Figures and Tables for CJFAS Short Communication

June 1, 2010

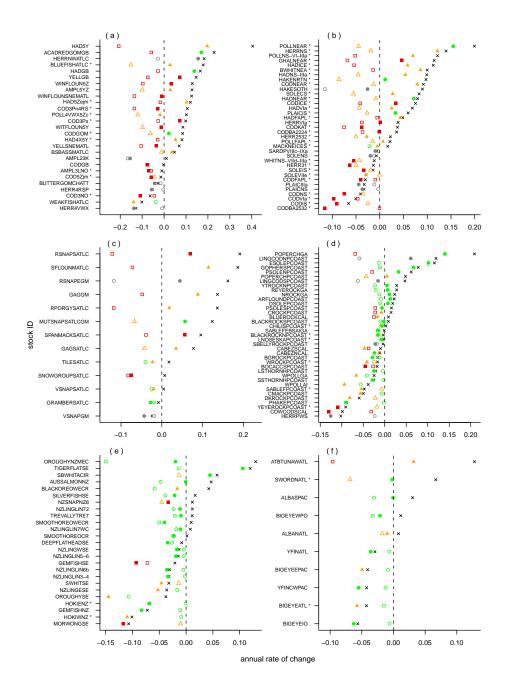


Figure 1

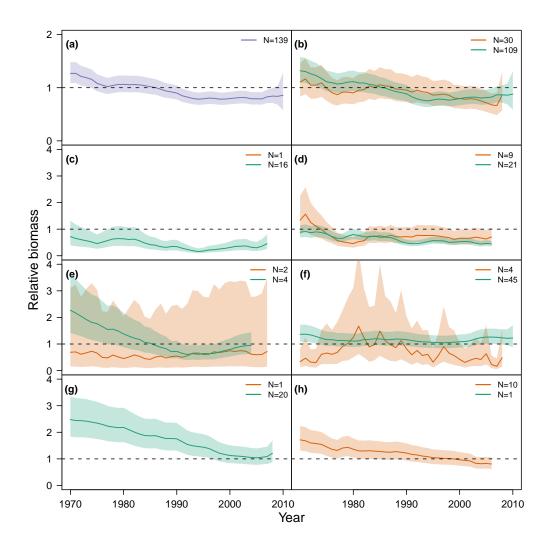


Figure 2

						Conti	inuous	Discon	tinuous	Dı	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
ACADREDGOMGB	Gulf of Maine /	Acadian red-	Sebastes fascia-	Demersal		0.3700	8.6600	-0.0582	0.1702	-0.0556	0.2303	-0.0535	0.2109
ALBANATL	Georges Bank Northern Atlantic	fish Albacore tuna	tus Thunnus alalunga	Pelagic		0.9300	0.8100	-0.0177	-0.0097	-0.0185	-0.0244	-0.0156	-0.0144
ALBASPAC	South Pacific Ocean	Albacore tuna	Thunnus alalunga	Pelagic		4.0100	2.4600	-0.0307	-0.0007	-0.0373	-0.0295	-0.0337	-0.0349
ALPLAICBSAI	Bering Sea and Aleutian Islands	Alaska plaice	Pleuronectes quadritubercu- latus	Demersal		2.7100	2.4600	0.0233	-0.0322	0.0458	-0.0123	0.0324	-0.0060
AMPL23K	Labrador - NE Newfoundland	American plaice	Hippoglossoides platessoides	Demersal				-0.1657	-0.1548	-0.0588	-0.0479	-0.1073	-0.1470
AMPL3LNO	Grand Banks	American plaice	Hippoglossoides platessoides	Demersal	*	0.1400	0.0800	-0.0587	-0.0688	-0.0222	0.0640	-0.0524	0.0187
AMPL5YZ	Gulf of Maine / Georges Bank	American plaice	Hippoglossoides platessoides	Demersal		0.5200	0.7000	-0.0993	0.0283	-0.1398	0.0087	-0.0809	0.0202
ARFLOUNDBSAI	Bering Sea and Aleutian Islands	Arrowtooth flounder	Reinhardtius stomias	Demersal		1.3100	2.7000	0.0628	0.0463	0.0524	0.0381	0.0592	0.0451
ARFLOUNDGA	Gulf of Alaska	Arrowtooth flounder	Reinhardtius stomias	Demersal		1.9300	3.0200	0.0521	0.0257	0.0508	0.0225	0.0467	0.0249
ARFLOUNDPCOAST	Pacific Coast	Arrowtooth	Reinhardtius stomias	Demersal		3.1100	3.8100	-0.0090	0.0129	-0.0095	0.0027	-0.0059	0.0136
ATBTUNAEATL	Eastern Atlantic	flounder Atlantic bluefin tuna	Thunnus thyn-	Pelagic		0.6200	0.3400	-0.0135	-0.0403	-0.0221	-0.0550	-0.0173	-0.0621
ATBTUNAWATL	Western Atlantic	Atlantic bluefin tuna	nus Thunnus thyn- nus	Pelagic		0.4300	0.5700	-0.0961	0.0318	-0.1085	0.0106	-0.0918	0.0193
ATKABSAI	Bering Sea and Aleutian Islands	Atka mackerel	Pleurogrammus	Demersal		2.2300	1.5500	0.0272	0.0026	0.0189	-0.0025	0.0648	-0.0215
ATLCROAKMATLC	Mid-Atlantic	Atlantic croaker	monopterygius Micropogonias undulatus	Demersal		1.3000	1.4200	0.0782	0.0306	0.0677	0.0034	0.0952	0.0092
AUSSALMONNZ	Coast New Zealand	Australian salmon	anautatus Arripis trutta	Pelagic		1.8400	1.6400	-0.0475	-0.0007	-0.0541	-0.0082	-0.0440	-0.0080
BGROCKPCOAST	Pacific Coast	Blackgill rock- fish	Sebastes melanosto- mus	Demersal		1.4300	1.3100	-0.0124	-0.0287	-0.0093	-0.0034	-0.0136	-0.0070
BIGEYEATL	Atlantic	Bigeye tuna	Thunnus obe- sus	Pelagic	*	1.4100	0.9000	-0.0150	-0.0576	0.0018	-0.0358	-0.0049	-0.0274
BIGEYEEPAC	Eastern Pacific	Bigeye tuna	Thunnus obe-	Pelagic		1.7400	0.9000	-0.0086	-0.0494	-0.0010	-0.0419	-0.0074	-0.0439
BIGEYEIO	Indian Ocean	Bigeye tuna	sus Thunnus obe-	Pelagic		2.2900	1.2300	-0.0062	-0.0626	-0.0049	-0.0558	-0.0114	-0.0518
BIGEYEWPO	Western Pacific	Bigeye tuna	sus Thunnus obe-	Pelagic		1.8700	1.0600	-0.0326	-0.0212	-0.0352	-0.0384	-0.0287	-0.0407
BIGHTREDSE	Ocean Southeast Aus-	Bight redfish	sus Centroberyx	Demersal		1.3400	0.9500	0.0056	-0.0170	0.0038	-0.0242	0.0047	-0.0234
BLACKOREOWECR	tralia West end of	Black oreo	$gerrardi \ Allocyttus$	Demersal		1.2500	0.9900	-0.0588	-0.0164	-0.0581	-0.0156	-0.0513	-0.0158
BLACKROCKNPCOAST	Chatham Rise Northern Pacific Coast	Black rockfish	niger Sebastes melanops	Demersal	*	0.9800	1.3700	-0.0126	-0.0158	-0.0095	0.0586	-0.0167	0.0458

					_	Conti	inuous	Discon	tinuous	Di	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
BLACKROCKSPCOAST	Southern Pacific Coast	Black rockfish	Sebastes melanops	Demersal		1.2100	2.2300	-0.0103	-0.0019	-0.0078	0.0528		
BLUEFISHATLC	Atlantic Coast	Bluefish	Pomatomus saltatrix	Demersal	*	0.5600	0.8100	-0.1517	0.0269	-0.1415	0.0303	-0.1314	0.0212
BLUEROCKCAL	California	Blue rockfish	Sebastes mysti- nus	Demersal		0.3300	0.7500	-0.0250	-0.0164	-0.0204	0.0802	-0.0270	0.0544
BOCACCSPCOAST	Southern Pacific Coast	Bocaccio	Sebastes pau- cispinis	Demersal		0.1800	0.3200	-0.0270	-0.0448	-0.0143	0.0425	-0.0328	0.0421
BSBASSMATLC	Mid-Atlantic Coast	Black sea bass	Centropristis striata	Demersal		0.5600	0.9200	-0.0119	0.0354	-0.0045	0.0505	0.0051	0.0331
BUTTERGOMCHATT	Gulf of Maine / Cape Hatteras	Atlantic but- terfish	Peprilus tria- canthus	Demersal				-0.0154	-0.0430	-0.0087	-0.0149	-0.0578	-0.003
BWHITNEA	Northeast At- lantic	Blue whiting	Micromesistius poutassou	Demersal	*	0.3400	0.6700	-0.0141	0.0858	-0.0363	0.0768	0.0073	0.0351
CABEZNCAL	Northern Califor- nia	Cabezon	Scorpaenichthys marmoratus	Demersal		0.7700	1.0400	-0.0122	-0.0240	-0.0103	0.0283	-0.0162	0.0231
CABEZSCAL	Southern Califor- nia	Cabezon	$Scorpaenichthys \\ marmoratus$	Demersal		0.3500	0.7400	-0.0374	-0.0473	-0.0335	0.0178	-0.0340	0.0573
CAPEICE	Iceland Grounds	Capelin	Mallotus villo- sus	Pelagic	*	0.8500	0.4900	0.0341	0.0094	0.0099	-0.0089	0.0367	0.0081
CAPENOR	Barents Sea	Capelin	Mallotus villo- sus	Pelagic	*	1.0300	0.1700	0.0585	0.0301	0.0571	0.0089		
CHAKESA	South Africa	Shallow-water cape hake	Merluccius capensis	Demersal		3.0400	2.3000	-0.0068	0.0034	-0.0085	-0.0280		
CHILISPCOAST	Southern Pacific Coast	Chilipepper rockfish	Sebastes goodei	Demersal	*	0.8900	1.4300	-0.0090	-0.0062	-0.0072	0.0624	-0.0109	0.0500
CHTRACCH	Chilean EEZ and offshore	Chilean jack mackerel	Trachurus mur- phyi	Pelagic	*	1.1200	0.5200	0.1135	-0.0963	0.1703	-0.0395	0.1276	-0.067
CMACKPCOAST	Pacific Coast	Chub mackerel	Scomber japon- icus	Pelagic		1.0400	0.6800	-0.0071	-0.0568	-0.0088	-0.0786	-0.0332	-0.026
COD3NO	Southern Grand Banks	Atlantic cod	Gadus morhua	Demersal	*	0.0500	0.0200	-0.0446	-0.1081	-0.0161	0.0024	-0.0495	-0.038
COD3Pn4RS	Northern Gulf of St. Lawrence	Atlantic cod	Gadus morhua	Demersal	*	0.1200	0.0900	-0.1353	-0.0290	-0.0611	0.0545	-0.1010	0.017
COD3Ps	St. Pierre Bank	Atlantic cod	Gadus morhua	Demersal	*	0.2900	0.4900	-0.0269	0.0717	0.0145	0.1195	0.0037	0.085
COD4TVn	Southern Gulf of St. Lawrence	Atlantic cod	Gadus morhua	Demersal	*	0.3100	0.1700	0.0022	-0.0857	0.0392	-0.0286	-0.0253	-0.033
COD4VsW	Eastern Scotian Shelf	Atlantic cod	Gadus morhua	Demersal				0.0050	-0.2548	0.0379	-0.1399	-0.0148	-0.173
COD5Zjm	Georges Bank	Atlantic cod	Gadus morhua	Demersal	*	0.6100	0.3400	-0.0428	-0.0574	0.0036	-0.0032	-0.0202	-0.052
CODBA2224	Western Baltic	Atlantic cod	Gadus morhua	Demersal	*	0.3700	0.3600	-0.0362	-0.0009	-0.0365	-0.0014	-0.0706	0.053
CODBA2532	Eastern Baltic	Atlantic cod	Gadus morhua	Demersal	*	0.1300	0.1600	-0.0005	-0.1159	0.0221	-0.0546	-0.0362	-0.009
CODFAPL	Faroe Plateau	Atlantic cod	Gadus morhua	Demersal	*	0.3600	0.2600	-0.0094	-0.0397	-0.0076	-0.0325	-0.0248	-0.010
CODGB	Georges Bank	Atlantic cod	Gadus morhua	Demersal		0.2500	0.1200	-0.0753	-0.0776	-0.0326	-0.0490	-0.0632	-0.050
CODGOM	Gulf of Maine	Atlantic cod	Gadus morhua	Demersal	*	0.6500	1.4600	-0.0628	0.0218	0.0095	0.0458	-0.0540	0.069
CODICE	Iceland Grounds	Atlantic cod	Gadus morhua	Demersal	*	0.3700	0.4600	-0.0412	0.0340	-0.0432	0.0231	-0.0406	0.014
CODIS CODKAT	Irish Sea Kattegat and Sk- agerrak	Atlantic cod Atlantic cod	Gadus morhua Gadus morhua	Demersal Demersal	*	$0.5200 \\ 0.2600$	$0.1500 \\ 0.1900$	-0.0249 -0.0752	-0.0905 -0.0378	-0.0114 -0.0973	-0.0595 -0.0765	-0.0231 -0.0781	-0.073 -0.032

						Cont	inuous	Discon	tinuous	D	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio curren
CODNEAR	North-East Arc- tic	Atlantic cod	Gadus morhua	Demersal	*	0.7300	0.5600	-0.0129	0.0790	-0.0244	-0.0203	-0.0060	-0.0291
CODNS	North Sea	Atlantic cod	Gadus morhua	Demersal	*	0.5100	0.1900	-0.0348	-0.0752	-0.0352	-0.0762	-0.0281	-0.0442
CODVIa	West of Scotland	Atlantic cod	$Gadus\ morhua$	Demersal	*	0.3500	0.1200	-0.0464	-0.0970	-0.0541	-0.1028	-0.0632	-0.0910
COWCODSCAL	Southern Califor- nia	Cowcod	Sebastes levis	Demersal		0.0500	0.0900	-0.0313	-0.1297	-0.0257	0.0448	-0.0430	0.0420
CROCKPCOAST	Pacific Coast	Canary rock- fish	Sebastes pin- niger	Demersal		0.4000	0.8500	-0.0222	-0.0076	-0.0187	0.0663	-0.0251	0.0506
CTRACSA	South Africa South coast	Cape horse mackerel	Trachurus capensis	Pelagic	*	1.3000	1.4700	-0.0003	0.0127	-0.0016	0.0047	-0.0127	0.0091
DEEPCHAKESA	South Africa	Deep-water cape hake	Merluccius paradoxus	Demersal		0.8100	0.8300	-0.0369	0.0222	-0.0388	-0.0135	-0.0263	0.0013
DEEPFLATHEADSE	Southeast Aus- tralia	Deepwater flathead	Platycephalus conatus	Demersal		2.0700	1.5100	-0.0261	-0.0344	-0.0194	-0.0299	-0.0201	-0.0212
DKROCKPCOAST	Pacific Coast	Darkblotched rockfish	Sebastes crameri	Demersal		0.7100	0.7300	-0.0222	-0.0815	-0.0171	-0.0062	-0.0243	0.0021
DSOLEPCOAST	Pacific Coast	Dover sole	Microstomus pacificus	Demersal		1.0600	1.6100	-0.0112	0.0074	-0.0103	0.0357	-0.0108	0.0320
DUSROCKGA	Gulf of Alaska	Dusky rockfish	Sebastes vari- abilis	Demersal		0.8900	1.5400	0.0484	0.0400	0.0461	0.0383	0.0429	0.0364
ESOLEPCOAST	Pacific Coast	English sole	Parophrys vetulus	Demersal		1.2400	6.4200	-0.0139	0.1017	-0.0132	0.1333	-0.0130	0.1095
FLSOLEBSAI	Bering Sea and Aleutian Islands	Flathead sole	Hippoglossoides elassodon	Demersal		1.8300	1.8300	0.2020	-0.0112	0.2068	-0.0079	0.1779	-0.000
GAGGM	Gulf of Mexico	Gag	Mycteroperca microlepis	Demersal		0.4400	1.0000	-0.0481	0.0883	-0.0494	0.0825	-0.0518	0.0687
GAGSATLC	Southern Atlantic coast	Gag	Mycteroperca microlepis	Demersal		0.6000	0.9400	-0.0429	0.0347	-0.0455	0.0239	-0.0382	0.0349
GEMFISHNZ	New Zealand	common gem- fish	Rexea solandri	Demersal		4.7800	1.6400	-0.0108	-0.0830	-0.0124	-0.0936	-0.0072	-0.076
GEMFISHSE	Southeast Aus- tralia	common gem- fish	$Rexea\ solandri$	Demersal		0.3800	0.2500	-0.0721	-0.0929	-0.0529	-0.0471	-0.0678	-0.028
GHAL23KLMNO	Labrador Shelf - Grand Banks	Greenland hal- ibut	Reinhardtius hippoglossoides	Demersal	*	0.9900	0.3900	0.0512	-0.1551	0.0582	-0.1472	0.0707	-0.167
GHALBSAI	Bering Sea and Aleutian Islands	Greenland hal- ibut	Reinhardtius hippoglossoides	Demersal		5.1800	1.4800	0.0177	-0.1247	0.0319	-0.0835	0.0142	-0.073
GHALNEAR	North-East Arc-	Greenland hal- ibut	Reinhardtius hippoglossoides	Demersal	*	0.1400	0.3600	-0.0681	0.0467	-0.0558	0.0854	-0.0537	0.0564
GOPHERSPCOAST	Southern Pacific Coast	Gopher rock- fish	Sebastes carna- tus	Demersal		1.8700	2.3800	-0.0110	0.0669	-0.0194	0.0388	-0.0084	0.0186
GRAMBERSATLC	Southern Atlantic	Greater am- beriack	Seriola dumer- ili	Demersal		1.2400	1.1000	-0.0193	-0.0275	-0.0153	0.0067	-0.0214	-0.008
GTRIGGM	Gulf of Mexico	Gray trigger- fish	Balistes capriscus	Demersal		2.1300	1.1200	0.0033	-0.0501	0.0184	-0.0411	0.0141	-0.054
HAD4X5Y	Western Scotian Shelf, Bay of Fundy and Gulf of Maine	Haddock	Melanogrammus aeglefinus	Demersal	*	0.4100	0.8500	-0.0294	0.0524	-0.0223	0.0733	-0.0164	0.0684

						Conti	nuous	Discon	tinuous	D	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
HAD5Y	Gulf of Maine	Haddock	Melanogrammus aeglefinus	Demersal		0.1500	0.9900	-0.2069	0.1973	-0.2653	0.1522	-0.1924	0.1251
${ m HAD5Zejm}$	Georges Bank	Haddock	Melanogrammus aeglefinus	Demersal	*	0.2500	1.0000	-0.0168	0.1031	0.0029	0.1670	-0.0293	0.1599
HADFAPL	Faroe Plateau	Haddock	Melanogrammus aeglefinus	Demersal	*	0.3100	0.8500	-0.0054	0.0431	0.0068	0.1035	-0.0184	0.0685
HADGB	Georges Bank	Haddock	Melanogrammus aeglefinus	Demersal		0.1000	1.9900	-0.0275	0.1379	-0.0234	0.1929	-0.0286	0.1966
HADICE	Iceland Grounds	Haddock	Melanogrammus aeglefinus	Demersal	*	0.3500	0.9800	-0.0540	0.0587	-0.0387	0.0674	-0.0467	0.0589
HADNEAR	North-East Arc- tic	Haddock	Melanogrammus aeglefinus	Demersal	*	0.6100	1.1000	-0.0078	0.0717	-0.0135	0.0311	0.0061	0.0421
HADNS-IIIa	IIIa and North Sea	Haddock	Melanogrammus aeglefinus	Demersal	*	0.8000	0.6200	-0.0453	0.0537	-0.0461	0.0513	-0.0510	0.0368
HADVIa	West of Scotland	Haddock	Melanogrammus aeglefinus	Demersal	*	0.8200	0.5800	-0.0433	0.0253	-0.0453	0.0239	-0.0452	0.0262
HAKENRTN	IIIa-IV-VI-VII- VIIIabd	Hake	Merluccius merluccius	Demersal	*	0.7100	1.0400	-0.0860	0.0113	-0.0589	0.0268	-0.0679	0.0292
HAKESOTH	VIIIc-IXa	Hake	Merluccius merluccius	Demersal				-0.1155	-0.0256	-0.1067	-0.0227	-0.0949	-0.0250
HERR2532	Eastern Baltic	Herring	Clupea haren- gus	Pelagic	*	0.6900	0.6900	-0.0499	-0.0275	-0.0393	-0.0140	-0.0372	0.0032
HERR30	Bothnian Sea	Herring	Clupea haren- gus	Pelagic	*	1.4700	1.1900	0.0589	0.0028	0.0469	-0.0144	0.0540	-0.0142
HERR31	Bothnian Bay	Herring	Clupea haren- gus	Pelagic	*	0.6500	0.2900	-0.0497	-0.0629	-0.0010	-0.0362	-0.0097	-0.0615
HERR4RFA	NAFO 4R	Herring	Clupea haren- gus	Pelagic				0.0080	-0.0273	0.0064	-0.0308	-0.0107	-0.0263
HERR4RSP	NAFO 4R	Herring	Clupea haren- gus	Pelagic				-0.0036	-0.0566	0.0153	0.0162	0.0039	-0.0101
HERR4VWX	Scotian Shelf and Bay of Fundy	Herring	Clupea haren- gus	Pelagic				-0.0095	-0.1375	0.0045	-0.0965	-0.0139	-0.1290
HERRCC	Central Coast	Pacific herring	Clupea pallasii	Pelagic	*	1.2500	0.3000	0.0220	-0.0456	0.0197	-0.0598	0.0125	-0.0590
HERRNIRS	Irish Sea	Herring	Clupea haren- gus	Pelagic	*	0.2400	0.7200	0.0102	-0.0734	0.0229	-0.0242	0.0292	0.0252
HERRNS	North Sea	Herring	Clupea haren-	Pelagic	*	0.6900	0.6500	-0.0182	0.1215	-0.0234	0.0999	-0.0275	0.0384
HERRNWATLC	Northwestern At- lantic Coast	Herring	gus Clupea haren-	Pelagic				-0.0274	0.1555	-0.0683	0.0386	-0.0282	0.0387
HERRPRD	Prince Rupert District	Pacific herring	gus Clupea pallasii	Pelagic	*	0.3900	0.1600	0.0037	-0.0118	0.0025	-0.0195	0.0077	-0.0349
HERRPWS	Prince William Sound	Pacific herring	$Clupea\ pallasii$	Pelagic				-0.0234	-0.1256	0.0597	-0.0799	0.0410	-0.1524
HERRQCI	Queen Charlotte Islands	Pacific herring	$Clupea\ pallasii$	Pelagic	*	0.3600	0.2000	0.0358	-0.1062	0.0457	-0.0468	0.0183	-0.0361
HERRRIGA	Gulf of Riga East	Herring	Clupea haren-	Pelagic	*	1.3700	1.2100	0.0587	-0.0060	0.0390	-0.0212	0.0536	-0.0108
HERRSITKA	of Gotland Sitka	Pacific herring	gus Clupea pallasii	Pelagic				0.0401	0.0495	0.0672	0.0677	0.0712	0.0273

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Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
HERRSOG	Straight of Geor-	Pacific herring	Clupea pallasii	Pelagic	*	1.1700	0.9100	0.0258	0.0165	0.0230	-0.0008	0.0162	-0.0154
HERRVIa	West of Scotland	Herring	Clupea haren- gus	Pelagic	*	0.3700	0.1800	-0.0376	0.0009	-0.0377	0.0003	-0.0222	-0.0251
HERRWCVANI	West Coast of Vancouver Island	Pacific herring	Clupea pallasii	Pelagic	*	0.6900	0.0300	0.0266	-0.1686	0.0287	-0.1562	0.0140	-0.1783
HOKIENZ	Eastern New Zealand	Hoki	$Macruronus \ nova ez el andia e$	Demersal	*	1.6400	1.1100	-0.0009	-0.0689	-0.0003	-0.0680	-0.0002	-0.0529
HOKIWNZ	Western New Zealand	Hoki	Macruronus $novaezelandiae$	Demersal	*	1.0600	0.5100	-0.0089	-0.1100	-0.0102	-0.1117	-0.0310	-0.0812
KELPGREENLINGORE	COASSIGON Coast	Kelp greenling	$Hexagrammos \ decagrammus$	Demersal		2.9400	1.2800	0.0279	-0.0500	0.0132	-0.0609	0.0256	-0.0643
KINGKLIPSA	South Africa	Anchovy	Engraulis encrasicolus	Pelagic		1.1000	1.2000	-0.0120	-0.0060	-0.0113	0.0019	-0.0124	0.0057
LINGCODNPCOAST	Northern Pacific Coast	Lingcod	Ophiodon elon- gatus	Demersal				-0.0587	0.0605	-0.0425	0.1575	-0.0589	0.1395
LINGCODSPCOAST	Southern Pacific Coast	Lingcod	$Ophiodon\ elon-gatus$	Demersal				-0.0624	-0.0156	-0.0511	0.0525	-0.0591	0.0404
LNOSESKAPCOAST LSTHORNHPCOAST	Pacific Coast Pacific Coast	Longnose skate Longspine thornyhead	Raja rhina Sebastolobus al- tivelis	Demersal Demersal	*	1.6400 3.3200	$1.5600 \\ 2.6500$	-0.0044 -0.0040	-0.0083 -0.0251	-0.0045 -0.0019	-0.0100 -0.0174	-0.0043 -0.0041	-0.0059 -0.0174
MACKGOMCHATT	Gulf of Maine / Cape Hatteras	Mackerel	Scomber scom- brus	Pelagic		1.9700	3.6100	0.0276	0.0380	0.0336	0.0668	0.0495	0.0504
MACKNEICES	IIa-IIIabd-IV- Vb-VI-VII- VIIIabcde-XII- XIV-Ixa	Mackerel	Scomber scom- brus	Pelagic	*	1.1600	0.9800	-0.0217	-0.0049	-0.0286	-0.0158	-0.0241	-0.0088
MENATGM	Gulf of Mexico	Gulf menhaden	Brevoortia pa- tronus	Pelagic	*	1.2600	1.0800	0.0445	0.0224	0.0430	0.0160	0.0449	-0.0081
MORWONGSE	Southeast Aus- tralia	Hawaiian mor- wong	Nemadactylus macropterus	Demersal		0.6700	0.3100	-0.0102	-0.1173	-0.0078	-0.0644	-0.0146	-0.0503
MUTSNAPSATLCGM	Southern Atlantic coast and Gulf of Mexico	Mutton snap- per	Lutjanus analis	Demersal		0.5200	1.1300	-0.0669	0.0568	-0.0523	0.0635	-0.0462	0.0555
NROCKBSAI	Bering Sea and Aleutian Islands	Northern rock- fish	Sebastes polyspinis	Demersal		1.1400	1.4100	0.0386	0.0131	0.0388	0.0132	0.0375	0.0127
NROCKGA	Gulf of Alaska	Northern rock- fish	Sebastes polyspinis	Demersal		2.1900	1.5000	-0.0124	0.0107	-0.0232	-0.0220	-0.0197	-0.0239
NRSOLEEBSAI	Eastern Bering Sea and Aleutian Islands	Northern rock sole	$Lepidopsetta \ polyxystra$	Demersal		1.7400	3.0200	0.1331	0.0546	0.1081	0.0296	0.1151	0.0365
NZLINGESE	Southeast Aus- tralia	New Zealand ling	Genypterus bla- codes	Demersal		1.4000	0.5900	-0.0165	-0.0526	-0.0150	-0.0494	-0.0173	-0.0576
NZLINGLIN3-4	New Zealand Ar- eas LIN 3 and 4	New Zealand ling	Genypterus bla- codes	Demersal		4.1400	3.0700	-0.0020	-0.0338	0.0074	-0.0207	-0.0082	-0.0200
NZLINGLIN5-6	New Zealand Ar- eas LIN 5 and 6	New Zealand ling	Genypterus bla- codes	Demersal		5.1300	3.9600	-0.0044	-0.0190	-0.0014	-0.0149	-0.0021	-0.0173
NZLINGLIN6b	New Zealand Ar- eas LIN 6b	New Zealand ling	Genypterus bla- codes	Demersal		3.7800	2.1900	-0.0050	-0.0358	0.0014	-0.0324	-0.0074	-0.0390

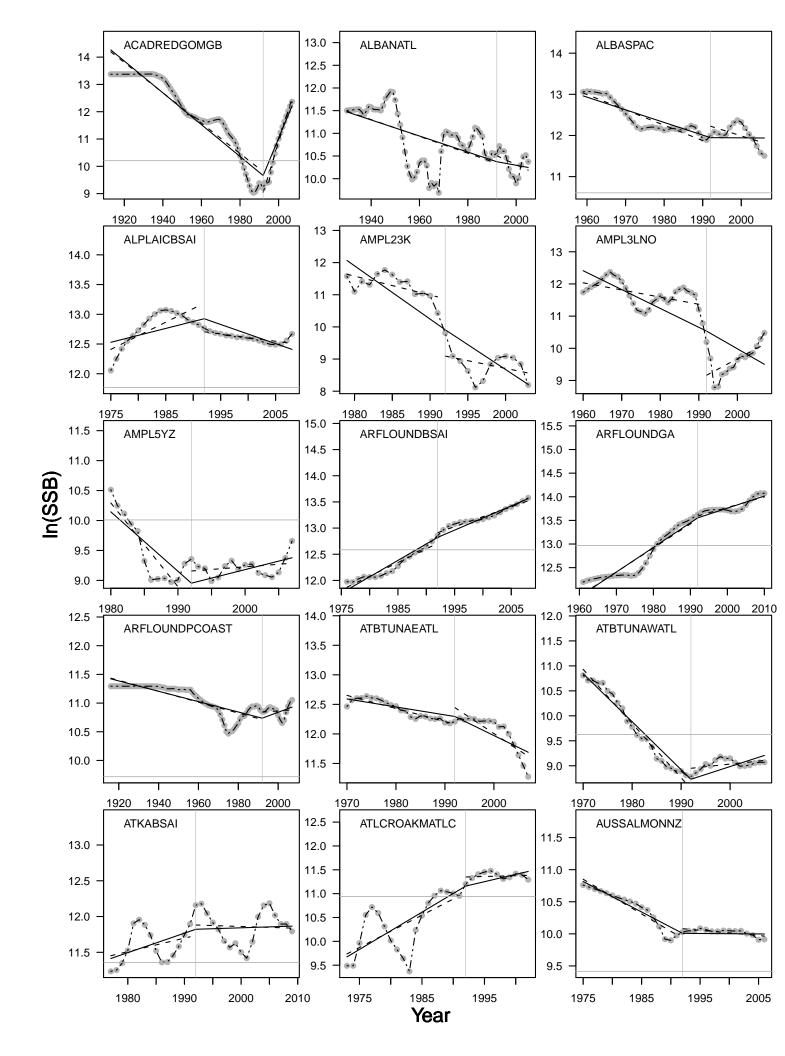
						Cont	nuous	Discon	tinuous	Di	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
NZLINGLIN72	New Zealand Ar- eas LIN 72	New Zealand ling	Genypterus bla- codes	Demersal		3.0500	2.4900	-0.0231	-0.0113	-0.0156	-0.0008	-0.0220	-0.0136
NZLINGLIN7WC	New Zealand Areas LIN 7WC- WCSI	New Zealand ling	Genypterus bla- codes	Demersal		2.0600	2.2100	-0.0184	-0.0104	-0.0120	-0.0024	-0.0180	0.0045
NZLINGWSE	Western half of Southeast Australia	New Zealand ling	$Genypterus\ bla-codes$	Demersal		1.6600	1.0800	-0.0041	-0.0172	-0.0043	-0.0176	-0.0100	-0.0283
NZSNAPNZ8	New Zealand Area 8 (Auck- land and Central West)	New Zealand snapper	Chrysophrys auratus	Demersal		0.5100	0.3500	-0.0454	-0.0335	-0.0443	-0.0154	-0.0368	-0.0285
OROUGHYNZMEC	New Zealand Mid East Coast	Orange roughy	$Hoplostethus \ atlanticus$	Demersal		1.3400	1.2000	-0.1496	-0.0199	-0.1119	0.0029	-0.1274	-0.0088
OROUGHYSE	Southeast Australia	Orange roughy	$Hoplostethus \ atlanticus$	Demersal		2.3300	0.5200	-0.1073	-0.1450	-0.0096	-0.0797	-0.0587	-0.1002
PCODBSAI	Bering Sea and Aleutian Islands	Pacific cod	Gadus macro- cephalus	Demersal		1.3200	1.0000	0.0338	-0.0298	0.0767	-0.0003	0.0422	-0.0174
PCODGA	Gulf of Alaska	Pacific cod	Gadus macro- cephalus	Demersal		1.2500	0.9100	0.0684	-0.0399	0.0960	-0.0209	0.0622	-0.0198
PERCHEBSAI	Eastern Bering Sea and Aleutian Islands	Pacific ocean perch	Sebastes alutus	Demersal		0.7400	1.2300	0.1033	0.0404	0.0822	0.0275	0.0816	0.0304
PHAKEPCOAST	Pacific Coast	Pacific hake	Merluccius pro- ductus	Demersal		4.3800	1.6100	-0.0018	-0.0904	0.0249	-0.0336	0.0020	-0.0624
PLAIC7d	Eastern English Channel	European Plaice	Pleuronectes platessa	Demersal				0.0415	-0.0674	0.0809	-0.0457	0.0276	-0.0376
PLAICCELT	Celtic Sea	European Plaice	Pleuronectes platessa	Demersal	*	0.9800	0.6500	0.0517	-0.0960	0.0843	-0.0674	0.0660	-0.0592
PLAICECHW	Western English Channel	European Plaice	Pleuronectes platessa	Demersal	*	0.7200	0.5100	0.0403	-0.0536	0.0785	-0.0153	0.0505	-0.0392
PLAICIIIa	Kattegat and Sk- agerrak	European Plaice	Pleuronectes platessa	Demersal				-0.0115	-0.0443	-0.0265	-0.0557	-0.0137	-0.0320
PLAICIS	Irish Sea	European Plaice	Pleuronectes platessa	Demersal	*	0.5700	1.0700	-0.0266	0.0331	-0.0198	0.0545	-0.0256	0.0482
PLAICNS	North Sea	European Plaice	Pleuronectes platessa	Demersal				-0.0033	-0.0366	0.0021	-0.0096	-0.0009	-0.0250
POLL4VWX5Zc	Scotian Shelf, Bay of Fundy and Georges Bank	Pollock	Pollachius virens	Demersal	*	0.6200	0.5600	-0.1202	-0.0183	-0.0543	0.0064	-0.0561	0.0004
POLLFAPL	Faroe Plateau	Pollock	Pollachius virens	Demersal	*	0.5200	0.9900	-0.0148	0.0068	-0.0056	0.0423	-0.0119	0.0355
POLLNEAR	North-East Arc- tic	Pollock	Pollachius virens	Demersal	*	0.7200	1.7000	-0.0447	0.1547	-0.0546	0.1137	-0.0275	0.1339
POLLNS-VI-IIIa	IIIa, VI and North Sea	Pollock	Pollachius virens	Demersal	*	0.2700	0.5700	-0.0517	0.0700	-0.0483	0.0784	-0.0313	0.0781
POPERCHGA	Gulf of Alaska	Pacific ocean perch	Sebastes alutus	Demersal		0.3000	1.1600	-0.0686	0.1400	-0.0901	0.0747	-0.0698	0.0853

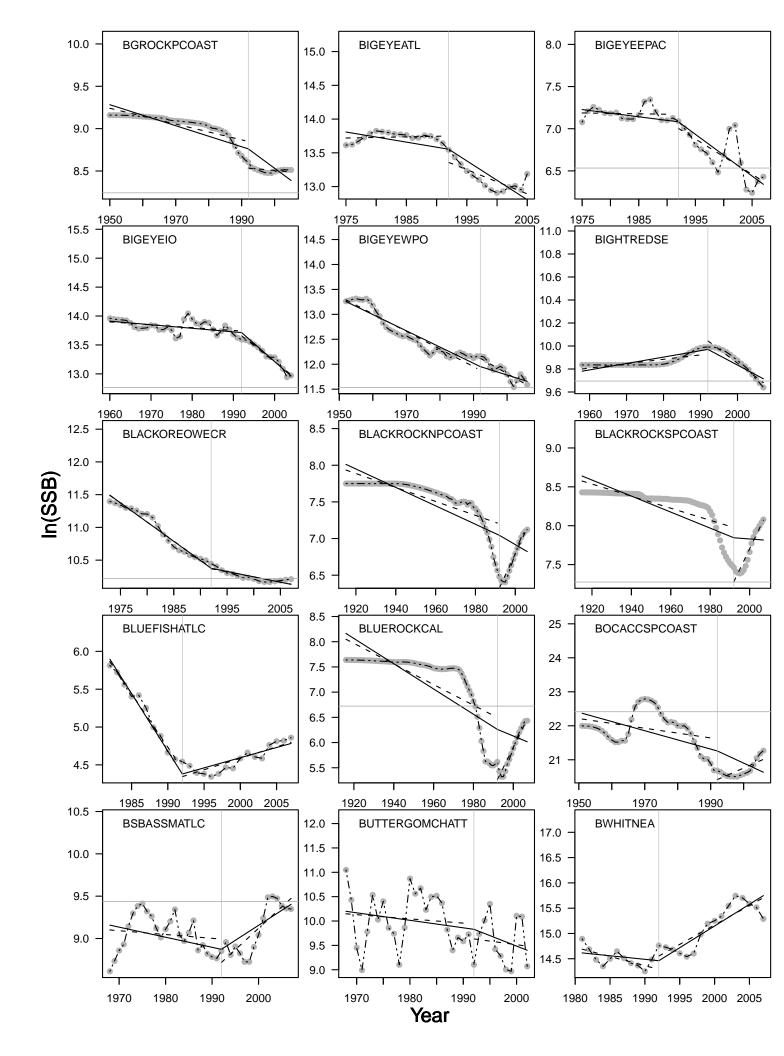
						Conti	nuous	Discon	tinuous	Di	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
POPERCHPCOAST	Pacific Coast	Pacific ocean perch	Sebastes alutus	Demersal		0.5300	0.6900	-0.0429	0.0053	-0.0399	0.0194	-0.0398	0.0174
PSOLENPCOAST	Northern Pacific Coast	Petrale sole	Eopsetta $jor dani$	Demersal		0.4800	1.8700	-0.0293	0.0324	-0.0268	0.1124	-0.0300	0.1050
PSOLESPCOAST	Southern Pacific Coast	Petrale sole	$Eopsetta jor- \\ dani$	Demersal		0.2700	1.1300	-0.0220	-0.0063	-0.0206	0.0872	-0.0226	0.1089
PTOOTHFISHPEI	South Africa Subantarctic Prince Edward Islands	Patagonian toothfish	Dissostichus eleginoides	Demersal		4.8800	1.8100	0.0033	-0.0656	-0.0004	-0.0775	-0.0005	-0.0619
REXSOLEGA	Gulf of Alaska	Rex sole	Glyptocephalus zachirus	Demersal		2.2200	2.6000	0.0142	0.0005	0.0147	0.0006	0.0235	0.0103
REYEROCKBSAI	Bering Sea and Aleutian Islands	Rougheye rockfish	Sebastes aleu- tianus	Demersal		1.1100	1.1500	0.0088	0.0020	0.0140	0.0052	0.0000	0.0021
REYEROCKGA	Gulf of Alaska	Rougheye rockfish	Sebastes aleu- tianus	Demersal		1.4700	1.6400	-0.0209	0.0068	-0.0199	0.0075	-0.0207	0.0071
RPORGYSATLC	Southern Atlantic coast	Common seabream	Pagrus pagrus	Demersal		0.3200	0.6100	-0.1179	0.0182	-0.0982	0.0594	-0.1020	0.0550
RSNAPEGM	Eastern Gulf of Mexico	Red snapper	Lutjanus campechanus	Demersal				-0.1176	0.0441	-0.1101	0.0922	-0.0999	0.0612
RSNAPSATLC	Southern Atlantic coast	Red snapper	Lutjanus campechanus	Demersal		0.0200	0.0200	-0.1215	0.0697	-0.1256	0.0321	-0.0947	0.0098
SABLEFEBSAIGA	Eastern Bering Sea / Aleutian Islands / Gulf of Alaska	Sablefish	$An oplopoma \ fimbria$	Demersal		1.2800	1.0500	-0.0150	-0.0163	-0.0126	-0.0085	-0.0051	-0.0123
SABLEFPCOAST	Pacific Coast	Sablefish	Anoplopoma fimbria	Demersal	*	0.9300	0.8400	-0.0068	-0.0542	-0.0055	-0.0150	-0.0089	-0.0099
SARDNPAC	North Pacific	Sardine	Sardinops sagax	Pelagic	*	0.3100	1.7300	0.4959	0.0867	0.4736	0.0787	0.4155	0.0870
SARDPCOAST	Pacific Coast	Sardine	Sardinops $sagax$	Pelagic	*		1.3600	0.5457	0.0878	0.5053	0.0715	0.4600	0.0714
SARDPVIIIc-IXa	VIIIc-IXa	European pilchard	Sardina pilchardus	Pelagic				-0.0033	-0.0094	0.0041	-0.0044	0.0233	0.0071
SBELLYROCKPCOAST	Pacific Coast	Shortbelly rockfish	Sebastes jor- dani	Demersal				-0.0181	-0.0222	-0.0249	-0.0774	-0.0245	-0.0589
SBWHITACIR	New Zealand - Campbell Island Rise	Southern blue whiting	$Micromesistius \ australis$	Demersal		0.5600	1.1500	-0.0131	0.0447	-0.0508	0.0202	-0.0646	0.0514
SFLOUNMATLC	Mid-Atlantic Coast	Summer floun- der	Paralichthys dentatus	Demersal		0.1800	0.7200	-0.0720	0.1143	-0.1371	0.0928	-0.0944	0.0943
SILVERFISHSE	Southeast Aus- tralia	Silverfish	Seriolella punc- tata	Demersal		1.1700	1.0300	-0.0384	-0.0214	-0.0285	-0.0139	-0.0442	-0.0093
SKJCWPAC	Central Western Pacific	Skipjack tuna	Katsuwonus pelamis	Pelagic		4.0000	4.3800	0.0184	-0.0036	0.0269	0.0099	0.0098	0.0065
SMOOTHOREOCR	Chatham Rise	Smooth oreo	Pseudocyttus maculatus	Demersal		2.9900	2.2500	-0.0243	-0.0226	-0.0213	-0.0206	-0.0222	-0.0203
SMOOTHOREOWECR	West end of Chatham Rise	Smooth oreo	maculatus Pseudocyttus maculatus	Demersal		1.5900	1.2500	-0.0500	-0.0404	-0.0401	-0.0217	-0.0481	-0.0203

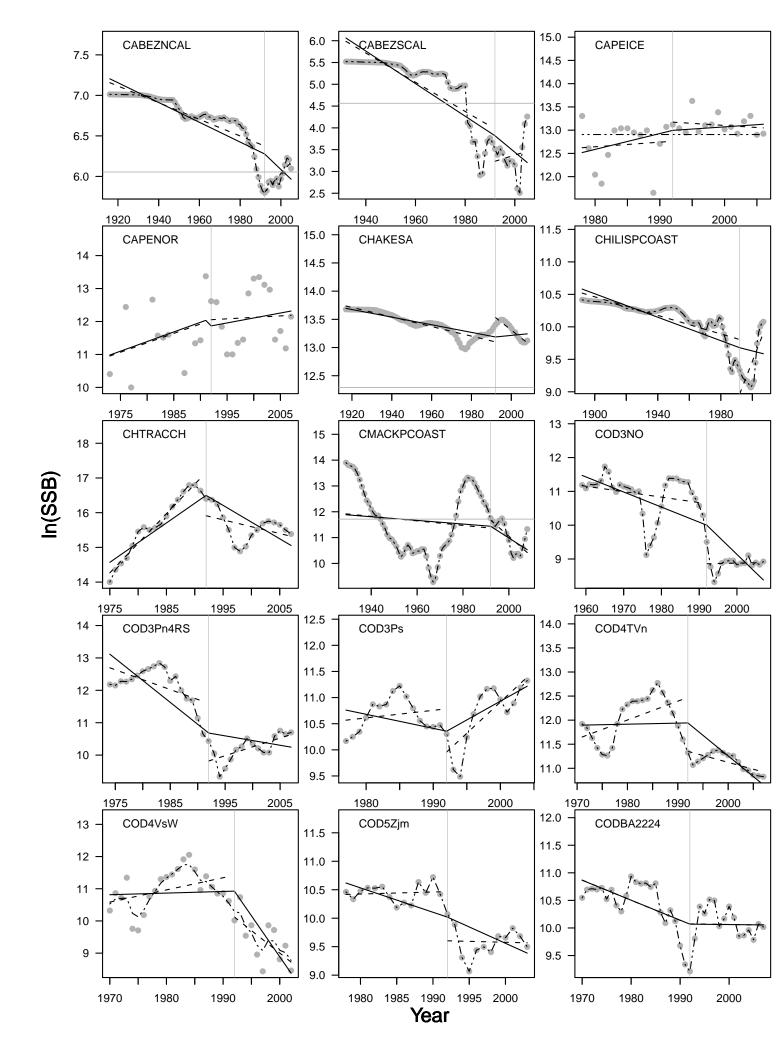
						Conti	nuous	Discon	tinuous	Di	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
SNOWGROUPSATLC	Southern Atlantic coast	Snowy grouper	Epinephelus niveatus	Demersal		0.4100	0.1900	-0.0824	-0.0755	-0.0779	-0.0437	-0.0707	-0.0589
SOLECS	Celtic Sea	common Euro- pean sole	Solea vulgaris	Demersal	*	0.8600	0.9000	-0.0555	0.0275	-0.0538	0.0304	-0.0480	0.0052
SOLEIS	Irish Sea	common Euro- pean sole	$Solea\ vulgaris$	Demersal	*	0.6700	0.3600	-0.0193	-0.0333	-0.0125	-0.0201	-0.0313	-0.0399
SOLENS	North Sea	common Euro- pean sole	$Solea\ vulgaris$	Demersal				-0.0126	-0.0198	-0.0199	-0.0558	0.0058	-0.0674
SOLEVIId	Eastern English Channel	common Euro- pean sole	$Solea\ vulgaris$	Demersal				0.0207	-0.0034	0.0057	-0.0090	0.0223	0.0025
SOLEVIIe	Western English Channel	common Euro- pean sole	$Solea\ vulgaris$	Demersal	*	0.6100	0.5100	-0.0005	-0.0292	0.0082	-0.0108	-0.0034	-0.0149
SOUTHHAKECR	Chatham Rise	Southern hake	Merluccius aus- tralis	Demersal		5.1800	1.7700	0.0102	-0.0690	0.0139	-0.0648	0.0044	-0.0768
SOUTHHAKESA	Sub-Antarctic	Southern hake	Merluccius aus- tralis	Demersal		5.4700	2.9100	0.0130	-0.0495	0.0267	-0.0358	0.0103	-0.0421
SPANMACKSATLC	Southern Atlantic coast	Spanish mack- erel	$Scomberomorus \\ maculatus$	Pelagic		0.2500	0.3800	-0.0388	0.0566	-0.0430	0.0300	-0.0373	0.0282
SPRAT22-32	Baltic Areas 22- 32	Sprat	Sprattus sprat- tus	Pelagic	*	1.1500	1.1300	0.0290	0.0440	-0.0229	-0.0144	0.0140	0.0097
SSTHORNHPCOAST	Pacific Coast	Shortspine thornyhead	Sebastolobus alascanus	Demersal		1.7300	1.5700	-0.0030	-0.0286	-0.0025	-0.0064	-0.0041	-0.0074
STFLOUNNPCOAST	Northern Pacific Coast	Starry flounder	Platichthys stellatus	Demersal		4.1600	1.1000	0.0498	-0.0333	0.0279	-0.0815	0.0448	-0.1024
STFLOUNSPCOAST	Southern Pacific Coast	Starry flounder	Platichthys stellatus	Demersal		1.7900	1.5500	0.0190	-0.0069	0.0334	0.0246	0.0055	-0.0114
STRIPEDBASSGOMCHA	TTGulf of Maine / Cape Hatteras	Striped bass	$egin{array}{ll} Morone & sax- \ atilis \end{array}$	Demersal				0.2426	0.0892	0.1807	0.0660	0.2060	0.0651
SWHITSE	Southeast Australia	School whiting	Sillago $flindersi$	Demersal		0.9900	0.6600	-0.0138	-0.0461	-0.0136	-0.0446	-0.0162	-0.0265
SWORDNATL TIGERFLATSE	Northern Atlantic Southeast Aus- tralia	Swordfish Tiger flathead	Xiphias gladius Neoplatycephalus richardsoni	Pelagic Demersal	*	$0.9100 \\ 2.2400$	1.0300 1.9900	-0.0685 -0.0138	-0.0018 0.1060	-0.0622 -0.0180	0.0036 -0.0038	-0.0479 -0.0094	0.0115 -0.0086
TILESATLC	Southern Atlantic coast	Tilefish	Lopholatilus chamaeleonti- ceps	Demersal		1.0800	0.9000	-0.0401	-0.0226	-0.0367	0.0017	-0.0349	-0.0075
TREVALLYTRE7	New Zealand Ar- eas TRE 7	Trevally	Pseudocaranx dentex	Demersal		1.8500	1.4400	-0.0211	-0.0096	-0.0223	-0.0230	-0.0144	-0.0193
VSNAPGM	Gulf of Mexico	Vermilion snapper	Rhomboplites aurorubens	Demersal				-0.0192	-0.0432	0.0152	-0.0224	-0.0077	-0.0363
VSNAPSATLC	Southern Atlantic coast	Vermilion snapper	Rhomboplites aurorubens	Demersal		1.1200	0.8600	-0.0242	-0.0199	-0.0243	-0.0209	-0.0239	-0.0197
WEAKFISHATLC	Atlantic Coast	Weakfish	Cynoscion regalis	Demersal		7.0700	0.7900	-0.0379	-0.1393	-0.0597	-0.1488	-0.0611	-0.1373
WHAKEGBGOM	Gulf of Maine / Georges Bank	White hake	Urophycis tenuis	Demersal		0.5600	0.3500	0.0018	-0.0776	0.0189	-0.0266	0.0131	-0.0306
WHITNS-VIId-IIIa	IIIa, VIId and North Sea	Whiting	Merlangius merlangus	Demersal	*	0.8900	0.3300	-0.0428	-0.0543	-0.0464	-0.0563	-0.0557	-0.0718

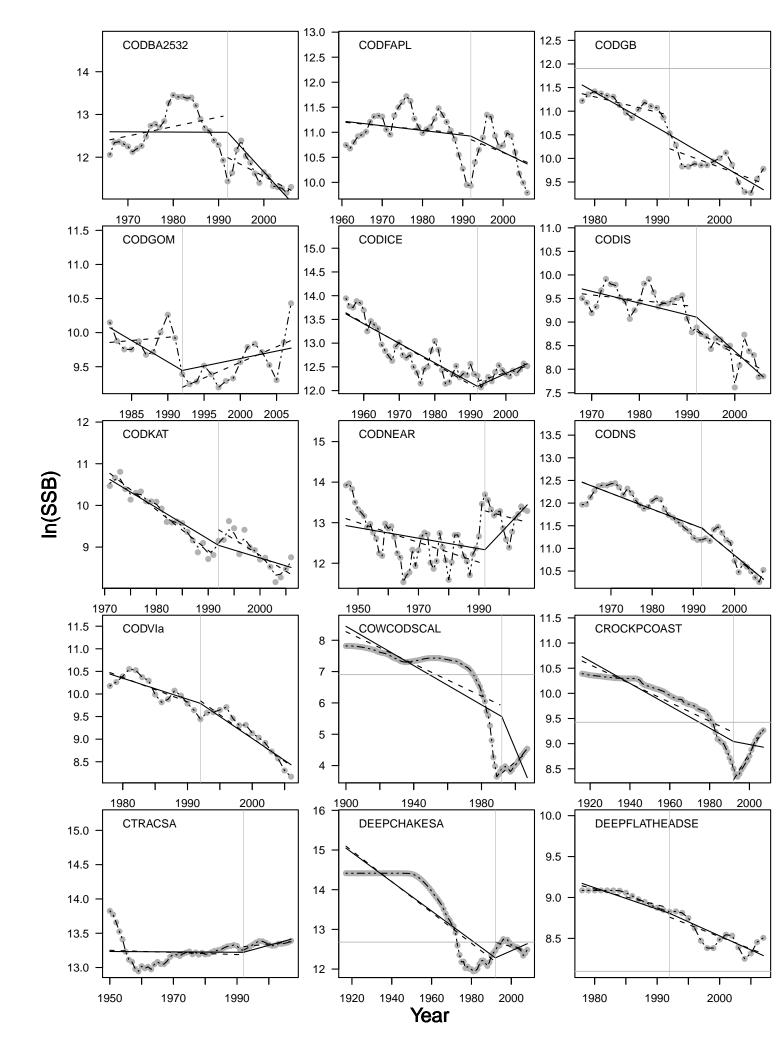
						Cont	inuous	Discon	tinuous	D	rift		
Stock ID	Area	Common name	Scientific name	Category	type	pre-1992	post- 1992	pre-1992	post- 1992	pre-1992	post1992	ratio 1992	ratio current
WHITVIIek	Celtic Sea	Whiting	Merlangius merlangus	Demersal	*	0.7900	0.4400	0.1253	-0.0294	0.0679	-0.0509	0.0713	-0.0221
WINFLOUN5Z	Georges Bank	Winter floun- der	Pseudopleuronect americanus	esDemersal		0.3300	0.2800	-0.0969	0.0320	-0.1025	0.0299	-0.1103	-0.0116
WINFLOUNSNEMATL	Southern New England /Mid Atlantic	Winter floun- der	Pseudopleuronect americanus	es Demersal		0.0900	0.0900	-0.1354	-0.0099	-0.1311	-0.0081	-0.1305	-0.0029
WITFLOUN5Y	Gulf of Maine	Witch flounder	Glyptocephalus cynoglossus	Demersal		0.6200	0.3000	-0.0984	-0.0125	-0.0985	-0.0125	-0.0716	-0.0480
WPOLLAI	Aleutian Islands	Walleye pol- lock	Theragra chalcogramma	Demersal		2.2300	0.8600	-0.0554	-0.0938	0.0239	-0.0466	-0.0171	-0.0596
WPOLLEBS	Eastern Bering Sea	Walleye pol- lock	Theragra chalcogramma	Demersal		1.1100	0.6600	0.0627	-0.0330	0.0636	-0.0307	0.0491	-0.0324
WPOLLGA	Gulf of Alaska	Walleye pol- lock	Theragra chalcogramma	Demersal		1.4500	0.7700	-0.0414	-0.0662	-0.0308	-0.0589	-0.0422	-0.0393
WROCKPCOAST	Pacific Coast	Widow rock- fish	Sebastes en- tomelas	Demersal	*	0.9600	0.9100	-0.0248	-0.0416	-0.0202	-0.0198	-0.0217	-0.0144
YELLGB	Georges Bank	Yellowtail flounder	Limanda fer- ruginea	Demersal		0.1000	0.2200	-0.0742	0.0720	-0.0947	0.0462	-0.0664	0.0504
YELLSNEMATL	Southern New England /Mid Atlantic	Yellowtail flounder	Limanda fer- ruginea	Demersal		0.0600	0.1300	-0.1046	-0.0357	-0.0497	0.0334	-0.1027	0.0476
YEYEROCKPCOAST	Pacific Coast	Yelloweye rockfish	Sebastes ruber- rimus	Demersal	*	0.6600	0.3800	-0.0180	-0.1088	-0.0138	-0.0268	-0.0210	-0.0297
YFINATL	Atlantic	Yellowfin tuna	Thunnus al- bacares	Pelagic		1.7900	1.0700	-0.0065	-0.0358	-0.0077	-0.0382	-0.0178	-0.0370
YFINCWPAC	Central Western Pacific	Yellowfin tuna	Thunnus al- bacares	Pelagic		2.3800	1.2200	-0.0125	-0.0549	-0.0136	-0.0628	-0.0094	-0.0513
YFINEPAC	Northeast Pacific	Yellowfin tuna	Thunnus al- bacares	Pelagic				0.0389	-0.0084	0.0307	-0.0166	-0.0067	-0.0204
YSOLEBSAI	Bering Sea and Aleutian Islands	Yellowfin sole	Limanda as- pera	Demersal		2.5000	1.9400	0.0990	-0.0365	0.1065	-0.0180	0.0789	-0.0160
YTROCKNPCOAST	Northern Pacific Coast	Yellowtail rockfish	Sebastes flavidus	Demersal		1.4500	1.3600	-0.0224	0.0053	-0.0229	0.0040	-0.0176	-0.0049

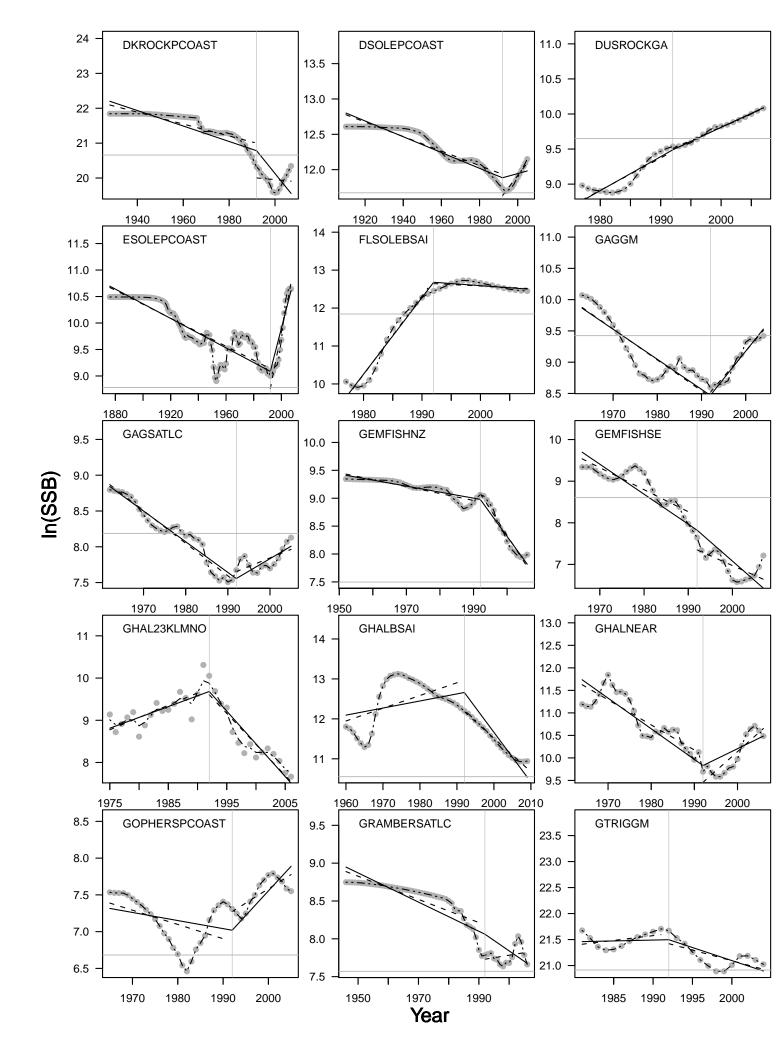
Table 1

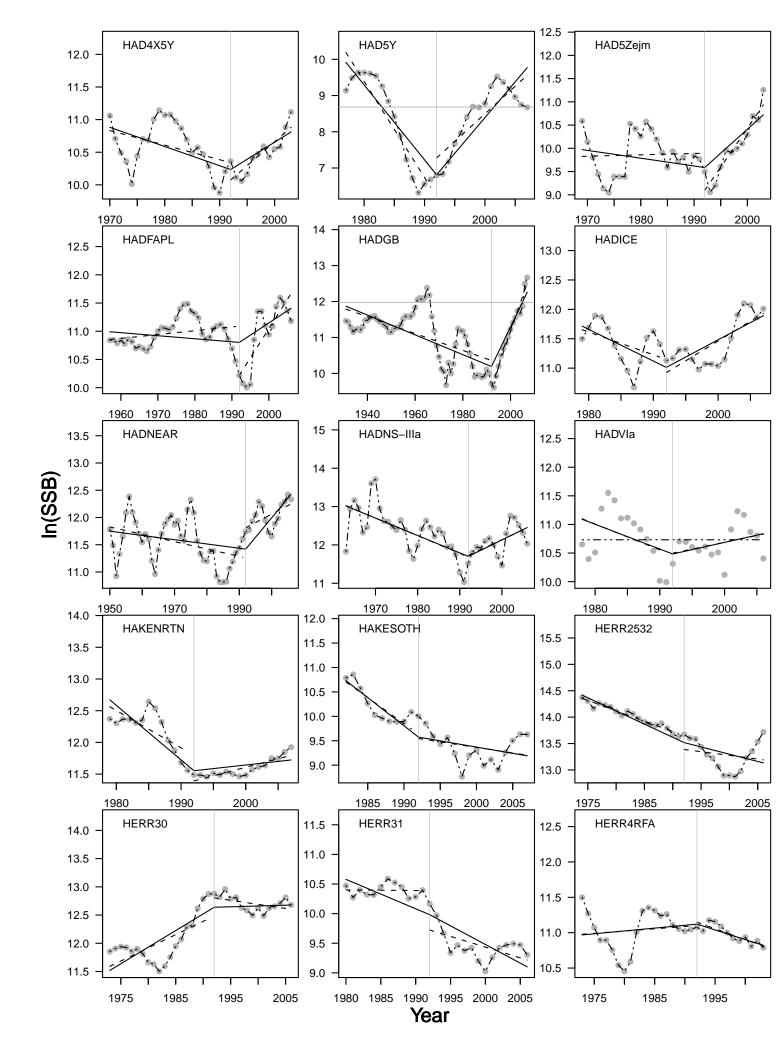


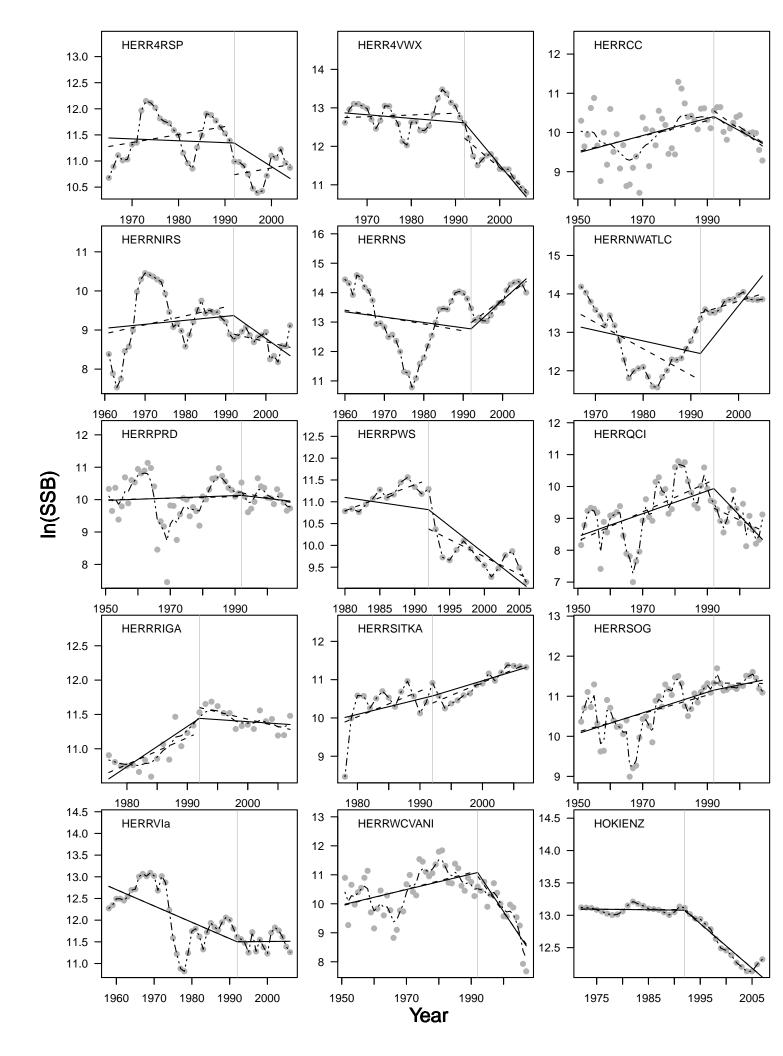


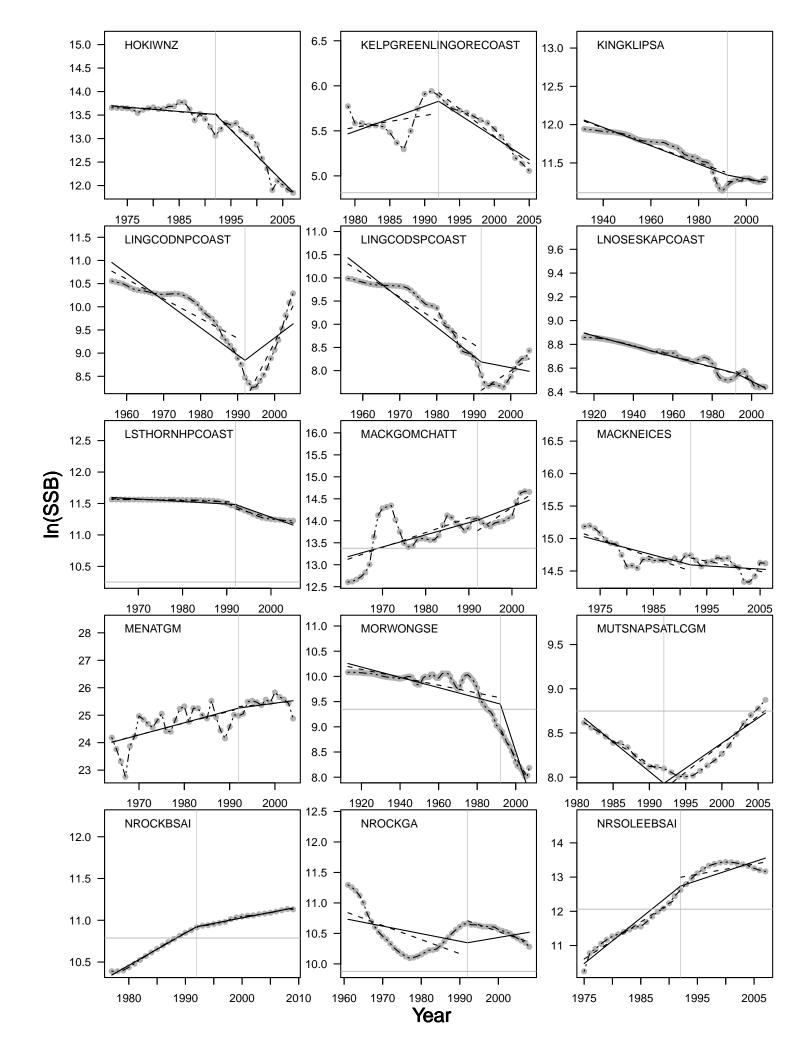


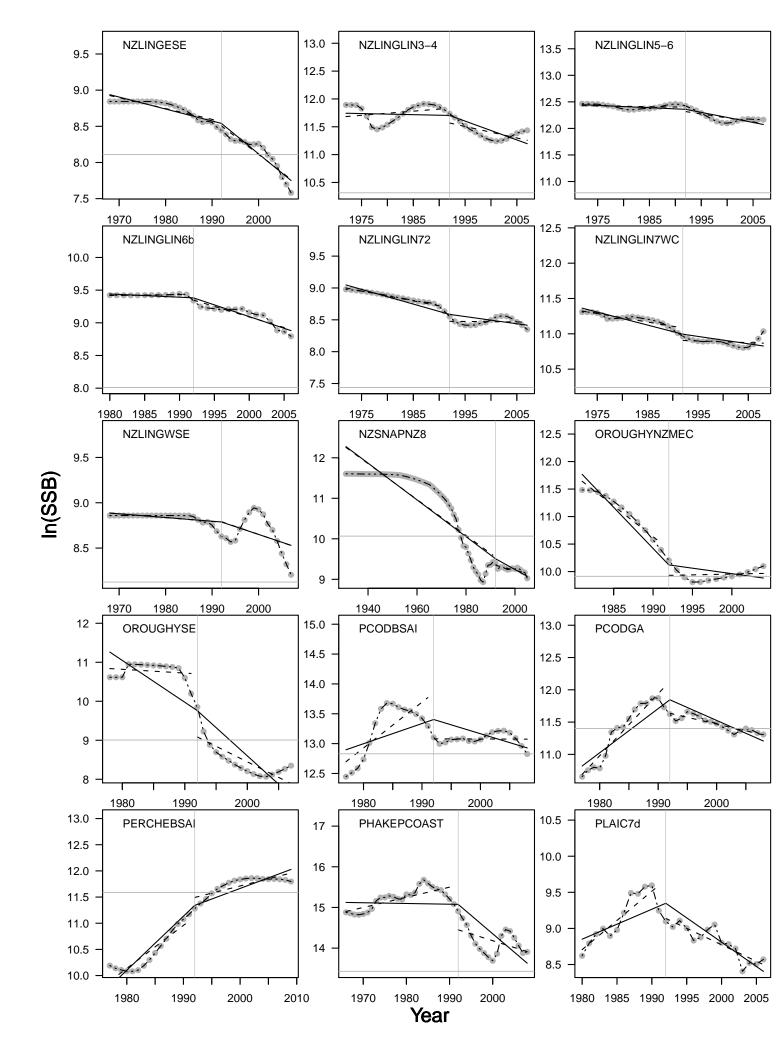


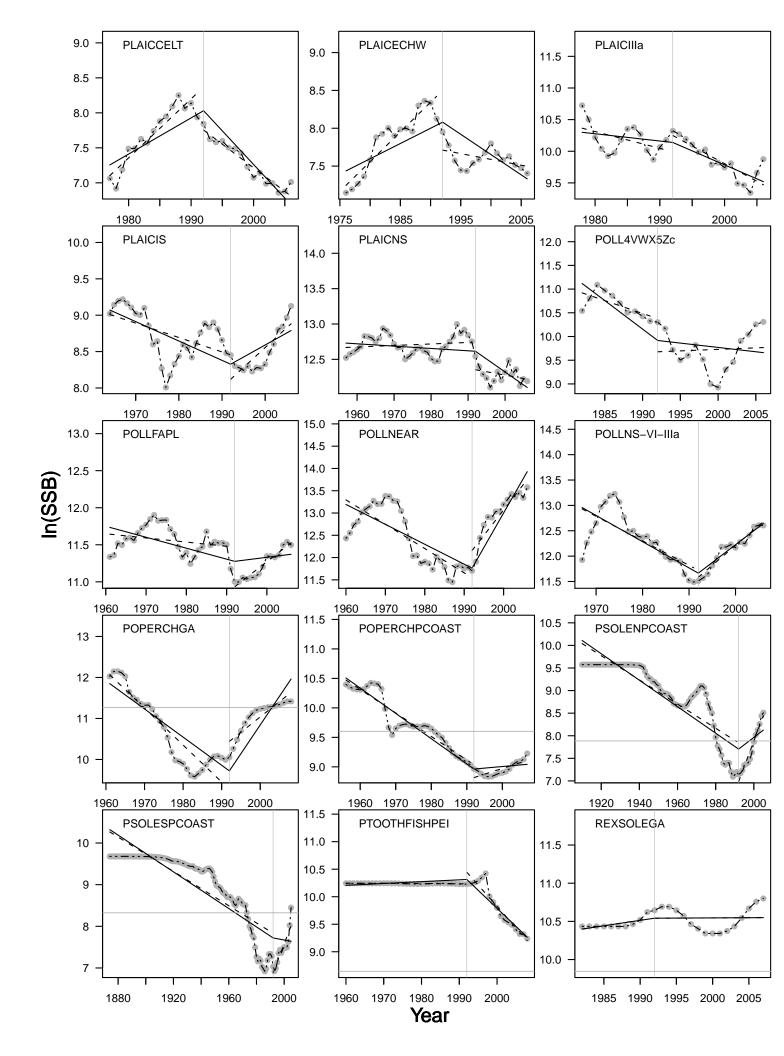


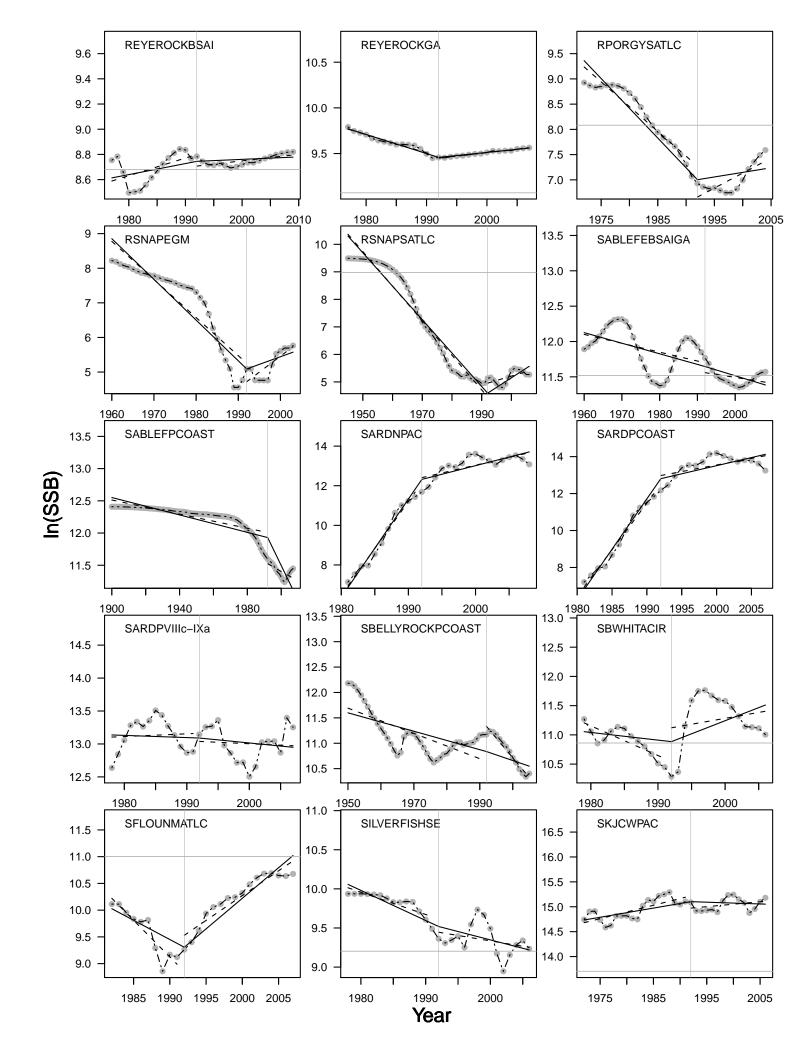


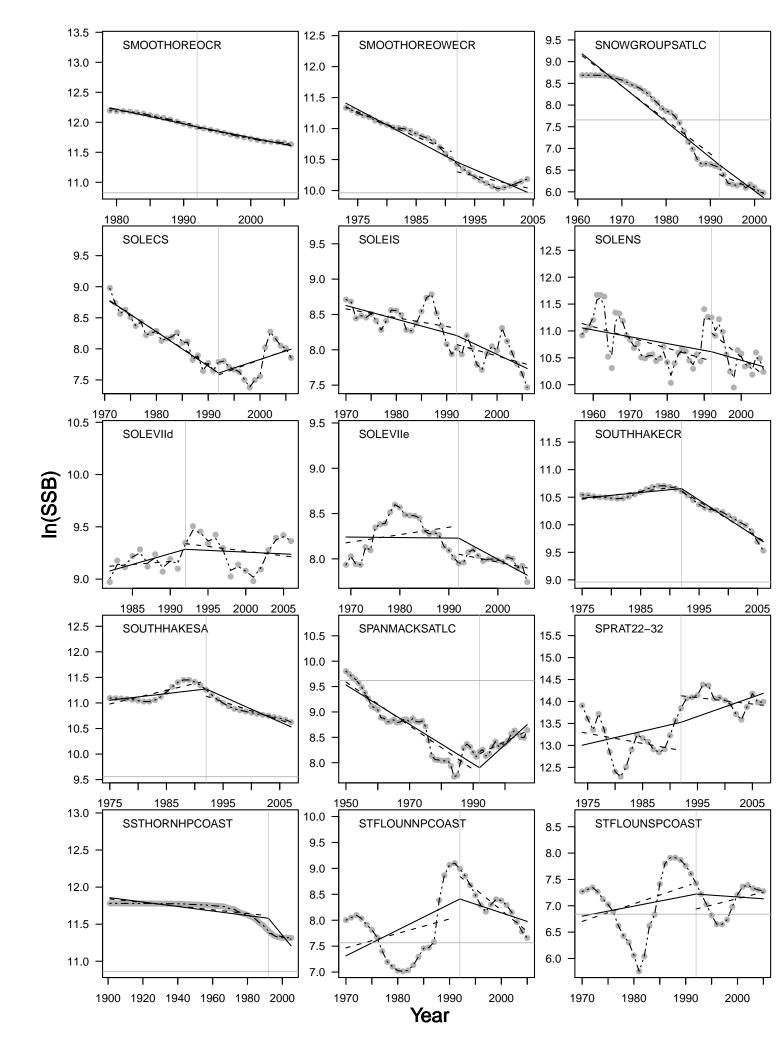


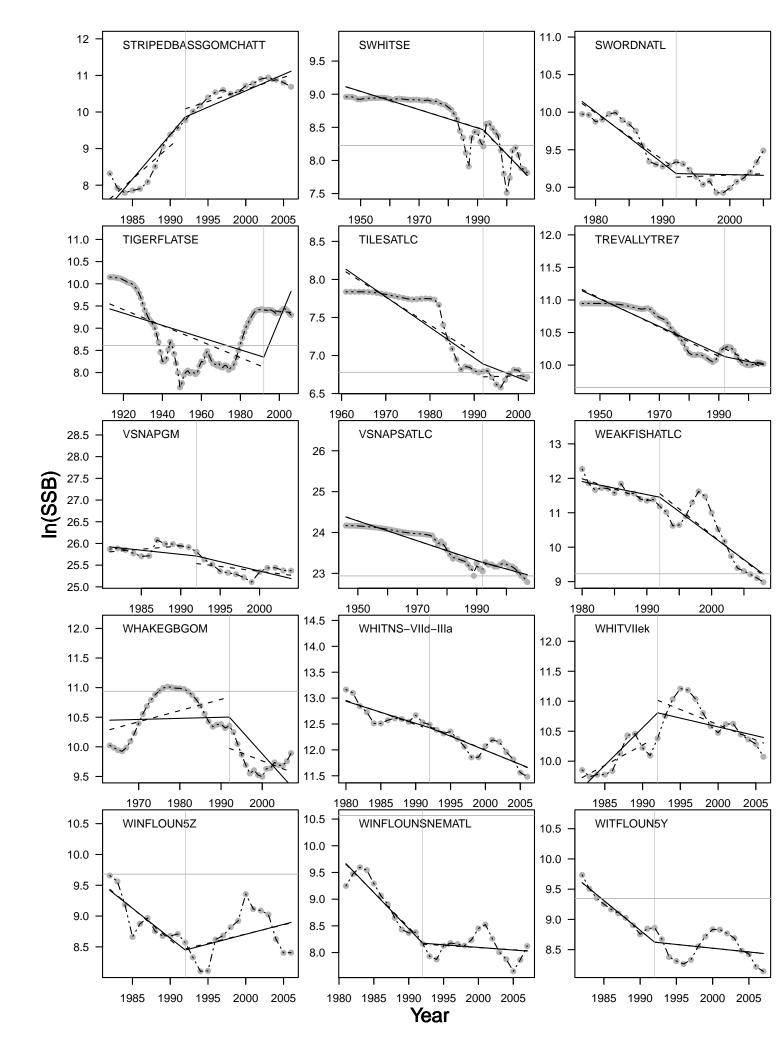












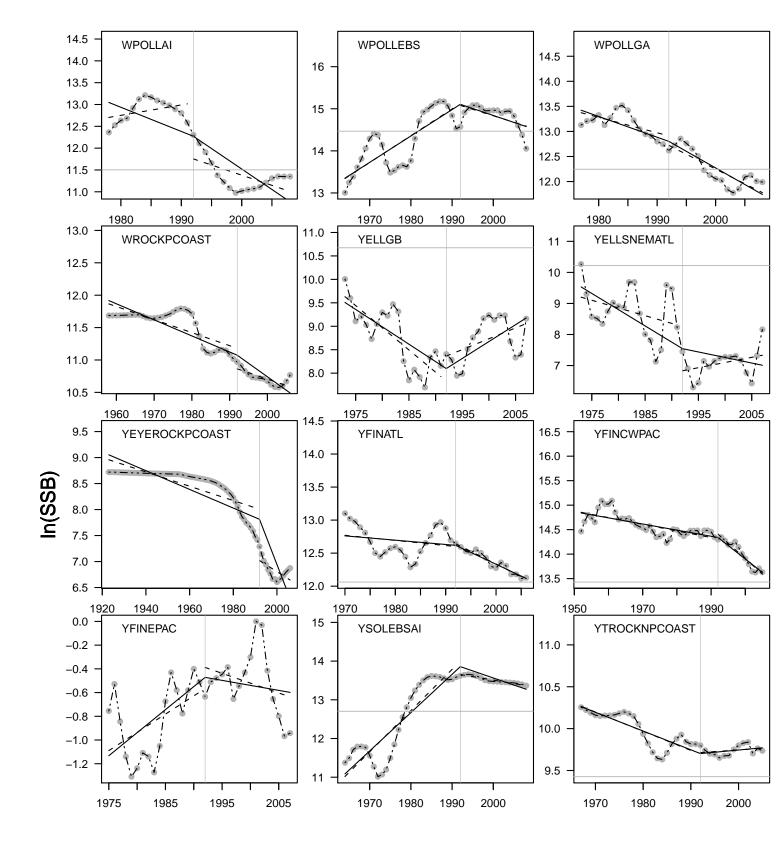


Figure S1

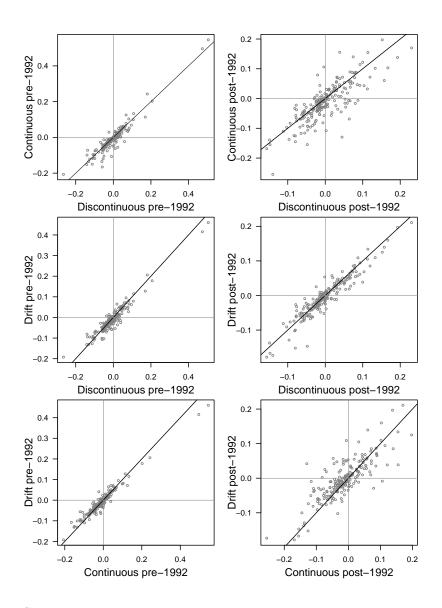


Figure S2