Supplementary materials for Fish and Fisheries manuscript

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Supporting Information

Entity relationship diagram

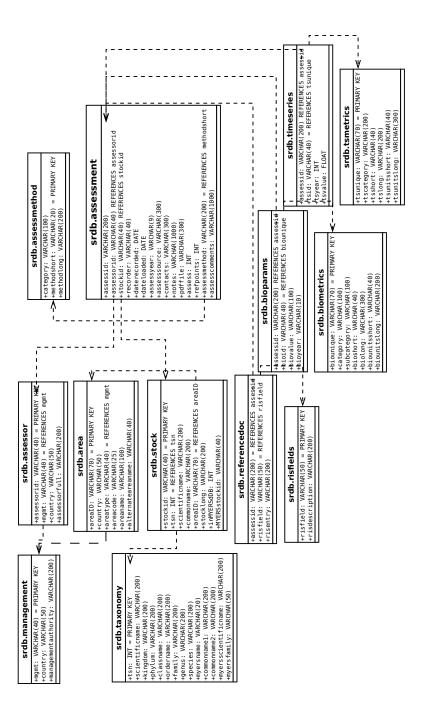


Figure 1: Entity relationship diagram of the RAM legacy database.

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
AFMA	Bight redfish Southeast Aus-	Centroberyx gerrardi	Integrated Analysis	1958-2007					
AFMA	tralia New Zealand ling Eastern half	Genypterus blacodes	Integrated Analysis	1968-2007	2007	0.59	yes	2.20	no
AFMA	of Southeast Australia New Zealand ling Western half of Southeast Australia	Genypterus blacodes	Integrated Analysis	1968-2007					
AFMA	Orange roughy Cascade Plateau	$Hop lost ethus \ at lanticus$	Integrated Analysis	1987-2006	2006	1.76	no	0.34	no
AFMA	Orange roughy Southeast Aus-	$Hoplostethus\ atlanticus$	Integrated Analysis	1978-2007	2007	0.52	yes	0.29	no
AFMA	tralia Jackass morwong Southeast	$Ne madacty lus\ macropterus$	Integrated Analysis	1913-2007	2007	0.31	yes	1.80	no
AFMA	Australia Tiger flathead Southeast Australia	$Neoplaty cephalus\ richardsoni$	Integrated Analysis	1913-2006	2006	1.99	yes	1.03	no
AFMA	Northern Australia brown tiger shrimp	Penaeus esculentus	Biomass dynamics model	1970-2006					
AFMA	Northern Australia grooved Tiger Prawn	Penaeus esculentus	Biomass dynamics model	1970-2006					
AFMA	Deepwater flathead Southeast	Platycephalus conatus	Integrated Analysis	1978-2007	2007	1.51	yes	0.61	no
AFMA	Australia Tasmanian giant crab Tasma-	Pseudocarcinus gigas	Unknown	1990-2007	2007	0.50	no	1.71	no
AFMA	nia common gemfish Southeast	$Rexea\ solandri$	Integrated Analysis	1966-2007	2007	0.25	yes	0.39	no
AFMA	Australia Blue Warehou Eastern half of Southeast Australia	Seriolella brama	Integrated Analysis	1984-2006	2006	0.49	yes	0.84	no
AFMA	Blue Warehou Western half of Southeast Australia	Seriolella brama	Integrated Analysis	1984-2006	2006	0.41	yes	2.04	no
$_{\rm AFMA}^{\rm AFMA}$	Silverfish Southeast Australia School whiting Southeast Aus- tralia	Seriolella punctata Sillago flindersi	Integrated Analysis Integrated Analysis	1978-2006 1945-2007	2006 2007	1.03 0.66	yes yes	$0.79 \\ 0.82$	no no
CCAMLR CFP	Antarctic toothfish Ross Sea Argentine anchoita Northern Argentina	$Dissostichus\ mawsoni \\ Engraulis\ anchoita$	Integrated Analysis VPA	$1995\text{-}2007 \\ 1989\text{-}2007$	$\frac{2007}{2007}$	$\frac{1.76}{1.37}$	no yes	$0.32 \\ 0.17$	yes yes
CFP	Argentina Argentine anchoita Southern Argentina	$Engraulis\ anchoita$	Biomass dynamics model	1992-2007	2007	3.13	yes	0.04	yes
CFP	Patagonian grenadier Southern Argentina	$Macruronus\ magellanicus$	VPA	1983-2006	2006	1.82	yes	0.60	yes
CFP	Argentine hake Northern Argentina	$Merluccius\ hubbsi$	VPA	1985-2007	2007	0.16	yes	1.26	yes
CFP	Argentine hake Southern Ar-	$Merluccius\ hubbsi$	VPA	1985-2008	2008	0.34	yes	1.49	yes
CFP	gentina Southern blue whiting South-	Micromesistius australis	VPA	1985-2007					
DETMCM	ern Argentina Patagonian toothfish South Africa Subantarctic Prince	$Dissostichus\ eleginoides$	Biomass dynamics model	1960-2008					
DETMCM	Edward Islands Anchovy South Africa	$Engraulis\ encrasicolus$	Statistical catch at age	1984-2006	2006	0.97	no	0.36	no
DETMCM DETMCM	Kingklip South Africa South African abalone South	Genypterus capensis Haliotis midae	Biomass dynamics model Statistical catch at age	1932-2008 1951-2008	2008	1.20	yes	0.55	no
DETMCM	Africa South African west coast rock	$Jasus\ lalandii$	model Statistical catch at age	1910-2008					
DETMCM	lobster South Africa Areas 1-2 South African west coast rock lobster South Africa Areas 3-4	$Jasus\ lalandii$	model Statistical catch at age model	1910-2008					

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
DETMCM	South African west coast rock	Jasus lalandii	Statistical catch at age	1910-2008					
DETMCM	lobster South Africa Areas 5-6 South African west coast rock	Jasus lalandii	model Statistical catch at age	1910-2008					
DETWOM	lobster South Africa Area 7	Jasus tatanan	model	1910-2008					
DETMCM	South African west coast rock lobster South Africa Area 8	$Jasus\ la landii$	Statistical catch at age model	1910-2008					
DETMCM	Shallow-water cape hake South Africa	Merluccius capensis	Biomass dynamics model	1917-2008	2008	2.30	yes	0.40	no
DETMCM	Deep-water cape hake South Africa	Merluccius paradoxus	Biomass dynamics model	1917-2008					
DETMCM	Southern spiny lobster South	$Palinurus\ gilchristi$	Statistical catch at age	1973-2008	2008	0.51	no	1.50	no
DETMCM	Africa South coast Sardine South Africa	$Sardinops\ sagax$	model Statistical catch at age model	1984-2006	2006	0.75	no	0.55	no
DETMCM	Cape horse mackerel South	Trachurus capensis	Biomass dynamics model	1950-2007	2007	1.47	no	0.76	no
DFO	Africa South coast Herring Scotian Shelf and Bay of Fundy	Clupea harengus	VPA	1965-2006					
DFO	Herring NAFO 4R fall spawn- ers	Clupea harengus	VPA	1971-2003					
DFO	Herring NAFO 4R spring spawners	Clupea harengus	VPA	1963-2004					
DFO	Herring NAFO 4T fall spawn-	Clupea harengus	VPA	1974-2007					
DFO	ers Herring NAFO 4T spring spawners	Clupea harengus	VPA	1974-2007					
DFO	Pacific herring Central Coast	$Clupea\ pallasii$	Statistical catch at age model	1951-2007	2007	0.30	no	0.11	no
DFO	Pacific herring Prince Rupert District	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.16	no	0.32	no
DFO	Pacific herring Queen Char- lotte Islands	Clupea pallasii	Statistical catch at age model	1951-2007	2007	0.20	no	0.00	no
DFO	Pacific herring Straight of Georgia	$Clupea\ pallasii$	Statistical catch at age	1951-2007	2007	0.91	no	0.40	no
DFO	Pacific herring West Coast of Vancouver Island	Clupea pallasii	Statistical catch at age	1951-2007	2007	0.03	no	0.00	no
DFO	Pacific cod Hecate Strait	Gadus macrocephalus	Biomass dynamics model	1956-2005	2004	0.37	no	0.25	no
DFO	Pacific cod West Coast of Van- couver Island	Gadus macrocephalus	Biomass dynamics model	1956-2002	2001	0.28	no	0.61	no
DFO	Atlantic cod NAFO 5Zjm	Gadus morhua	VPA	1978-2003	2002	0.34	no	0.45	no
DFO	Atlantic cod NAFO 2J3KL in- shore	Gadus morhua	VPA	1959-2006	2005	1.60	no	0.14	no
DFO	Atlantic cod NAFO 3Ps	$Gadus\ morhua$	VPA	1959-2004	2004	0.49	no	0.41	no
DFO	Atlantic cod NAFO 3Pn4RS	Gadus morhua	VPA	1964-2007	2006	0.09	no	0.79	no
DFO	Atlantic cod NAFO 4TVn	Gadus morhua	VPA	1965-2007	2006	0.17	no	0.32	no
DFO	Rock sole Hecate Strait	Lepidopsetta bilineata	Statistical catch at age model	1945-2001	2001	1.03	no	0.45	no
DFO	Haddock NAFO-4X5Y	Melanogrammus aeglefinus	VPA	1960-2003	2003	0.85	no	0.33	no
DFO	Haddock NAFO-5Zejm	Melanogrammus aeglefinus	VPA	1968-2003	2002	1.00	no	0.65	no
DFO	English sole Hecate Strait	Parophrys vetulus	Statistical catch at age model	1944-2001	2001	1.23	no	0.37	no
DFO IATTC	Pollock NAFO-4VWX5Zc Yellowfin tuna Eastern Pacific	Pollachius virens Thunnus albacares	VPA Statistical catch at age model	1974-2007 1975-2007	2006	0.56	no	0.30	no
IATTC	Bigeye tuna Eastern Pacific	Thunnus obesus	model Integrated Analysis	1975-2007					
ICCAT	Skipjack tuna Eastern Atlantic	Katsuwonus pelamis	Biomass dynamics model	1950-2006	2006	1.71	no	0.27	yes

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
ICCAT	Skipjack tuna Western Atlantic	Katsuwonus pelamis	Biomass dynamics model	1952-2006	2006	1.72	no	0.32	yes
ICCAT	Albacore tuna North Atlantic	Thunnus alalunga	VPA	1929-2005	2005	0.81	yes	1.49	yes
ICCAT	Yellowfin tuna Atlantic	Thunnus albacares	VPA	1970-2006	2006	1.07	yes	0.81	yes
ICCAT	Bigeye tuna Atlantic	Thunnus obesus	Biomass dynamics model	1950-2005	2005	0.90	no	0.87	yes
ICCAT	Bluefin tuna Eastern Atlantic	Thunnus thynnus	VPA	1969-2007	2007	0.34	yes	9.38	yes
ICCAT	Bluefin tuna Western Atlantic	Thunnus thynnus	VPA	1969-2007	2007	0.57	yes	1.33	yes
ICCAT	Swordfish Mediterranean Sea	Xiphias gladius	Biomass dynamics model	1968-2006	2006	0.94	yes	1.27	yes
ICCAT	Swordfish North Atlantic	Xiphias gladius	Biomass dynamics model	1978-2007	2005	0.99	yes	0.88	yes
ICCAT	Swordfish South Atlantic	Xiphias gladius	Biomass dynamics model	1970-2005	2005	1.54	yes	0.49	yes
ICES	Sandeel North Sea	Ammodytes marinus	VPA	1983-2007	2007	0.92	no	0.24	no
ICES	Herring ICES 22-24-IIIa	Clupea harengus	Statistical catch at age model	1991-2006	2006	0.73	no	1.02	no
ICES	Herring Northern Irish Sea	Clupea harengus	Statistical catch at age model	1960-2006	2006	0.72	no	0.34	no
ICES	Herring North Sea	Clupea harengus	Statistical catch at age model	1960-2007	2006	0.65	no	1.32	no
ICES	Herring ICES VIa	Clupea harengus	Statistical catch at age model	1957-2006	2006	0.18	no	1.59	no
ICES	Herring ICES VIa-VIIb-VIIc	Clupea harengus	VPA	1969-2000	2000	0.50	no	1.04	no
ICES	Herring ICES 25-32	Clupea harengus	VPA	1973-2006	2006	0.69	no	0.79	no
ICES	Herring ICES 30	Clupea harengus	VPA	1972-2007	2006	1.19	no	1.10	no
ICES	Herring ICES 31	Clupea harengus	VPA	1979-2006	2006	0.29	no	1.60	no
ICES	Herring Iceland (Summer spawners)	Clupea harengus	VPA	1983-2007	2006	1.00	no	0.79	no
ICES	Herring ICES 28	Clupea harengus	VPA	1976-2007	2006	1.21	no	0.87	no
ICES	Anchovy ICES VIII	Engraulis encrasicolus	Biomass dynamics model	1986-2007					
ICES	Atlantic cod coastal Norway	Gadus morhua	VPA	1982-2006	2006	0.27	no	2.17	no
ICES	Atlantic cod Northeast Arctic	Gadus morhua	VPA	1943-2006	2006	0.56	no	1.42	no
ICES	Atlantic cod Faroe Plateau	Gadus morhua	VPA	1959-2006	2006	0.26	no	1.52	no
ICES	Atlantic cod Iceland	Gadus morhua	Statistical catch at age model	1952-2006	2006	0.46	no	1.17	no
ICES	Atlantic cod Baltic Areas 22 and 24	Gadus morhua	VPA	1969-2007	2006	0.36	no	1.43	no
ICES	Atlantic cod Baltic Areas 25-32	Gadus morhua	VPA	1964-2007	2006	0.16	no	1.46	no
ICES	Atlantic cod Kattegat	Gadus morhua	VPA	1970-2006	2006	0.19	no	0.31	no
ICES	Atlantic cod Irish Sea	Gadus morhua	VPA	1968-2006	2006	0.15	no	0.56	no
ICES	Atlantic cod West of Scotland	Gadus morhua	Statistical catch at age model	1977-2006	2006	0.12	no	0.42	no
ICES	Atlantic cod North Sea	Gadus morhua	VPA	1962-2007	2006	0.19	no	0.80	no
ICES	Fourspotted megrim ICES VIIIc-IXa	Lepidorhombus boscii	VPA	1986-2006	2006	0.70	no	1.01	no
ICES	Megrim ICES VIIIc-IXa	Lepidorhombus whiffiagonis	VPA	1985-2007	2006	0.43	no	1.07	no
ICES	Capelin Barents Sea	$Mallotus\ villosus$	Unknown	1965-2007	2006	0.17	no	0.00	no
ICES	Capelin Iceland	Mallotus villosus	Survey index	1977-2007	2006	0.49	no	0.85	no
ICES	Haddock Northeast Arctic	Melanogrammus aeglefinus	VPA	1947-2006	2006	1.10	no	1.06	no
ICES	Haddock Faroe Plateau	Melanogrammus aeglefinus	VPA	1955-2006	2006	0.85	no	1.07	no
ICES	Haddock Iceland	Melanogrammus aeglefinus	VPA	1977-2007	2007	0.98	no	1.23	no
ICES ICES	Haddock Irish Sea Haddock West of Scotland	Melanogrammus aeglefinus Melanogrammus aeglefinus	Survey index Statistical catch at age	1972-2006 1977-2006	2006	0.58	no	0.73	no
ICES	Haddock ICES IIIa and North	$Me la no grammus\ a e gle finus$	model VPA	1963-2006	2006	0.62	no	0.25	no
ICEC	Sea	Malan agramma:1-E	VPA	1000 2007	2006	1.10	7.0	0.50	no.
ICES ICES	Haddock Rockall Bank Haddock ICES VIIb-k	Melanogrammus aeglefinus Melanogrammus aeglefinus	VPA VPA	1990-2007 1993-2006	2006 2006	$\frac{1.10}{1.37}$	no	$0.52 \\ 0.41$	no no
ICES	Whiting ICES VIIb-R	Melanogrammus aeglefinus Merlanqius merlanqus	VPA Survey index	1993-2006 1984-2007	∠006	1.37	no	0.41	по
ICES	Whiting ICES IIIa, VIId and	Meriangius meriangus Merlangius merlangus	VPA	1984-2007	2006	0.33	no	1.04	no
TOES	North Sea	menangus menungus	ATT	1919-2000	2000	0.55	110	1.04	

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
ICES	Whiting ICES VIIe-k	Merlangius merlangus	VPA	1982-2007	2006	0.44	no	1.25	no
ICES	Hake Northeast Atlantic North	Merluccius merluccius	VPA	1977-2007	2006	1.04	no	0.74	no
ICES	Hake Northeast Atlantic South	Merluccius merluccius	VPA	1982-2007	2000	0.05		1 00	
ICES ICES	Whiting Northeast Atlantic European Plaice Irish Sea	Micromesistius poutassou Pleuronectes platessa	Integrated Analysis Statistical catch at age	1980-2007 1962-2006	2006 2006	$0.67 \\ 1.07$	no	$\frac{1.66}{0.23}$	no
ICES	European Flaice Irish Sea	Fieuronecies piaiessa	model at age	1902-2000	2000	1.07	no	0.23	no
ICES	European Plaice ICES VIId	Pleuronectes platessa	VPA	1979-2006					
ICES	European Plaice ICES IIIa	Pleuronectes platessa	VPA	1976-2006					
ICES	European Plaice North Sea	Pleuronectes platessa	VPA	1956-2006					
ICES	European Plaice ICES VIIf-g	Pleuronectes platessa	VPA	1976-2006	2006	0.65	no	0.41	no
ICES	European Plaice ICES VIIe	Pleuronectes platessa	VPA	1975-2006	2006	0.51	no	1.39	no
ICES	Pollock Northeast Arctic	Pollachius virens	VPA	1957-2006	2006	1.70	no	0.60	no
ICES ICES	Pollock Faroe Plateau	Pollachius virens Pollachius virens	VPA VPA	1958-2006	2006	0.99	no	1.52	no
ICES	Pollock ICES IIIa, VI and North Sea	Pollacnius virens	VPA	1964-2006	2006	0.57	no	0.97	no
ICES	Greenland halibut Northeast Arctic	$Reinhard tius\ hippoglossoides$	VPA	1959-2007	2006	0.36	no	1.20	no
ICES	European pilchard ICES VIIIc- IXa	Sardina pilchardus	Statistical catch at age model	1978-2007					
ICES	Mackerel ICES Northeast At- lantic	Scomber scombrus	Statistical catch at age model	1972-2007	2006	0.98	no	0.73	no
ICES	Golden Redfish Northeast Arctic	Sebastes norvegicus	Statistical catch at age model	1986-2006	2006	0.29	no	2.65	no
ICES	common European sole ICES Kattegat and Skagerrak	Solea vulgaris	VPA	1982-2007	2006	1.25	no	0.54	no
ICES	common European sole Bay of Biscay	Solea vulgaris	VPA	1982-2006	2006	0.76	no	1.00	no
ICES	common European sole Irish Sea	Solea vulgaris	VPA	1968-2006	2006	0.36	no	1.16	no
ICES	common European sole North Sea	Solea vulgaris	VPA	1956-2006					
ICES	common European sole ICES VIId	Solea vulgaris	VPA	1981-2006					
ICES	common European sole Celtic Sea	Solea vulgaris	VPA	1970-2006	2006	0.90	no	0.95	no
ICES	common European sole West- ern English Channel	Solea vulgaris	VPA	1968-2006	2006	0.51	no	1.74	no
ICES	Sprat North Sea	Sprattus sprattus	Statistical catch at age model	1995-2007					
ICES ICES	Sprat ICES Baltic Areas 22-32 Norway pout North Sea	Sprattus sprattus Trisopterus esmarkii	VPA VPA	1973-2007 1983-2007	2006 2006	1.13 0.90	no	$\frac{1.27}{0.33}$	no
IMARPE	Peruvian anchoveta North- Central Peru	Engraulis ringens	VPA VPA	1963-2007	2006	0.90	no	0.33	no
IOTC	Bigeye tuna Indian Ocean	Thunnus obesus	Biomass dynamics model	1957-2006	2004	1.23	ves	0.97	yes
IPHC	Pacific halibut North Pacific	Hippoglossus stenolepis	Statistical catch at age model	1988-2009	2008	0.54	no	2.01	no
MFish	Black oreo West end of Chatham Rise	$Allocyttus\ niger$	Integrated Analysis	1973-2007	2007	0.99	yes	0.82	yes
MFish	Australian salmon New Zealand	Arripis trutta	Integrated Analysis	1975-2006	2006	1.64	yes	0.33	yes
MFish	New Zealand snapper New Zealand Area 8	Chrysophrys auratus	Integrated Analysis	1931-2005	2005	0.35	yes	2.50	yes
MFish	New Zealand ling New Zealand Areas LIN 3 and 4	Genypterus blacodes	Integrated Analysis	1972-2007	2007	3.07	yes	0.09	yes
MFish	New Zealand ling New Zealand Areas LIN 5 and 6	$Genypterus\ blacodes$	Integrated Analysis	1972-2007	2007	3.96	yes	0.10	yes

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MFish	New Zealand ling New Zealand	Genypterus blacodes	Integrated Analysis	1980-2006	2006	2.19	ves	0.11	ves
MFish	Area LIN 6b New Zealand ling New Zealand	Genypterus blacodes	Integrated Analysis	1972-2007	2007	2.49	ves	0.32	ves
	Area LIN 72	01	· ·						v
MFish	New Zealand ling New Zealand Area LIN 7WC - WCSI	Genypterus blacodes	Integrated Analysis	1972-2008	2008	2.21	yes	0.13	yes
MFish	New Zealand abalone species New Zealand Area PAU 5A	Haliotis iris	Integrated Analysis	1964-2006	2006	0.72	no	2.83	no
MFish	New Zealand abalone species New Zealand Area PAU 5B	Haliotis iris	Integrated Analysis	1963-2007	2007	1.02	no	0.59	no
MFish	New Zealand Area PAU 5D New Zealand Area PAU 5D	Haliotis iris	Integrated Analysis	1964-2006	2006	0.44	no	2.10	no
MFish	New Zealand Area PAU 5D New Zealand abalone species New Zealand Area PAU 7	Haliotis iris	Integrated Analysis	1964-2008	2008	0.87	no	0.94	no
MFish	Orange roughy New Zealand Mid East Coast	$Hoplostethus \ atlanticus$	Integrated Analysis	1981-2004	2004	1.20	yes	0.35	yes
MFish	Red rock lobster New Zealand area CRA1	Jasus edwardsii	Unknown	1945-2001	2001	1.14	no	0.88	no
MFish	Red rock lobster New Zealand area CRA2	$Jasus\ edwardsii$	Unknown	1945-2001	2001	0.53	no	2.12	no
MFish	Red rock lobster New Zealand area CRA3	$Jasus\ edwardsii$	Unknown	1945-2007					
MFish	Red rock lobster New Zealand	$Jasus\ edwardsii$	Unknown	1945-2005	2005	0.67	no	1.33	no
MFish	area CRA4 Red rock lobster New Zealand area CRA5	$Jasus\ edwardsii$	Unknown	1945-2002	2002	0.59	no	1.68	no
MFish	Red rock lobster New Zealand area CRA7	Jasus edwardsii	Unknown	1976-2005	2005	0.73	no	0.43	no
MFish	Red rock lobster New Zealand area CRA8	Jasus edwardsii	Unknown	1976-2005	2005	0.69	no	0.49	no
MFish	Hoki Eastern New Zealand	$Macruronus\ novaezelandiae$	Integrated Analysis	1972-2007	2007	1.11	no	0.33	no
MFish	Hoki Western New Zealand	$Macruronus\ novaezelandiae$	Integrated Analysis	1972-2007	2007	0.51	no	0.57	no
MFish	Southern hake Chatham Rise	Merluccius australis	Integrated Analysis	1975-2006	2006	1.77	yes	0.12	yes
MFish	Southern hake Sub-Antarctic	Merluccius australis	Integrated Analysis	1975-2007	2007	2.91	yes	0.11	yes
MFish	Southern blue whiting Camp- bell Island Rise	Micromesistius australis	Integrated Analysis	1979-2006	2006	1.15	yes	0.92	yes
MFish	Trevally New Zealand Areas TRE 7	Pseudocaranx dentex	Integrated Analysis	1944-2005	2005	1.44	yes	0.83	yes
MFish	Smooth oreo Chatham Rise	Pseudocyttus maculatus	Integrated Analysis	1979-2006	2006	2.25	yes	0.38	yes
MFish	Smooth oreo West end of Chatham Rise	Pseudocyttus maculatus	Integrated Analysis	1973-2004	2004	1.25	yes	0.53	yes
MFish	common gemfish New Zealand	$Rexea\ solandri$	Integrated Analysis	1952-2007	2006	1.64	yes	0.43	yes
NAFO	Atlantic cod NAFO 3M	Gadus morhua	VPA	1959-2008					
NAFO	Atlantic cod NAFO 3NO	Gadus morhua	VPA	1953-2007	2006	0.02	no	0.27	no
NAFO	American Plaice NAFO-3LNO	Hippoglossoides platessoides	VPA	1955-2007	2006	0.08	no	0.77	no
NAFO	American Plaice NAFO-3M	Hippoglossoides platessoides	VPA	1960-2007	2007	0.13	no	0.00	no
NAFO	Yellowtail Flounder NAFO 3LNO	$Limanda\ ferruginea$	Biomass dynamics model	1960-2009	2007	1.62	no	0.15	no
NAFO	Redfish species NAFO 3LN	Redfish species	Biomass dynamics model	1959-2008	2008	1.88	yes	0.04	yes
NAFO	Redfish species NAFO 3M	Redfish species	VPA	1989-2006	2006	0.93	no	0.15	no
NAFO	Greenland halibut NAFO 23KLMNO	$Reinhard tius\ hippoglossoides$	VPA	1960-2006	2006	0.39	no	1.73	no
NMFS	Sablefish Eastern Bering Sea / Aleutian Islands / Gulf of	$An oplopoma\ fimbria$	Statistical catch at age model	1956-2008	2008	1.05	yes	0.66	yes
NMFS	Alaska Sablefish Pacific Coast	$An oplopoma\ fimbria$	Integrated Analysis	1900-2007	2007	0.84	no	0.69	yes

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NMFS	Ocean quahog Atlantic Coast	Arctica islandica	Biomass dynamics model	1978-2008					
NMFS	Gray triggerfish Gulf of Mexico	Balistes capriscus	Biomass dynamics model	1981-2004					
NMFS	Gulf menhaden Gulf of Mexico	Brevoortia patronus	Statistical catch at age model	1964-2004	2004	1.08	no	0.48	no
NMFS	Atlantic menhaden Atlantic	$Brevoortia\ tyrannus$	Statistical catch at age model	1940-2005	2005	0.47	no	0.97	no
NMFS	Blacknose shark Atlantic	$Carcharhinus\ acronotus$	Biomass dynamics model	1950-2005					
NMFS	Finetooth shark Atlantic	Carcharhinus isodon	Biomass dynamics model	1976-2005					
NMFS	Blacktip shark Atlantic	Carcharhinus limbatus	Biomass dynamics model	1981-2004					
NMFS	Blacktip shark Gulf of Mexico	Carcharhinus limbatus	Biomass dynamics model	1981-2004					
NMFS	Sandbar shark Atlantic	Carcharhinus plumbeus	Biomass dynamics model	1975-2004					
NMFS	Black sea bass Mid-Atlantic Coast	Centropristis striata	Statistical catch at age model	1968-2007	2007	0.92	yes	0.67	no
NMFS	Snow crab Bering Sea	Chionoecetes opilio	Biomass dynamics model	1979-2008	2008	0.55	yes	1.49	no
NMFS	Atlantic herring Northwestern Atlantic Coast	Clupea harengus	Statistical catch at age model	1960-2005					
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	1981-2008					
NMFS	Petrale sole Northern Pacific Coast	$Eopsetta\ jordani$	Integrated Analysis	1910-2005	2005	1.87	yes	1.26	no
NMFS	Petrale sole Southern Pacific Coast	$Eopsetta\ jordani$	Integrated Analysis	1874-2005	2005	1.13	yes	0.61	no
NMFS	Red grouper Gulf of Mexico	$Epinephelus\ morio$	Statistical catch at age model	1986-2005	2005	1.27	yes	0.73	yes
NMFS	Snowy grouper Southern At- lantic coast	Epinephelus niveatus	Statistical catch at age model	1961-2002	2002	0.19	yes	3.08	yes
NMFS	Pacific cod Bering Sea and Aleutian Islands	Gadus macrocephalus	Integrated Analysis	1964-2008	2008	1.00	yes	0.93	no
NMFS	Pacific cod Gulf of Alaska	Gadus macrocephalus	Integrated Analysis	1964-2008	2008	0.91	ves	0.84	no
NMFS	Atlantic cod Georges Bank	Gadus morhua	VPA	1960-2008	2007	0.12	yes	0.72	no
NMFS	Atlantic cod Gulf of Maine	Gadus morhua	VPA	1893-2008	2007	1.46	no	2.40	ves
NMFS	Witch Flounder NAFO-5Y	Glyptocephalus cynoglossus	VPA	1982-2008	2007	0.30	yes	1.45	yes
NMFS	Rex sole Gulf of Alaska	$Glyptocephalus\ zachirus$	Statistical catch at age model	1979-2008					
NMFS	Kelp greenling Oregon Coast	Hexagrammos decagrammus	Integrated Analysis	1979-2005					
NMFS	Flathead sole Bering Sea and Aleutian Islands	$Hippoglossoides\ elassodon$	Statistical catch at age model	1977-2008	2008	1.83	yes	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	0.70	ves	0.30	no
NMFS	Atlantic Halibut NAFO-5YZ	Hippoglossus hippoglossus	Unknown	1800-2007			5		
NMFS	American lobster Georges Bank	Homarus americanus	Biomass dynamics model	1981-2007					
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 North- western Atlantic Coast	Illex illecebrosus	Biomass dynamics model	1967-2005					
NMFS	Northern rock sole Eastern Bering Sea and Aleutian Is- lands	$Lepidop setta\ polyxystra$	Statistical catch at age model	1971-2008	2007	3.02	yes	0.21	yes
NMFS	Yellowfin sole Bering Sea and Aleutian Islands	$Limanda\ aspera$	Statistical catch at age model	1959-2008	2008	1.94	yes	0.62	yes

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
NMFS	Yellowtail flounder Cape Cod / Gulf of Maine	Limanda ferruginea	VPA	1935-2008	2007	0.25	yes	1.73	yes
NMFS	Yellowtail flounder Georges Bank	$Limanda\ ferruginea$	VPA	1935-2008	2007	0.22	yes	1.14	yes
NMFS	Yellowtail Flounder Southern New England-Mid Atlantic	$Limanda\ ferruginea$	VPA	1935-2008	2007	0.13	yes	1.61	yes
NMFS	Golden king crab Aleutian Islands Eastern segment	$Lithodes\ a equispinus$	Statistical catch at length model	1990-2007					
NMFS	Golden king crab Aleutian Islands Western segment	$Lithodes\ a equispinus$	Statistical catch at length model	1989-2007					
NMFS	Monkfish Gulf of Maine / Northern Georges Bank	Lophius americanus	Unknown	1964-2006	2006	1.73	no	0.38	no
NMFS	Monkfish Southern Georges Bank / Mid-Atlantic	$Lophius\ americanus$	Unknown	1964-2006	2006	1.72	no	0.30	no
NMFS NMFS	Tilefish Mid-Atlantic Coast Tilefish Southern Atlantic coast	$Lopholatilus\ chamaele onticeps \\ Lopholatilus\ chamaele onticeps$	Biomass dynamics model Statistical catch at age model	1973-2008 1961-2002	$\frac{2005}{2002}$	$0.72 \\ 0.90$	no yes	$0.61 \\ 1.55$	no yes
NMFS	Mutton snapper Southern At- lantic coast and Gulf of Mexico	$Lutjanus\ analis$	Statistical catch at age model	1981-2006					
NMFS	Red snapper Eastern Gulf of Mexico	Lutjanus campechanus	Statistical catch at age model	1872-2003					
NMFS	Red snapper Southern Atlantic coast	$Lut janus\ campe chanus$	Statistical catch at age model	1945-2006					
NMFS	Red snapper Western Gulf of Mexico	$Lut janus\ campe chanus$	Statistical catch at age model	1880-2003					
NMFS	Haddock NAFO-5Y	Melanogrammus aeglefinus	VPA	1956-2008	2007	0.99	yes	1.21	no
NMFS NMFS	Haddock Georges Bank Silver hake Gulf of Maine / Northern Georges Bank	Melanogrammus aeglefinus Merluccius bilinearis	VPA Survey index	1930-2008 1955-2005					
NMFS	Silver hake Southern Georges Bank / Mid-Atlantic	$Merluccius\ bilinear is$	Survey index	1955-2005					
NMFS	Pacific hake Pacific Coast	Merluccius productus	Integrated Analysis	1966-2008	2008	1.61	yes	0.73	yes
NMFS	Atlantic croaker Mid-Atlantic Coast	$Micropogonias\ undulatus$	Biomass dynamics model	1973-2002	2002	1.42	yes	0.27	yes
NMFS	Dover sole Gulf of Alaska	Microstomus pacificus	Statistical catch at age model	1978-2010					
NMFS NMFS	Dover sole Pacific Coast Striped bass Gulf of Maine / Cape Hatteras	Microstomus pacificus Morone saxatilis	Integrated Analysis Statistical catch at age model	1910-2005 1982-2006	2005	1.61	yes	0.45	no
NMFS	Gag Gulf of Mexico	Mycteroperca microlepis	Unknown	1963-2004	2004	1.00	yes	2.44	yes
NMFS	Gag Southern Atlantic coast	Mycteroperca microlepis	Statistical catch at age model	1962-2005	2005	0.94	yes	1.31	yes
NMFS	Yellowtail snapper Southern Atlantic Coast and Gulf of Mexico	Ocyurus chrysurus	Statistical catch at age model	1962-2001	2001	1.14	yes	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	yes	0.39	yes
NMFS	Northern shrimp Gulf of Maine	Pandalus borealis	Statistical catch at age model	1960-2009	2008	1.58	no	0.56	no
NMFS	Summer flounder Mid-Atlantic Coast	Paralichthys dentatus	Statistical catch at age model	1940-2007					
NMFS	Red king crab Bristol Bay	$Paralithodes\ camts chaticus$	Statistical catch at length model	1960-2008	2008	1.27	yes	1.05	yes
NMFS	Red king crab Norton Sound	Paralithodes camtschaticus	Statistical catch at length model	1976-2008					

Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
NMFS NMFS	English sole Pacific Coast Atlantic butterfish Gulf of Maine / Cape Hatteras	Parophrys vetulus Peprilus triacanthus	Integrated Analysis Unknown	1876-2007 1965-2005	2007	6.42	yes	0.14	no
NMFS	Sea scallop Georges Bank	$Placopecten\ magellanicus$	Statistical catch at length model	1964-2006	2006	1.59	no	0.78	no
NMFS	Sea scallop Mid-Atlantic Coast	$Placopecten\ magellanicus$	Statistical catch at length model	1964-2006	2006	1.00	no	0.36	no
NMFS	Starry flounder Northern Pa- cific Coast	Platichthys stellatus	Integrated Analysis	1970-2005	2005	1.10	yes	0.33	no
NMFS	Starry flounder Southern Pa- cific Coast	Platichthys stellatus	Integrated Analysis	1970-2005	2005	1.55	yes	0.12	no
NMFS	Atka mackerel Bering Sea and Aleutian Islands	$Pleurogrammus\ monoptery gius$	Statistical catch at age model	1976-2009	2009	1.55	yes	0.55	no
NMFS	Alaska plaice Bering Sea and Aleutian Islands	$Pleuronectes\ quadrituber culatus$	Statistical catch at age model	1972-2008	2008	2.46	yes	0.07	yes
NMFS NMFS	Pollock NAFO-5YZ Bluefish Atlantic Coast	Pollachius virens Pomatomus saltatrix	Survey index Statistical catch at age	1963-2007 1981-2007	2007	0.81	no	0.79	yes
NMFS	Winter Flounder NAFO-5Z	Pseudopleuronectes americanus	model VPA	1982-2007	2006	0.28	yes	0.25	no
NMFS NMFS	Winter Flounder NAFO-5Y Winter Flounder Southern New	Pseudopleuronectes americanus Pseudopleuronectes americanus	Unknown VPA	1982-2008 1940-2007	2007	0.09	yes	1.10	no
NMFS NMFS	England-Mid Atlantic Longnose skate Pacific Coast Greenland turbot Bering Sea	Raja rhina Reinhardtius hippoglossoides	Integrated Analysis Statistical catch at age	1915-2007 1960-2009	2007 2009	1.56 1.48	no yes	$0.40 \\ 0.05$	no yes
NMFS	and Aleutian Islands Arrowtooth flounder Bering	Reinhardtius stomias	model Statistical catch at age	1970-2008	2008	2.70	yes	0.31	no
NMFS	Sea and Aleutian Islands Arrowtooth flounder Gulf of	Reinhardtius stomias	model Statistical catch at age	1958-2010	2010	3.02	yes	0.28	no
NMFS	Alaska Arrowtooth flounder Pacific	$Reinhardtius\ stomias$	model Integrated Analysis	1916-2007	2007	3.81	yes	0.21	yes
NMFS	Coast Atlantic sharpnose shark At-	$Rhizoprionodon\ terraenovae$	Biomass dynamics model	1950-2005					
NMFS	lantic Vermilion snapper Gulf of Mex- ico	$Rhomboplites\ aurorubens$	Biomass dynamics model	1981-2004					
NMFS	Vermilion snapper Southern Atlantic coast	$Rhomboplites\ aurorubens$	Statistical catch at age model	1946-2008	2007	0.86	yes	1.27	yes
NMFS	Pacific sardine North Pacific	Sardinops sagax	Statistical catch at age model	1981-2008	2006	1.73	no	0.37	no
NMFS NMFS	Pacific sardine Pacific Coast Pacific chub mackerel Pacific	Sardinops sagax Scomber japonicus	Integrated Analysis Statistical catch at age	1981-2007 1929-2008	2006	1.36	no	0.41	no
NMFS	Coast King mackerel Gulf of Mexico	Scomberomorus cavalla	model VPA	1992-2001	2001	0.93	yes	0.44	no
NMFS	King mackerel Southern At- lantic Coast	Scomberomorus cavalla	VPA	1981-2001	2001	1.35	yes	0.56	no
NMFS	Spanish mackerel Southern At- lantic Coast	Scomberomorus maculatus	Statistical catch at age model	1950-2008	2007	0.38	yes	0.91	yes
NMFS	Atlantic mackerel Gulf of Maine / Cape Hatteras	Scomber scombrus	VPA	1960-2005					
NMFS	Windowpane flounder - Gulf of Maine / Georges Bank	$Scophthalmus\ aquosus$	Survey index	1975-2007					
NMFS	Windowpane Southern New England-Mid Atlantic	$Scophthalmus\ aquosus$	Survey index	1975-2007					
NMFS	California scorpionfish South- ern California	Scorpaena guttata	Statistical catch at age model	1990-2005					
NMFS	Cabezon Northern California	Scorpaenichthys marmoratus	Integrated Analysis	1916-2005	2005	1.04	yes	0.99	no

Management	Stock ID	Scientific name	${\bf Methodology}$	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
NMFS NMFS	Cabezon Southern California Rougheye rockfish Bering Sea and Aleutian Islands	Scorpaenichthys marmoratus Sebastes aleutianus	Integrated Analysis Statistical catch at age model	1932-2005 1974-2009	2005	0.74	yes	0.53	no
NMFS	Rougheye rockfish Gulf of Alaska	Sebastes aleutianus	Statistical catch at age model	1974-2007					
NMFS	Pacific Ocean perch Eastern Bering Sea and Aleutian Is- lands	Sebastes alutus	Statistical catch at age model	1974-2009	2009	1.23	yes	0.26	no
NMFS	Pacific ocean perch Gulf of Alaska	Sebastes alutus	Statistical catch at age model	1959-2008	2008	1.16	yes	0.73	yes
NMFS	Pacific ocean perch Pacific Coast	Sebastes alutus	Statistical catch at age model	1953-2007	2007	0.69	yes	0.00	yes
NMFS	Shortraker rockfish Bering Sea and Aleutian Islands	Sebastes borealis	Statistical catch at age model	1977-2008					
NMFS	Gopher rockfish Southern Pa- cific Coast	Sebastes carnatus	Integrated Analysis	1965-2005	2005	2.38	yes	0.62	no
NMFS	Darkblotched rockfish Pacific Coast	Sebastes crameri	Integrated Analysis	1928-2007	2007	0.73	yes	0.31	yes
NMFS	Widow rockfish Pacific Coast	Sebastes entomelas	Statistical catch at age model	1955-2006	2006	0.91	no	0.05	yes
NMFS	Acadian redfish Gulf of Maine / Georges Bank	Sebastes fasciatus	Statistical catch at age model	1913-2007					
NMFS	Yellowtail rockfish Northern Pacific Coast	Sebastes flavidus	Integrated Analysis	1967-2005	2005	1.36	yes	0.51	no
NMFS	Chilipepper Southern Pacific Coast	Sebastes goodei	Integrated Analysis	1892-2007	2006	1.43	no	0.04	yes
NMFS	Shortbelly rockfish Pacific Coast	Sebastes jordani	Integrated Analysis	1950-2005					
NMFS NMFS	Cowcod Southern California Black rockfish Northern Pacific Coast	Sebastes levis Sebastes melanops	Integrated Analysis Integrated Analysis	1900-2007 1914-2006	2007 2006	$0.09 \\ 1.37$	yes no	$0.07 \\ 0.47$	yes yes
NMFS	Black rockfish Southern Pacific Coast	Sebastes melanops	Integrated Analysis	1915-2007	2007	2.23	yes	0.33	yes
NMFS	Blackgill rockfish Pacific Coast	Sebastes melanostomus	Integrated Analysis	1950-2005	2005	1.31	yes	1.20	no
NMFS NMFS	Blue rockfish California Bocaccio Southern Pacific	Sebastes mystinus Sebastes paucispinis	Integrated Analysis Integrated Analysis	1916-2007 1951-2006	2007 2006	$0.75 \\ 0.32$	yes yes	1.19 0.10	yes yes
TVIVII D	Coast	Sedastes paretspines	Integrated Imarysis	1301-2000	2000	0.02	yes	0.10	yes
NMFS	Canary rockfish Pacific Coast	Sebastes pinniger	Integrated Analysis	1916-2007	2007	0.85	yes	0.02	yes
NMFS	Northern rockfish Bering Sea and Aleutian Islands	Sebastes polyspinis	Statistical catch at age model	1974-2009	2009	1.41	yes	0.13	no
NMFS	Northern rockfish Gulf of Alaska	Sebastes polyspinis	Statistical catch at age model	1959-2008	2008	1.50	yes	0.66	yes
NMFS	Yelloweye rockfish Pacific Coast	Sebastes ruberrimus	Integrated Analysis	1923-2006	2006	0.38	no	0.65	yes
NMFS	Dusky rockfish Gulf of Alaska	Sebastes variabilis	Statistical catch at age model	1973-2008	2007	1.54	yes	0.54	yes
NMFS	Shortspine thornyhead Pacific Coast	Sebastolobus alascanus	Integrated Analysis	1901-2005	2005	1.57	yes	0.93	no
NMFS	Longspine thornyhead Pacific Coast	Sebastolobus altivelis	Integrated Analysis	1962-2005	2005	2.65	yes	0.23	yes
NMFS	Greater amberjack Gulf of Mexico	Seriola dumerili	Biomass dynamics model	1986-2004	2004	0.46	no	1.52	no
NMFS	Greater amberjack Southern Atlantic coast	Seriola dumerili	Statistical catch at age model	1946-2006					
NMFS	Bonnethead shark Atlantic	Sphyrna tiburo	Biomass dynamics model	1950-2005	40				
NMFS	Atlantic surfclam Mid-Atlantic Coast	Spisula solidissima	Biomass dynamics model	1965-2008	1994	1.85	no	0.18	yes

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Management	Stock ID	Scientific name	Methodology	Timespan	Current year	B ratio	B ratio from assess- ment	U ratio	U ratio from assess- ment
NMFS NMFS	Spiny dogfish Atlantic Coast Scup Atlantic Coast	Squalus acanthias Stenotomus chrysops	Unknown Statistical catch at age model	1962-2006 1960-2007	2005	1.61	no	0.15	no
NMFS	Walleye pollock Aleutian Islands	$The ragra\ chalcogramma$	Statistical catch at age model	1976-2008	2008	0.86	yes	0.02	yes
NMFS	Walleye pollock Eastern Bering Sea	$The ragra\ chalcogramma$	Statistical catch at age model	1963-2008	2008	0.66	yes	0.85	no
NMFS	Walleye pollock Gulf of Alaska	$The ragra\ chalcogramma$	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	yes	0.80	yes
RFFA	Walleye pollock Northern Sea of Okhotsk	$The ragra\ chalcogramma$	Biomass dynamics model	1985-1994	1992	1.11	no	0.63	yes
RFFA	Walleye pollock Western Bering Sea	$The ragra\ chalcogramma$	VPA	1994-2004	2004	2.16	no	0.26	no
SPRFMO	Chilean jack mackerel Chilean EEZ and offshore	Trachurus murphyi	Unknown	1975-2007	2006	0.52	no	1.20	no
UNKNOWN	Shortfin mako Nothwest Pacific Ocean	Isurus oxyrinchus	VPA	1990-2003					
US State	American lobster Rhode Island	Homarus americanus	Biomass dynamics model	1959-2007	2006	0.53	no	0.67	no
US State	Winter flounder Rhode Island	Pseudopleuronectes americanus	Biomass dynamics model	1959-2007	2006	0.25	no	2.02	ves
US State	Tautog Rhode Island	Tautoga onitis	Biomass dynamics model	1959-2007	2006	0.84	no	0.59	no
WCPFC	Skipjack tuna Central Western Pacific	Katsuwonus pelamis	Statistical catch at age model	1972-2006	2006	4.38	yes	0.30	yes
WCPFC	Albacore tuna South Pacific Ocean	$Thunnus\ alalunga$	Statistical catch at age model	1959-2006	2006	2.46	yes	0.90	yes
WCPFC	Yellowfin tuna Central Western Pacific	Thunnus albacares	Statistical catch at age model	1952-2005	2005	1.22	yes	0.80	yes
WCPFC	Bigeye tuna Western Pacific Ocean	Thunnus obesus	Statistical catch at age model	1952-2006	2006	1.06	yes	1.38	yes

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.

	SP U/Umsy < 1	SP U/Umsy > 1
U/Umsy < 1	28	21
U/Umsy > 1	2	9
B/Bmsy < 1	32	8
B/Bmsy > 1	22	35

Table 2: Contingency tables of stock status classification for reference points obtained from assessments and those derived from surplus production models.