.07	no	[60]
ICES	Capelin Barents Sea	$Mallotus\ villosus$	1965-2007	2006	0.17	0.00	no	[57]
ICES	Capelin Iceland	$Mallotus\ villosus$	1977-2007	2006	0.49	0.85	no	[55]
ICES	Haddock Northeast Arctic	Melanogrammus aeglefi- nus	1947-2006	2006	1.10	1.06	no	[57]
ICES	Haddock Faroe Plateau	Melanogrammus aeglefi- nus	1955-2006	2006	0.85	1.07	no	[55]
ICES	Haddock Iceland	Melanogrammus aeglefinus	1977-2007	2007	0.98	1.23	no	[55]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
ICES	Haddock West of Scotland	Melanogrammus aeglefi- nus	1977-2006	2006	0.58	0.73	no	[59]
ICES	Haddock ICES IIIa and North Sea	Melanogrammus aeglefi- nus	1963-2006	2006	0.62	0.25	no	[52]
ICES	Haddock Rockall Bank	Melanogrammus aeglefi- nus	1990-2007	2006	1.10	0.52	no	[59]
ICES	Haddock ICES VIIb-k	Melanogrammus aeglefi- nus	1993-2006	2006	1.37	0.41	no	[61]
ICES	Haddock Irish Sea	Melanogrammus aeglefi- nus	1972-2006					[59]
ICES	Whiting ICES IIIa, VIId and North Sea	Merlangius merlangus	1979-2006	2006	0.33	1.04	no	[52]
ICES	Whiting ICES VIIe-k	Merlangius merlangus	1982-2007	2006	0.44	1.25	no	[61]
ICES	Whiting ICES VIa	Merlangius merlangus	1984-2007					[59]
ICES	Hake Northeast Atlantic North	Merluccius merluccius	1977-2007	2006	1.04	0.74	no	[60]
ICES	Hake Northeast Atlantic South	Merluccius merluccius	1982-2007					[60]
ICES	Whiting Northeast Atlantic	Micromesistius poutas- sou	1980-2007	2006	0.67	1.66	no	[62]
ICES	European Plaice Irish Sea	Pleuronectes platessa	1962-2006	2006	1.07	0.23	no	[59]
ICES	European Plaice ICES VIIf-g	Pleuronectes platessa	1976-2006	2006	0.65	0.41	no	[61]
ICES	European Plaice ICES VIIe	Pleuronectes platessa	1975-2006	2006	0.51	1.39	no	[61]
ICES	European Plaice ICES VIId	Pleuronectes platessa	1979-2006					[52]

Managem	ent Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
ICES	European Plaice ICES IIIa	Pleuronectes platessa	1976-2006					[52]
ICES	European Plaice North Sea	Pleuronectes platessa	1956-2006					[52]
ICES	Pollock Northeast Arctic	Pollachius virens	1957-2006	2006	1.70	0.60	no	[57]
ICES	Pollock Faroe Plateau	Pollachius virens	1958-2006	2006	0.99	1.52	no	[55]
ICES	Pollock ICES IIIa, VI and North Sea	Pollachius virens	1964-2006	2006	0.57	0.97	no	[52]
ICES	Greenland halibut Northeast Arctic	Reinhardtius hippoglos- soides	1959-2007	2006	0.36	1.20	no	[57]
ICES	European pilchard ICES VIIIc-IXa	Sardina pilchardus	1978-2007					[63]
ICES	Mackerel ICES North- east Atlantic	Scomber scombrus	1972-2007	2006	0.98	0.73	no	[63]
ICES	Golden Redfish North- east Arctic	Sebastes norvegicus	1986-2006	2006	0.29	2.65	no	[57]
ICES	common European sole ICES Kattegat and Sk- agerrak	Solea vulgaris	1982-2007	2006	1.25	0.54	no	[54]
ICES	common European sole Bay of Biscay	Solea vulgaris	1982-2006	2006	0.76	1.00	no	[60]
ICES	common European sole Irish Sea	Solea vulgaris	1968-2006	2006	0.36	1.16	no	[59]
ICES	common European sole Celtic Sea	Solea vulgaris	1970-2006	2006	0.90	0.95	no	[61]

Managem	ent Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
ICES	common European sole Western English Chan- nel	Solea vulgaris	1968-2006	2006	0.51	1.74	no	[61]
ICES	common European sole North Sea	Solea vulgaris	1956-2006					[52]
ICES	common European sole ICES VIId	Solea vulgaris	1981-2006					[52]
ICES	Sprat ICES Baltic Areas 22-32	Sprattus sprattus	1973-2007	2006	1.13	1.27	no	[54]
ICES	Sprat North Sea	$Sprattus\ sprattus$	1995-2007					[53]
ICES	Norway pout North Sea	Trisopterus esmarkii	1983-2007	2006	0.90	0.33	no	[52]
IOTC	Bigeye tuna Indian Ocean	Thunnus obesus	1957-2006	2004	1.23	0.97	yes	[64]
IPHC	Pacific halibut North Pacific	$Hippoglossus\ stenolepis$	1988-2009	2008	0.54	2.01	no	[65]
MFish	Black oreo West end of Chatham Rise	$Allocyttus\ niger$	1973-2007	2007	0.99	0.82	yes	[?]
MFish	Australian salmon New Zealand	Arripis trutta	1975-2006	2006	1.64	0.33	yes	[?]
MFish	New Zealand snapper New Zealand Area 8	Chrysophrys auratus	1931-2005	2005	0.35	2.50	yes	[?]
MFish	New Zealand ling New Zealand Areas LIN 3 and 4	Genypterus blacodes	1972-2007	2007	3.07	0.09	yes	[?]
MFish	New Zealand ling New Zealand Areas LIN 5 and 6	Genypterus blacodes	1972-2007	2007	3.96	0.10	yes	[?]

Manageme	ent Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
MFish	New Zealand ling New Zealand Area LIN 6b	Genypterus blacodes	1980-2006	2006	2.19	0.11	yes	[?]
MFish	New Zealand ling New Zealand Area LIN 72	$Genypterus\ blacodes$	1972-2007	2007	2.49	0.32	yes	[?]
MFish	New Zealand ling New Zealand Area LIN 7WC - WCSI	Genypterus blacodes	1972-2008	2008	2.21	0.13	yes	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5A	Haliotis iris	1964-2006	2006	0.72	2.83	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5B	Haliotis iris	1963-2007	2007	1.02	0.59	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 5D	Haliotis iris	1964-2006	2006	0.44	2.10	no	[?]
MFish	New Zealand abalone species New Zealand Area PAU 7	Haliotis iris	1964-2008	2008	0.87	0.94	no	[?]
MFish	Orange roughy New Zealand Mid East Coast	Hoplostethus atlanticus	1981-2004	2004	1.20	0.35	yes	[?]
MFish	Red rock lobster New Zealand area CRA1	Jasus edwardsii	1945-2001	2001	1.14	0.88	no	[?]
MFish	Red rock lobster New Zealand area CRA2	Jasus edwardsii	1945-2001	2001	0.53	2.12	no	[?]
MFish	Red rock lobster New Zealand area CRA4	Jasus edwardsii	1945-2005	2005	0.67	1.33	no	[?]

Managemer	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
MFish	Red rock lobster New Zealand area CRA5	Jasus edwardsii	1945-2002	2002	0.59	1.68	no	[?]
MFish	Red rock lobster New Zealand area CRA7	Jasus edwardsii	1976-2005	2005	0.73	0.43	no	[?]
MFish	Red rock lobster New Zealand area CRA8	Jasus edwardsii	1976-2005	2005	0.69	0.49	no	[?]
MFish	Red rock lobster New Zealand area CRA3	Jasus edwardsii	1945-2007					[?]
MFish	Hoki Eastern New Zealand	Macruronus novaeze- landiae	1972-2007	2007	1.11	0.33	no	[66]
MFish	Hoki Western New Zealand	Macruronus novaeze- landiae	1972-2007	2007	0.51	0.57	no	[66]
MFish	Southern hake Chatham Rise	Merluccius australis	1975-2006	2006	1.77	0.12	yes	[?]
MFish	Southern hake Sub- Antarctic	Merluccius australis	1975-2007	2007	2.91	0.11	yes	[?]
MFish	Southern blue whiting Campbell Island Rise	Micromesistius australis	1979-2006	2006	1.15	0.92	yes	[?]
MFish	Trevally New Zealand Areas TRE 7	Pseudocaranx dentex	1944-2005	2005	1.44	0.83	yes	[?]
MFish	Smooth oreo Chatham Rise	$Pseudocyttus\ maculatus$	1979-2006	2006	2.25	0.38	yes	[?]
MFish	Smooth oreo West end of Chatham Rise	$Pseudocyttus\ maculatus$	1973-2004	2004	1.25	0.53	yes	[?]
MFish	common gemfish New Zealand	Rexea solandri	1952-2007	2006	1.64	0.43	yes	[?]
NAFO	Atlantic cod NAFO 3NO	Gadus morhua	1953-2007	2006	0.02	0.27	no	[67]

Managemen	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NAFO NAFO	Atlantic cod NAFO 3M American Plaice NAFO-3LNO	Gadus morhua Hippoglossoides plates- soides	1959-2008 1955-2007	2006	0.08	0.77	no	[68] [69]
NAFO	American Plaice NAFO-3M	Hippoglossoides plates- soides	1960-2007	2007	0.13	0.00	no	[70]
NAFO	Yellowtail Flounder NAFO 3LNO	$Limanda\ ferruginea$	1960-2009	2007	1.62	0.15	no	[71]
NAFO	Redfish species NAFO 3LN	Redfish species	1959-2008	2008	1.88	0.04	yes	[72]
NAFO	Redfish species NAFO 3LN	Redfish species	1959-2007	2006	1.95	0.01	no	[73]
NAFO	Redfish species NAFO 3M	Redfish species	1989-2006	2006	0.93	0.15	no	[74]
NAFO	Greenland halibut NAFO 23KLMNO	Reinhardtius hippoglos- soides	1960-2006	2006	0.39	1.73	no	[75]
NMFS	Sablefish Eastern Bering Sea / Aleutian Islands / Gulf of Alaska	$An oplopoma\ fimbria$	1956-2008	2008	1.05	0.66	yes	[?]
NMFS	Sablefish Pacific Coast	$An oplopoma\ fimbria$	1900-2007	2007	0.84	1.09	no	[76]
NMFS	Ocean quahog Atlantic Coast	Arctica islandica	1978-2008					[77]
NMFS	Gray triggerfish Gulf of Mexico	Balistes capriscus	1981-2004					[78]
NMFS	Gulf menhaden Gulf of Mexico	Brevoortia patronus	1964-2004	2004	1.08	0.48	no	[?]
NMFS	Atlantic menhaden Atlantic	Brevoortia tyrannus	1940-2005	2005	0.47	0.97	no	[79]

Managemer	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Blacknose shark Atlantic	Carcharhinus acronotus	1950-2005					[80]
NMFS	Finetooth shark Atlantic	Carcharhinus isodon	1976-2005					[80]
NMFS	Blacktip shark Atlantic	$Carcharhinus\ limbatus$	1981-2004					[81]
NMFS	Blacktip shark Gulf of Mexico	Carcharhinus limbatus	1981-2004					[81]
NMFS	Sandbar shark Atlantic	Carcharhinus plumbeus	1975-2004					[81]
NMFS	Black sea bass Mid- Atlantic Coast	Centropristis striata	1968-2007	2007	1.21	0.67	no	[82]
NMFS	Snow crab Bering Sea	Chionoecetes opilio	1979-2008	2008	0.35	1.49	no	[83]
NMFS	Atlantic herring North- western Atlantic Coast	Clupea harengus	1960-2005					[84]
NMFS	Pacific herring Prince William Sound	Clupea pallasii	1980-2006					[?]
NMFS	Pacific herring Sitka	$Clupea\ pallasii$	1978-2007					[?]
NMFS	Weakfish Atlantic Coast	Cynoscion regalis	1980-2008	2008	0.06	1.49	no	[85]
NMFS	Petrale sole Northern Pacific Coast	Eopsetta jordani	1910-2005	2004	0.96	1.26	no	[?]
NMFS	Petrale sole Southern Pacific Coast	$Eopsetta\ jordani$	1874-2005	2004	0.63	0.61	no	[?]
NMFS	Red grouper Gulf of Mexico	Epinephelus morio	1986-2005	2005	1.00	0.88	no	[86]
NMFS	Snowy grouper Southern Atlantic coast	Epinephelus niveatus	1961-2002	2002	0.19	3.08	yes	[?]
NMFS	Pacific cod Bering Sea and Aleutian Islands	Gadus macrocephalus	1964-2008	2007	0.89	0.93	no	[?]

Managemer	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Pacific cod Gulf of Alaska	Gadus macrocephalus	1964-2008	2007	1.07	0.84	no	[?]
NMFS	Atlantic cod Georges Bank	Gadus morhua	1960-2008	2007	0.18	0.72	no	[87]
NMFS	Atlantic cod Gulf of Maine	$Gadus\ morhua$	1893-2008	2007	1.46	0.29	no	[88]
NMFS	Witch Flounder NAFO- 5Y	$Glyptocephalus \ cynoglossus$	1982-2008	2007	0.30	1.45	yes	[?]
NMFS	Rex sole Gulf of Alaska	$Glyptocephalus\ zachirus$	1979-2008					[?]
NMFS	Kelp greenling Oregon Coast	Hexagrammos deca- grammus	1979-2005					[89]
NMFS	Flathead sole Bering Sea and Aleutian Islands	Hippoglossoides elas- sodon	1977-2008	2008	1.66	0.18	no	[?]
NMFS	Flathead sole Gulf of Alaska	Hippoglossoides elas- sodon	1978-2008					[?]
NMFS	American Plaice NAFO-5YZ	Hippoglossoides plates- soides	1960-2008	2007	0.55	0.30	no	[?]
NMFS	Atlantic Halibut NAFO-5YZ	Hippoglossus hippoglossus	1800-2007					[?]
NMFS	American lobster Georges Bank	Homarus americanus	1981-2007					[?]
NMFS	American lobster Gulf of Maine	Homarus americanus	1981-2007					[?]
NMFS	American lobster Southern New England	Homarus americanus	1981-2007					[?]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Northern shortfin squid Northwestern Atlantic Coast	Illex illecebrosus	1967-2005					[90]
NMFS	Northern rock sole Eastern Bering Sea and Aleutian Islands	Lepidopsetta polyxystra	1971-2008	2007	3.02	0.21	yes	[?]
NMFS	Yellowfin sole Bering Sea and Aleutian Is- lands	Limanda aspera	1959-2008	2008	1.94	0.62	yes	[?]
NMFS	Yellowtail flounder Cape Cod / Gulf of Maine	Limanda ferruginea	1935-2008	2007	0.25	1.73	yes	[91]
NMFS	Yellowtail flounder Georges Bank	$Limanda\ ferruginea$	1935-2008	2007	0.22	1.14	yes	[92]
NMFS	Yellowtail Flounder Southern New England- Mid Atlantic	Limanda ferruginea	1935-2008	2007	0.13	1.61	yes	[93]
NMFS	Golden king crab Aleutian Islands Eastern segment	Lithodes aequispinus	1990-2007					[83]
NMFS	Golden king crab Aleutian Islands Western segment	Lithodes aequispinus	1989-2007					[83]
NMFS	Monkfish Gulf of Maine / Northern Georges Bank	Lophius americanus	1964-2006	2006	1.73	0.38	no	[94]

Managemen	at Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Monkfish Southern Georges Bank / Mid- Atlantic	Lophius americanus	1964-2006	2006	1.72	0.30	no	[95]
NMFS	Tilefish Southern Atlantic coast	$Lopholatilus \ chamaeleonticeps$	1961-2002	2002	0.94	1.55	yes	[?]
NMFS	Tilefish Mid-Atlantic Coast	$Lopholatilus \ chamaeleonticeps$	1973-2008	2005	0.72	0.61	no	[96]
NMFS	Mutton snapper Southern Atlantic coast and Gulf of Mexico	Lutjanus analis	1981-2006					[97]
NMFS	Red snapper Eastern Gulf of Mexico	Lutjanus campechanus	1872-2003					[98]
NMFS	Red snapper Southern Atlantic coast	Lutjanus campechanus	1945-2006					[99]
NMFS	Red snapper Western Gulf of Mexico	Lutjanus campechanus	1880-2003					[98]
NMFS	Haddock NAFO-5Y	Melanogrammus aeglefi- nus	1956-2008	2007	0.36	1.21	no	[100]
NMFS	Haddock Georges Bank	Melanogrammus aeglefi- nus	1930-2008					[101]
NMFS	Silver hake Gulf of Maine / Northern Georges Bank	Merluccius bilinearis	1955-2005					[102]
NMFS	Silver hake Southern Georges Bank / Mid- Atlantic	Merluccius bilinearis	1955-2005					[102]
NMFS	Pacific hake Pacific Coast	Merluccius productus	1966-2008	2008	1.61	0.73	yes	[103]

Managemer	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Atlantic croaker Mid- Atlantic Coast	Micropogonias undula- tus	1973-2002	2002	1.42	0.27	yes	[?]
NMFS	Dover sole Pacific Coast	Microstomus pacificus	1910-2005	2004	1.33	0.45	no	[?]
NMFS	Dover sole Gulf of Alaska	Microstomus pacificus	1978-2010					[?]
NMFS	Striped bass Gulf of Maine / Cape Hatteras	Morone saxatilis	1982-2006					[?]
NMFS	Gag Gulf of Mexico	Mycteroperca mi- crolepis	1963-2004	2004	1.00	2.44	yes	[104]
NMFS	Gag Southern Atlantic coast	Mycteroperca mi- crolepis	1962-2005	2005	0.94	1.31	yes	[105]
NMFS	Yellowtail snapper Southern Atlantic Coast and Gulf of Mexico	Ocyurus chrysurus	1962-2001	2001	1.14	0.61	yes	[?]
NMFS	Lingcod Northern Pacific Coast	Ophiodon elongatus	1956-2005					[?]
NMFS	Lingcod Southern Pacific Coast	Ophiodon elongatus	1956-2005					[?]
NMFS	Red porgy Southern Atlantic coast	Pagrus pagrus	1972-2004	2004	0.61	0.39	yes	[106]
NMFS	Northern shrimp Gulf of Maine	Pandalus borealis	1960-2009	2008	1.58	0.56	no	[?]
NMFS	Summer flounder Mid- Atlantic Coast	Paralichthys dentatus	1940-2007					[107]
NMFS	Red king crab Bristol Bay	Paralithodes camtschaticus	1960-2008	2008	1.27	1.05	yes	[83]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Red king crab Norton Sound	$Paralithodes \ camts chaticus$	1976-2008					[83]
NMFS	English sole Pacific Coast	Parophrys vetulus	1876-2007	2006	2.06	0.14	no	[108]
NMFS	Atlantic butterfish Gulf of Maine / Cape Hat- teras	Peprilus triacanthus	1965-2005					[109]
NMFS	Sea scallop Georges Bank	Placopecten magellani- cus	1964-2006	2006	1.59	0.78	no	[110]
NMFS	Sea scallop Mid- Atlantic Coast	Placopecten magellani- cus	1964-2006	2006	1.00	0.36	no	[110]
NMFS	Starry flounder North- ern Pacific Coast	Platichthys stellatus	1970-2005	2004	0.68	0.33	no	[?]
NMFS	Starry flounder Southern Pacific Coast	Platichthys stellatus	1970-2005	2004	1.15	0.12	no	[?]
NMFS	Atka mackerel Bering Sea and Aleutian Is- lands	Pleurogrammus monopterygius	1976-2009	2008	1.50	0.55	no	[?]
NMFS	Alaska plaice Bering Sea and Aleutian Islands	Pleuronectes quadritu- berculatus	1972-2008	2008	2.46	0.07	yes	[?]
NMFS	Pollock NAFO-5YZ	Pollachius virens	1963-2007					[111]
NMFS	Bluefish Atlantic Coast	$Pomatomus\ saltatrix$	1981 - 2007	2007	0.81	1.25	no	[112]
NMFS	Winter Flounder NAFO-5Z	Pseudopleuronectes americanus	1982-2007	2006	1.41	0.25	no	[113]
NMFS	Winter Flounder Southern New England-Mid Atlantic	Pseudopleuronectes americanus	1940-2007	2007	0.17	1.10	no	[114]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Winter Flounder NAFO-5Y	Pseudopleuronectes americanus	1982-2008					[111]
NMFS	Longnose skate Pacific Coast	Raja rhina	1915-2007	2007	1.56	0.40	no	[?]
NMFS	Greenland turbot Bering Sea and Aleu- tian Islands	Reinhardtius hippoglos- soides	1960-2009	2009	1.48	0.05	yes	[?]
NMFS	Arrowtooth flounder Pacific Coast	Reinhardtius stomias	1916-2007	2007	3.81	0.21	yes	[?]
NMFS	Arrowtooth floun- der Bering Sea and Aleutian Islands	Reinhardtius stomias	1970-2008	2008	1.28	0.31	no	[?]
NMFS	Arrowtooth flounder Gulf of Alaska	$Reinhardtius\ stomias$	1958-2010	2007	1.33	0.28	no	[?]
NMFS	Atlantic sharpnose shark Atlantic	Rhizoprionodon ter- raenovae	1950-2005					[80]
NMFS	Vermilion snapper Southern Atlantic coast	Rhomboplites au- rorubens	1946-2008	2007	0.86	1.27	yes	[?]
NMFS	Vermilion snapper Gulf of Mexico	Rhomboplites au- rorubens	1981-2004					[115]
NMFS	Pacific sardine North Pacific	Sardinops sagax	1981-2008	2006	1.73	0.37	no	[?]
NMFS	Pacific sardine Pacific Coast	$Sardinops\ sagax$	1981-2007	2006	1.36	0.41	no	[116]
NMFS	Pacific chub mackerel Pacific Coast	Scomber japonicus	1929-2008					[117]
NMFS	King mackerel Gulf of Mexico	Scomberomorus cavalla	1992-2001	2001	1.51	0.44	no	[118]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	King mackerel Southern Atlantic Coast	$Scomberomorus\ cavalla$	1981-2001	2001	1.38	0.56	no	[118]
NMFS	Spanish mackerel Southern Atlantic Coast	Scomberomorus macu- latus	1950-2008	2007	0.38	0.91	yes	[119]
NMFS	Atlantic mackerel Gulf of Maine / Cape Hat- teras	Scomber scombrus	1960-2005					[120]
NMFS	Windowpane flounder - Gulf of Maine / Georges Bank	$Scophthalmus\ aquosus$	1975-2007					[121]
NMFS	Windowpane Southern New England-Mid At- lantic	$Scophthalmus\ aquosus$	1975-2007					[111]
NMFS	California scorpionfish Southern California	Scorpaena guttata	1990-2005					[122]
NMFS	Cabezon Northern California	Scorpaenichthys mar- moratus	1916-2005	2004	0.89	0.99	no	[?]
NMFS	Cabezon Southern California	Scorpaenichthys mar- moratus	1932-2005	2004	0.81	0.53	no	[?]
NMFS	Rougheye rockfish Bering Sea and Aleu- tian Islands	Sebastes aleutianus	1974-2009					[?]
NMFS	Rougheye rockfish Gulf of Alaska	Sebastes aleutianus	1974-2007					[?]
NMFS	Pacific ocean perch Gulf of Alaska	Sebastes alutus	1959-2008	2008	1.16	0.73	yes	[?]

Manageme	nt Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Pacific ocean perch Pacific Coast	Sebastes alutus	1953-2007	2007	0.69	0.00	yes	[?]
NMFS	Pacific Ocean perch Eastern Bering Sea and Aleutian Islands	Sebastes alutus	1974-2009	2008	1.70	0.26	no	[?]
NMFS	Shortraker rockfish Bering Sea and Aleu- tian Islands	Sebastes borealis	1977-2008					[?]
NMFS	Gopher rockfish Southern Pacific Coast	Sebastes carnatus	1965-2005	2004	0.88	0.62	no	[?]
NMFS	Darkblotched rockfish Pacific Coast	Sebastes crameri	1928-2007	2007	0.73	0.31	yes	[?]
NMFS	Widow rockfish Pacific Coast	Sebastes entomelas	1955-2006	2006	0.91	0.07	no	[123]
NMFS	Acadian redfish Gulf of Maine / Georges Bank	$Sebastes\ fasciatus$	1913-2007					[124]
NMFS	Yellowtail rockfish Northern Pacific Coast	Sebastes flavidus	1967-2005	2005	0.75	0.51	no	[?]
NMFS	Chilipepper Southern Pacific Coast	$Sebastes\ goodei$	1892-2007	2006	1.43	0.04	no	[?]
NMFS	Shortbelly rockfish Pacific Coast	$Sebastes\ jordani$	1950-2005					[?]
NMFS	Cowcod Southern California	Sebastes levis	1900-2007	2007	0.09	0.07	yes	[?]
NMFS	Black rockfish Southern Pacific Coast	$Sebastes\ melanops$	1915-2007	2007	2.23	0.33	yes	[?]
NMFS	Black rockfish Northern Pacific Coast	Sebastes melanops	1914-2006	2006	1.37	0.57	no	[?]

Managem	ent Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS	Blackgill rockfish Pacific Coast	Sebastes melanostomus	1950-2005	2004	0.80	1.20	no	[?]
NMFS	Blue rockfish California	$Sebastes\ mystinus$	1916-2007	2007	0.75	1.19	yes	[?]
NMFS	Bocaccio Southern Pacific Coast	Sebastes paucispinis	1951-2006	2006	0.32	0.10	yes	[?]
NMFS	Canary rockfish Pacific Coast	Sebastes pinniger	1916-2007	2007	0.85	0.02	yes	[125]
NMFS	Northern rockfish Gulf of Alaska	Sebastes polyspinis	1959-2008	2008	1.50	0.66	yes	[?]
NMFS	Northern rockfish Bering Sea and Aleu- tian Islands	Sebastes polyspinis	1974-2009	2008	1.07	0.13	no	[?]
NMFS	Yelloweye rockfish Pacific Coast	Sebastes ruberrimus	1923-2006	2006	0.38	0.34	no	[126]
NMFS	Dusky rockfish Gulf of Alaska	Sebastes variabilis	1973-2008	2007	1.54	0.54	yes	[?]
NMFS	Shortspine thornyhead Pacific Coast	$Sebastolobus\ alas canus$	1901-2005	2004	1.55	0.93	no	[?]
NMFS	Longspine thornyhead Pacific Coast	Sebastolobus altivelis	1962-2005	2005	2.65	0.23	yes	[?]
NMFS	Greater amberjack Gulf of Mexico	Seriola dumerili	1986-2004	2004	0.46	1.52	no	[127]
NMFS	Greater amberjack Southern Atlantic coast	Seriola dumerili	1946-2006					[128]
NMFS	Bonnethead shark Atlantic	Sphyrna tiburo	1950-2005					[80]
NMFS	Atlantic surfclam Mid- Atlantic Coast	$Spisula\ solidissima$	1965-2008	1994	1.85	0.00	no	[129]

Management Stock ID	Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
NMFS Spiny dogfish Atlan Coast	tic Squalus acanthias	1962-2006	2005	1.61	0.15	no	[130]
NMFS Scup Atlantic Coast	$Stenotomus\ chrysops$	1960-2007					[131]
NMFS Walleye pollock Ale tian Islands	eu- Theragra chalcogramma	1976-2008	2008	0.86	0.02	yes	[?]
NMFS Walleye pollock Easte Bering Sea	rn Theragra chalcogramma	1963-2008	2008	0.68	0.85	no	[?]
NMFS Walleye pollock Gulf Alaska	of Theragra chalcogramma	1964-2008					[?]
NMFS White hake George Bank / Gulf of Main	1 0	1963-2007	2007	0.35	0.80	yes	[132]
RFFA Walleye pollock Nor ern Sea of Okhotsk		1985-1994	1992	1.11	0.87	no	[133]
RFFA Walleye pollock We ern Bering Sea	st- Theragra chalcogramma	1994-2004	2004	2.16	0.26	no	[134]
SPRFMO Chilean jack macke Chilean EEZ and of shore	1 0	1975-2007	2006	0.52	1.20	no	[135]
UNKNOWN Shortfin mako Nothw Pacific Ocean	est Isurus oxyrinchus	1990-2003					[136]
US State American lobs Rhode Island	ter Homarus americanus	1959-2007	2006	0.53	0.67	no	[?]
US State Winter flounder Rho Island	de Pseudopleuronectes americanus	1959-2007	2006	0.25	1.59	no	[?]
US State Tautog Rhode Island	$Tautoga\ onitis$	1959-2007	2006	0.84	0.59	no	[?]
WCPFC Skipjack tuna Cent Western Pacific	ral Katsuwonus pelamis	1972-2006	2006	4.38	0.30	yes	[137]

Management Stock ID		Scientific name	Timespan	Current year	B ratio	U ratio	From assessment	Ref.
WCPFC	Albacore tuna South Pacific Ocean	Thunnus alalunga	1959-2006	2006	2.46	0.90	yes	[138]
WCPFC	Yellowfin tuna Central Western Pacific	Thunnus albacares	1952-2005	2005	1.22	0.80	yes	[139]
WCPFC	Bigeye tuna Western Pacific Ocean	Thunnus obesus	1952-2006	2006	1.06	1.38	yes	[140]

Table 1: Summary of the assessments used in this analysis and their estimated ratios of current biomass to the biomass at maximum sustainable yield and current harvest rate to the harvest rate that results is maximum sustainable yield. The estimated ratios were preferentially obtained directly from the assessment document or derived from surplus production model fits. When both an SSBmsy and Bmsy reference points are available, the SSB is chosen preferentially.

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