

forage fish Stocks

v4.66 (Nov-03-2024)

Not present Present Preferred

Stock	B/Bmsy	Time Series Types			
		U/Umsy	B/Bmgt	U/Umgt	
1. ANCHIXa [Anchovy Portugese Waters -East]	TB SSB	ER F	TB SSB	ER F	
2. ANCHMEDGSA1 [Anchovy Northern Alboran Sea]	TB SSB	ER F	TB SSB	ER F	
3. ANCHMEDGSA16 [Anchovy South of Sicily]	TB SSB	ER F	TB SSB	ER F	
4. ANCHMEDGSA17-18 [Anchovy Adriatic Sea (GSA 17,18)]	TB SSB	ER F	TB SSB	ER F	
5. ANCHMEDGSA19 [Anchovy Western Ionian Sea]	TB SSB	ER F	TB SSB	ER F	
6. ANCHMEDGSA20 [Anchovy Eastern Ionian Sea]	TB SSB	ER F	TB SSB	ER F	
7. ANCHMEDGSA22-23 [Anchovy Aegean Sea and Crete Island (GSA 22,23)]	TB SSB	ER F	TB SSB	ER F	
8. ANCHMEDGSA29 [Anchovy Black Sea]	TB SSB	ER F	TB SSB	ER F	
9. ANCHMEDGSA6 [Anchovy Northern Spain]	TB SSB	ER F	TB SSB	ER F	
10. ANCHMEDGSA7 [Anchovy Gulf of Lions]	TB SSB	ER F	TB SSB	ER F	
11. ANCHMEDGSA9-11 [Anchovy Geographical Sub-Areas 9-11]	TB SSB	ER F	TB SSB	ER F	
12. ANCHOBAYB [Anchovy Bay of Biscay]	TB SSB	ER F	TB SSB	ER F	
13. ANCHOCWACIV-BEN [Anchovy Central West Africa Cote Divoire-Benin]	TB SSB	ER F	TB SSB	ER F	
14. ANCHOCWAGAB-AGO [Anchovy Central West Africa Gabon-Angola]	TB SSB	ER F	TB SSB	ER F	
15. ANCHONWA [Anchovy North West Africa]	TB SSB	ER F	TB SSB	ER F	
16. ANCHOSA [Anchovy South Africa]	TB SSB	ER F	TB SSB	ER F	
17. ANCHOVYKILKACS [Anchovy kilka Iranian Caspian Sea]	TB SSB	ER F	TB SSB	ER F	
18. ARGANCHONARG [Argentine anchoita Northern Argentina]	TB SSB	ER F	TB SSB	ER F	
19. ARGANCHOSARG [Argentine anchoita Southern Argentina]	TB SSB	ER F	TB SSB	ER F	
20. BONGACWAGAB-COD [Bonga Central West Africa Gabon-Congo DR]	TB SSB	ER F	TB SSB	ER F	
21. BONGANWA [Bonga North West Africa]	TB SSB	ER F	TB SSB	ER F	
22. CAPE2J3KL [Capelin Southern Labrador-Eastern Newfoundland]	TB SSB	ER F	TB SSB	ER F	
23. CAPE4RST [Capelin Gulf of St. Lawrence]	TB SSB	ER F	TB SSB	ER F	
24. CAPEIIa-V-XIV [Capelin ICES 2a-5-14]	TB SSB	ER F	TB SSB	ER F	
25. CAPENOR [Capelin Barents Sea]	TB SSB	ER F	TB SSB	ER F	
26. CHERRCHVX [Chilean herring Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
27. CSARDCSCH [Chilean sardine Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F	
28. DSSMELTPAC [Deep sea smelt Pacific Ocean]	TB SSB	ER F	TB SSB	ER F	
29. DSSMELTSOJ [Deep sea smelt Sea of Japan]	TB SSB	ER F	TB SSB	ER F	
30. EULAPCOASTCCDU [Eulachon Pacific Coast of Canada Central Coast Designatable Unit]	TB SSB	ER F	TB SSB	ER F	
31. EULAPCOASTFRDU [Eulachon Pacific Coast of Canada Fraser River Designatable Unit]	TB SSB	ER F	TB SSB	ER F	
32. EULAPCOASTNSDU [Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit]	TB SSB	ER F	TB SSB	ER F	

33. GSSMELTI-II-IIIa-IV [Greater silver smelt ICES 1-2-3a-4]	TB SSB	ER F	TB SSB	ER F
34. GSSMELTVa-XIV [Greater silver smelt ICES 5a-14]	TB SSB	ER F	TB SSB	ER F
35. GSSMELTVb-VIa [Greater silver smelt ICES 5b-6a]	TB SSB	ER F	TB SSB	ER F
36. GSSMELTVIb-VII-VIII-IX-X-XII [Greater silver smelt ICES 6b-7-8-9-10-12]	TB SSB	ER F	TB SSB	ER F
37. HERR2224IIIa [Herring ICES 22-24-3a]	TB SSB	ER F	TB SSB	ER F
38. HERR2529-32 [Herring Subdivisions 25-29 and 32]	TB SSB	ER F	TB SSB	ER F
39. HERR30-31 [Herring Subdivisions 30-31]	TB SSB	ER F	TB SSB	ER F
40. HERR4RFA [Herring NAFO division 4R (Fall spawners)]	TB SSB	ER F	TB SSB	ER F
41. HERR4RSP [Herring NAFO division 4R (Spring spawners)]	TB SSB	ER F	TB SSB	ER F
42. HERR4SFS [Herring Quebec North Shore (Fall spawners)]	TB SSB	ER F	TB SSB	ER F
43. HERR4SSS [Herring Quebec North Shore (Spring spawners)]	TB SSB	ER F	TB SSB	ER F
44. HERR4TFA [Herring Southern Gulf of St. Lawrence (Fall spawners)]	TB SSB	ER F	TB SSB	ER F
45. HERR4TSP [Herring Southern Gulf of St. Lawrence (Spring spawners)]	TB SSB	ER F	TB SSB	ER F
46. HERR4VWX [Herring Scotian Shelf and Bay of Fundy]	TB SSB	ER F	TB SSB	ER F
47. HERRCC [Pacific herring Central Coast]	TB SSB	ER F	TB SSB	ER F
48. HERRHG [Pacific herring Haida Gwaii]	TB SSB	ER F	TB SSB	ER F
49. HERRHOKK [Pacific herring Hokkaido]	TB SSB	ER F	TB SSB	ER F
50. HERRIsum [Herring Iceland (Summer spawners)]	TB SSB	ER F	TB SSB	ER F
51. HERRNFLDESC [Herring Newfoundland East and South Coast]	TB SSB	ER F	TB SSB	ER F
52. HERRNIRS [Herring Irish Sea]	TB SSB	ER F	TB SSB	ER F
53. HERRNORSS [Herring ICES 1-2-4a-5-14a (Norwegian Spring Spawners)]	TB SSB	ER F	TB SSB	ER F
54. HERRNS-IIIa-VIId [Herring ICES 3a-4-7d]	TB SSB	ER F	TB SSB	ER F
55. HERRNWATLC [Herring Northwestern Atlantic Coast]	TB SSB	ER F	TB SSB	ER F
56. HERRPRD [Pacific herring Prince Rupert District]	TB SSB	ER F	TB SSB	ER F
57. HERRPWS [Pacific herring Prince William Sound]	TB SSB	ER F	TB SSB	ER F
58. HERRRIGA [Herring Gulf of Riga East of Gotland]	TB SSB	ER F	TB SSB	ER F
59. HERRSIRS [Herring ICES 7a-g-h-j-k]	TB SSB	ER F	TB SSB	ER F
60. HERRSITKA [Pacific herring Sitka]	TB SSB	ER F	TB SSB	ER F
61. HERRSOG [Pacific herring Strait of Georgia]	TB SSB	ER F	TB SSB	ER F
62. HERRTOG [Pacific herring Togiak District]	TB SSB	ER F	TB SSB	ER F
63. HERRVIaVIIbc [Herring ICES 6a7bc]	TB SSB	ER F	TB SSB	ER F
64. HERRWCVANI [Pacific herring West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F
65. JANCHOPJPN [Japanese anchovy Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
66. JANCHOSETO [Japanese anchovy Inland Sea of Japan]	TB SSB	ER F	TB SSB	ER F
67. JANCHOTSST [Japanese anchovy Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
68. MENATGM [Gulf menhaden Gulf of Mexico]	TB SSB	ER F	TB SSB	ER F
69. MENATLAN [Atlantic menhaden Atlantic]	TB SSB	ER F	TB SSB	ER F
70. MSARDCWACIV-BEN [Madeiran sardinella Central West Africa Cote Divoire-Benin]	TB SSB	ER F	TB SSB	ER F
71. MSARDNWA [Madeiran sardinella North West Africa]	TB SSB	ER F	TB SSB	ER F
72. PANCHCCH [Peruvian anchoveta Central Chile]	TB SSB	ER F	TB SSB	ER F
73. PANCHCSCH [Peruvian anchoveta Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F
74. PANCHNCHSP [Peruvian anchoveta Northern Chile Southern Peru]	TB SSB	ER F	TB SSB	ER F
75. PANCHPERUNC [Peruvian anchoveta North-Central Peruvian coast]	TB SSB	ER F	TB SSB	ER F
76. PILCHPJPN [Japanese sardine Pacific Coast of Japan]	TB SSB	ER F	TB SSB	ER F
77. PILCHTSST [Japanese sardine Tsushima Strait]	TB SSB	ER F	TB SSB	ER F

78. PSANDLIMKB [Pacific sandlance Ise and Mikawa Bay]	TB SSB	ER F	TB SSB	ER F
79. PSLANCESYS [Pacific sand lance Souya Strait]	TB SSB	ER F	TB SSB	ER F
80. PSLANDLSETOE [Pacific sandlance Inland Sea of Japan (East)]	TB SSB	ER F	TB SSB	ER F
81. RHERRPAC [Round herring Pacific Ocean]	TB SSB	ER F	TB SSB	ER F
82. RHERRTSST [Round herring Tsushima Strait]	TB SSB	ER F	TB SSB	ER F
83. RSARDCWACIV-BEN [Round sardinella Central West Africa Cote Divoire-Benin]	TB SSB	ER F	TB SSB	ER F
84. RSARDNWA [Round sardinella North West Africa]	TB SSB	ER F	TB SSB	ER F
85. SARDBC [Pacific sardine Pacific Coast of Canada]	TB SSB	ER F	TB SSB	ER F
86. SARDINCWAGAB-AGO [Sardinella Central West Africa Gabon-Angola]	TB SSB	ER F	TB SSB	ER F
87. SARDINCWAGNB-LBR [Sardinella Central West Africa Guinea Bissau-Liberia]	TB SSB	ER F	TB SSB	ER F
88. SARDMEDGSA1 [European pilchard Northern Alboran Sea]	TB SSB	ER F	TB SSB	ER F
89. SARDMEDGSA16 [Sardine South of Sicily]	TB SSB	ER F	TB SSB	ER F
90. SARDMEDGSA17-18 [Sardine Adriatic Sea (GSA 17,18)]	TB SSB	ER F	TB SSB	ER F
91. SARDMEDGSA20 [European pilchard Eastern Ionian Sea]	TB SSB	ER F	TB SSB	ER F
92. SARDMEDGSA22-23 [European pilchard Aegean Sea and Crete Island (GSA 22,23)]	TB SSB	ER F	TB SSB	ER F
93. SARDMEDGSA6 [European pilchard Northern Spain]	TB SSB	ER F	TB SSB	ER F
94. SARDMEDGSA7 [Sardine Gulf of Lions]	TB SSB	ER F	TB SSB	ER F
95. SARDMEDGSA9 [European pilchard Ligurian and North Tyrrhenian Sea]	TB SSB	ER F	TB SSB	ER F
96. SARDNWAZAB [Sardine North West Africa Zone A+B]	TB SSB	ER F	TB SSB	ER F
97. SARDNWAZC [Sardine North West Africa Zone C]	TB SSB	ER F	TB SSB	ER F
98. SARPCOAST [Pacific sardine Pacific Coast]	TB SSB	ER F	TB SSB	ER F
99. SARDPVIlIc-IXa [Sardine ICES 8c-9a]	TB SSB	ER F	TB SSB	ER F
100. SARDSAS [Sardine South Africa (South Component)]	TB SSB	ER F	TB SSB	ER F
101. SARDSAW [Sardine South Africa (West Component)]	TB SSB	ER F	TB SSB	ER F
102. SARDVII [Sardine ICES 7]	TB SSB	ER F	TB SSB	ER F
103. SARDVIIlabd [Sardine ICES 8abd]	TB SSB	ER F	TB SSB	ER F
104. SARDWSE [Sardine Western half of Southeast Australia]	TB SSB	ER F	TB SSB	ER F
105. SAURNWPAC [Pacific saury Northwest Pacific]	TB SSB	ER F	TB SSB	ER F
106. SEELNSSA1 [Sand eel Sandeel Area 1]	TB SSB	ER F	TB SSB	ER F
107. SEELNSSA2 [Sand eel Sandeel Area 2]	TB SSB	ER F	TB SSB	ER F
108. SEELNSSA3 [Sand eel Sandeel Area 3]	TB SSB	ER F	TB SSB	ER F
109. SEELNSSA4 [Sand eel Sandeel Area 4]	TB SSB	ER F	TB SSB	ER F
110. SEELNSSA5 [Sand eel Sandeel Area 5]	TB SSB	ER F	TB SSB	ER F
111. SEELNSSA6 [Sand eel Sandeel Area 6]	TB SSB	ER F	TB SSB	ER F
112. SEELNSSA7 [Sand eel Sandeel Area 7]	TB SSB	ER F	TB SSB	ER F
113. SEELVIa [Sand eel West of Scotland]	TB SSB	ER F	TB SSB	ER F
114. SPRAT22-32 [Sprat Baltic Areas 22-32]	TB SSB	ER F	TB SSB	ER F
115. SPRATIIIa-IV [Sprat ICES 3a-4]	TB SSB	ER F	TB SSB	ER F
116. SPRATVIIde [Sprat ICES 7de]	TB SSB	ER F	TB SSB	ER F
117. SPRATVI-VIIabcfghijk [Sprat ICES 6-7abcfghijk]	TB SSB	ER F	TB SSB	ER F
118. SPRBLKGSA29 [Sprat Black Sea]	TB SSB	ER F	TB SSB	ER F
119. SSARDCH [Southern sardine Central-Southern Chile]	TB SSB	ER F	TB SSB	ER F

Anchovy Portuguese Waters -East [ANCHIXa]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGHANSA-ANCHIXa-1989-2021-ICESIMP2021-2
Area	Portuguese Waters -East
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Southern Horse Mackerel, Anchovy and Sardine
Asmts in RAM	2016, 2016, 2018, 2019, 2020, 2021, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2021	0.52
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	0.32
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	0.696	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	F-1/yr	2021	1.116	-	-
ER	ER-ratio	2016	0.253	-	-
TC	TC-MT	2019	15,799		
TL	TL-MT	2019	15,770		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2021	1.338		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



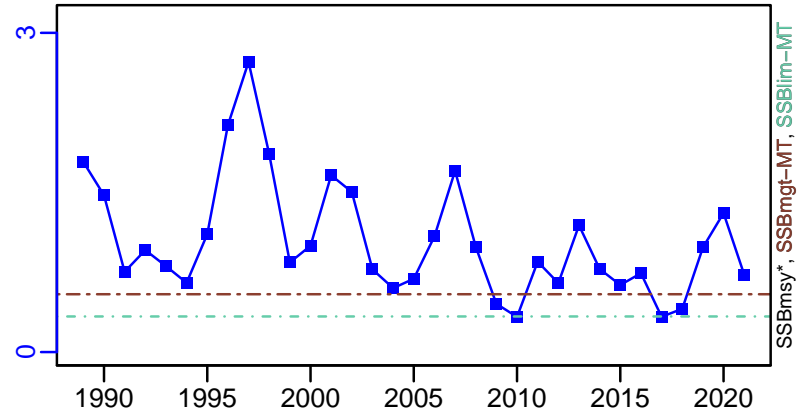
◆ Start Year ◆ End Year * No Data

Anchovy Portuguese Waters –East [ANCHIXa]

TB*



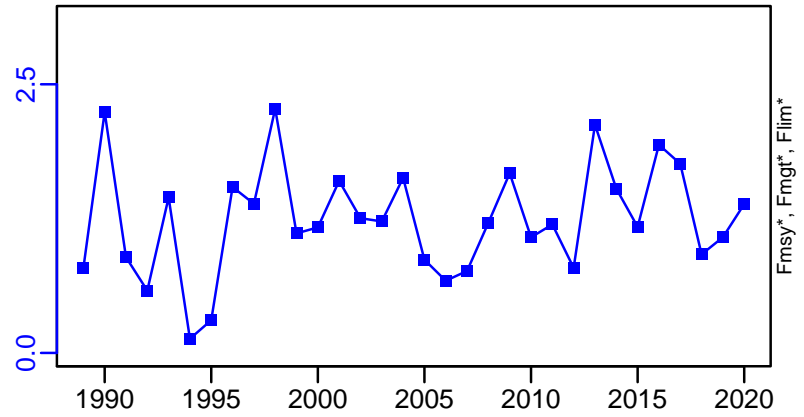
SSB-MT (1989–2021–ICESIMP2021–2)



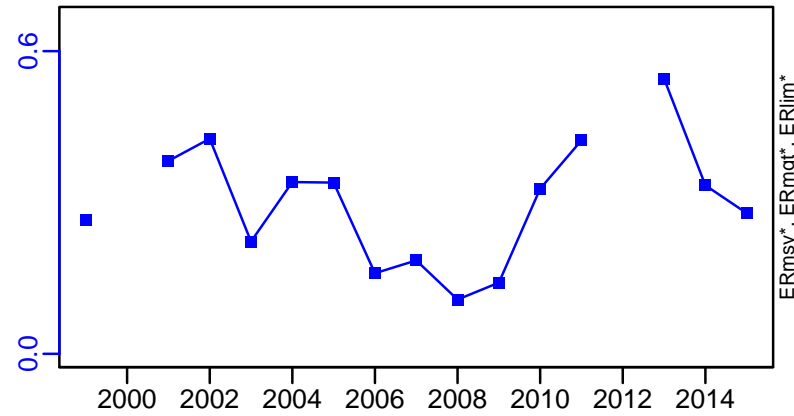
TN *



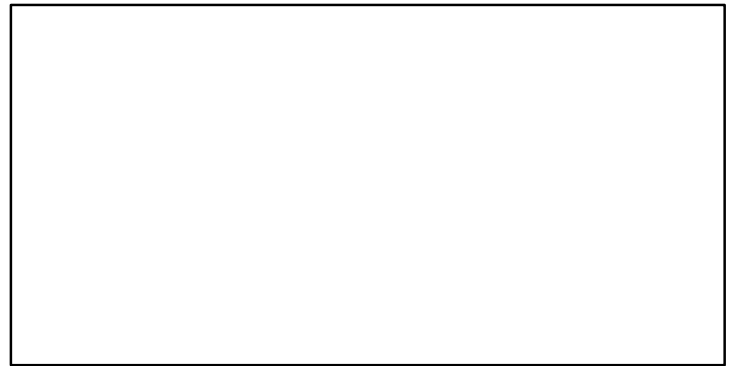
F-1/yr (1989–2021–ICESIMP2021–2)



ER-ratio (1989–2016–ICESIMP2016)

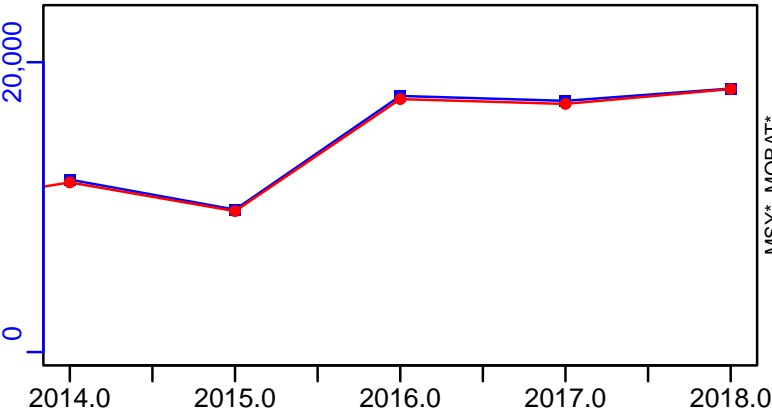


Recruits*



Anchovy Portuguese Waters –East [ANCHIXa]

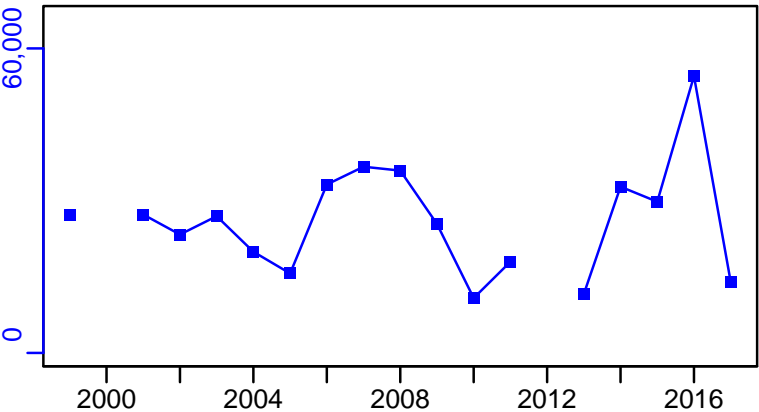
TC–MT, TL–MT, RecC* (1989–2019–ICESIMP2021)



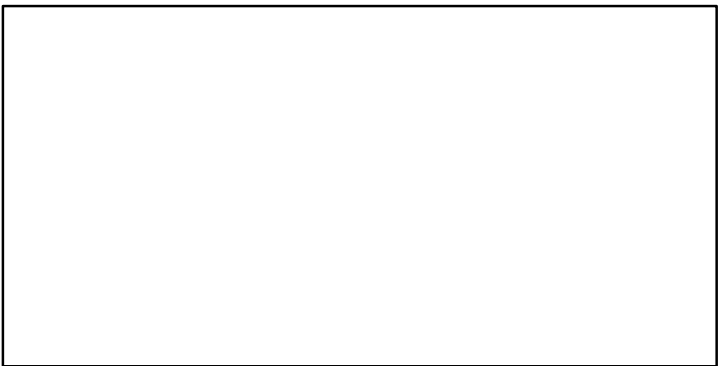
TAC*, Cpair*, Cadv*



survB–MT (1999–2017–ICESIMP2018)



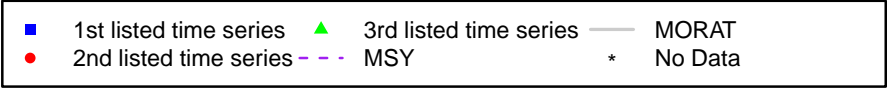
CPUE*



EFFORT*



CdivMSY*

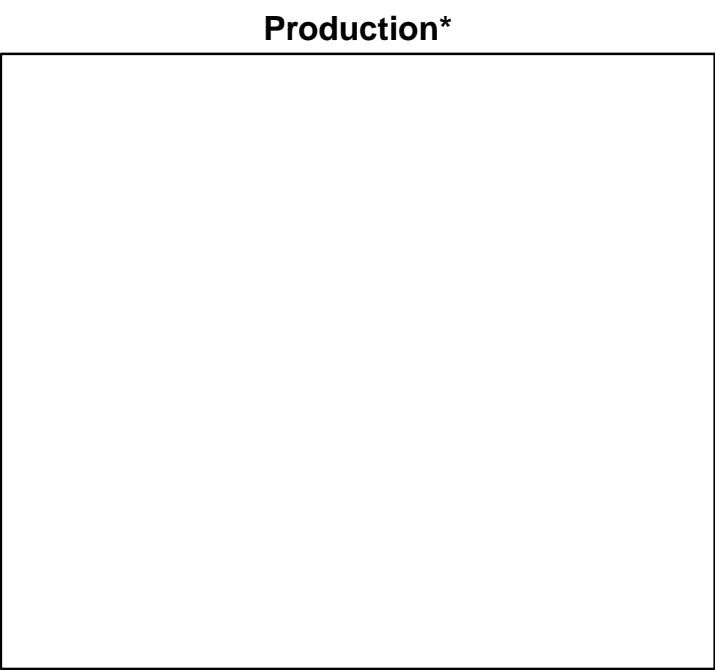
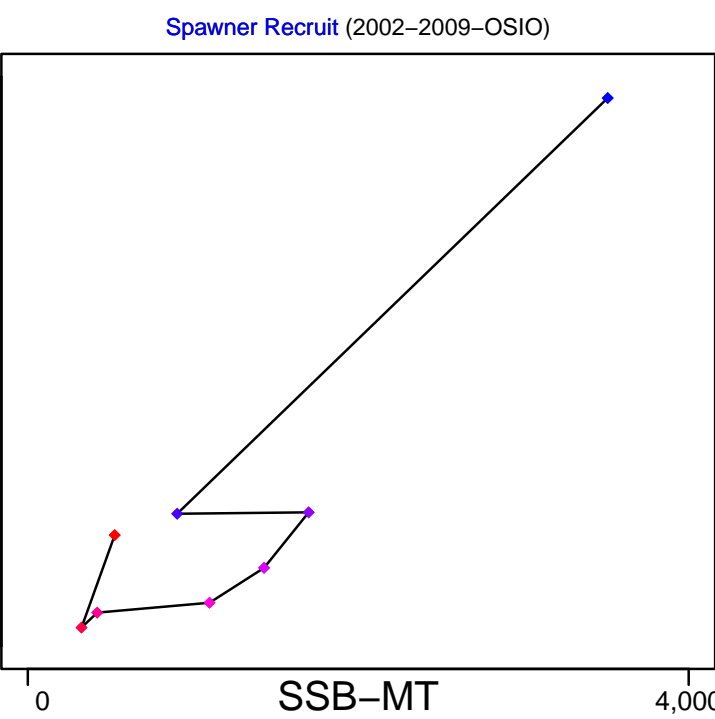
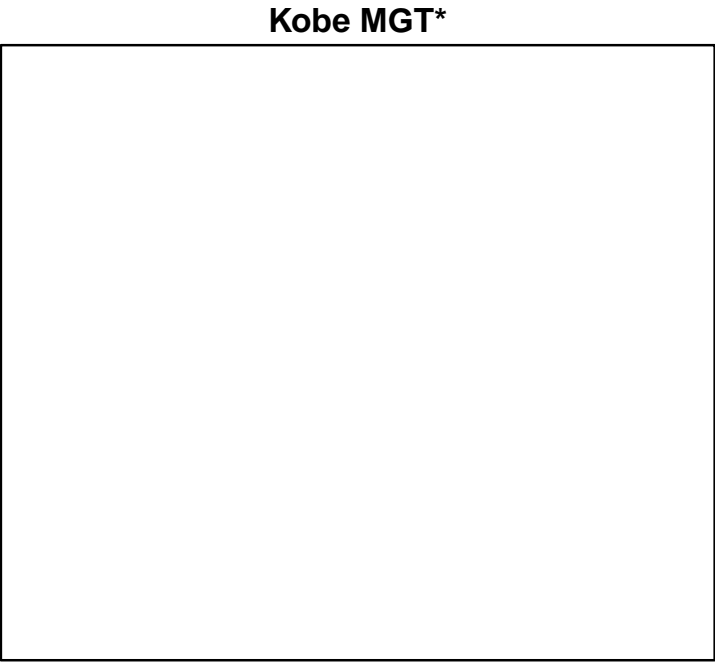
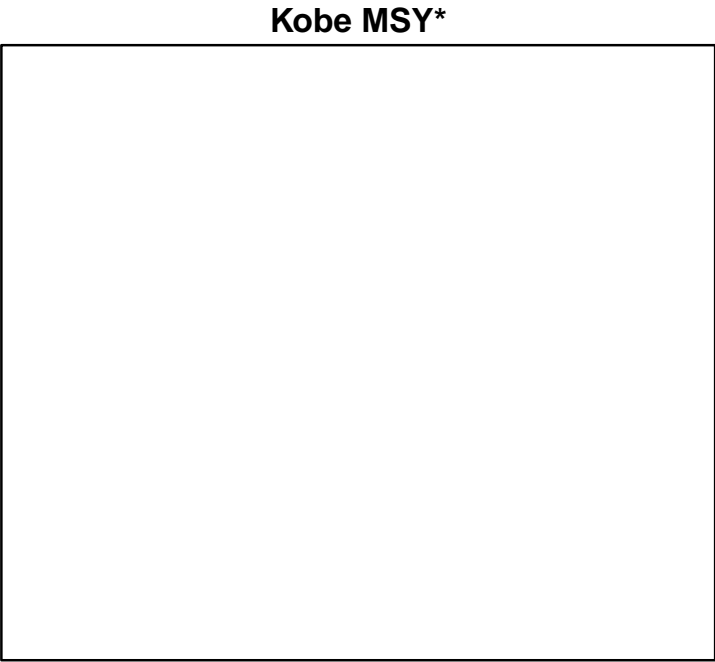


Anchovy Northern Alboran Sea [ANCHMEDGSA1]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	STECF-ANCHMEDGSA1-2002-2009-OSIO
Area	Northern Alboran Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2009

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2009	0.452
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2009	526	-	-
TN	-	-	-	-	-
R	R-E00	2009	1.56×10^8	-	-
F	F-1/yr	2009	1.05	-	-
ER	-	-	-	-	-
TC	TC-MT	2009	292		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2009	2.324		
ER/ERmgt	-	-	-		



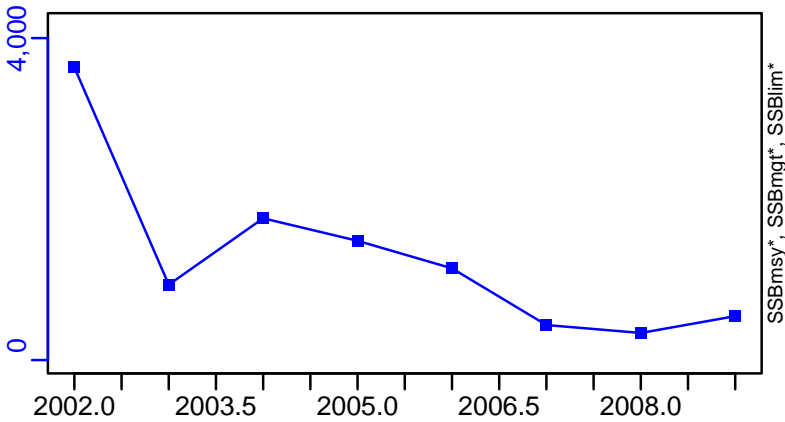
◆ Start Year ◆ End Year * No Data

Anchovy Northern Alboran Sea [ANCHMEDGSA1]

TB*



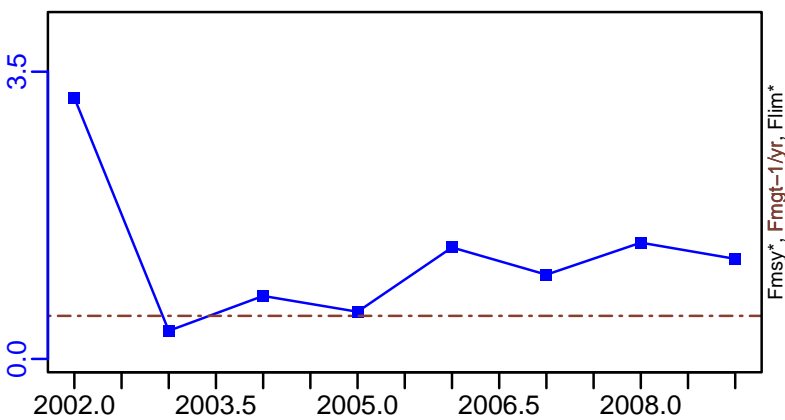
SSB-MT (2002–2009–OSIO)



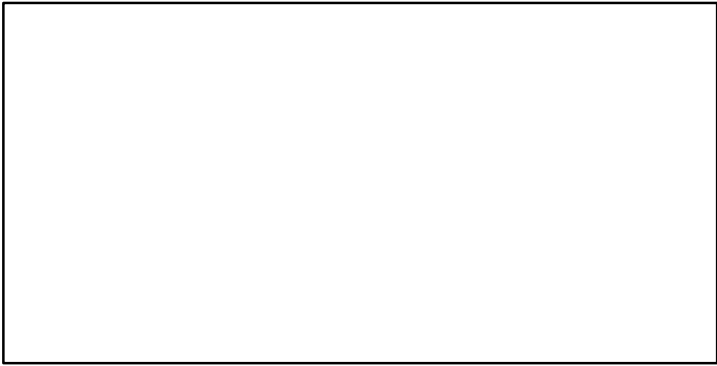
TN *



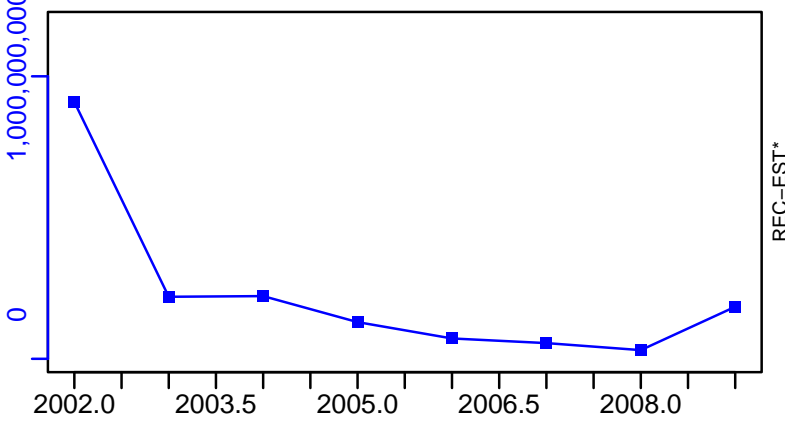
F-1/yr (2002–2009–OSIO)



ER*



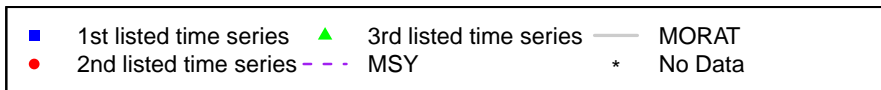
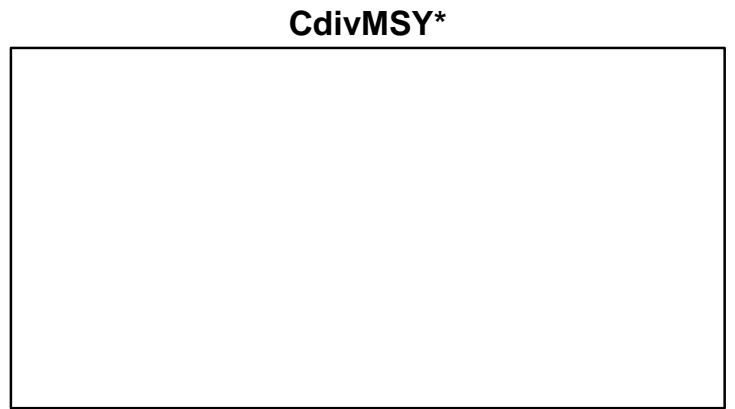
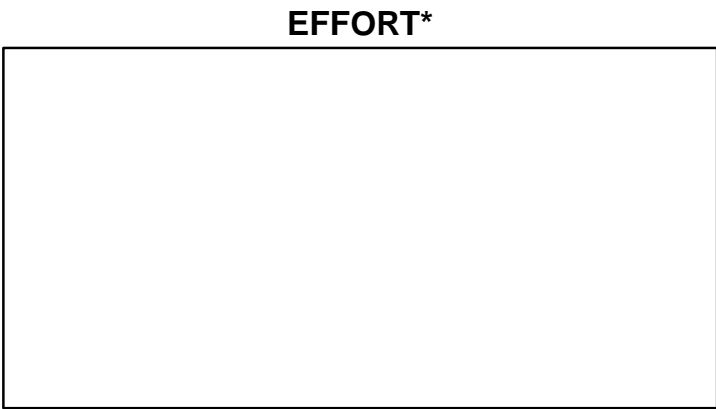
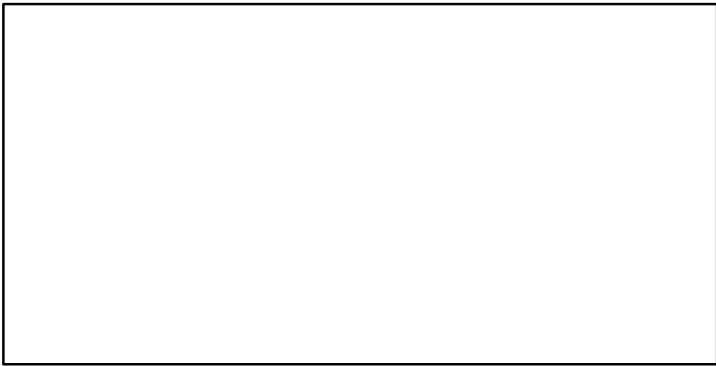
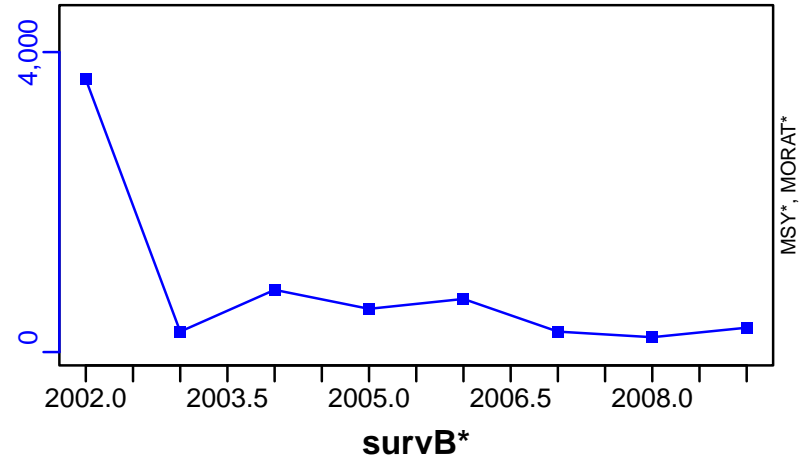
R-E00 (2002–2009–OSIO)



Anchovy Northern Alboran Sea [ANCHMEDGSA1]

TC-MT, TL*, RecC* (2002–2009–OSIO)

TAC*, Cpair*, Cadv*



Anchovy South of Sicily [ANCHMEDGSA16]

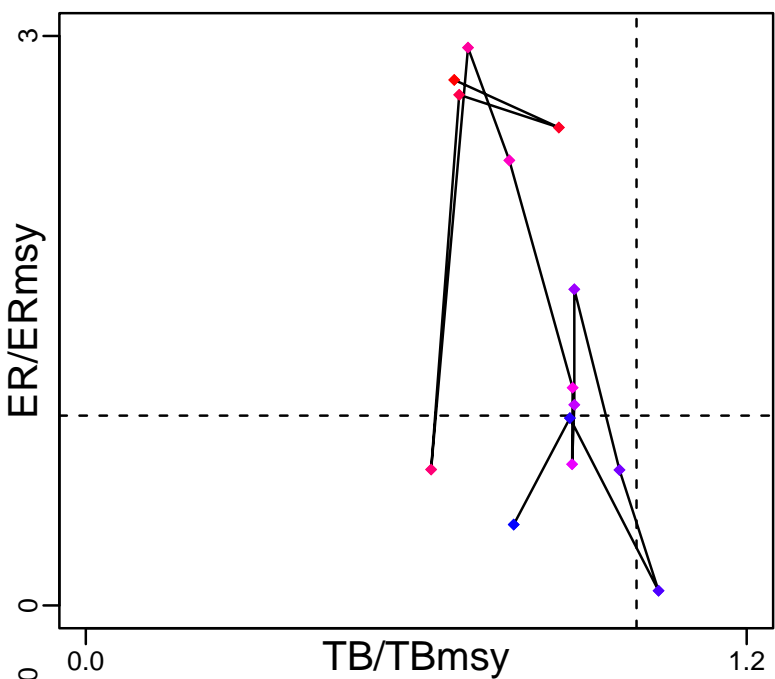
Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGSASP-ANCHMEDGSA16-2005-2021-HIVELY
Area	South of Sicily
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2011, 2011, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2011	14,152
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2011	0.17
ERmsy	ERmsy-calc-ratio	2011	0.167
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.454
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2011	2359
M	M-1/yr	2011	0.66
TBlim	TBlim-MT	2011	3130
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

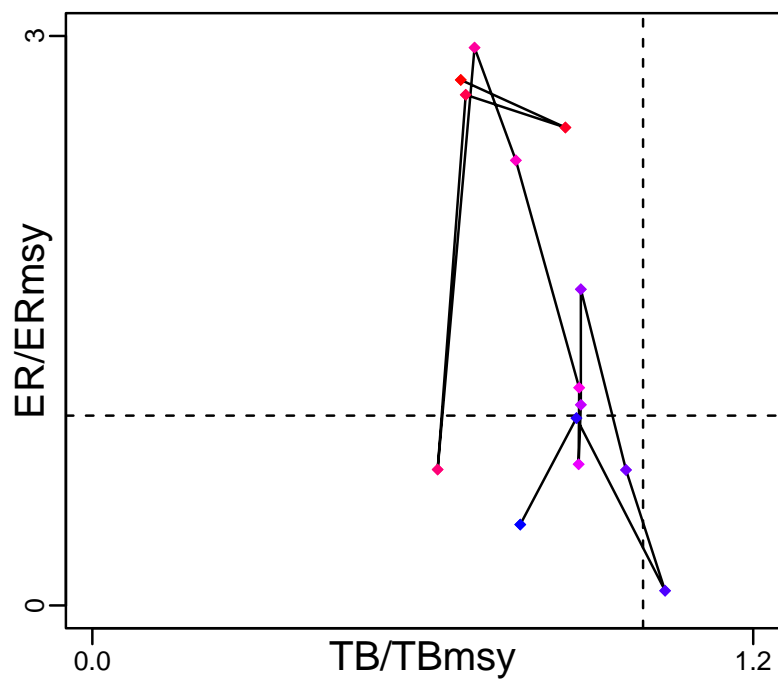
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	11,288	-	-
SSB	SSB-MT	2021	3634	-	-
TN	-	-	-	-	-
R	R-E00	2021	691,493,000	-	-
F	F-1/yr	2021	0.426	-	-
ER	ER-calc-ratio	2021	0.133	-	-
TC	TC-MT	2011	4370		
TL	TL-MT	2021	1500		
TB/TBmsy	TBdivTBmsy-dimensionless	2011	0.669		
SSB/SSBmsy	-	-	-		
F/Fmsy	FdivFmsy-dimensionless	2011	1.62		
ER/ERmsy	ER-calc-ratio/ERmsy-calc-ratio	2011	2.768		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.937		
ER/ERmgt	-	-	-		

Anchovy South of Sicily [ANCHMEDGSA16]

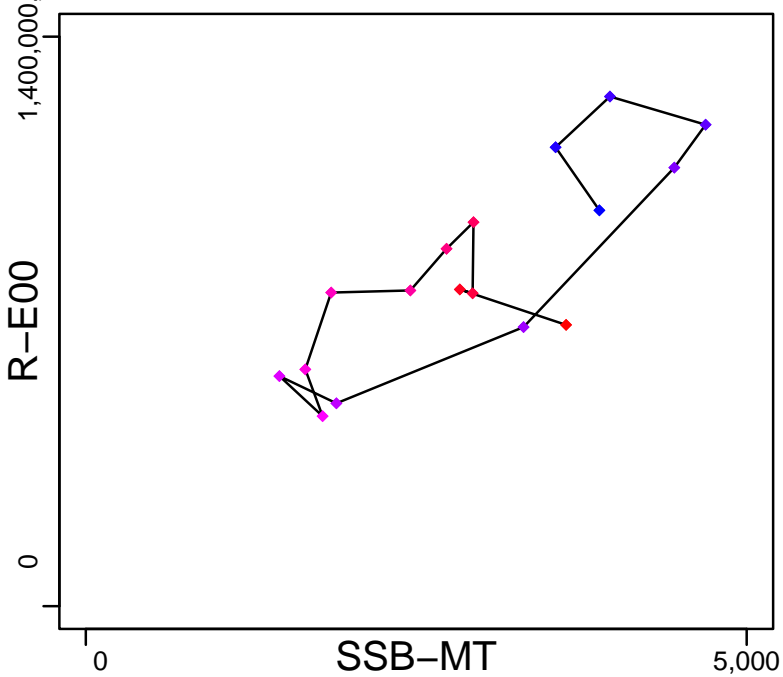
Kobe MSYpref (1998–2011–BANOB1)



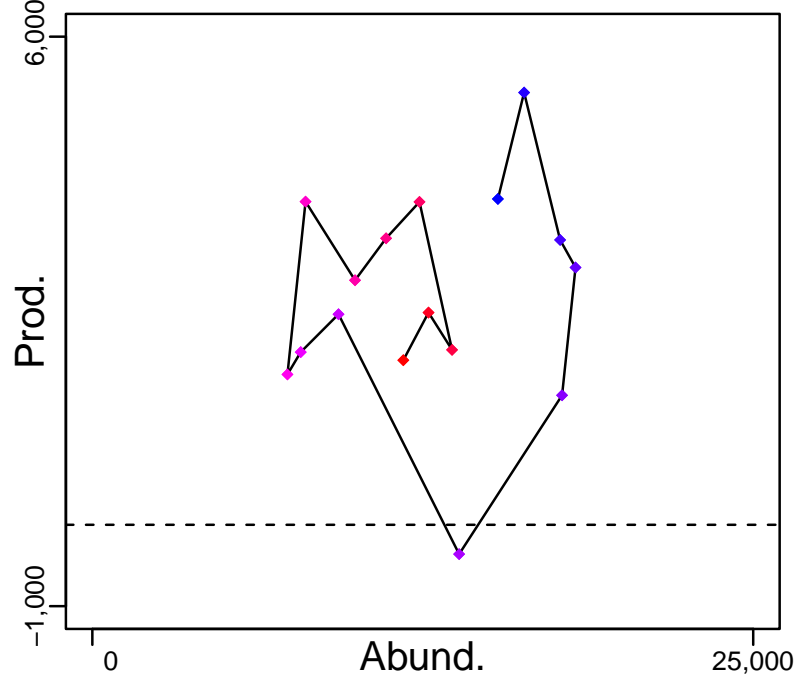
Kobe MGTpref (1998–2011–BANOB1)



Spawner Recruit (2005–2021–HIVELY)



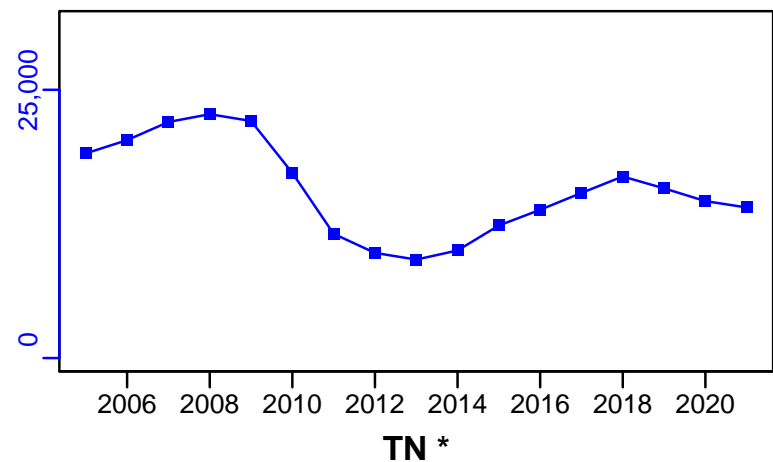
Production (2005–2021–HIVELY)



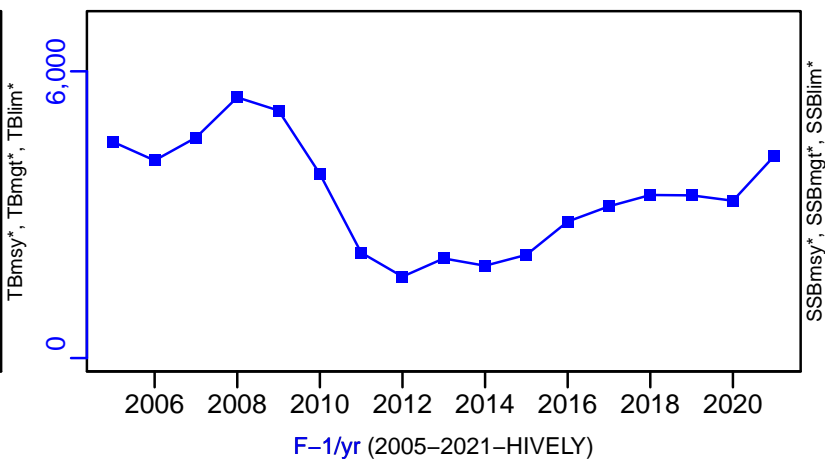
◆ Start Year ◆ End Year * No Data

Anchovy South of Sicily [ANCHMEDGSA16]

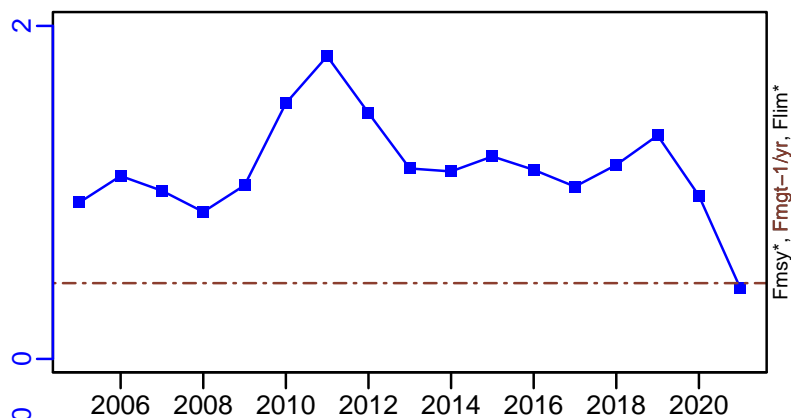
TB-MT (2005–2021–HIVELY)



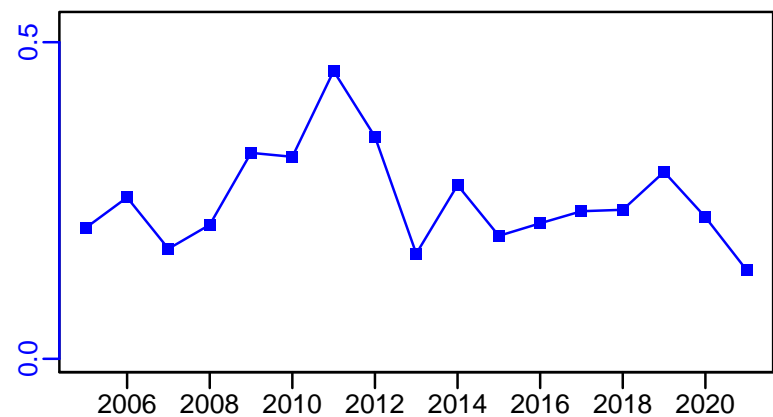
SSB-MT (2005–2021–HIVELY)



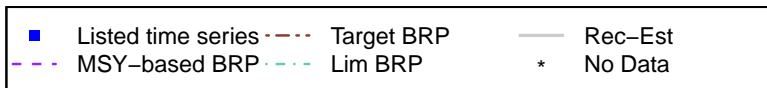
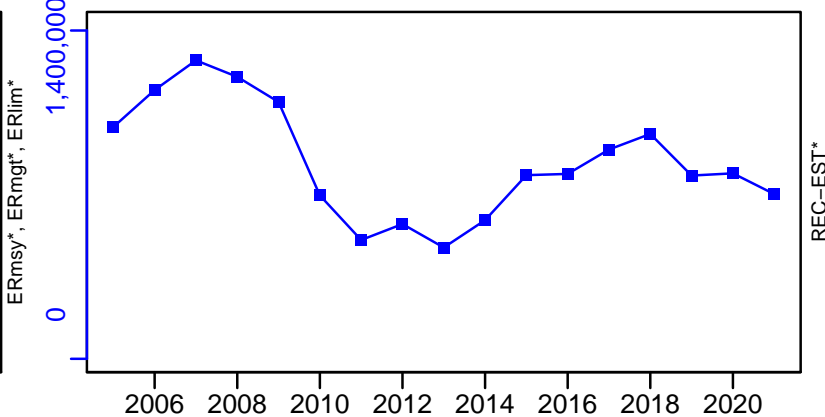
F-1/yr (2005–2021–HIVELY)



ER-calc-ratio (2005–2021–HIVELY)

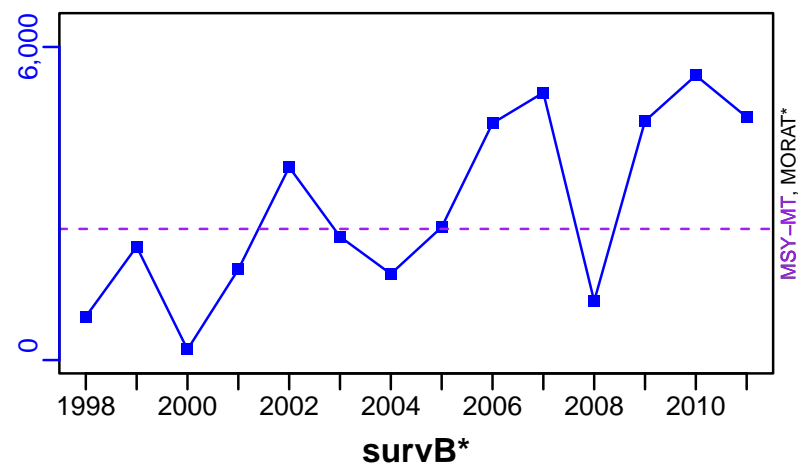


R-E00 (2005–2021–HIVELY)



Anchovy South of Sicily [ANCHMEDGSA16]

TC-MT, TL*, RecC* (1998–2011–BANOB)



TAC*, Cpair*, Cadv*



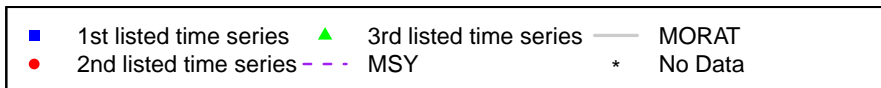
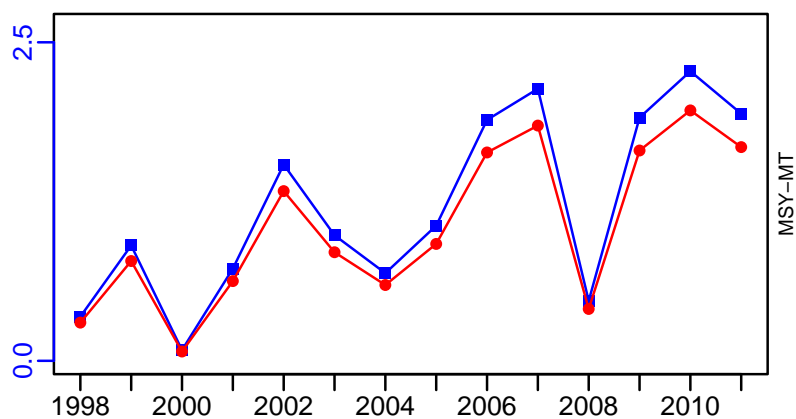
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1998–2011–BANOB)



Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGSASP-ANCHMEDGSA17-18-2000-2022-HIVELY
Area	Adriatic Sea (GSA 17,18)
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2015, 2016, 2013, 2022

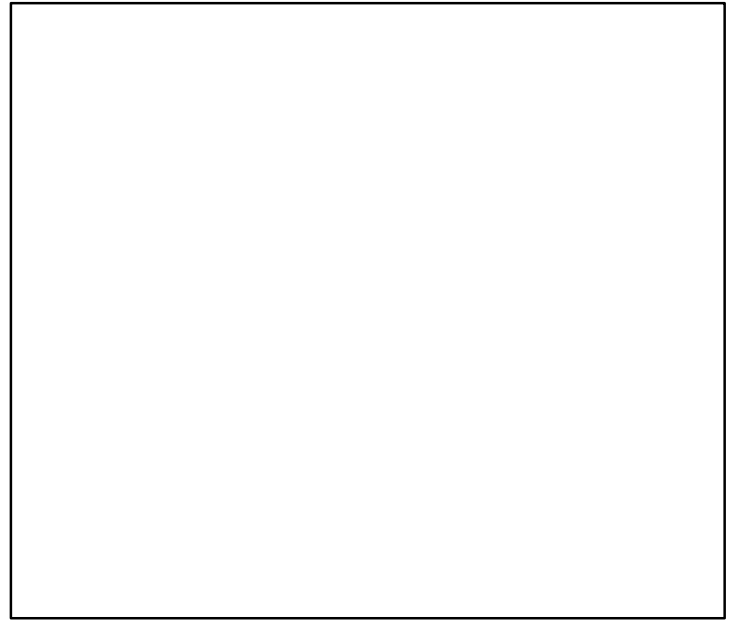
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2022	0.81
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2022	0.81
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2022	16,200
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	349,000	-	-
SSB	SSB-MT	2022	20,178	-	-
TN	-	-	-	-	-
R	R-E00	2022	72,574,075,600	-	-
F	F-1/yr	2022	1.003	-	-
ER	ER-calc-ratio	2015	0.113	-	-
TC	TC-MT	2022	28,665		
TL	TL-MT	2015	39,400		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2022	1.238		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2022	1.238		
ER/ERmgt	-	-	-		

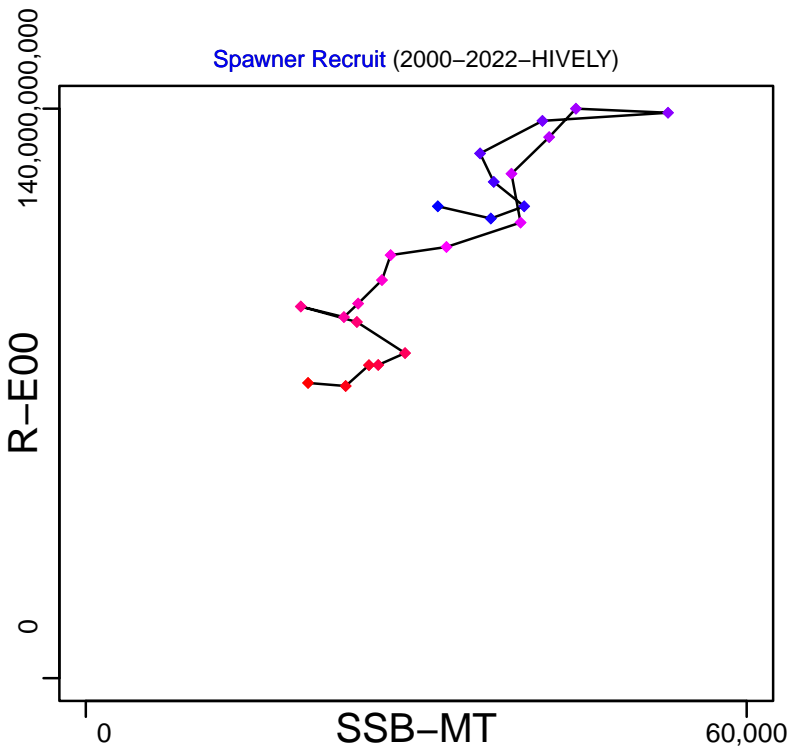
Kobe MSY*



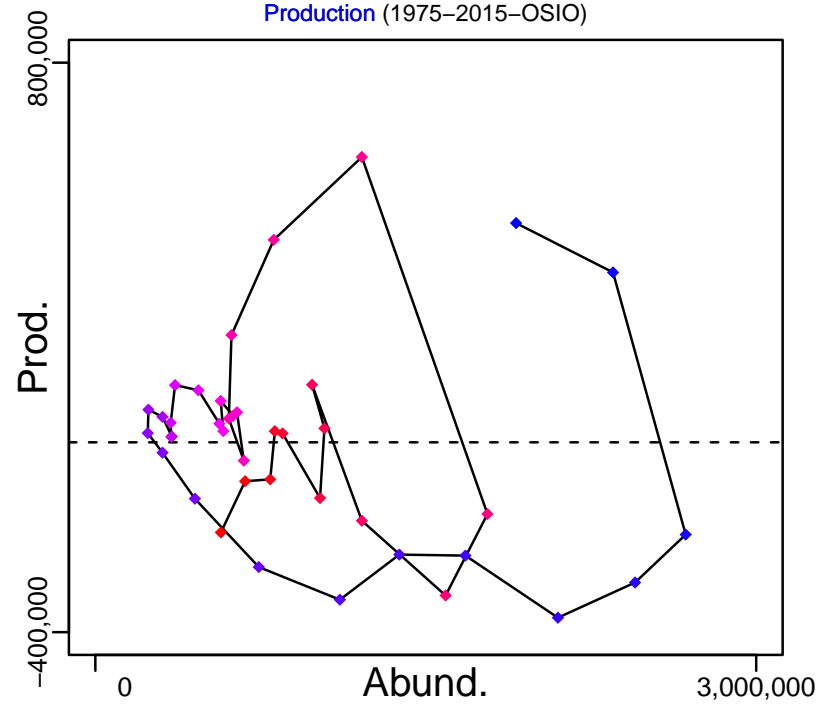
Kobe MGT*



Spawner Recruit (2000–2022–HIVELY)

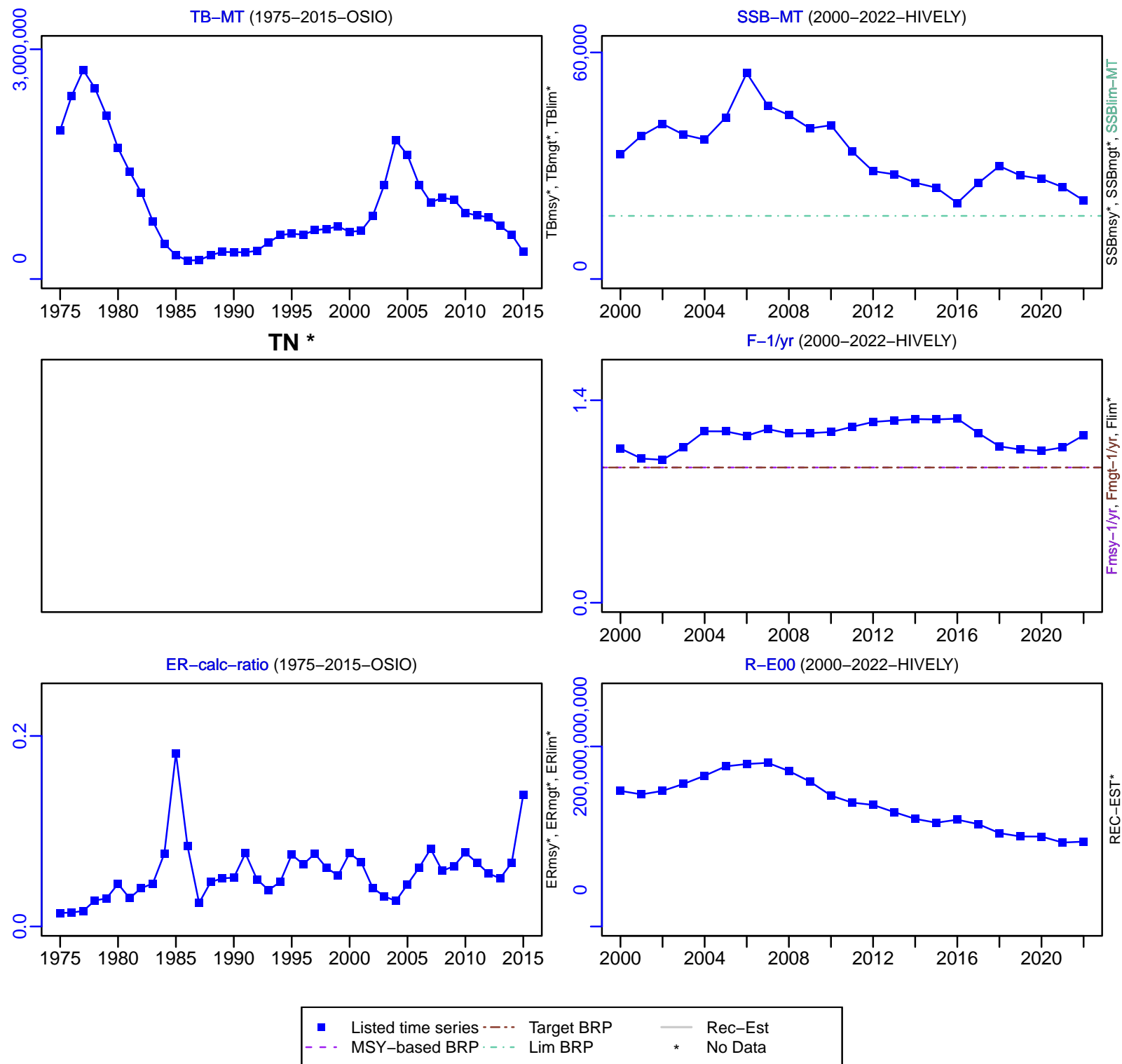


Production (1975–2015–OSIO)



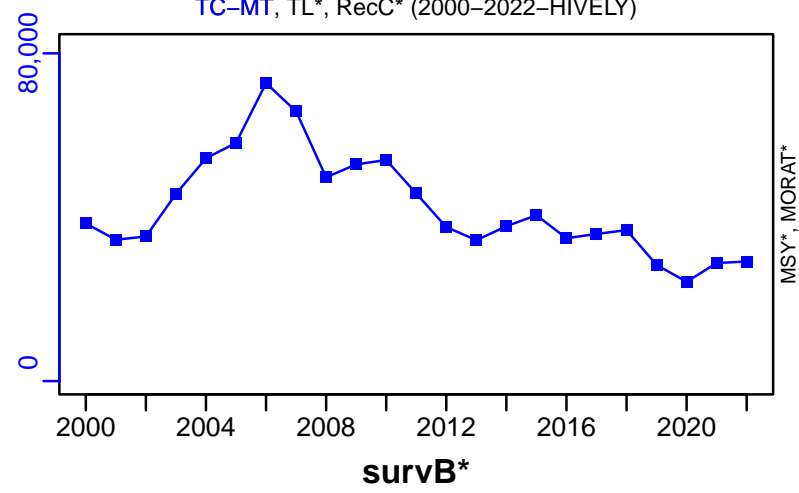
◆ Start Year ◆ End Year * No Data

Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]



Anchovy Adriatic Sea (GSA 17,18) [ANCHMEDGSA17-18]

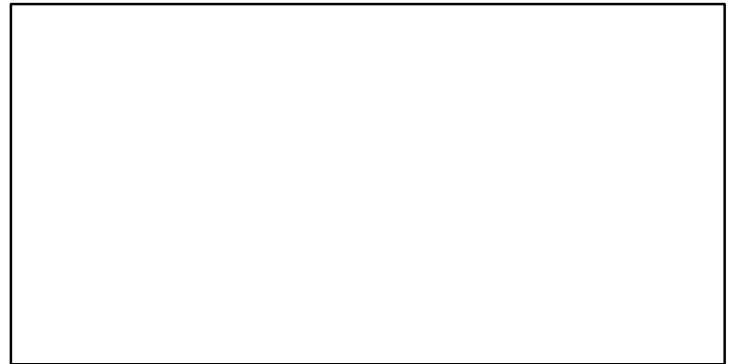
TC-MT, TL*, RecC* (2000-2022-HIVELY)



TAC*, Cpair*, Cadv*



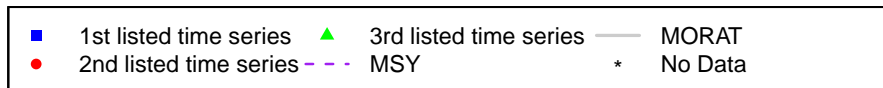
CPUE*



EFFORT*



CdivMSY*



Anchovy Western Ionian Sea [ANCHMEDGSA19]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	STECF-ANCHMEDGSA19-2006-2012-OSIO
Area	Western Ionian Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2012	817		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



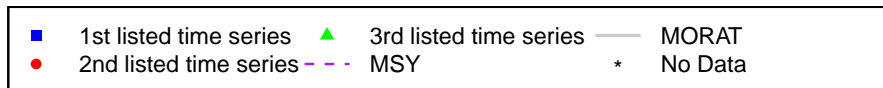
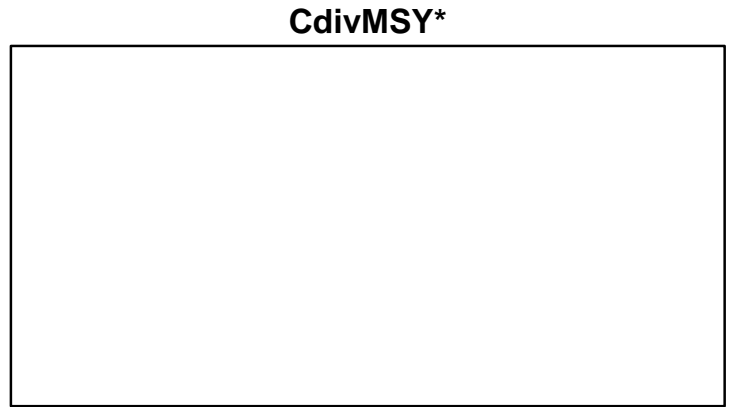
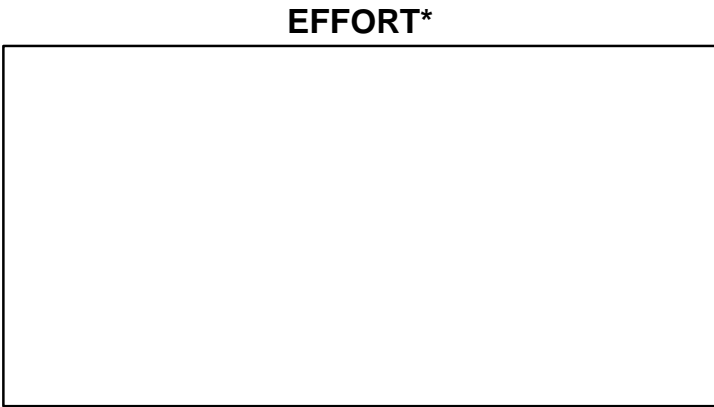
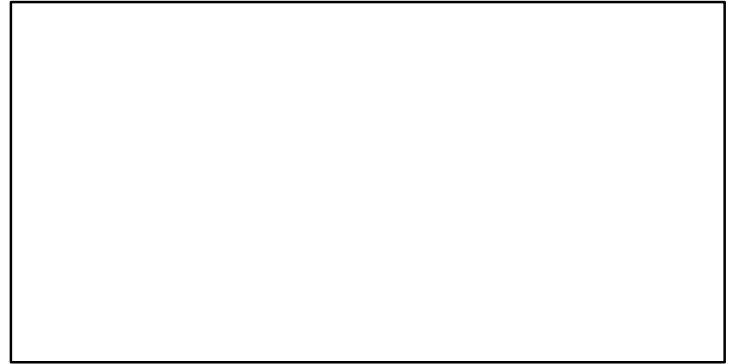
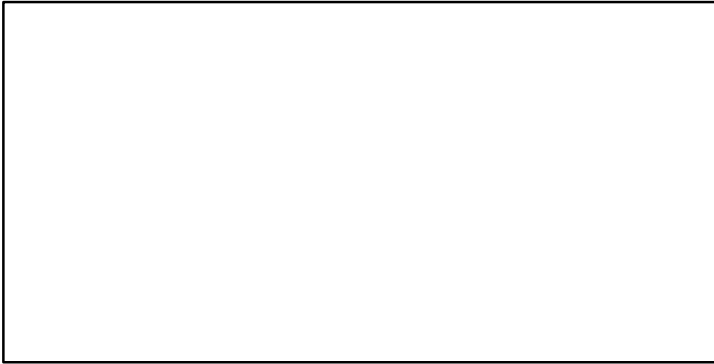
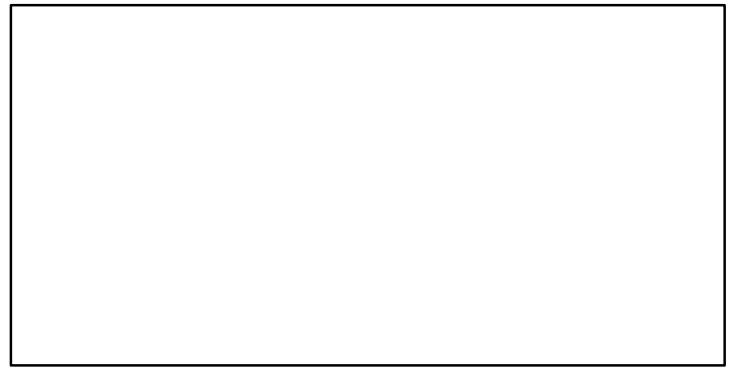
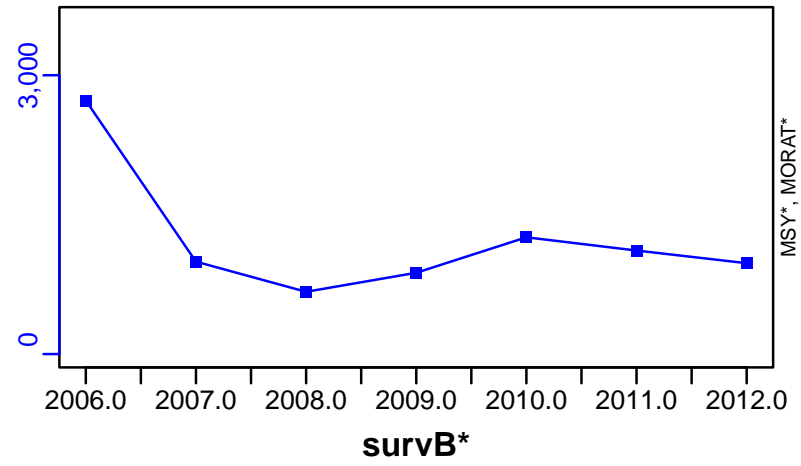
Recruits*



Anchovy Western Ionian Sea [ANCHMEDGSA19]

TC-MT, TL*, RecC* (2006–2012–OSIO)

TAC*, Cpair*, Cadv*

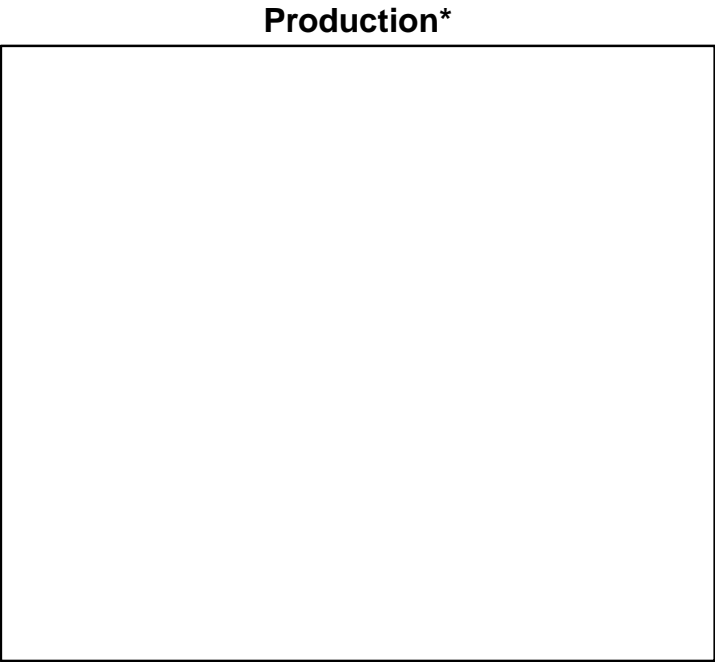
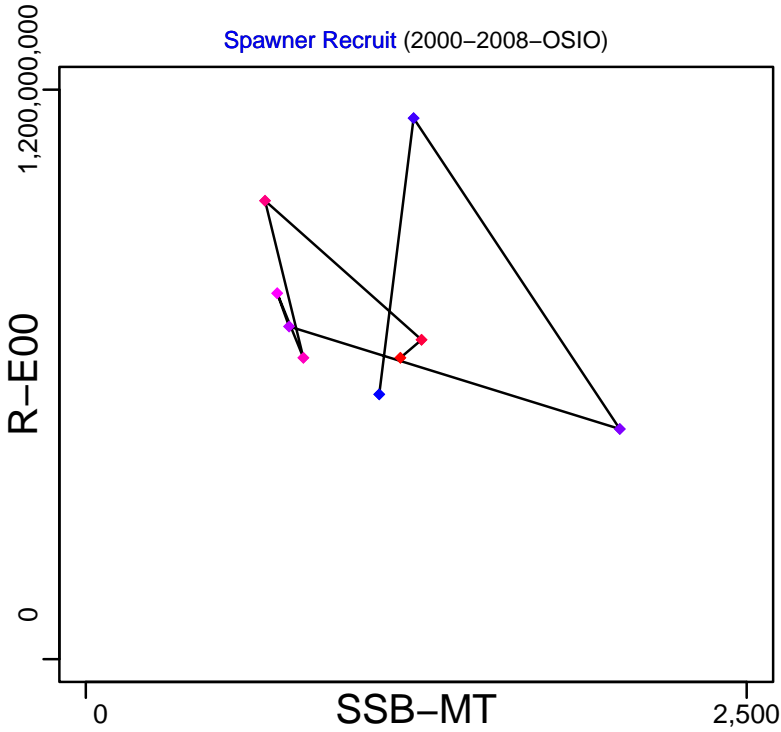
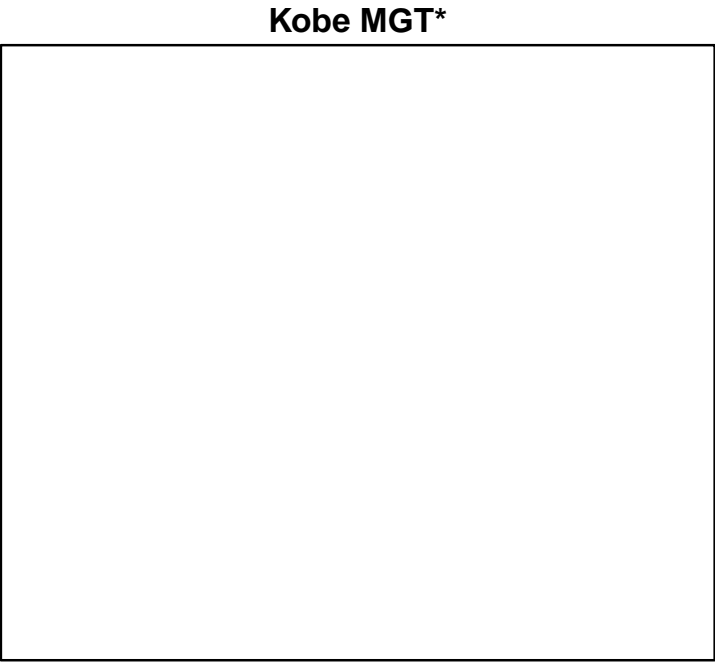
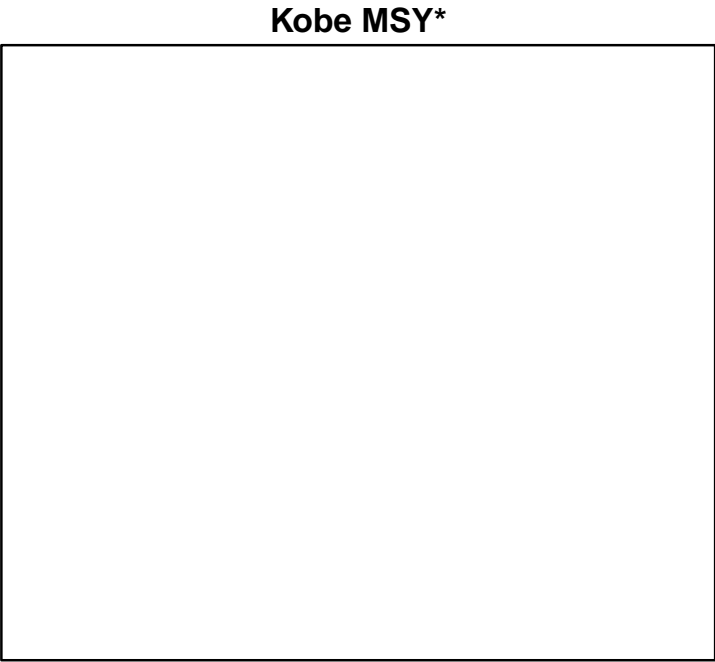


Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	STECF-ANCHMEDGSA20-2000-2008-OSIO
Area	Eastern Ionian Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2008

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2008	1190	-	-
TN	-	-	-	-	-
R	R-E00	2008	6.35×10^8	-	-
F	F-1/yr	2008	0.814	-	-
ER	-	-	-	-	-
TC	TC-MT	2008	1310		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



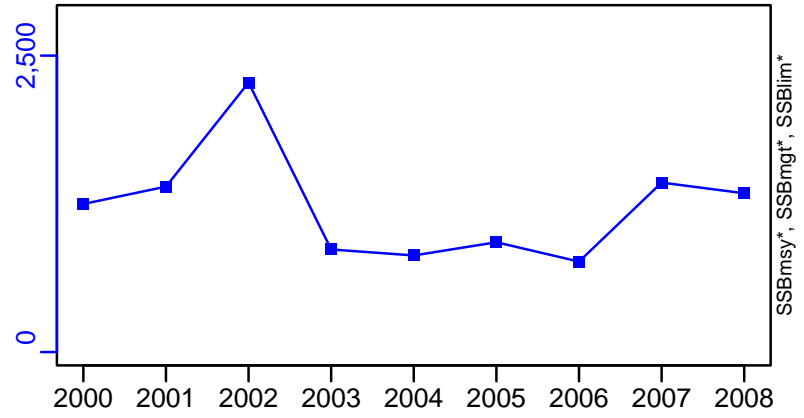
◆ Start Year ◆ End Year * No Data

Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

TB*



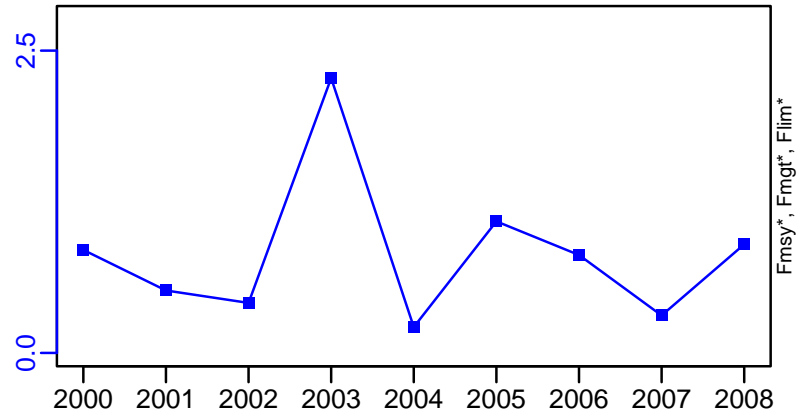
SSB-MT (2000–2008–OSIO)



TN *



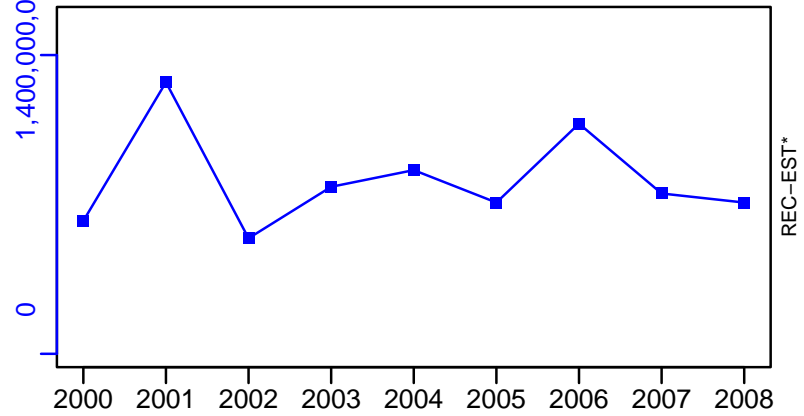
F-1/yr (2000–2008–OSIO)



ER*

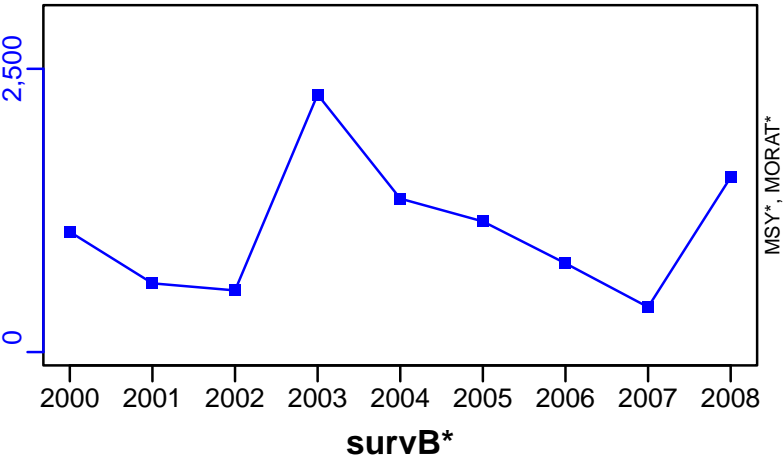


R-E00 (2000–2008–OSIO)



Anchovy Eastern Ionian Sea [ANCHMEDGSA20]

TC-MT, TL*, RecC* (2000–2008–OSIO)



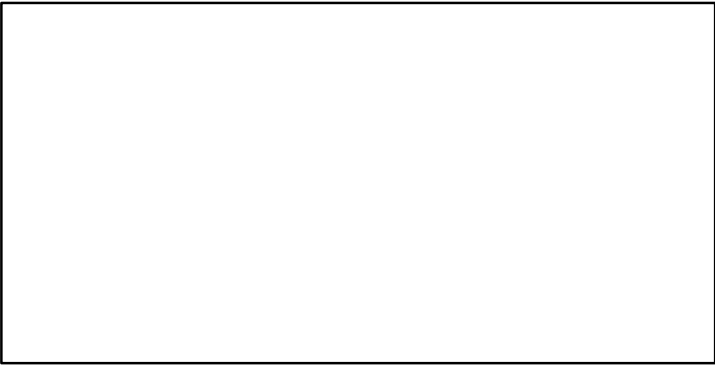
TAC*, Cpair*, Cadv*



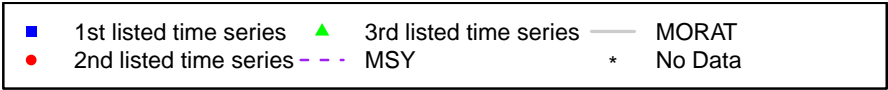
CPUE*



EFFORT*



CdivMSY*



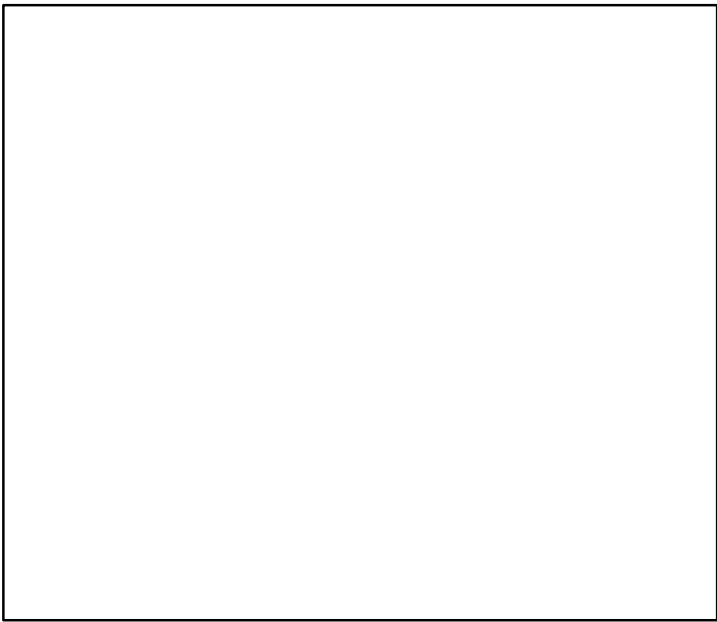
Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	STECF-ANCHMEDGSA22-23-2000-2016-MEDIMP2021-2
Area	Aegean Sea and Crete Island (GSA 22,23)
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2016	0.47
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2016	0.47
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2016	74,802	-	-
TN	-	-	-	-	-
R	R-E00	2016	26,458,735,000	-	-
F	F-1/yr	2016	0.464	-	-
ER	-	-	-	-	-
TC	TC-MT	2016	10,610		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2016	0.986		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	0.986		
ER/ERmgt	-	-	-		

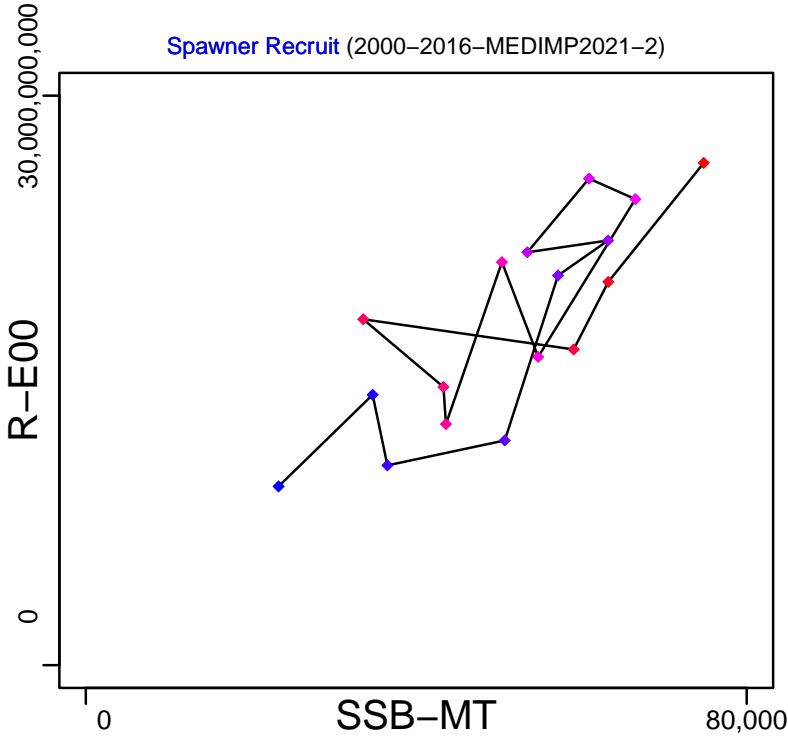
Kobe MSY*



Kobe MGT*



Spawner Recruit (2000-2016-MEDIMP2021-2)

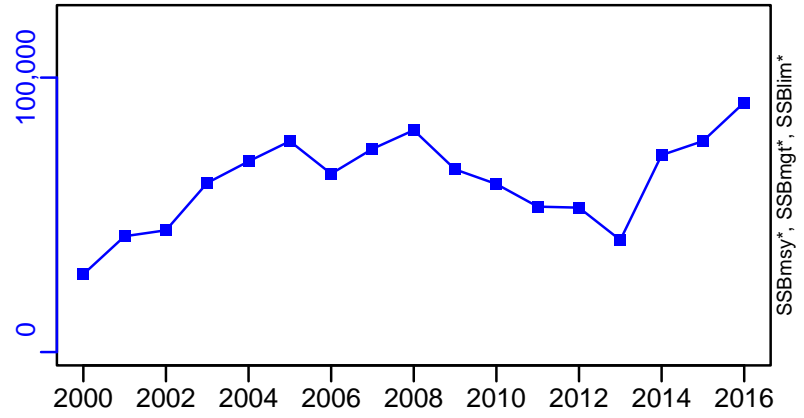


Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

TB*



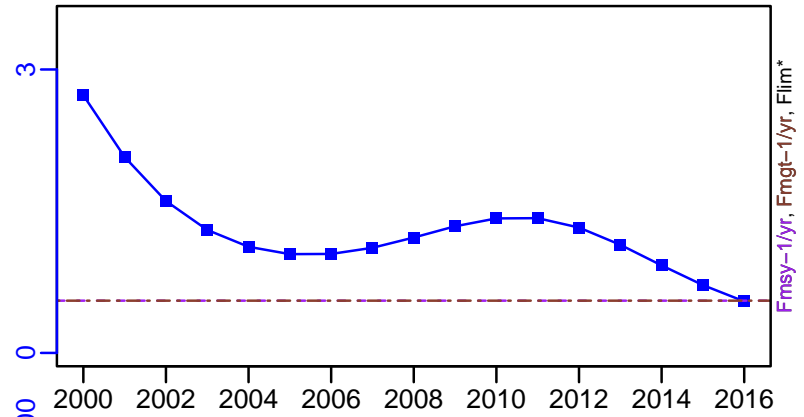
SSB-MT (2000-2016-MEDIMP2021-2)



TN *



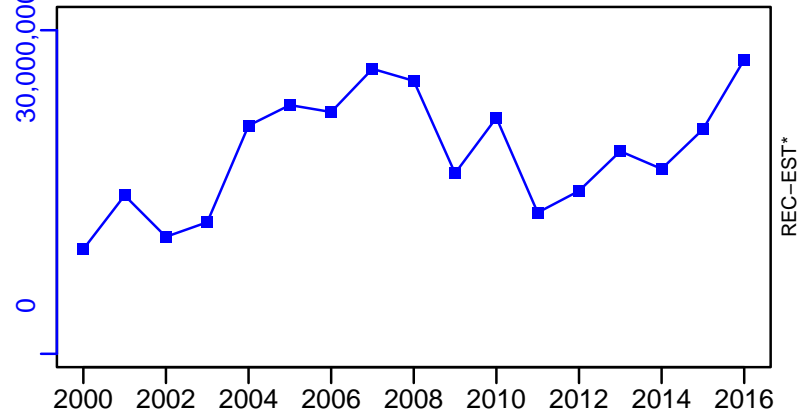
F-1/yr (2000-2016-MEDIMP2021-2)



ER*

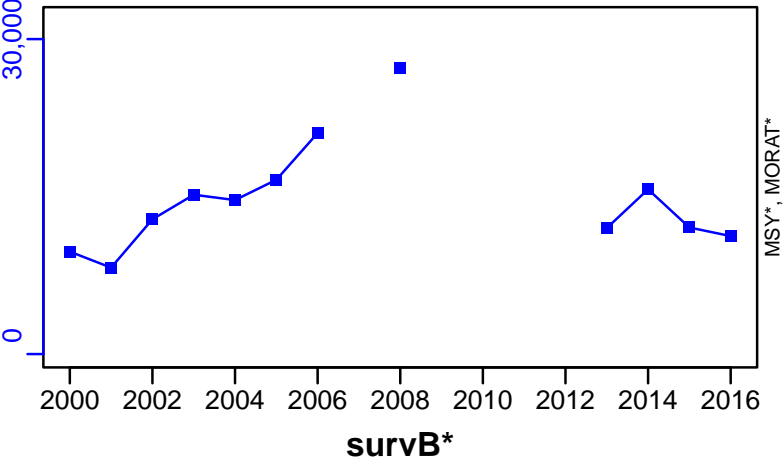


R-E00 (2000-2016-MEDIMP2021-2)

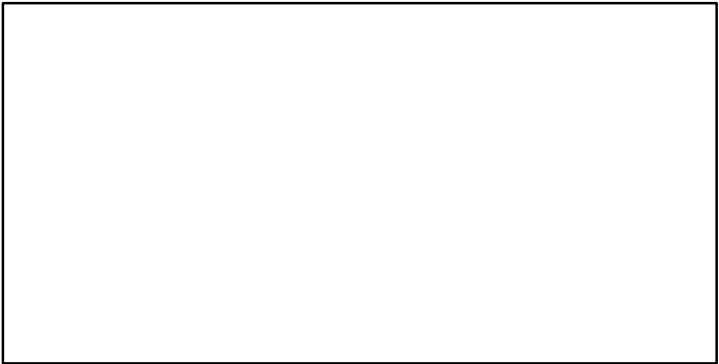


Anchovy Aegean Sea and Crete Island (GSA 22,23) [ANCHMEDGSA22-23]

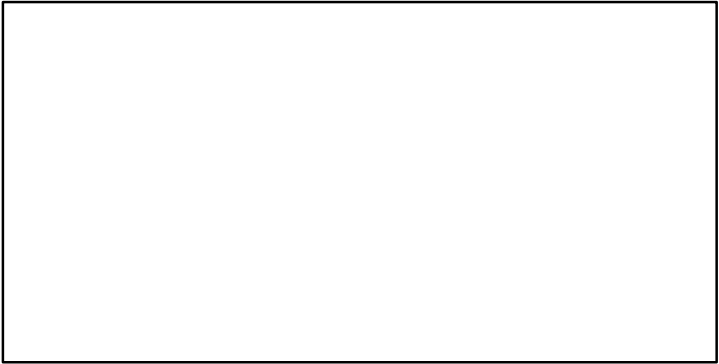
TC-MT, TL*, RecC* (2000-2016-MEDIMP2021-2)



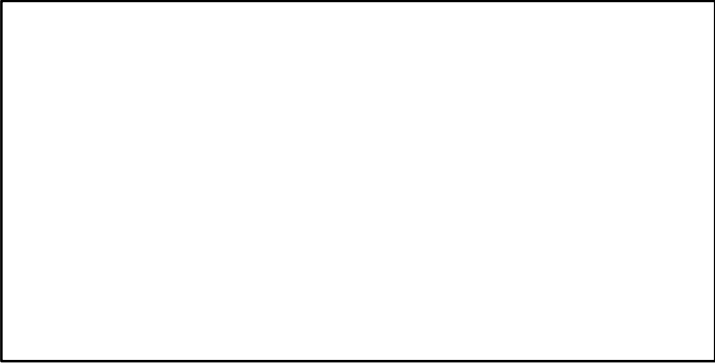
TAC*, Cpair*, Cadv*



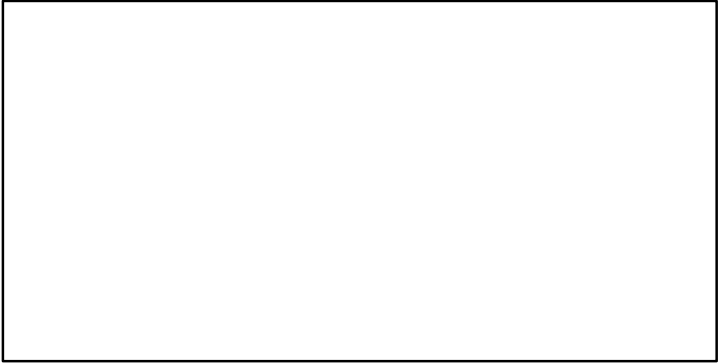
CPUE*



EFFORT*



CdivMSY*

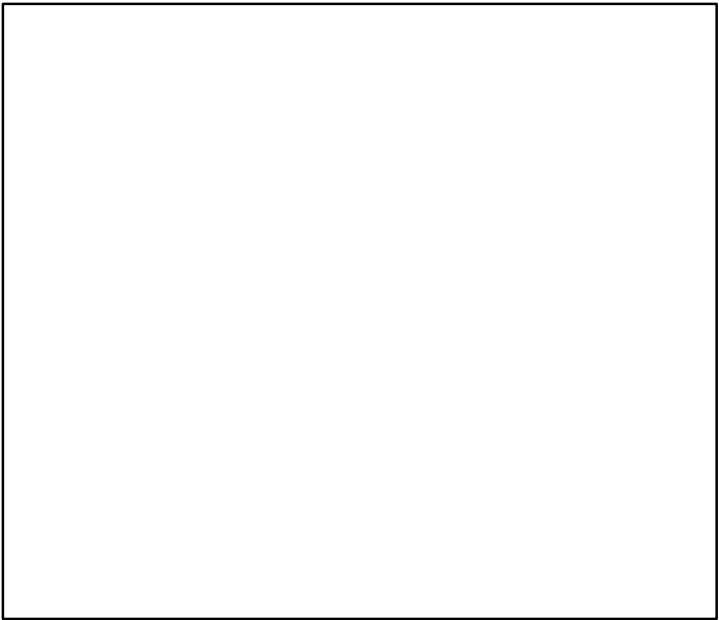
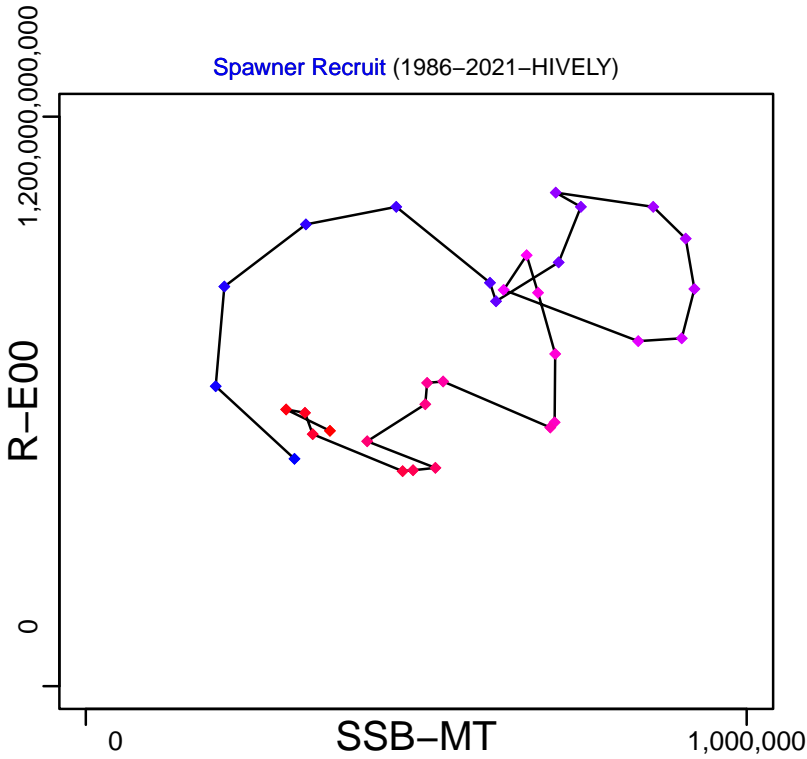
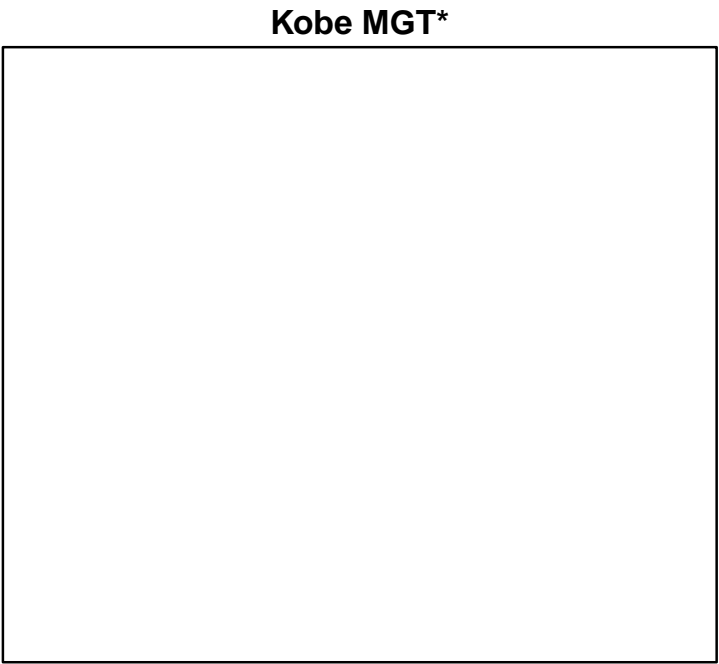
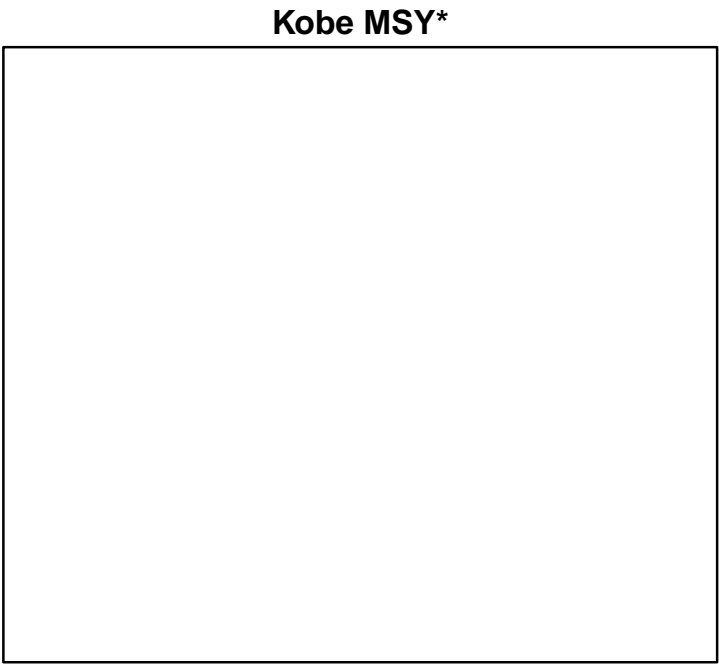


Anchovy Black Sea [ANCHMEDGSA29]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	SGSABS-ANCHMEDGSA29-1986-2021-HIVELY
Area	Black Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Subregional Group on Stock Assessment for the Black Sea
Asmts in RAM	2021, 2014, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2016	0.49
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2016	0.49
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	431,067	-	-
TN	-	-	-	-	-
R	R-E00	2021	5.38×10^{11}	-	2
F	F-1/yr	2021	1.39	-	-
ER	-	-	-	-	-
TC	TC-MT	2021	196,066		
TL	TL-MT	2021	196,066		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2016	1.289		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	1.289		
ER/ERmgt	-	-	-		

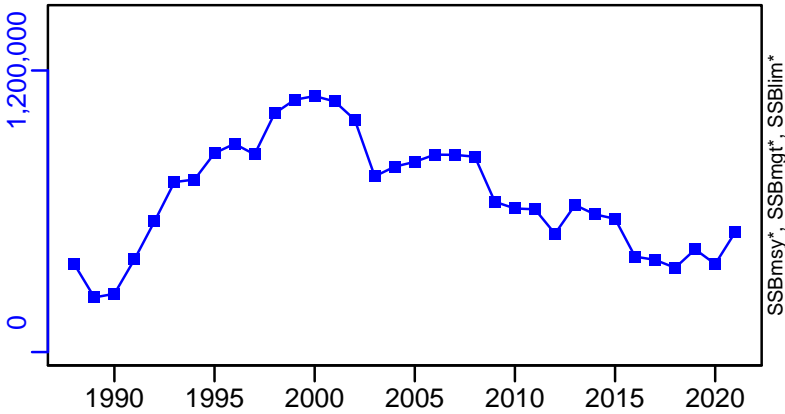


Anchovy Black Sea [ANCHMEDGSA29]

TB*



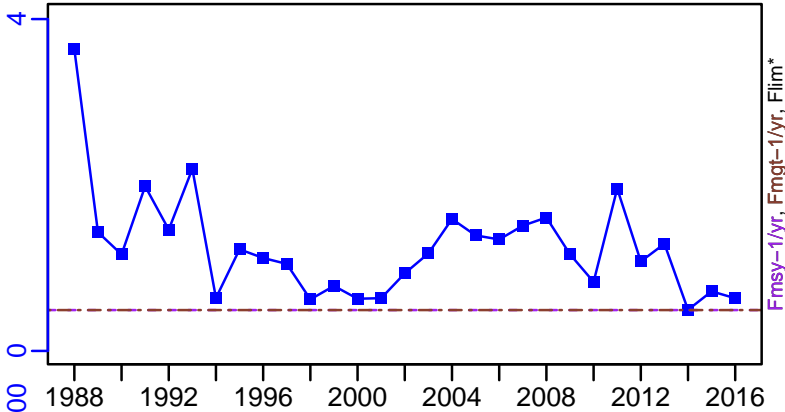
SSB-MT (1986-2021-HIVELY)



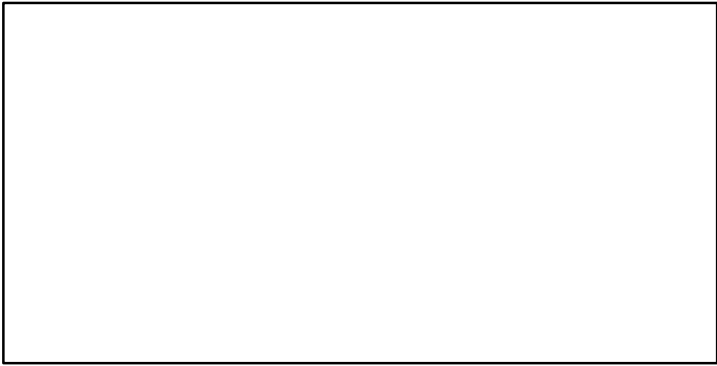
TN *



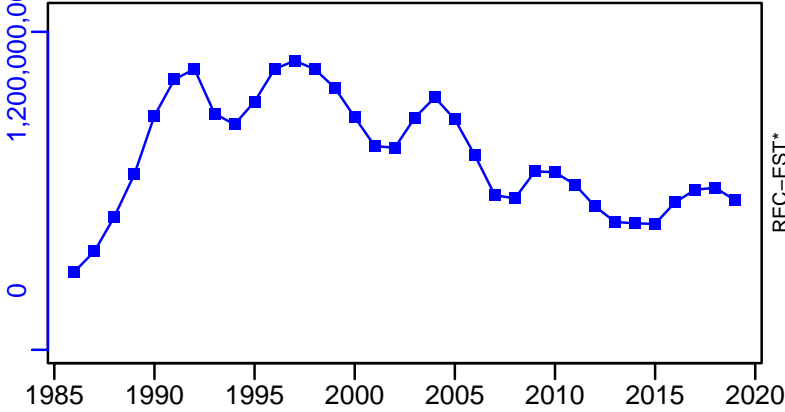
F-1/yr (1988-2016-MEDIMP2021-2)



ER*

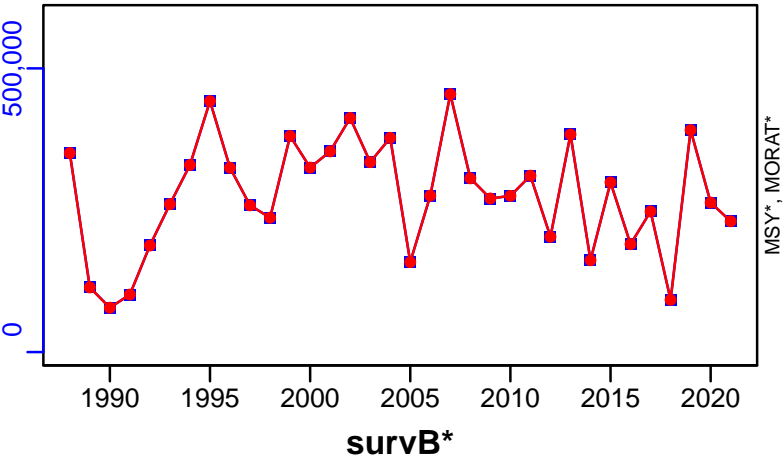


R-E00 (1986-2021-HIVELY)



Anchovy Black Sea [ANCHMEDGSA29]

TC-MT, TL-MT, RecC* (1986-2021-HIVELY)



TAC*, Cpair*, Cadv*



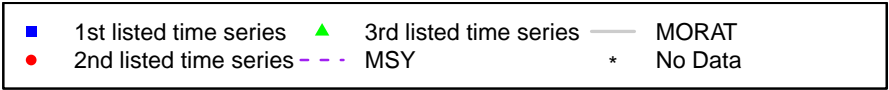
CPUE*



EFFORT*



CdivMSY*



Anchovy Northern Spain [ANCHMEDGSA6]

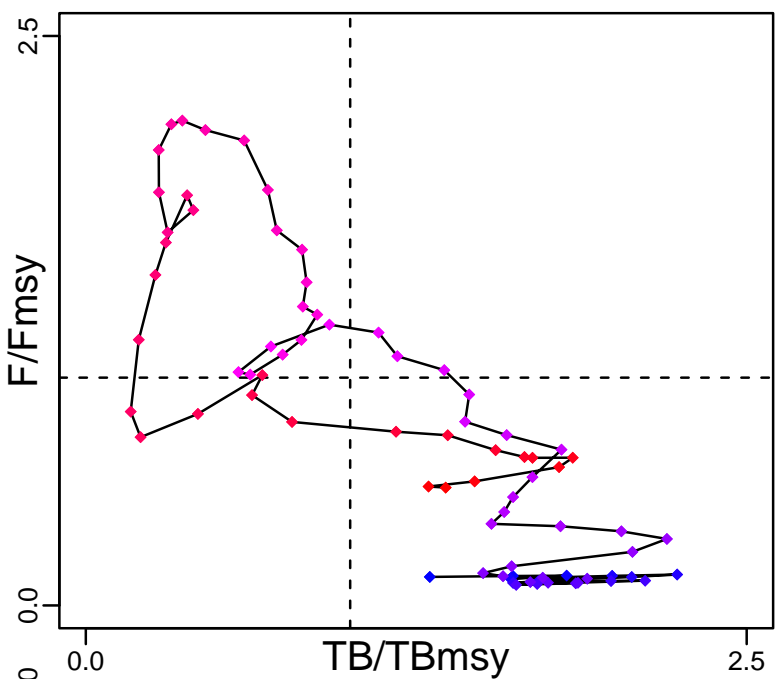
Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGSASP-ANCHMEDGSA6-1945-2021-HIVELY
Area	Northern Spain
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2015, 2016, 2009, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2021	48,346
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.331
ERmsy	-	-	-
TBmgt	TBmgt-MT	2021	48,346
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.331
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

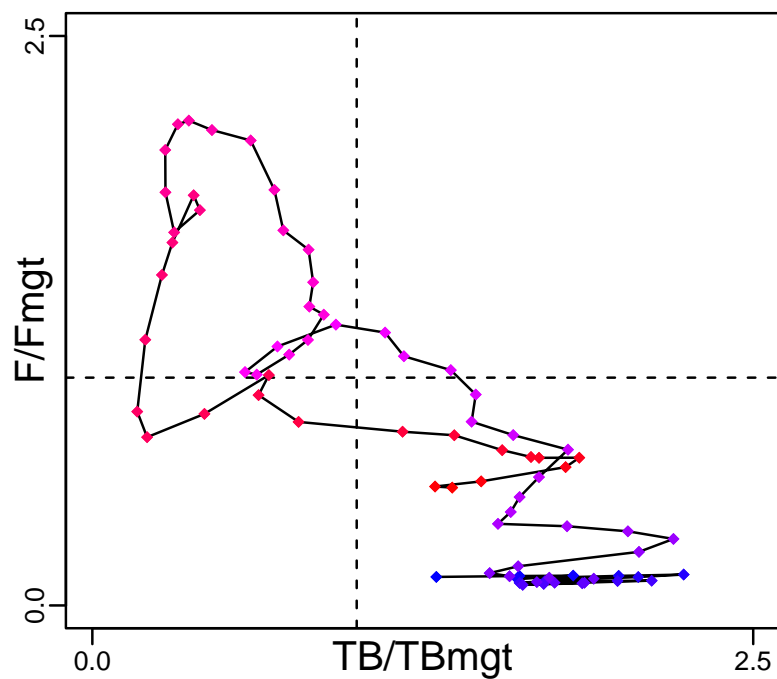
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	65,817	-	-
SSB	SSB-MT	2009	26,500	-	-
TN	-	-	-	-	-
R	R-E00	2009	1.38×10^9	-	-
F	F-1/yr	2021	0.171	-	-
ER	ER-calc-ratio	2021	0.166	-	-
TC	TC-MT	2016	17,466		
TL	TL-MT	2021	10,920		
TB/TBmsy	TB-MT/TBmsy-MT	2021	1.361		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	0.517		
ER/ERmsy	-	-	-		
TB/TBmgt	TB-MT/TBmgt-MT	2021	1.361		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.517		
ER/ERmgt	-	-	-		

Anchovy Northern Spain [ANCHMEDGSA6]

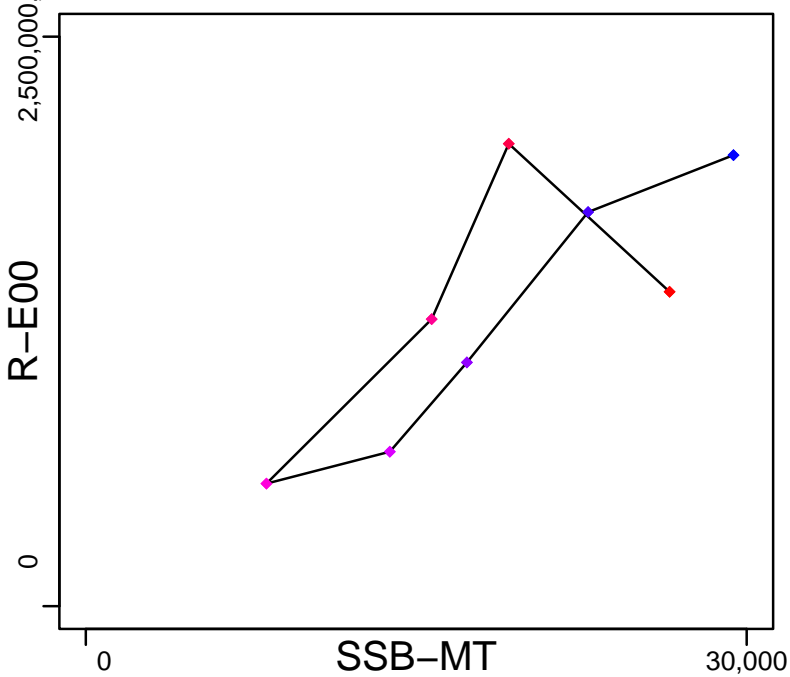
Kobe MSYpref (1945–2021–HIVELY)



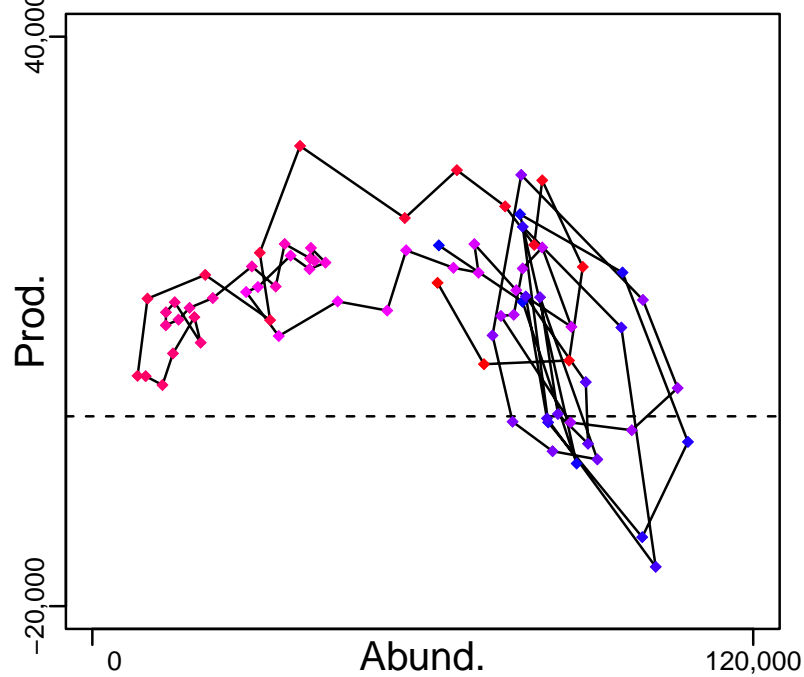
Kobe MGTpref (1945–2021–HIVELY)



Spawner Recruit (2002–2009–OSIO)

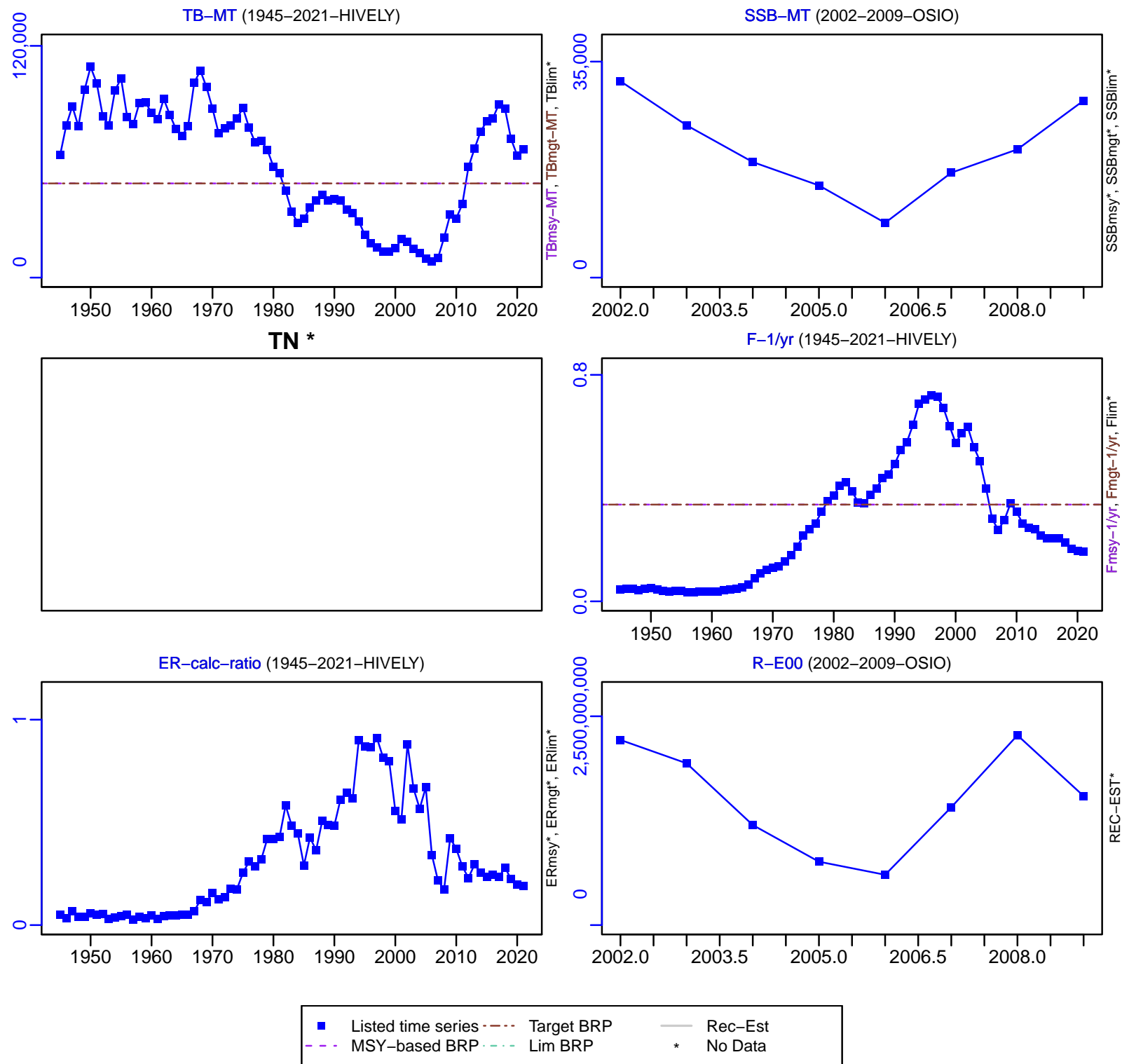


Production (1945–2021–HIVELY)



◆ Start Year ◆ End Year * No Data

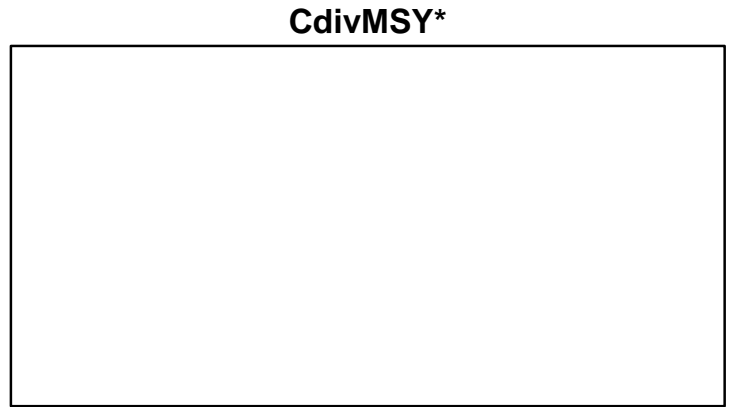
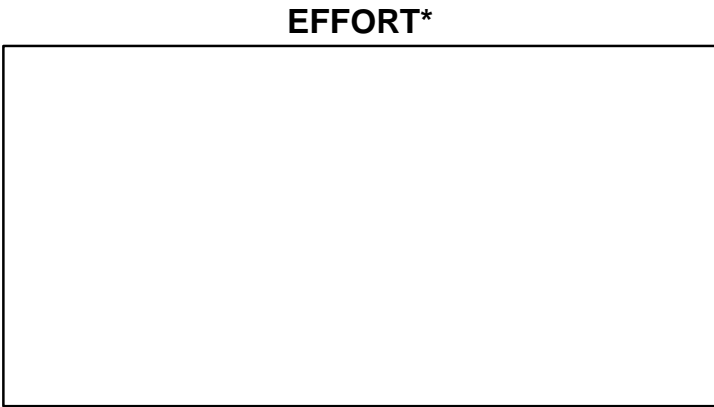
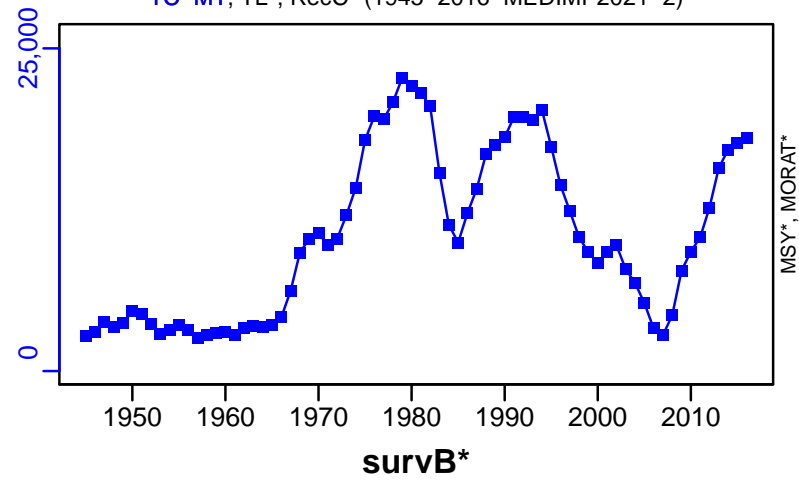
Anchovy Northern Spain [ANCHMEDGSA6]



Anchovy Northern Spain [ANCHMEDGSA6]

TC-MT, TL*, RecC* (1945-2016-MEDIMP2021-2)

TAC*, Cpair*, Cadv*



Anchovy Gulf of Lions [ANCHMEDGSA7]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGSASP-ANCHMEDGSA7-1993-2021-HIVELY
Area	Gulf of Lions
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2012, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.49
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.49
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	TBlim-MT	2021	22,889
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	42,811	-	-
SSB	SSB-MT	2021	135,153	-	-
TN	-	-	-	-	-
R	R-E00	2021	38,688,921,000	-	0
F	F-1/yr	2021	0.008	-	-
ER	ER-calc-ratio	2021	0.038	-	-
TC	-	-	-		
TL	TL-MT	2021	696		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	0.016		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.016		
ER/ERmgt	-	-	-		

Anchovy Gulf of Lions [ANCHMEDGSA7]

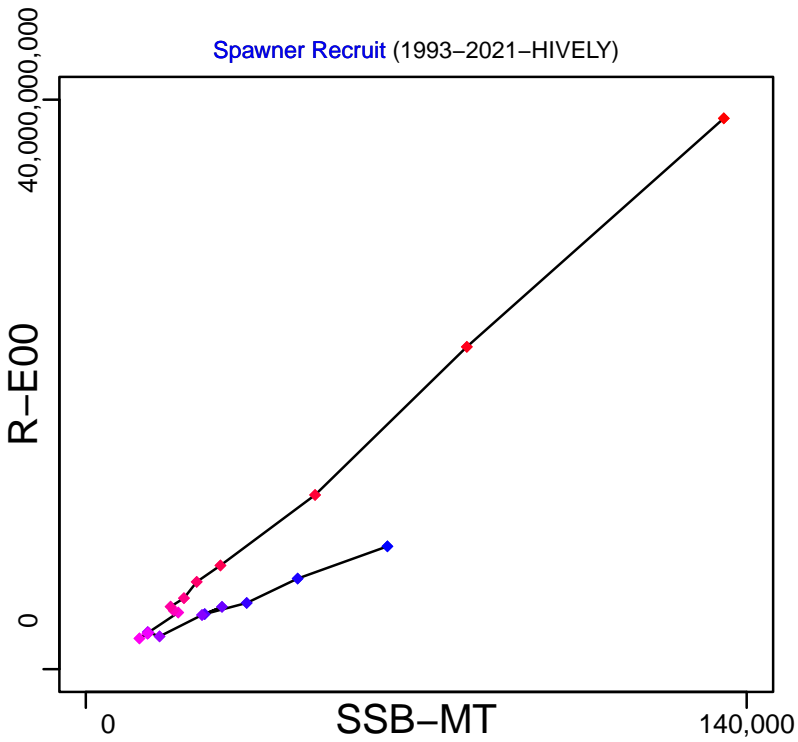
Kobe MSY*



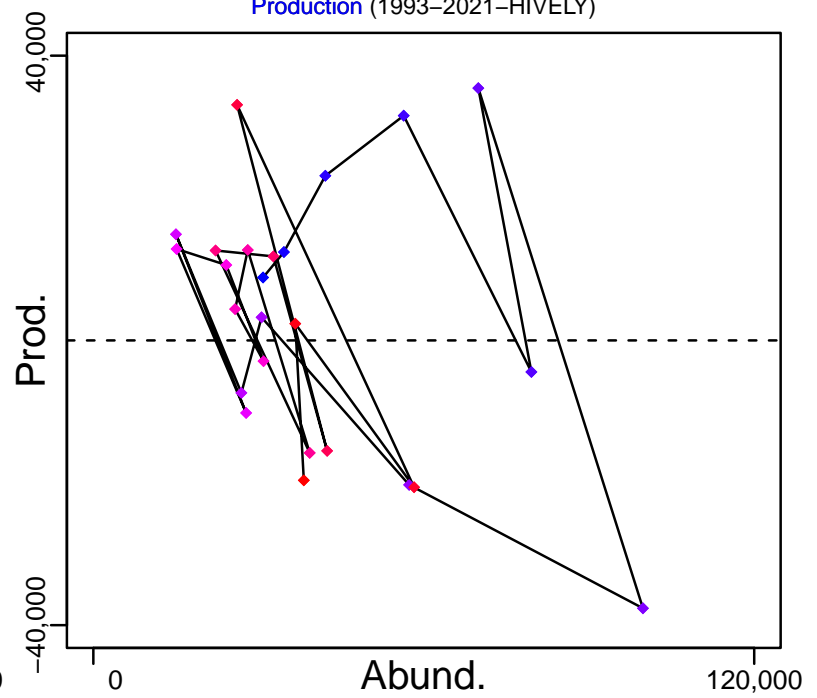
Kobe MGT*



Spawner Recruit (1993–2021–HIVELY)



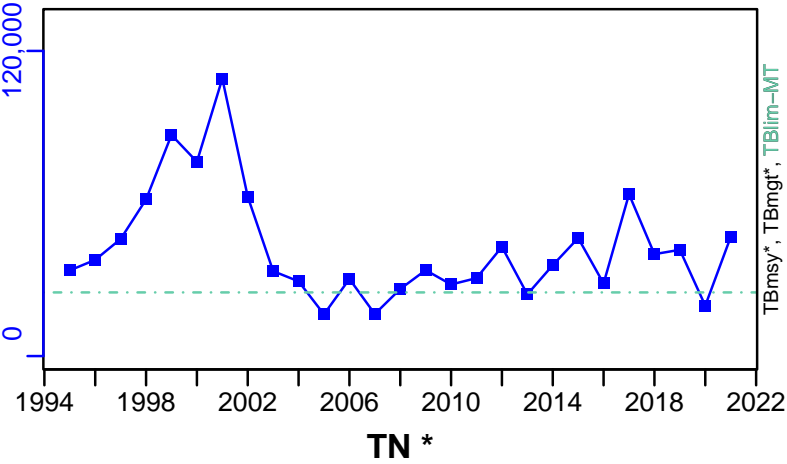
Production (1993–2021–HIVELY)



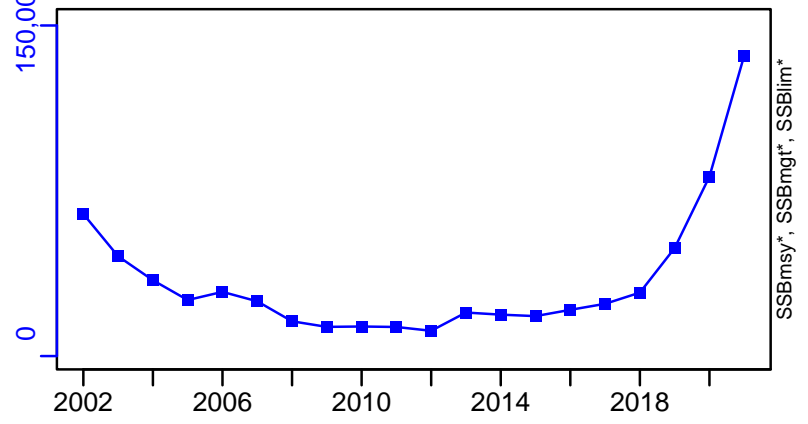
◆ Start Year ◆ End Year * No Data

Anchovy Gulf of Lions [ANCHMEDGSA7]

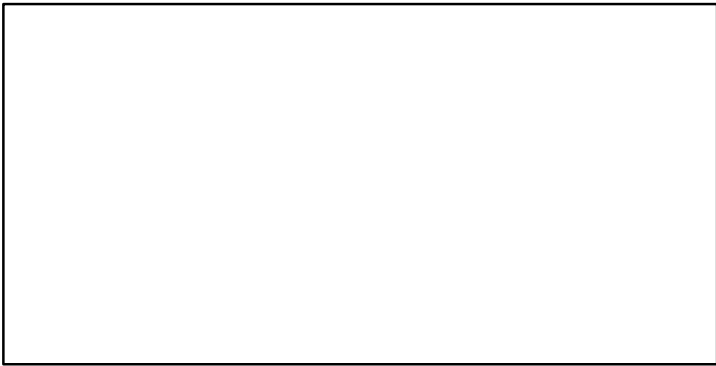
TB-MT (1993–2021–HIVELY)



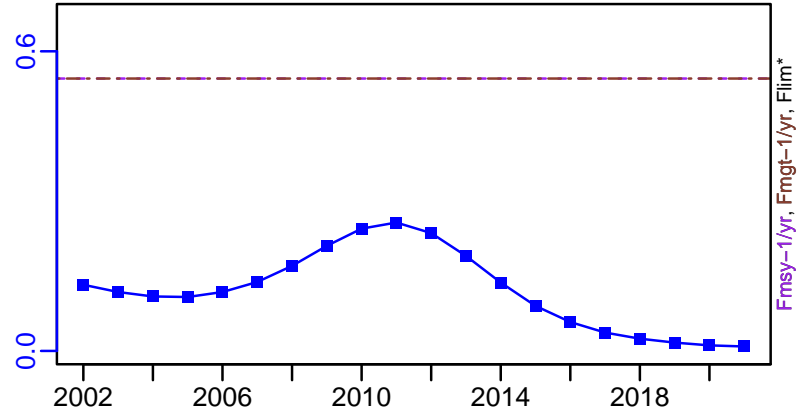
SSB-MT (1993–2021–HIVELY)



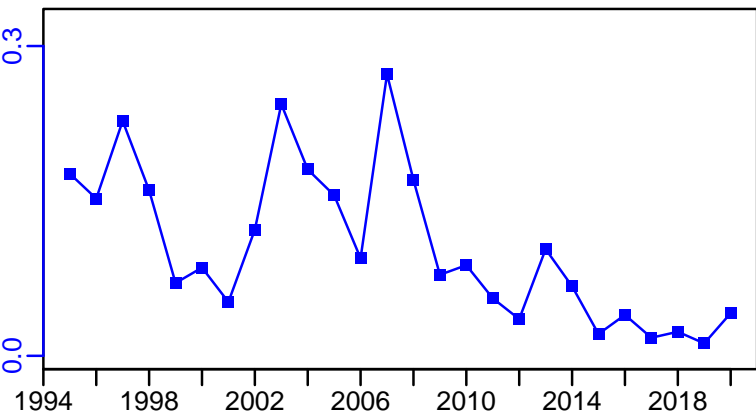
TN *



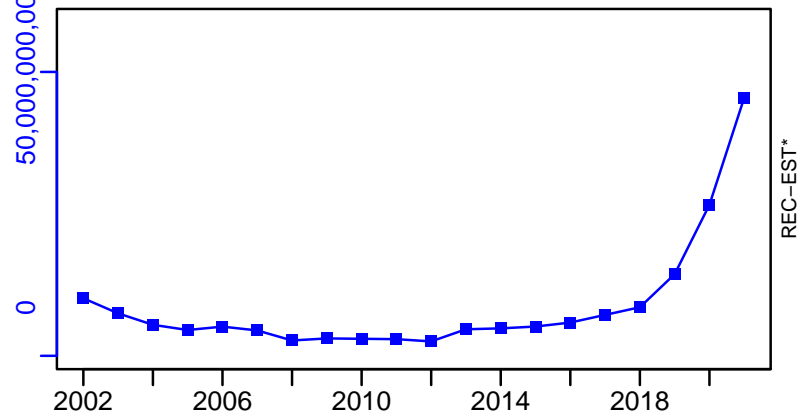
F-1/yr (1993–2021–HIVELY)



ER-calc-ratio (1993–2021–HIVELY)

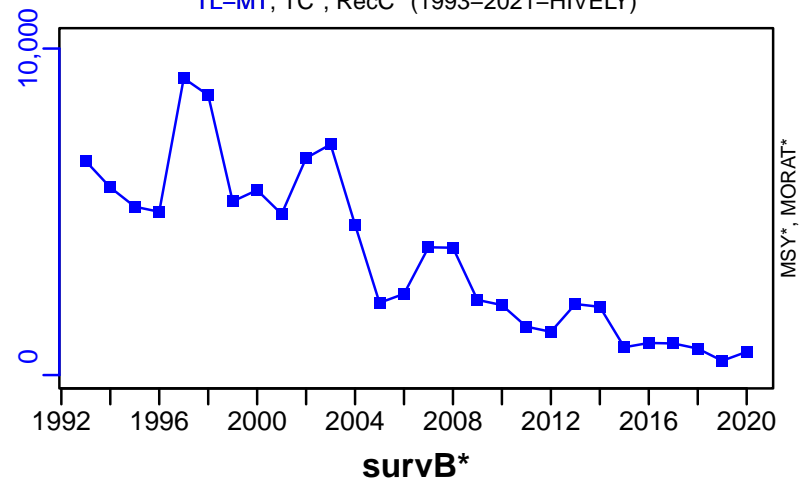


R-E00 (1993–2021–HIVELY)



Anchovy Gulf of Lions [ANCHMEDGSA7]

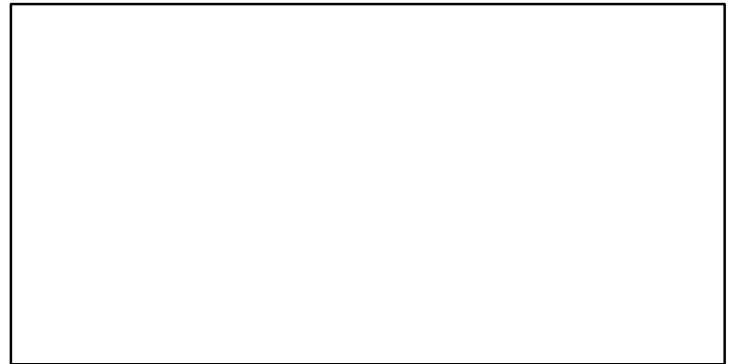
TL-MT, TC*, RecC* (1993–2021–HIVELY)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

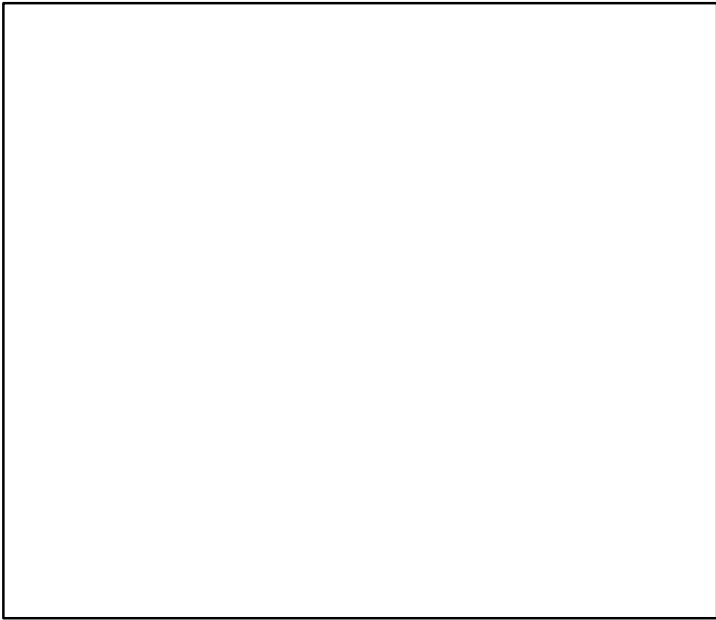
Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	STECF-ANCHMEDGSA9-11-2009-2016-MEDIMP2021-2
Area	Geographical Sub-Areas 9-11
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2016	0.22
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2016	0.22
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2016	39,011	-	-
TN	-	-	-	-	-
R	R-E00	2016	6,150,093,000	-	-
F	F-1/yr	2016	0.336	-	-
ER	-	-	-	-	-
TC	TC-MT	2016	8931		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2016	1.527		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	1.527		
ER/ERmgt	-	-	-		

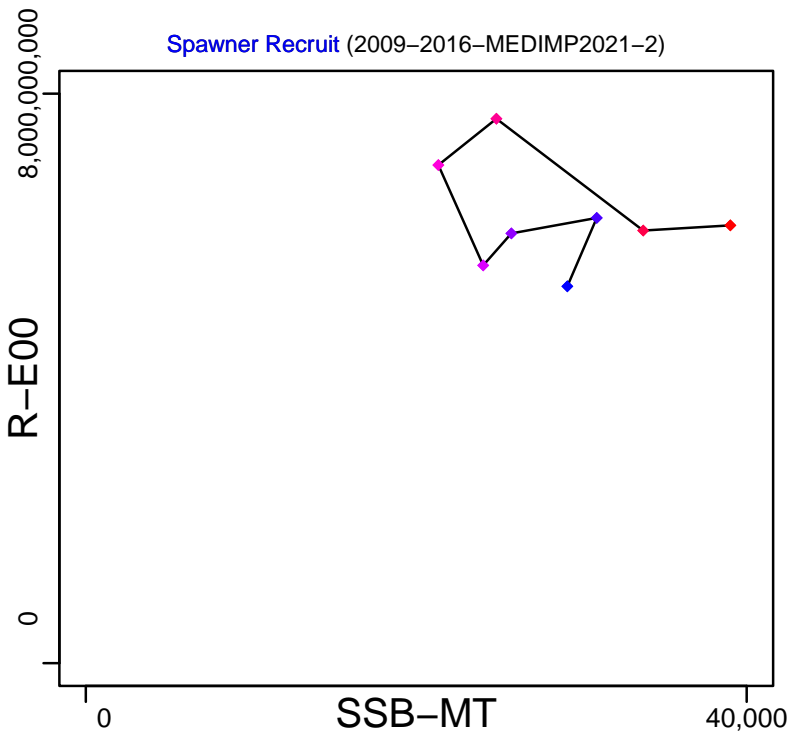
Kobe MSY*



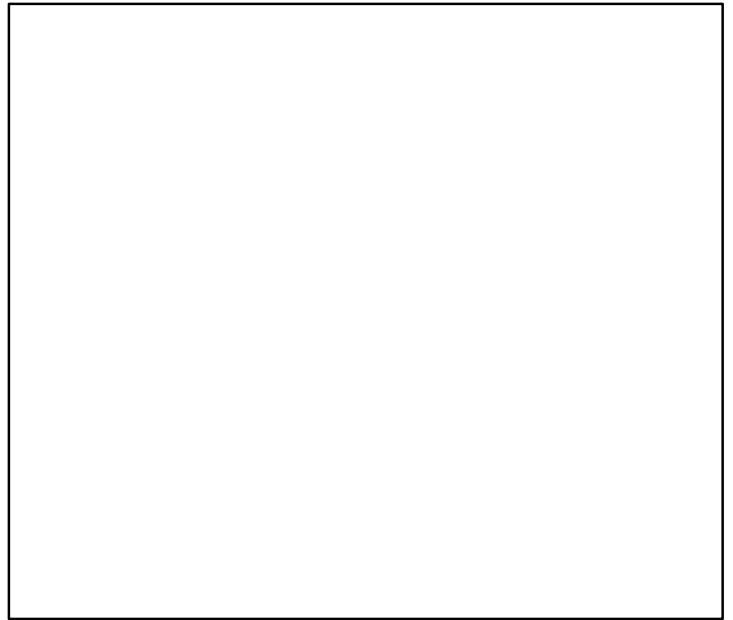
Kobe MGT*



Spawner Recruit (2009–2016–MEDIMP2021–2)



Production*



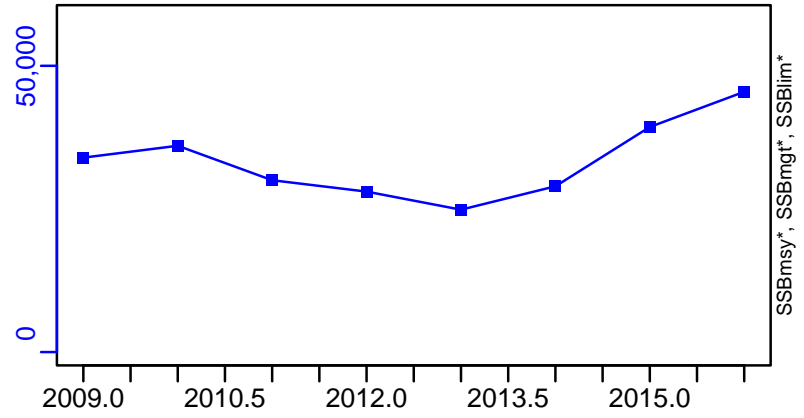
◆ Start Year ◆ End Year * No Data

Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

TB*



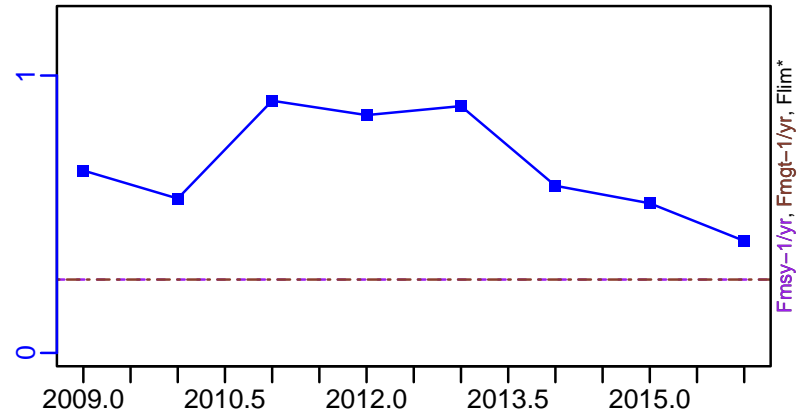
SSB-MT (2009-2016-MEDIMP2021-2)



TN *



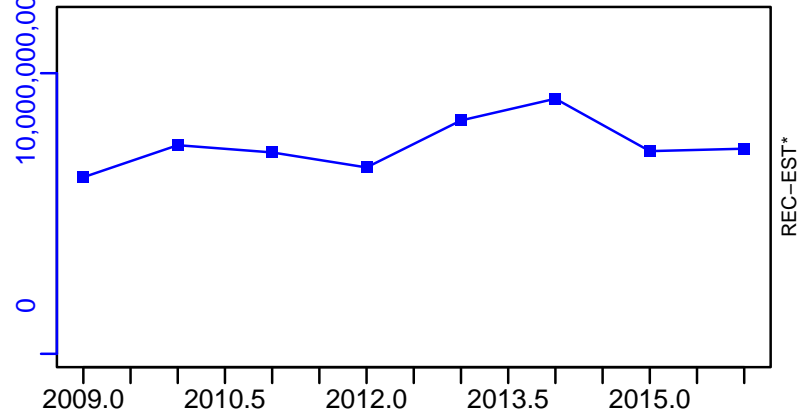
F-1/yr (2009-2016-MEDIMP2021-2)



ER*

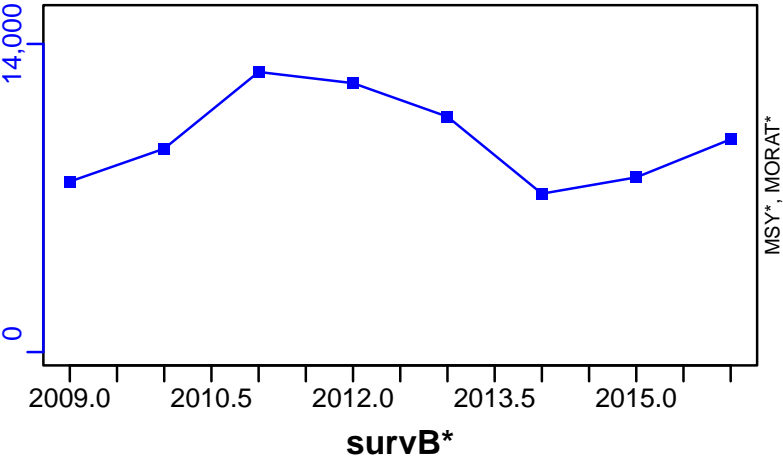


R-E00 (2009-2016-MEDIMP2021-2)



Anchovy Geographical Sub-Areas 9-11 [ANCHMEDGSA9-11]

TC-MT, TL*, RecC* (2009-2016-MEDIMP2021-2)



TAC*, Cpair*, Cadv*



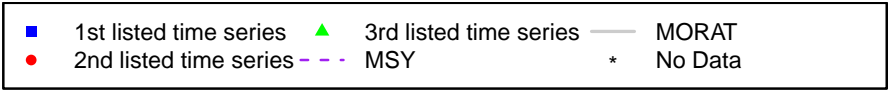
CPUE*



EFFORT*



CdivMSY*

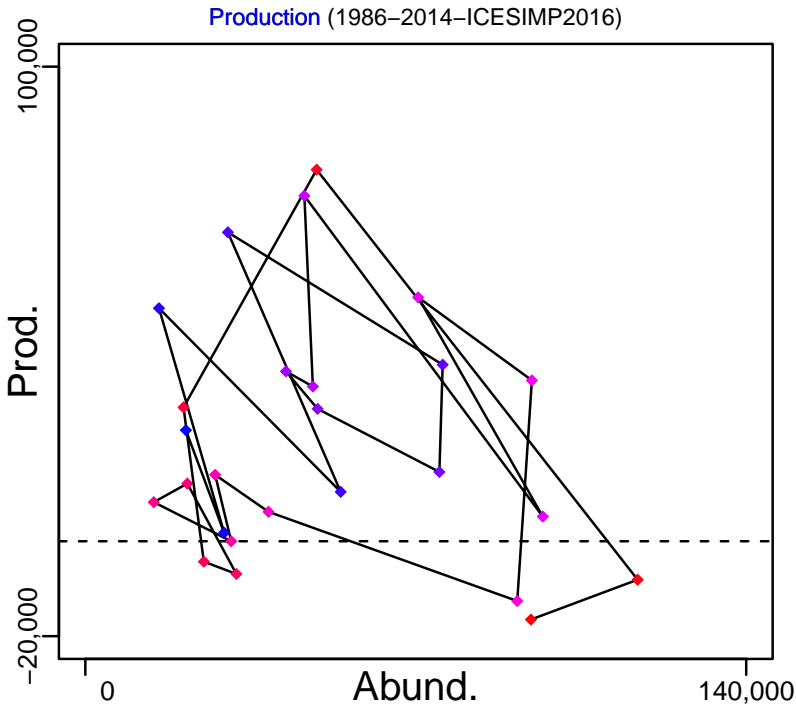
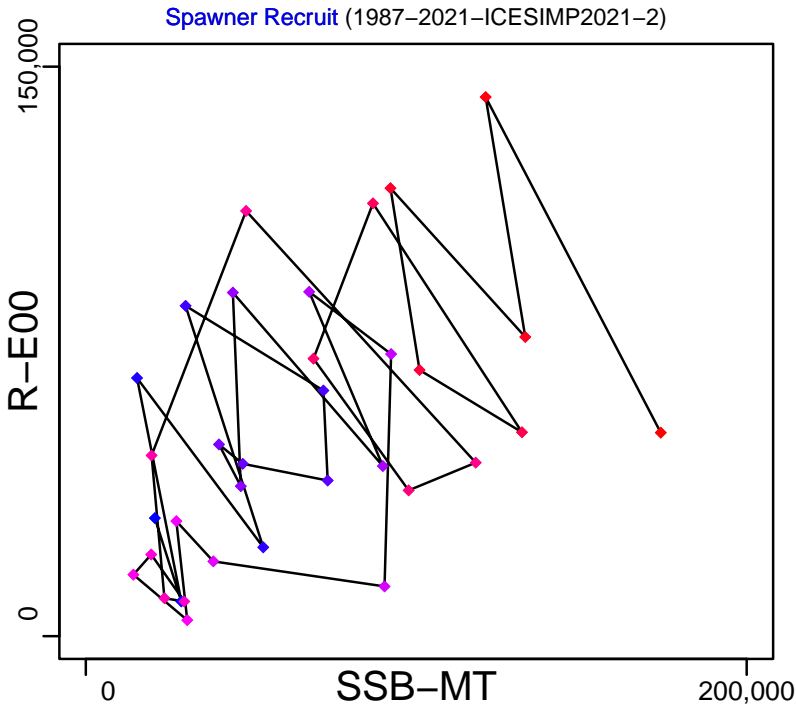
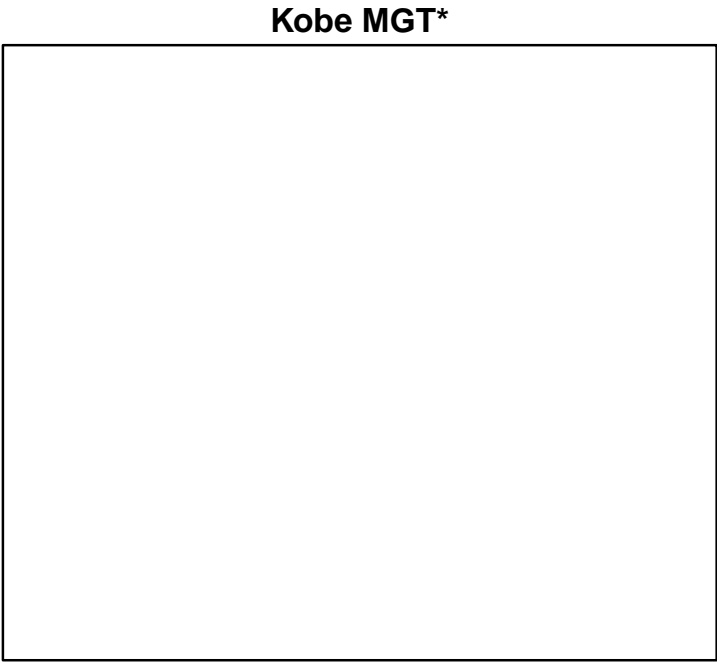
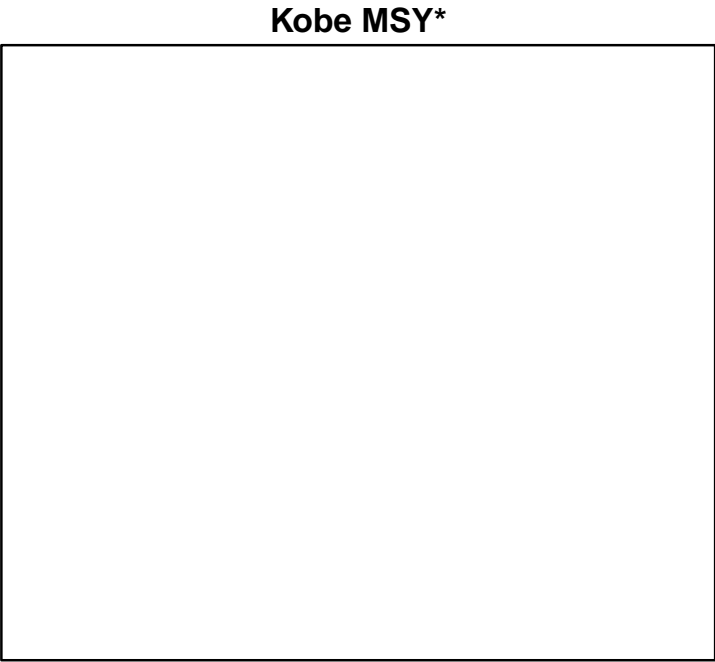


Anchovy Bay of Biscay [ANCHOBAYB]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	WGHANSA-ANCHOBAYB-1987-2021-ICESIMP2021-2
Area	Bay of Biscay
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Southern Horse Mackerel, Anchovy and Sardine
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2019, 2021, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2021	89,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2007	1.2
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	21,000
Flim	-	-	-
ERlim	-	-	-

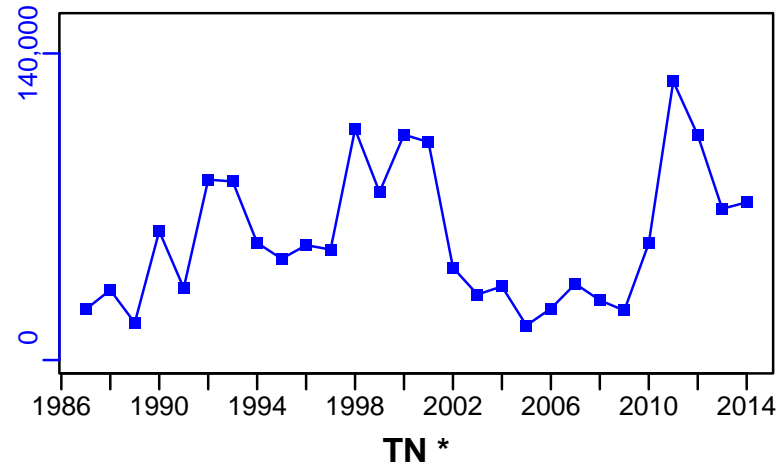
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2014	66,200	Both	-
SSB	SSB-MT	2021	174,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	53,600	-	1
F	F-relative	2021	0.149	-	-
ER	ER-ratio	2019	0.184	-	2+
TC	TC-MT	2021	25,900		
TL	TL-MT	2021	25,200		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2021	1.955		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



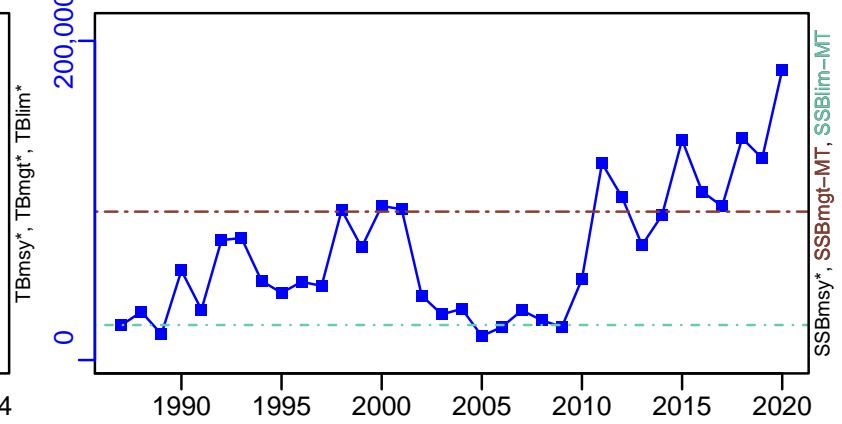
◆ Start Year ◆ End Year * No Data

Anchovy Bay of Biscay [ANCHOBAYB]

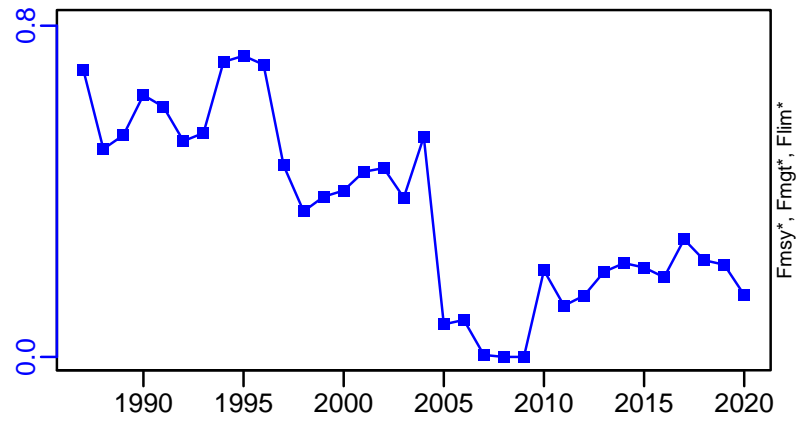
TB-MT (1986–2014–ICESIMP2016)



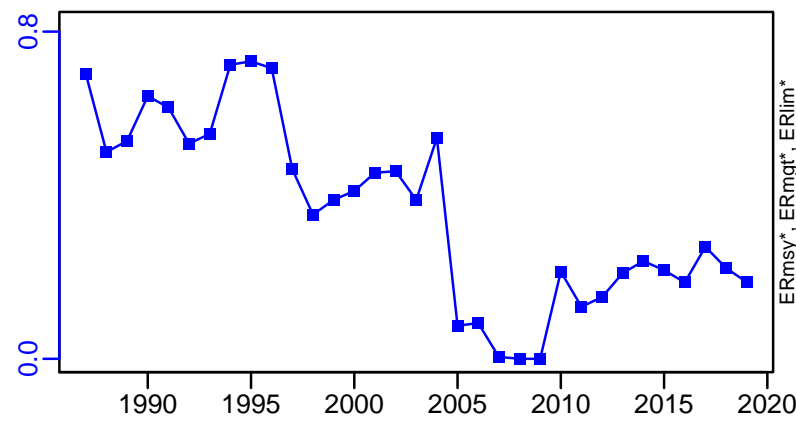
SSB-MT (1987–2021–ICESIMP2021-2)



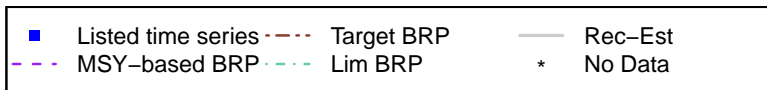
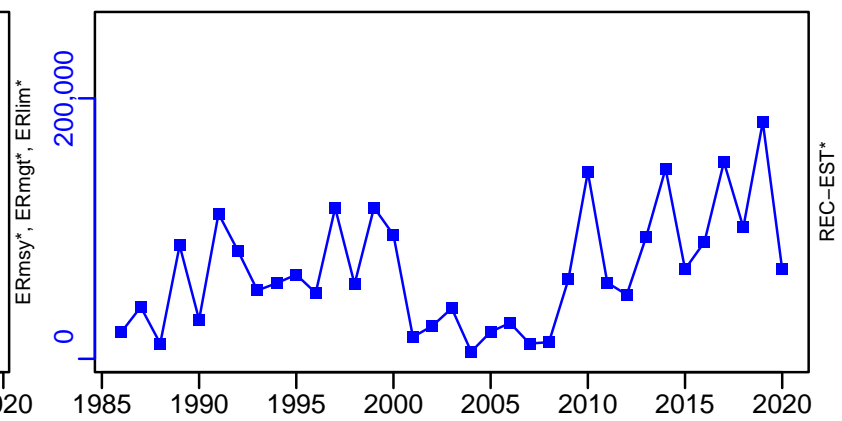
F-relative (1987–2021–ICESIMP2021-2)



ER-ratio (1986–2019–ICESIMP2021)

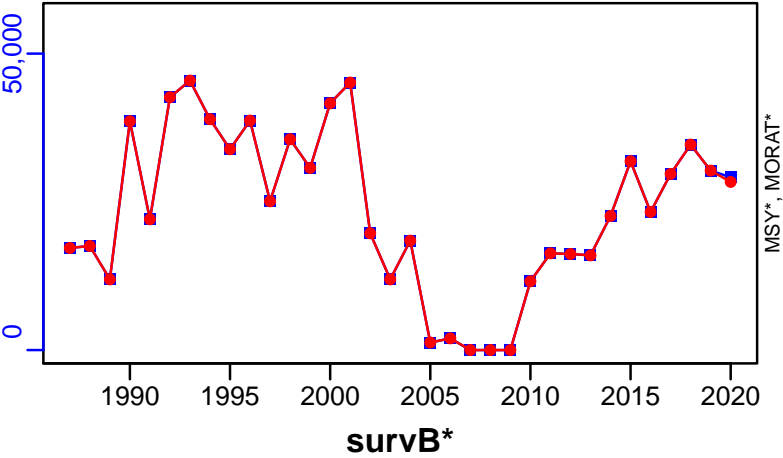


R-E00 (1987–2021–ICESIMP2021-2)

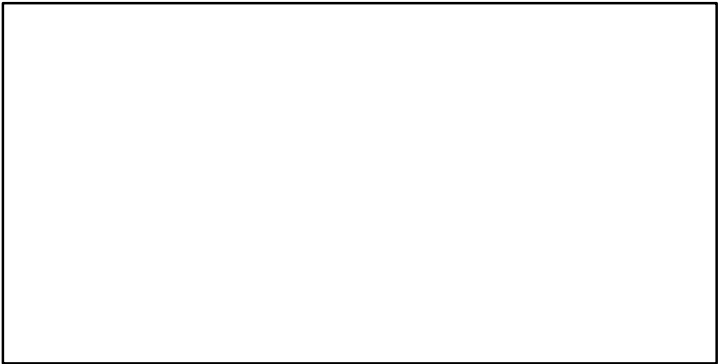


Anchovy Bay of Biscay [ANCHOBAYB]

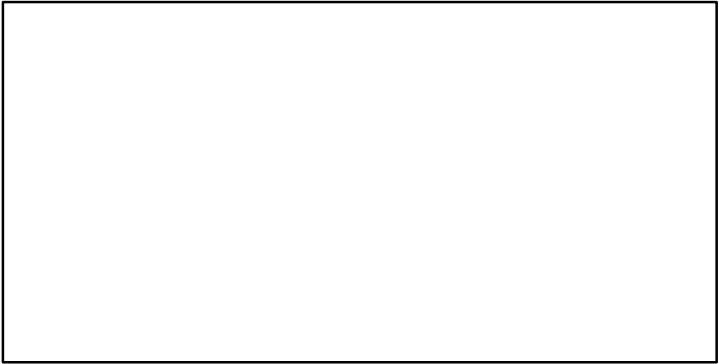
TC-MT, TL-MT, RecC* (1987-2021-ICESIMP2021-2)



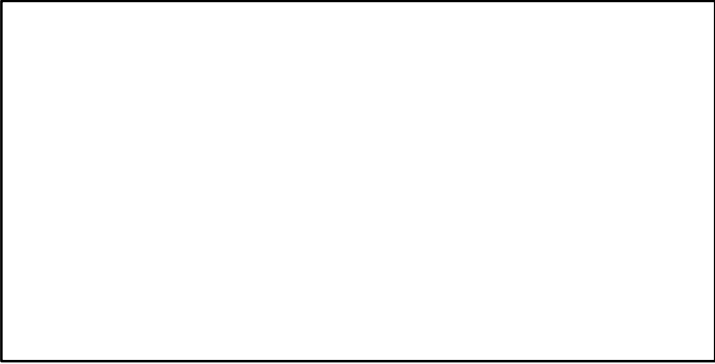
TAC*, Cpair*, Cadv*



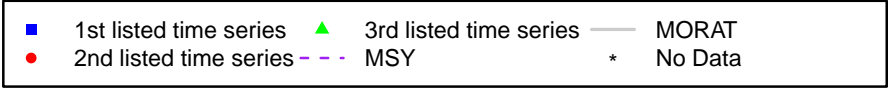
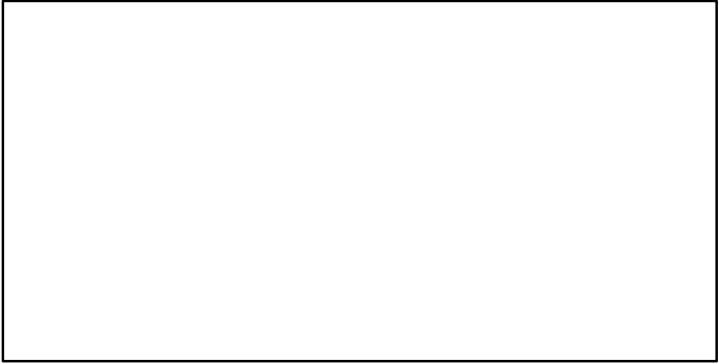
CPUE*



EFFORT*



CdivMSY*



Anchovy Central West Africa Cote Divoire-Benin [ANCHOCWACIV-BEN]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	FAO-SPNWA-ANCHOCWACIV-BEN-1990-2017-ASHBROOK
Area	Central West Africa Cote Divoire-Benin
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	49,713		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

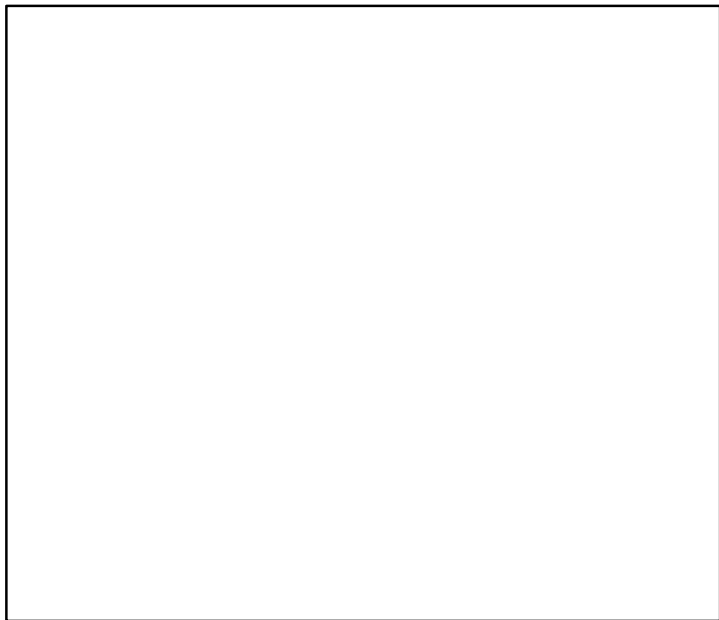
Kobe MSY*



Kobe MGT*



Spawner Recruit*



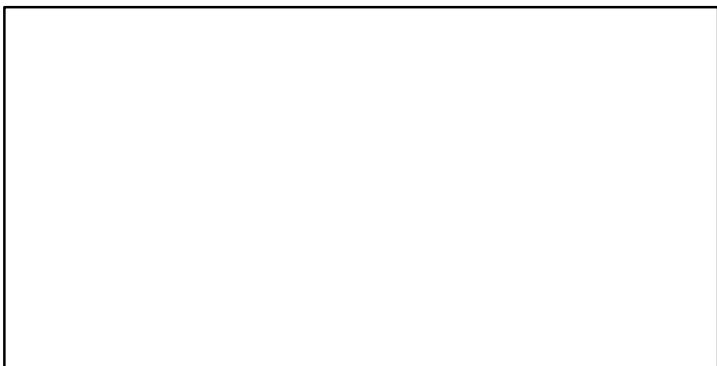
Production*



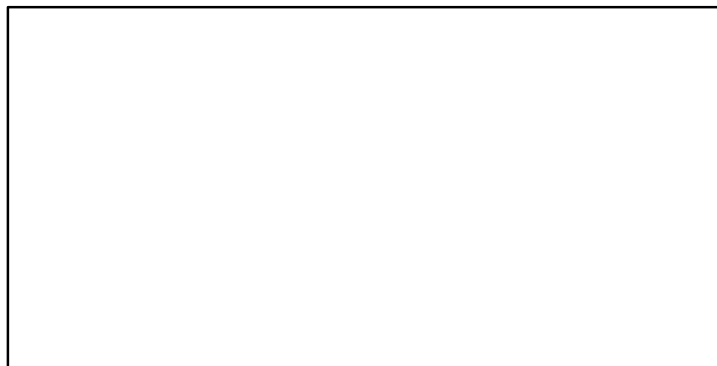
◆ Start Year ◆ End Year * No Data

Anchovy Central West Africa Cote Divoire–Benin [ANCHOCWACIV–BEN]

TB*



SSB*



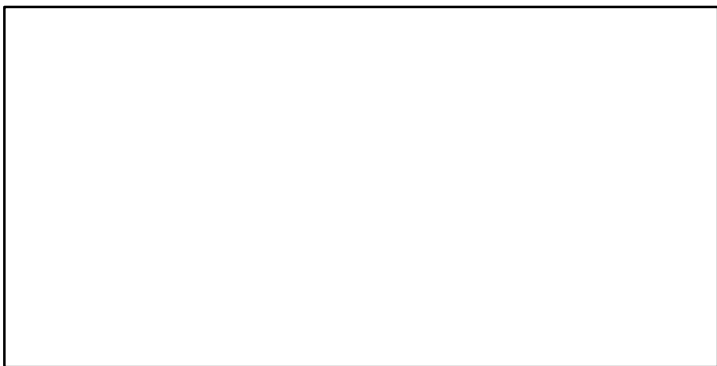
TN *



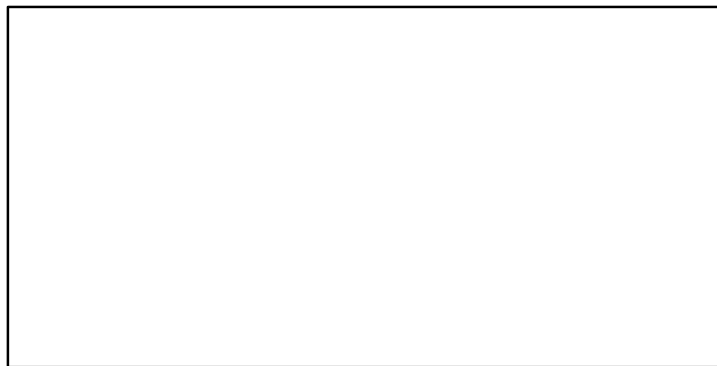
F*



ER*

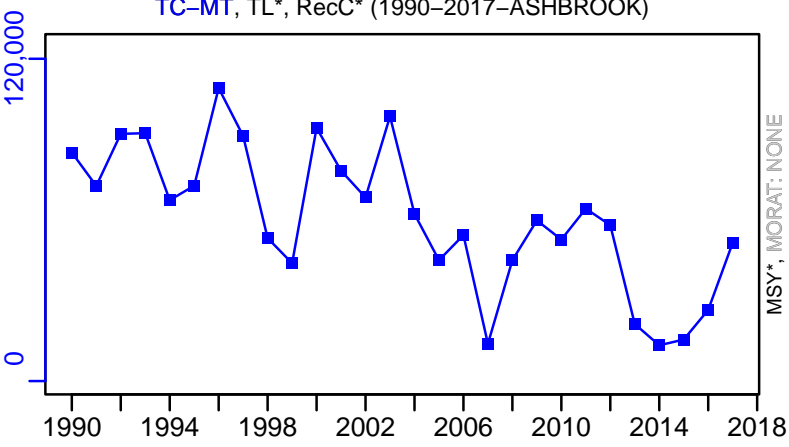


Recruits*



Anchovy Central West Africa Cote Divoire–Benin [ANCHOCWACIV–BEN]

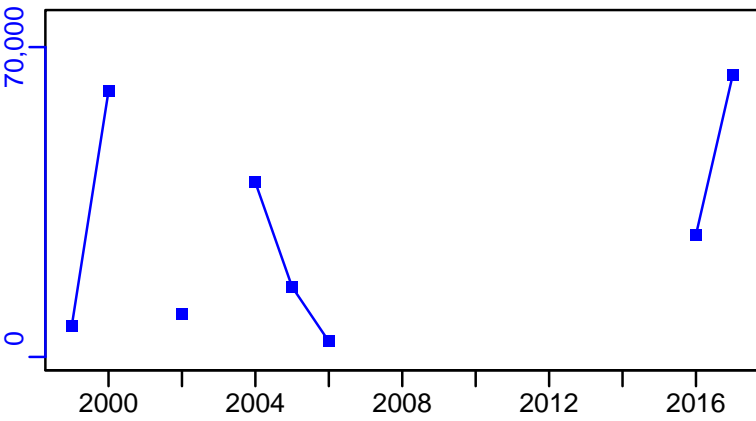
TC–MT, TL*, RecC* (1990–2017–ASHBROOK)



TAC*, Cpair*, Cadv*



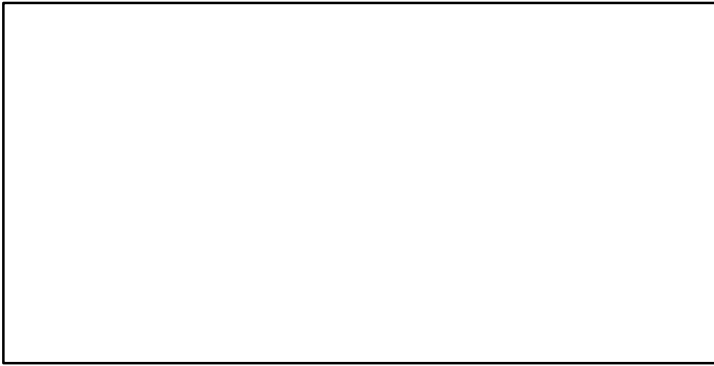
survB_absolute–MT (1990–2017–ASHBROOK)



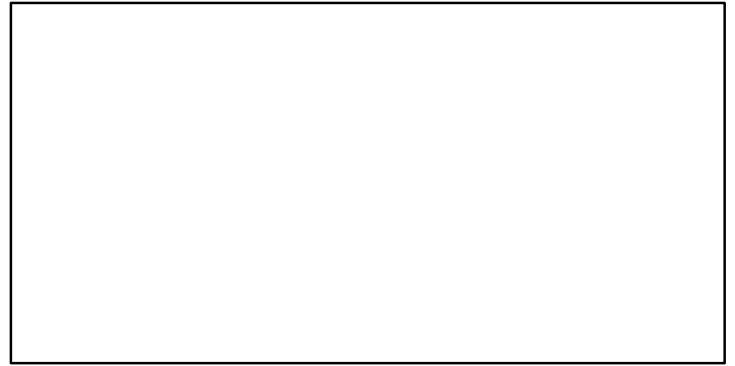
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Anchovy Central West Africa Gabon-Angola [ANCHOCWAGAB-AGO]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	FAO-SPNWA-ANCHOCWAGAB-AGO-1995-2017-ASHBROOK
Area	Central West Africa Gabon-Angola
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	372		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



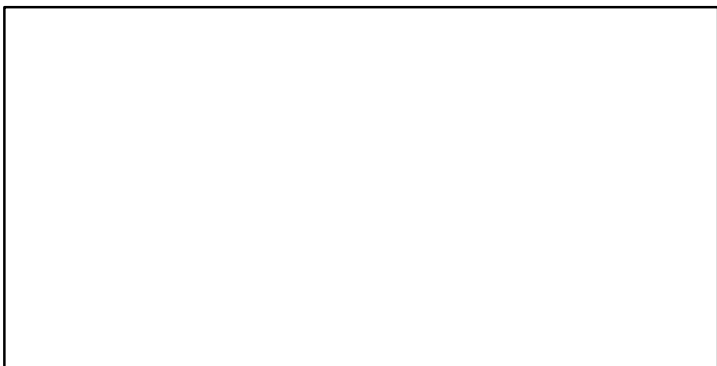
Production*



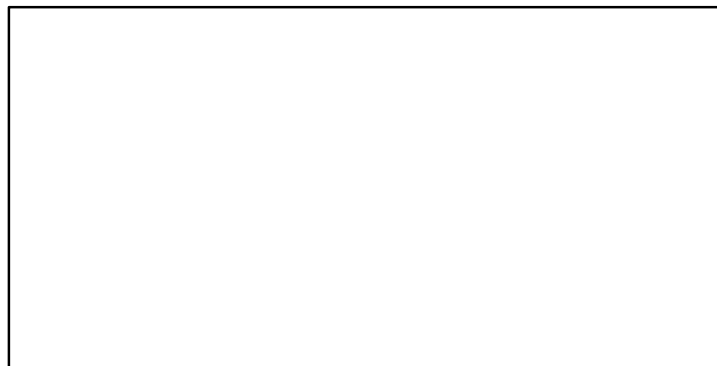
◆ Start Year ◆ End Year * No Data

Anchovy Central West Africa Gabon–Angola [ANCHOCWAGAB–AGO]

TB*



SSB*



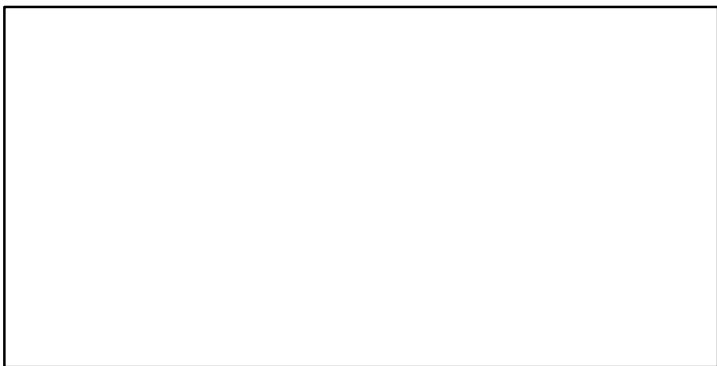
TN *



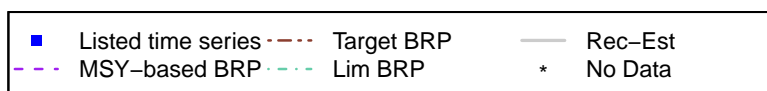
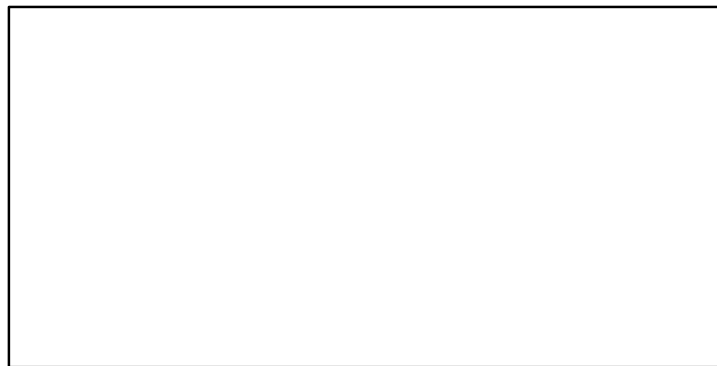
F*



ER*

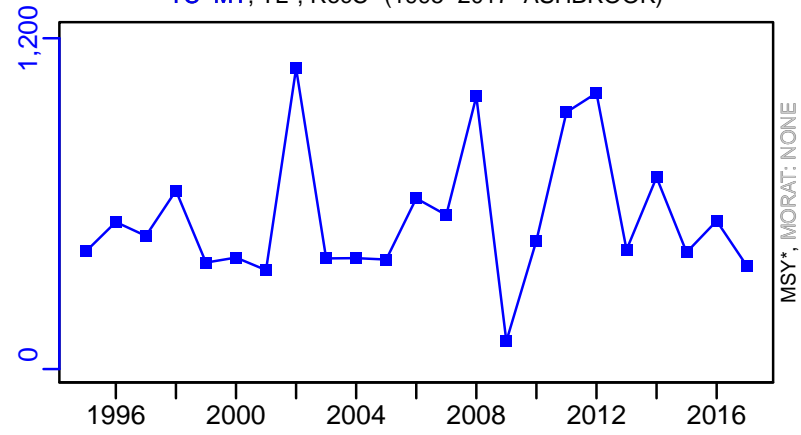


Recruits*



Anchovy Central West Africa Gabon–Angola [ANCHOCWAGAB-AGO]

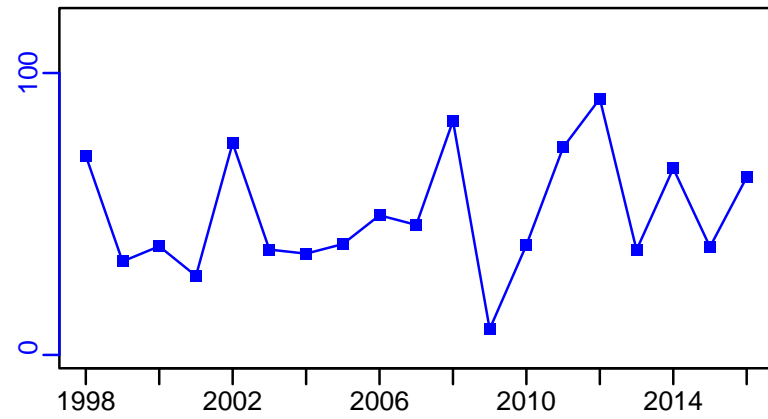
TC–MT, TL*, RecC* (1995–2017–ASHBROOK)



TAC*, Cpair*, Cadv*



survB_index–index (1995–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Anchovy North West Africa [ANCHONWA]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	FAO-SPNWA-ANCHONWA-1990-2020-HIVELY
Area	North West Africa
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2010, 2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2016	1.35
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	143,000	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	F-1/yr	2010	0.84	-	-
ER	ER-calc-ratio	2010	0.839	-	-
TC	TC-MT	2020	50,629		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

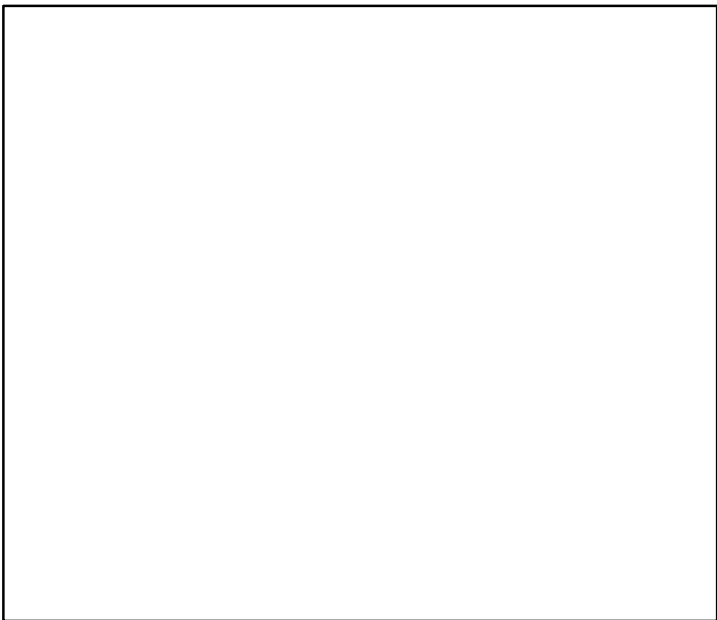
Kobe MSY*



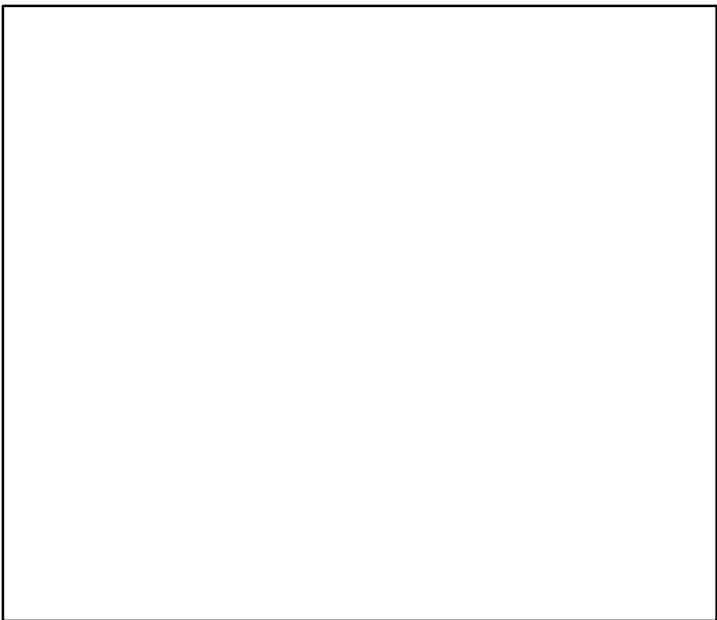
Kobe MGT*



Spawner Recruit*



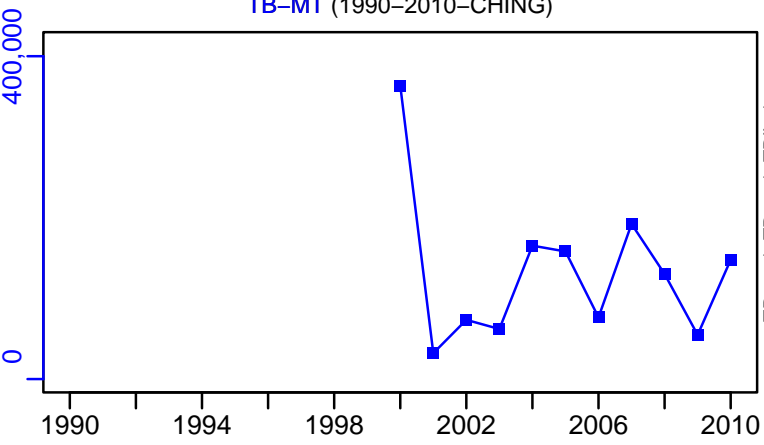
Production*



◆ Start Year ◆ End Year * No Data

Anchovy North West Africa [ANCHONWA]

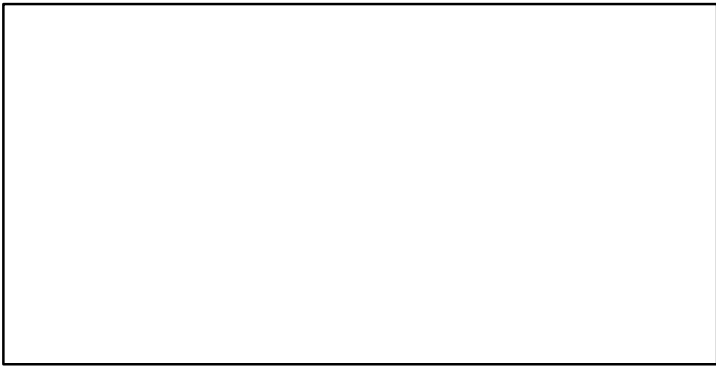
TB-MT (1990-2010-CHING)



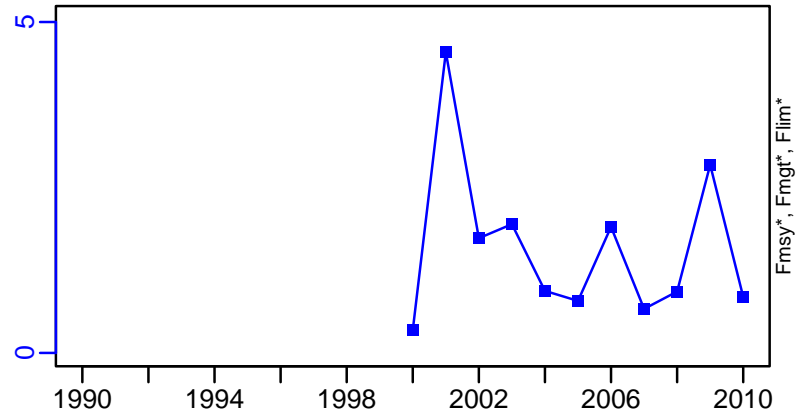
SSB*



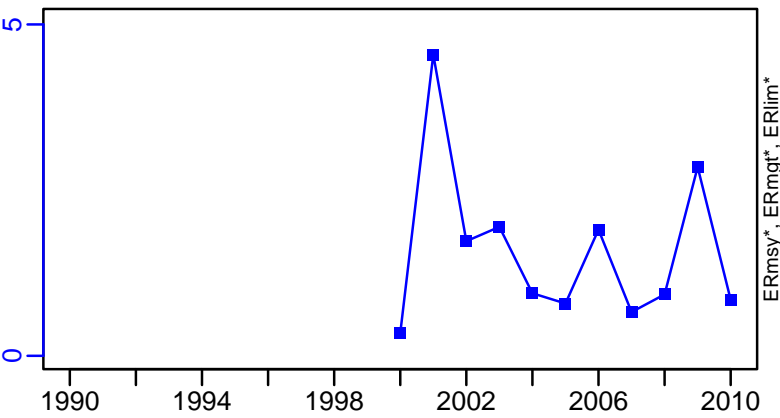
TN *



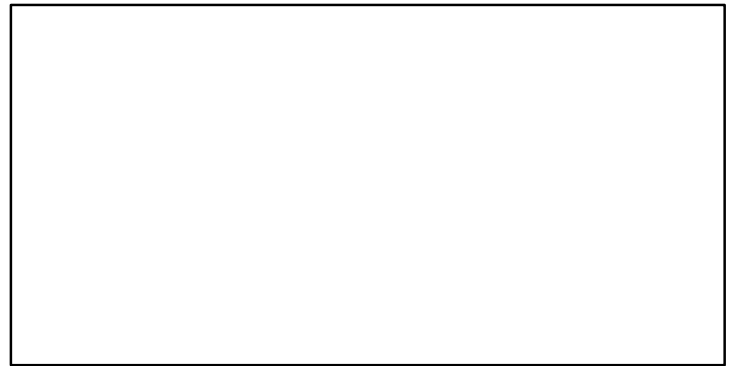
F-1/yr (1990-2010-CHING)



ER-calc-ratio (1990-2010-CHING)

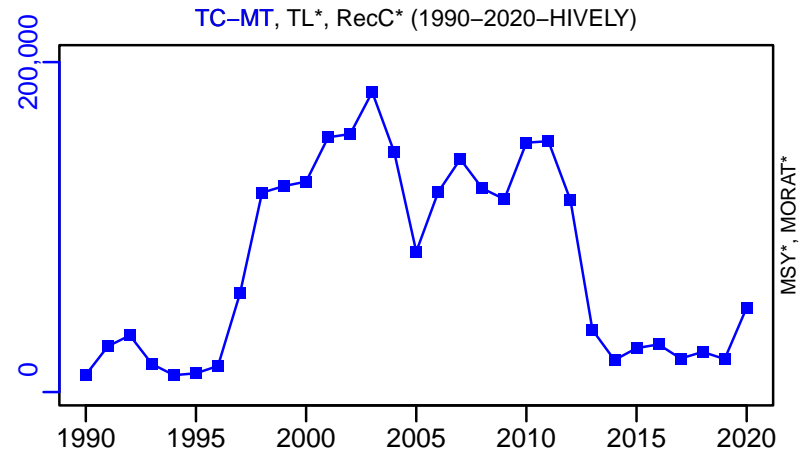


Recruits*



Anchovy North West Africa [ANCHONWA]

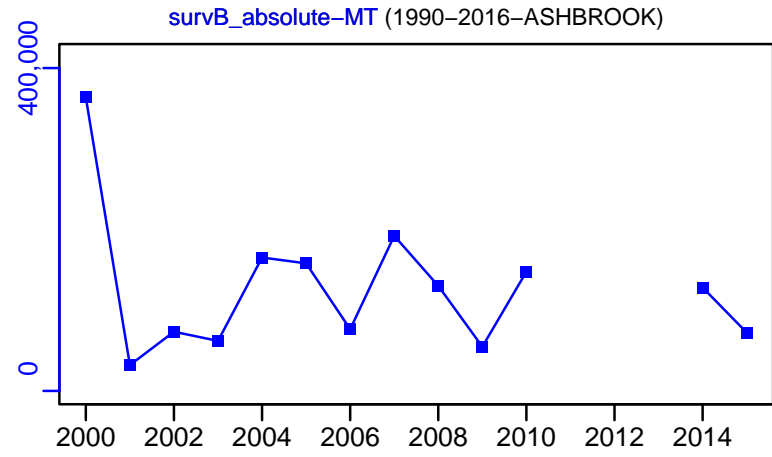
TC-MT, TL*, RecC* (1990-2020-HIVELY)



TAC*, Cpair*, Cadv*



survB_absolute-MT (1990-2016-ASHBROOK)



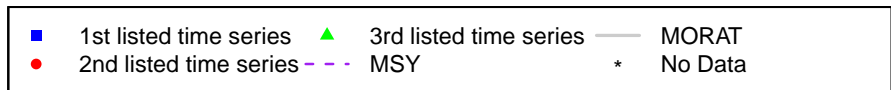
CPUE*



EFFORT*



CdivMSY*



Anchovy South Africa [ANCHOSA]

Metadata	
Scientific Name	Engraulis encrasicolus
Current Assess ID	MARAM-ANCHOSA-1949-2019-deMoor
Area	South Africa
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2015, 2019, 2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2015	5,261,270
SSB0	SSB0-MT	2019	2,754,300
MSY	-	-	-
M	M-1/yr	2019	1.2
TBlim	TBlim-MT	2019	536,000
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	1,546,700	-	-
SSB	SSB-MT	2019	1,455,800	-	-
TN	TN-E00	2015	9.94×10^{11}	Both	0+
R	R-E00	2019	3.88×10^{11}	-	-
F	-	-	-	-	-
ER	ER-ratio	2019	0.081	Both	-
TC	TC-MT	2019	164,400		
TL	TL-MT	2019	164,400		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

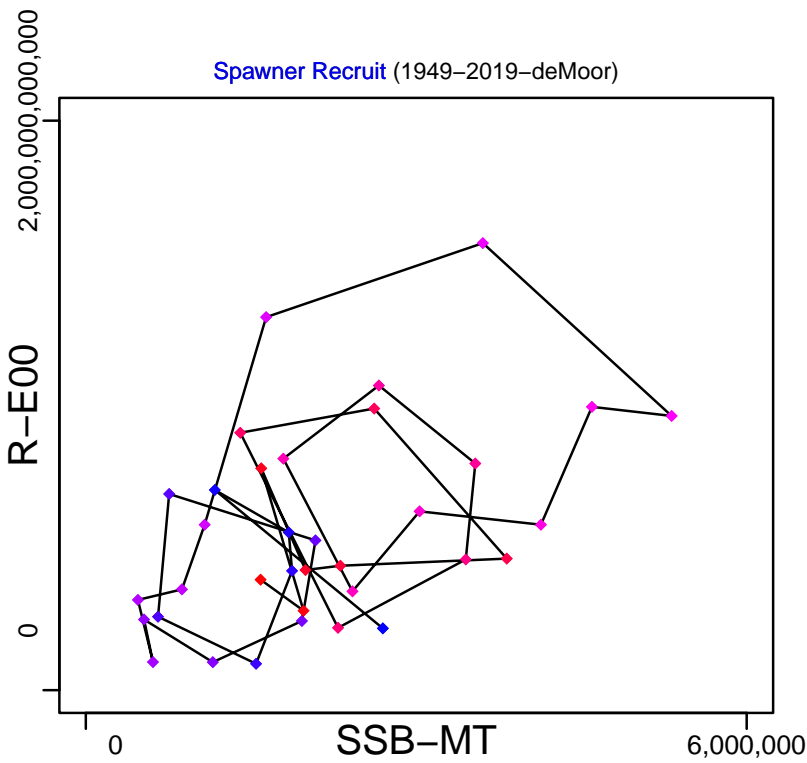
Kobe MSY*



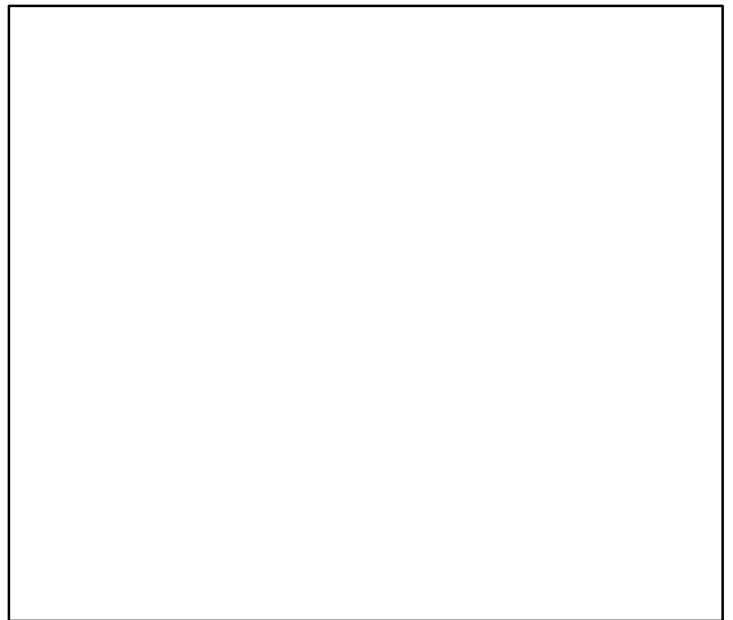
Kobe MGT*



Spawner Recruit (1949–2019–deMoor)

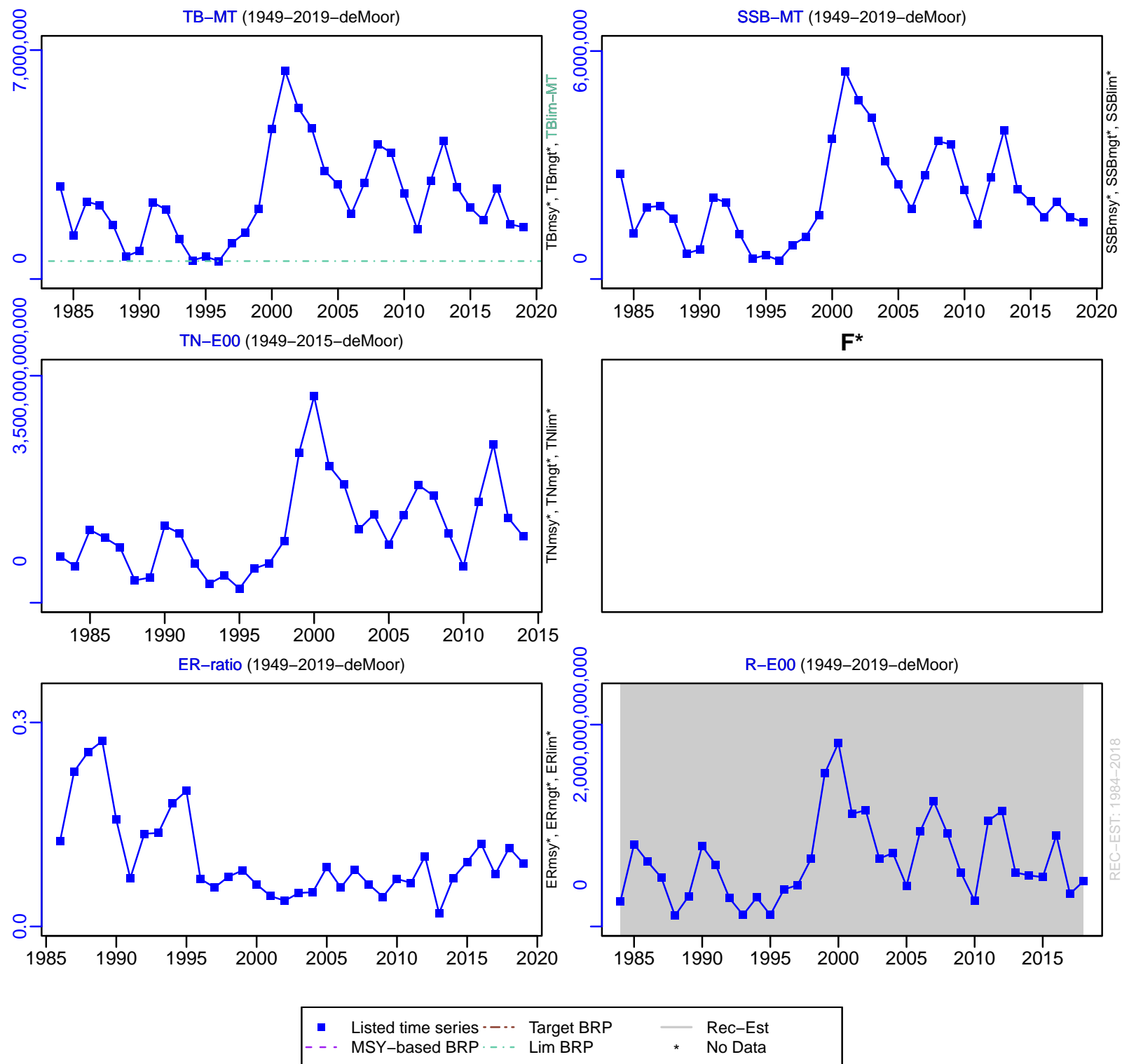


Production*



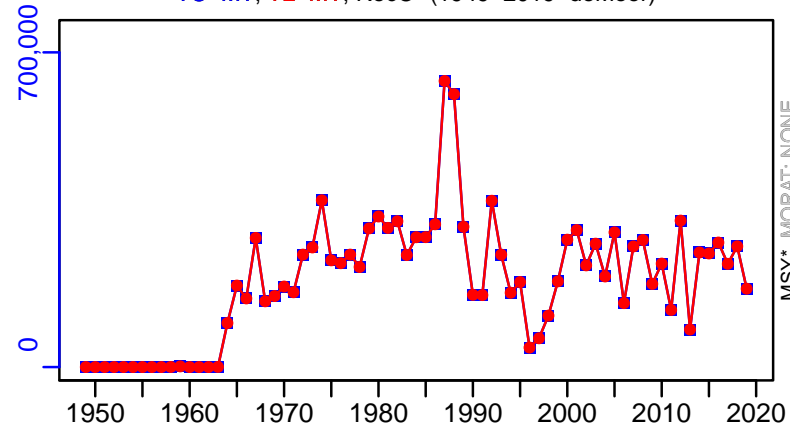
◆ Start Year ◆ End Year * No Data

Anchovy South Africa [ANCHOSA]

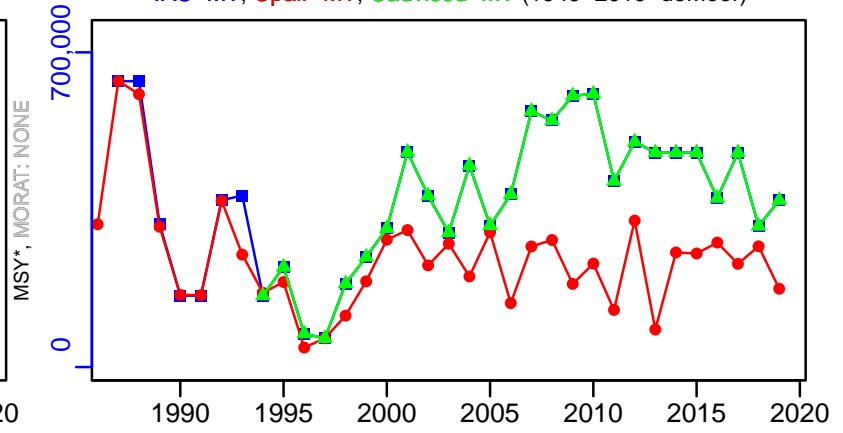


Anchovy South Africa [ANCHOSA]

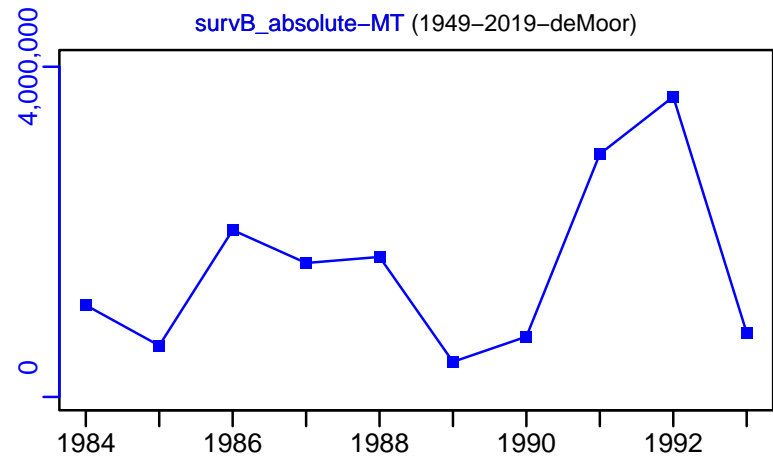
TC-MT, TL-MT, RecC* (1949–2019–deMoor)



TAC-MT, Cpair-MT, Cadvised-MT (1949–2019–deMoor)



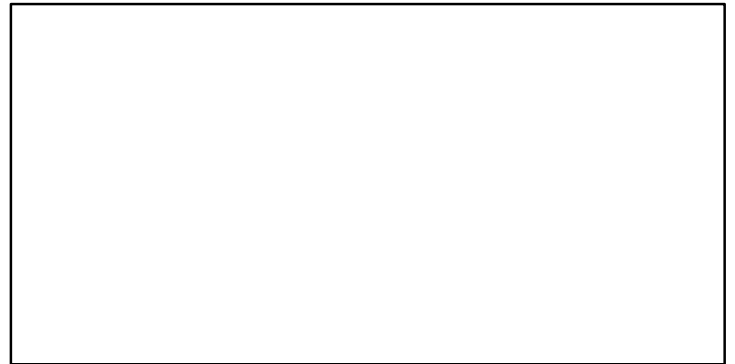
survB_absolute-MT (1949–2019–deMoor)



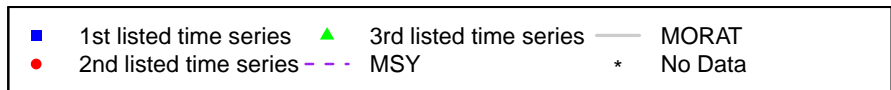
EFFORT*



CPUE*



CdivMSY*



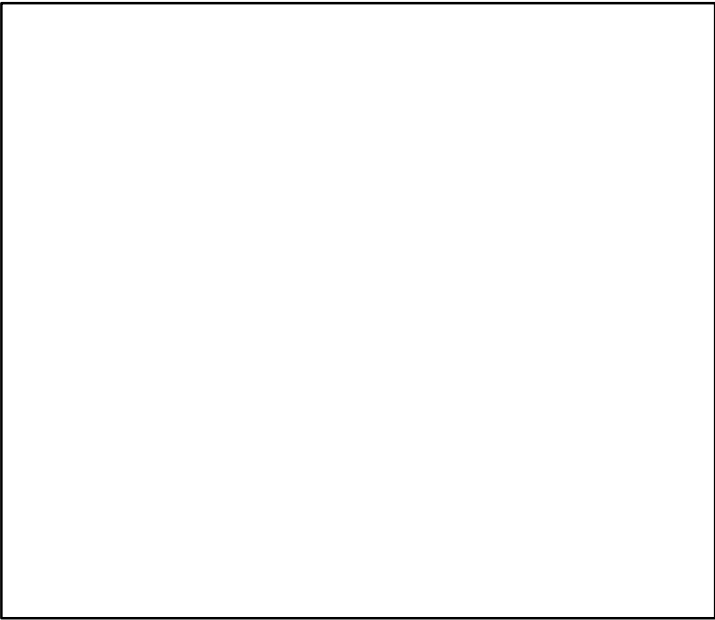
Anchovy kilka Iranian Caspian Sea [ANCHOVYKILKACS]

Metadata	
Scientific Name	Clupeonella engrauliformis
Current Assess ID	CSEER-ANCHOVYKILKACS-1991-2007-JENSEN
Area	Iranian Caspian Sea
Management Authority	Iranian national management
Assessor	Caspian Sea Ecology Research Center
Asmts in RAM	2007

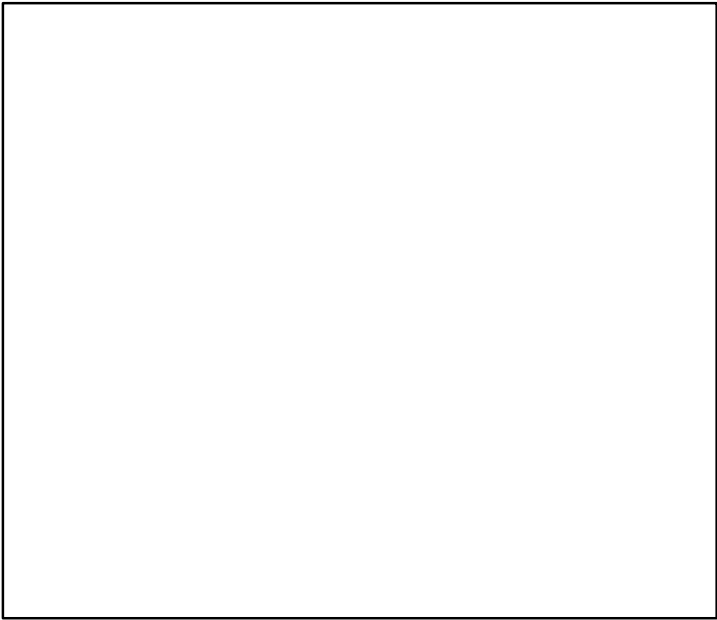
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2007	44,652
M	M-1/yr	2007	0.473
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2007	8320	-	-
SSB	SSB-MT	2007	7160	-	2+
TN	-	-	-	-	-
R	R-MT	2007	326	-	0.18
F	F-1/yr	2007	1.28	-	-
ER	ER-ratio	2007	0.619	-	-
TC	TC-MT	2007	1200		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

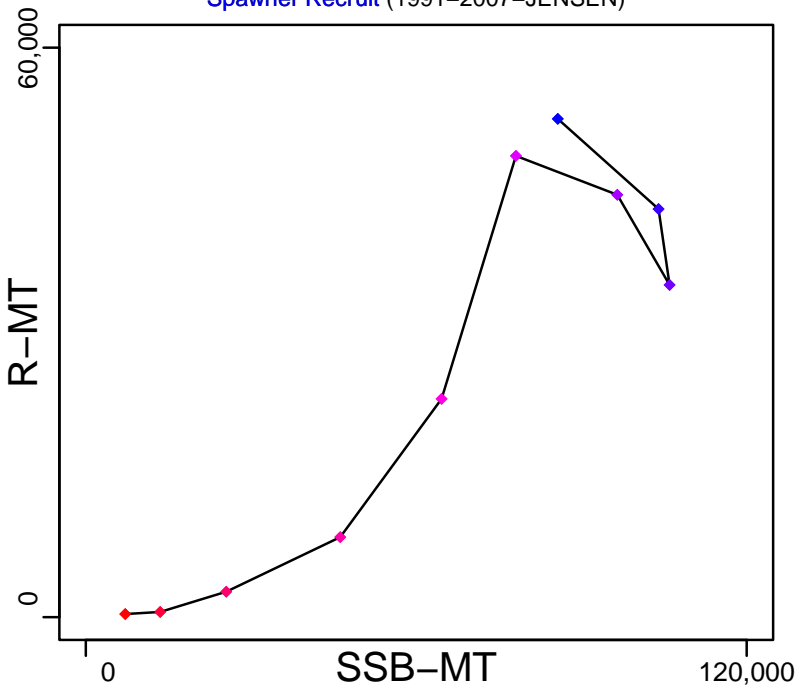
Kobe MSY*



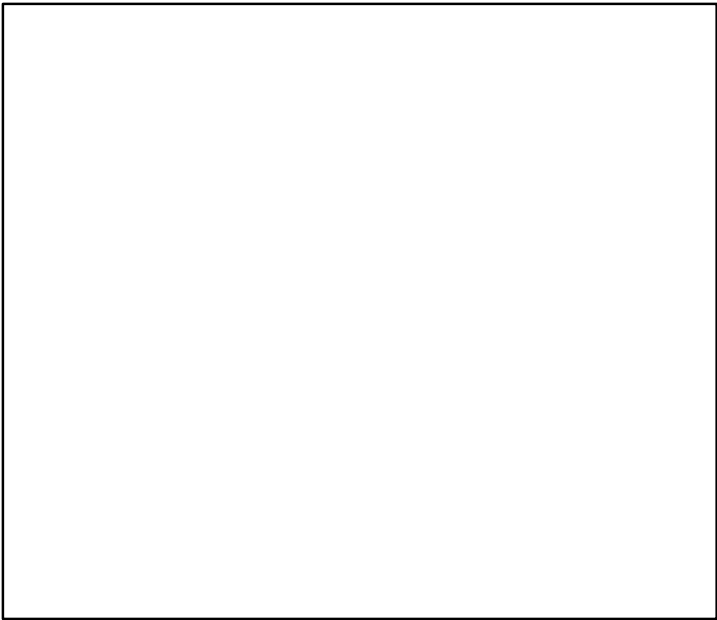
Kobe MGT*



Spawner Recruit (1991–2007–JENSEN)



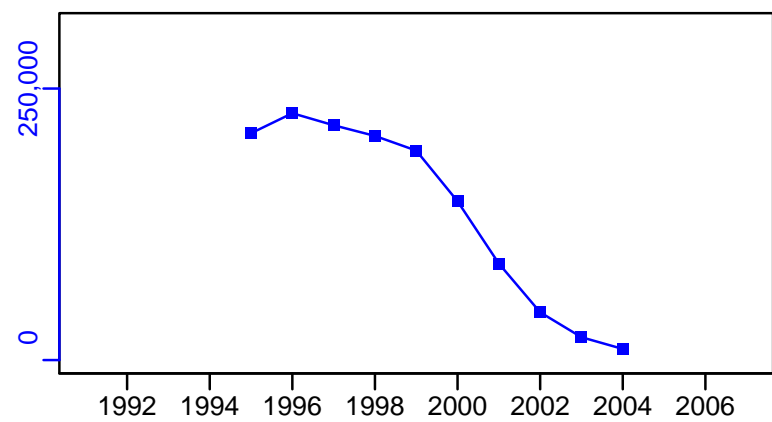
Production*



◆ Start Year ◆ End Year * No Data

Anchovy kilka Iranian Caspian Sea [ANCHOVYKILKACS]

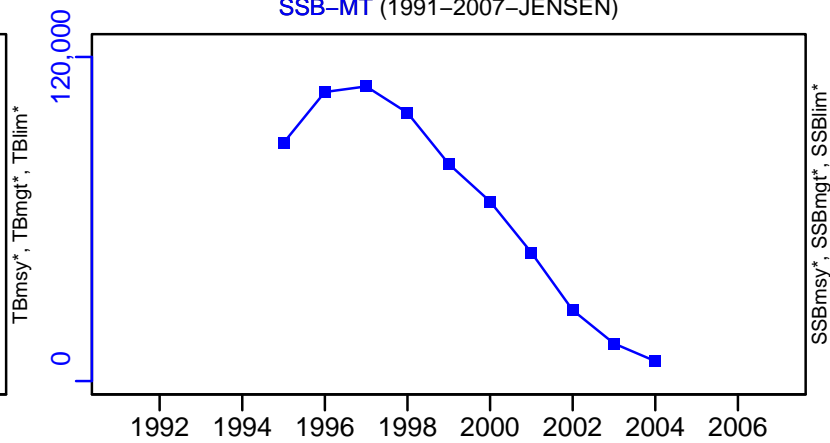
TB-MT (1991-2007-JENSEN)



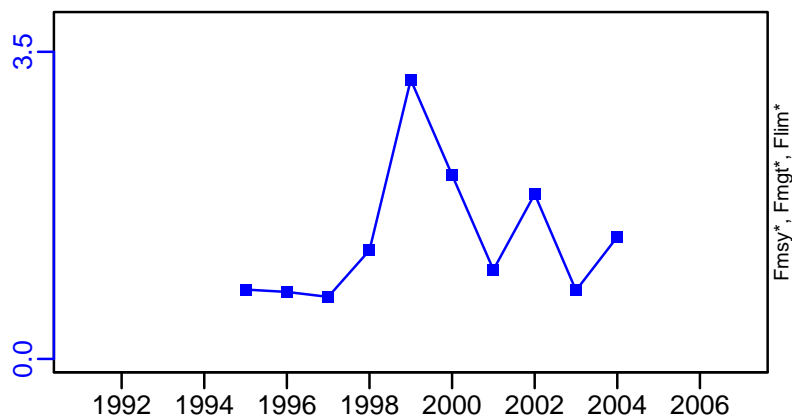
TN *



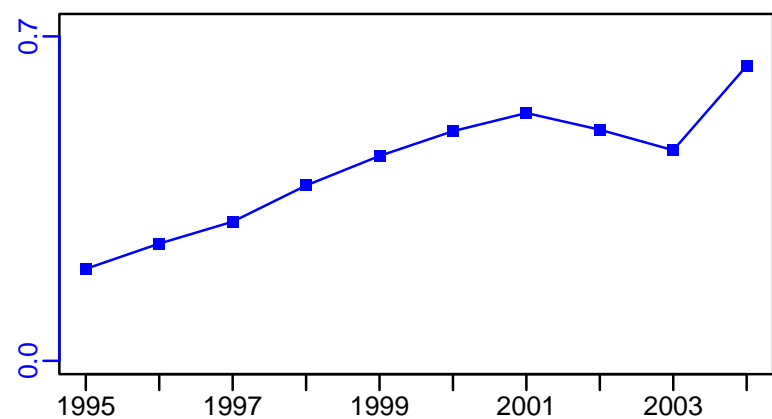
SSB-MT (1991-2007-JENSEN)



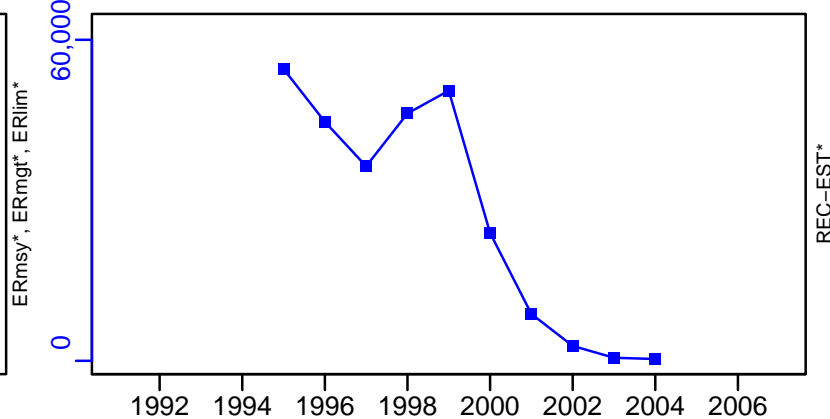
F-1/yr (1991-2007-JENSEN)



ER-ratio (1991-2007-JENSEN)



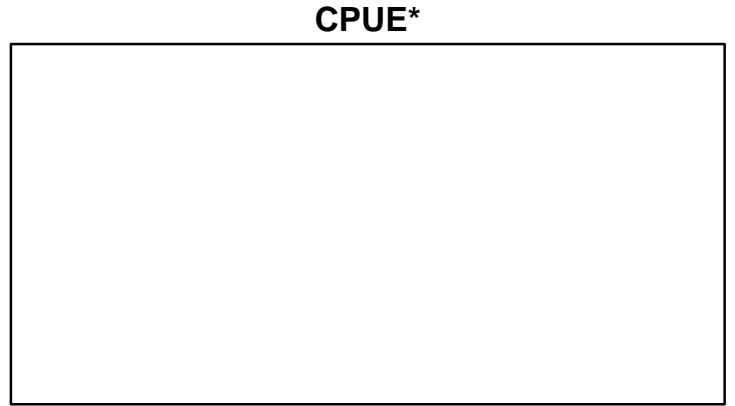
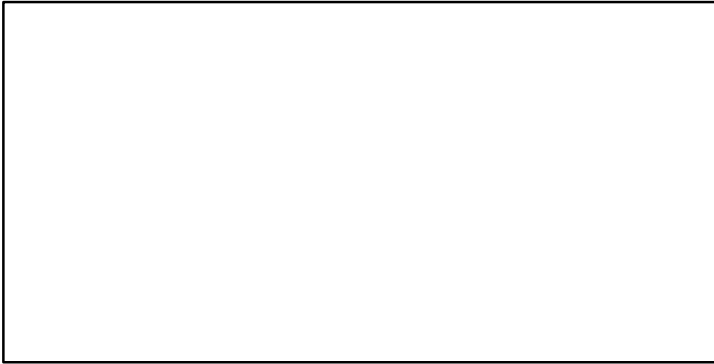
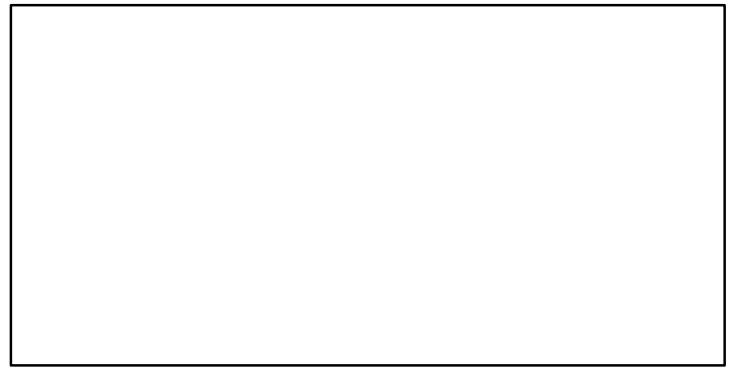
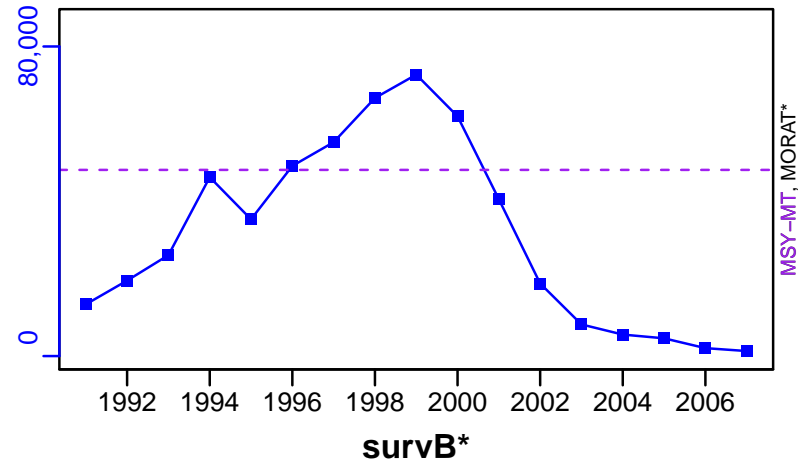
R-MT (1991-2007-JENSEN)



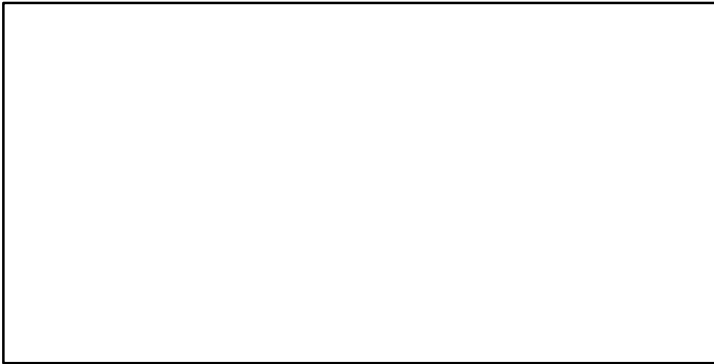
Anchovy kilka Iranian Caspian Sea [ANCHOVYKILKACS]

TC-MT, TL*, RecC* (1991-2007-JENSEN)

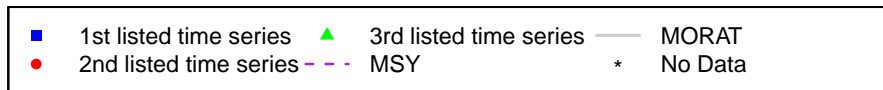
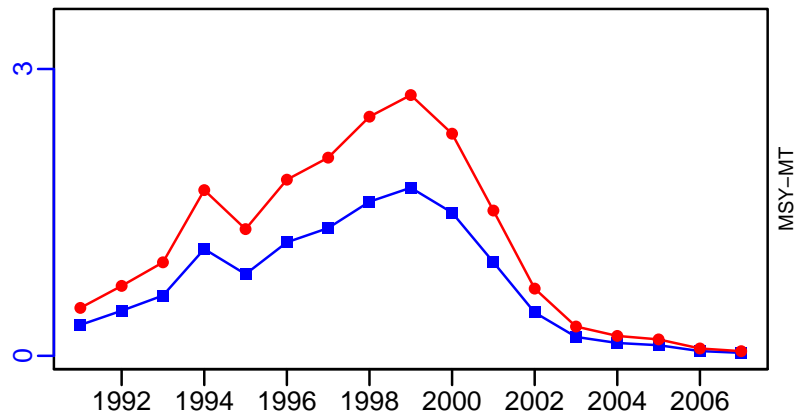
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1991-2007-JENSEN)



Argentine anchoita Northern Argentina [ARGANCHONARG]

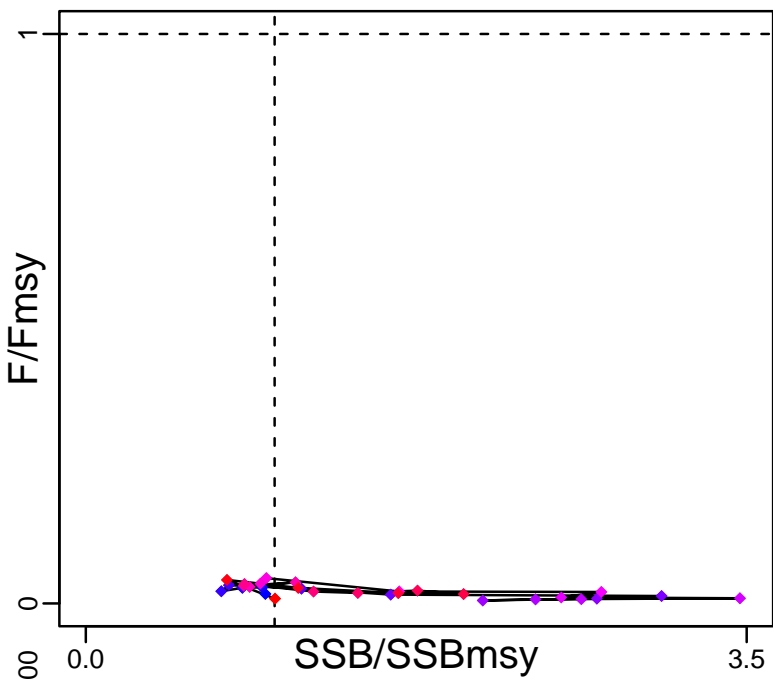
Metadata	
Scientific Name	Engraulis anchoita
Current Assess ID	INIDEP-ARGANCHONARG-1989-2019-PARMA
Area	Northern Argentina
Management Authority	Consejo Federal Pesquero, Argentina national management
Assessor	Instituto Nacional de Investigacion y Desarrollo Pesquero
Asmts in RAM	2007, 2015, 2016, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2019	1,866,031
SSBmsy	SSBmsy-MT	2019	795,744
Fmsy	Fmsy-1/yr	2019	1.625
ERmsy	ERmsy-ratio	2007	0.405
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2019	788,664
Fmgt	Fmgt-1/yr	2019	1.1
ERmgt	-	-	-
TB0	TB0-MT	2016	3,370,285
SSB0	SSB0-MT	2016	2,196,036
MSY	MSY-MT	2015	222,163
M	M-1/yr	2019	1.01
TBlim	-	-	-
SSBlim	SSBlim-MT	2016	293,000
Flim	Flim-1/yr	2016	4.4
ERlim	-	-	-

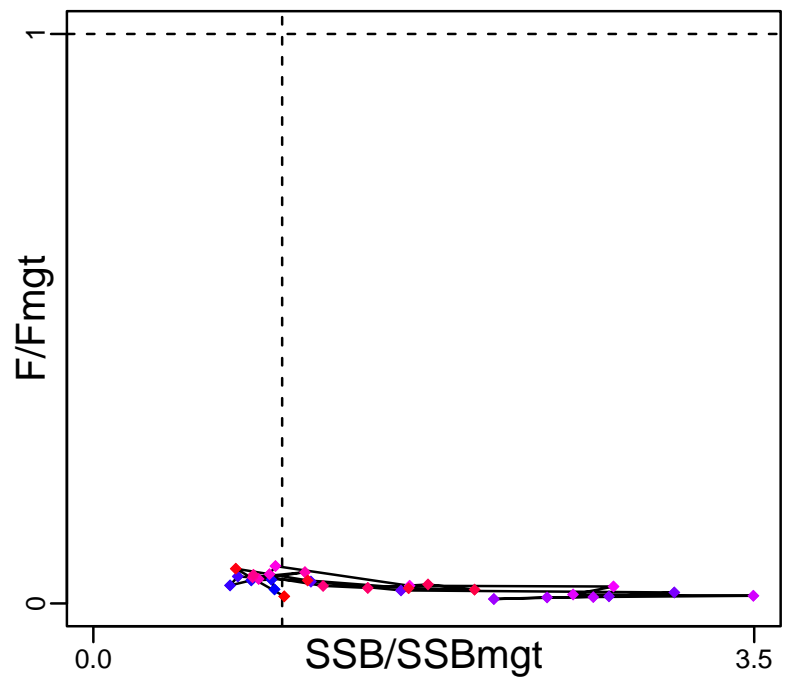
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	1,679,482	Both	1+
SSB	SSB-MT	2019	797,357	Both	2+
TN	-	-	-	-	-
R	R-E00	2019	$1.674,83 \times 10^{11}$	Both	1
F	F-1/yr	2019	0.014	Both	6
ER	ER-calc-ratio	2019	0.001	-	-
TC	TC-MT	2019	1815		
TL	TL-MT	2019	12,130		
TB/TBmsy	TB-MT/TBmsy-MT	2019	0.9		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2019	1.002		
F/Fmsy	F-1/yr/Fmsy-1/yr	2019	0.008		
ER/ERmsy	ER-ratio/ERmsy-ratio	2007	0.053		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2019	1.011		
F/Fmgt	F-1/yr/Fmgt-1/yr	2019	0.012		
ER/ERmgt	-	-	-		

Argentine anchoita Northern Argentina [ARGANCHONARG]

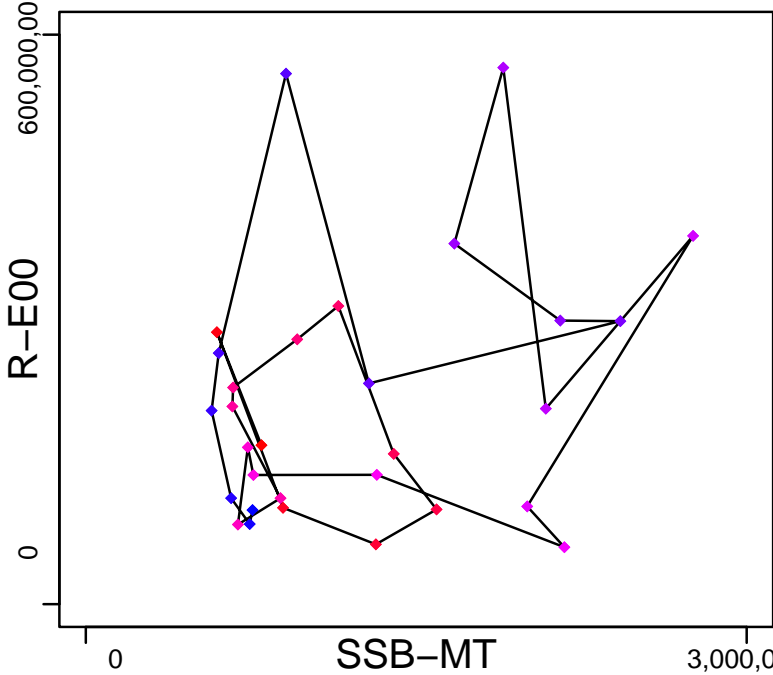
Kobe MSYpref (1989–2019–PARMA)



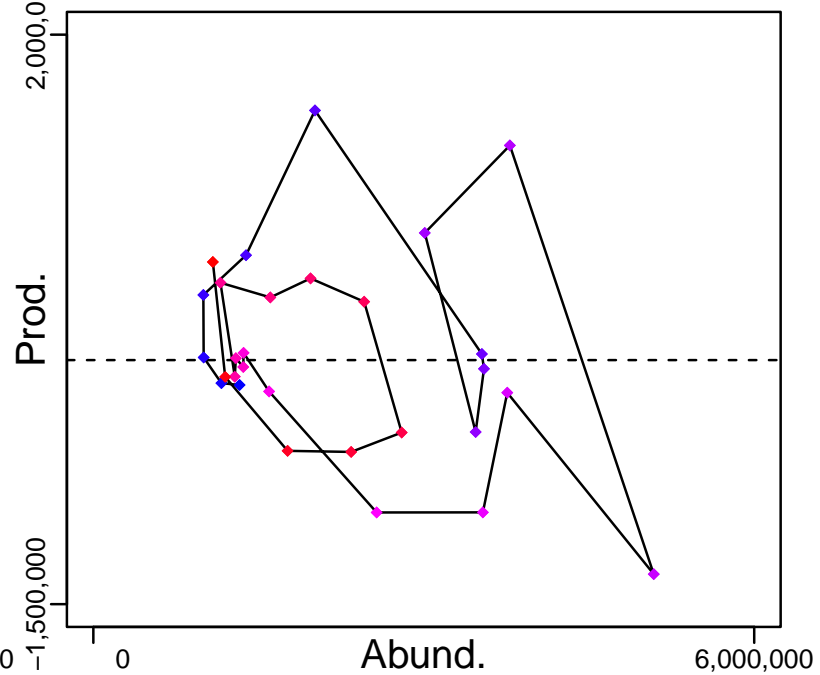
Kobe MGTpref (1989–2019–PARMA)



Spawner Recruit (1989–2019–PARMA)

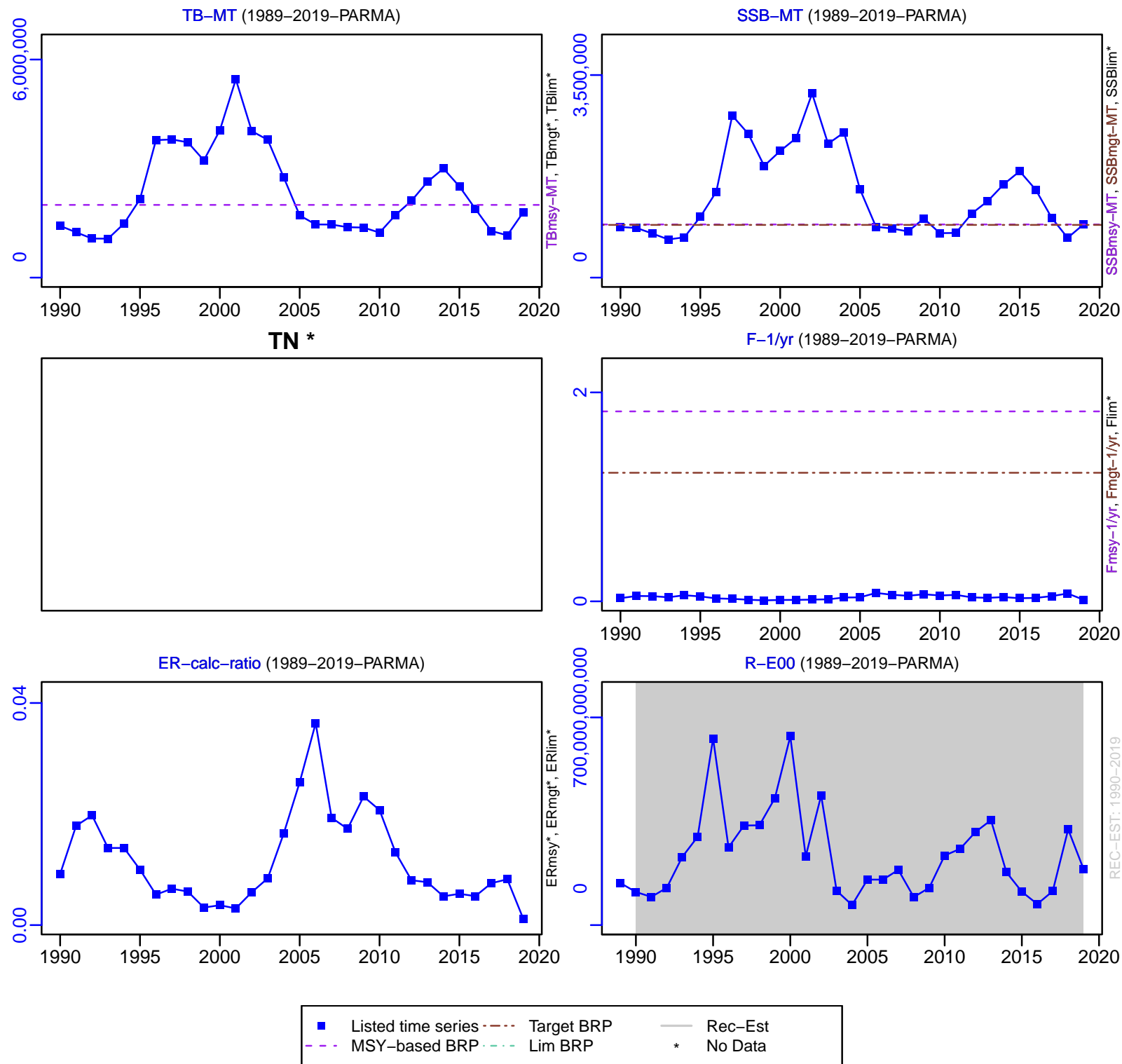


Production (1989–2019–PARMA)



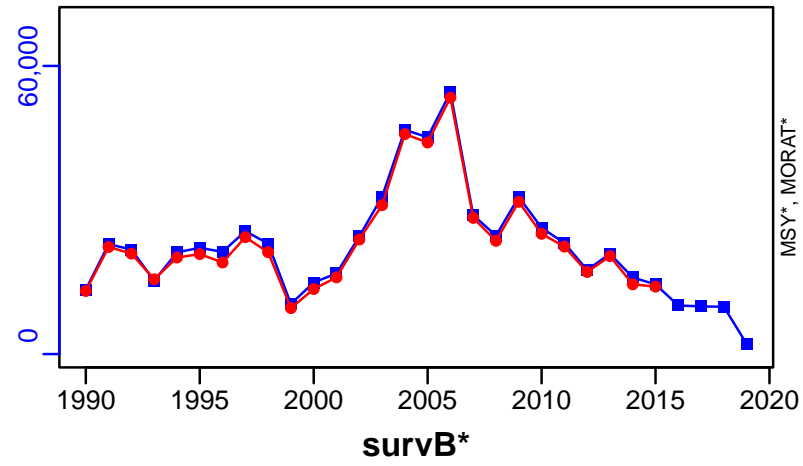
◆ Start Year ◆ End Year * No Data

Argentine anchoita Northern Argentina [ARGANCHONARG]

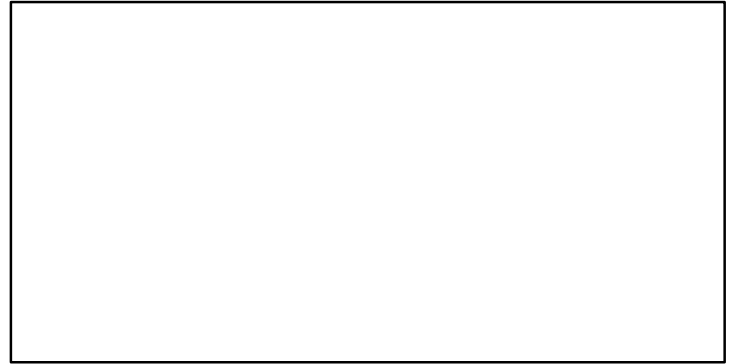
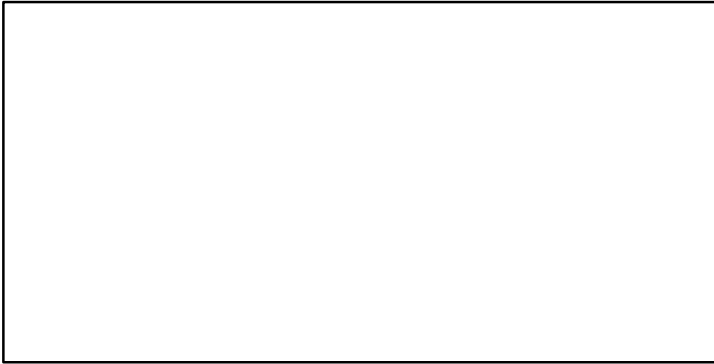
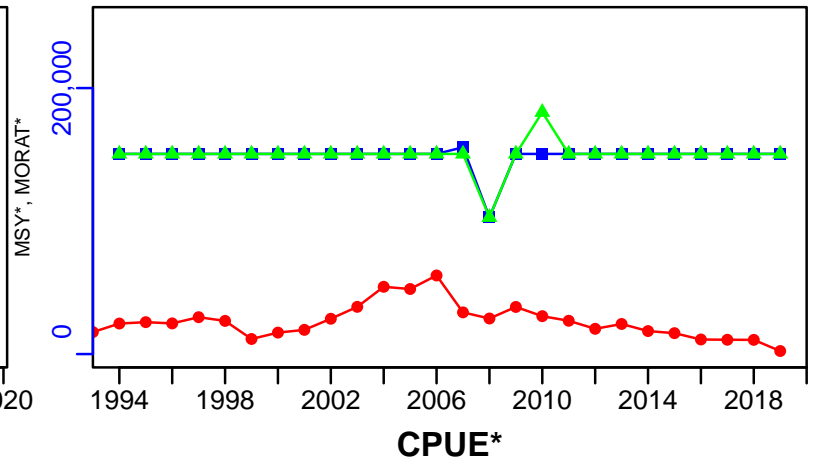


Argentine anchoita Northern Argentina [ARGANCHONARG]

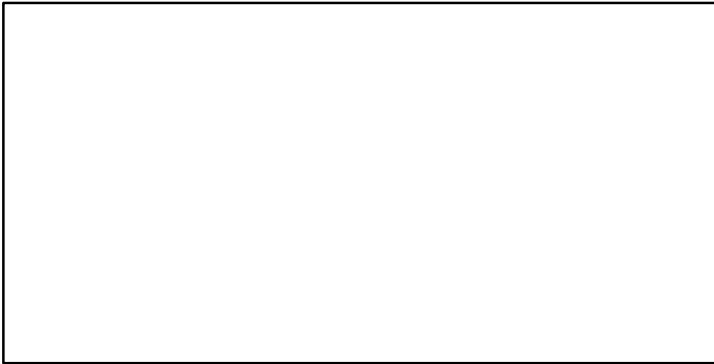
TC-MT, TL-MT, RecC* (1989–2019–PARMA)



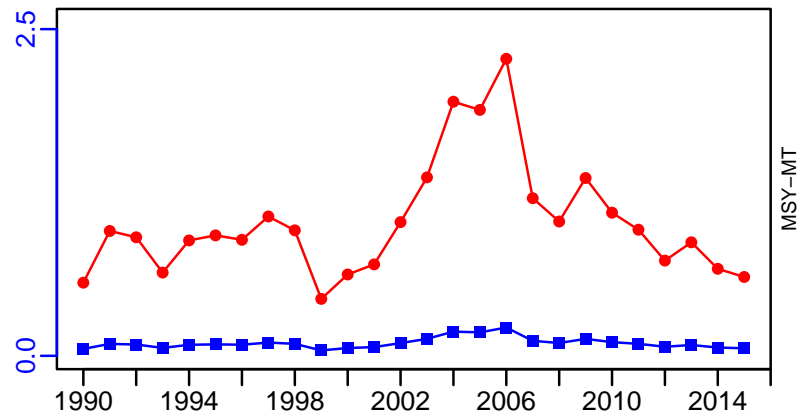
TAC-MT, Cpair-MT, Cadvised-MT (1989–2019–PARMA)



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1989–2015–ORLANDO)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Argentine anchoita Southern Argentina [ARGANCHOSARG]

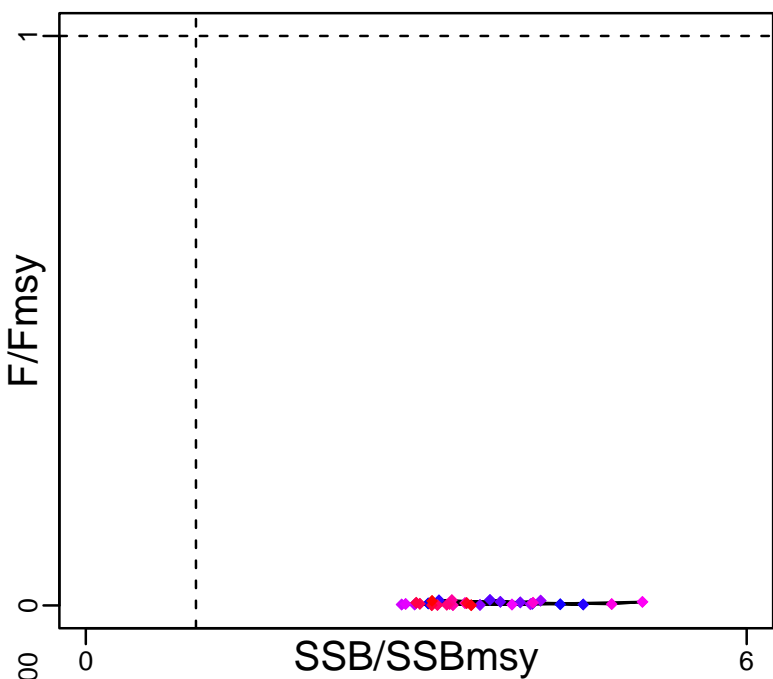
Metadata	
Scientific Name	Engraulis anchoita
Current Assess ID	INIDEP-ARGANCHOSARG-1989-2020-PARMA
Area	Southern Argentina
Management Authority	Consejo Federal Pesquero, Argentina national management
Assessor	Instituto Nacional de Investigacion y Desarrollo Pesquero
Asmts in RAM	2015, 2020, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2020	734,669
SSBmsy	SSBmsy-MT	2020	309,895
Fmsy	Fmsy-1/yr	2020	1.46
ERmsy	ERmsy-ratio	2007	0.395
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2020	484,937
Fmgt	Fmgt-1/yr	2020	0.71
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2015	454,000
M	M-1/yr	2020	0.98
TBlim	TBlim-MT	2007	350,000
SSBlim	SSBlim-MT	2015	339,700
Flim	-	-	-
ERlim	-	-	-

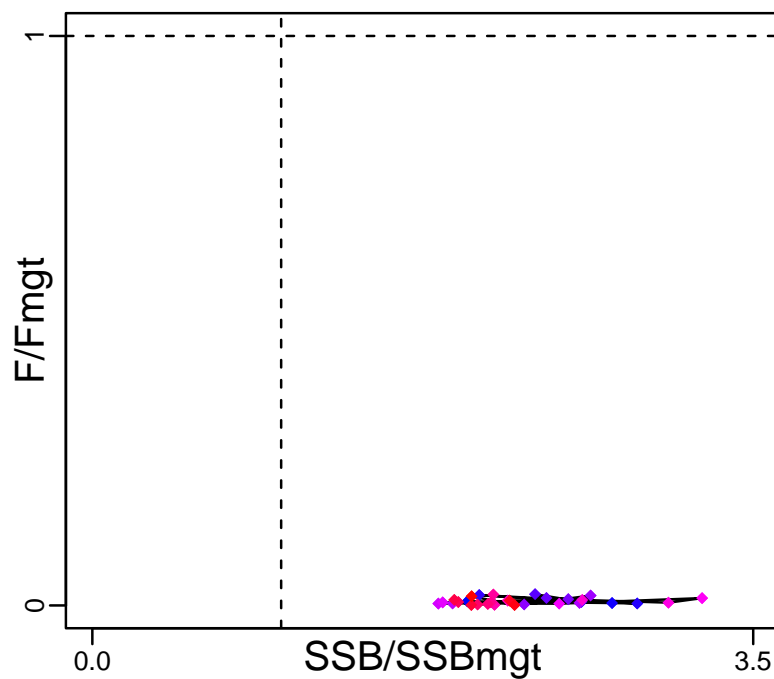
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	1,245,613	Both	1+
SSB	SSB-MT	2020	974,089	Both	1+
TN	-	-	-	-	-
R	R-E00	2020	$1.305,56 \times 10^{11}$	Both	1
F	F-1/yr	2020	0.011	Both	6
ER	ER-calc-ratio	2020	0.003	-	-
TC	TC-MT	2020	4146		
TL	TL-MT	2015	2280		
TB/TBmsy	TB-MT/TBmsy-MT	2020	1.695		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2020	3.143		
F/Fmsy	F-1/yr/Fmsy-1/yr	2020	0.008		
ER/ERmsy	ER-ratio/ERmsy-ratio	2007	0.005		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2020	2.009		
F/Fmgt	F-1/yr/Fmgt-1/yr	2020	0.016		
ER/ERmgt	-	-	-		

Argentine anchoita Southern Argentina [ARGANCHOSARG]

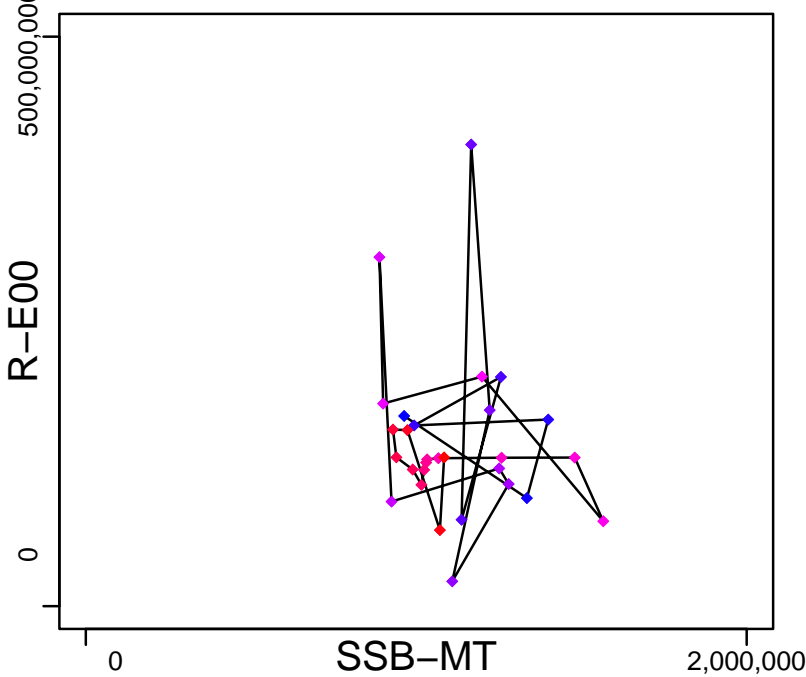
Kobe MSY_{pref} (1989–2020–PARMA)



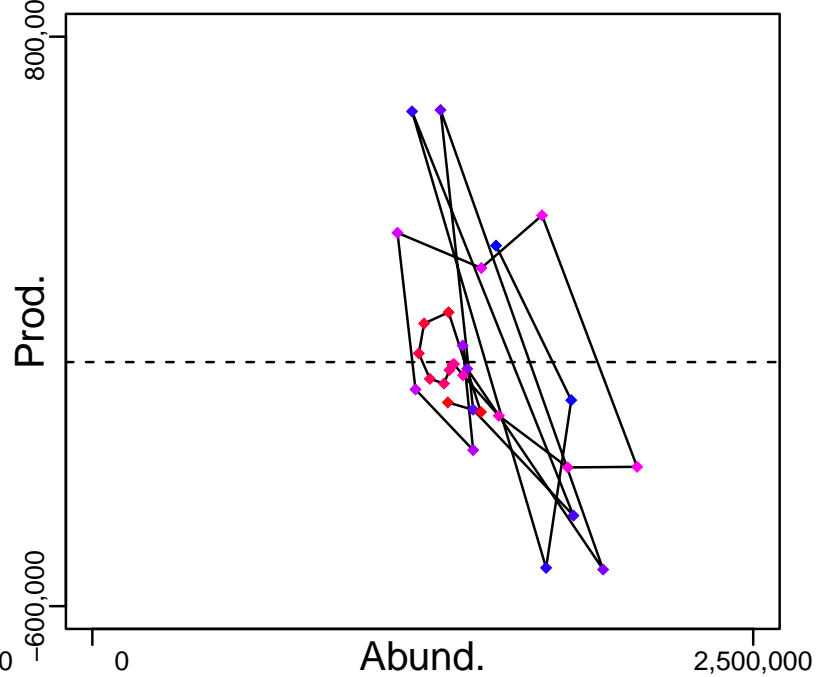
Kobe MGT_{pref} (1989–2020–PARMA)



Spawner Recruit (1989–2020–PARMA)



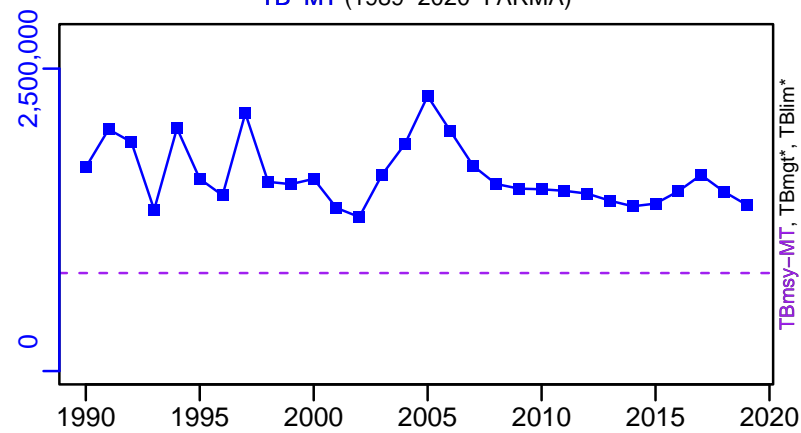
Production (1989–2020–PARMA)



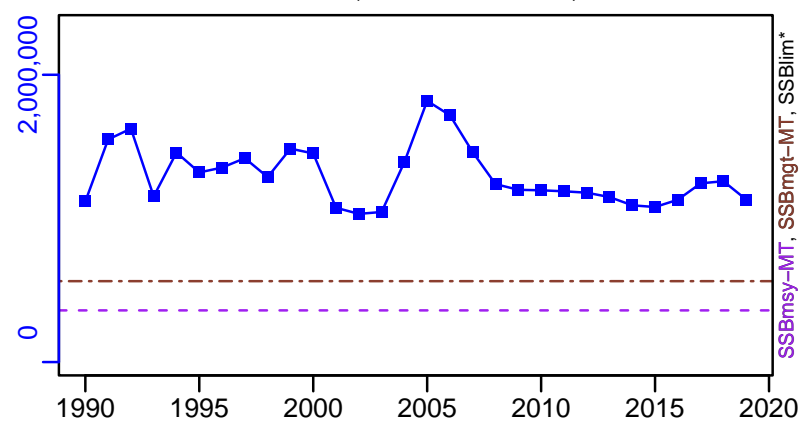
◆ Start Year ◆ End Year * No Data

Argentine anchoita Southern Argentina [ARGANCHOSARG]

TB-MT (1989–2020–PARMA)



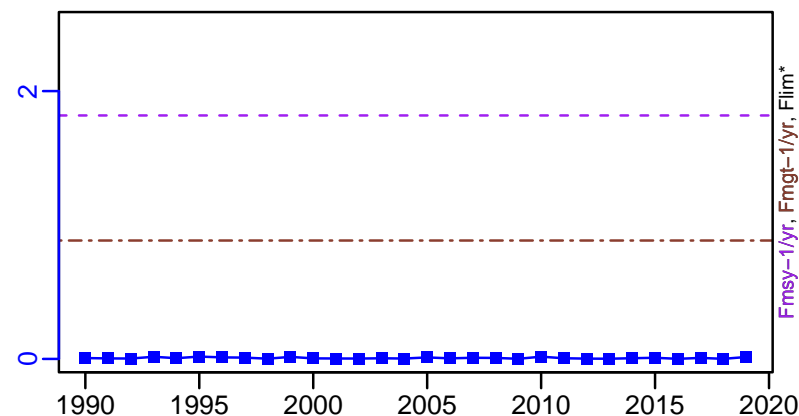
SSB-MT (1989–2020–PARMA)



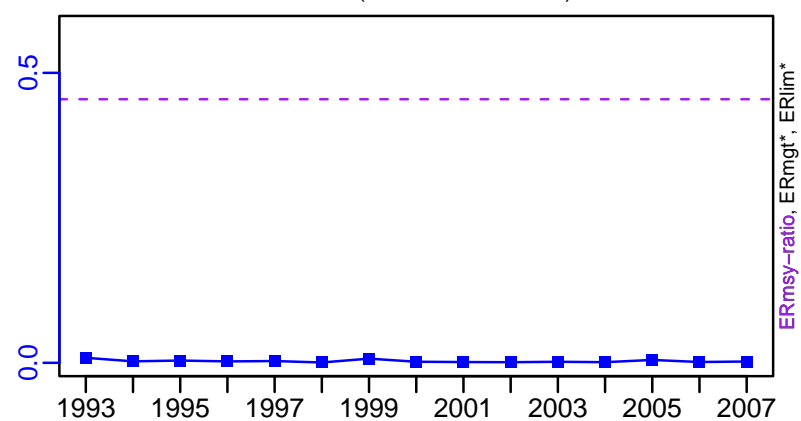
TN *



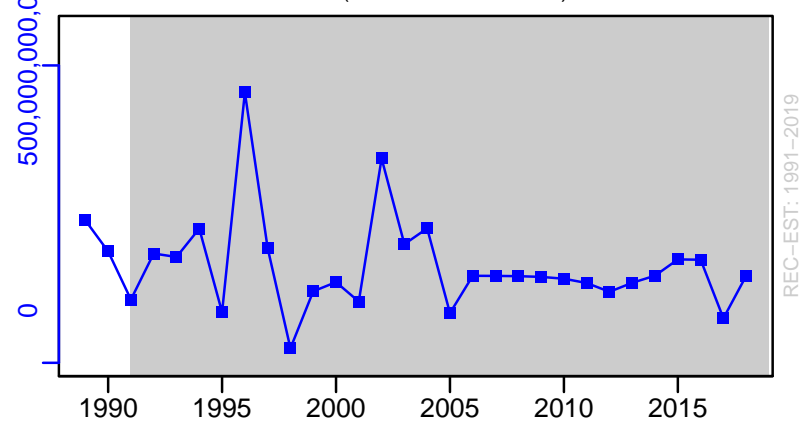
F-1/yr (1989–2020–PARMA)



ER-ratio (1992–2007–Parma)

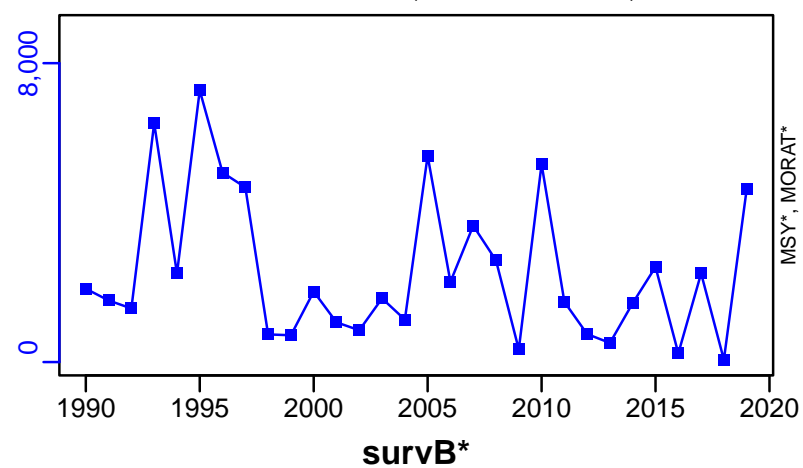


R-E00 (1989–2020–PARMA)

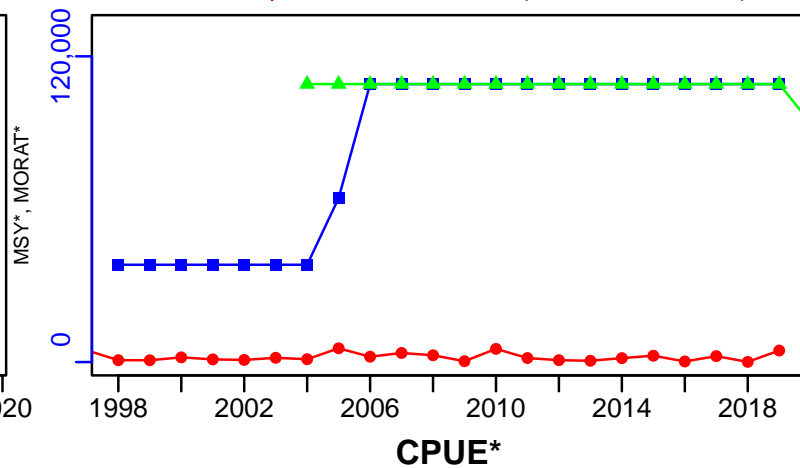


Argentine anchoita Southern Argentina [ARGANCHOSARG]

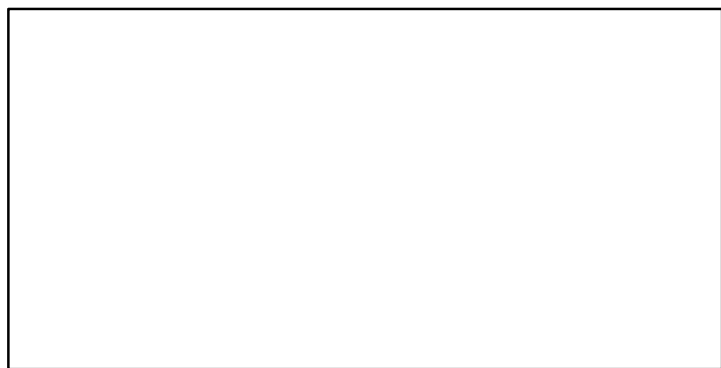
TC-MT, TL*, RecC* (1989–2020–PARMA)



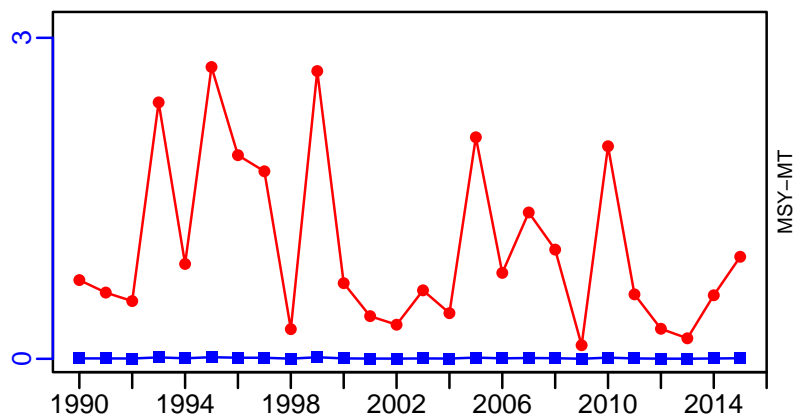
TAC-MT, Cpair-MT, Cadvised-MT (1989–2020–PARMA)



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1989–2015–BURATTI)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

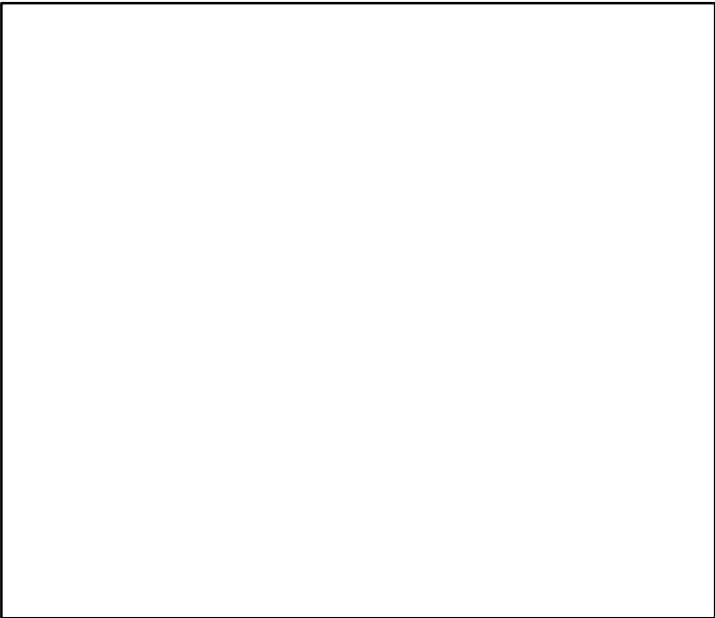
Bonga Central West Africa Gabon-Congo DR [BONGACWAGAB-COD]

Metadata	
Scientific Name	Ethmalosa fimbriata
Current Assess ID	FAO-SPNWA-BONGACWAGAB-COD-1995-2017-ASHBROOK
Area	Central West Africa Gabon-Congo DR
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

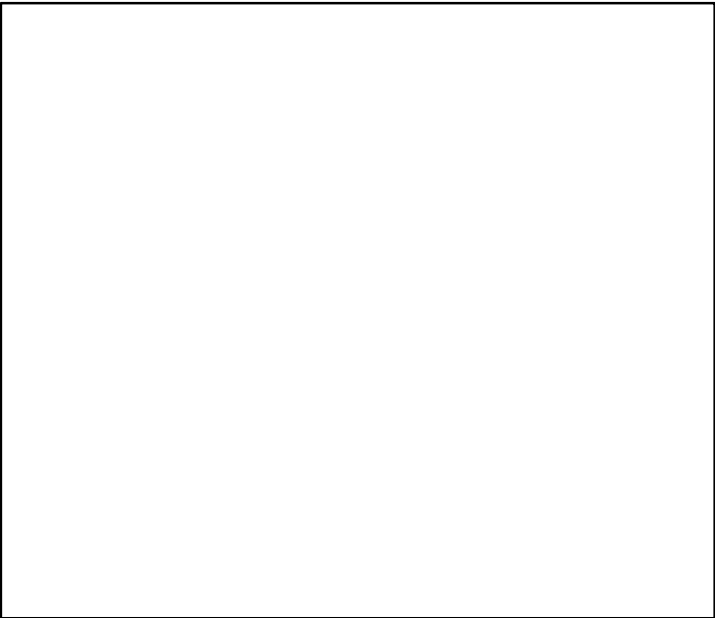
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	3370		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

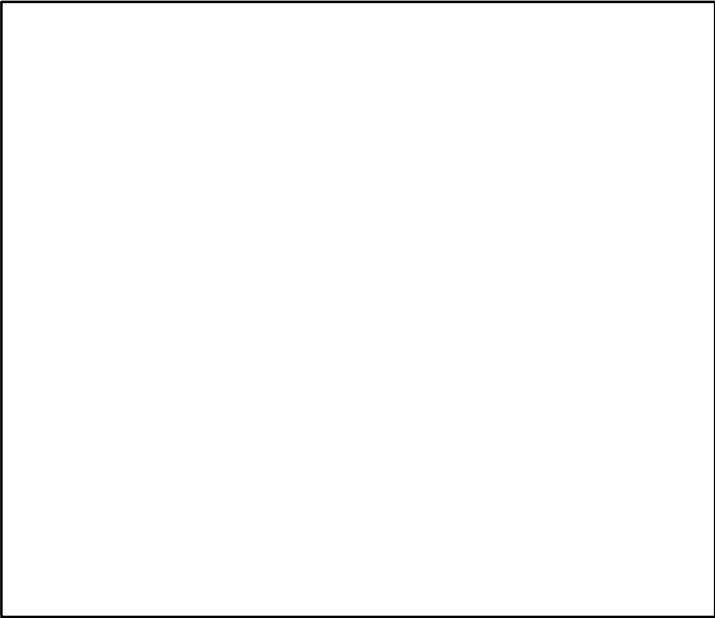
Kobe MSY*



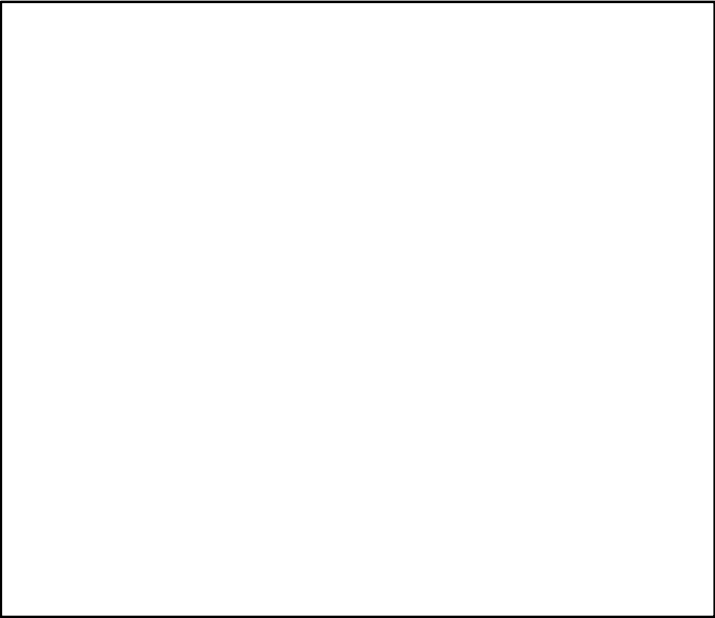
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

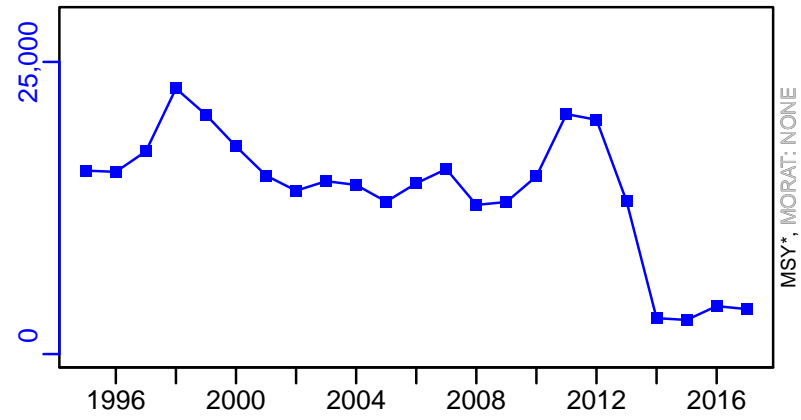


Recruits*



Bonga Central West Africa Gabon–Congo DR [BONGACWAGAB–COD]

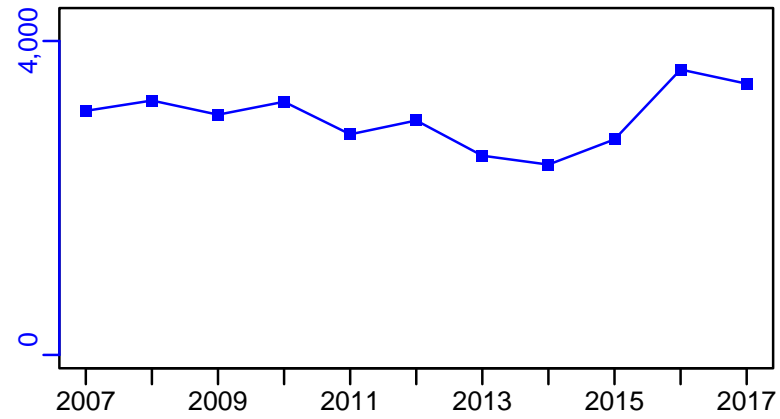
TC–MT, TL*, RecC* (1995–2017–ASHBROOK)



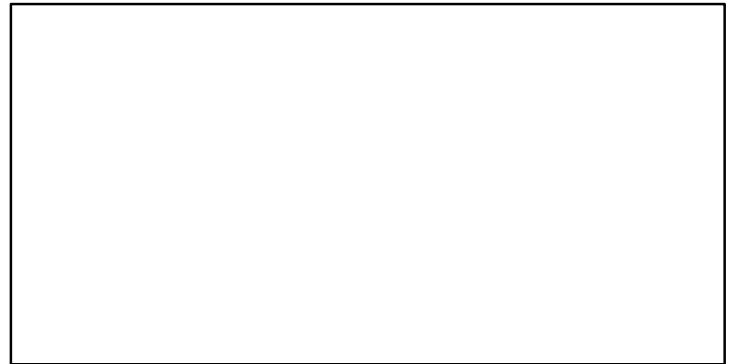
TAC*, Cpair*, Cadv*



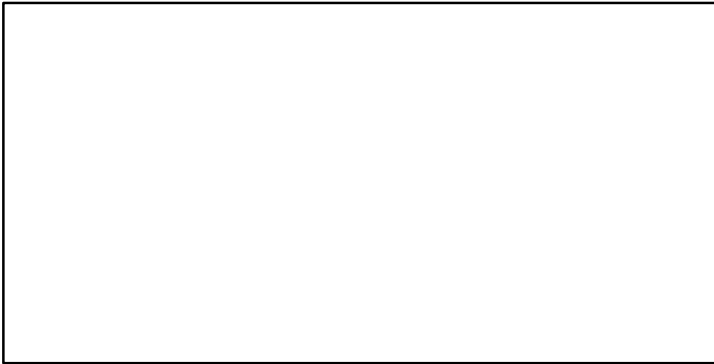
survB_index–index (1995–2017–ASHBROOK)



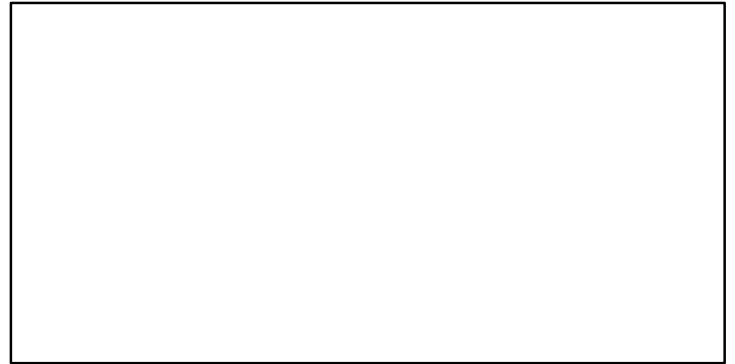
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

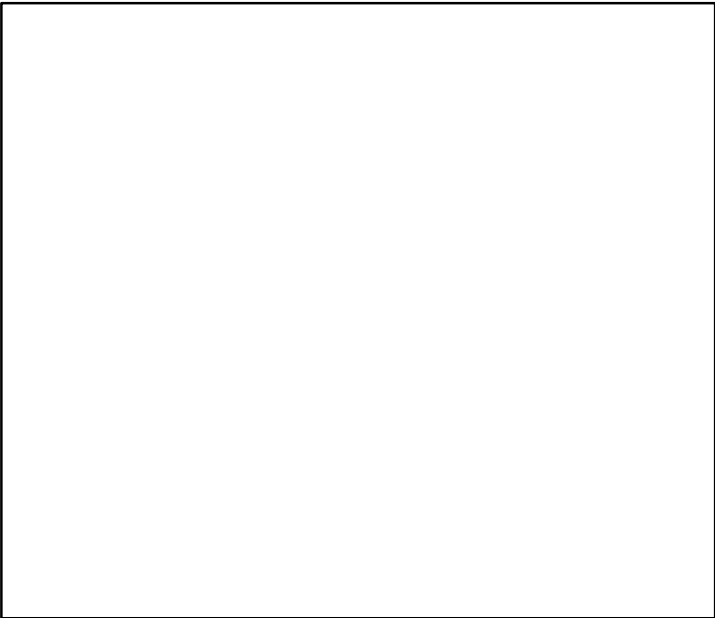
Bonga North West Africa [BONGANWA]

Metadata	
Scientific Name	Ethmalosa fimbriata
Current Assess ID	FAO-SPNWA-BONGANWA-1990-2020-HIVELY
Area	North West Africa
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2010, 2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2016	0.4
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	58,454		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

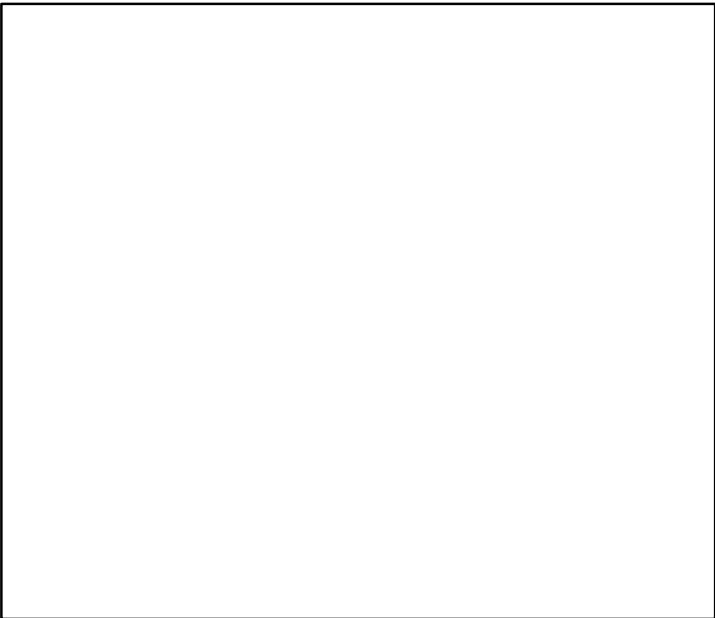
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



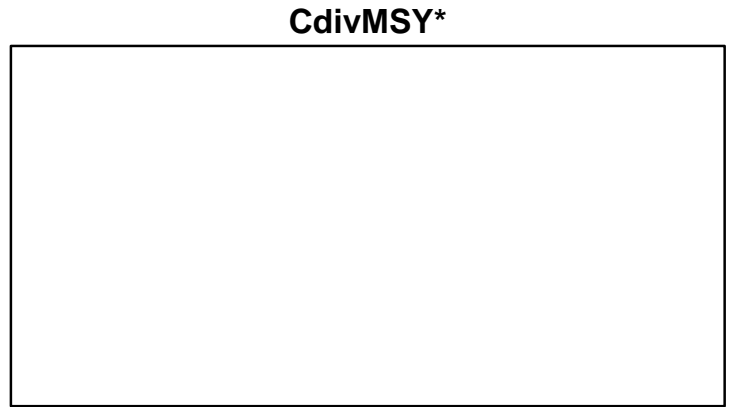
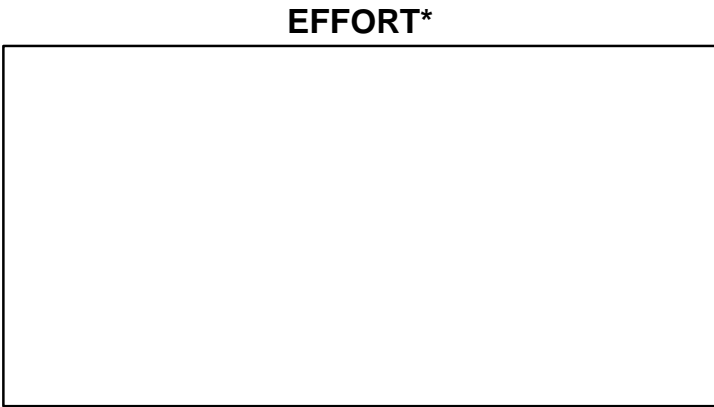
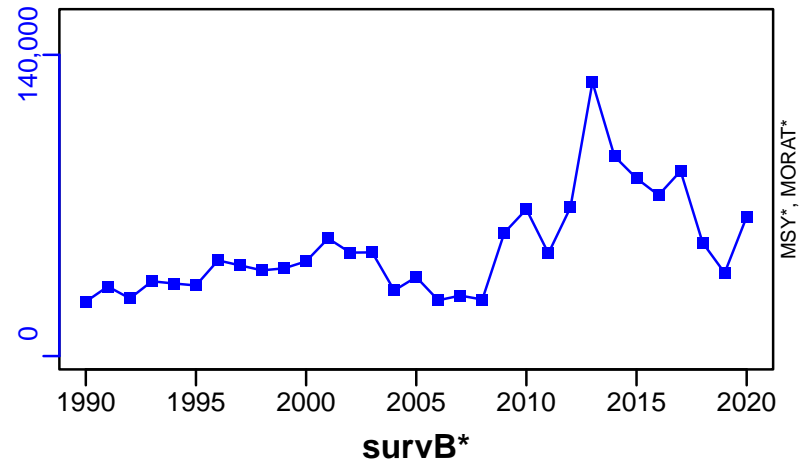
Recruits*



Bonga North West Africa [BONGANWA]

TC-MT, TL*, RecC* (1990-2020-HIVELY)

TAC*, Cpair*, Cadv*



Capelin Southern Labrador-Eastern Newfoundland [CAPE2J3KL]

Metadata	
Scientific Name	Mallotus villosus
Current Assess ID	DFO-CAPE2J3KL-1972-2018-ASHBROOK
Area	Southern Labrador-Eastern Newfoundland
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2018	18,888		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



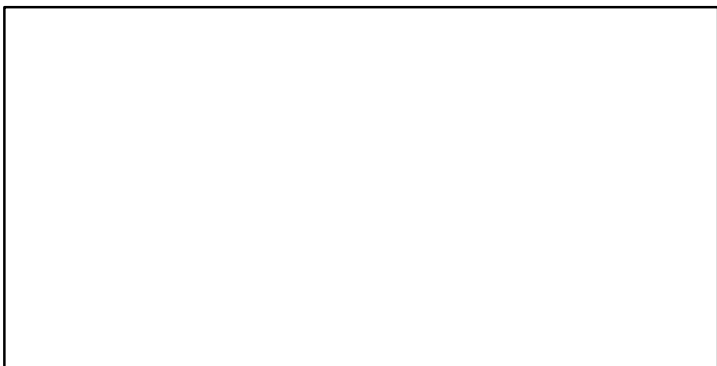
Production*



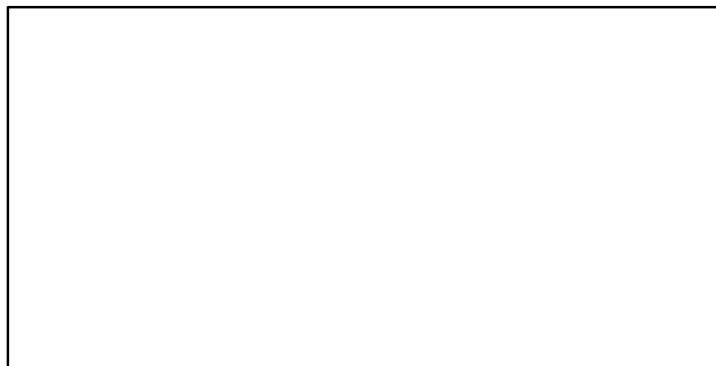
◆ Start Year ◆ End Year * No Data

Capelin Southern Labrador–Eastern Newfoundland [CAPE2J3KL]

TB*



SSB*



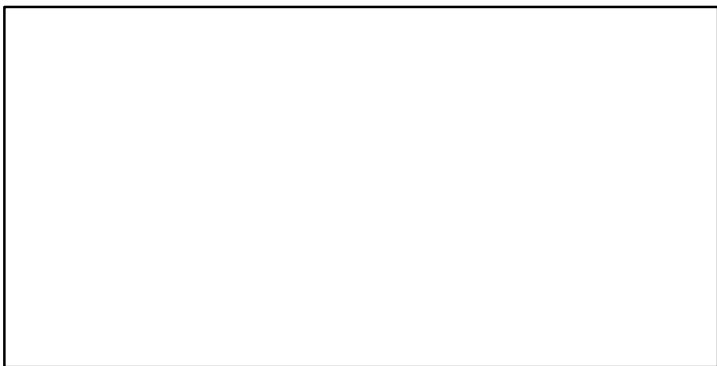
TN *



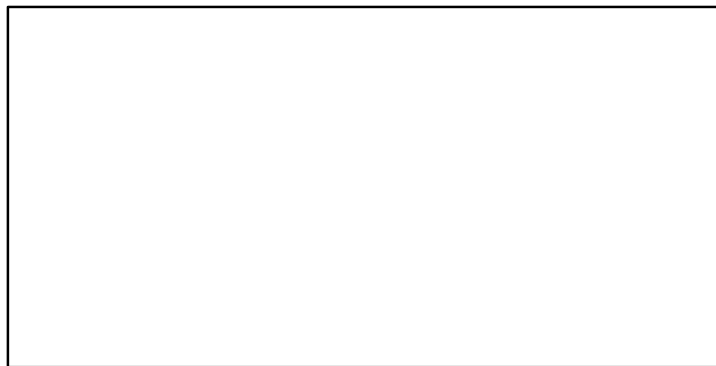
F*



ER*

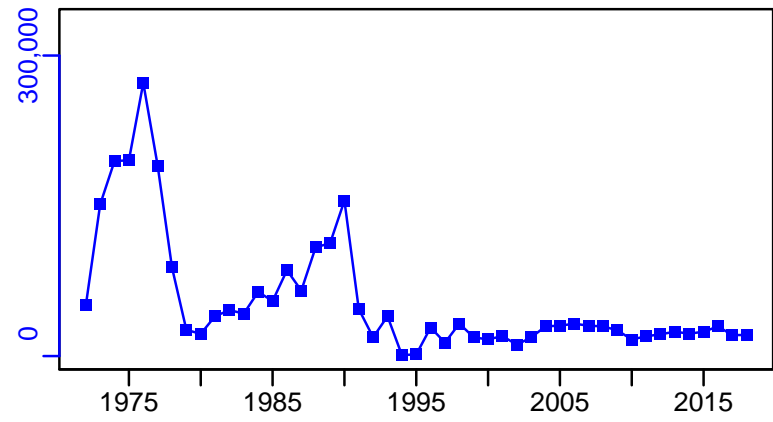


Recruits*

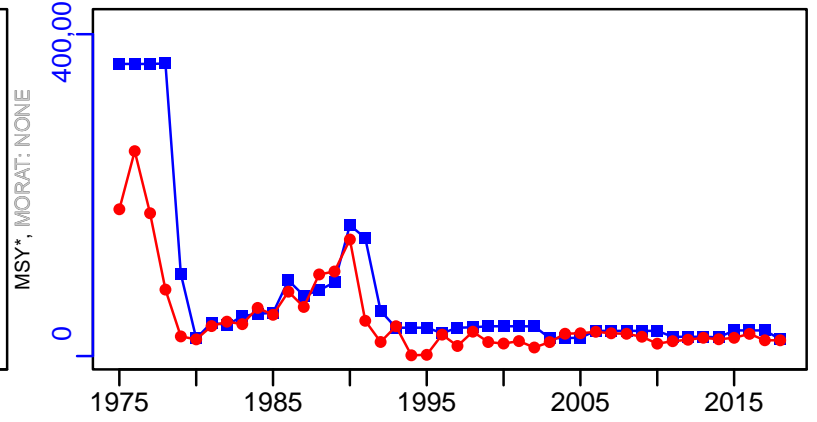


Capelin Southern Labrador–Eastern Newfoundland [CAPE2J3KL]

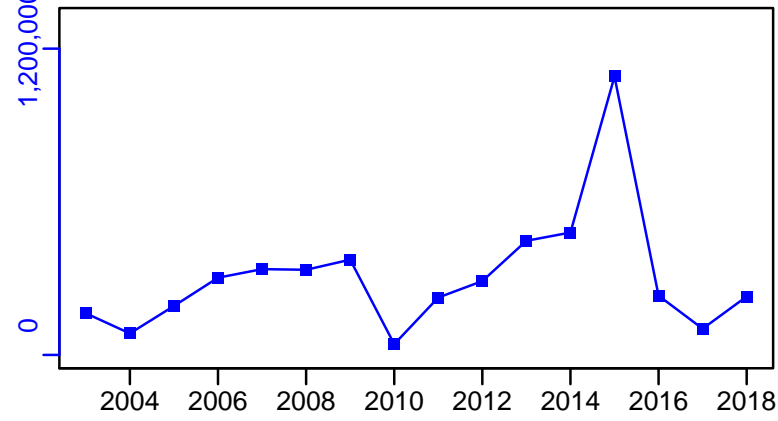
TL–MT, TC*, RecC* (1972–2018–ASHBROOK)



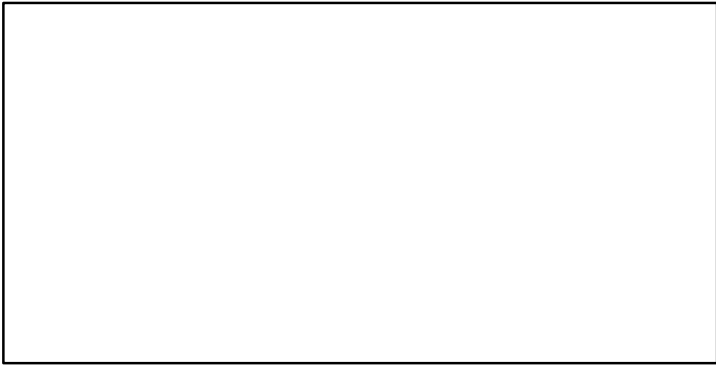
TAC–MT, Cpair–MT, Cadv* (1972–2018–ASHBROOK)



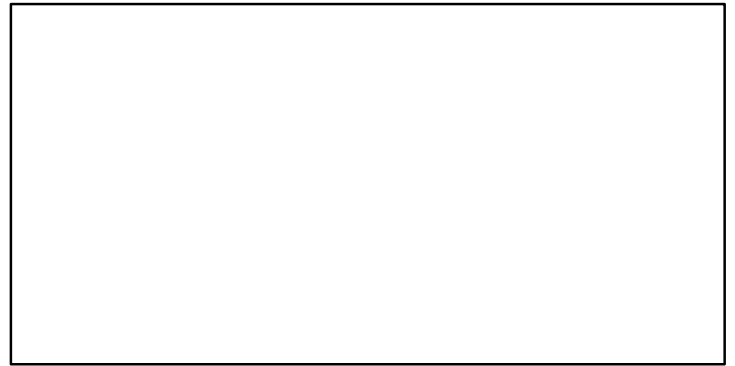
survB–MT (1972–2018–ASHBROOK)



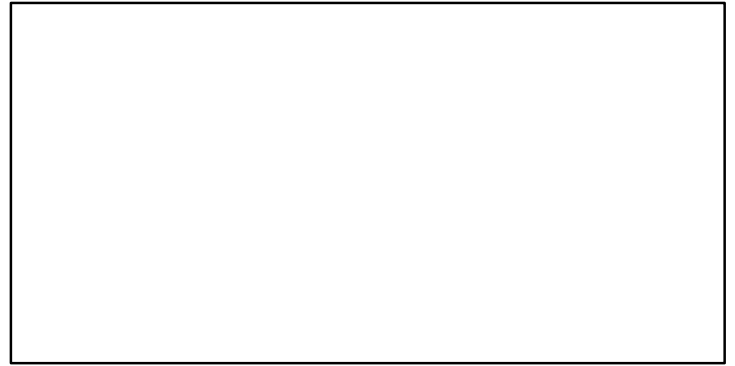
EFFORT*



CPUE*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Capelin Gulf of St. Lawrence [CAPE4RST]

Metadata	
Scientific Name	Mallotus villosus
Current Assess ID	DFO-QUE-CAPE4RST-1960-2017-ASHBROOK
Area	Gulf of St. Lawrence
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Quebec Region
Asmts in RAM	2012, 2010, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2017	1973		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



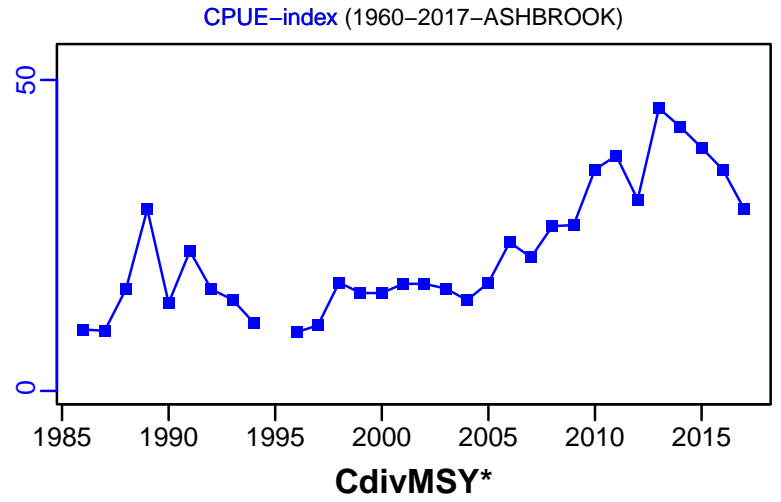
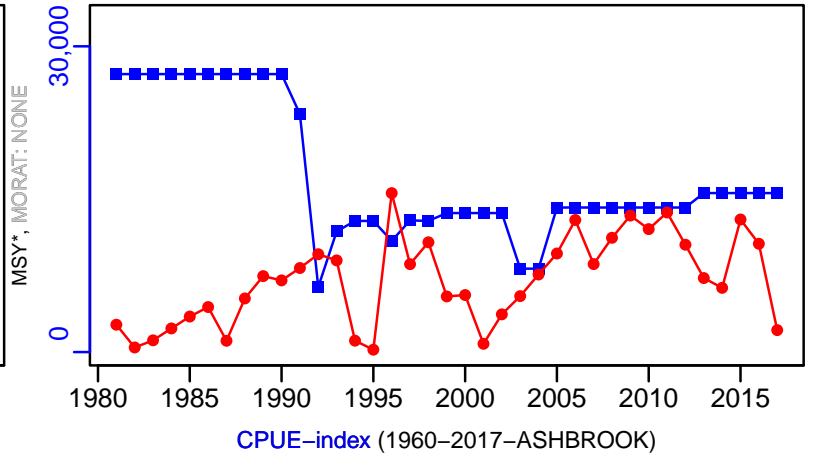
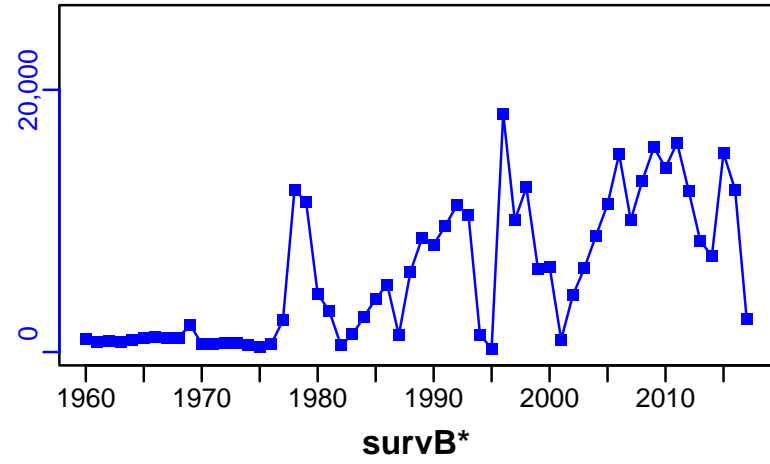
Recruits*



Capelin Gulf of St. Lawrence [CAPE4RST]

TL-MT, TC*, RecC* (1960-2017-ASHBROOK)

TAC-MT, Cpair-MT, Cadv* (1960-2017-ASHBROOK)



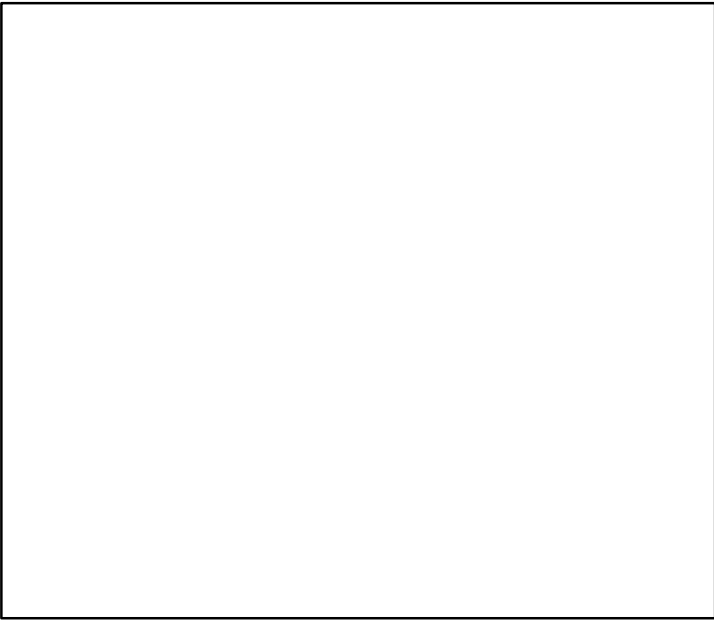
Capelin ICES 2a-5-14 [CAPEIIa-V-XIV]

Metadata	
Scientific Name	Mallotus villosus
Current Assess ID	NWWG-CAPEIIa-V-XIV-1979-2022-HIVELY
Area	ICES 2a-5-14
Management Authority	International Council for the Exploration of the Sea
Assessor	North-Western Working Group
Asmts in RAM	2010, 2014, 2016, 2015, 2017, 2019, 2020, 2022

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2022	150,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2022	150,000
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2022	460,000	-	-
TN	-	-	-	-	-
R	R-E00	2022	40,720,000	-	-
F	-	-	-	-	-
ER	ER-ratio	2010	0.016	-	-
TC	TC-MT	2022	608,036		
TL	TL-MT	2020	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2022	3.067		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

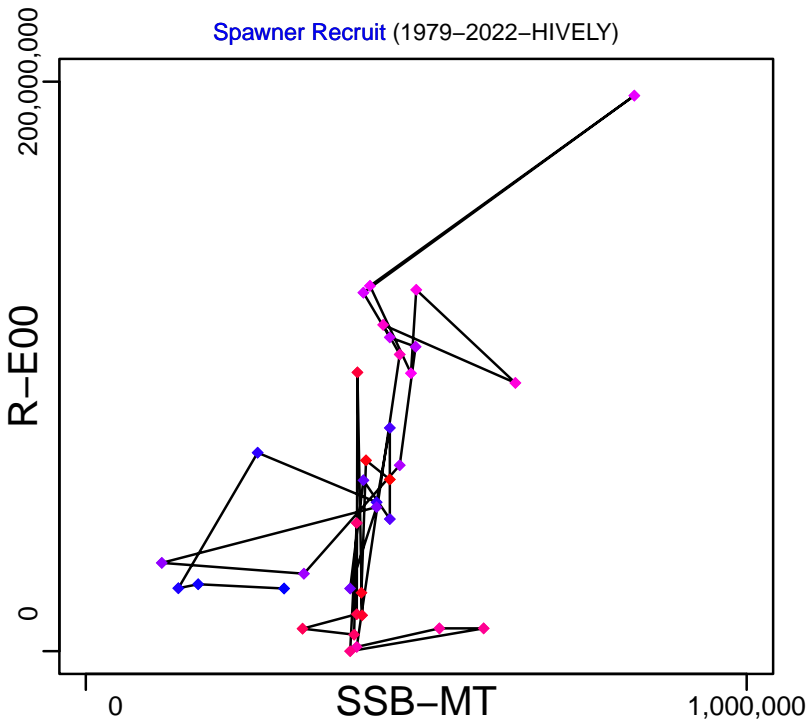
Kobe MSY*



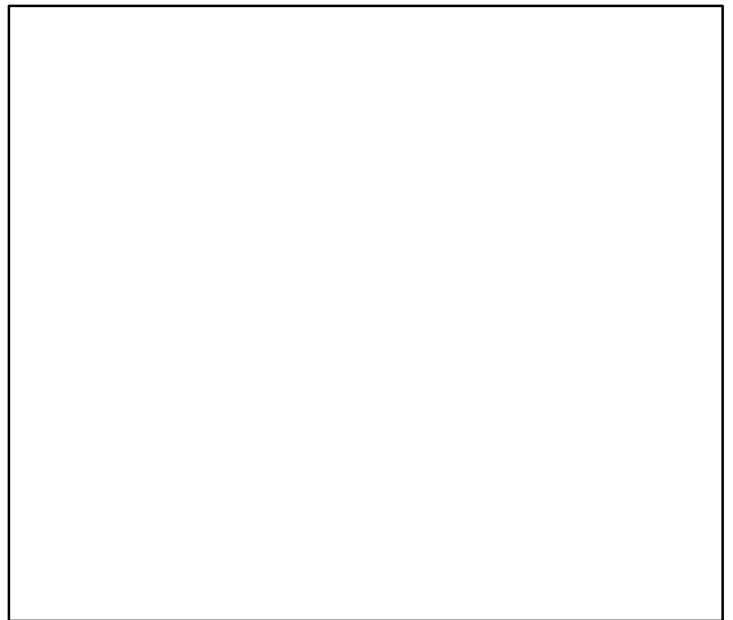
Kobe MGT*



Spawner Recruit (1979-2022-HIVELY)



Production*



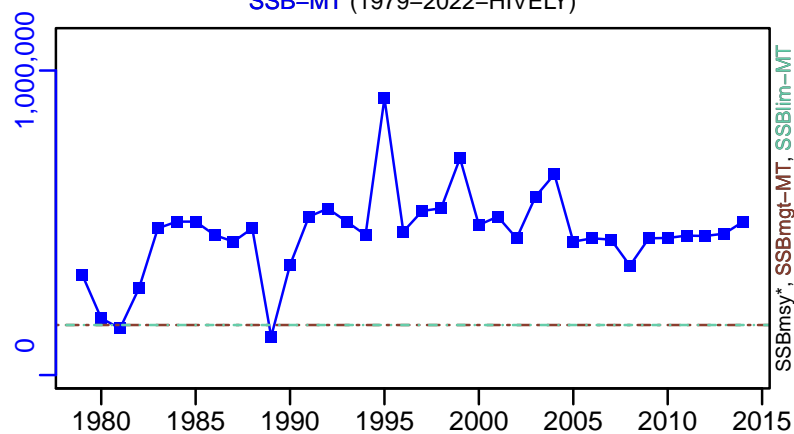
◆ Start Year ◆ End Year * No Data

Capelin ICES 2a-5-14 [CAPElla-V-XIV]

TB*



SSB-MT (1979-2022-HIVELY)



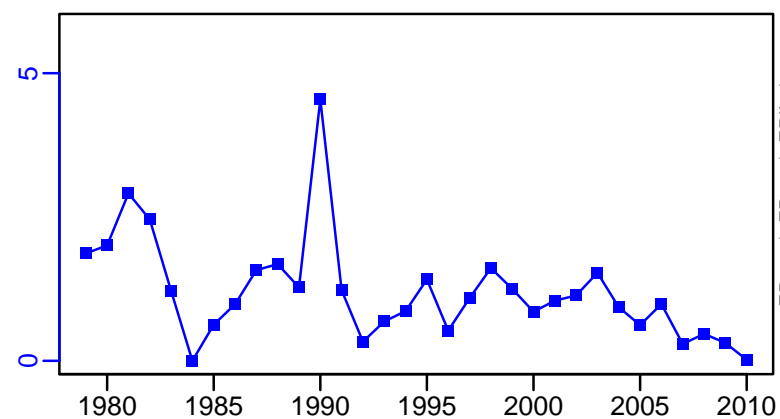
TN *



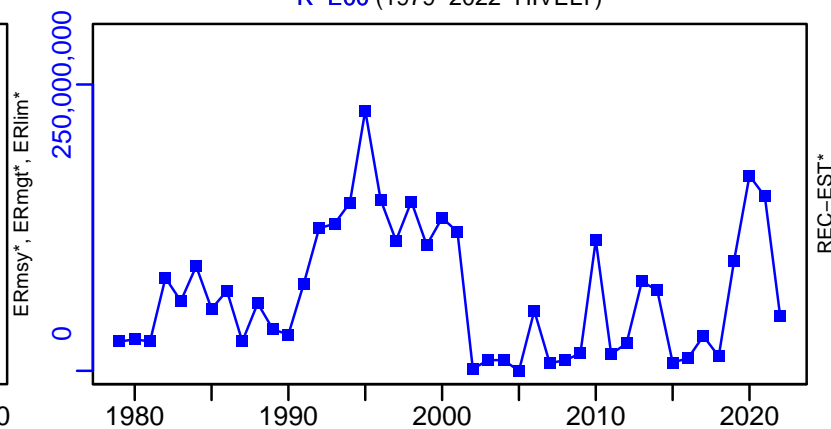
F*



ER-ratio (1977-2010-NEUBAUER)



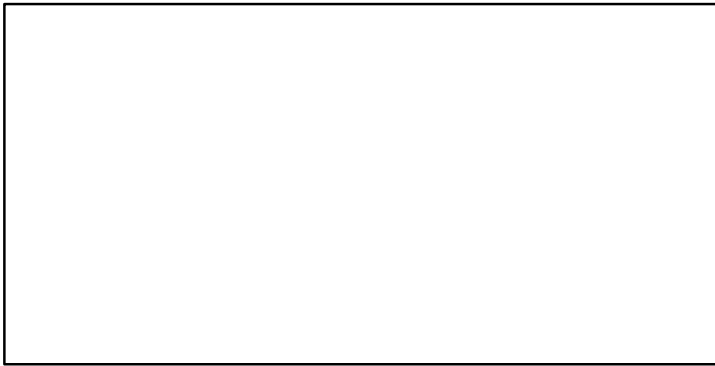
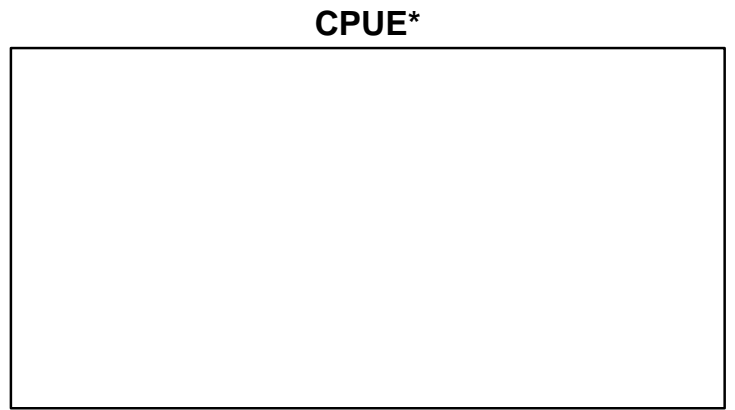
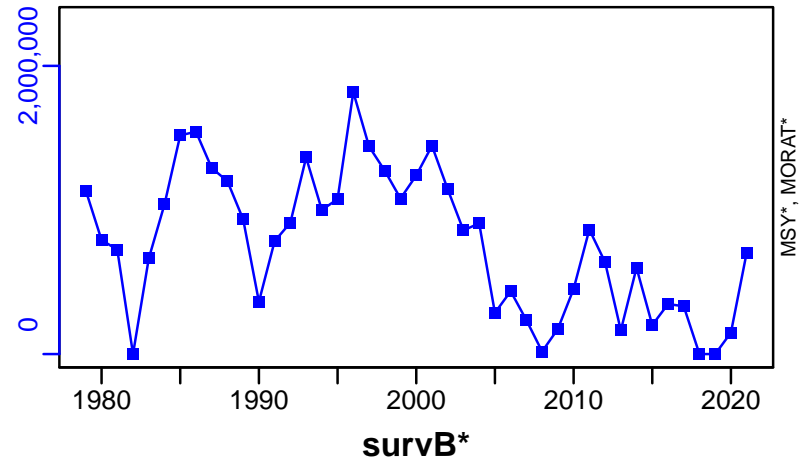
R-E00 (1979-2022-HIVELY)



Capelin ICES 2a-5-14 [CAPElla-V-XIV]

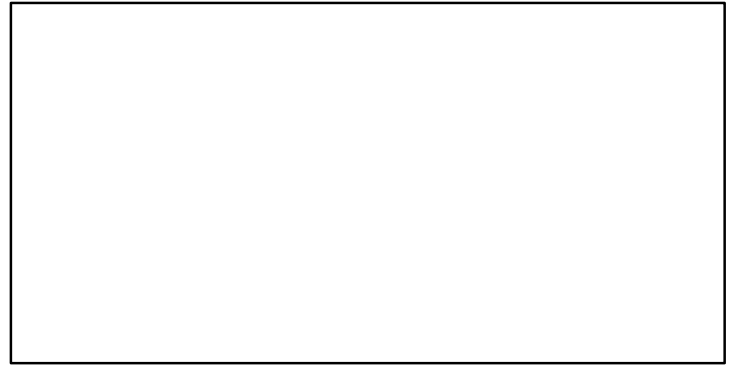
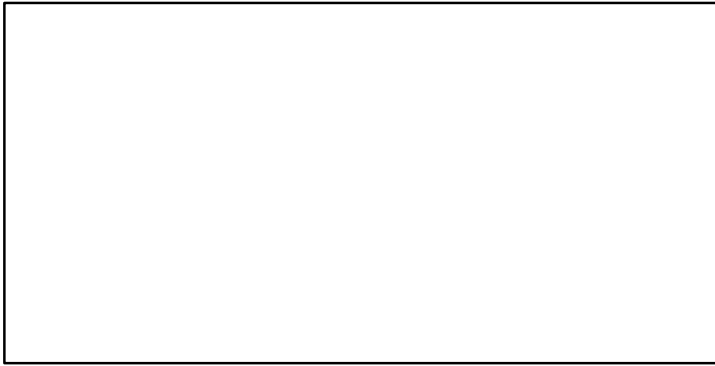
TC-MT, TL*, RecC* (1979-2022-HIVELY)

TAC*, Cpair*, Cadv*



EFFORT*

CdivMSY*



Capelin Barents Sea [CAPENOR]

Metadata	
Scientific Name	Mallotus villosus
Current Assess ID	AFWG-CAPENOR-1972-2021-ICESIMP2021-2
Area	Barents Sea
Management Authority	International Council for the Exploration of the Sea
Assessor	Arctic Fisheries Working Group
Asmts in RAM	2007, 2016, 2017, 2018, 2019, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	2×10^5
Flim	-	-	-
ERlim	-	-	-

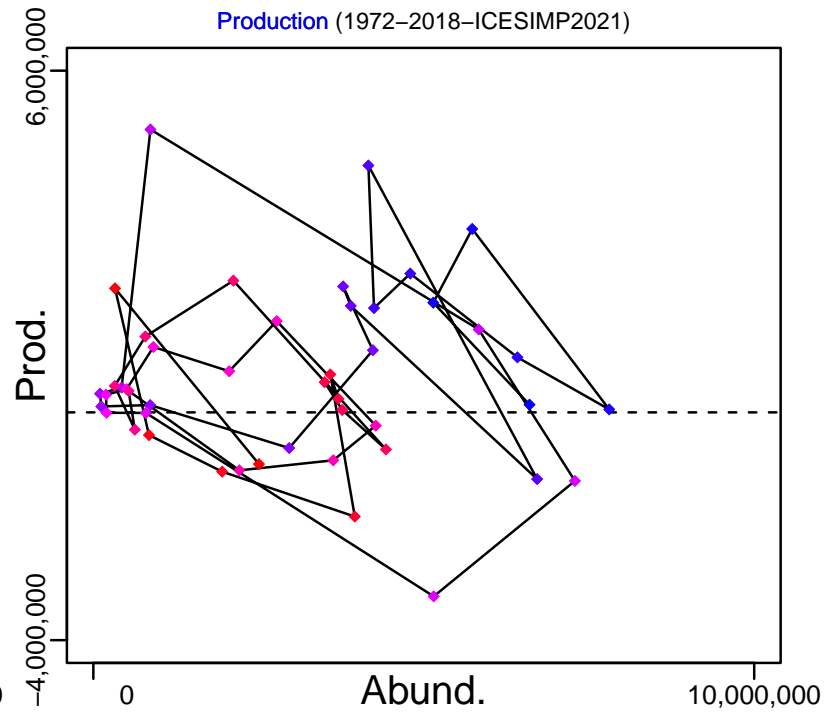
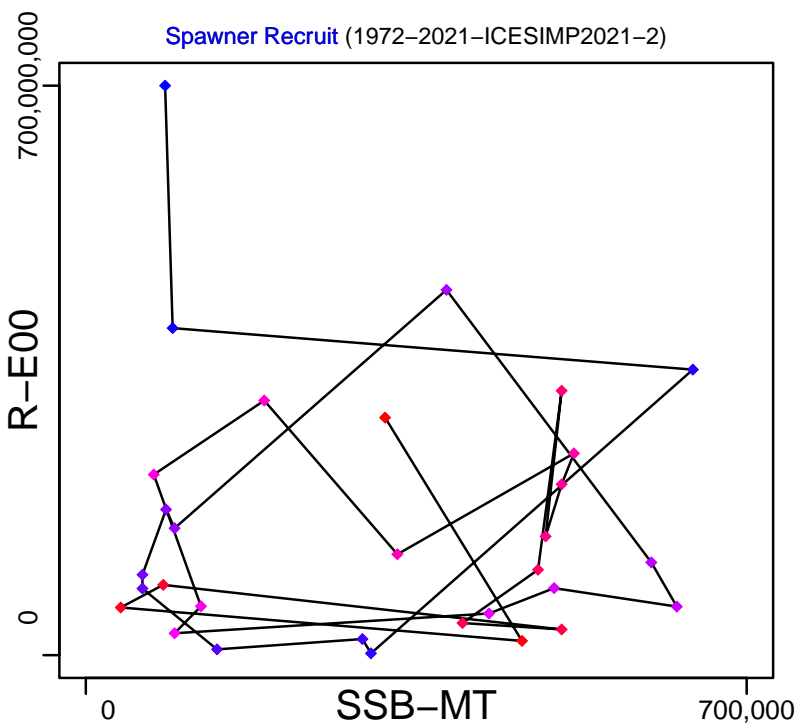
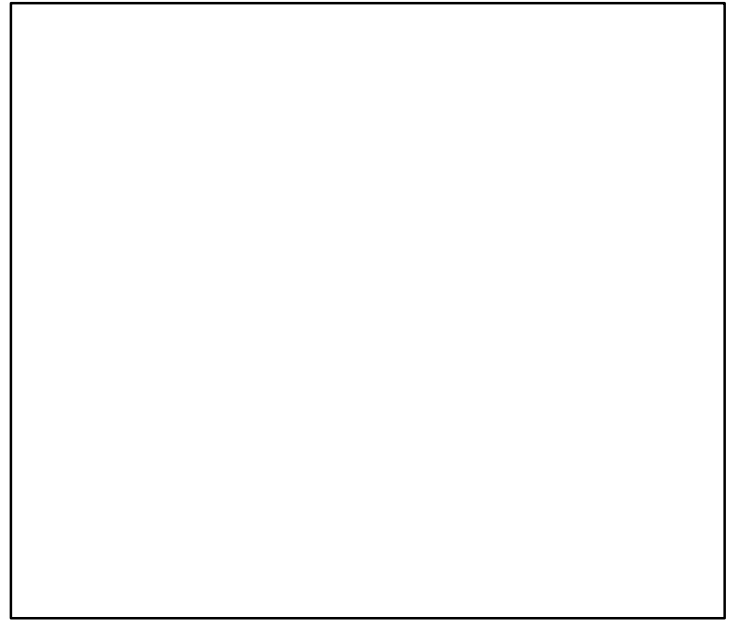
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	1,597,000	-	-
SSB	SSB-MT	2021	156,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	2.92×10^8	-	1
F	-	-	-	-	-
ER	ER-calc-ratio	2018	0.122	-	-
TC	TC-MT	2021	31		
TL	TL-MT	2019	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Capelin Barents Sea [CAPENOR]

Kobe MSY*



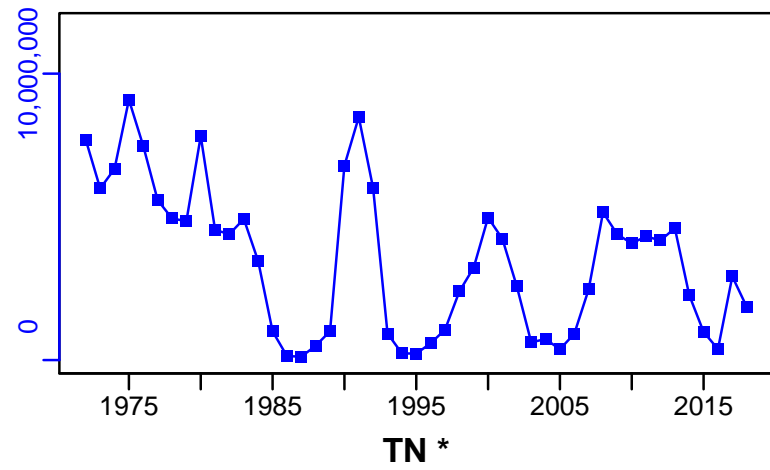
Kobe MGT*



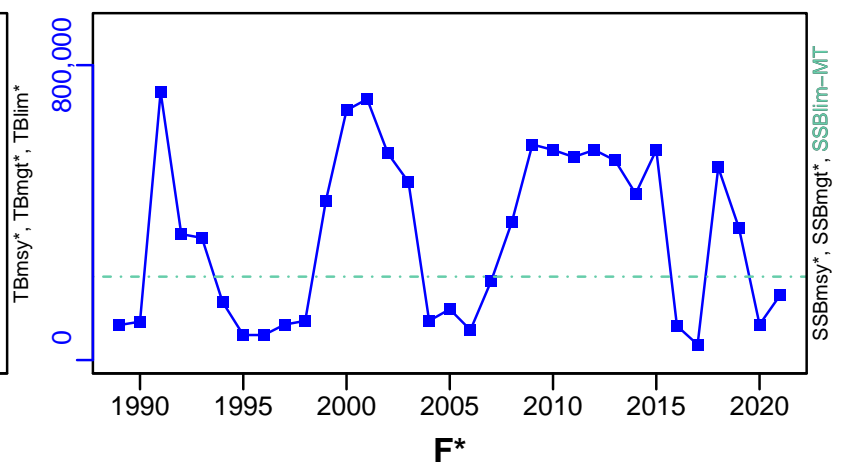
◆ Start Year ◆ End Year * No Data

Capelin Barents Sea [CAPENOR]

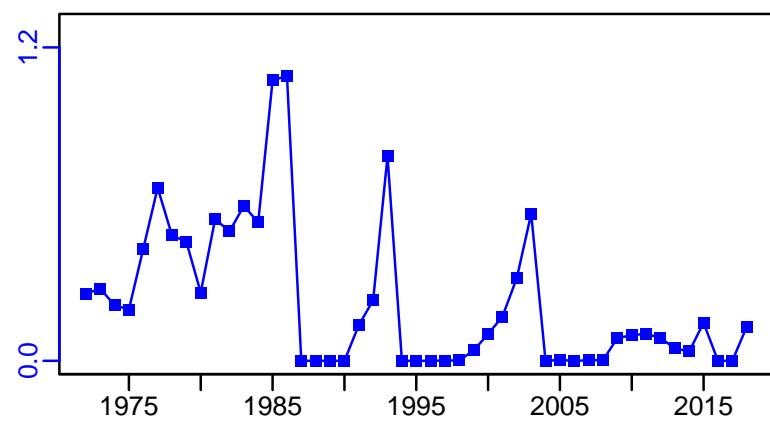
TB-MT (1972–2018–ICESIMP2021)



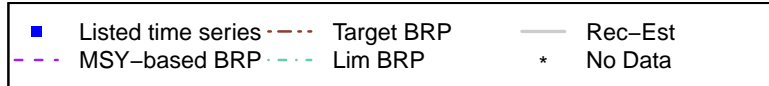
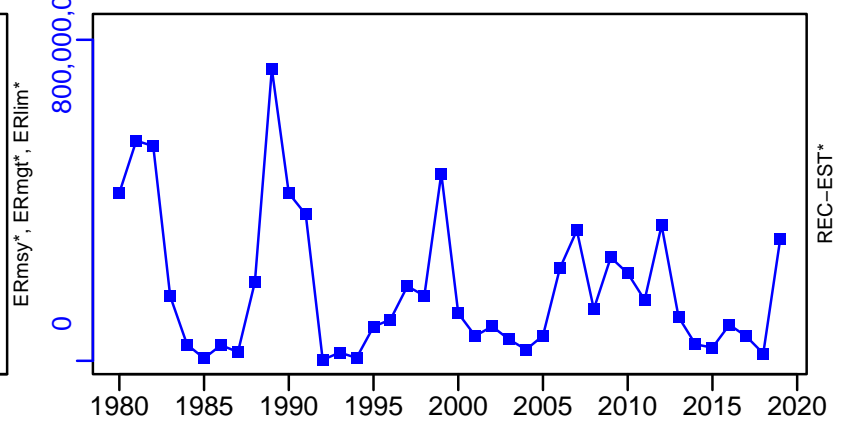
SSB-MT (1972–2021–ICESIMP2021–2)



ER-calc-ratio (1972–2018–ICESIMP2021)

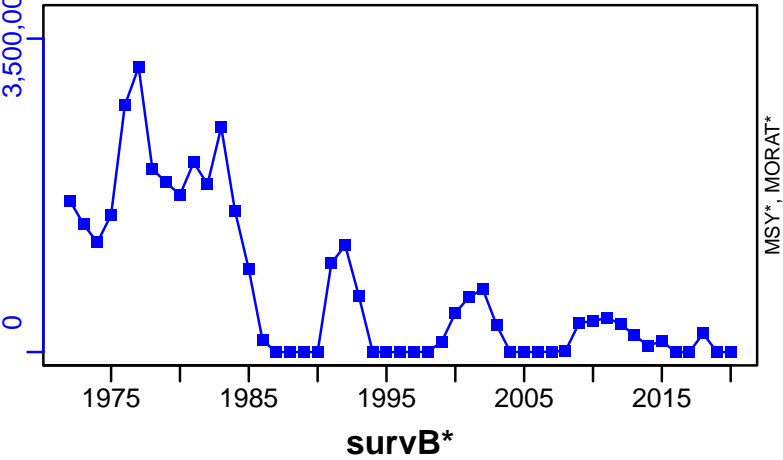


R-E00 (1972–2021–ICESIMP2021–2)



Capelin Barents Sea [CAPENOR]

TC-MT, TL*, RecC* (1972-2021-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



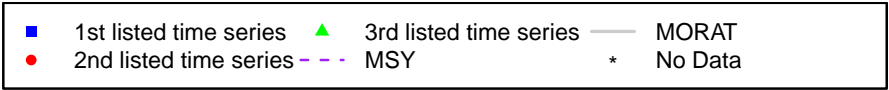
CPUE*



EFFORT*



CdivMSY*



Chilean herring Central-Southern Chile [CHERRCHVX]

Metadata	
Scientific Name	Clupea bentincki
Current Assess ID	IFOPCH-CHERRCHVX-1960-2012-CHING
Area	Central-Southern Chile
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	4,190,000	-	-
SSB	SSB-MT	2012	1,620,000	-	-
TN	-	-	-	-	-
R	R-E00	2012	7.41×10^{10}	-	-
F	F-1/yr	2012	0.262	-	-
ER	ER-calc-ratio	2012	0.221	-	-
TC	-	-	-		
TL	TL-MT	2012	833,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

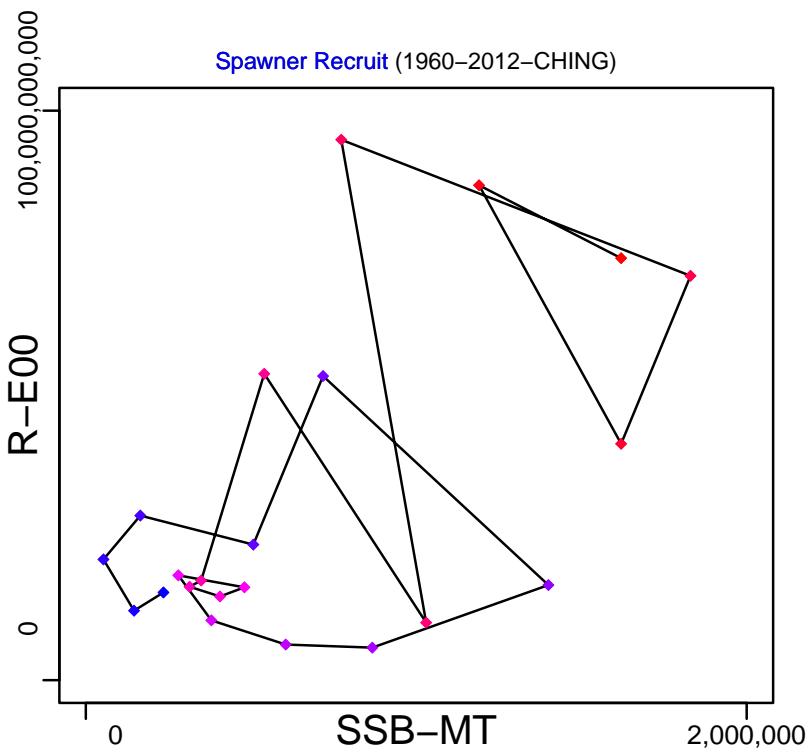
Kobe MSY*



Kobe MGT*



Spawner Recruit (1960–2012–CHING)



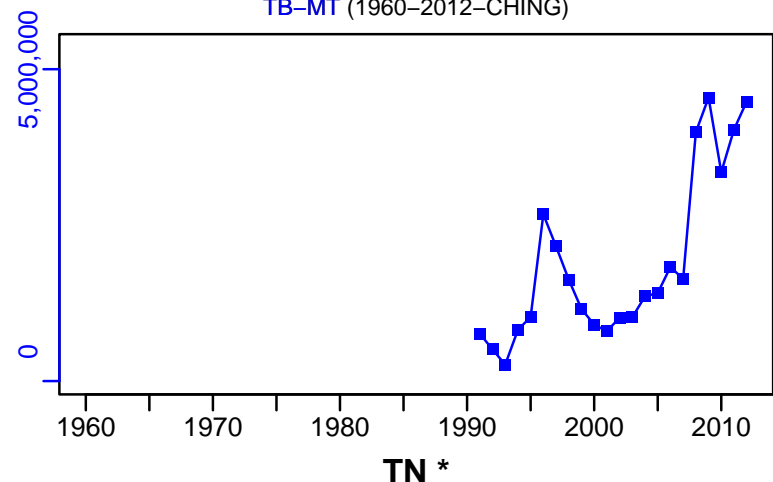
Production*



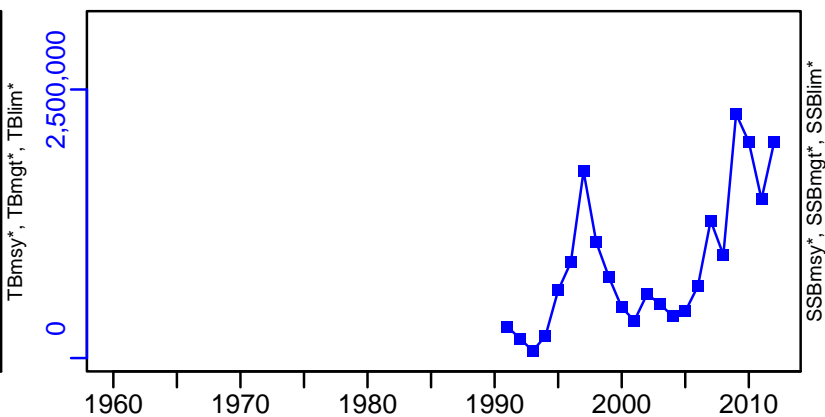
◆ Start Year ◆ End Year * No Data

Chilean herring Central–Southern Chile [CHERRCHVX]

TB-MT (1960–2012–CHING)



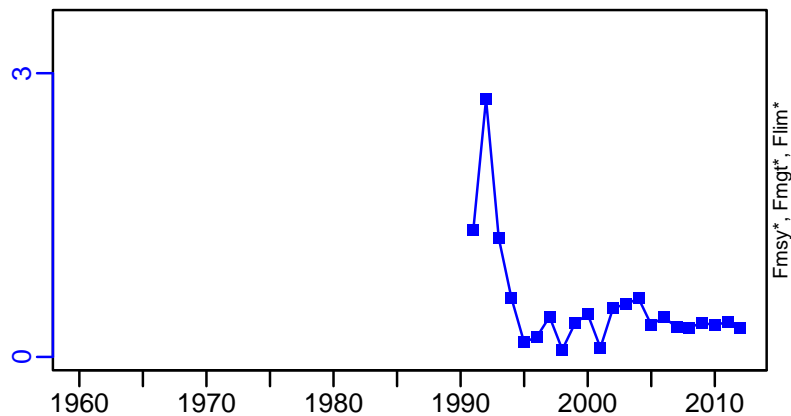
SSB-MT (1960–2012–CHING)



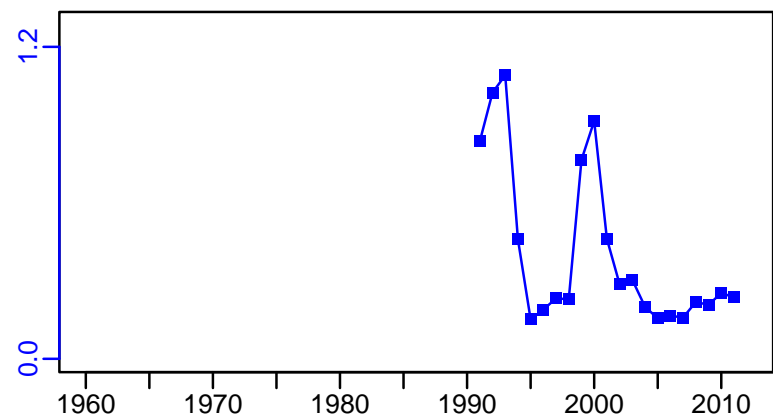
TN *



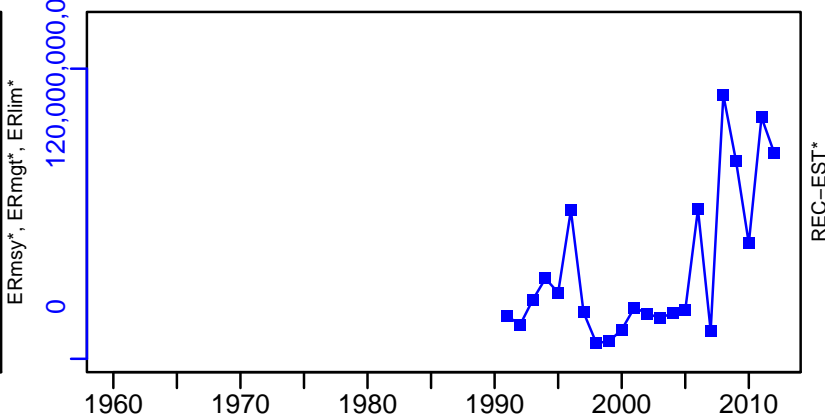
F-1/yr (1960–2012–CHING)



ER-calc-ratio (1960–2012–CHING)

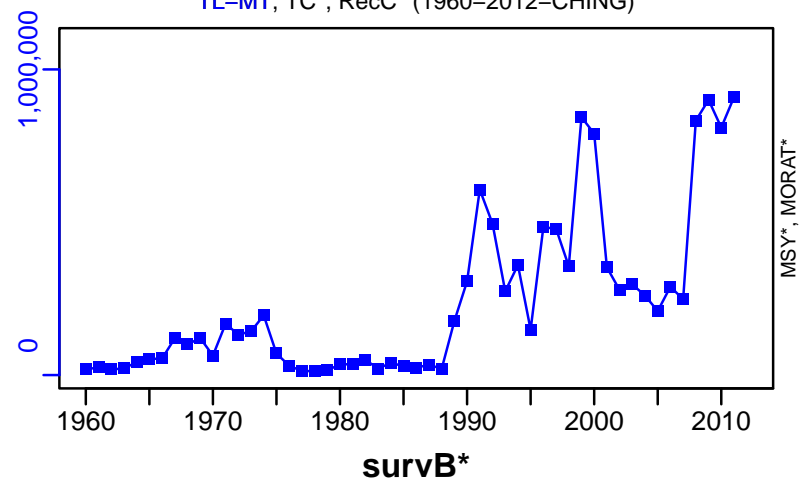


R-E00 (1960–2012–CHING)

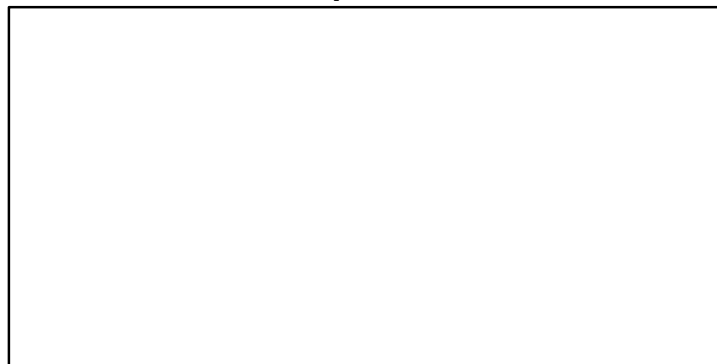


Chilean herring Central–Southern Chile [CHERRCHVX]

TL–MT, TC*, RecC* (1960–2012–CHING)



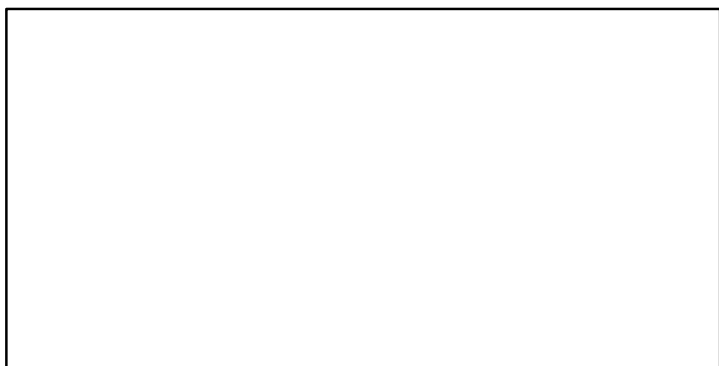
TAC*, Cpair*, Cadv*



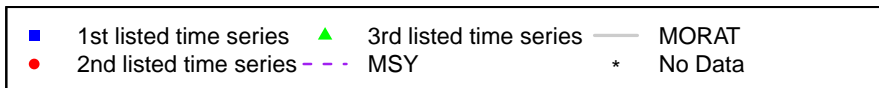
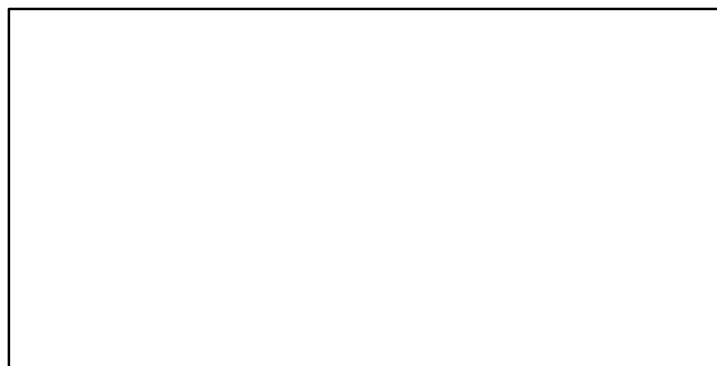
CPUE*



EFFORT*



CdivMSY*



Chilean sardine Central-Southern Chile [CSARDCSCH]

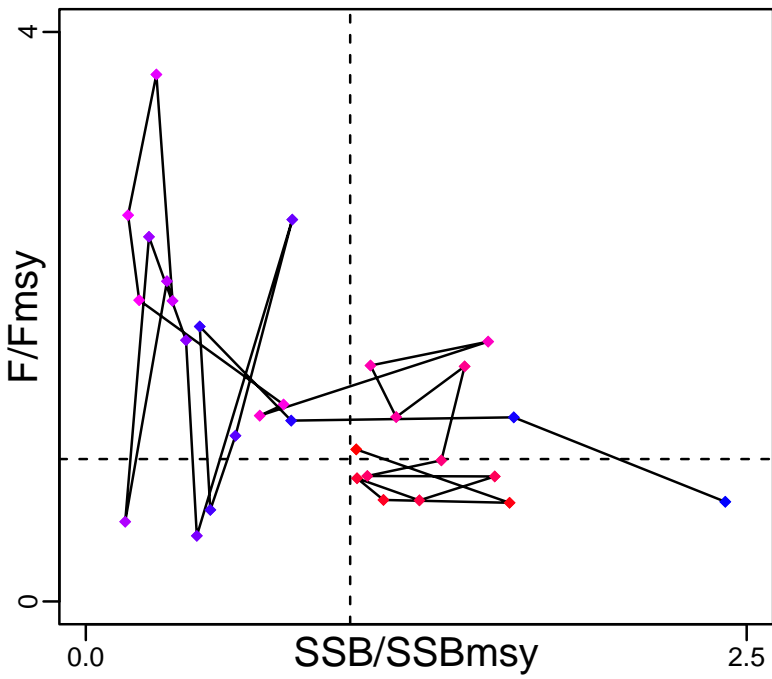
Metadata	
Scientific Name	Strangomera bentincki
Current Assess ID	IFOPCH-CSARDCSCH-1991-2020-Quiroz
Area	Central-Southern Chile
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2015, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2020	830,339
Fmsy	Fmsy-pr-1/yr	2020	0.3
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2015	889,000
Fmgt	Fmgt-1/yr	2015	0.26
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2020	1,509,710
MSY	MSY-MT	2020	289,790
M	M-1/yr	2020	1
TBlim	-	-	-
SSBlim	SSBlim-MT	2015	444,000
Flim	-	-	-
ERlim	-	-	-

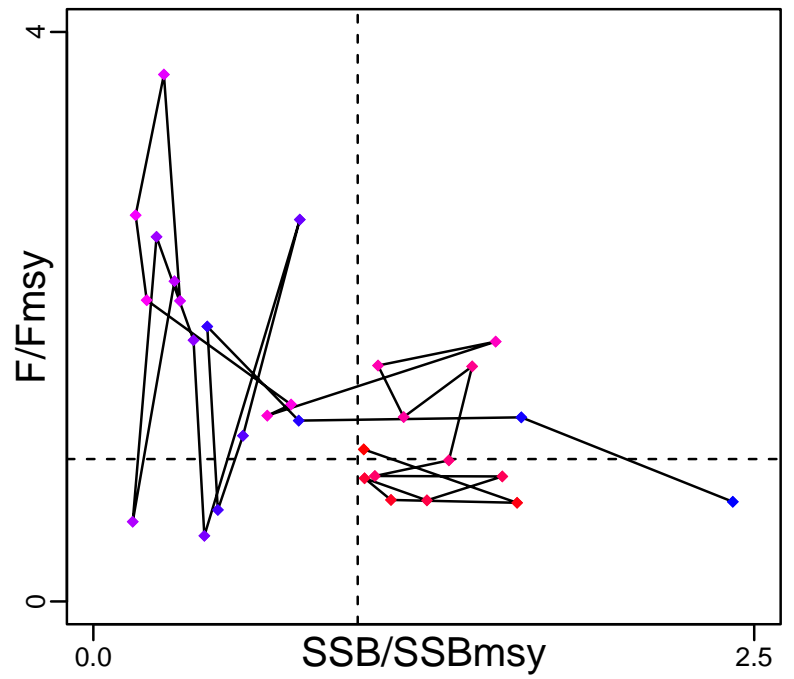
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	1,333,000	-	-
SSB	SSB-MT	2020	849,310	Both	-
TN	-	-	-	-	-
R	R-E00	2020	58,067	Both	-
F	F-1/yr	2020	0.21	Both	-
ER	ER-ratio	2020	0.217	-	-
TC	TC-MT	2020	289,779		
TL	TL-MT	2015	431,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2020	1.023		
F/Fmsy	FdivFmsy-dimensionless	2020	1.068		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2015	1.485		
F/Fmgt	F-1/yr/Fmgt-1/yr	2015	0.735		
ER/ERmgt	-	-	-		

Chilean sardine Central–Southern Chile [CSARDCSCH]

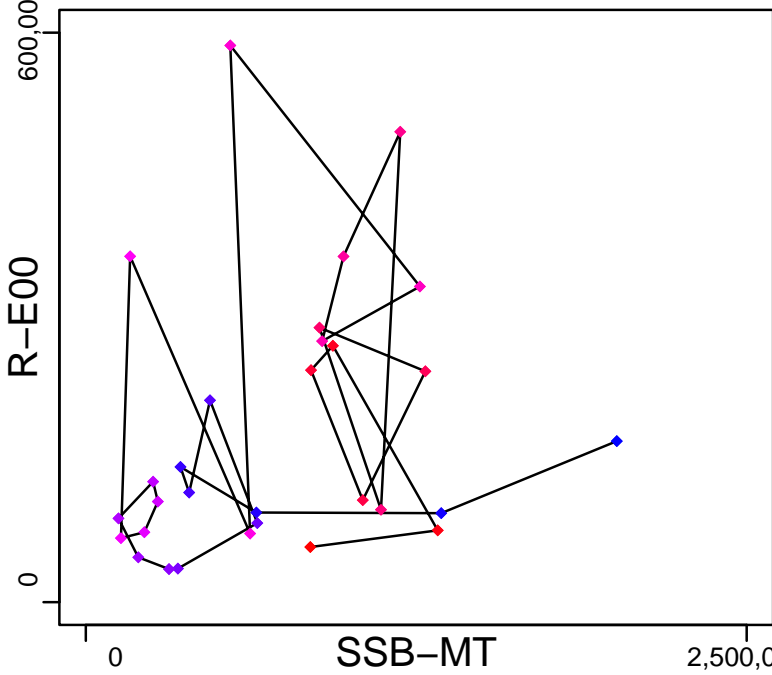
Kobe MSYpref (1991–2020–Quiroz)



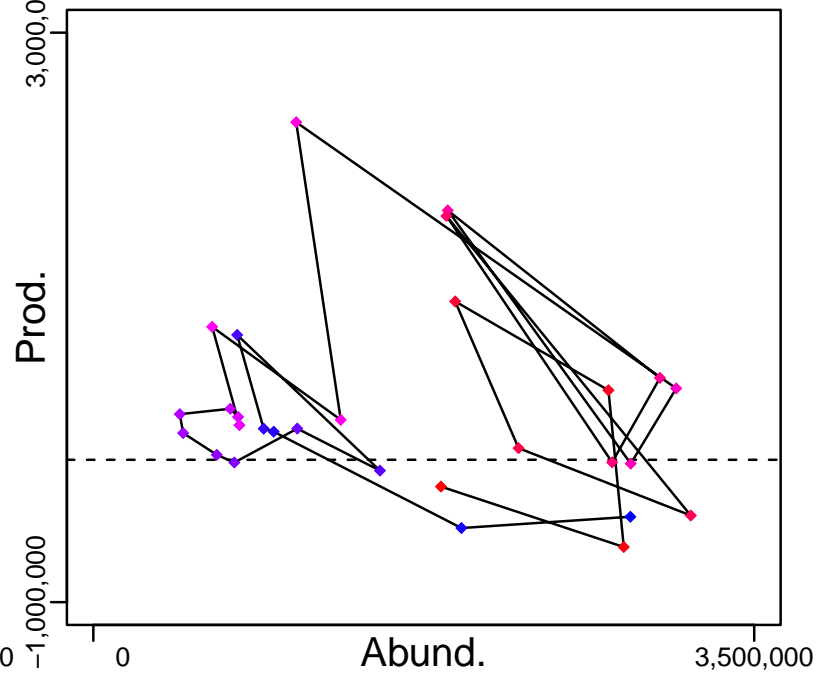
Kobe MGTpref (1991–2020–Quiroz)



Spawner Recruit (1991–2020–Quiroz)

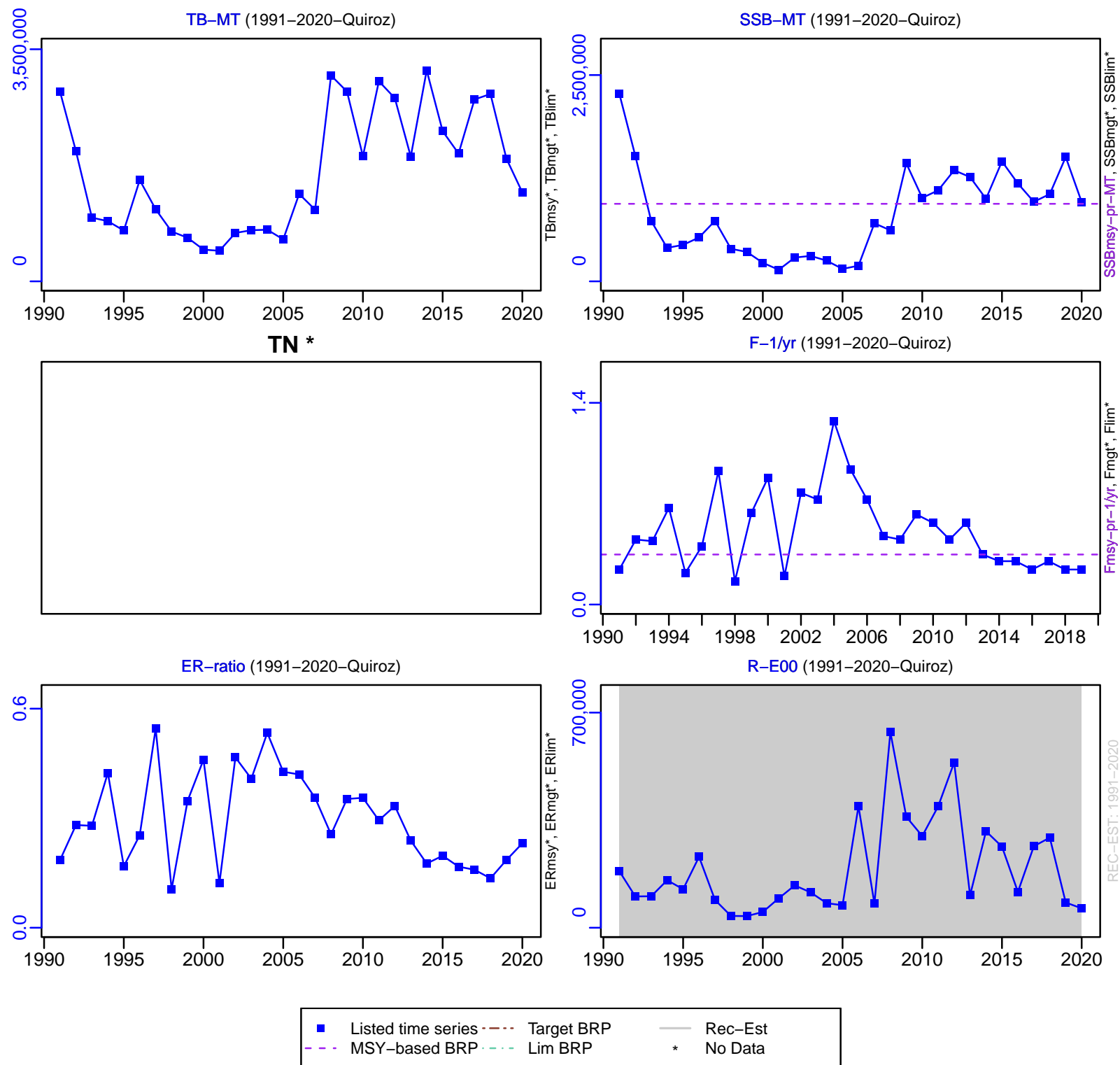


Production (1991–2020–Quiroz)



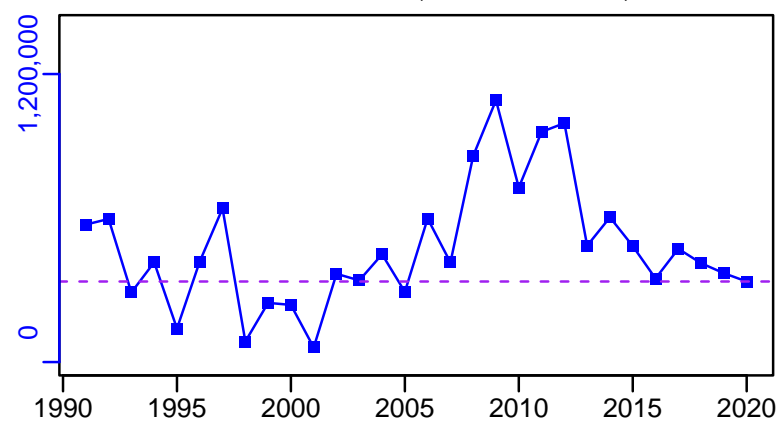
◆ Start Year ◆ End Year * No Data

Chilean sardine Central–Southern Chile [CSARDCSCH]

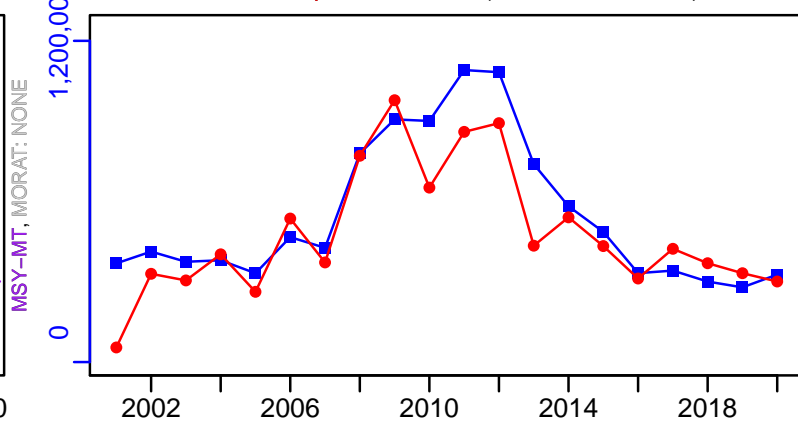


Chilean sardine Central–Southern Chile [CSARDCSCH]

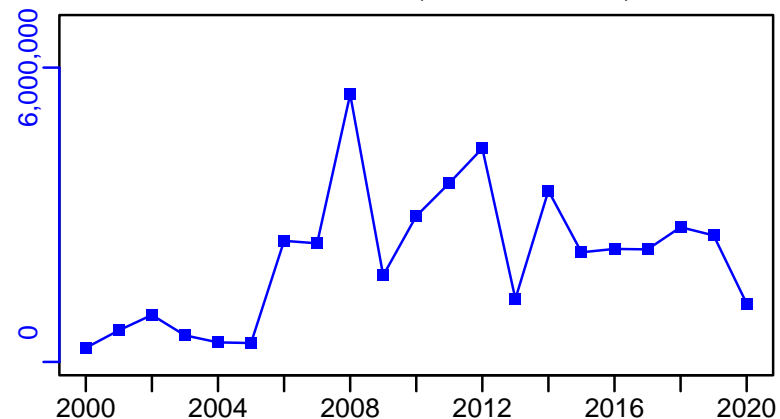
TC–MT, TL*, RecC* (1991–2020–Quiroz)



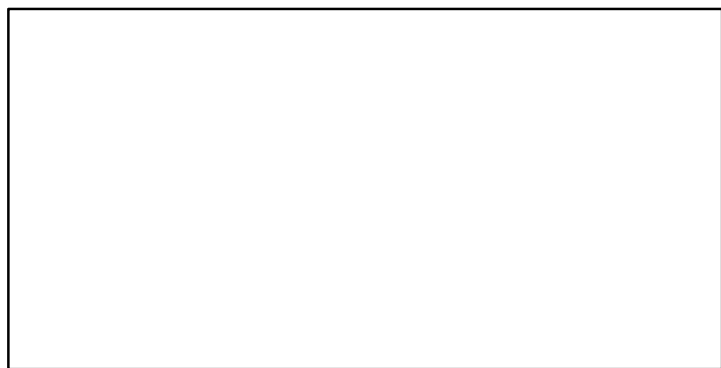
TAC–MT, Cpair–MT, Cadv* (1991–2020–Quiroz)



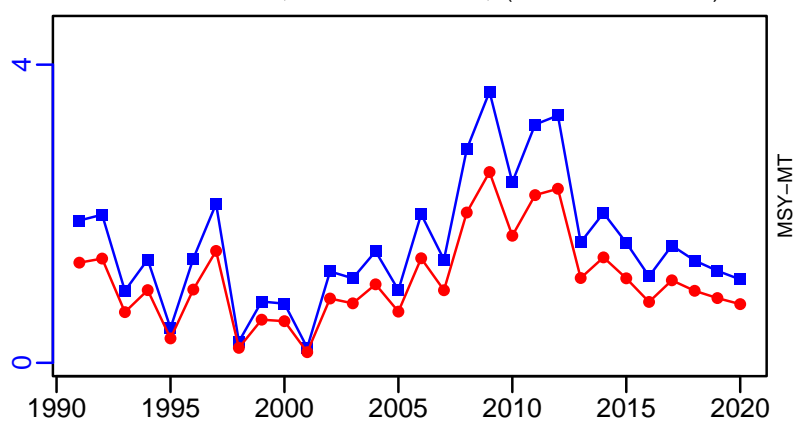
survB_absolute–MT (1991–2020–Quiroz)



EFFORT*



TC–MT/MSY–MT, CdivMEANC–ratio, (1991–2020–Quiroz)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Deep sea smelt Pacific Ocean [DSSMELTPAC]

Metadata	
Scientific Name	Glossanodon semifasciatus
Current Assess ID	FAFRFJ-DSSMELTPAC-1980-2018-KUROTA
Area	Pacific Ocean
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	552		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



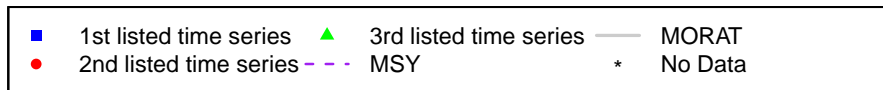
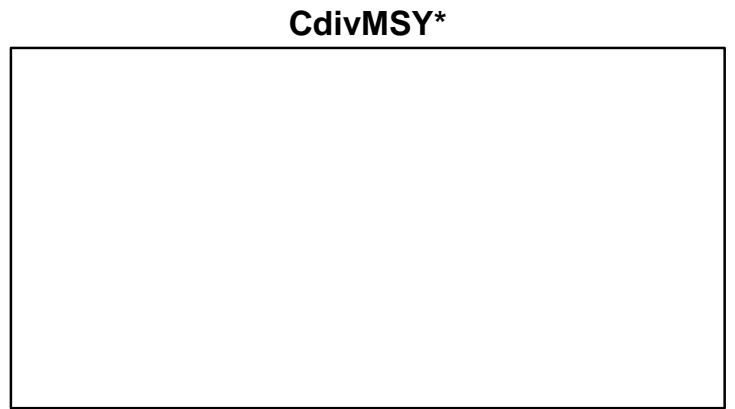
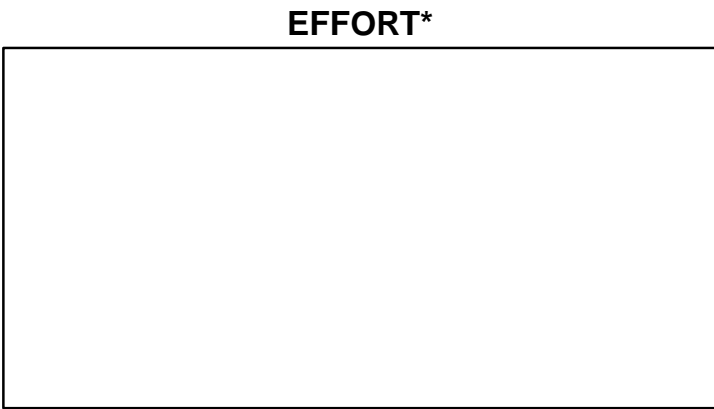
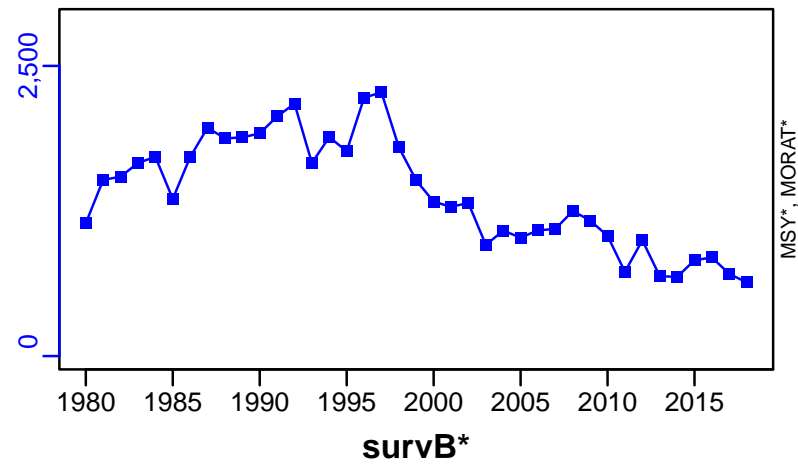
Recruits*



Deep sea smelt Pacific Ocean [DSSMELTPAC]

TC-MT, TL*, RecC* (1980-2018-KUROTA)

TAC*, Cpair*, Cadv*



Deep sea smelt Sea of Japan [DSSMELTSOJ]

Metadata	
Scientific Name	Glossanodon semifasciatus
Current Assess ID	FAFRFJ-DSSMELTSOJ-1975-2018-KUROTA
Area	Sea of Japan
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	2067		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

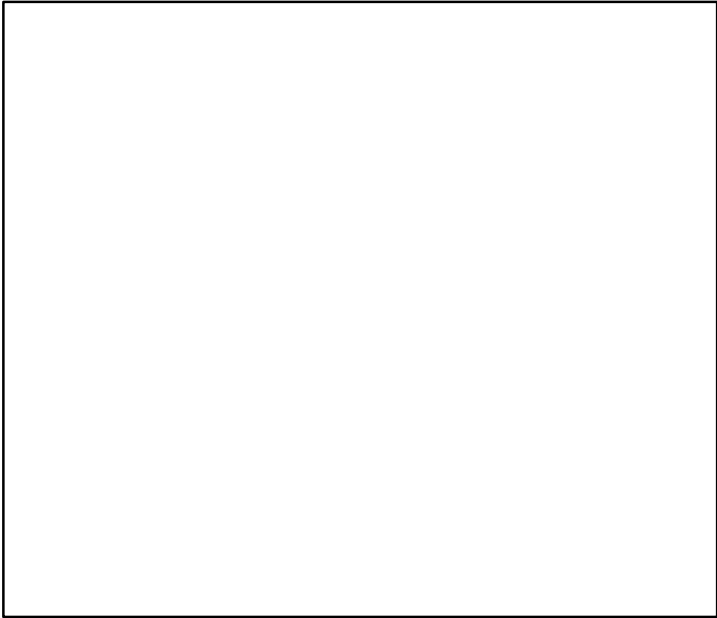
Kobe MSY*



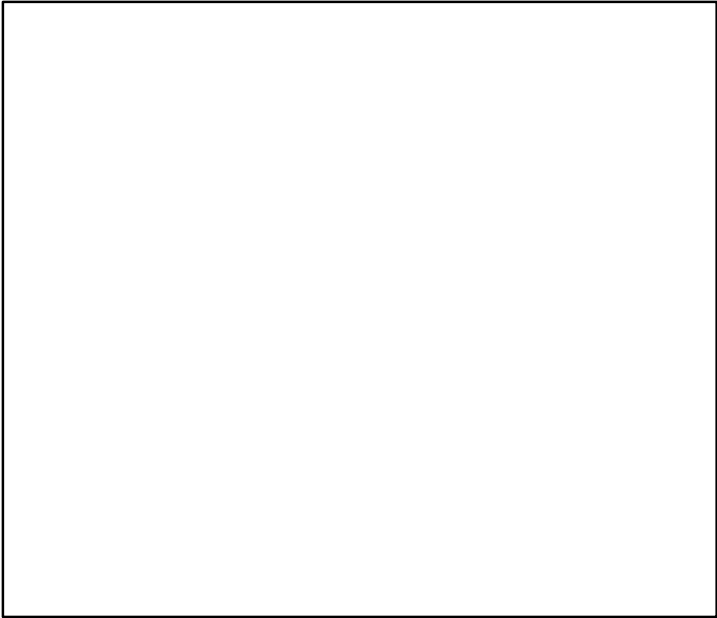
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



Recruits*



■ Listed time series

--- MSY-based BRP

--- Target BRP

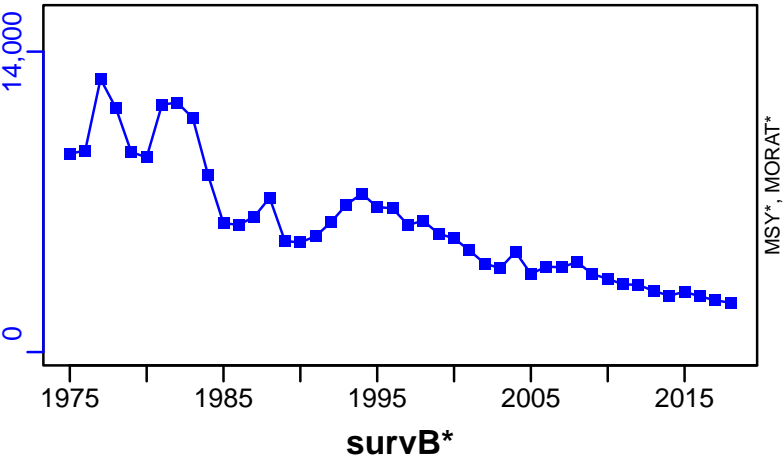
--- Lim BRP

— Rec-Est

* No Data

Deep sea smelt Sea of Japan [DSSMELTSOJ]

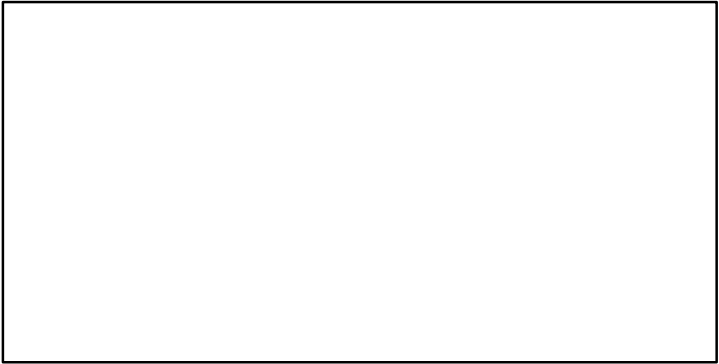
TC-MT, TL*, RecC* (1975-2018-KUROTA)



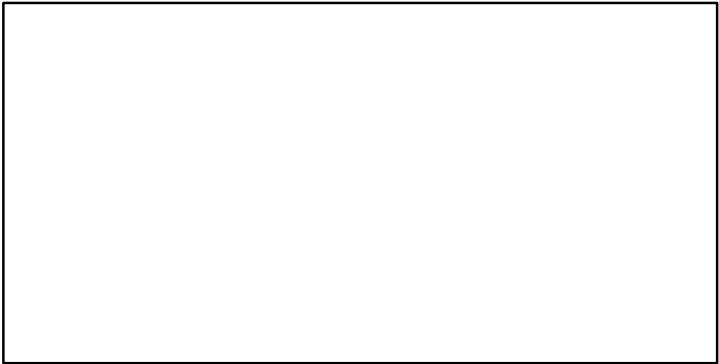
TAC*, Cpair*, Cadv*



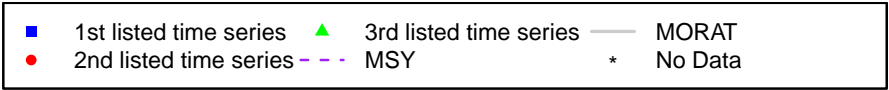
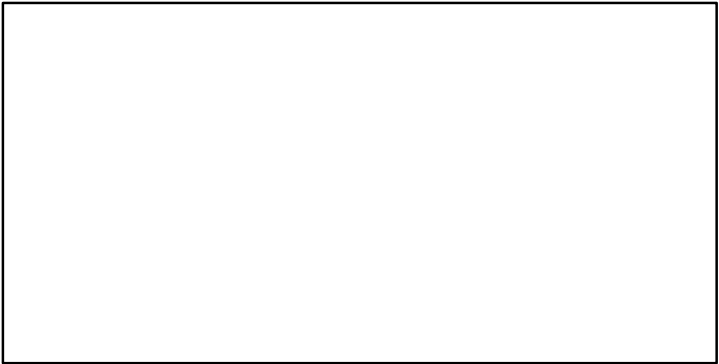
CPUE*



EFFORT*



CdivMSY*



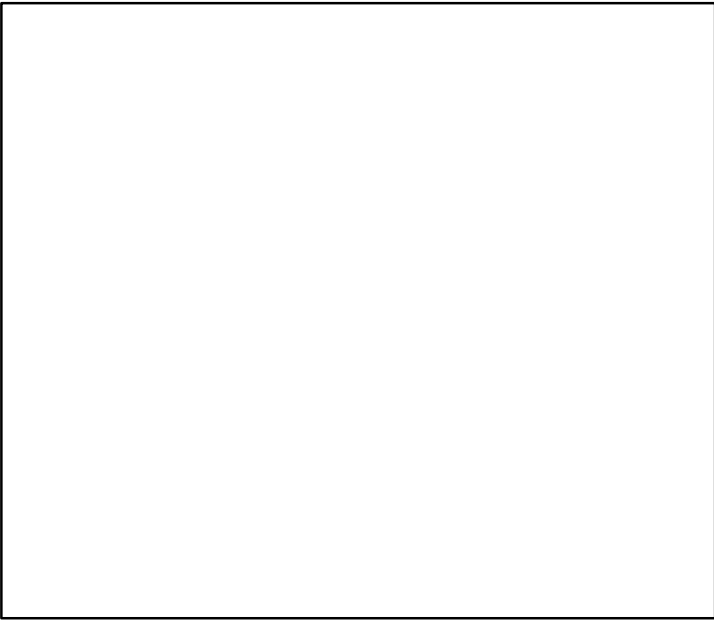
**Eulachon Pacific Coast of Canada Central Coast Designatable Unit
[EULAPCOASTCCDU]**

Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTCCDU-1951-2012-WATSON
Area	Pacific Coast of Canada Central Coast Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	76	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	14	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.07	-	-
TC	TC-MT	2012	4.2		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

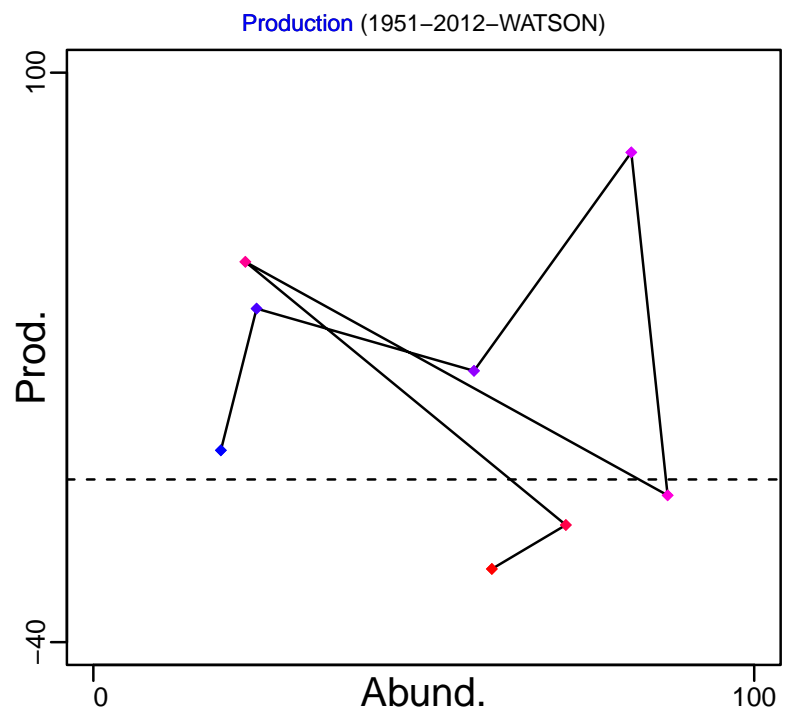
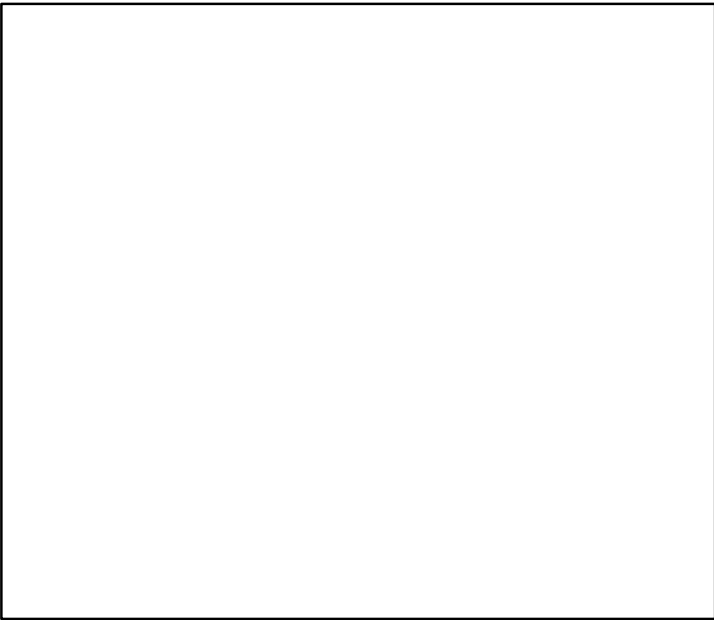
Kobe MSY*



Kobe MGT*



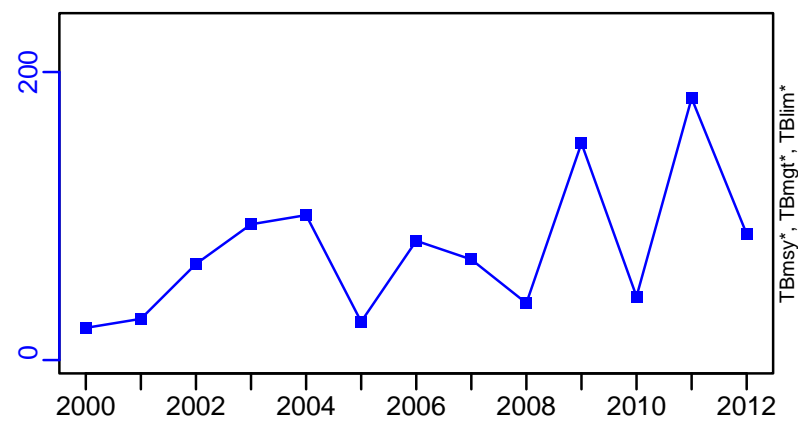
Spawner Recruit*



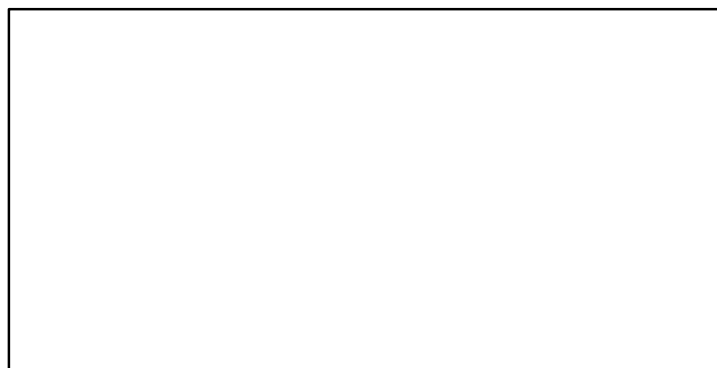
◆ Start Year ◆ End Year * No Data

Eulachon Pacific Coast of Canada Central Coast Designatable Unit [EULAPCOASTCCDU]

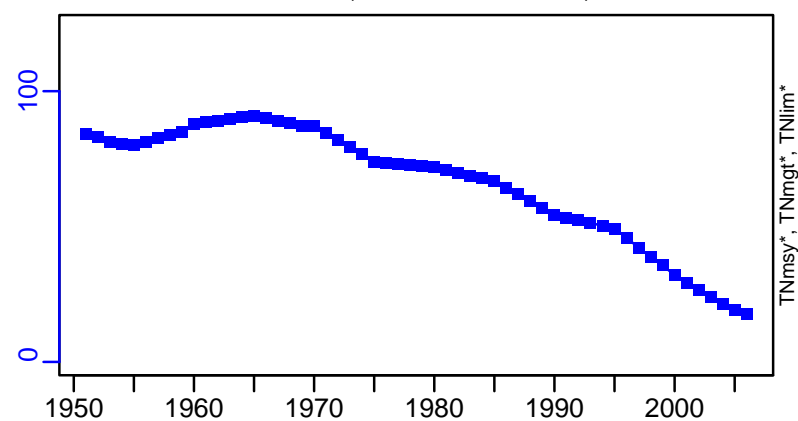
TB-MT (1951-2012-WATSON)



SSB*



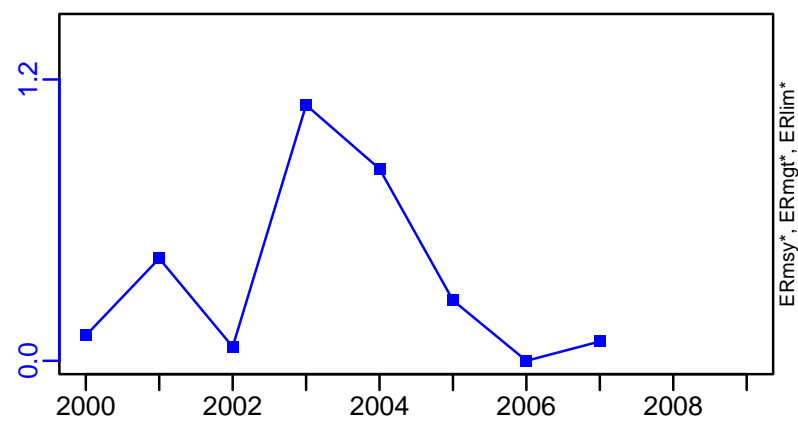
TN-index (1951-2012-WATSON)



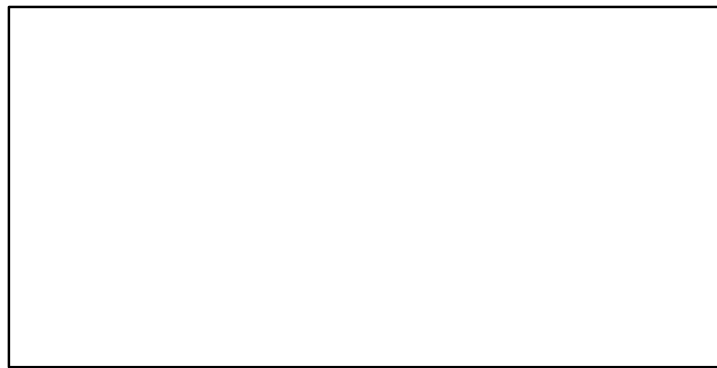
F*



ER-calc-ratio (1951-2012-WATSON)



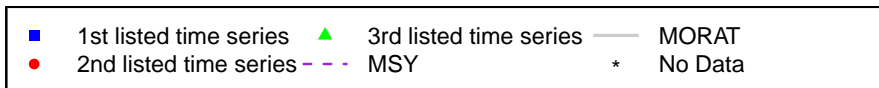
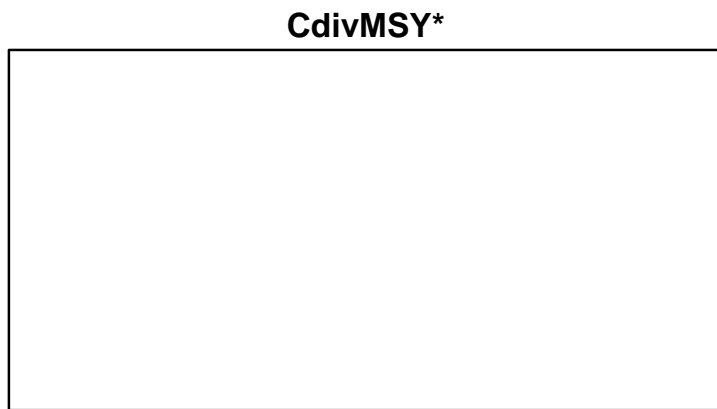
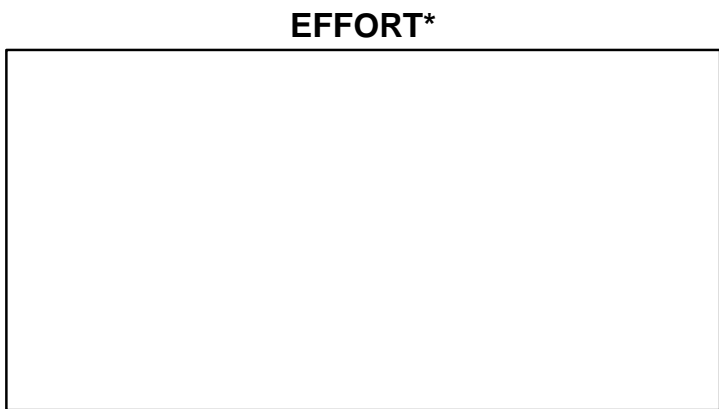
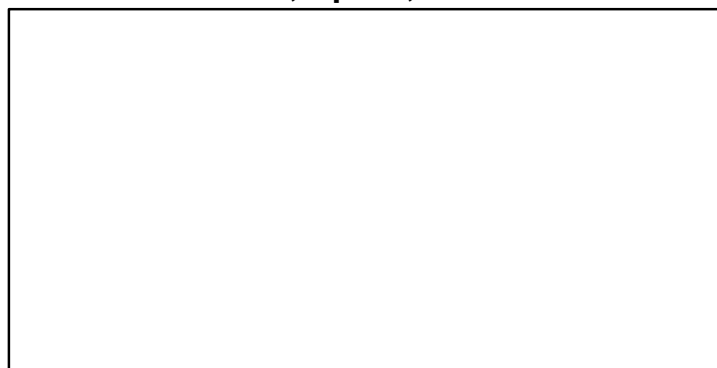
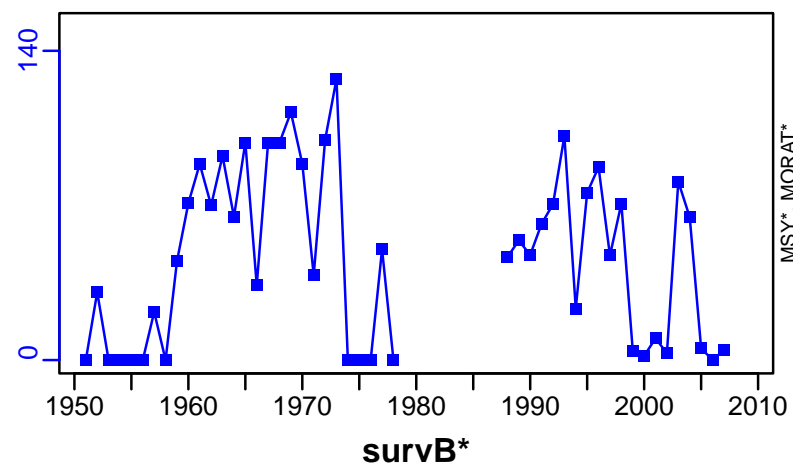
Recruits*



Eulachon Pacific Coast of Canada Central Coast Designatable Unit [EULAPCOASTCCDU]

TC-MT, TL*, RecC* (1951-2012-WATSON)

TAC*, Cpair*, Cadv*



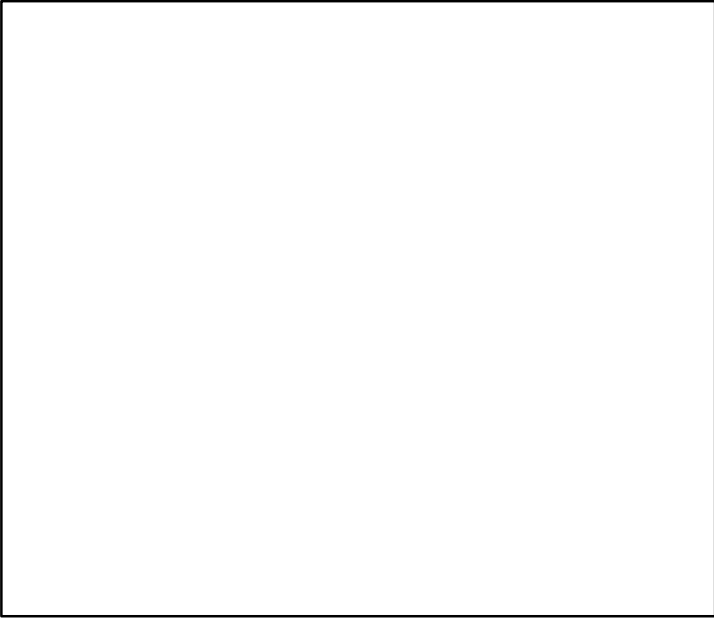
Eulachon Pacific Coast of Canada Fraser River Designatable Unit [EULAPCOASTFRDU]

Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTFRDU-1900-2012-WATSON
Area	Pacific Coast of Canada Fraser River Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2012

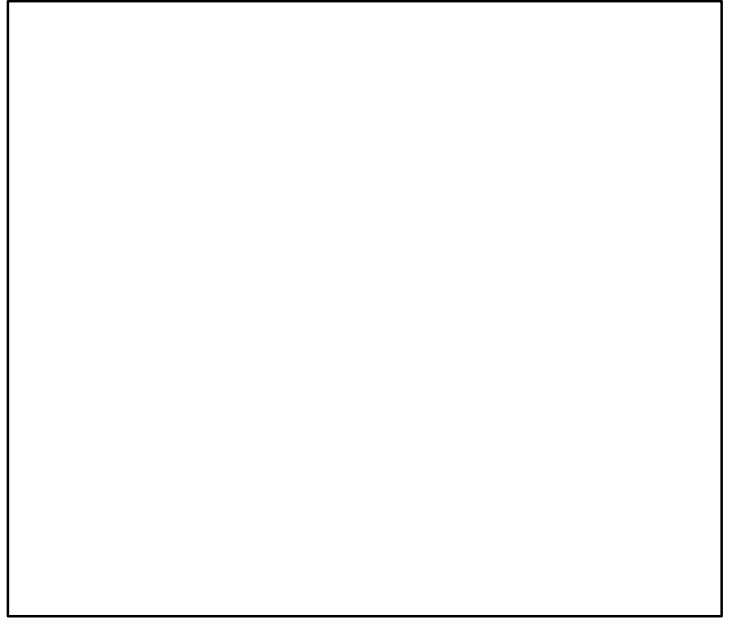
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2012	112
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	48	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	6	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.002	-	-
TC	TC-MT	2012	0.1	-	-
TL	-	-	-	-	-
TB/TBmsy	-	-	-	-	-
SSB/SSBmsy	-	-	-	-	-
F/Fmsy	-	-	-	-	-
ER/ERmsy	-	-	-	-	-
TB/TBmgt	-	-	-	-	-
SSB/SSBmgt	-	-	-	-	-
F/Fmgt	-	-	-	-	-
ER/ERmgt	-	-	-	-	-

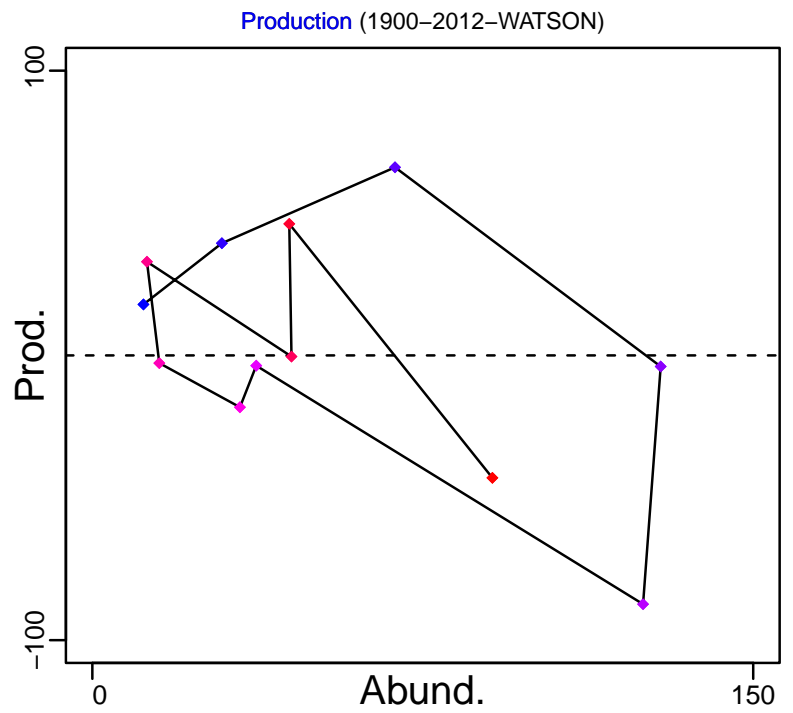
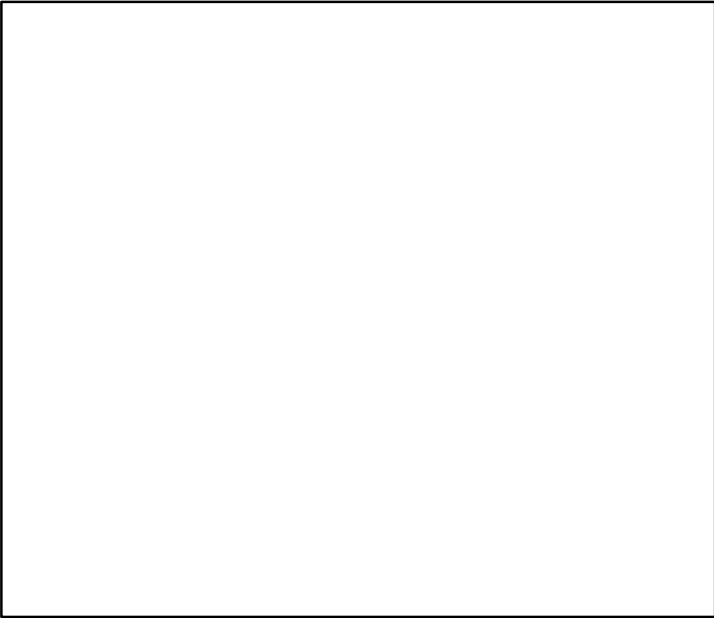
Kobe MSY*



Kobe MGT*



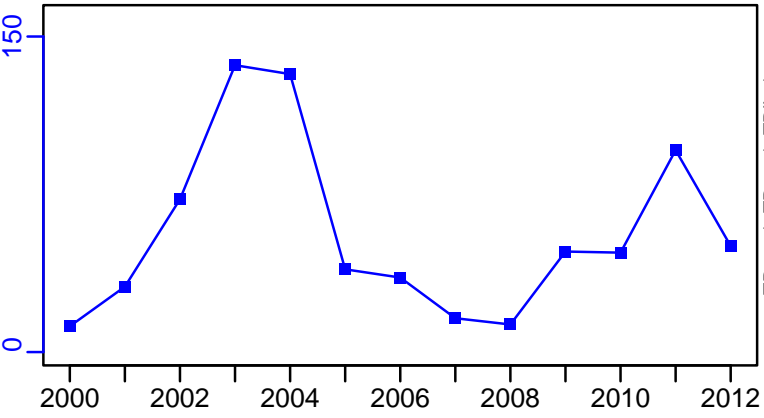
Spawner Recruit*



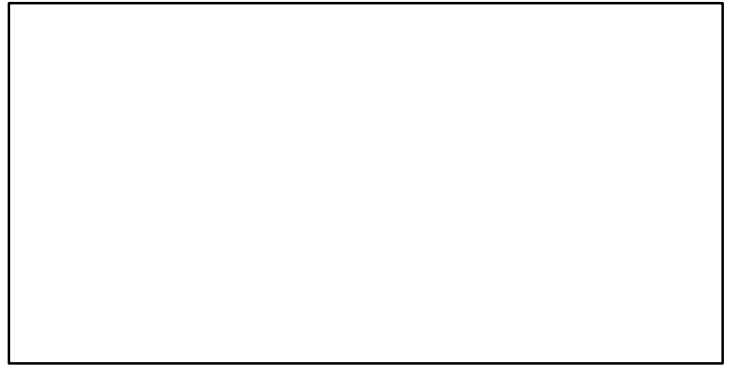
◆ Start Year ◆ End Year * No Data

Eulachon Pacific Coast of Canada Fraser River Designatable Unit [EULAPCOASTFRDU]

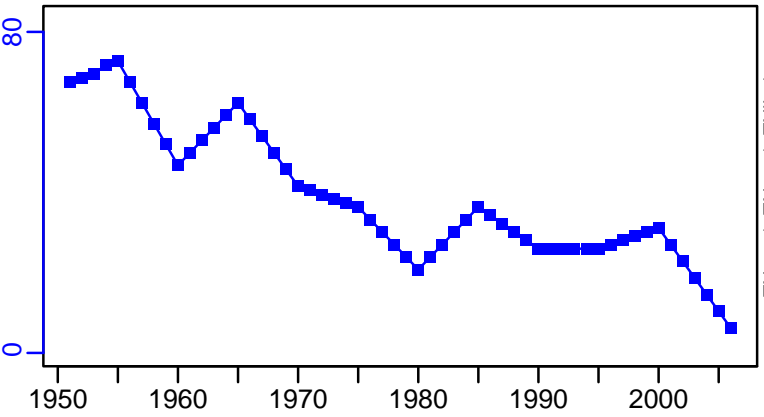
TB-MT (1900-2012-WATSON)



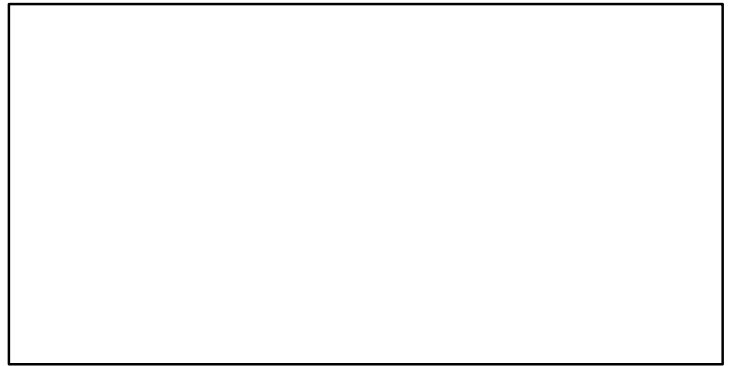
SSB*



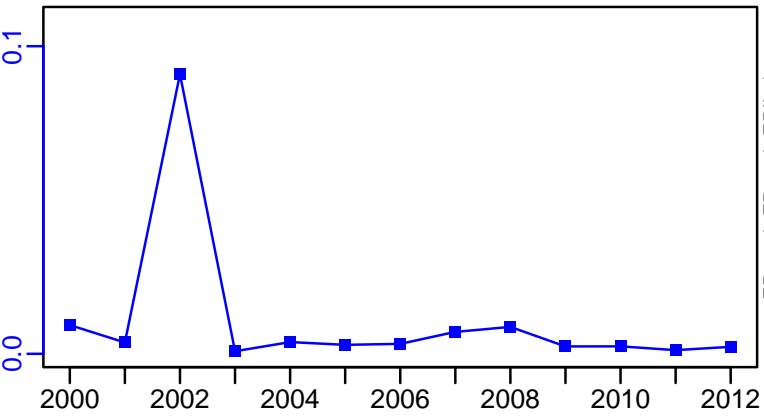
TN-index (1900-2012-WATSON)



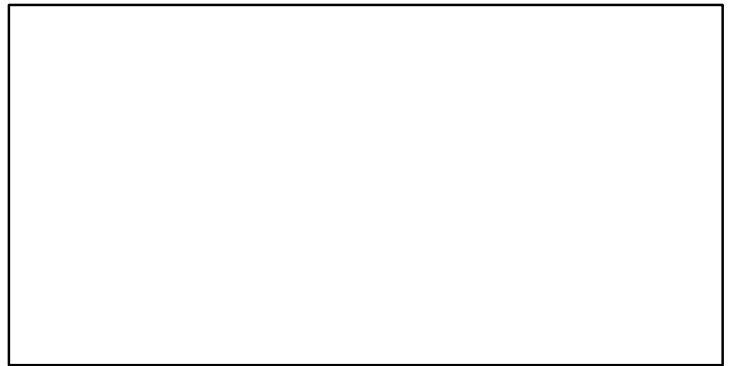
F*



ER-calc-ratio (1900-2012-WATSON)



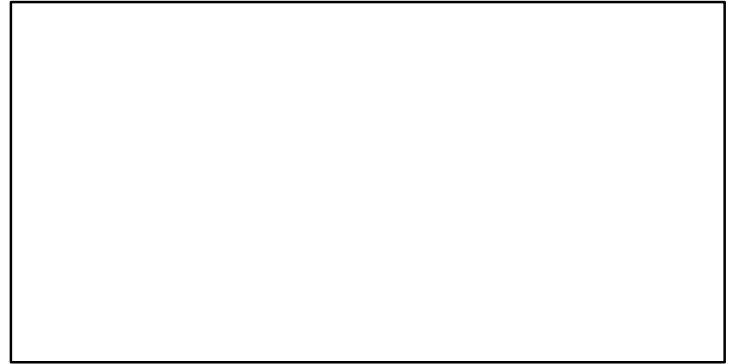
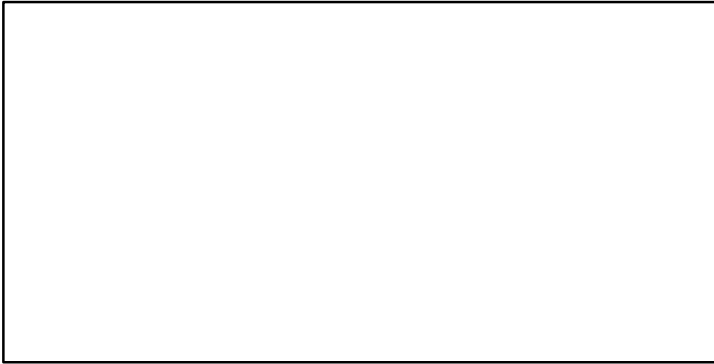
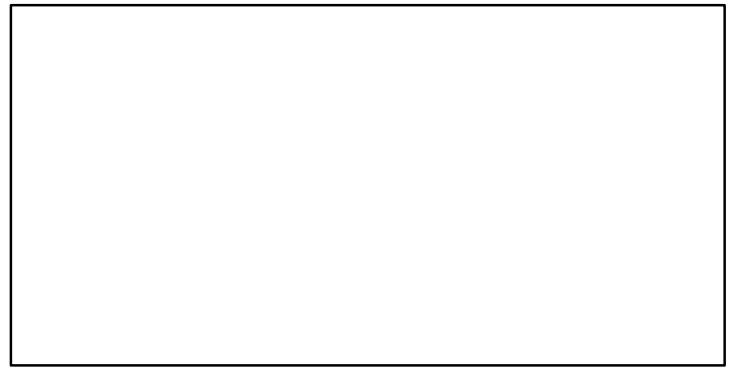
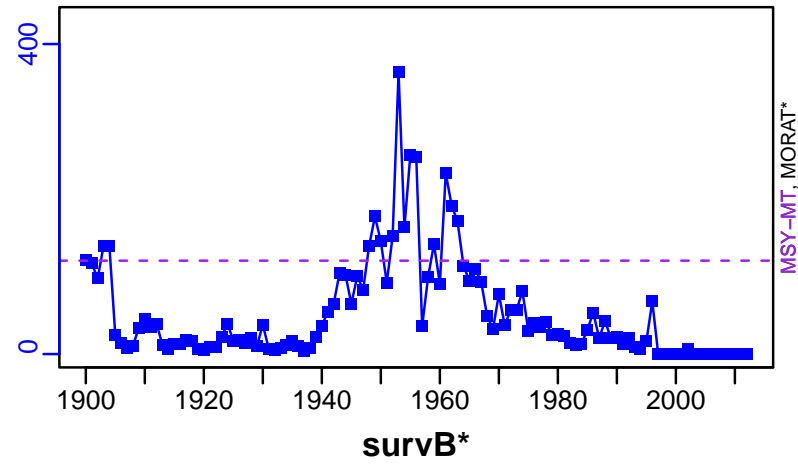
Recruits*



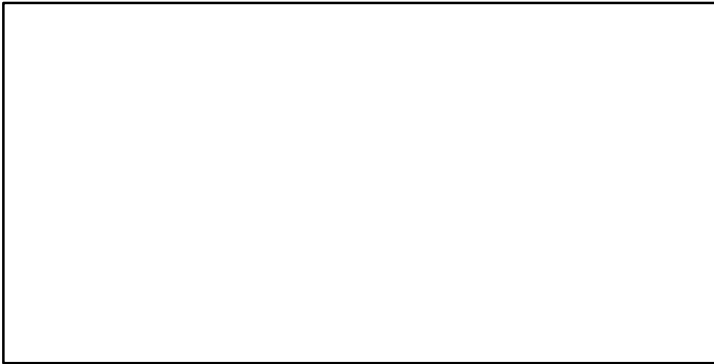
Eulachon Pacific Coast of Canada Fraser River Designatable Unit [EULAPCOASTFRDU]

TC-MT, TL*, RecC* (1900-2012-WATSON)

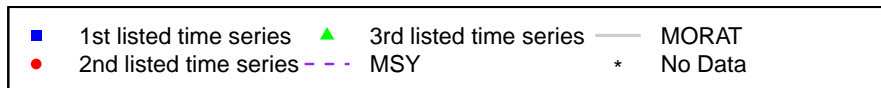
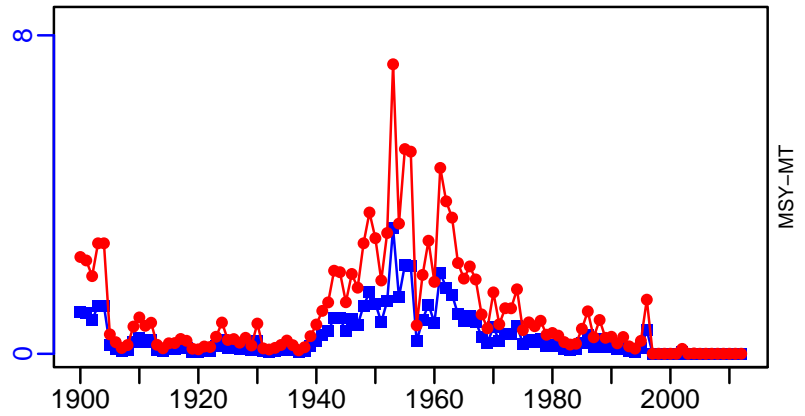
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900-2012-WATSON)



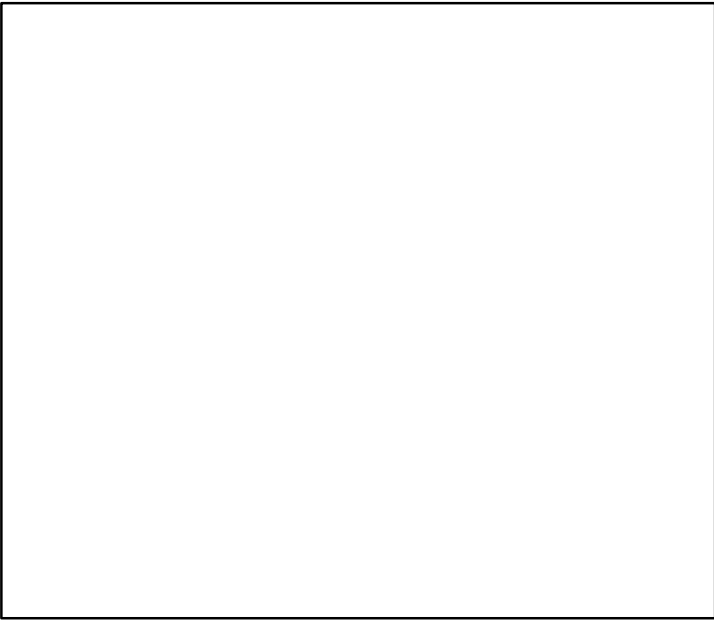
**Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit
[EULAPCOASTNSDU]**

Metadata	
Scientific Name	Thaleichthys pacificus
Current Assess ID	DFO-EULAPCOASTNSDU-1951-2012-WATSON
Area	Pacific Coast of Canada Nass / Skeena Designatable Unit
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	71	-	-
SSB	-	-	-	-	-
TN	TN-index	2012	36	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2012	0.001	-	-
TC	TC-MT	2012	0.07		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

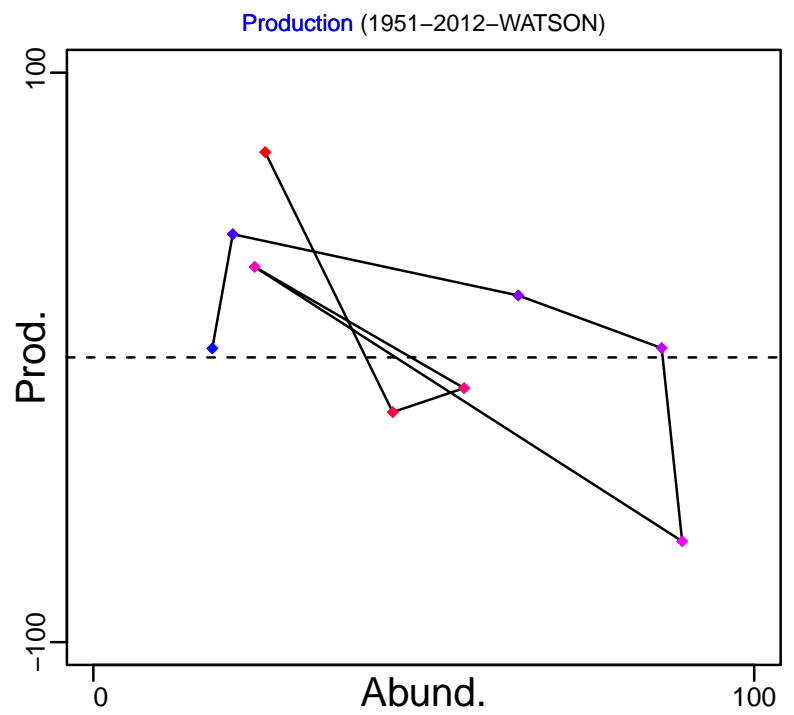
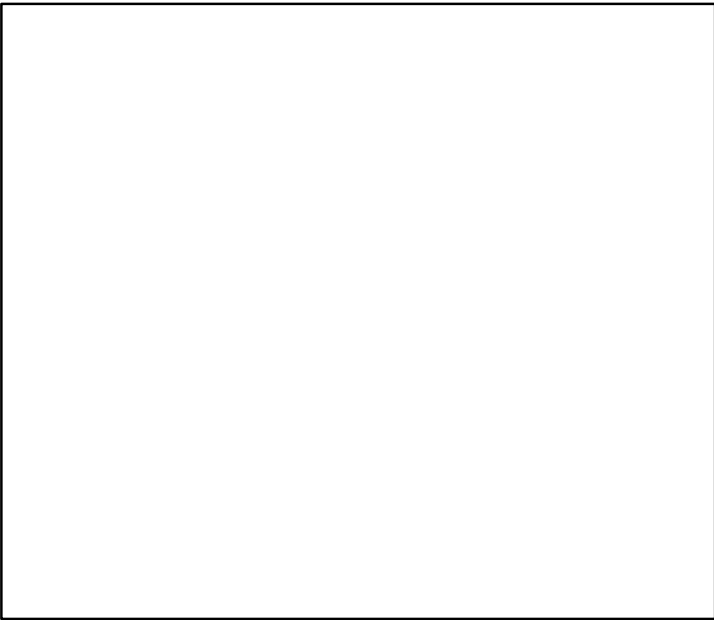
Kobe MSY*



Kobe MGT*



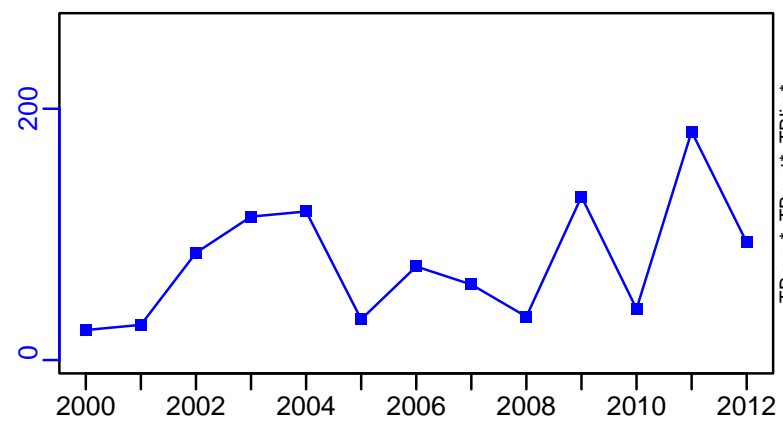
Spawner Recruit*



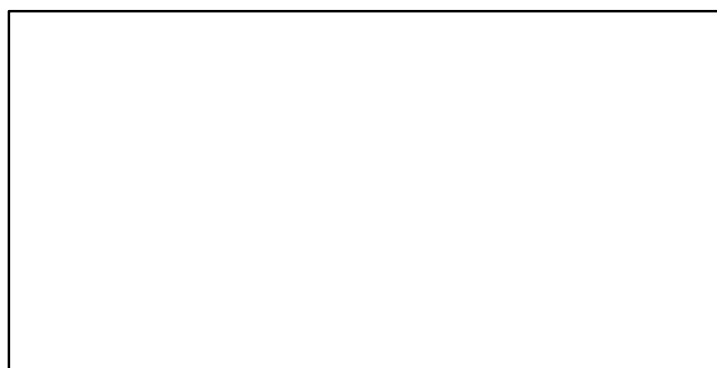
◆ Start Year ◆ End Year * No Data

Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit [EULAPCOASTNSDU]

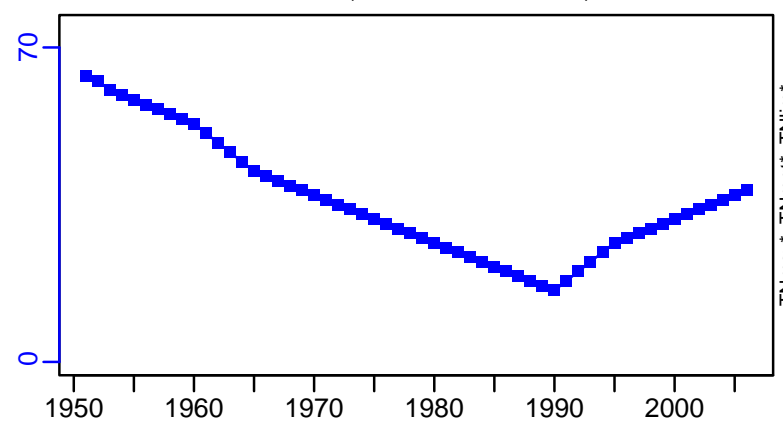
TB-MT (1951-2012-WATSON)



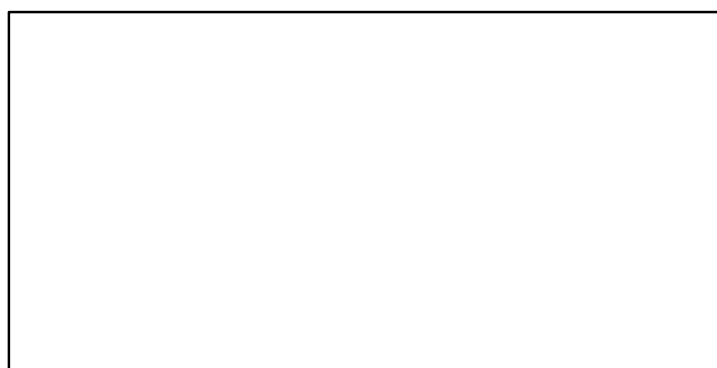
SSB*



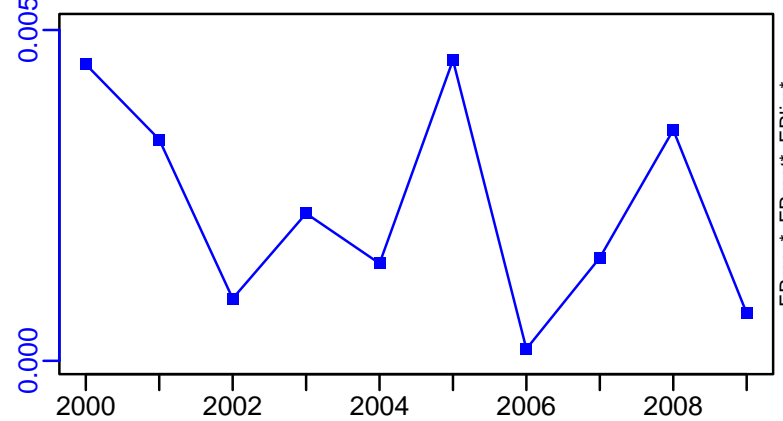
TN-index (1951-2012-WATSON)



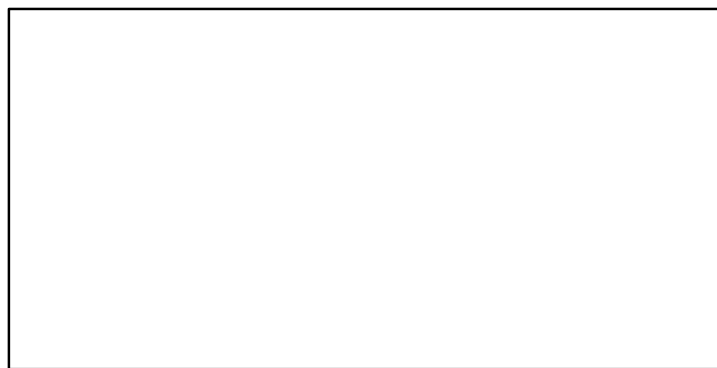
F*



ER-calc-ratio (1951-2012-WATSON)



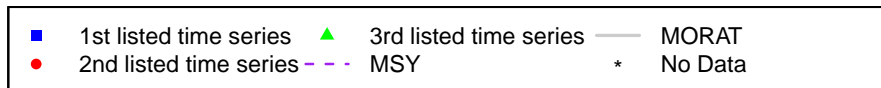
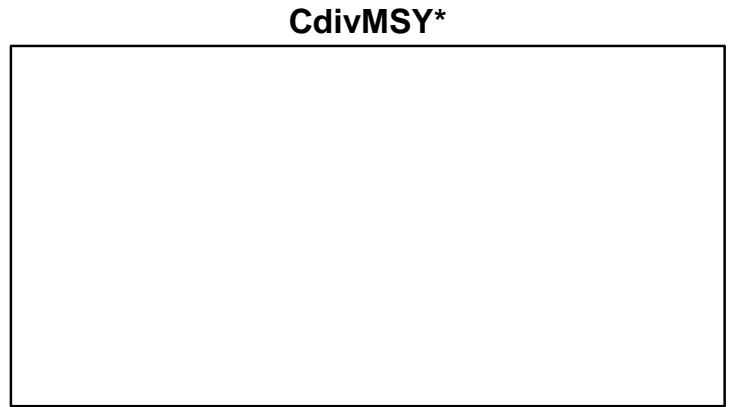
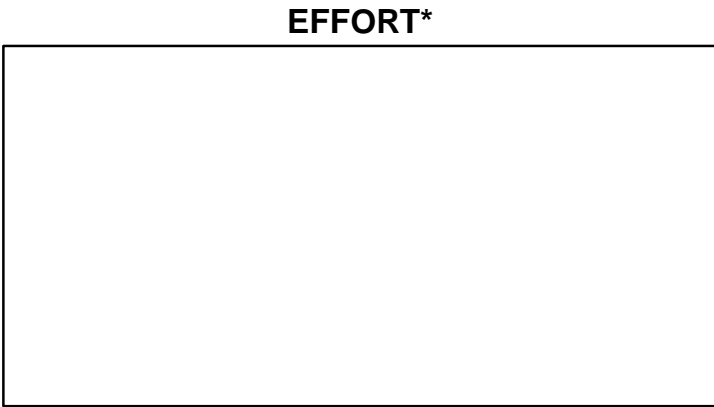
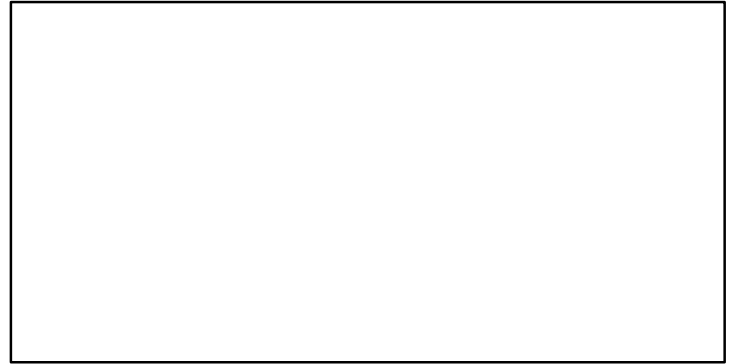
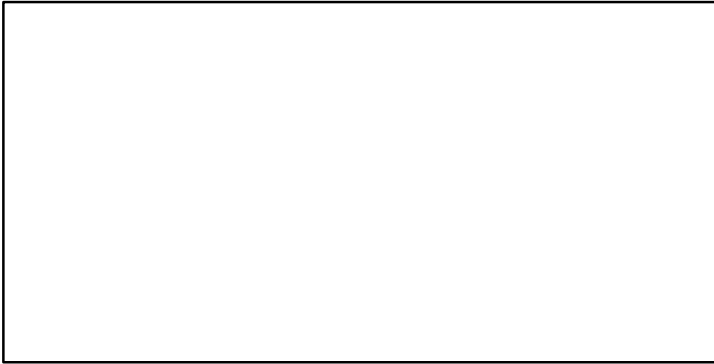
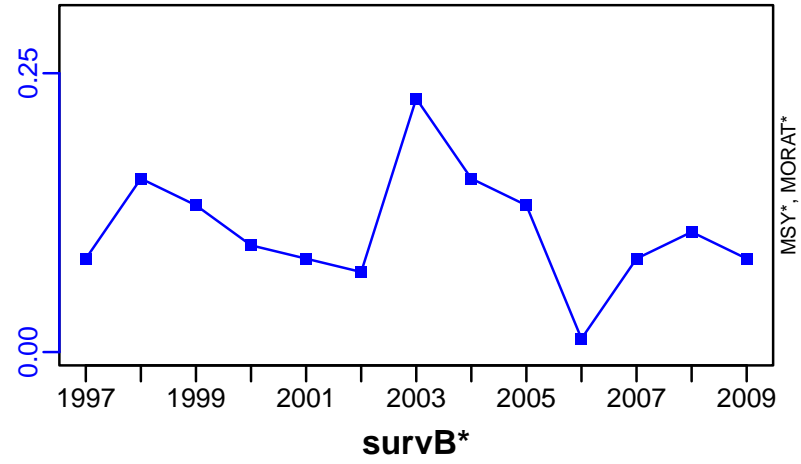
Recruits*



Eulachon Pacific Coast of Canada Nass / Skeena Designatable Unit [EULAPCOASTNSDU]

TC-MT, TL*, RecC* (1951-2012-WATSON)

TAC*, Cpair*, Cadv*



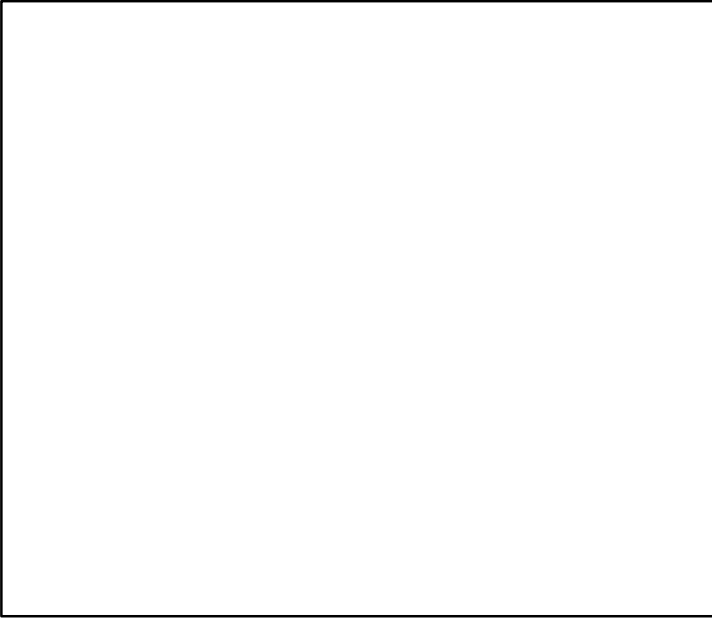
Greater silver smelt ICES 1-2-3a-4 [GSSMELTI-II-IIIa-IV]

Metadata	
Scientific Name	Argentina silus
Current Assess ID	WGDEEP-GSSMELTI-II-IIIa-IV-1988-2020-ICESIMP2021-2
Area	ICES 1-2-3a-4
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
Asmts in RAM	2014, 2016, 2018, 2020

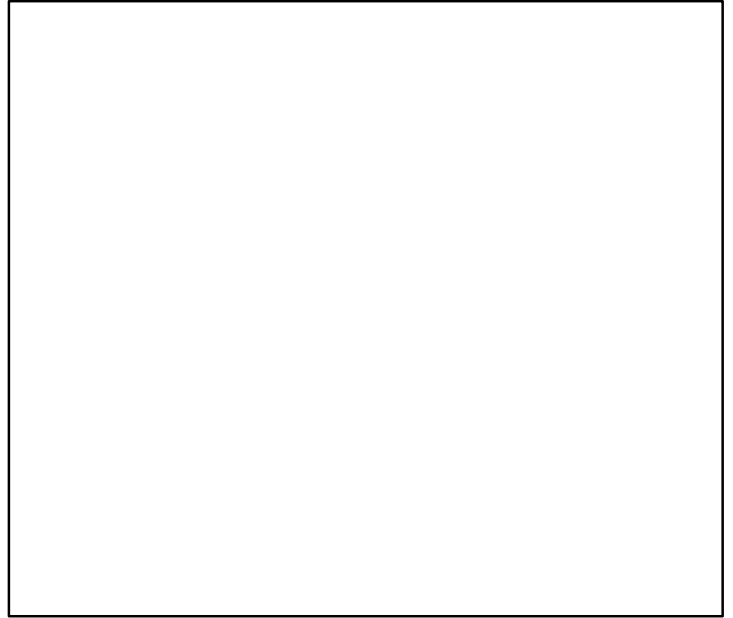
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2014	15,100		
TL	TL-MT	2020	15,900		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2020	1.16		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

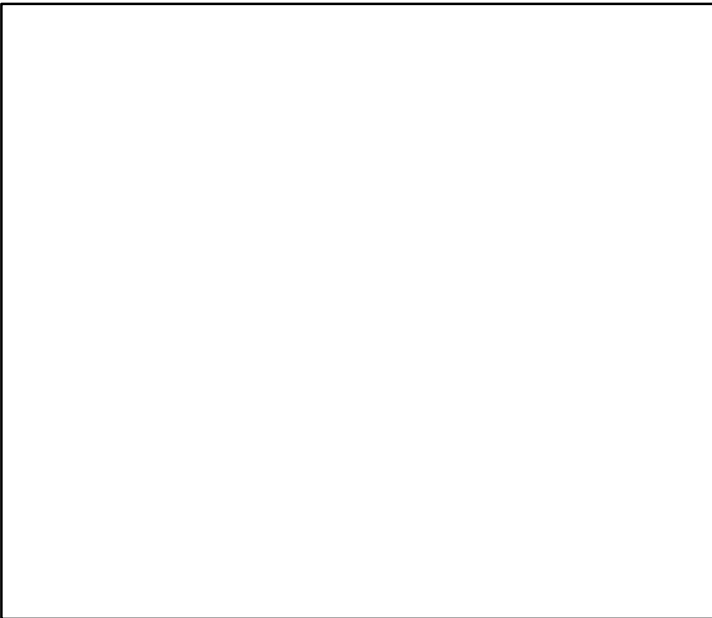
Kobe MSY*



Kobe MGT*



Spawner Recruit*



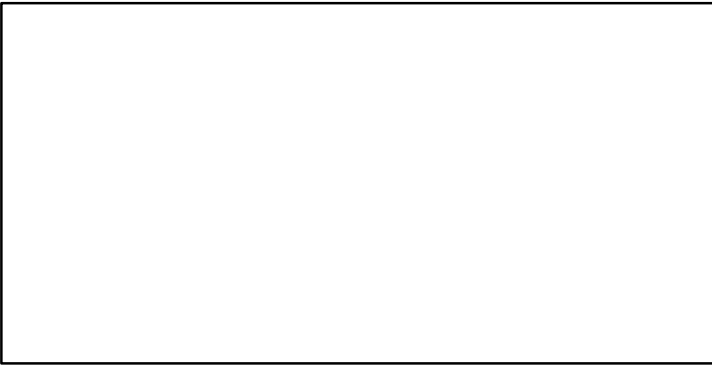
Production*



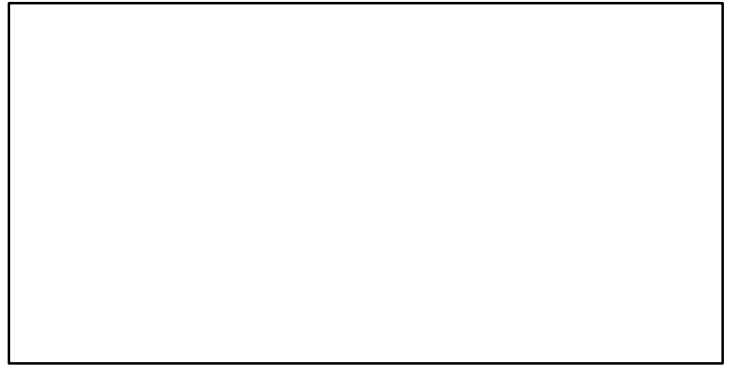
◆ Start Year ◆ End Year * No Data

Greater silver smelt ICES 1–2–3a–4 [GSSMELT I–II–IIIa–IV]

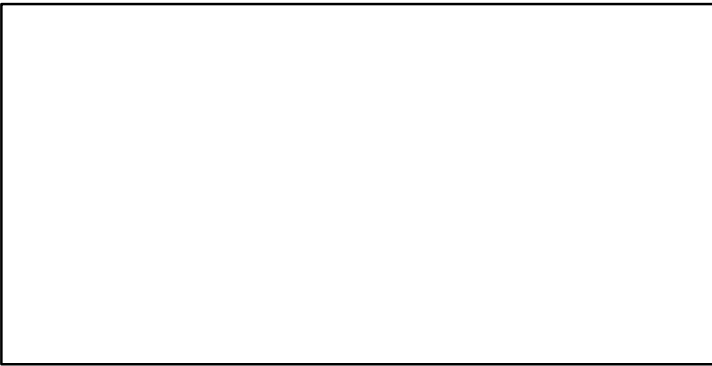
TB*



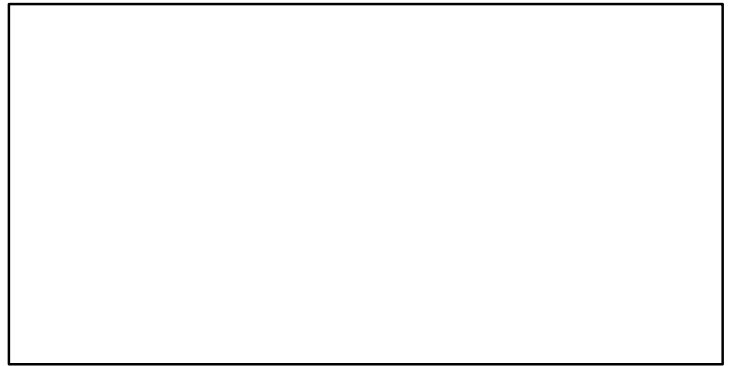
SSB*



TN *



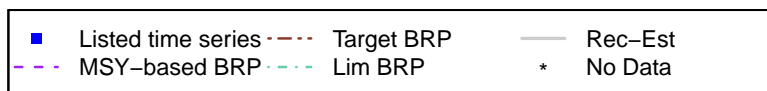
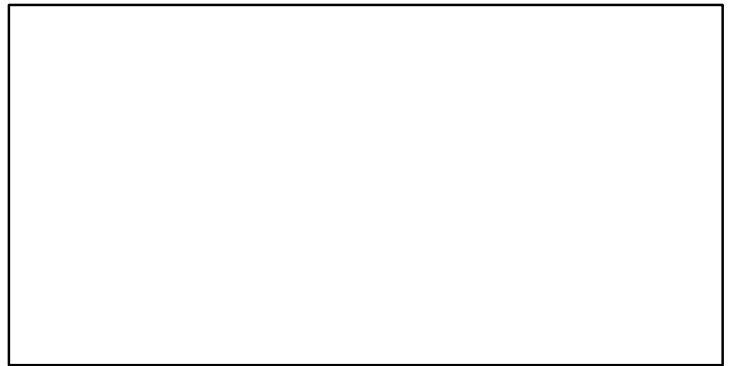
F*



ER*

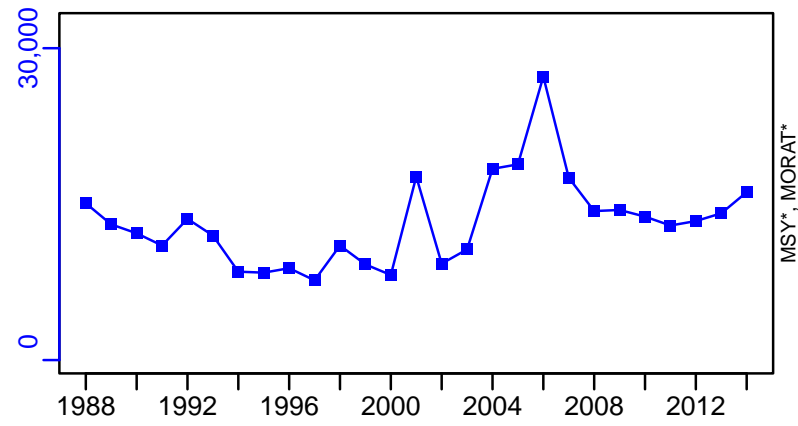


Recruits*



Greater silver smelt ICES 1–2–3a–4 [GSSMELTI–II–IIIa–IV]

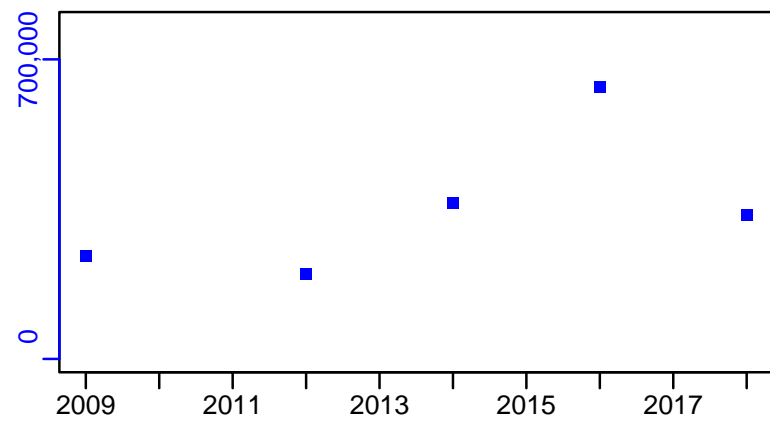
TC–MT, TL*, RecC* (1988–2014–ICESIMP2018)



TAC*, Cpair*, Cadv*



survB–MT (1988–2018–ICESIMP2021)



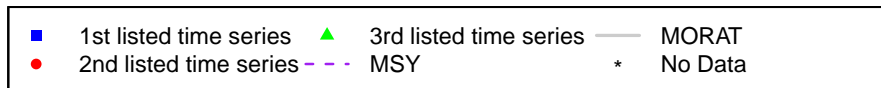
CPUE*



EFFORT*



CdivMSY*



Greater silver smelt ICES 5a-14 [GSSMELTVa-XIV]

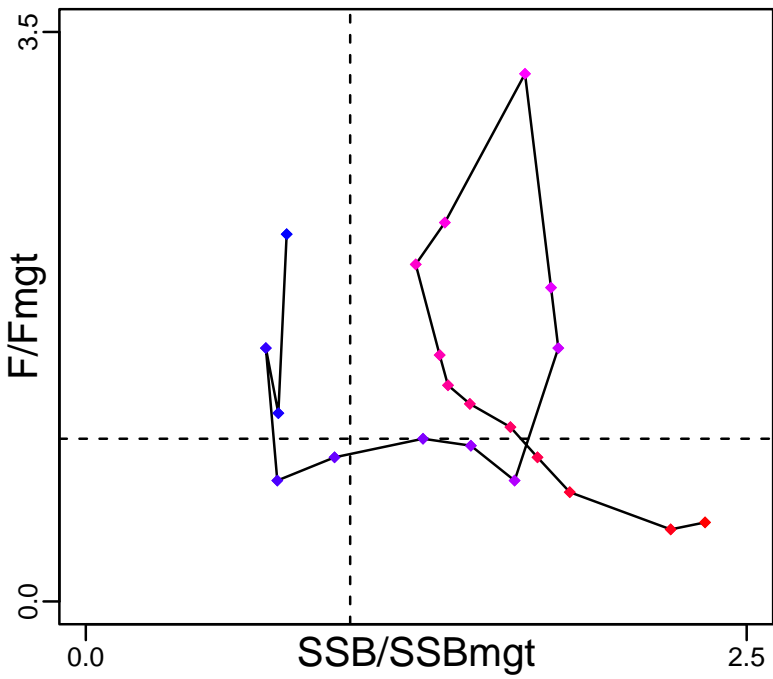
Metadata	
Scientific Name	Argentina silus
Current Assess ID	WGDEEP-GSSMELTVa-XIV-2000-2021-ICESIMP2021-2
Area	ICES 5a-14
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
Asmts in RAM	2016, 2016, 2017, 2018, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2021	25,400
Fmgt	Fmgt-1/yr	2021	0.07
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	18,300
Flim	Flim-1/yr	2021	0.24
ERlim	-	-	-

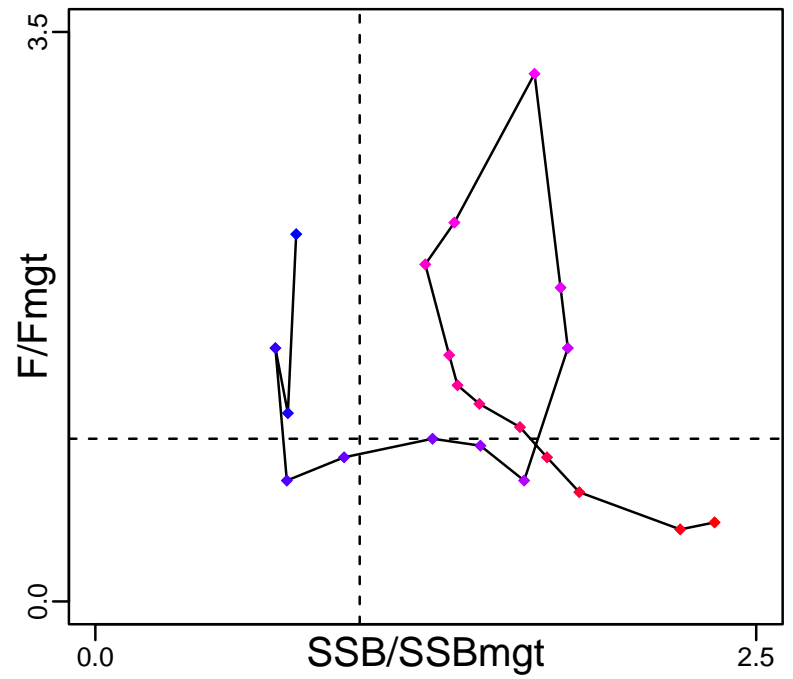
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	56,400	-	-
TN	-	-	-	-	-
R	R-E00	2021	81,700	-	5
F	F-1/yr	2021	0.034	-	-
ER	-	-	-	-	-
TC	TC-MT	2021	3780		
TL	TL-MT	2021	3780		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2021	2.22		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.486		
ER/ERmgt	-	-	-		

Greater silver smelt ICES 5a-14 [GSSMELTVa-XIV]

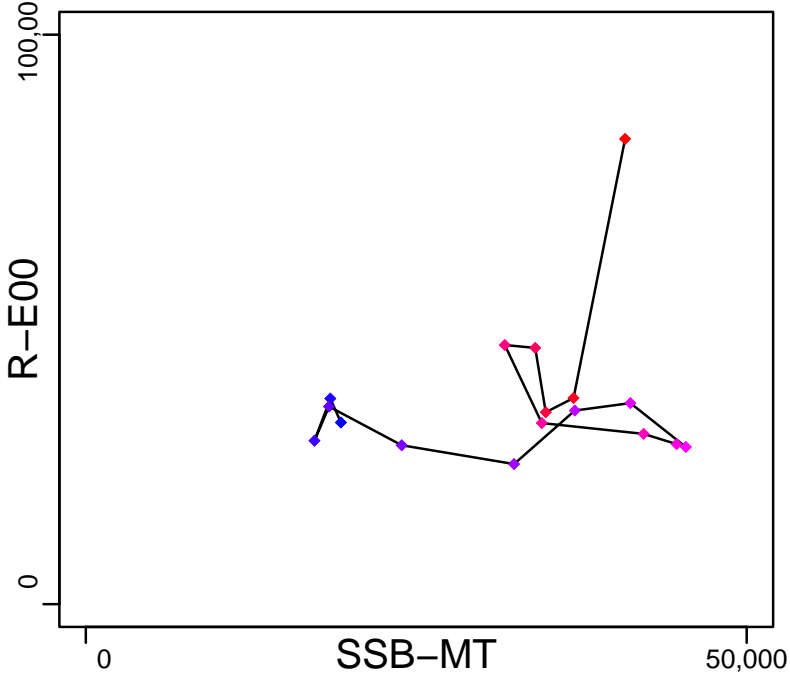
Kobe MSYpref (2000-2021-ICESIMP2021-2)



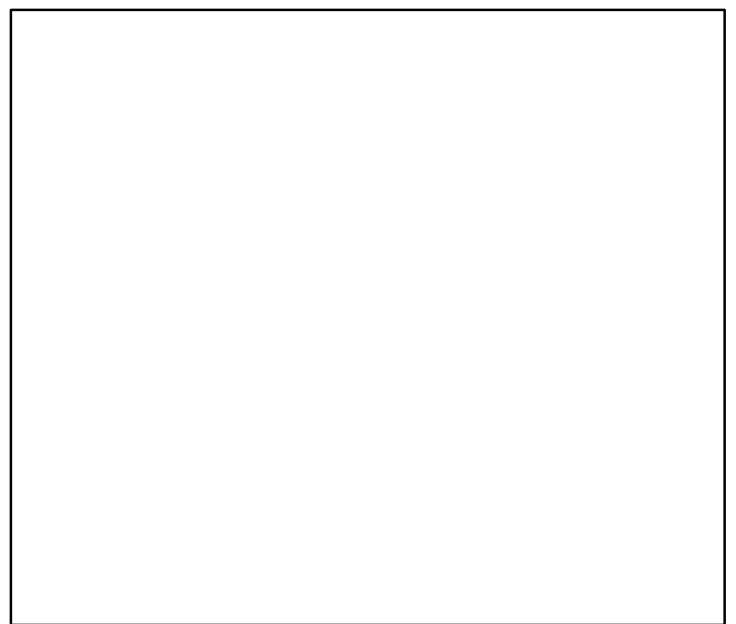
Kobe MGTpref (2000-2021-ICESIMP2021-2)



Spawner Recruit (2000-2021-ICESIMP2021-2)



Production*



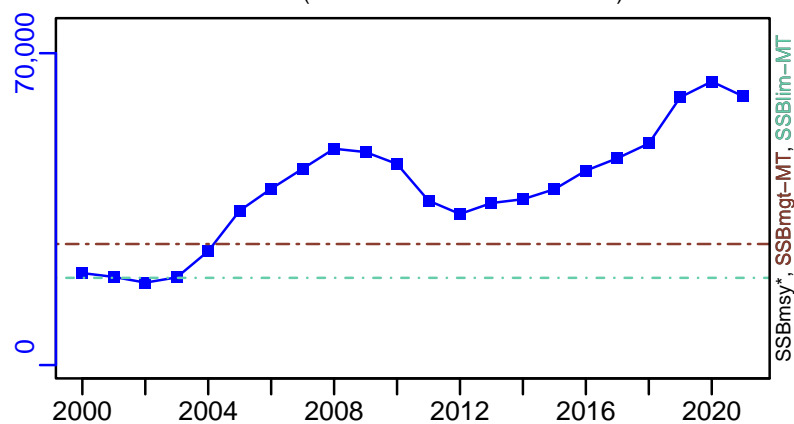
◆ Start Year ◆ End Year * No Data

Greater silver smelt ICES 5a-14 [GSSMELTVa-XIV]

TB*



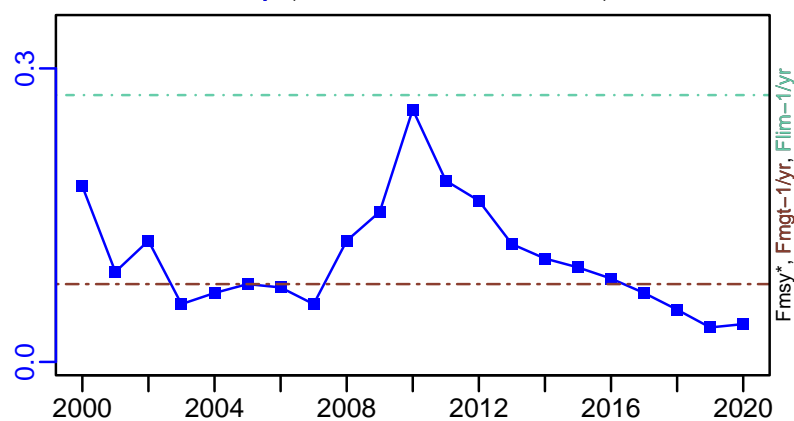
SSB-MT (2000-2021-ICESIMP2021-2)



TN *



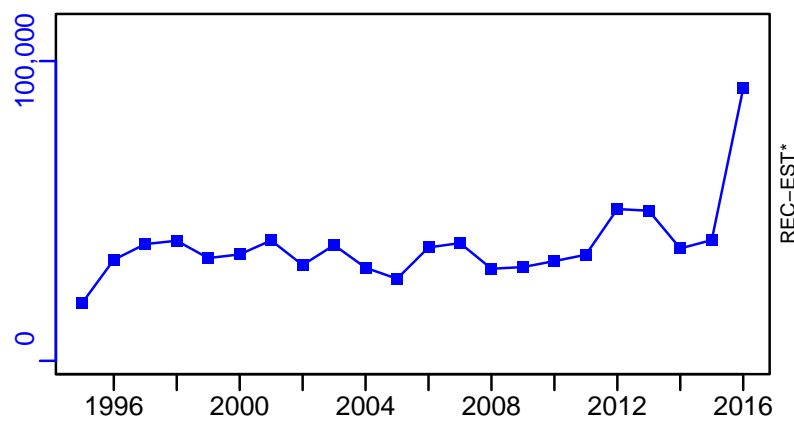
F-1/yr (2000-2021-ICESIMP2021-2)



ER*

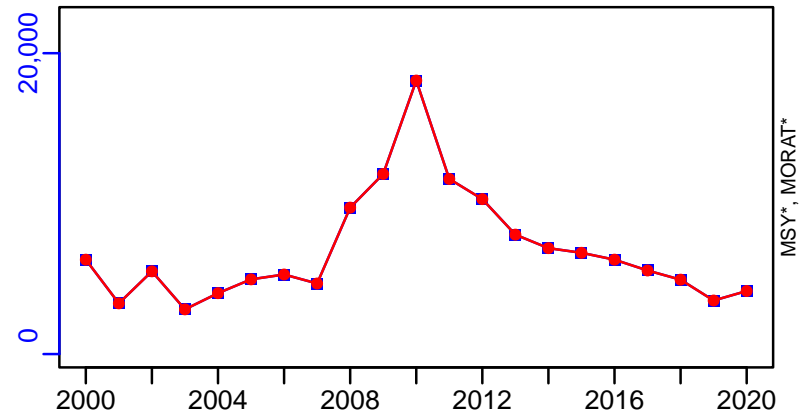


R-E00 (2000-2021-ICESIMP2021-2)



Greater silver smelt ICES 5a-14 [GSSMELTVa-XIV]

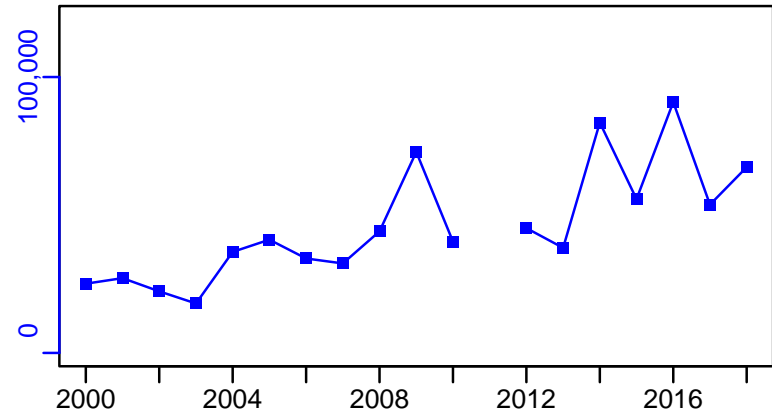
TC-MT, TL-MT, RecC* (2000-2021-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



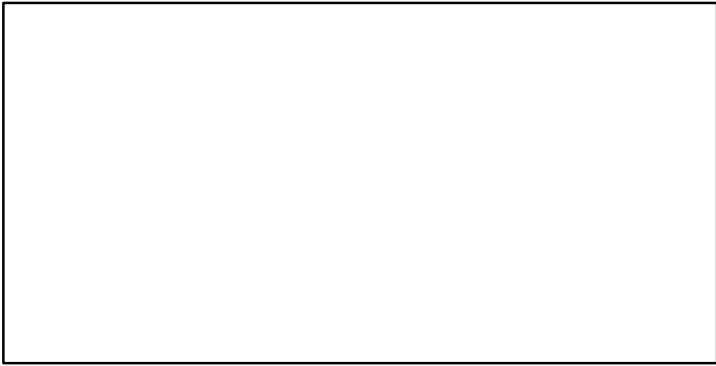
survB-MT (2000-2018-ICESIMP2021)



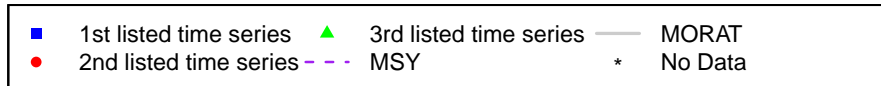
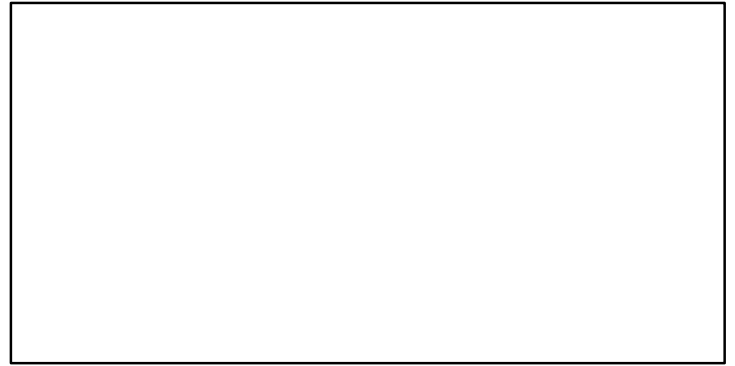
CPUE*



EFFORT*



CdivMSY*



Greater silver smelt ICES 5b-6a [GSSMELTVb-VIa]

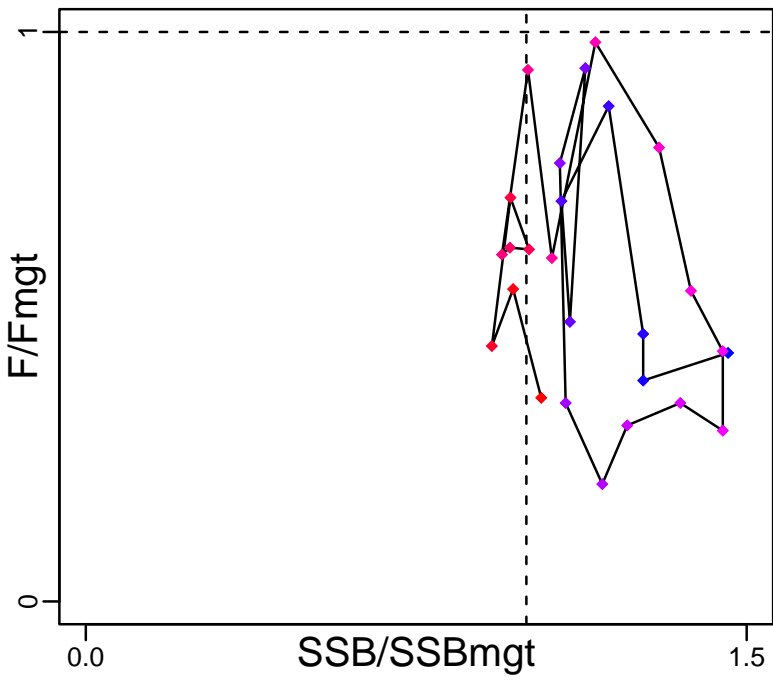
Metadata	
Scientific Name	Argentina silus
Current Assess ID	WGDEEP-GSSMELTVb-VIa-1988-2021-ICESIMP2021-2
Area	ICES 5b-6a
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
Asmts in RAM	2014, 2016, 2018, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2021	83,000
Fmgt	Fmgt-1/yr	2021	0.33
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	59,700
Flim	-	-	-
ERlim	-	-	-

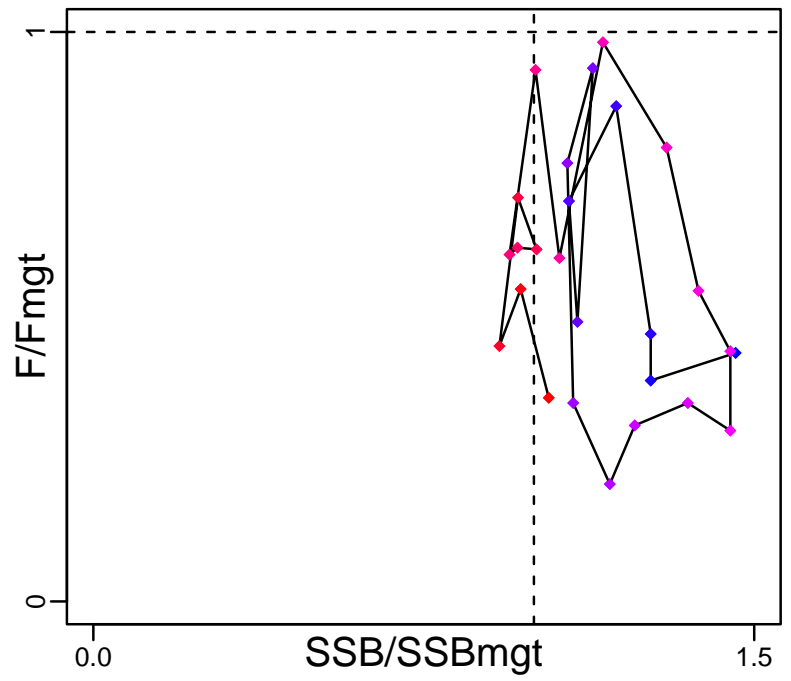
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	89,300	-	-
TN	-	-	-	-	-
R	R-E00	2021	107,000	-	5
F	F-1/yr	2021	0.118	-	-
ER	-	-	-	-	-
TC	TC-MT	2016	18,000		
TL	TL-MT	2021	17,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2021	1.076		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.358		
ER/ERmgt	-	-	-		

Greater silver smelt ICES 5b-6a [GSSMELTVb-VIa]

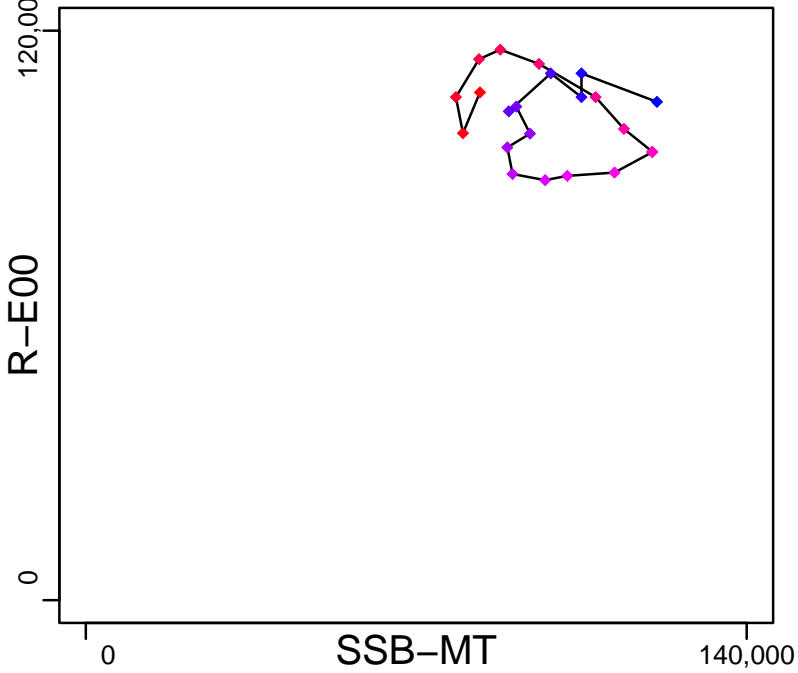
Kobe MSYpref (1988-2021-ICESIMP2021-2)



Kobe MGTpref (1988-2021-ICESIMP2021-2)



Spawner Recruit (1988-2021-ICESIMP2021-2)



Production*



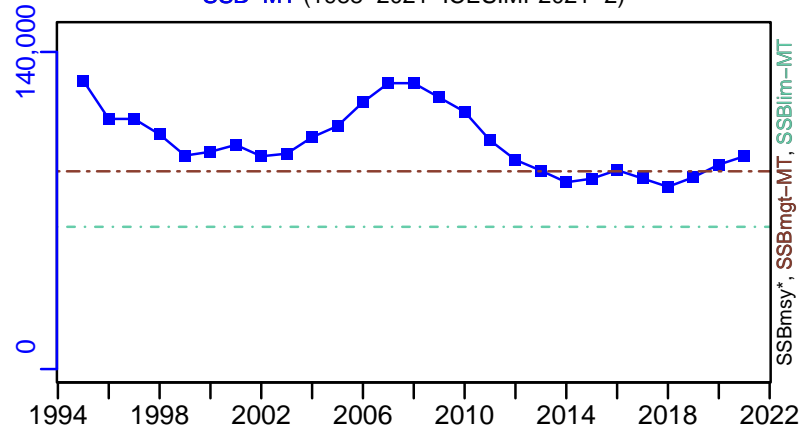
◆ Start Year ◆ End Year * No Data

Greater silver smelt ICES 5b-6a [GSSMELTVb-VIa]

TB*



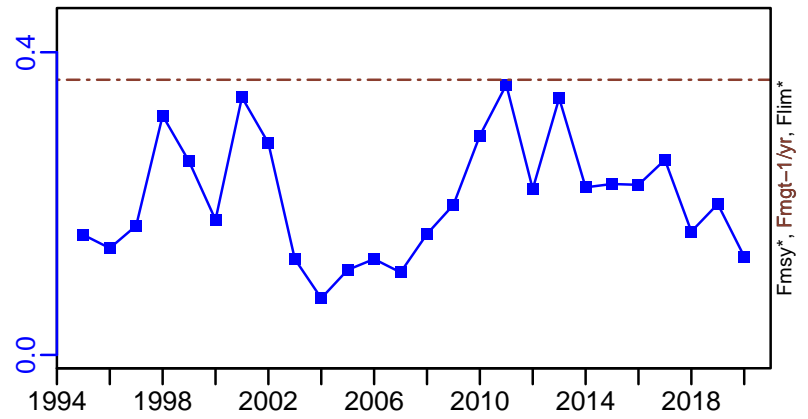
SSB-MT (1988-2021-ICESIMP2021-2)



TN *



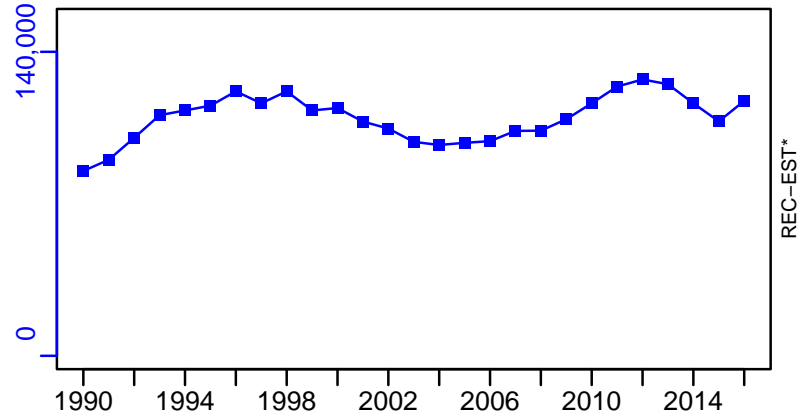
F-1/yr (1988-2021-ICESIMP2021-2)



ER*

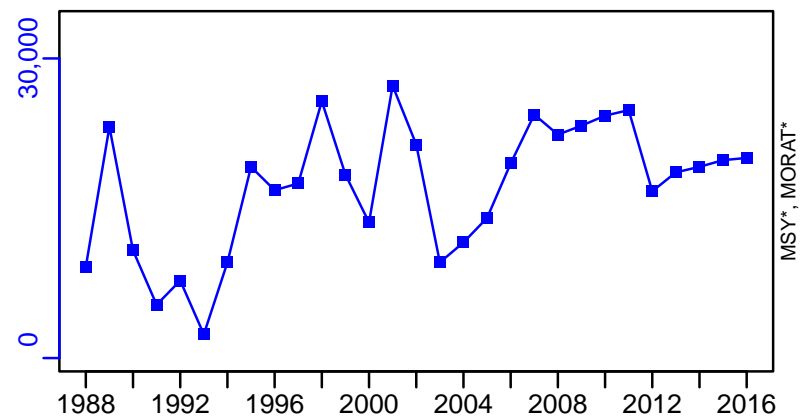


R-E00 (1988-2021-ICESIMP2021-2)



Greater silver smelt ICES 5b-6a [GSSMELTVb-VIa]

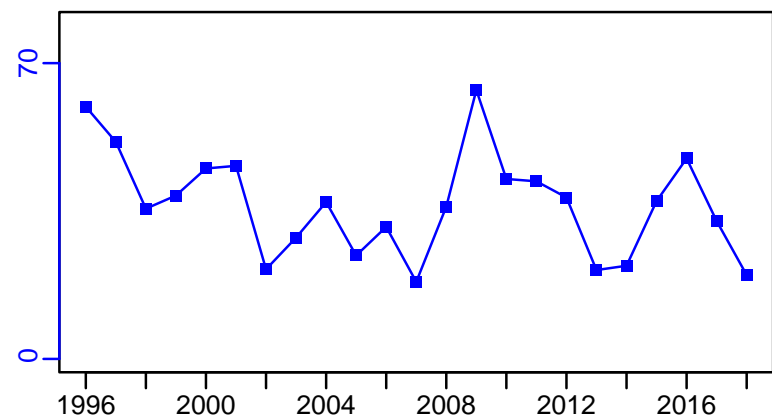
TC-MT, TL*, RecC* (1988-2016-ICESIMP2018)



TAC*, Cpair*, Cadv*



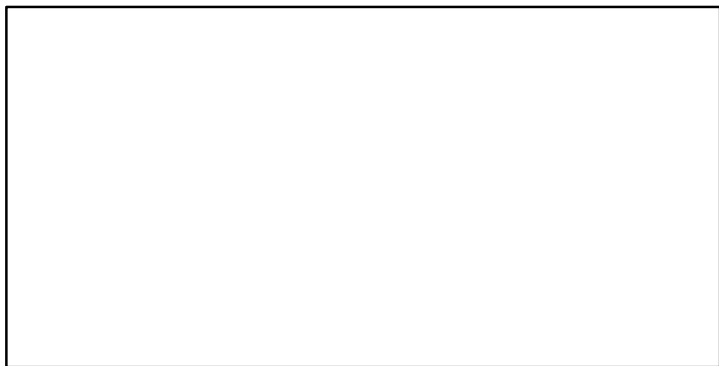
survB-index (1988-2018-ICESIMP2021)



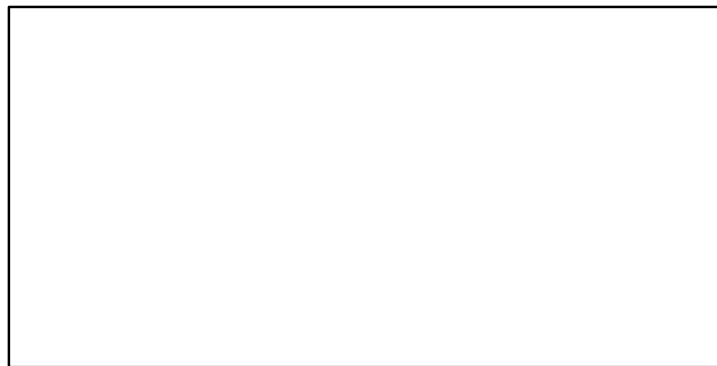
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Greater silver smelt ICES 6b-7-8-9-10-12 [GSSMELTVIb-VII-VIII-IX-X-XII]

Metadata	
Scientific Name	Argentina silus
Current Assess ID	WGDEEP-GSSMELTVIb-VII-VIII-IX-X-XII-1966-2020-ICESIMP2021-2
Area	ICES 6b-7-8-9-10-12
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources
Asmts in RAM	2014, 2016, 2020, 2018

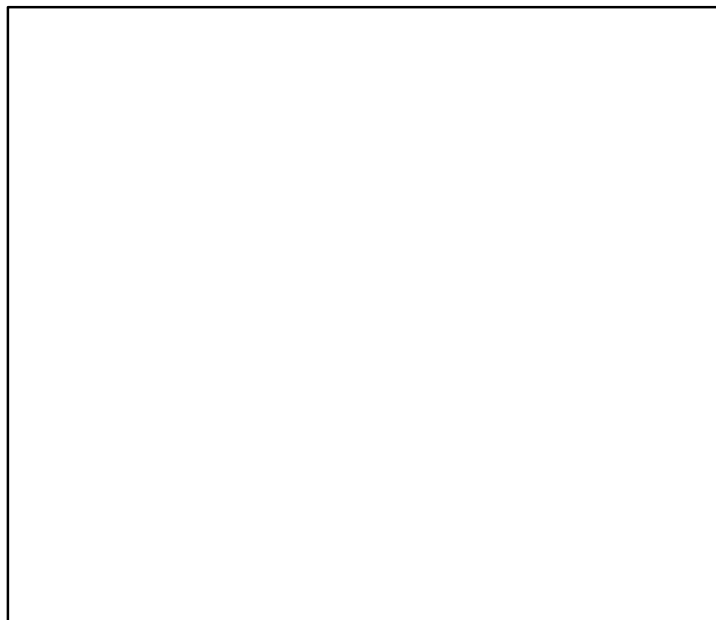
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	172		
TL	TL-MT	2020	76		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*

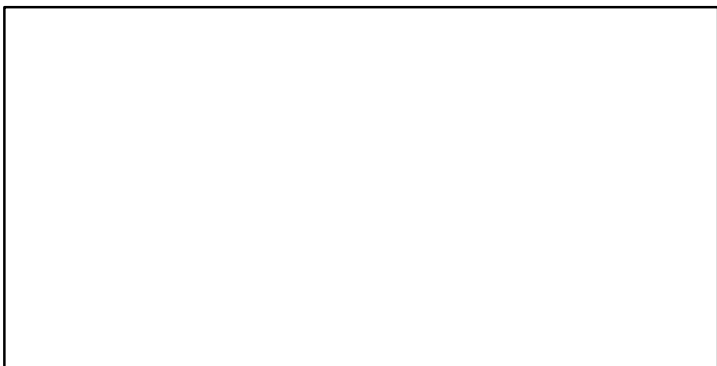


Production*

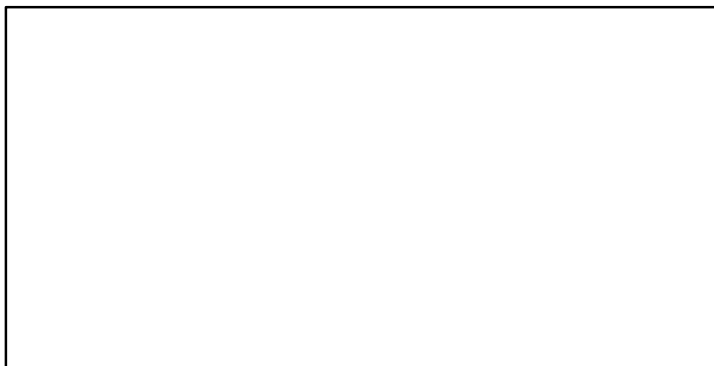


◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

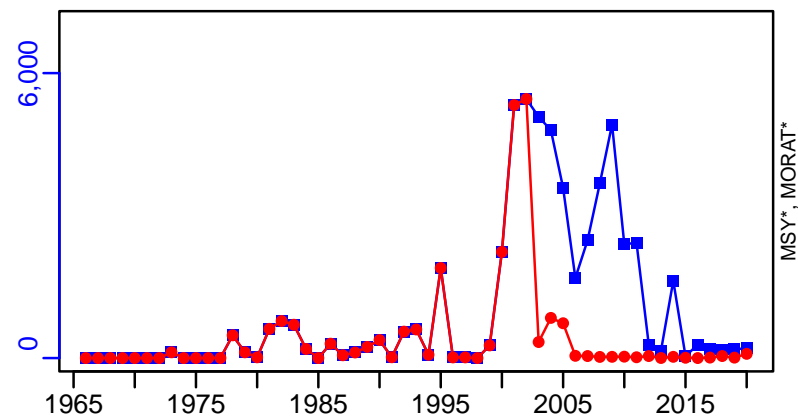


Recruits*



Greater silver smelt ICES 6b-7-8-9-10-12 [GSSMELTVIb-VII-VIII-IX-X-XII]

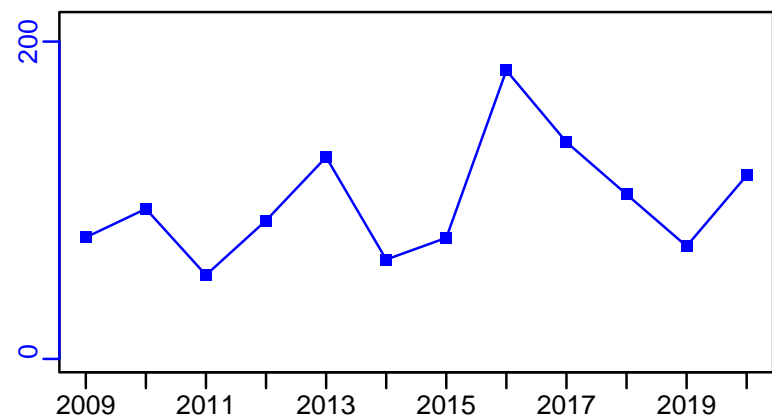
TC-MT, TL-MT, RecC* (1966-2020-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



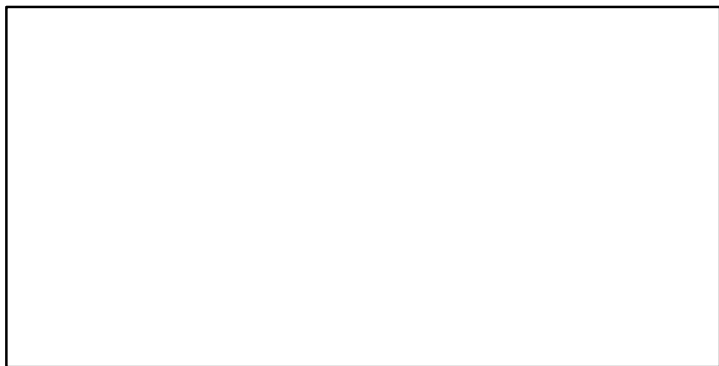
survB-index (1966-2020-ICESIMP2021-2)



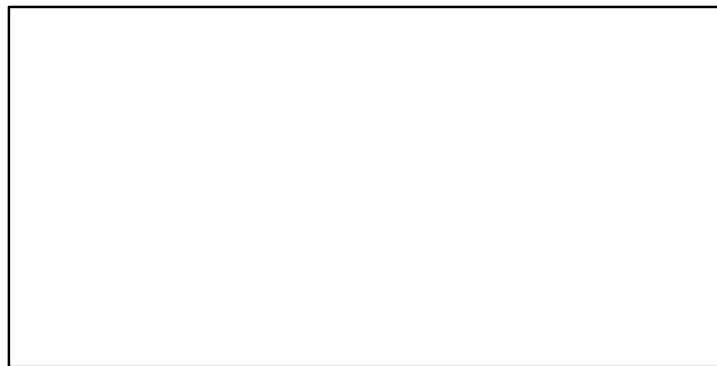
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring ICES 22-24-3a [HERR2224IIIa]

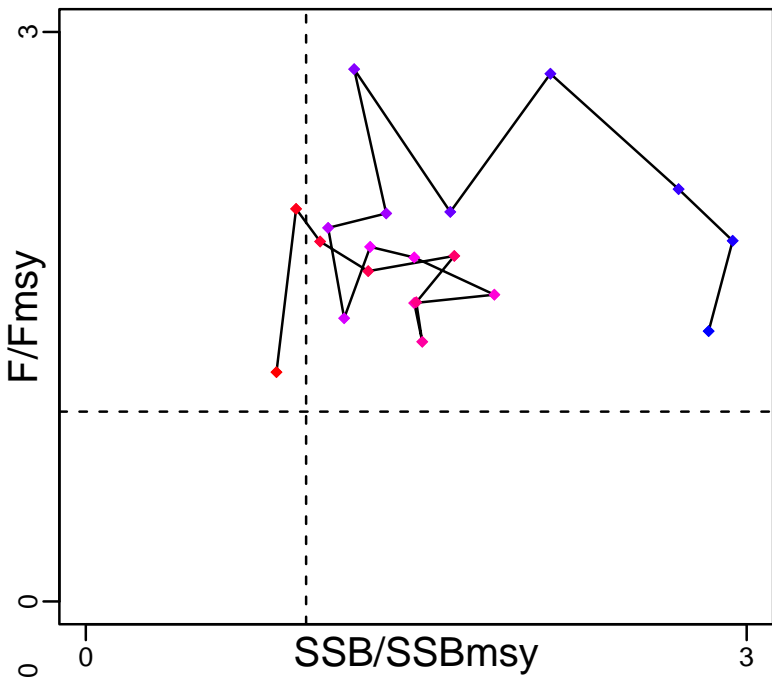
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	HAWG-HERR2224IIIa-1991-2021-ICESIMP2021-2
Area	ICES 22-24-3a
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2011	110,000
Fmsy	Fmsy-1/yr	2021	0.31
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.31
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	120,000
Flim	Flim-1/yr	2021	0.45
ERlim	-	-	-

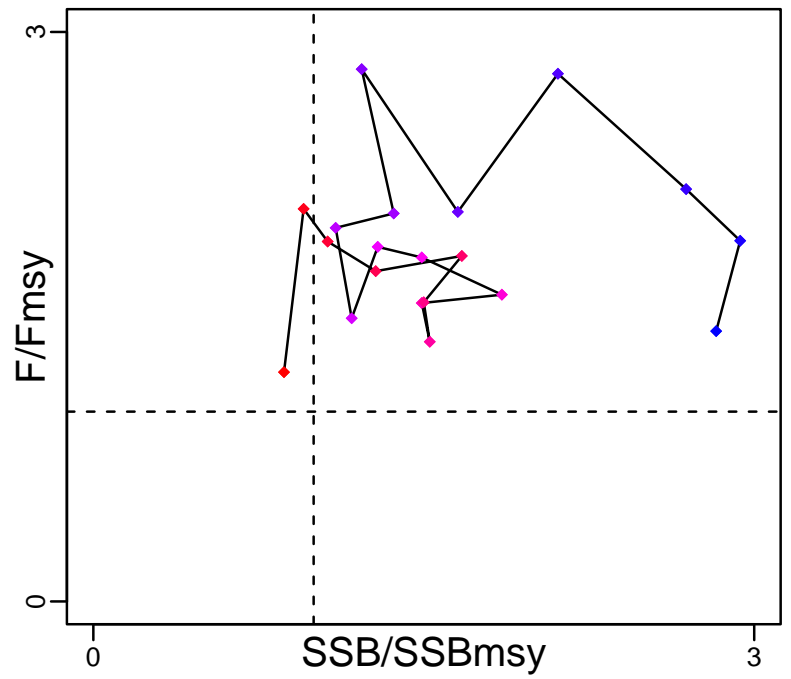
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	114,957	-	-
SSB	SSB-MT	2021	65,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	8.6×10^8	-	0
F	F-1/yr	2021	0.193	-	-
ER	ER-calc-ratio	2019	0.357	-	-
TC	TC-MT	2021	22,100		
TL	TL-MT	2021	22,100		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2011	0.886		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	0.623		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.623		
ER/ERmgt	-	-	-		

Herring ICES 22-24-3a [HERR2224IIIa]

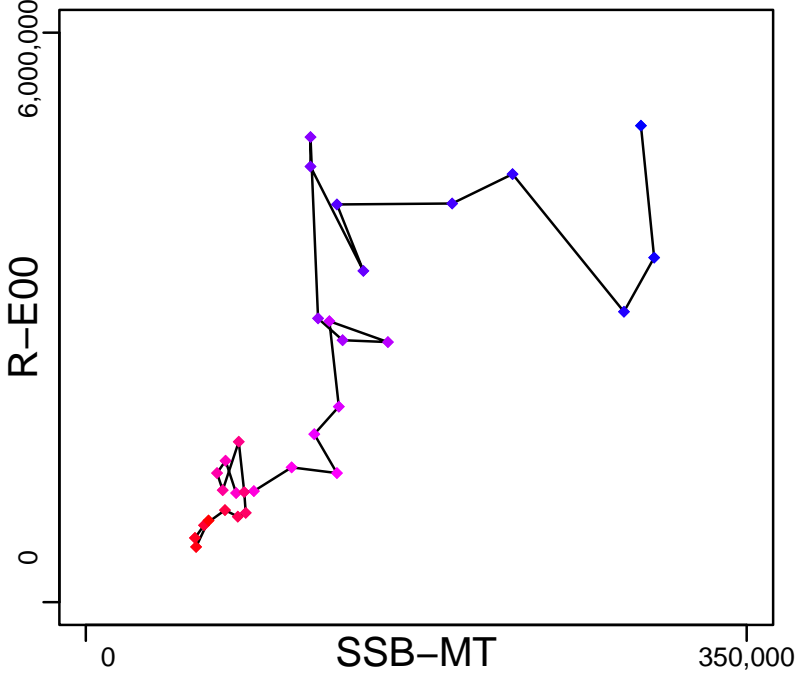
Kobe MSYpref (1991-2011-NEUBAUER)



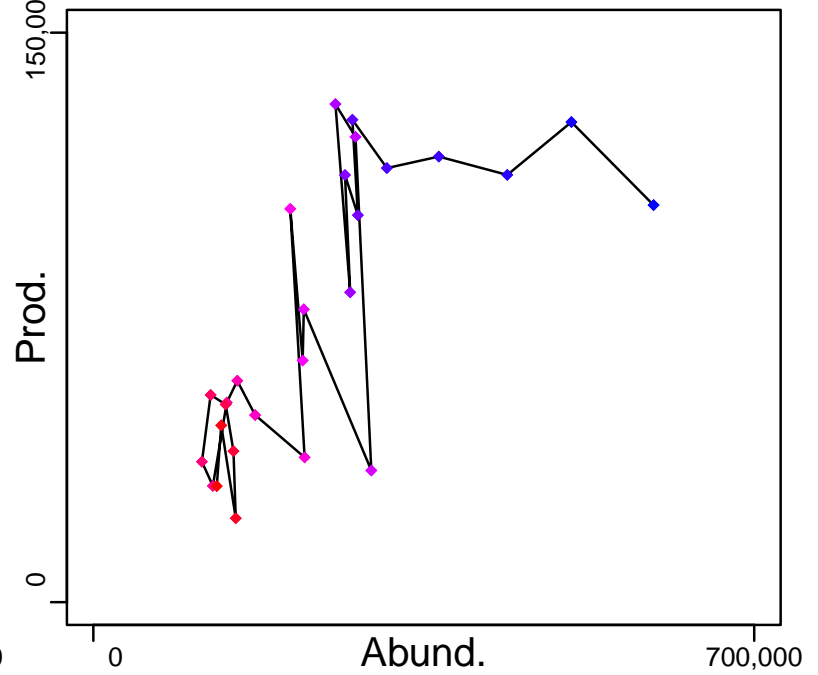
Kobe MGTpref (1991-2011-NEUBAUER)



Spawner Recruit (1991-2021-ICESIMP2021-2)



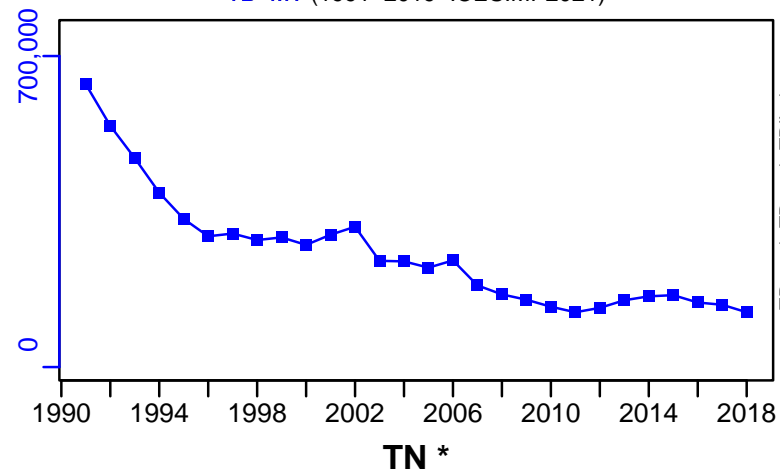
Production (1991-2019-ICESIMP2021)



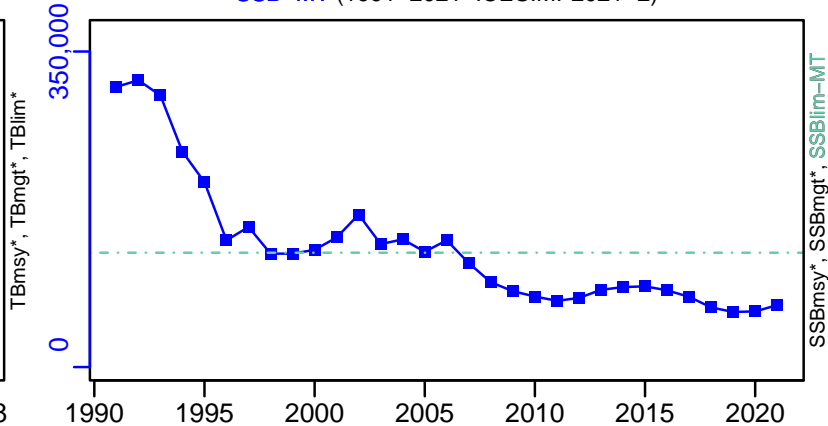
◆ Start Year ◆ End Year * No Data

Herring ICES 22–24–3a [HERR2224IIIa]

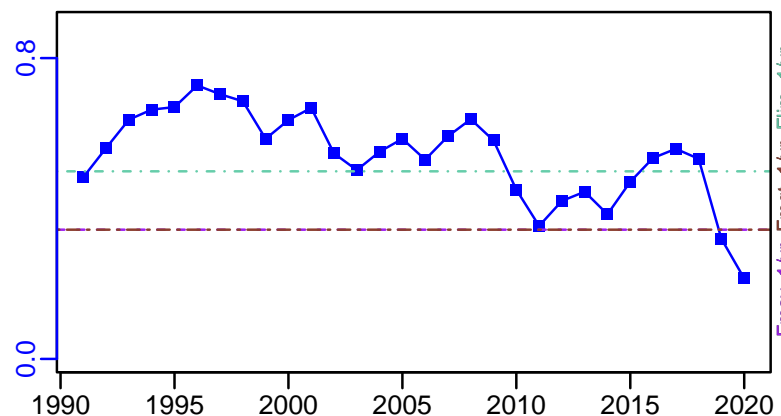
TB–MT (1991–2019–ICESIMP2021)



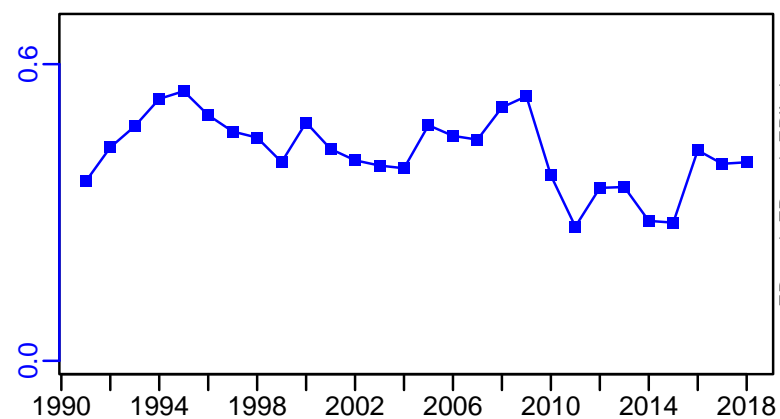
SSB–MT (1991–2021–ICESIMP2021–2)



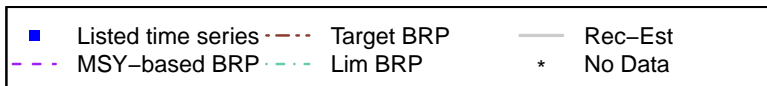
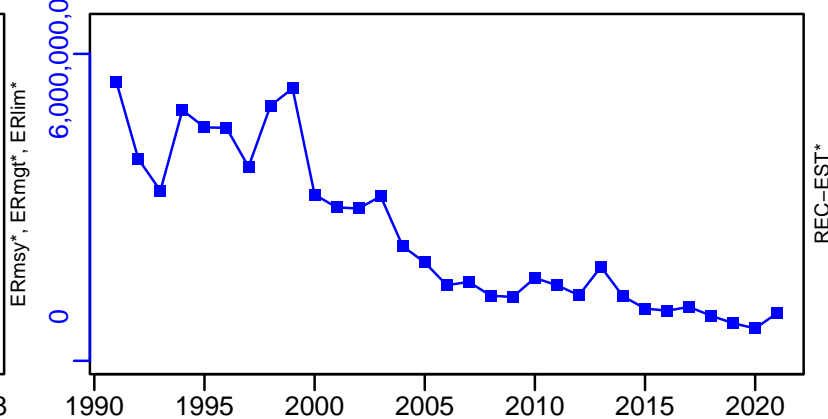
F–1/yr (1991–2021–ICESIMP2021–2)



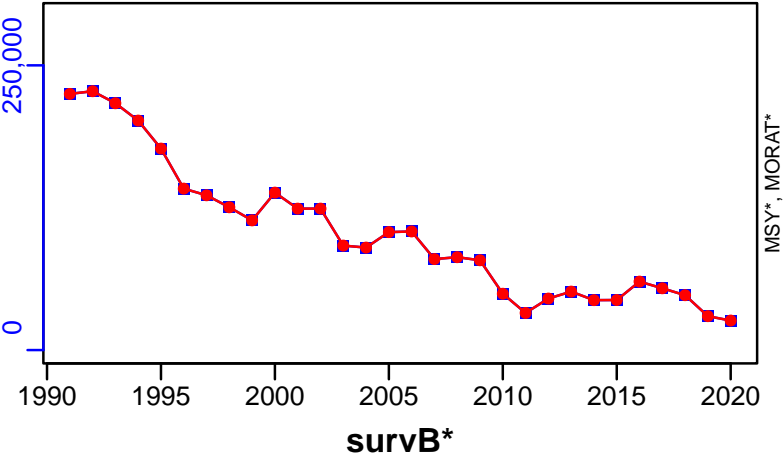
ER–calc–ratio (1991–2019–ICESIMP2021)



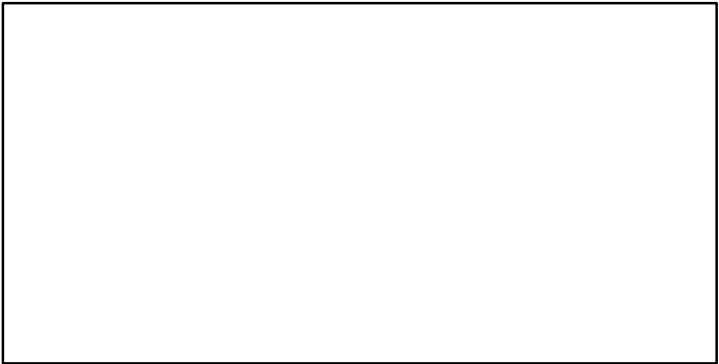
R–E00 (1991–2021–ICESIMP2021–2)



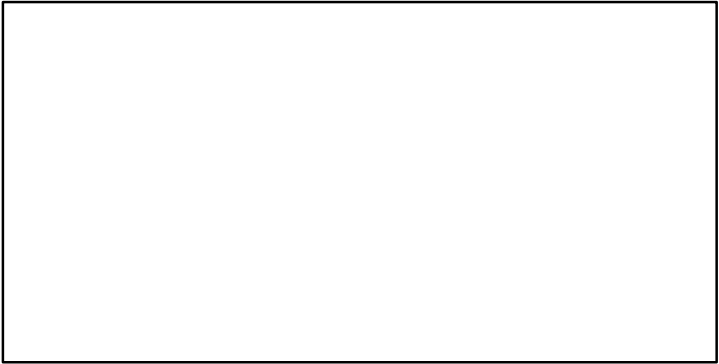
TC–MT, TL–MT, RecC* (1991–2021–ICESIMP2021–2)



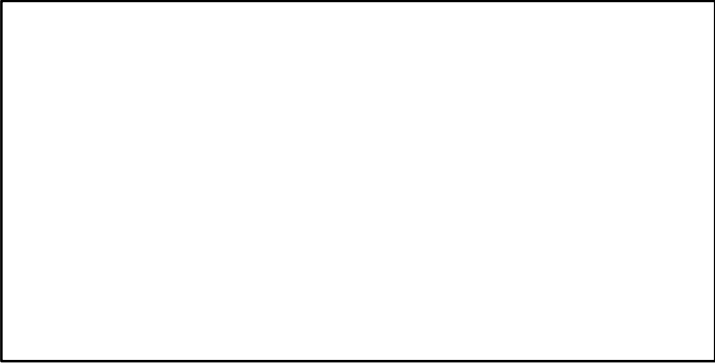
TAC*, Cpair*, Cadv*



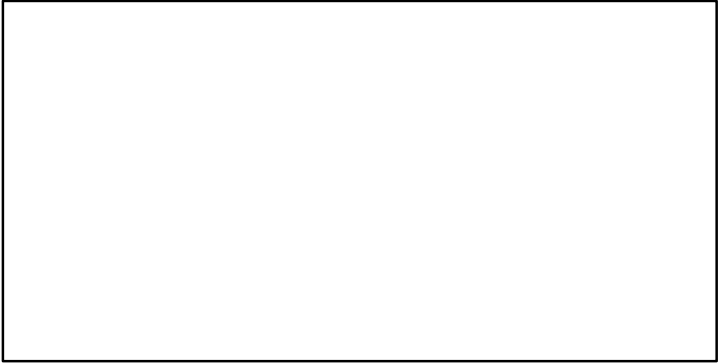
CPUE*



EFFORT*



CdivMSY*



Herring Subdivisions 25-29 and 32 [HERR2529-32]

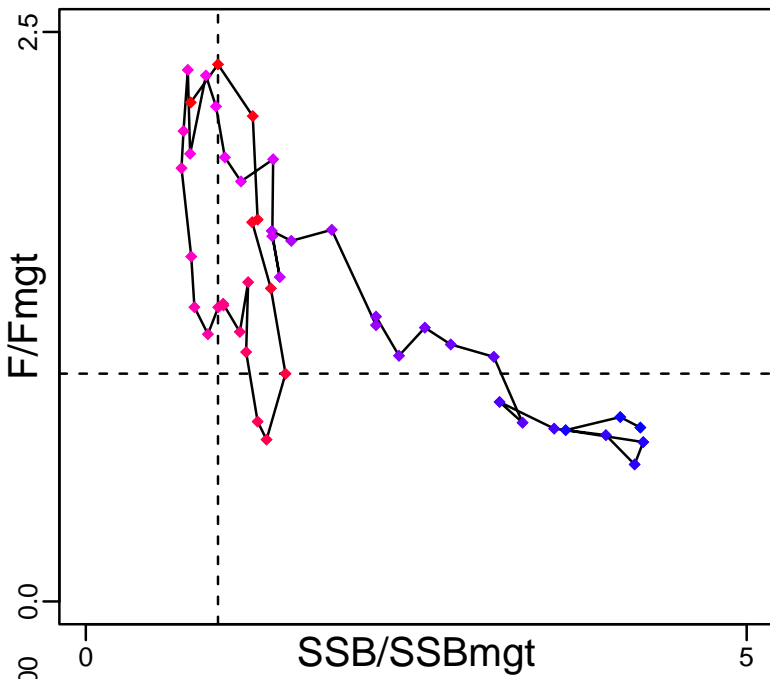
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	WGBFAS-HERR2529-32-1974-2021-ICESIMP2021-2
Area	Subdivisions 25-29 and 32
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2018	0.22
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2021	460,000
Fmgt	Fmgt-1/yr	2021	0.21
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	330,000
Flim	Flim-1/yr	2021	0.59
ERlim	-	-	-

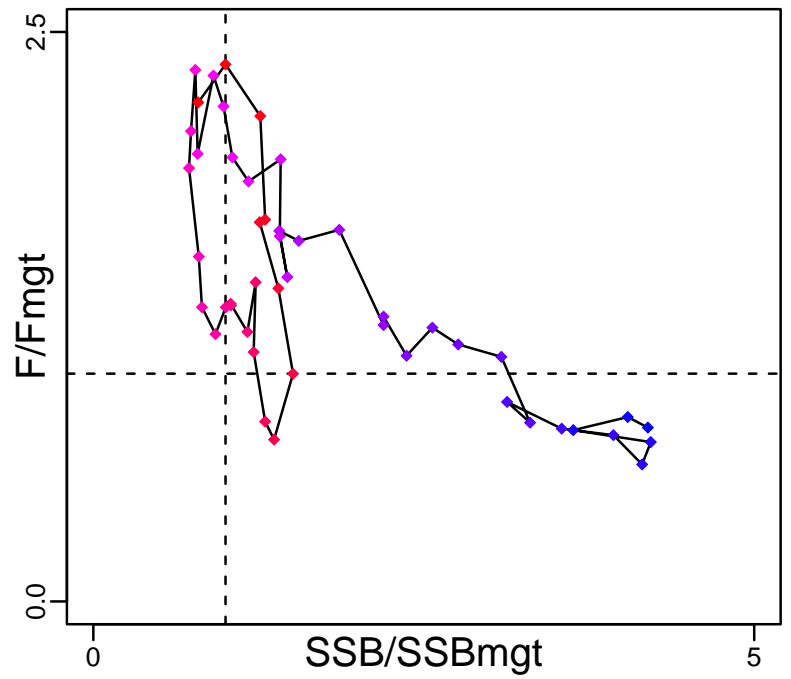
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	1,379,633	-	-
SSB	SSB-MT	2021	365,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	1.21×10^{10}	-	1
F	F-1/yr	2021	0.46	-	-
ER	ER-calc-ratio	2019	0.177	-	-
TC	TC-MT	2021	177,000		
TL	TL-MT	2021	177,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2018	1.255		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2021	0.793		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	2.19		
ER/ERmgt	-	-	-		

Herring Subdivisions 25–29 and 32 [HERR2529–32]

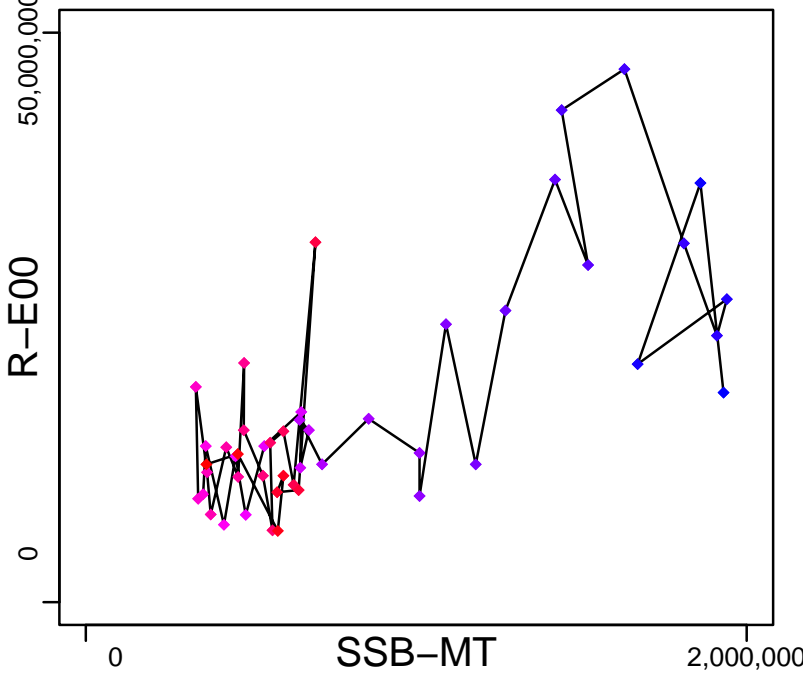
Kobe MSYpref (1974–2021–ICESIMP2021–2)



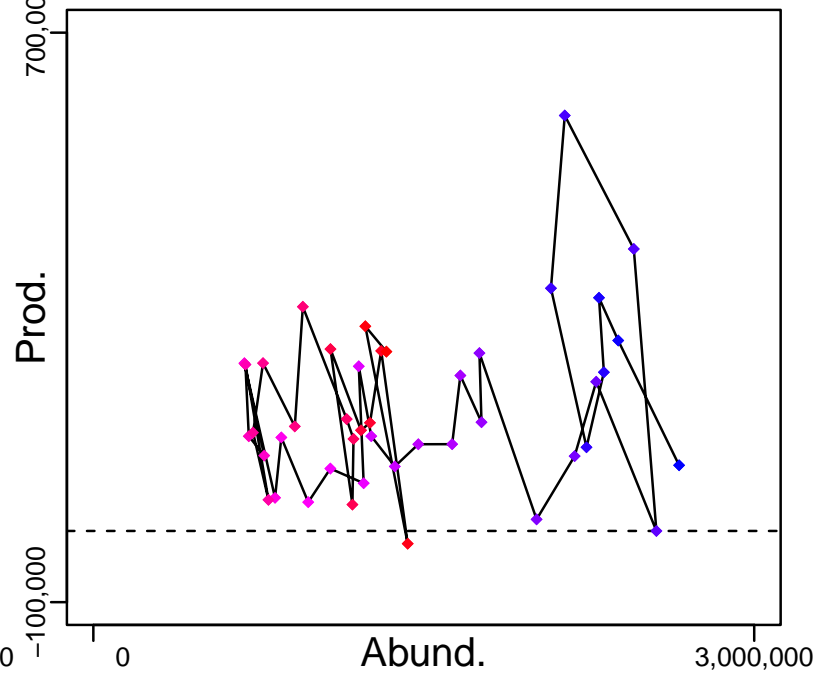
Kobe MGTpref (1974–2021–ICESIMP2021–2)



Spawner Recruit (1974–2021–ICESIMP2021–2)



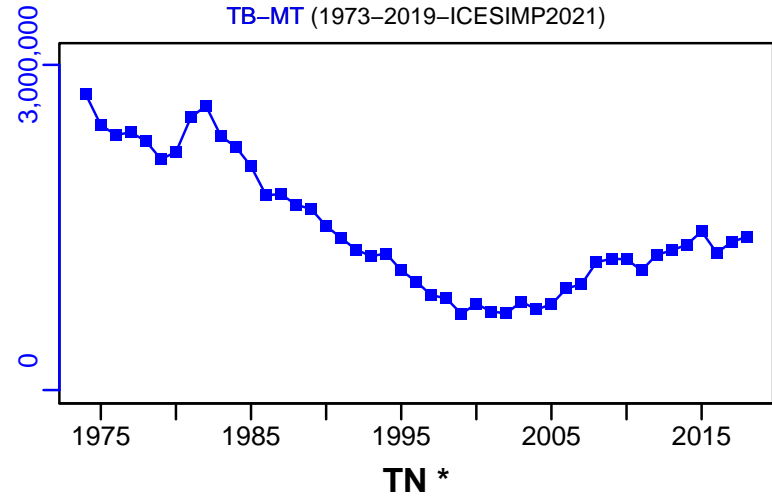
Production (1973–2019–ICESIMP2021)



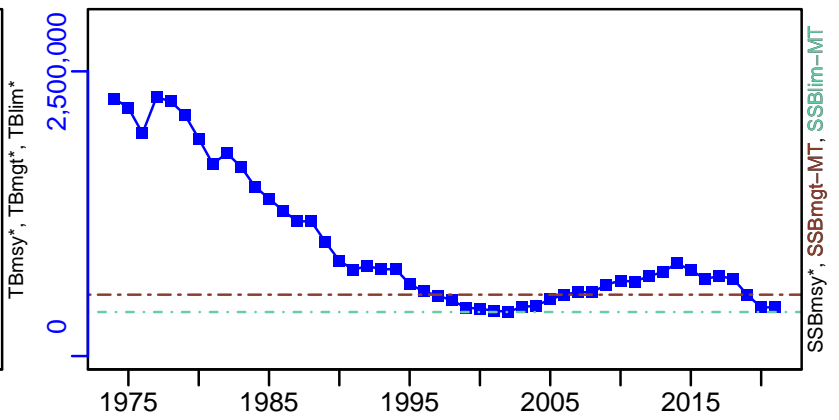
◆ Start Year ◆ End Year * No Data

Herring Subdivisions 25–29 and 32 [HERR2529–32]

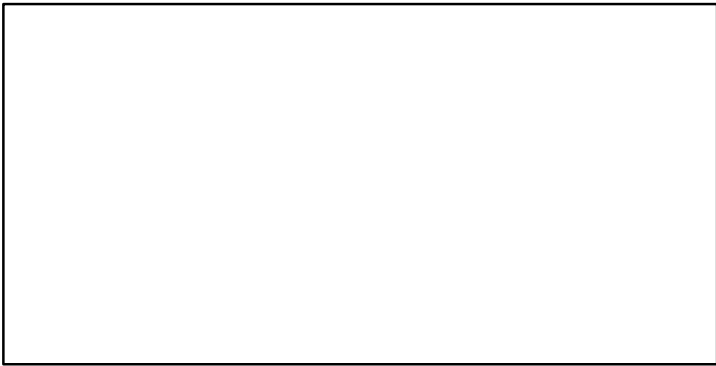
TB–MT (1973–2019–ICESIMP2021)



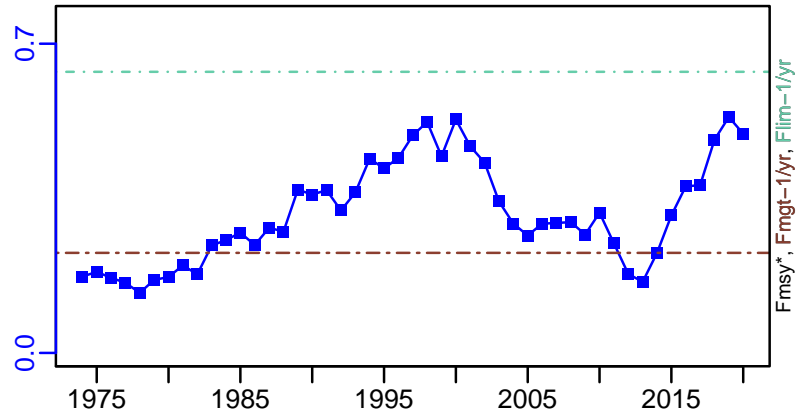
SSB–MT (1974–2021–ICESIMP2021–2)



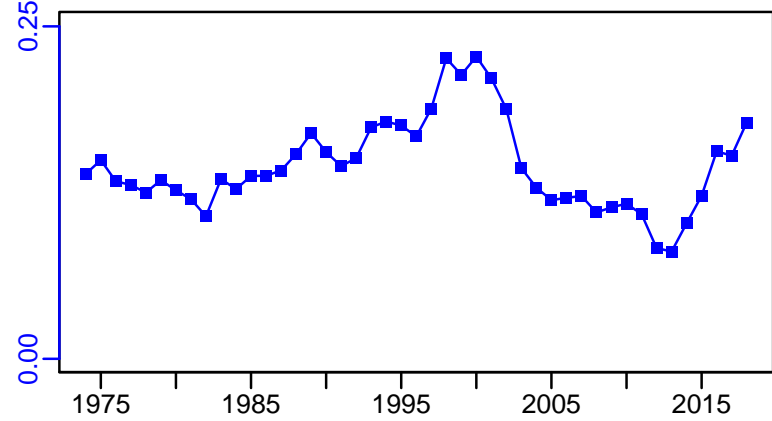
TN *



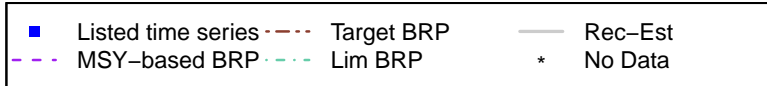
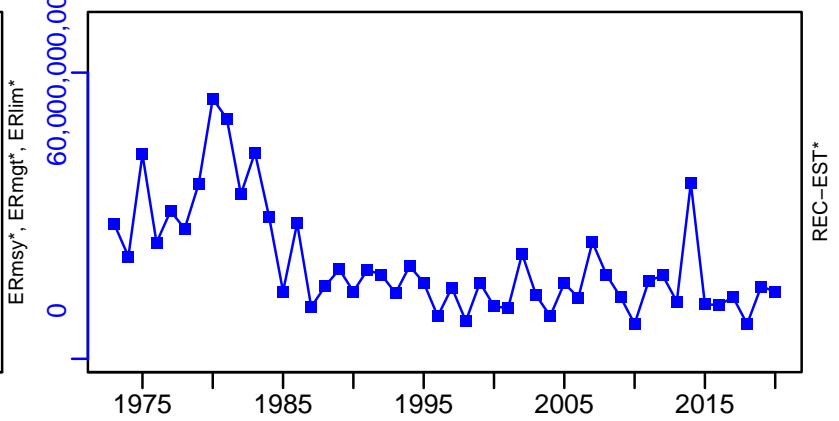
F–1/yr (1974–2021–ICESIMP2021–2)



ER–calc–ratio (1973–2019–ICESIMP2021)

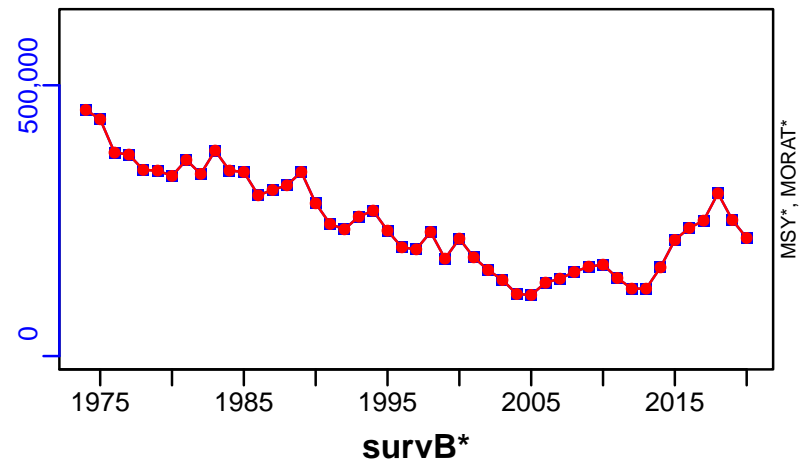


R–E00 (1974–2021–ICESIMP2021–2)

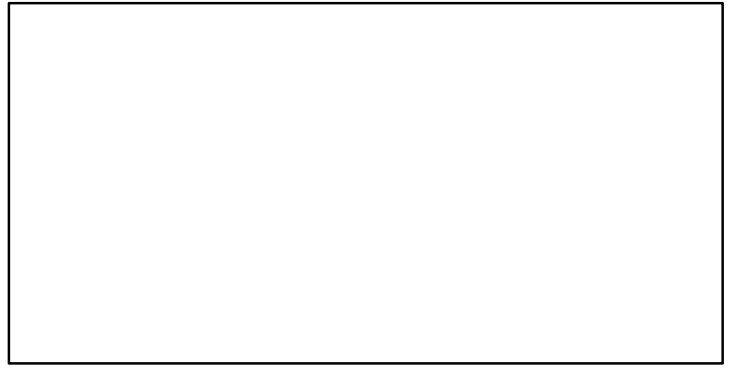


Herring Subdivisions 25–29 and 32 [HERR2529–32]

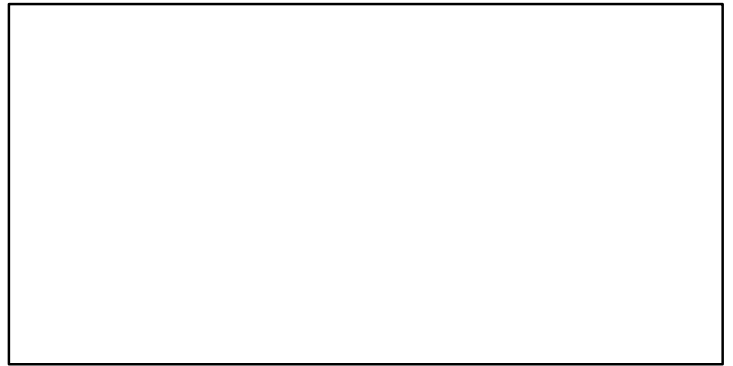
TC–MT, TL–MT, RecC* (1974–2021–ICESIMP2021–2)



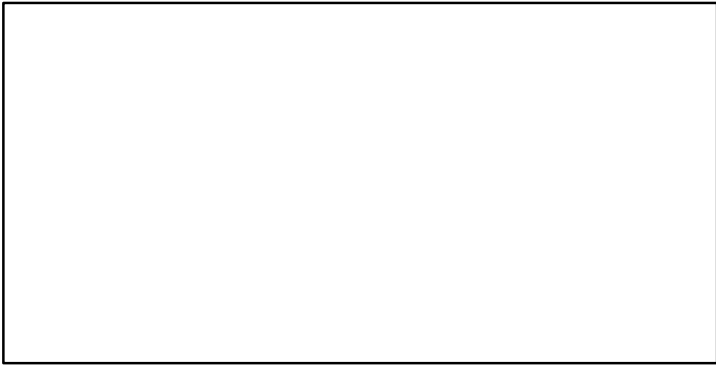
TAC*, Cpair*, Cadv*



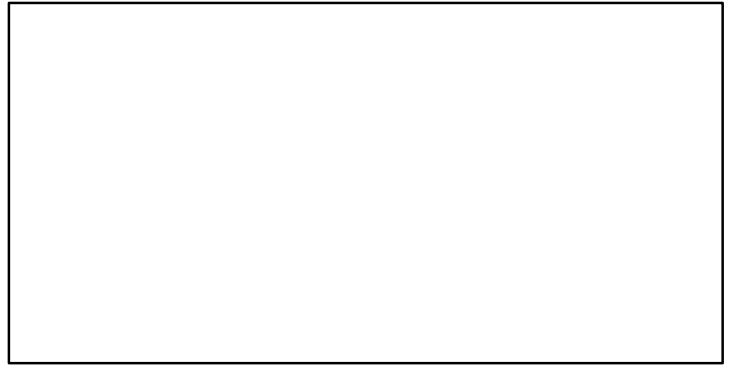
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring Subdivisions 30-31 [HERR30-31]

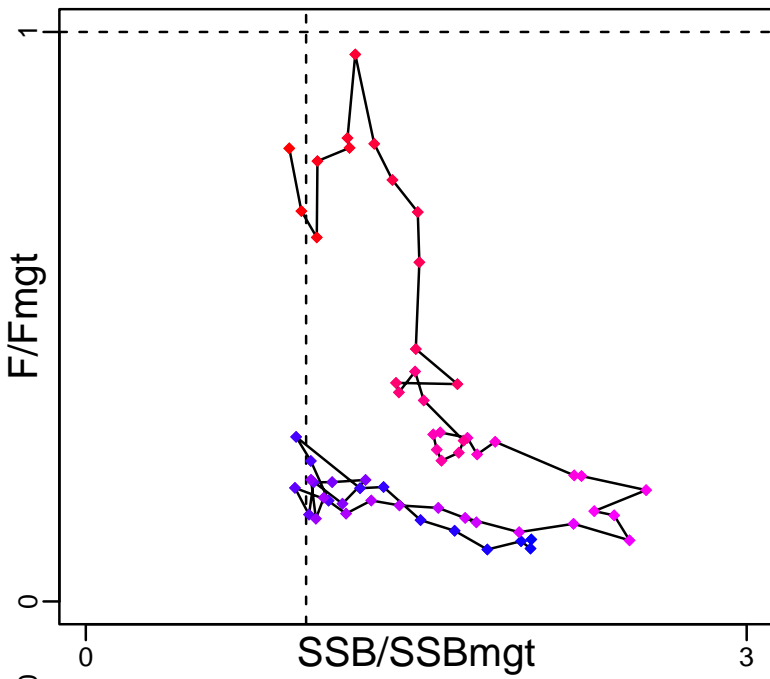
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	WGBFAS-HERR30-31-1963-2023-ICESIMP2024
Area	Subdivisions 30-31
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2021, 2023, 2017, 2018, 2018, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2018	0.21
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2023	533,515
Fmgt	Fmgt-1/yr	2023	0.271
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	376,571
Flim	Flim-1/yr	2023	0.496
ERlim	-	-	-

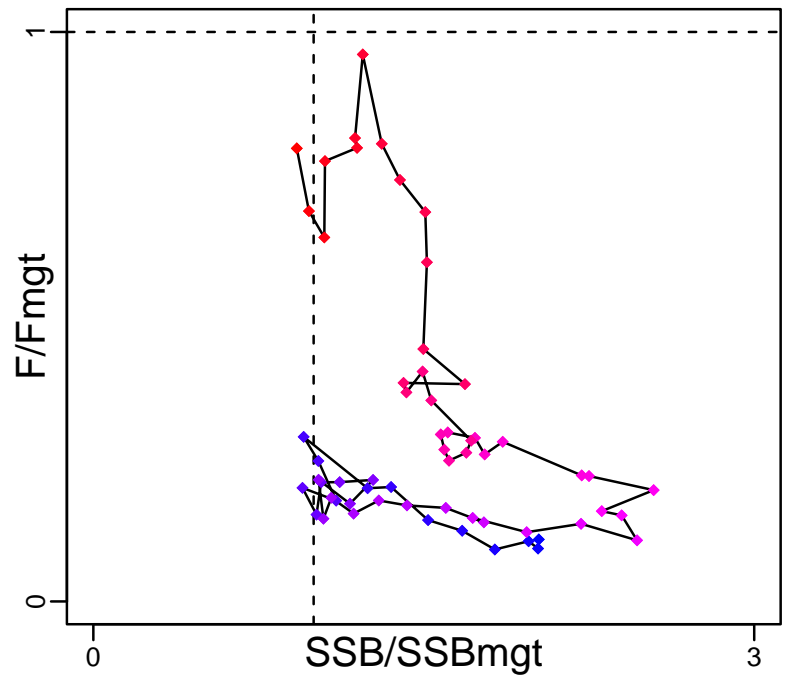
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-relative	2018	0.892	-	-
SSB	SSB-MT	2023	449,913	-	-
TN	-	-	-	-	-
R	R-E00	2023	26,570,110	-	0
F	F-1/yr	2023	0.216	-	3 to 7
ER	ER-calc-ratio	2017	0.185	-	-
TC	TC-MT	2023	78,614		
TL	TL-MT	2018	104,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2018	1.19		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2023	0.843		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	0.796		
ER/ERmgt	-	-	-		

Herring Subdivisions 30-31 [HERR30-31]

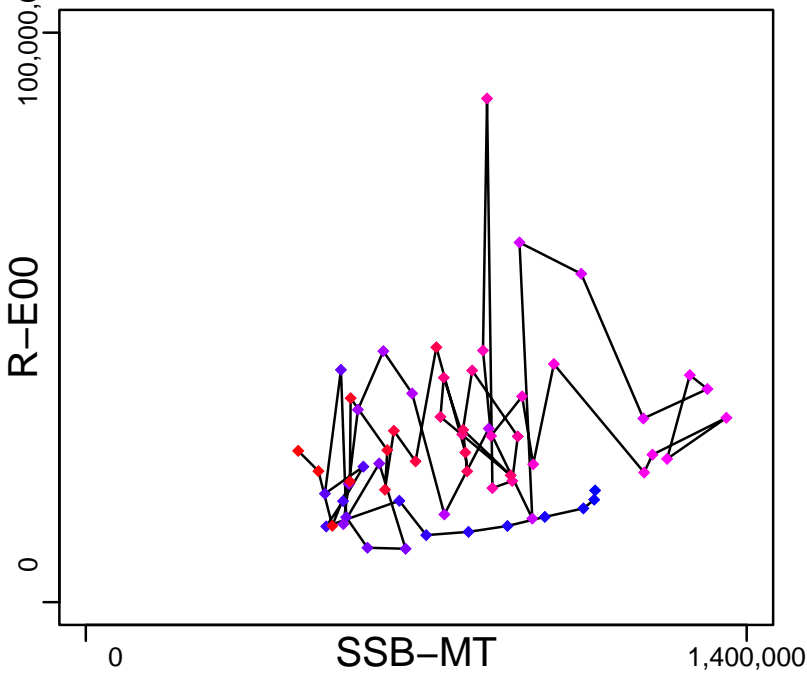
Kobe MSYpref (1963-2023-ICESIMP2024)



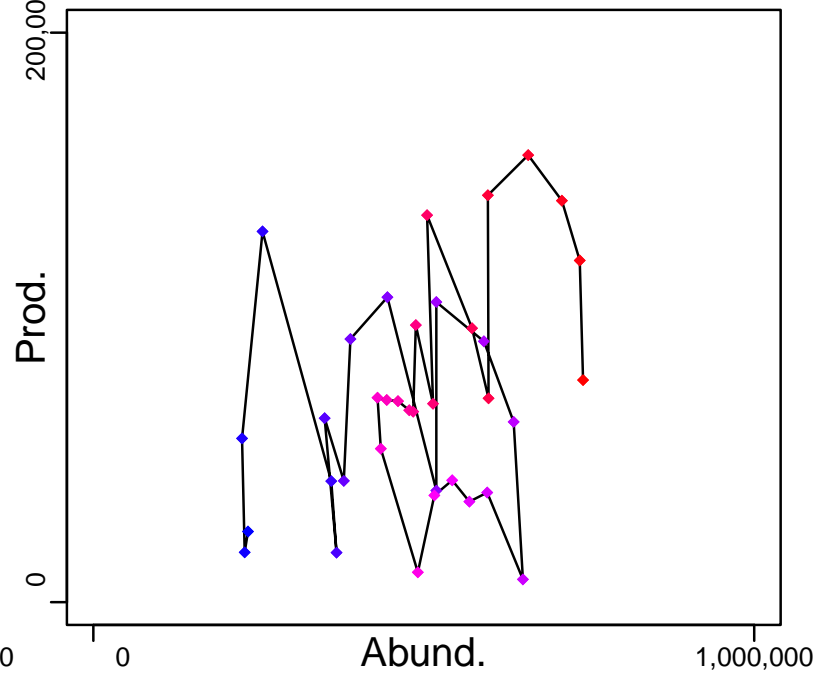
Kobe MGTpref (1963-2023-ICESIMP2024)



Spawner Recruit (1963-2023-ICESIMP2024)



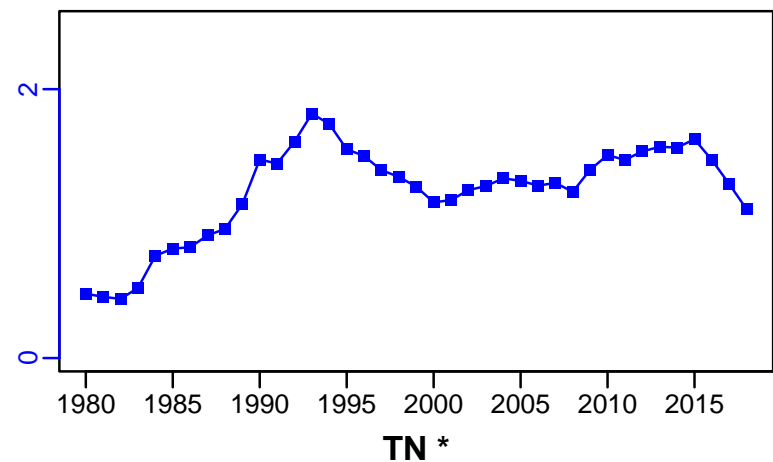
Production (1979-2017-ICESIMP2018)



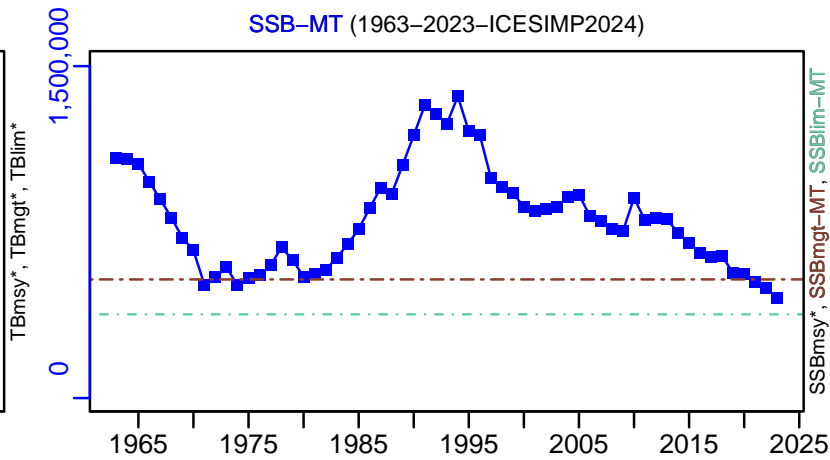
◆ Start Year ◆ End Year * No Data

Herring Subdivisions 30-31 [HERR30-31]

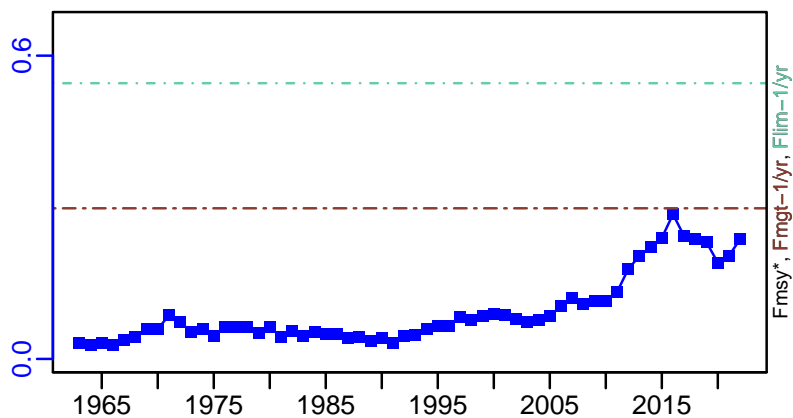
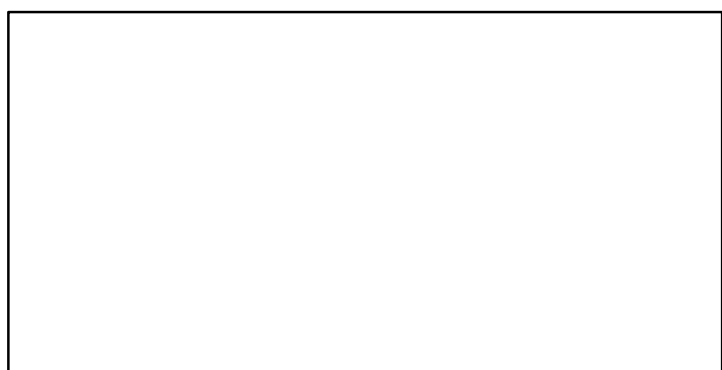
TB-relative (1979-2018-ICESIMP2021)



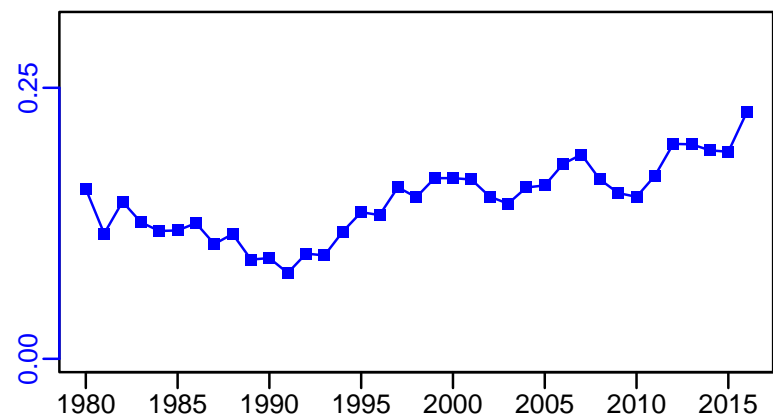
SSB-MT (1963-2023-ICESIMP2024)



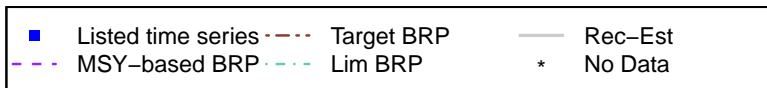
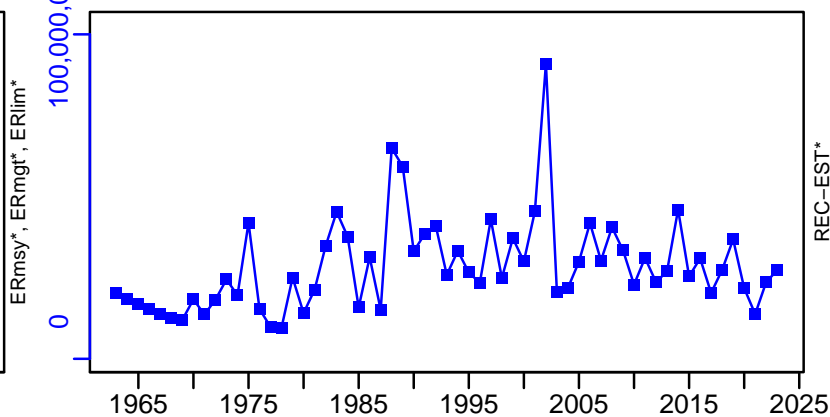
F-1/yr (1963-2023-ICESIMP2024)



ER-calc-ratio (1979-2017-ICESIMP2018)

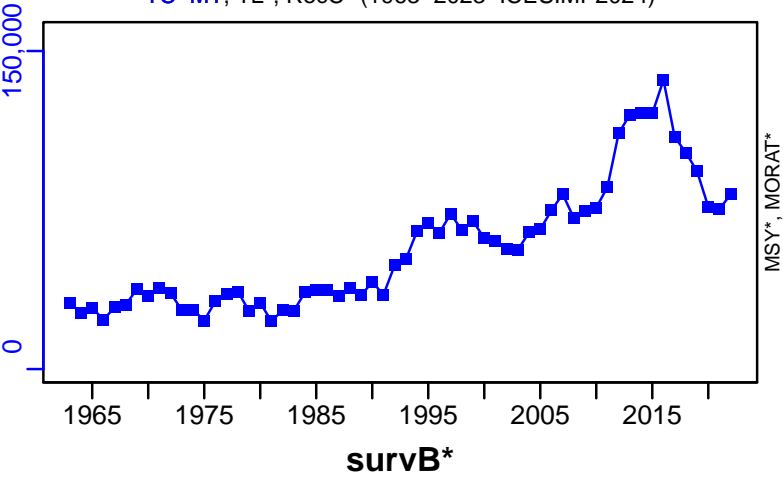


R-E00 (1963-2023-ICESIMP2024)

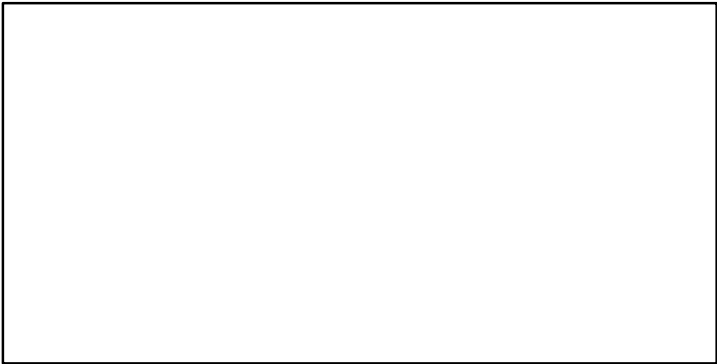


Herring Subdivisions 30–31 [HERR30–31]

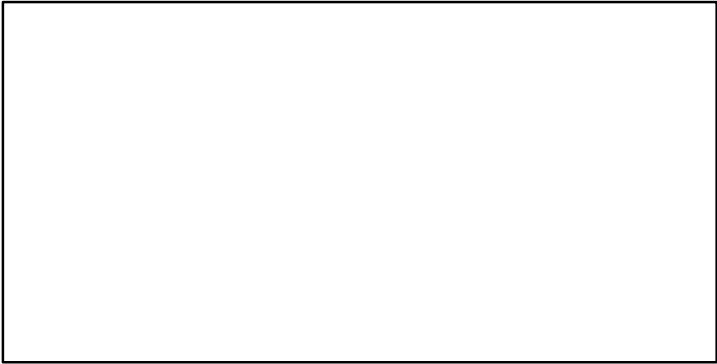
TC–MT, TL*, RecC* (1963–2023–ICESIMP2024)



TAC*, Cpair*, Cadv*



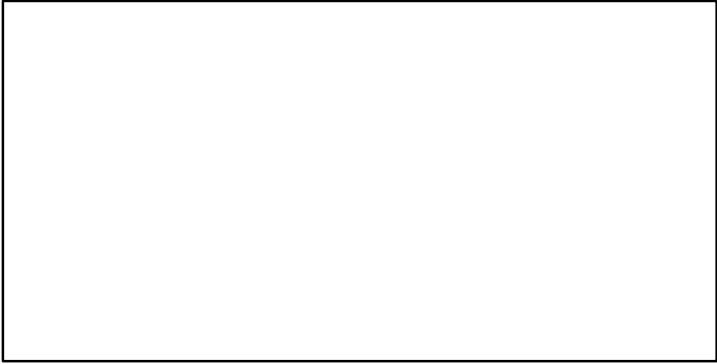
CPUE*



EFFORT*



CdivMSY*



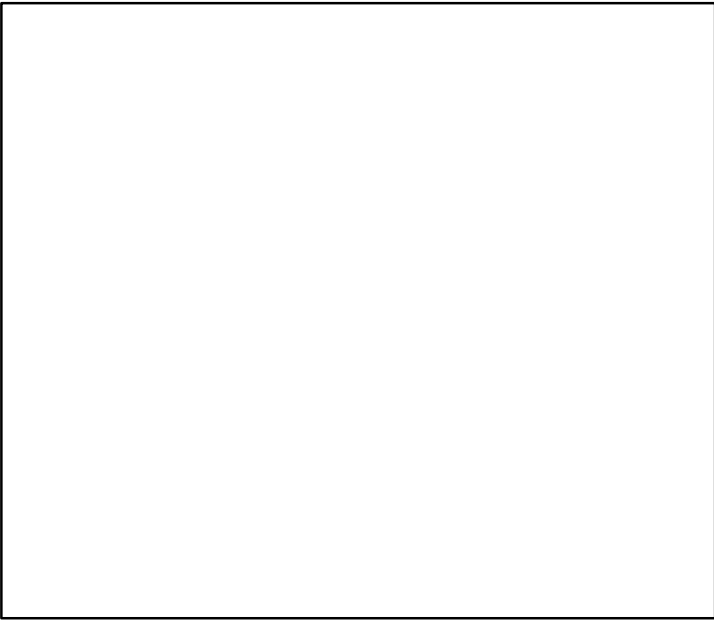
Herring NAFO division 4R (Fall spawners) [HERR4RFA]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-QUE-HERR4RFA-1965-2017-ASHBROOK
Area	NAFO division 4R (Fall spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Quebec Region
Asmts in RAM	2017, 2003

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2017	61,074
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2003	0.2
TBlim	TBlim-MT	2003	47,953
SSBlim	SSBlim-MT	2017	47,902
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2017	76,383	-	-
TN	-	-	-	-	-
R	R-E00	2003	49,300,000	-	2
F	F-1/yr	2003	0.049	-	4+
ER	-	-	-	-	-
TC	TC-E00	2003	16,200,000		
TL	TL-MT	2003	4499		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2017	1.251		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

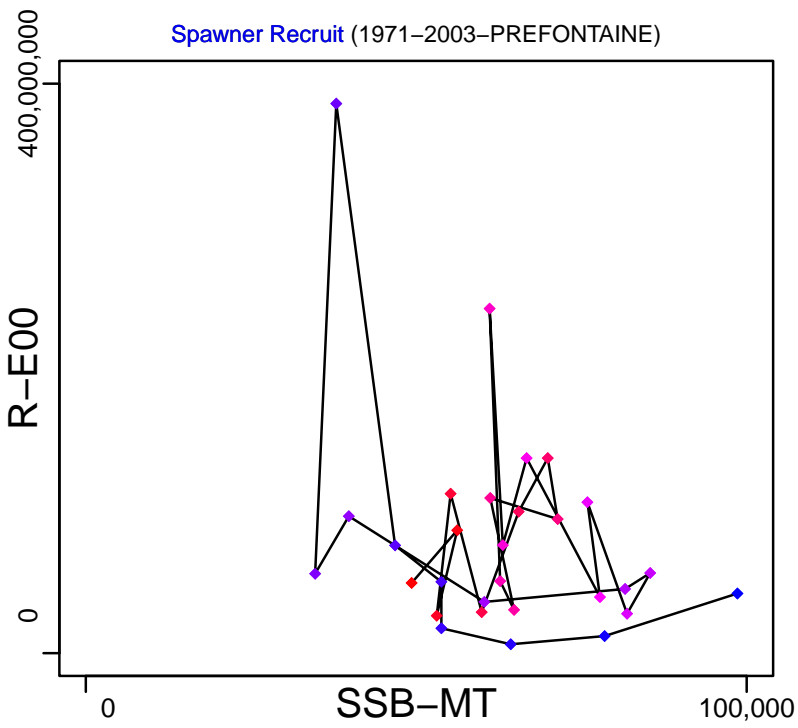
Kobe MSY*



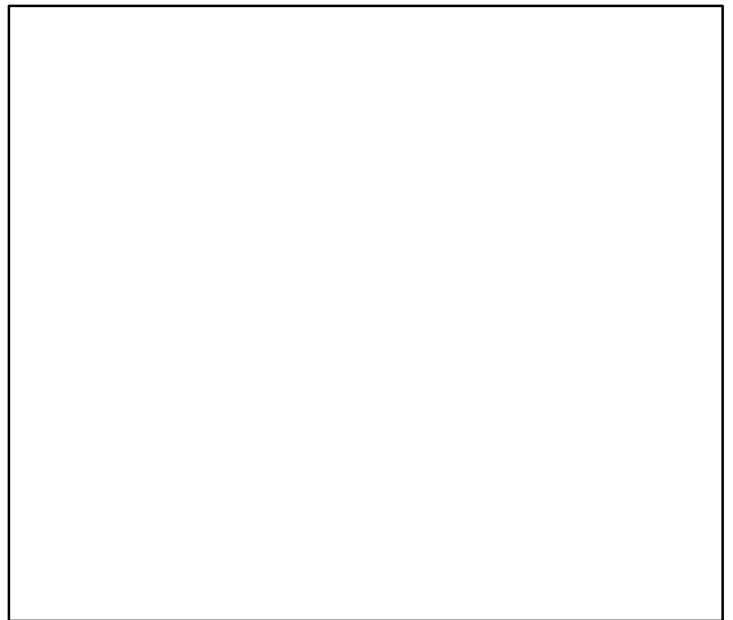
Kobe MGT*



Spawner Recruit (1971–2003–PREFONTAINE)



Production*



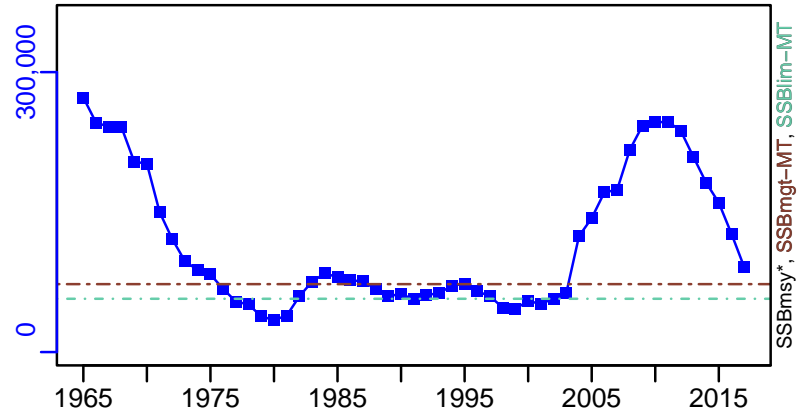
◆ Start Year ◆ End Year * No Data

Herring NAFO division 4R (Fall spawners) [HERR4RFA]

TB*



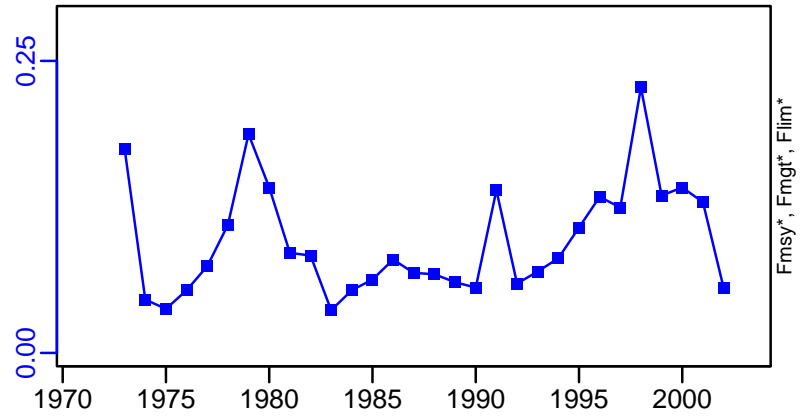
SSB-MT (1965–2017–ASHBROOK)



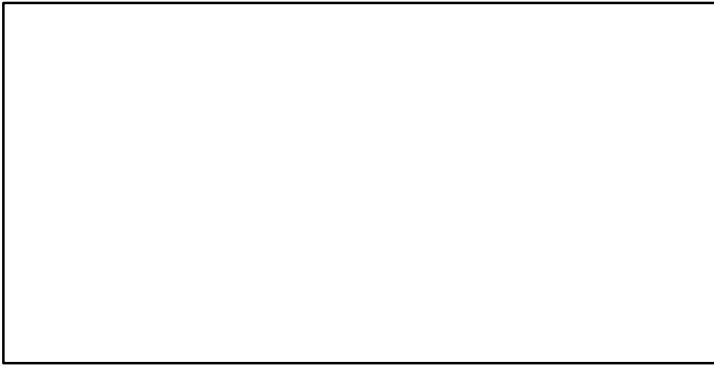
TN *



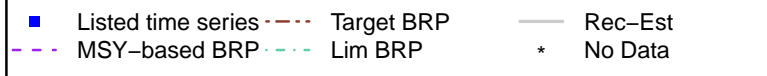
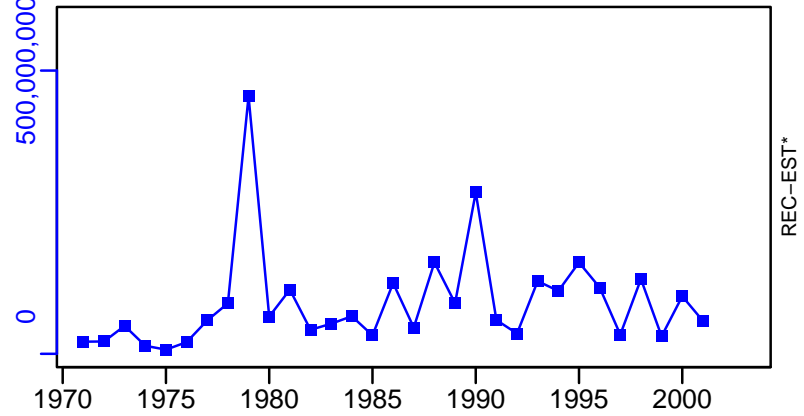
F-1/yr (1971–2003–PREFONTAINE)



ER*

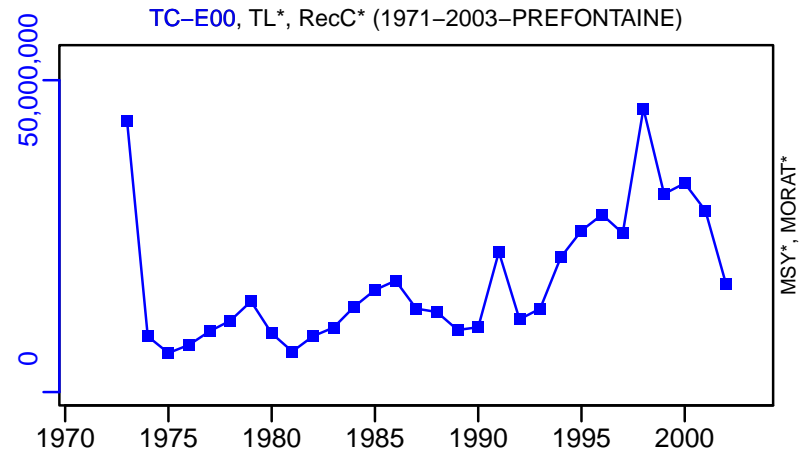


R-E00 (1971–2003–PREFONTAINE)



Herring NAFO division 4R (Fall spawners) [HERR4RFA]

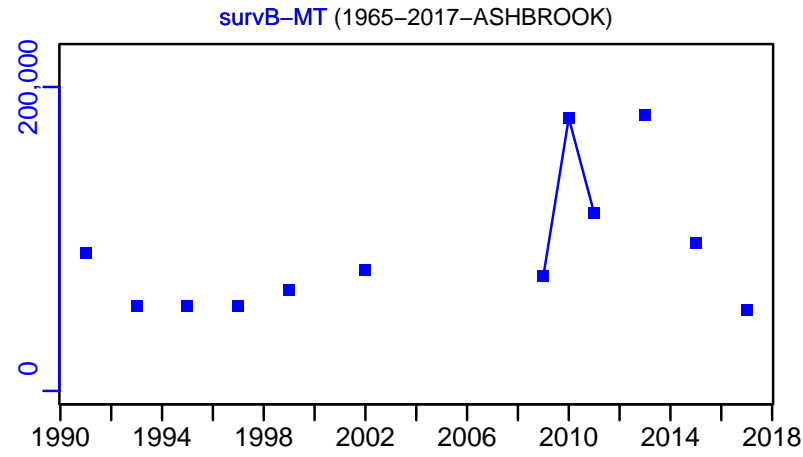
TC-E00, TL*, RecC* (1971–2003–PREFONTAINE)



TAC*, Cpair*, Cadv*



survB-MT (1965–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring NAFO division 4R (Spring spawners) [HERR4RSP]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-QUE-HERR4RSP-1965-2017-ASHBROOK
Area	NAFO division 4R (Spring spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Quebec Region
Asmts in RAM	2004, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2017	57,081
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2004	0.2
TBlim	TBlim-MT	2004	37,831
SSBlim	SSBlim-MT	2017	37,384
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2004	64,300	-	-
SSB	SSB-MT	2017	2192	-	-
TN	-	-	-	-	-
R	R-E00	2004	71,800,000	-	2
F	F-1/yr	2004	0.148	-	4+
ER	ER-calc-ratio	2004	0.103	-	-
TC	TC-E00	2004	22,700,000		
TL	TL-MT	2004	7926		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2017	0.038		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Herring NAFO division 4R (Spring spawners) [HERR4RSP]

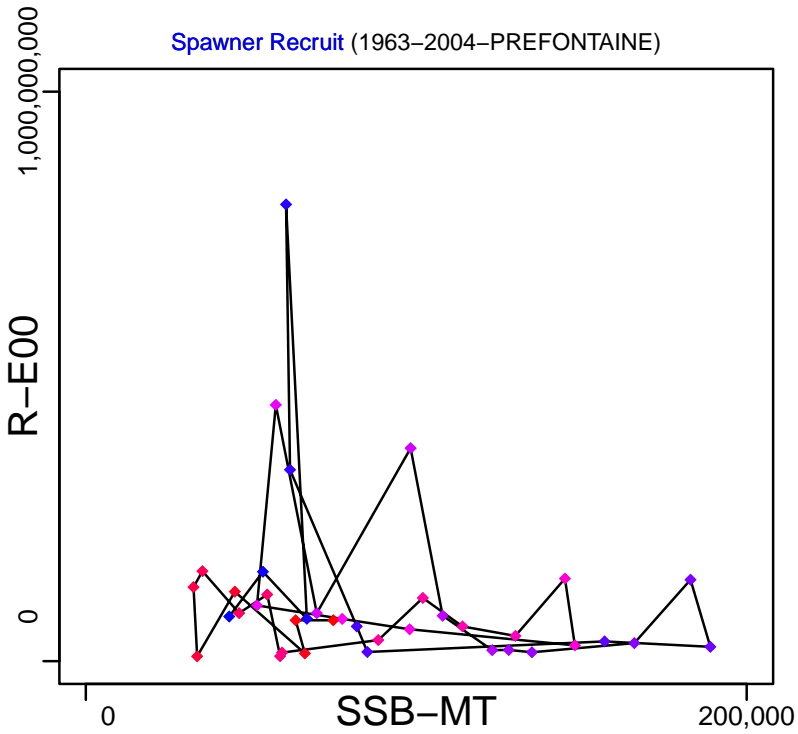
Kobe MSY*



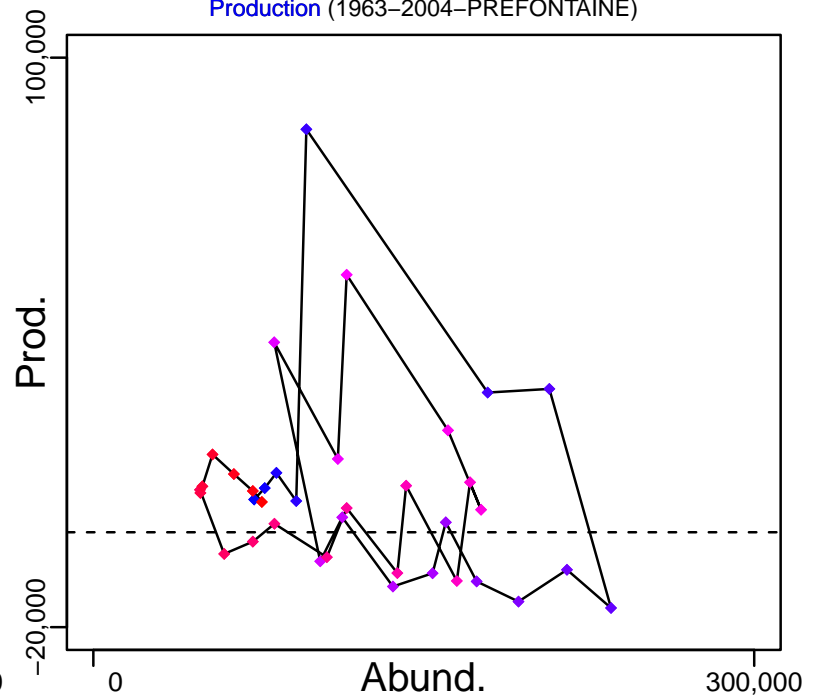
Kobe MGT*



Spawner Recruit (1963–2004–PREFONTAINE)



Production (1963–2004–PREFONTAINE)

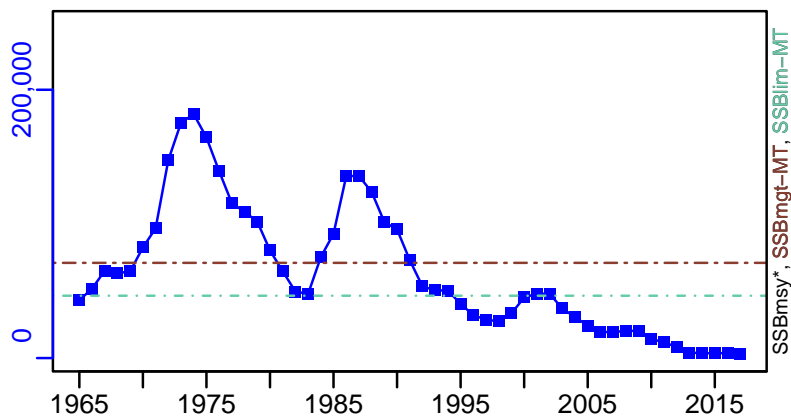
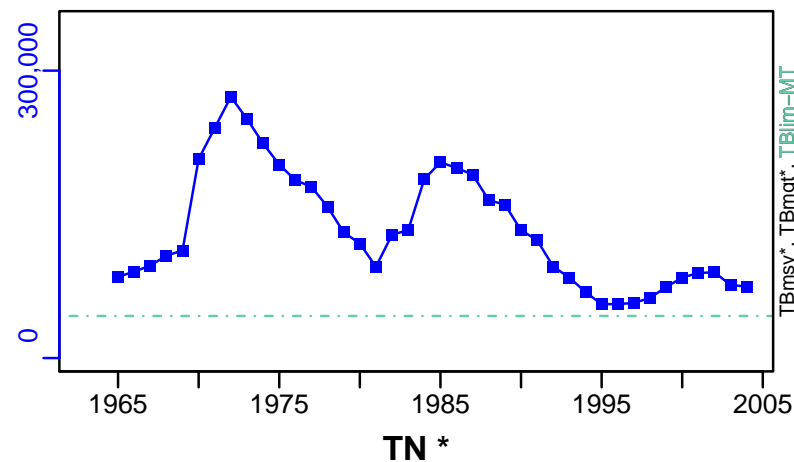


◆ Start Year ◆ End Year * No Data

Herring NAFO division 4R (Spring spawners) [HERR4RSP]

TB-MT (1963–2004–PREFONTAINE)

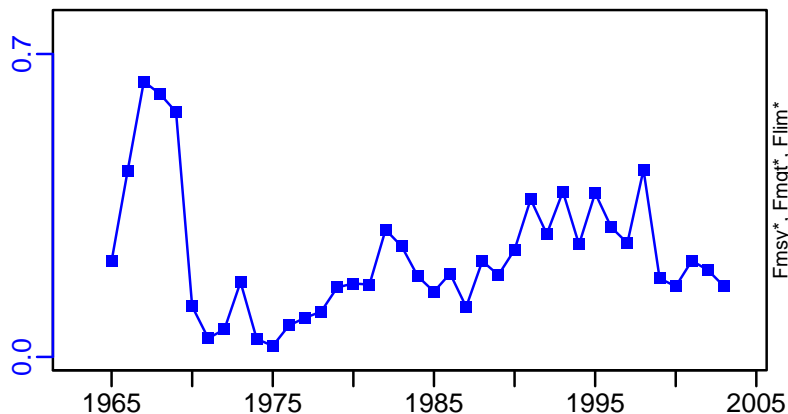
SSB-MT (1965–2017–ASHBROOK)



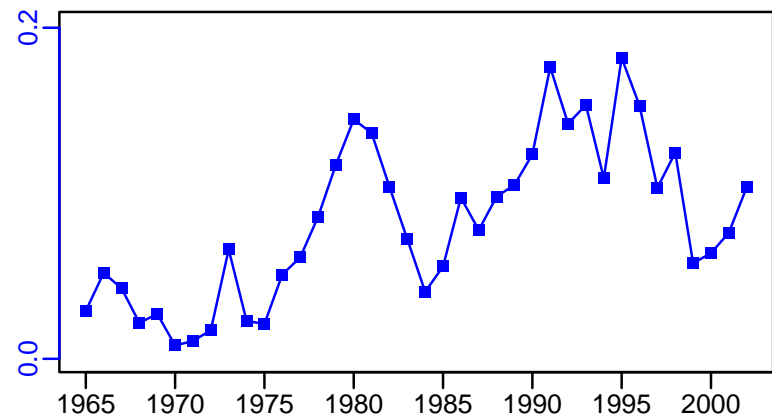
TN *



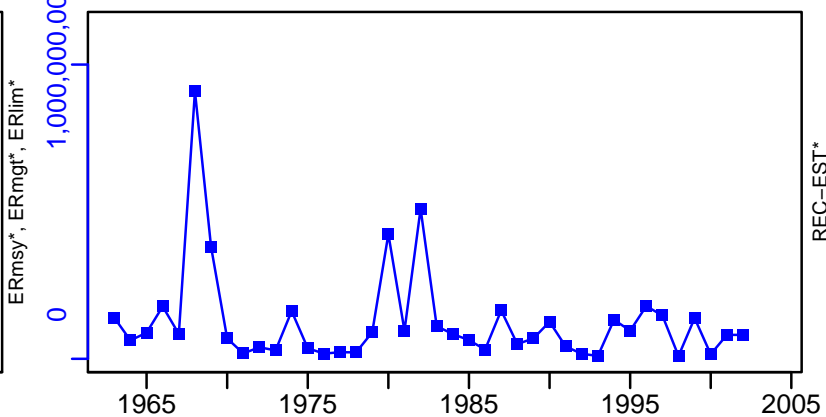
F-1/yr (1963–2004–PREFONTAINE)



ER-calc-ratio (1963–2004–PREFONTAINE)

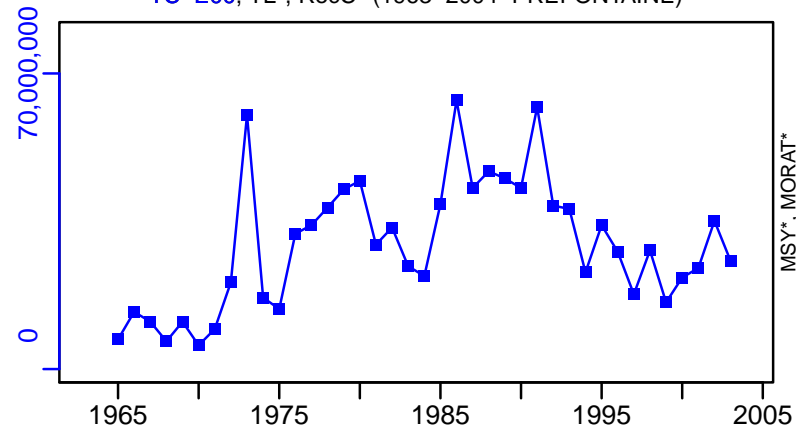


R-E00 (1963–2004–PREFONTAINE)



Herring NAFO division 4R (Spring spawners) [HERR4RSP]

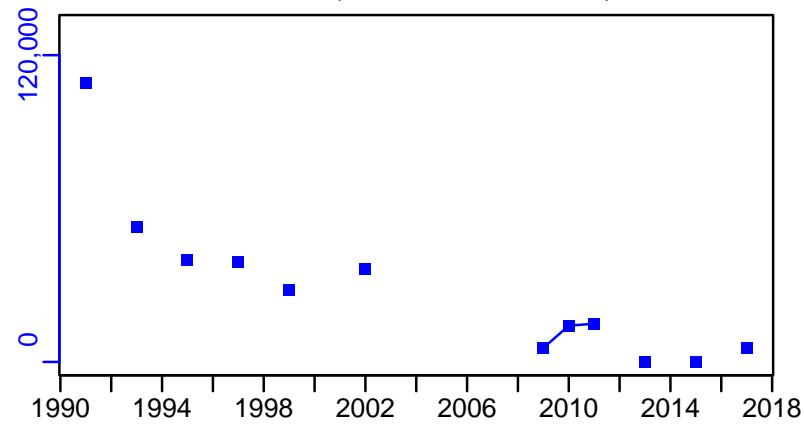
TC-E00, TL*, RecC* (1963–2004–PREFONTAINE)



TAC*, Cpair*, Cadv*



survB-MT (1965–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring Quebec North Shore (Fall spawners) [HERR4SFS]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-QUE-HERR4SFS-1985-2018-ASHBROOK
Area	Quebec North Shore (Fall spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Quebec Region
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2018	2355		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

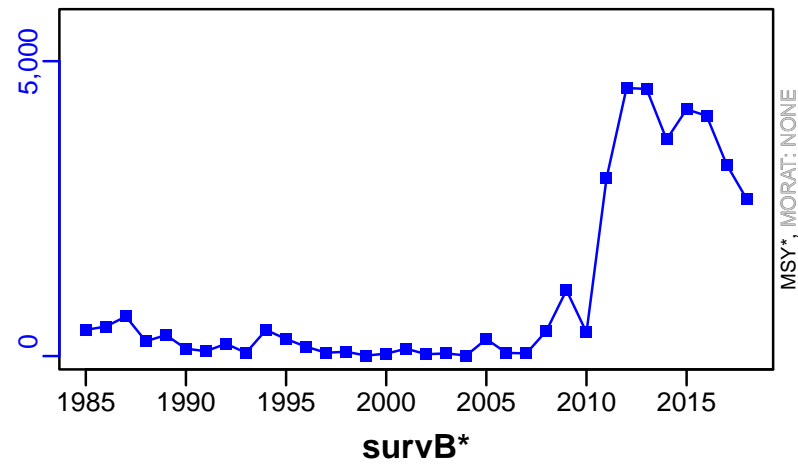


Recruits*



Herring Quebec North Shore (Fall spawners) [HERR4SFS]

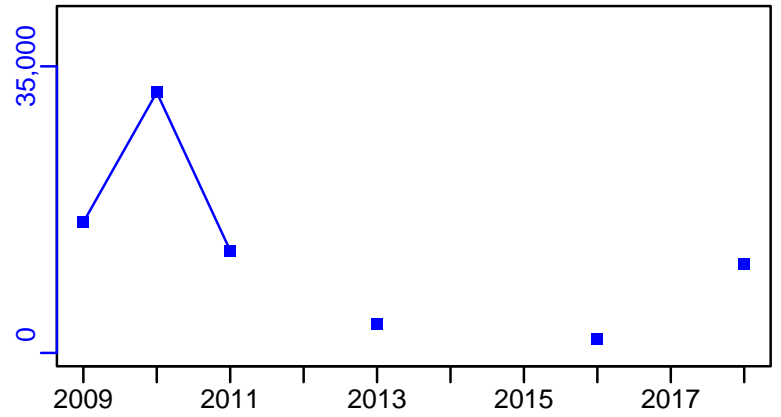
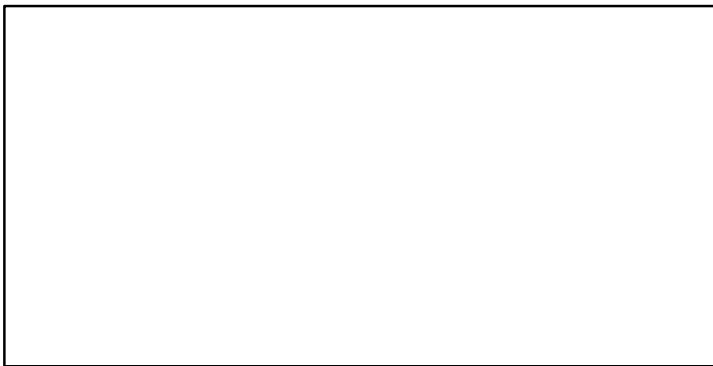
TL-MT, TC*, RecC* (1985-2018-ASHBROOK)



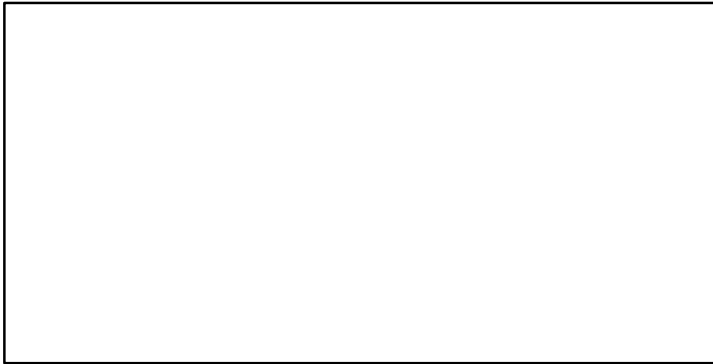
TAC*, Cpair*, Cadv*



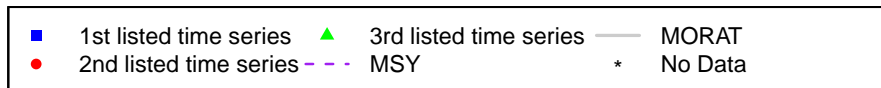
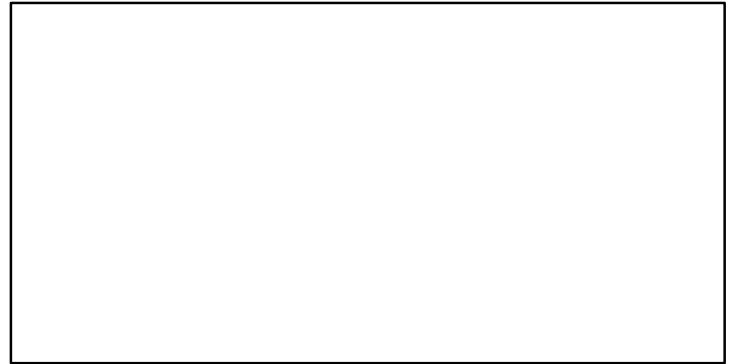
CPUE-MT (1985-2018-ASHBROOK)



EFFORT*



CdivMSY*



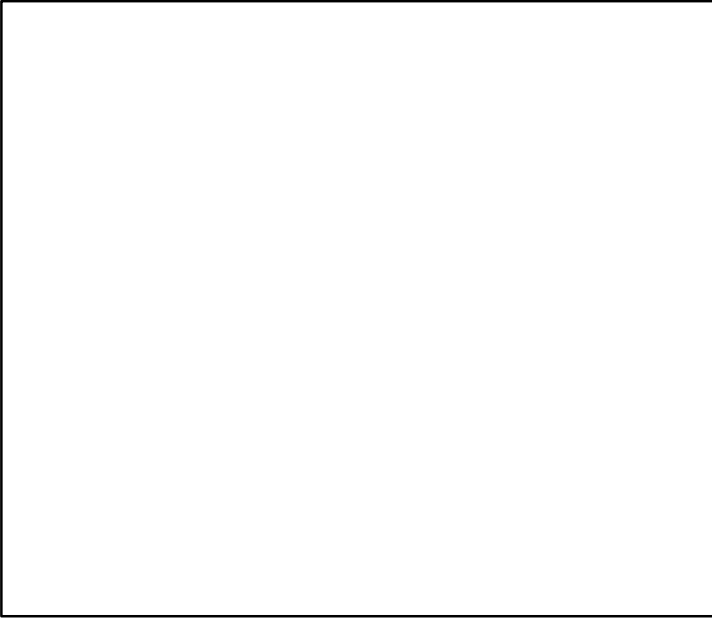
Herring Quebec North Shore (Spring spawners) [HERR4SSS]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-QUE-HERR4SSS-1985-2018-ASHBROOK
Area	Quebec North Shore (Spring spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Quebec Region
Asmts in RAM	2018

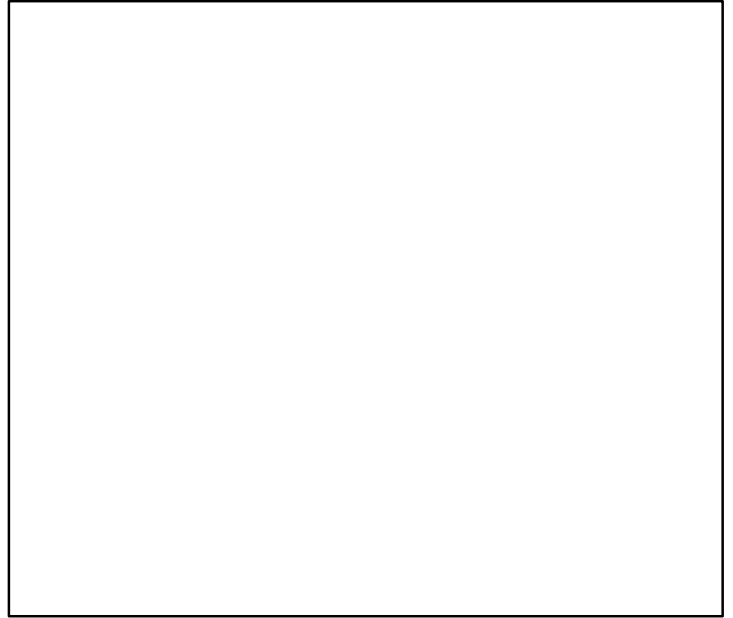
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2018	146		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

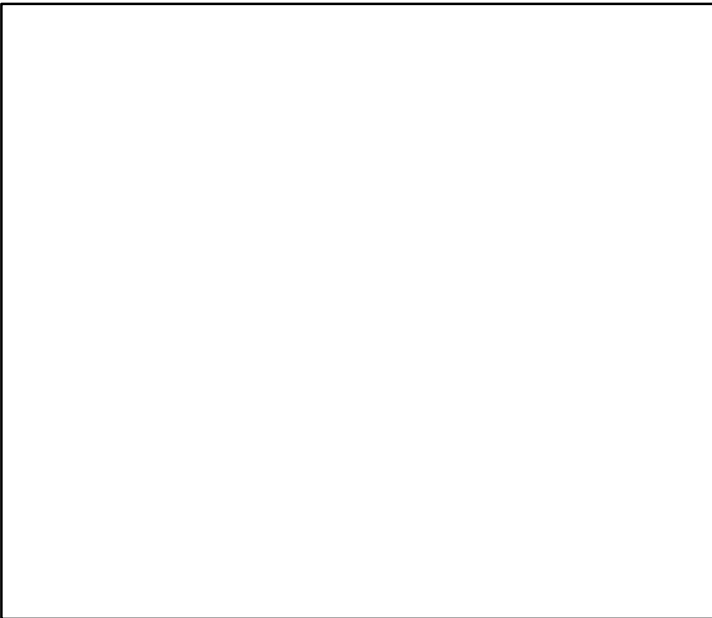
Kobe MSY*



Kobe MGT*



Spawner Recruit*



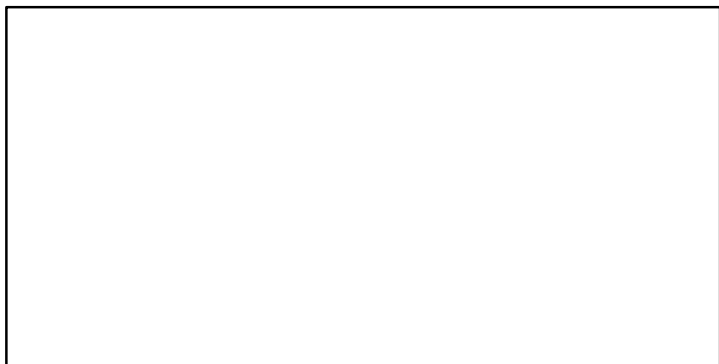
Production*



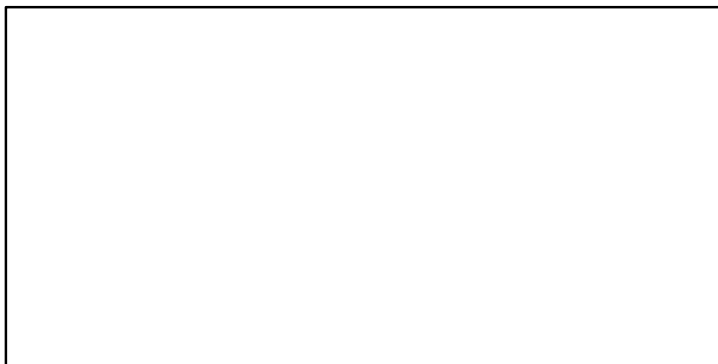
◆ Start Year	◆ End Year	* No Data
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Herring Quebec North Shore (Spring spawners) [HERR4SSS]

TB*



SSB*



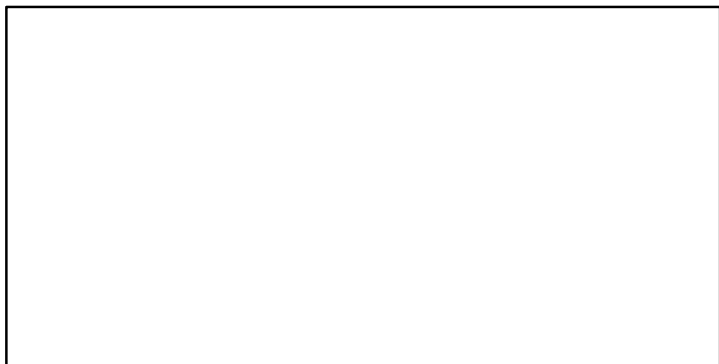
TN *



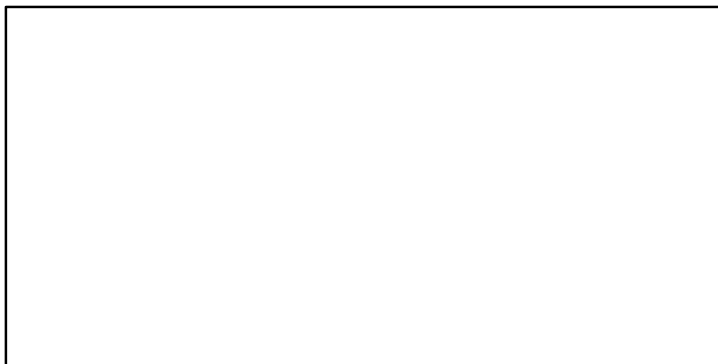
F*



ER*

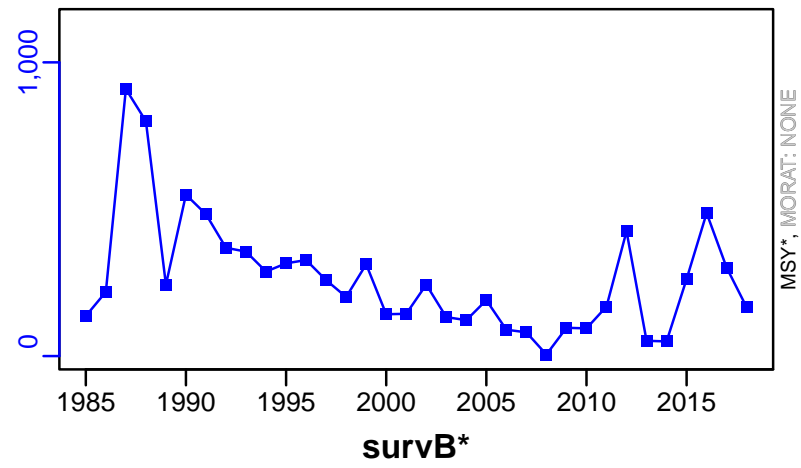


Recruits*



Herring Quebec North Shore (Spring spawners) [HERR4SSS]

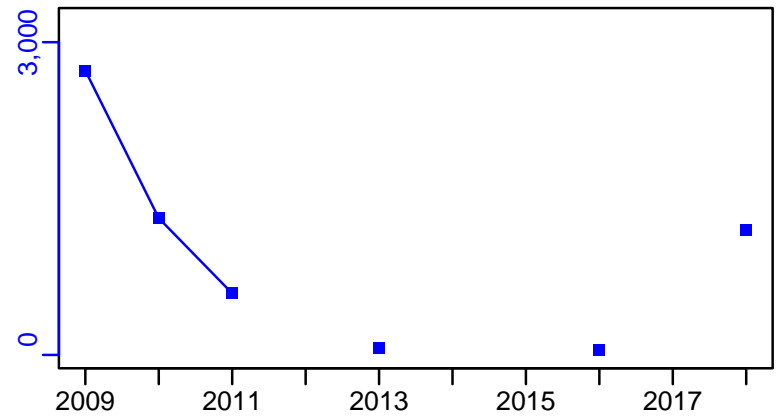
TL-MT, TC*, RecC* (1985-2018-ASHBROOK)



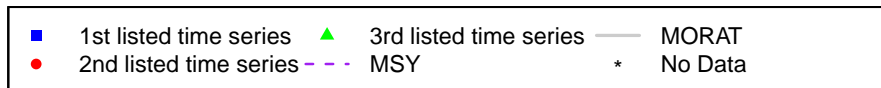
TAC*, Cpair*, Cadv*



CPUE-MT (1985-2018-ASHBROOK)



EFFORT*



Herring Southern Gulf of St. Lawrence (Fall spawners) [HERR4TFA]

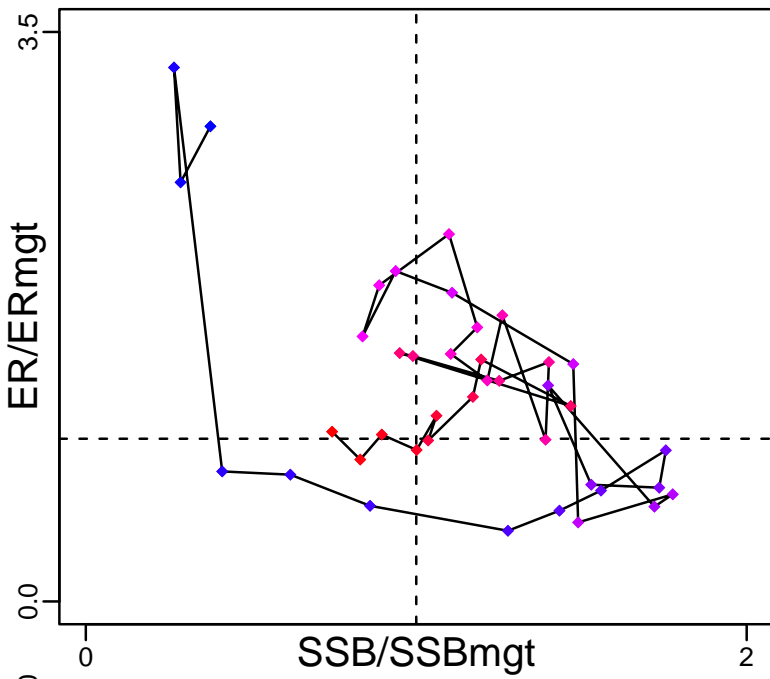
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-SG-HERR4TFA-1974-2018-ASHBROOK
Area	Southern Gulf of St. Lawrence (Fall spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Southern Gulf Region
Asmts in RAM	2014, 2007, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	172,000
Fmgt	-	-	-
ERmgt	ERmgt-ratio	2018	0.27
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.2
TBlim	-	-	-
SSBlim	SSBlim-MT	2018	58,000
Flim	-	-	-
ERlim	-	-	-

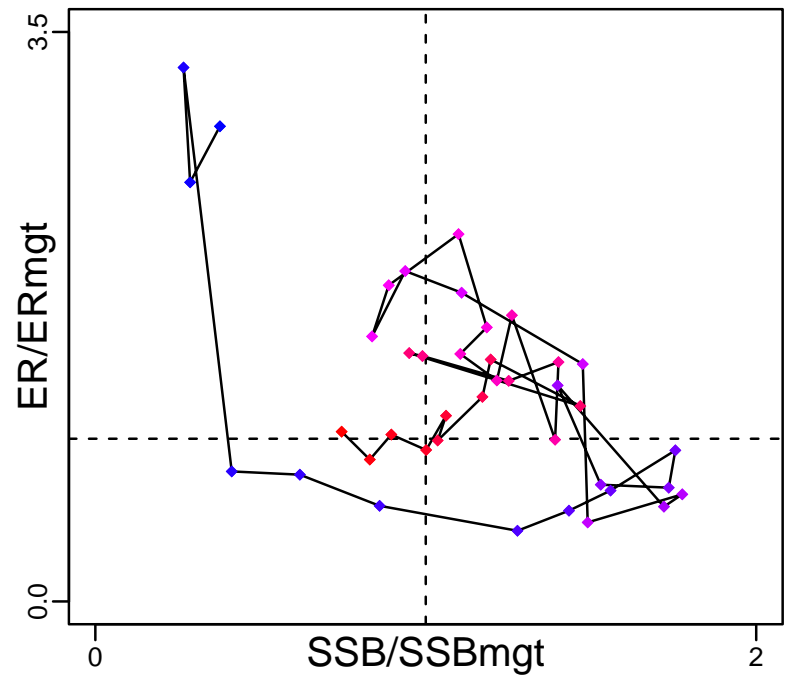
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2018	112,000	-	-
TN	TN-E00	2018	559,253,800	-	4+
R	R-E00	2018	79,119,050	-	4
F	F-1/yr	2014	0.423	Both	5 to 10
ER	ER-ratio	2018	0.282	-	-
TC	TC-MT	2014	34,400		
TL	TL-MT	2018	20,523		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	0.651		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Herring Southern Gulf of St. Lawrence (Fall spawners) [HERR4TFA]

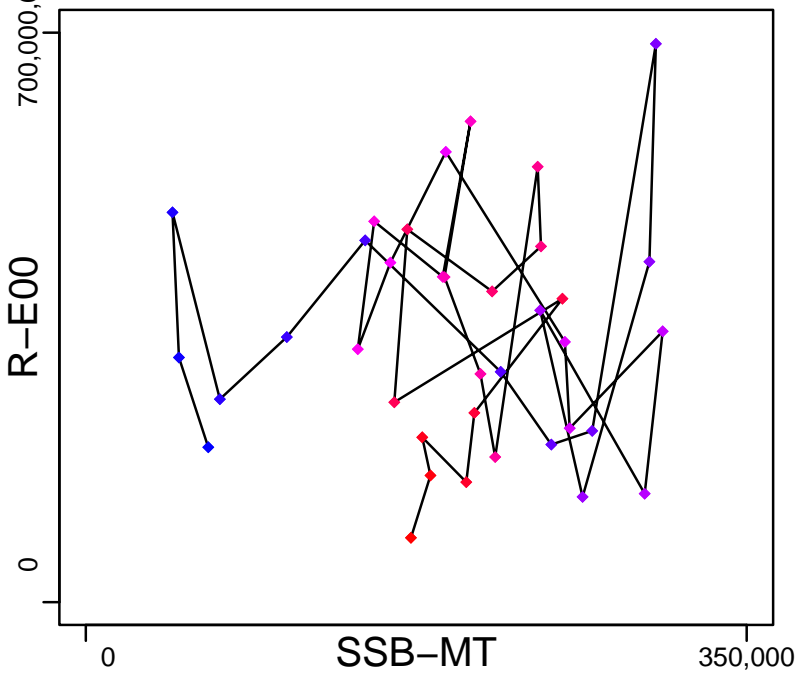
Kobe MSYpref (1974–2018–ASHBROOK)



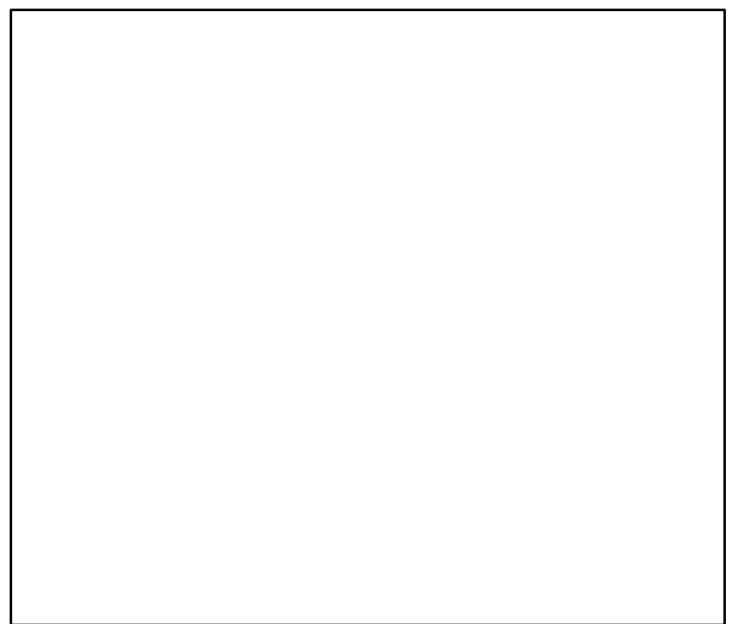
Kobe MGTpref (1974–2018–ASHBROOK)



Spawner Recruit (1974–2018–ASHBROOK)



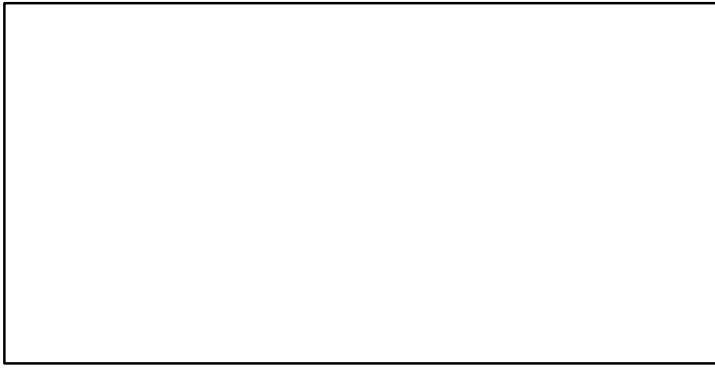
Production*



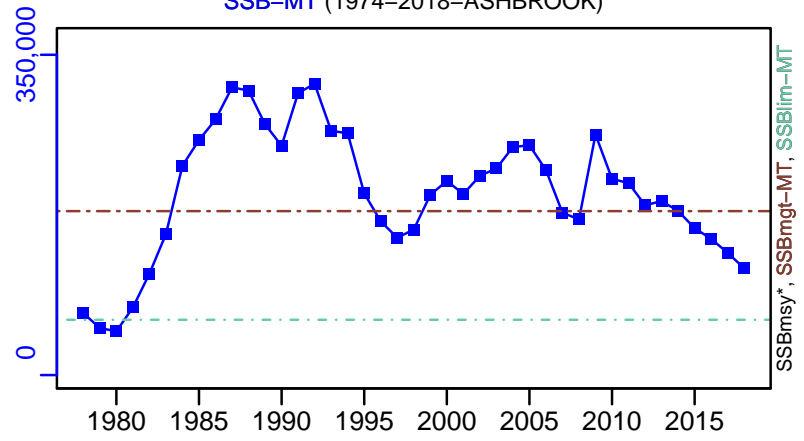
◆ Start Year ◆ End Year * No Data

Herring Southern Gulf of St. Lawrence (Fall spawners) [HERR4TFA]

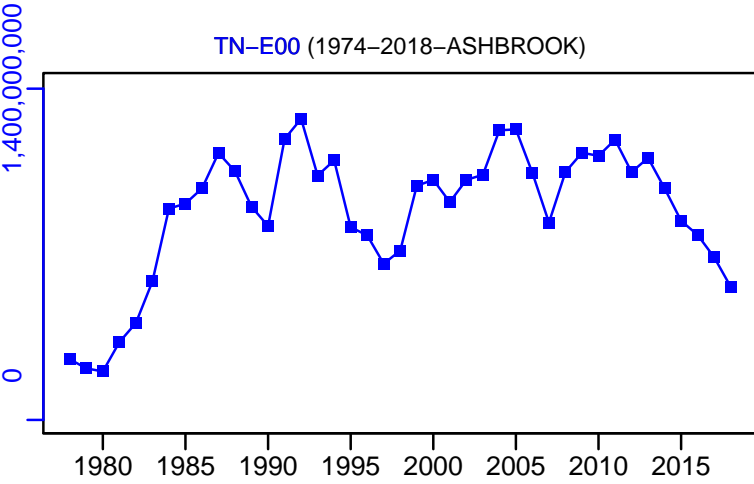
TB*



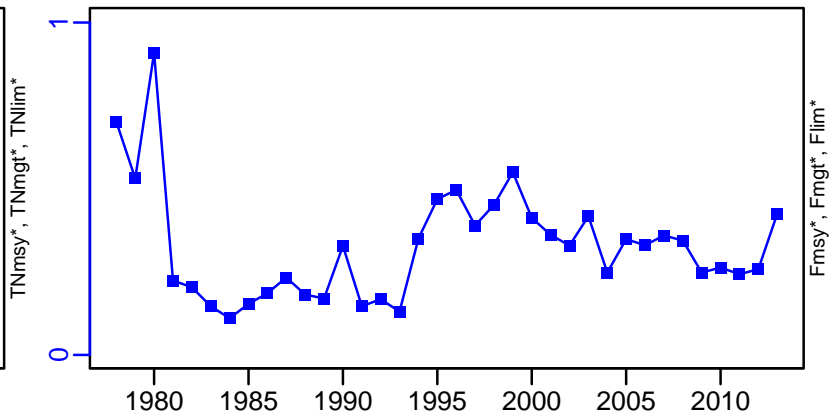
SSB-MT (1974–2018–ASHBROOK)



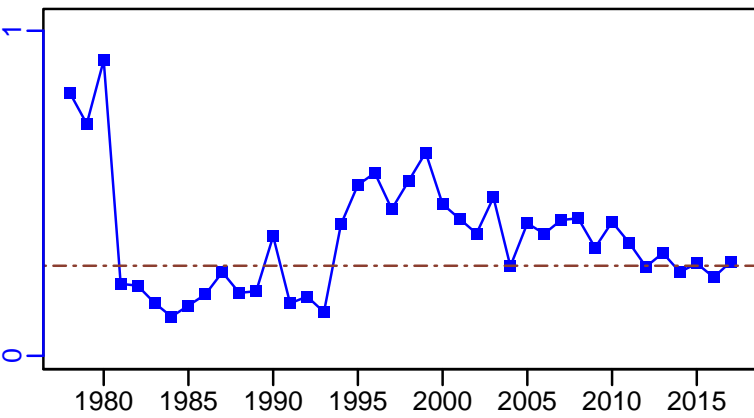
TN-E00 (1974–2018–ASHBROOK)



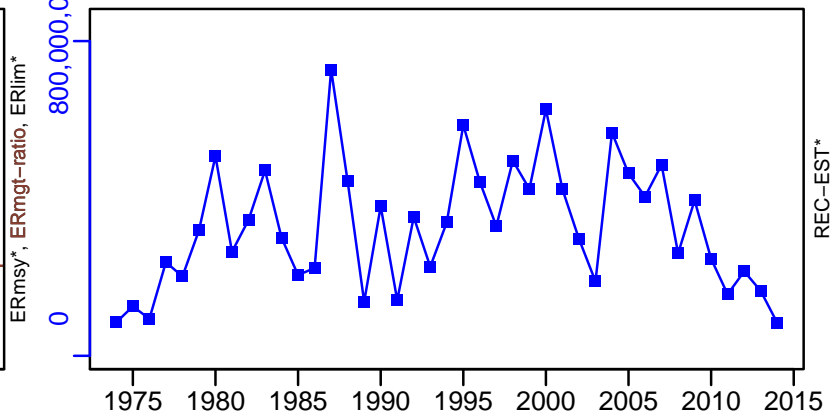
F-1/yr (1978–2014–WATSON)



ER-ratio (1974–2018–ASHBROOK)



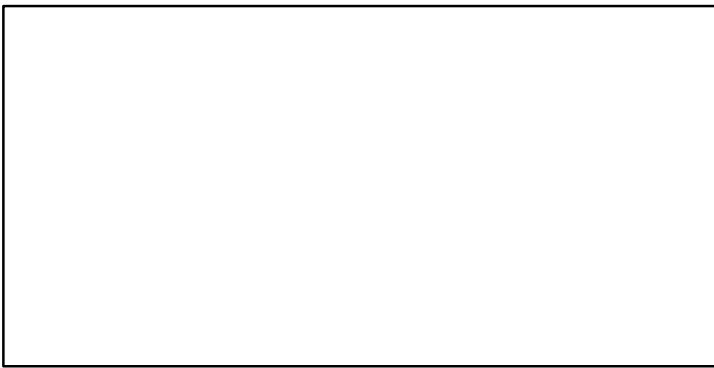
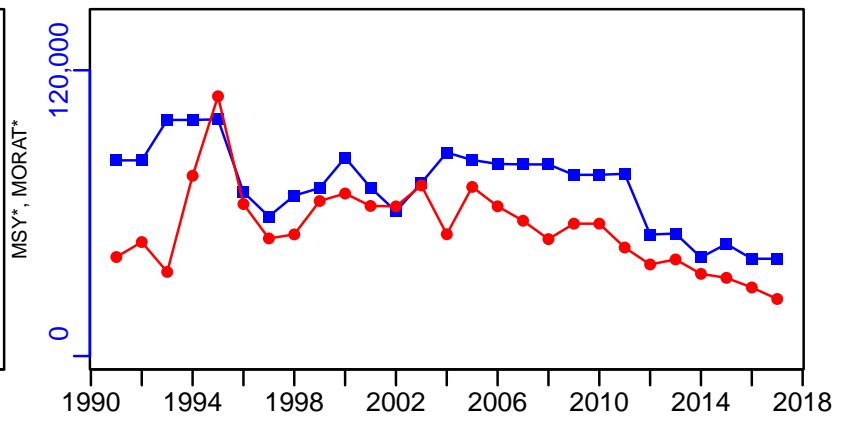
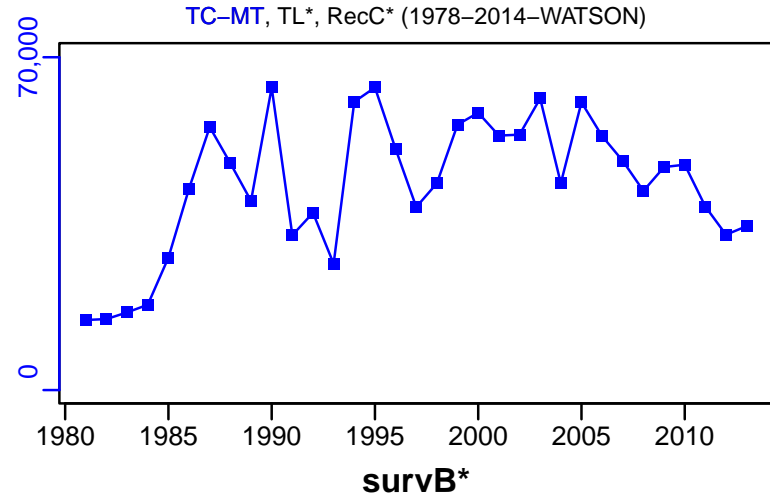
R-E00 (1974–2018–ASHBROOK)



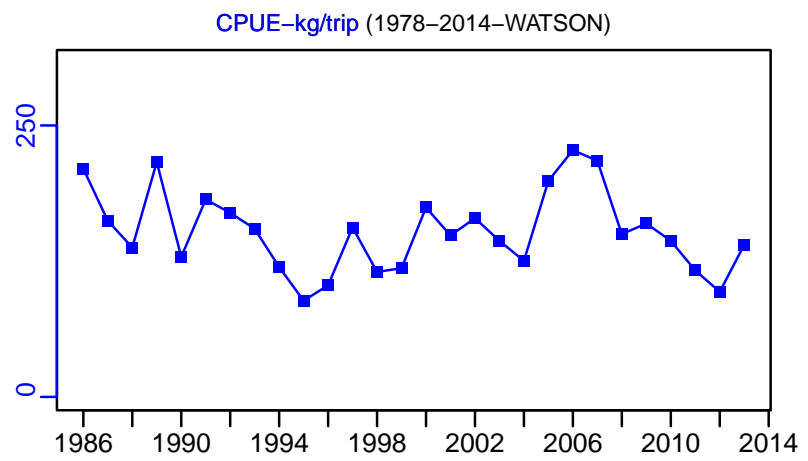
Herring Southern Gulf of St. Lawrence (Fall spawners) [HERR4TFA]

TC-MT, TL*, RecC* (1978-2014-WATSON)

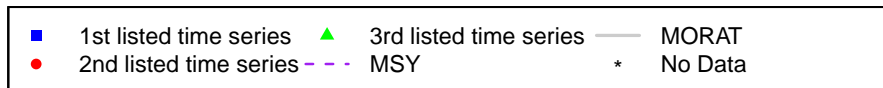
TAC-MT, Cpair-MT, Cadv* (1974-2018-ASHBROOK)



EFFORT*



CdivMSY*



Herring Southern Gulf of St. Lawrence (Spring spawners) [HERR4TSP]

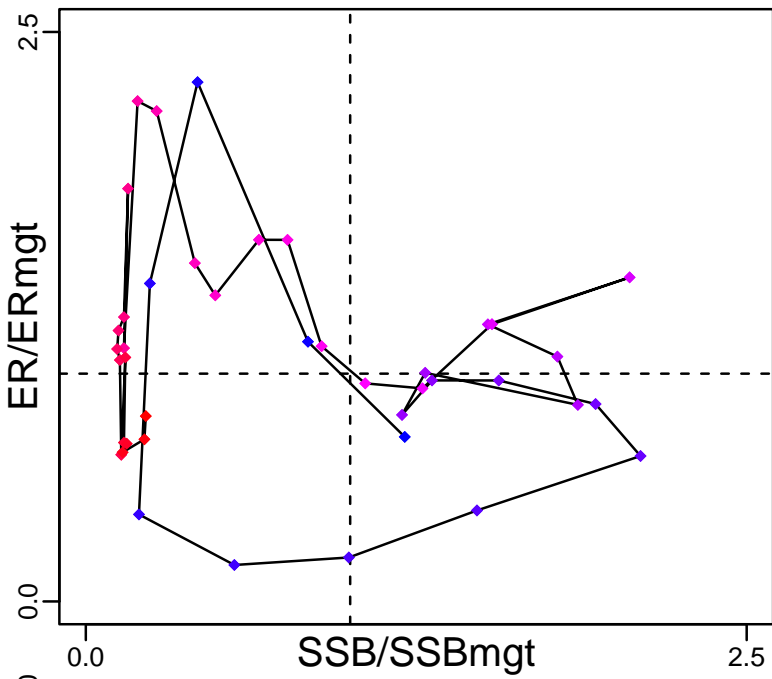
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-SG-HERR4TSP-1974-2018-ASHBROOK
Area	Southern Gulf of St. Lawrence (Spring spawners)
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Southern Gulf Region
Asmts in RAM	2014, 2007, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	54,000
Fmgt	-	-	-
ERmgt	ERmgt-ratio	2018	0.295
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2014	0.2
TBlim	-	-	-
SSBlim	SSBlim-MT	2018	19,250
Flim	-	-	-
ERlim	-	-	-

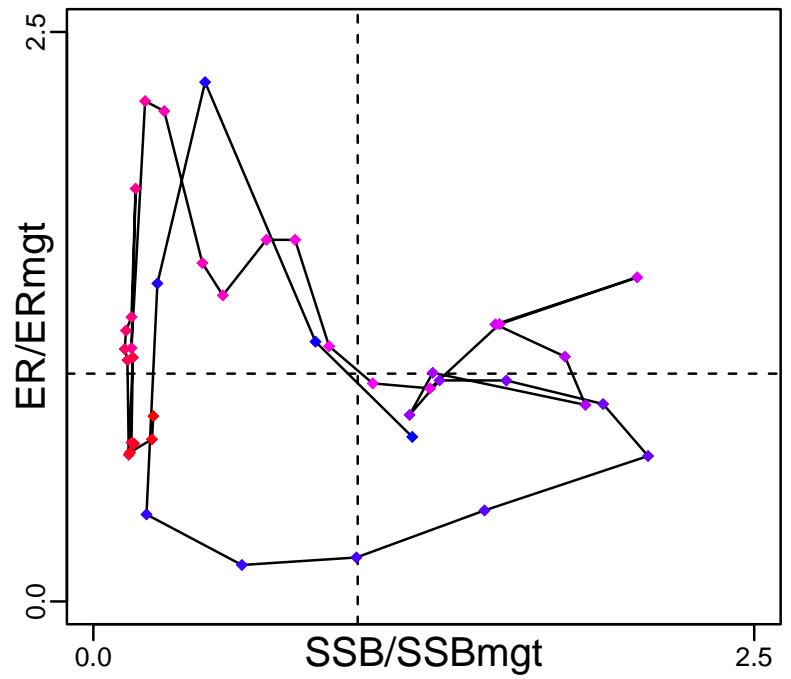
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2018	12,251	-	-
TN	TN-E00	2018	84,033,190	-	4+
R	R-E00	2018	20,737,226	-	4
F	F-1/yr	2014	0.137	Both	5 to 10
ER	ER-ratio	2018	0.24	-	8-Jun
TC	TC-MT	2014	1700		
TL	TL-MT	2018	1189		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	0.227		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Herring Southern Gulf of St. Lawrence (Spring spawners) [HERR4TSP]

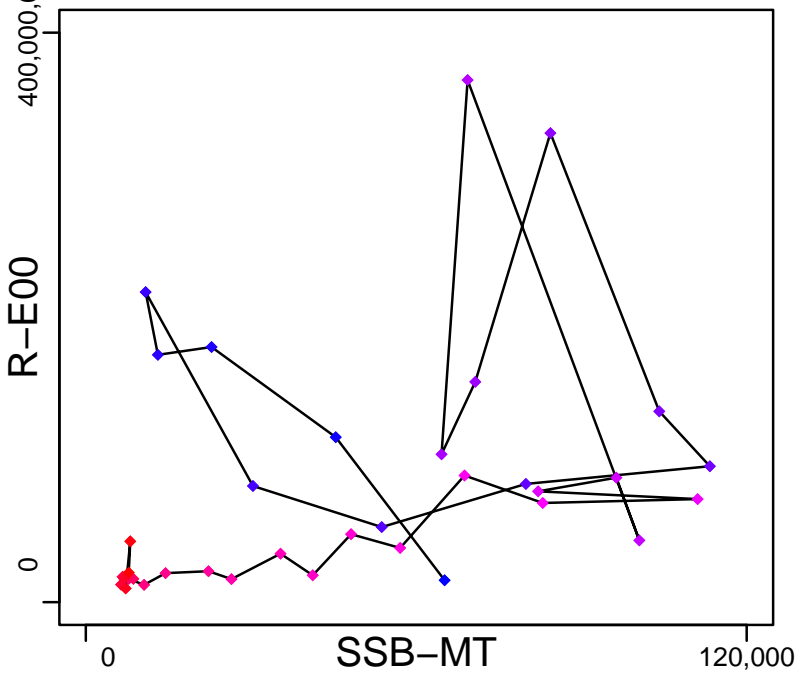
Kobe MSYpref (1974–2018–ASHBROOK)



Kobe MGTpref (1974–2018–ASHBROOK)



Spawner Recruit (1974–2018–ASHBROOK)



Production*

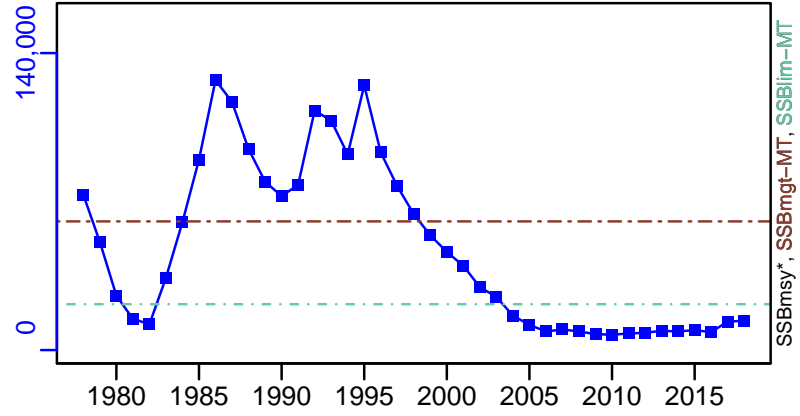
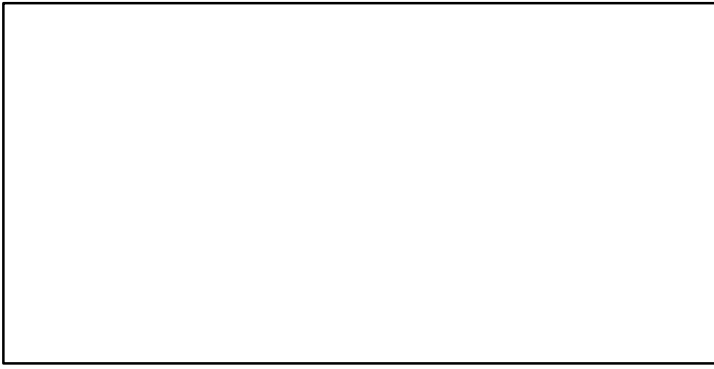


◆ Start Year ◆ End Year * No Data

Herring Southern Gulf of St. Lawrence (Spring spawners) [HERR4TSP]

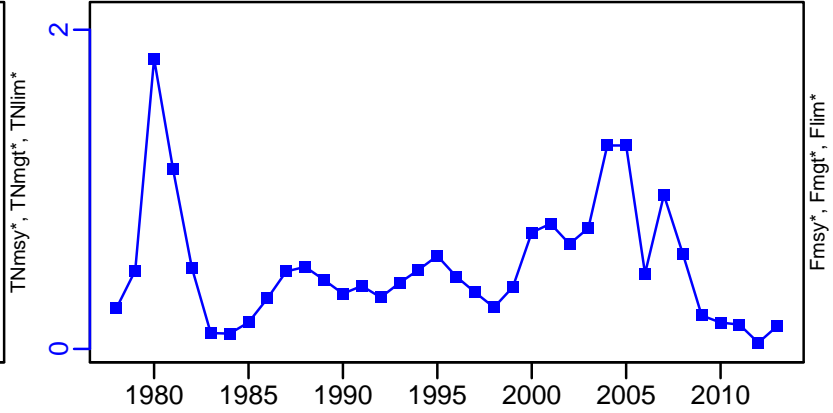
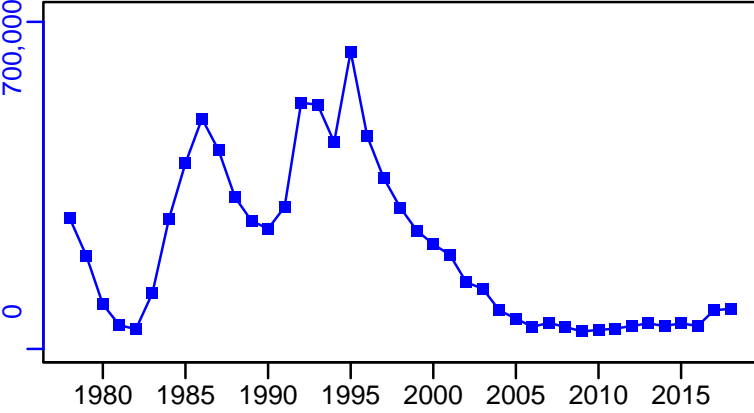
TB*

SSB-MT (1974–2018–ASHBROOK)



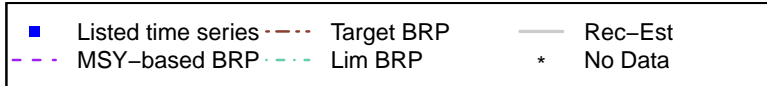
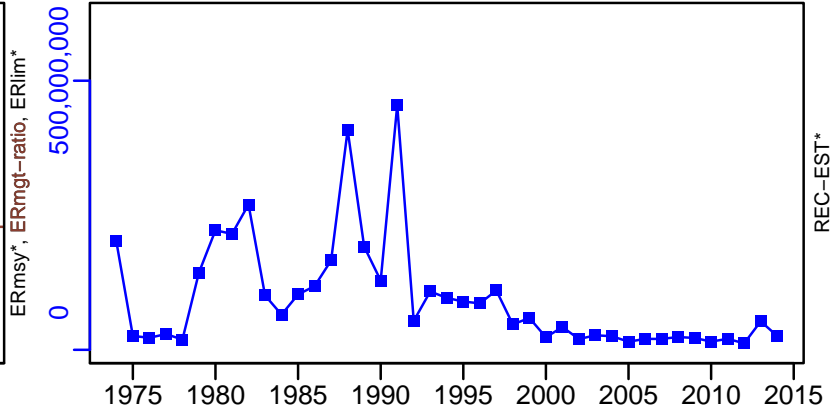
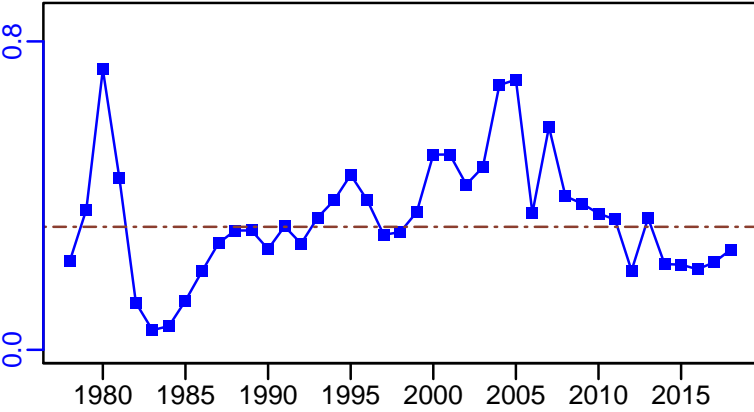
TN-E00 (1974–2018–ASHBROOK)

F-1/yr (1978–2014–WATSON)



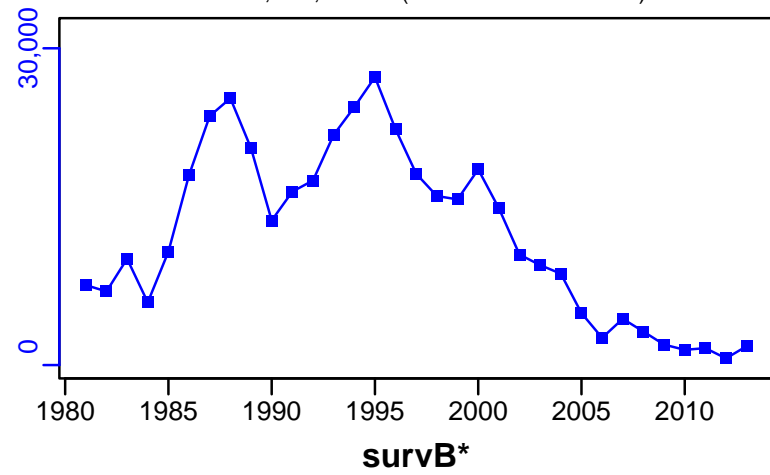
ER-ratio (1974–2018–ASHBROOK)

R-E00 (1974–2018–ASHBROOK)

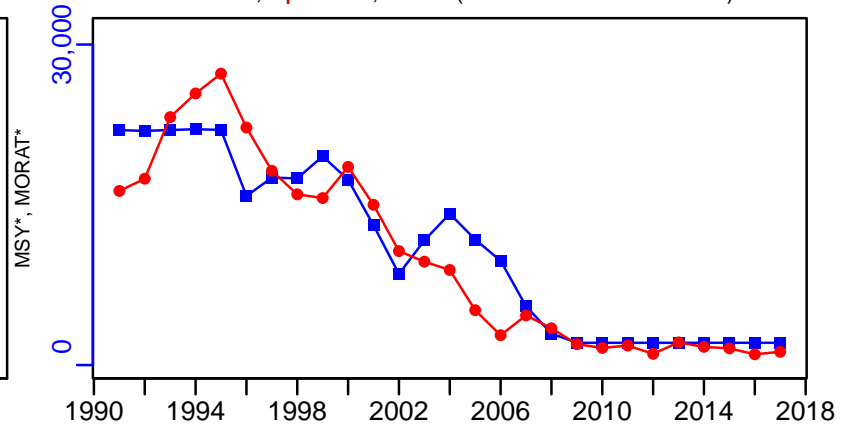


Herring Southern Gulf of St. Lawrence (Spring spawners) [HERR4TSP]

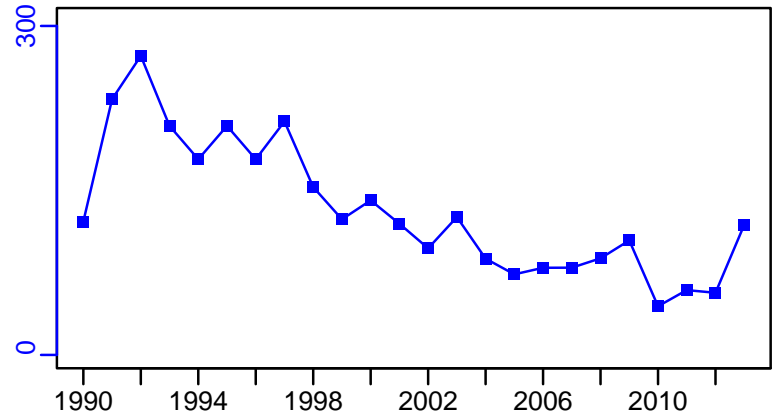
TC-MT, TL*, RecC* (1978–2014–WATSON)



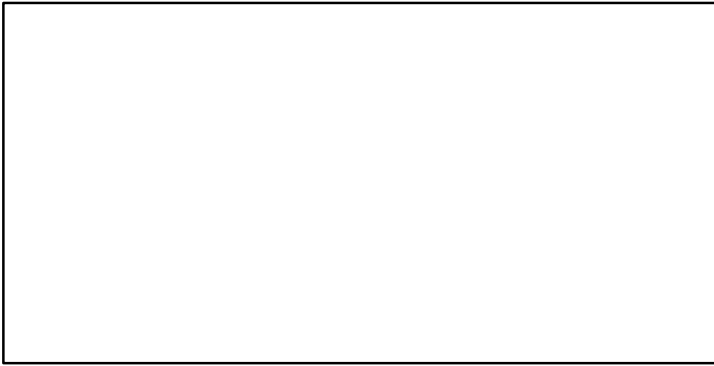
TAC-MT, Cpair-MT, Cadv* (1974–2018–ASHBROOK)



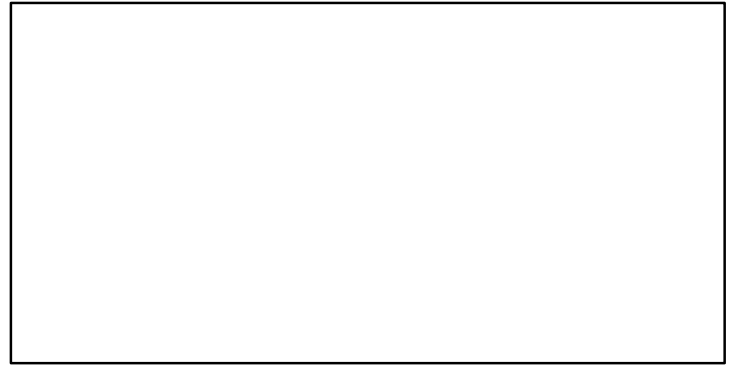
CPUE-kg/trip (1978–2014–WATSON)



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring Scotian Shelf and Bay of Fundy [HERR4VWX]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-MAR-HERR4VWX-1966-2017-ASHBROOK
Area	Scotian Shelf and Bay of Fundy
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Maritimes Region
Asmts in RAM	2012, 2006, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2006	0.2
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2006	91,700	-	-
SSB	SSB-MT	2006	48,600	-	-
TN	TN-index	2012	83	-	-
R	R-E00	2006	1×10^9	-	1
F	F-1/yr	2006	1.21	-	5 to 8
ER	ER-ratio	2012	0.101	Both	-
TC	-	-	-		
TL	TL-MT	2017	39,997		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

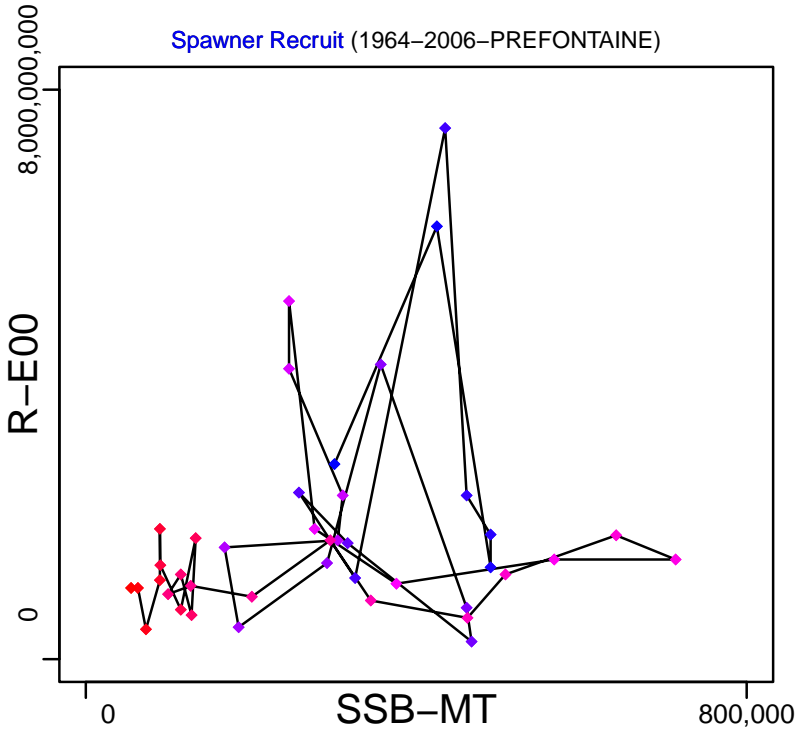
Kobe MSY*



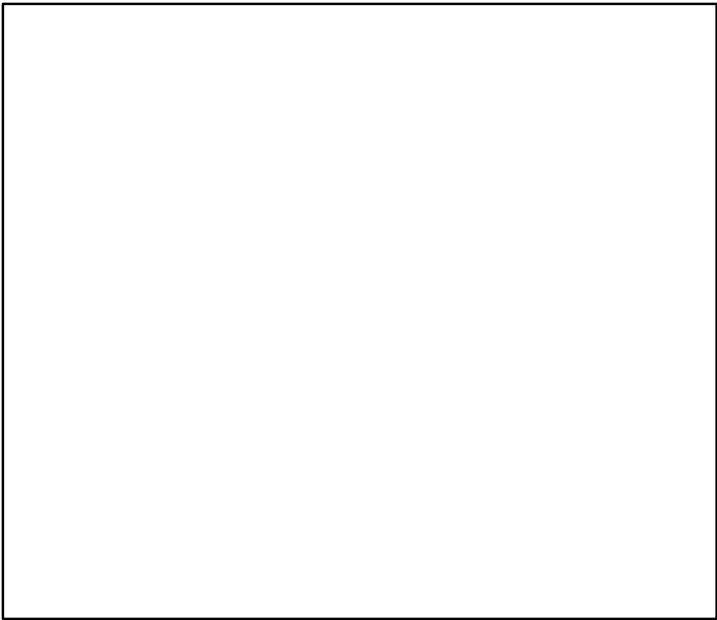
Kobe MGT*



Spawner Recruit (1964–2006–PREFONTAINE)



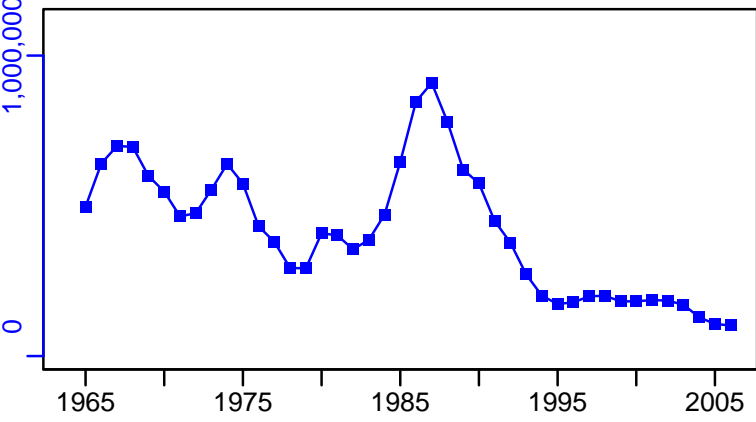
Production*



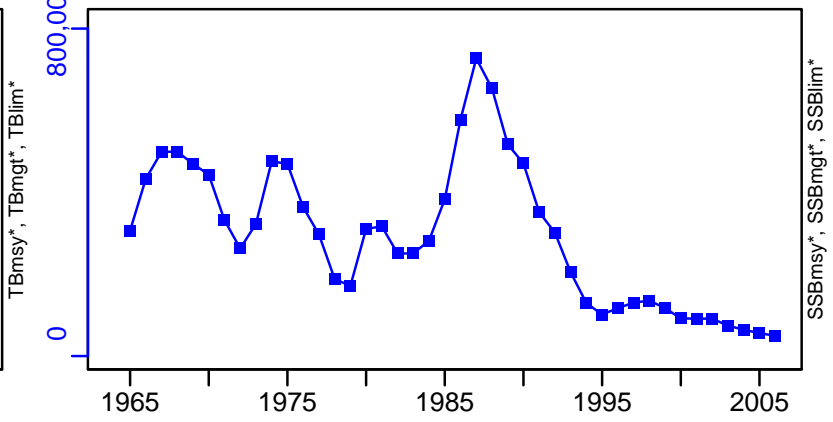
◆ Start Year ◆ End Year * No Data

Herring Scotian Shelf and Bay of Fundy [HERR4VWX]

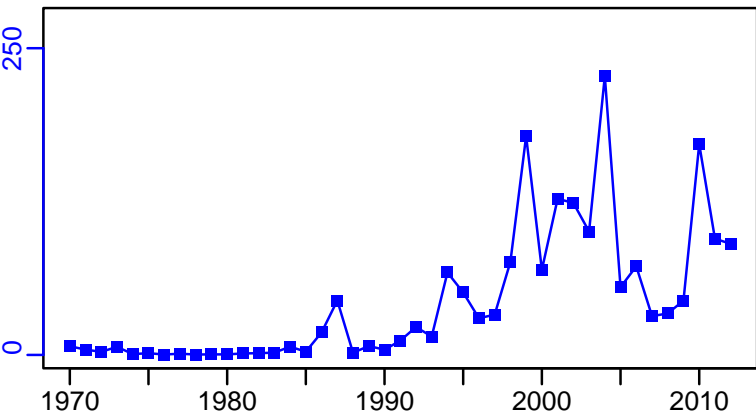
TB-MT (1964–2006–PREFONTAINE)



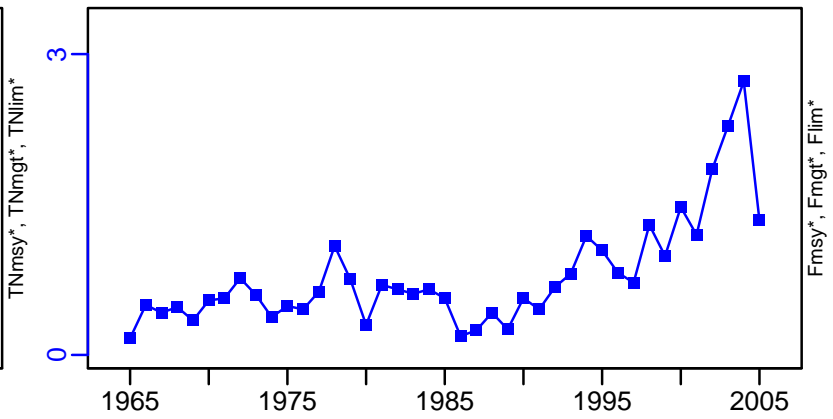
SSB-MT (1964–2006–PREFONTAINE)



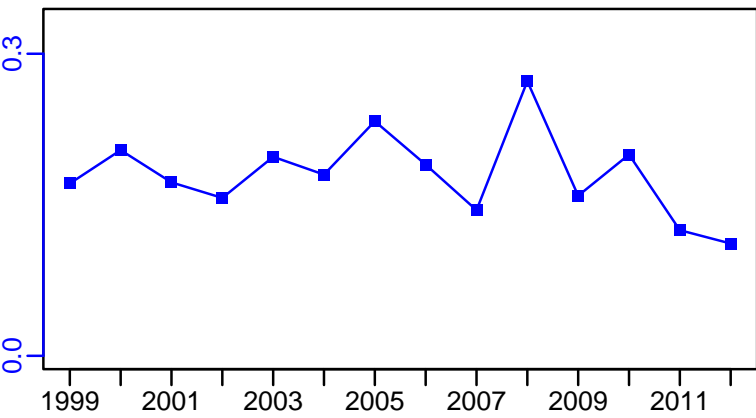
TN-index (1963–2012–WATSON)



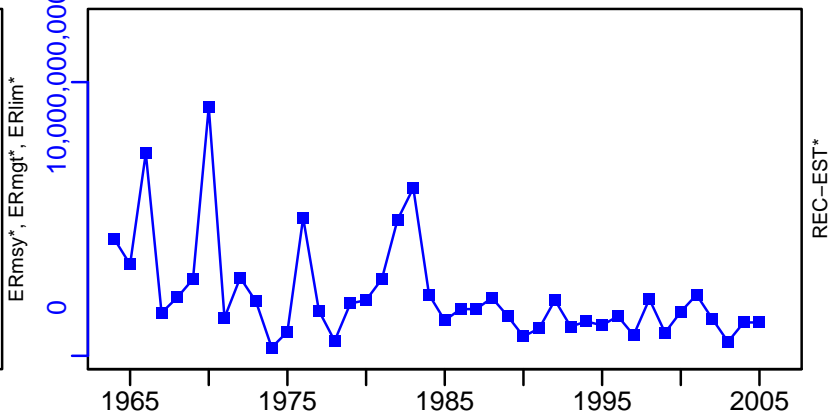
F-1/yr (1964–2006–PREFONTAINE)



ER-ratio (1963–2012–WATSON)

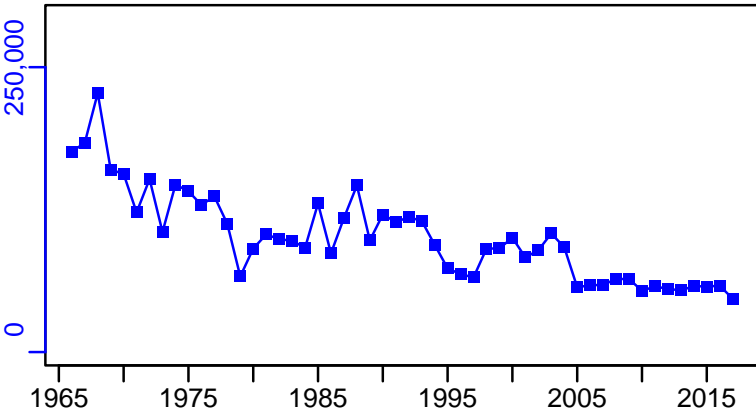


R-E00 (1964–2006–PREFONTAINE)

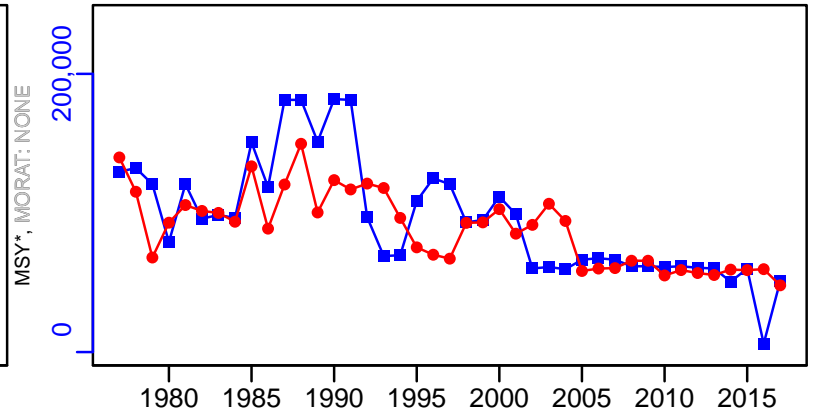


Herring Scotian Shelf and Bay of Fundy [HERR4VWX]

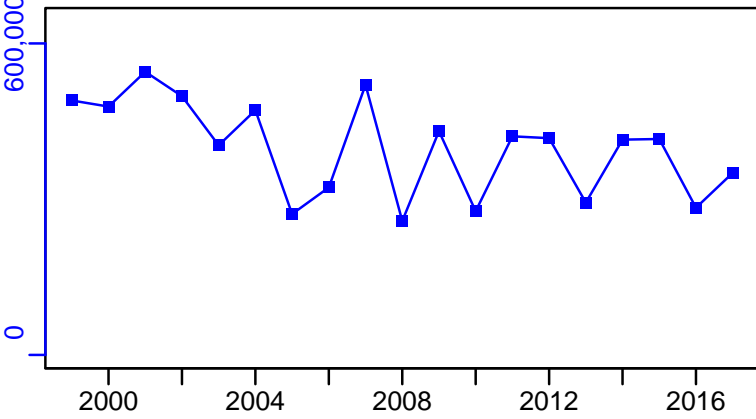
TL-MT, TC*, RecC* (1966-2017-ASHBROOK)



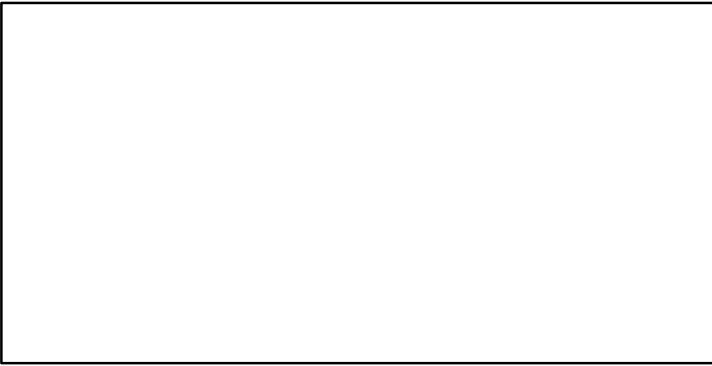
TAC-MT, Cpair-MT, Cadv* (1966-2017-ASHBROOK)



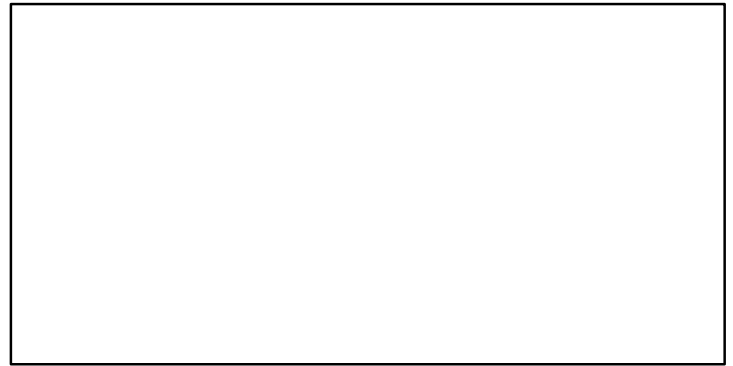
survB-MT (1966-2017-ASHBROOK)



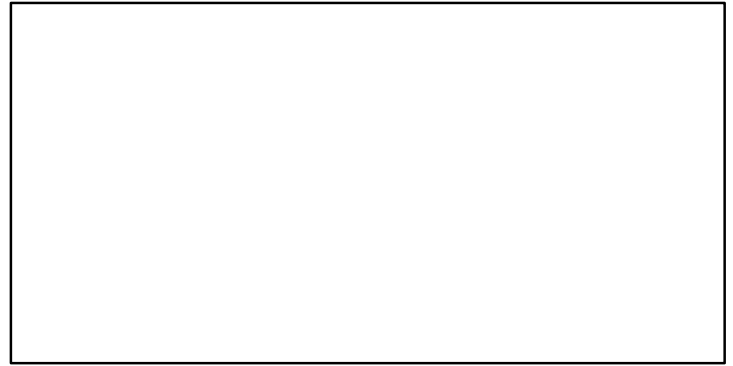
EFFORT*



CPUE*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Pacific herring Central Coast [HERRCC]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRCC-1949-2018-ASHBROOK
Area	Central Coast
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	55,347
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	48,900	-	-
SSB	SSB-MT	2018	32,724	-	3+
TN	-	-	-	-	-
R	R-E00	2018	217,029,110	-	2
F	F-1/yr	2007	0.033	-	-
ER	ER-calc-ratio	2015	0.013	-	-
TC	TC-MT	2015	626		
TL	TL-MT	2018	500		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Central Coast [HERRCC]

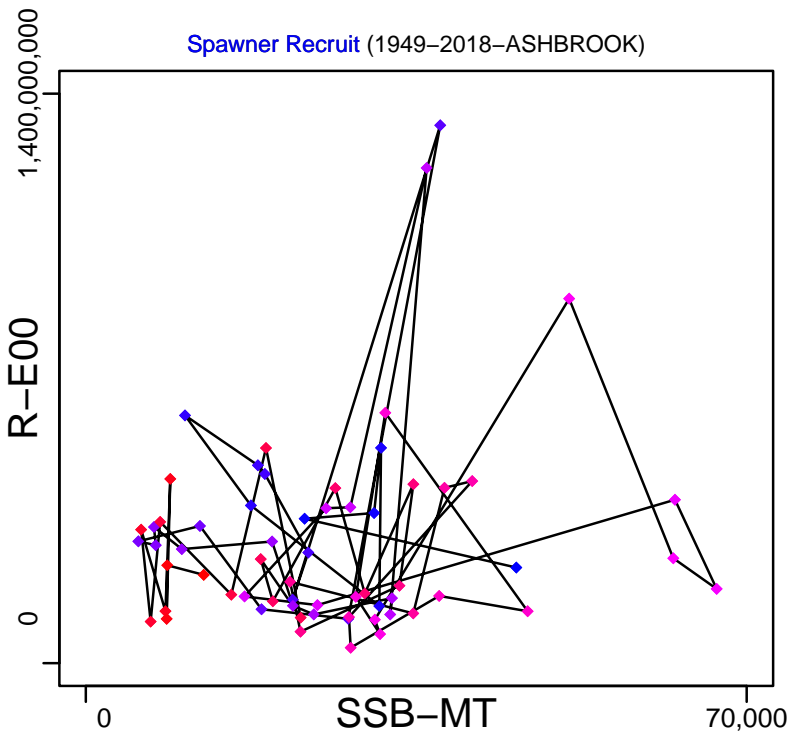
Kobe MSY*



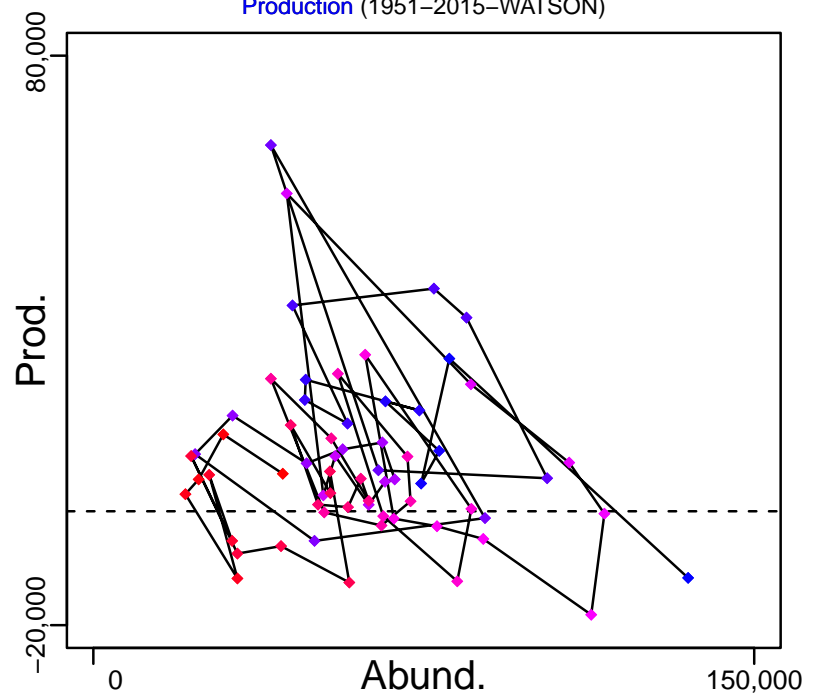
Kobe MGT*



Spawner Recruit (1949–2018–ASHBROOK)



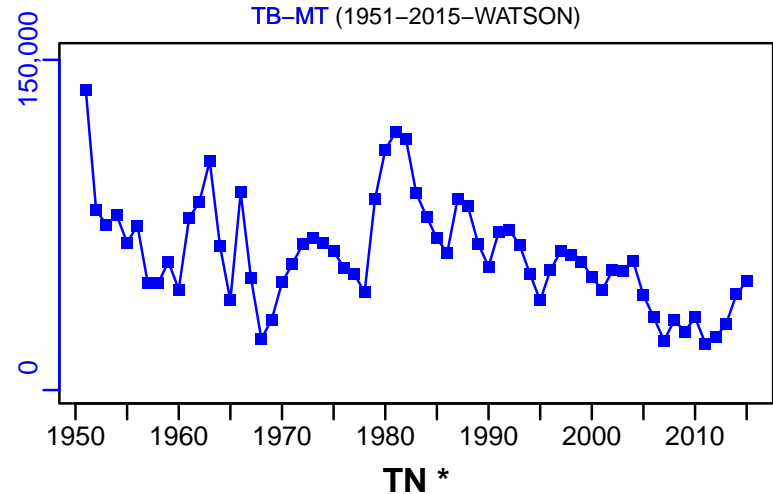
Production (1951–2015–WATSON)



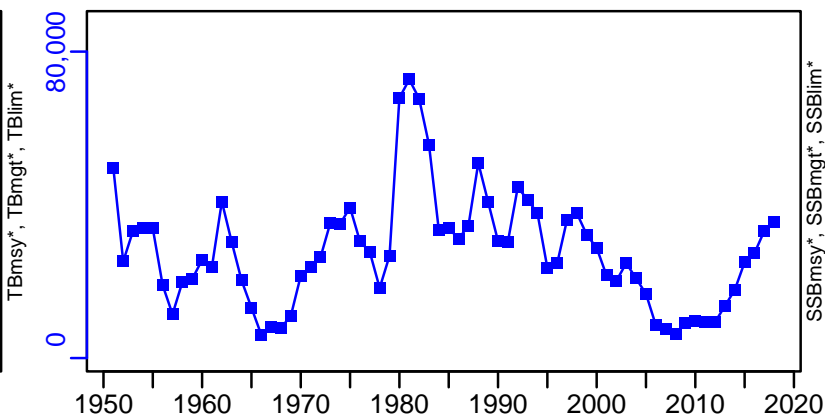
◆ Start Year ◆ End Year * No Data

Pacific herring Central Coast [HERRCC]

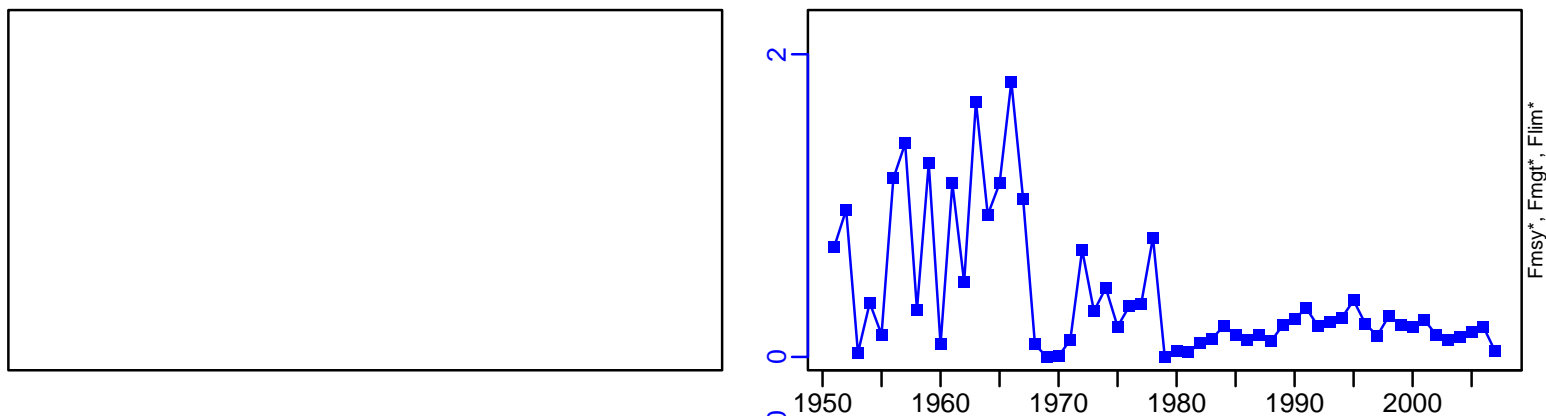
TB-MT (1951-2015-WATSON)



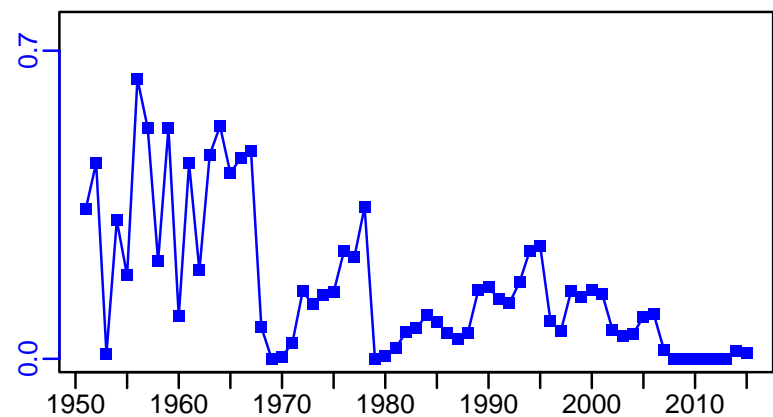
SSB-MT (1949-2018-ASHBROOK)



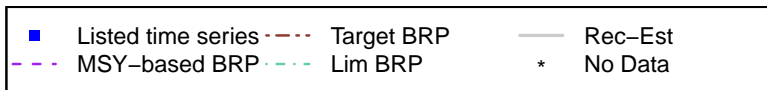
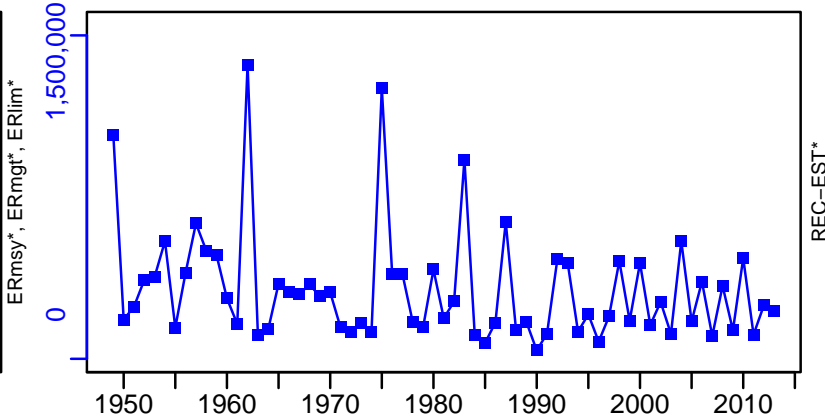
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1951-2015-WATSON)



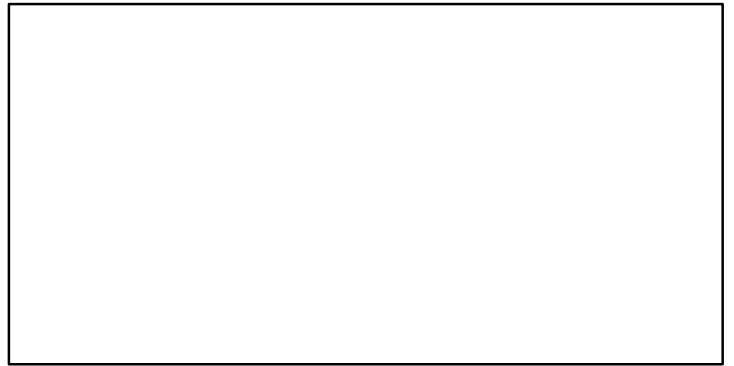
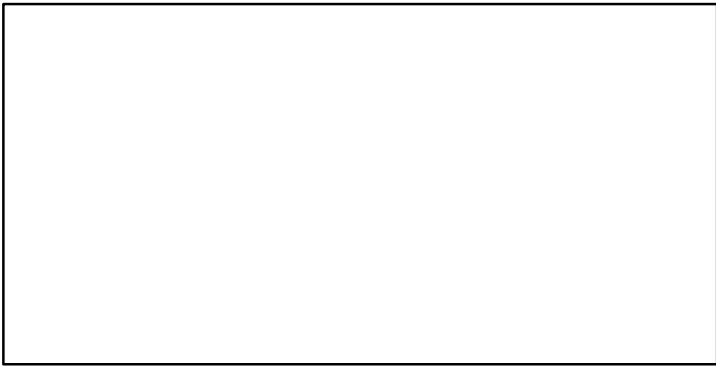
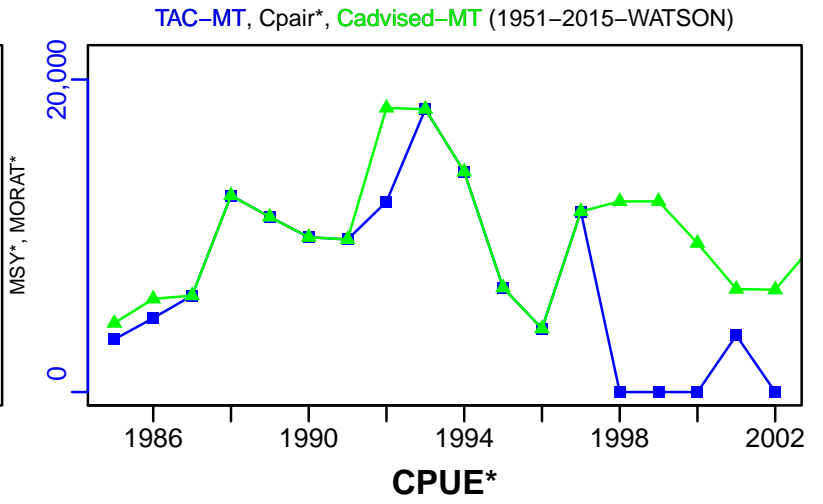
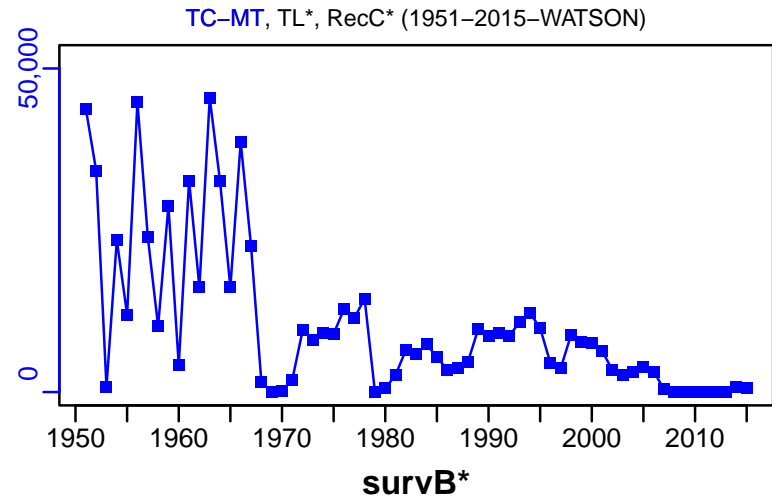
R-E00 (1949-2018-ASHBROOK)



Pacific herring Central Coast [HERRCC]

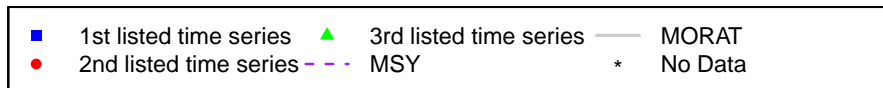
TC-MT, TL*, RecC* (1951-2015-WATSON)

TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*

CdivMSY*

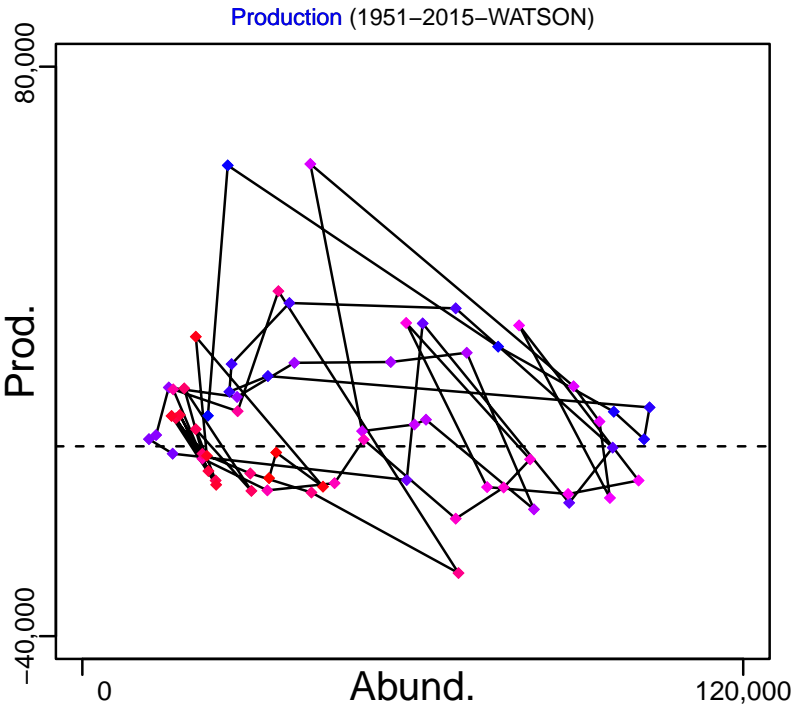
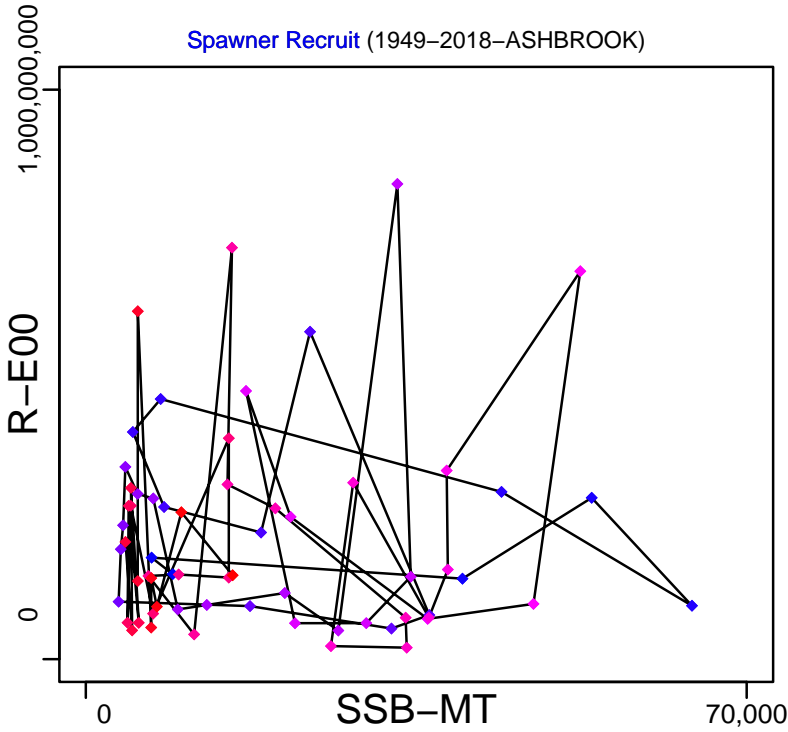
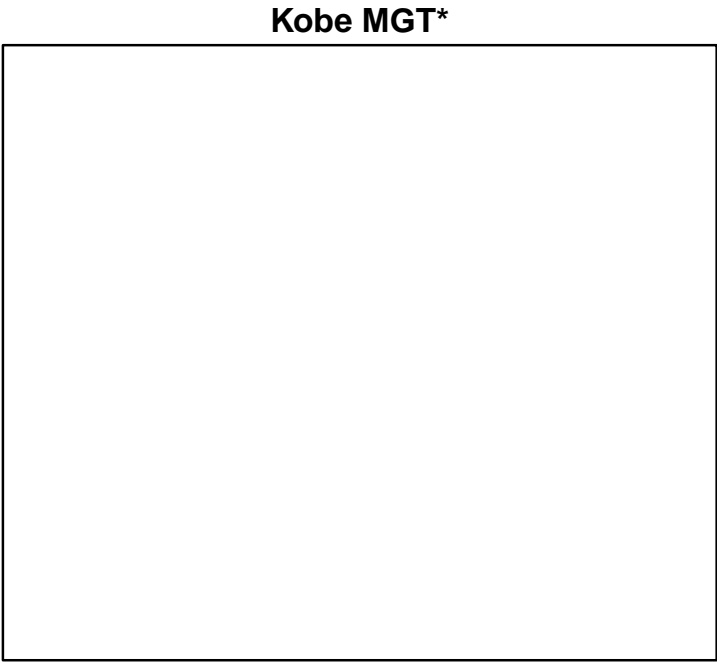
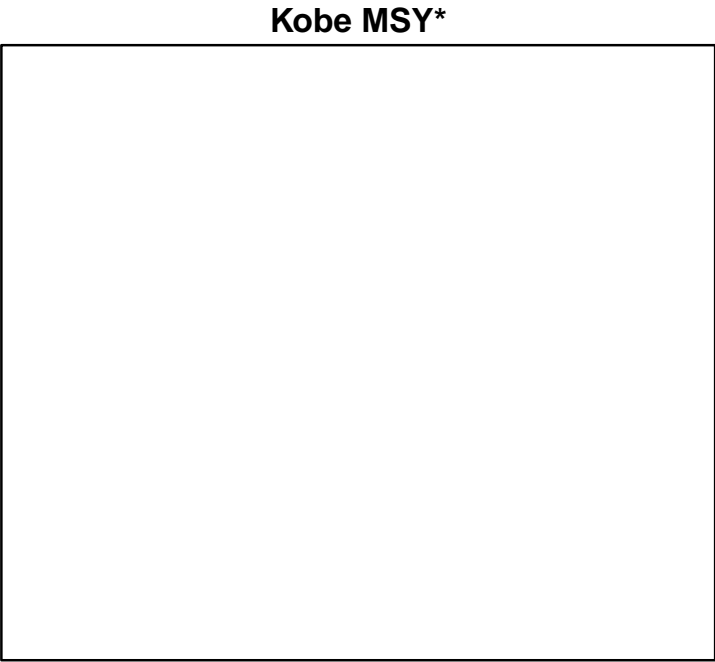


Pacific herring Haida Gwaii [HERRHG]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRHG-1949-2018-ASHBROOK
Area	Haida Gwaii
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	23,098
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

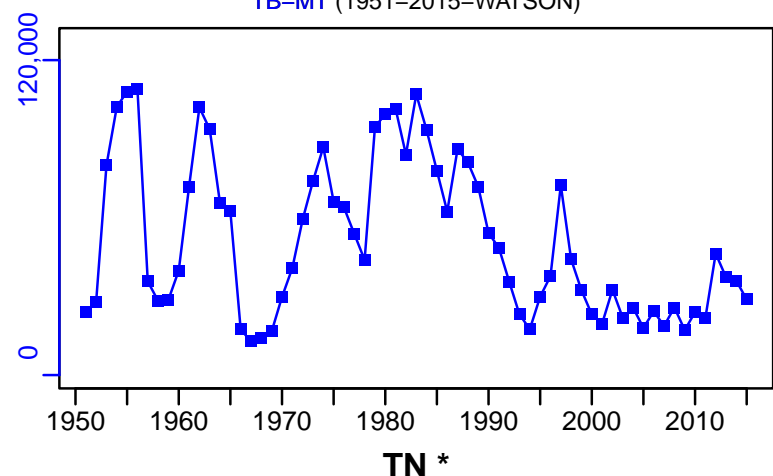
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	27,200	-	-
SSB	SSB-MT	2018	4477	-	3+
TN	-	-	-	-	-
R	R-E00	2018	147,346,390	-	2
F	F-1/yr	2007	0	-	-
ER	ER-calc-ratio	2015	0	-	-
TC	TC-MT	2015	0		
TL	TL-MT	2018	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



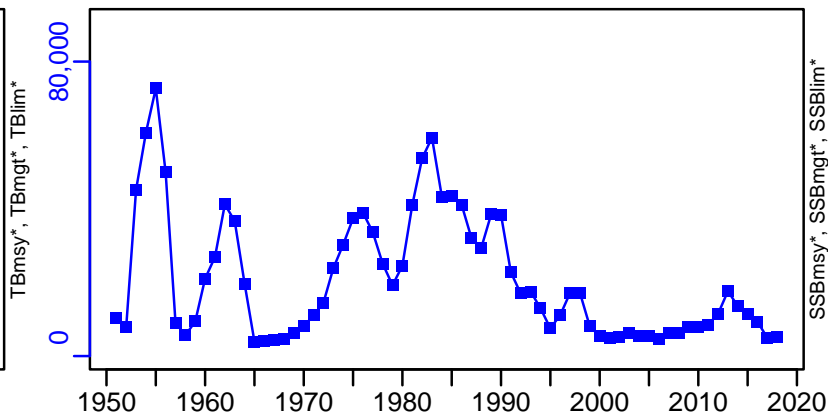
◆ Start Year ◆ End Year * No Data

Pacific herring Haida Gwaii [HERRHG]

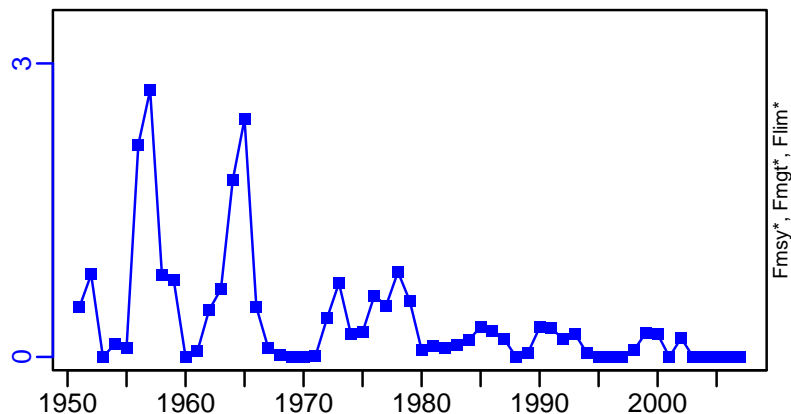
TB-MT (1951-2015-WATSON)



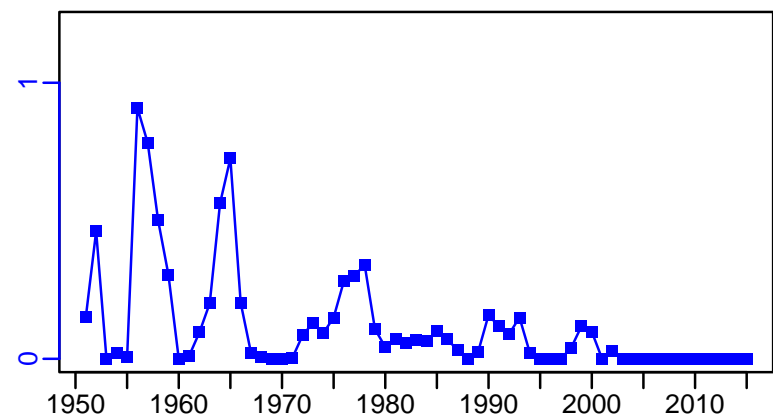
SSB-MT (1949-2018-ASHBROOK)



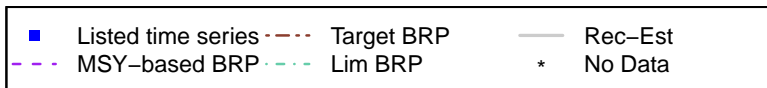
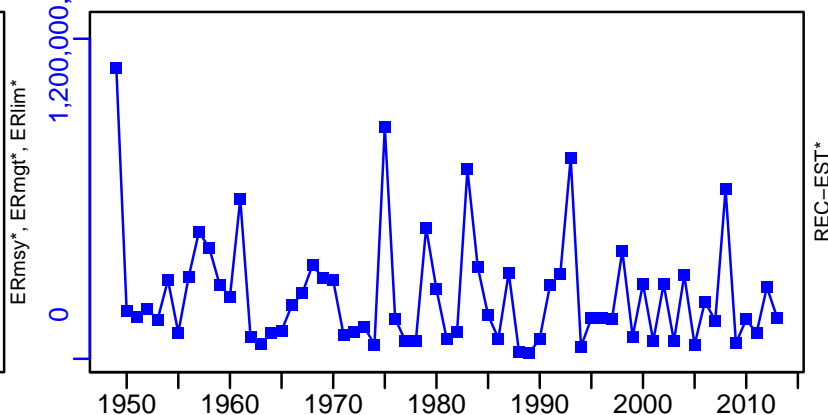
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1951-2015-WATSON)



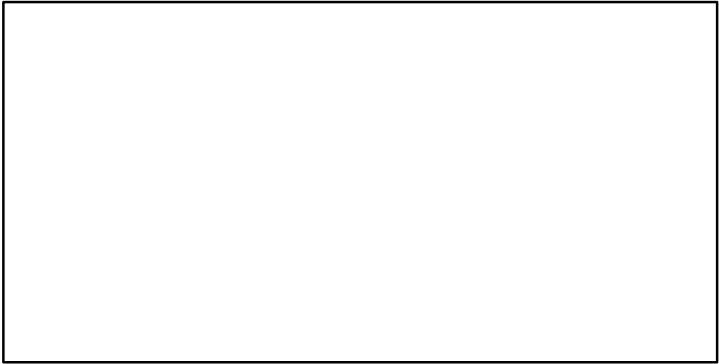
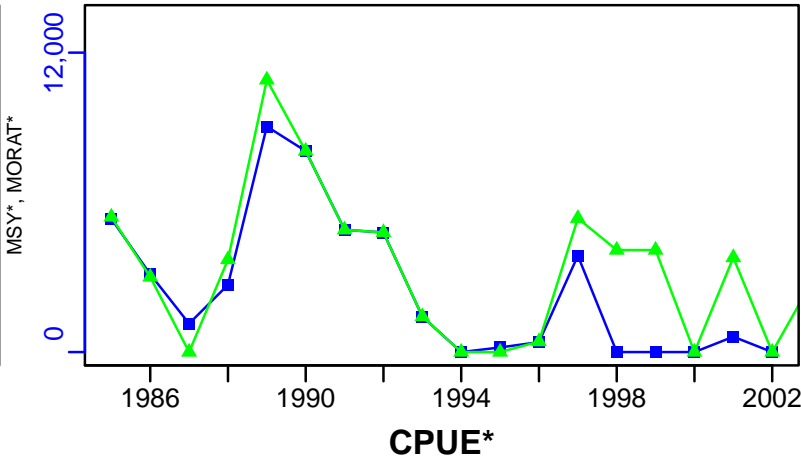
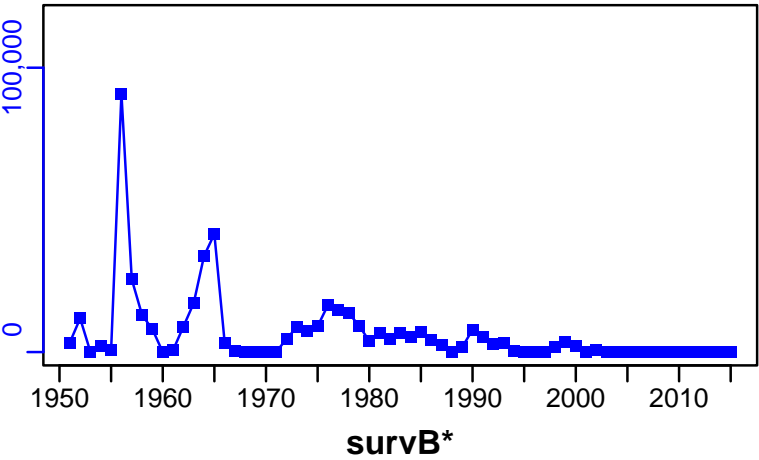
R-E00 (1949-2018-ASHBROOK)



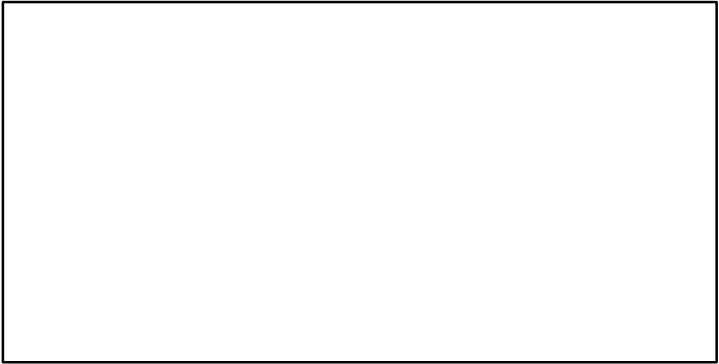
Pacific herring Haida Gwaii [HERRHG]

TC-MT, TL*, RecC* (1951-2015-WATSON)

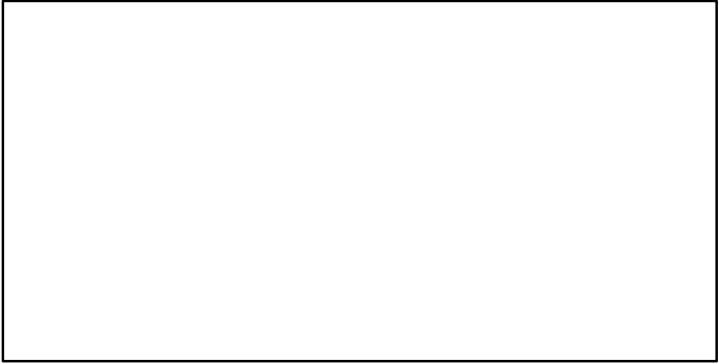
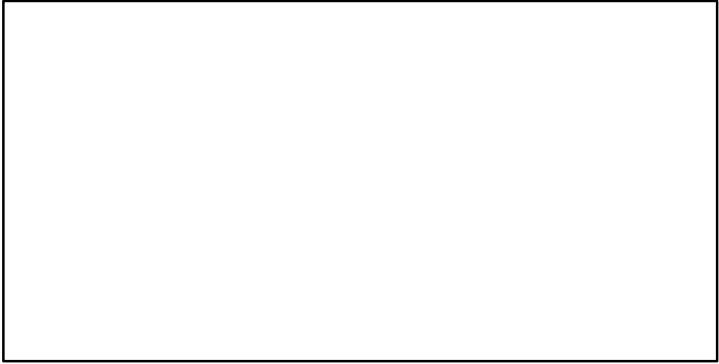
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



CdivMSY*



Pacific herring Hokkaido [HERRHOKK]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	FAFRFJ-HERRHOKK-1975-2018-KUROTA
Area	Hokkaido
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	13,263		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Pacific herring Hokkaido [HERRHOKK]

TB*



SSB*



TN *



F*



ER*

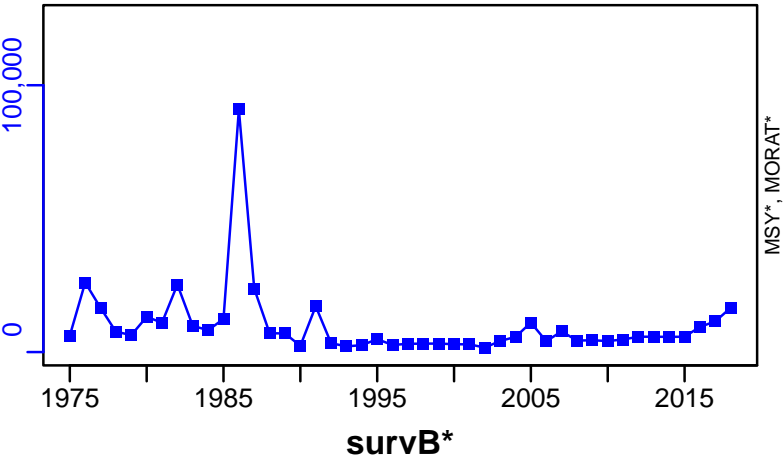


Recruits*



Pacific herring Hokkaido [HERRHOKK]

TC-MT, TL*, RecC* (1975-2018-KUROTA)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Herring Iceland (Summer spawners) [HERRIsum]

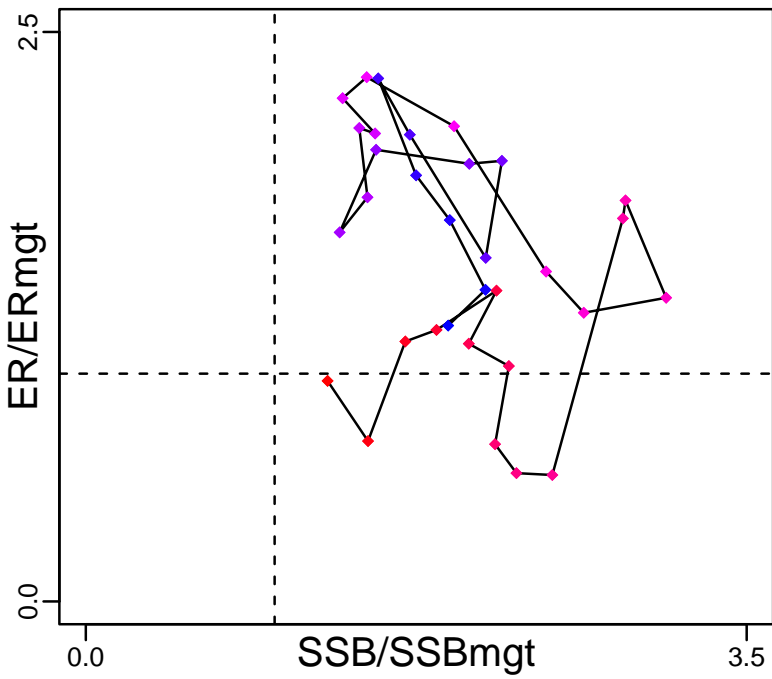
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	NWWG-HERRIsum-1984-2023-ICESIMP2024
Area	Iceland (Summer spawners)
Management Authority	International Council for the Exploration of the Sea
Assessor	North-Western Working Group
Asmts in RAM	2011, 2013, 2014, 2016, 2017, 2018, 2019, 2023, 2015, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2016	0.22
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2023	2×10^5
Fmgt	Fmgt-1/yr	2023	0.15
ERmgt	ERmgt-ratio	2019	0.15
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2011	0.1
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	2×10^5
Flim	Flim-1/yr	2018	0.61
ERlim	-	-	-

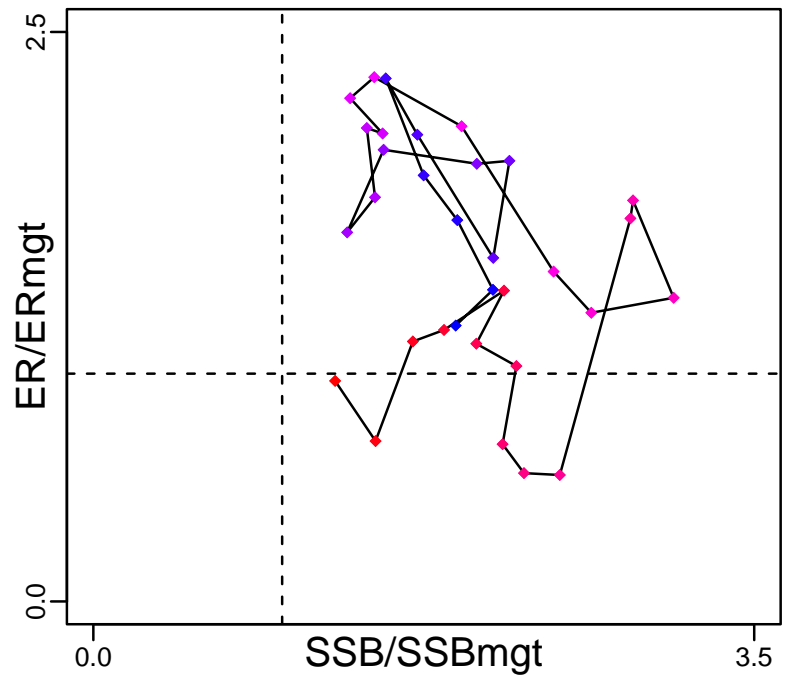
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2023	617,557	-	-
SSB	SSB-MT	2023	555,403	-	-
TN	-	-	-	-	-
R	R-E00	2023	481,676	-	3
F	F-1/yr	2019	0.175	-	5 to 10
ER	ER-ratio	2023	0.132	-	5 to 10
TC	TC-MT	2023	72,756		
TL	TL-MT	2023	72,756		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2016	0.995		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2023	2.777		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	0.995		
ER/ERmgt	-	-	-		

Herring Iceland (Summer spawners) [HERRIsum]

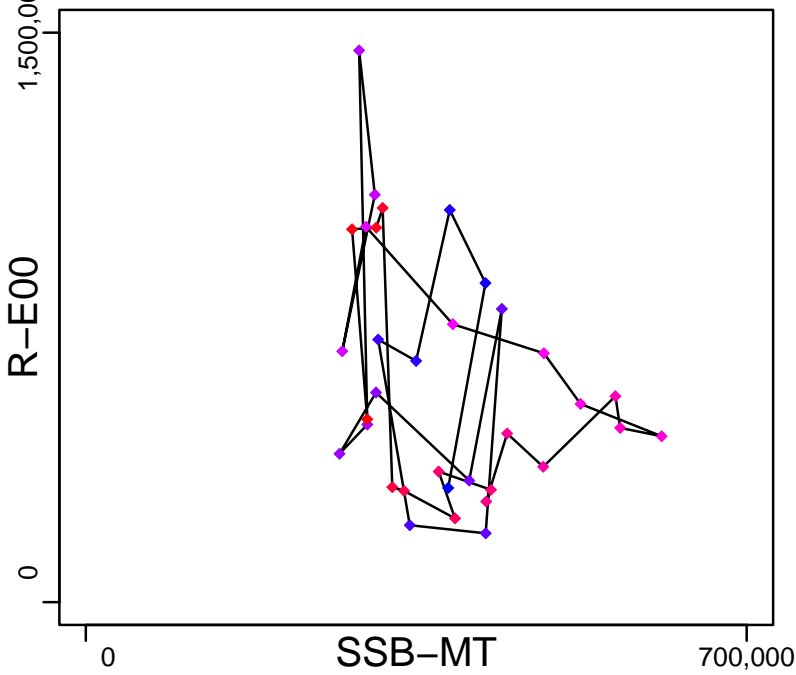
Kobe MSYpref (1984–2019–ICESIMP2021)



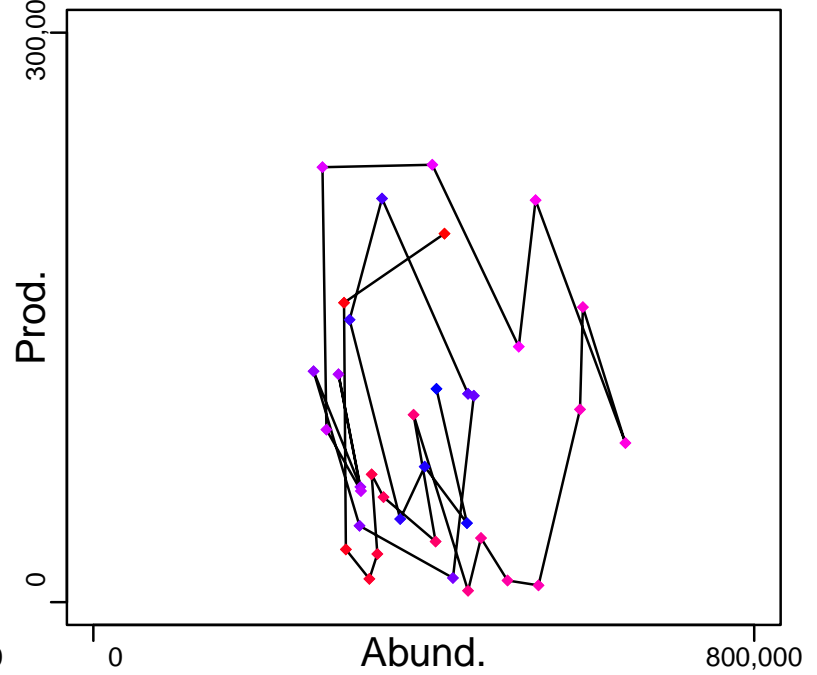
Kobe MGTpref (1984–2019–ICESIMP2021)



Spawner Recruit (1984–2023–ICESIMP2024)



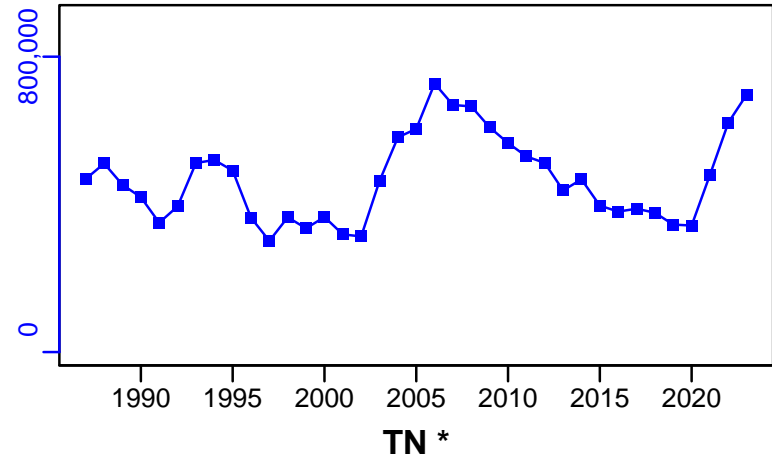
Production (1984–2023–ICESIMP2024)



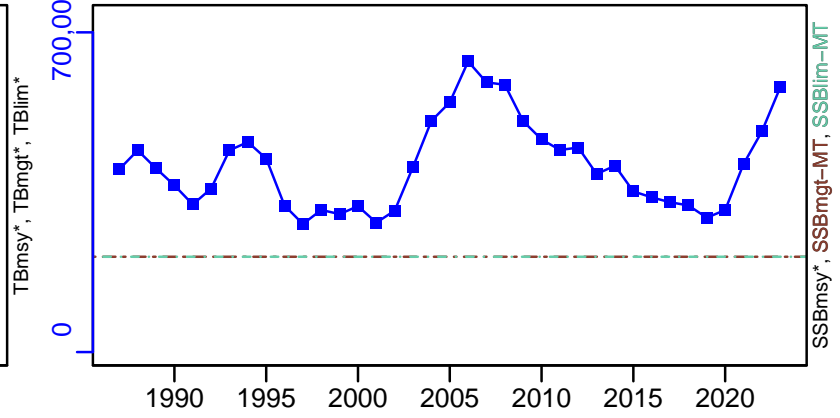
◆ Start Year ◆ End Year * No Data

Herring Iceland (Summer spawners) [HERRIsum]

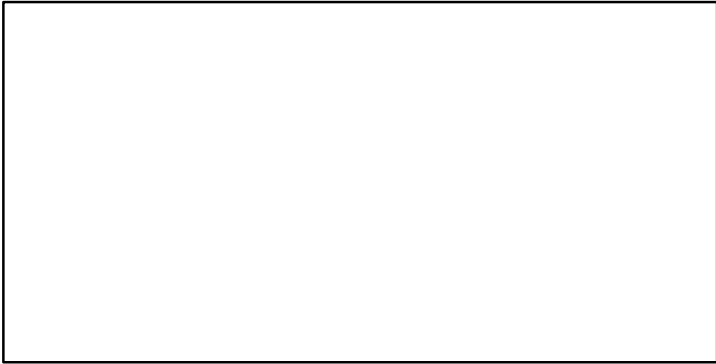
TB-MT (1984–2023–ICESIMP2024)



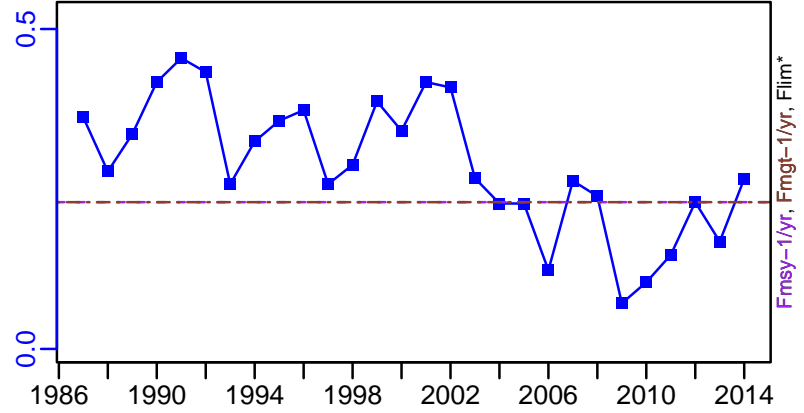
SSB-MT (1984–2023–ICESIMP2024)



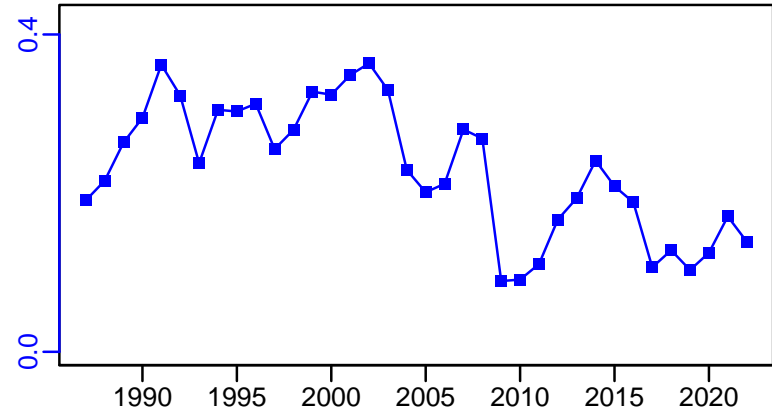
TN *



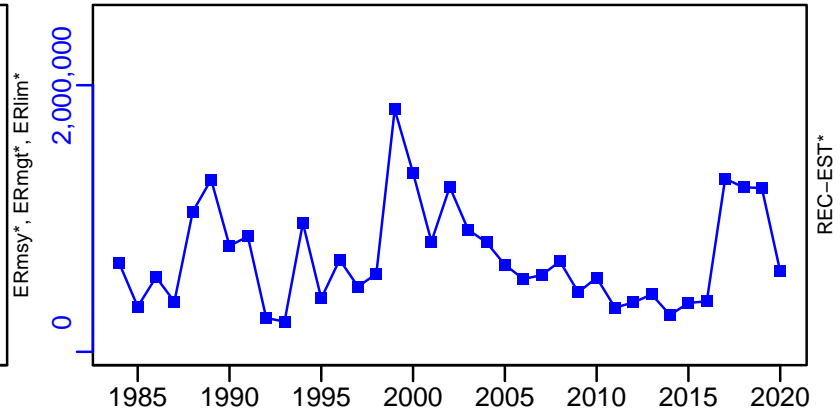
F-1/yr (1987–2015–ICESIMP2016)



ER-ratio (1984–2023–ICESIMP2024)

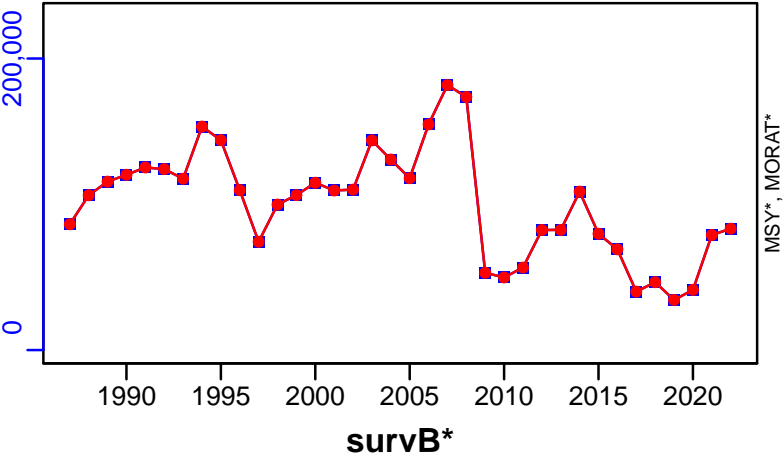


R-E00 (1984–2023–ICESIMP2024)

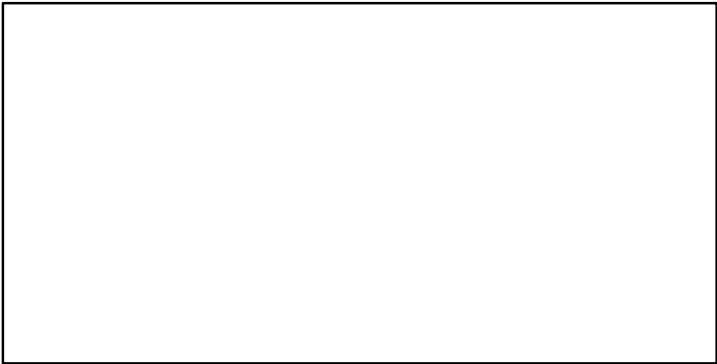


Herring Iceland (Summer spawners) [HERRIsum]

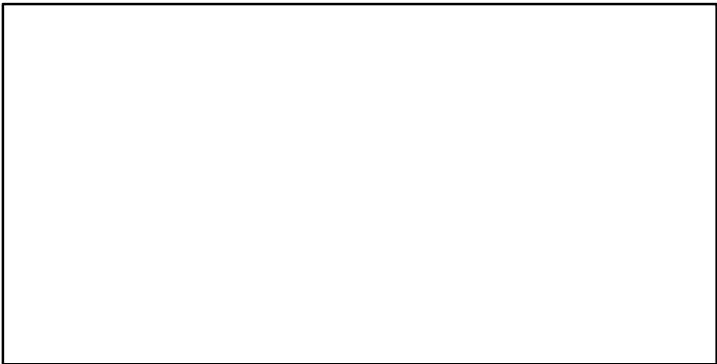
TC-MT, TL-MT, RecC* (1984–2023–ICESIMP2024)



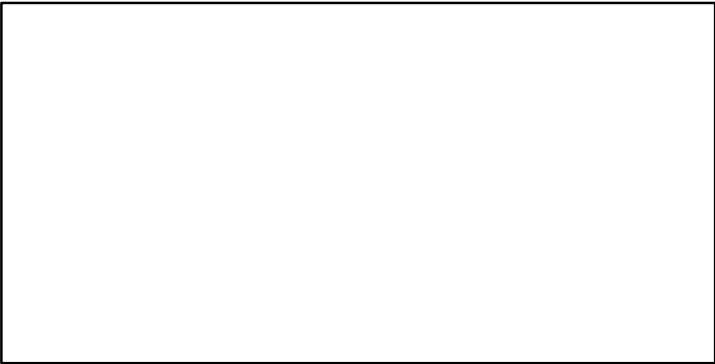
TAC*, Cpair*, Cadv*



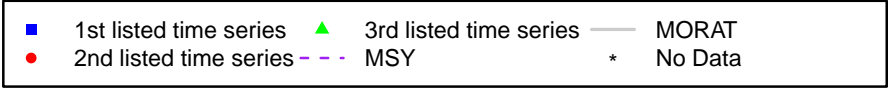
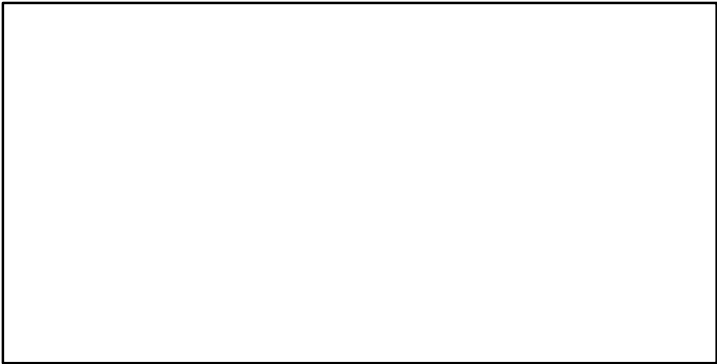
CPUE*



EFFORT*



CdivMSY*



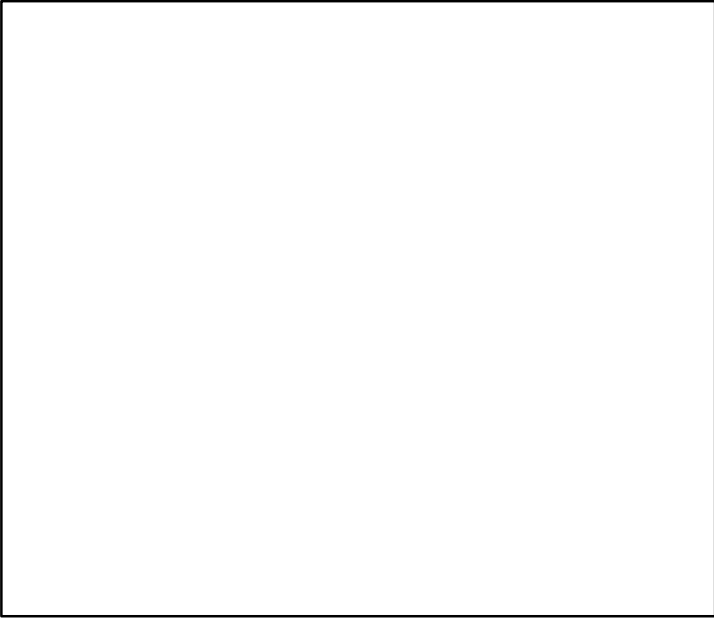
Herring Newfoundland East and South Coast [HERRNFLDESC]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	DFO-HERRNFLDESC-1966-2018-ASHBROOK
Area	Newfoundland East and South Coast
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans
Asmts in RAM	2014, 2018

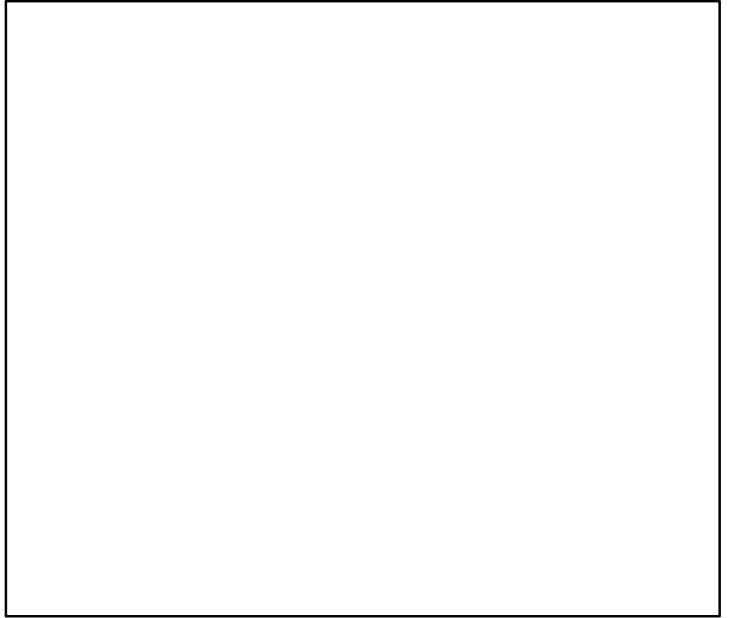
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2018	5907		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

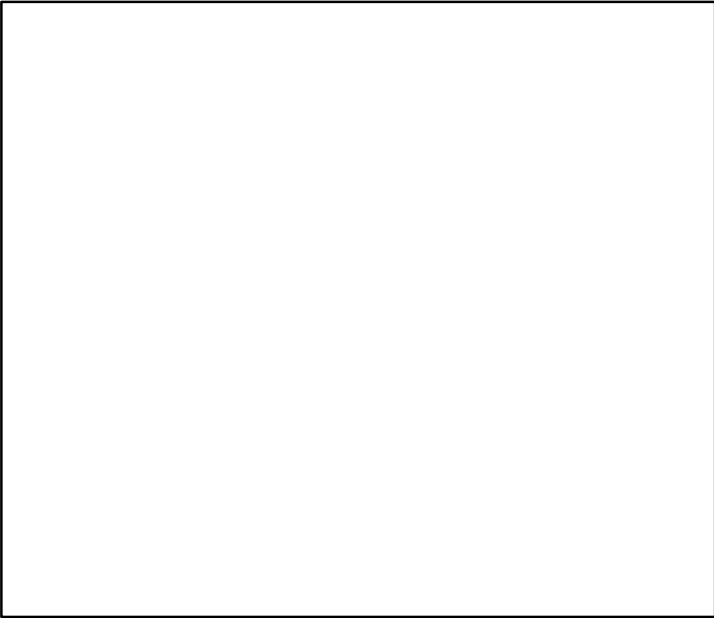
Kobe MSY*



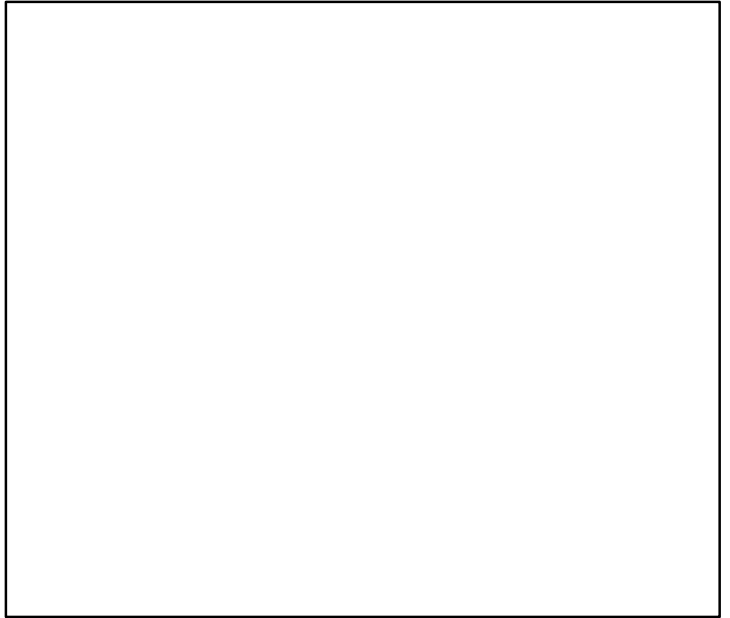
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Herring Newfoundland East and South Coast [HERRNFLDESC]

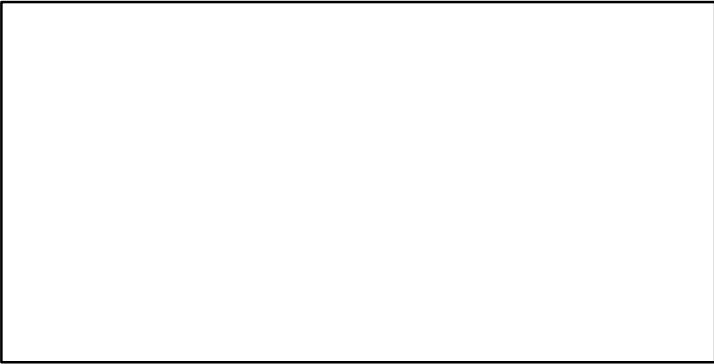
TB*



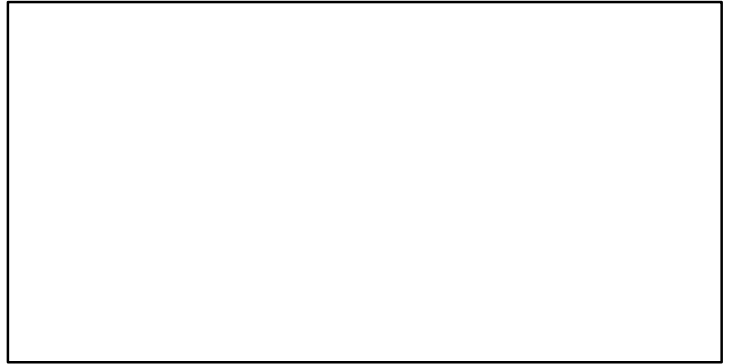
SSB*



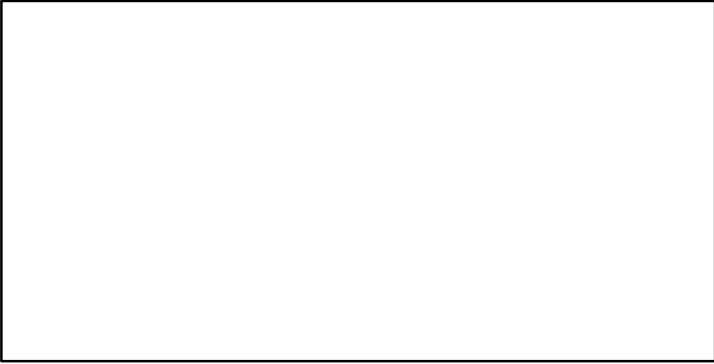
TN *



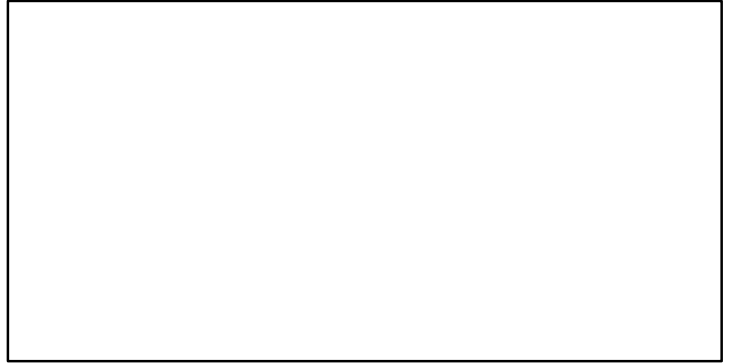
F*



ER*



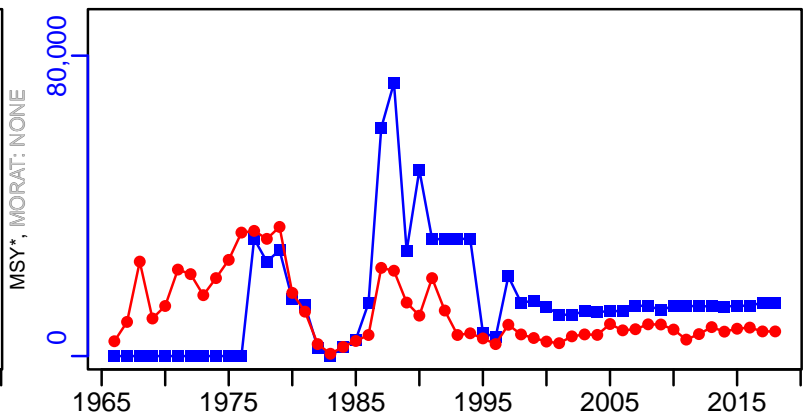
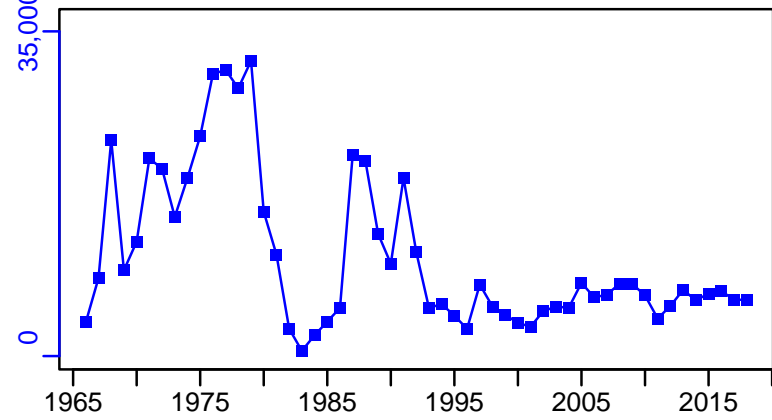
Recruits*



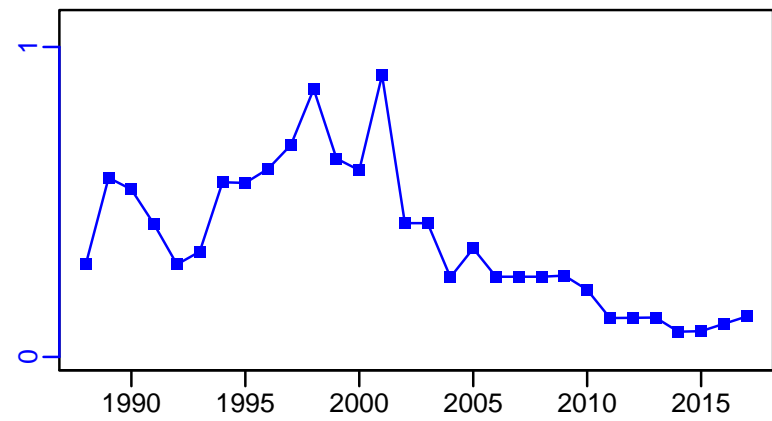
Herring Newfoundland East and South Coast [HERRNFLDESC]

TL-MT, TC*, RecC* (1966-2018-ASHBROOK)

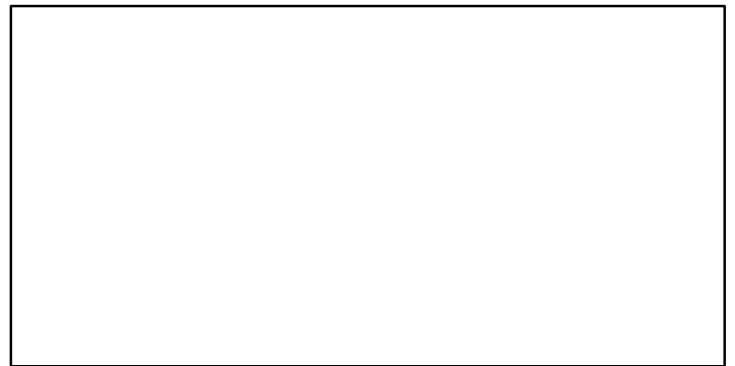
TAC-MT, Cpair-MT, Cadv* (1966-2018-ASHBROOK)



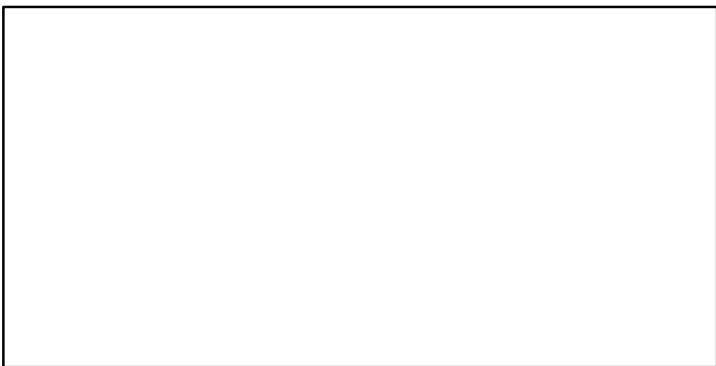
survB-index (1966-2018-ASHBROOK)



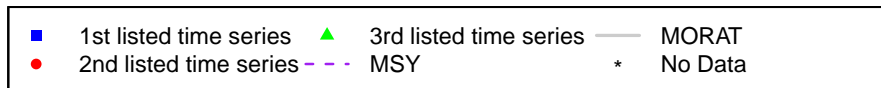
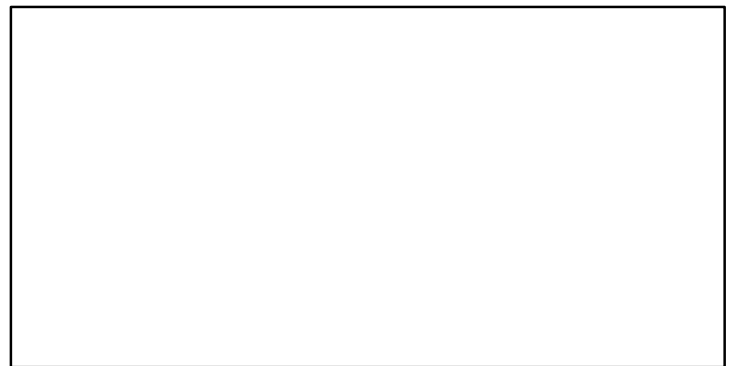
CPUE*



EFFORT*



CdivMSY*



Herring Irish Sea [HERRNIRS]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	HAWG-HERRNIRS-1979-2023-ICESIMP2024
Area	Irish Sea
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2023, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2023	0.266
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2023	0.266
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	8500
Flim	Flim-1/yr	2023	0.397
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2023	78,355	-	-
SSB	SSB-MT	2023	25,569	-	-
TN	-	-	-	-	-
R	R-E00	2023	310,023	-	1
F	F-1/yr	2023	0.238	-	4 to 6
ER	ER-calc-ratio	2023	0.101	-	-
TC	TC-MT	2023	7888		
TL	TL-MT	2023	7888		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2023	0.894		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	0.894		
ER/ERmgt	-	-	-		

Herring Irish Sea [HERRNIRS]

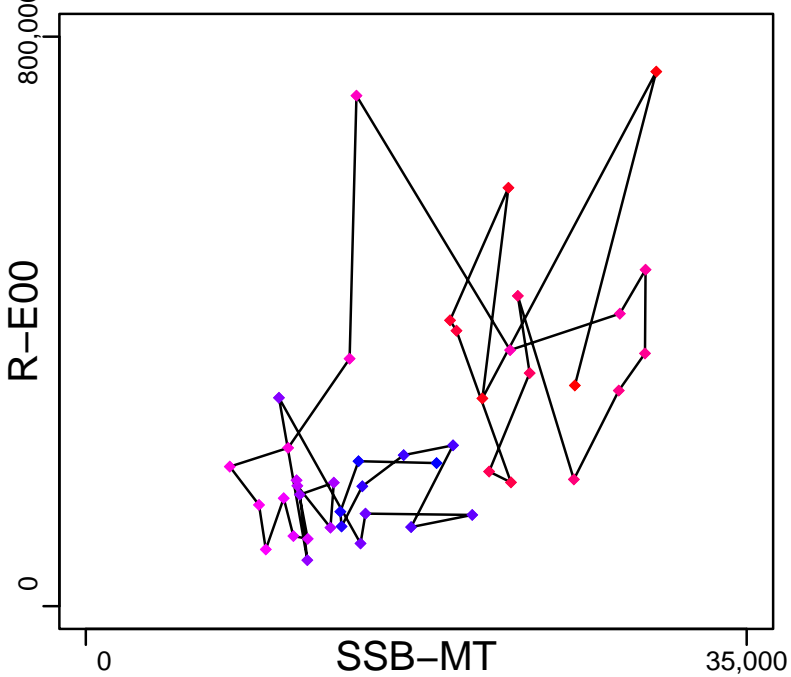
Kobe MSY*



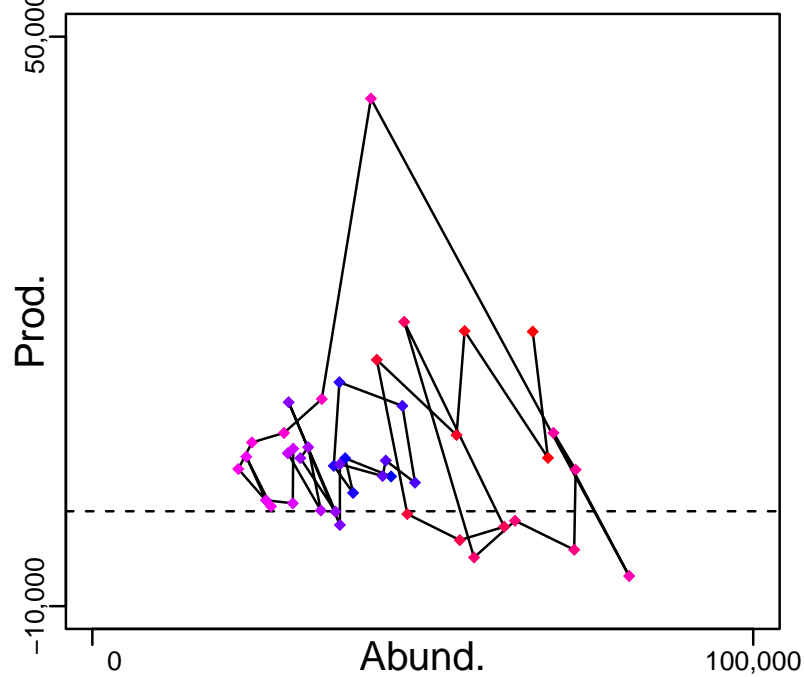
Kobe MGT*



Spawner Recruit (1979–2023–ICESIMP2024)



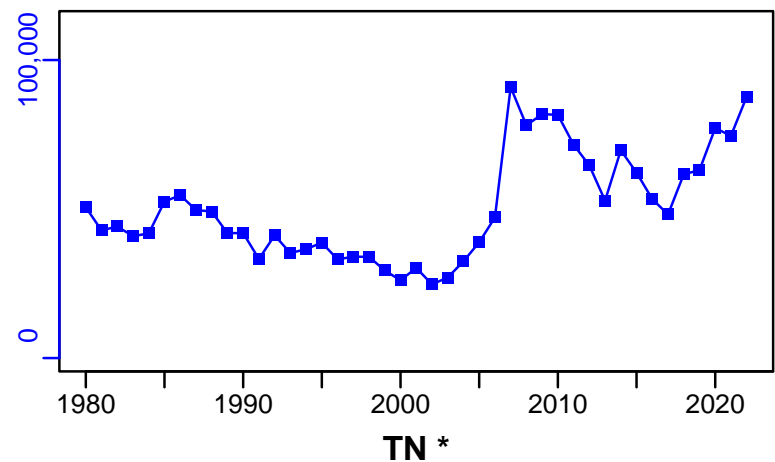
Production (1979–2023–ICESIMP2024)



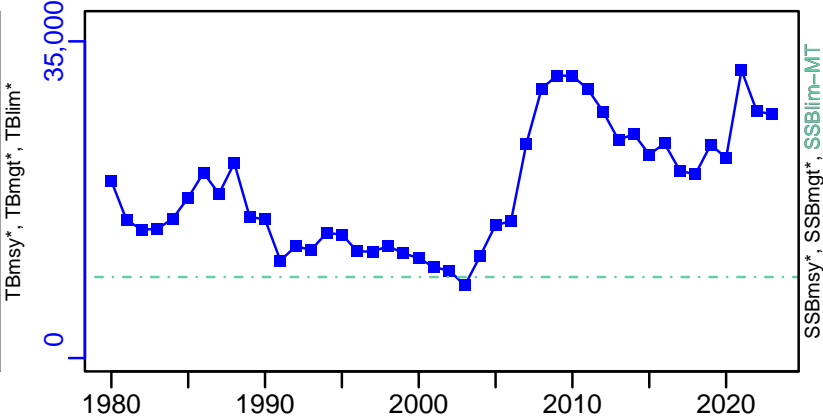
◆ Start Year ◆ End Year * No Data

Herring Irish Sea [HERRNIRS]

TB-MT (1979–2023–ICESIMP2024)



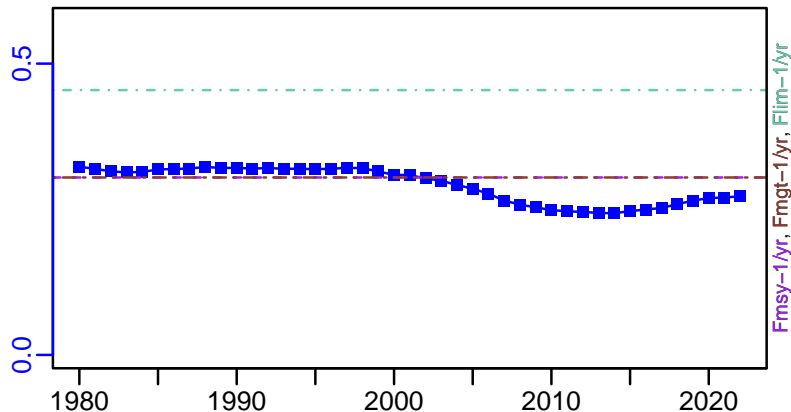
SSB-MT (1979–2023–ICESIMP2024)



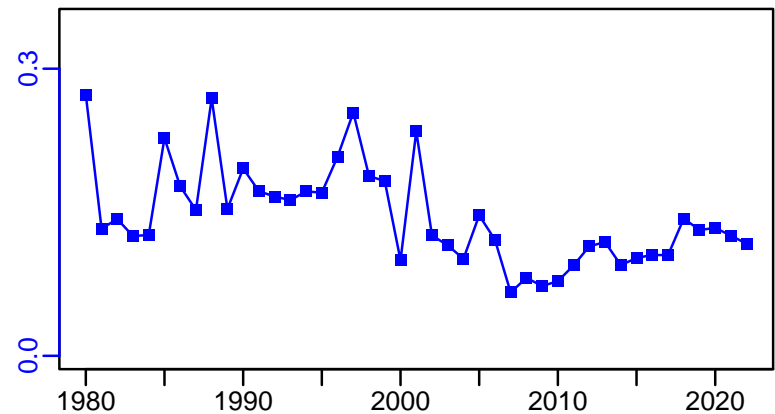
TN *



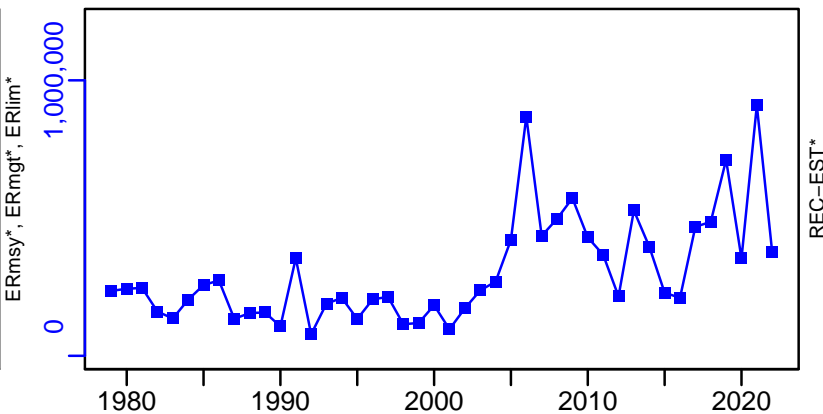
F-1/yr (1979–2023–ICESIMP2024)



ER-calc-ratio (1979–2023–ICESIMP2024)

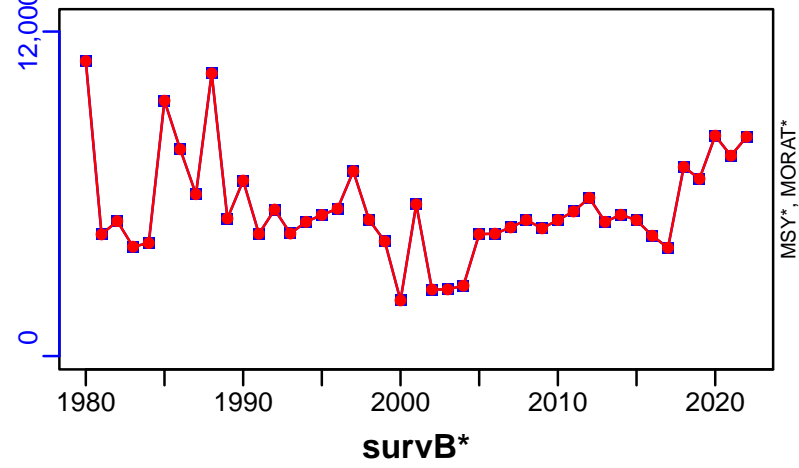


R-E00 (1979–2023–ICESIMP2024)

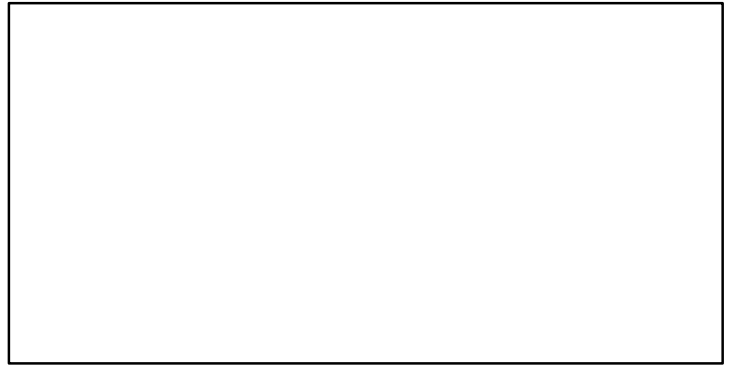


Herring Irish Sea [HERRNIRS]

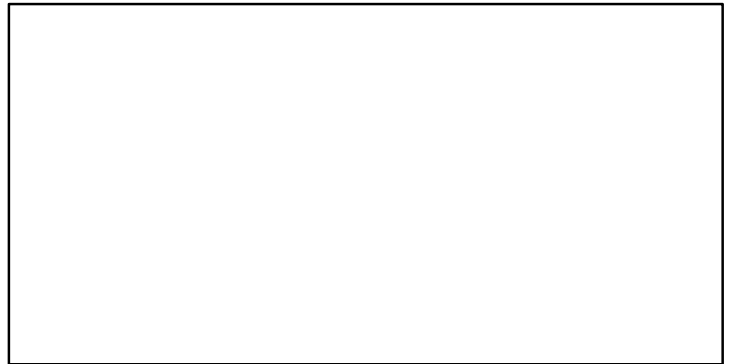
TC-MT, TL-MT, RecC* (1979–2023–ICESIMP2024)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring ICES 1-2-4a-5-14a (Norwegian Spring Spawners) [HERRNORSS]

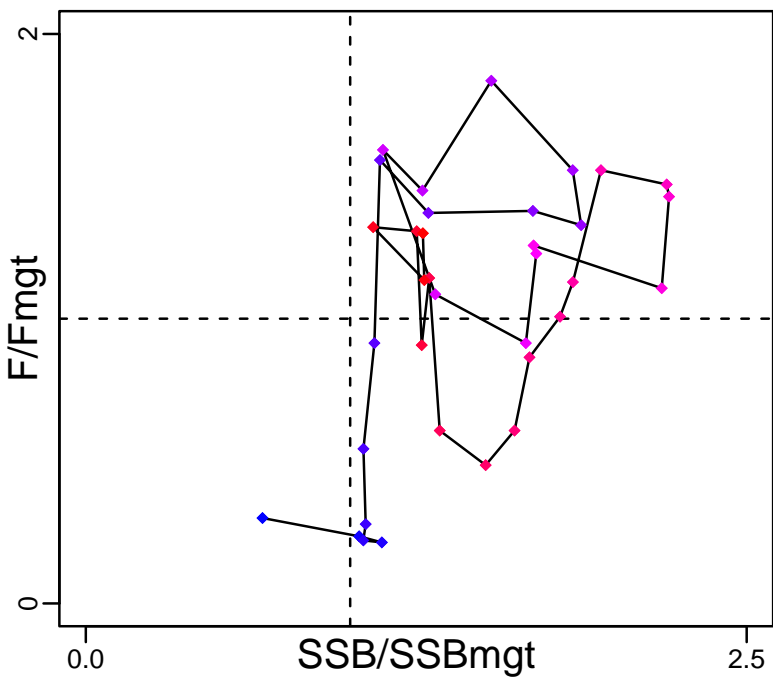
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	WGWIDE-HERRNORSS-1986-2023-ICESIMP2024
Area	ICES 1-2-4a-5-14a (Norwegian Spring Spawners)
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Widely Distributed Stocks
Asmts in RAM	2014, 2016, 2017, 2019, 2023, 2013, 2015, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.157
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2023	3,184,000
Fmgt	Fmgt-1/yr	2023	0.14
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	2,500,000
Flim	Flim-1/yr	2023	0.291
ERlim	-	-	-

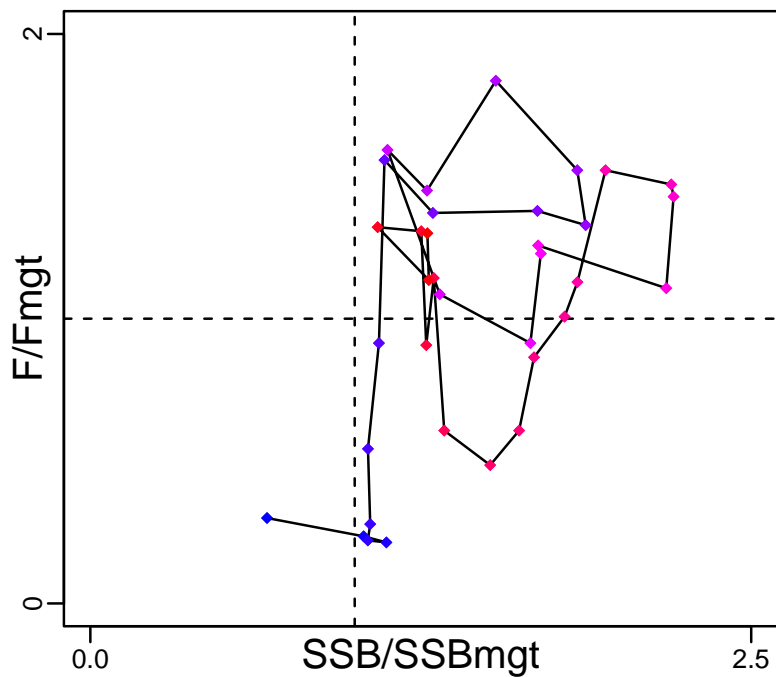
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2023	4,671,000	-	-
SSB	SSB-MT	2023	3,664,000	-	-
TN	-	-	-	-	-
R	R-E00	2023	10,619,000	-	2
F	F-1/yr	2023	0.182	-	5-12+
ER	ER-calc-ratio	2023	0.166	-	-
TC	TC-MT	2023	813,834		
TL	TL-MT	2023	813,834		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	1.197		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2023	1.151		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	1.3		
ER/ERmgt	-	-	-		

Herring ICES 1-2-4a-5-14a (Norwegian Spring Spawners) [HERRNORSS]

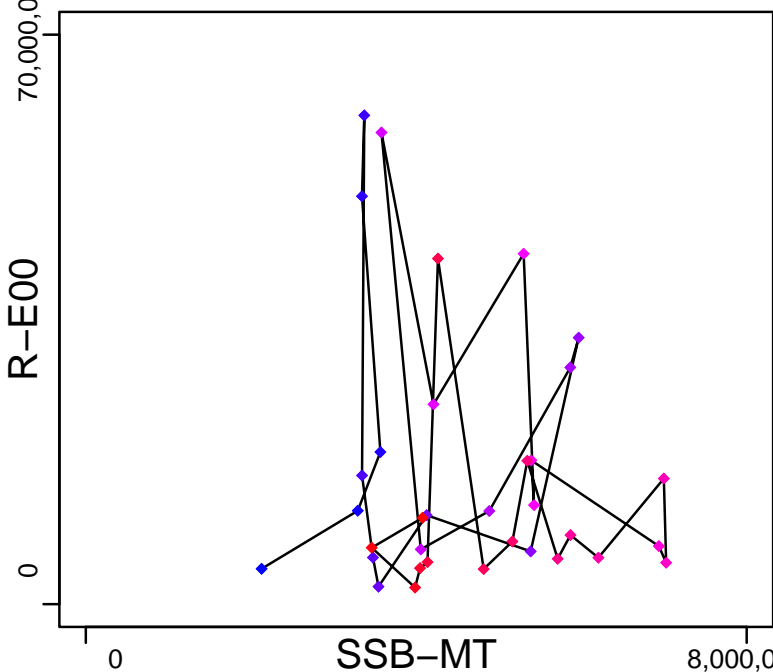
Kobe MSYpref (1986-2023-ICESIMP2024)



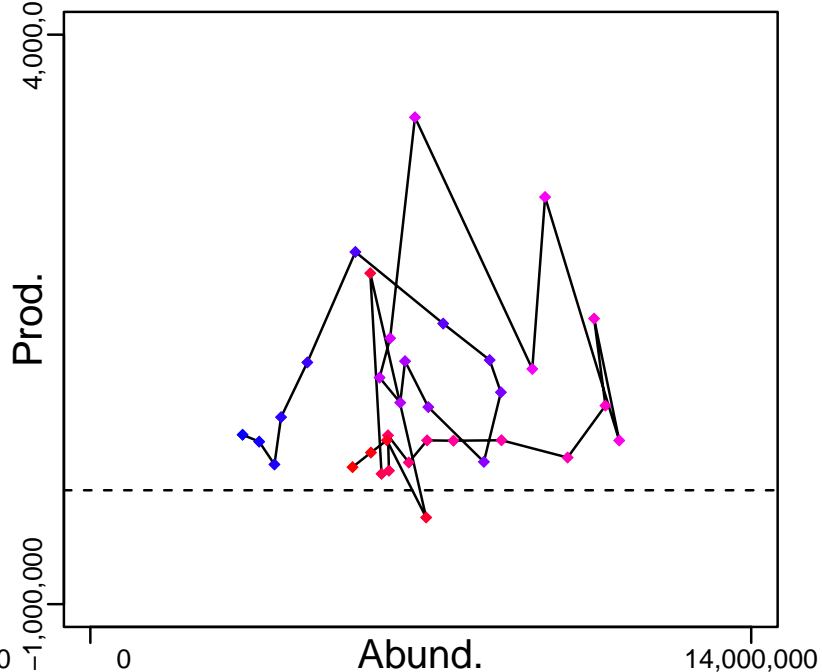
Kobe MGTpref (1986-2023-ICESIMP2024)



Spawner Recruit (1986-2023-ICESIMP2024)



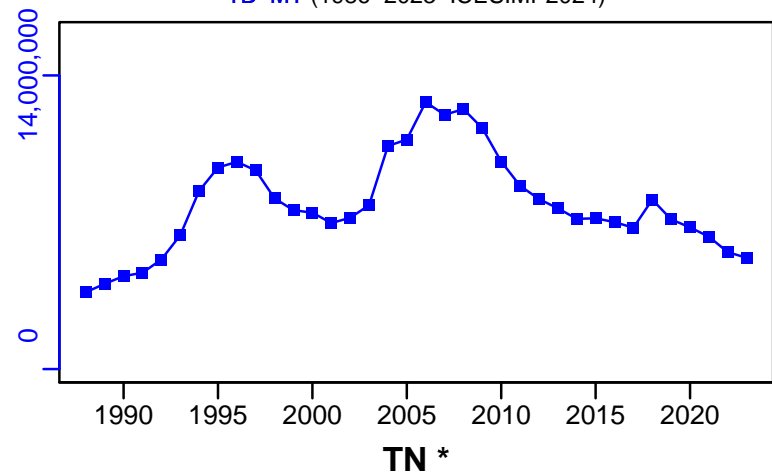
Production (1986-2023-ICESIMP2024)



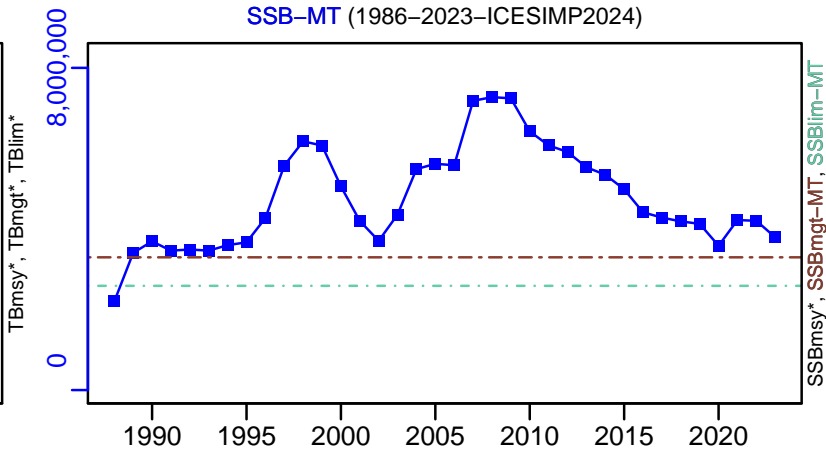
◆ Start Year ◆ End Year * No Data

Herring ICES 1-2-4a-5-14a (Norwegian Spring Spawners) [HERRNORSS]

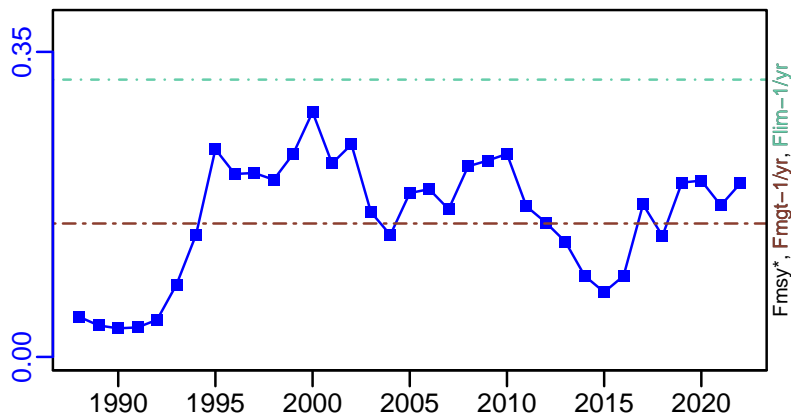
TB-MT (1986-2023-ICESIMP2024)



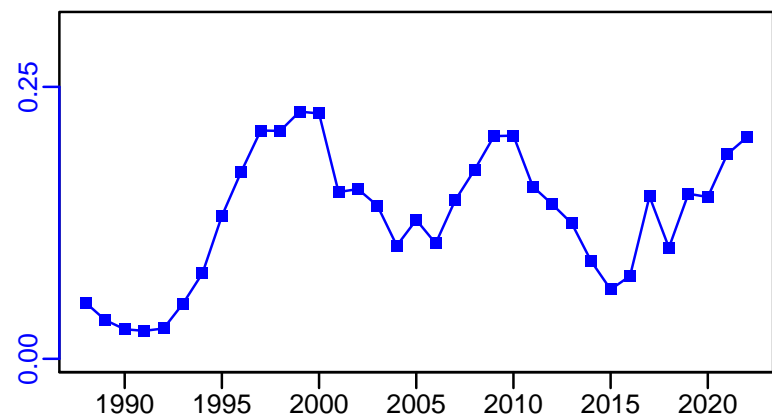
SSB-MT (1986-2023-ICESIMP2024)



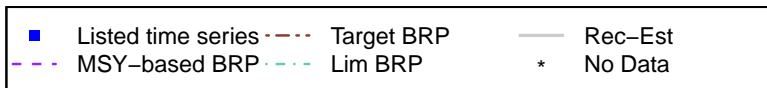
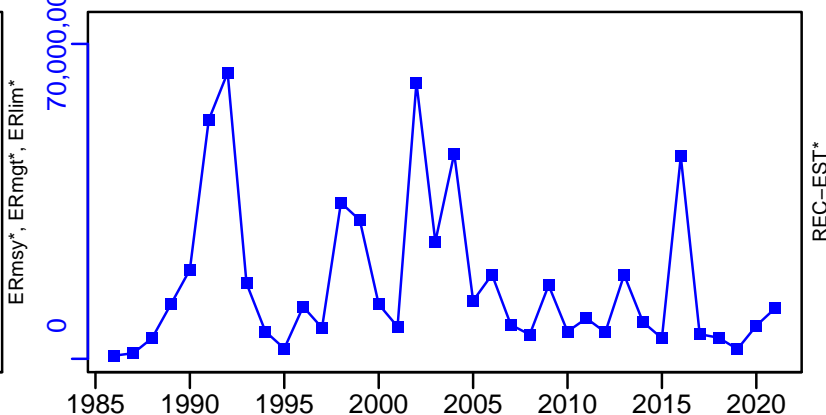
F-1/yr (1986-2023-ICESIMP2024)



ER-calc-ratio (1986-2023-ICESIMP2024)

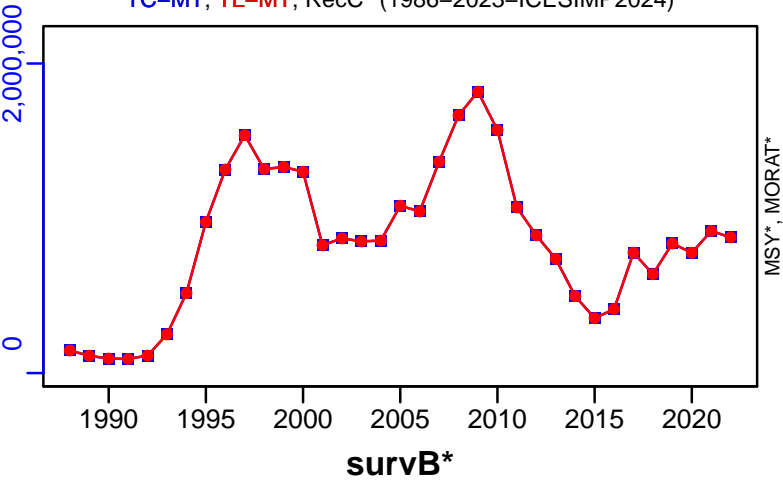


R-E00 (1986-2023-ICESIMP2024)

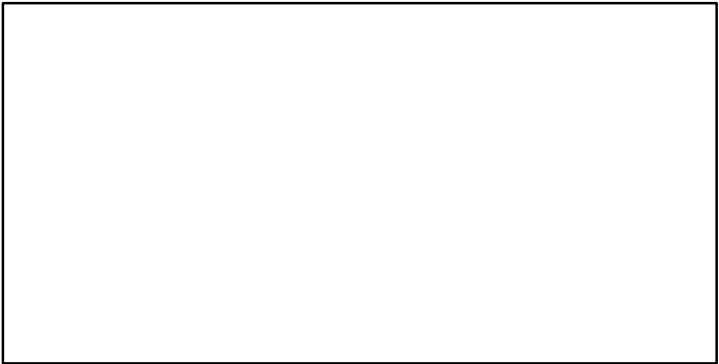


Herring ICES 1–2–4a–5–14a (Norwegian Spring Spawners) [HERRNORSS]

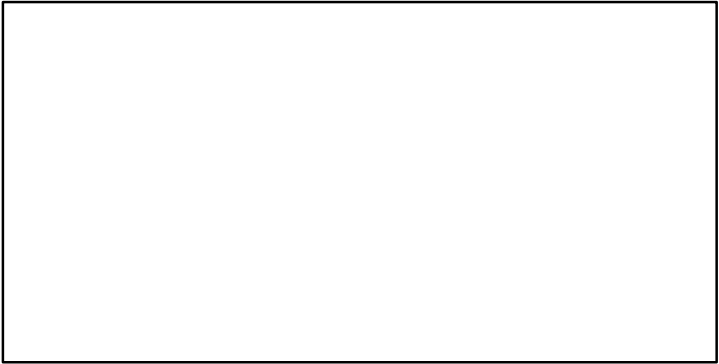
TC–MT, TL–MT, RecC* (1986–2023–ICESIMP2024)



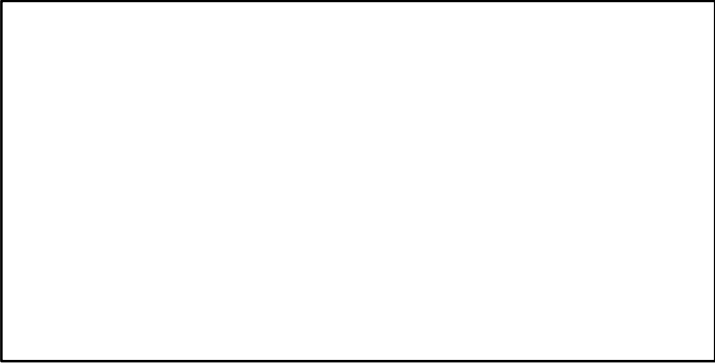
TAC*, Cpair*, Cadv*



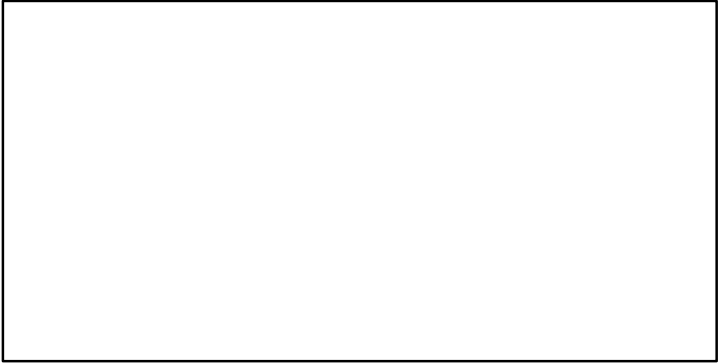
CPUE*



EFFORT*



CdivMSY*



Herring ICES 3a-4-7d [HERRNS-IIIa-VIId]

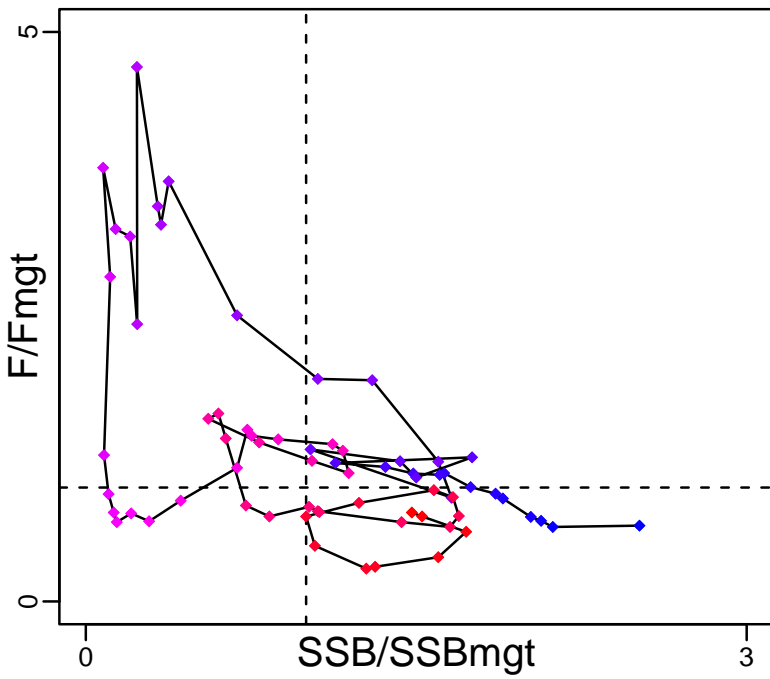
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	HAWG-HERRNS-IIIa-VIId-1947-2023-ICESIMP2024
Area	ICES 3a-4-7d
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2023, 2011

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2023	0.31
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2015	1,500,000
Fmgt	Fmgt-1/yr	2023	0.31
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	874,198
Flim	Flim-1/yr	2023	0.4
ERlim	-	-	-

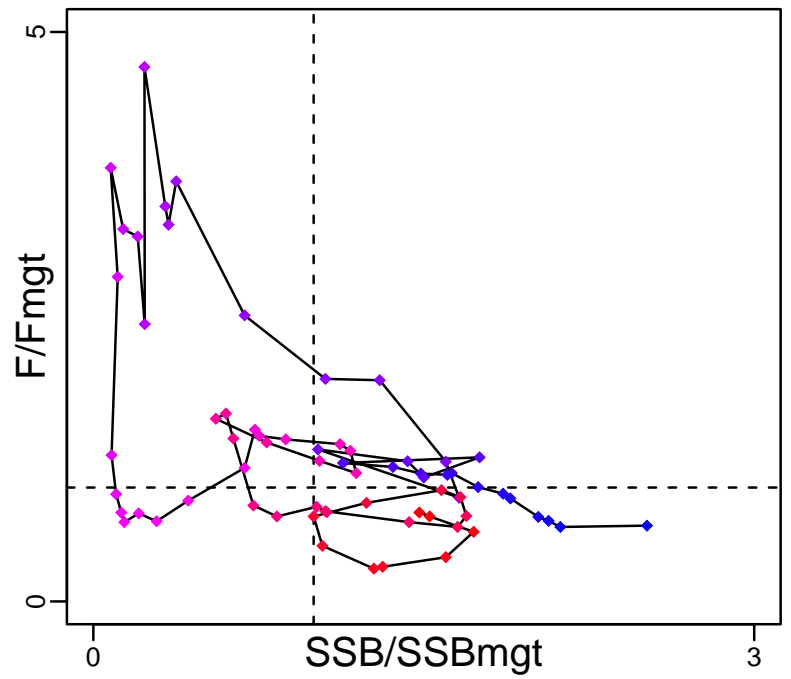
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2023	3,042,541	-	-
SSB	SSB-MT	2023	1,480,607	-	-
TN	-	-	-	-	-
R	R-E00	2023	31,349,395	-	0
F	F-1/yr	2023	0.227	-	2 to 6
ER	ER-calc-ratio	2023	0.149	-	-
TC	TC-MT	2023	462,247		
TL	TL-MT	2017	564,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2023	0.734		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2015	1.48		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	0.734		
ER/ERmgt	-	-	-		

Herring ICES 3a-4-7d [HERRNS-IIIa-VIId]

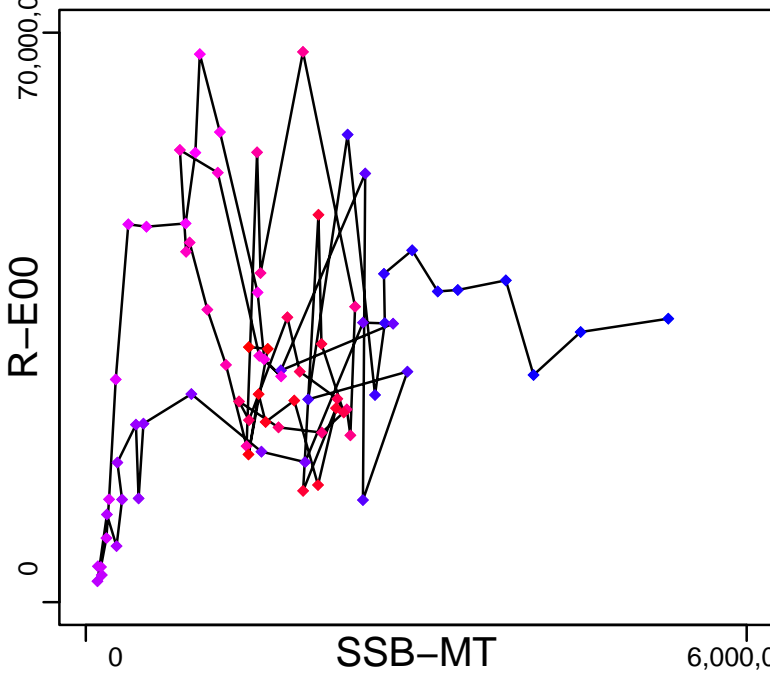
Kobe MSYpref (1947-2015-ICESIMP2016)



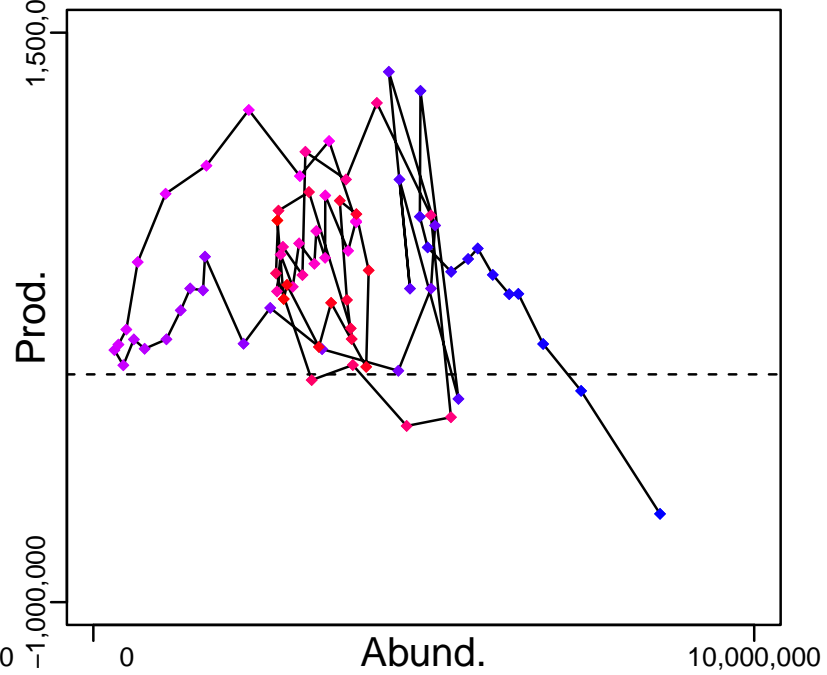
Kobe MGTpref (1947-2015-ICESIMP2016)



Spawner Recruit (1947-2023-ICESIMP2024)



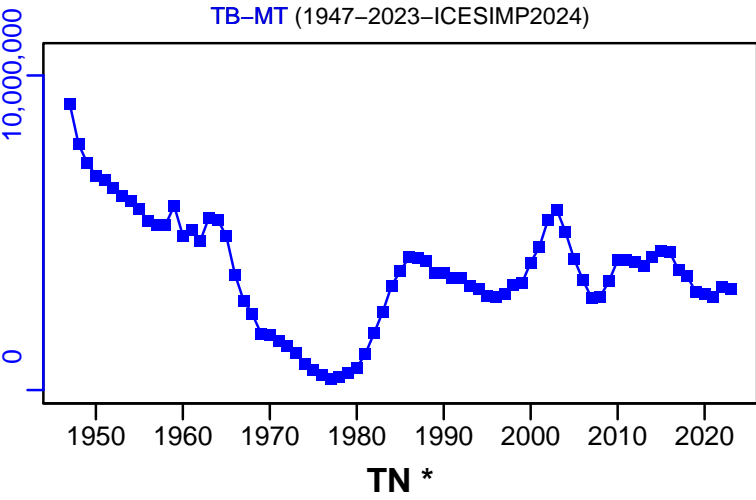
Production (1947-2023-ICESIMP2024)



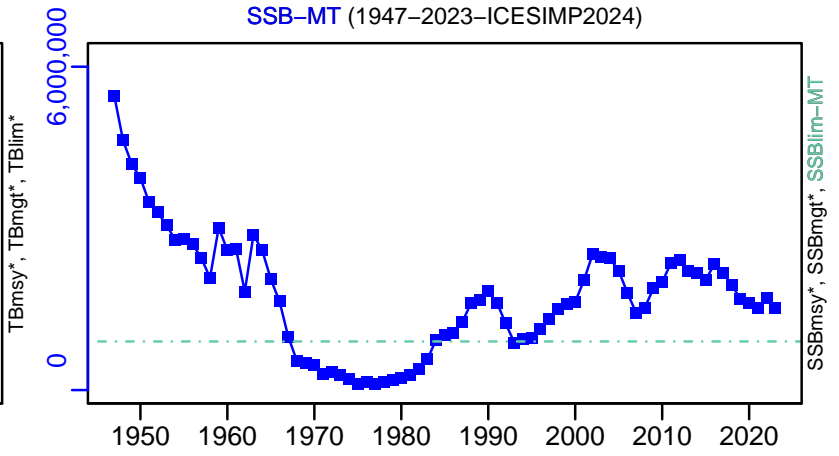
◆ Start Year ◆ End Year * No Data

Herring ICES 3a-4-7d [HERRNS-IIIa-VIId]

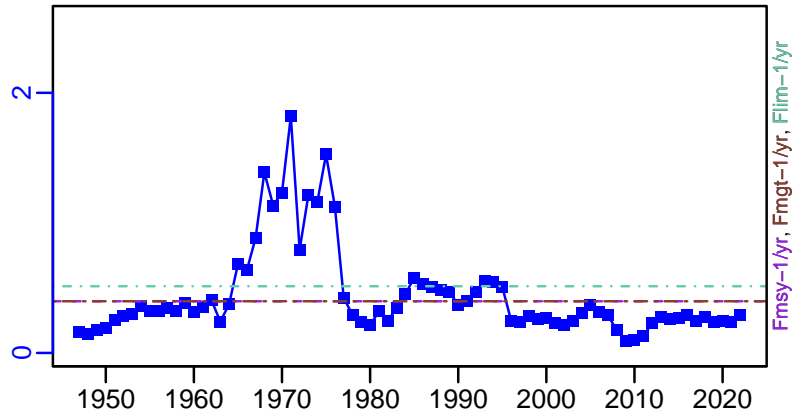
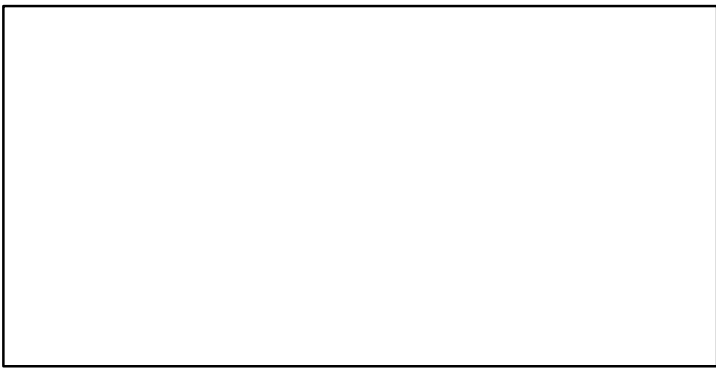
TB-MT (1947-2023-ICESIMP2024)



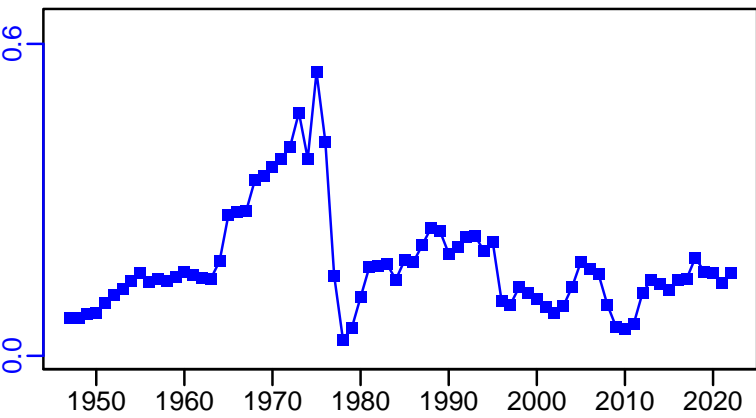
SSB-MT (1947-2023-ICESIMP2024)



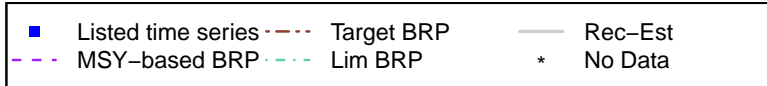
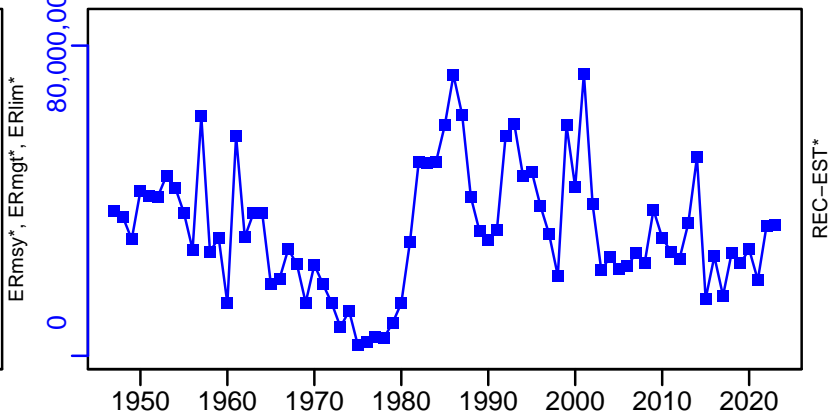
F-1/yr (1947-2023-ICESIMP2024)



ER-calc-ratio (1947-2023-ICESIMP2024)

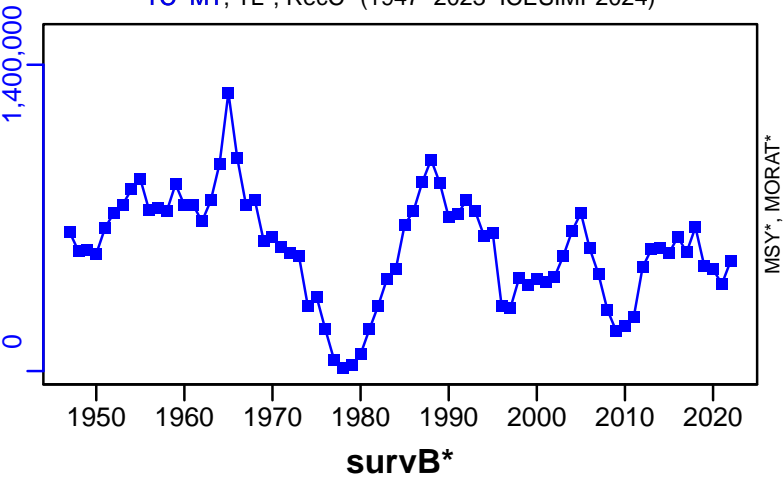


R-E00 (1947-2023-ICESIMP2024)

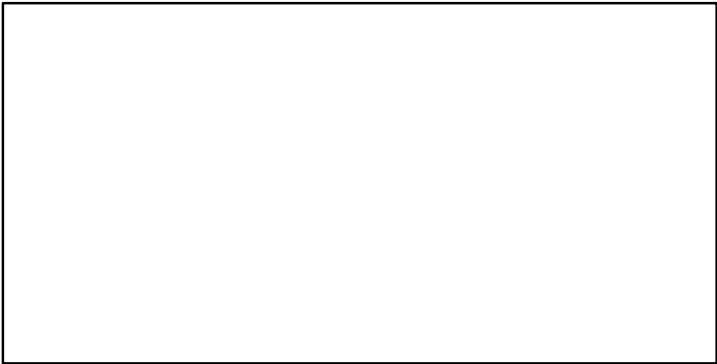


Herring ICES 3a–4–7d [HERRNS–IIIa–VIIId]

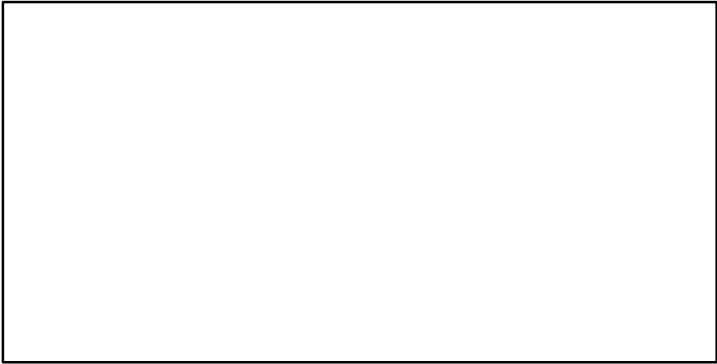
TC–MT, TL*, RecC* (1947–2023–ICESIMP2024)



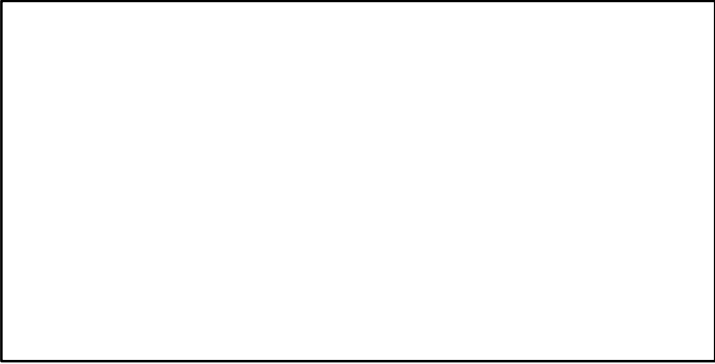
TAC*, Cpair*, Cadv*



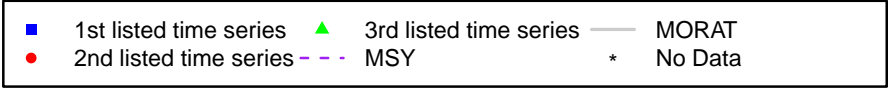
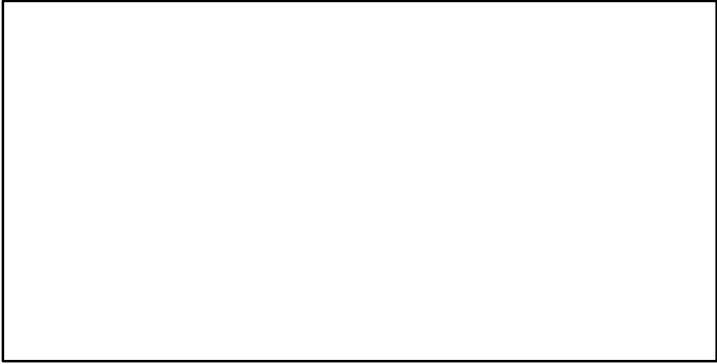
CPUE*



EFFORT*



CdivMSY*



Herring Northwestern Atlantic Coast [HERRNWATLC]

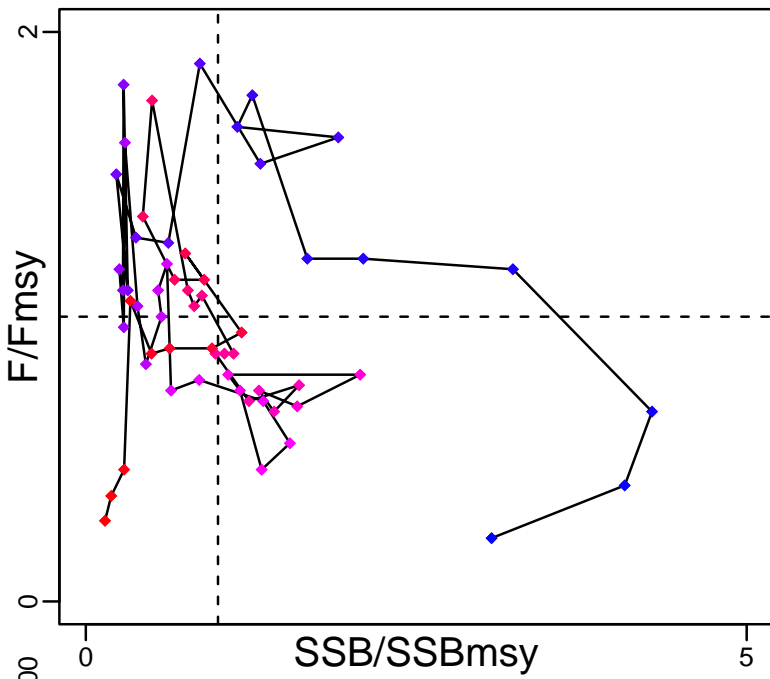
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	NEFSC-HERRNWATLC-1964-2022-SISIMP2022
Area	Northwestern Atlantic Coast
Management Authority	National Marine Fisheries Service, US national management
Assessor	Northeast Fisheries Science Center
Asmts in RAM	2011, 2017, 2022, 2014, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2022	269,000
Fmsy	Fmsy-1/yr	2022	0.54
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2022	99,400
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2019	135,000
Flim	Flim-1/yr	2019	0.54
ERlim	-	-	-

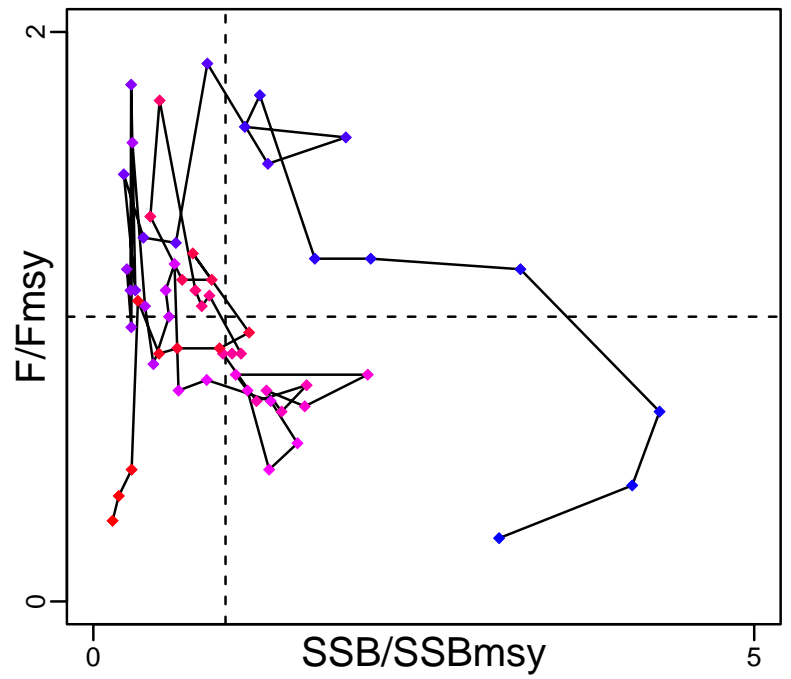
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2011	1,320,000	-	-
SSB	SSB-MT	2022	61,645	-	-
TN	-	-	-	-	-
R	R-E00	2022	2,144,500,000	-	1
F	F-1/yr	2022	0.153	-	-
ER	ER-calc-ratio	2011	0.064	-	-
TC	TC-MT	2022	7865		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2022	0.229		
F/Fmsy	F-1/yr/Fmsy-1/yr	2022	0.283		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Herring Northwestern Atlantic Coast [HERRNWATLC]

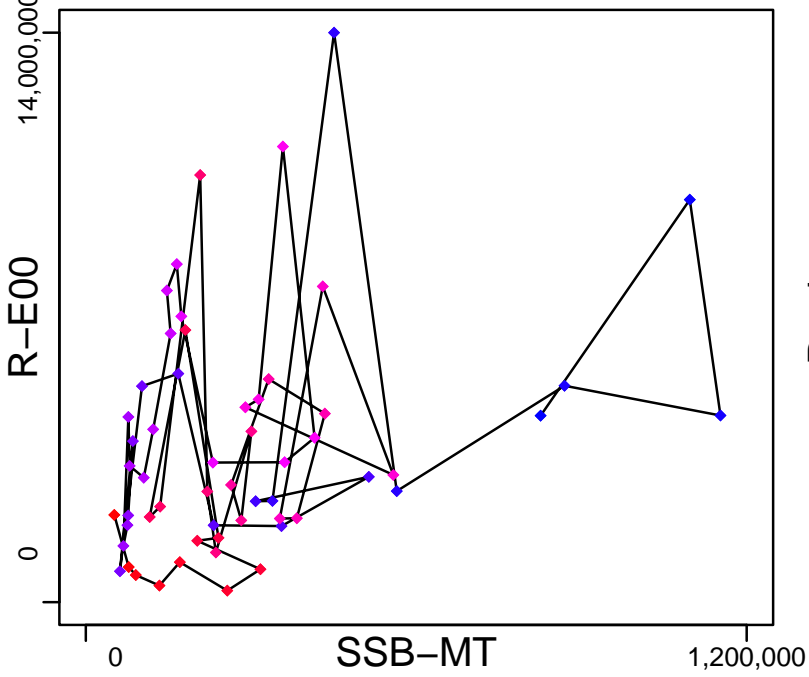
Kobe MSYpref (1964–2022–SISIMP2022)



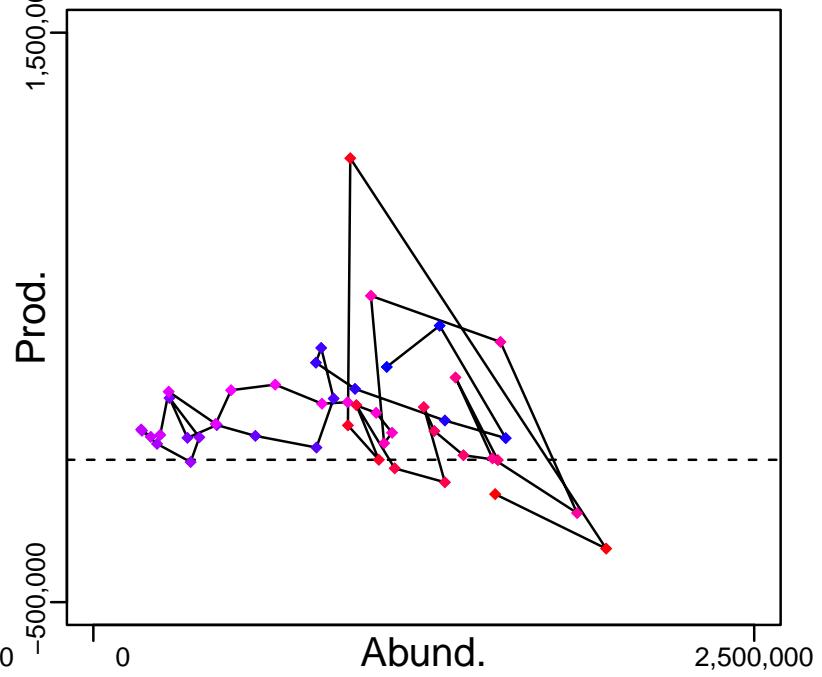
Kobe MGTpref (1964–2022–SISIMP2022)



Spawner Recruit (1964–2022–SISIMP2022)



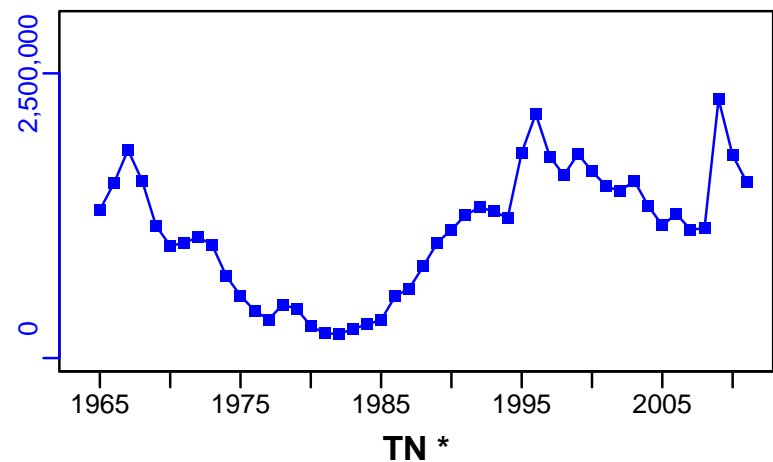
Production (1964–2011–HIVELY)



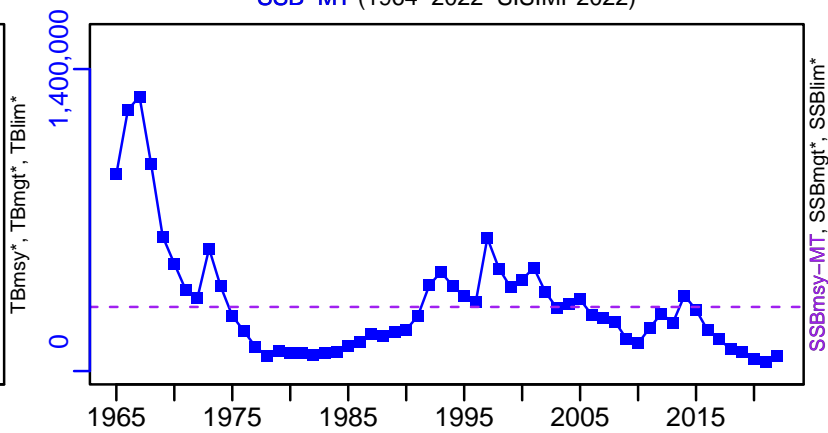
◆ Start Year ◆ End Year * No Data

Herring Northwestern Atlantic Coast [HERRNWATLC]

TB-MT (1964–2011–HIVELY)



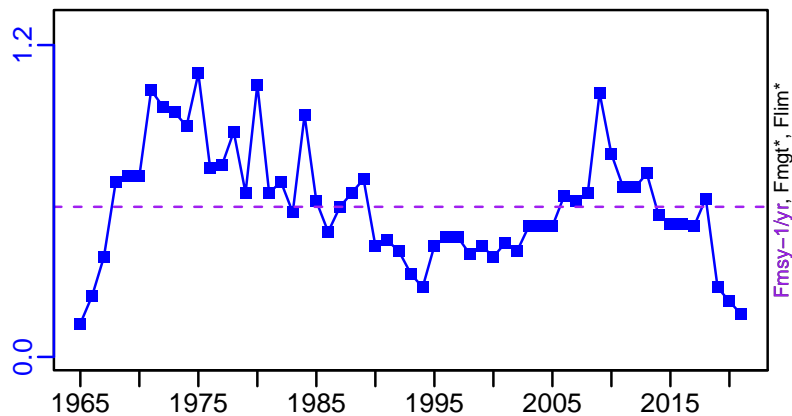
SSB-MT (1964–2022–SISIMP2022)



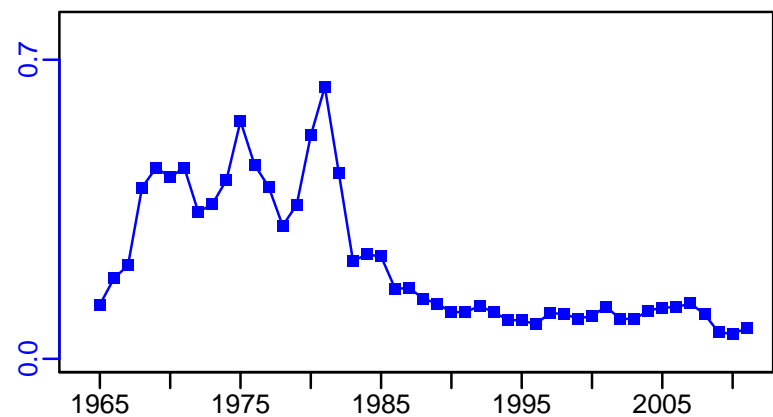
TN *



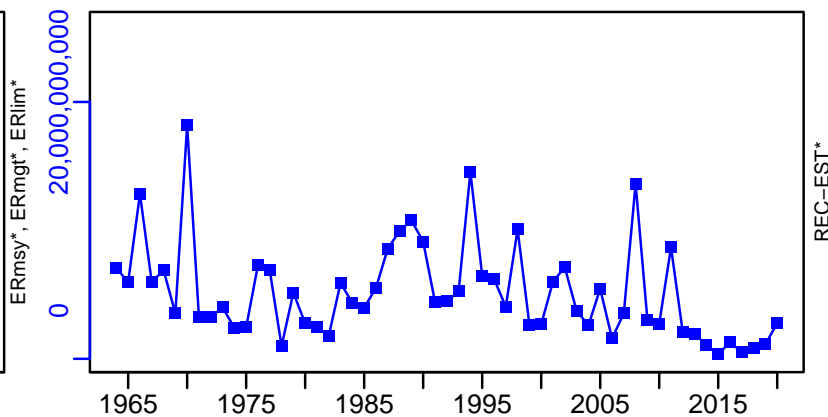
F-1/yr (1964–2022–SISIMP2022)



ER-calc-ratio (1964–2011–HIVELY)

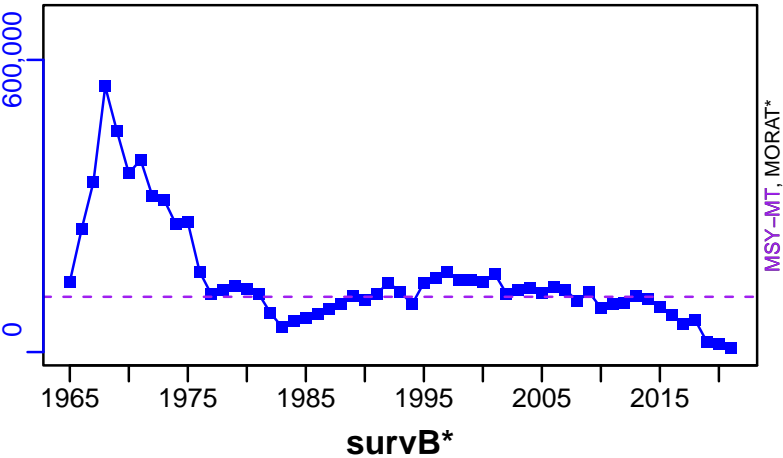


R-E00 (1964–2022–SISIMP2022)



Herring Northwestern Atlantic Coast [HERRNWATLC]

TC-MT, TL*, RecC* (1964–2022–SISIMP2022)



TAC*, Cpair*, Cadv*



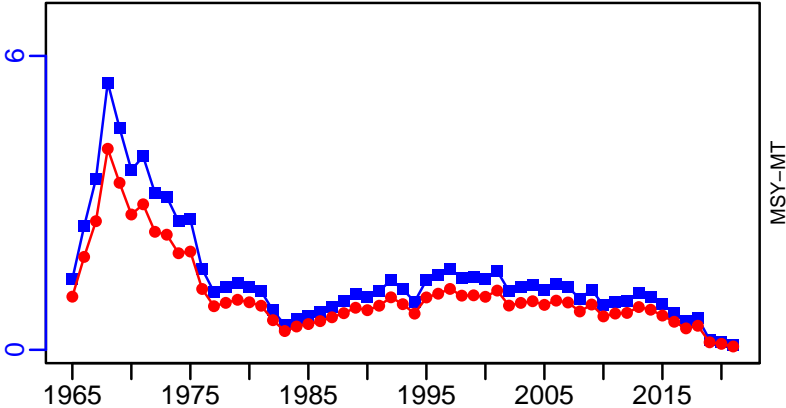
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1964–2022–SISIMP2022)



Pacific herring Prince Rupert District [HERRPRD]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRPRD-1949-2018-ASHBROOK
Area	Prince Rupert District
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	61,097
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

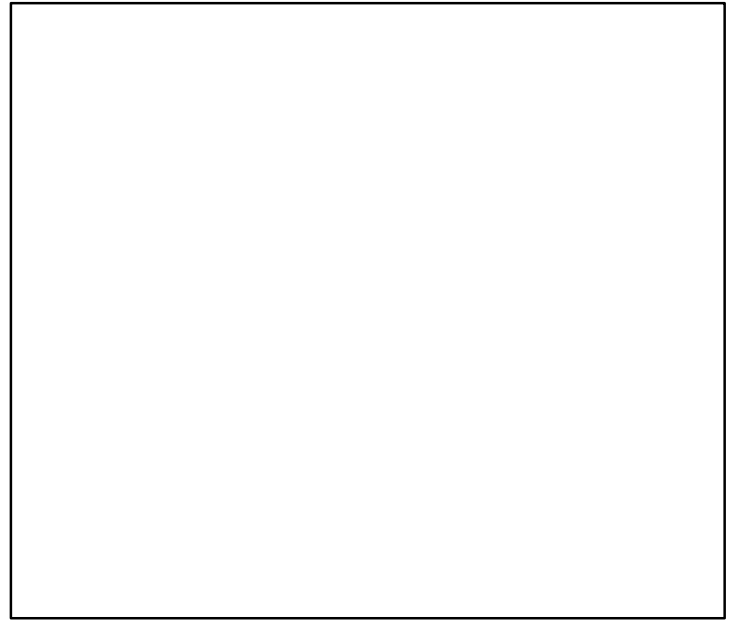
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	56,300	-	-
SSB	SSB-MT	2018	25,000	-	3+
TN	-	-	-	-	-
R	R-E00	2018	164,215,680	-	2
F	F-1/yr	2007	0.04	-	-
ER	ER-calc-ratio	2015	0.038	-	-
TC	TC-MT	2015	2160		
TL	TL-MT	2018	1910		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring Prince Rupert District [HERRPRD]

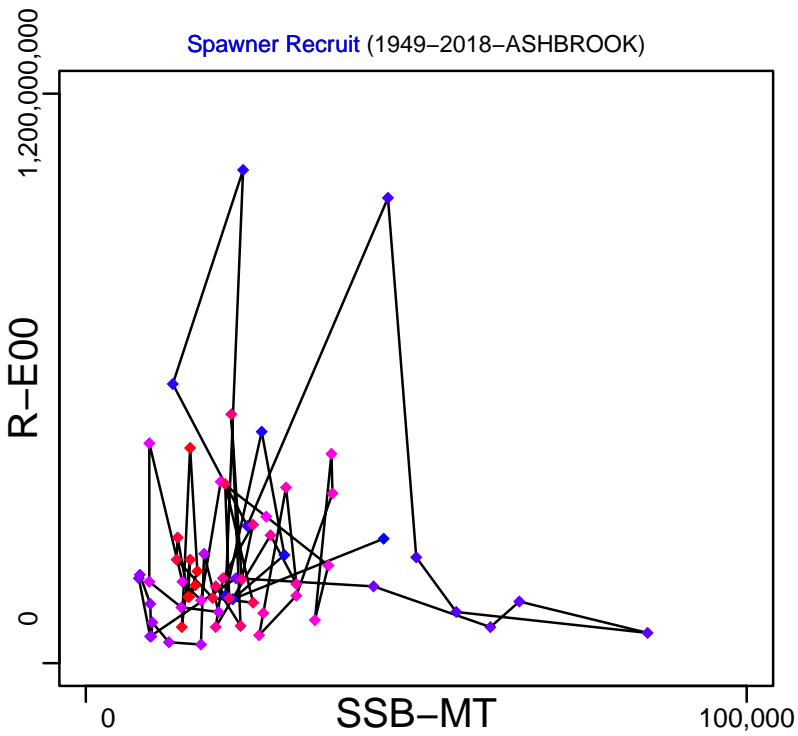
Kobe MSY*



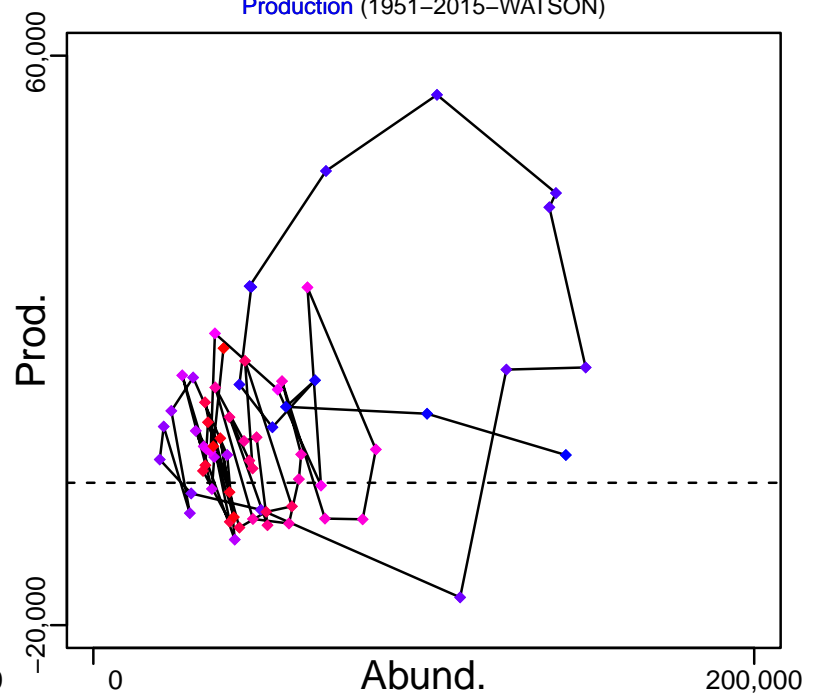
Kobe MGT*



Spawner Recruit (1949–2018–ASHBROOK)



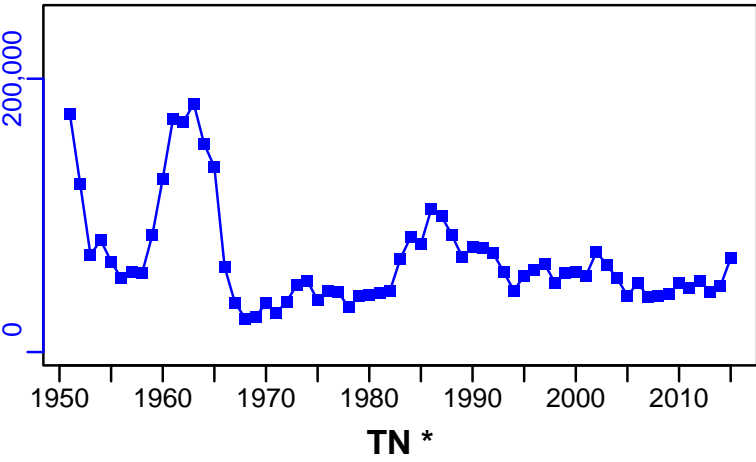
Production (1951–2015–WATSON)



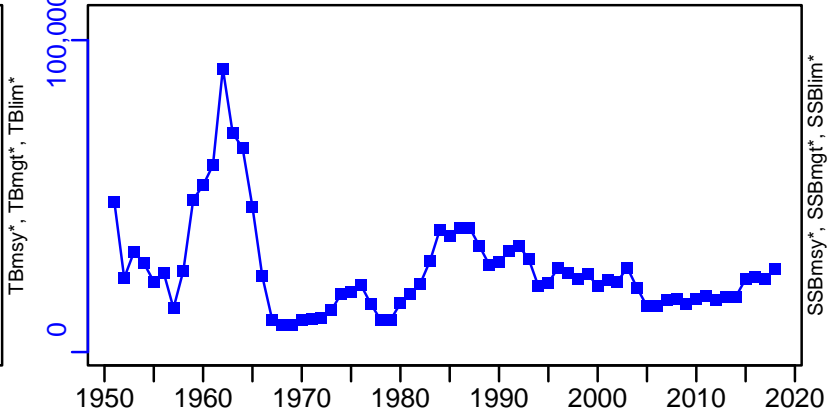
◆ Start Year ◆ End Year * No Data

Pacific herring Prince Rupert District [HERRPRD]

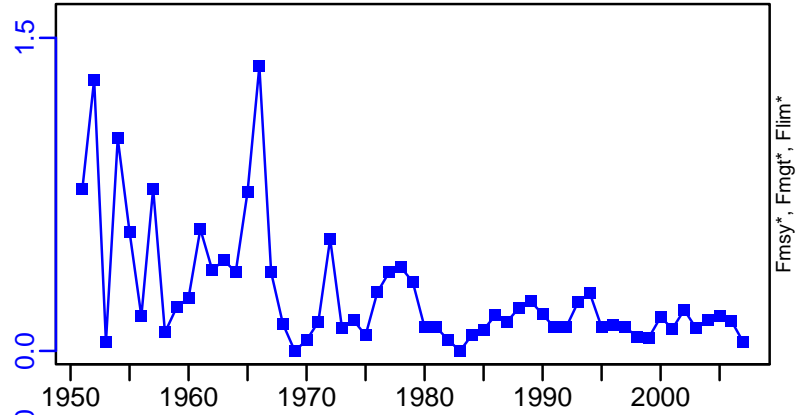
TB-MT (1951-2015-WATSON)



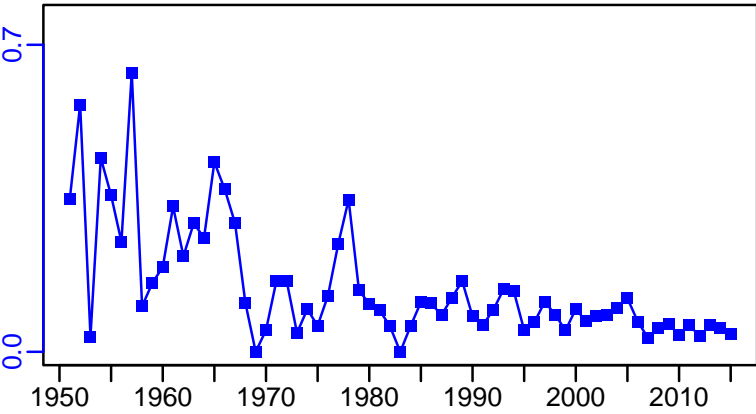
SSB-MT (1949-2018-ASHBROOK)



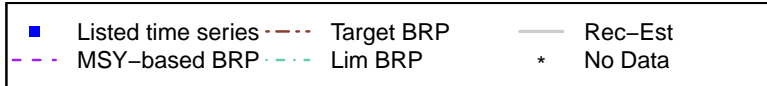
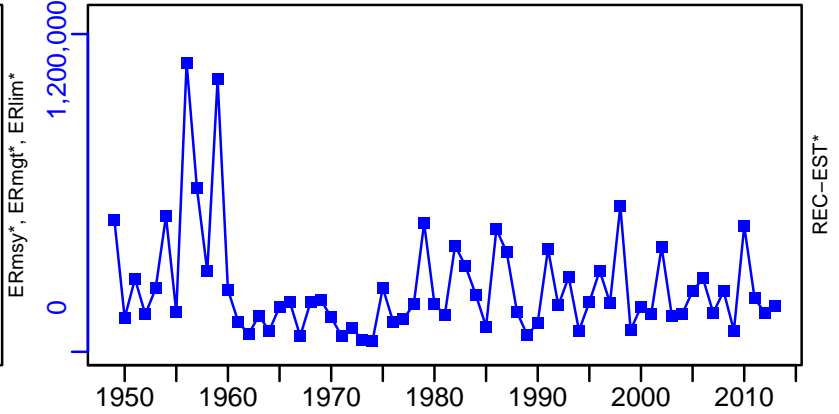
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1951-2015-WATSON)



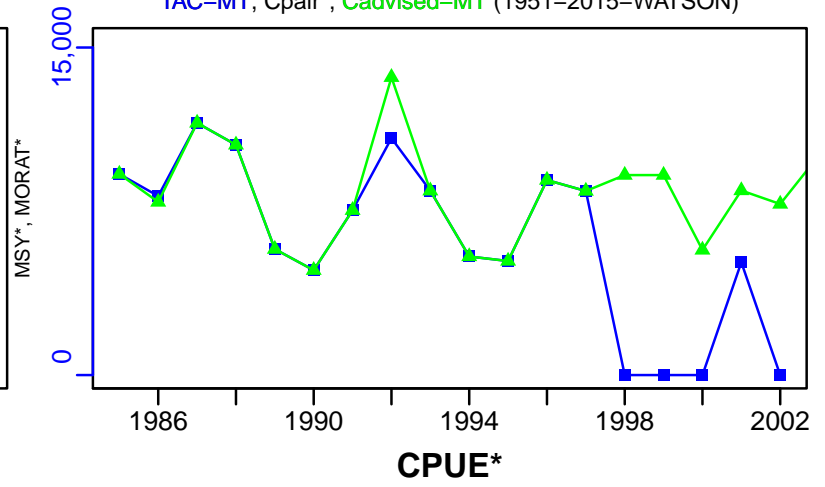
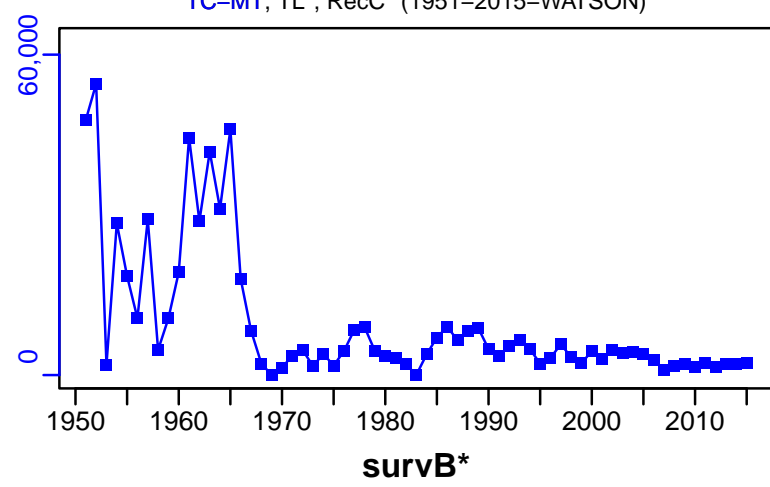
R-E00 (1949-2018-ASHBROOK)



Pacific herring Prince Rupert District [HERRPRD]

TC-MT, TL*, RecC* (1951-2015-WATSON)

TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*

CdivMSY*



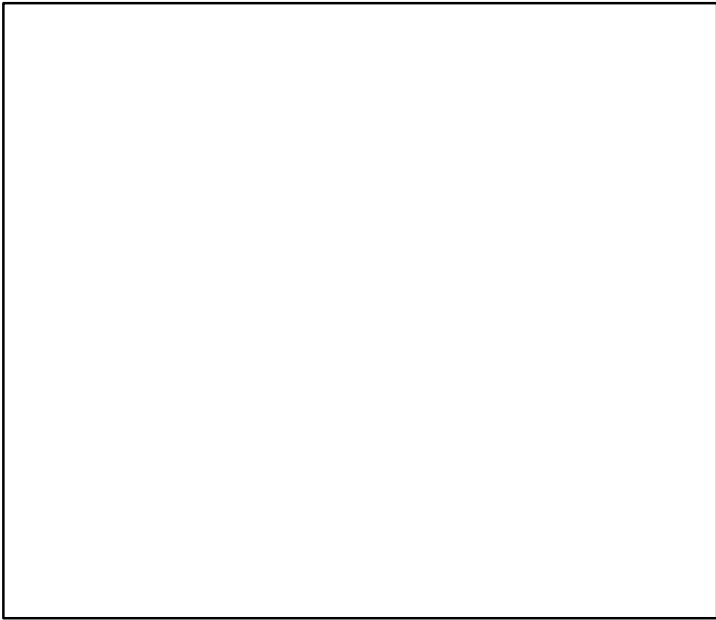
Pacific herring Prince William Sound [HERRPWS]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	ADFG-HERRPWS-1980-2006-COLLIE
Area	Prince William Sound
Management Authority	State of Alaska
Assessor	Alaska Department of Fish and Game
Asmts in RAM	2006

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2006	0.25
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2006	9500	Both	3+
TN	-	-	-	-	-
R	R-E00	2006	30,300,000	-	3
F	F-1/yr	2006	0	Both	3+
ER	-	-	-	-	-
TC	TC-E00	2006	0		
TL	TL-MT	2006	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

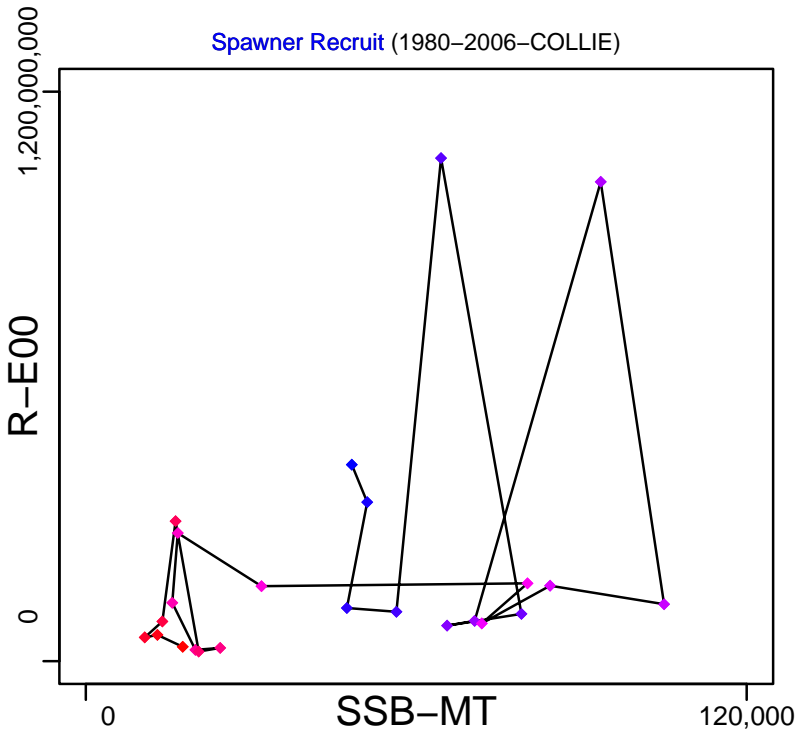
Kobe MSY*



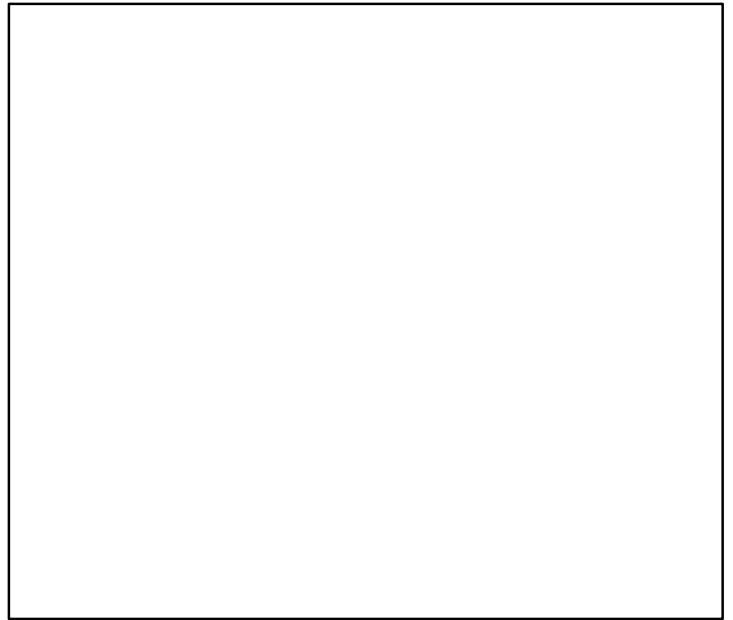
Kobe MGT*



Spawner Recruit (1980–2006–COLLIE)



Production*



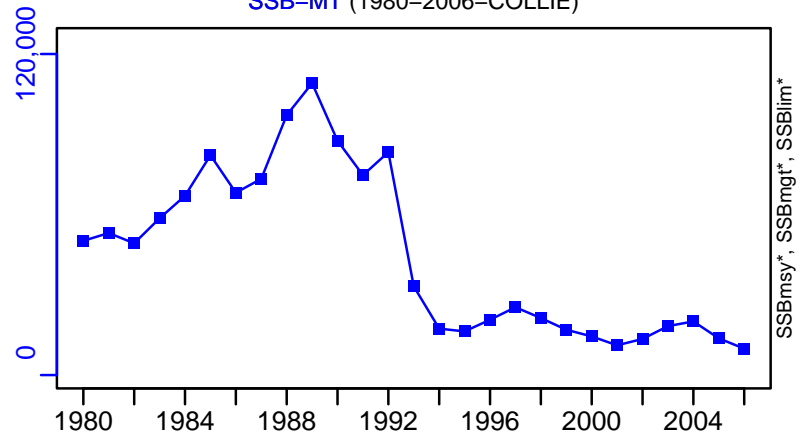
◆ Start Year ◆ End Year * No Data

Pacific herring Prince William Sound [HERRPWS]

TB*



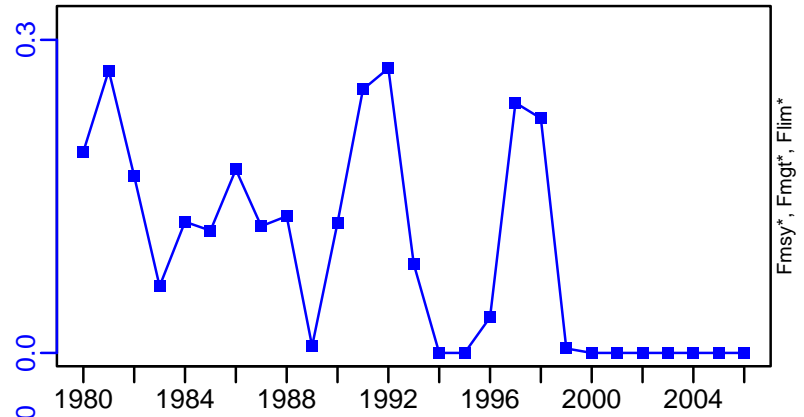
SSB-MT (1980-2006-COLLIE)



TN *



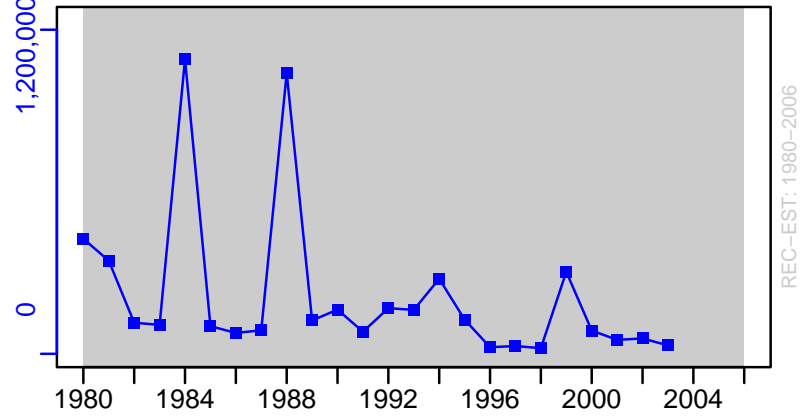
F-1/yr (1980-2006-COLLIE)



ER*



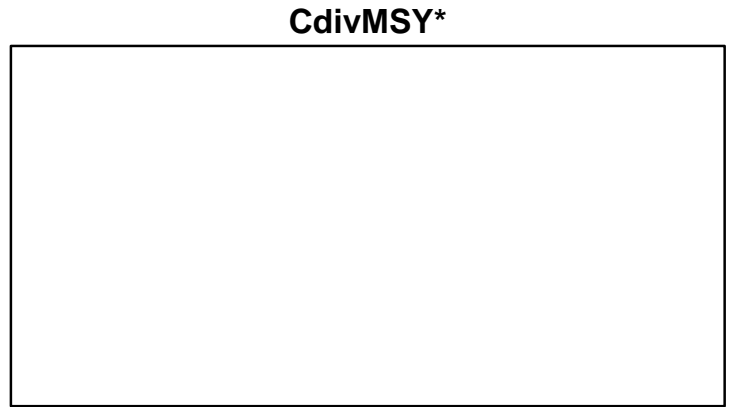
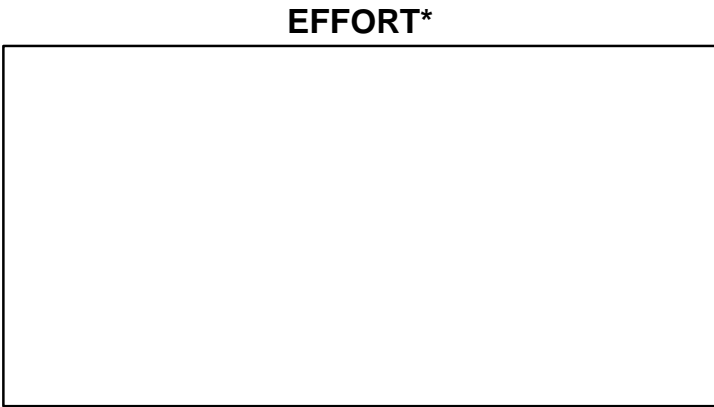
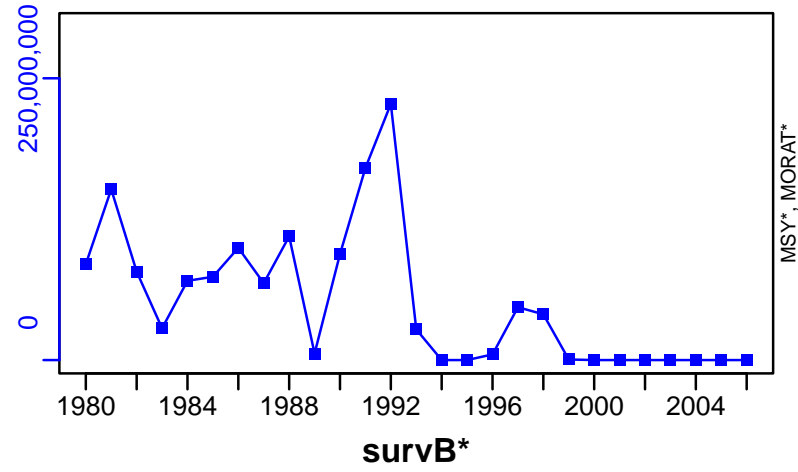
R-E00 (1980-2006-COLLIE)



Pacific herring Prince William Sound [HERRPWS]

TC-E00, TL*, RecC* (1980-2006-COLLIE)

TAC*, Cpair*, Cadv*



Herring Gulf of Riga East of Gotland [HERRRIGA]

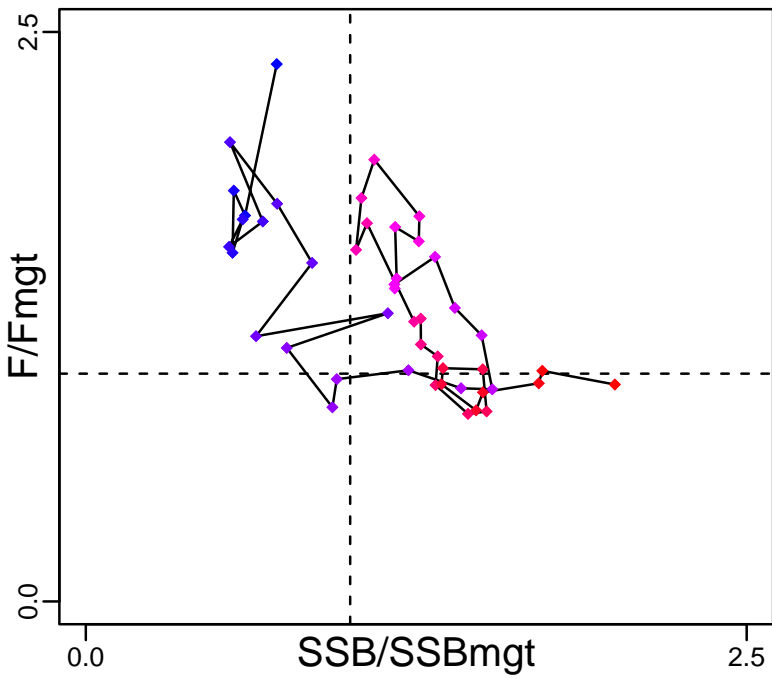
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	WGBFAS-HERRRIGA-1977-2023-ICESIMP2024
Area	Gulf of Riga East of Gotland
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2023

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2020	0.32
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2023	72,907
Fmgt	Fmgt-1/yr	2023	0.28
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2011	0.2
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	52,076
Flim	Flim-1/yr	2023	0.49
ERlim	-	-	-

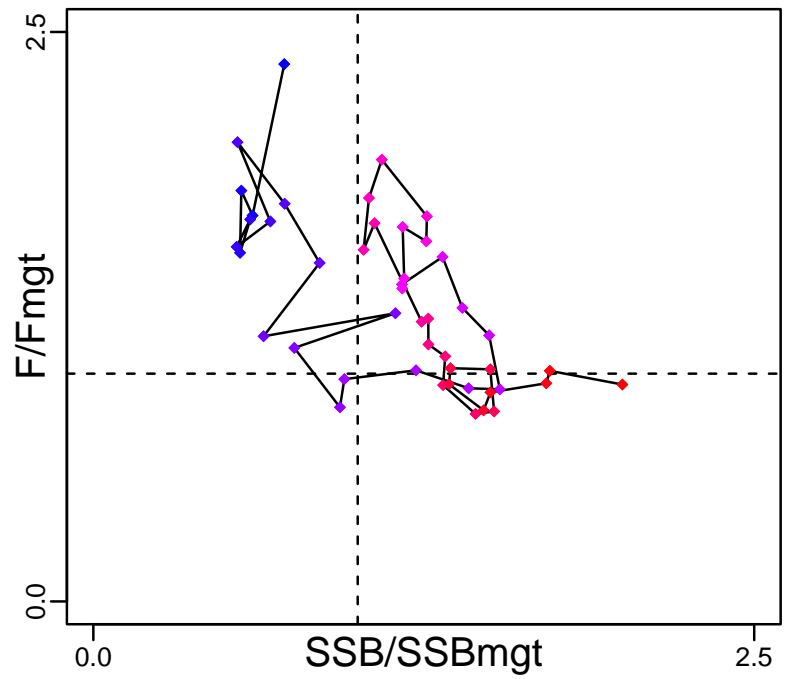
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	177,796	-	-
SSB	SSB-MT	2023	139,870	-	-
TN	-	-	-	-	-
R	R-E00	2023	4,097,984	-	0
F	F-1/yr	2023	0.267	-	2 to 6
ER	ER-calc-ratio	2019	0.145	-	-
TC	TC-MT	2017	30,900		
TL	TL-MT	2023	41,117		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2020	0.889		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2023	1.918		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	0.952		
ER/ERmgt	-	-	-		

Herring Gulf of Riga East of Gotland [HERRRIGA]

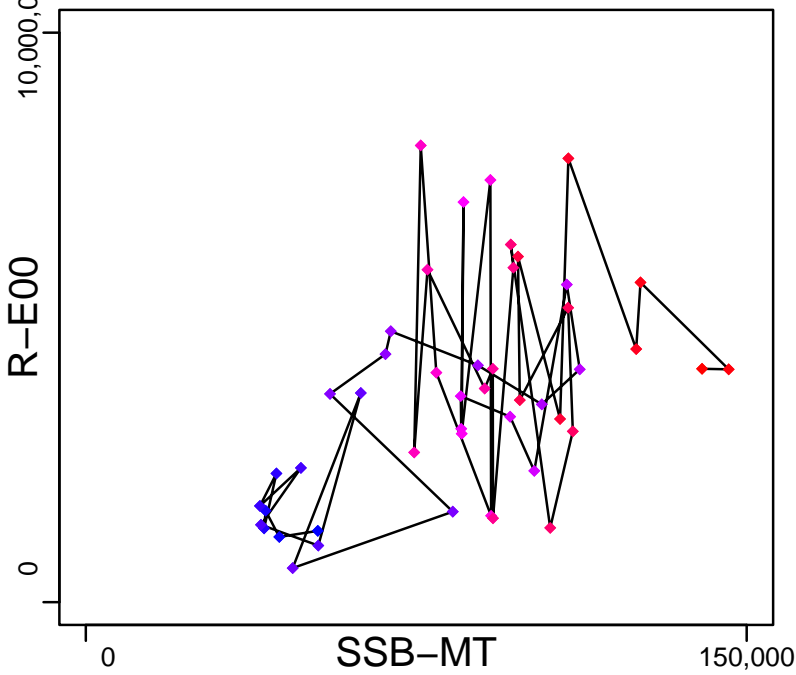
Kobe MSYpref (1977–2023–ICESIMP2024)



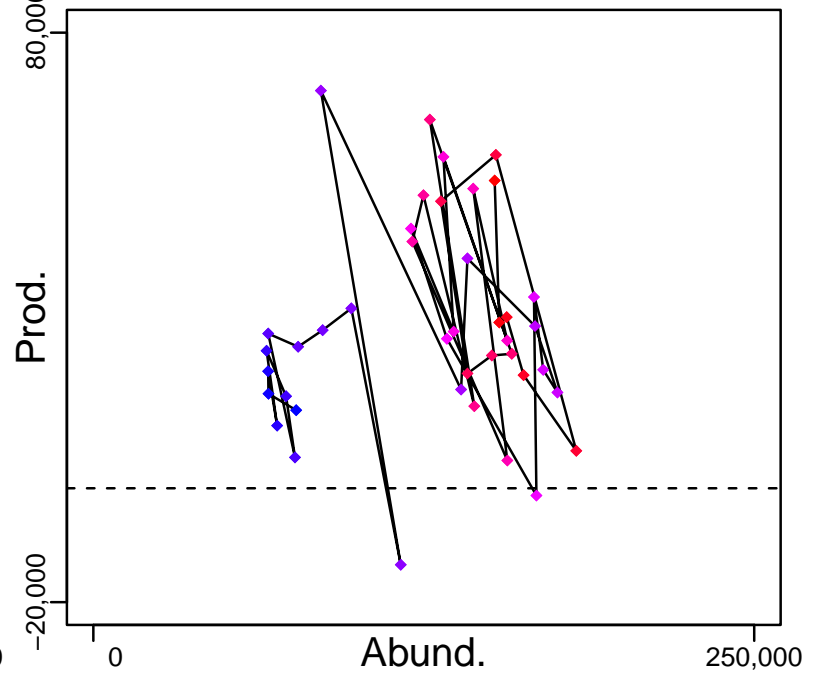
Kobe MGTpref (1977–2023–ICESIMP2024)



Spawner Recruit (1977–2023–ICESIMP2024)



Production (1976–2019–ICESIMP2021)

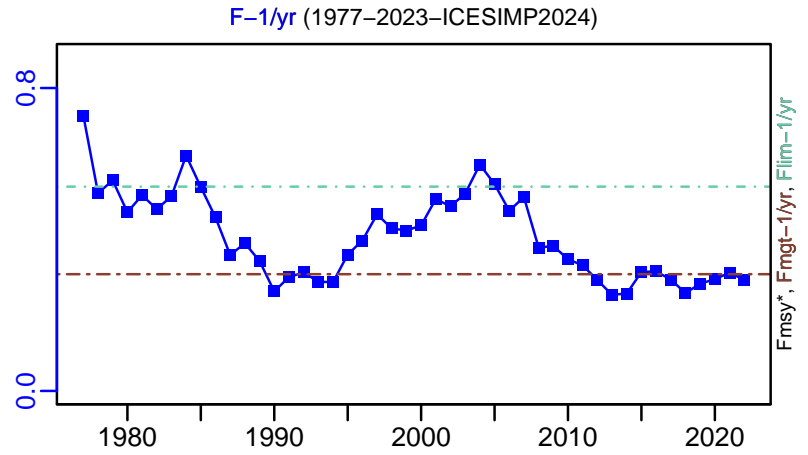
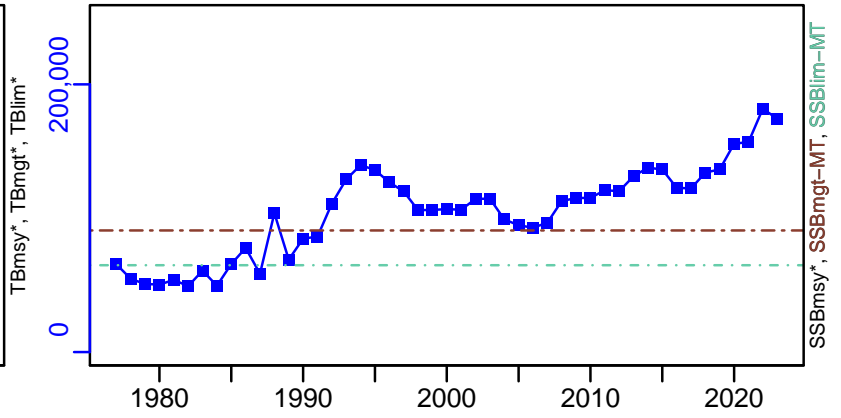
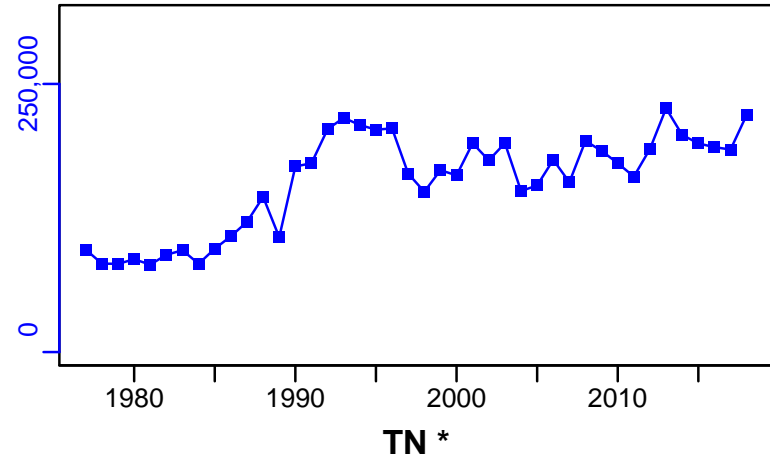


◆ Start Year ◆ End Year * No Data

Herring Gulf of Riga East of Gotland [HERRRIGA]

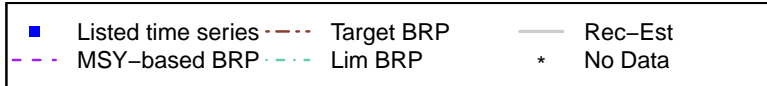
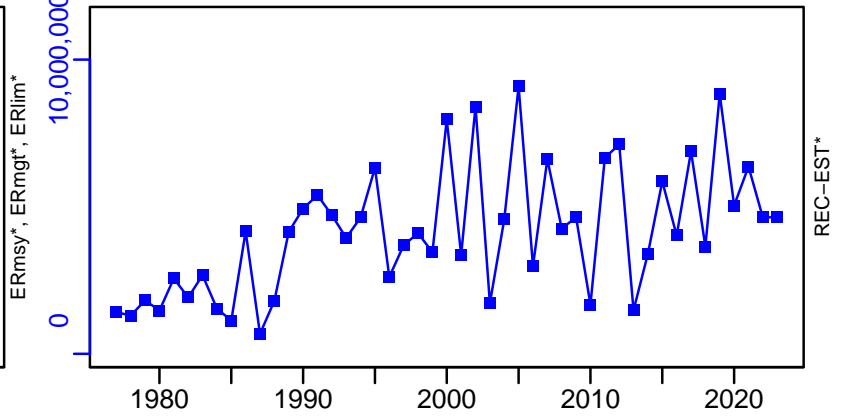
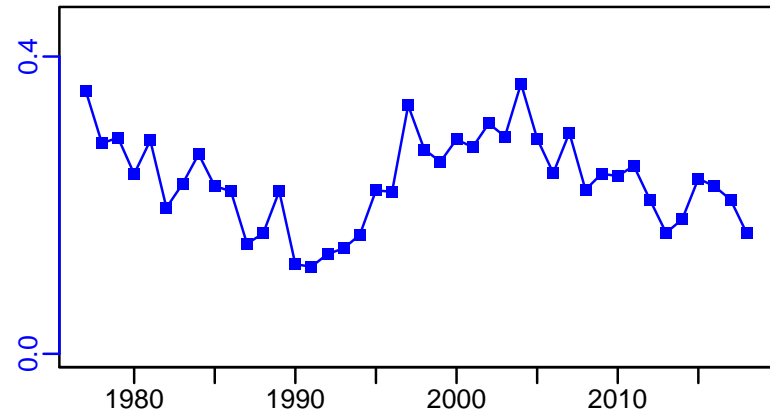
TB-MT (1976–2019–ICESIMP2021)

SSB-MT (1977–2023–ICESIMP2024)



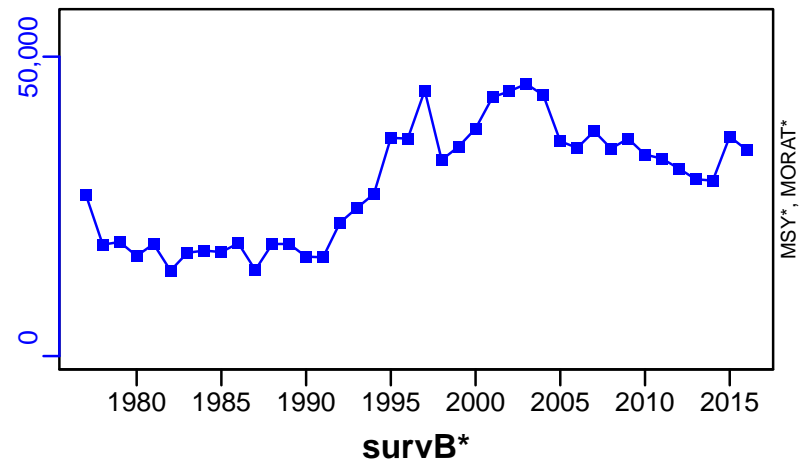
ER-calc-ratio (1976–2019–ICESIMP2021)

R-E00 (1977–2023–ICESIMP2024)



Herring Gulf of Riga East of Gotland [HERRRIGA]

TC-MT, TL*, RecC* (1976–2017–ICESIMP2018)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Herring ICES 7a-g-h-j-k [HERRSIRS]

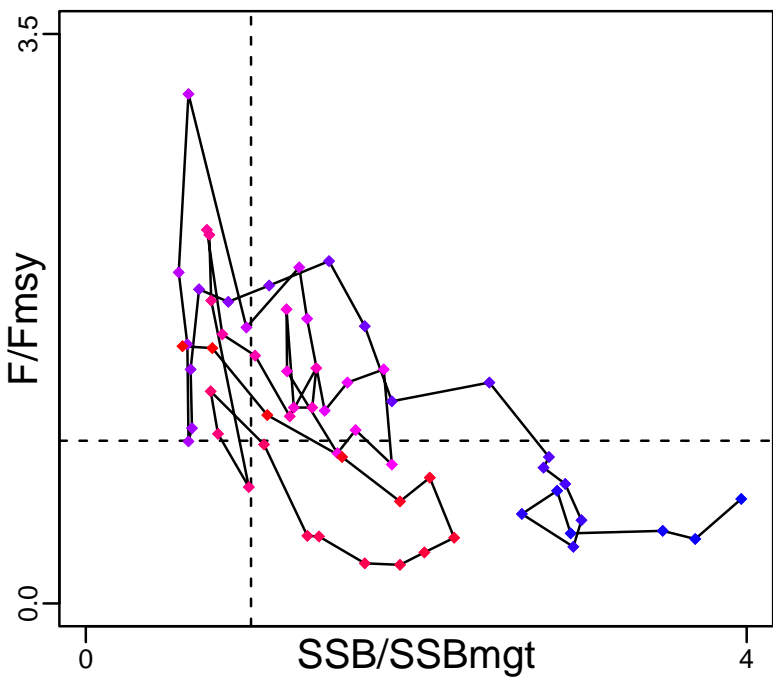
Metadata	
Scientific Name	Clupea harengus
Current Assess ID	HAWG-HERRSIRS-1958-2021-ICESIMP2021-2
Area	ICES 7a-g-h-j-k
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2010, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.26
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	61,000
Fmgt	Fmgt-1/yr	2021	0.26
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	34,000
Flim	Flim-1/yr	2021	0.45
ERlim	-	-	-

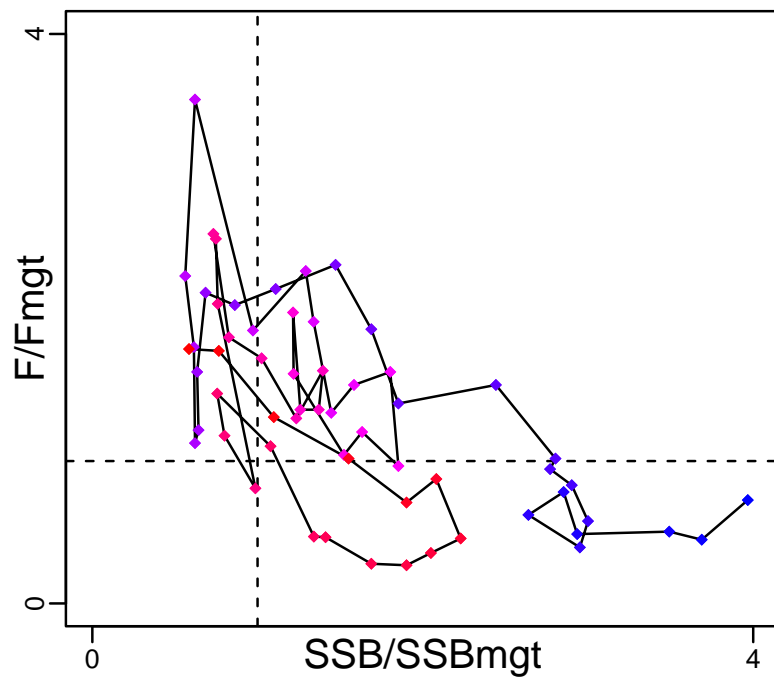
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	61,300	Both	-
SSB	SSB-MT	2021	19,300	-	-
TN	-	-	-	-	-
R	R-E00	2021	165,000	-	1
F	F-1/yr	2021	0.023	-	-
ER	ER-calc-ratio	2018	0.176	-	-
TC	TC-MT	2021	132		
TL	TL-MT	2019	4420		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	0.087		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	0.561		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.087		
ER/ERmgt	-	-	-		

Herring ICES 7a-g-h-j-k [HERRSIRS]

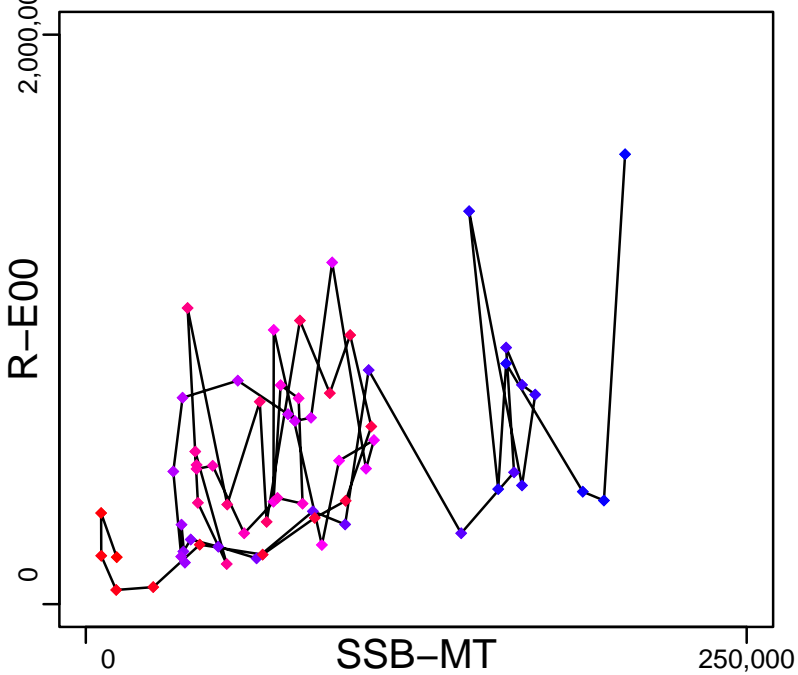
Kobe MSYpref (1957–2018–ICESIMP2018)



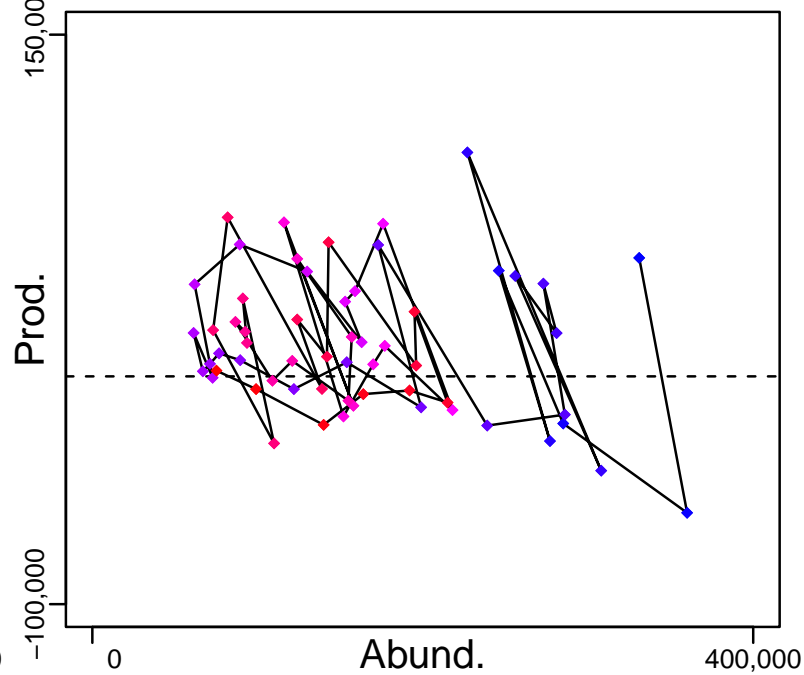
Kobe MGTpref (1957–2018–ICESIMP2018)



Spawner Recruit (1958–2021–ICESIMP2021–2)



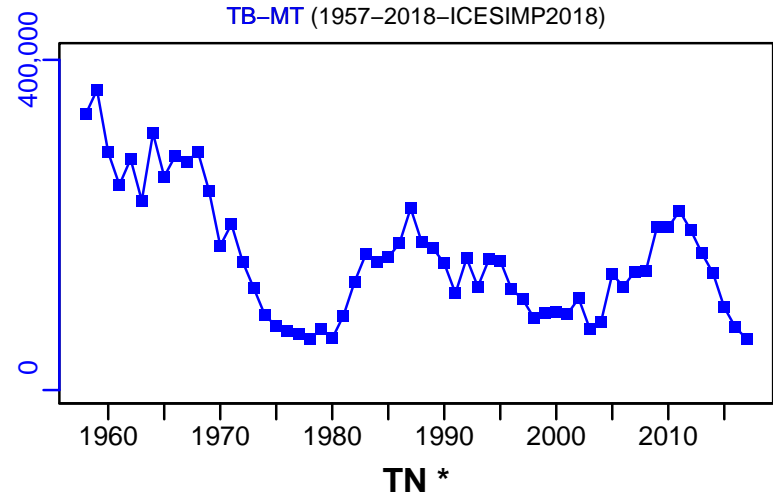
Production (1957–2018–ICESIMP2018)



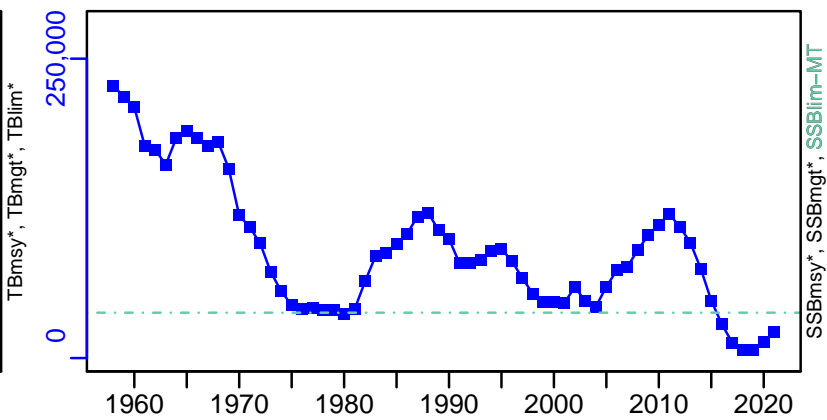
◆ Start Year ◆ End Year * No Data

Herring ICES 7a-g-h-j-k [HERRSIRS]

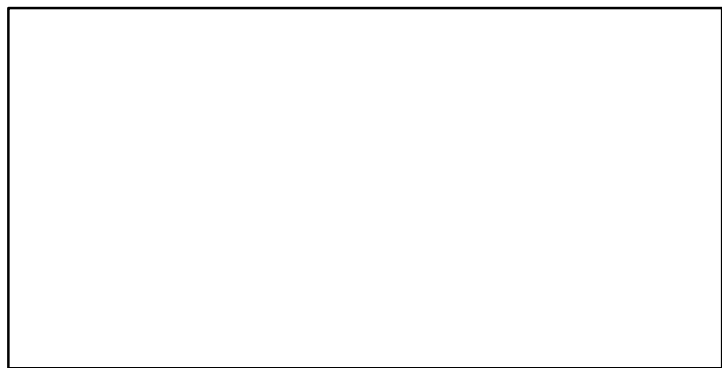
TB-MT (1957-2018-ICESIMP2018)



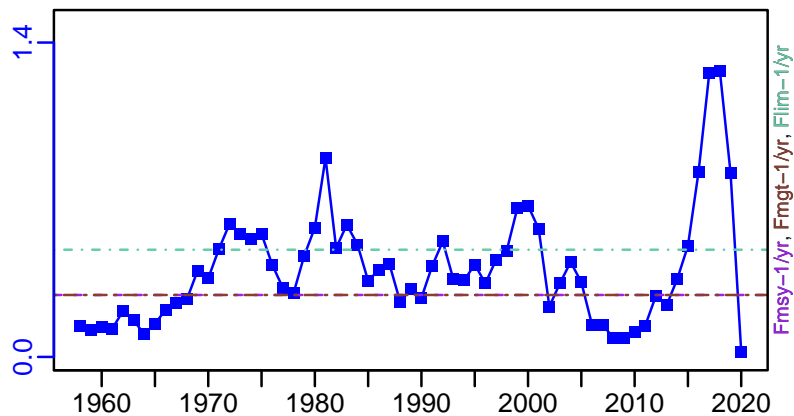
SSB-MT (1958-2021-ICESIMP2021-2)



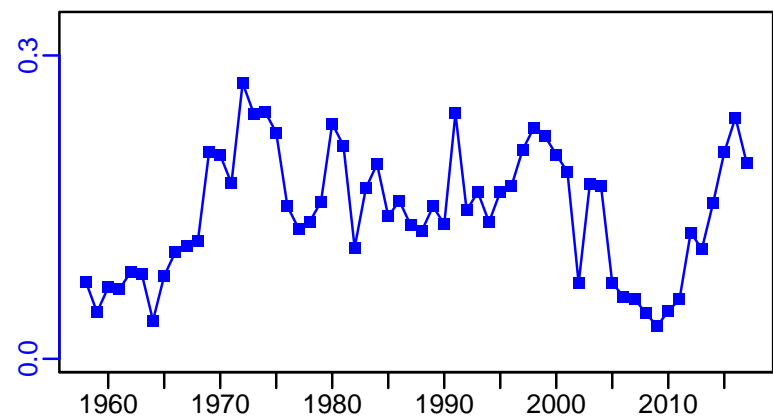
TN *



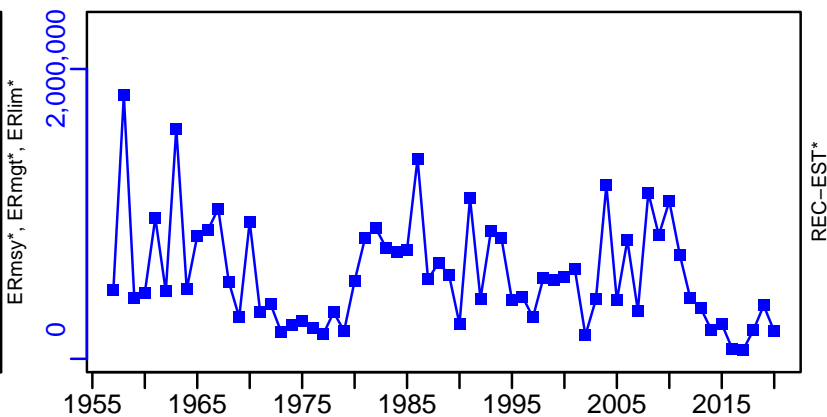
F-1/yr (1958-2021-ICESIMP2021-2)



ER-calc-ratio (1957-2018-ICESIMP2018)



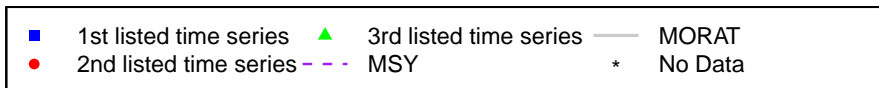
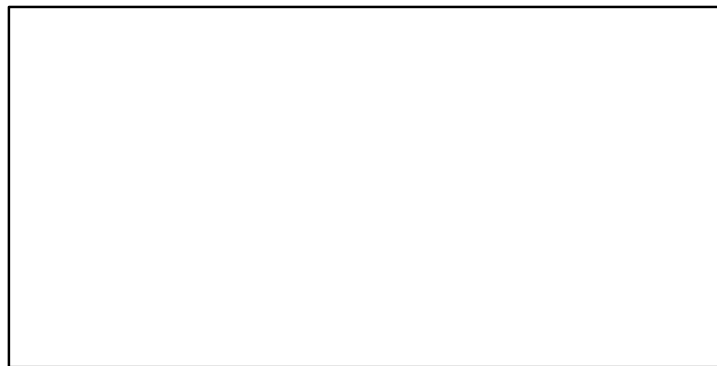
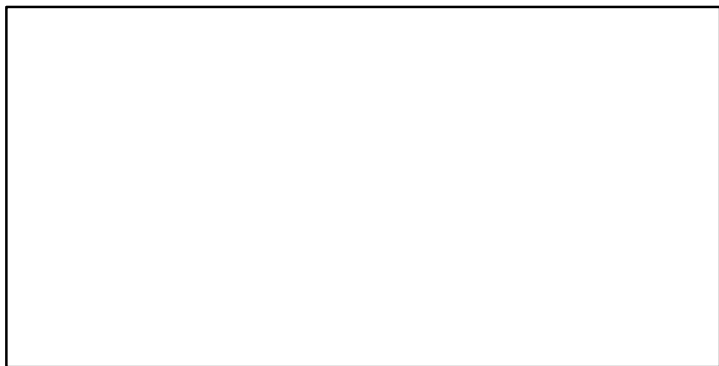
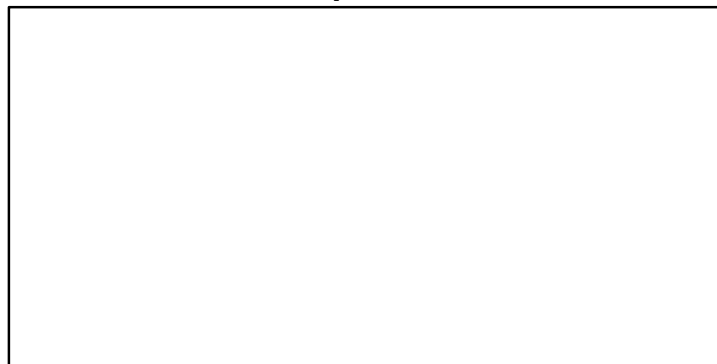
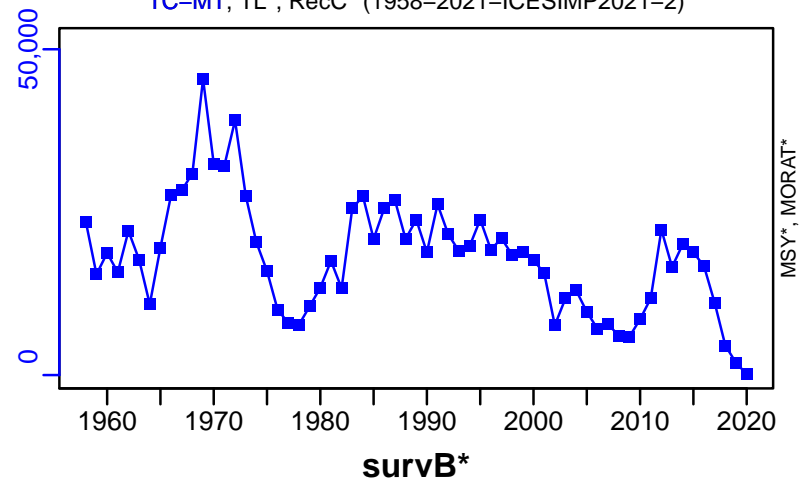
R-E00 (1958-2021-ICESIMP2021-2)



Herring ICES 7a–g–h–j–k [HERRSIRS]

TC–MT, TL*, RecC* (1958–2021–ICESIMP2021–2)

TAC*, Cpair*, Cadv*



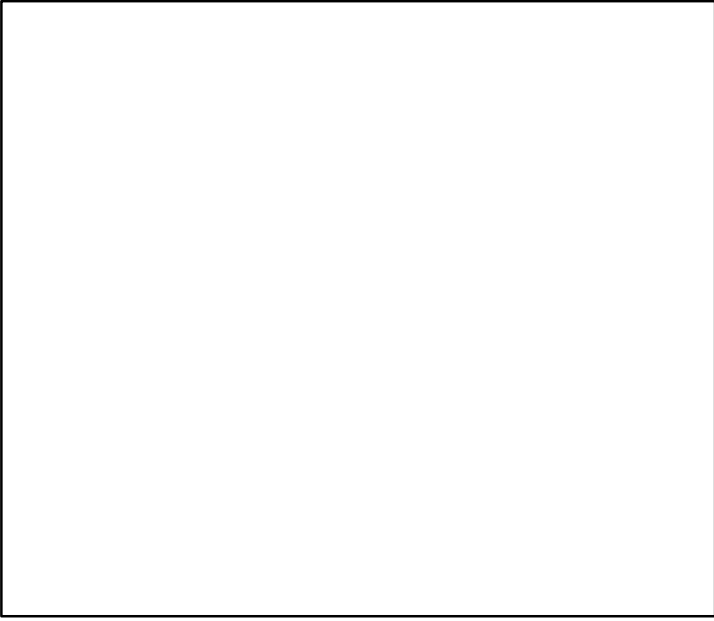
Pacific herring Sitka [HERRSITKA]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	ADFG-HERRSITKA-1978-2007-COLLIE
Area	Sitka
Management Authority	State of Alaska
Assessor	Alaska Department of Fish and Game
Asmts in RAM	2007

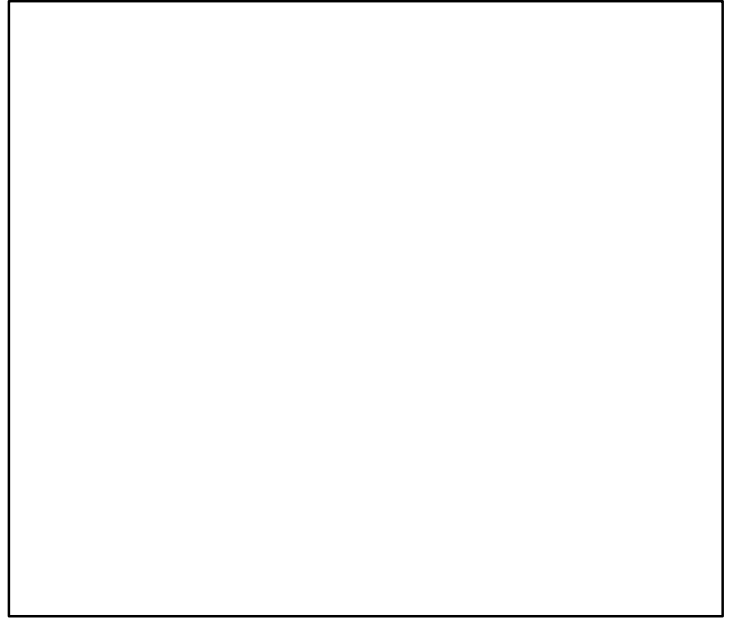
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2007	0.2
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2007	98,400	-	3+
SSB	SSB-MT	2007	82,900	Both	3+
TN	-	-	-	-	-
R	R-E00	2007	1.14×10^8	-	3
F	F-1/yr	2007	0.118	Both	3+
ER	-	-	-	-	-
TC	TC-E00	2007	69,600,000		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

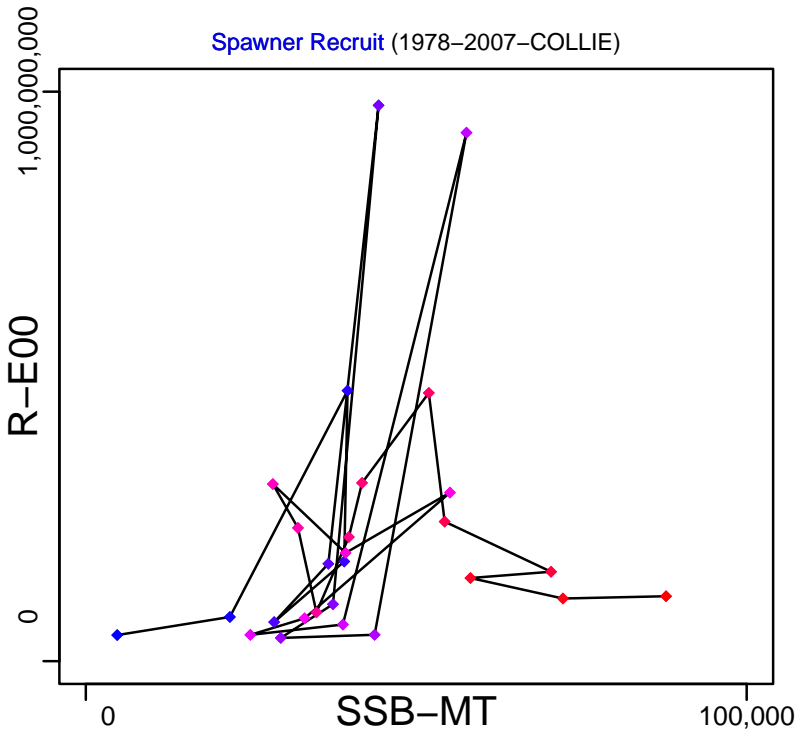
Kobe MSY*



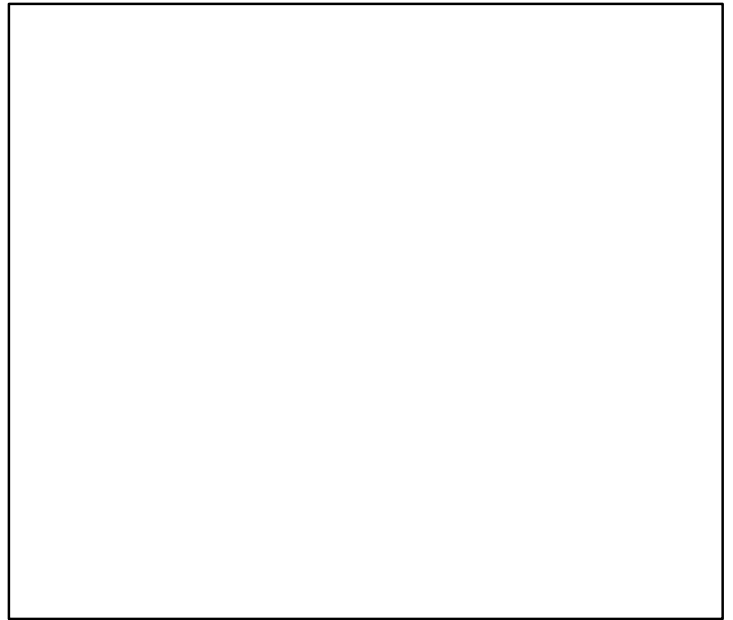
Kobe MGT*



Spawner Recruit (1978–2007–COLLIE)



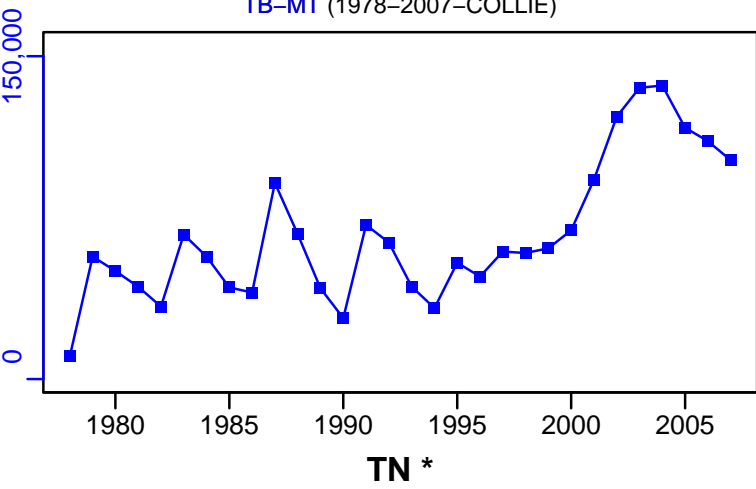
Production*



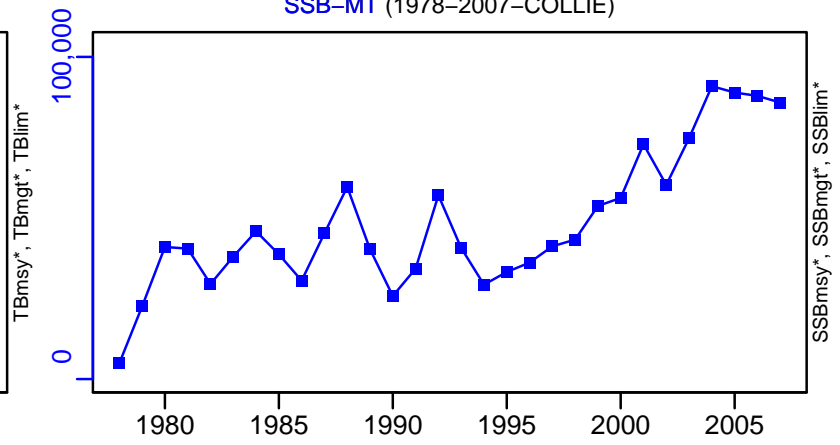
◆ Start Year ◆ End Year * No Data

Pacific herring Sitka [HERRSITKA]

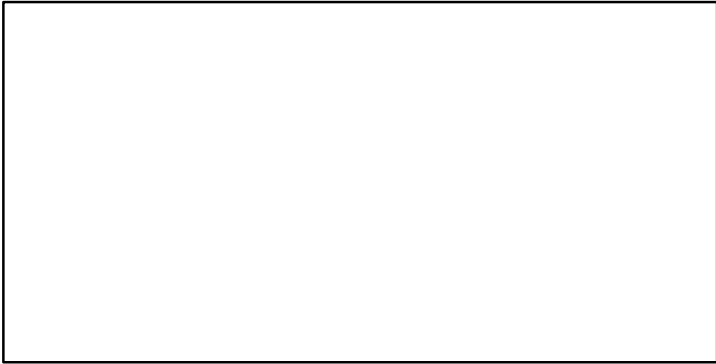
TB-MT (1978–2007–COLLIE)



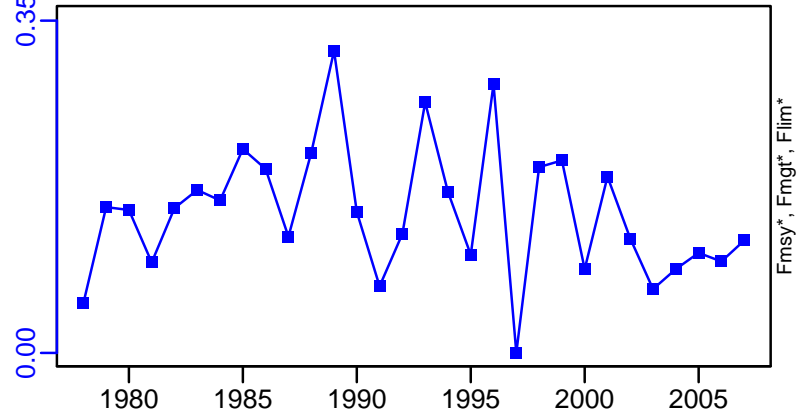
SSB-MT (1978–2007–COLLIE)



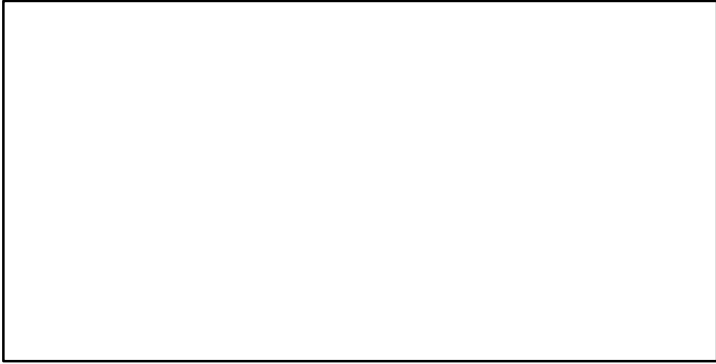
TN *



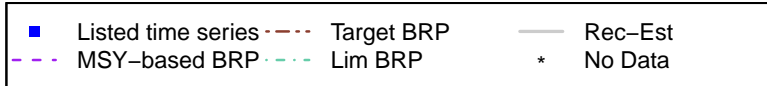
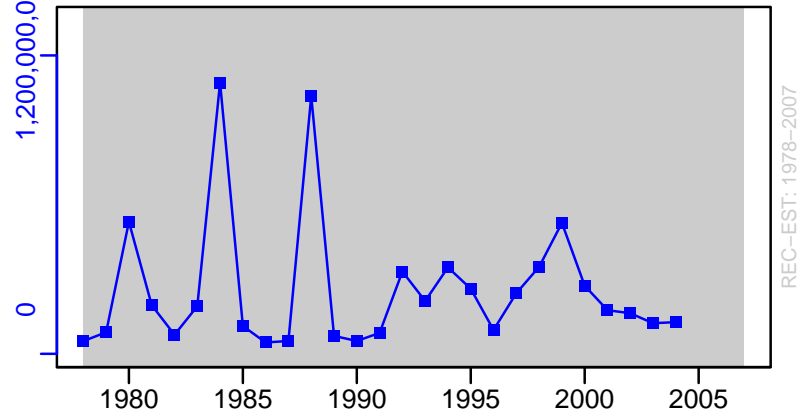
F-1/yr (1978–2007–COLLIE)



ER*

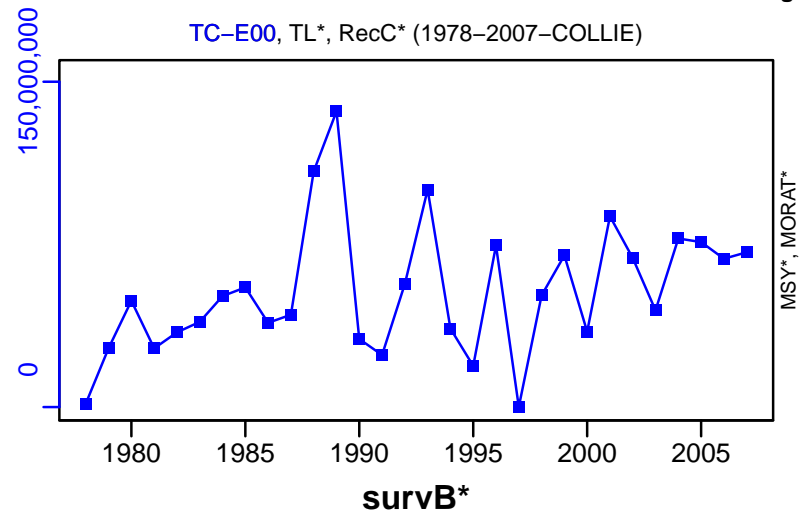


R-E00 (1978–2007–COLLIE)



Pacific herring Sitka [HERRSITKA]

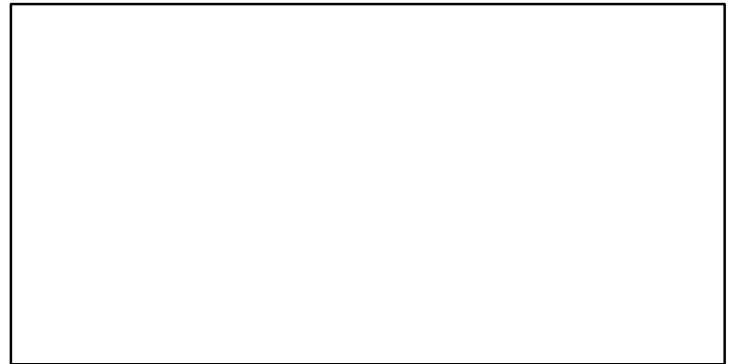
TC-E00, TL*, RecC* (1978-2007-COLLIE)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



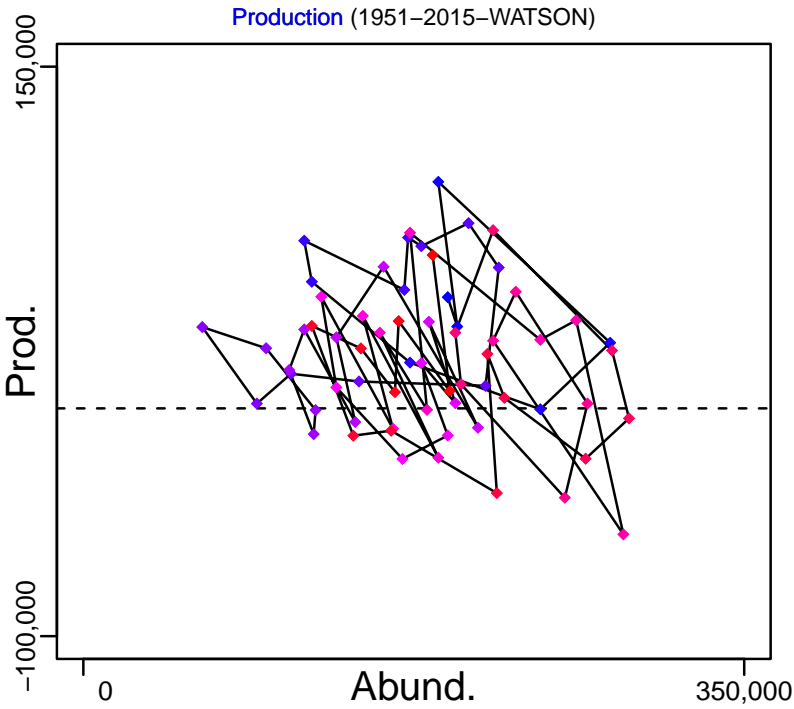
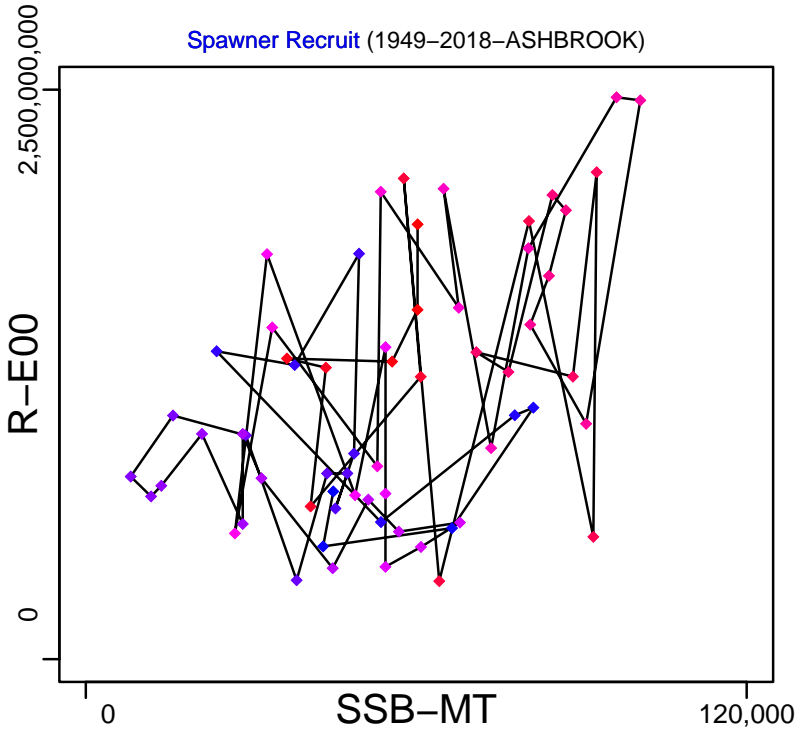
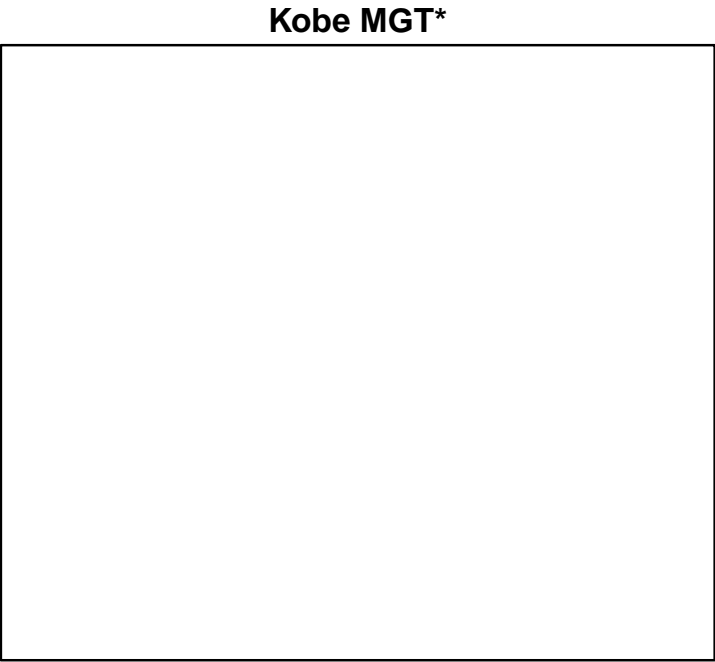
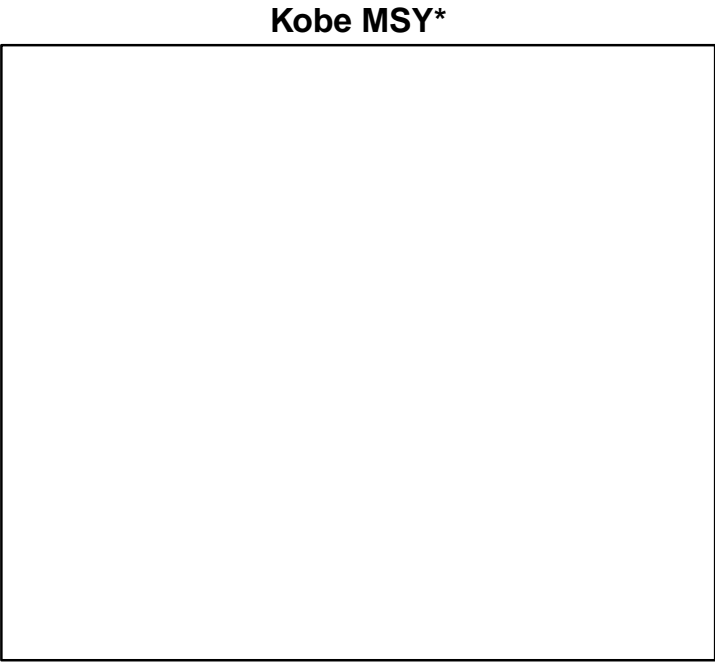
■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - MSY * No Data

Pacific herring Strait of Georgia [HERRSOG]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRSOG-1949-2018-ASHBROOK
Area	Strait of Georgia
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	138,795
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

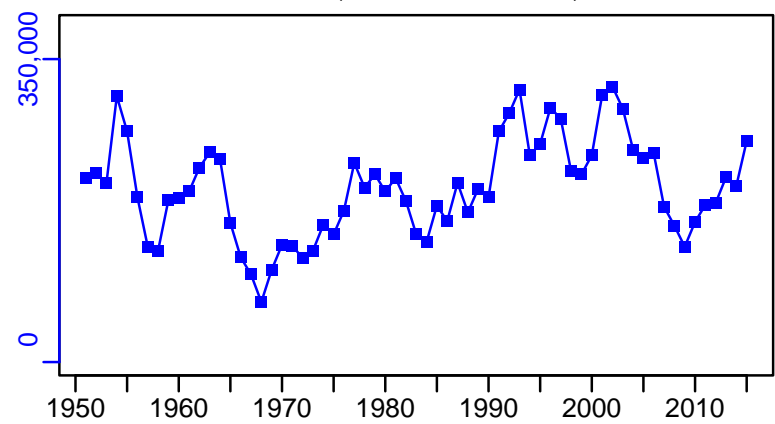
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	232,000	-	-
SSB	SSB-MT	2018	126,134	-	3+
TN	-	-	-	-	-
R	R-E00	2018	1,908,760,000	-	2
F	F-1/yr	2007	0.113	-	-
ER	ER-calc-ratio	2015	0.086	-	-
TC	TC-MT	2015	20,000		
TL	TL-MT	2018	25,806		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



◆ Start Year ◆ End Year * No Data

Pacific herring Strait of Georgia [HERRSOG]

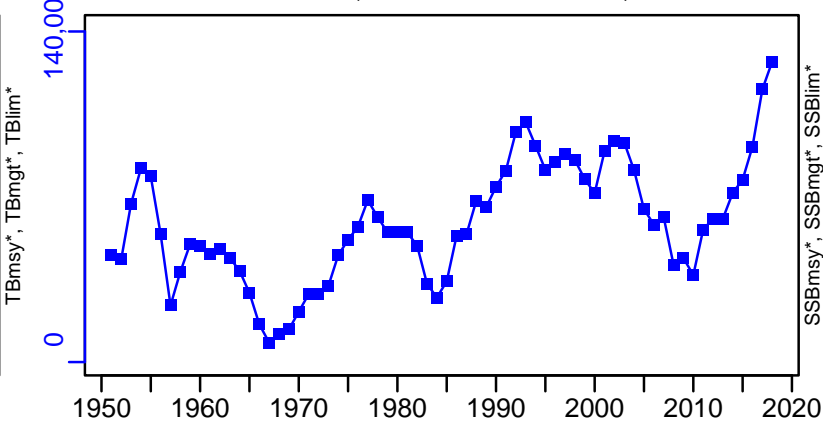
TB-MT (1951-2015-WATSON)



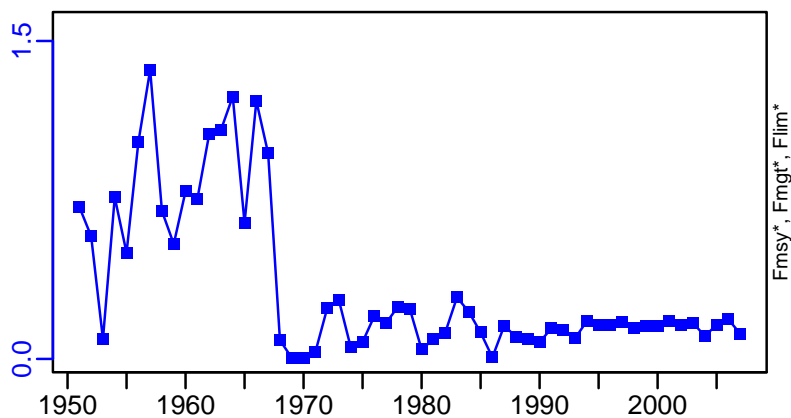
TN *



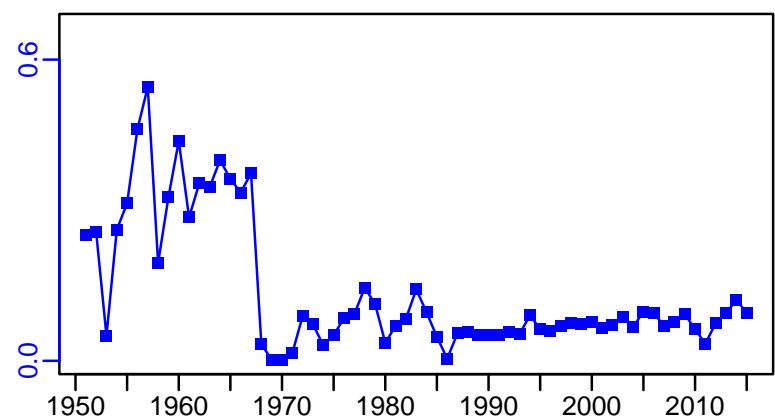
SSB-MT (1949-2018-ASHBROOK)



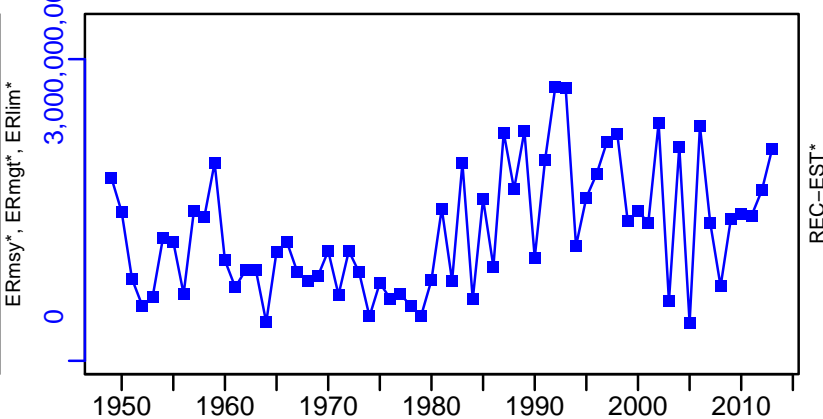
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1951-2015-WATSON)

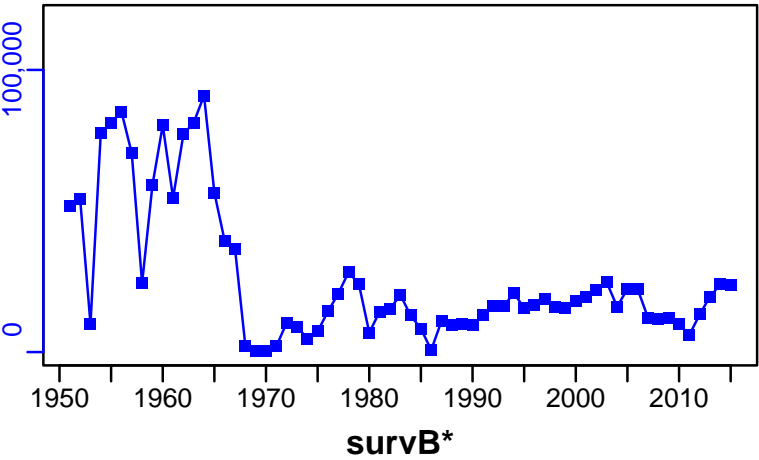


R-E00 (1949-2018-ASHBROOK)

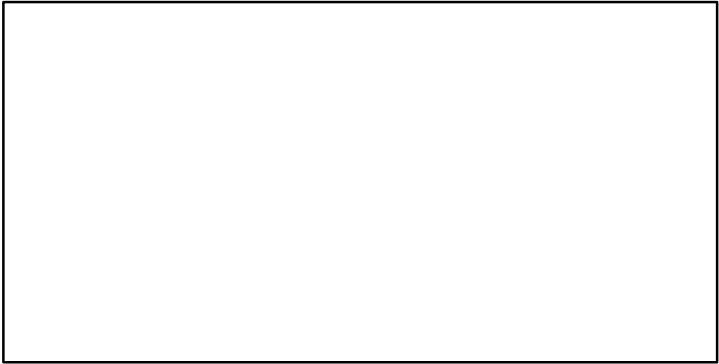
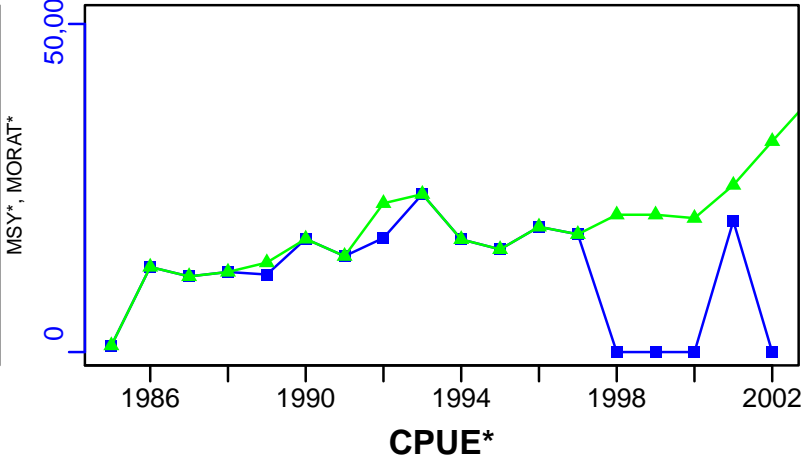


Pacific herring Strait of Georgia [HERRSOG]

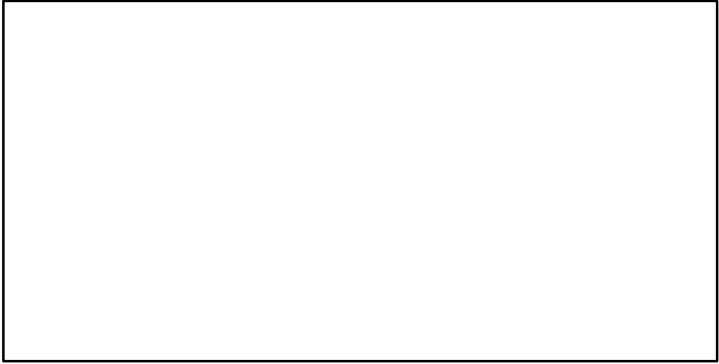
TC-MT, TL*, RecC* (1951-2015-WATSON)



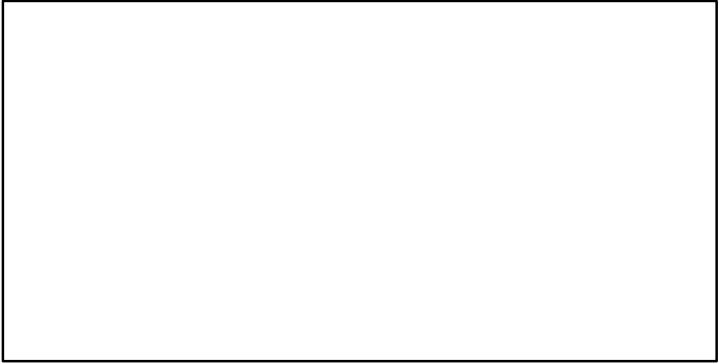
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



CdivMSY*

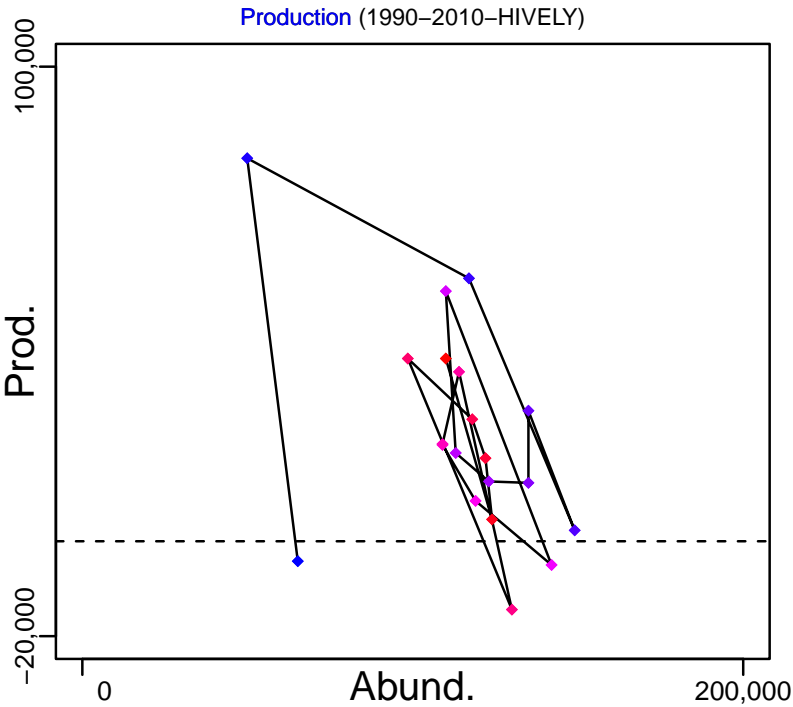
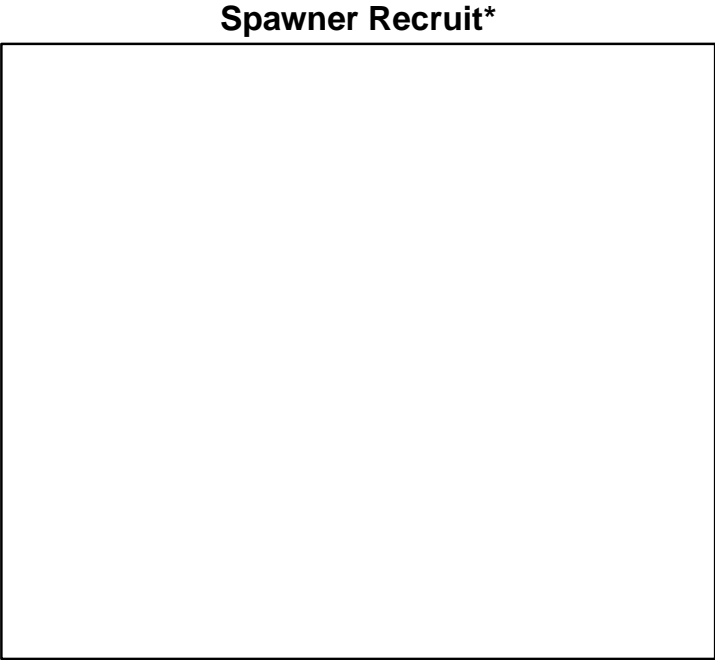
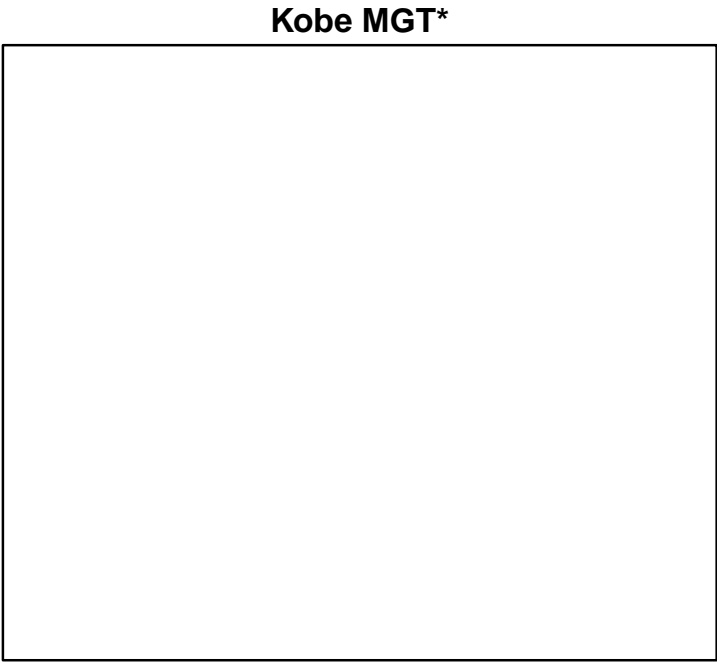
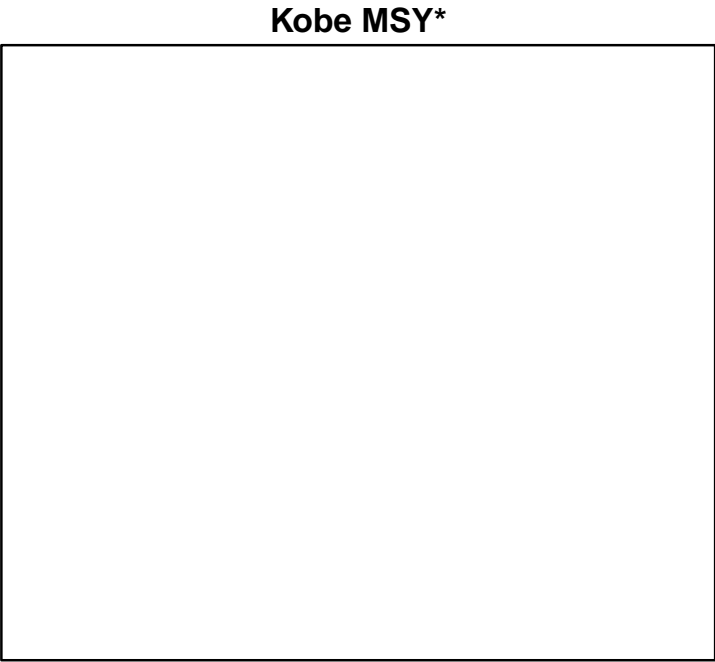


Pacific herring Togiak District [HERRTOG]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	ADFG-HERRTOG-1990-2010-HIVELY
Area	Togiak District
Management Authority	State of Alaska
Assessor	Alaska Department of Fish and Game
Asmts in RAM	2010

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	133,000	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-ratio	2010	0.18	-	-
TC	TC-MT	2010	23,900		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

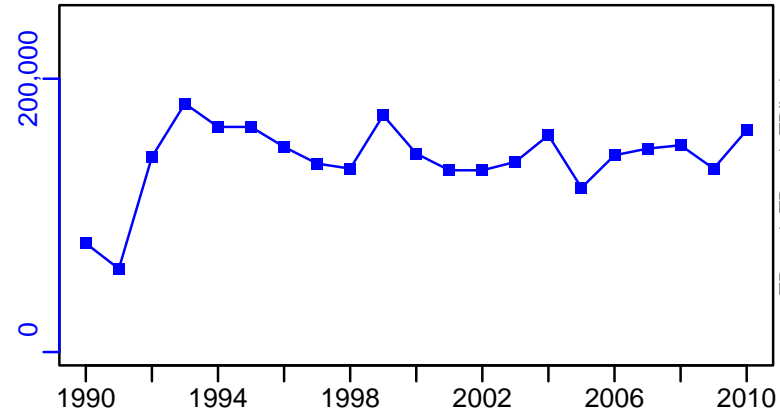


◆ Start Year ◆ End Year * No Data

Pacific herring Togiak District [HERRTOG]

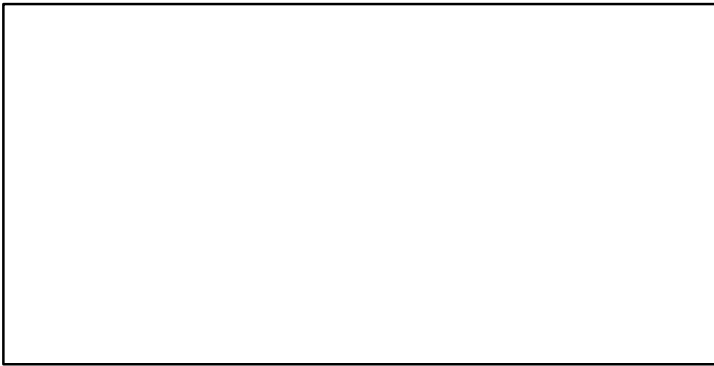
TB-MT (1990-2010-HIVELY)

SSB*



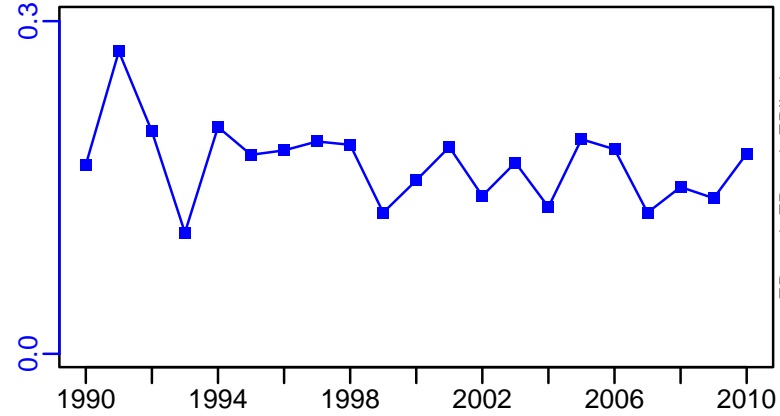
TN *

F*



ER-ratio (1990-2010-HIVELY)

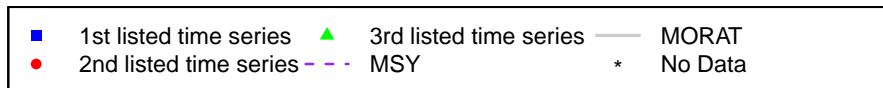
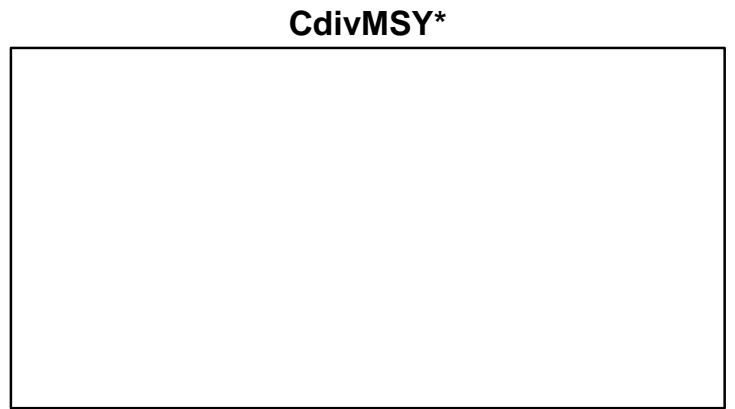
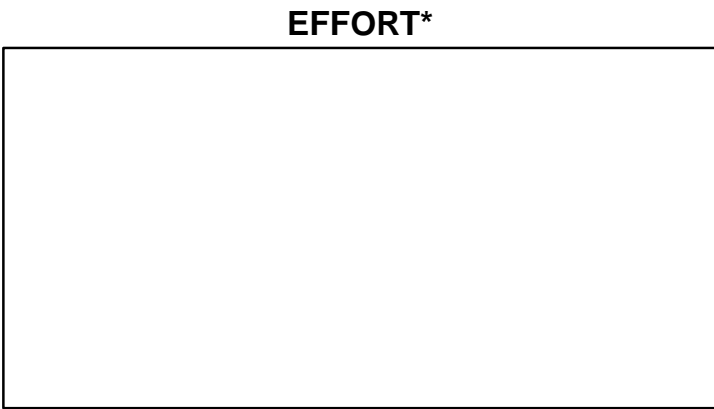
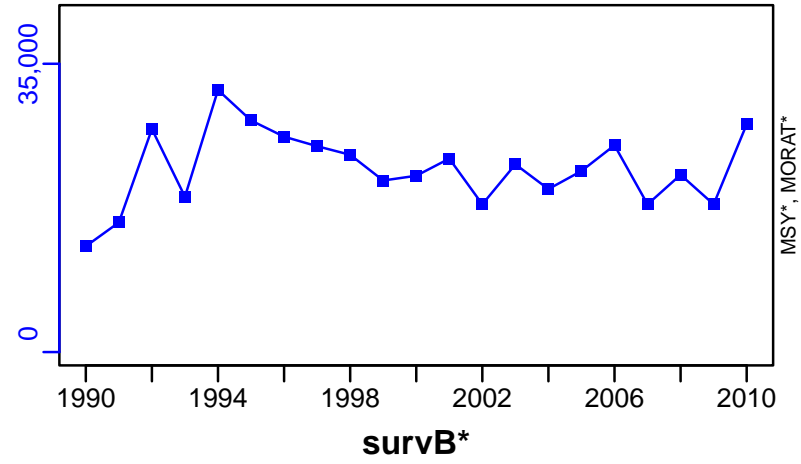
Recruits*



Pacific herring Togiak District [HERRTOG]

TC-MT, TL*, RecC* (1990-2010-HIVELY)

TAC*, Cpair*, Cadv*

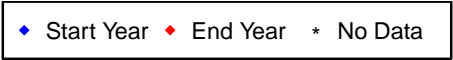
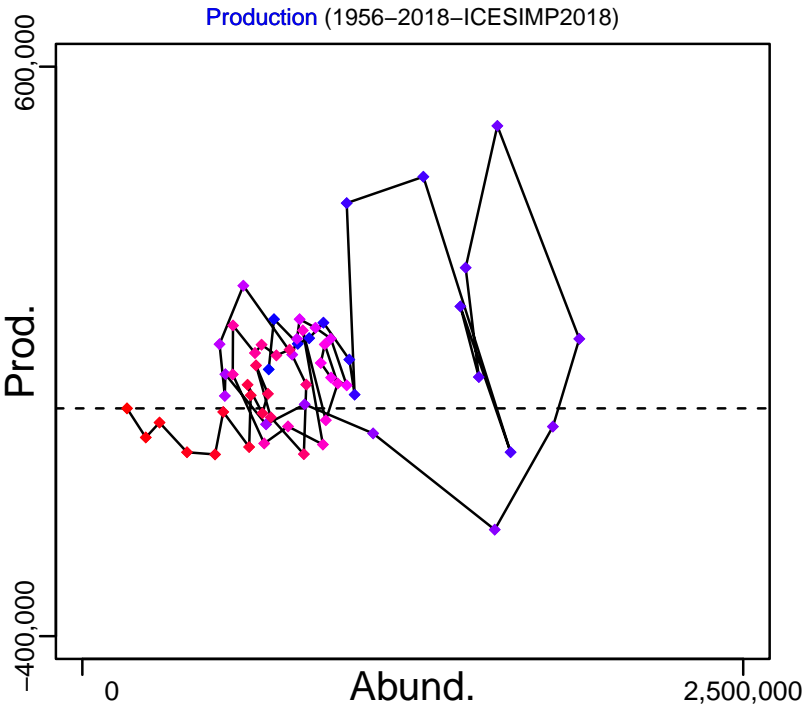
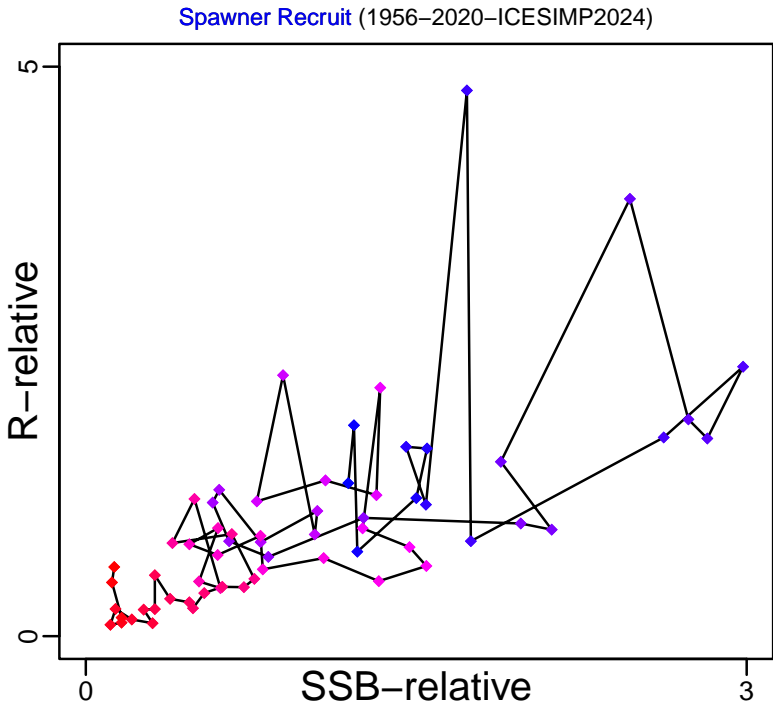
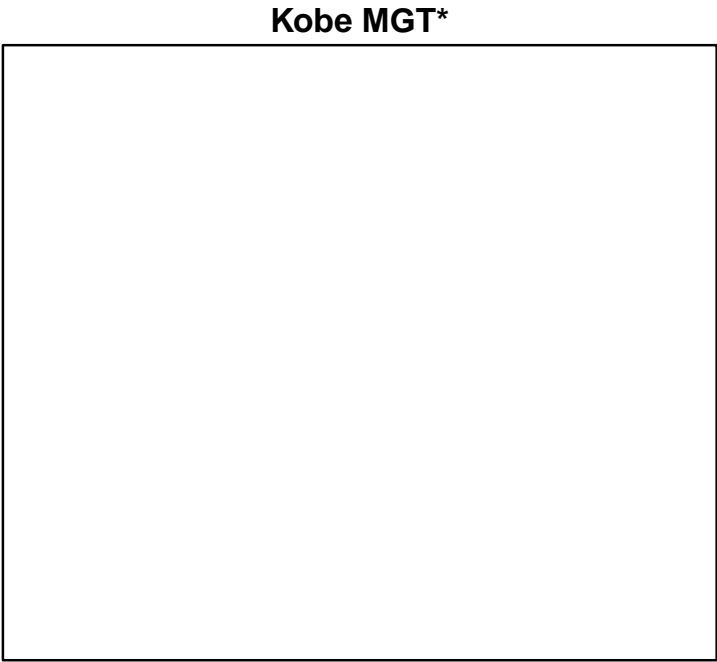
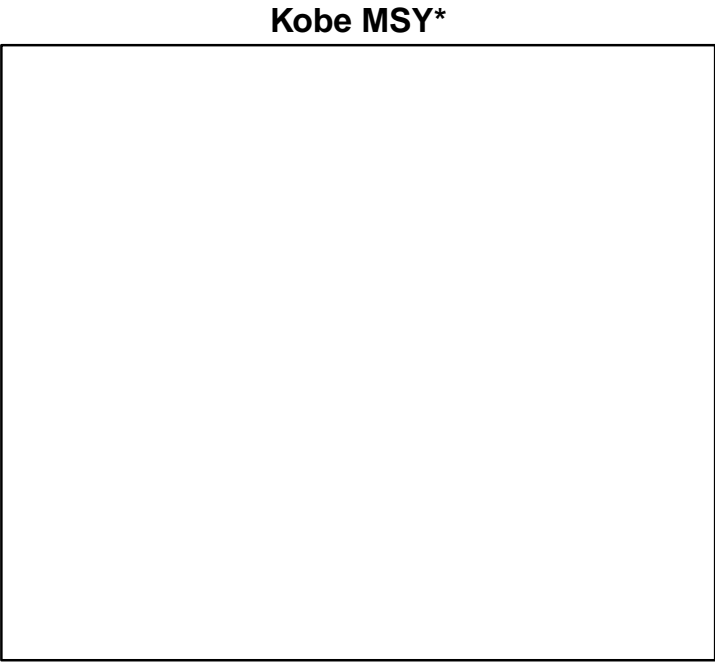


Herring ICES 6a7bc [HERRVIaVIIbc]

Metadata	
Scientific Name	Clupea harengus
Current Assess ID	HAWG-HERRVIaVIIbc-1956-2020-ICESIMP2024
Area	ICES 5a-7bc
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2010, 2013, 2014, 2015, 2016, 2017, 2018, 2018, 2020, 2019

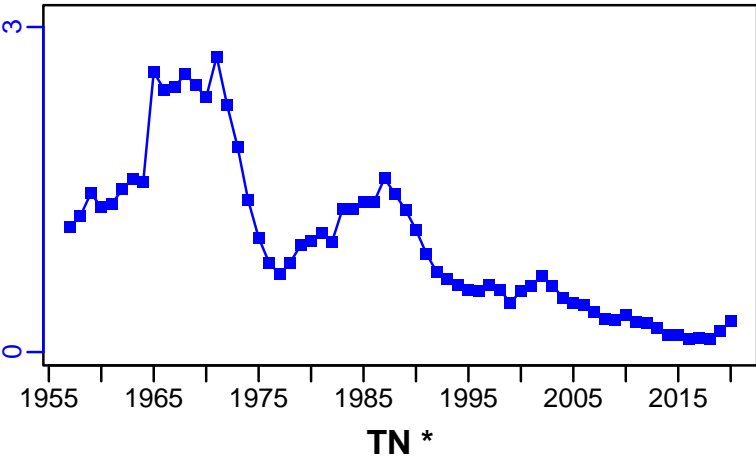
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2018	0.16
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-relative	2014	110,000
Fmgt	Fmgt-1/yr	2018	0.16
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2018	250,000
Flim	Flim-1/yr	2018	0.3
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-relative	2020	0.28	-	-
SSB	SSB-relative	2020	0.184	-	-
TN	-	-	-	-	-
R	R-relative	2020	0.607	-	1
F	F-relative	2020	0.136	-	3 to 6
ER	ER-calc-ratio	2018	0.04	-	-
TC	TC-MT	2019	3430		
TL	TL-MT	2020	1397		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2018	0.381		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2018	0.381		
ER/ERmgt	-	-	-		

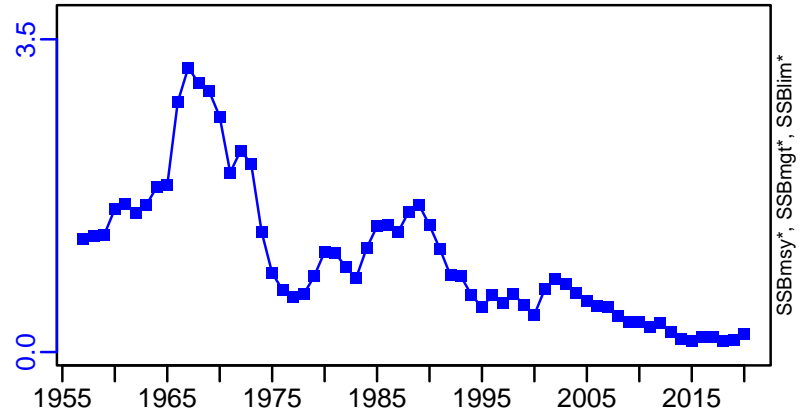


Herring ICES 6a7bc [HERRVIaVIIbc]

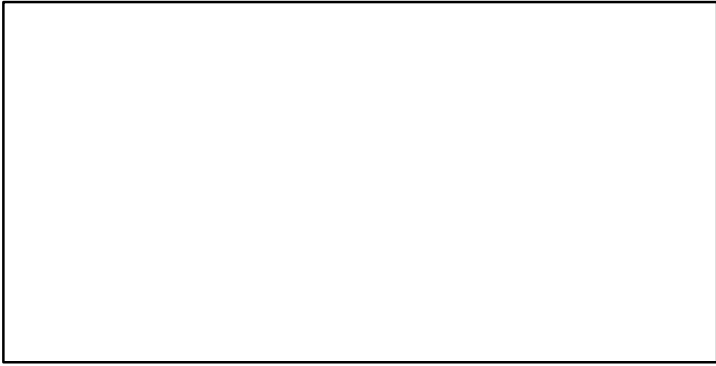
TB-relative (1956–2020–ICESIMP2024)



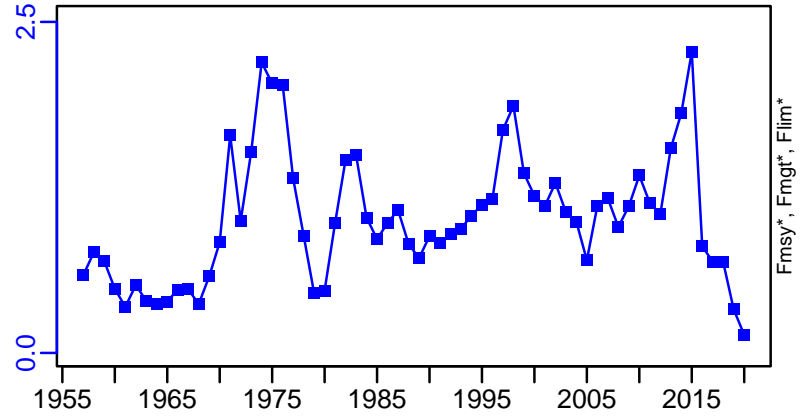
SSB-relative (1956–2020–ICESIMP2024)



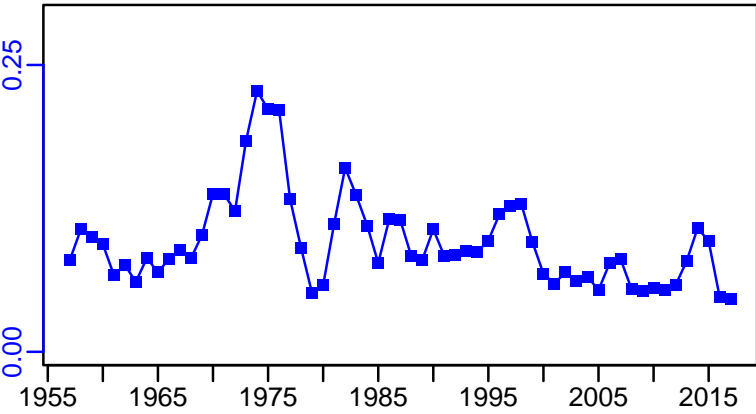
TN *



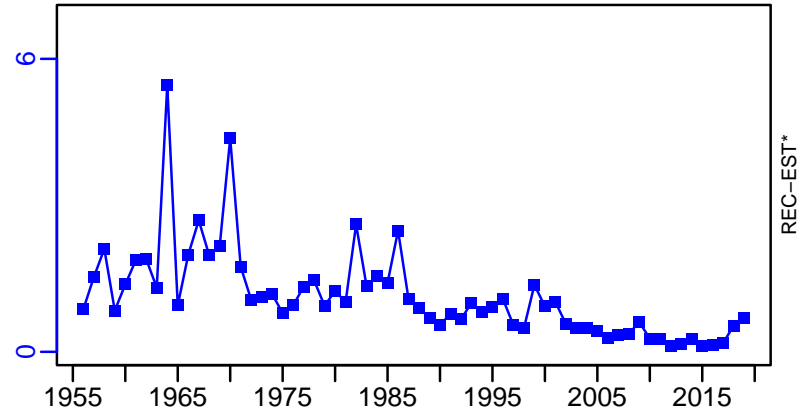
F-relative (1956–2020–ICESIMP2024)



ER-calc-ratio (1956–2018–ICESIMP2018)

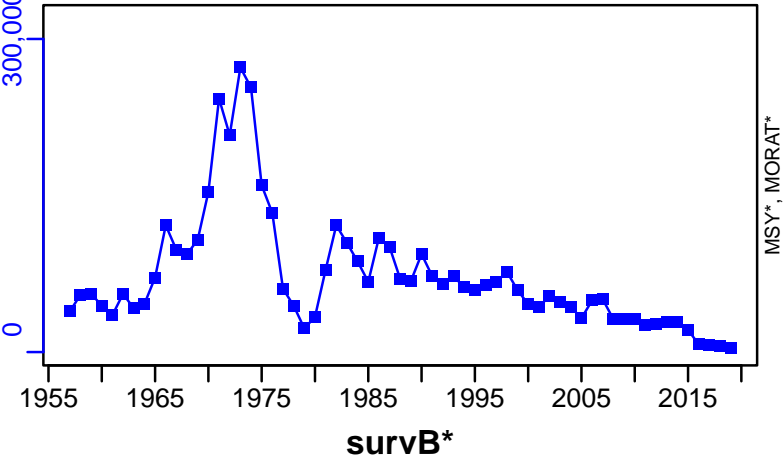


R-relative (1956–2020–ICESIMP2024)



Herring ICES 6a7bc [HERRVIaVIIbc]

TC-MT, TL*, RecC* (1957-2019-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Pacific herring West Coast of Vancouver Island [HERRWCVANI]

Metadata	
Scientific Name	Clupea pallasii
Current Assess ID	DFO-PAC-HERRWCVANI-1949-2018-ASHBROOK
Area	West Coast of Vancouver Island
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2015, 2018, 2007

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2018	46,890
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	56,400	-	-
SSB	SSB-MT	2018	20,403	-	3+
TN	-	-	-	-	-
R	R-E00	2018	167,741,930	-	2
F	F-1/yr	2007	0	-	-
ER	ER-calc-ratio	2015	0	-	-
TC	TC-MT	2015	0		
TL	TL-MT	2018	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific herring West Coast of Vancouver Island [HERRWCVANI]

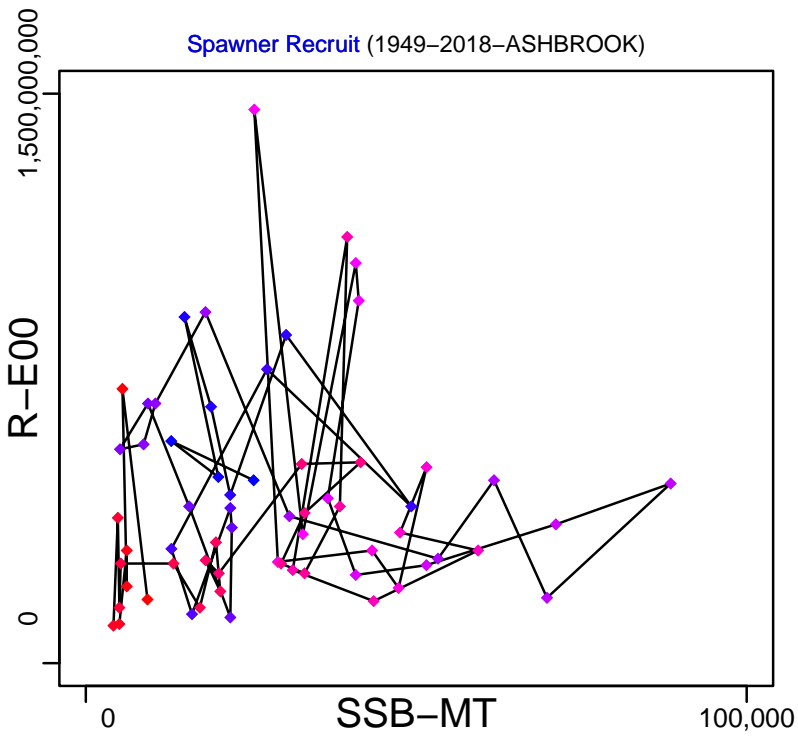
Kobe MSY*



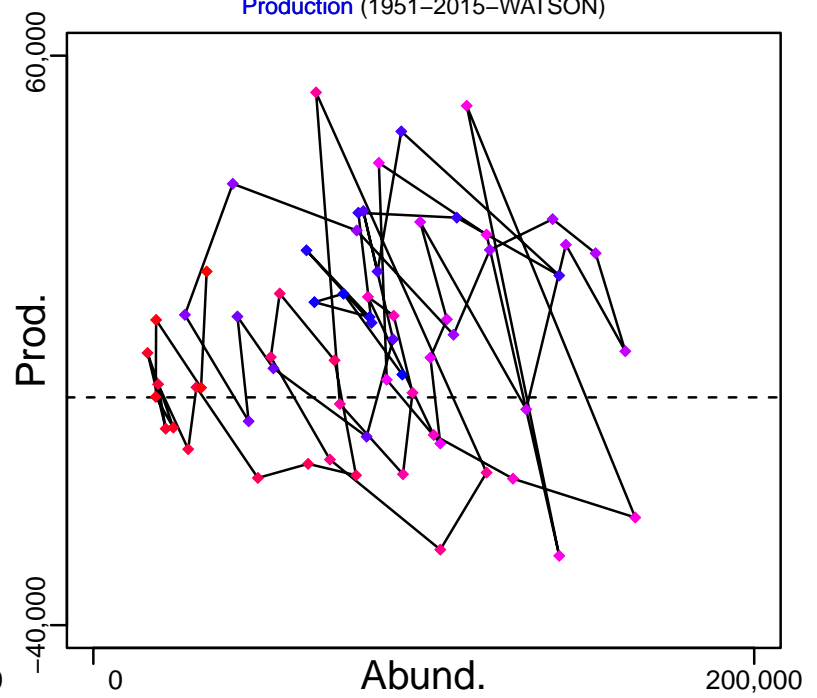
Kobe MGT*



Spawner Recruit (1949–2018–ASHBROOK)



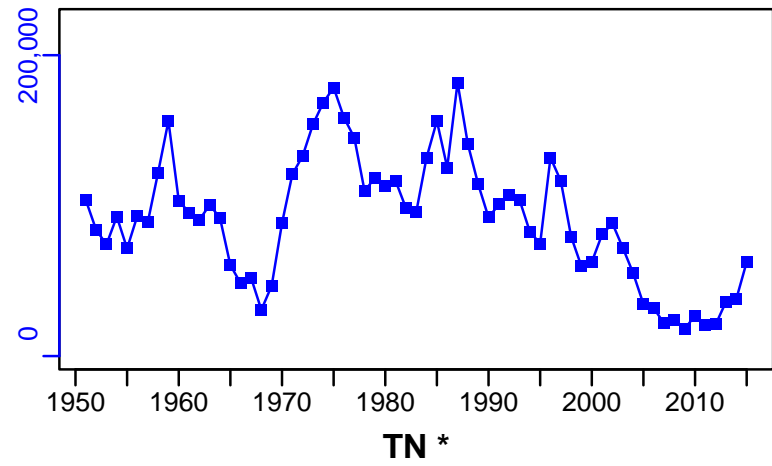
Production (1951–2015–WATSON)



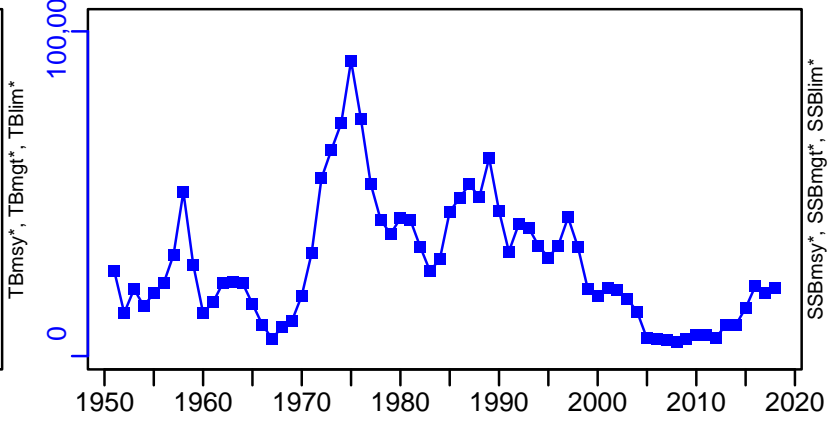
◆ Start Year ◆ End Year * No Data

Pacific herring West Coast of Vancouver Island [HERRWCVANI]

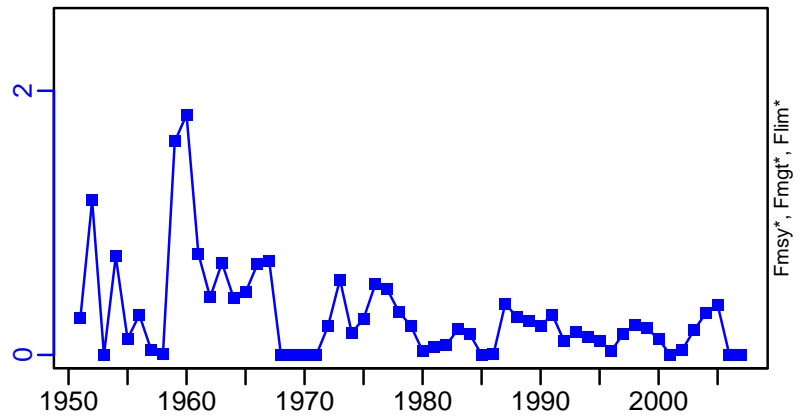
TB-MT (1951-2015-WATSON)



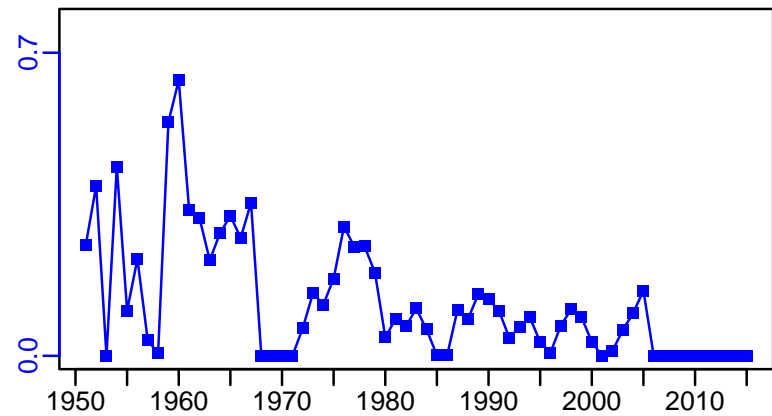
SSB-MT (1949-2018-ASHBROOK)



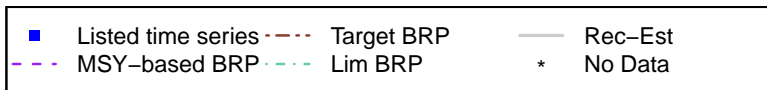
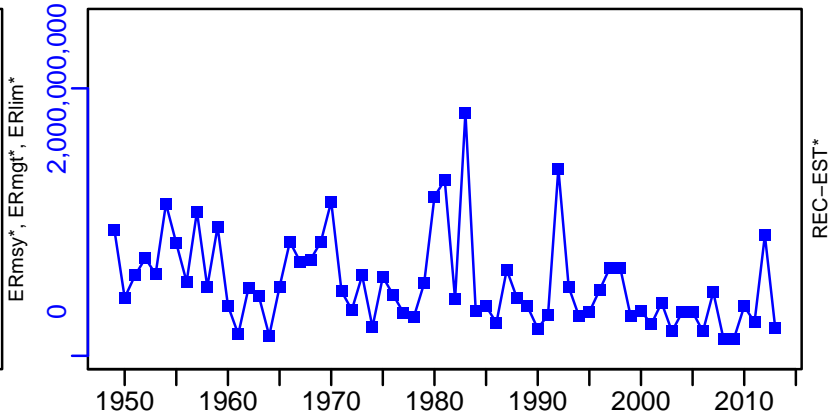
F-1/yr (1951-2007-COLLIE)



ER-calc-ratio (1951-2015-WATSON)



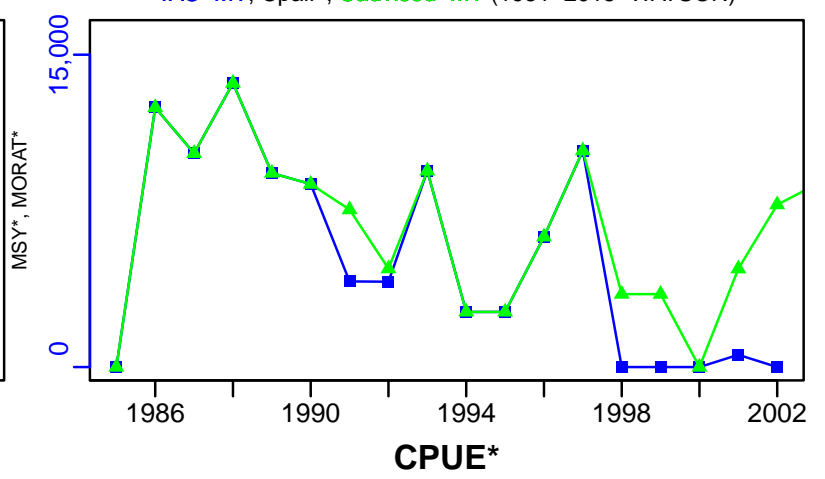
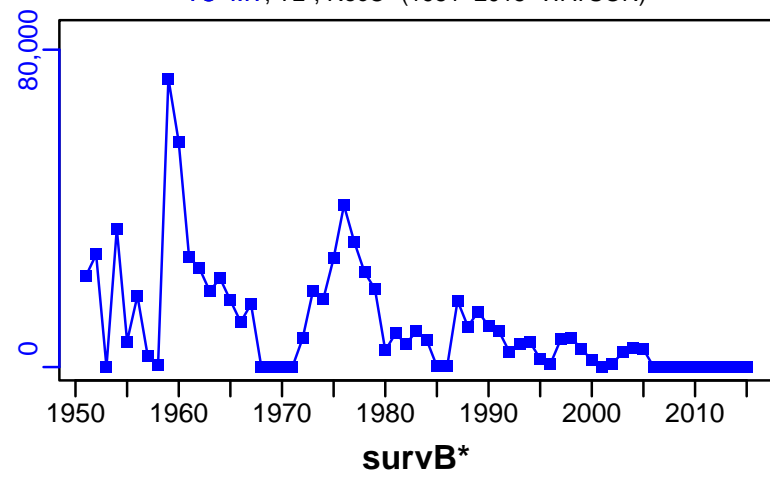
R-E00 (1949-2018-ASHBROOK)



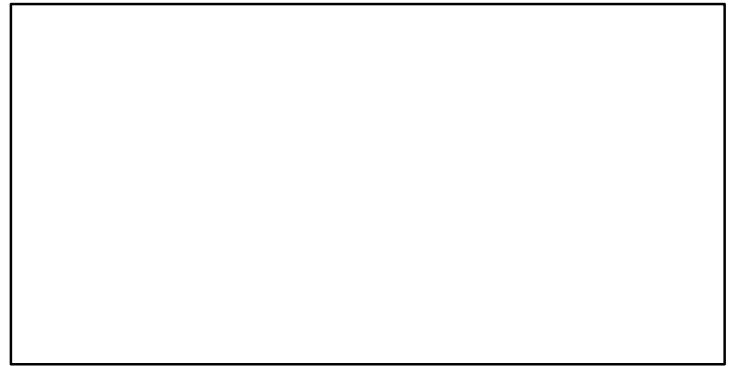
Pacific herring West Coast of Vancouver Island [HERRWCVANI]

TC-MT, TL*, RecC* (1951-2015-WATSON)

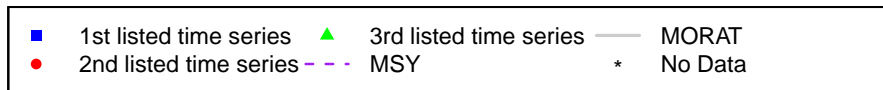
TAC-MT, Cpair*, Cadvised-MT (1951-2015-WATSON)



EFFORT*



CdivMSY*



Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

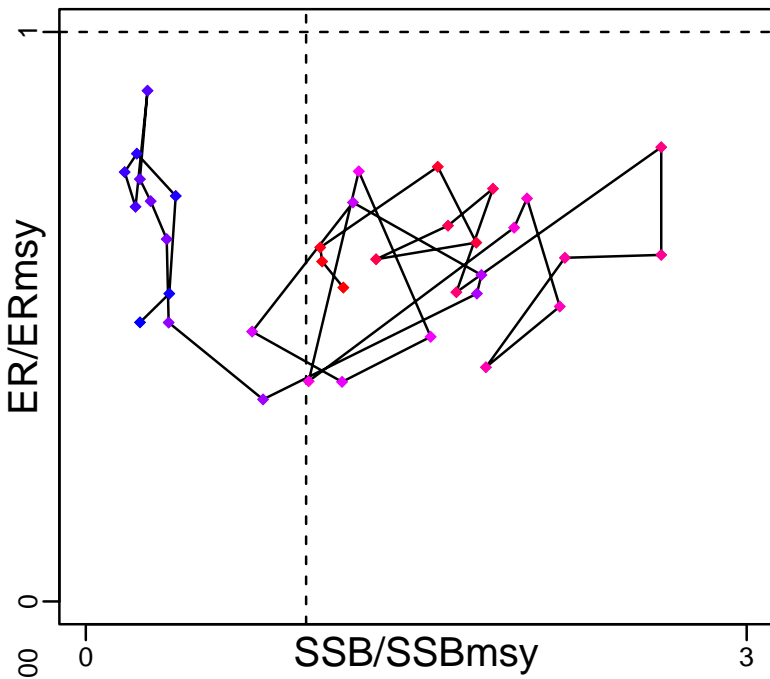
Metadata	
Scientific Name	Engraulis japonicus
Current Assess ID	FAFRFJ-JANCHOPJPN-1978-2018-KUROTA
Area	Pacific Coast of Japan
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2013	590,244
SSBmsy	SSBmsy-MT	2018	343,019
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2013	0.45
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2018	265,610
M	M-1/yr	2018	1
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

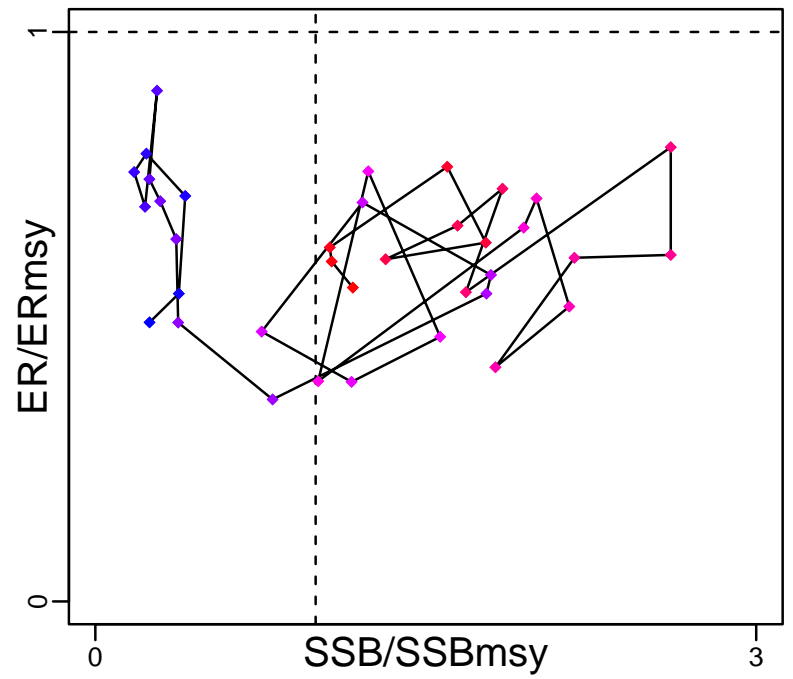
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	625,000	-	0
SSB	SSB-MT	2018	401,000	-	1
TN	-	-	-	-	-
R	R-E00	2018	8.02×10^{10}	-	0
F	-	-	-	-	-
ER	ER-calc-ratio	2018	0.25	-	-
TC	TC-MT	2018	31,250		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2013	1.059		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	1.169		
F/Fmsy	-	-	-		
ER/ERmsy	ER-calc-ratio/ERmsy-ratio	2013	0.551		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

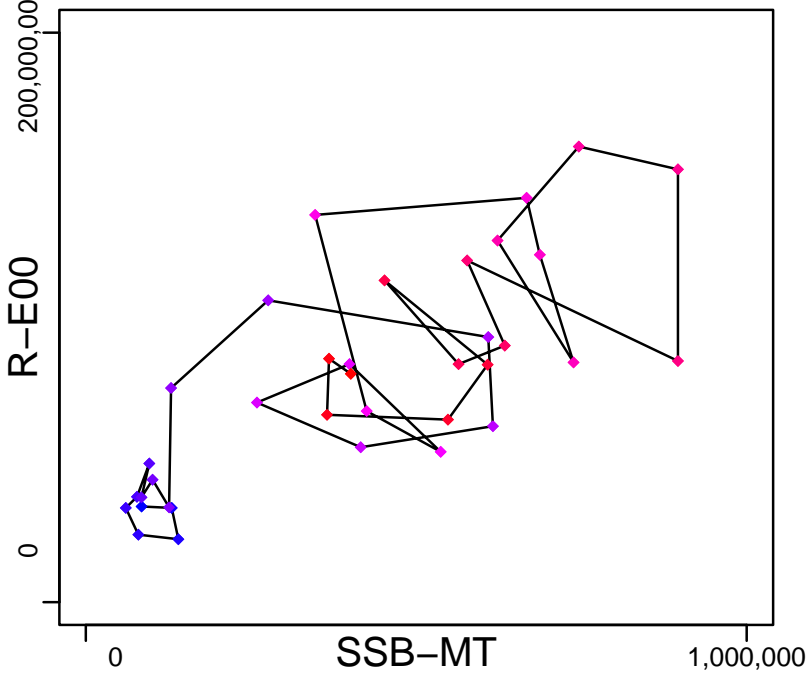
Kobe MSYpref (1978–2013–JPNIMP2016)



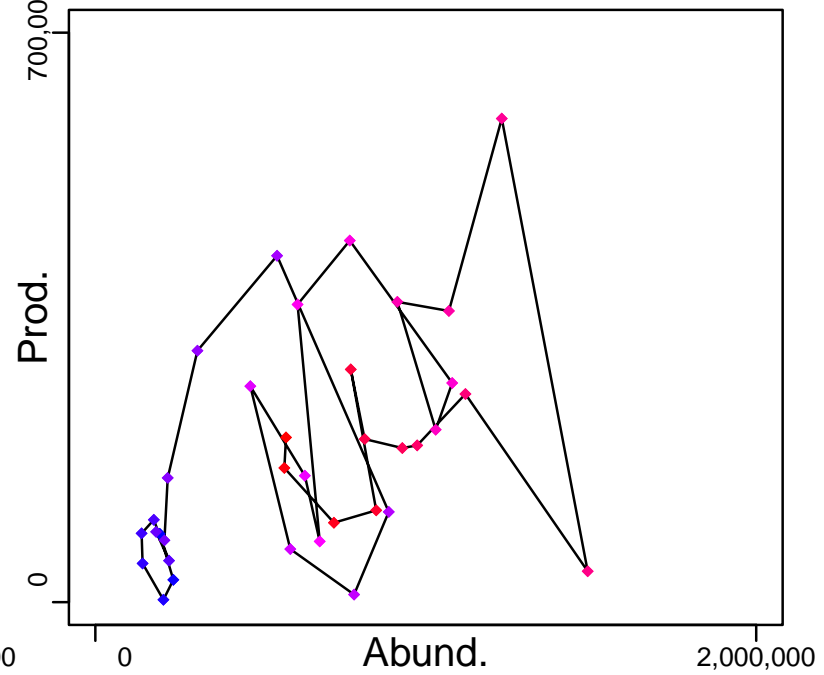
Kobe MGTpref (1978–2013–JPNIMP2016)



Spawner Recruit (1978–2018–KUROTA)



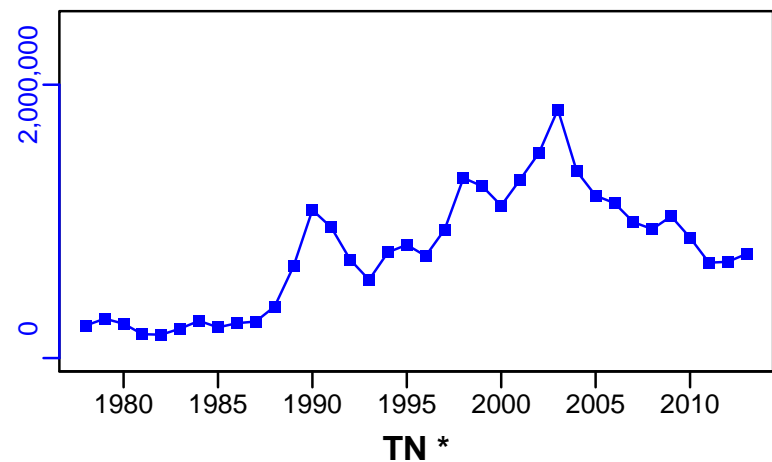
Production (1978–2018–KUROTA)



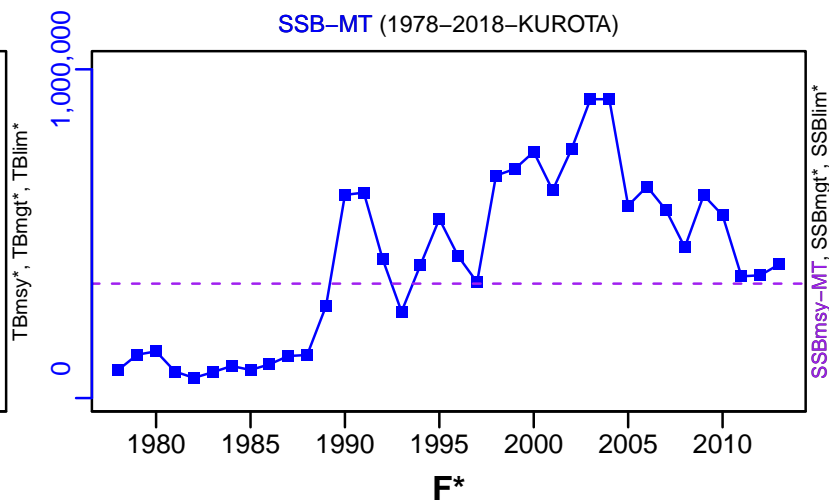
◆ Start Year ◆ End Year * No Data

Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

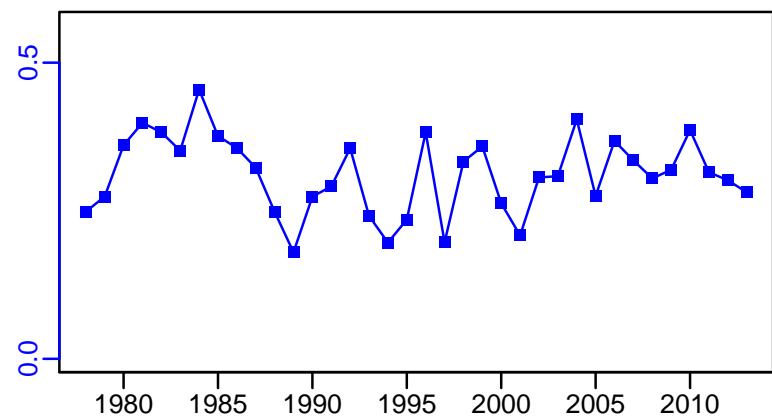
TB-MT (1978–2018–KUROTA)



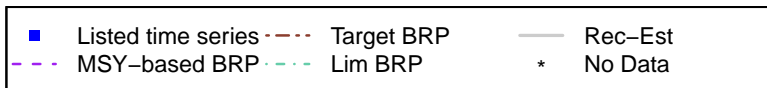
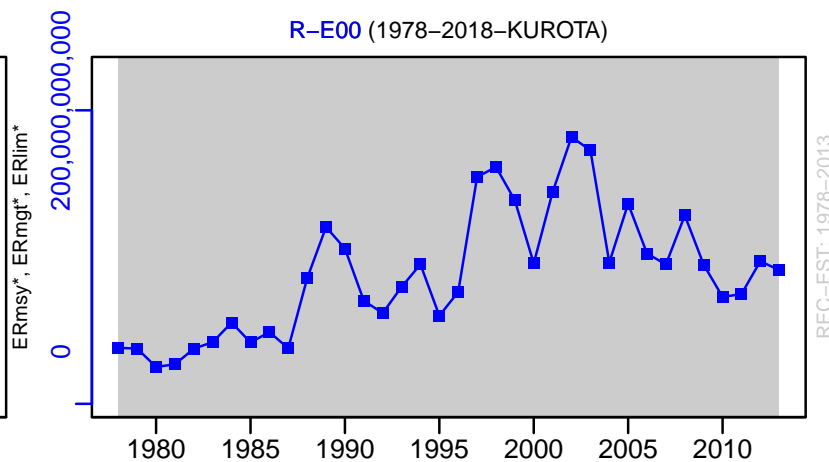
SSB-MT (1978–2018–KUROTA)



ER-calc-ratio (1978–2018–KUROTA)

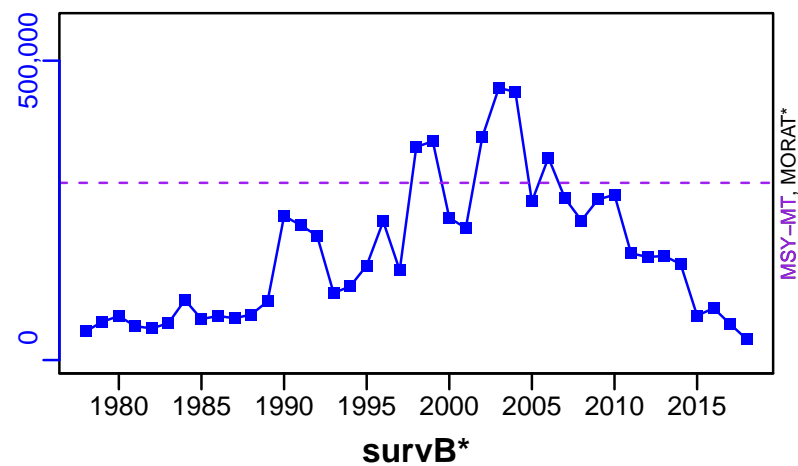


R-E00 (1978–2018–KUROTA)



Japanese anchovy Pacific Coast of Japan [JANCHOPJPN]

TC-MT, TL*, RecC* (1978-2018-KUROTA)



TAC*, Cpair*, Cadv*



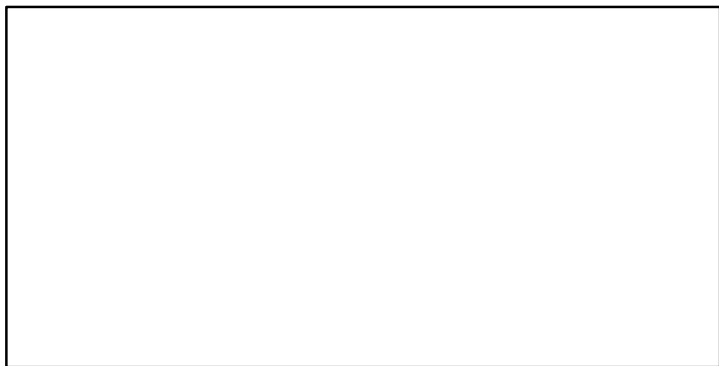
survB*



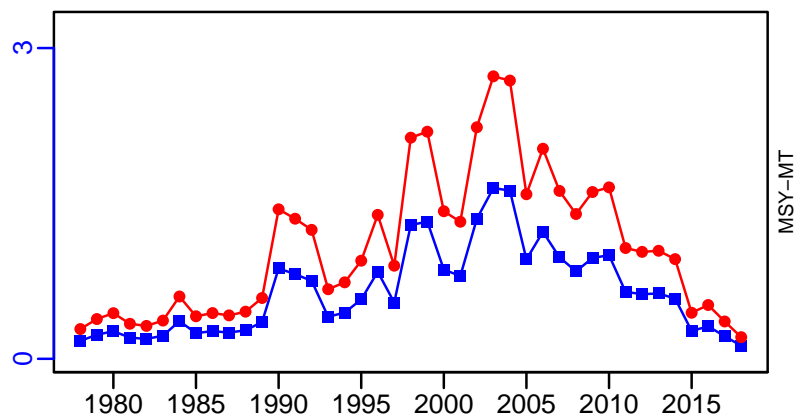
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1978-2018-KUROTA)



- 1st listed time series (blue square)
- 2nd listed time series (red circle)
- 3rd listed time series (green triangle)
- MORAT (grey line)
- MSY (purple dashed line)
- No Data (*)

Japanese anchovy Inland Sea of Japan [JANCHOSETO]

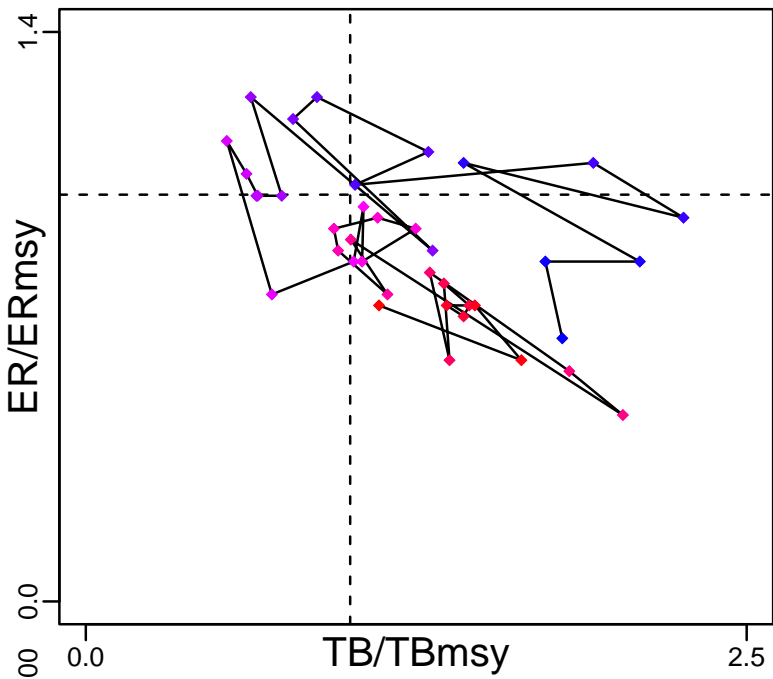
Metadata	
Scientific Name	Engraulis japonicus
Current Assess ID	FAFRFJ-JANCHOSETO-1955-2018-KUROTA
Area	Inland Sea of Japan
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2018	187,524
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.371
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-calc-MT	2018	69,571
M	M-1/yr	2018	2.41
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

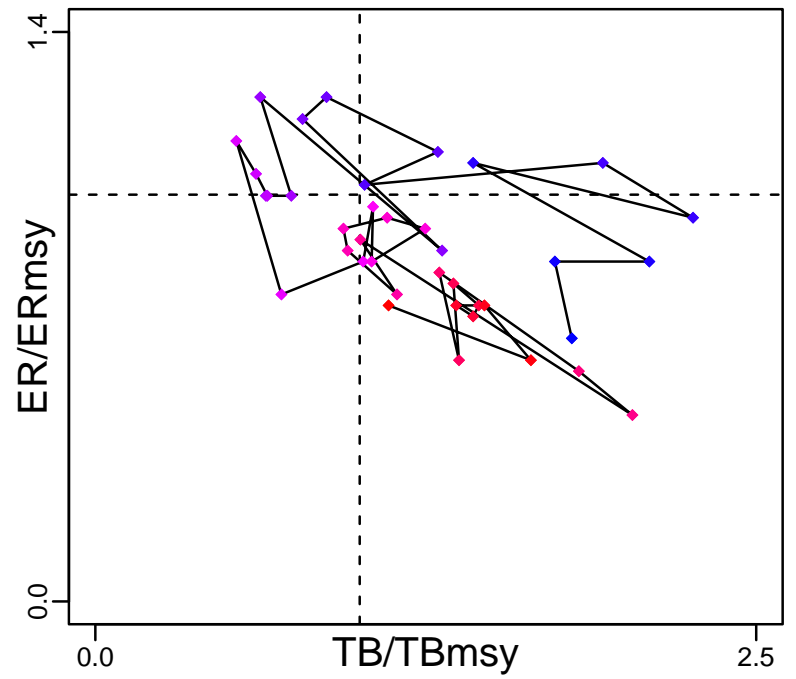
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	208,000	-	0
SSB	SSB-MT	2018	51,000	-	0.4166667
TN	-	-	-	-	-
R	R-E00	2018	2.33×10^{11}	-	0
F	-	-	-	-	-
ER	ER-ratio	2018	0.27	-	-
TC	TC-MT	2018	57,100		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-MT	2018	1.109		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2018	0.728		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Japanese anchovy Inland Sea of Japan [JANCHOSETO]

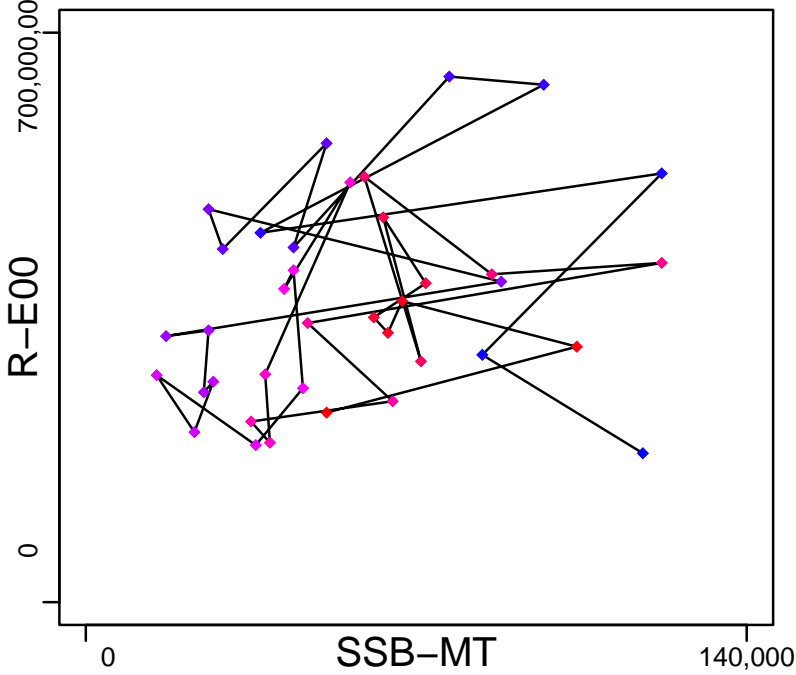
Kobe MSYpref (1955–2018–KUROTA)



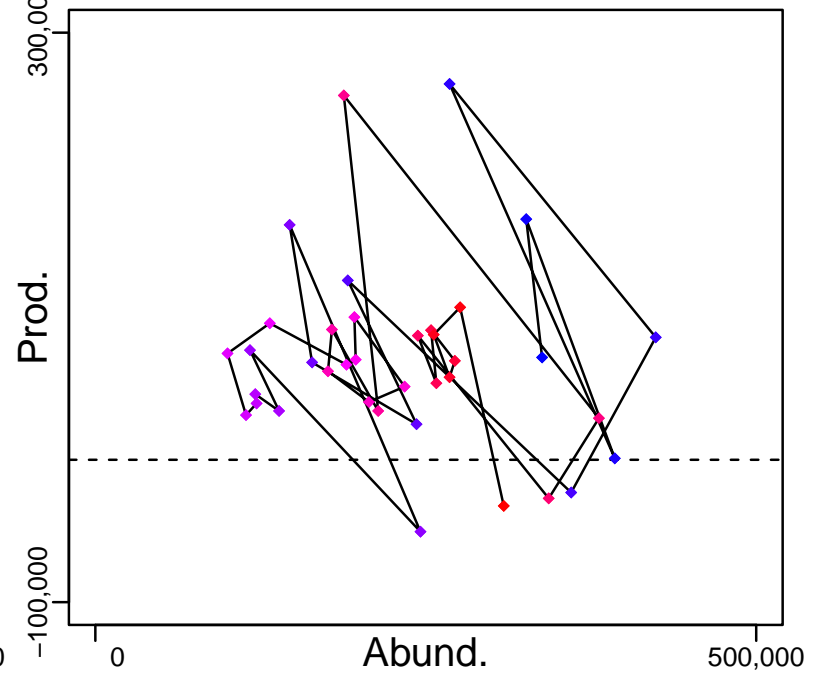
Kobe MGTpref (1955–2018–KUROTA)



Spawner Recruit (1955–2018–KUROTA)



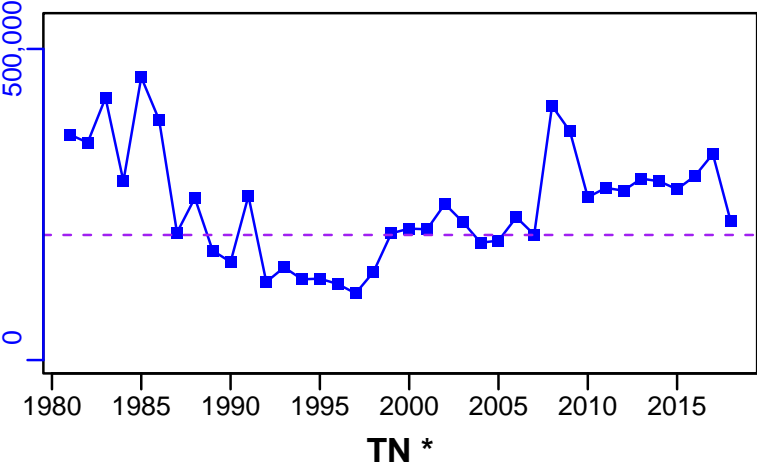
Production (1955–2018–KUROTA)



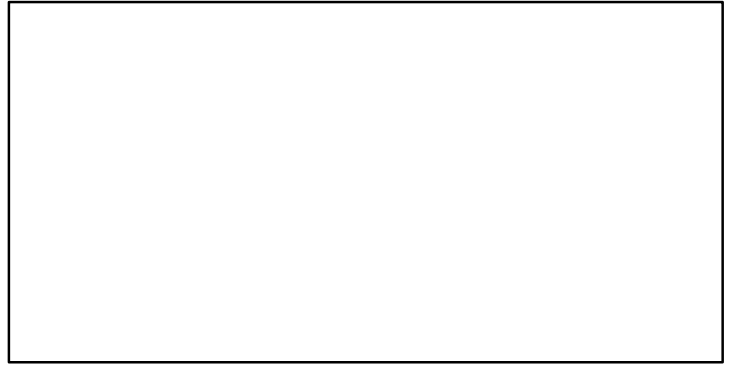
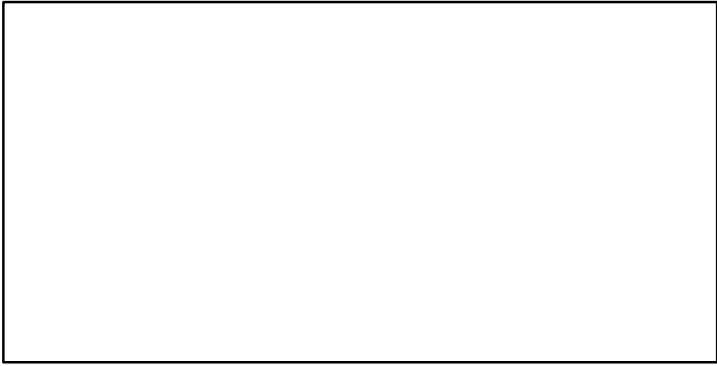
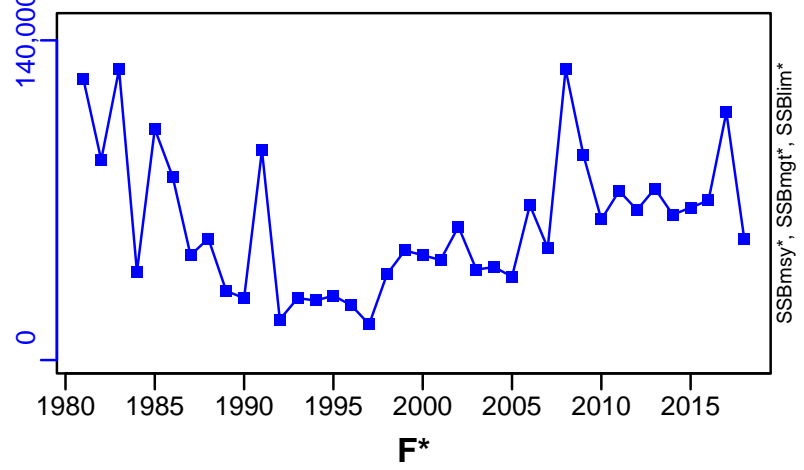
◆ Start Year ◆ End Year * No Data

Japanese anchovy Inland Sea of Japan [JANCHOSETO]

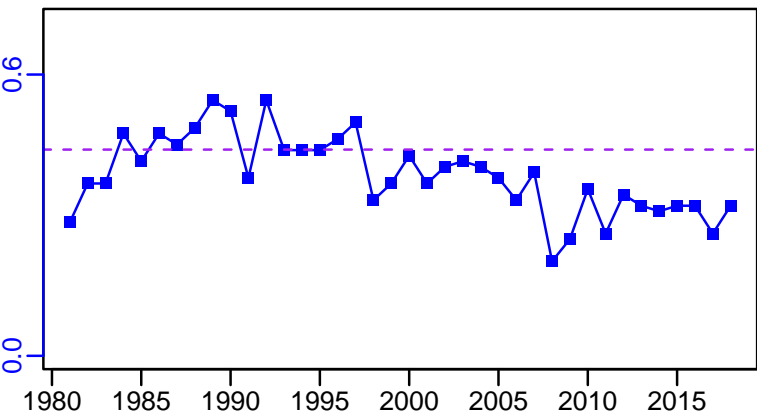
TB-MT (1955–2018–KUROTA)



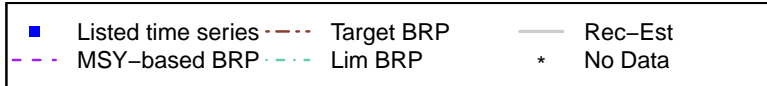
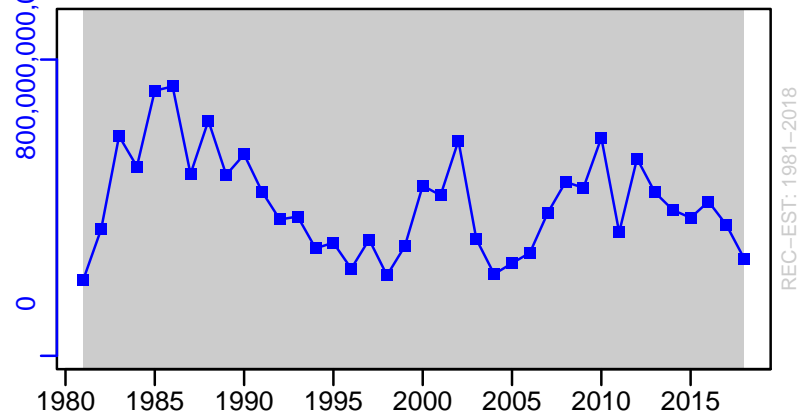
SSB-MT (1955–2018–KUROTA)



ER-ratio (1955–2018–KUROTA)

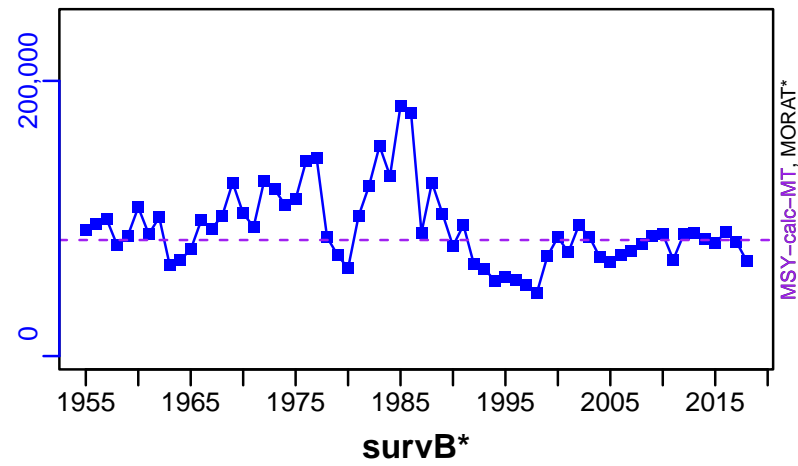


R-E00 (1955–2018–KUROTA)



Japanese anchovy Inland Sea of Japan [JANCHOSETO]

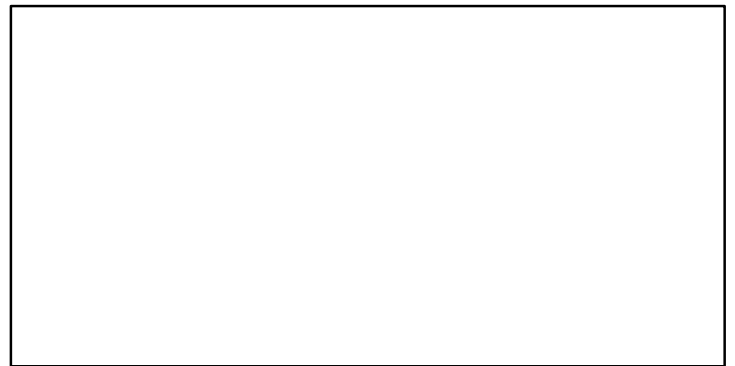
TC-MT, TL*, RecC* (1955-2018-KUROTA)



TAC*, Cpair*, Cadv*



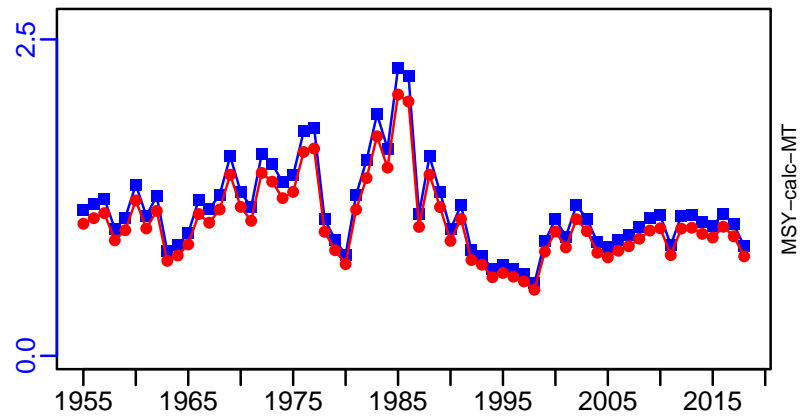
CPUE*



EFFORT*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1955-2018-KUROTA)



■ 1st listed time series ▲ 3rd listed time series — MORAT
 ● 2nd listed time series - - - MSY * No Data

Japanese anchovy Tsushima Strait [JANCHOTSST]

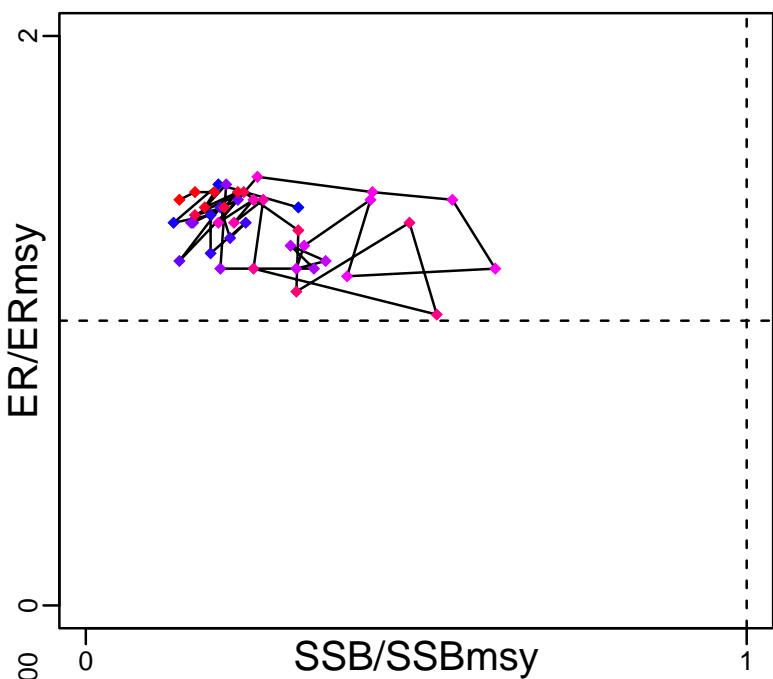
Metadata	
Scientific Name	Engraulis japonicus
Current Assess ID	FAFRFJ-JANCHOTSST-1977-2018-KUROTA
Area	Tsushima Strait
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2018	402,460
SSBmsy	SSBmsy-MT	2018	338,932
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.372
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2018	149,715
M	M-1/yr	2018	1
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

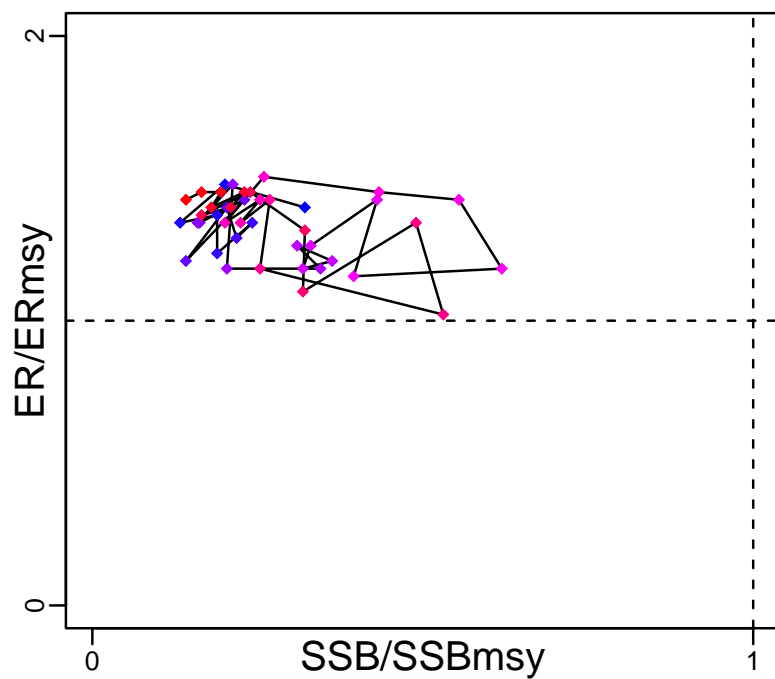
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	88,000	Both	0
SSB	SSB-MT	2018	48,000	Both	1
TN	-	-	-	-	-
R	R-E00	2018	5.6135×10^{10}	Both	0
F	-	-	-	-	-
ER	ER-ratio	2018	0.53	Both	-
TC	TC-MT	2018	43,100		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2018	0.219		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	0.142		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2018	1.425		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Japanese anchovy Tsushima Strait [JANCHOTSST]

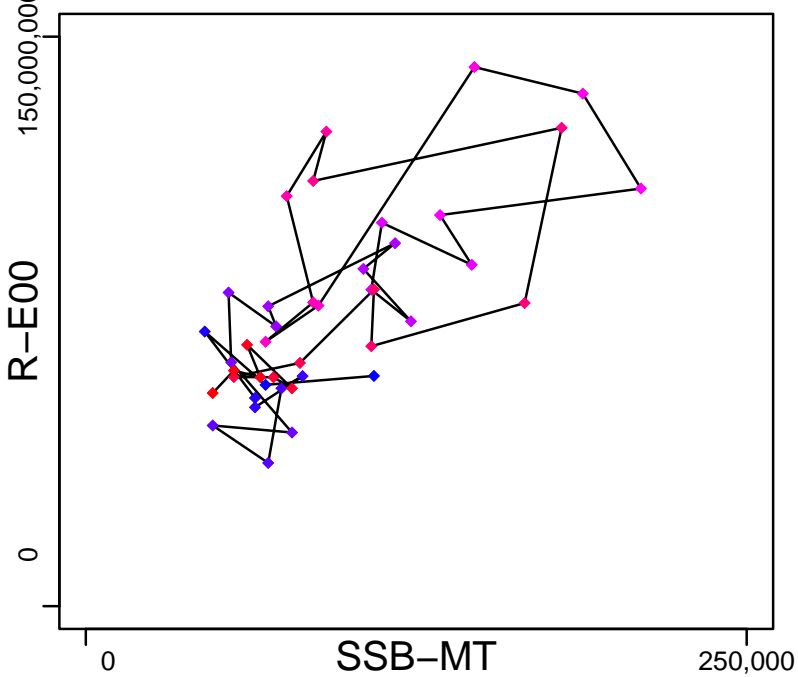
Kobe MSYpref (1977–2018–KUROTA)



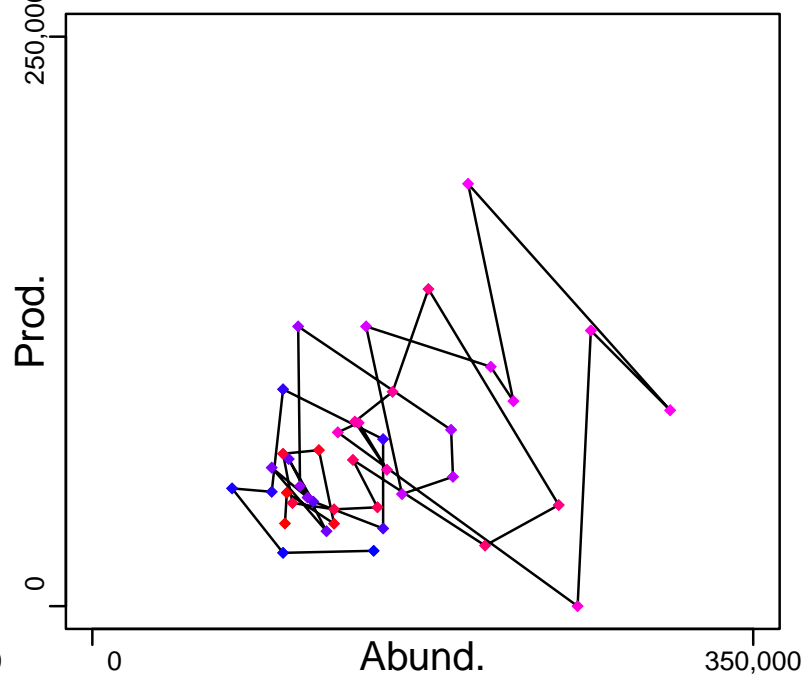
Kobe MGTpref (1977–2018–KUROTA)



Spawner Recruit (1977–2018–KUROTA)



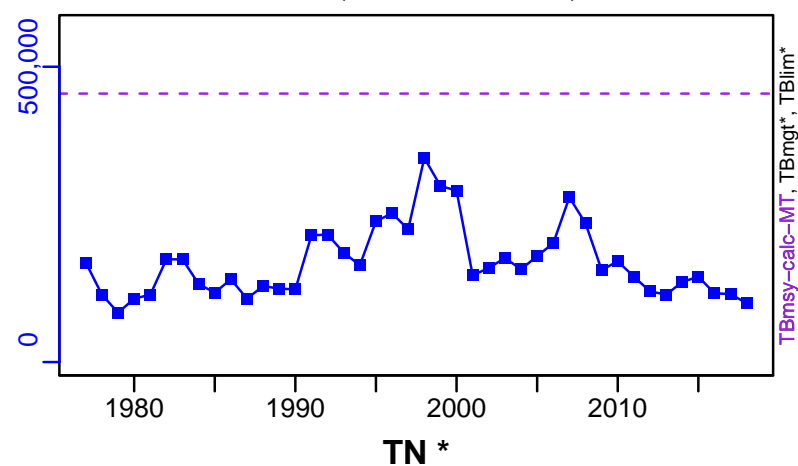
Production (1977–2018–KUROTA)



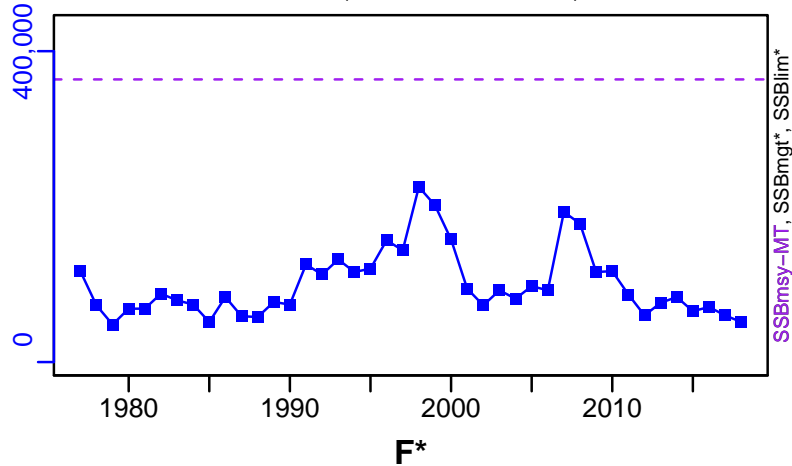
◆ Start Year ◆ End Year * No Data

Japanese anchovy Tsushima Strait [JANCHOTSST]

TB-MT (1977-2018-KUROTA)



SSB-MT (1977-2018-KUROTA)

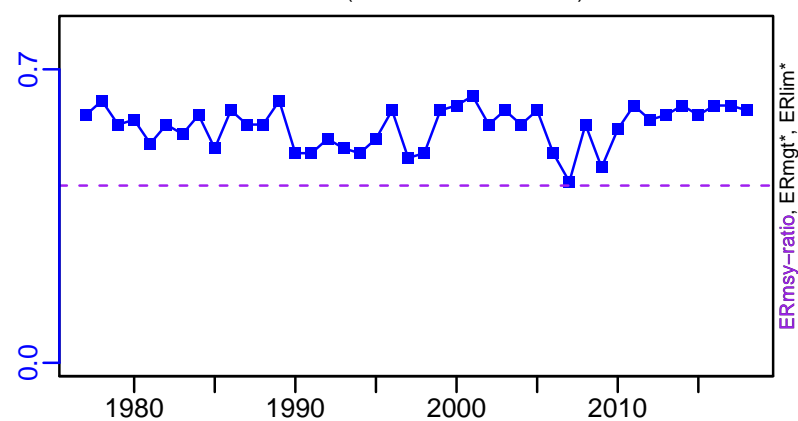


TN *

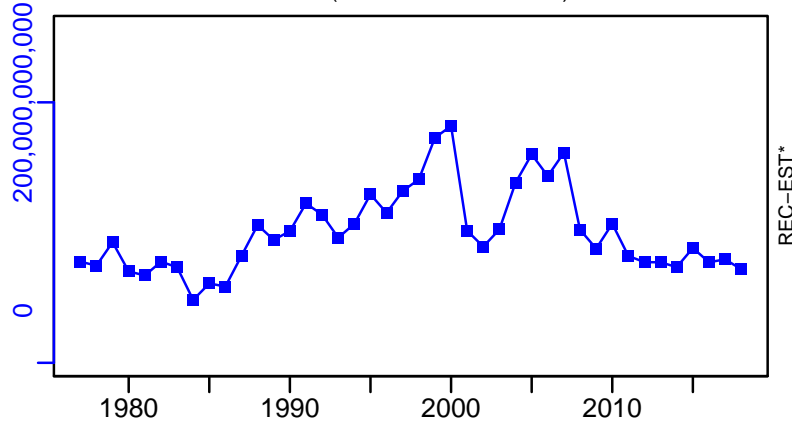
F*



ER-ratio (1977-2018-KUROTA)

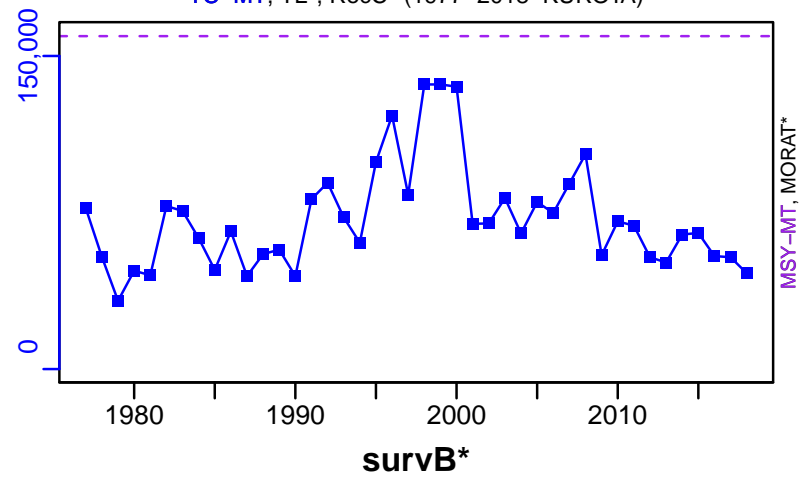


R-E00 (1977-2018-KUROTA)



Japanese anchovy Tsushima Strait [JANCHOTSST]

TC-MT, TL*, RecC* (1977-2018-KUROTA)



TAC*, Cpair*, Cadv*



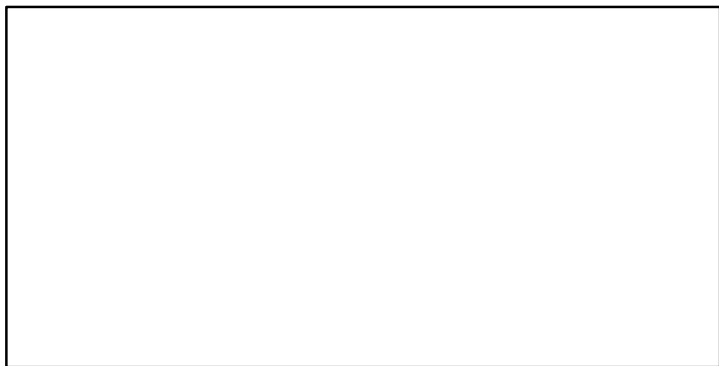
survB*



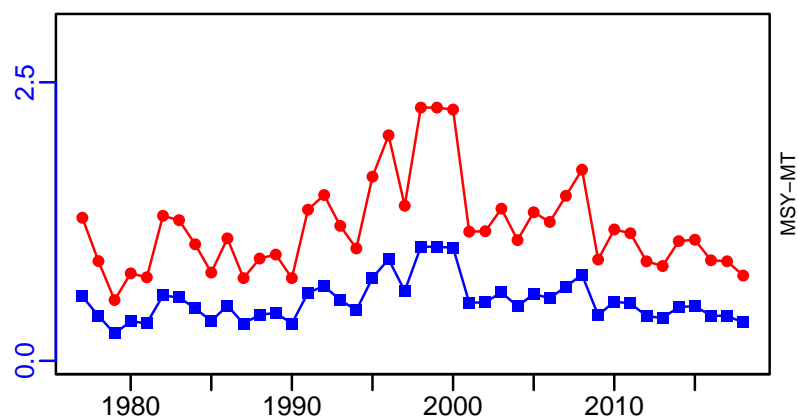
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1977-2018-KUROTA)



- 1st listed time series
- 2nd listed time series
- 3rd listed time series
- MORAT
- MSY
- No Data

Gulf menhaden Gulf of Mexico [MENATGM]

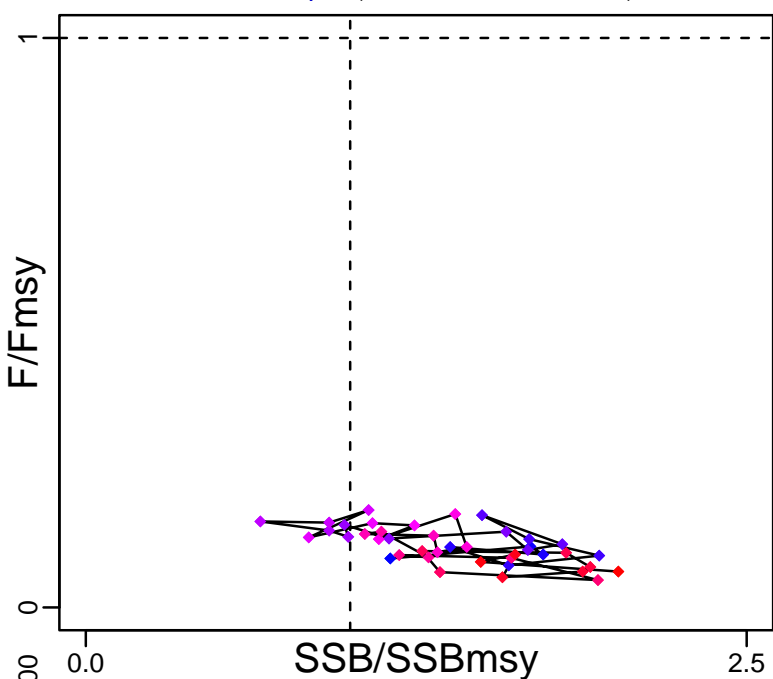
Metadata	
Scientific Name	Brevoortia patronus
Current Assess ID	SEFSC-MENATGM-1977-2022-HIVELY
Area	Gulf of Mexico
Management Authority	National Marine Fisheries Service, US national management
Assessor	Southeast Fisheries Science Center
Asmts in RAM	2011, 2017, 2022

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-E00eggs	2022	2.55×10^{15}
Fmsy	Fmsy-pr-1/yr	2022	0.99
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-E00eggs	2011	4.98×10^{13}
Fmgt	Fmgt-1/yr	2011	3.66
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2011	1.22
TBlim	-	-	-
SSBlim	SSBlim-E00eggs	2011	2.26×10^{13}
Flim	Flim-1/yr	2011	4.88
ERlim	-	-	-

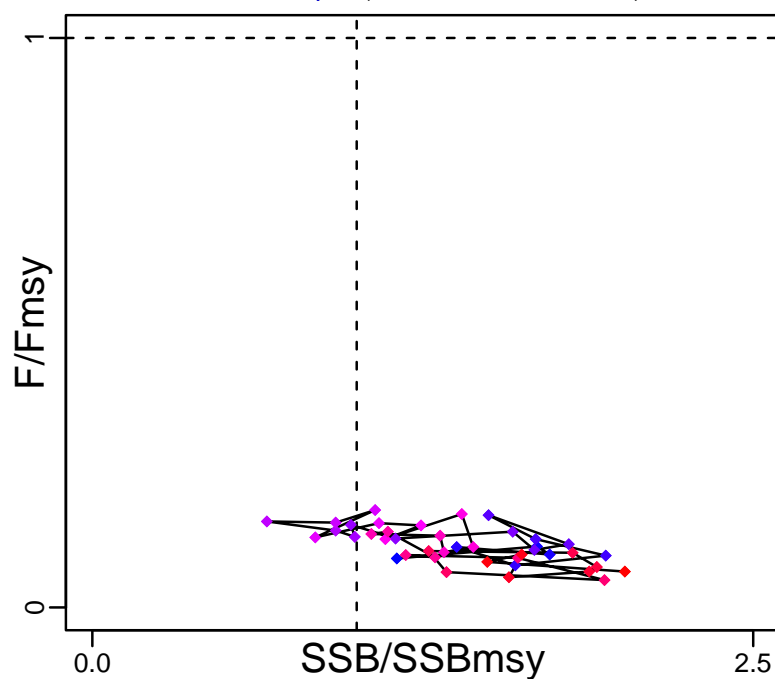
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2022	2,395,973	-	-
SSB	SSB-E00eggs	2022	3.57×10^{15}	-	-
TN	TN-E00	2022	1.84×10^{11}	-	-
R	R-E00	2022	1.45×10^{11}	-	-
F	F-1/yr	2017	0.63	Both	0-4+
ER	ER-calc-ratio	2022	0.226	-	-
TC	TC-MT	2017	462,460		
TL	TL-MT	2022	414,730		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-E00eggs/SSBmsy-pr-E00eggs	2022	1.4		
F/Fmsy	F-1/yr/Fmsy-pr-1/yr	2017	0.063		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-E00eggs/SSBmgt-E00eggs	2011	1.014		
F/Fmgt	F-1/yr/Fmgt-1/yr	2011	0.645		
ER/ERmgt	-	-	-		

Gulf menhaden Gulf of Mexico [MENATGM]

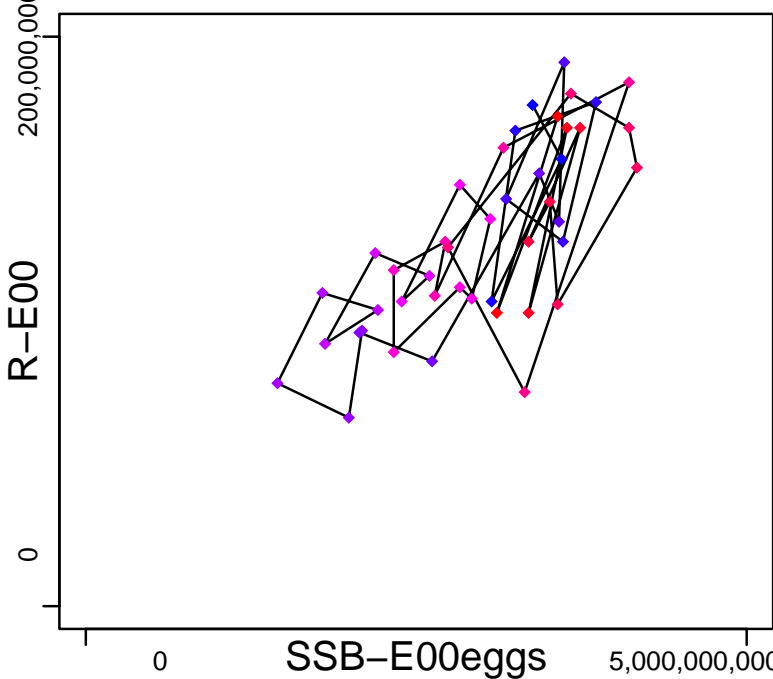
Kobe MSY_{pref} (1948–2017–ASHBROOK)



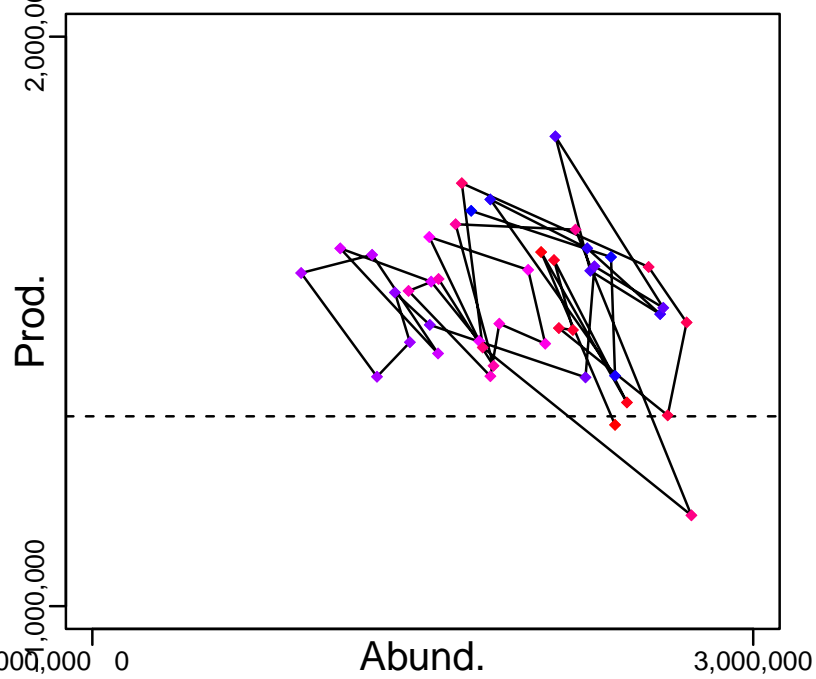
Kobe MGT_{pref} (1948–2017–ASHBROOK)



Spawner Recruit (1977–2022–HIVELY)



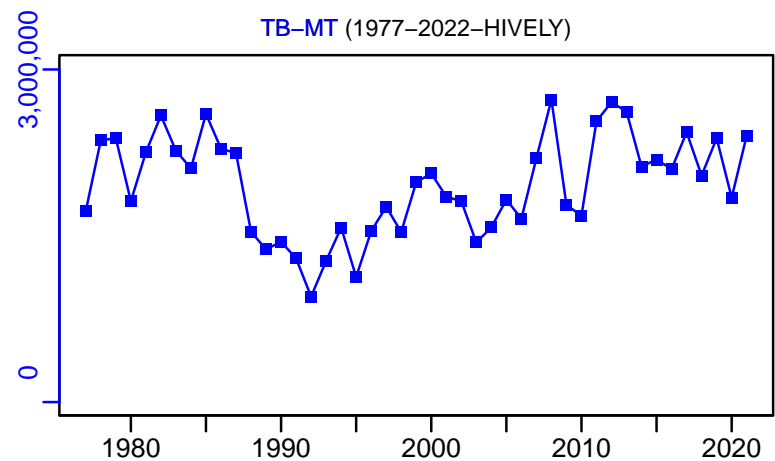
Production (1977–2022–HIVELY)



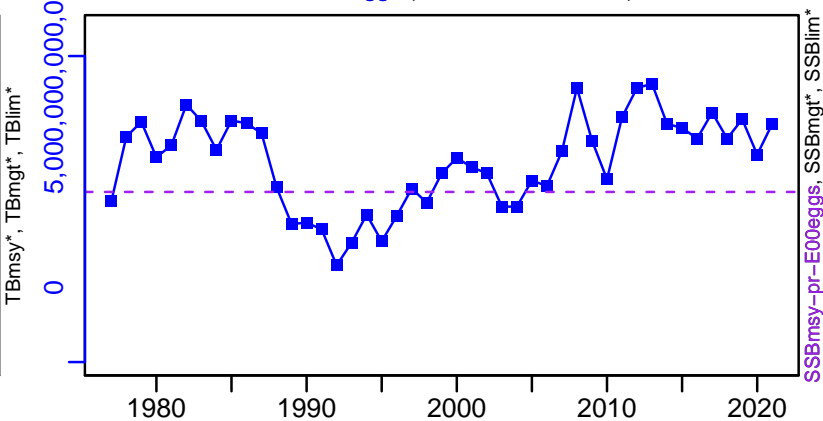
◆ Start Year ◆ End Year * No Data

Gulf menhaden Gulf of Mexico [MENATGM]

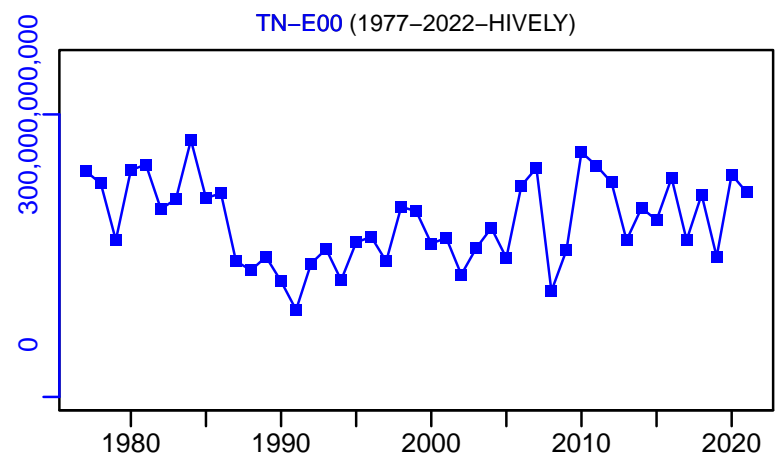
TB-MT (1977-2022-HIVELY)



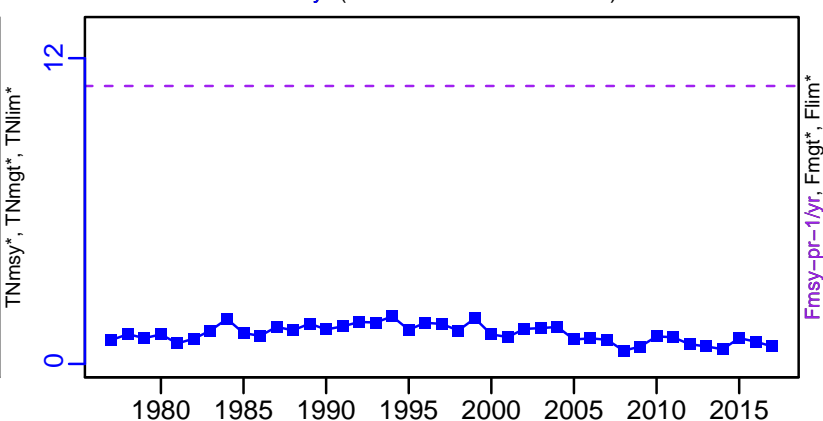
SSB-E00eggs (1977-2022-HIVELY)



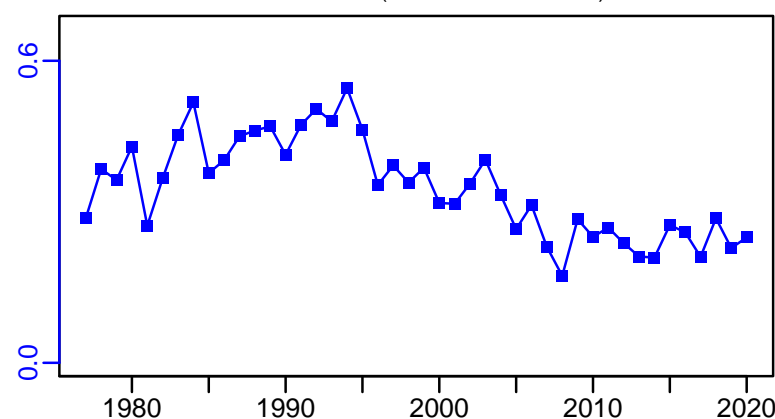
TN-E00 (1977-2022-HIVELY)



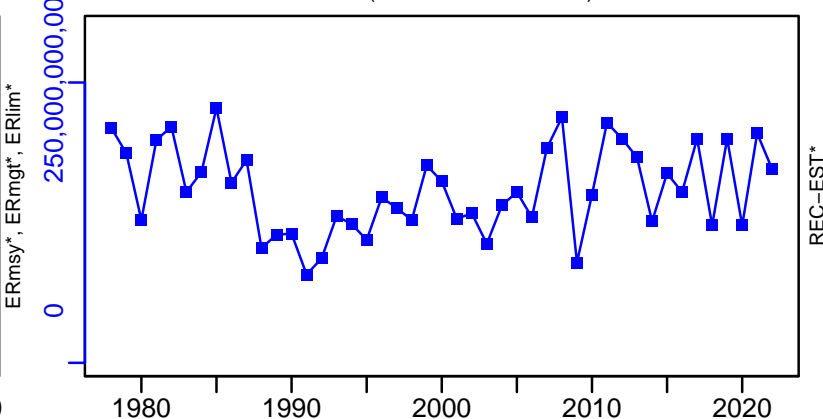
F-1/yr (1948-2017-ASHBROOK)



ER-calc-ratio (1977-2022-HIVELY)

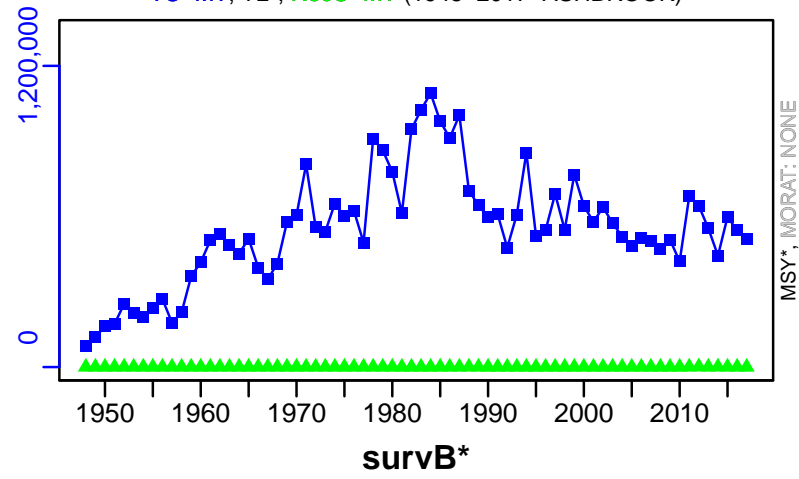


R-E00 (1977-2022-HIVELY)



Gulf menhaden Gulf of Mexico [MENATGM]

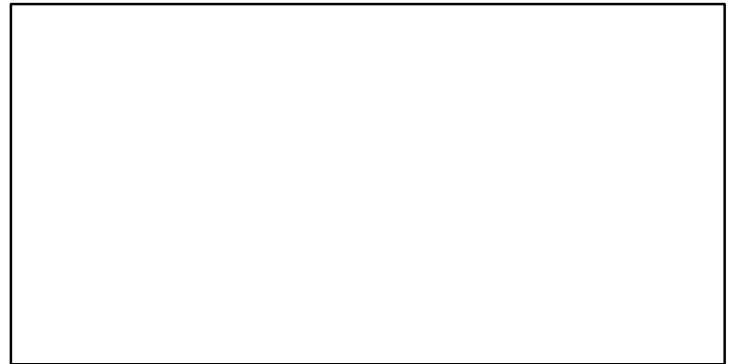
TC-MT, TL*, RecC-MT (1948-2017-ASHBROOK)



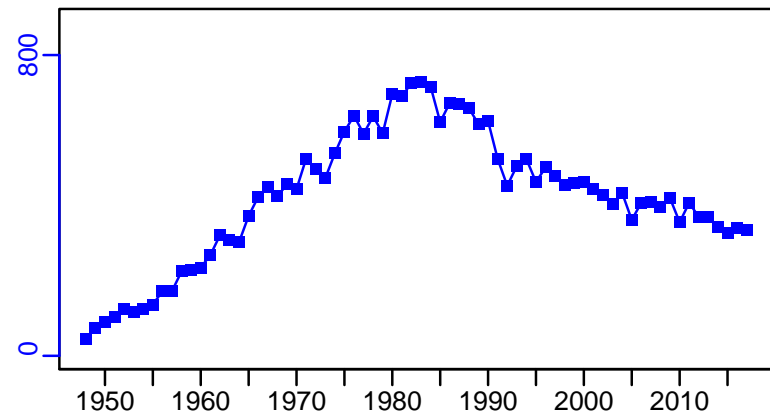
TAC*, Cpair*, Cadv*



CPUE*



EFFORT-vtw (1948-2017-ASHBROOK)



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Atlantic menhaden Atlantic [MENATLAN]

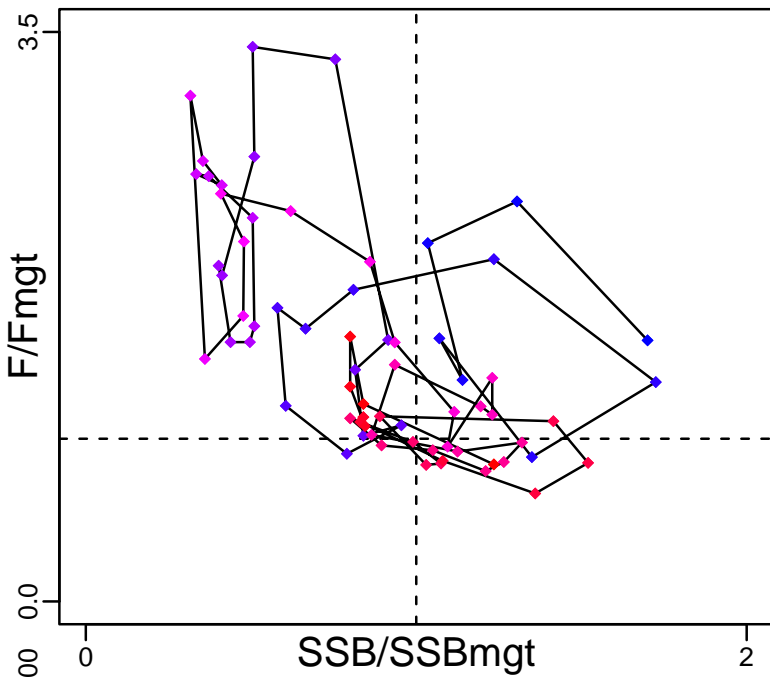
Metadata	
Scientific Name	Brevoortia tyrannus
Current Assess ID	ASMFC-MENATLAN-1955-2021-HIVELY
Area	Atlantic
Management Authority	National Marine Fisheries Service, US national management
Assessor	Atlantic States Marine Fisheries Commission
Asmts in RAM	2017, 2021, 2005

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-E00eggs	2021	2×10^{15}
Fmgt	Fmgt-1/yr	2021	0.19
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2005	0.5
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

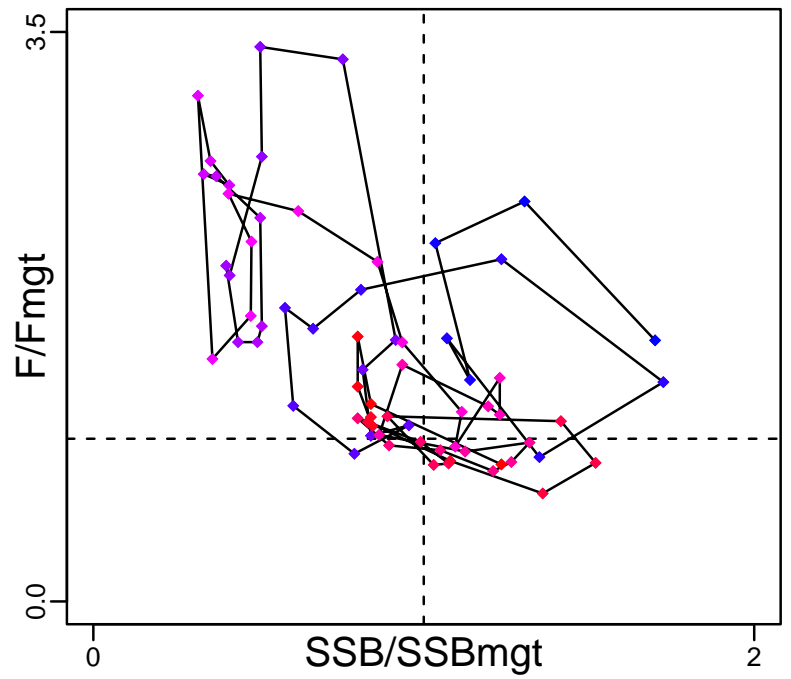
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	4,551,064	-	1+
SSB	SSB-E00eggs	2021	2.47×10^{15}	-	-
TN	TN-E00	2017	1.84×10^{10}	-	0-6+
R	R-E00	2021	1.01×10^{11}	-	-
F	F-1/yr	2021	0.16	-	2 to 4
ER	ER-calc-ratio	2021	0.043	-	-
TC	-	-	-		
TL	TL-MT	2021	197,650		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-E00eggs/SSBmgt-E00eggs	2021	1.235		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.842		
ER/ERmgt	-	-	-		

Atlantic menhaden Atlantic [MENATLAN]

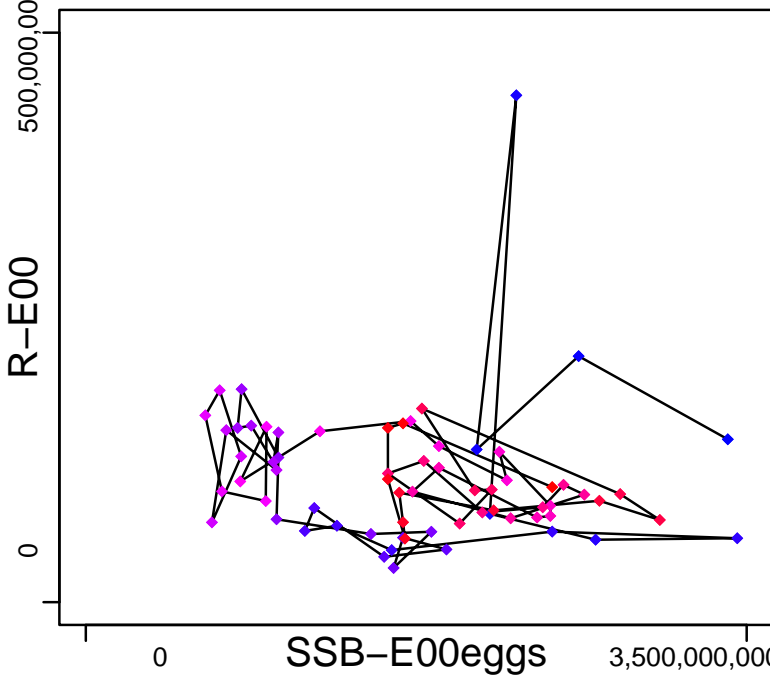
Kobe MSYpref (1955–2021–HIVELY)



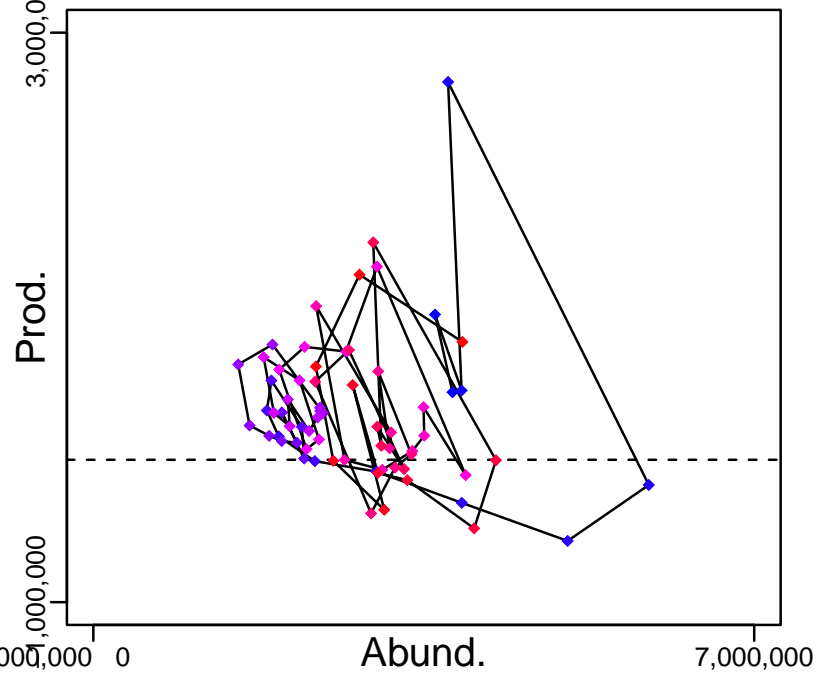
Kobe MGTpref (1955–2021–HIVELY)



Spawner Recruit (1955–2021–HIVELY)

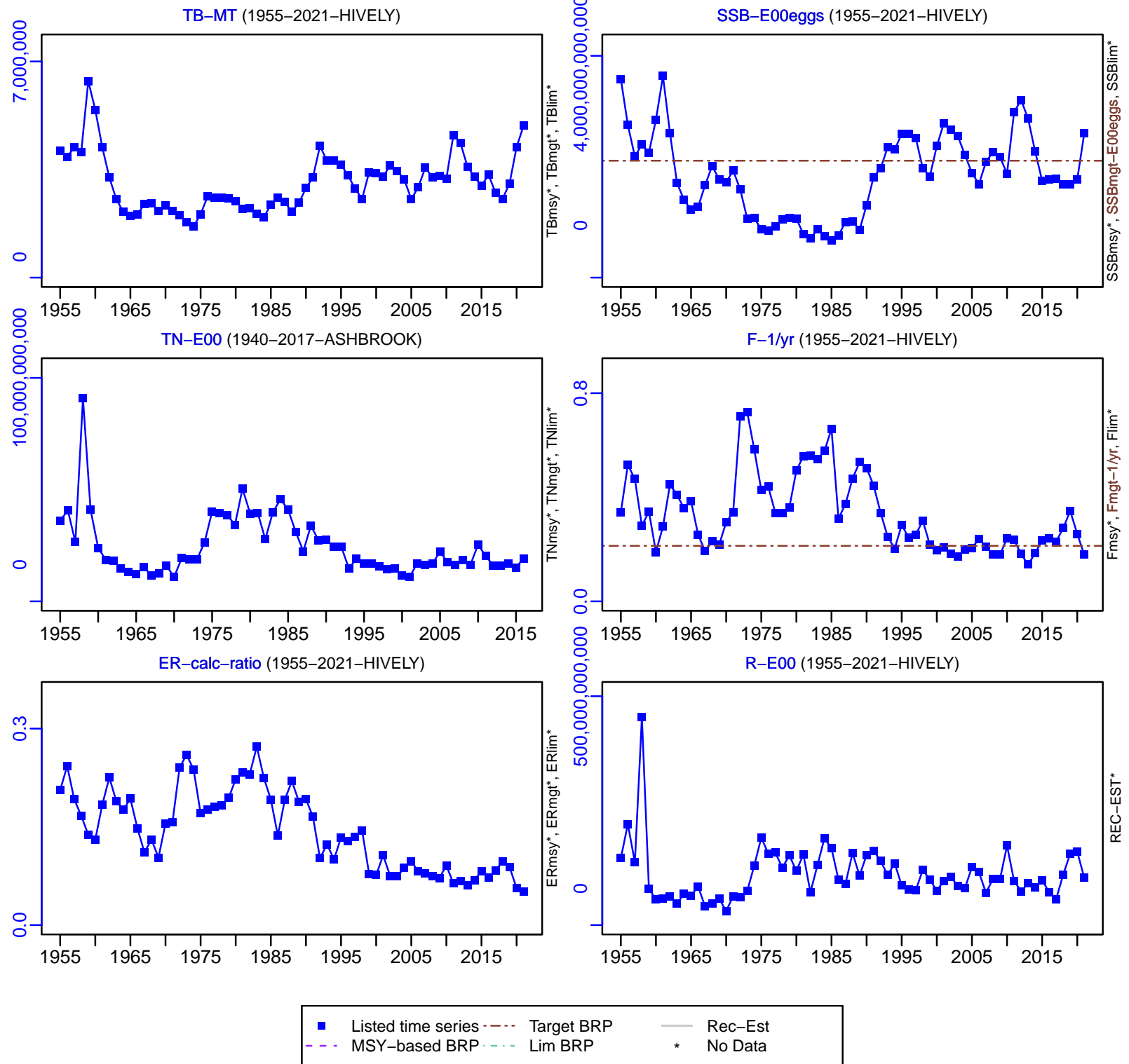


Production (1955–2021–HIVELY)



◆ Start Year ◆ End Year * No Data

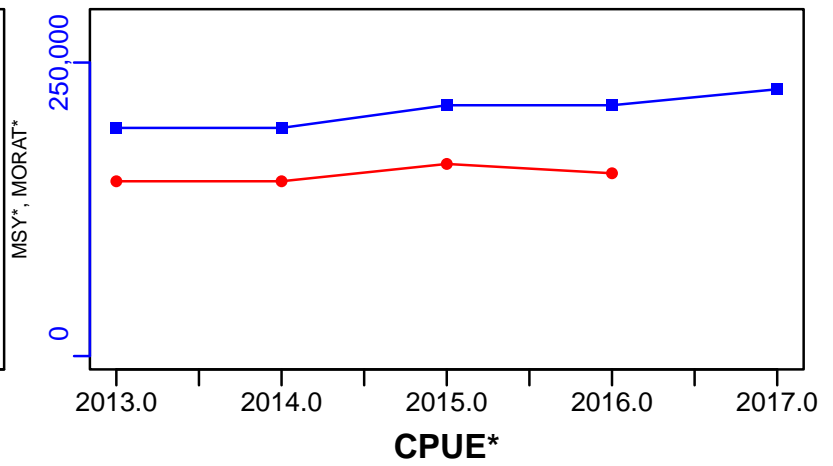
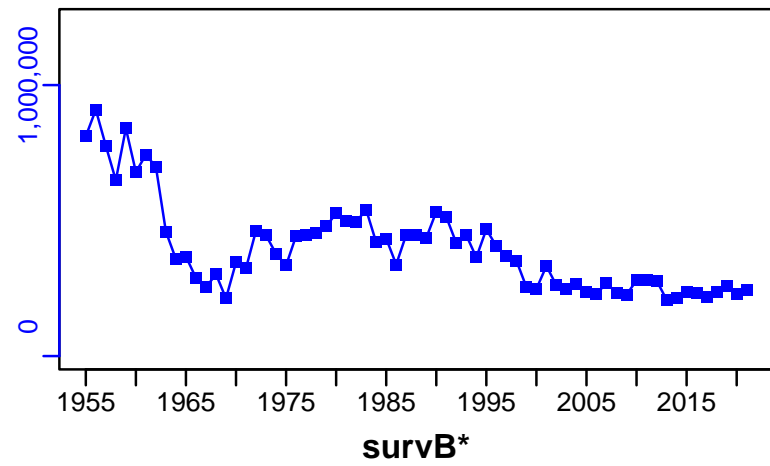
Atlantic menhaden Atlantic [MENATLAN]



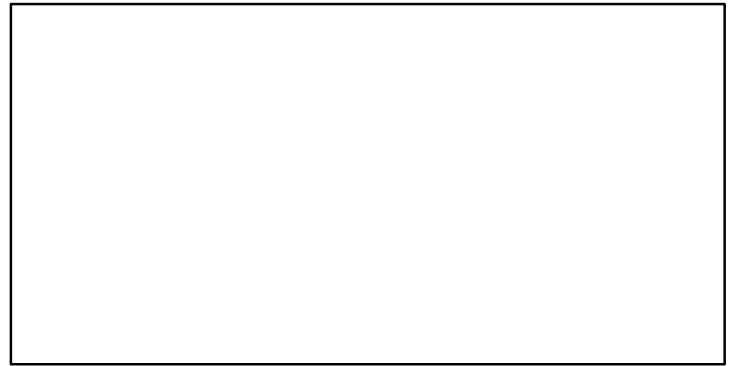
Atlantic menhaden Atlantic [MENATLAN]

TL-MT, TC*, RecC* (1955–2021–HIVELY)

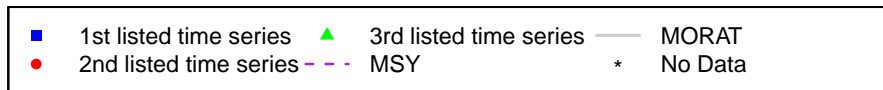
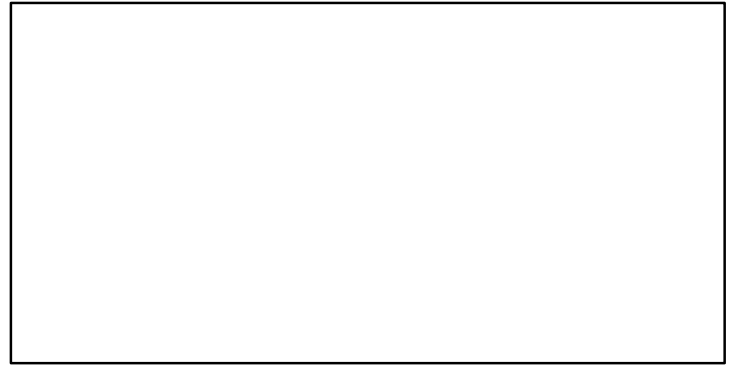
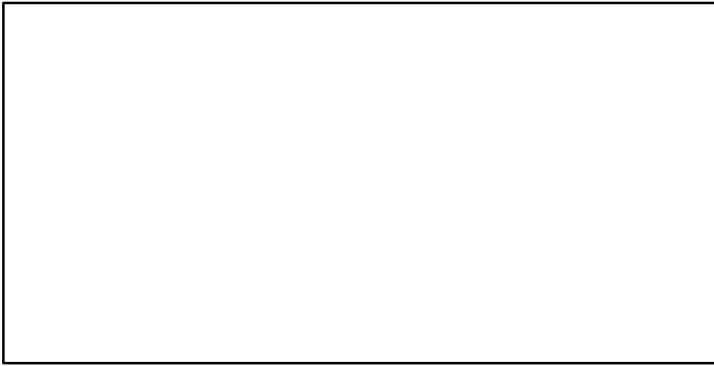
TAC-MT, Cpair-MT, Cadv* (1940–2017–ASHBROOK)



EFFORT*



CdivMSY*



Madeiran sardinella Central West Africa Cote Divoire-Benin [MSARDCWACIV-BEN]

Metadata	
Scientific Name	Sardinella maderensis
Current Assess ID	FAO-SPNWA-MSARDCWACIV-BEN-1990-2017-ASHBROOK
Area	Central West Africa Cote Divoire-Benin
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	10,717		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

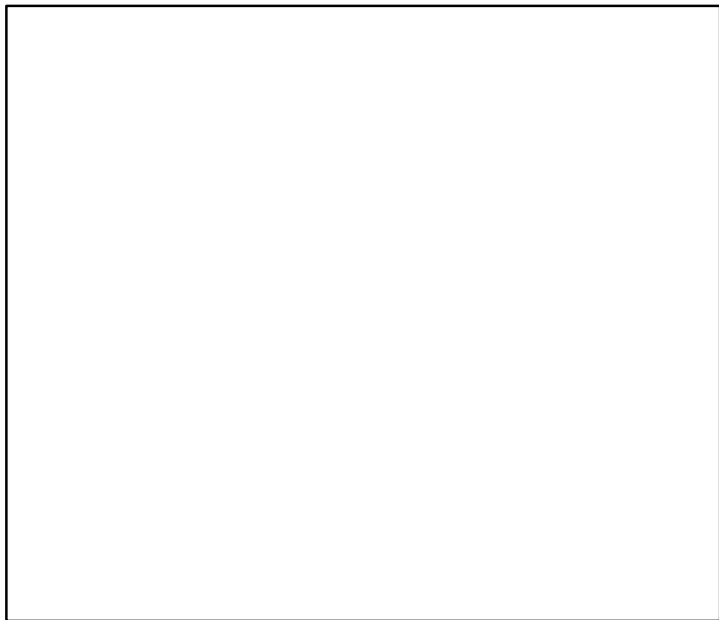
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

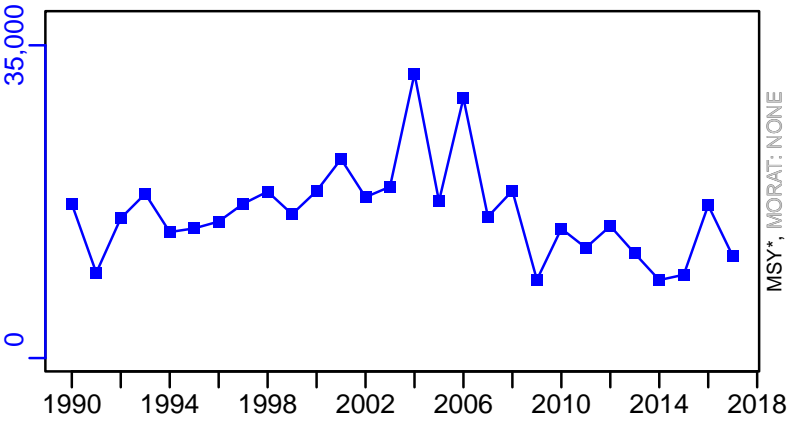


Recruits*



Madeiran sardinella Central West Africa Cote Divoire–Benin [MSARDCWACIV–BEN]

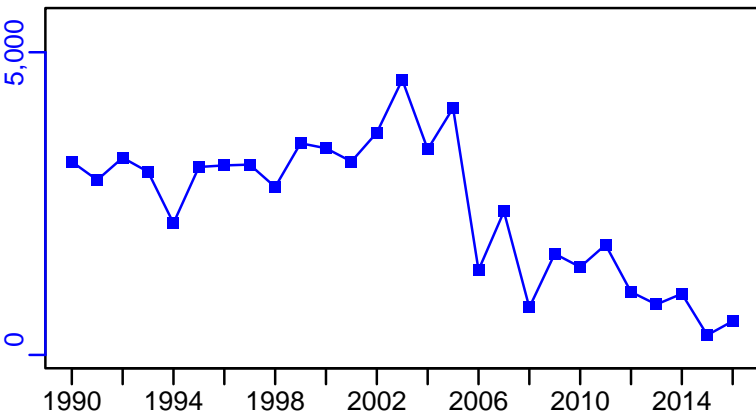
TC–MT, TL*, RecC* (1990–2017–ASHBROOK)



TAC*, Cpair*, Cadv*



survB_index–index (1990–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Madeiran sardinella North West Africa [MSARDNWA]

Metadata	
Scientific Name	Sardinella maderensis
Current Assess ID	FAO-SPNWA-MSARDNWA-1990-2020-HIVELY
Area	North West Africa
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	336,480		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

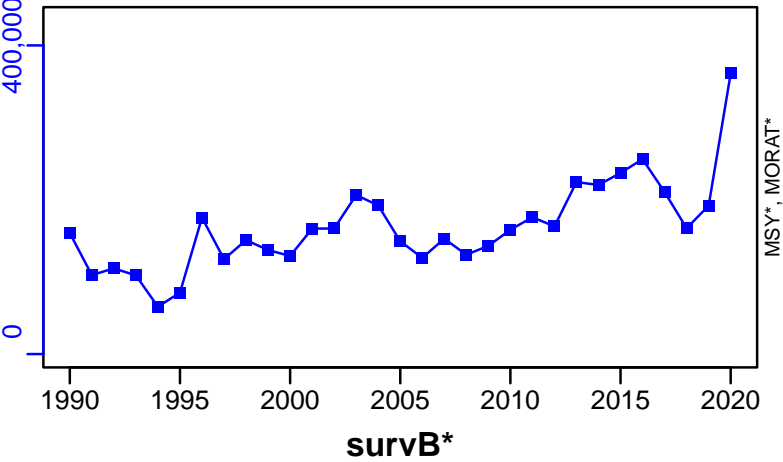


Recruits*

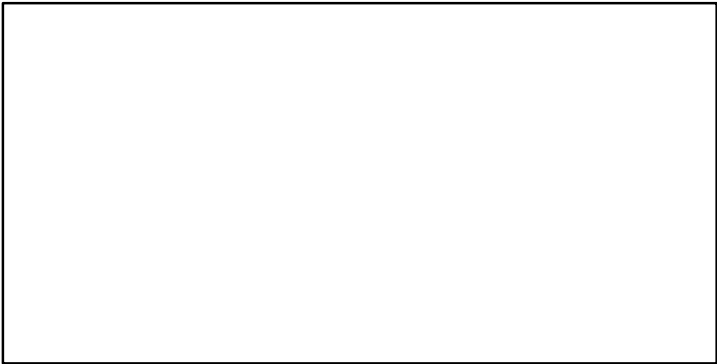


Madeiran sardinella North West Africa [MSARDNWA]

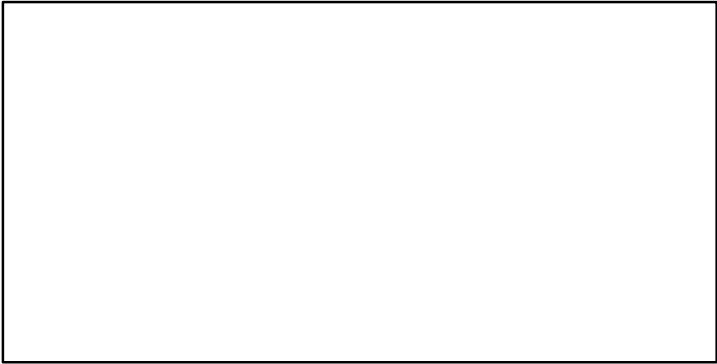
TC-MT, TL*, RecC* (1990-2020-HIVELY)



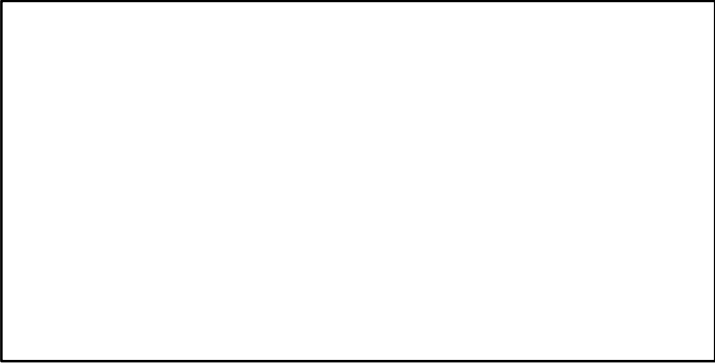
TAC*, Cpair*, Cadv*



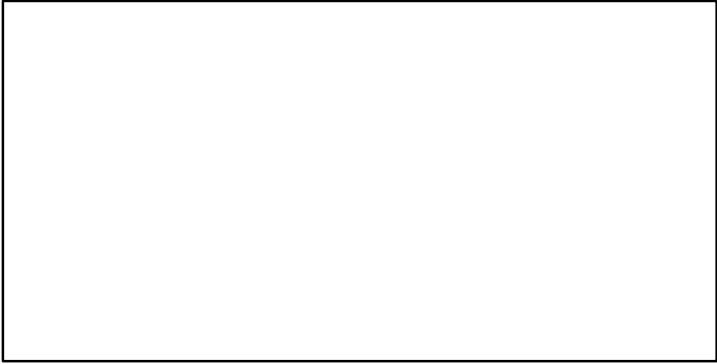
CPUE*



EFFORT*



CdivMSY*



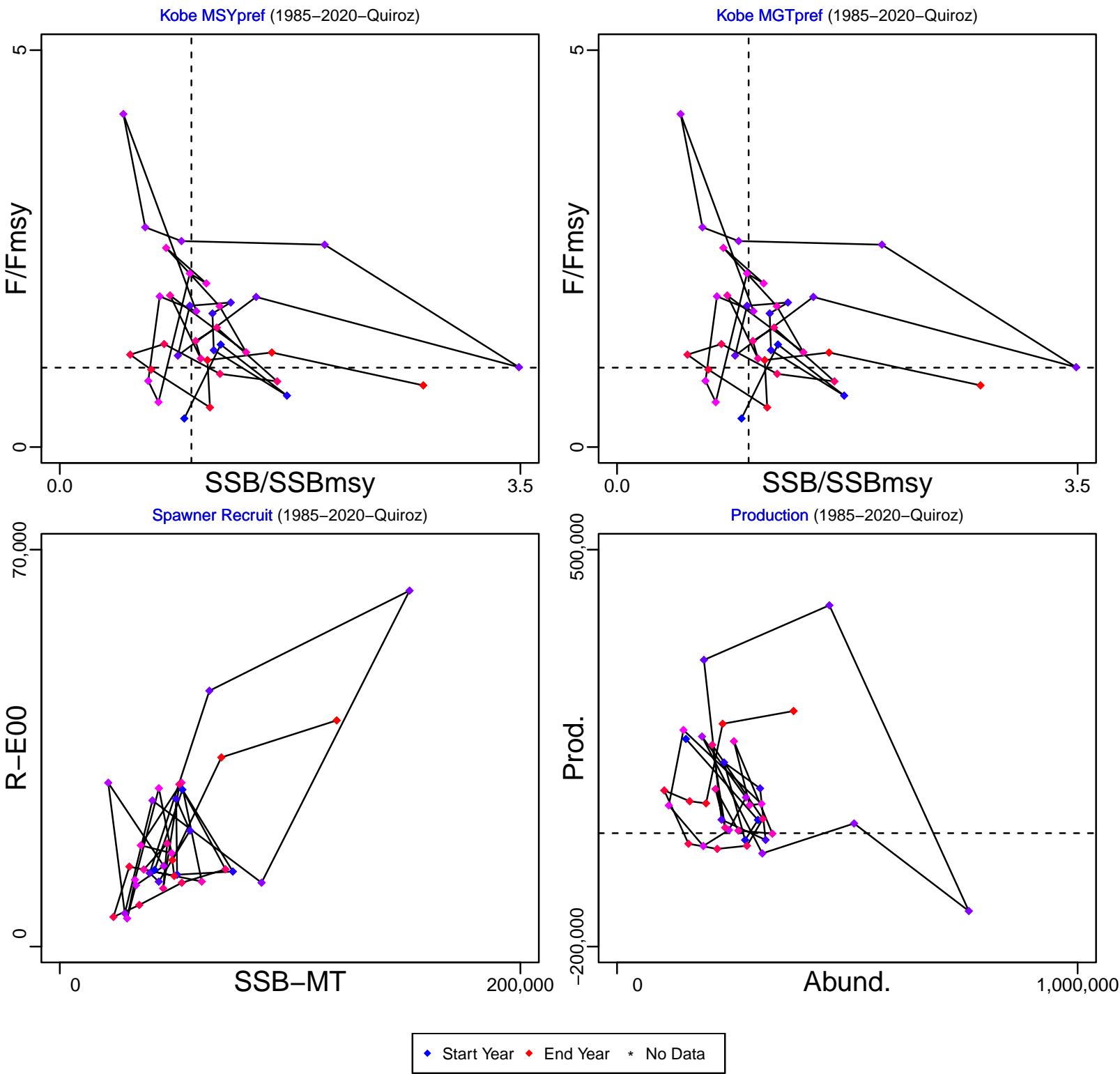
Peruvian anchoveta Central Chile [PANCHCCH]

Metadata	
Scientific Name	Engraulis ringens
Current Assess ID	IFOPCH-PANCHCCH-1985-2020-Quiroz
Area	Central Chile
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2016, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2020	43,530
Fmsy	Fmsy-pr-1/yr	2020	0.48
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2016	51,000
Fmgt	Fmgt-1/yr	2016	0.47
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2020	78,953
MSY	MSY-MT	2020	81,367
M	M-1/yr	2020	1.3
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

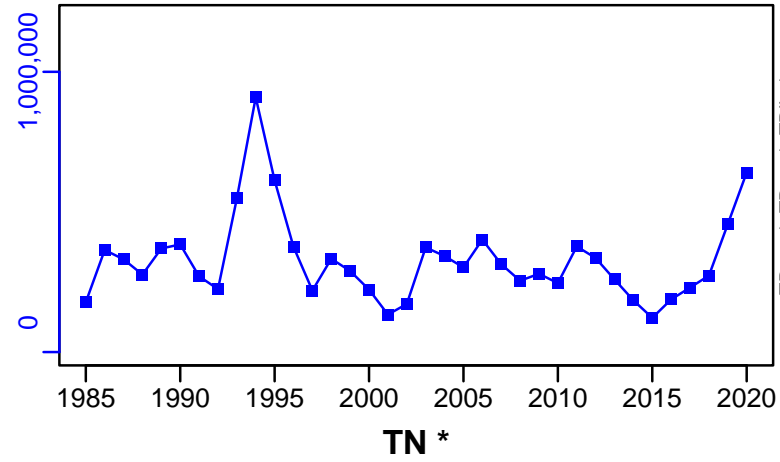
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	538,270	-	-
SSB	SSB-MT	2020	120,240	Both	-
TN	-	-	-	-	-
R	R-E00	2020	39,889	Both	-
F	F-1/yr	2020	0.373	Both	-
ER	ER-ratio	2020	0.121	-	-
TC	TC-MT	2020	91,927		
TL	TL-MT	2016	36,400		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2020	2.762		
F/Fmsy	FdivFmsy-dimensionless	2020	0.777		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2016	1.061		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	0.894		
ER/ERmgt	-	-	-		

Peruvian anchoveta Central Chile [PANCHCCH]

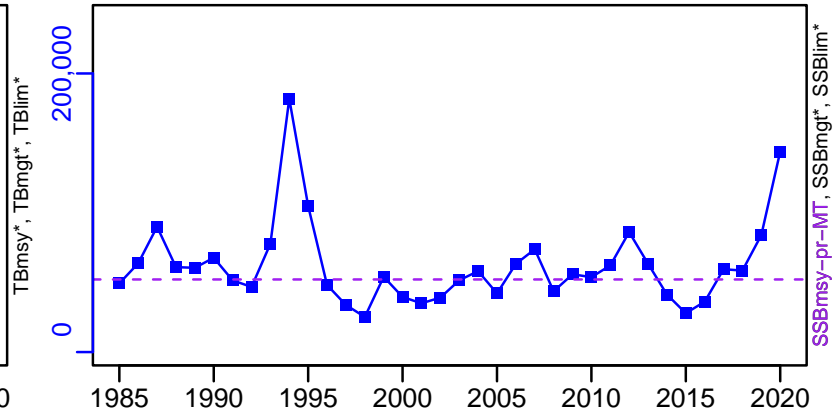


Peruvian anchoveta Central Chile [PANCHCCH]

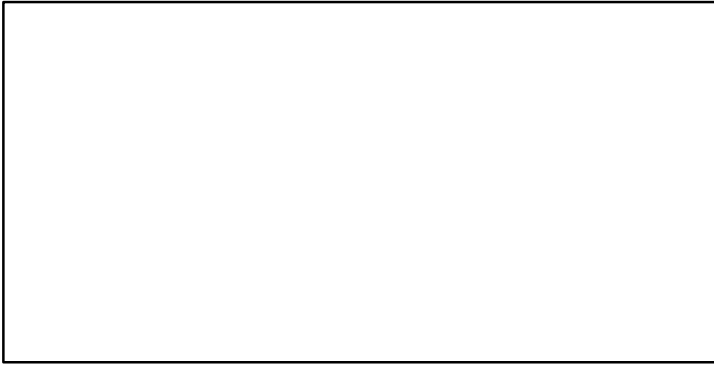
TB-MT (1985–2020–Quiroz)



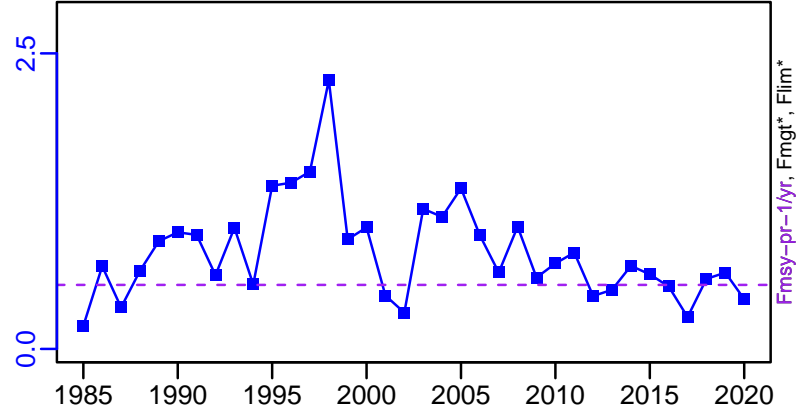
SSB-MT (1985–2020–Quiroz)



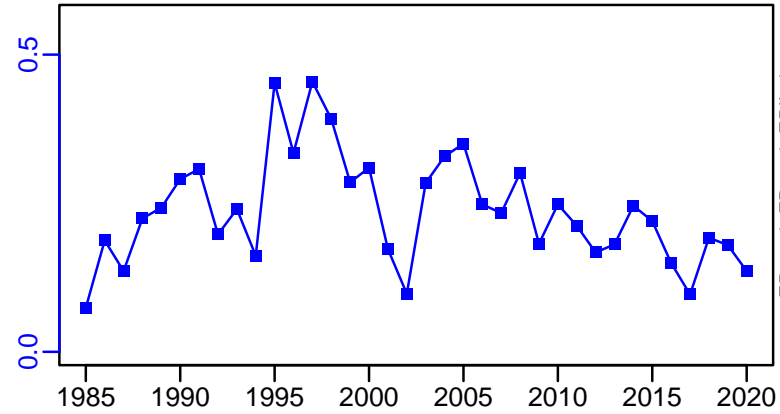
TN *



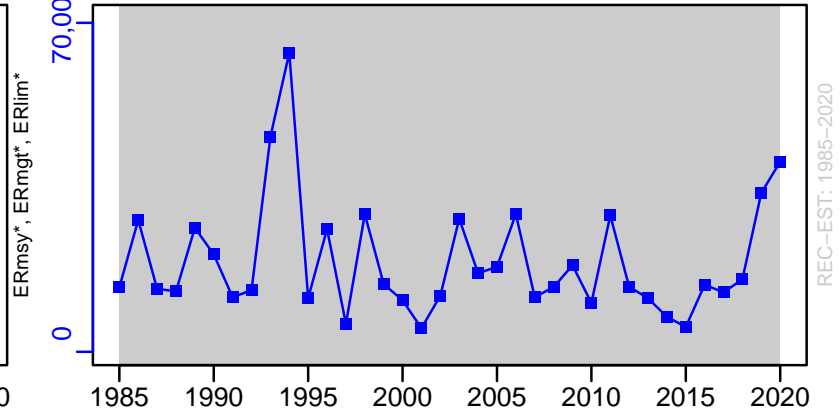
F-1/yr (1985–2020–Quiroz)



ER-ratio (1985–2020–Quiroz)

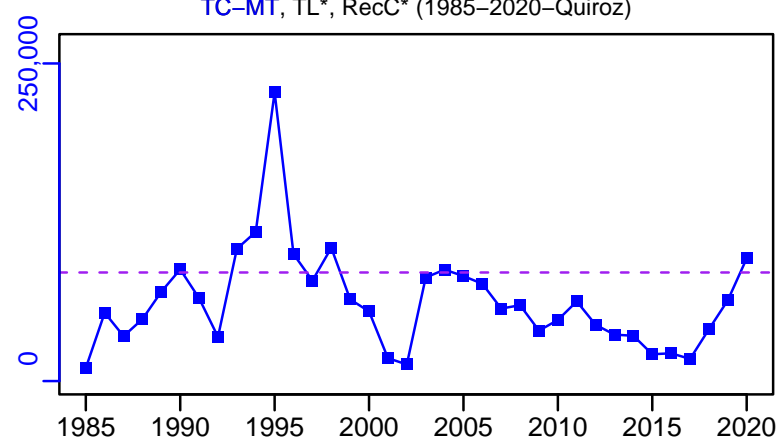


R-E00 (1985–2020–Quiroz)

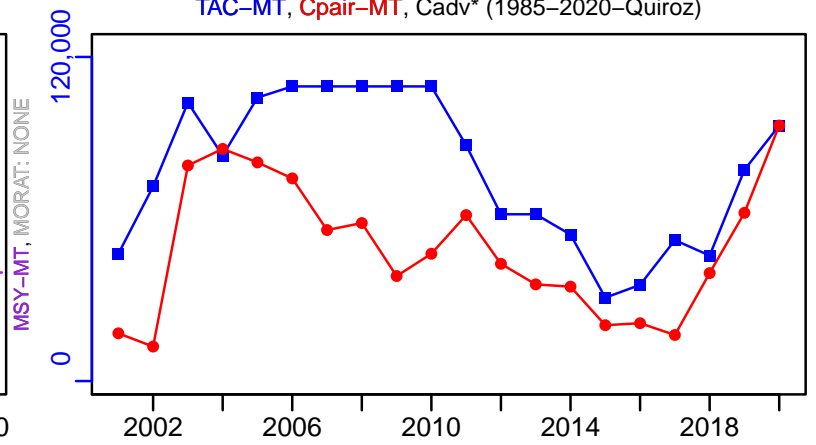


Peruvian anchoveta Central Chile [PANCHCCH]

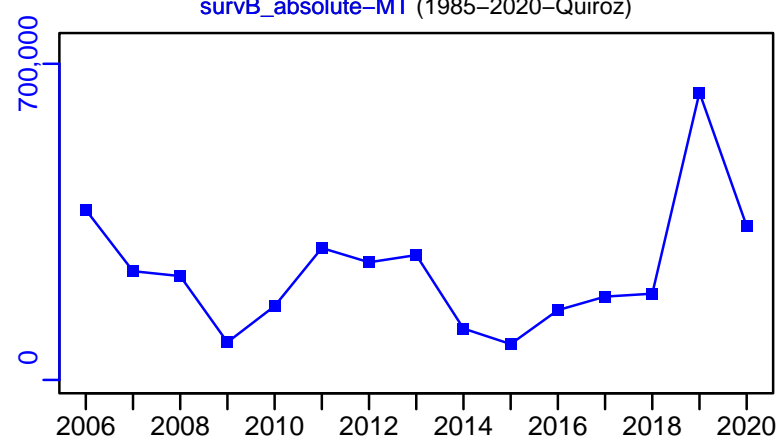
TC-MT, TL*, RecC* (1985–2020–Quiroz)



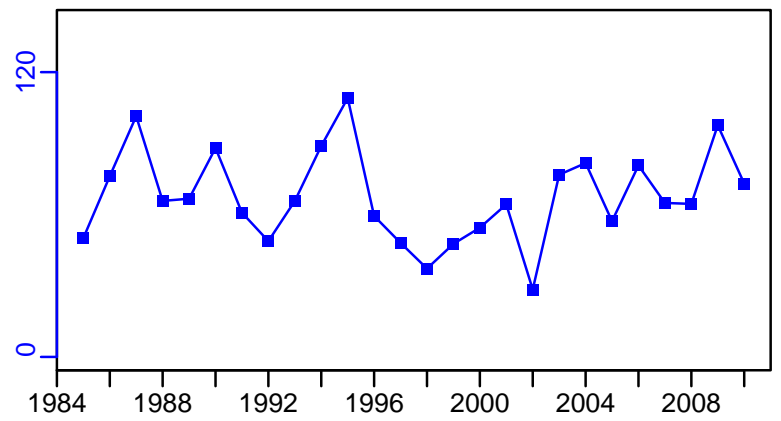
TAC-MT, Cpair-MT, Cadv* (1985–2020–Quiroz)



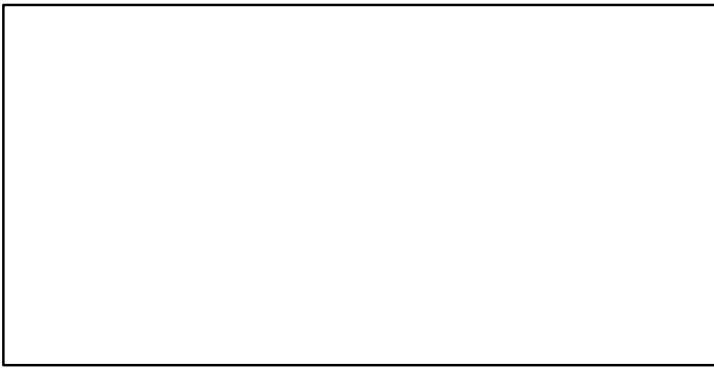
survB_absolute-MT (1985–2020–Quiroz)



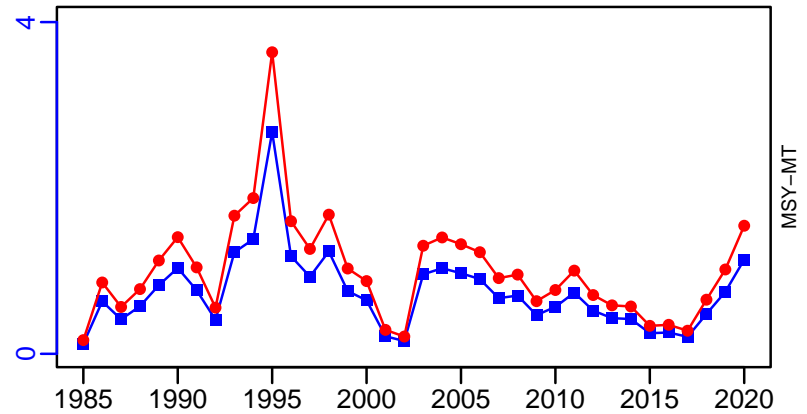
CPUE-index (1985–2020–Quiroz)



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1985–2020–Quiroz)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Peruvian anchoveta Central-Southern Chile [PANCHCSCH]

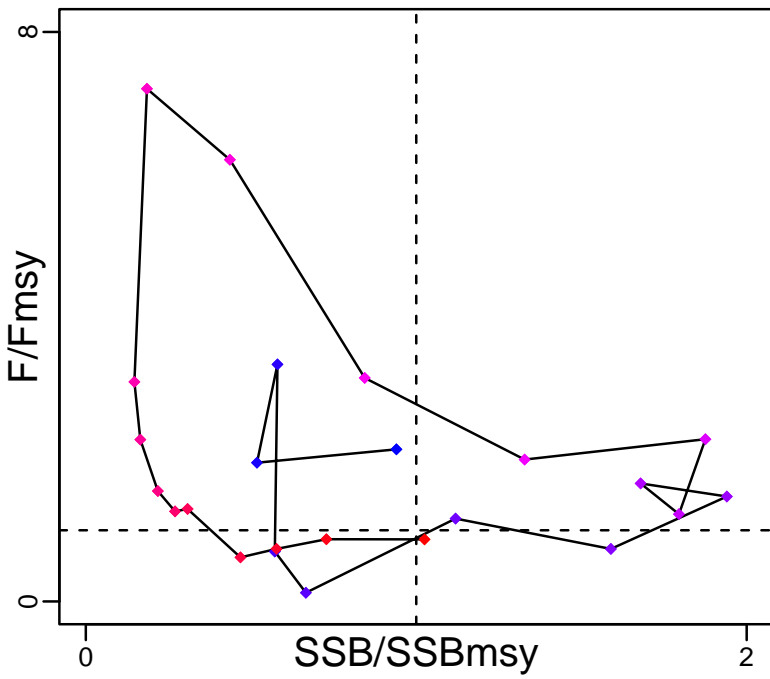
Metadata	
Scientific Name	Engraulis ringens
Current Assess ID	IFOPCH-PANCHCSCH-1997-2020-Quiroz
Area	Central-Southern Chile
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2016, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2020	482,277
Fmsy	Fmsy-pr-1/yr	2020	0.44
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2016	562,000
Fmgt	Fmgt-1/yr	2016	0.396
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2020	877,959
MSY	MSY-MT	2020	160,810
M	M-1/yr	2020	0.7
TBlim	-	-	-
SSBlim	SSBlim-MT	2016	281,000
Flim	-	-	-
ERlim	-	-	-

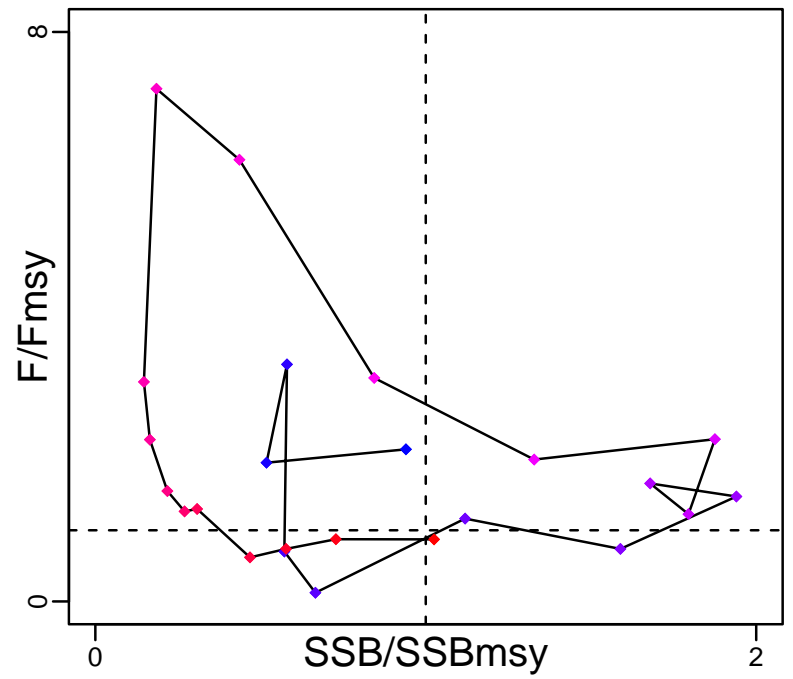
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	824,040	-	-
SSB	SSB-MT	2020	495,110	Both	-
TN	-	-	-	-	-
R	R-E00	2020	58,165	Both	-
F	F-1/yr	2020	0.385	Both	-
ER	ER-ratio	2020	0.195	-	-
TC	TC-MT	2020	160,799		
TL	TL-MT	2016	44,600		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2020	1.025		
F/Fmsy	FdivFmsy-dimensionless	2020	0.872		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2016	0.363		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	0.995		
ER/ERmgt	-	-	-		

Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

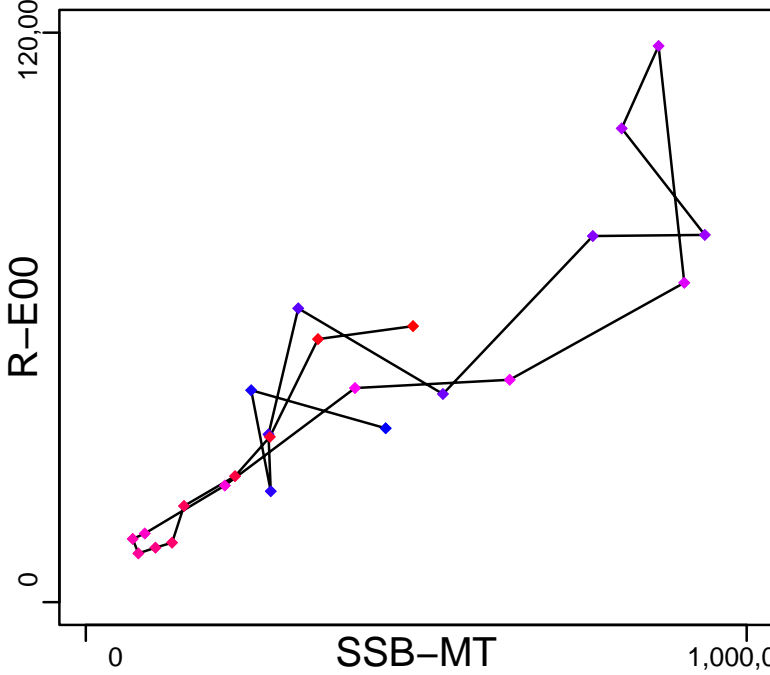
Kobe MSYpref (1997–2020–Quiroz)



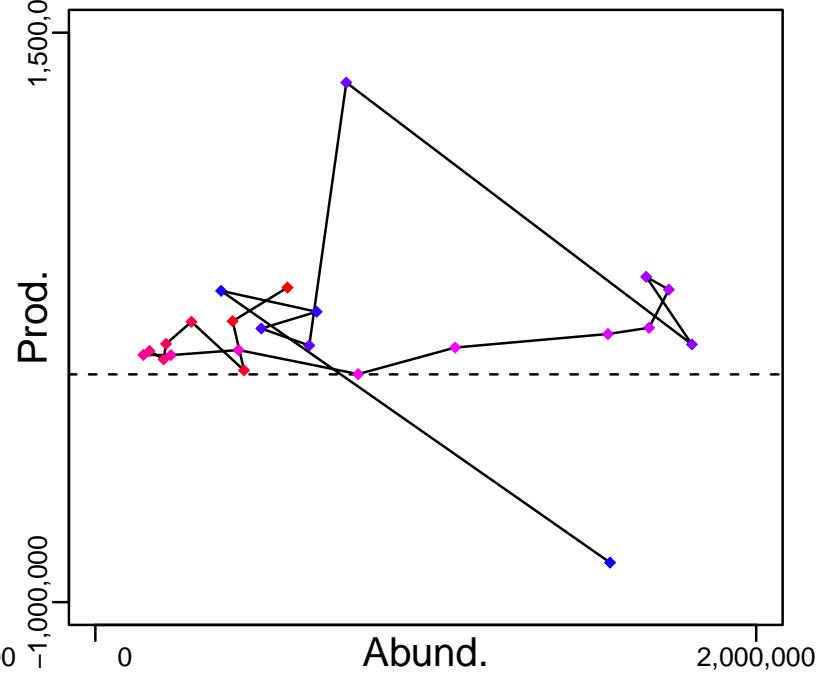
Kobe MGTpref (1997–2020–Quiroz)



Spawner Recruit (1997–2020–Quiroz)



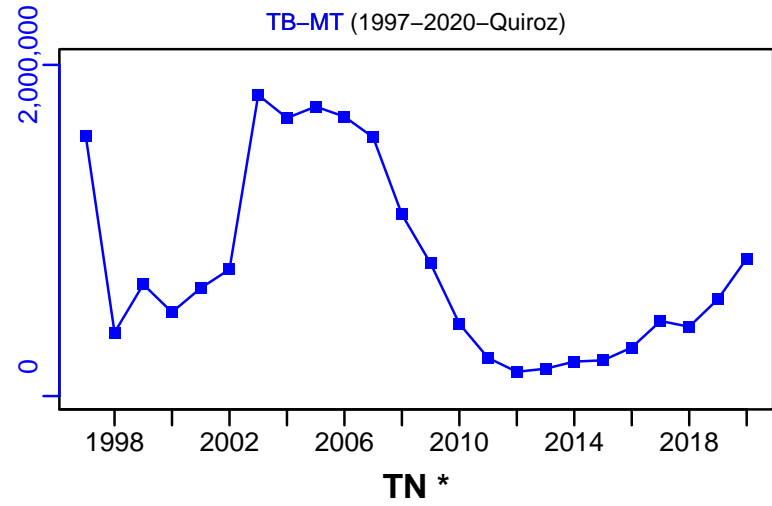
Production (1997–2020–Quiroz)



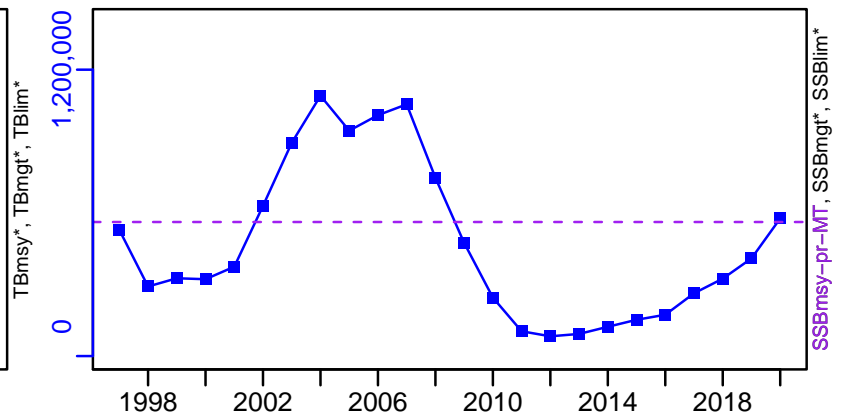
◆ Start Year ◆ End Year * No Data

Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

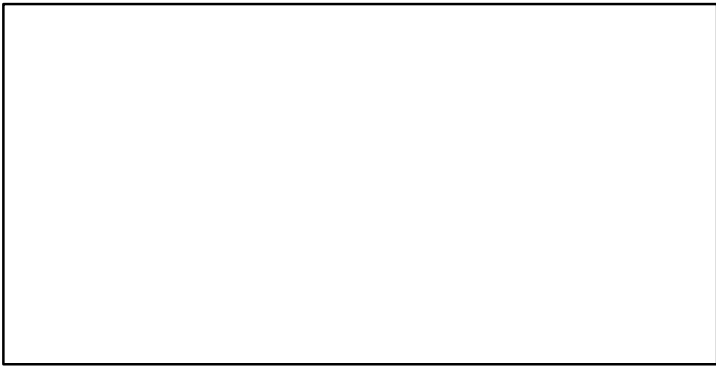
TB–MT (1997–2020–Quiroz)



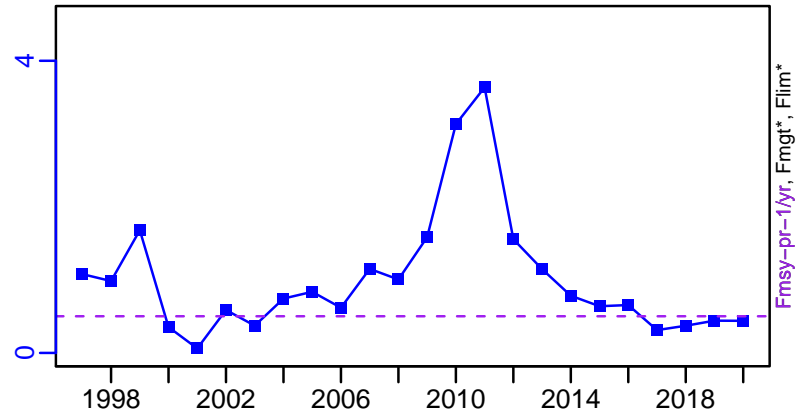
SSB–MT (1997–2020–Quiroz)



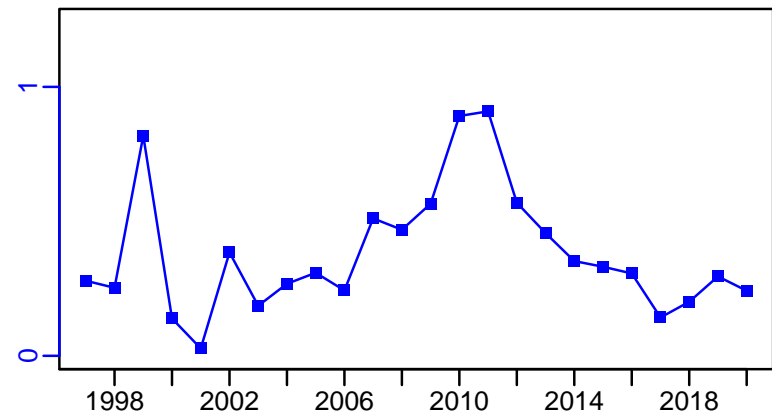
TN *



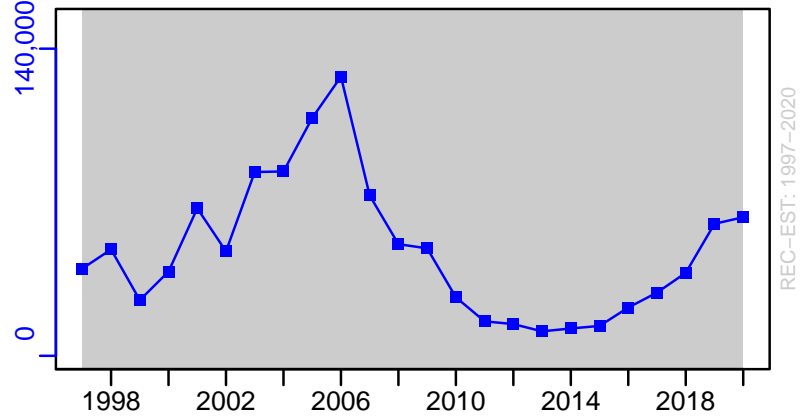
F–1/yr (1997–2020–Quiroz)



ER–ratio (1997–2020–Quiroz)

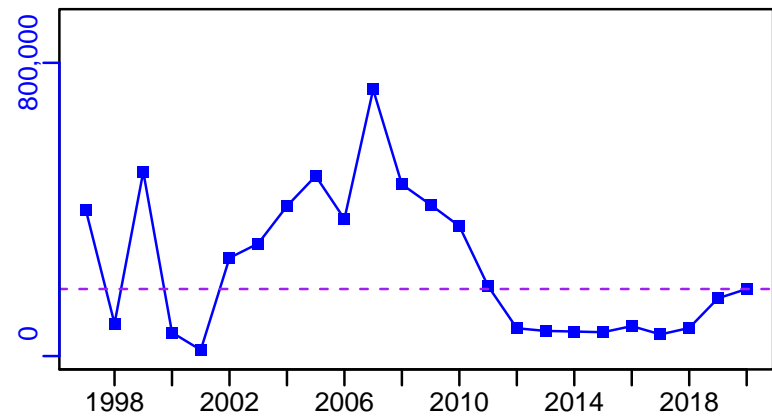


R–E00 (1997–2020–Quiroz)

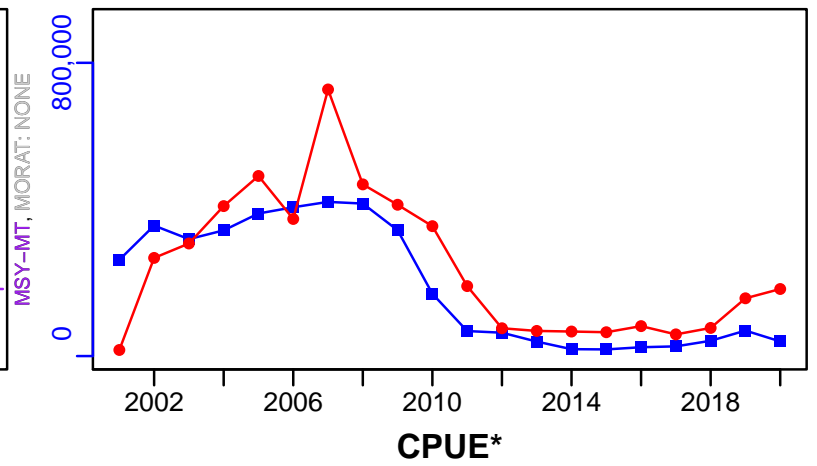


Peruvian anchoveta Central–Southern Chile [PANCHCSCH]

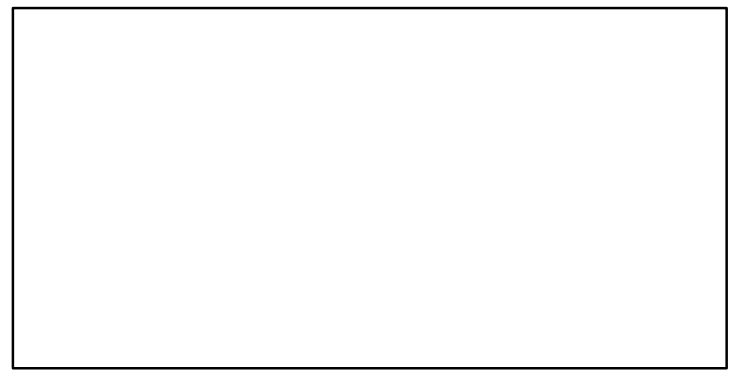
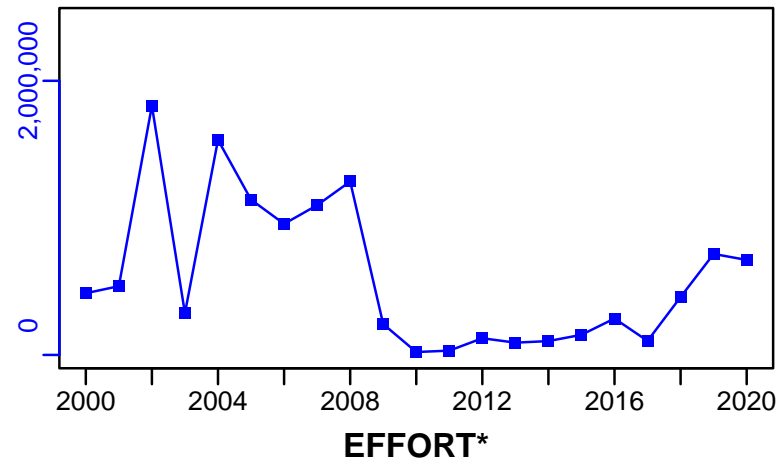
TC–MT, TL*, RecC* (1997–2020–Quiroz)



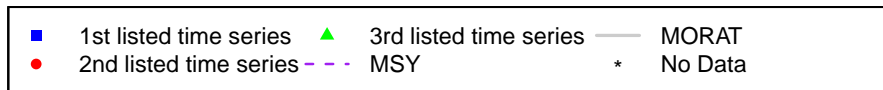
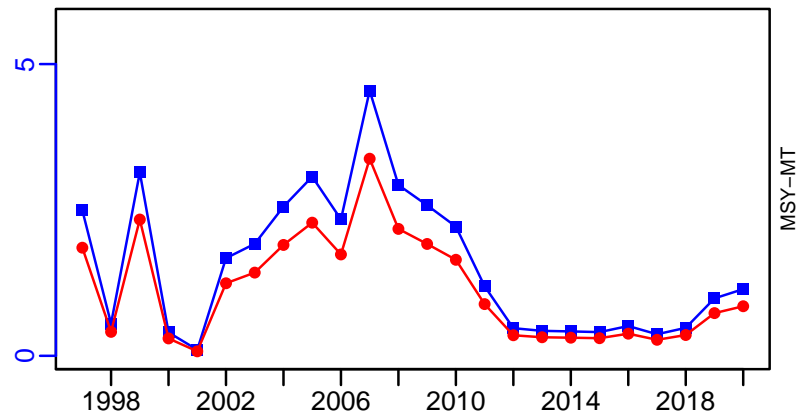
TAC–MT, Cpair–MT, Cadv* (1997–2020–Quiroz)



survB_absolute–MT (1997–2020–Quiroz)



TC–MT/MSY–MT, CdivMEANC–ratio, (1997–2020–Quiroz)



Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

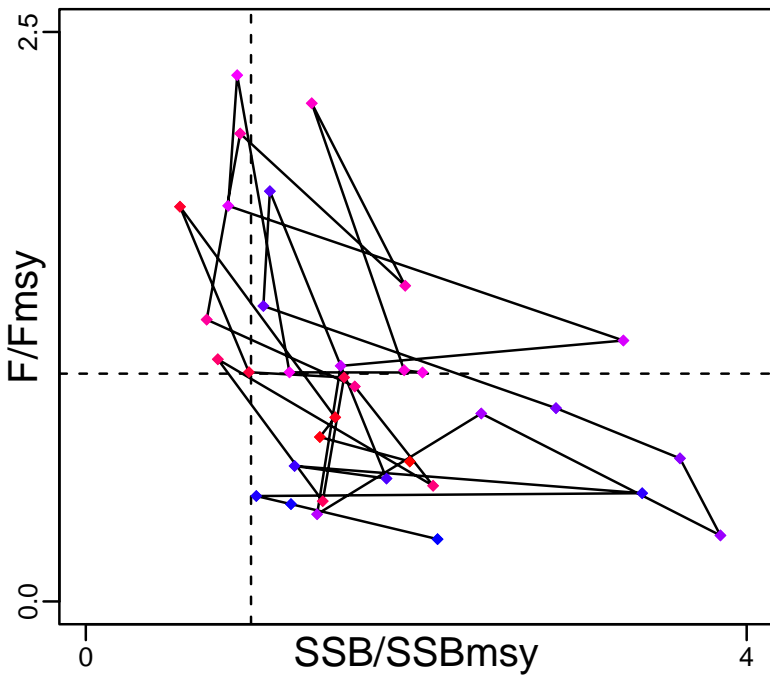
Metadata	
Scientific Name	Engraulis ringens
Current Assess ID	IFOPCH-PANCHNCHSP-1986-2019-Quiroz
Area	Northern Chile Southern Peru
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2019	642,260
Fmsy	Fmsy-pr-1/yr	2019	0.863
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2015	2,021,000
Fmgt	Fmgt-1/yr	2015	1.18
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2019	1,284,520
MSY	MSY-MT	2019	338,192
M	M-1/yr	2019	2.2
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

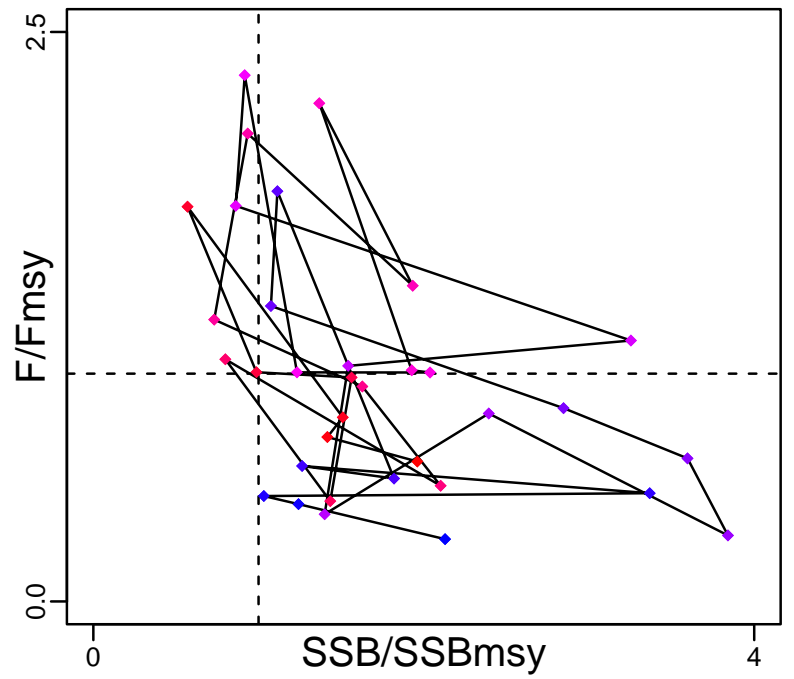
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	2,069,000	-	-
SSB	SSB-MT	2019	1,259,400	Both	-
TN	-	-	-	-	-
R	R-E00	2019	349,460	Both	-
F	F-1/yr	2019	0.53	Both	-
ER	ER-ratio	2019	0.259	-	-
TC	TC-MT	2019	690,083		
TL	TL-MT	2015	1,200,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2019	1.961		
F/Fmsy	FdivFmsy-dimensionless	2019	0.614		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2015	0.599		
F/Fmgt	F-1/yr/Fmgt-1/yr	2015	3.576		
ER/ERmgt	-	-	-		

Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

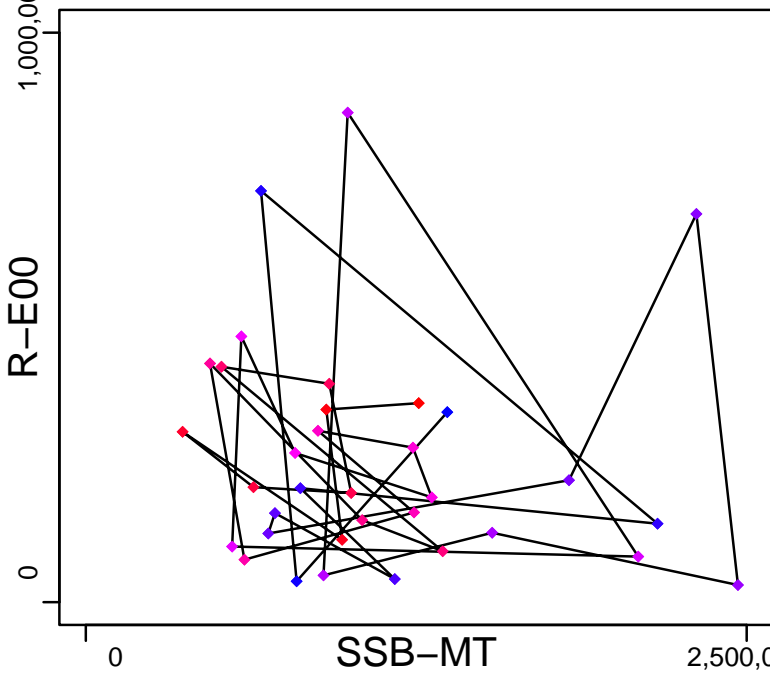
Kobe MSY_{pref} (1986–2019–Quiroz)



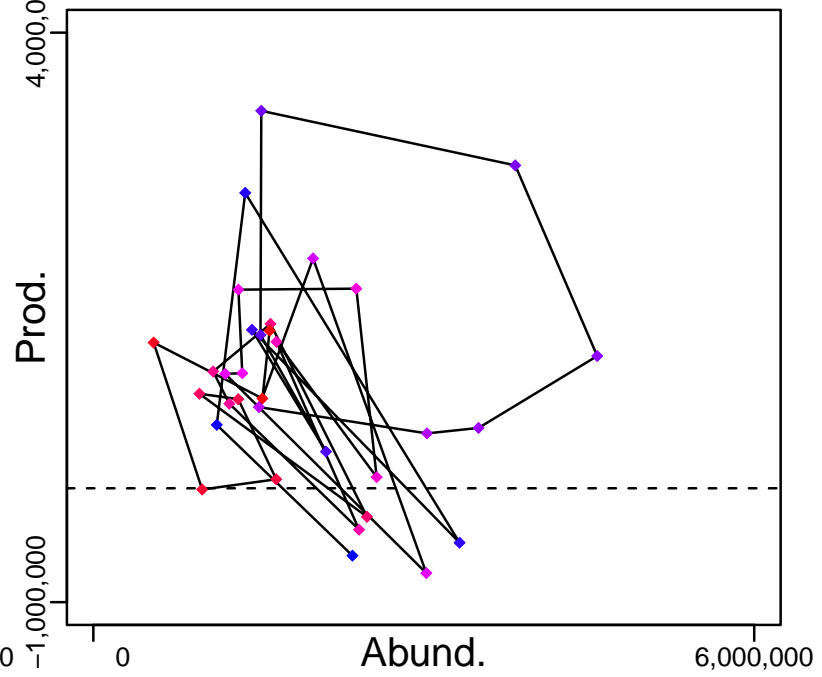
Kobe MGT_{pref} (1986–2019–Quiroz)



Spawner Recruit (1986–2019–Quiroz)



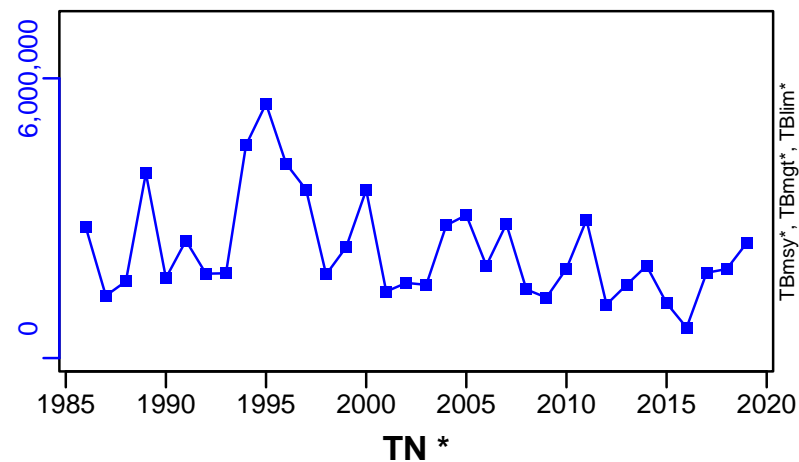
Production (1986–2019–Quiroz)



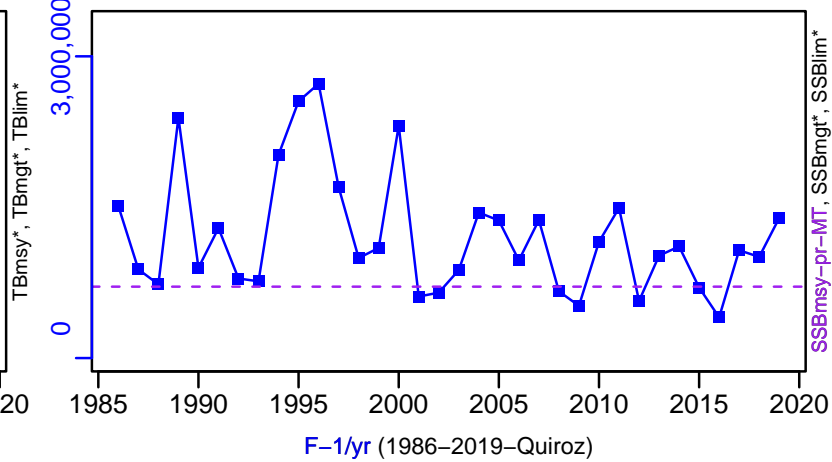
◆ Start Year ◆ End Year * No Data

Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

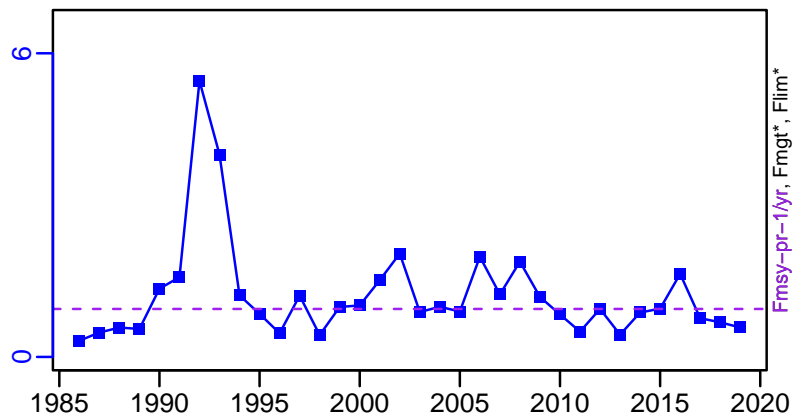
TB-MT (1986–2019–Quiroz)



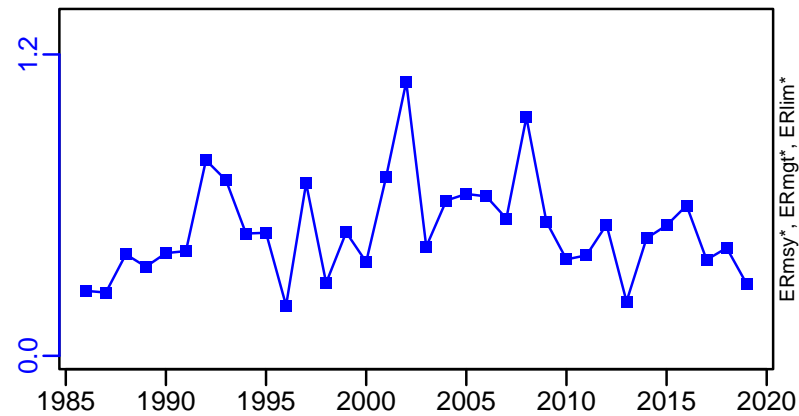
SSB-MT (1986–2019–Quiroz)



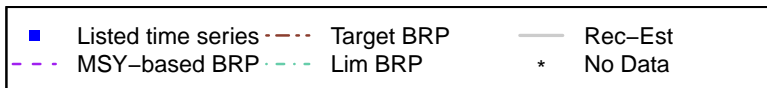
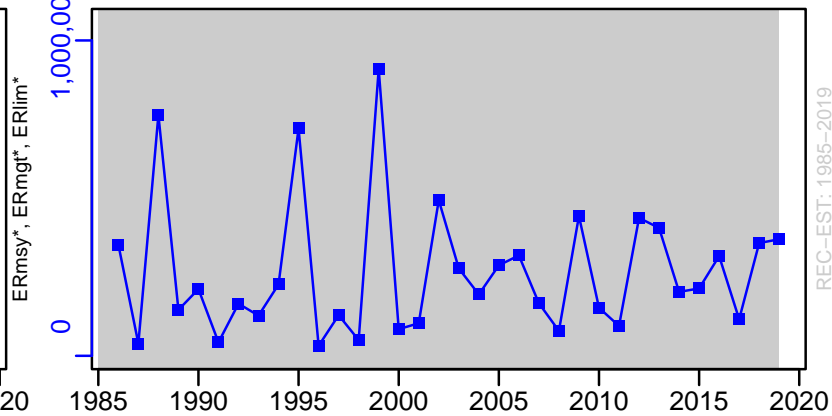
F-1/yr (1986–2019–Quiroz)



ER-ratio (1986–2019–Quiroz)

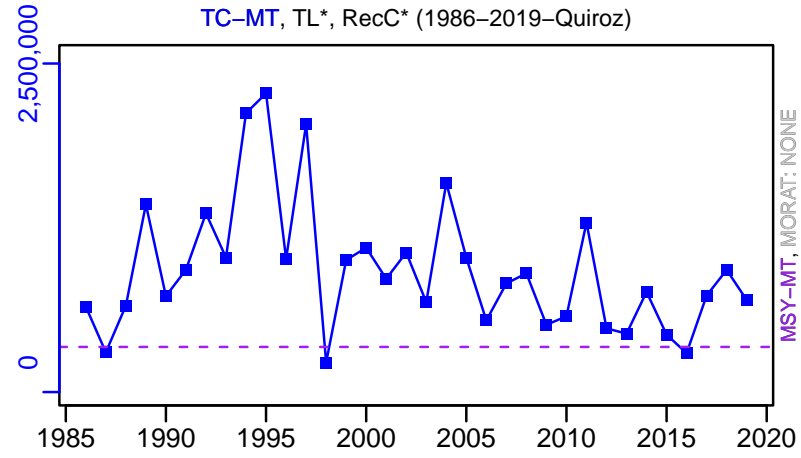


R-E00 (1986–2019–Quiroz)



Peruvian anchoveta Northern Chile Southern Peru [PANCHNCHSP]

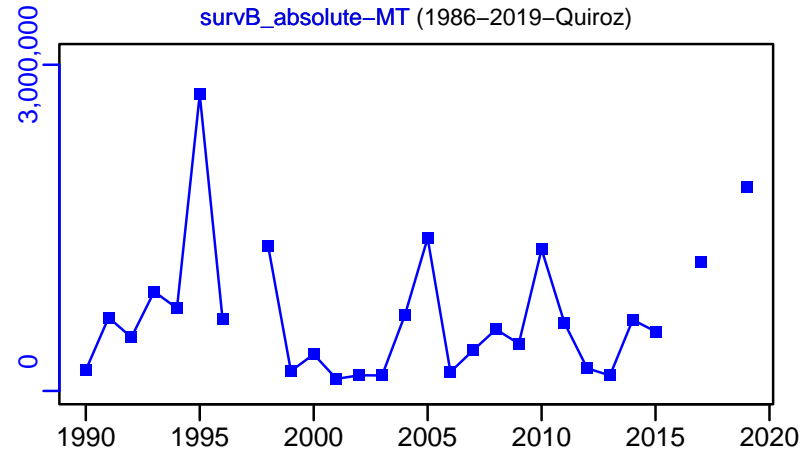
TC-MT, TL*, RecC* (1986–2019–Quiroz)



TAC*, Cpair*, Cadv*



survB_absolute-MT (1986–2019–Quiroz)



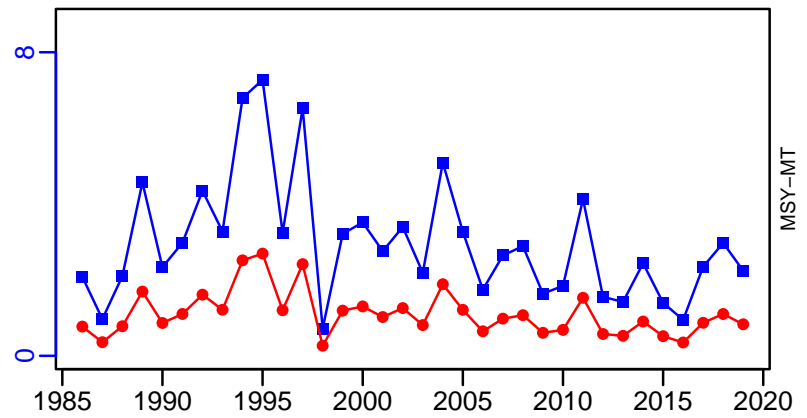
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1986–2019–Quiroz)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

Metadata	
Scientific Name	Engraulis ringens
Current Assess ID	IMARPE-PANCHPERUNC-1953-2020-DIAZ
Area	North-Central Peruvian coast
Management Authority	Instituto del Mar del Peru, Peru national management
Assessor	Instituto del Mar del Peru
Asmts in RAM	2020, 2008, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-pr-MT	2016	6,660,000
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	TBmgt-MT	2016	6,660,000
SSBmgt	-	-	-
Fmgt	-	-	-
ERMgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2016	10,200,000	Both	-
SSB	SSB-MT	2008	6,590,000	Both	-
TN	-	-	-	-	-
R	R-E00	2016	1.81×10^8	Both	-
F	F-1/yr	2008	0.588	-	-
ER	ER-calc-ratio	2016	0.325	-	-
TC	-	-	-		
TL	TL-MT	2020	3,151,481		
TB/TBmsy	TB-MT/TBmsy-pr-MT	2016	1.532		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	TB-MT/TBmgt-MT	2016	1.532		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERMgt	-	-	-		

Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

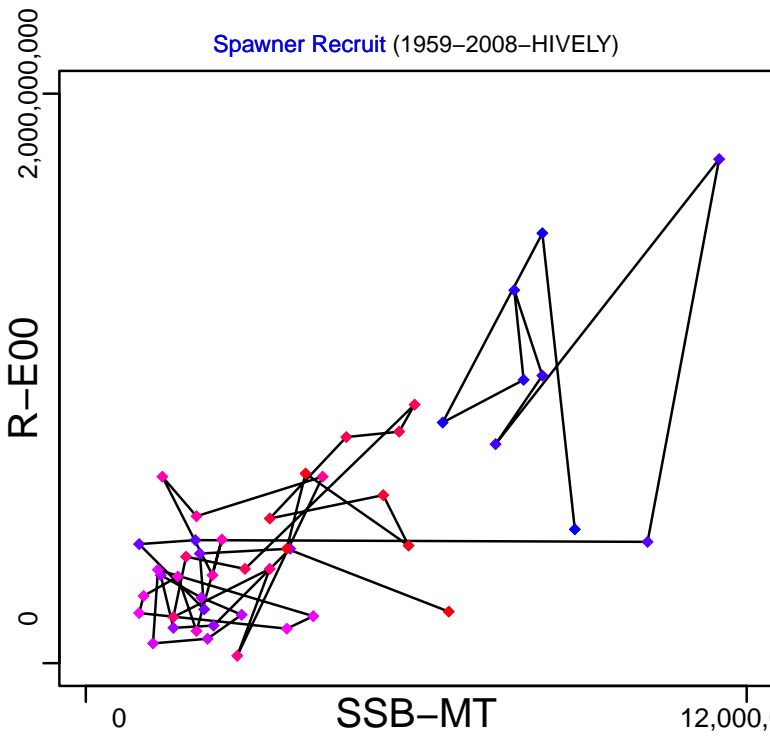
Kobe MSY*



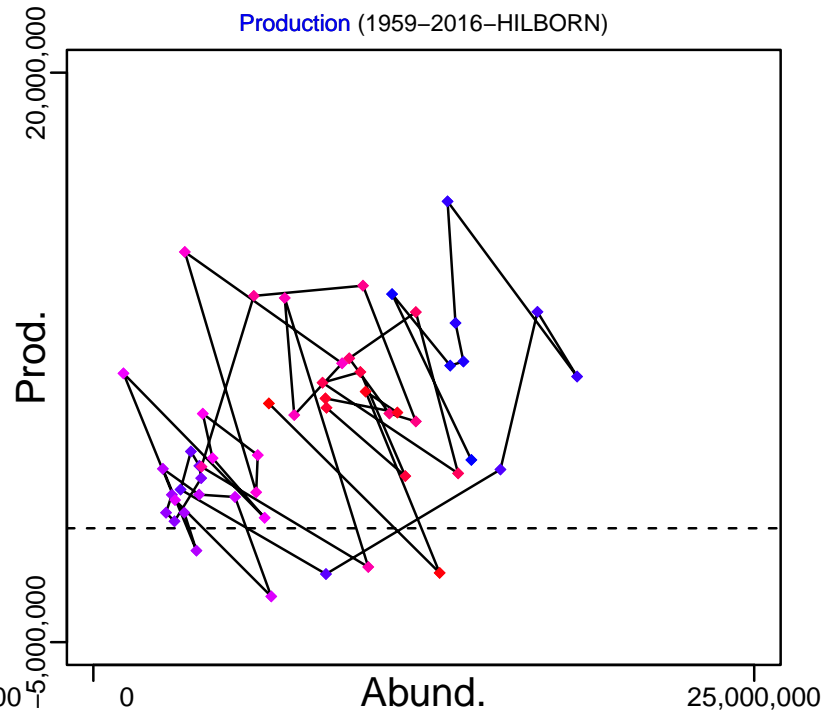
Kobe MGT*



Spawner Recruit (1959–2008–HIVELY)



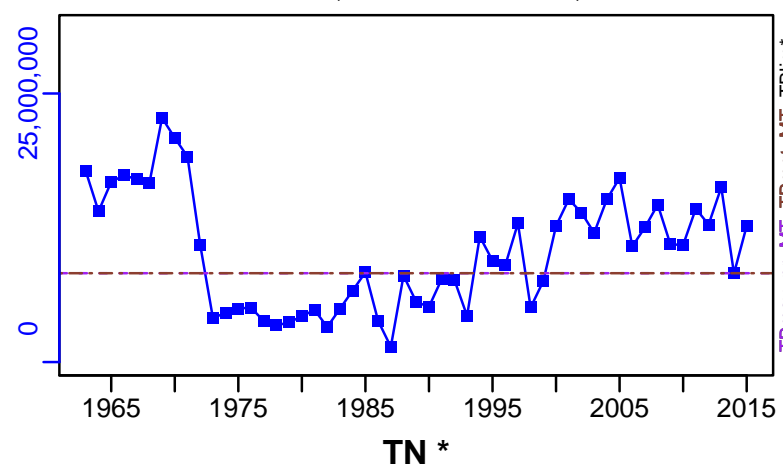
Production (1959–2016–HILBORN)



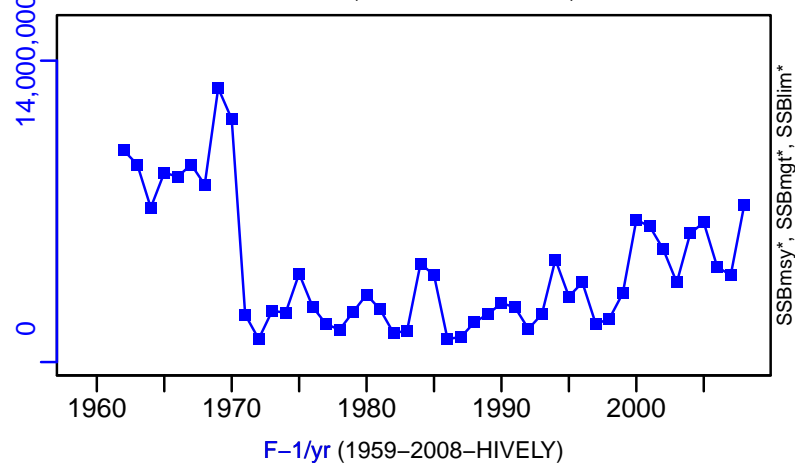
◆ Start Year ◆ End Year * No Data

Peruvian anchoveta North-Central Peruvian coast [PANCHPERUNC]

TB-MT (1959–2016–HILBORN)



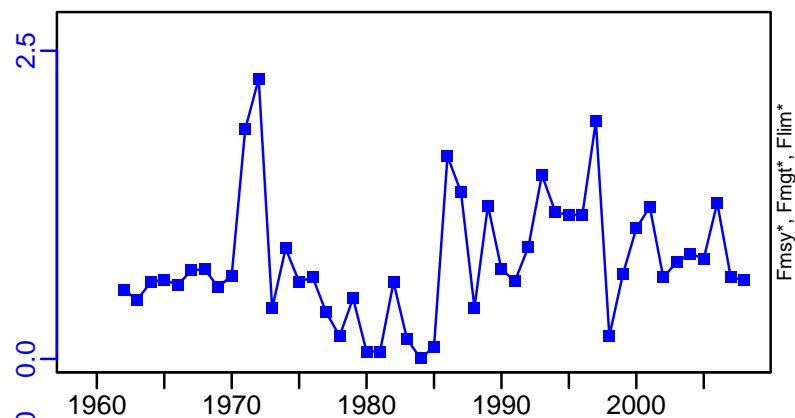
SSB-MT (1959–2008–HIVELY)



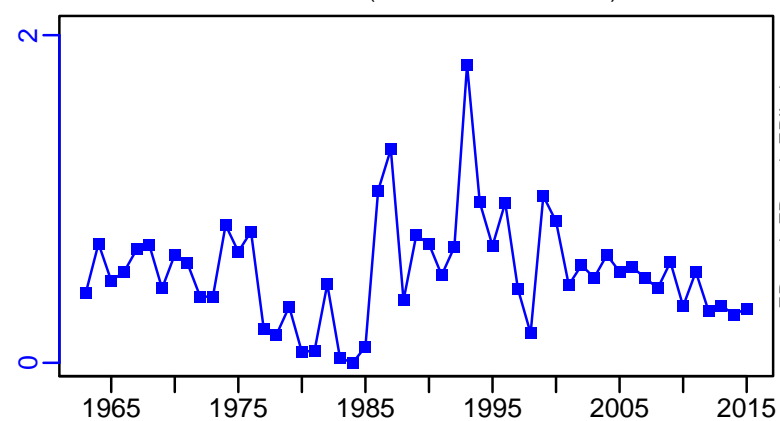
TN *



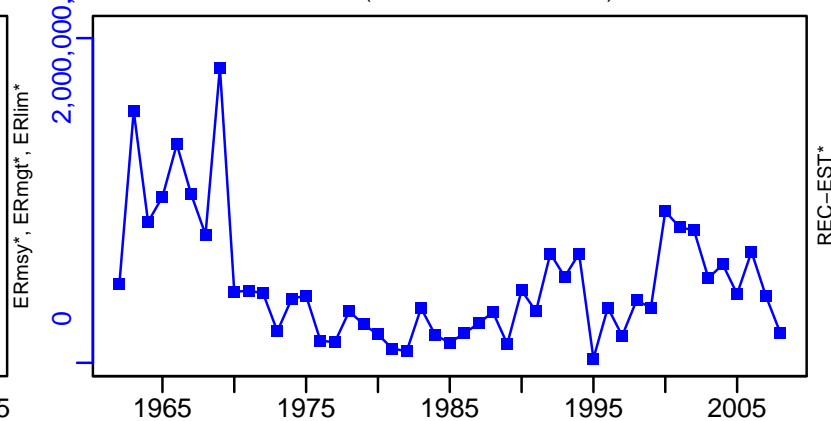
F-1/yr (1959–2008–HIVELY)



ER-calc-ratio (1959–2016–HILBORN)

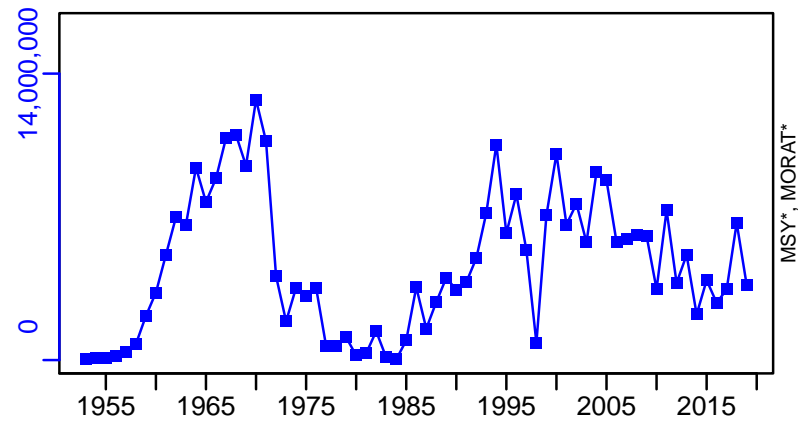


R-E00 (1959–2016–HILBORN)



Peruvian anchoveta North–Central Peruvian coast [PANCHPERUNC]

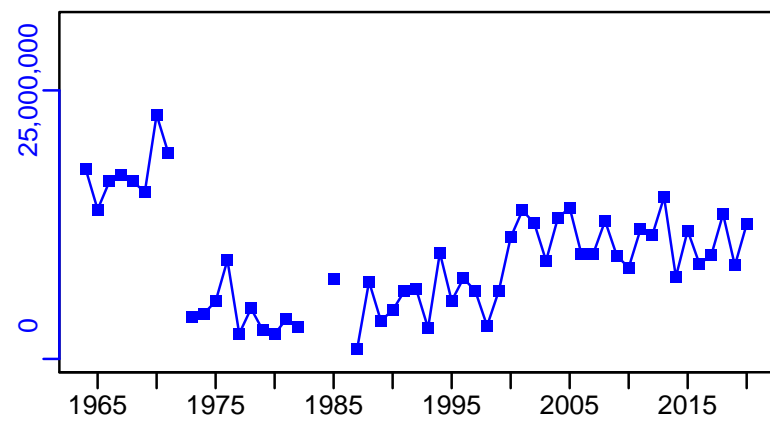
TL–MT, TC*, RecC* (1953–2020–DIAZ)



TAC*, Cpair*, Cadv*



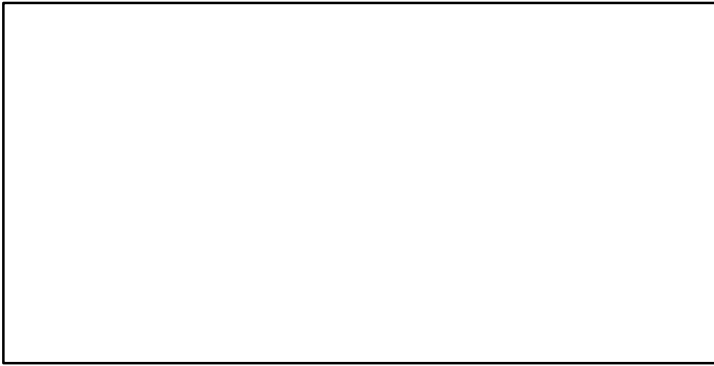
survB_absolute–MT (1953–2020–DIAZ)



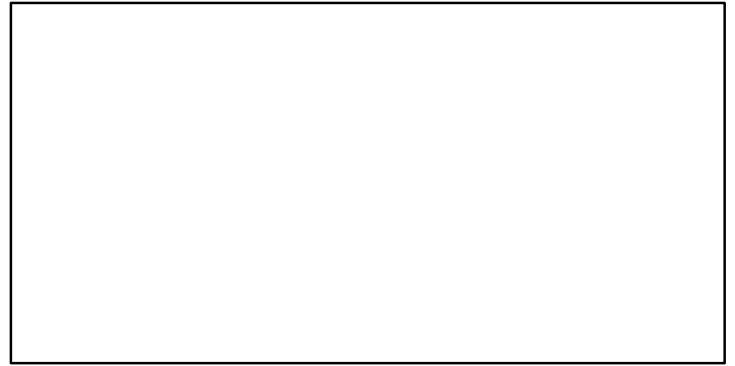
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Japanese sardine Pacific Coast of Japan [PILCHPJPN]

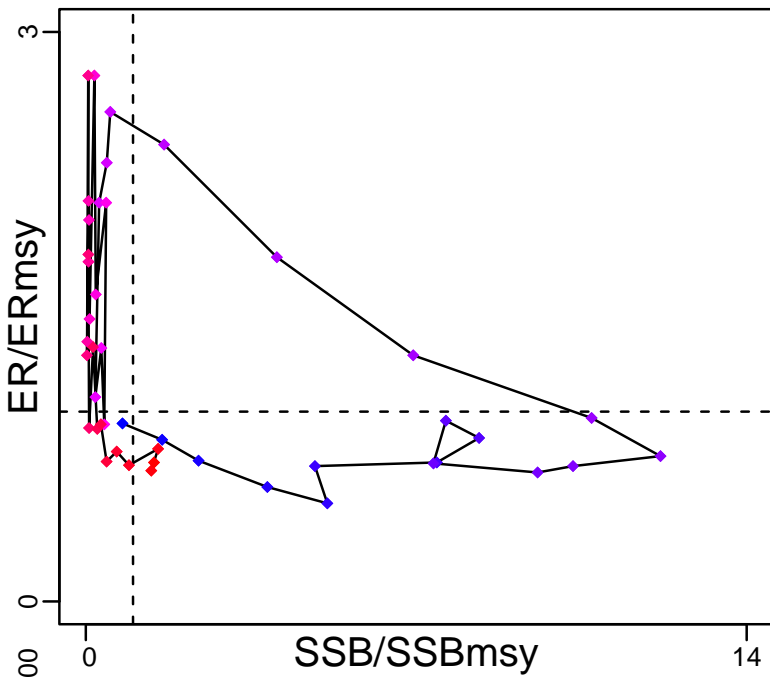
Metadata	
Scientific Name	Sardinops melanostictus
Current Assess ID	FAFRFJ-PILCHPJPN-1975-2019-KUROTA
Area	Pacific Coast of Japan
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2019, 2009

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2019	1,760,766
SSBmsy	SSBmsy-MT	2019	1,097,000
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2019	0.209
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2019	1,097,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2019	368,000
M	M-1/yr	2019	0.4
TBlim	TBlim-MT	2009	221
SSBlim	SSBlim-MT	2019	471,000
Flim	-	-	-
ERlim	-	-	-

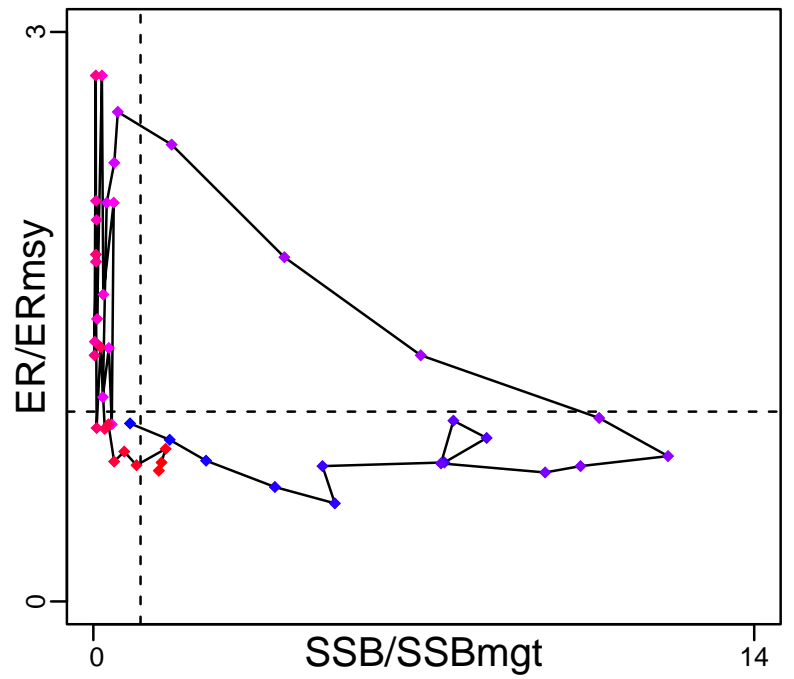
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	3,415,000	-	0
SSB	SSB-MT	2019	1,585,000	-	1
TN	-	-	-	-	-
R	R-E00	2019	3.91×10^{10}	-	0
F	F-1/yr	2009	0.41	Both	0 to 4
ER	ER-ratio	2019	0.153	-	-
TC	TC-MT	2019	521,000		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2019	1.939		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2019	1.445		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2019	0.732		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2019	1.445		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Japanese sardine Pacific Coast of Japan [PILCHPJPN]

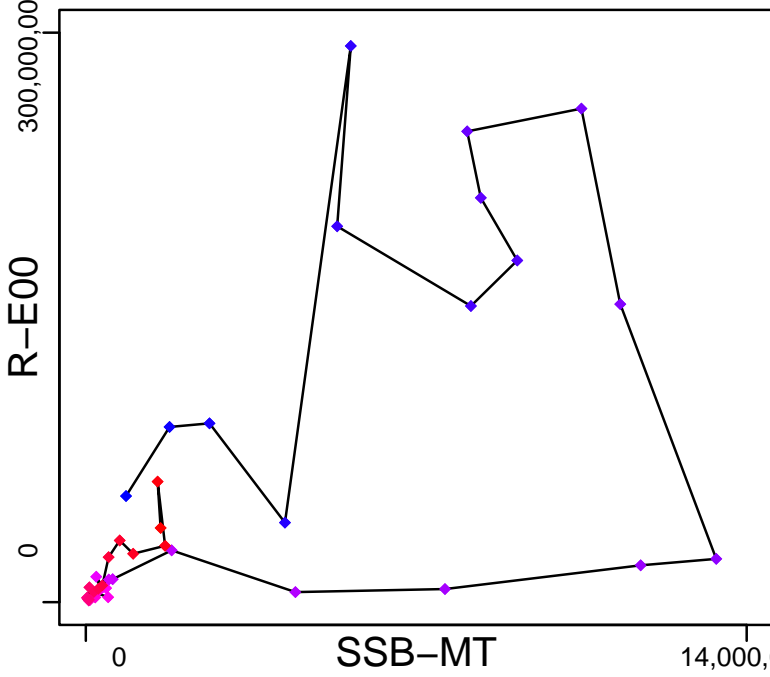
Kobe MSYpref (1975–2019–KUROTA)



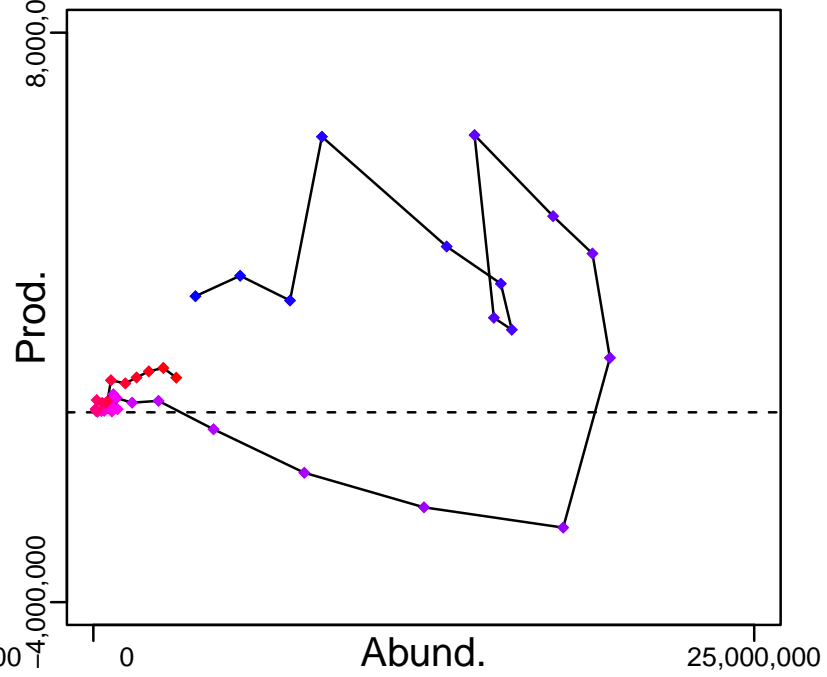
Kobe MGTpref (1975–2019–KUROTA)



Spawner Recruit (1975–2019–KUROTA)

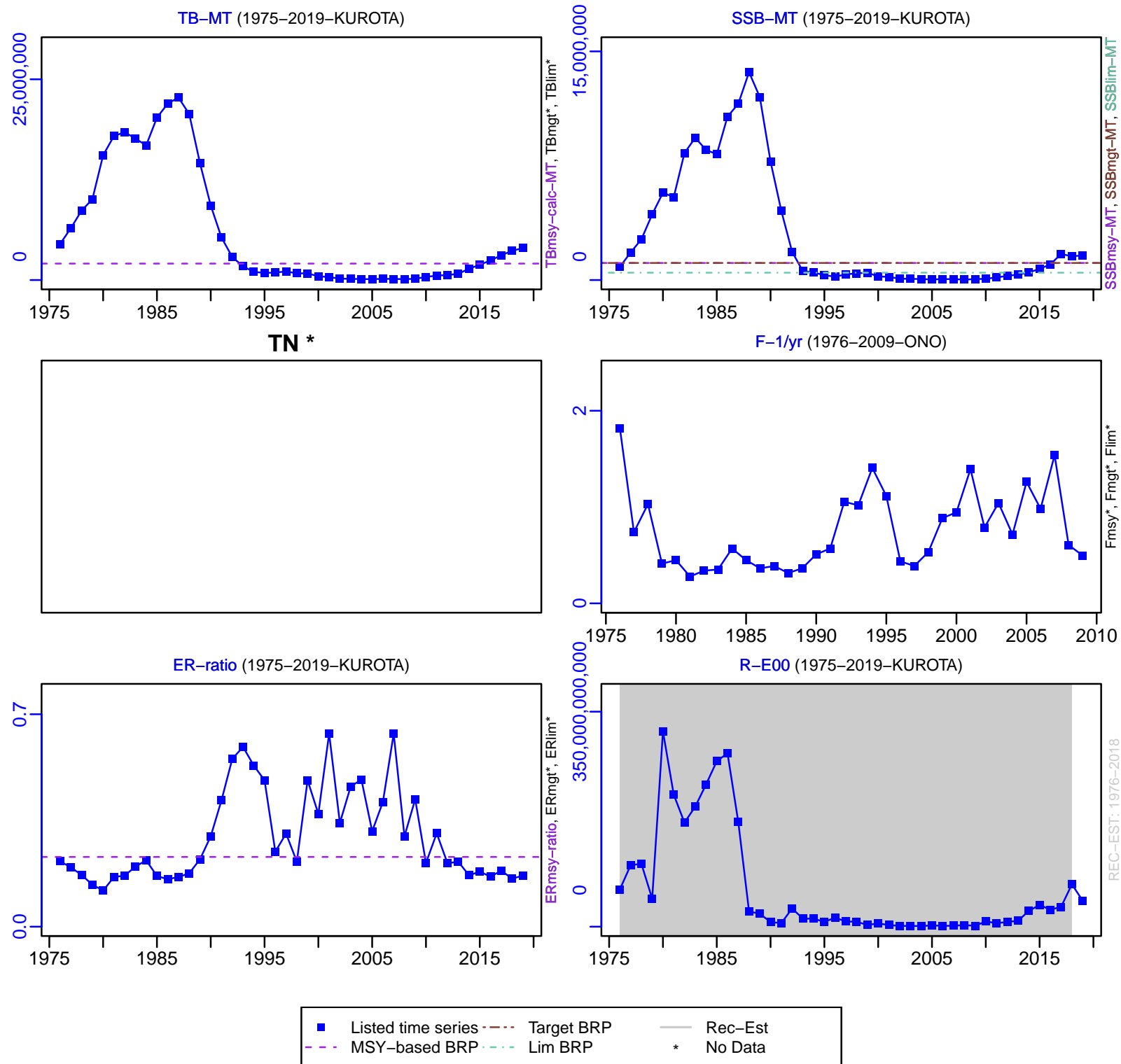


Production (1975–2019–KUROTA)



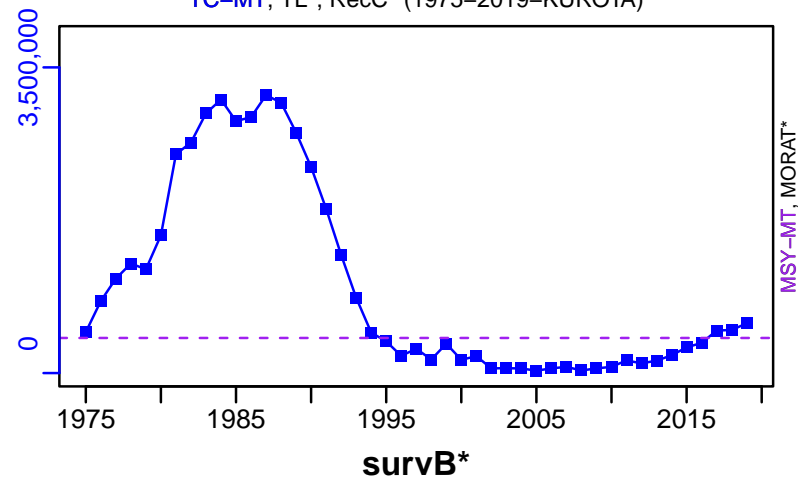
◆ Start Year ◆ End Year * No Data

Japanese sardine Pacific Coast of Japan [PILCHPJPN]



Japanese sardine Pacific Coast of Japan [PILCHPJPN]

TC-MT, TL*, RecC* (1975-2019-KUROTA)



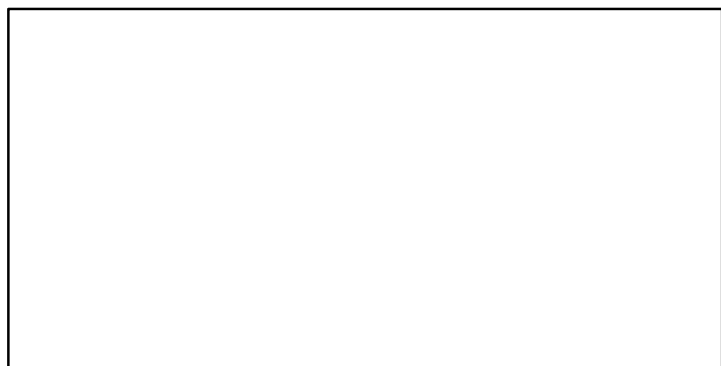
TAC*, Cpair*, Cadv*



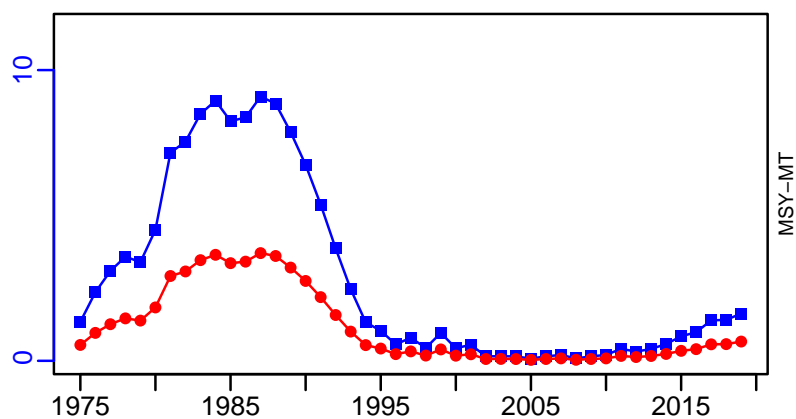
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1975-2019-KUROTA)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Japanese sardine Tsushima Strait [PILCHTSST]

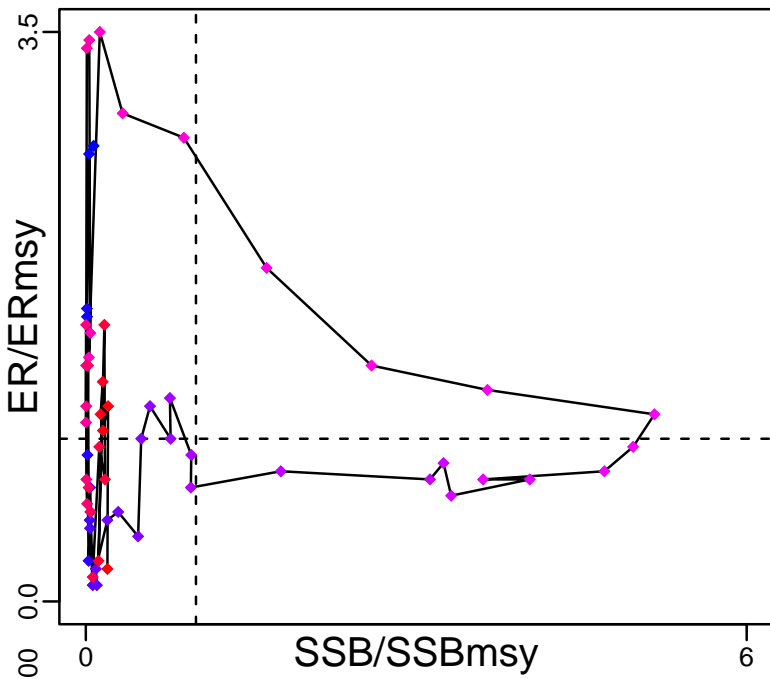
Metadata	
Scientific Name	Sardinops melanostictus
Current Assess ID	FAFRFJ-PILCHTSST-1960-2019-KUROTA
Area	Tsushima Strait
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2010, 2013, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2019	1,580,000
SSBmsy	SSBmsy-MT	2019	990,000
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2019	0.2
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2019	990,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2019	316,000
M	M-1/yr	2019	0.4
TBlim	-	-	-
SSBlim	SSBlim-MT	2019	454,000
Flim	-	-	-
ERlim	-	-	-

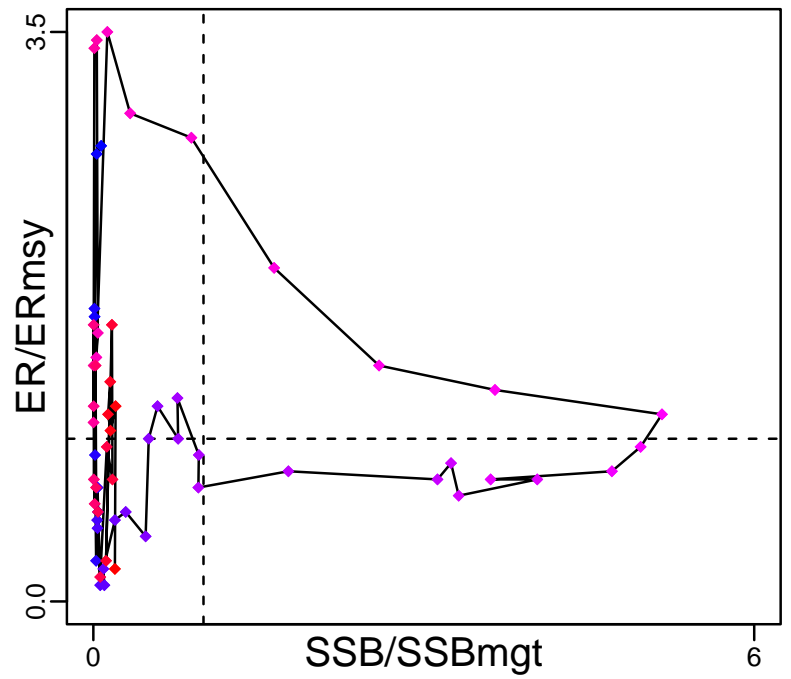
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	329,000	-	0
SSB	SSB-MT	2019	194,000	-	1
TN	-	-	-	-	-
R	R-E00	2019	5.374×10^9	-	0.00E+00
F	-	-	-	-	-
ER	ER-ratio	2019	0.04	-	-
TC	TC-MT	2019	14,000		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2019	0.208		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2019	0.196		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2019	0.2		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2019	0.196		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Japanese sardine Tsushima Strait [PILCHTSST]

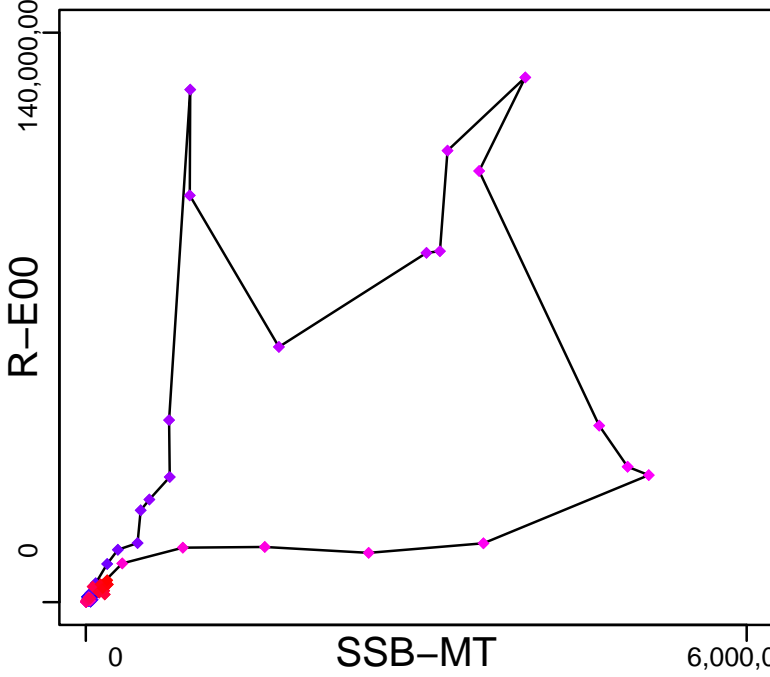
Kobe MSYpref (1960–2019–KUROTA)



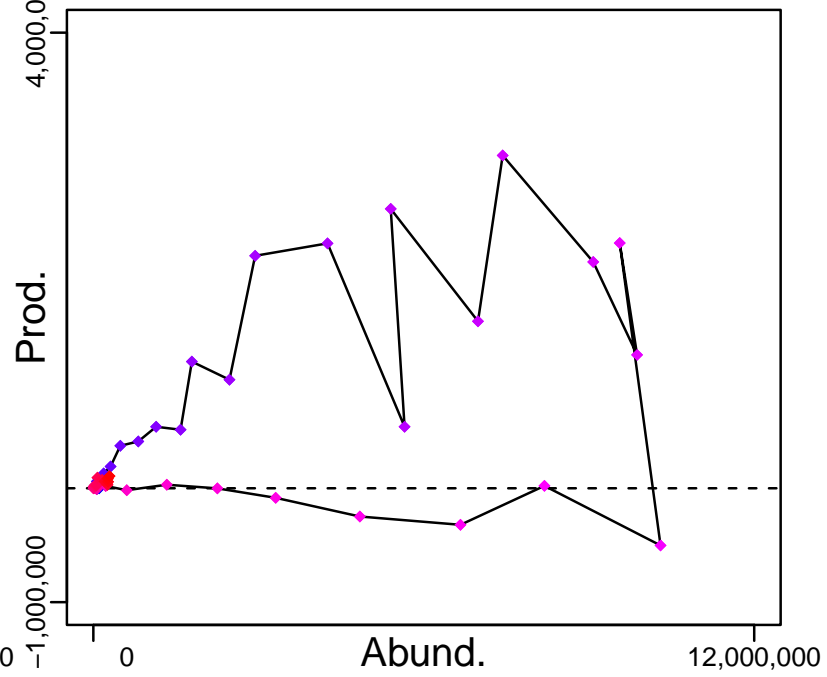
Kobe MGTpref (1960–2019–KUROTA)



Spawner Recruit (1960–2019–KUROTA)

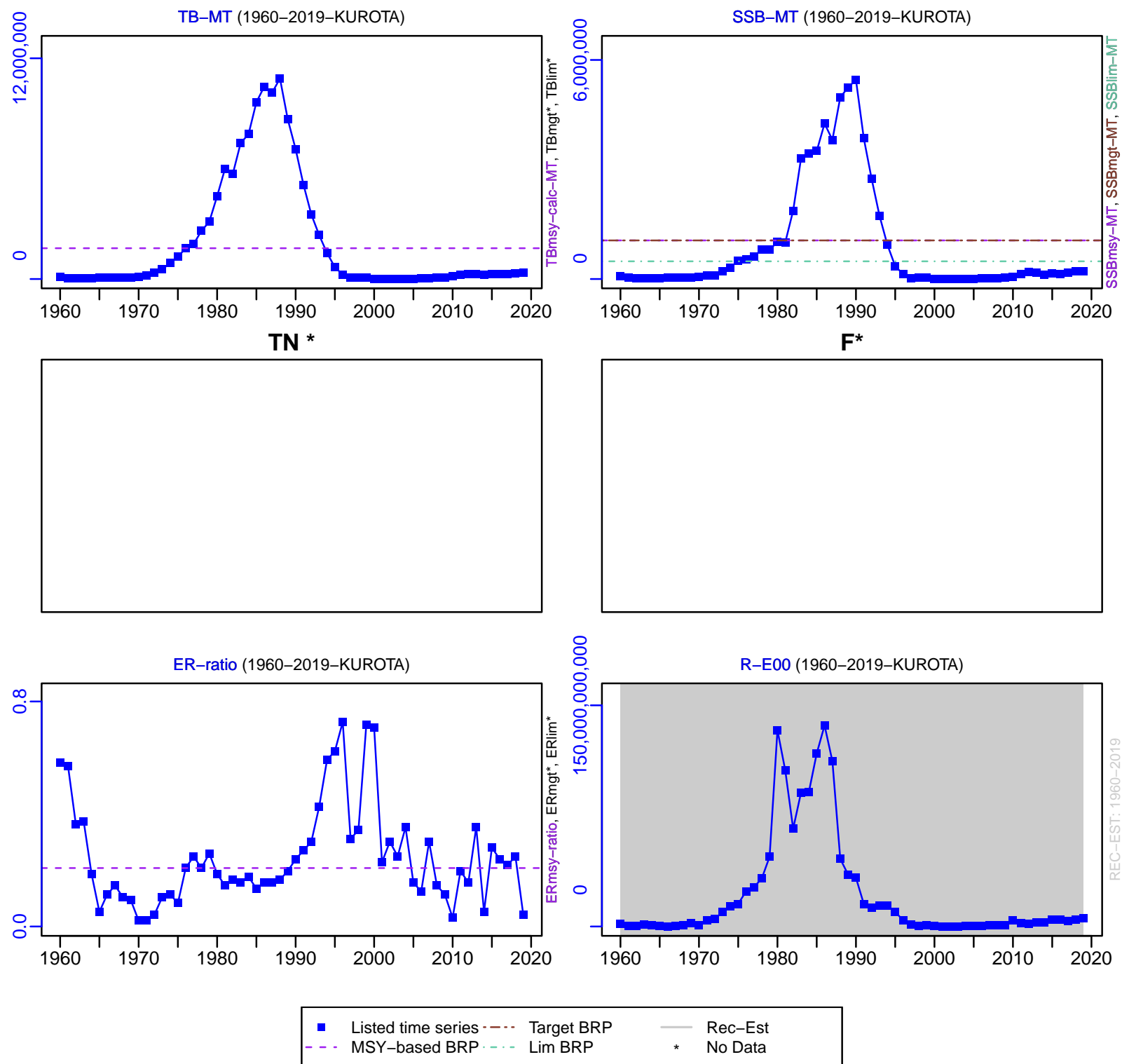


Production (1960–2019–KUROTA)



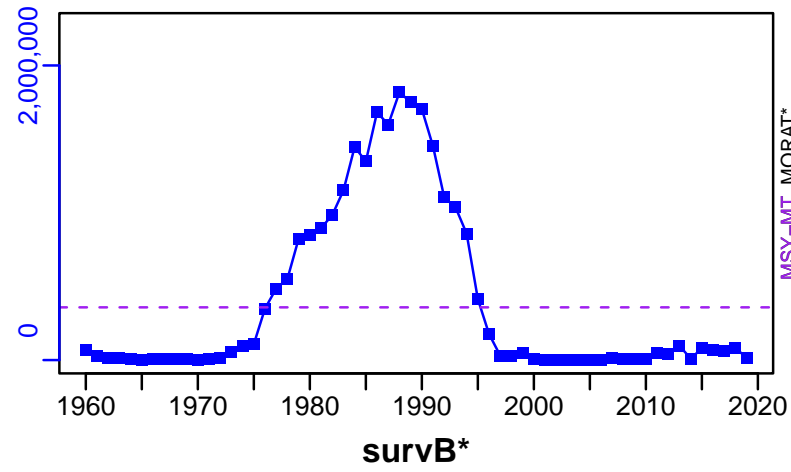
◆ Start Year ◆ End Year * No Data

Japanese sardine Tsushima Strait [PILCHTSST]



Japanese sardine Tsushima Strait [PILCHTSST]

TC-MT, TL*, RecC* (1960-2019-KUROTA)



TAC*, Cpair*, Cadv*



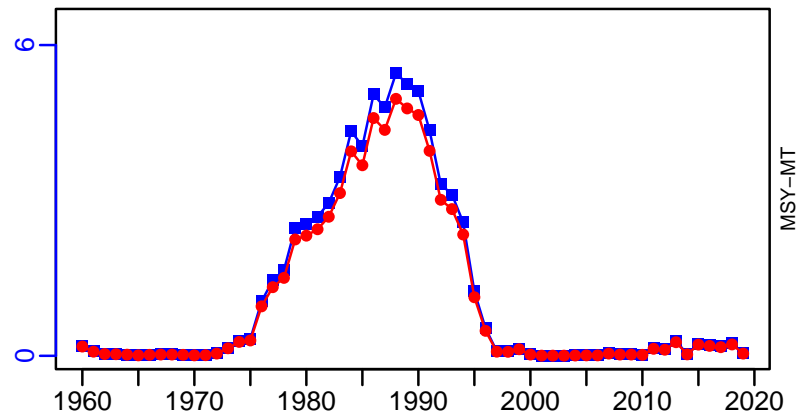
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1960-2019-KUROTA)



- | | | |
|--------------------------|--------------------------|-----------|
| ■ 1st listed time series | ▲ 3rd listed time series | — MORAT |
| ● 2nd listed time series | - - - MSY | * No Data |

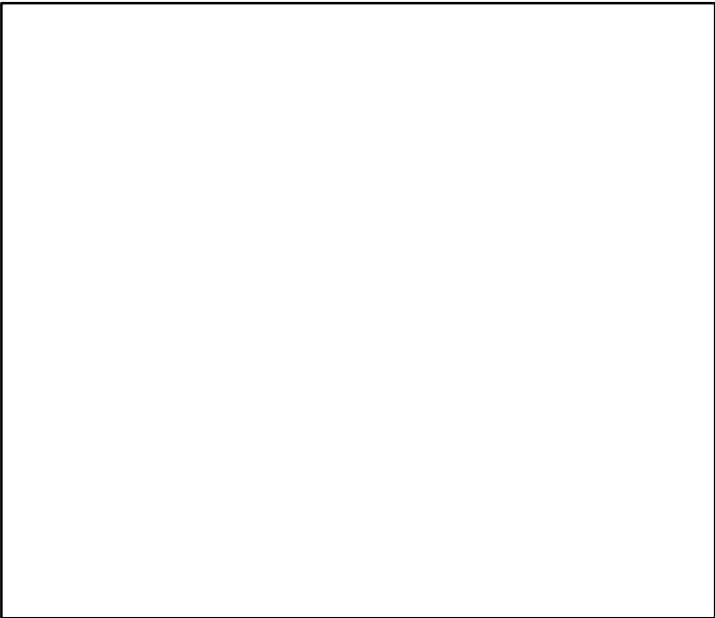
Pacific sandlance Ise and Mikawa Bay [PSANDLIMKB]

Metadata	
Scientific Name	Ammodytes personatus
Current Assess ID	FAFRFJ-PSANDLIMKB-1979-2019-KUROTA
Area	Ise and Mikawa Bay
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2014, 2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	R-E00	2014	2.92×10^{10}	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2019	0		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

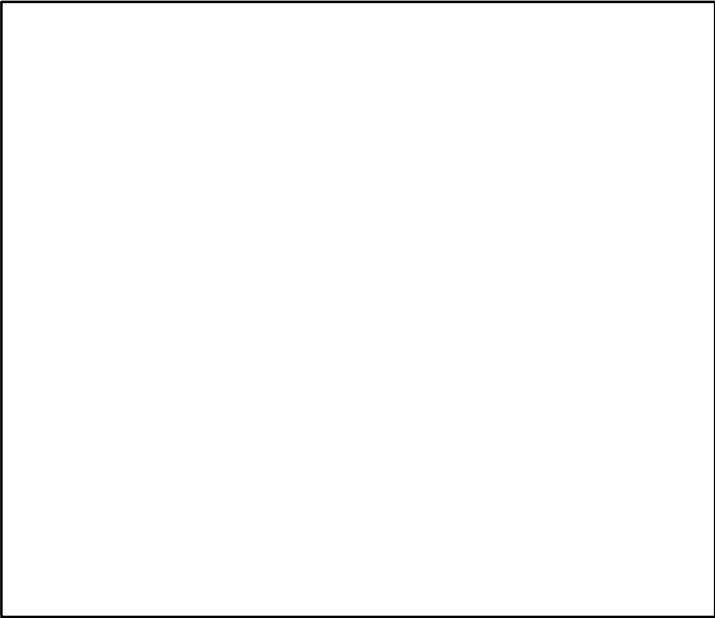
Kobe MSY*



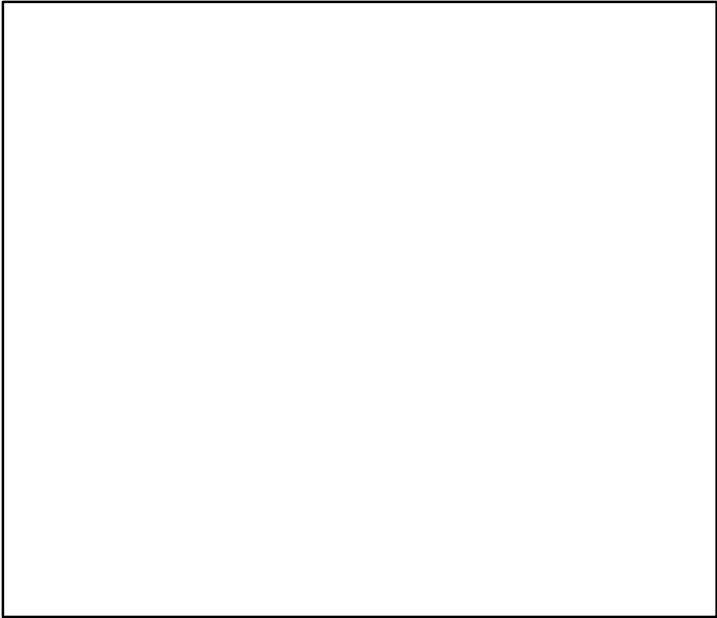
Kobe MGT*



Spawner Recruit*



Production*



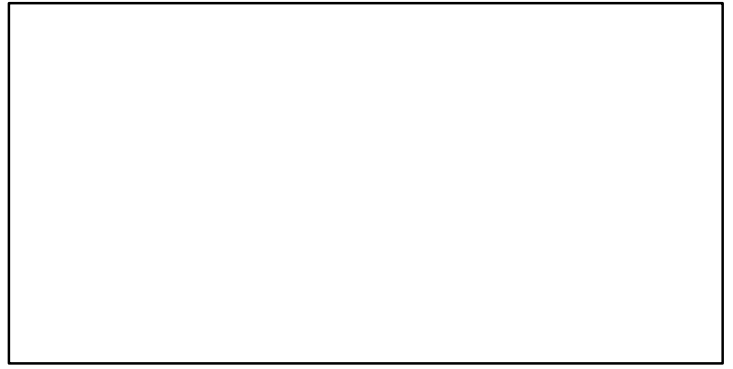
◆ Start Year ◆ End Year * No Data

Pacific sandlance Ise and Mikawa Bay [PSANDLIMKB]

TB*



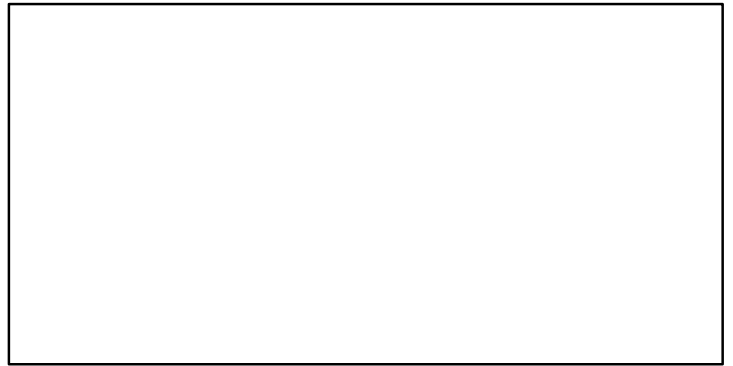
SSB*



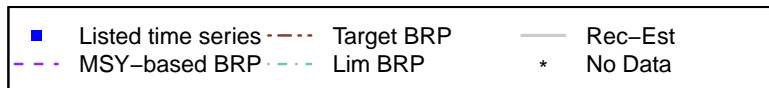
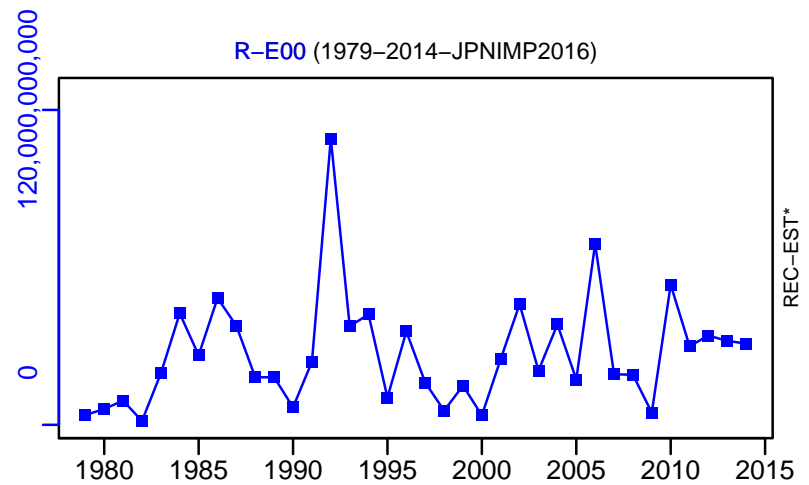
TN *



F*



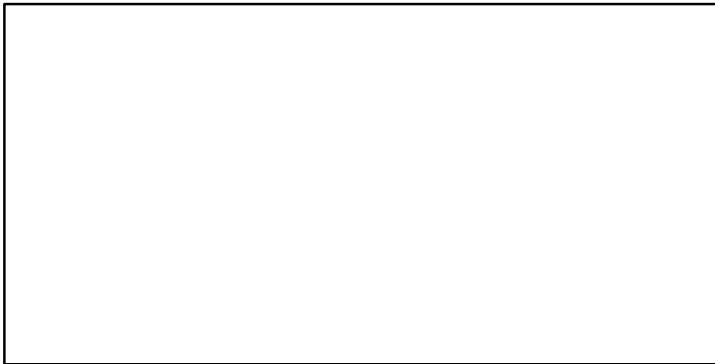
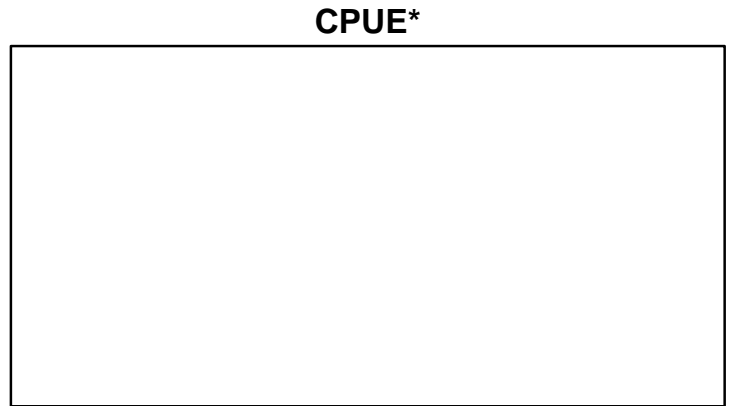
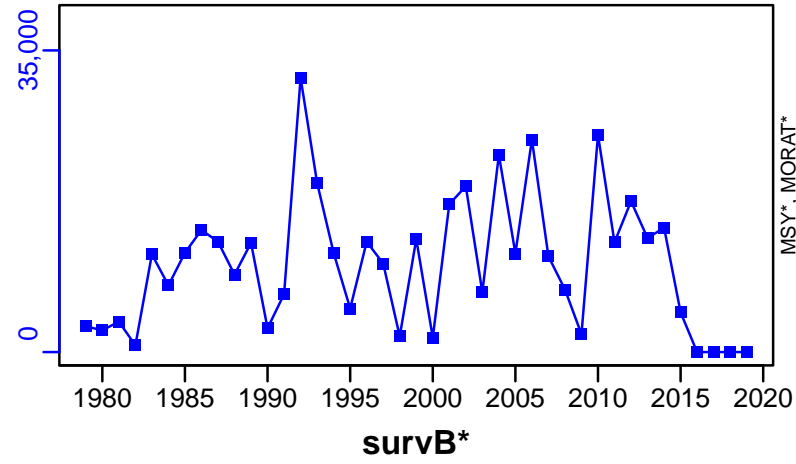
ER*



Pacific sand lance Ise and Mikawa Bay [PSANDLIMKB]

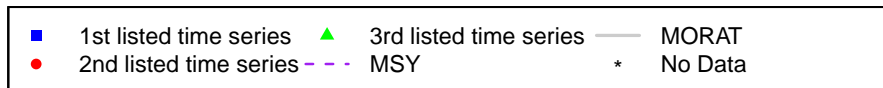
TC-MT, TL*, RecC* (1979-2019-KUROTA)

TAC*, Cpair*, Cadv*



EFFORT*

CdivMSY*



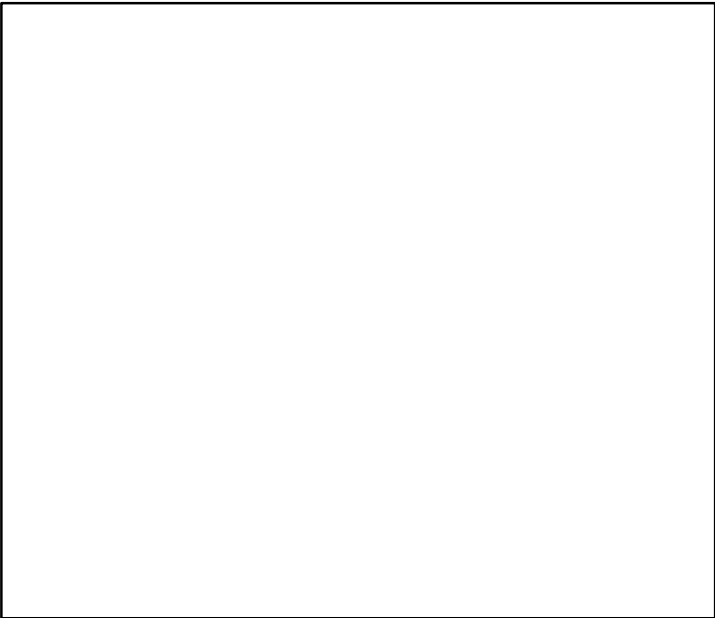
Pacific sand lance Souya Strait [PSLANCESYS]

Metadata	
Scientific Name	Ammodytes hexapterus
Current Assess ID	FAFRFJ-PSLANCESYS-1980-2018-KUROTA
Area	Souya Strait
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	8729		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

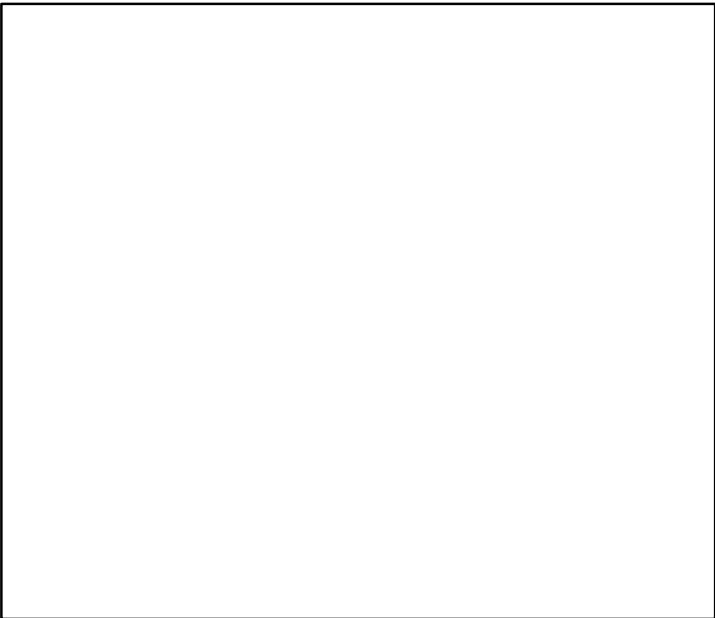
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Pacific sand lance Souya Strait [PSLANCESYS]

TB*



SSB*



TN *



F*



ER*



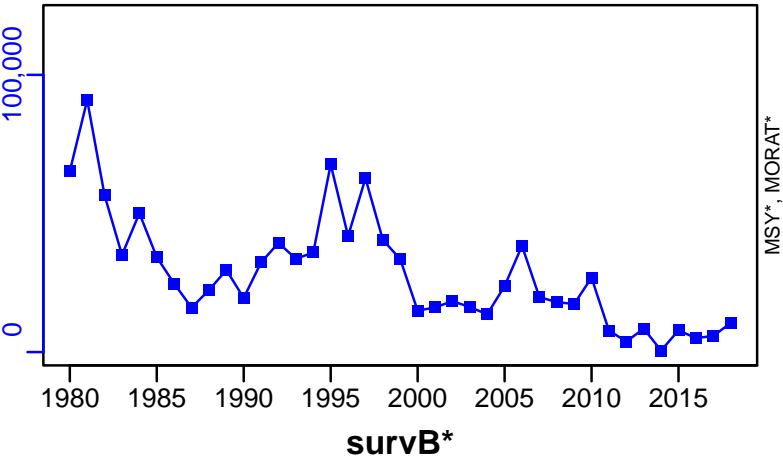
Recruits*



■ Listed time series	- - - Target BRP	— Rec-Est
- - - MSY-based BRP	· · · Lim BRP	* No Data

Pacific sand lance Souya Strait [PSLANCESYS]

TC-MT, TL*, RecC* (1980-2018-KUROTA)



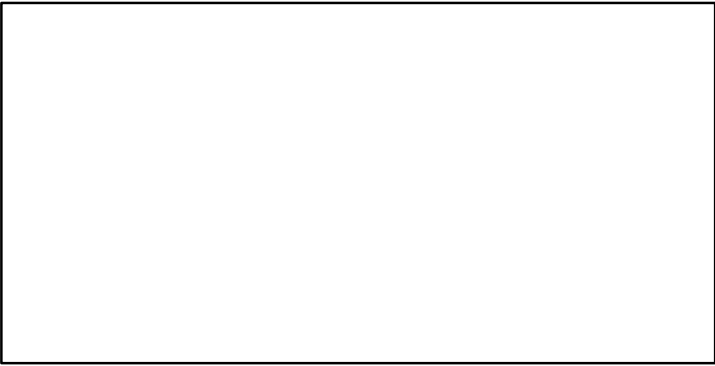
TAC*, Cpair*, Cadv*



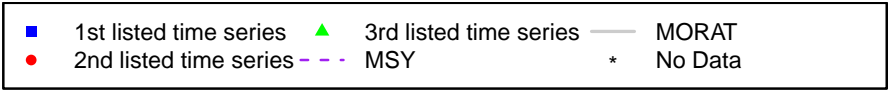
CPUE*



EFFORT*



CdivMSY*



Pacific sandlance Inland Sea of Japan (East) [PSLANDLSETOE]

Metadata	
Scientific Name	Ammodytes personatus
Current Assess ID	FAFRFJ-PSLANDLSETOE-1952-2018-KUROTA
Area	Inland Sea of Japan (East)
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	2623		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

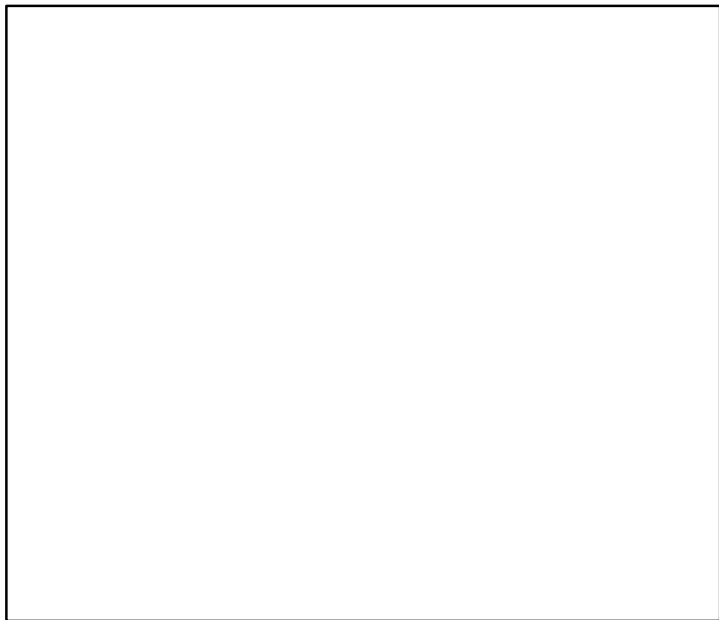
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

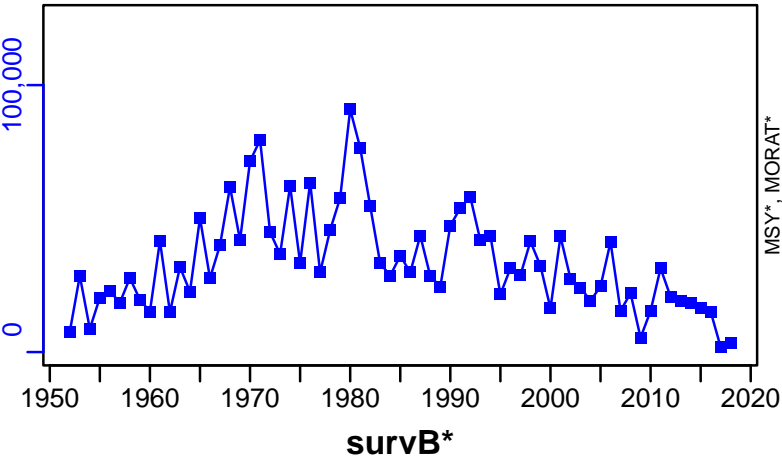


Recruits*



Pacific sandlance Inland Sea of Japan (East) [PSLANDLSETOE]

TC-MT, TL*, RecC* (1952-2018-KUROTA)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Round herring Pacific Ocean [RHERRPAC]

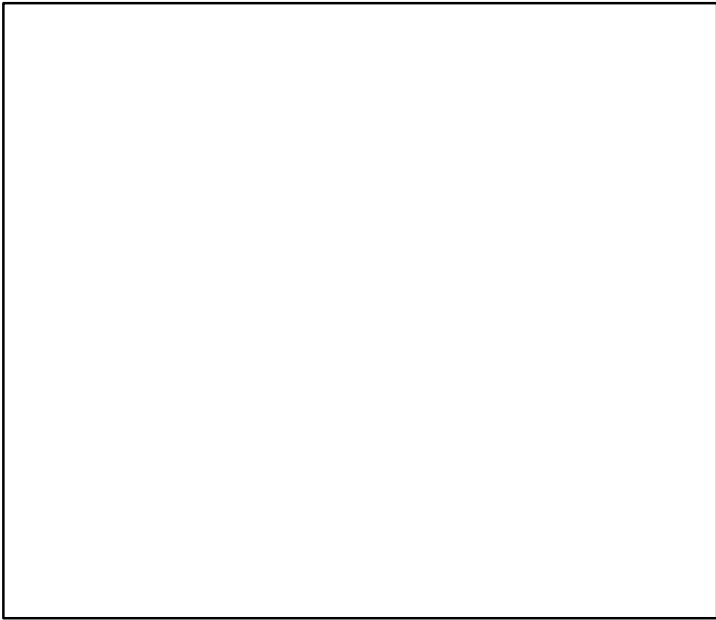
Metadata	
Scientific Name	Etrumeus teres
Current Assess ID	FAFRFJ-RHERRPAC-1985-2018-KUROTA
Area	Pacific Ocean
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2018	0.7
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	24,466		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Round herring Pacific Ocean [RHERRPAC]

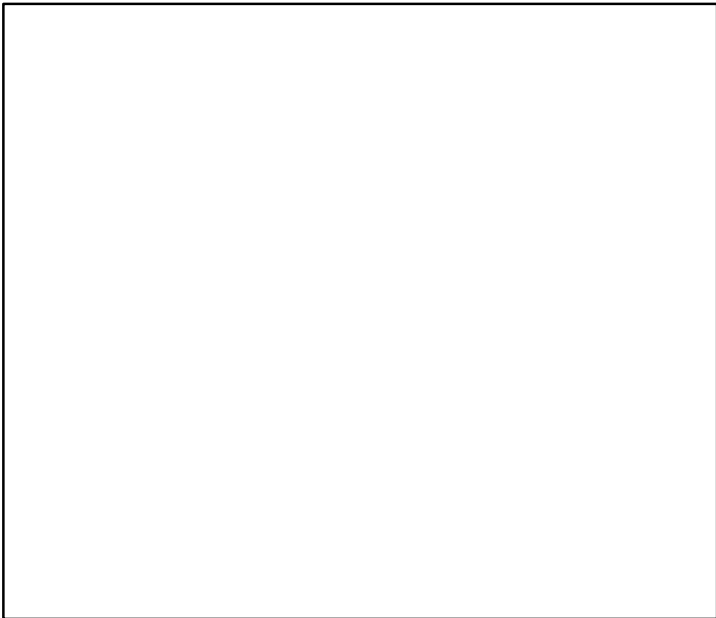
Kobe MSY*



Kobe MGT*



Spawner Recruit*



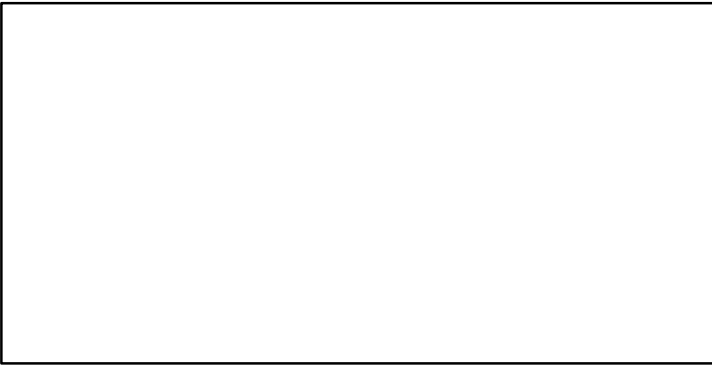
Production*



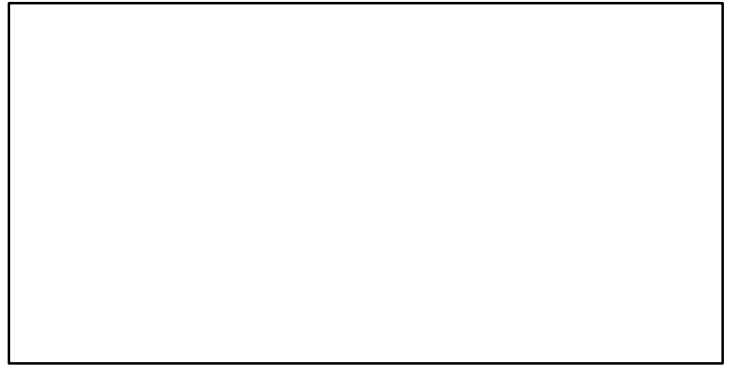
◆ Start Year ◆ End Year * No Data

Round herring Pacific Ocean [RHERRPAC]

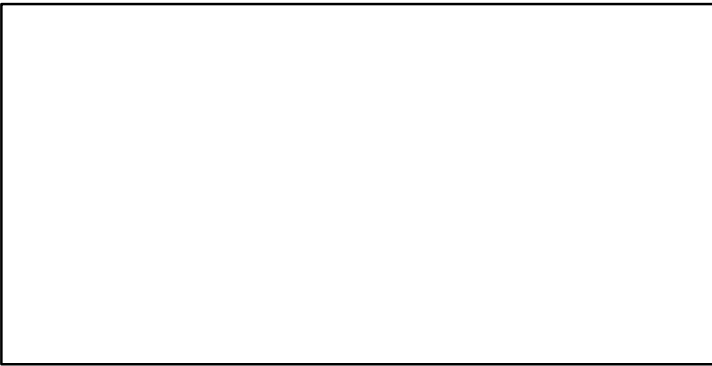
TB*



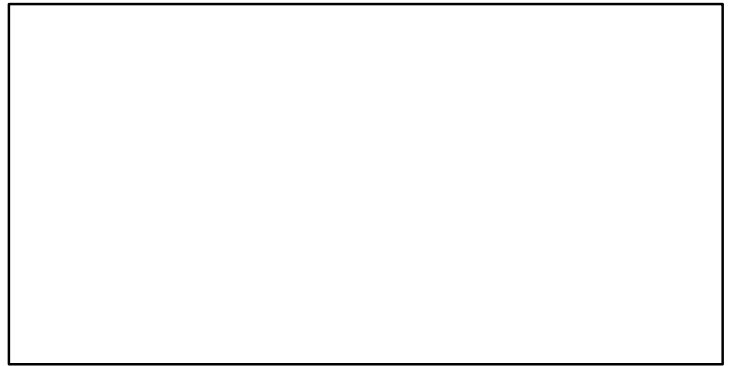
SSB*



TN *



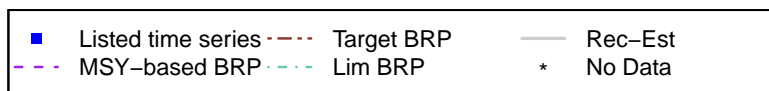
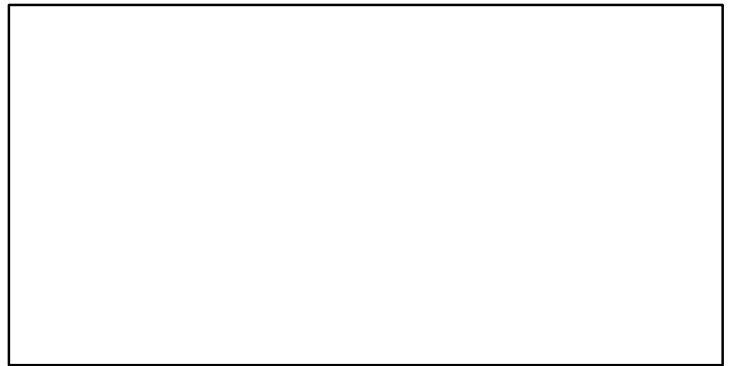
F*



ER*



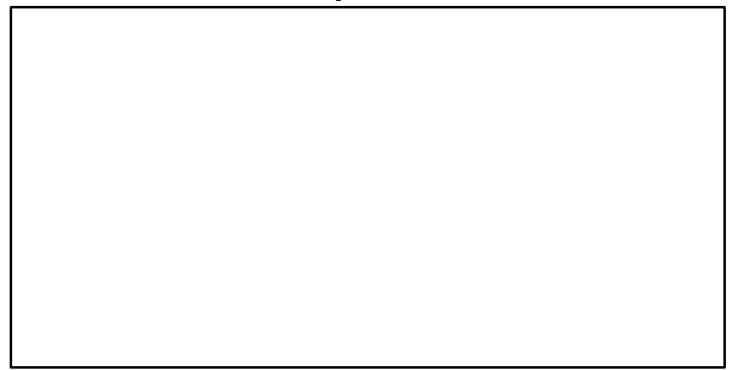
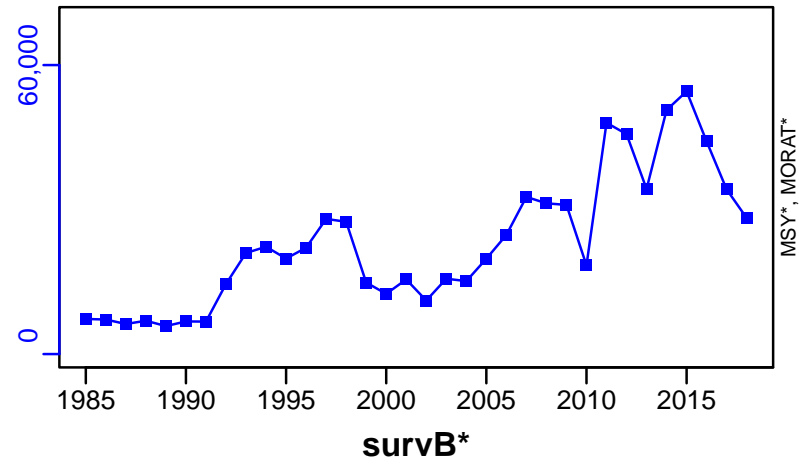
Recruits*



Round herring Pacific Ocean [RHERRPAC]

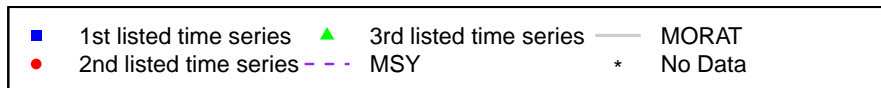
TC-MT, TL*, RecC* (1985-2018-KUROTA)

TAC*, Cpair*, Cadv*



EFFORT*

CdivMSY*



Round herring Tsushima Strait [RHERTSST]

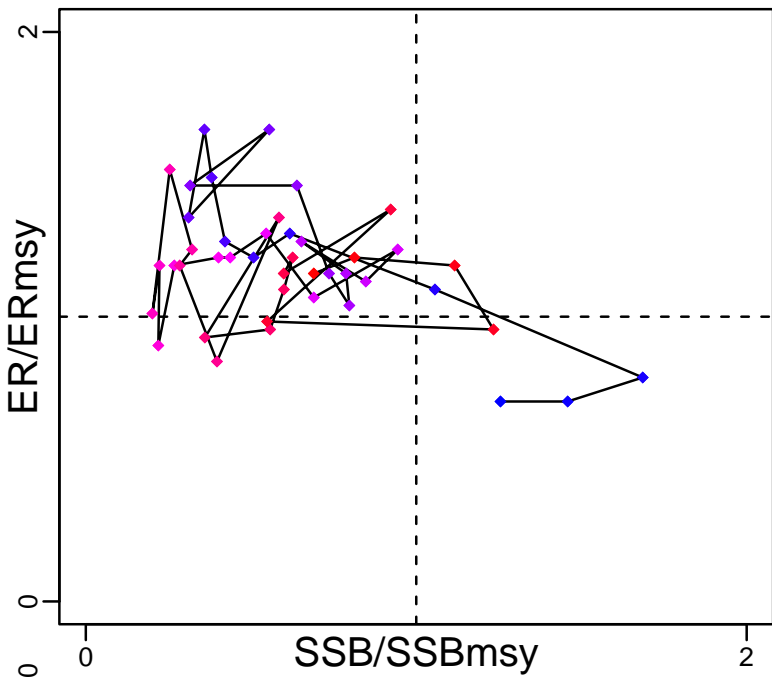
Metadata	
Scientific Name	Etrumeus teres
Current Assess ID	FAFRFJ-RHERTSST-1976-2018-KUROTA
Area	Tsushima Strait
Management Authority	Fisheries Agency of Japan
Assessor	Fisheries Agency and Fisheries Research Agency of Japan
Asmts in RAM	2013, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-calc-MT	2018	123,572
SSBmsy	SSBmsy-MT	2018	74,564
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.356
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2018	43,992
M	M-1/yr	2018	0.7
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

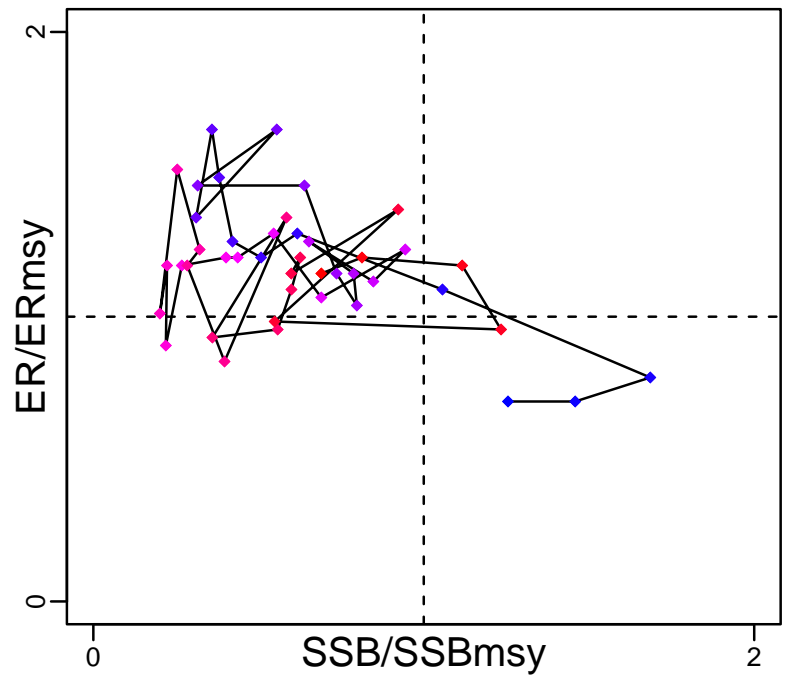
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	76,901	Both	0
SSB	SSB-MT	2018	51,446	Both	1
TN	-	-	-	-	-
R	R-E00	2018	2,031,250,000	Both	0
F	-	-	-	-	-
ER	ER-ratio	2018	0.41	Both	-
TC	TC-MT	2018	31,481		
TL	-	-	-		
TB/TBmsy	TB-MT/TBmsy-calc-MT	2018	0.622		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2018	0.69		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2018	1.152		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Round herring Tsushima Strait [RHERTSST]

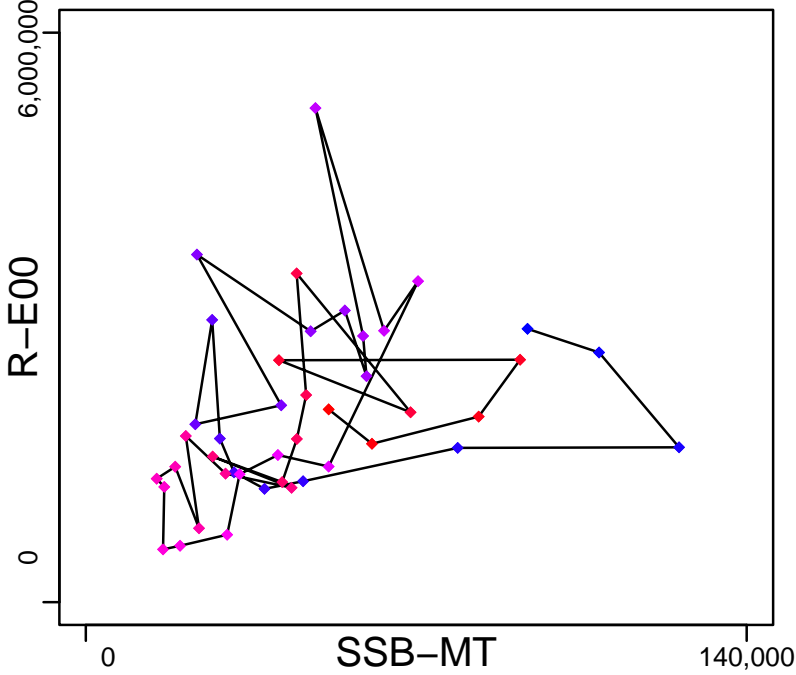
Kobe MSYpref (1976–2018–KUROTA)



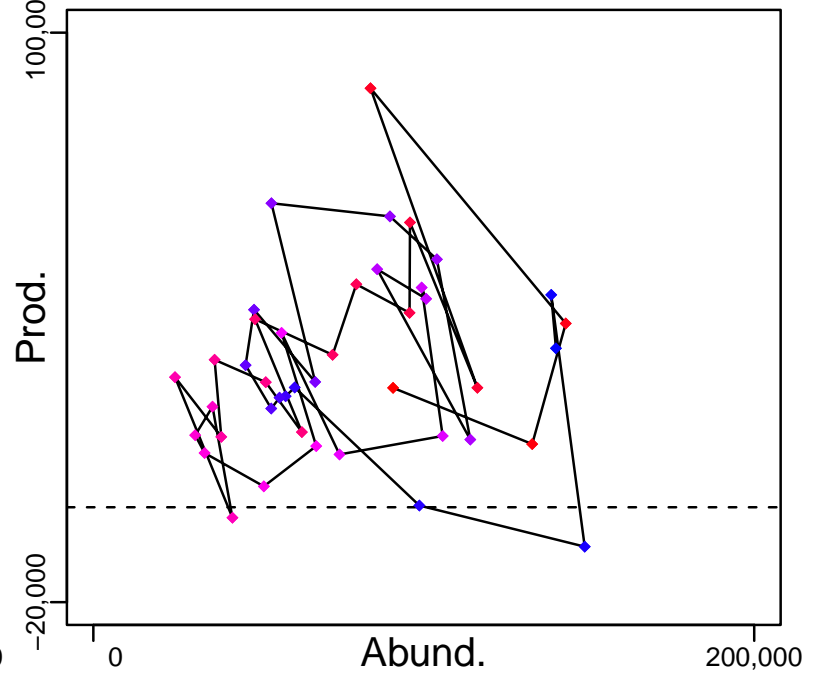
Kobe MGTpref (1976–2018–KUROTA)



Spawner Recruit (1976–2018–KUROTA)

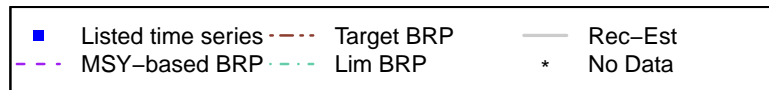
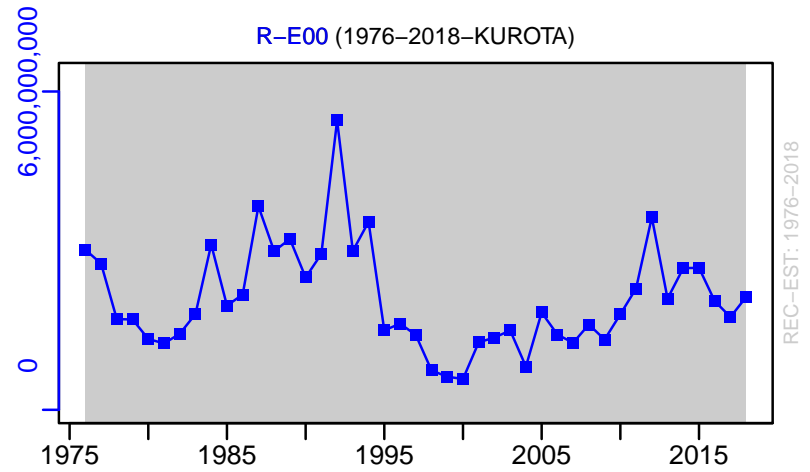
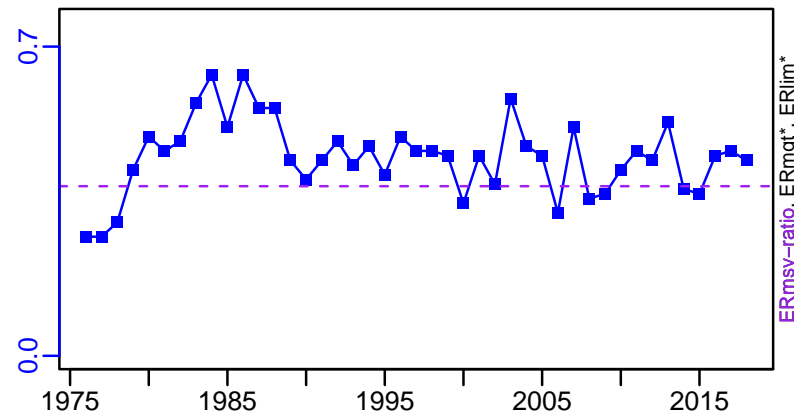
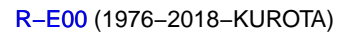
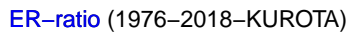
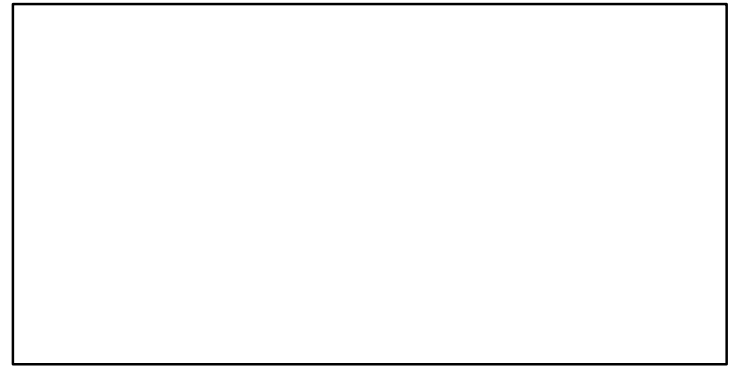
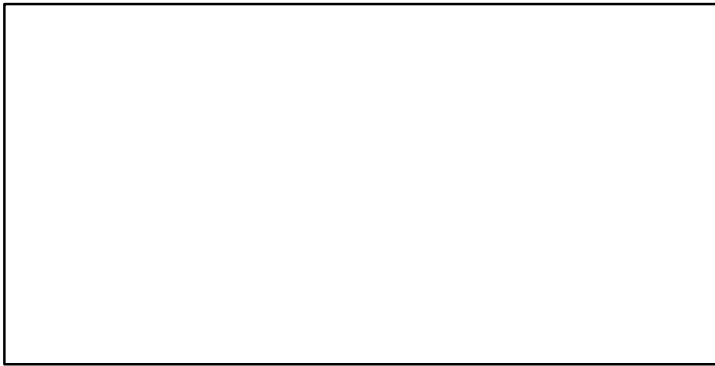
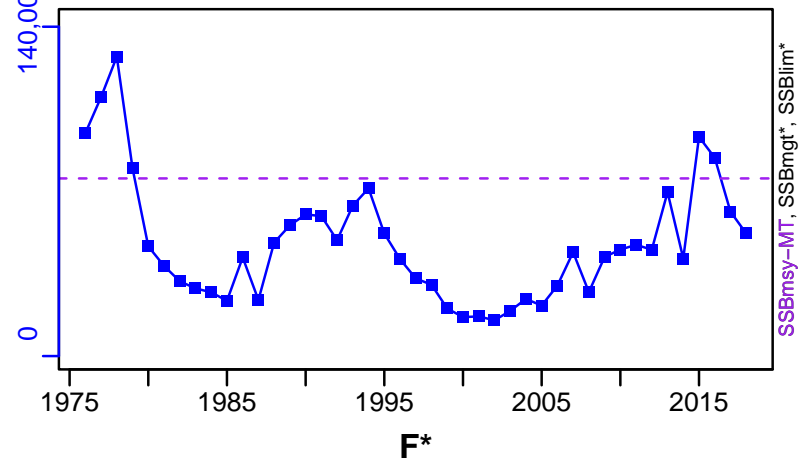
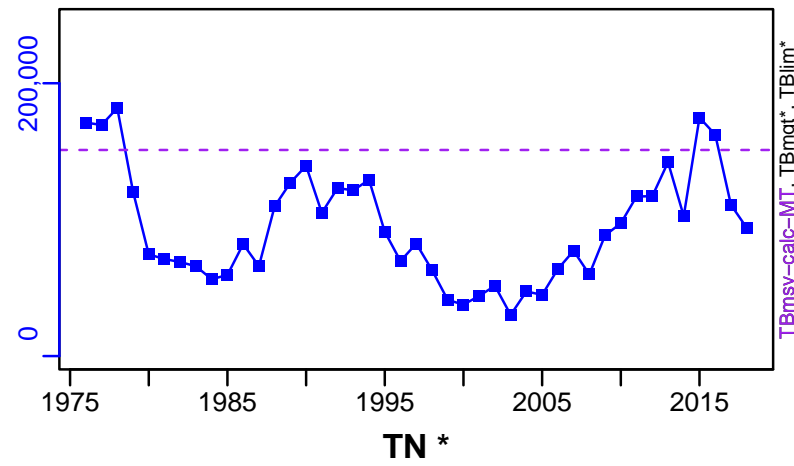
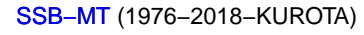
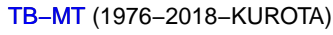


Production (1976–2018–KUROTA)



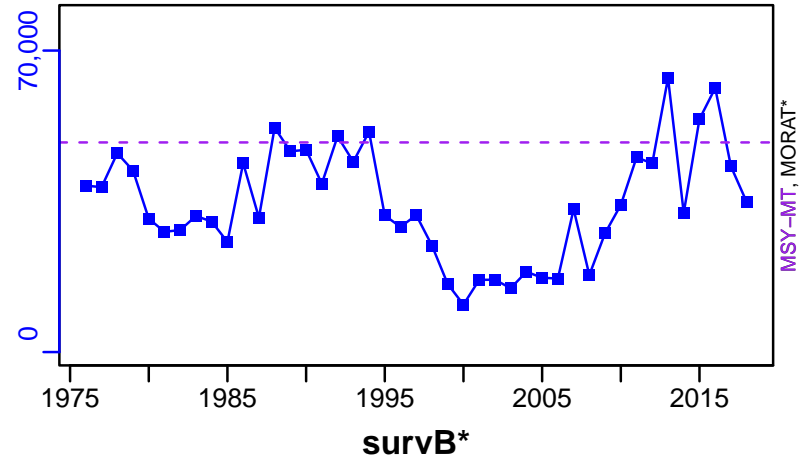
◆ Start Year ◆ End Year * No Data

Round herring Tsushima Strait [RHERRTSST]



Round herring Tsushima Strait [RHERTSST]

TC-MT, TL*, RecC* (1976-2018-KUROTA)



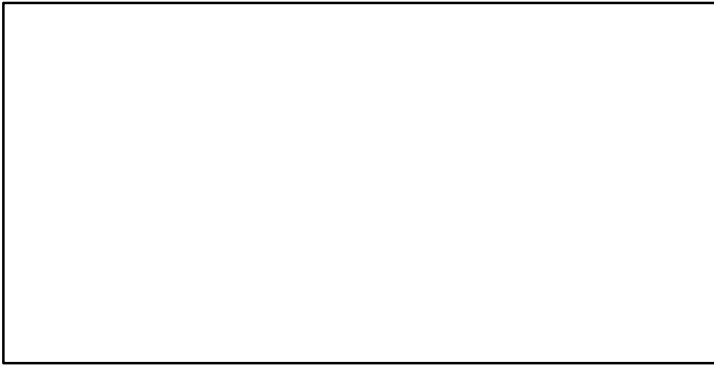
TAC*, Cpair*, Cadv*



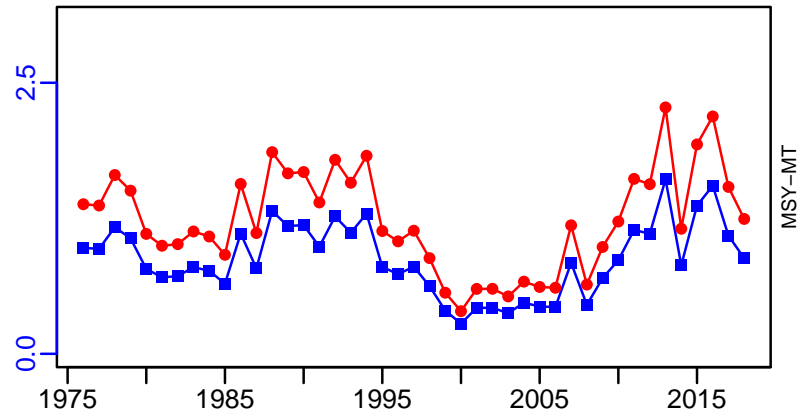
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1976-2018-KUROTA)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Round sardinella Central West Africa Cote Divoire-Benin [RSARDCWACIV-BEN]

Metadata	
Scientific Name	Sardinella aurita
Current Assess ID	FAO-SPNWA-RSARDCWACIV-BEN-1990-2017-ASHBROOK
Area	Central West Africa Cote Divoire-Benin
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	58,180		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

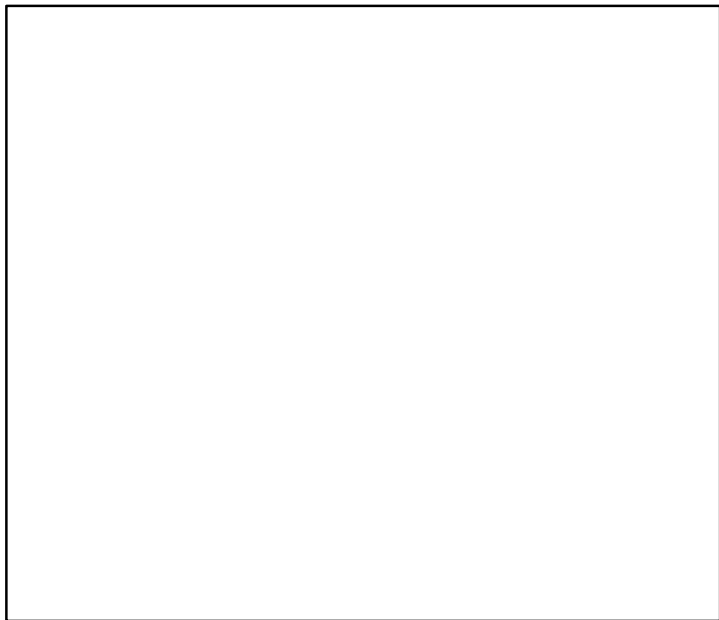
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

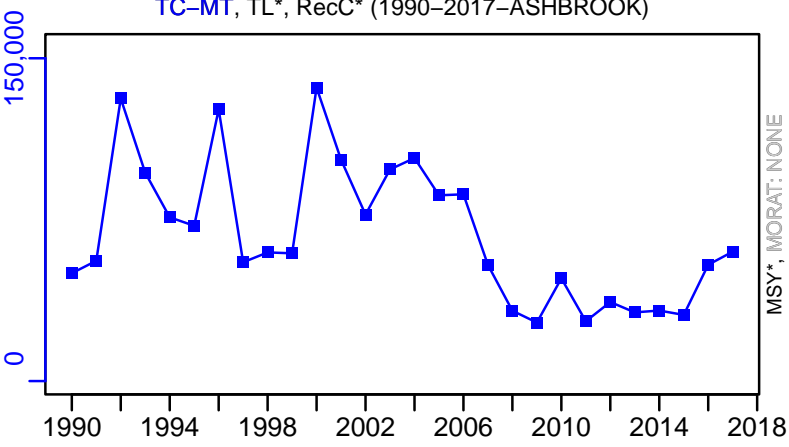


Recruits*



Round sardinella Central West Africa Cote Divoire–Benin [RSARDCWACIV–BEN]

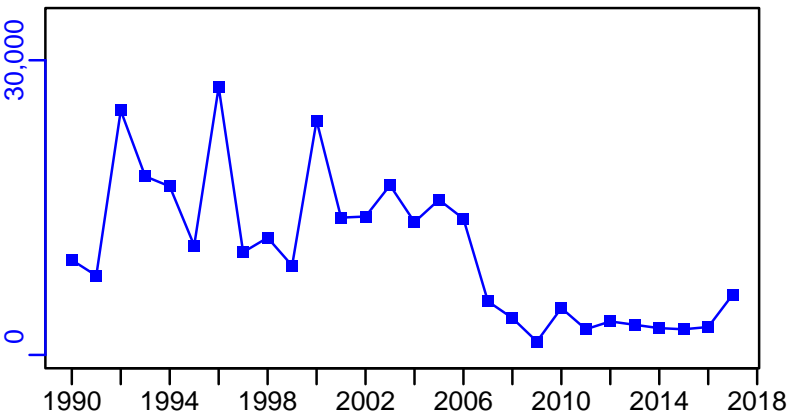
TC–MT, TL*, RecC* (1990–2017–ASHBROOK)



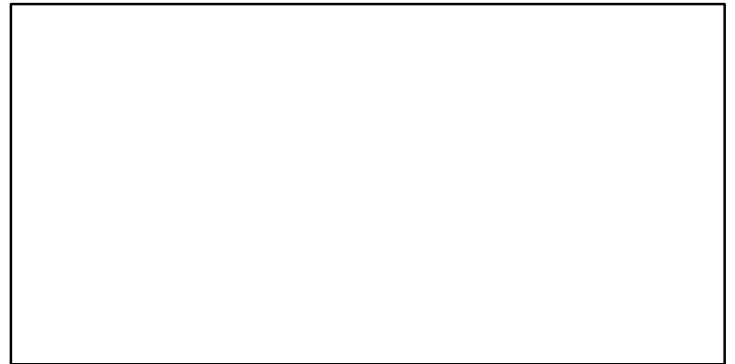
TAC*, Cpair*, Cadv*



survB_index–index (1990–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

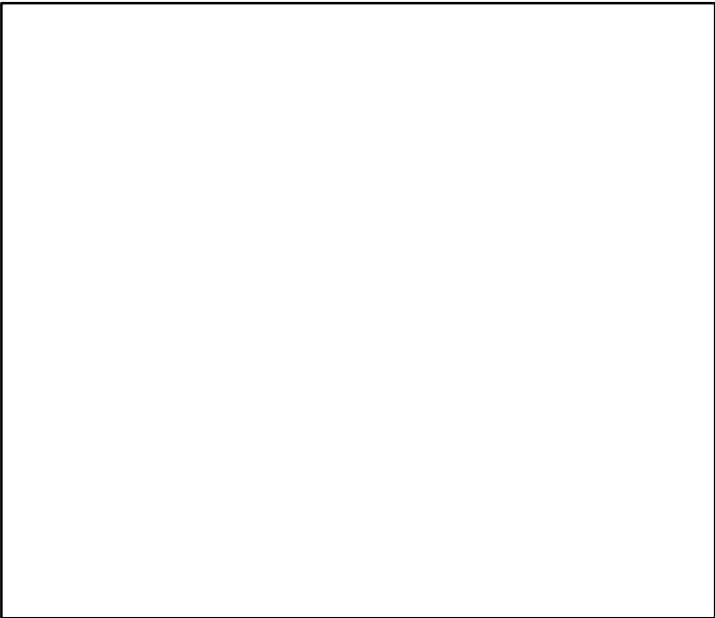
Round sardinella North West Africa [RSARDNWA]

Metadata	
Scientific Name	Sardinella aurita
Current Assess ID	FAO-SPNWA-RSARDNWA-1990-2020-HIVELY
Area	North West Africa
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	197,007		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

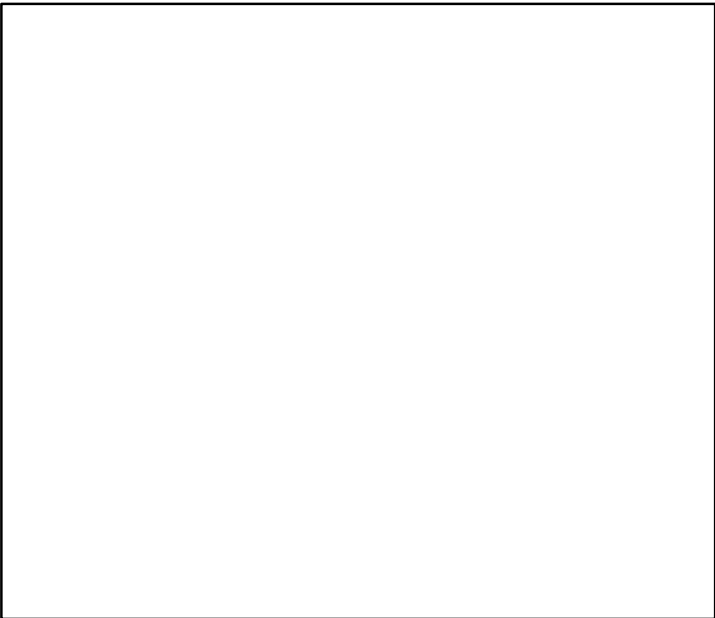
Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Round sardinella North West Africa [RSARDNWA]

TB*



SSB*



TN *



F*



ER*

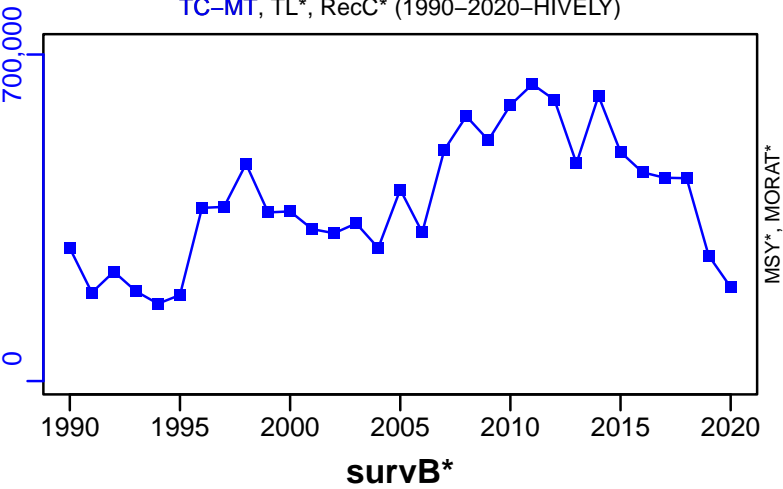


Recruits*

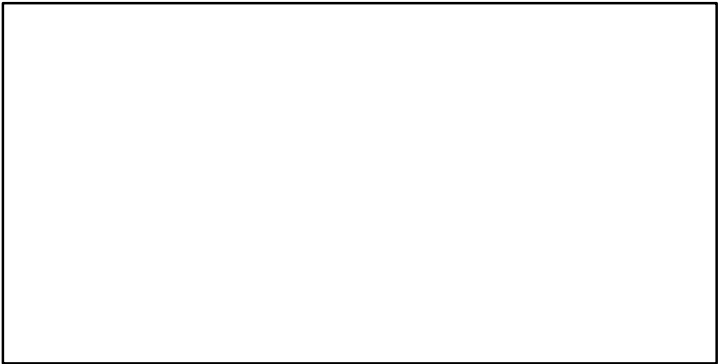


Round sardinella North West Africa [RSARDNWA]

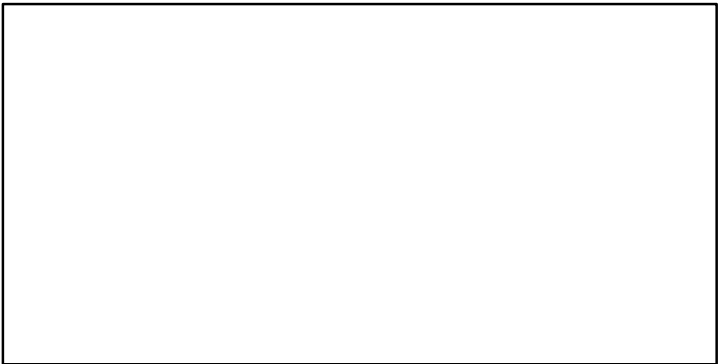
TC-MT, TL*, RecC* (1990-2020-HIVELY)



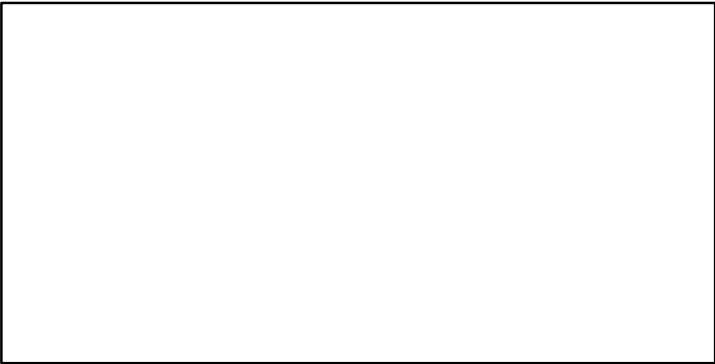
TAC*, Cpair*, Cadv*



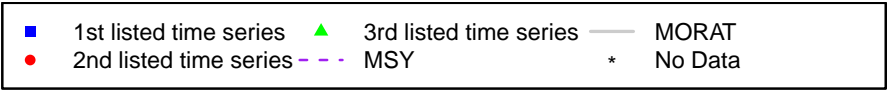
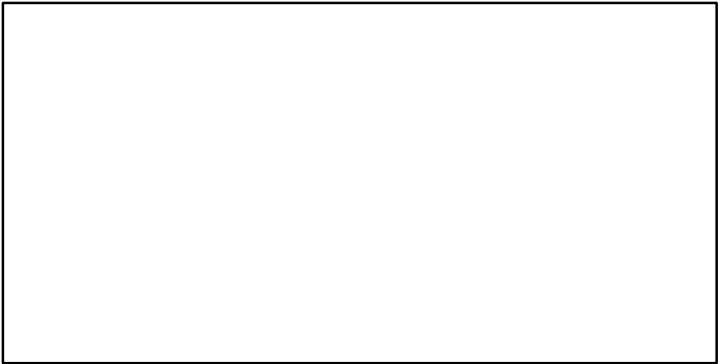
CPUE*



EFFORT*



CdivMSY*

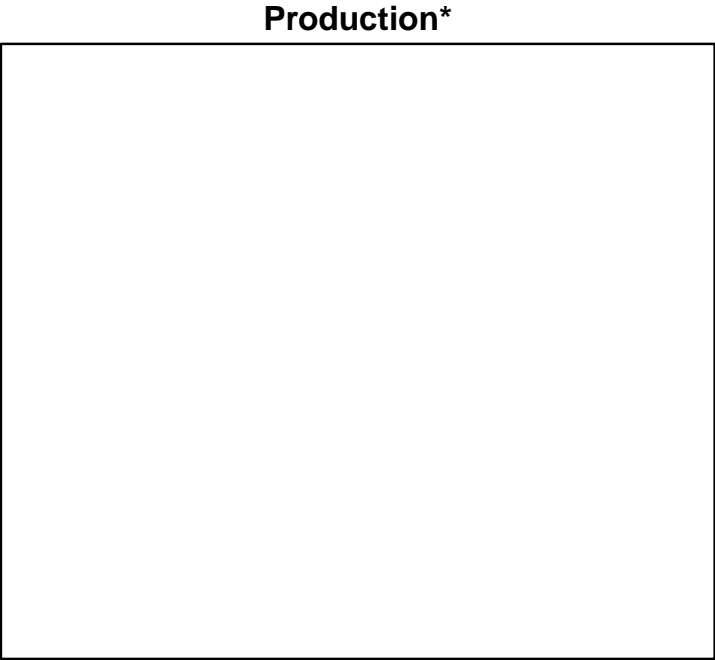
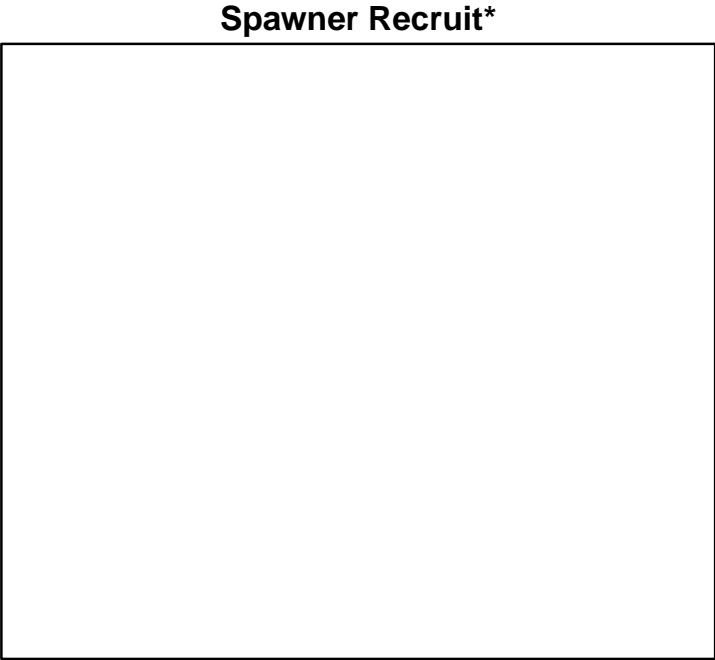
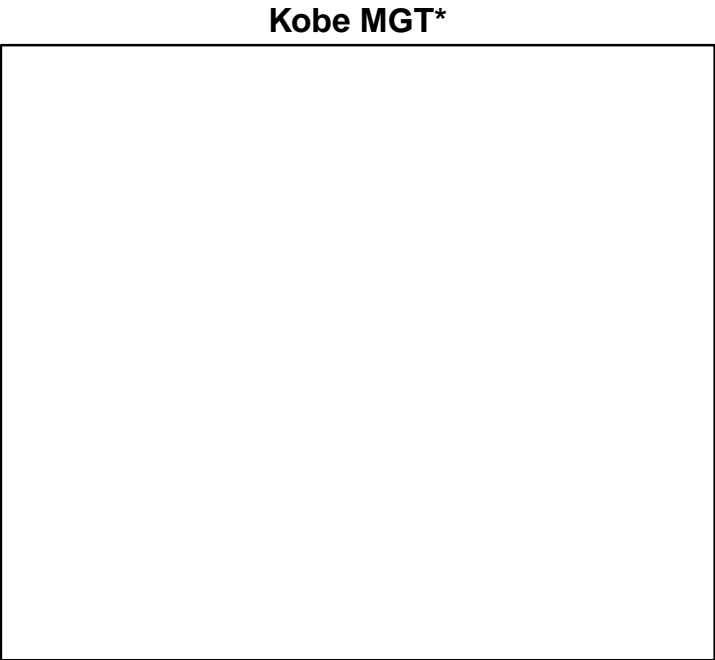
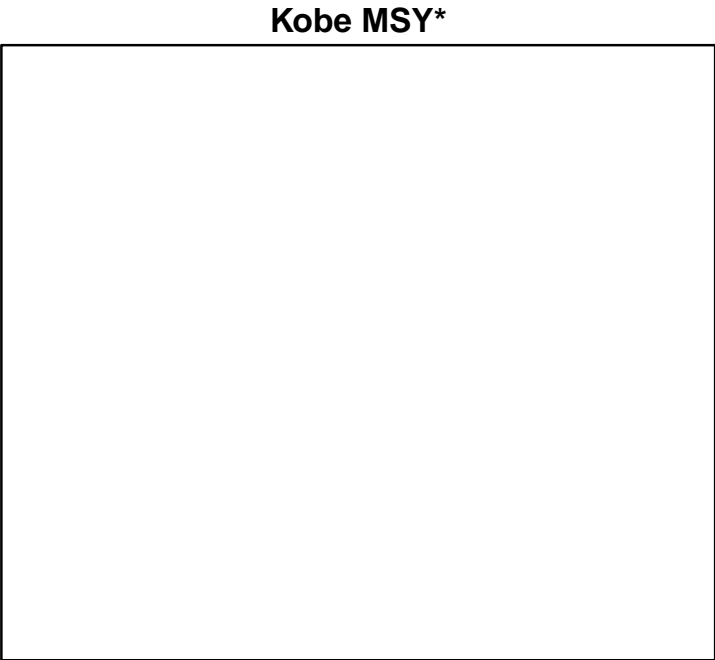


Pacific sardine Pacific Coast of Canada [SARDBC]

Metadata	
Scientific Name	Sardinops sagax
Current Assess ID	DFO-PAC-SARDBC-2002-2012-OSGOOD
Area	Pacific Coast of Canada
Management Authority	Department of Fisheries and Oceans, Canada national management
Assessor	Department of Fisheries and Oceans - Pacific Region
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2012	19,100		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



◆ Start Year ♦ End Year * No Data

TB*



SSB*



TN *



F*



ER*

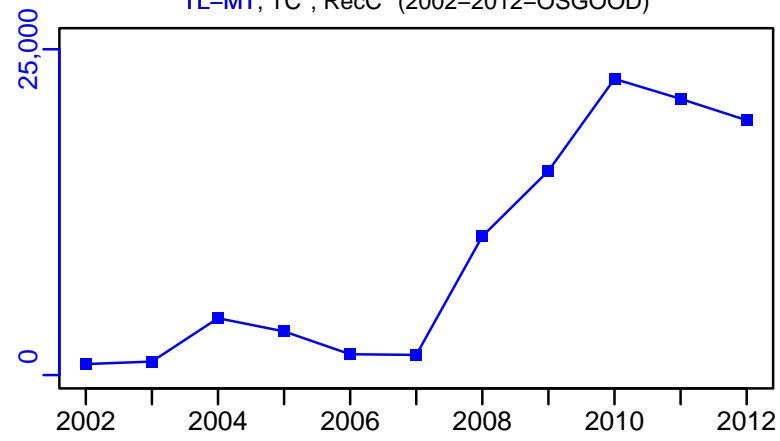


Recruits*

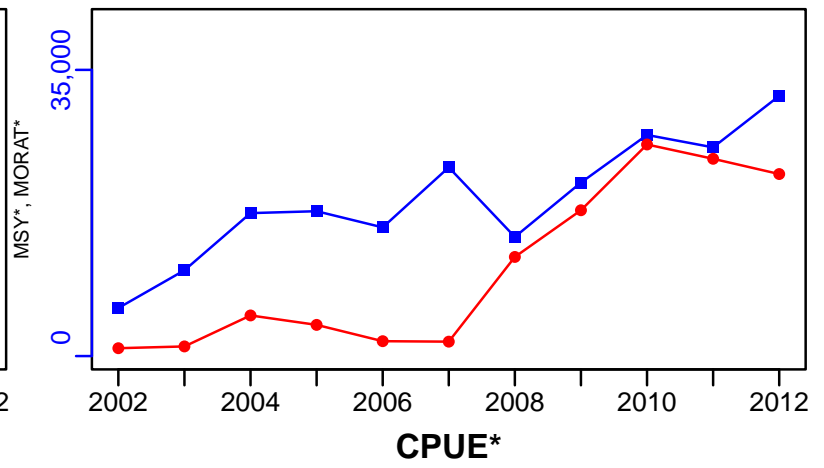


Pacific sardine Pacific Coast of Canada [SARDBC]

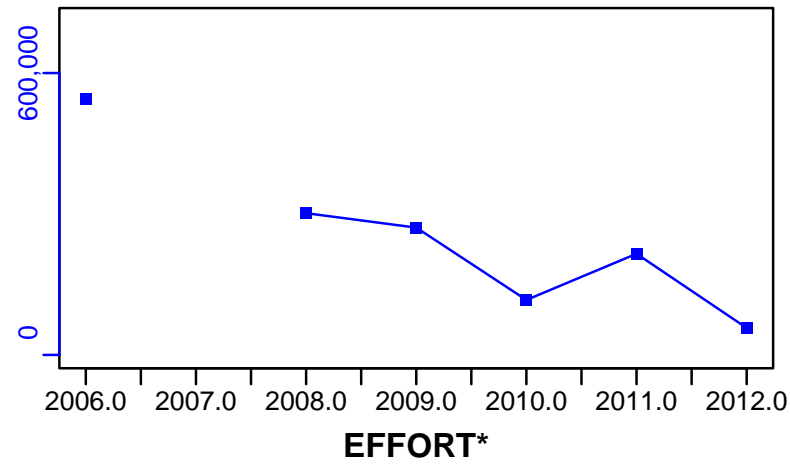
TL-MT, TC*, RecC* (2002-2012-OSGOOD)



TAC-MT, Cpair-MT, Cadv* (2002-2012-OSGOOD)



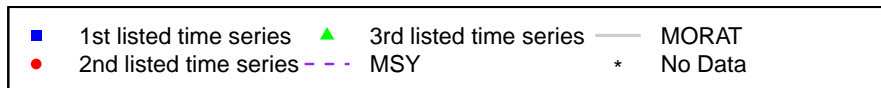
survB-MT (2002-2012-OSGOOD)



CPUE*



CdivMSY*



Sardinella Central West Africa Gabon-Angola [SARDINCWAGAB-AGO]

Metadata	
Scientific Name	Sardinella spp
Current Assess ID	FAO-SPNWA-SARDINCWAGAB-AGO-1990-2017-ASHBROOK
Area	Central West Africa Gabon-Angola
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	215,174		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

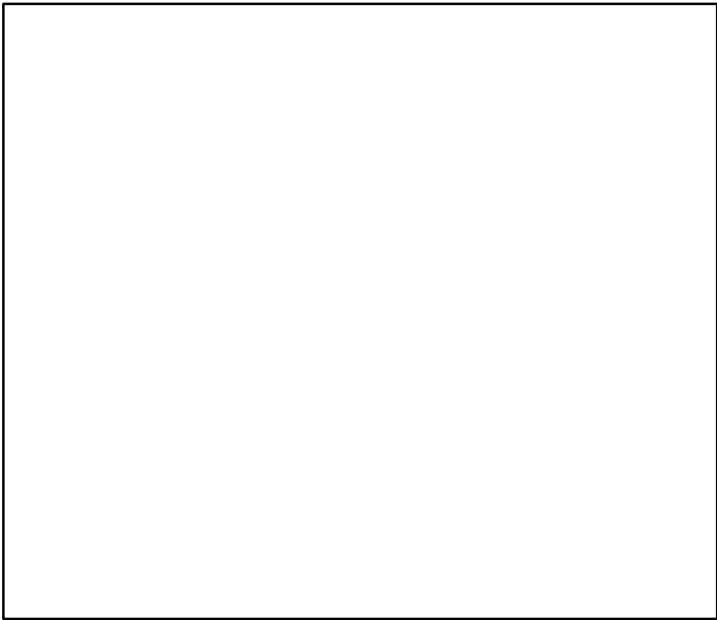
Kobe MSY*



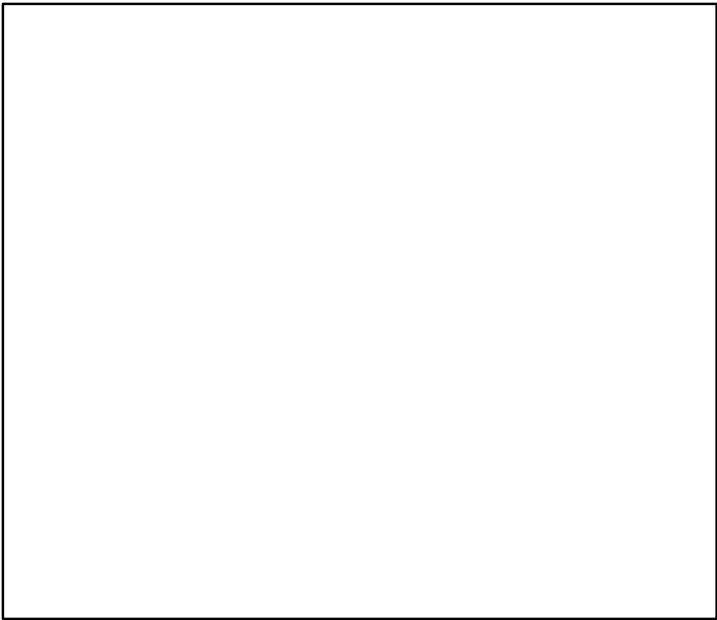
Kobe MGT*



Spawner Recruit*



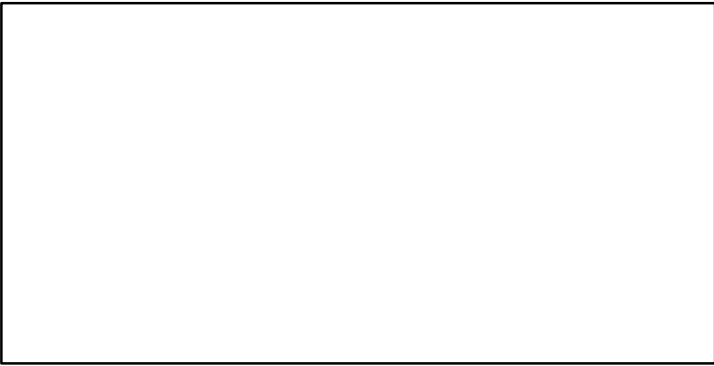
Production*



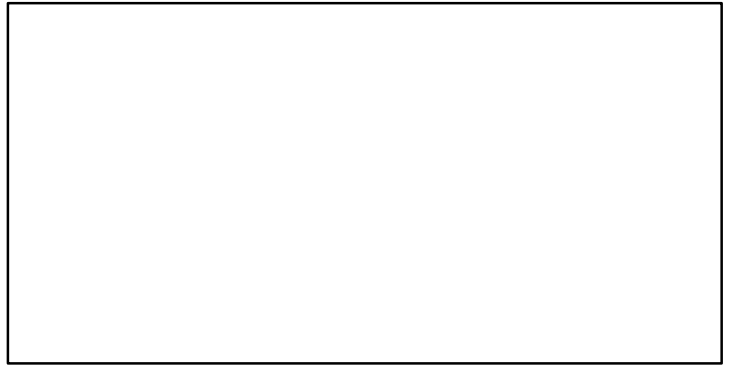
◆ Start Year ◆ End Year * No Data

Sardinella Central West Africa Gabon–Angola [SARDINCWAGAB–AGO]

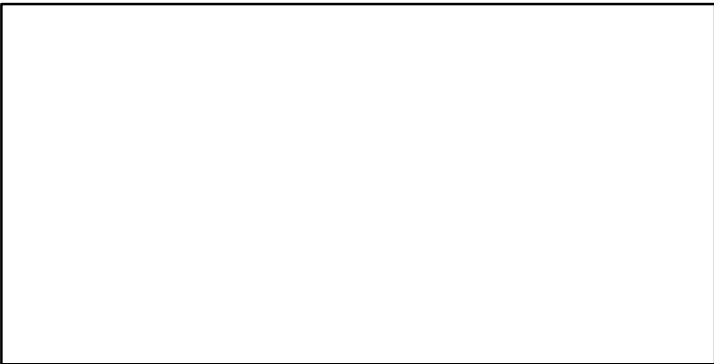
TB*



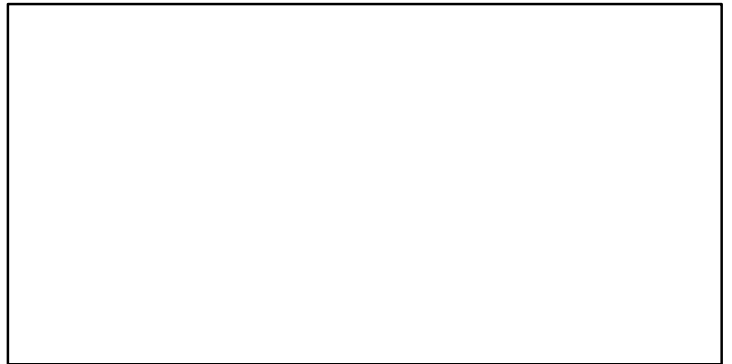
SSB*



TN *



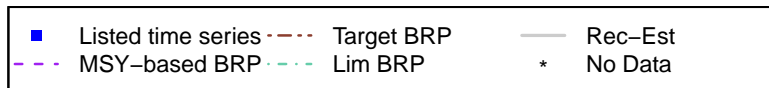
F*



ER*

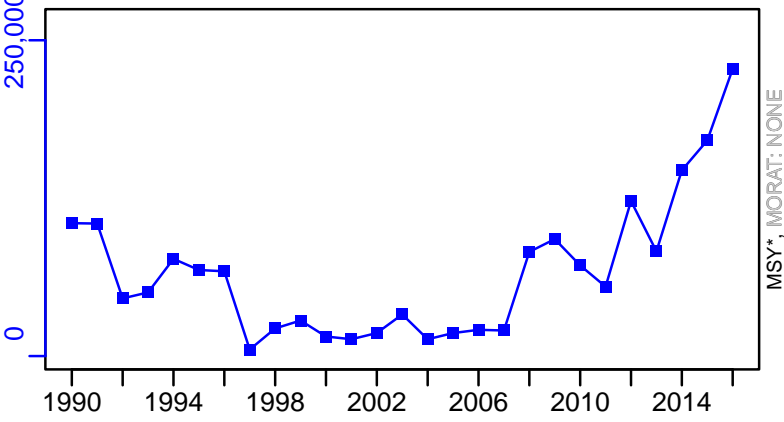


Recruits*



Sardinella Central West Africa Gabon–Angola [SARDINCWAGAB–AGO]

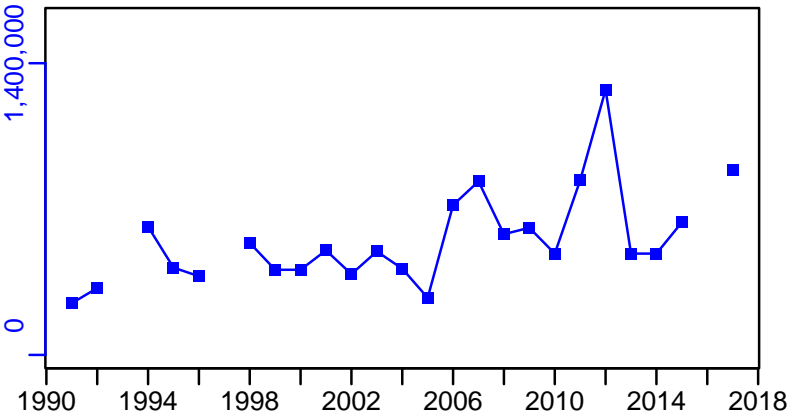
TC–MT, TL*, RecC* (1990–2017–ASHBROOK)



TAC*, Cpair*, Cadv*



survB_index–index (1990–2017–ASHBROOK)



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Sardinella Central West Africa Guinea Bissau-Liberia [SARDINCWAGNB-LBR]

Metadata	
Scientific Name	Sardinella spp
Current Assess ID	FAO-SPNWA-SARDINCWAGNB-LBR-1990-2017-ASHBROOK
Area	Central West Africa Guinea Bissau-Liberia
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	60,047		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

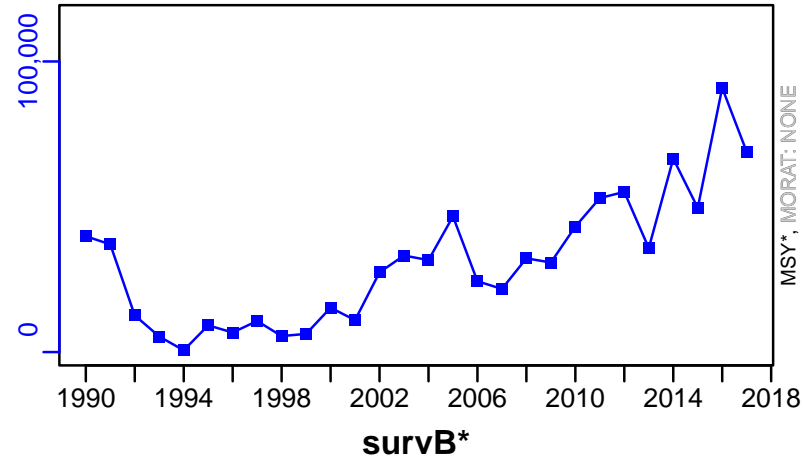


Recruits*



Sardinella Central West Africa Guinea Bissau–Liberia [SARDINCWAGNB–LBR]

TC–MT, TL*, RecC* (1990–2017–ASHBROOK)



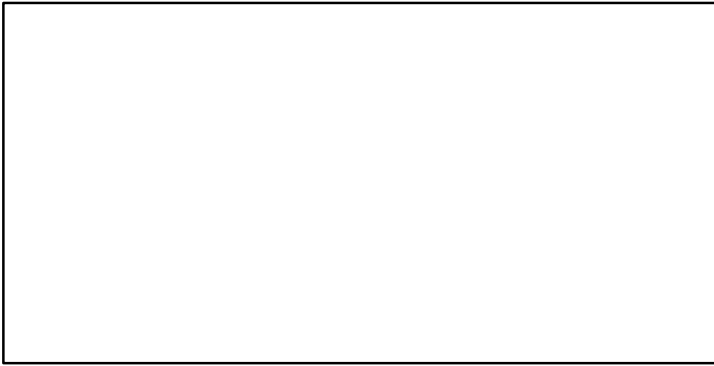
TAC*, Cpair*, Cadv*



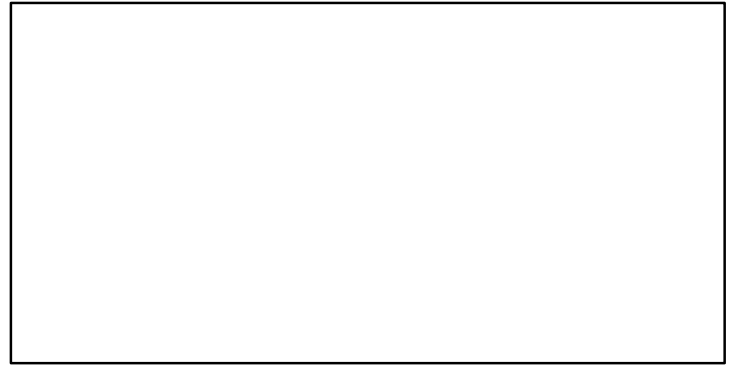
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

European pilchard Northern Alboran Sea [SARDMEDGSA1]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	STECF-SARDMEDGSA1-2002-2012-OSIO
Area	Northern Alboran Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2012	6220		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

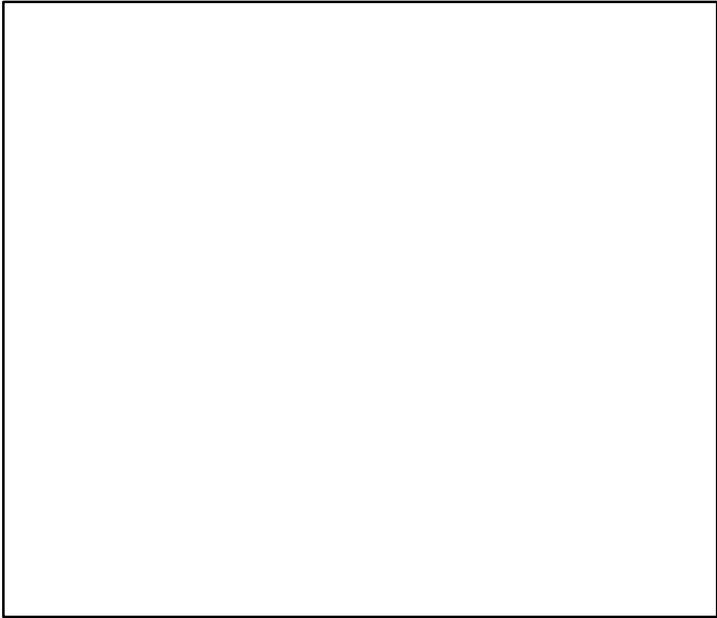
Kobe MSY*



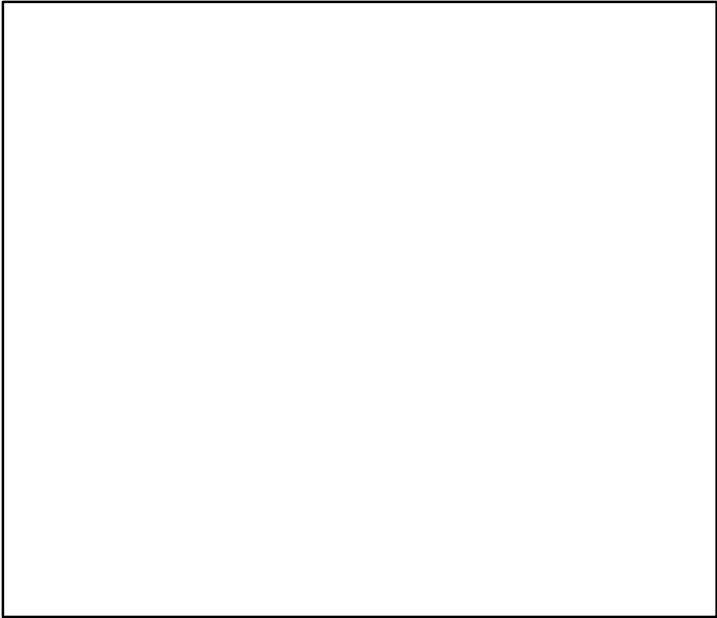
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

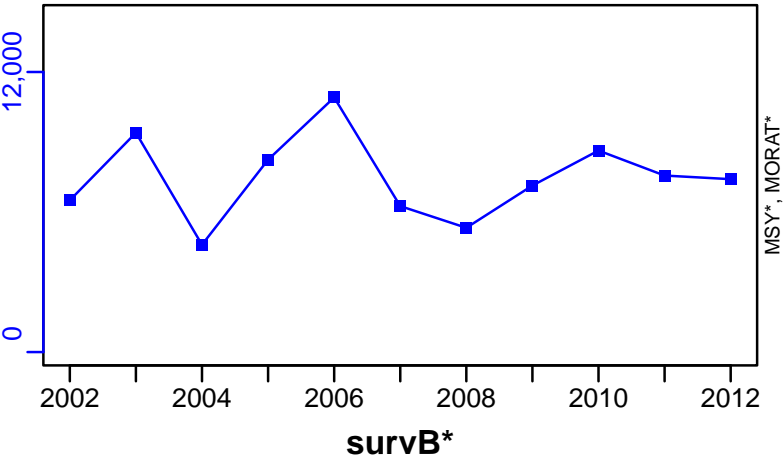


Recruits*



European pilchard Northern Alboran Sea [SARDMEDGSA1]

TC-MT, TL*, RecC* (2002-2012-OSIO)



TAC*, Cpair*, Cadv*



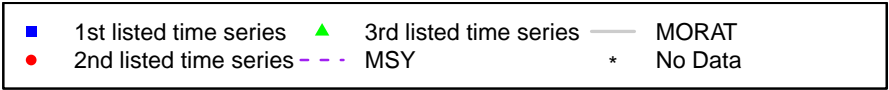
CPUE*



EFFORT*



CdivMSY*



Sardine South of Sicily [SARDMEDGSA16]

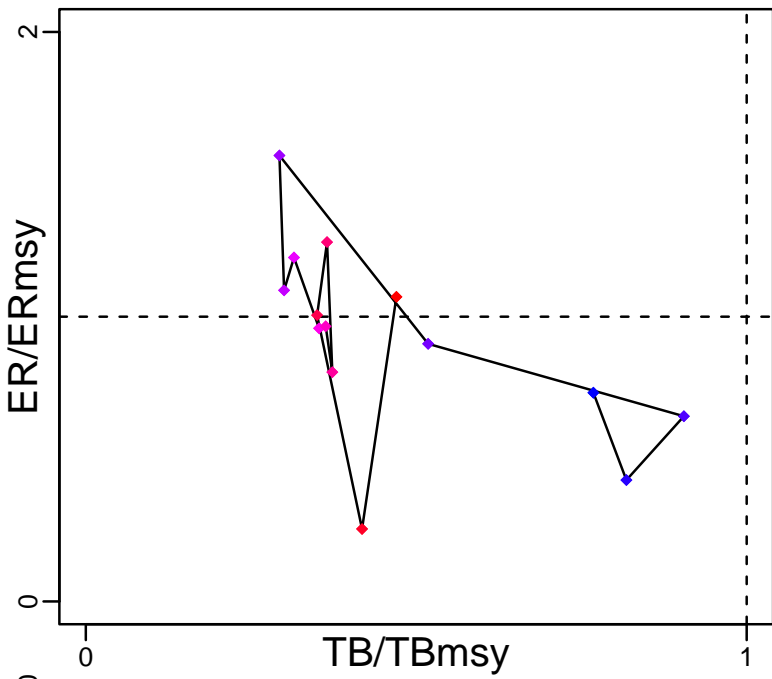
Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGSASP-SARDMEDGSA16-2003-2021-HIVELY
Area	South of Sicily
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2011, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2011	32,527
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2011	0.16
ERmsy	ERmsy-calc-ratio	2011	0.163
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.476
ERMgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2011	5307
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

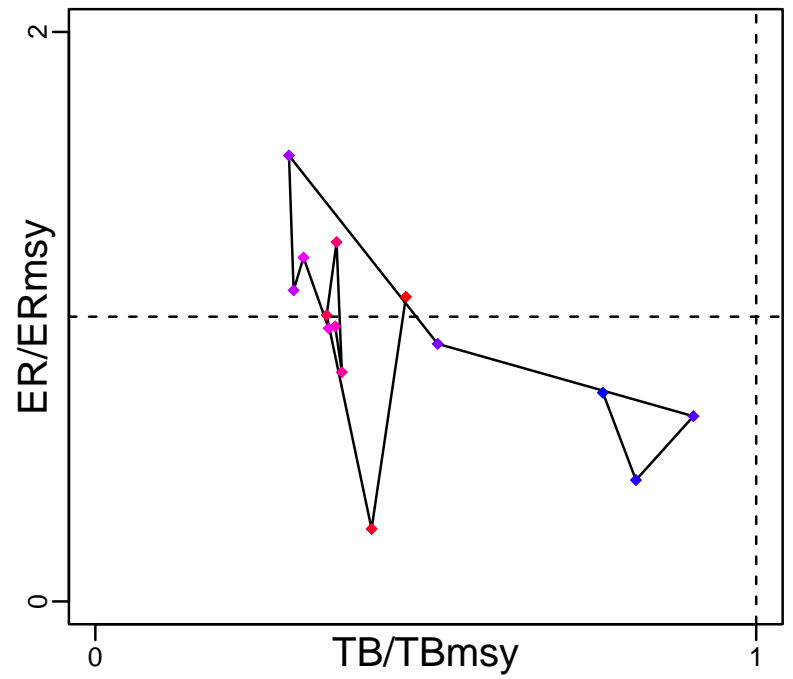
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	1103	-	-
SSB	SSB-MT	2021	643	-	-
TN	-	-	-	-	-
R	R-E00	2021	29,746,000	-	-
F	F-1/yr	2021	1.666	-	-
ER	ER-calc-ratio	2021	0.777	-	-
TC	TC-MT	2011	2670		
TL	TL-MT	2021	858		
TB/TBmsy	TBdivTBmsy-dimensionless	2011	0.47		
SSB/SSBmsy	-	-	-		
F/Fmsy	FdivFmsy-dimensionless	2011	1.07		
ER/ERmsy	ER-calc-ratio/ERmsy-calc-ratio	2011	1.07		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	3.502		
ER/ERMgt	-	-	-		

Sardine South of Sicily [SARDMEDGSA16]

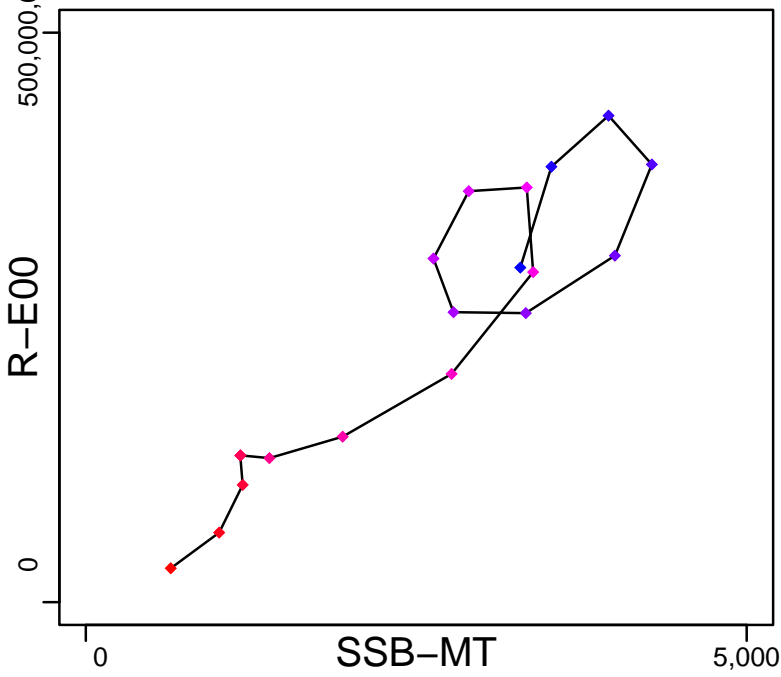
Kobe MSYpref (1998–2011–BANOB1)



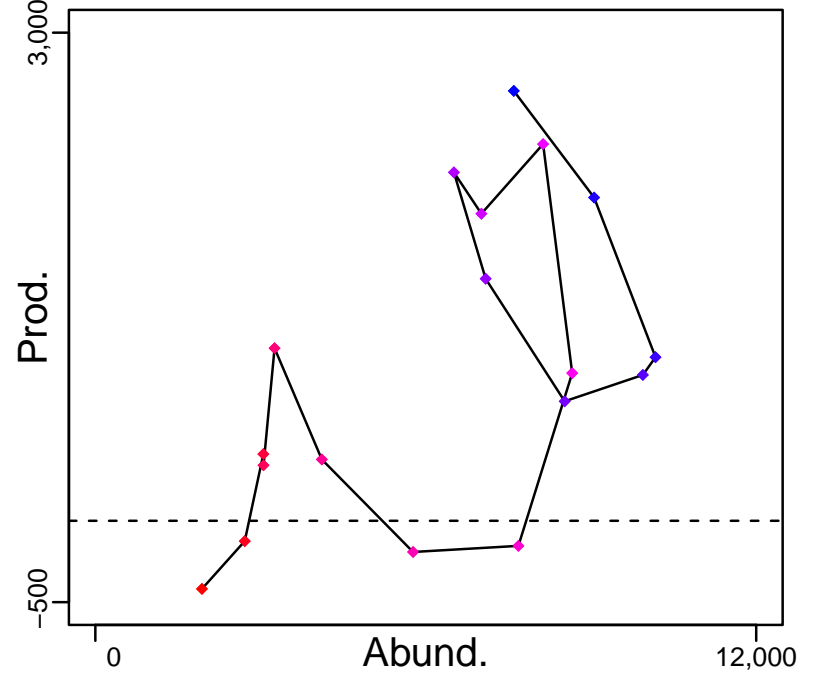
Kobe MGTpref (1998–2011–BANOB1)



Spawner Recruit (2003–2021–HIVELY)



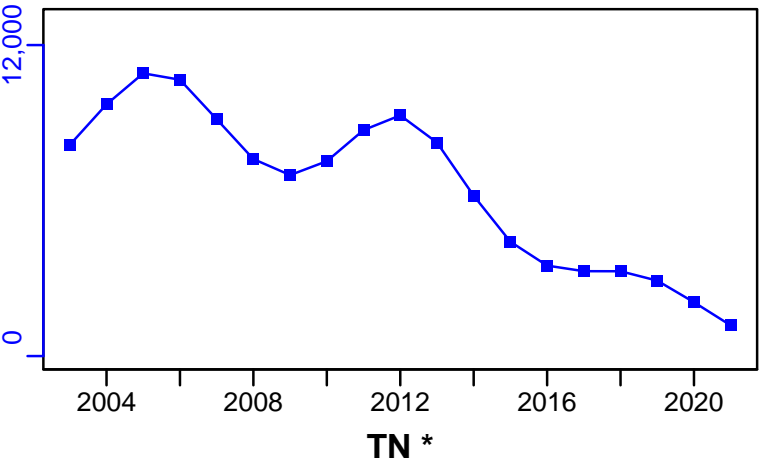
Production (2003–2021–HIVELY)



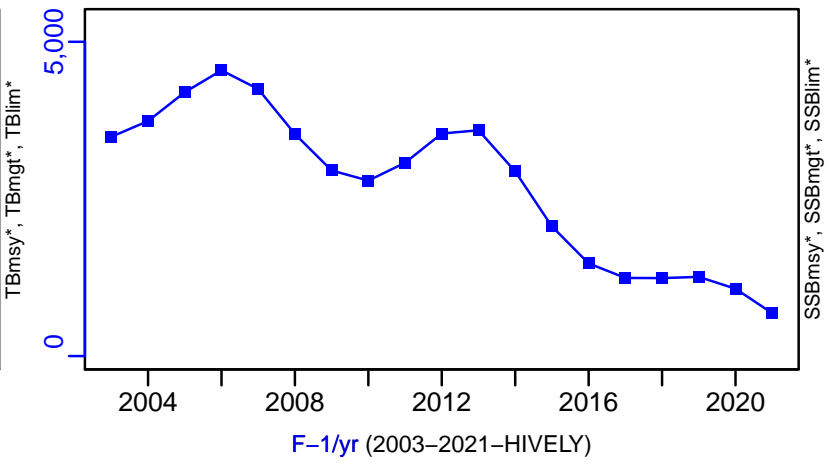
◆ Start Year ◆ End Year * No Data

Sardine South of Sicily [SARDMEDGSA16]

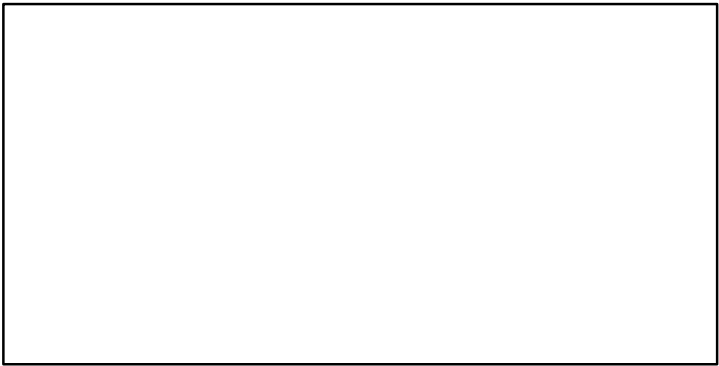
TB-MT (2003–2021–HIVELY)



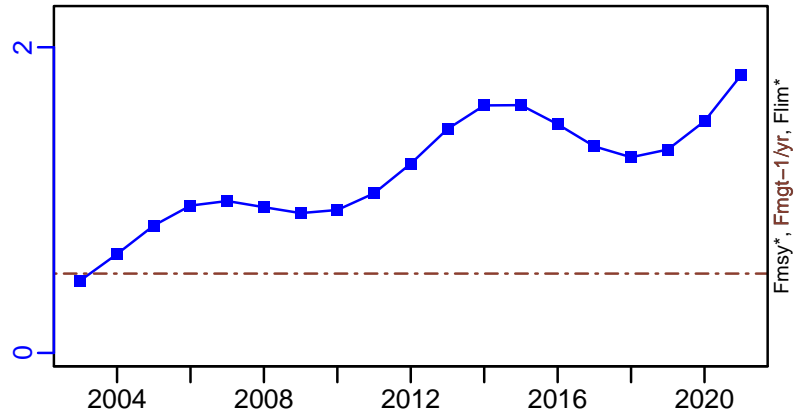
SSB-MT (2003–2021–HIVELY)



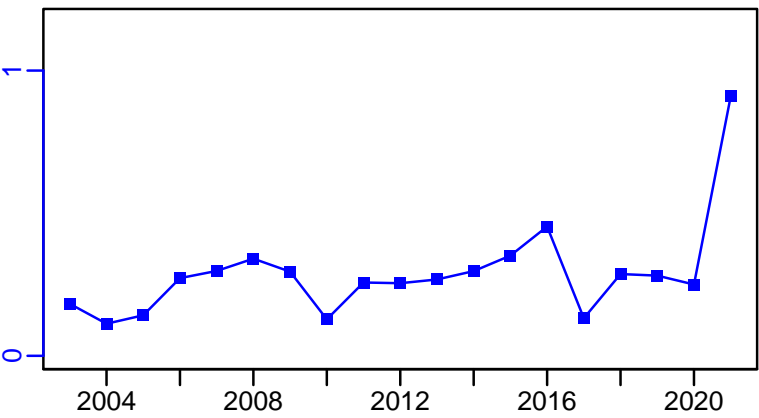
TN *



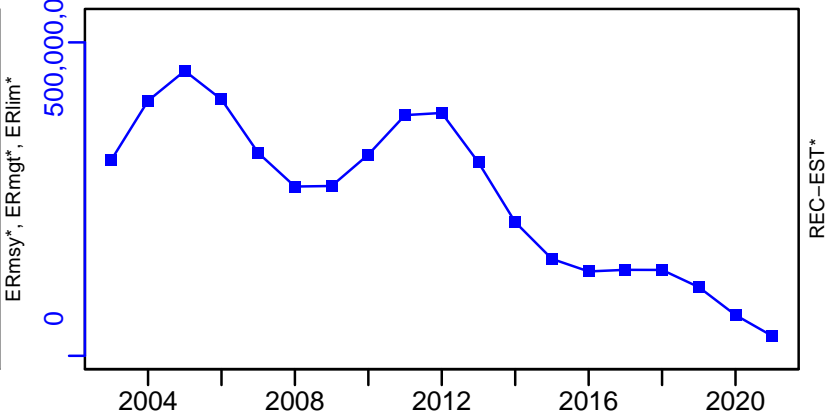
F-1/yr (2003–2021–HIVELY)



ER-calc-ratio (2003–2021–HIVELY)

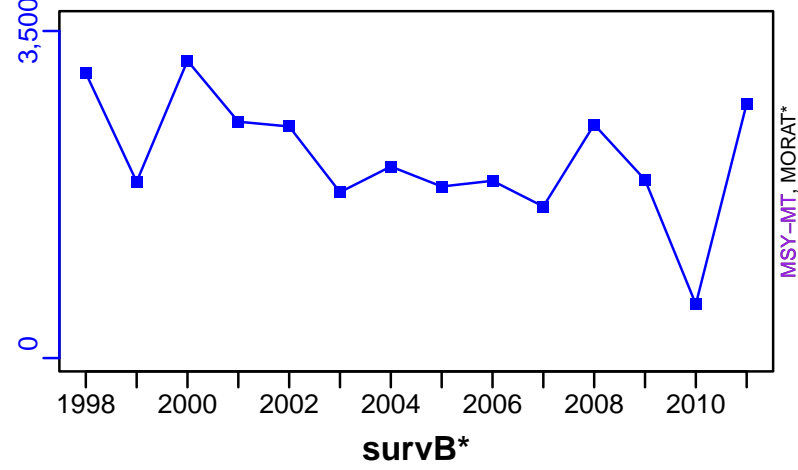


R-E00 (2003–2021–HIVELY)



Sardine South of Sicily [SARDMEDGSA16]

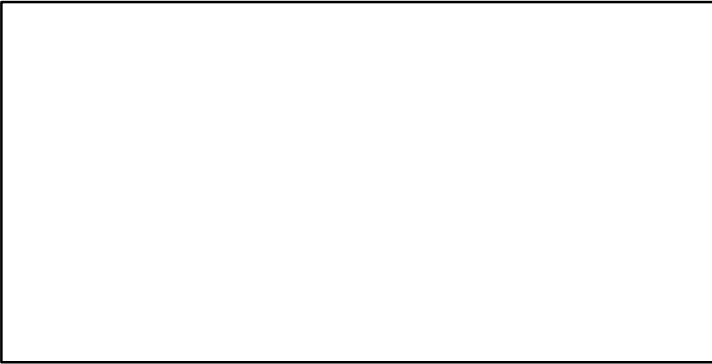
TC-MT, TL*, RecC* (1998–2011–BANOB)



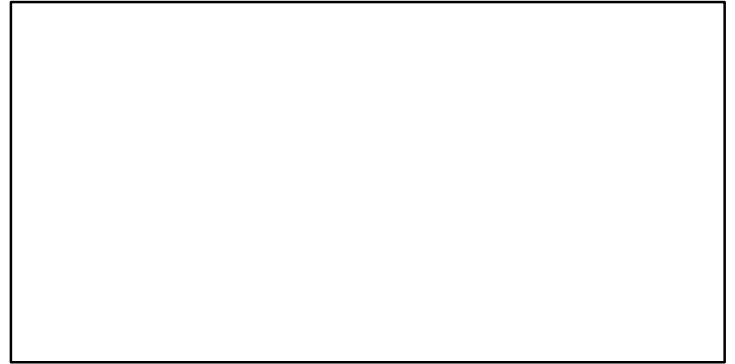
TAC*, Cpair*, Cadv*



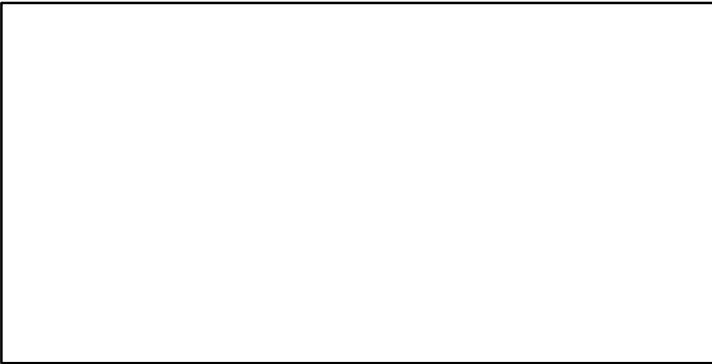
survB*



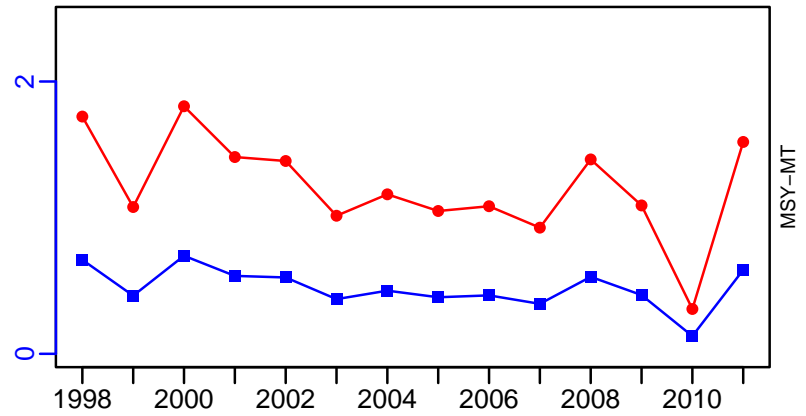
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1998–2011–BANOB)



■ 1st listed time series ▲ 3rd listed time series — MORAT
 ● 2nd listed time series - - - MSY * No Data

Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

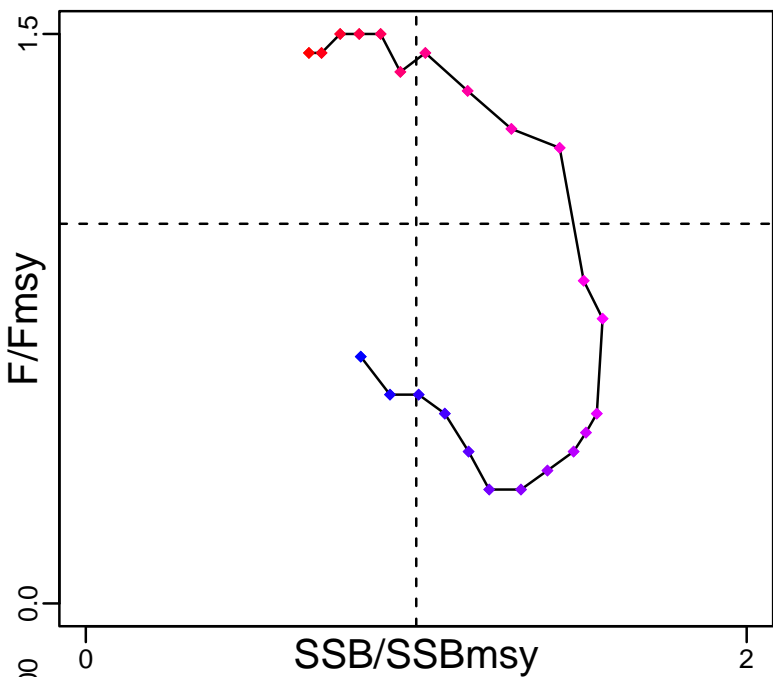
Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGSASP-SARDMEDGSA17-18-2000-2022-HIVELY
Area	Adriatic Sea (GSA 17,18)
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2013, 2015, 2016, 2022

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2022	254,971
Fmsy	Fmsy-1/yr	2022	0.2
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2022	254,971
Fmgt	Fmgt-1/yr	2022	0.2
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2022	76,491
Flim	-	-	-
ERlim	-	-	-

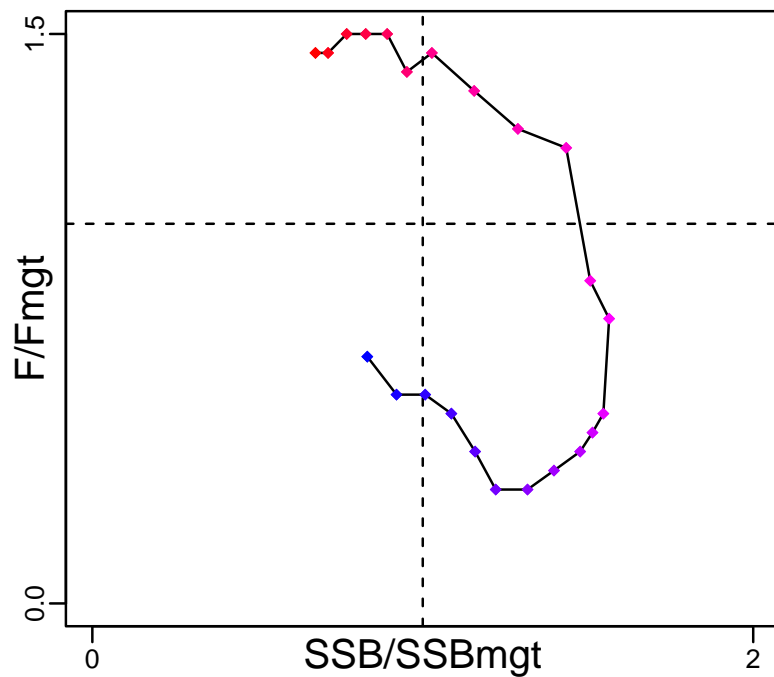
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	573,000	-	-
SSB	SSB-MT	2022	172,167	-	-
TN	-	-	-	-	-
R	R-E00	2016	24,791,217,000	-	-
F	F-1/yr	2022	0.29	-	-
ER	ER-calc-ratio	2015	0.135	-	-
TC	TC-MT	2022	50,537		
TL	TL-MT	2022	50,537		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2022	0.675		
F/Fmsy	F-1/yr/Fmsy-1/yr	2022	1.45		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2022	0.675		
F/Fmgt	F-1/yr/Fmgt-1/yr	2022	1.45		
ER/ERmgt	-	-	-		

Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

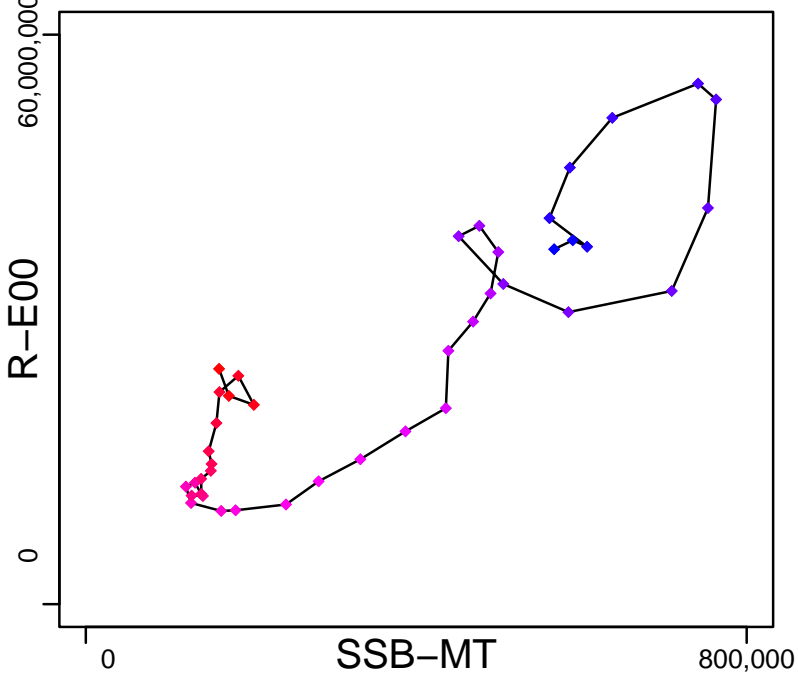
Kobe MSYpref (2000–2022–HIVELY)



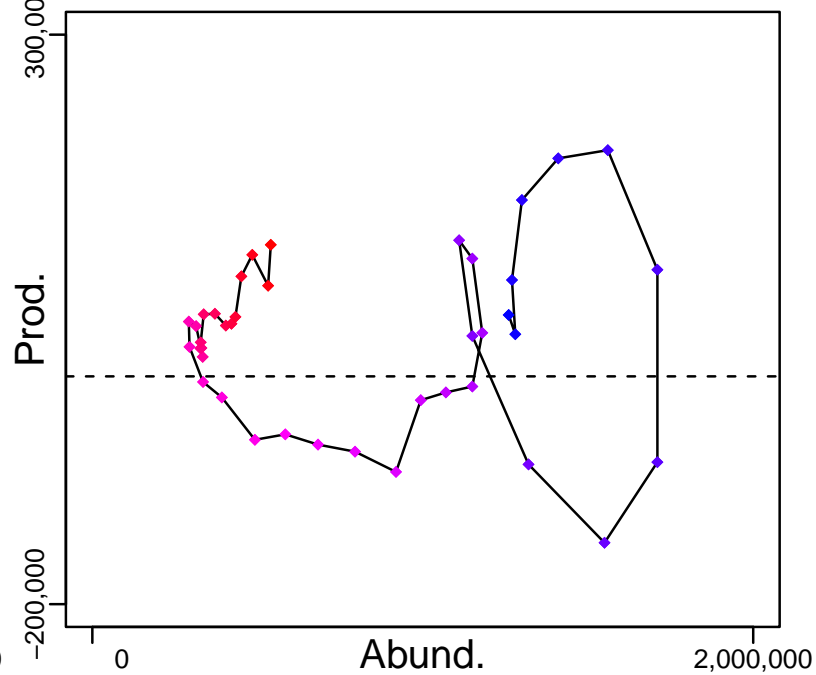
Kobe MGTpref (2000–2022–HIVELY)



Spawner Recruit (1975–2016–MEDIMP2021–2)

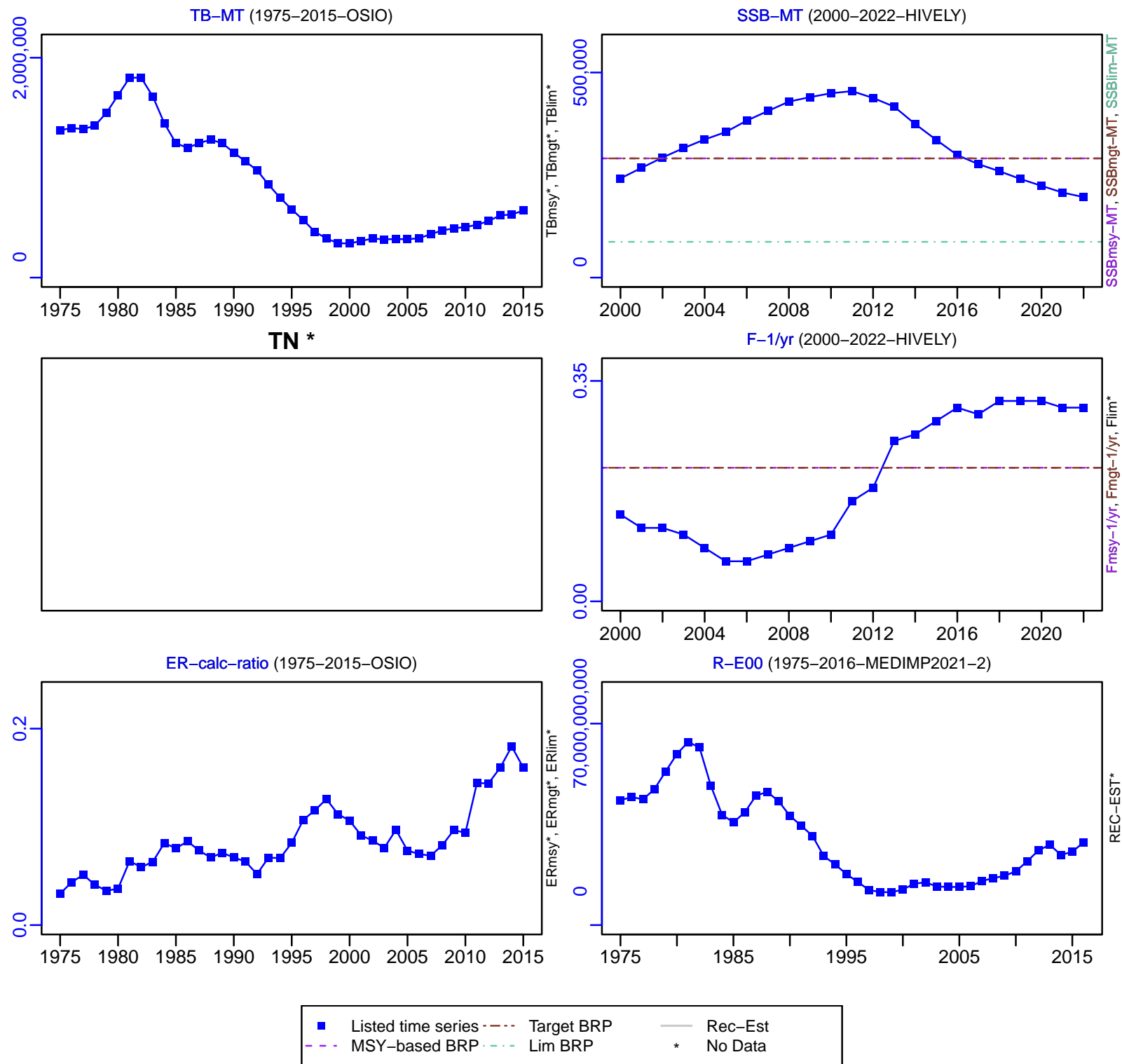


Production (1975–2015–OSIO)



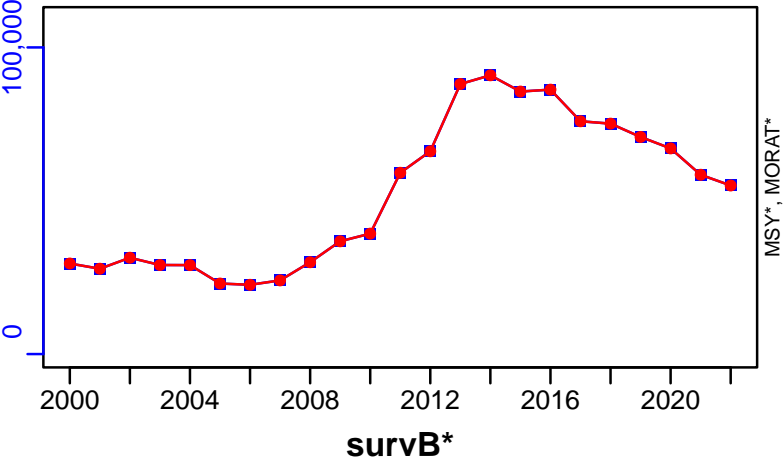
◆ Start Year ◆ End Year * No Data

Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

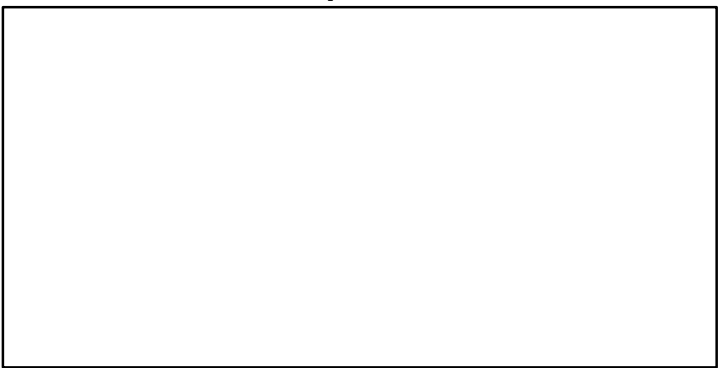


Sardine Adriatic Sea (GSA 17,18) [SARDMEDGSA17-18]

TC-MT, TL-MT, RecC* (2000-2022-HIVELY)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



European pilchard Eastern Ionian Sea [SARDMEDGSA20]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	STECF-SARDMEDGSA20-2000-2008-OSIO
Area	Eastern Ionian Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2008

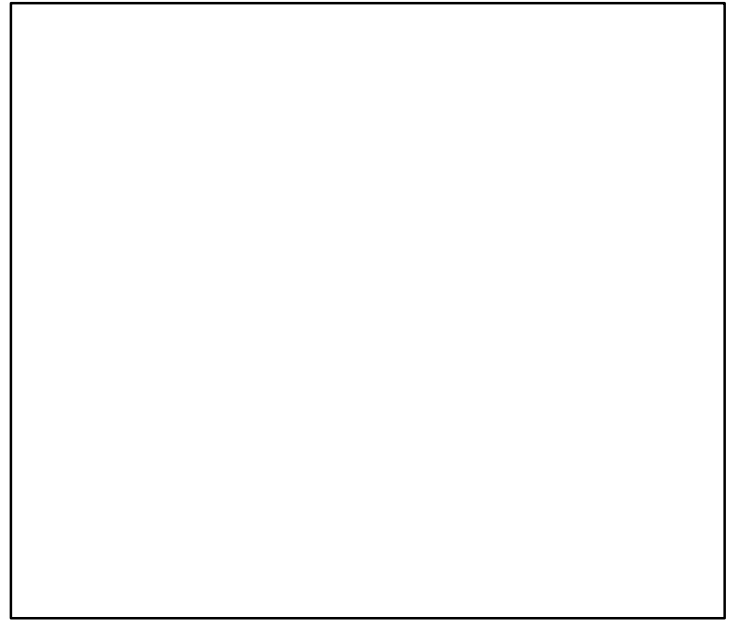
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2008	5650	-	1 to 3
TN	-	-	-	-	-
R	R-E00	2008	1.02×10^9	-	-
F	F-1/yr	2008	0.68	-	-
ER	-	-	-	-	-
TC	TC-MT	2008	2940		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

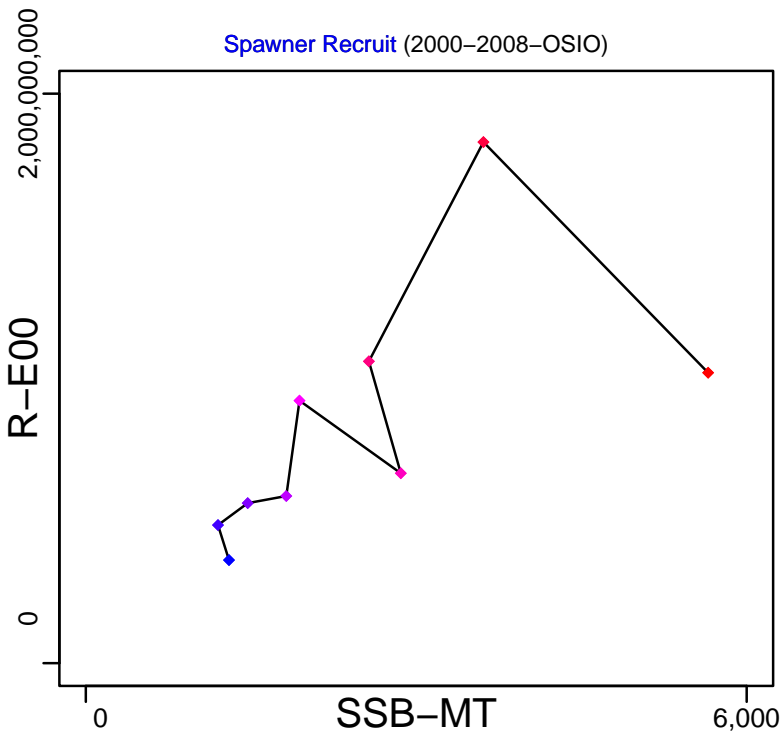
Kobe MSY*



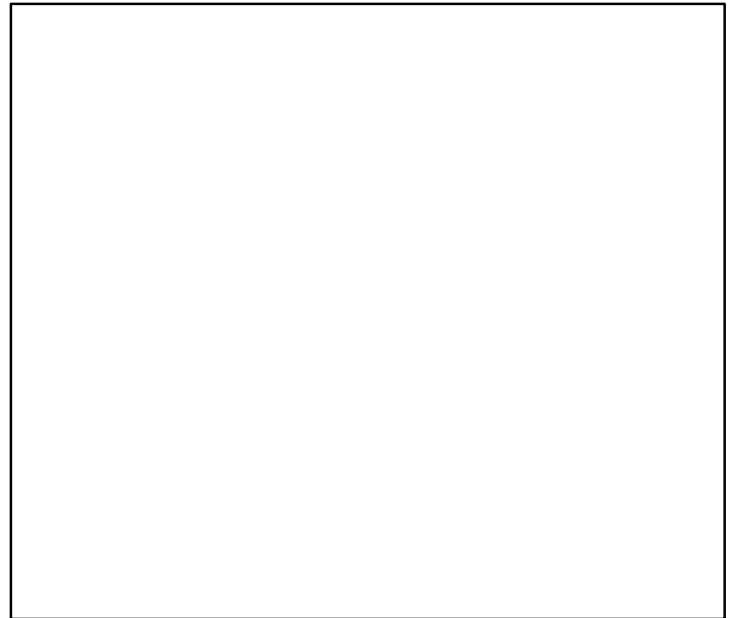
Kobe MGT*



Spawner Recruit (2000–2008–OSIO)



Production*



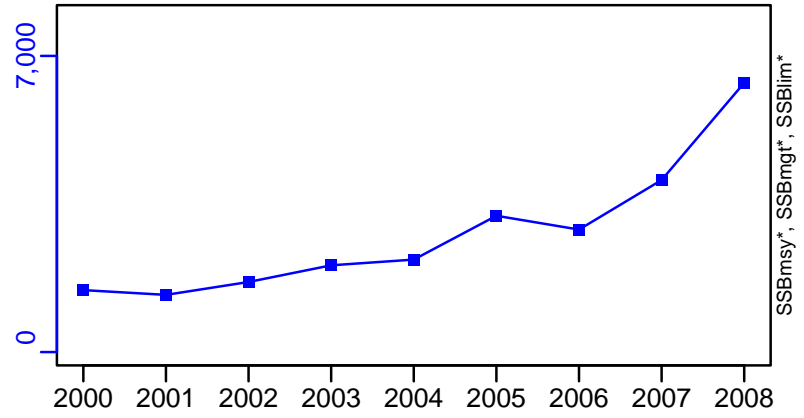
◆ Start Year ◆ End Year * No Data

European pilchard Eastern Ionian Sea [SARDMEDGSA20]

TB*



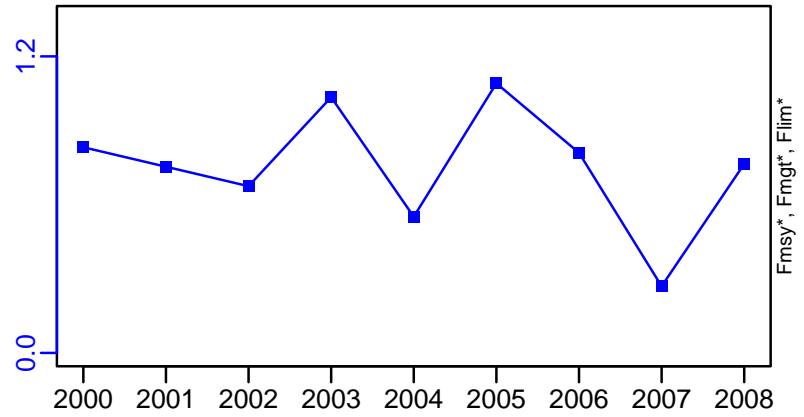
SSB-MT (2000–2008–OSIO)



TN *



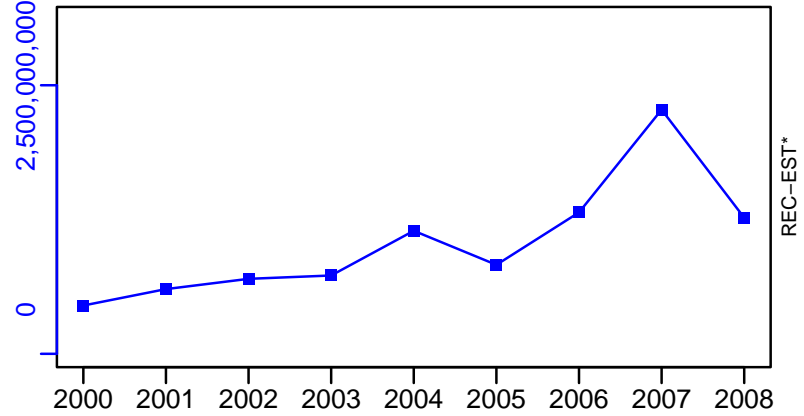
F-1/yr (2000–2008–OSIO)



ER*

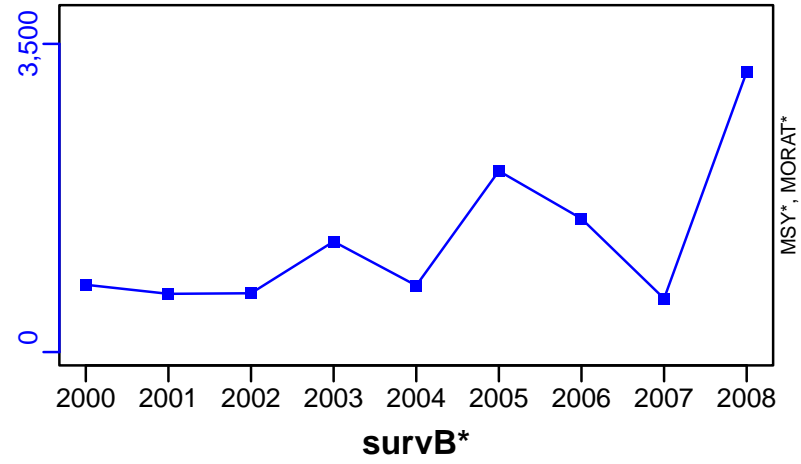


R-E00 (2000–2008–OSIO)



European pilchard Eastern Ionian Sea [SARDMEDGSA20]

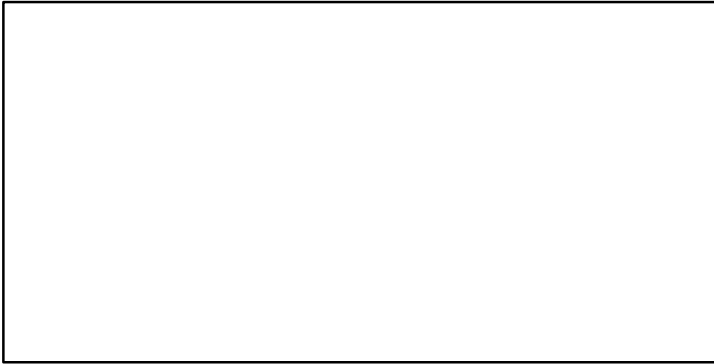
TC-MT, TL*, RecC* (2000–2008–OSIO)



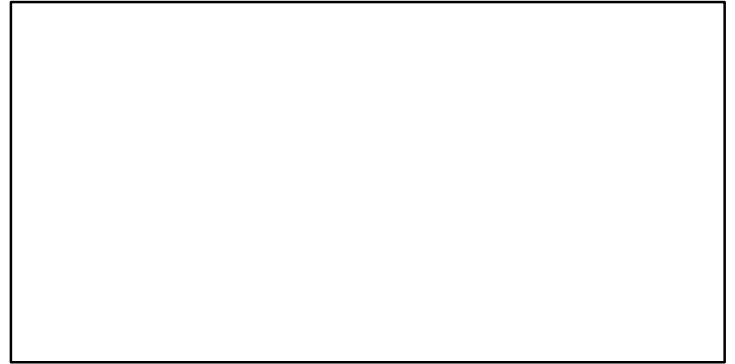
TAC*, Cpair*, Cadv*



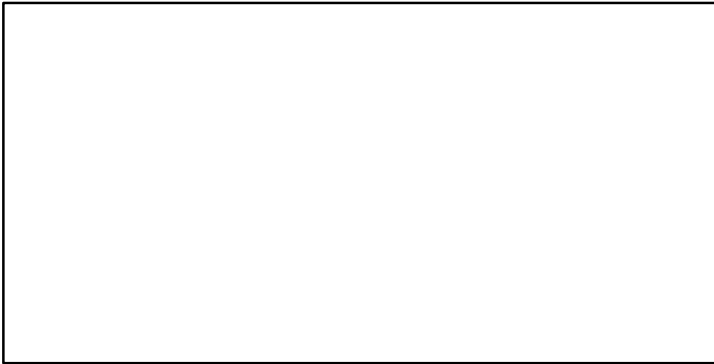
survB*



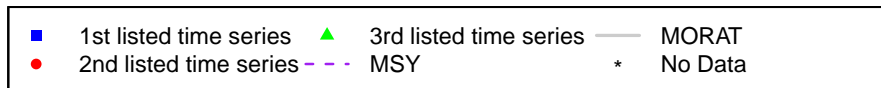
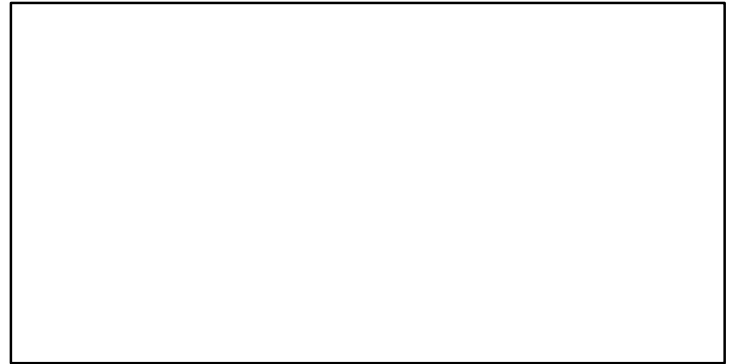
CPUE*



EFFORT*



CdivMSY*



European pilchard Aegean Sea and Crete Island (GSA 22,23)
[SARDMEDGSA22-23]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	STECF-SARDMEDGSA22-23-2000-2016-MEDIMP2021-2
Area	Aegean Sea and Crete Island (GSA 22,23)
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2016	0.503
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2016	0.503
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2016	33,851	-	-
TN	-	-	-	-	-
R	R-E00	2016	6,176,295,000	-	-
F	F-1/yr	2016	0.534	-	-
ER	-	-	-	-	-
TC	TC-MT	2016	9655		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2016	1.062		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	1.062		
ER/ERmgt	-	-	-		

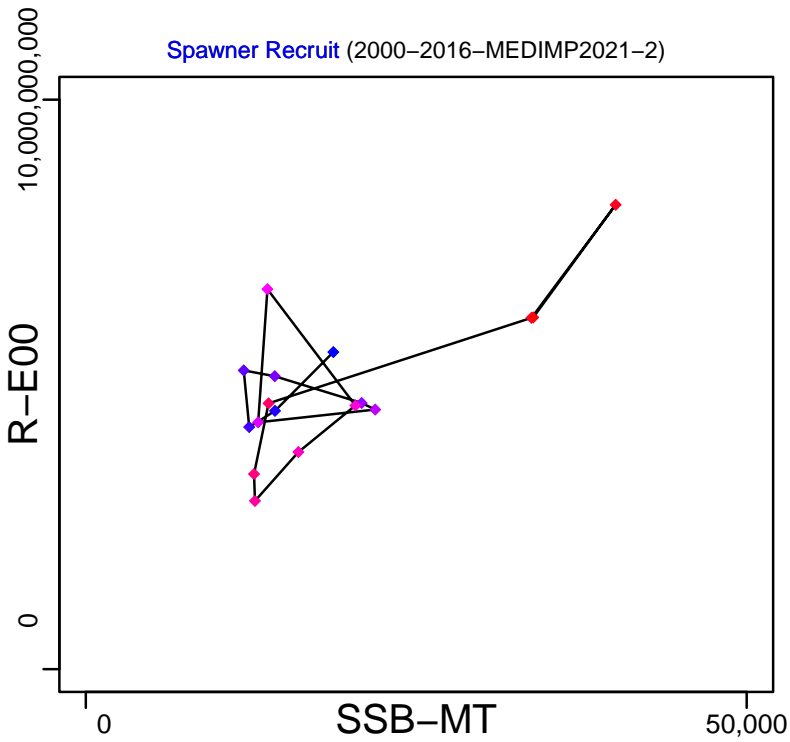
Kobe MSY*



Kobe MGT*



Spawner Recruit (2000-2016-MEDIMP2021-2)



Production*



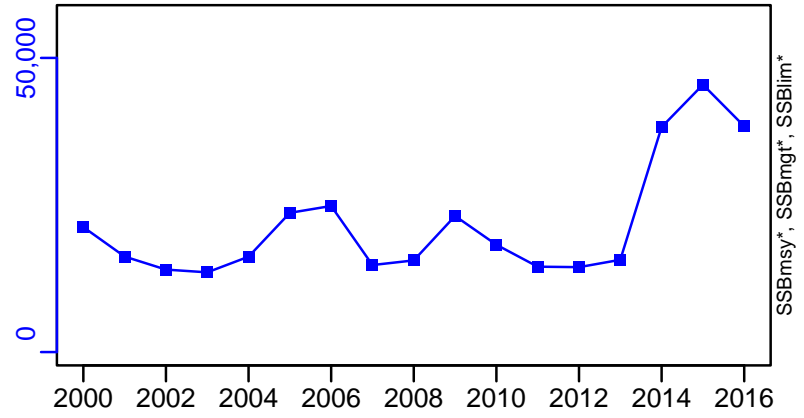
◆ Start Year ◆ End Year * No Data

European pilchard Aegean Sea and Crete Island (GSA 22,23) [SARDMEDGSA22-23]

TB*



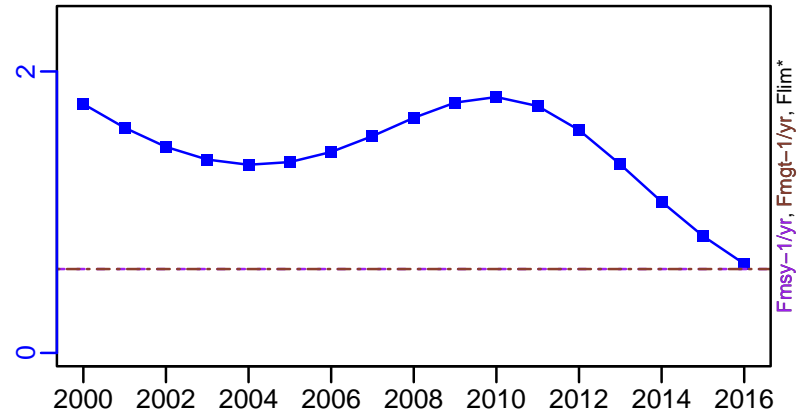
SSB-MT (2000-2016-MEDIMP2021-2)



TN *



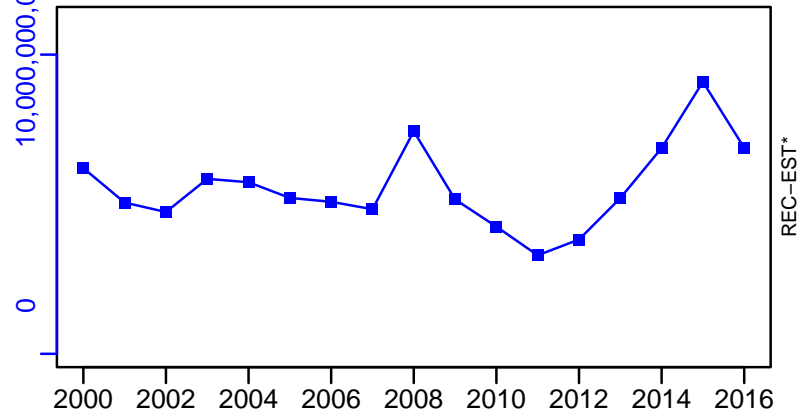
F-1/yr (2000-2016-MEDIMP2021-2)



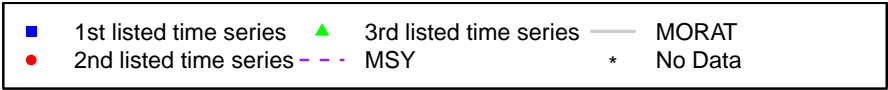
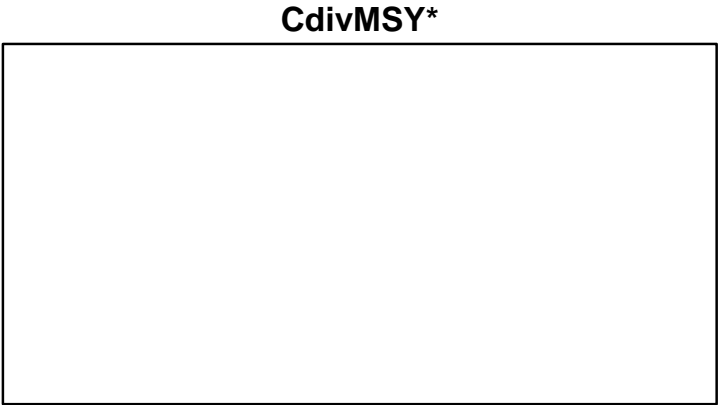
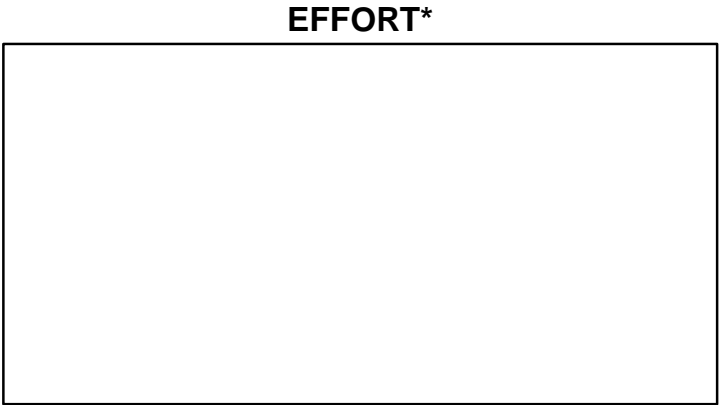
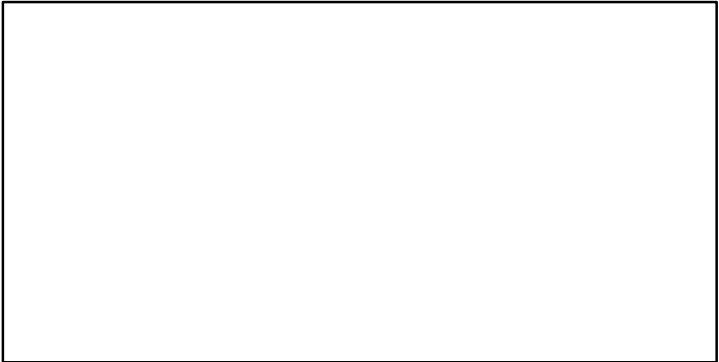
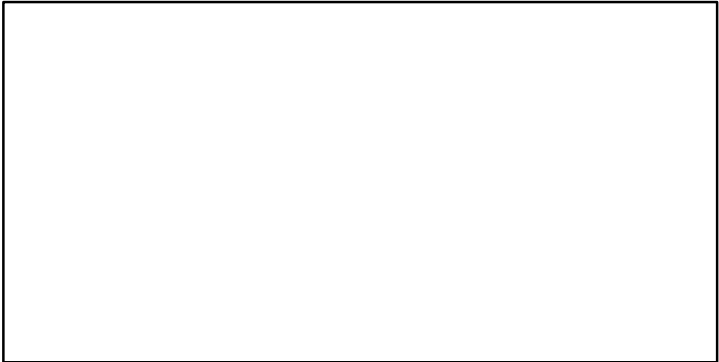
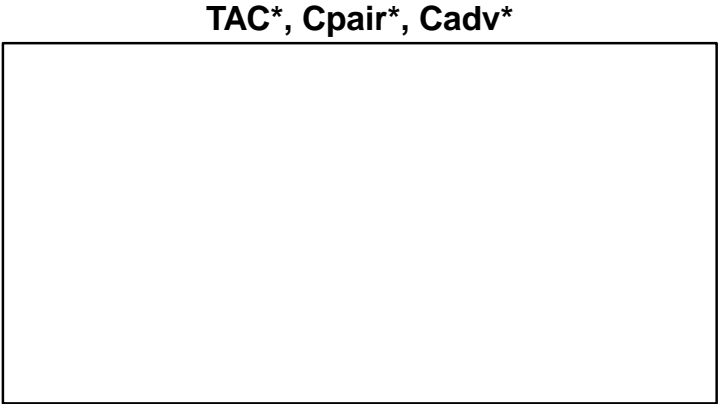
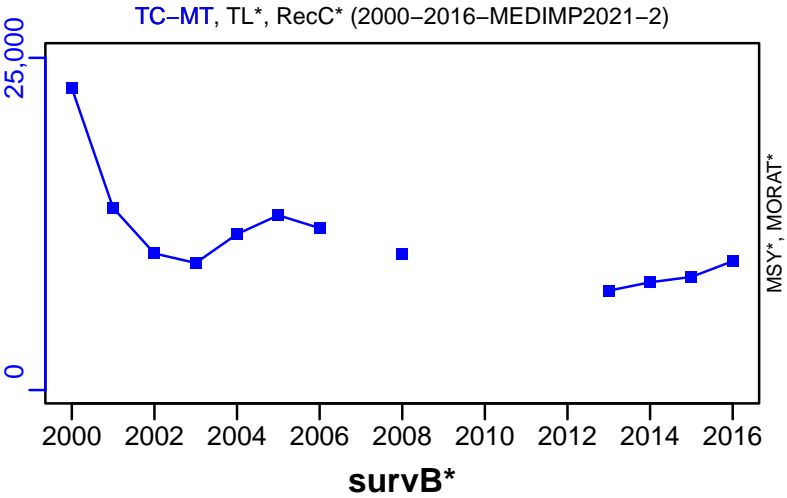
ER*



R-E00 (2000-2016-MEDIMP2021-2)



European pilchard Aegean Sea and Crete Island (GSA 22,23) [SARDMEDGSA22-23]

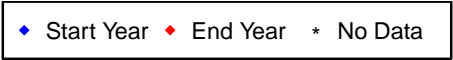
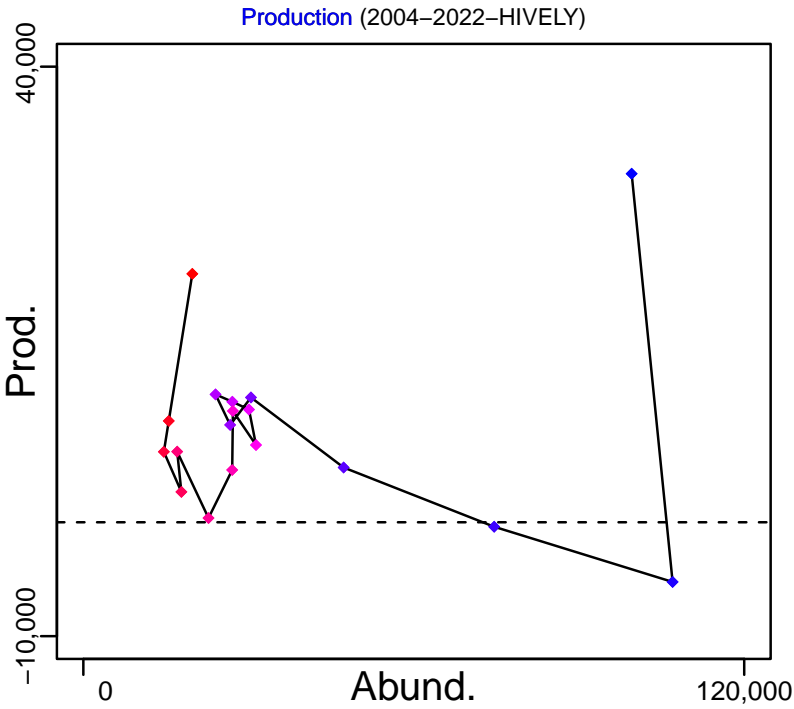
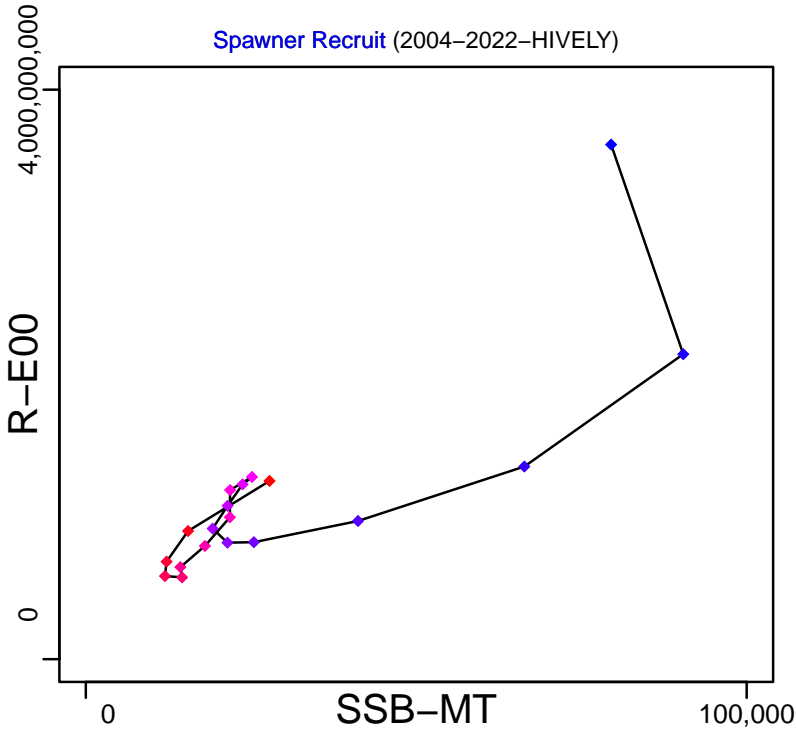
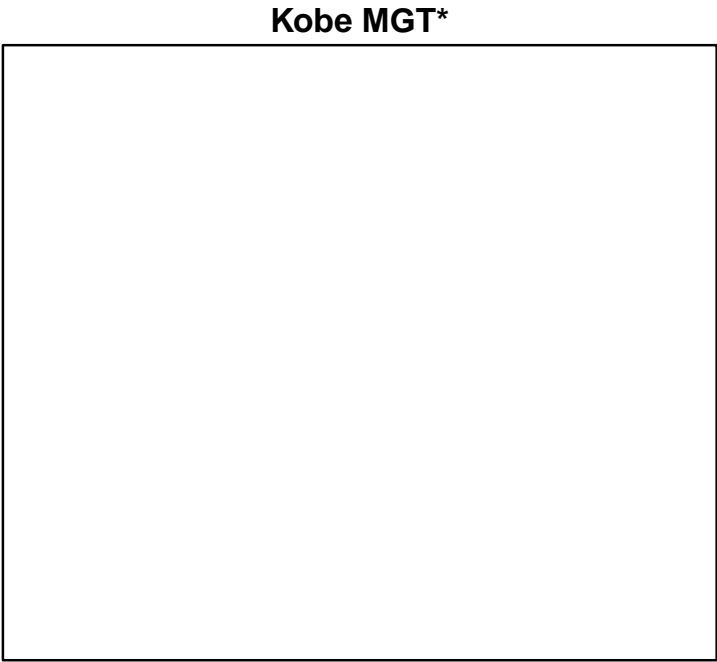
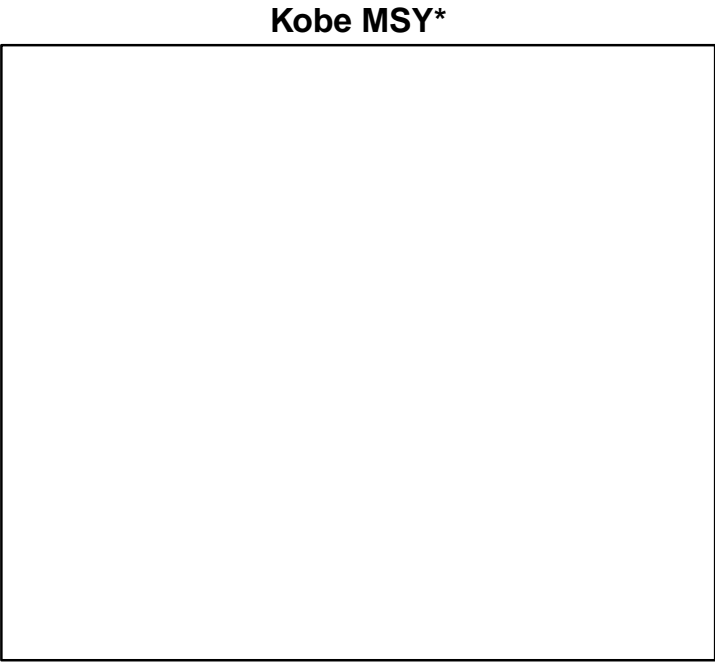


European pilchard Northern Spain [SARDMEDGSA6]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGSASP-SARDMEDGSA6-2004-2022-HIVELY
Area	Northern Spain
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2016, 2013, 2015, 2021, 2022

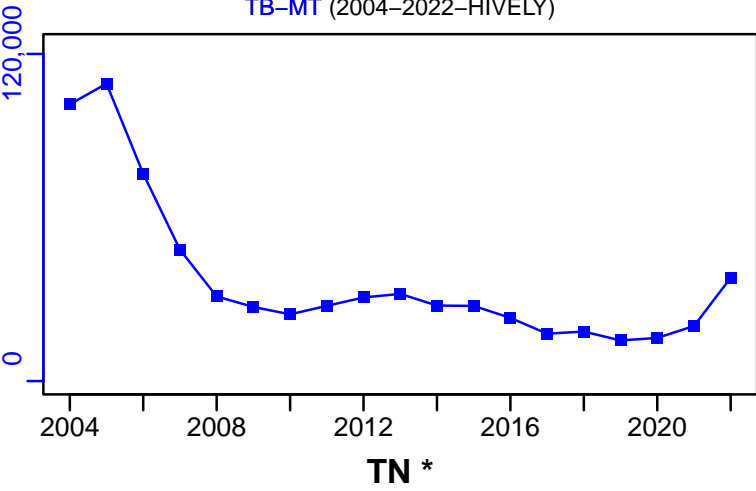
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2015	0.7
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2022	0.47
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2022	37,163	-	-
SSB	SSB-MT	2022	27,800	-	-
TN	-	-	-	-	-
R	R-E00	2022	1,251,817,000	-	-
F	F-1/yr	2022	0.465	-	-
ER	ER-calc-ratio	2022	0.124	-	-
TC	TC-MT	2022	4626		
TL	TL-MT	2022	4626		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2015	2.529		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2022	0.989		
ER/ERmgt	-	-	-		

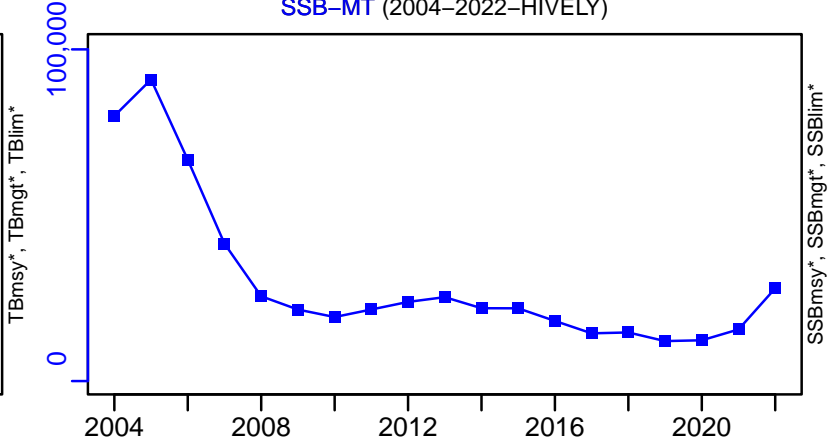


European pilchard Northern Spain [SARDMEDGSA6]

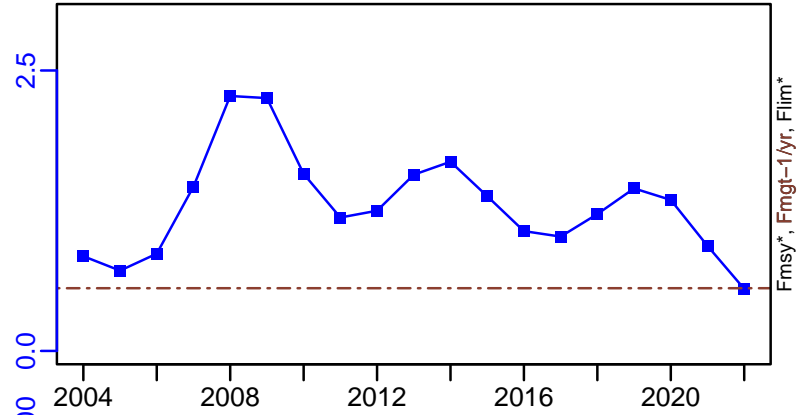
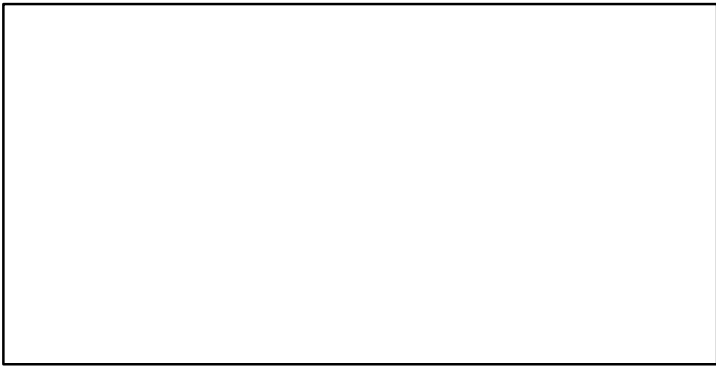
TB-MT (2004–2022–HIVELY)



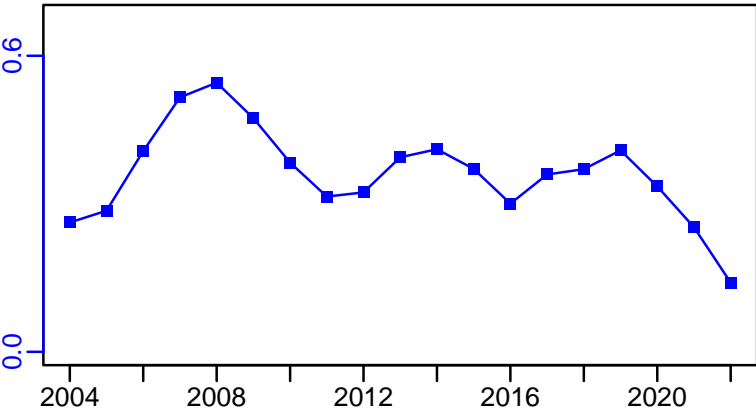
SSB-MT (2004–2022–HIVELY)



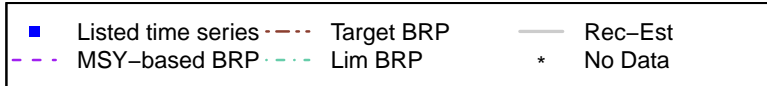
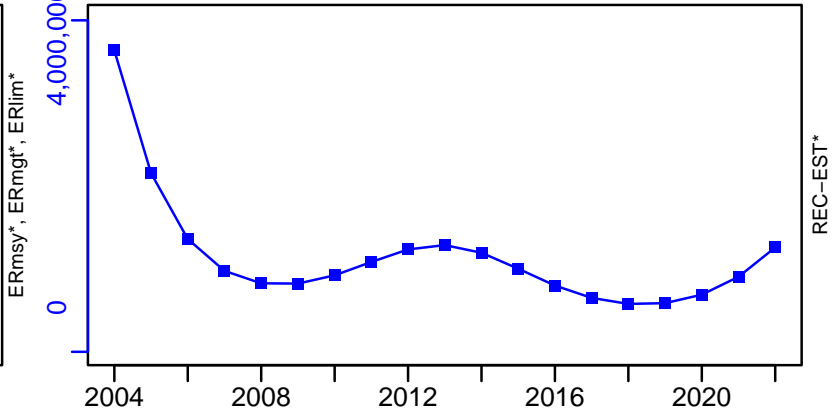
F-1/yr (2004–2022–HIVELY)



ER-calc-ratio (2004–2022–HIVELY)

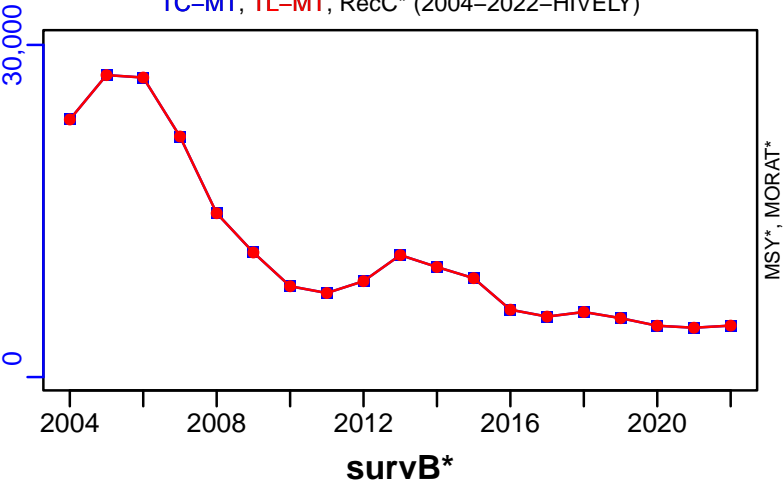


R-E00 (2004–2022–HIVELY)



European pilchard Northern Spain [SARDMEDGSA6]

TC-MT, TL-MT, RecC* (2004–2022–HIVELY)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Sardine Gulf of Lions [SARDMEDGSA7]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGSASP-SARDMEDGSA7-1995-2022-HIVELY
Area	Gulf of Lions
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Working Group on Stock Assessment of Small Pelagic species
Asmts in RAM	2012, 2021, 2022

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2021	0.25
ERmgt	ERmgt-ratio	2022	0.35
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2022	9861
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2012	115,000	-	-
SSB	SSB-MT	2022	47,815	-	-
TN	-	-	-	-	-
R	R-MT	2012	57,500	-	-
F	F-1/yr	2021	0.001	-	-
ER	ER-ratio	2022	0.001	-	-
TC	TC-MT	2012	782		
TL	TL-MT	2022	27		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.004		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



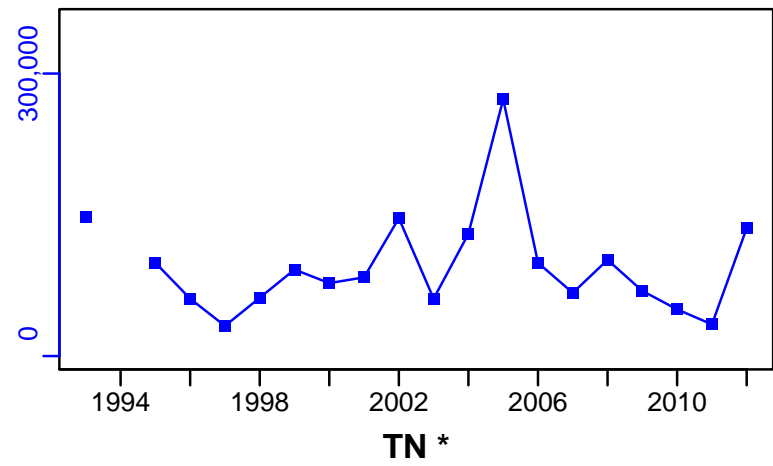
Production*



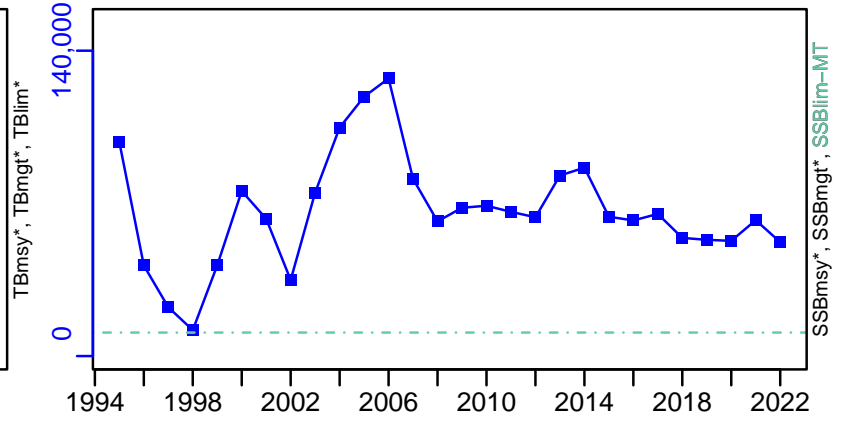
◆ Start Year ◆ End Year * No Data

Sardine Gulf of Lions [SARDMEDGSA7]

TB-MT (1993–2012–BANOB1)



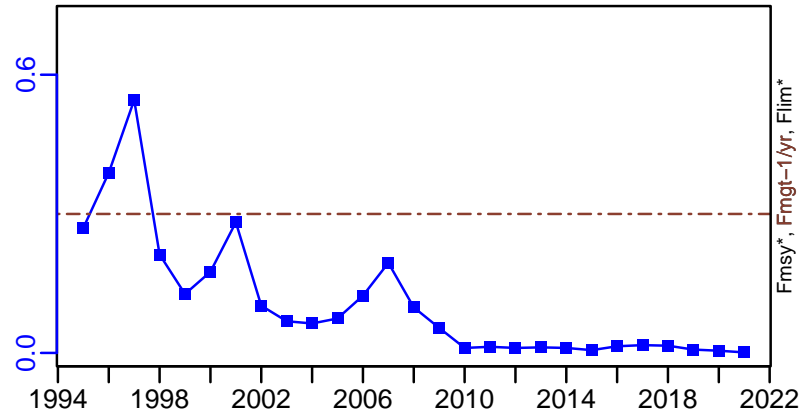
SSB-MT (1995–2022–HIVELY)



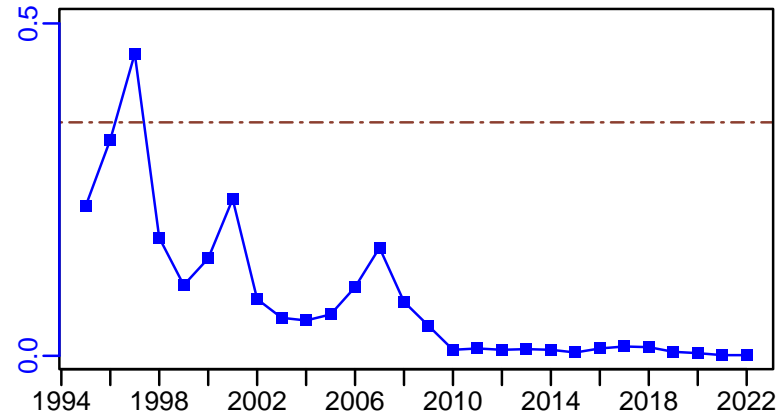
TN *



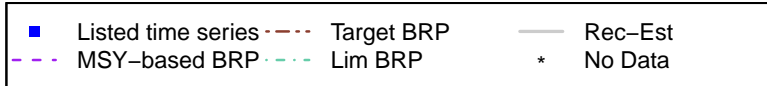
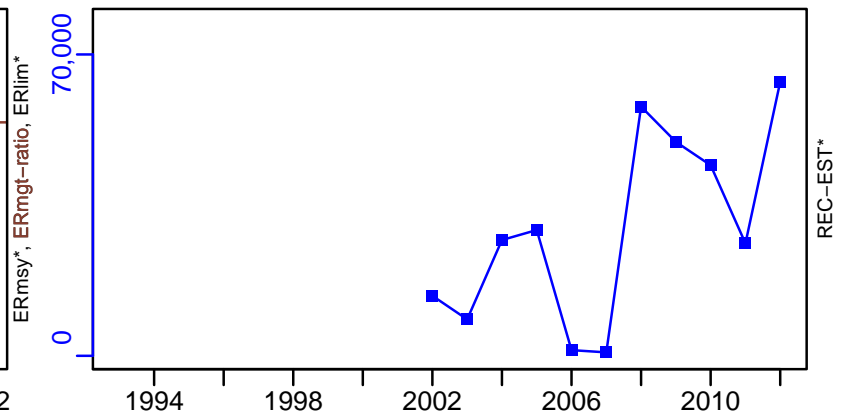
F-1/yr (1995–2021–HIVELY)



ER-ratio (1995–2022–HIVELY)



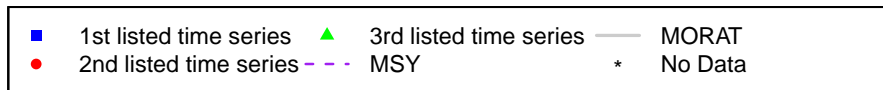
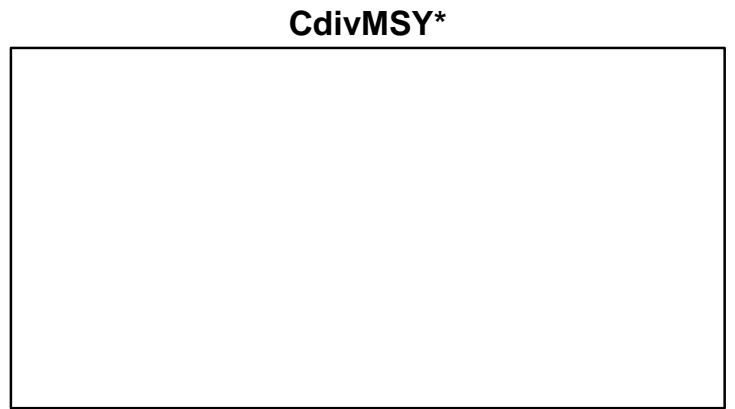
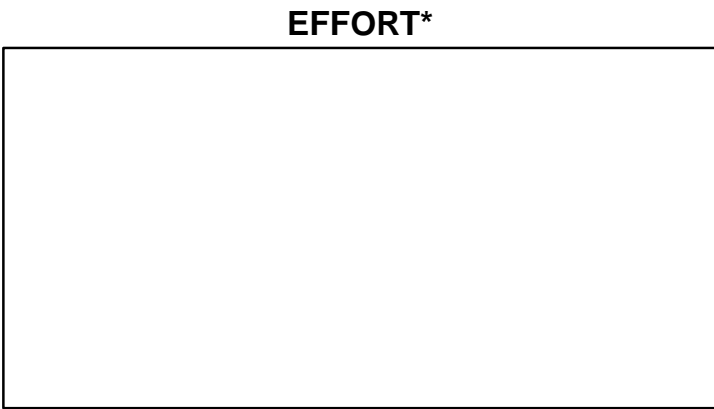
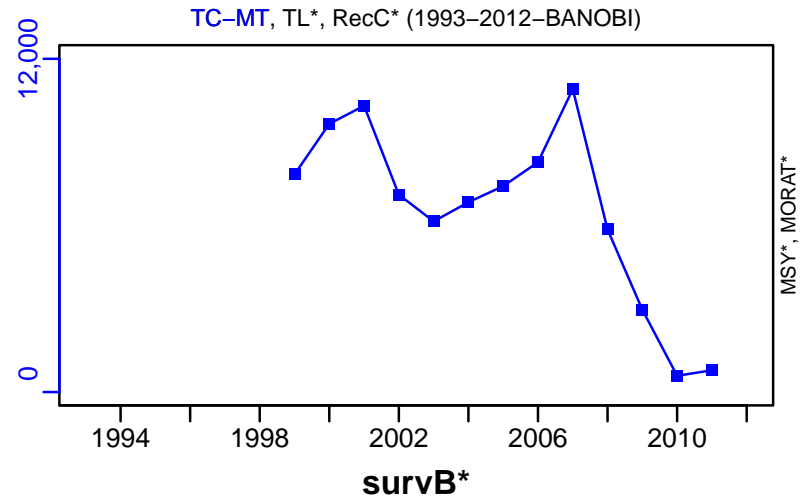
R-MT (1993–2012–BANOB1)



Sardine Gulf of Lions [SARDMEDGSA7]

TC-MT, TL*, RecC* (1993–2012–BANOB)

TAC*, Cpair*, Cadv*



European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	STECF-SARDMEDGSA9-2006-2012-OSIO
Area	Ligurian and North Tyrrhenian Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Scientific, Technical and Economic Committee for Fisheries
Asmts in RAM	2012

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2012	1730		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

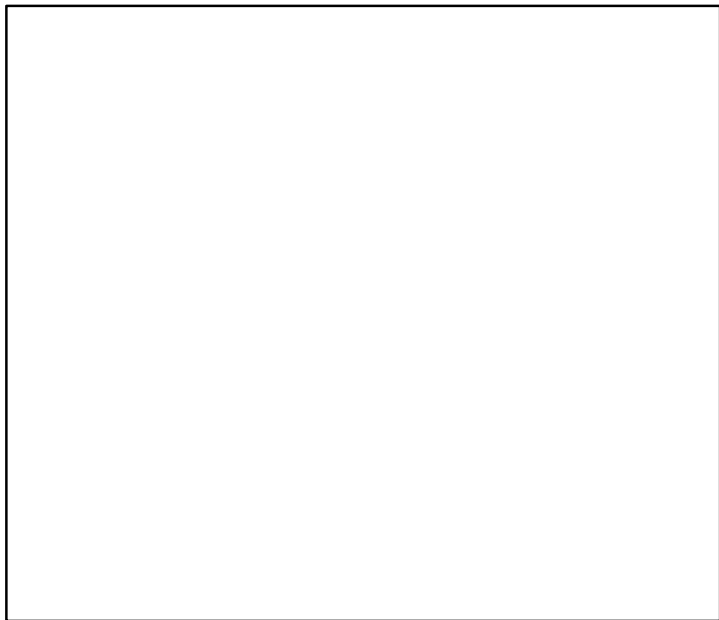
Kobe MSY*



Kobe MGT*



Spawner Recruit*



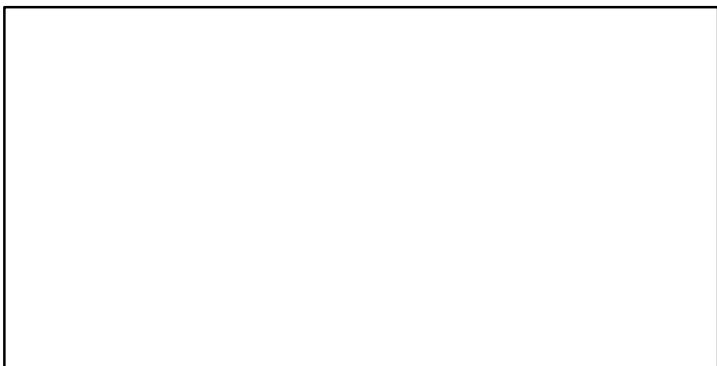
Production*



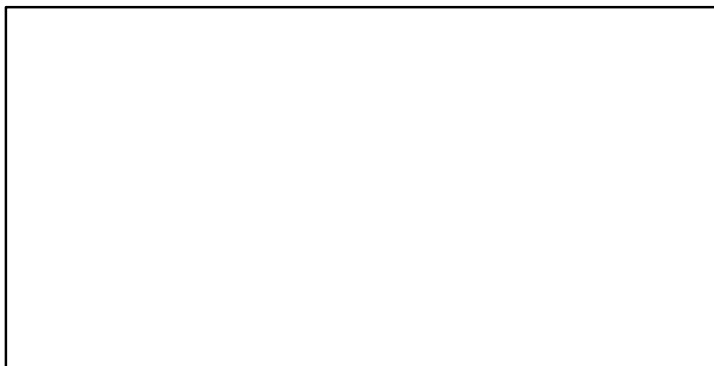
◆ Start Year ◆ End Year * No Data

European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

TB*



SSB*



TN *



F*



ER*

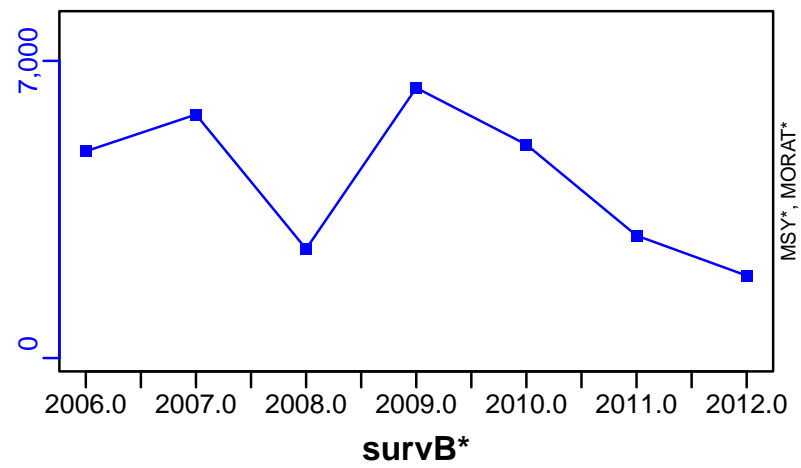


Recruits*



European pilchard Ligurian and North Tyrrhenian Sea [SARDMEDGSA9]

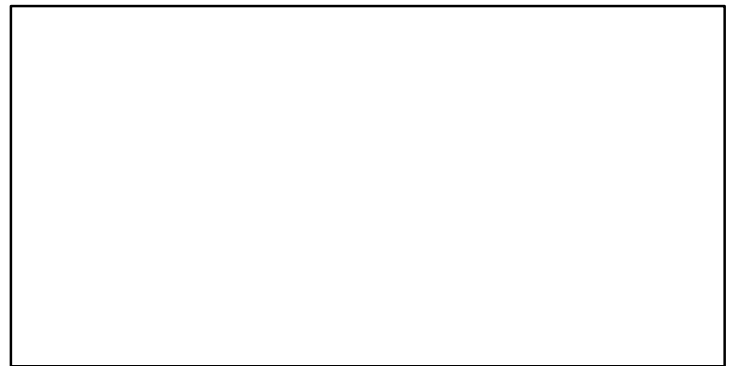
TC-MT, TL*, RecC* (2006–2012–OSIO)



TAC*, Cpair*, Cadv*



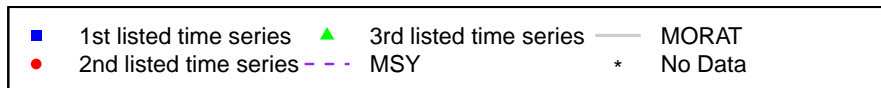
CPUE*



EFFORT*



CdivMSY*



Sardine North West Africa Zone A+B [SARDNWAZAB]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	FAO-SPNWA-SARDNWAZAB-1990-2020-HIVELY
Area	North West Africa Zone A+B
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2010, 2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	95,500	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	F-1/yr	2010	5.28	-	-
ER	ER-calc-ratio	2010	5.288	-	-
TC	TC-MT	2020	389,079		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



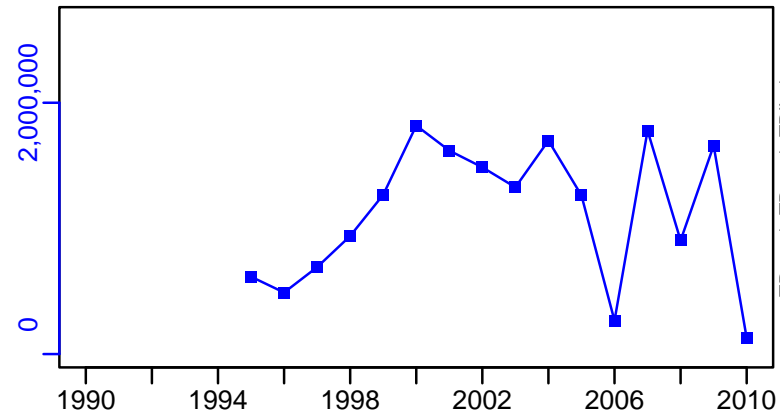
Production*



◆ Start Year ◆ End Year * No Data

Sardine North West Africa Zone A+B [SARDNWAZAB]

TB-MT (1990-2010-CHING)



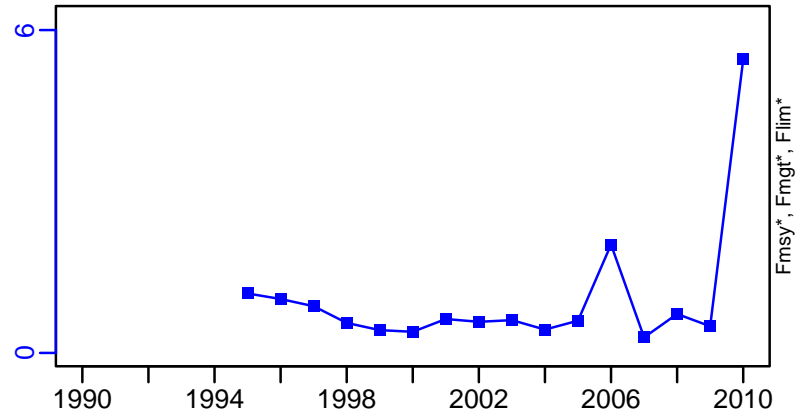
SSB*



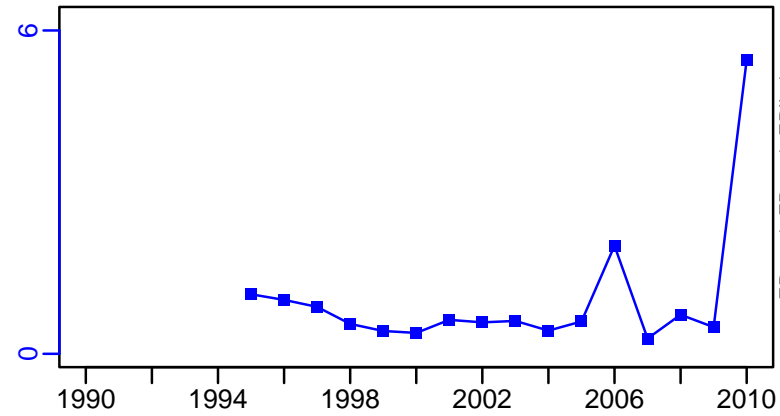
TN *



F-1/yr (1990-2010-CHING)



ER-calc-ratio (1990-2010-CHING)

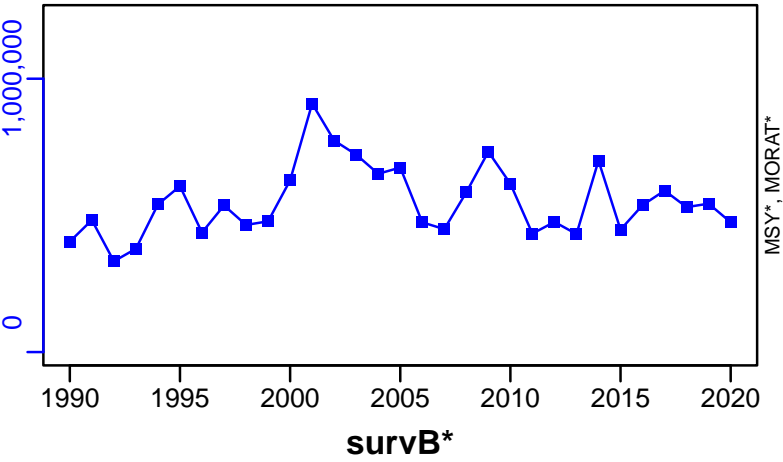


Recruits*



Sardine North West Africa Zone A+B [SARDNWAZAB]

TC-MT, TL*, RecC* (1990-2020-HIVELY)



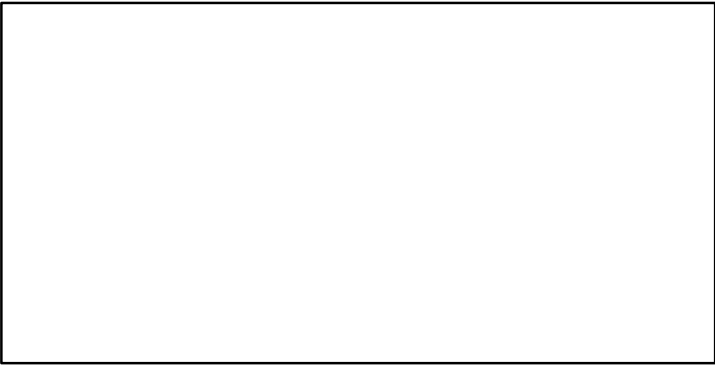
TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Sardine North West Africa Zone C [SARDNWAZC]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	FAO-SPNWA-SARDNWAZC-1990-2020-HIVELY
Area	North West Africa Zone C
Management Authority	Food and Agriculture Organization of the United Nations
Assessor	FAO Working Group on the Assessment of Small Pelagic Fish Off Northwest Africa
Asmts in RAM	2010, 2016, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	2,310,000	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	F-1/yr	2010	0.18	-	-
ER	ER-calc-ratio	2010	0.182	-	-
TC	TC-MT	2020	823,755		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*

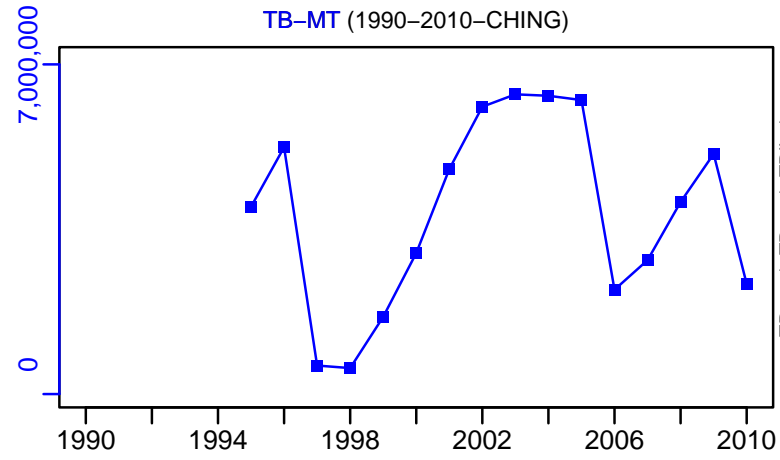


◆ Start Year ◆ End Year * No Data

Sardine North West Africa Zone C [SARDNWAZC]

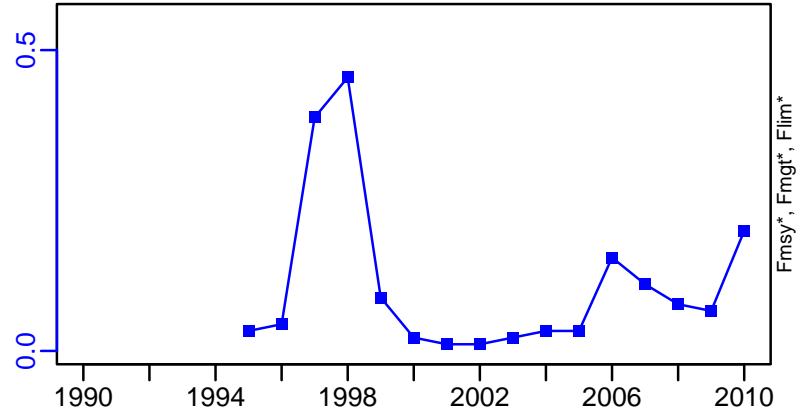
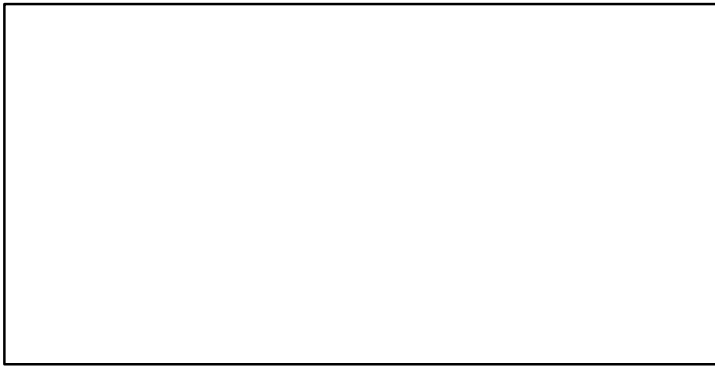
TB-MT (1990-2010-CHING)

SSB*



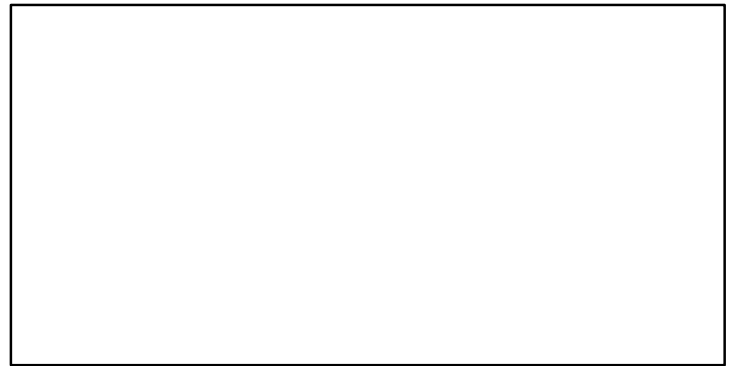
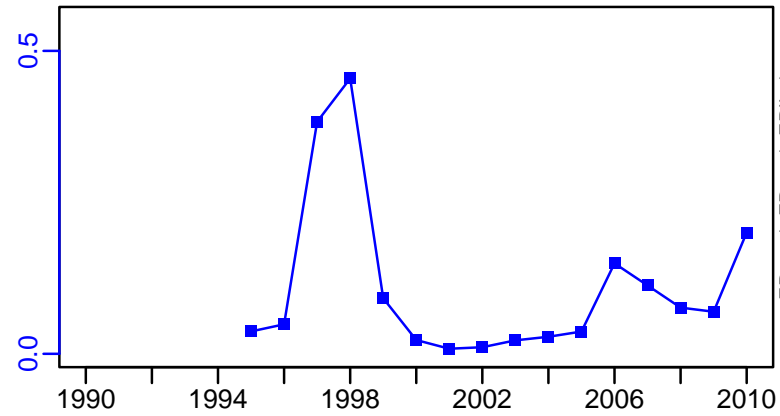
TN *

F-1/yr (1990-2010-CHING)



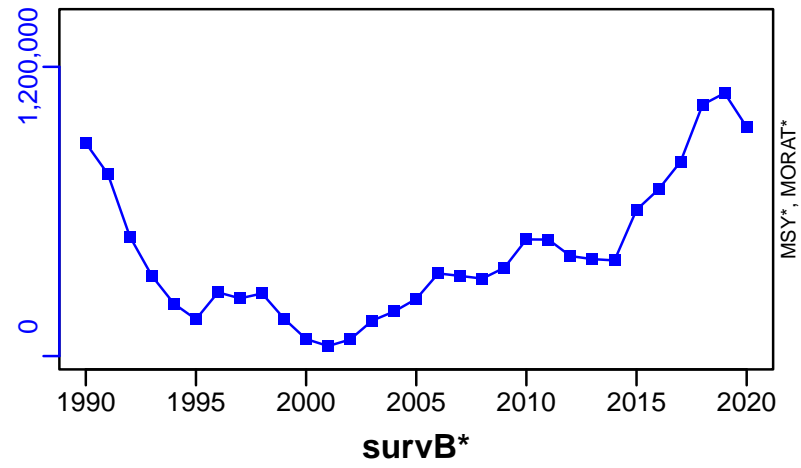
ER-calc-ratio (1990-2010-CHING)

Recruits*



Sardine North West Africa Zone C [SARDNWAZC]

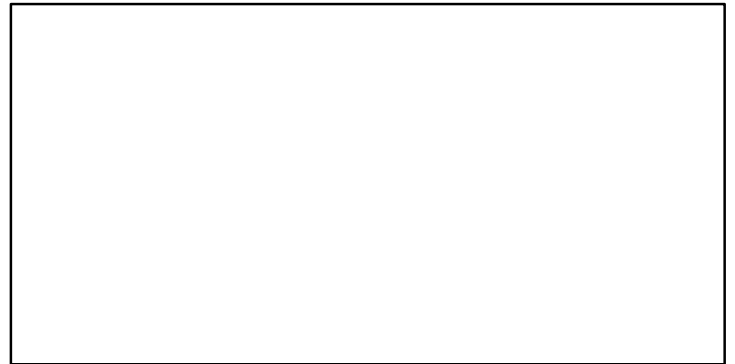
TC-MT, TL*, RecC* (1990-2020-HIVELY)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - MSY * No Data

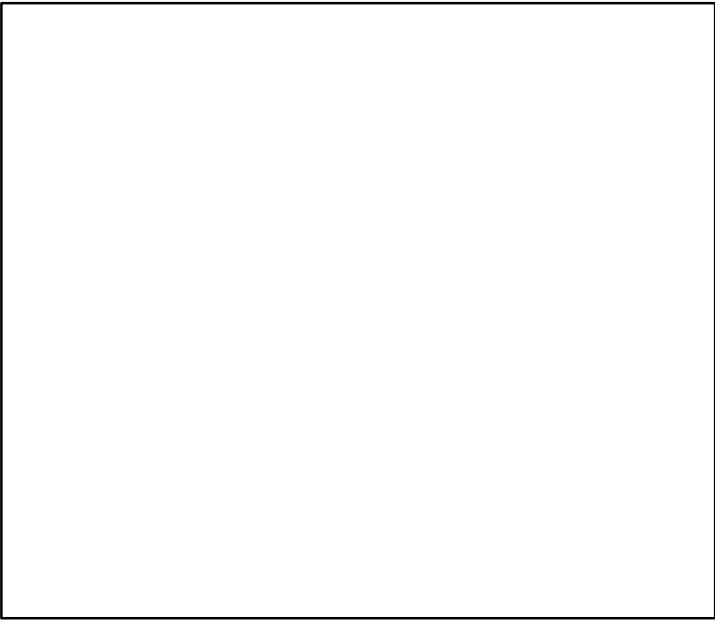
Pacific sardine Pacific Coast [SARDPCOAST]

Metadata	
Scientific Name	Sardinops sagax
Current Assess ID	SWFSC-SARDPCOAST-2005-2021-SISIMP2024
Area	Pacific Coast
Management Authority	National Marine Fisheries Service, US national management
Assessor	Southwest Fisheries Science Center
Asmts in RAM	2007, 2016, 2017, 2018, 2019, 2021

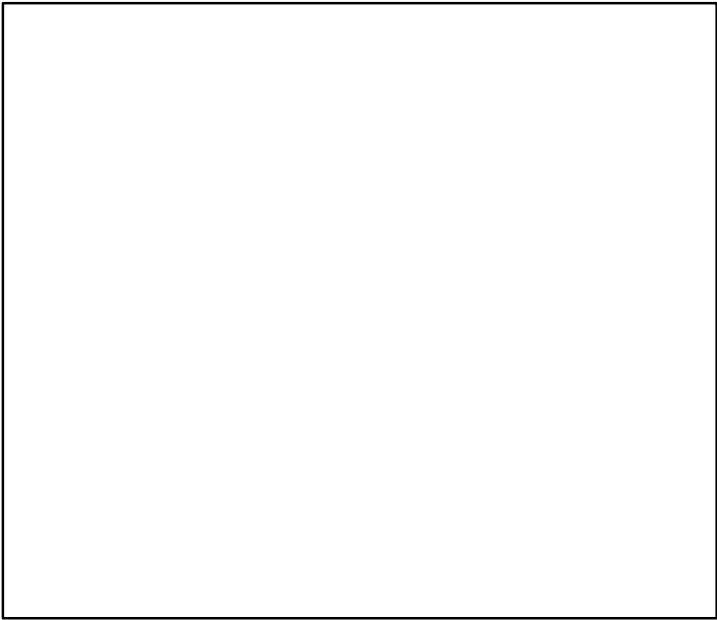
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERMgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2007	0.4
TBlim	TBlim-MT	2021	50,000
SSBlim	SSBlim-MT	2019	50,000
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2021	48,856	-	-
SSB	SSB-MT	2019	27,500	-	-
TN	-	-	-	-	-
R	R-E00	2021	2,367,410	-	0
F	-	-	-	-	-
ER	ER-ratio	2021	0.01	-	-
TC	TC-MT	2021	104		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERMgt	-	-	-		

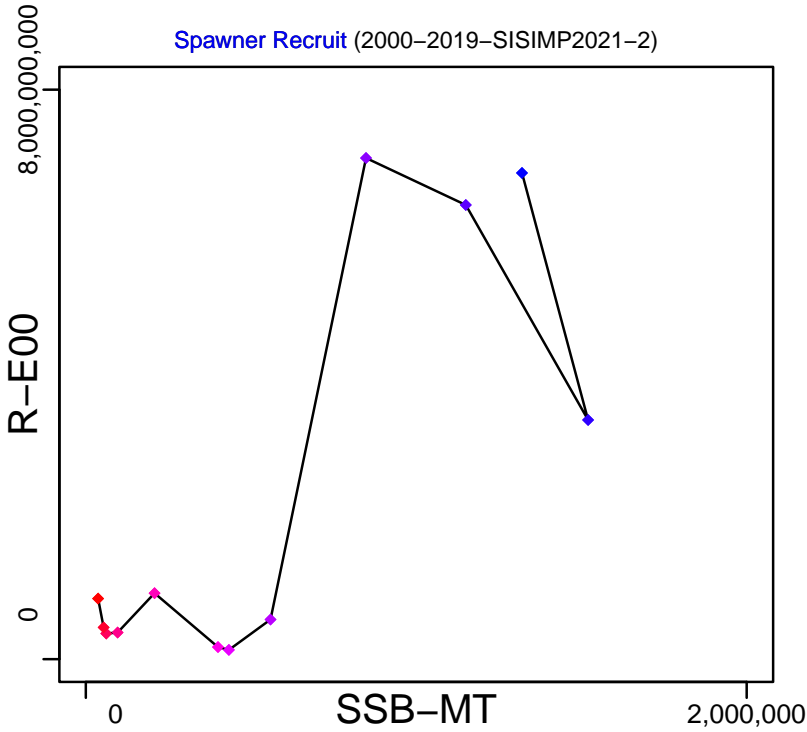
Kobe MSY*



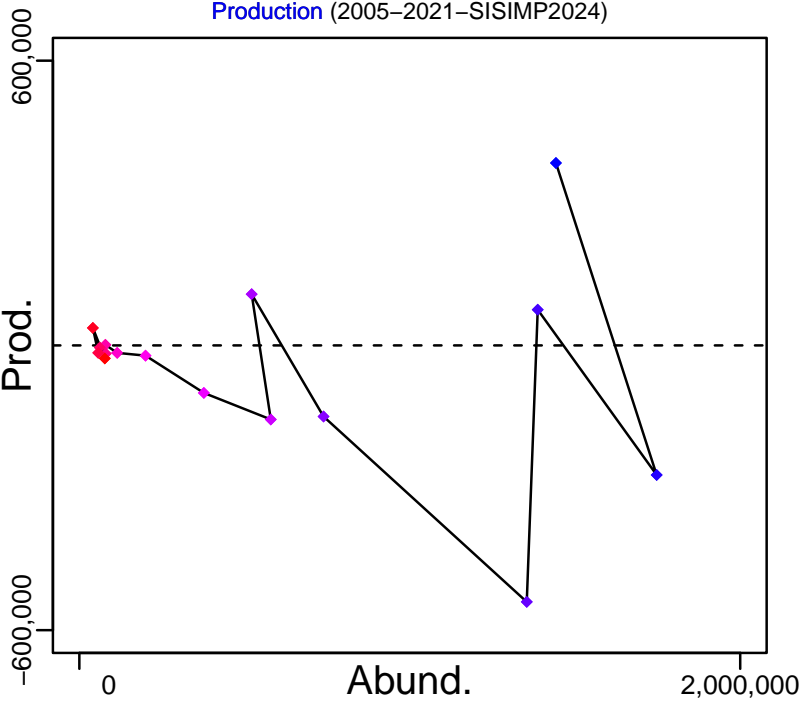
Kobe MGT*



Spawner Recruit (2000–2019–SISIMP2021–2)



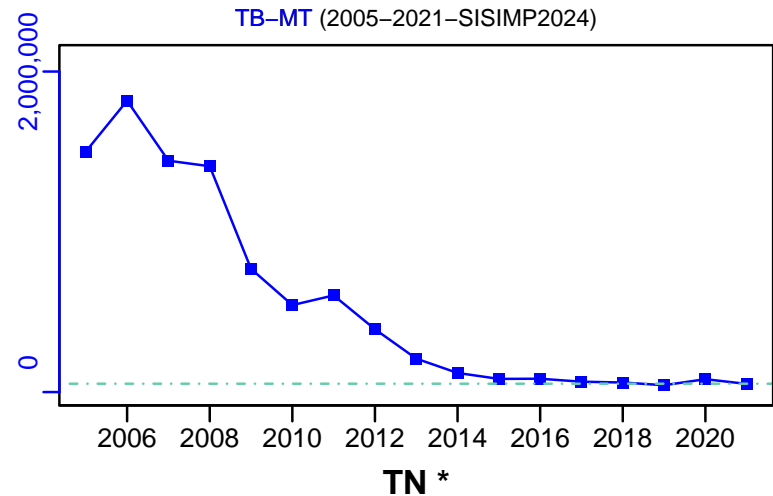
Production (2005–2021–SISIMP2024)



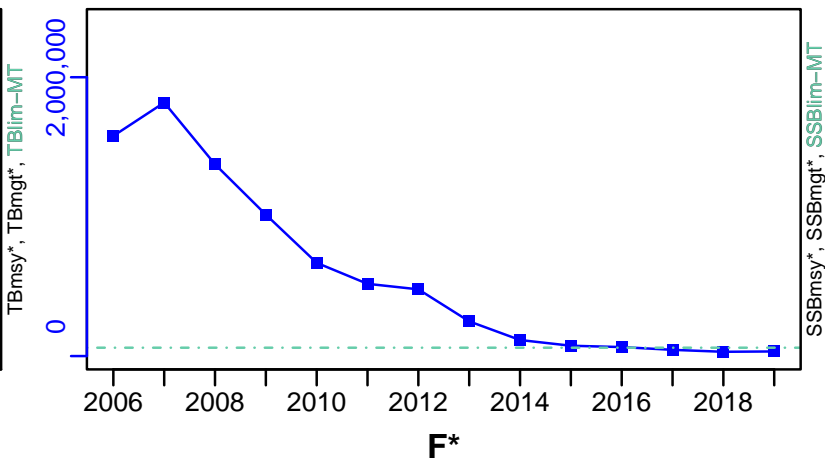
◆ Start Year ◆ End Year * No Data

Pacific sardine Pacific Coast [SARDPCOAST]

TB-MT (2005–2021–SISIMP2024)



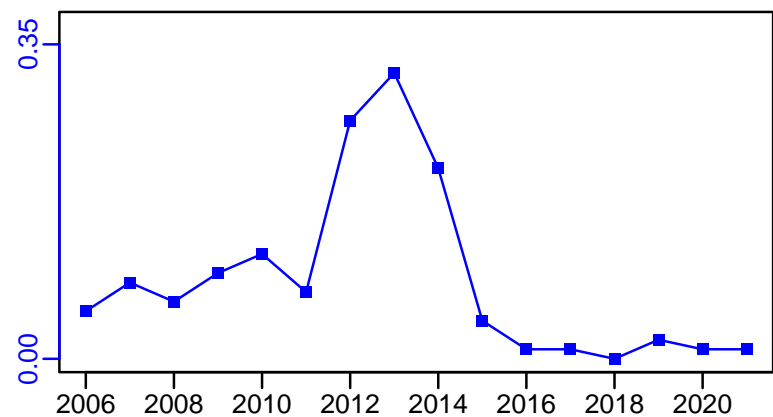
SSB-MT (2000–2019–SISIMP2021–2)



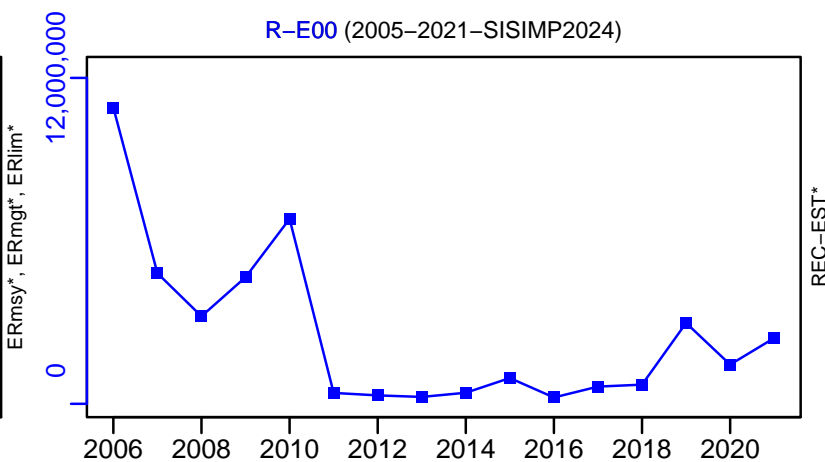
TN *

F*

ER-ratio (2005–2021–SISIMP2024)



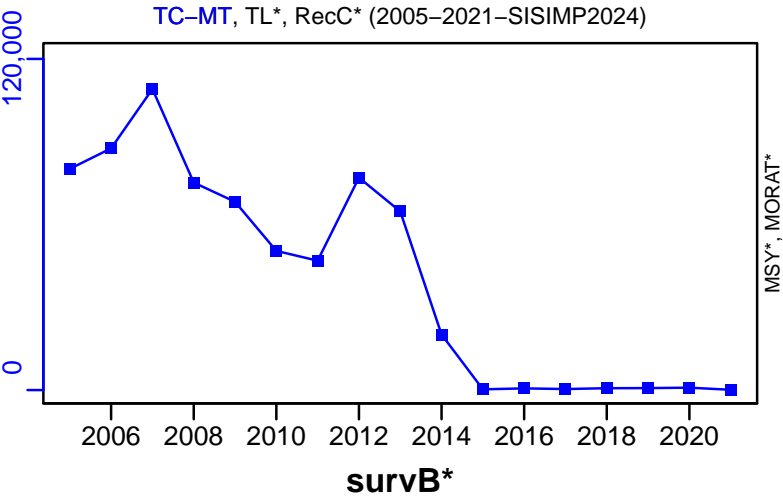
R-E00 (2005–2021–SISIMP2024)



■ Listed time series
 - - - Target BRP
 - - - MSY-based BRP
 - - - Lim BRP
 — Rec-Est
 * No Data

Pacific sardine Pacific Coast [SARDPCOAST]

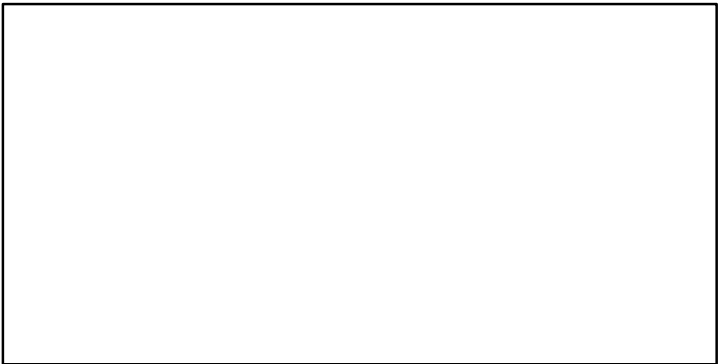
TC-MT, TL*, RecC* (2005-2021-SISIMP2024)



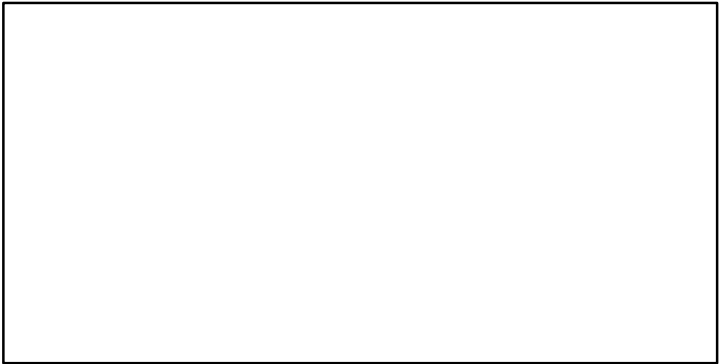
TAC*, Cpair*, Cadv*



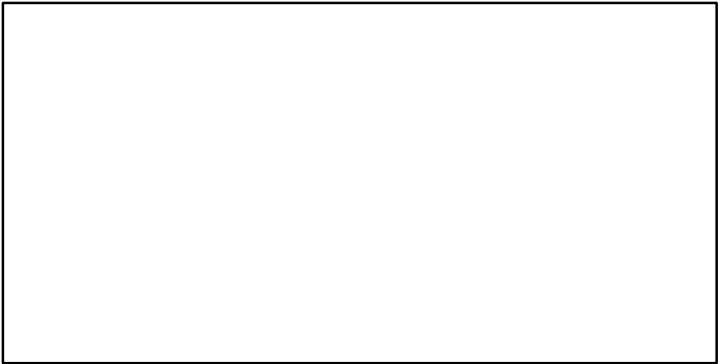
CPUE*



EFFORT*



CdivMSY*



Sardine ICES 8c-9a [SARDPVIlIc-IXa]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGHANSA-SARDPVIlIc-IXa-1978-2021-ICESIMP2021-2
Area	ICES 8c-9a
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Southern Horse Mackerel, Anchovy and Sardine
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2020, 2021, 2011

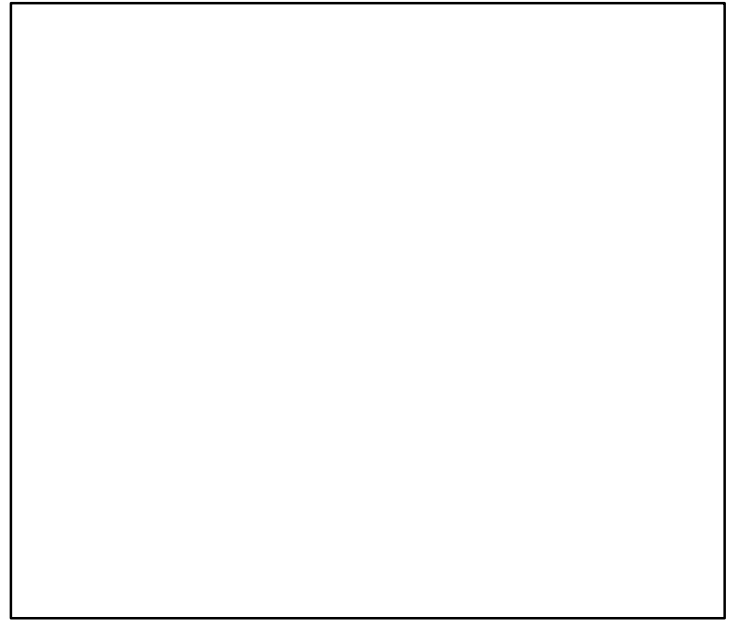
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.092
ERmsy	-	-	-
TBmgt	TBmgt-MT	2016	368,400
SSBmgt	SSBmgt-MT	2015	368,400
Fmgt	Fmgt-1/yr	2021	0.092
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2011	0.33
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	196,000
Flim	Flim-1/yr	2021	0.26
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2016	199,000	Both	-
SSB	SSB-MT	2021	451,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	9,520,000	-	0
F	F-1/yr	2021	0.061	-	-
ER	ER-calc-ratio	2016	0.125	-	-
TC	TC-MT	2021	22,100		
TL	TL-MT	2018	21,900		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	0.658		
ER/ERmsy	-	-	-		
TB/TBmgt	TB-MT/TBmgt-MT	2016	0.54		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2021	0.658		
ER/ERmgt	-	-	-		

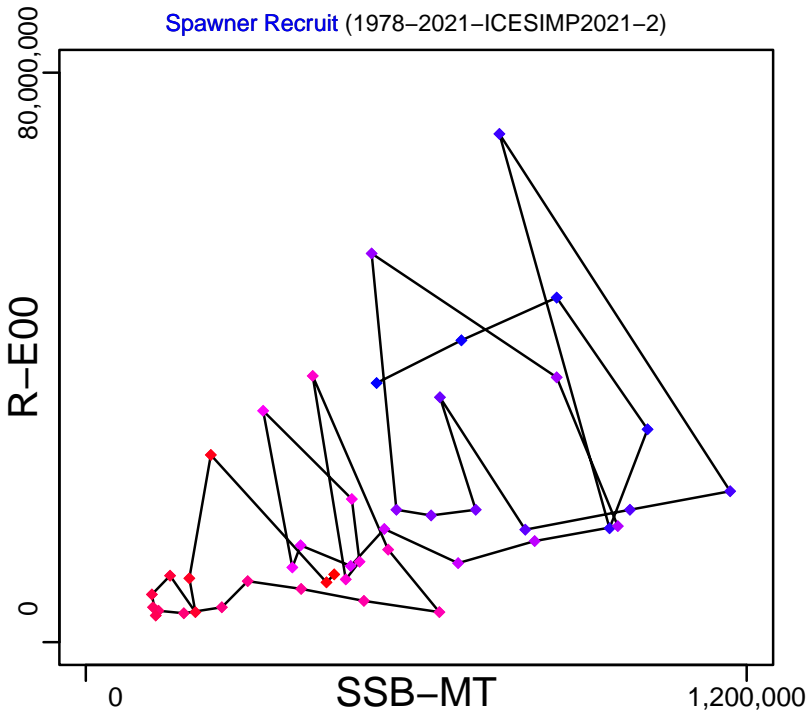
Kobe MSY*



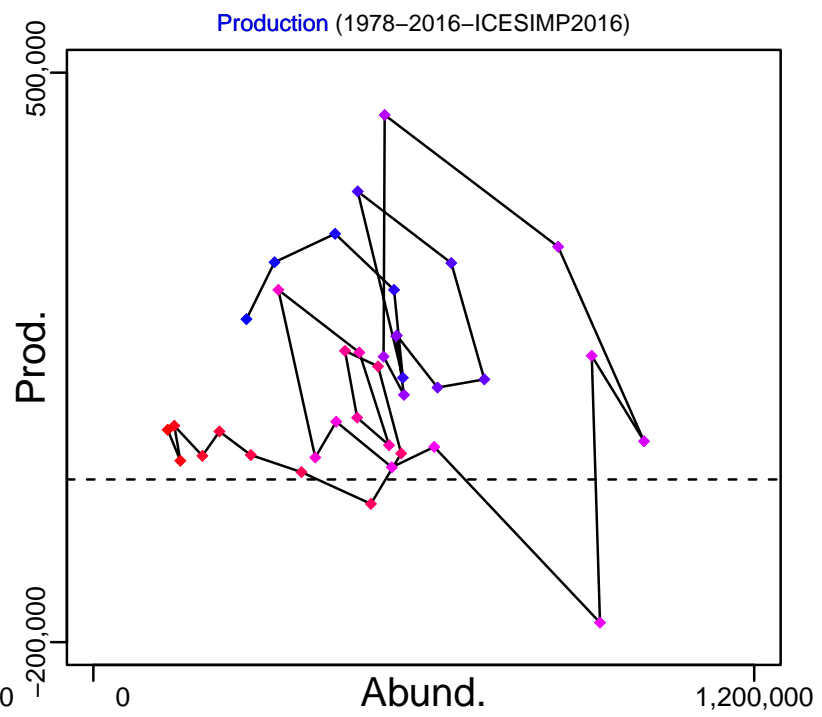
Kobe MGT*



Spawner Recruit (1978-2021-ICESIMP2021-2)



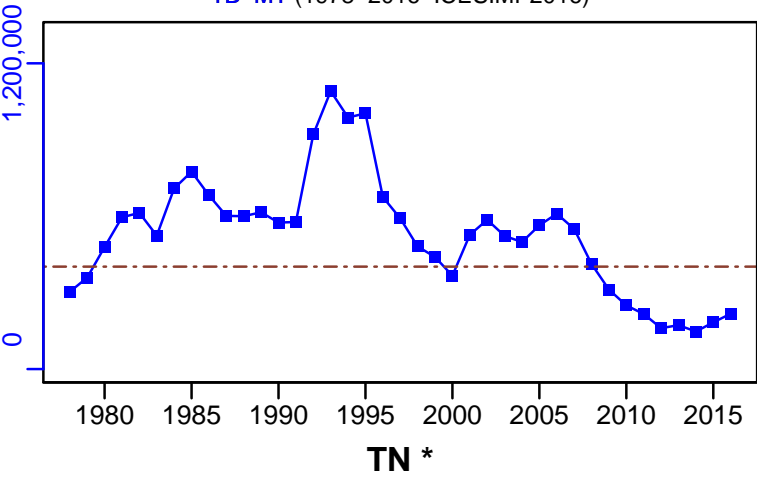
Production (1978-2016-ICESIMP2016)



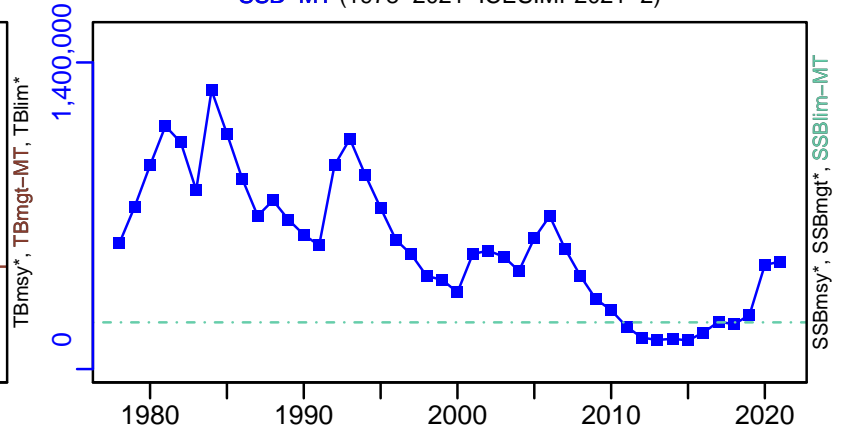
◆ Start Year ◆ End Year * No Data

Sardine ICES 8c-9a [SARDPVIIIc-IXa]

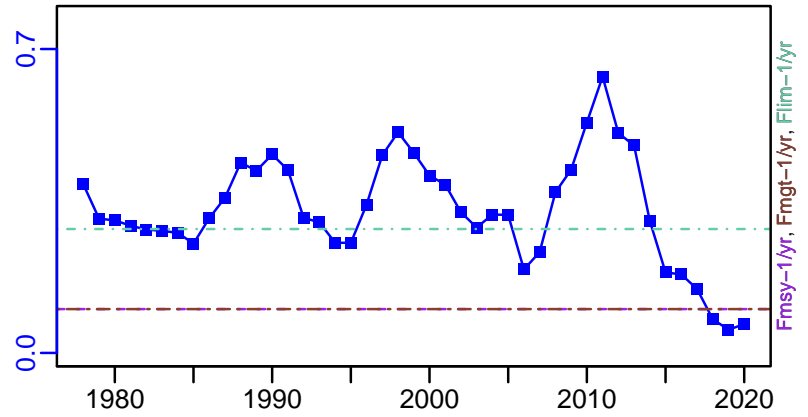
TB-MT (1978-2016-ICESIMP2016)



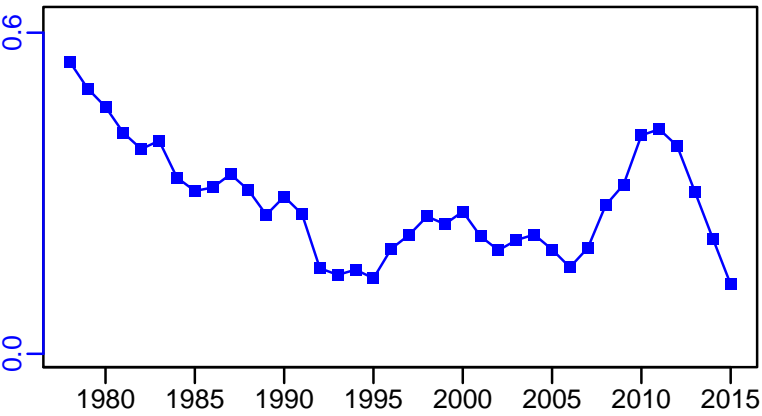
SSB-MT (1978-2021-ICESIMP2021-2)



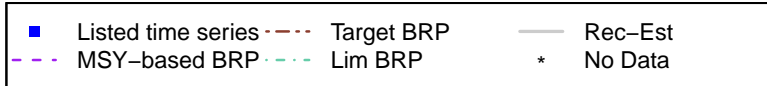
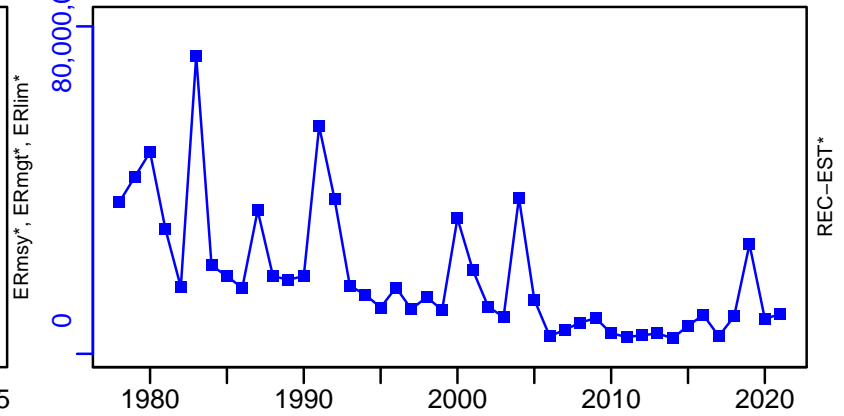
F-1/yr (1978-2021-ICESIMP2021-2)



ER-calc-ratio (1978-2016-ICESIMP2016)

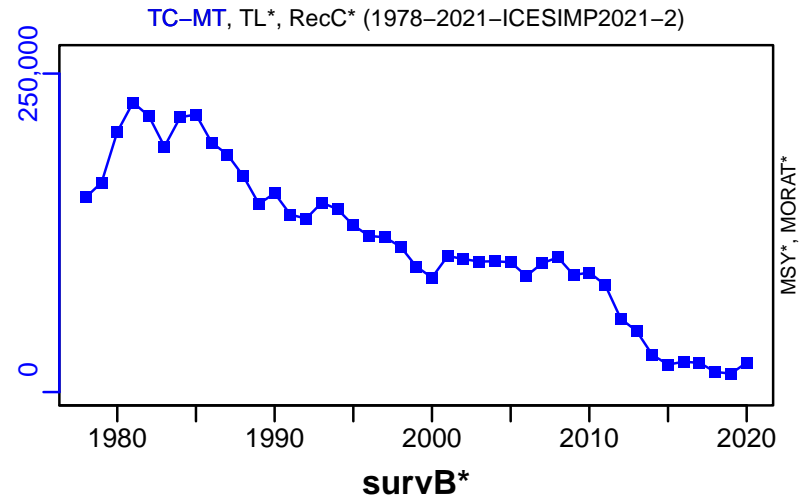


R-E00 (1978-2021-ICESIMP2021-2)



Sardine ICES 8c-9a [SARDPVIlIc-IXa]

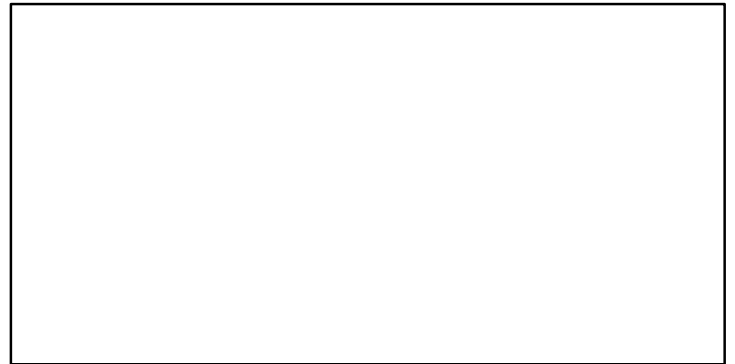
TC-MT, TL*, RecC* (1978-2021-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



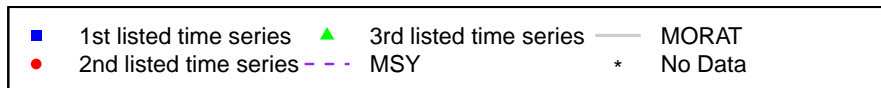
CPUE*



EFFORT*



CdivMSY*

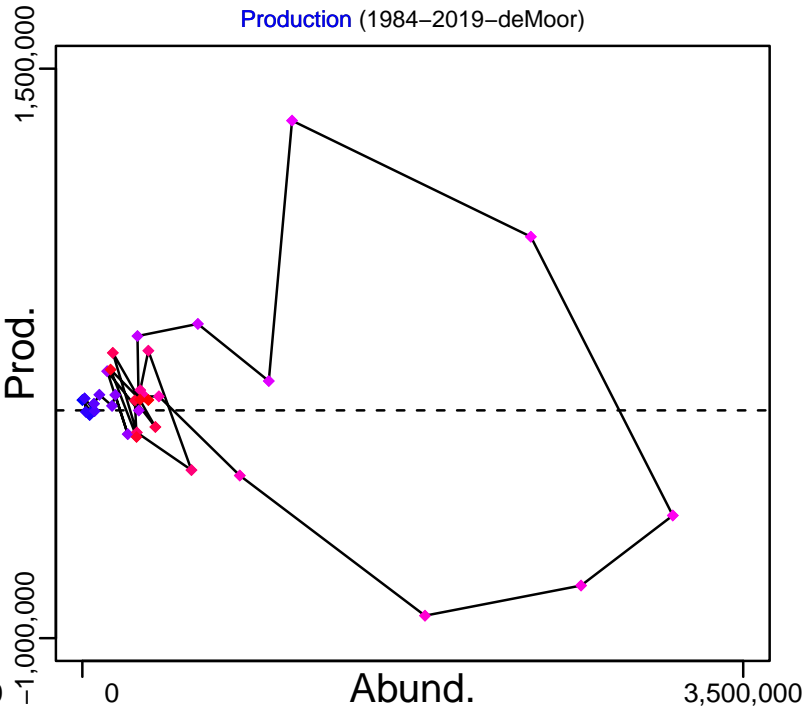
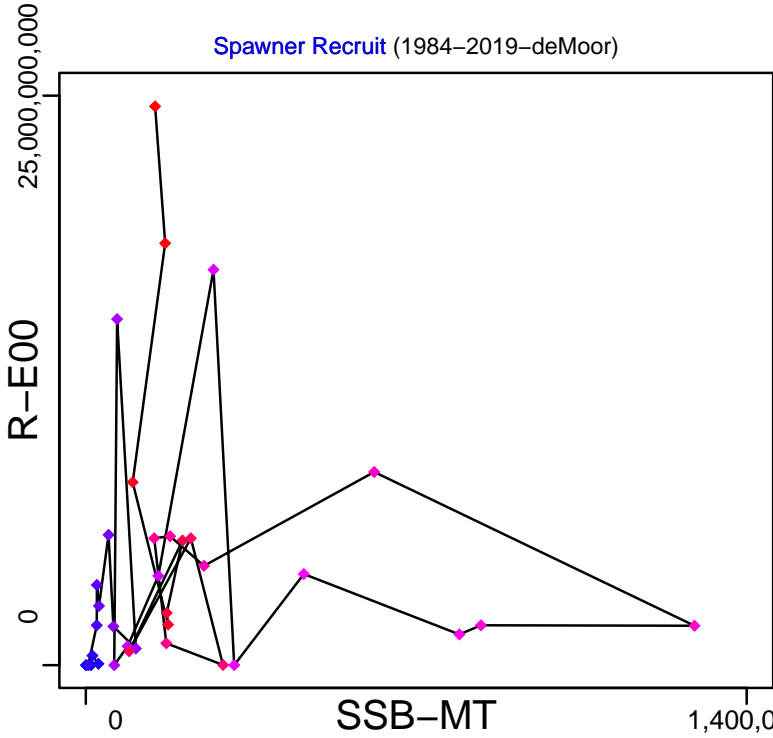
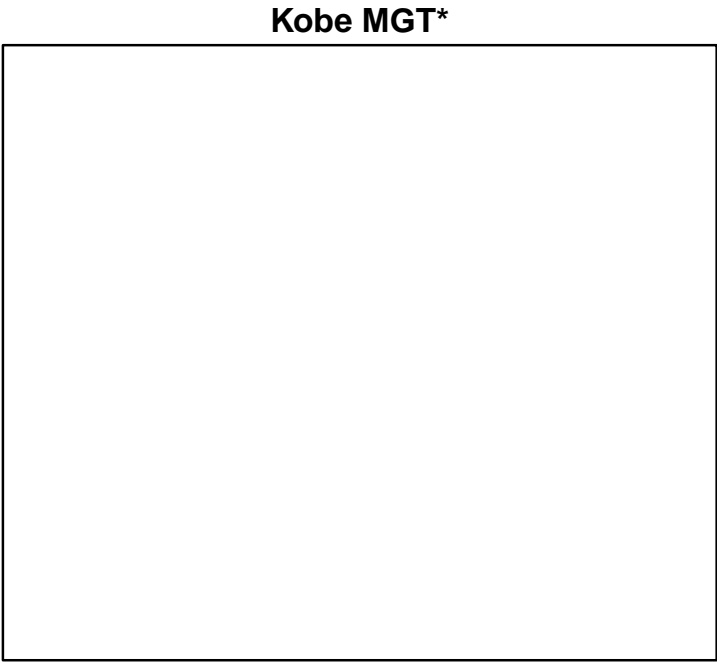
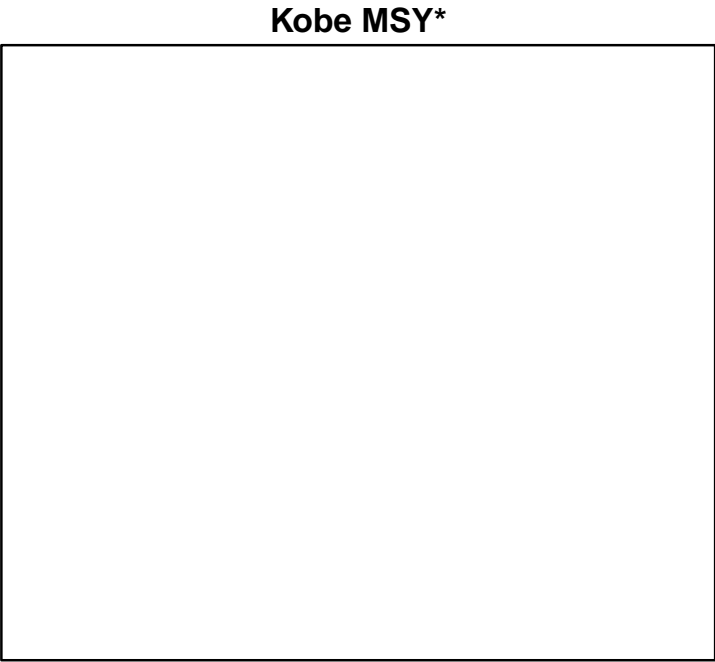


Sardine South Africa (South Component) [SARDSAS]

Metadata	
Scientific Name	Sardinops sagax
Current Assess ID	MARAM-SARDSAS-1984-2019-deMoor
Area	South Africa (South Component)
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2019	1
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

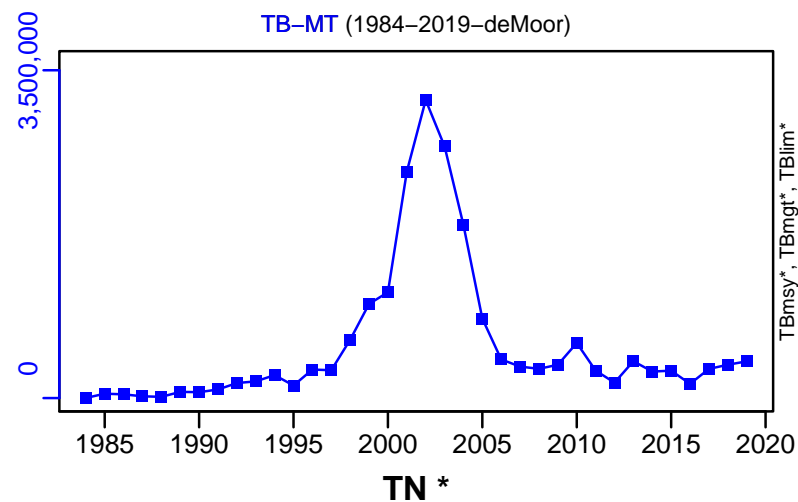
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	385,000	Both	0+
SSB	SSB-MT	2019	184,300	Both	mature
TN	-	-	-	-	-
R	R-E00	2019	2.453×10^{10}	Both	0
F	-	-	-	-	-
ER	ER-ratio	2019	0.01	Both	0+
TC	TC-MT	2019	3500		
TL	TL-MT	2019	3500		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



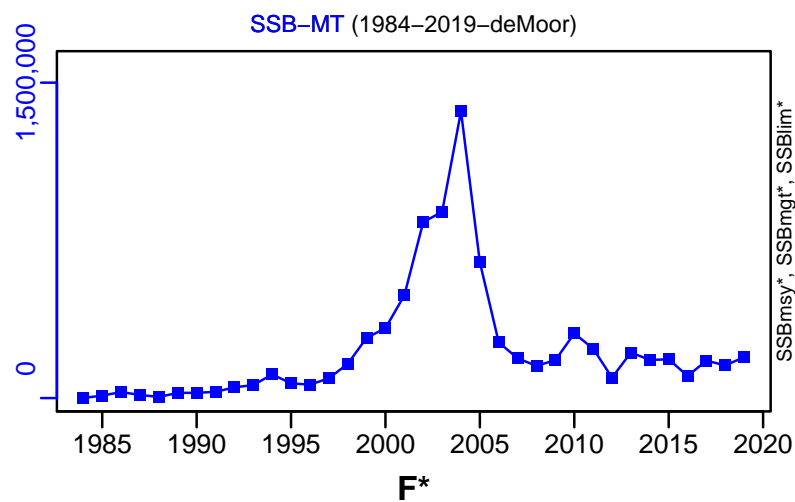
◆ Start Year ◆ End Year * No Data

Sardine South Africa (South Component) [SARDSAS]

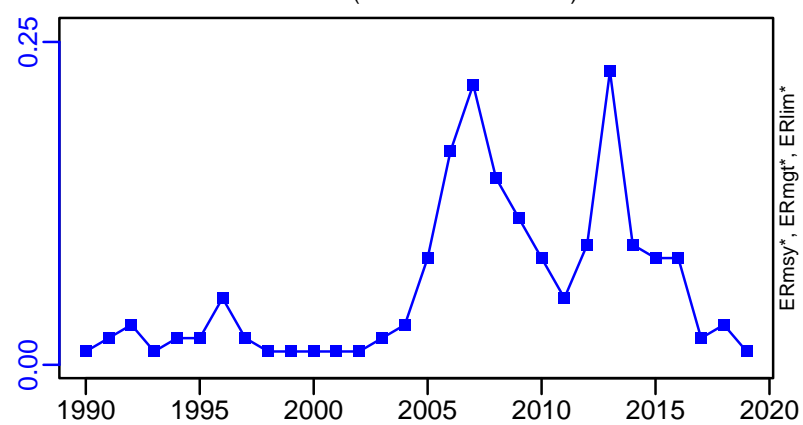
TB-MT (1984–2019–deMoor)



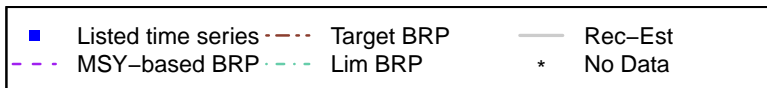
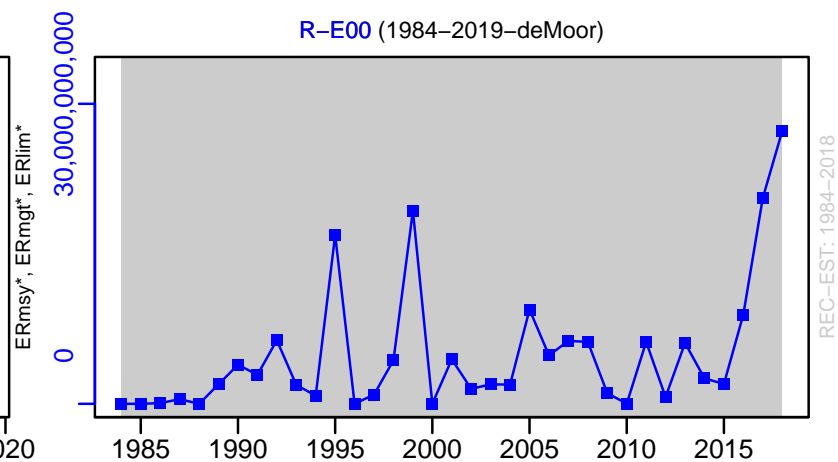
SSB-MT (1984–2019–deMoor)



ER-ratio (1984–2019–deMoor)

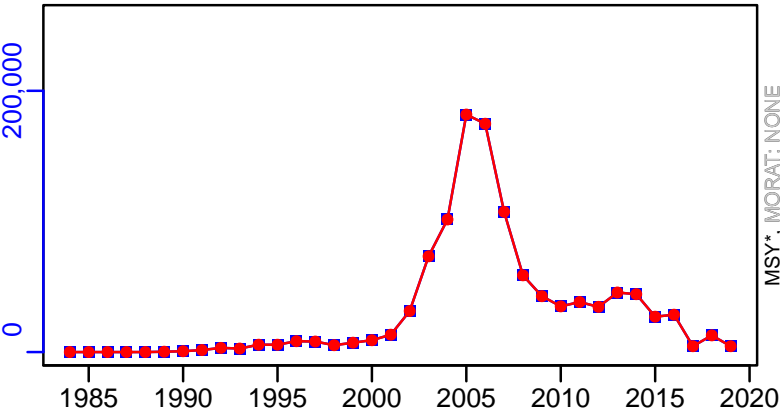


R-E00 (1984–2019–deMoor)



Sardine South Africa (South Component) [SARDSAS]

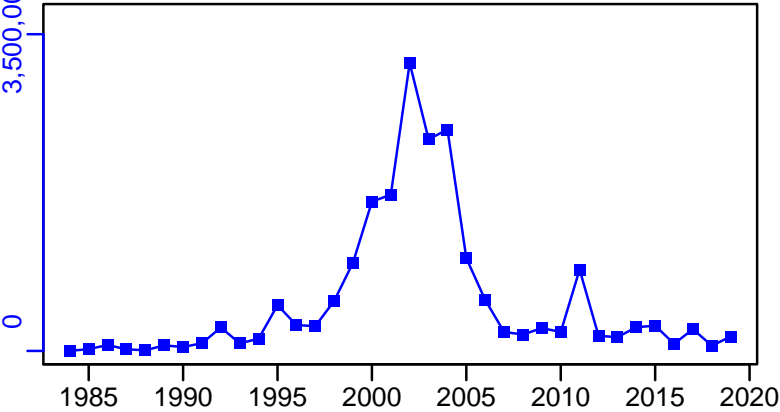
TC-MT, TL-MT, RecC* (1984-2019-deMoor)



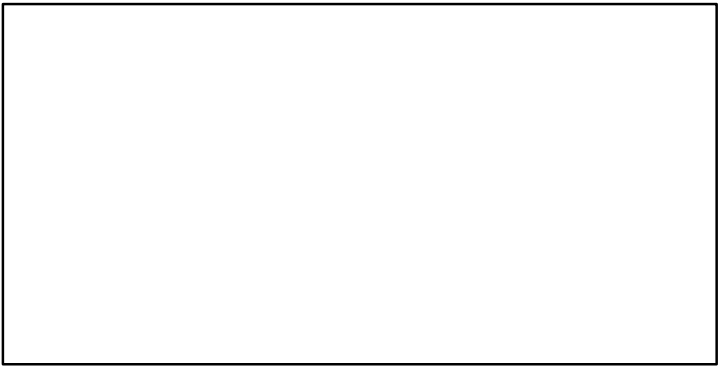
TAC*, Cpair*, Cadv*



survB_index-index (1984-2019-deMoor)



CPUE*



CdivMSY*



Sardine South Africa (West Component) [SARDSAW]

Metadata	
Scientific Name	Sardinops sagax
Current Assess ID	MARAM-SARDSAW-1949-2019-deMoor
Area	South Africa (West Component)
Management Authority	South African national management, Fisheries Branch of Department of Agriculture, Forestry and Fisheries
Assessor	Marine Resource Assessment and Management Group, Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa
Asmts in RAM	2019

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2019	1
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	89,700	Both	0+
SSB	SSB-MT	2019	6800	Both	mature
TN	-	-	-	-	-
R	R-E00	2019	1.414×10^{10}	Both	0
F	-	-	-	-	-
ER	ER-ratio	2019	0.21	Both	0+
TC	TC-MT	2019	8500		
TL	TL-MT	2019	8500		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

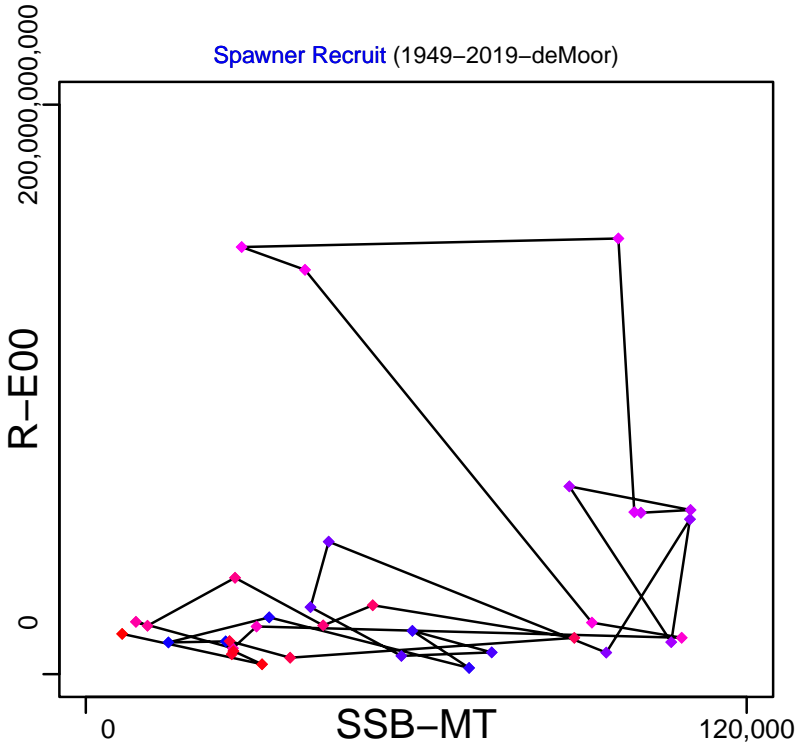
Kobe MSY*



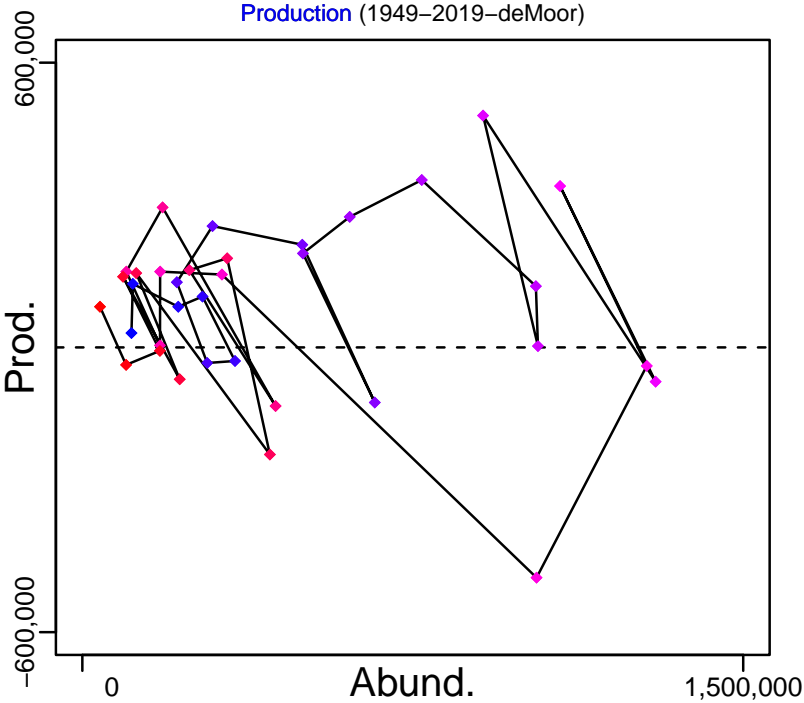
Kobe MGT*



Spawner Recruit (1949–2019–deMoor)



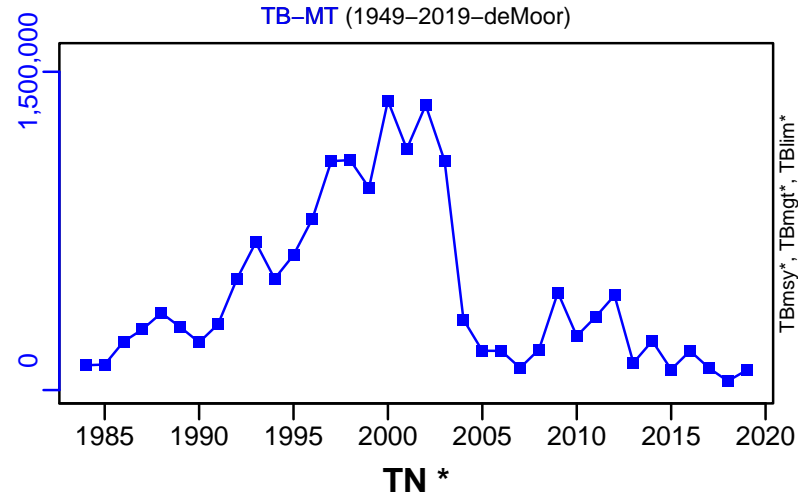
Production (1949–2019–deMoor)



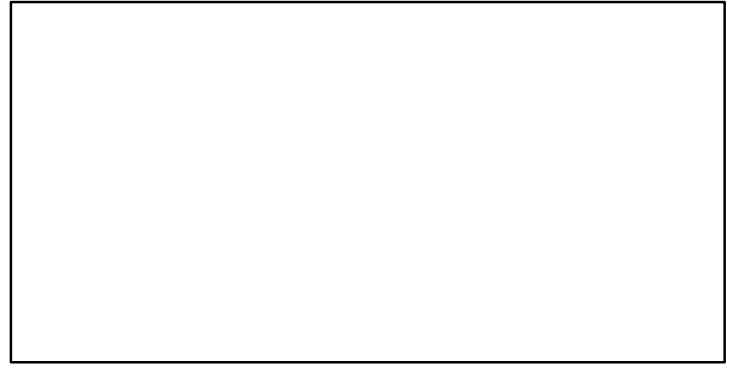
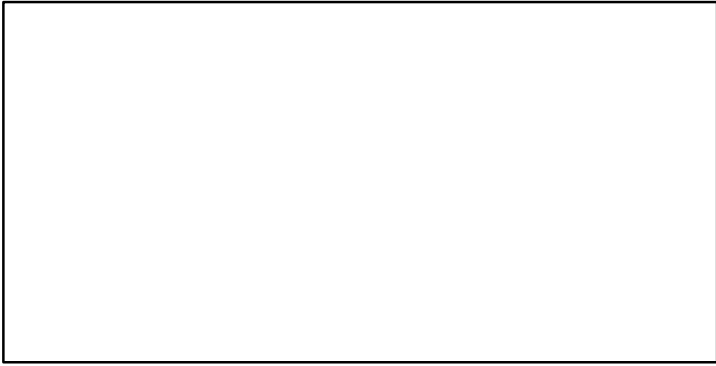
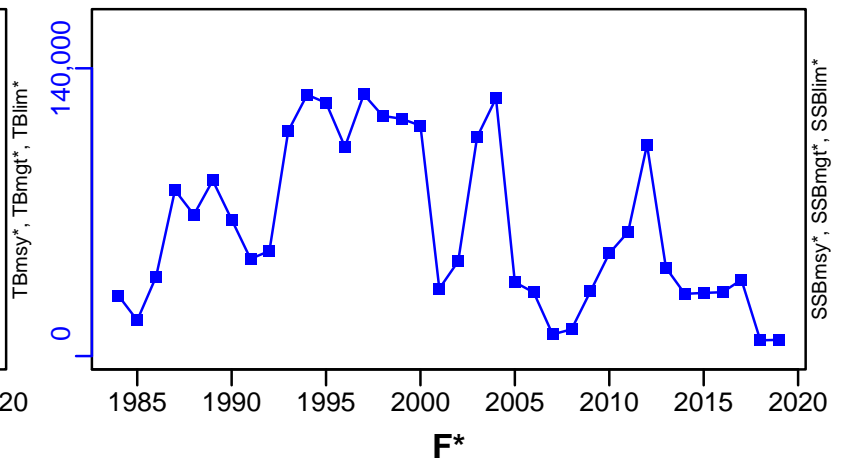
◆ Start Year ◆ End Year * No Data

Sardine South Africa (West Component) [SARDSAW]

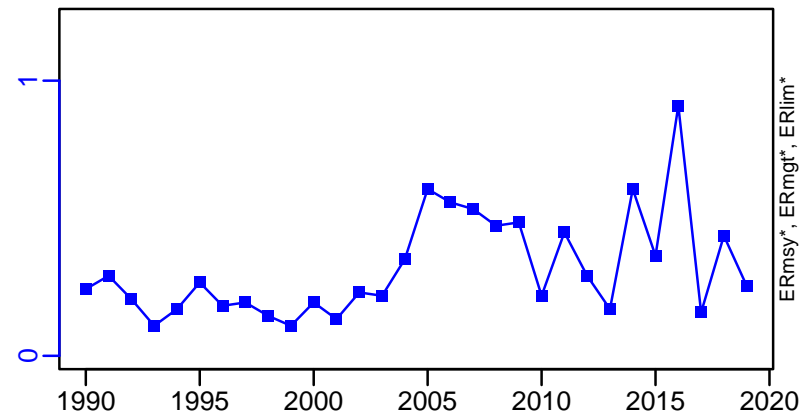
TB-MT (1949–2019–deMoor)



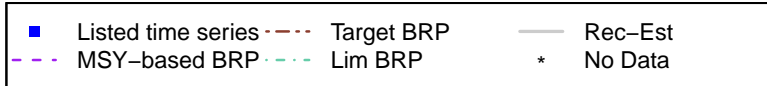
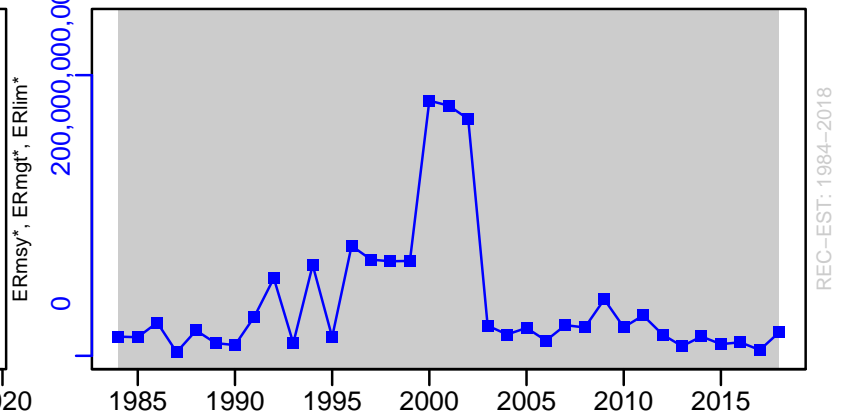
SSB-MT (1949–2019–deMoor)



ER-ratio (1949–2019–deMoor)

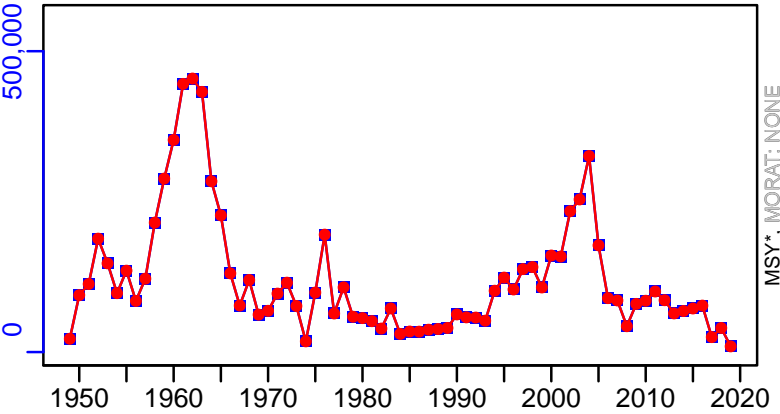


R-E00 (1949–2019–deMoor)



Sardine South Africa (West Component) [SARDSAW]

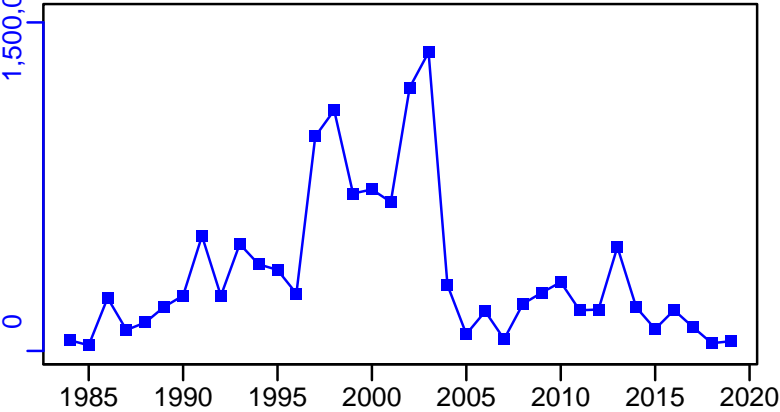
TC-MT, TL-MT, RecC* (1949-2019-deMoor)



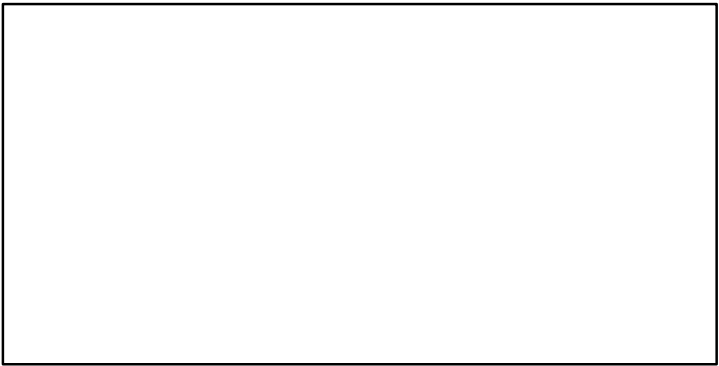
TAC*, Cpair*, Cadv*



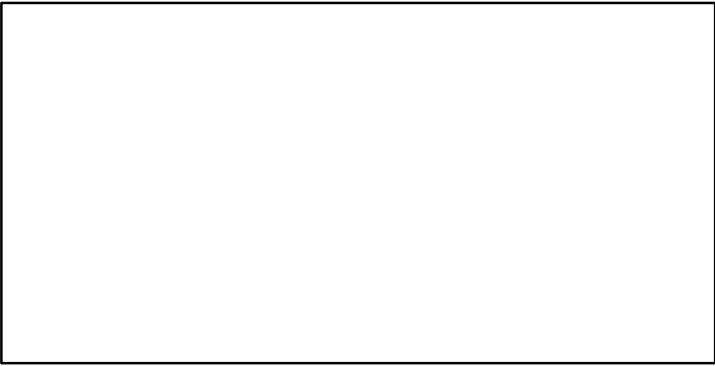
survB_index-index (1949-2019-deMoor)



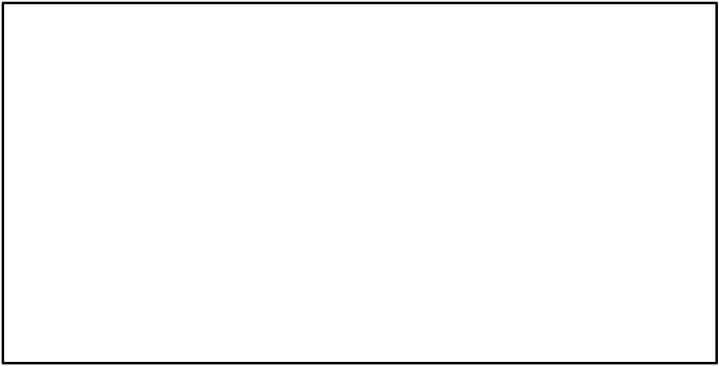
CPUE*



EFFORT*



CdivMSY*



Sardine ICES 7 [SARDVII]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGHANSA-SARDVII-1970-2018-ICESIMP2021
Area	ICES 7
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Southern Horse Mackerel, Anchovy and Sardine
Asmts in RAM	2016, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2018	10,412		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

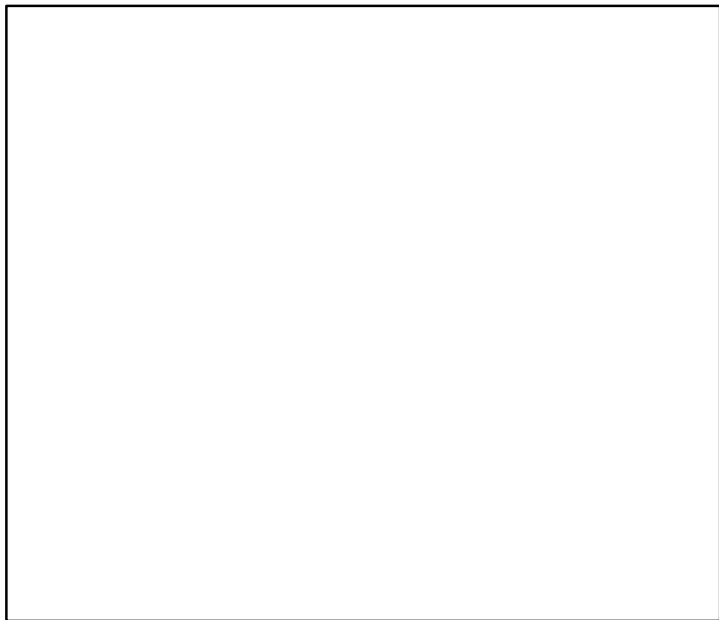
Kobe MSY*



Kobe MGT*



Spawner Recruit*



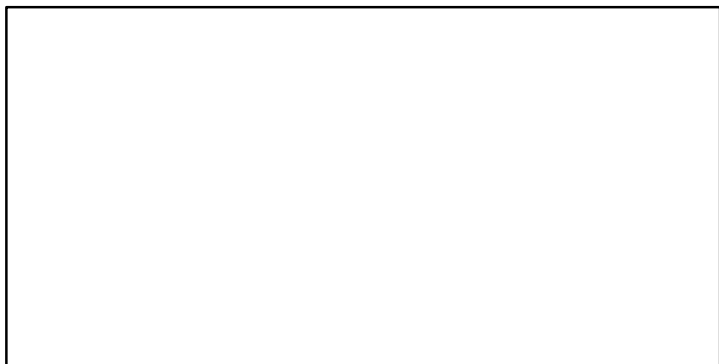
Production*



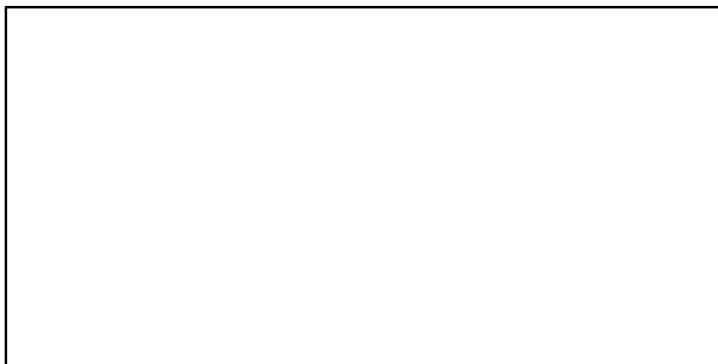
◆ Start Year ◆ End Year * No Data

Sardine ICES 7 [SARDVII]

TB*



SSB*



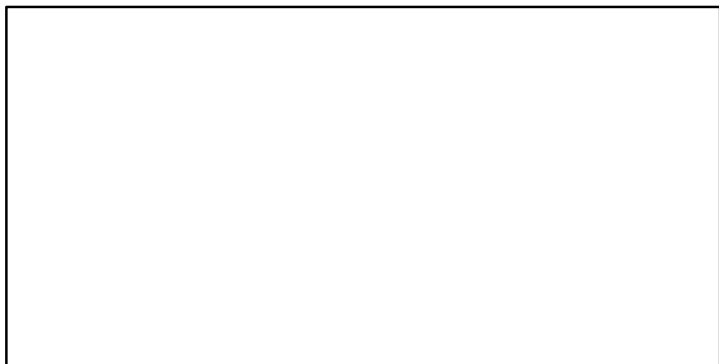
TN *



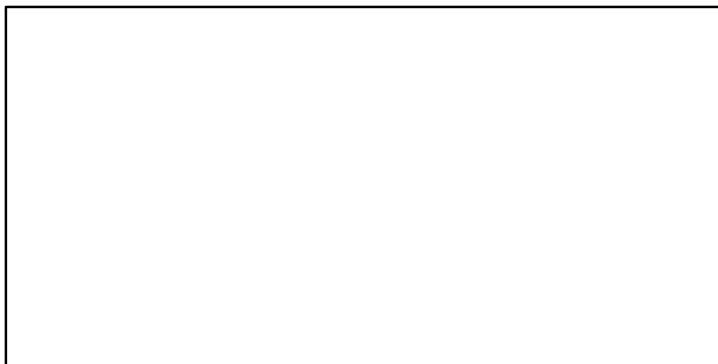
F*



ER*

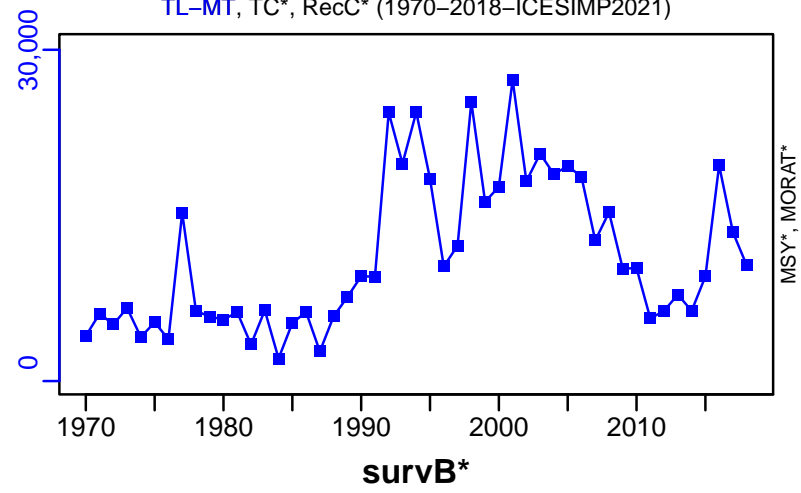


Recruits*

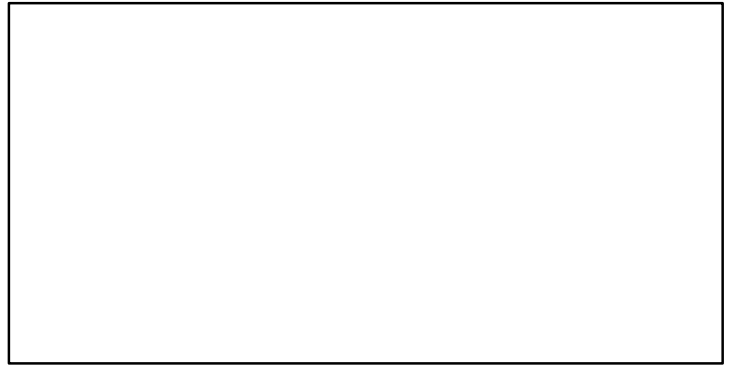


Sardine ICES 7 [SARDVII]

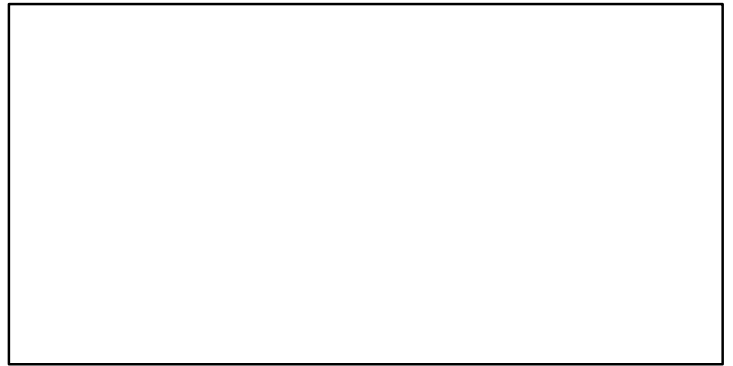
TL-MT, TC*, RecC* (1970–2018–ICESIMP2021)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Sardine ICES 8abd [SARDVIIIabd]

Metadata	
Scientific Name	Sardina pilchardus
Current Assess ID	WGHANSA-SARDVIIIabd-2000-2020-ICESIMP2021-2
Area	ICES 8abd
Management Authority	International Council for the Exploration of the Sea
Assessor	Working Group on Southern Horse Mackerel, Anchovy and Sardine
Asmts in RAM	2019, 2020, 2017, 2018

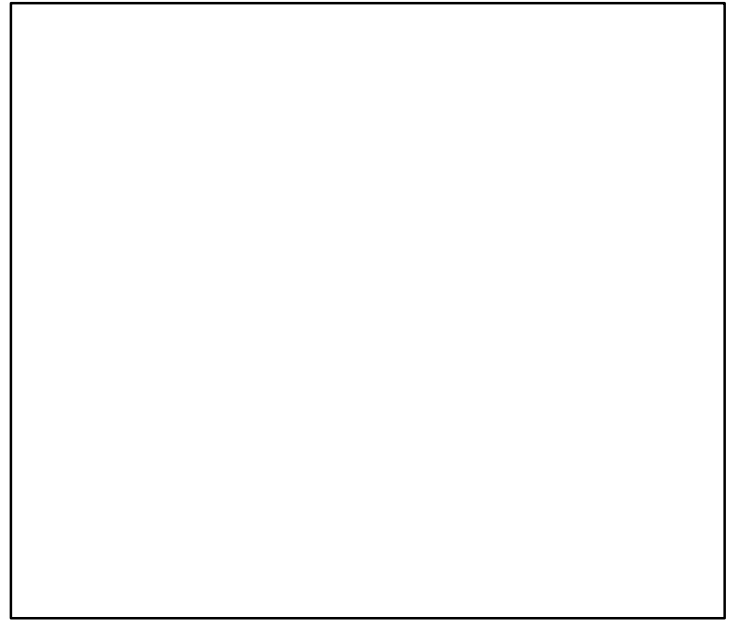
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2020	0.453
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-relative	2018	88,000
Fmgt	Fmgt-1/yr	2020	0.453
ERMgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2020	56,300
Flim	Flim-1/yr	2020	0.757
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2020	104,000	-	-
TN	-	-	-	-	-
R	R-E00	2020	4,840,000	-	0
F	F-1/yr	2020	0.379	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	24,600		
TL	TL-MT	2018	30,300		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2020	0.837		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2020	0.837		
ER/ERMgt	-	-	-		

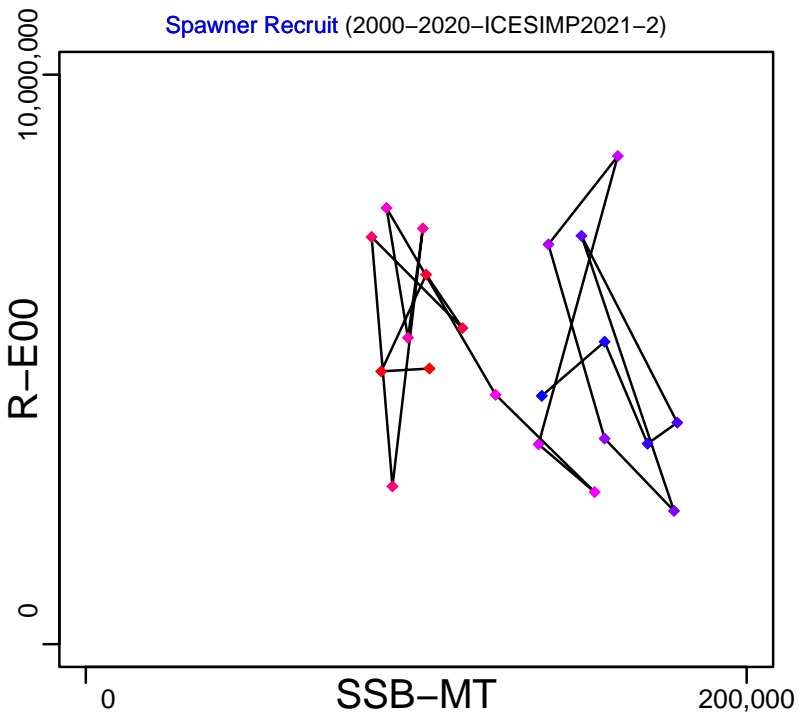
Kobe MSY*



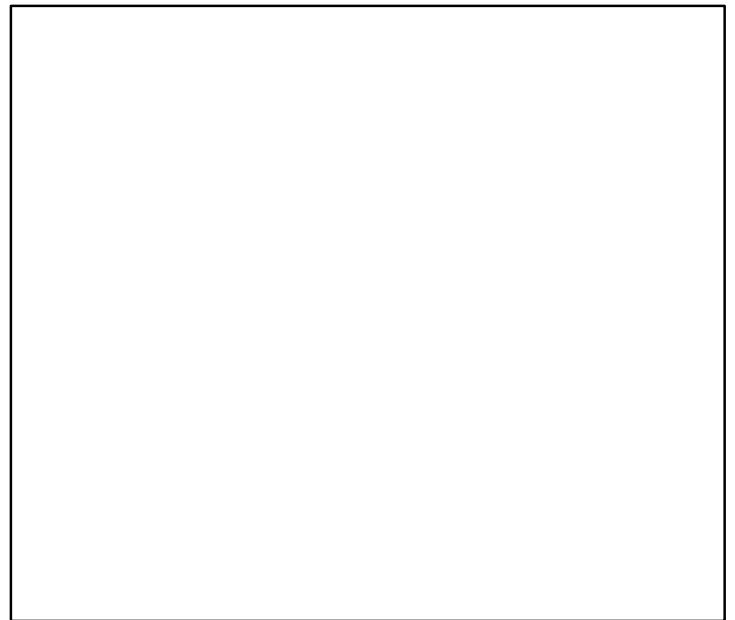
Kobe MGT*



Spawner Recruit (2000–2020–ICESIMP2021–2)



Production*



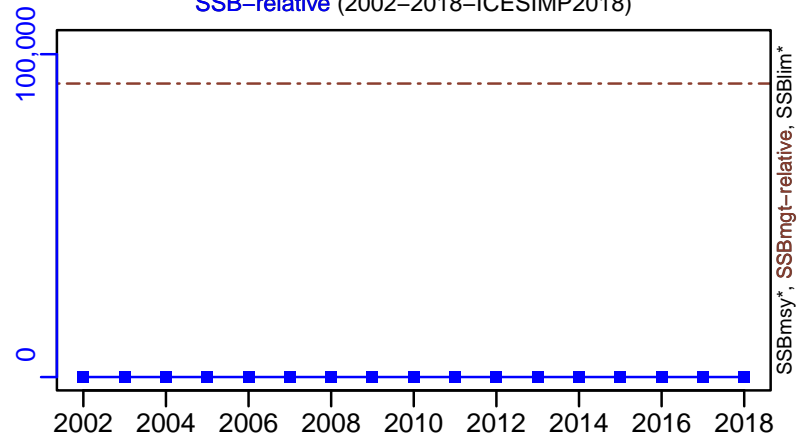
◆ Start Year ◆ End Year * No Data

Sardine ICES 8abd [SARDVIlIabd]

TB*



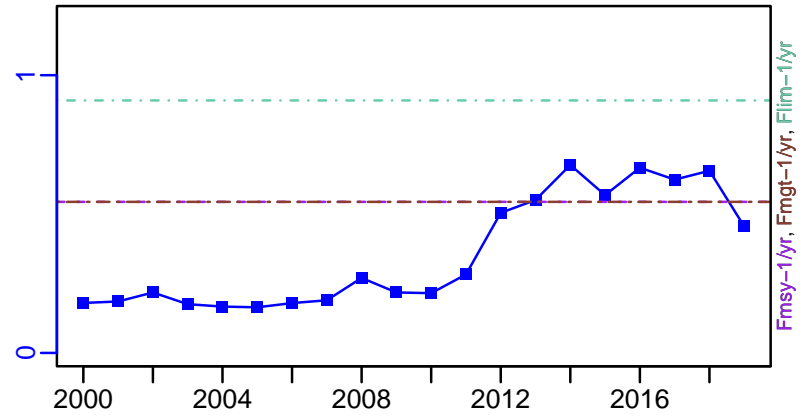
SSB-relative (2002-2018-ICESIMP2018)



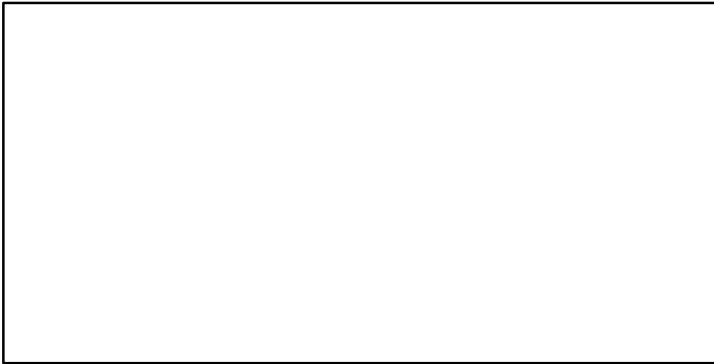
TN *



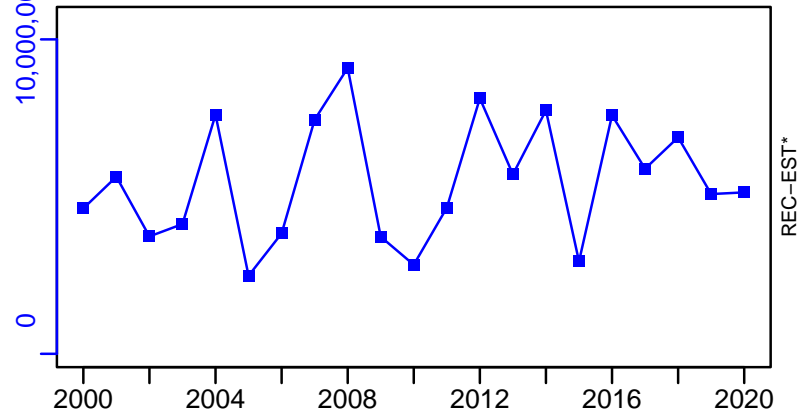
F-1/yr (2000-2020-ICESIMP2021-2)



ER*

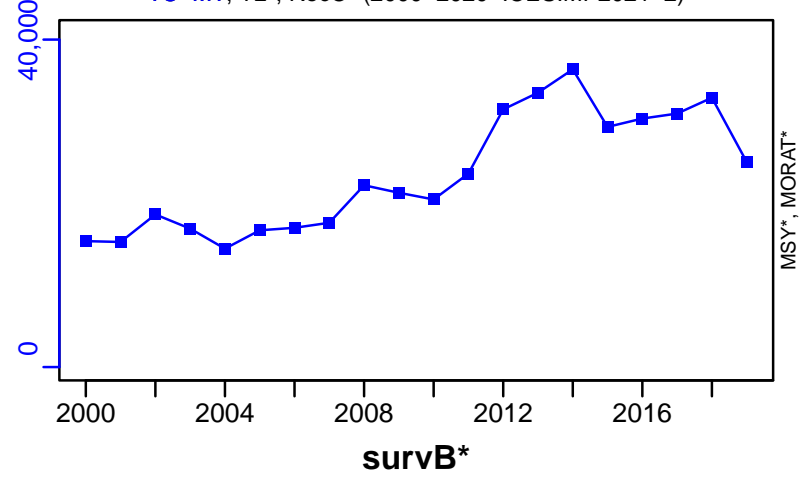


R-E00 (2000-2020-ICESIMP2021-2)



Sardine ICES 8abd [SARDVIIIabd]

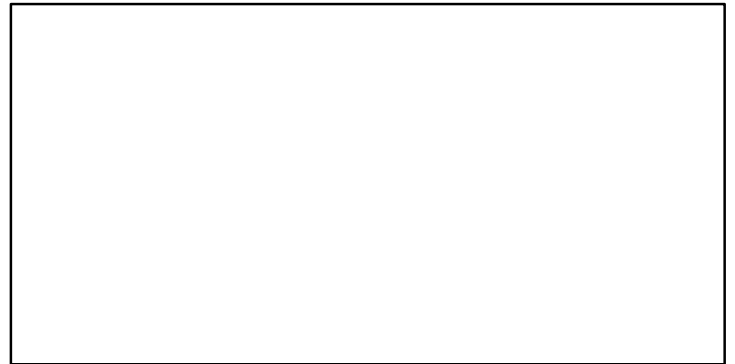
TC-MT, TL*, RecC* (2000–2020–ICESIMP2021–2)



TAC*, Cpair*, Cadv*



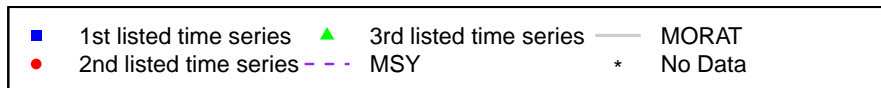
CPUE*



EFFORT*



CdivMSY*



Sardine Western half of Southeast Australia [SARDWSE]

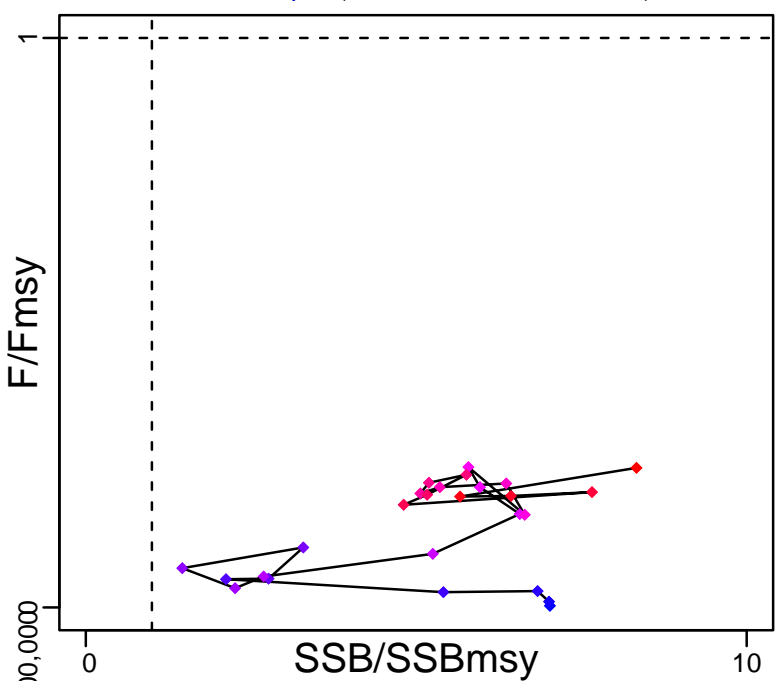
Metadata	
Scientific Name	Sardinops sagax
Current Assess ID	SARDI-SARDWSE-1992-2017-MOESENER
Area	Western half of Southeast Australia
Management Authority	South Australian Research and Development Institute
Assessor	South Australian Research and Development Institute
Asmts in RAM	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-MT	2017	15,293
Fmsy	Fmsy-1/yr	2017	0.405
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2017	42,960
Fmgt	Fmgt-1/yr	2017	0.23
ERmgt	-	-	-
TB0	TB0-MT	2017	400,434
SSB0	SSB0-MT	2017	107,400
MSY	MSY-MT	2017	85,726
M	M-1/yr	2017	0.3
TBlim	-	-	-
SSBlim	SSBlim-MT	2017	21,480
Flim	-	-	-
ERlim	-	-	-

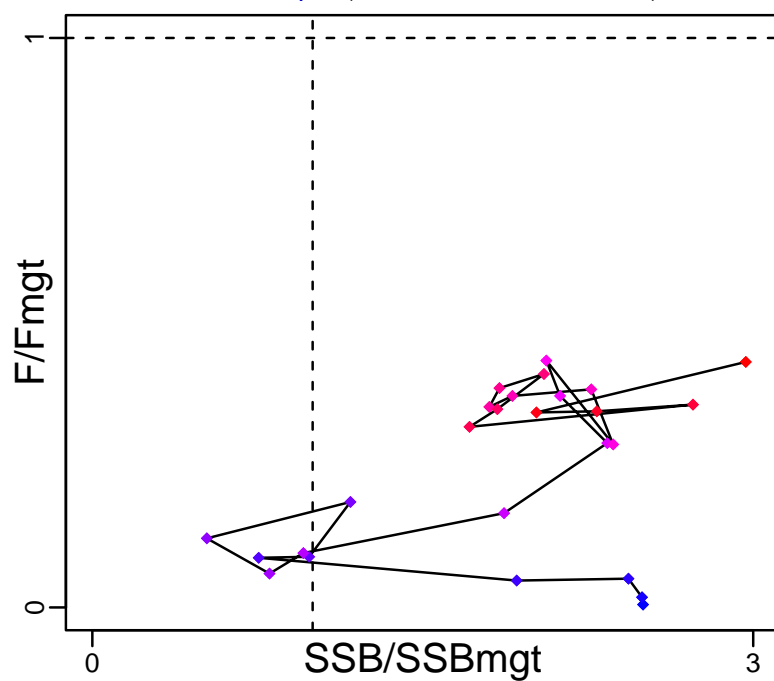
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2017	430,348	-	-
SSB	SSB-MT	2017	127,437	Both	-
TN	-	-	-	-	-
R	R-E00	2017	1.13×10^{16}	-	-
F	F-1/yr	2017	0.099	-	-
ER	ER-ratio	2017	0.099	-	-
TC	-	-	-		
TL	TL-MT	2017	42,750		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSB-MT/SSBmsy-MT	2017	8.333		
F/Fmsy	F-1/yr/Fmsy-1/yr	2017	0.245		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2017	2.966		
F/Fmgt	F-1/yr/Fmgt-1/yr	2017	0.431		
ER/ERmgt	-	-	-		

Sardine Western half of Southeast Australia [SARDWSE]

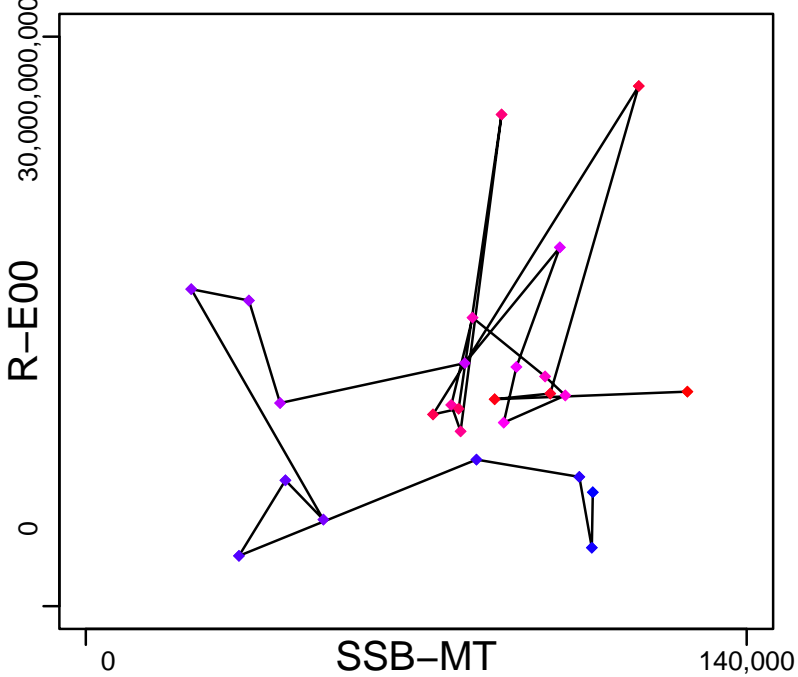
Kobe MSYpref (1992–2017–MOESENEDER)



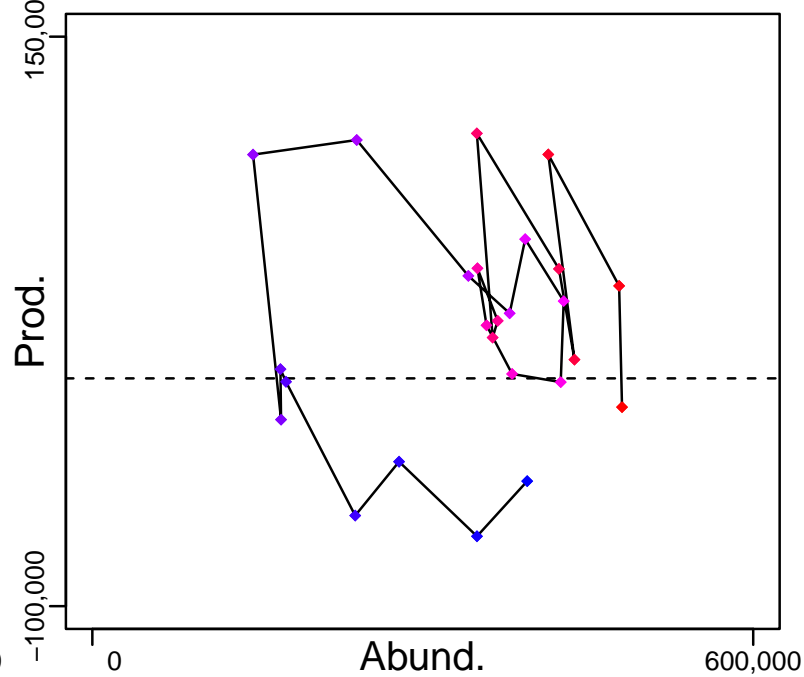
Kobe MGTpref (1992–2017–MOESENEDER)



Spawner Recruit (1992–2017–MOESENEDER)



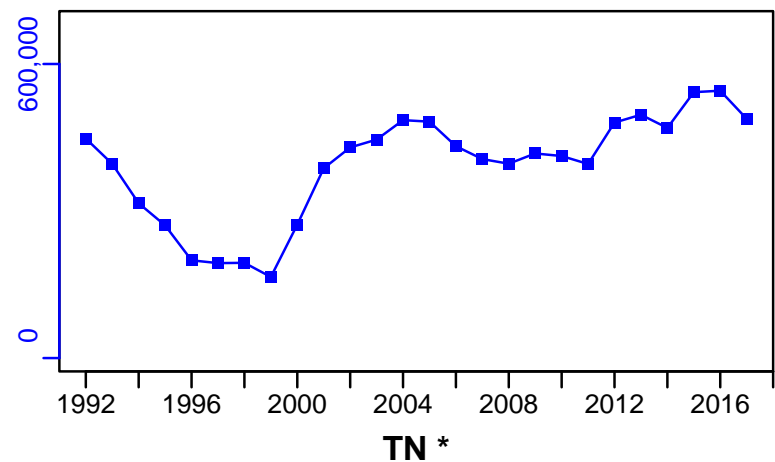
Production (1992–2017–MOESENEDER)



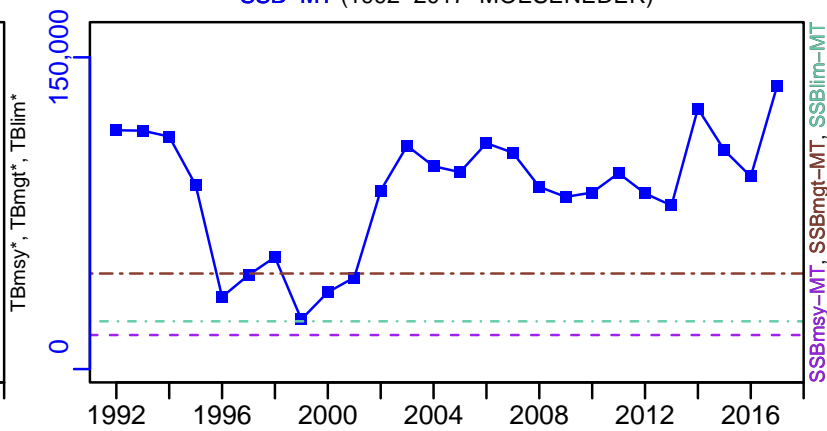
◆ Start Year ◆ End Year * No Data

Sardine Western half of Southeast Australia [SARDWSE]

TB-MT (1992-2017-MOESENER)

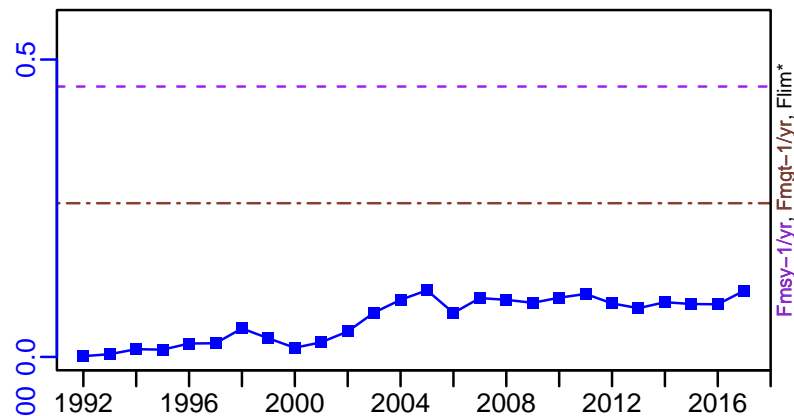


SSB-MT (1992-2017-MOESENER)

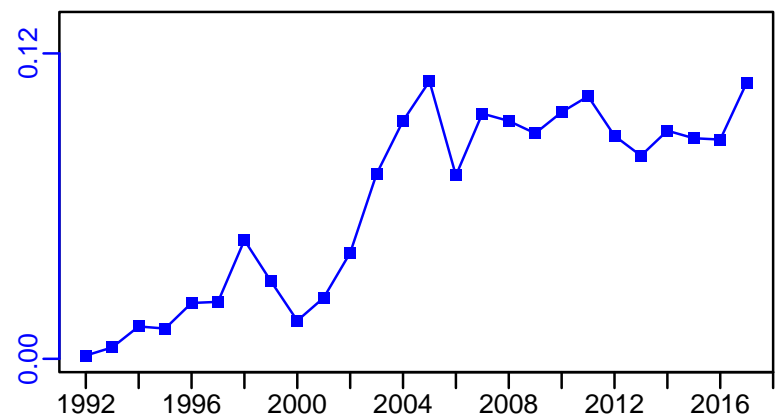


TN *

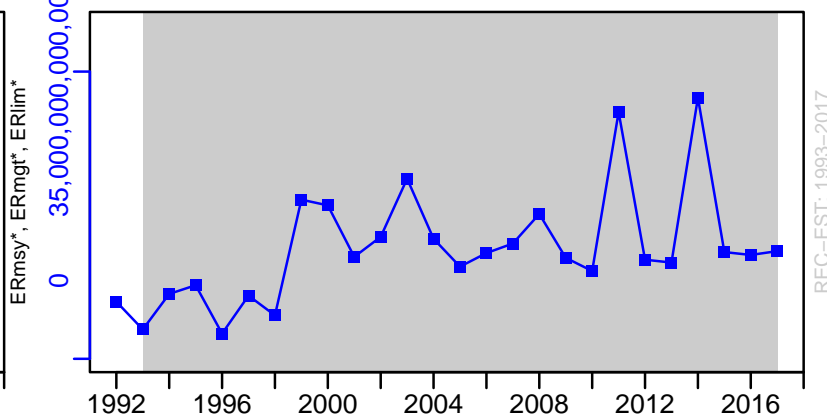
F-1/yr (1992-2017-MOESENER)



ER-ratio (1992-2017-MOESENER)

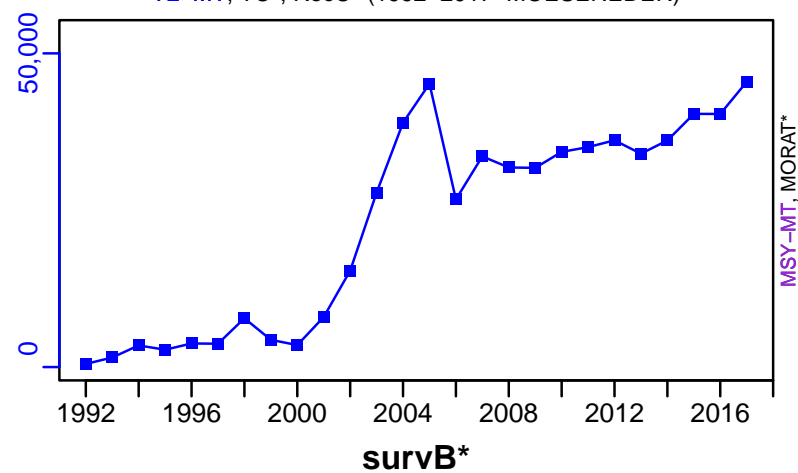


R-E00 (1992-2017-MOESENER)



Sardine Western half of Southeast Australia [SARDWSE]

TL-MT, TC*, RecC* (1992-2017-MOESENER)



TAC*, Cpair*, Cadv*



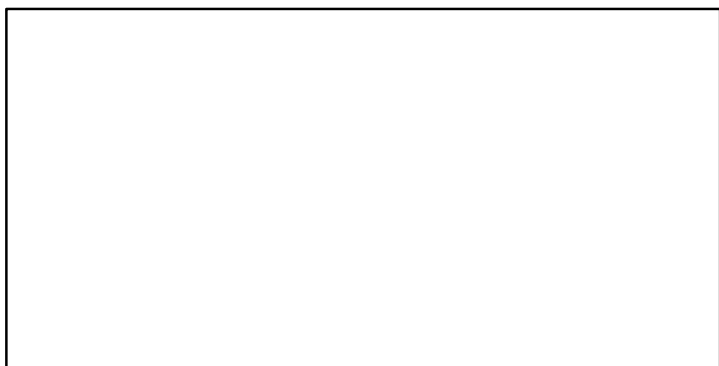
survB*



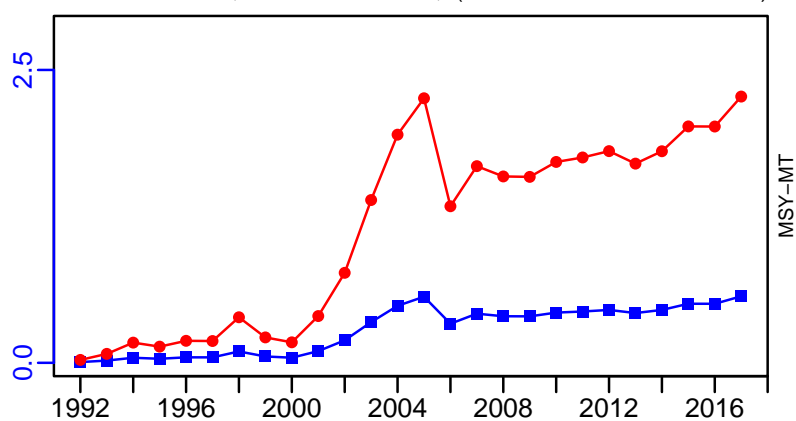
CPUE*



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1992-2017-MOESENER)



- 1st listed time series
- 2nd listed time series
- 3rd listed time series
- MSY
- MORAT
- No Data

Pacific saury Northwest Pacific [SAURNWPAC]

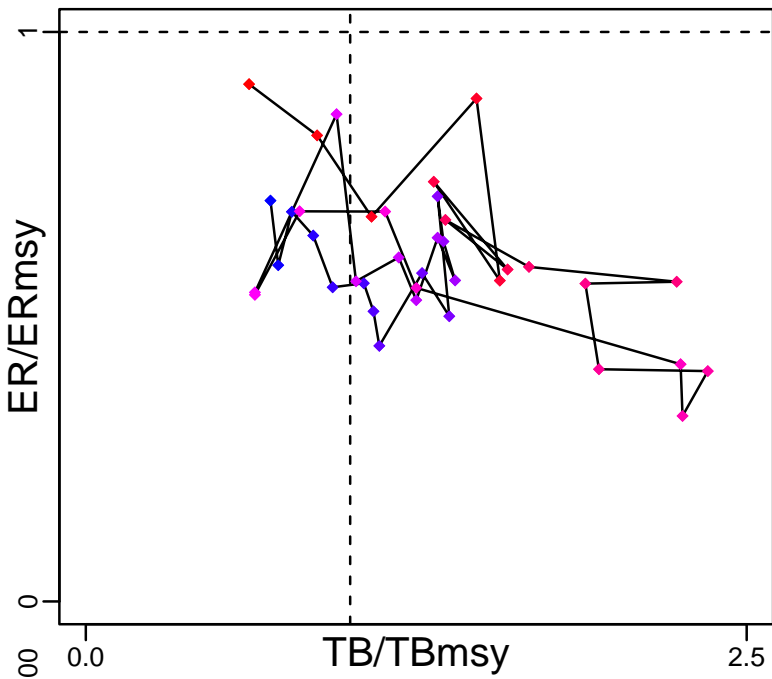
Metadata	
Scientific Name	Cololabis saira
Current Assess ID	NPFC-SAURNWPAC-1950-2018-KUROTA
Area	Northwest Pacific
Management Authority	North Pacific Fisheries Commission
Assessor	North Pacific Fisheries Commission
Asmts in RAM	2018, 2010, 2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2018	2,197,000
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2018	0.25
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2018	493,000
M	M-1/yr	2013	1.25
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

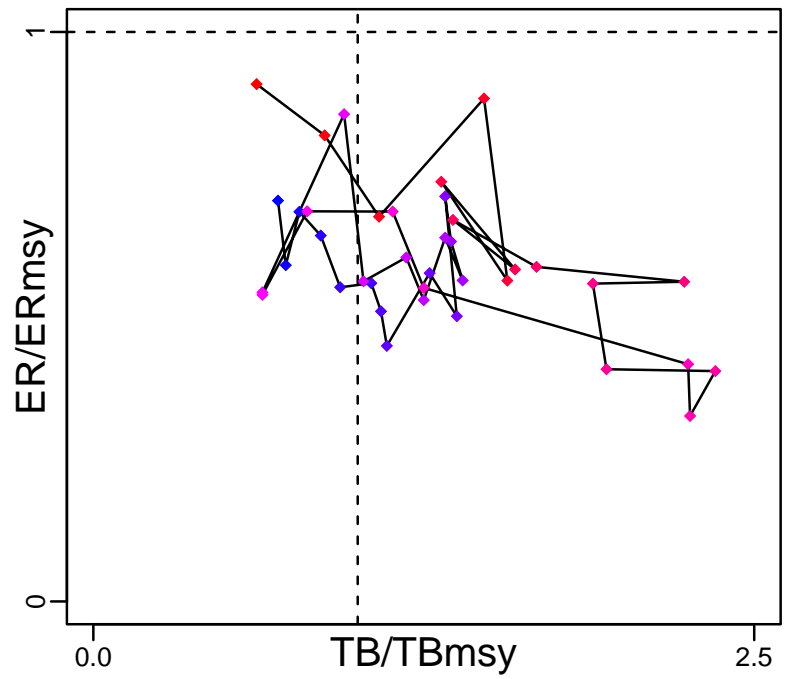
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2018	2,370,522	-	0
SSB	SSB-MT	2013	1,410,000	Both	1
TN	-	-	-	-	-
R	R-E00	2013	5.27×10^{10}	-	0
F	F-1/yr	2010	0.264	-	0 to 1
ER	ER-ratio	2018	0.201	-	-
TC	TC-MT	2018	435,351		
TL	-	-	-		
TB/TBmsy	TBdivTBmsy-dimensionless	2018	0.985		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ERdivERmsy-dimensionless	2018	0.908		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Pacific saury Northwest Pacific [SAURNWPAC]

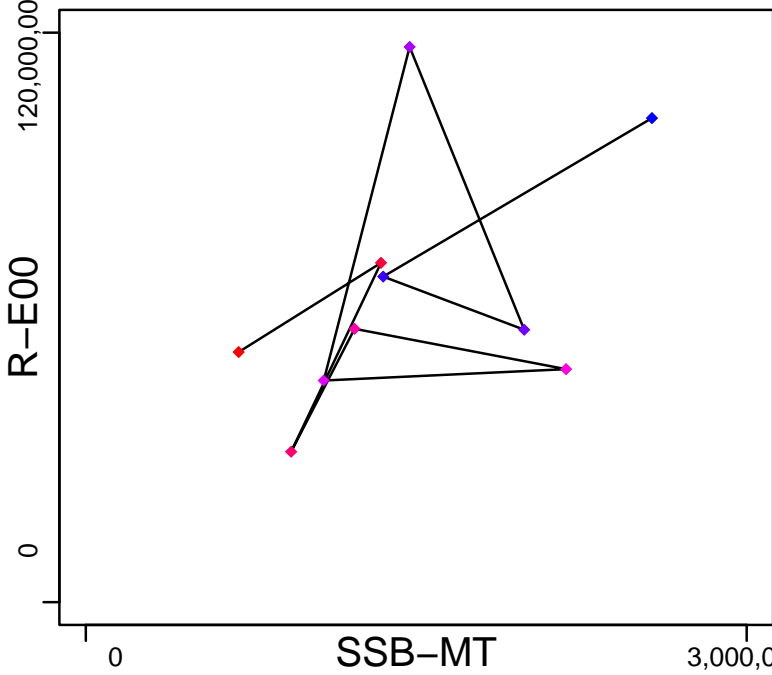
Kobe MSYpref (1950–2018–KUROTA)



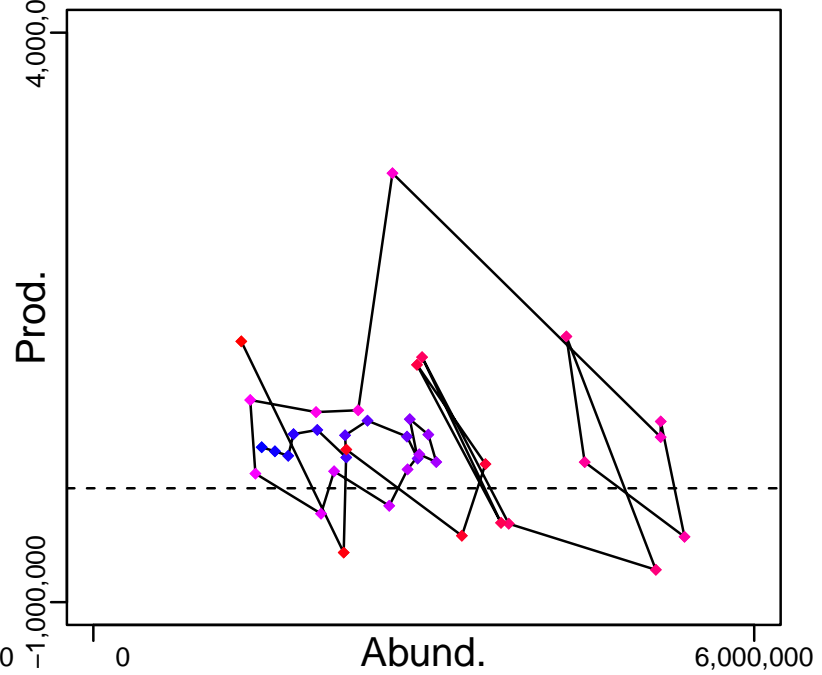
Kobe MGTpref (1950–2018–KUROTA)



Spawner Recruit (1980–2013–JPNIMP2016)



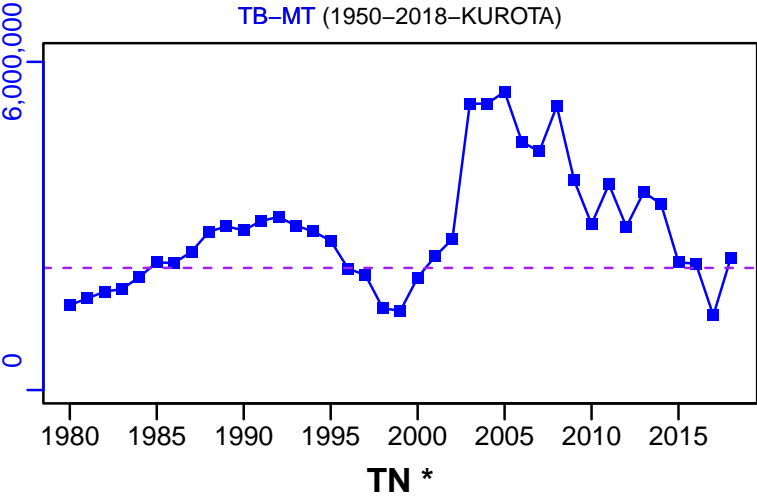
Production (1950–2018–KUROTA)



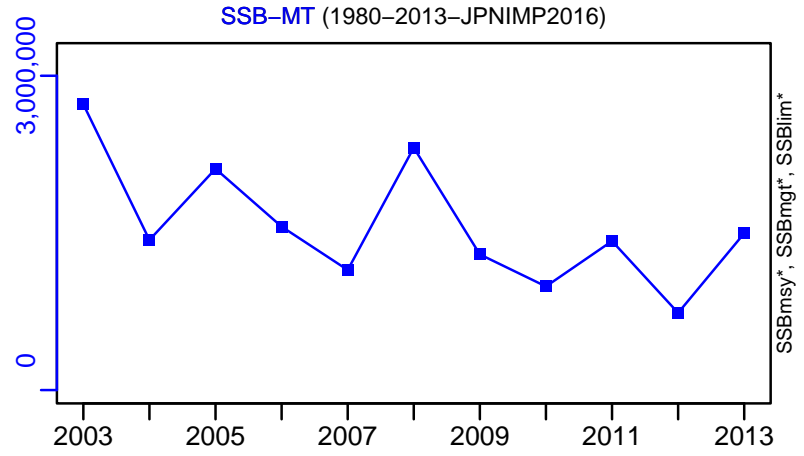
◆ Start Year ◆ End Year * No Data

Pacific saury Northwest Pacific [SAURNWPAC]

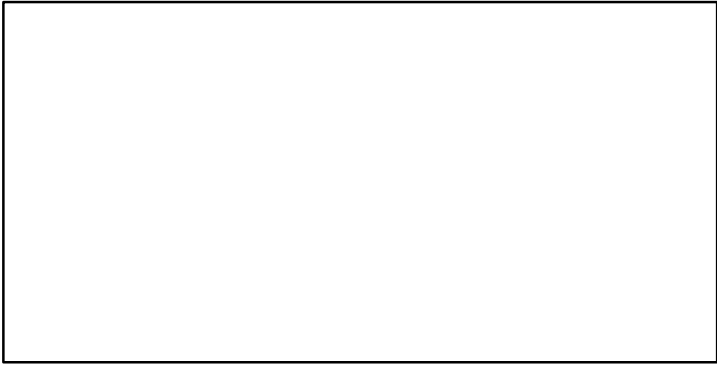
TB-MT (1950-2018-KUROTA)



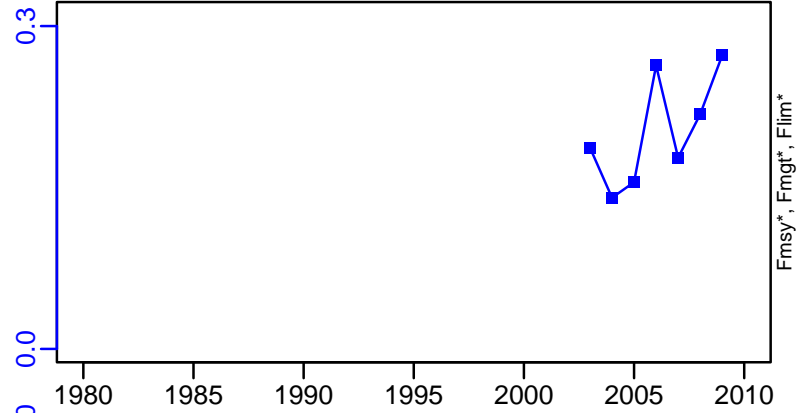
SSB-MT (1980-2013-JPNIMP2016)



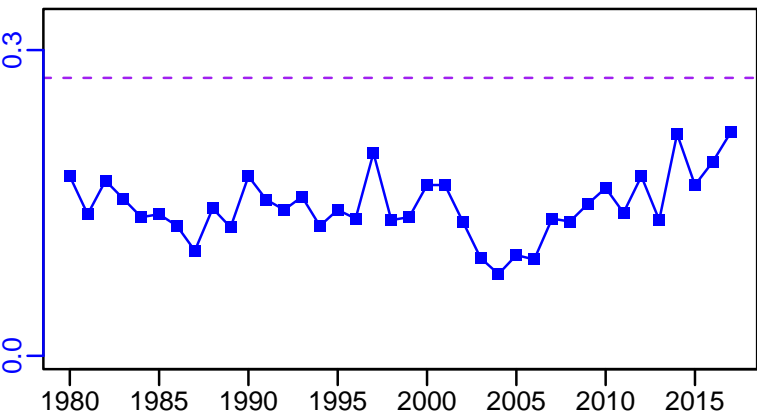
TN *



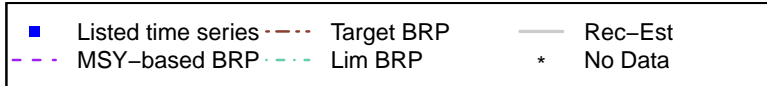
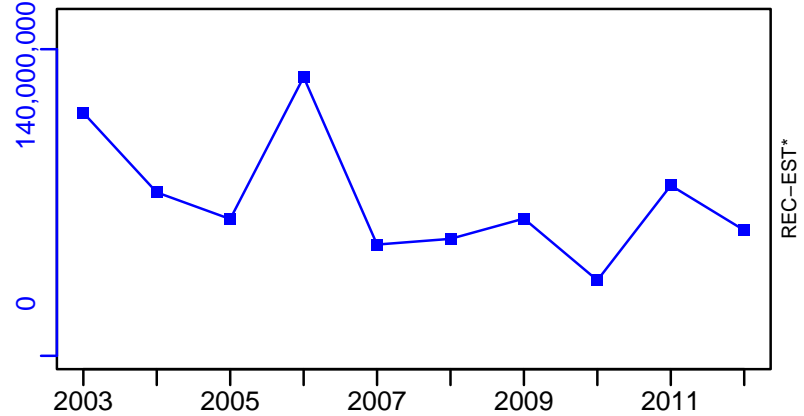
F-1/yr (1980-2010-ONO)



ER-ratio (1950-2018-KUROTA)



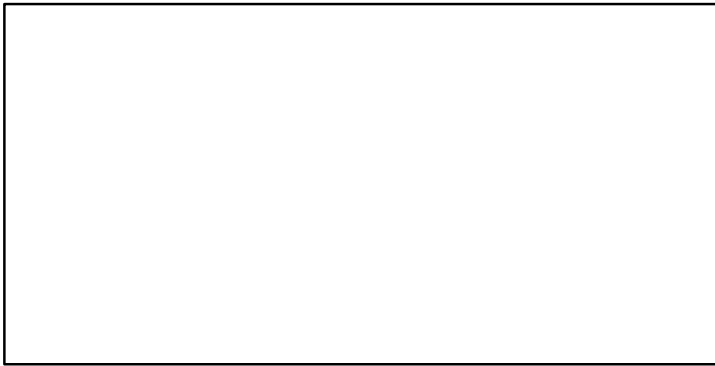
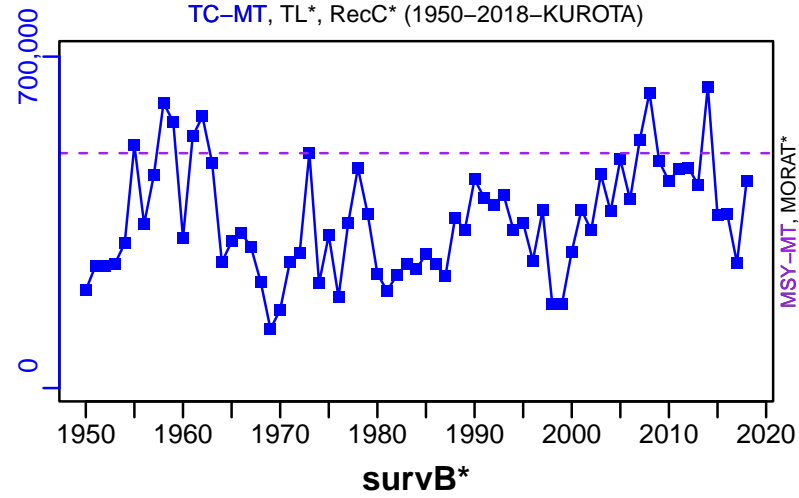
R-E00 (1980-2013-JPNIMP2016)



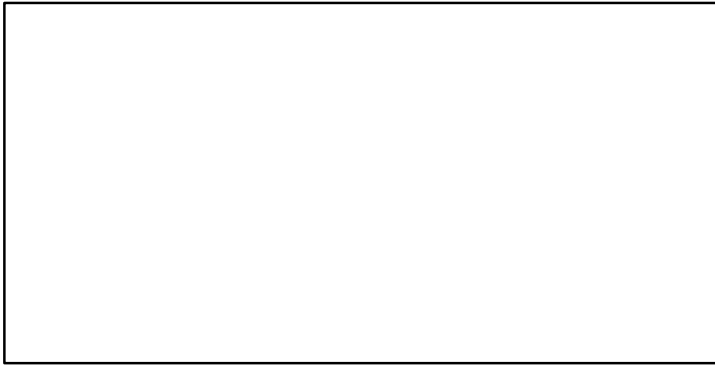
Pacific saury Northwest Pacific [SAURNWPAC]

TC-MT, TL*, RecC* (1950-2018-KUROTA)

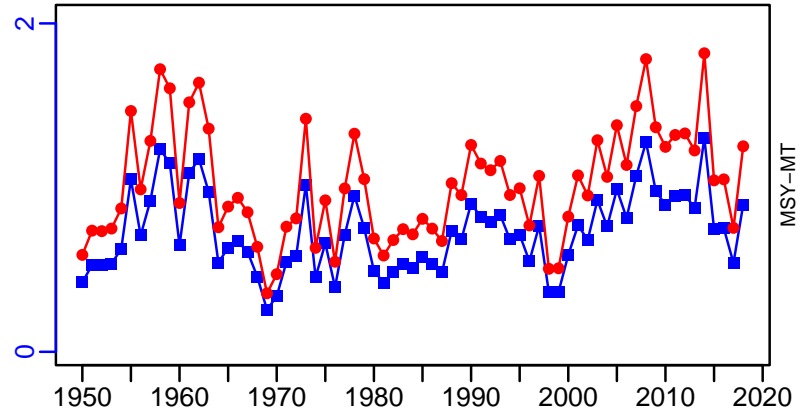
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1950-2018-KUROTA)



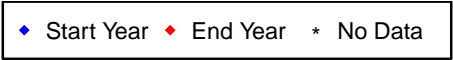
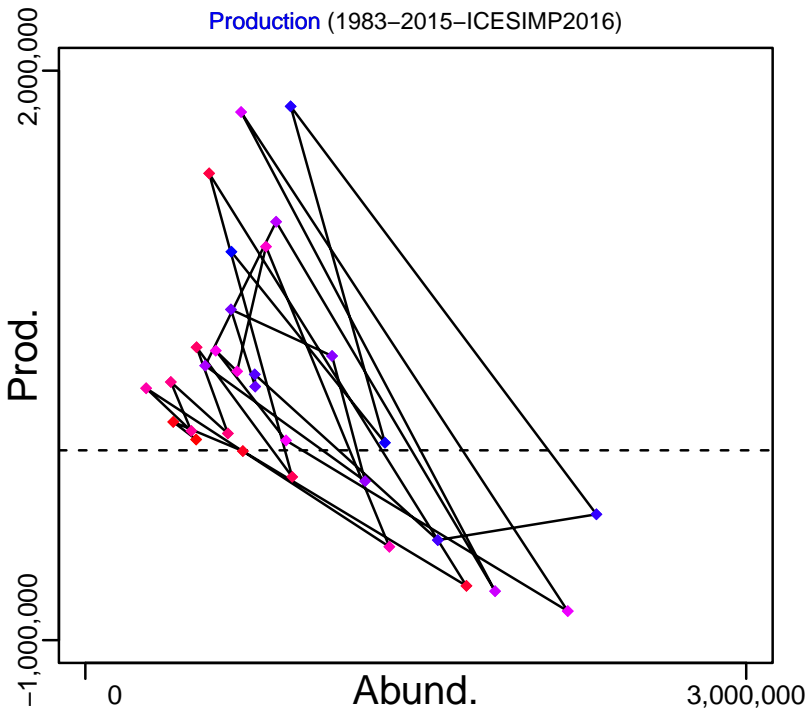
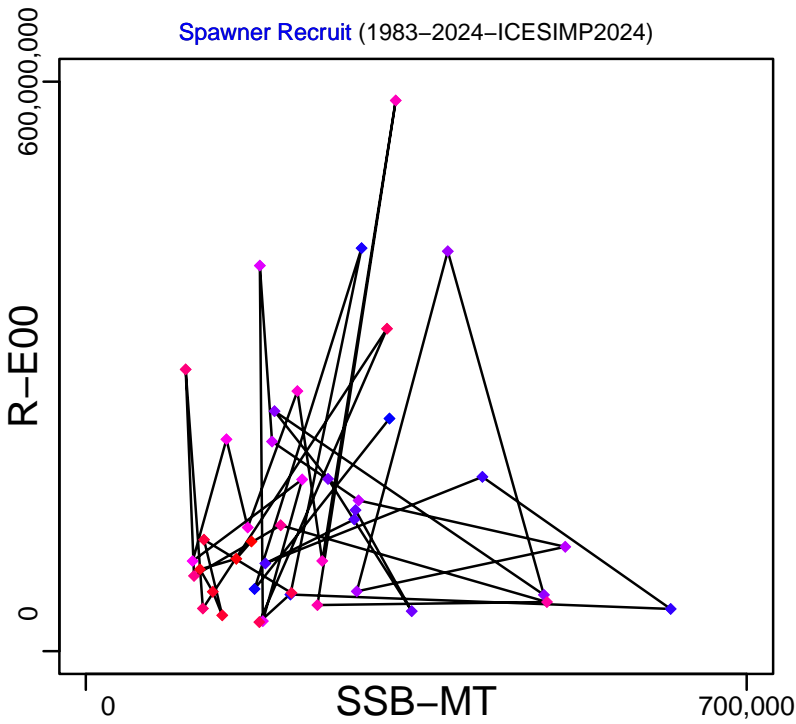
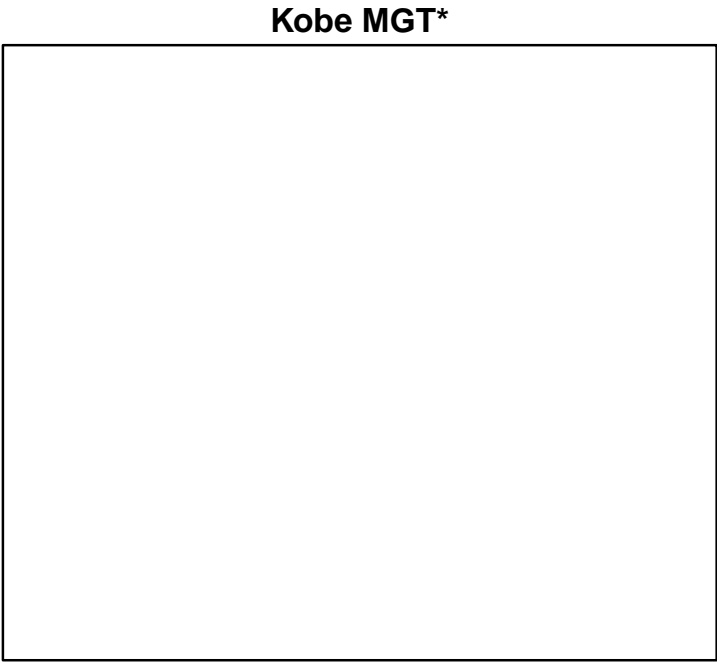
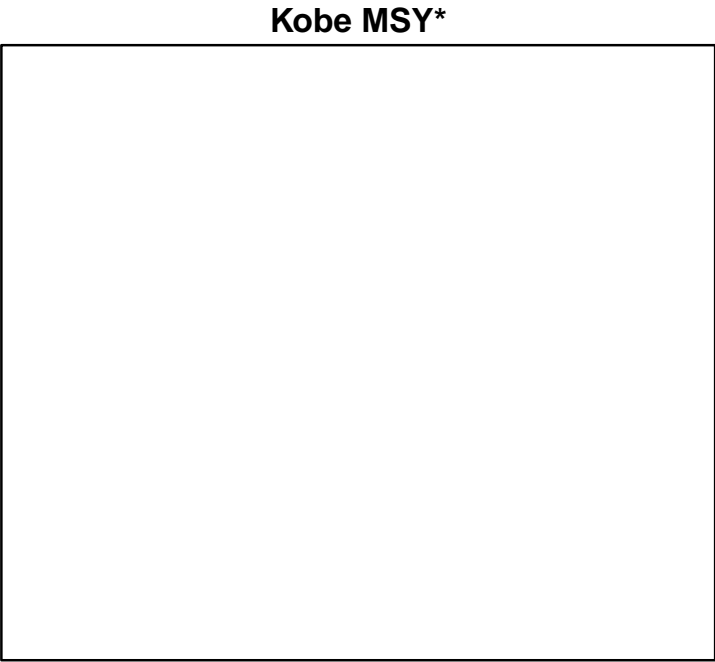
- 1st listed time series
- 2nd listed time series
- 3rd listed time series
- MORAT
- MSY
- No Data

Sand eel Sandeel Area 1 [SEELNSSA1]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA1-1983-2024-ICESIMP2024
Area	Sandeel Area 1
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2024, 2011

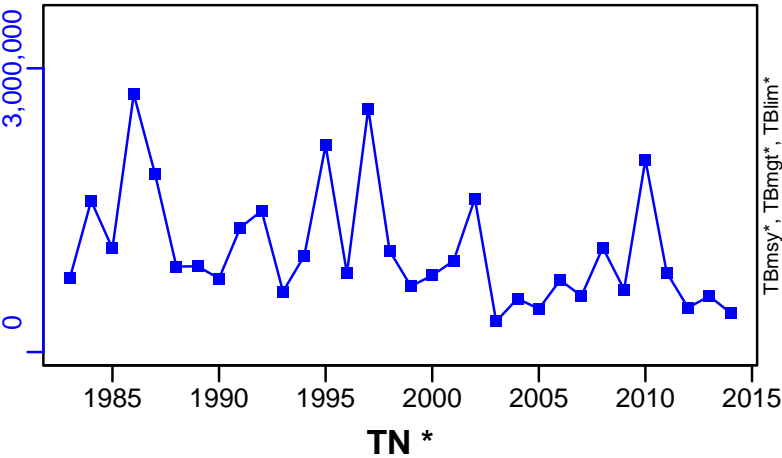
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	145,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2024	105,809
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	351,000	Both	-
SSB	SSB-MT	2024	175,408	-	-
TN	-	-	-	-	-
R	R-E00	2024	115,580,737	-	0
F	F-1/yr	2024	0.26	-	1 to 2
ER	ER-ratio	2021	0.493	-	-
TC	TC-MT	2024	88,581		
TL	TL-MT	2020	59,600		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	1.917		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

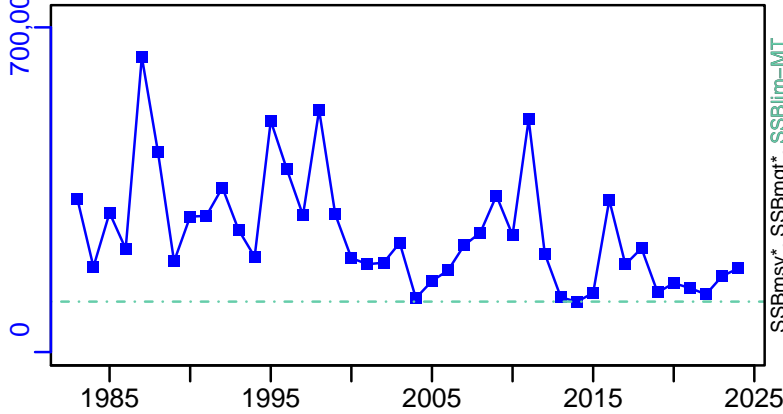


Sand eel Sandeel Area 1 [SEELNSSA1]

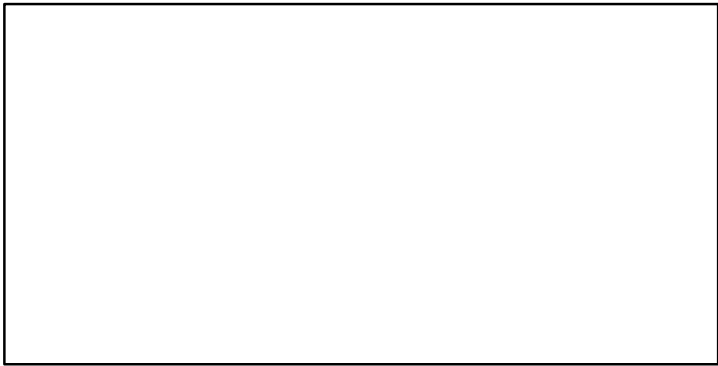
TB-MT (1983–2015–ICESIMP2016)



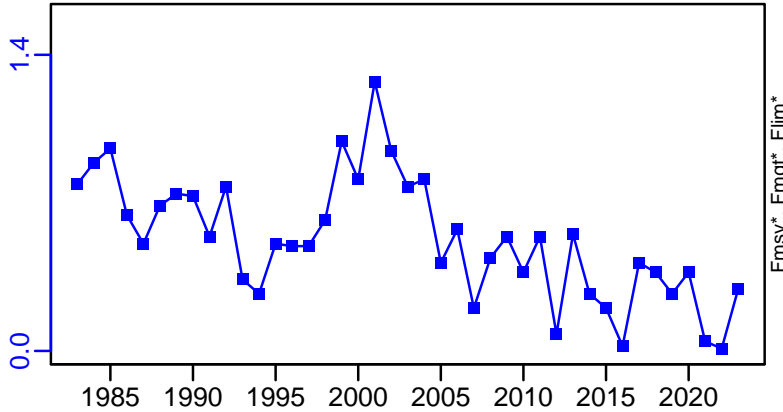
SSB-MT (1983–2024–ICESIMP2024)



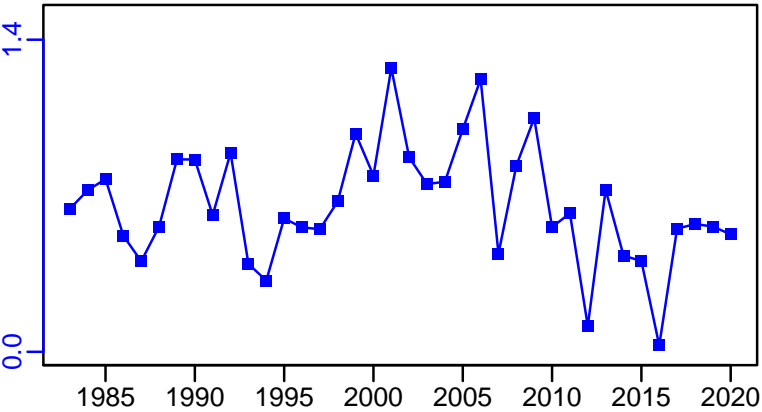
TN *



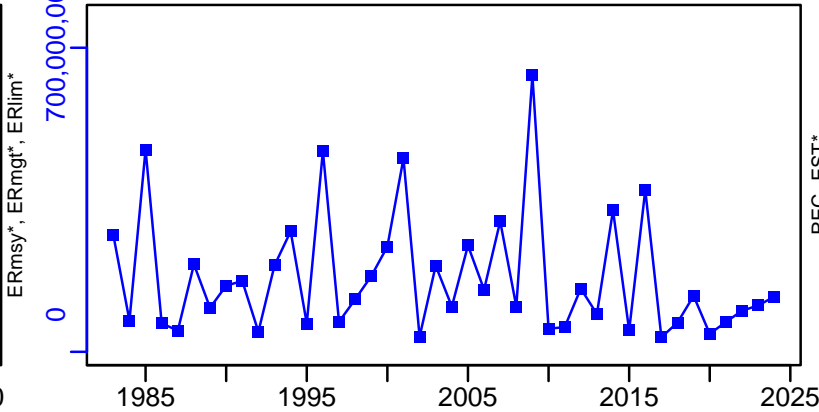
F-1/yr (1983–2024–ICESIMP2024)



ER-ratio (1983–2021–ICESIMP2021-2)

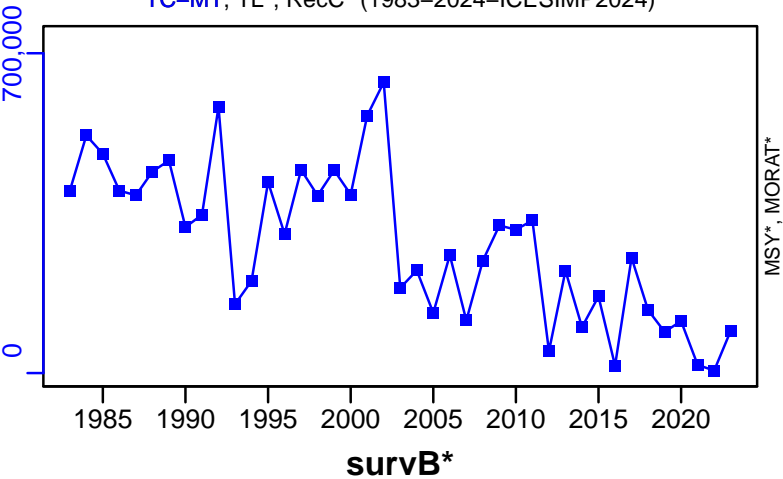


R-E00 (1983–2024–ICESIMP2024)

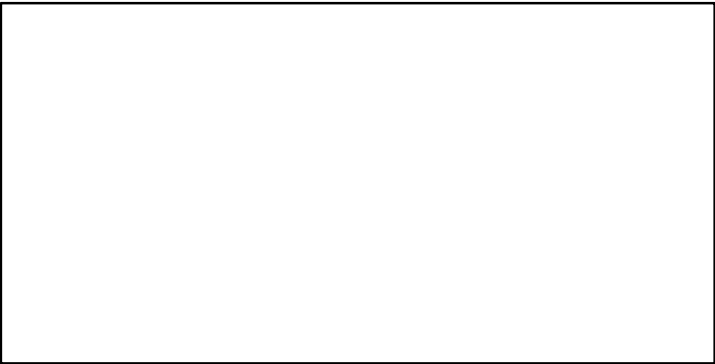


Sand eel Sandeel Area 1 [SEELNSSA1]

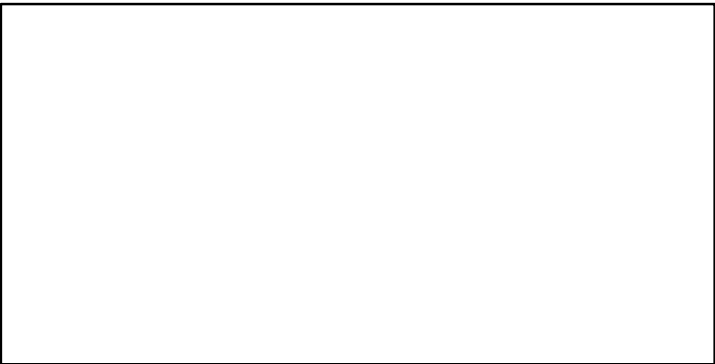
TC-MT, TL*, RecC* (1983-2024-ICESIMP2024)



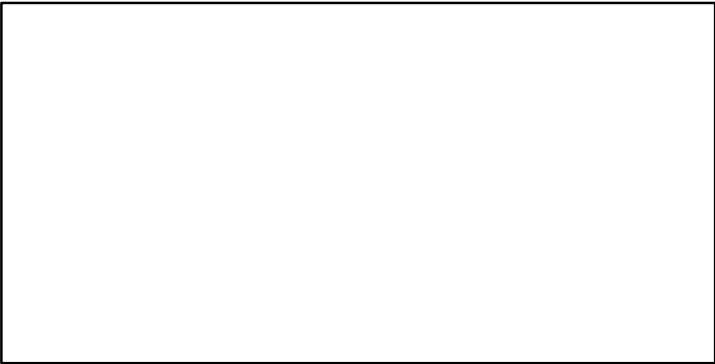
TAC*, Cpair*, Cadv*



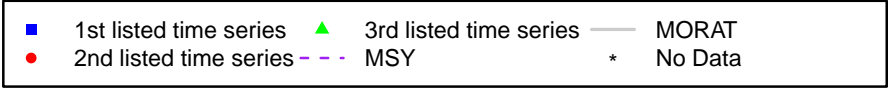
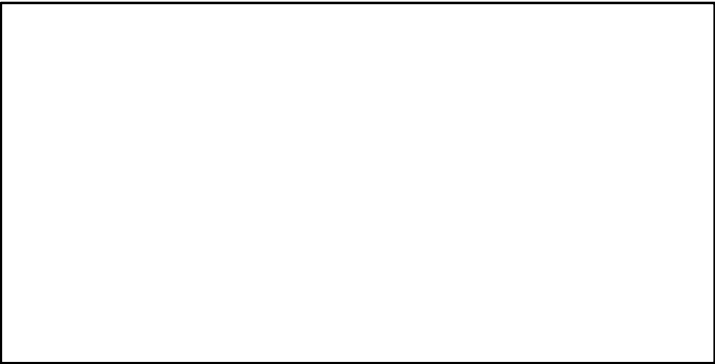
CPUE*



EFFORT*



CdivMSY*

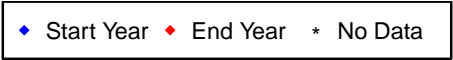
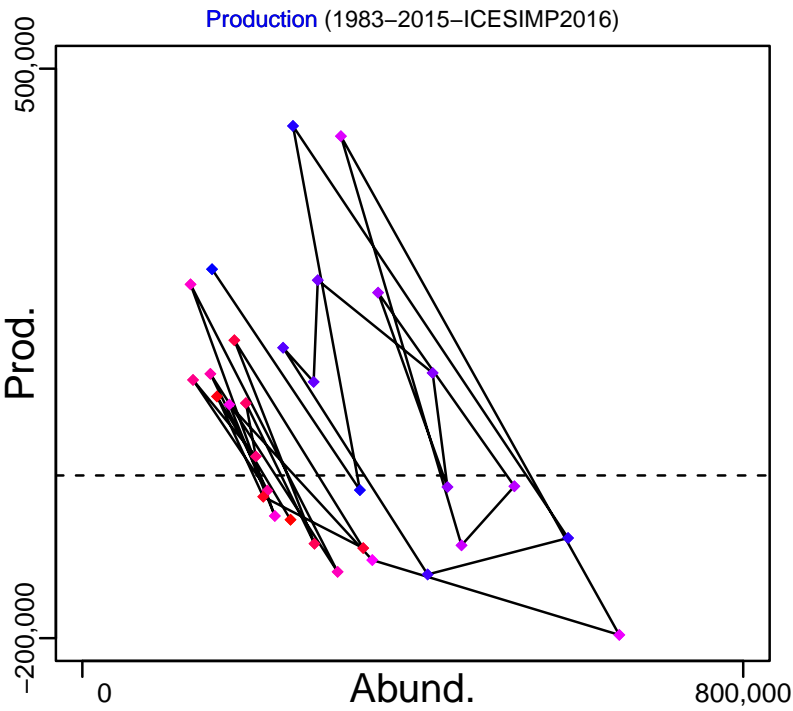
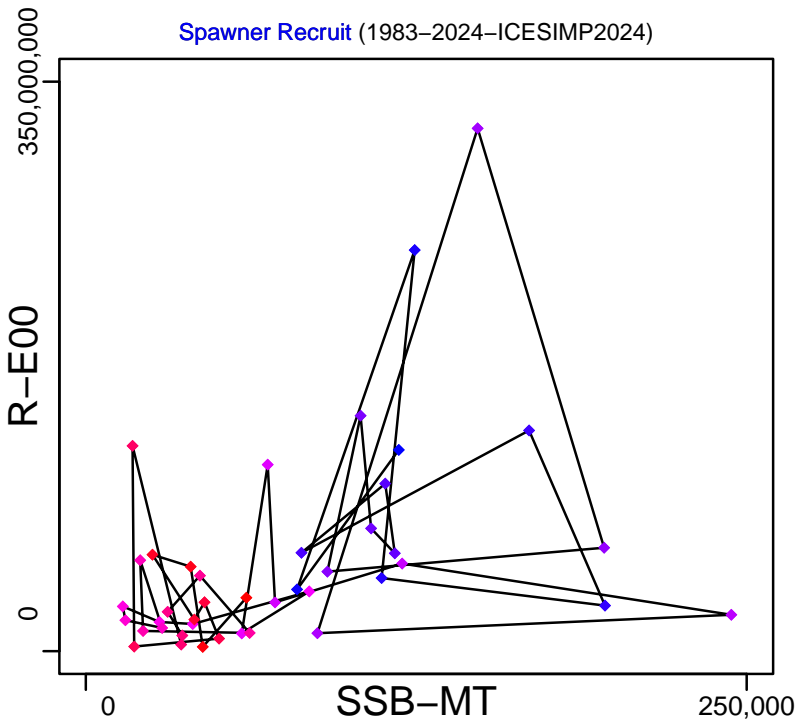
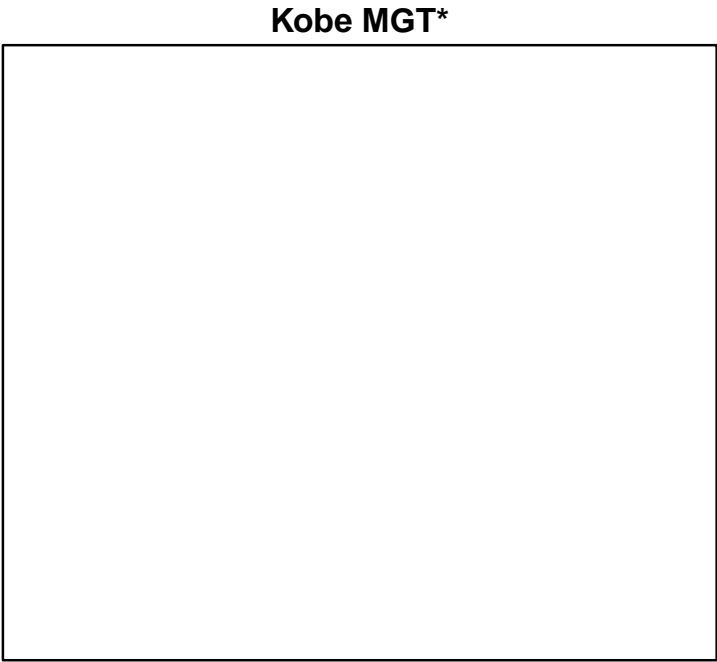
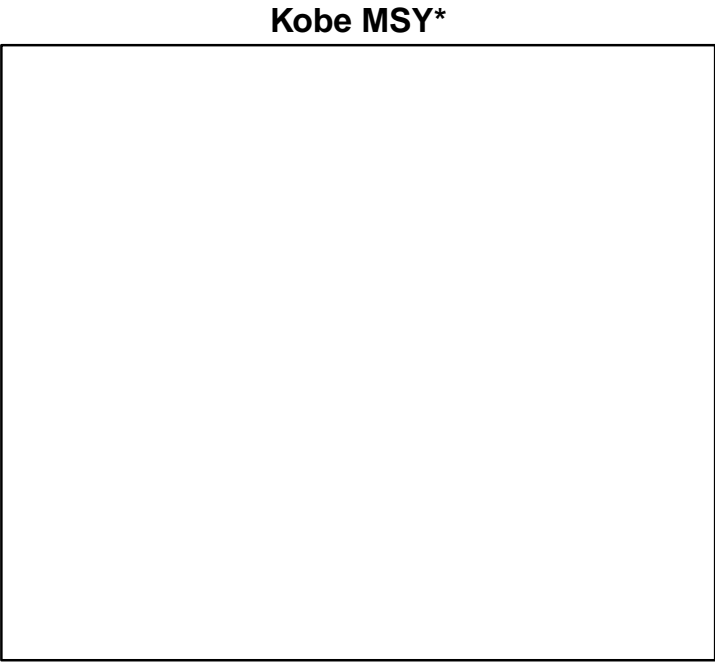


Sand eel Sandeel Area 2 [SEELNSSA2]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA2-1983-2024-ICESIMP2024
Area	Sandeel Area 2
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2024, 2011

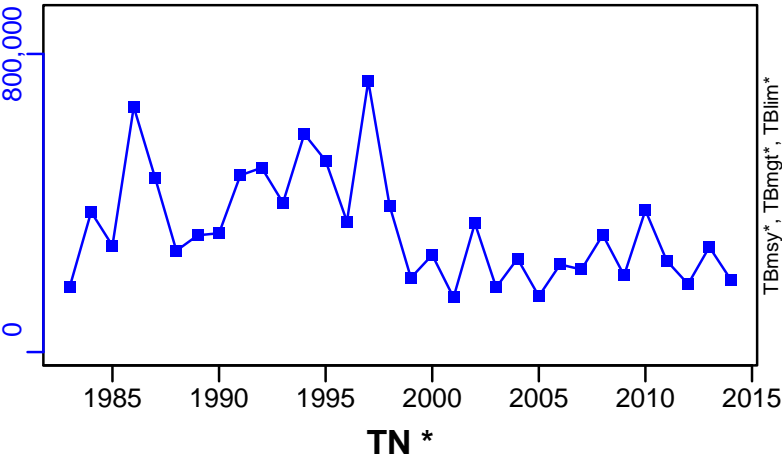
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	84,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2024	18,949
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	174,000	Both	-
SSB	SSB-MT	2024	60,736	-	-
TN	-	-	-	-	-
R	R-E00	2024	32,828,956	-	0
F	F-1/yr	2024	0.43	-	1 to 2
ER	ER-ratio	2021	0.581	-	-
TC	TC-MT	2024	39,653		
TL	TL-MT	2020	5220		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	1.274		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

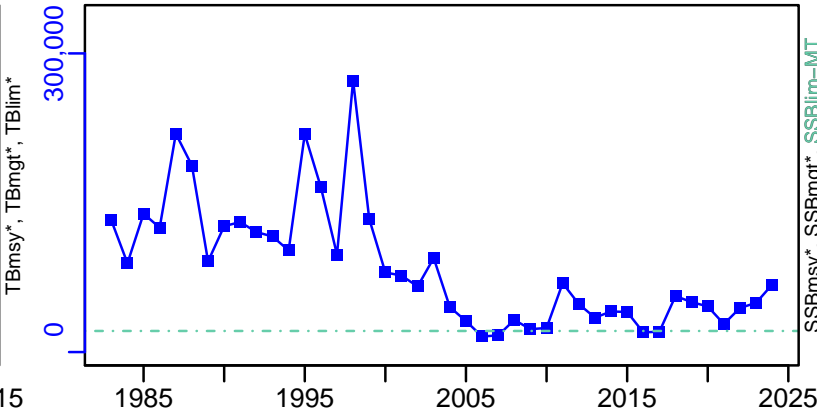


Sand eel Sandeel Area 2 [SEELNSSA2]

TB-MT (1983–2015–ICESIMP2016)

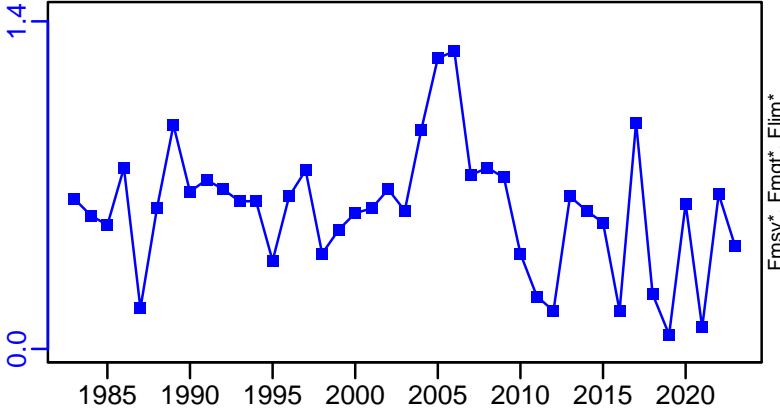


SSB-MT (1983–2024–ICESIMP2024)

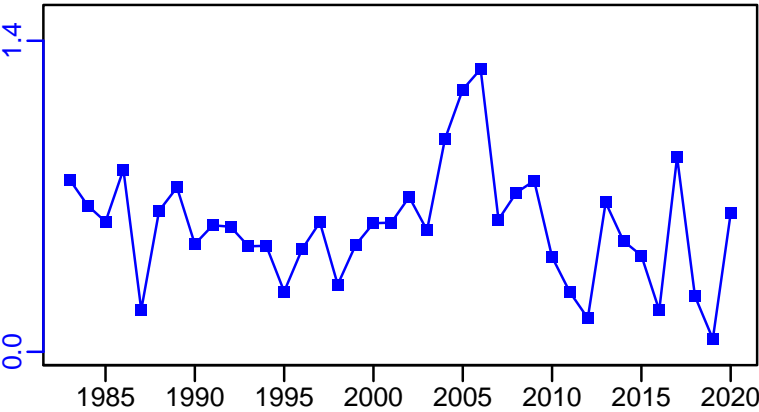


TN *

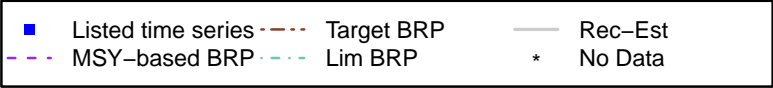
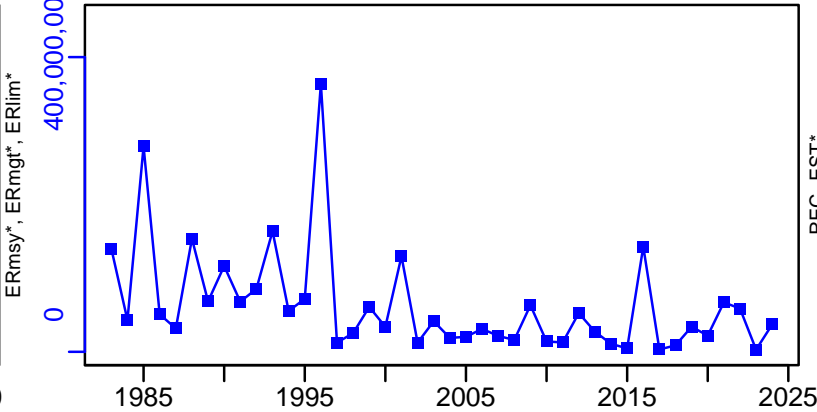
F-1/yr (1983–2024–ICESIMP2024)



ER-ratio (1983–2021–ICESIMP2021-2)

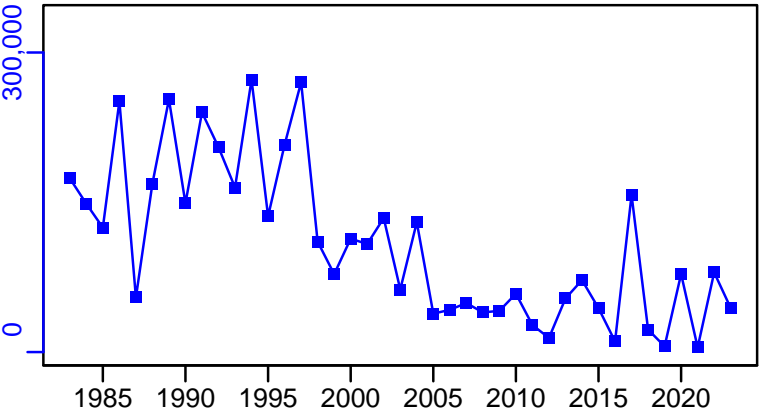


R-E00 (1983–2024–ICESIMP2024)



Sand eel Sandeel Area 2 [SEELNSSA2]

TC-MT, TL*, RecC* (1983-2024-ICESIMP2024)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*

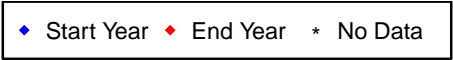
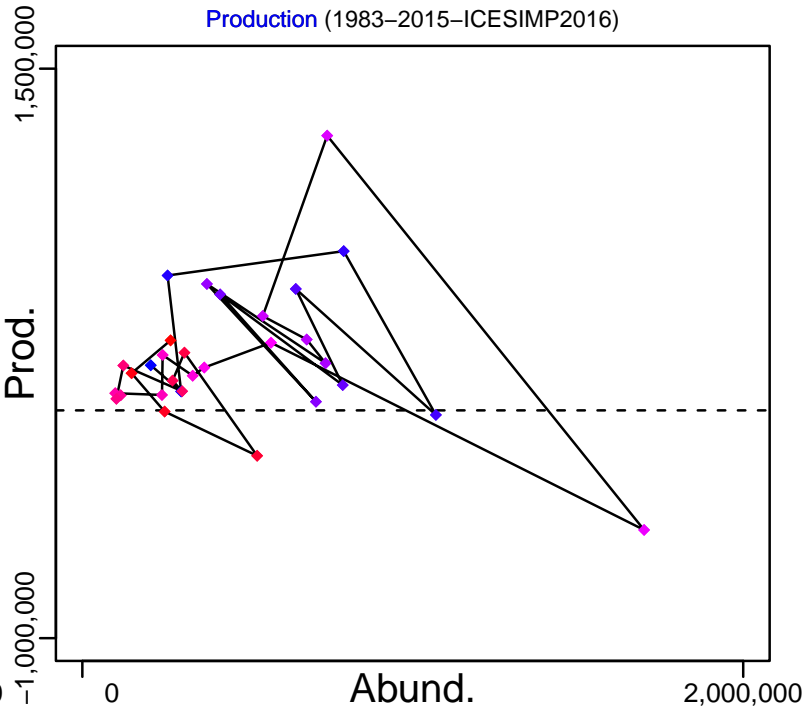
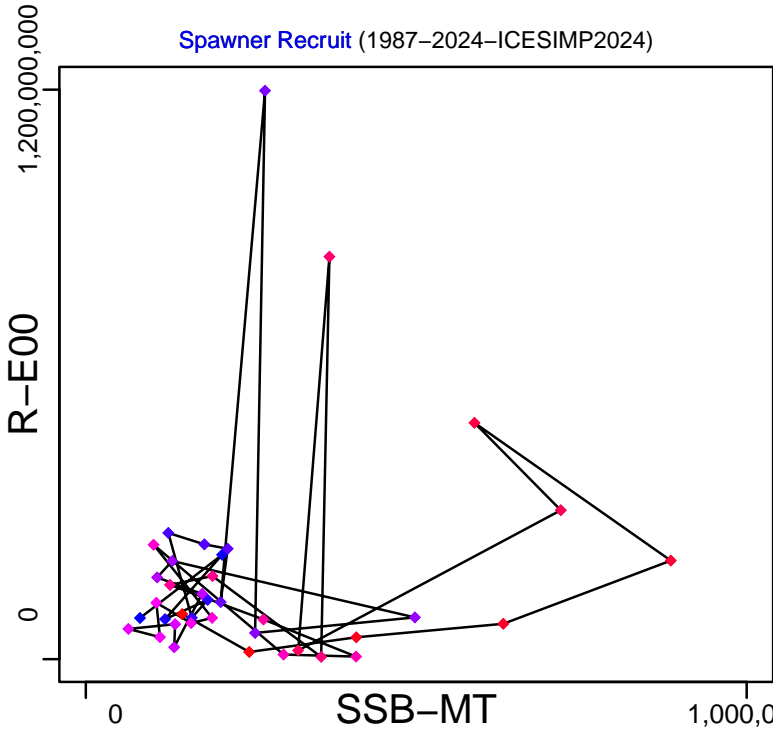
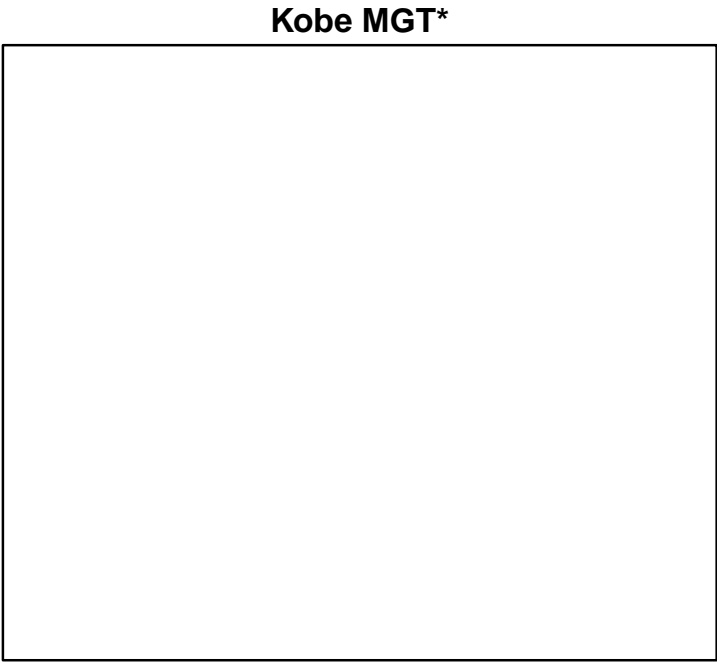
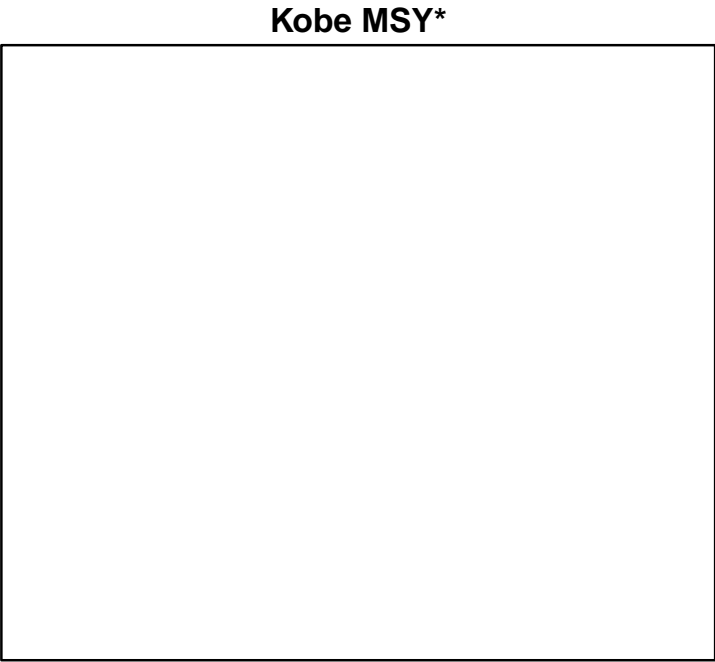


Sand eel Sandeel Area 3 [SEELNSSA3]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA3-1987-2024-ICESIMP2024
Area	Sandeel Area 3
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2024, 2011

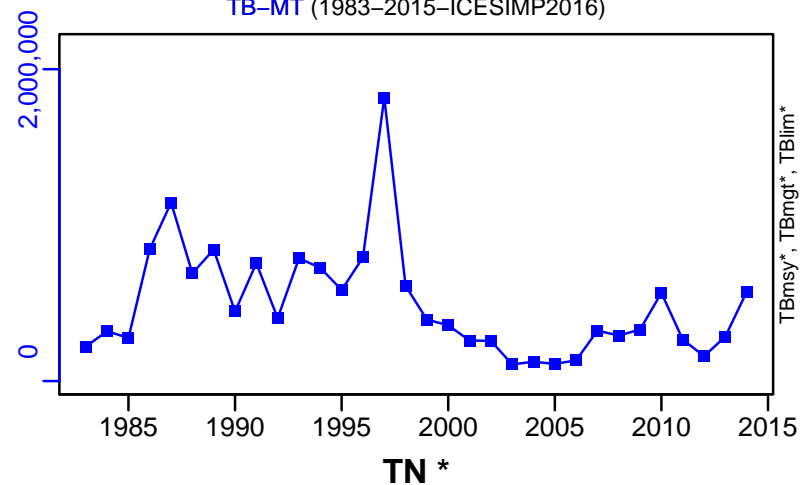
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	129,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2024	72,713
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2015	535,000	Both	-
SSB	SSB-MT	2024	145,862	-	-
TN	-	-	-	-	-
R	R-E00	2024	94,904,752	-	0
F	F-1/yr	2024	0.11	-	1 to 2
ER	ER-ratio	2021	0.664	-	-
TC	TC-MT	2024	18,955		
TL	TL-MT	2020	136,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	2.636		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

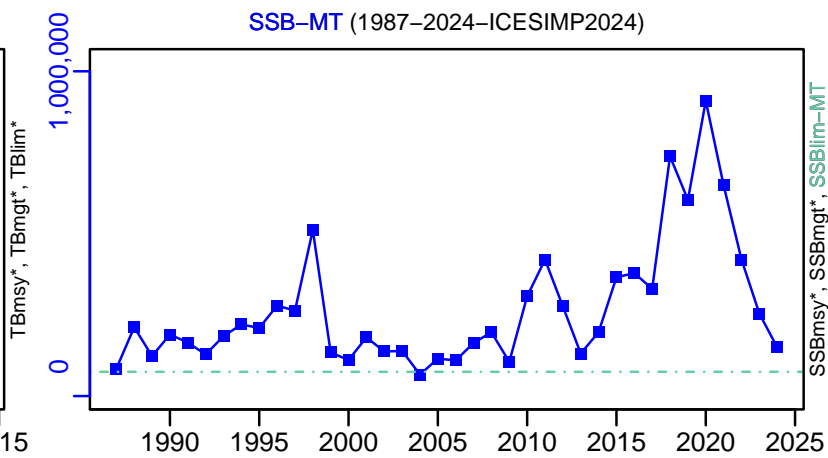


Sand eel Sandeel Area 3 [SEELNSSA3]

TB-MT (1983–2015–ICESIMP2016)



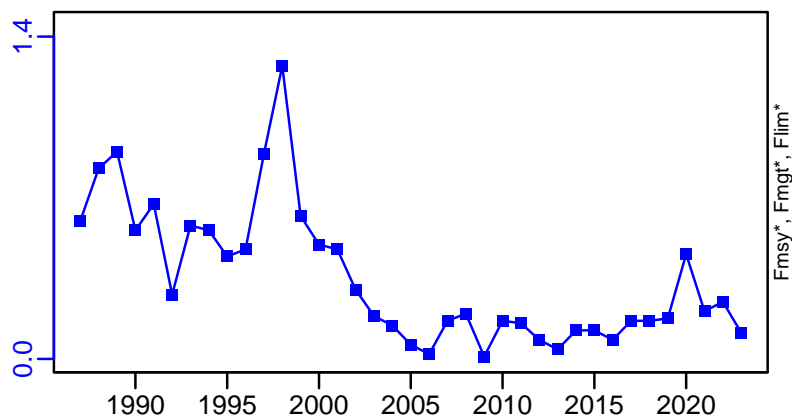
SSB-MT (1987–2024–ICESIMP2024)



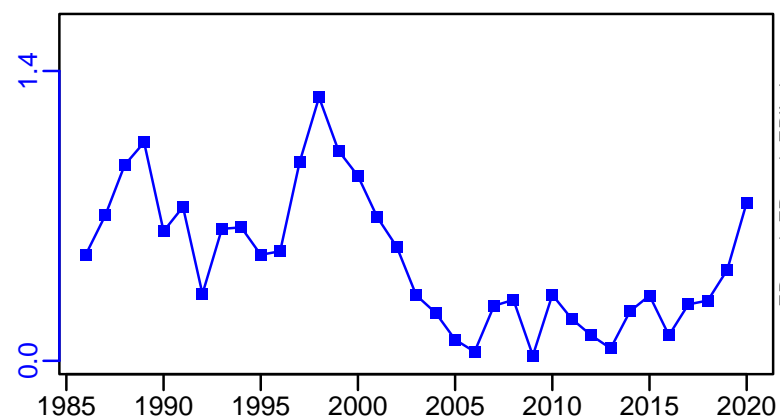
TN *



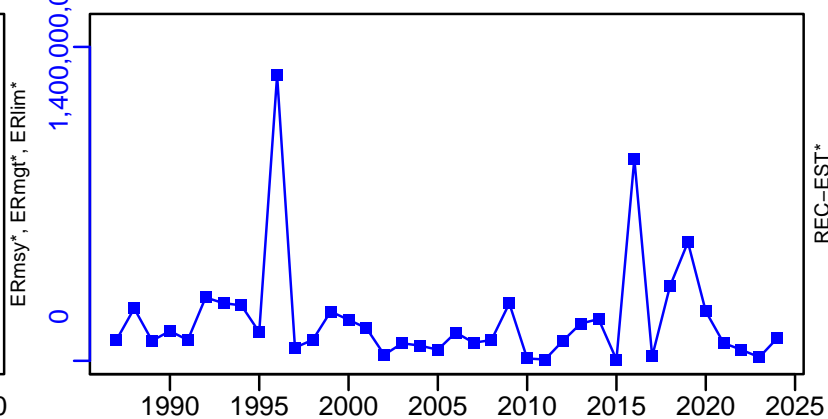
F-1/yr (1987–2024–ICESIMP2024)



ER-ratio (1986–2021–ICESIMP2021-2)

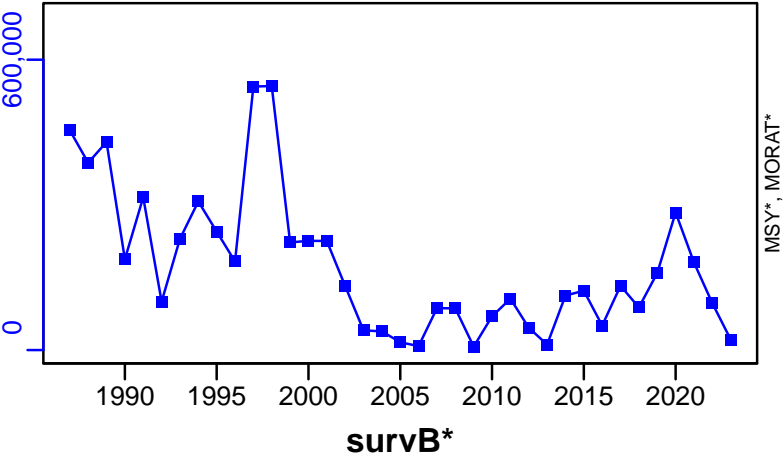


R-E00 (1987–2024–ICESIMP2024)

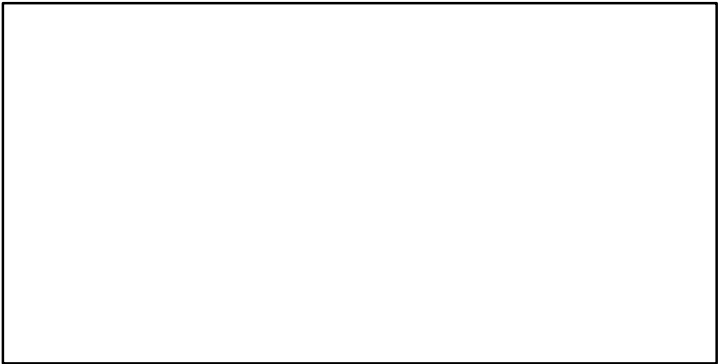


Sand eel Sandeel Area 3 [SEELNSSA3]

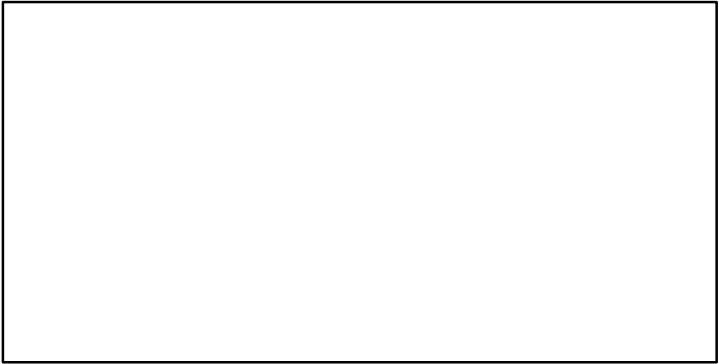
TC-MT, TL*, RecC* (1987-2024-ICESIMP2024)



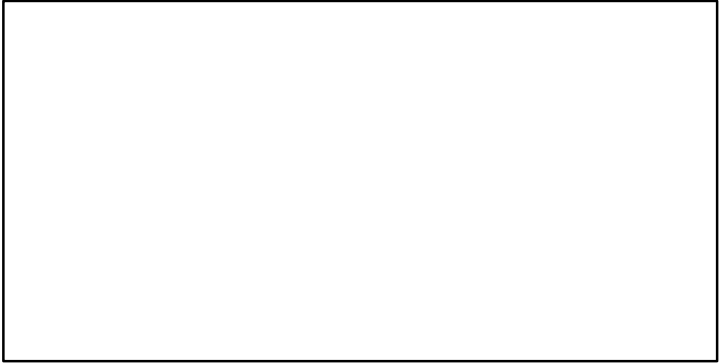
TAC*, Cpair*, Cadv*



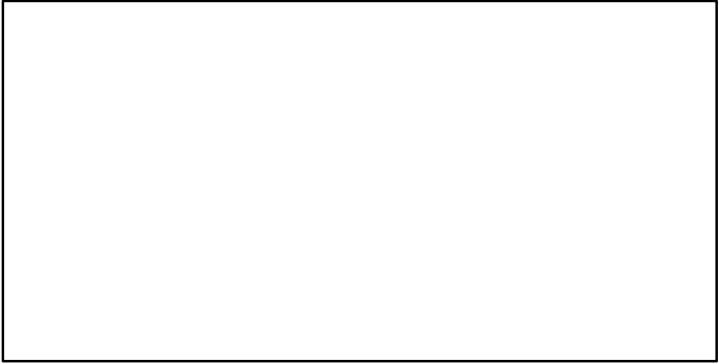
CPUE*



EFFORT*



CdivMSY*

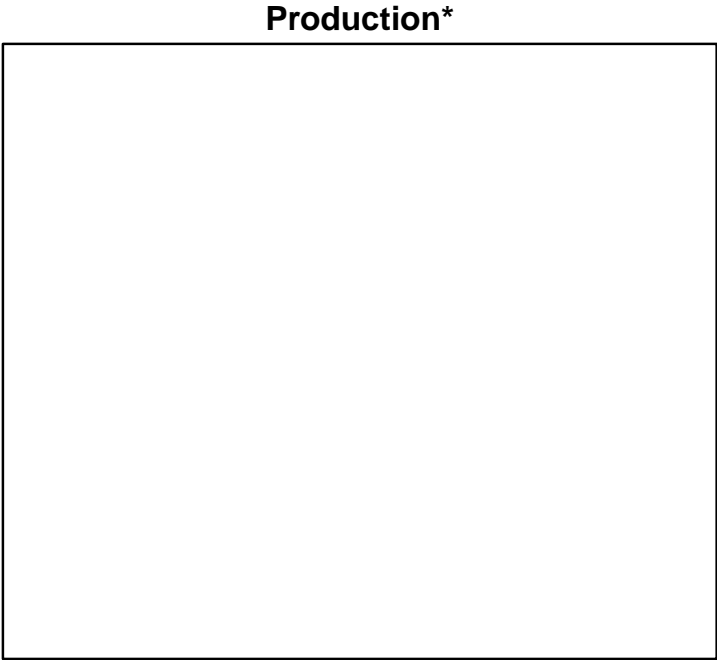
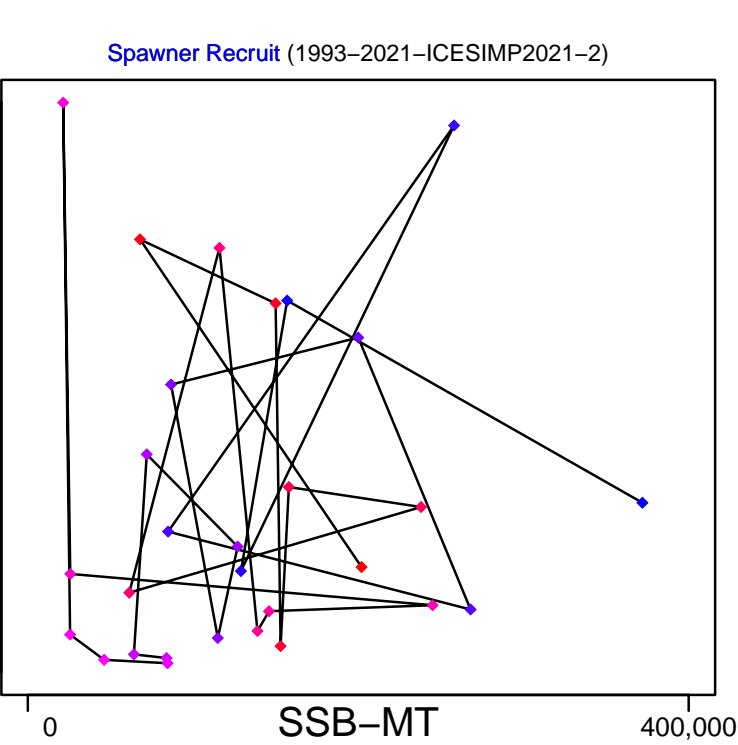
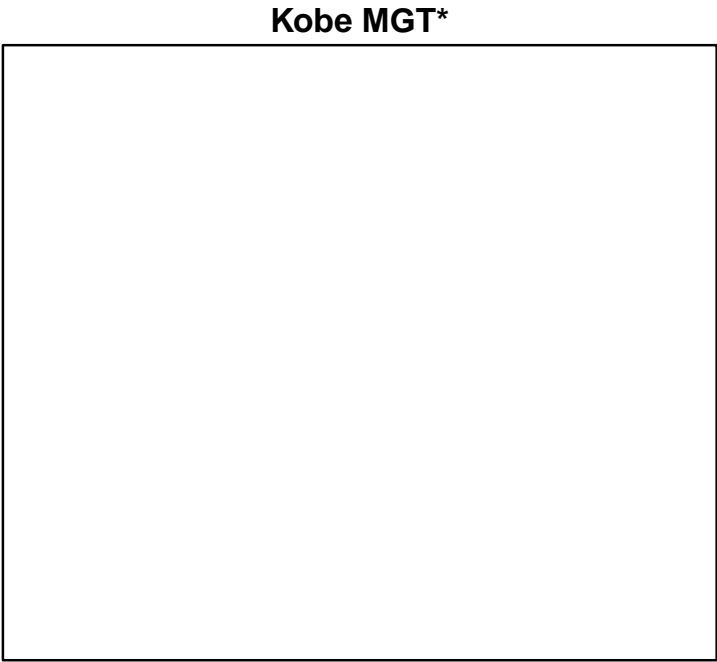
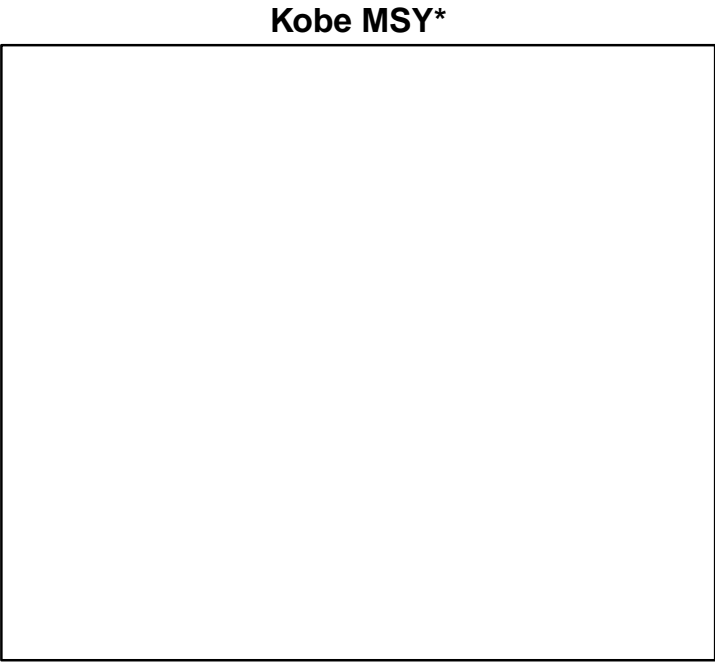


Sand eel Sandeel Area 4 [SEELNSSA4]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA4-1993-2021-ICESIMP2021-2
Area	Sandeel Area 4
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2015, 2017, 2018, 2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2018	102,000
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	48,000
Flim	-	-	-
ERlim	-	-	-

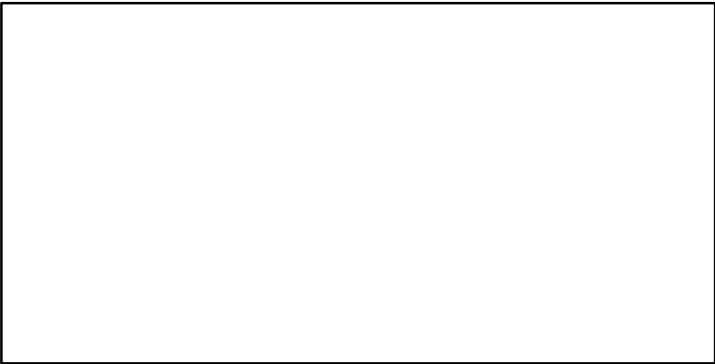
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	202,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	7.38×10^{10}	-	0
F	F-1/yr	2020	0.053	-	-
ER	ER-ratio	2021	0.046	-	-
TC	TC-MT	2021	19,600		
TL	TL-MT	2020	6600		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2018	1.912		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



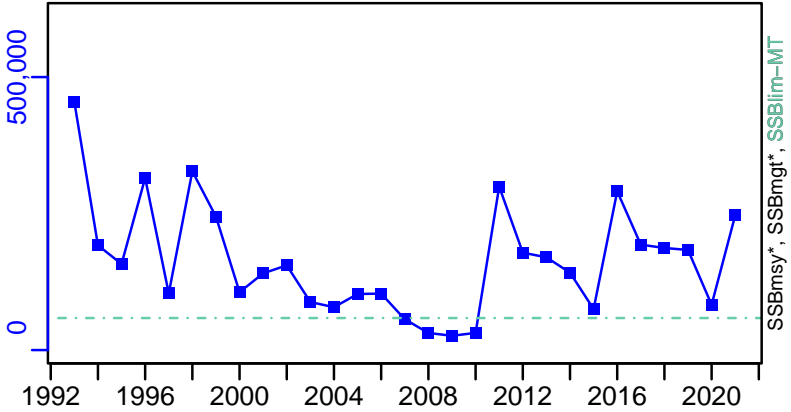
◆ Start Year ◆ End Year * No Data

Sand eel Sandeel Area 4 [SEELNSSA4]

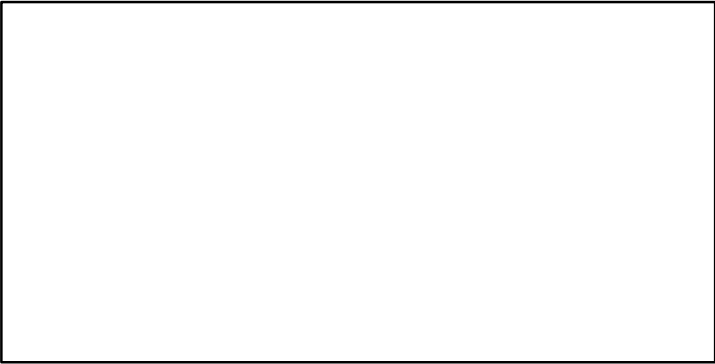
TB*



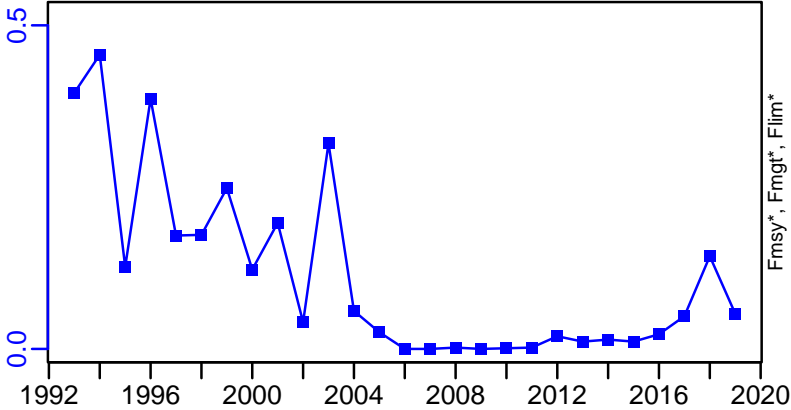
SSB-MT (1993–2021–ICESIMP2021–2)



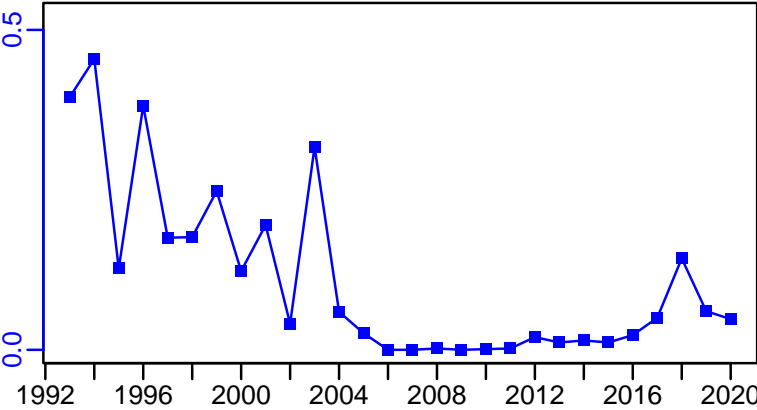
TN *



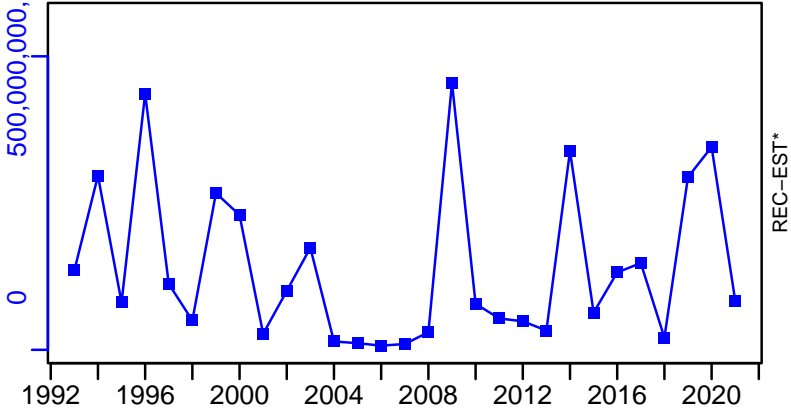
F-1/yr (1993–2020–ICESIMP2021–2)



ER-ratio (1993–2021–ICESIMP2021–2)

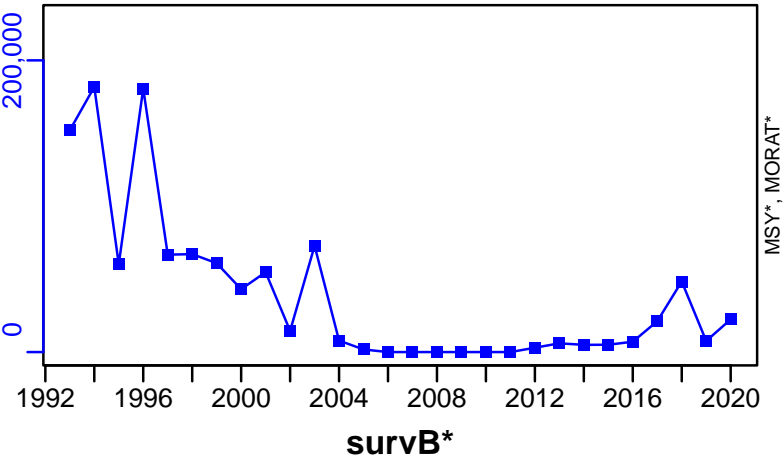


R-E00 (1993–2021–ICESIMP2021–2)



Sand eel Sandeel Area 4 [SEELNSSA4]

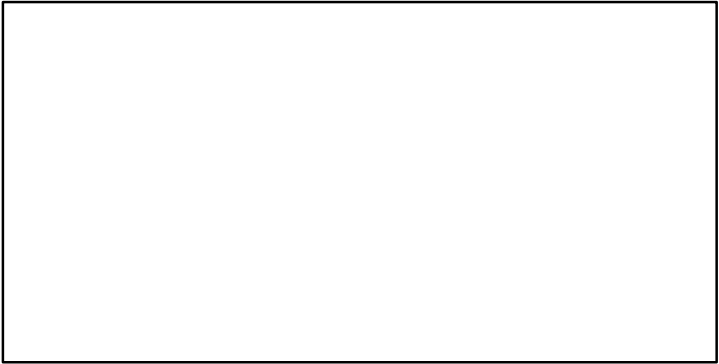
TC-MT, TL*, RecC* (1993-2021-ICESIMP2021-2)



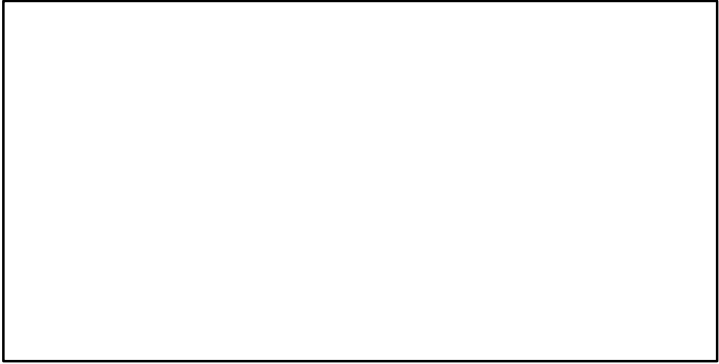
TAC*, Cpair*, Cadv*



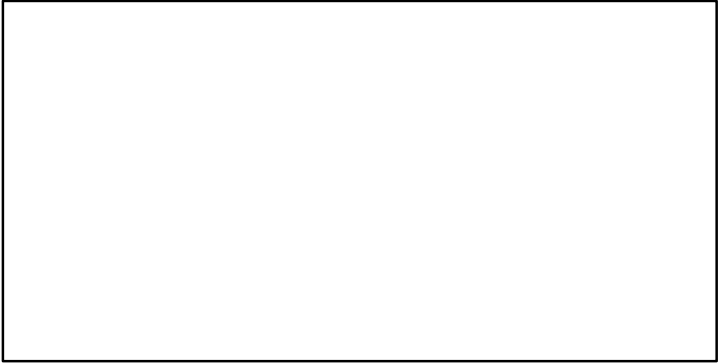
CPUE*



EFFORT*



CdivMSY*



Sand eel Sandeel Area 5 [SEELNSSA5]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA5-1982-2020-ICESIMP2021-2
Area	Sandeel Area 5
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2016, 2018, 2020, 2015, 2015

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	0		
TL	TL-MT	2015	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

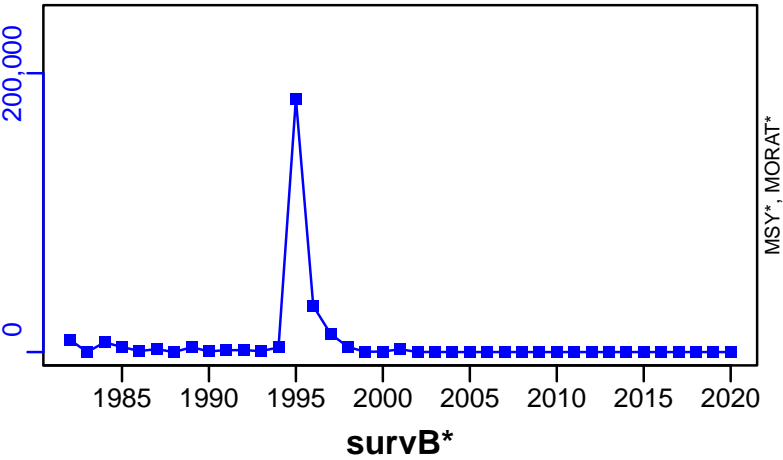


Recruits*



Sand eel Sandeel Area 5 [SEELNSSA5]

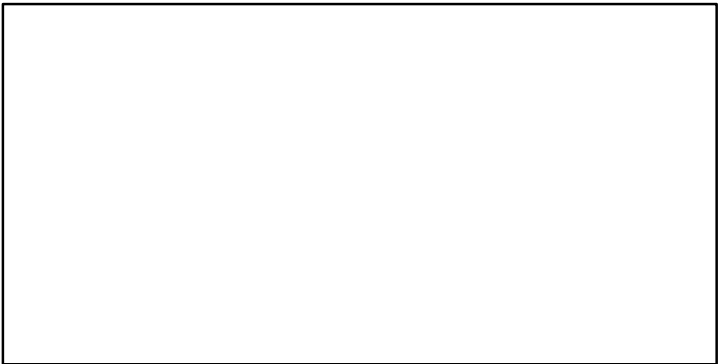
TC-MT, TL*, RecC* (1982-2020-ICESIMP2021-2)



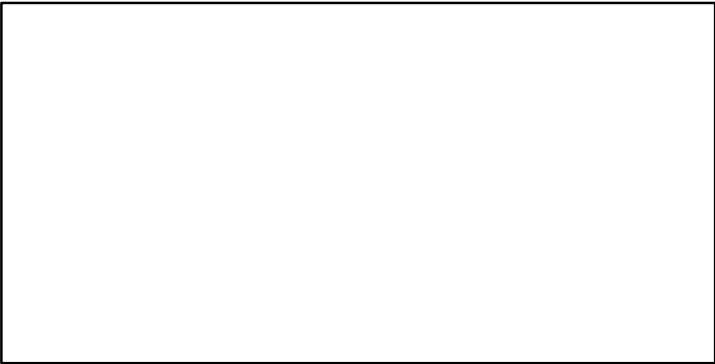
TAC*, Cpair*, Cadv*



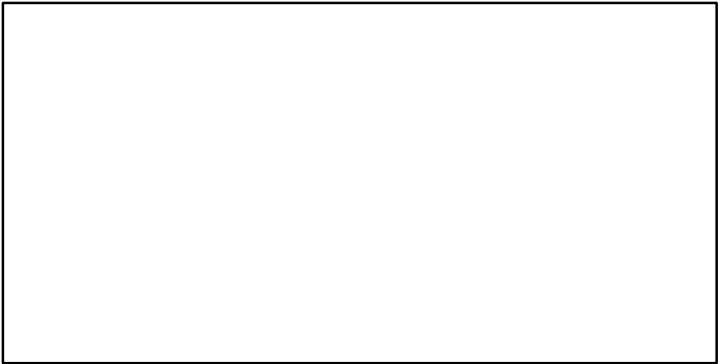
CPUE*



EFFORT*



CdivMSY*



Sand eel Sandeel Area 6 [SEELNSSA6]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA6-1982-2020-ICESIMP2021-2
Area	Sandeel Area 6
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2020, 2015, 2015, 2016, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	177		
TL	TL-MT	2016	123		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

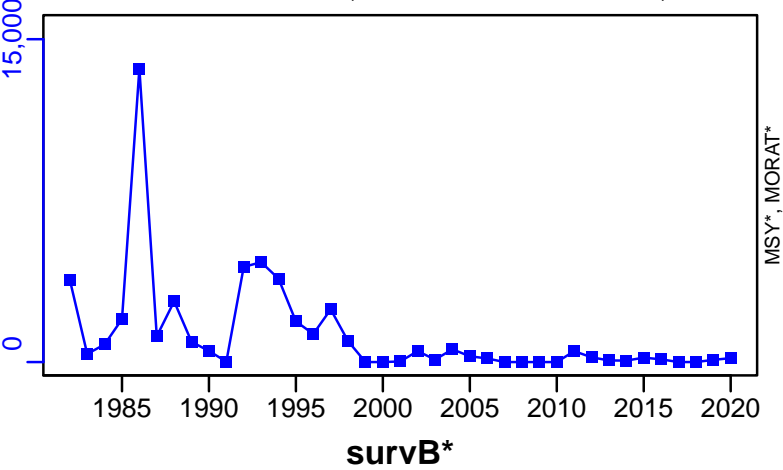


Recruits*



Sand eel Sandeel Area 6 [SEELNSSA6]

TC-MT, TL*, RecC* (1982-2020-ICESIMP2021-2)



TAC*, Cpair*, Cadv*



CPUE*



EFFORT*



CdivMSY*



Sand eel Sandeel Area 7 [SEELNSSA7]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELNSSA7-1982-2020-ICESIMP2021-2
Area	Sandeel Area 7
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2020, 2015, 2015, 2016, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	0		
TL	TL-MT	2015	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY*



Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*

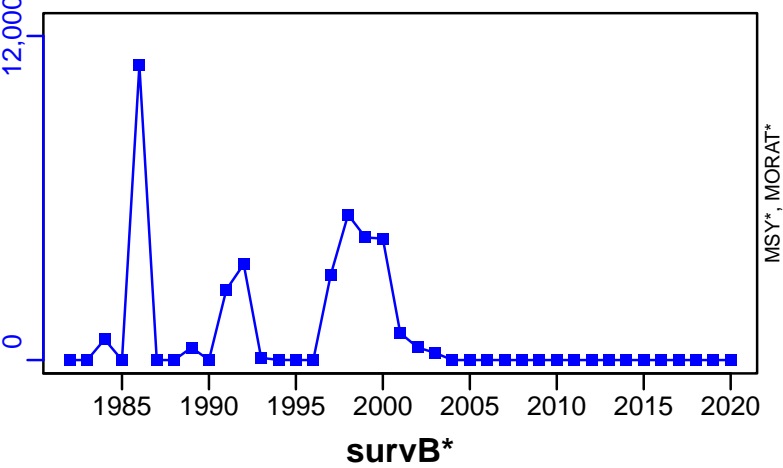


Recruits*



Sand eel Sandeel Area 7 [SEELNSSA7]

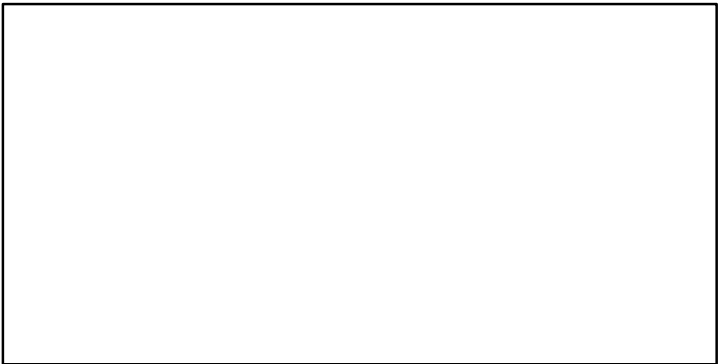
TC-MT, TL*, RecC* (1982-2020-ICESIMP2021-2)



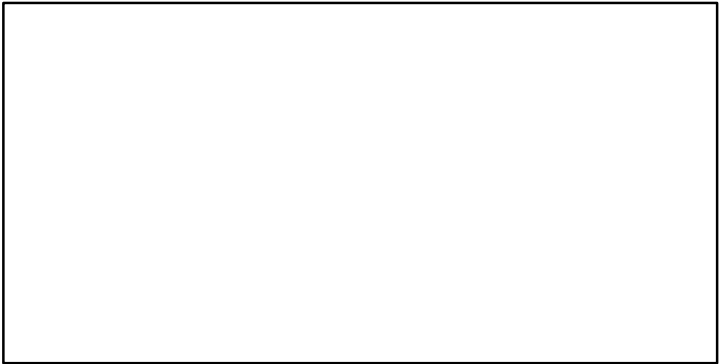
TAC*, Cpair*, Cadv*



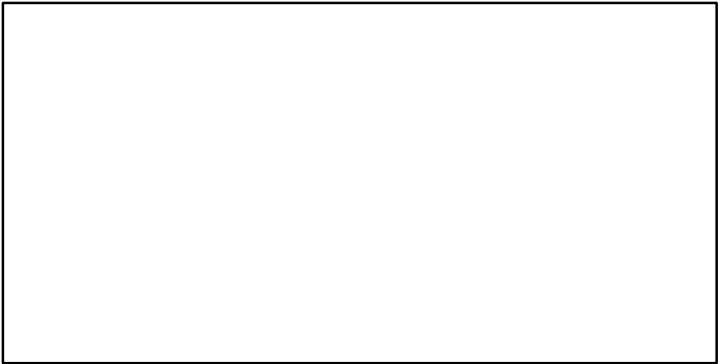
CPUE*



EFFORT*



CdivMSY*



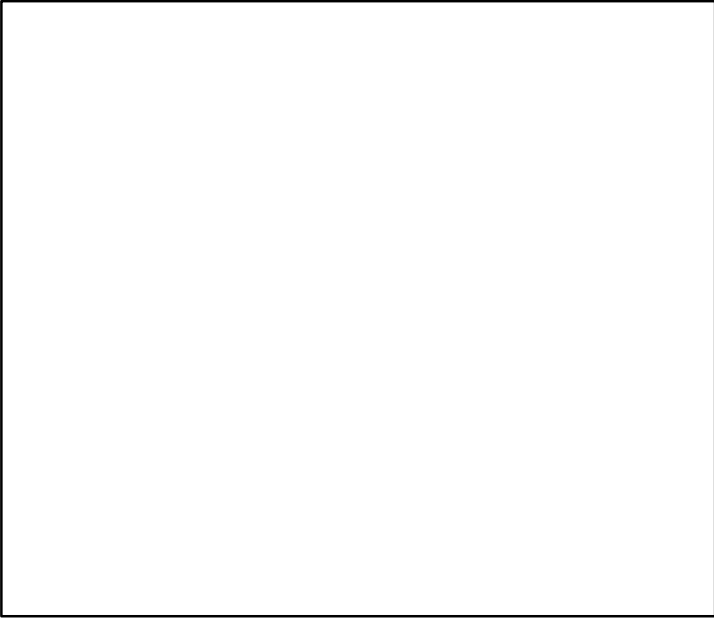
Sand eel West of Scotland [SEELVIa]

Metadata	
Scientific Name	Ammodytes spp
Current Assess ID	HAWG-SEELVIa-1970-2020-ICESIMP2021-2
Area	West of Scotland
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2015, 2017, 2020

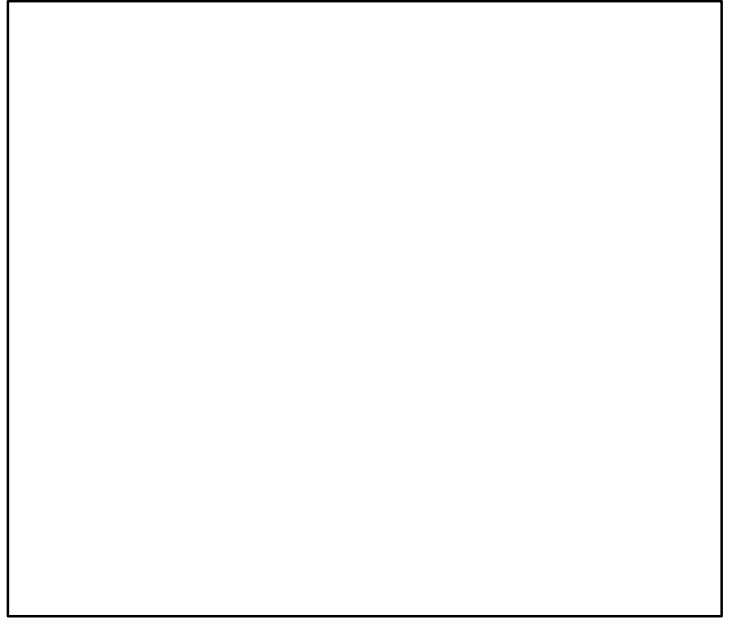
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	2.69		
TL	TL-MT	2017	0		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

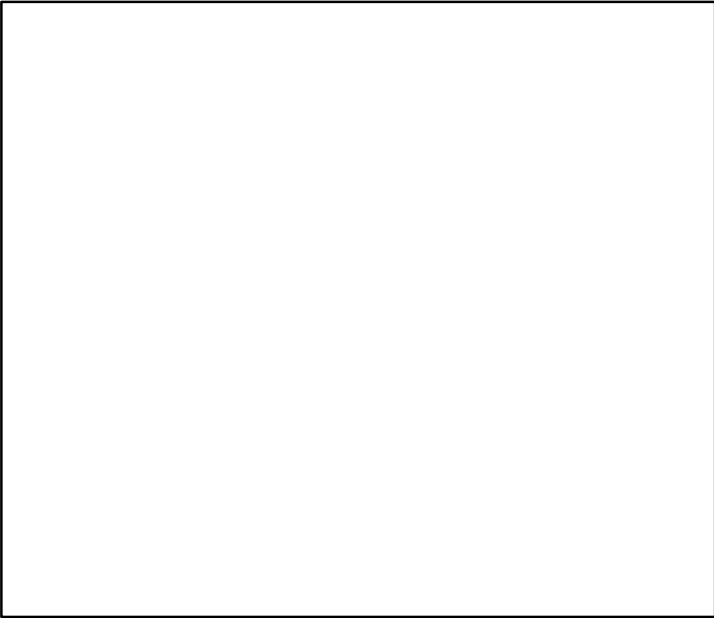
Kobe MSY*



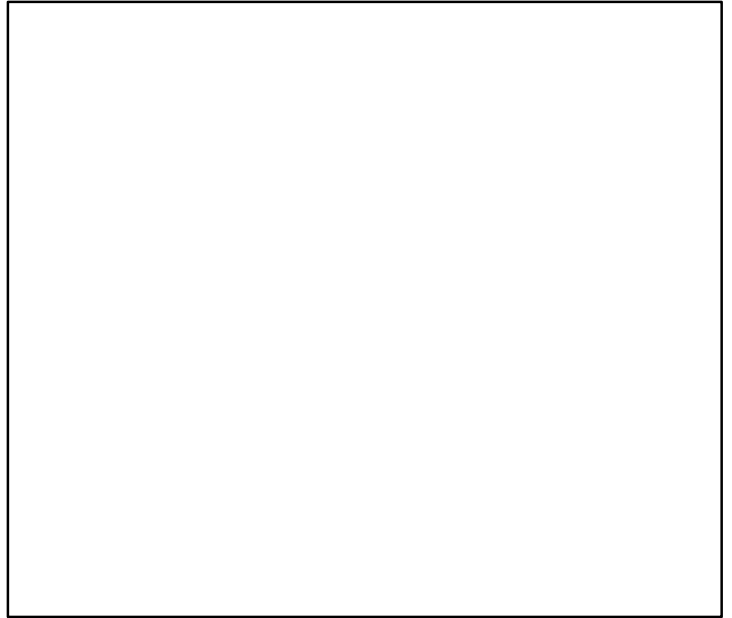
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

Sand eel West of Scotland [SEELVla]

TB*



SSB*



TN *



F*



ER*



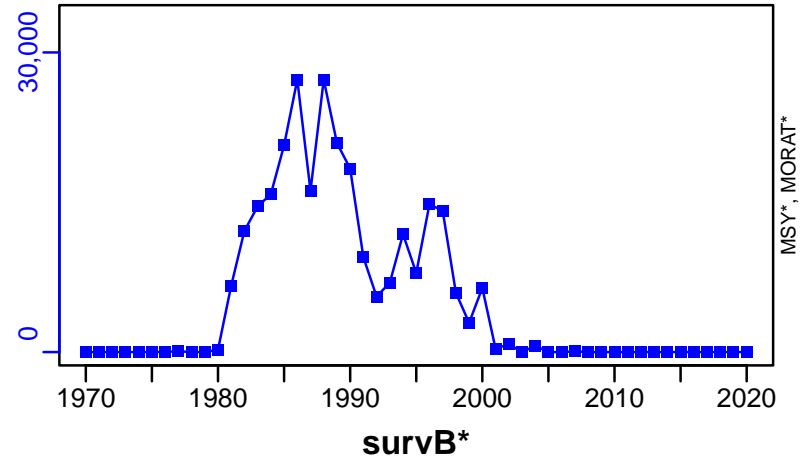
Recruits*



■ Listed time series	- - - Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	* No Data

Sand eel West of Scotland [SEELVla]

TC-MT, TL*, RecC* (1970–2020–ICESIMP2021–2)



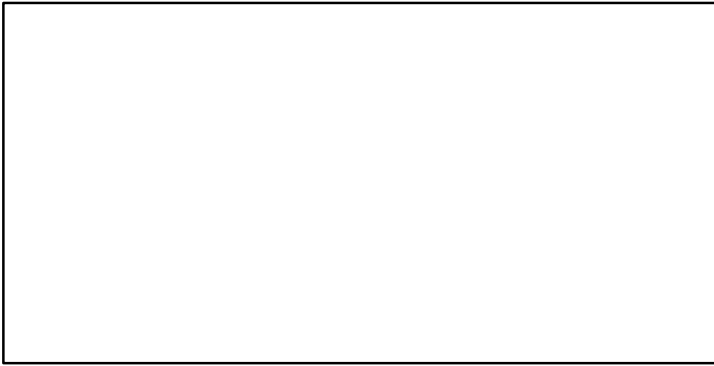
TAC*, Cpair*, Cadv*



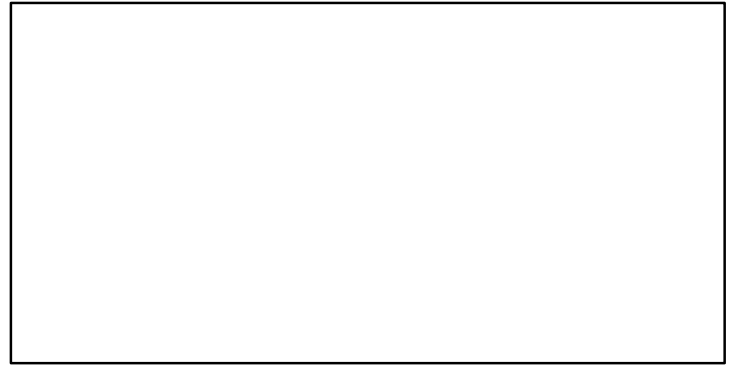
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Sprat Baltic Areas 22-32 [SPRAT22-32]

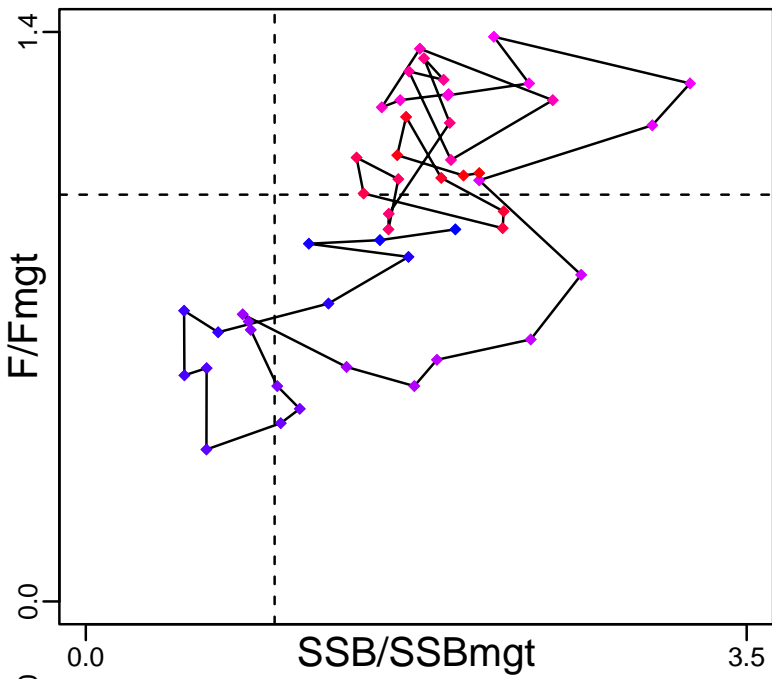
Metadata	
Scientific Name	Sprattus sprattus
Current Assess ID	WGBFAS-SPRAT22-32-1973-2023-ICESIMP2024
Area	Baltic Areas 22-32
Management Authority	International Council for the Exploration of the Sea
Assessor	Baltic Fisheries Assessment Working Group
Asmts in RAM	2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2023, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2021	0.31
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2023	541,000
Fmgt	Fmgt-1/yr	2023	0.34
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2023	459,000
Flim	Flim-1/yr	2023	0.49
ERlim	-	-	-

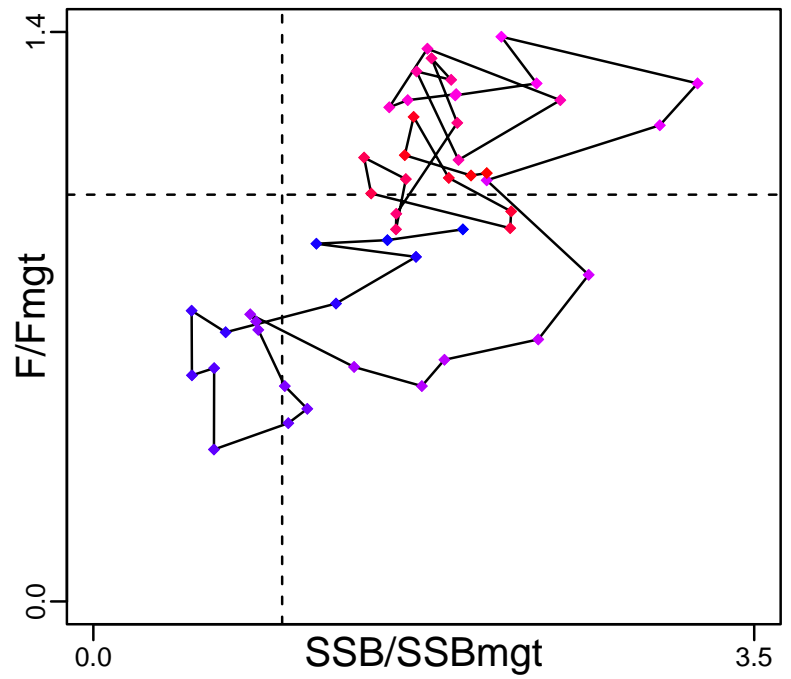
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	1,664,000	-	-
SSB	SSB-MT	2023	903,773	-	-
TN	-	-	-	-	-
R	R-E00	2023	43,773,000	-	1
F	F-1/yr	2023	0.358	-	3 to 5
ER	ER-calc-ratio	2019	0.176	-	-
TC	TC-MT	2021	272,000		
TL	TL-MT	2023	301,409		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2021	1.187		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2023	1.671		
F/Fmgt	F-1/yr/Fmgt-1/yr	2023	1.053		
ER/ERmgt	-	-	-		

Sprat Baltic Areas 22–32 [SPRAT22–32]

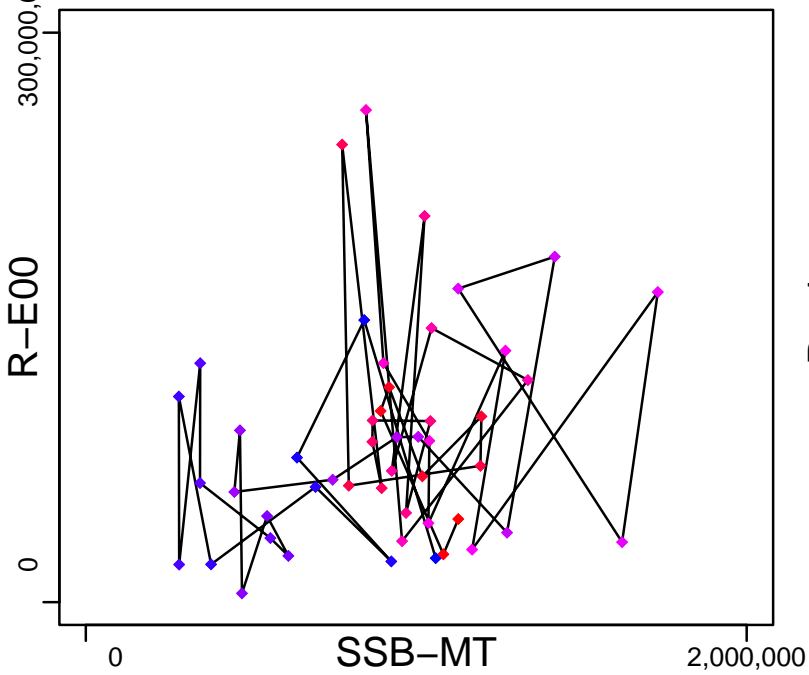
Kobe MSYpref (1973–2023–ICESIMP2024)



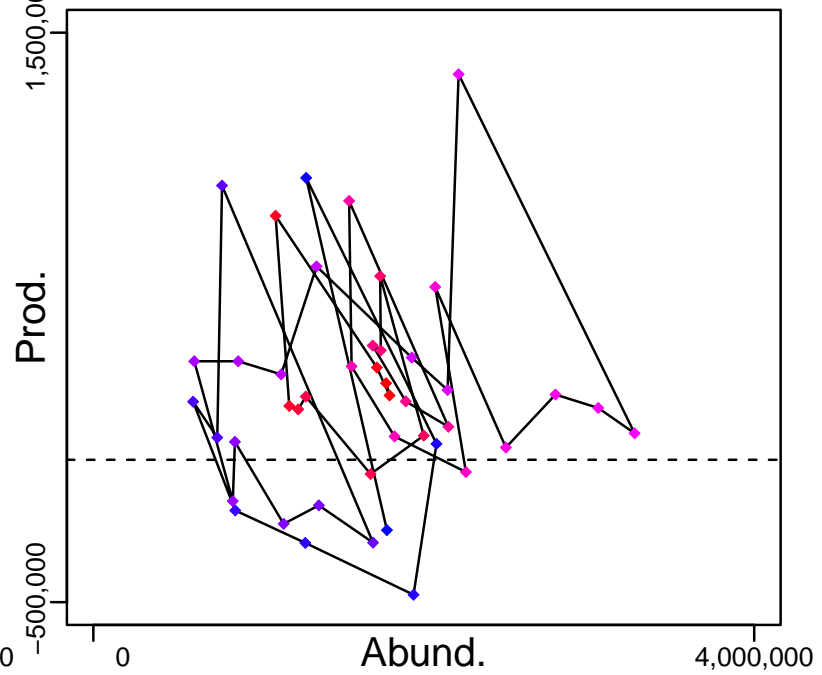
Kobe MGTpref (1973–2023–ICESIMP2024)



Spawner Recruit (1973–2023–ICESIMP2024)

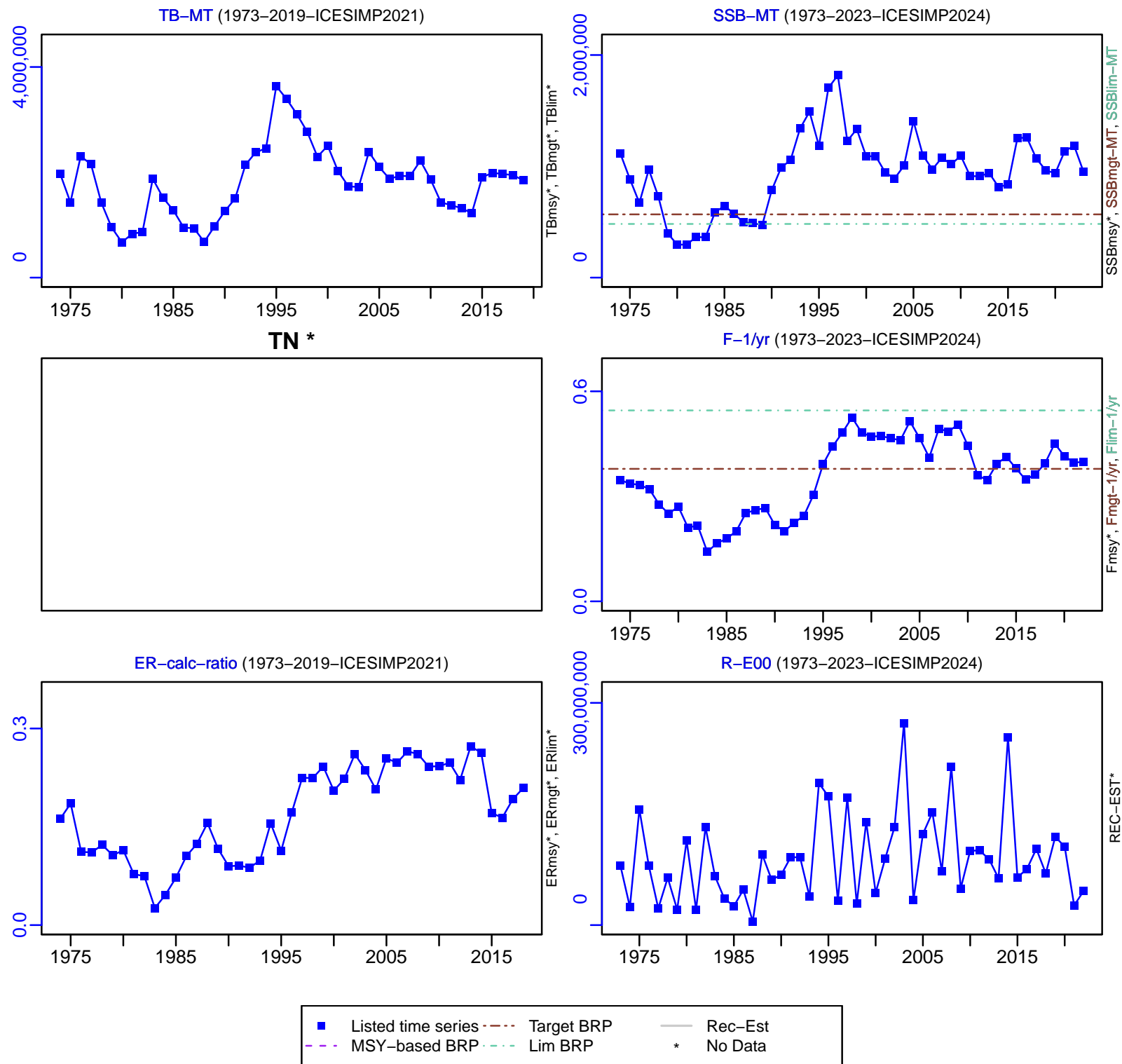


Production (1973–2019–ICESIMP2021)



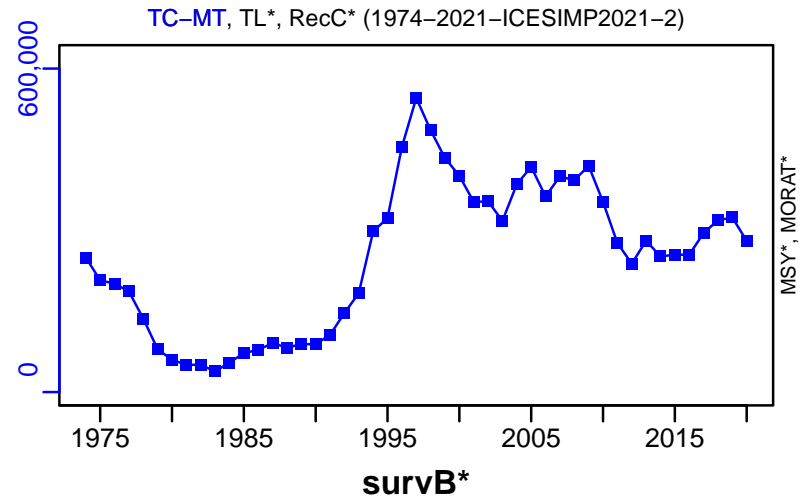
◆ Start Year ◆ End Year * No Data

Sprat Baltic Areas 22–32 [SPRAT22–32]

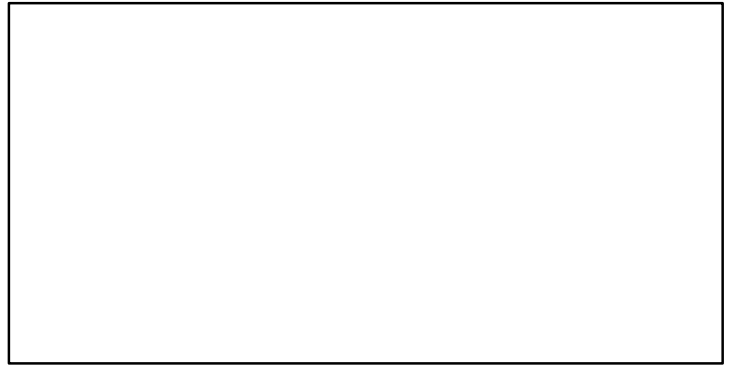


Sprat Baltic Areas 22–32 [SPRAT22–32]

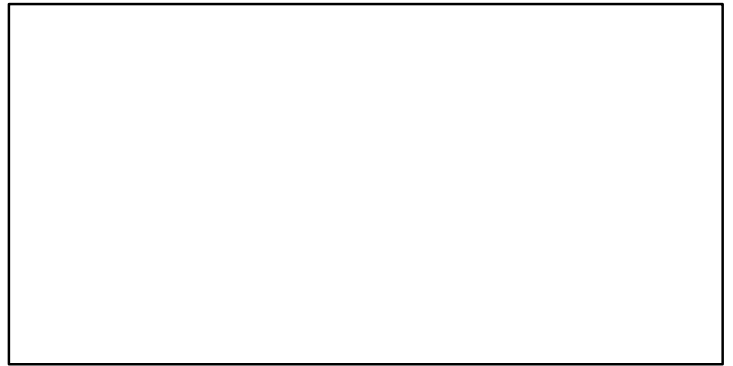
TC–MT, TL*, RecC* (1974–2021–ICESIMP2021–2)



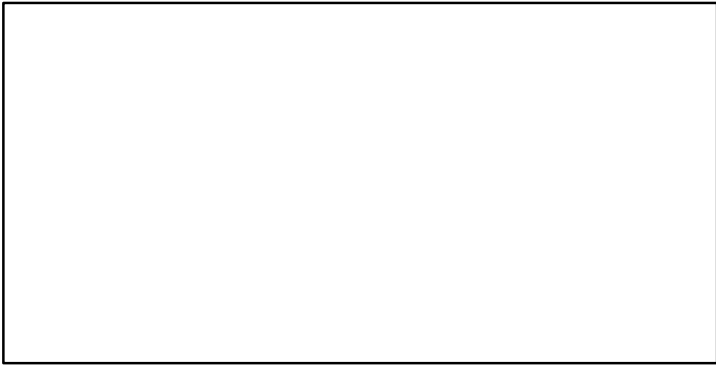
TAC*, Cpair*, Cadv*



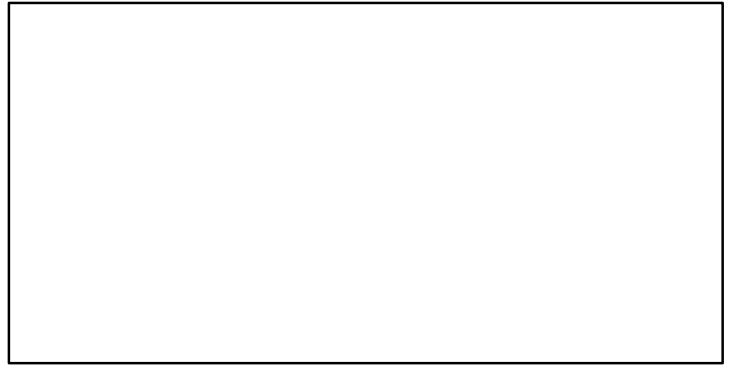
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Sprat ICES 3a-4 [SPRATIIIa-IV]

Metadata	
Scientific Name	Sprattus sprattus
Current Assess ID	HAWG-SPRATIIIa-IV-1974-2021-ICESIMP2021-2
Area	ICES 3a-4
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2021	94,000
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2021	162,000	-	-
TN	-	-	-	-	-
R	R-E00	2021	1.27×10^8	-	0
F	F-1/yr	2021	1.671	-	-
ER	-	-	-	-	-
TC	TC-MT	2020	137,000		
TL	TL-MT	2021	179,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

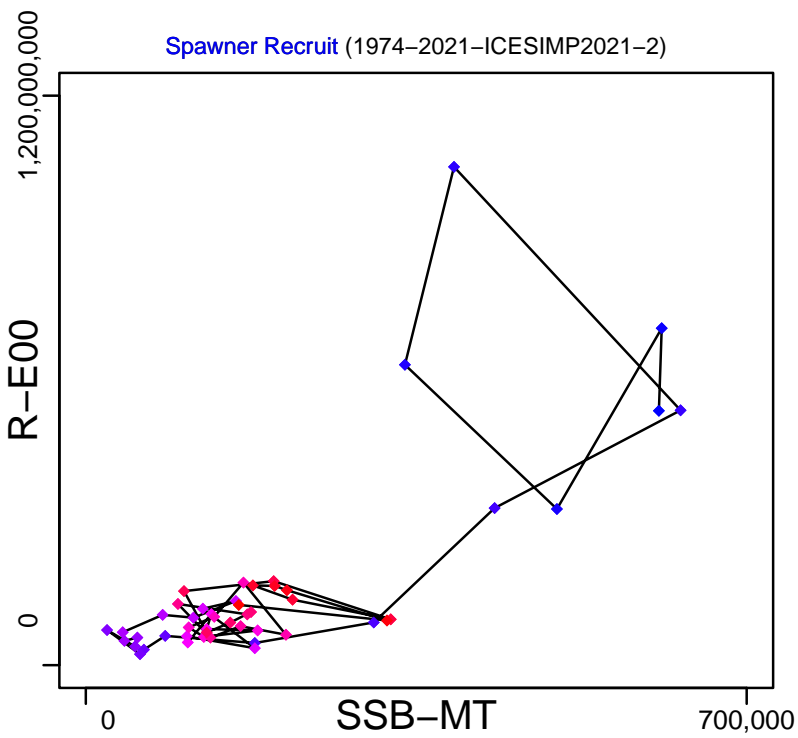
Kobe MSY*



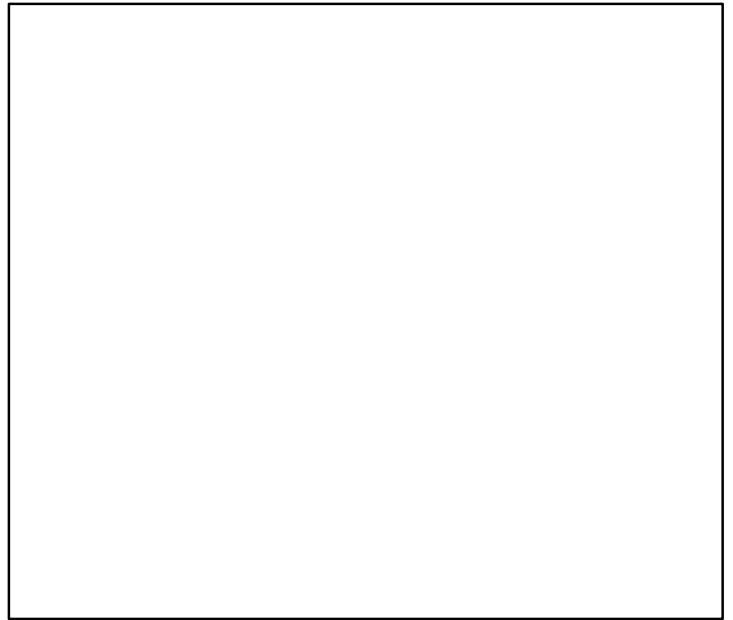
Kobe MGT*



Spawner Recruit (1974-2021-ICESIMP2021-2)



Production*



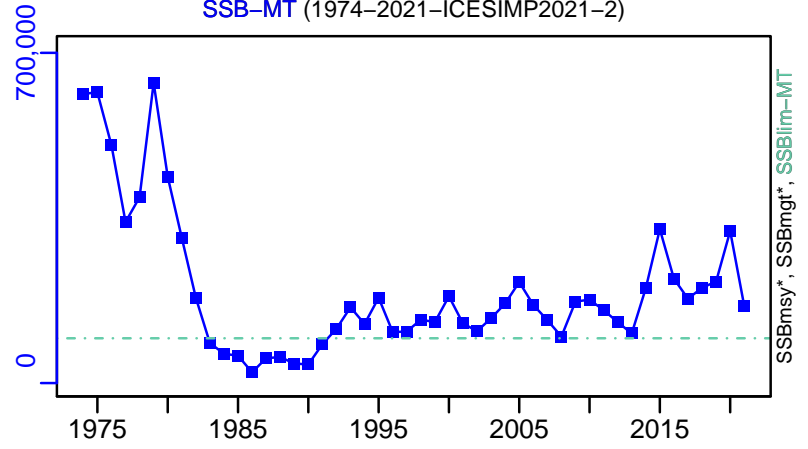
◆ Start Year ◆ End Year * No Data

Sprat ICES 3a-4 [SPRATIIIa-IV]

TB*



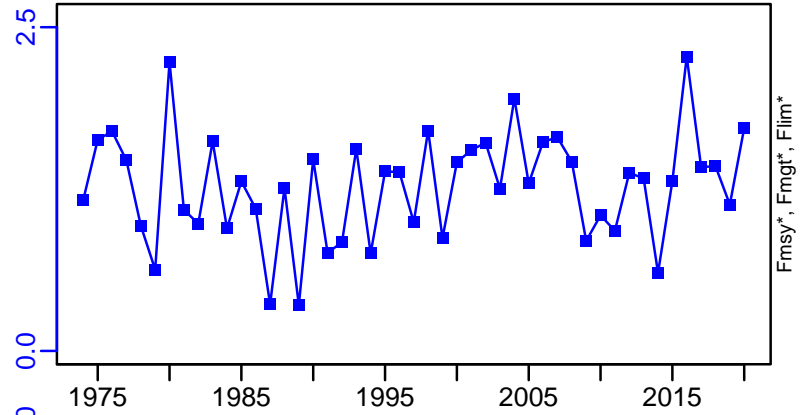
SSB-MT (1974-2021-ICESIMP2021-2)



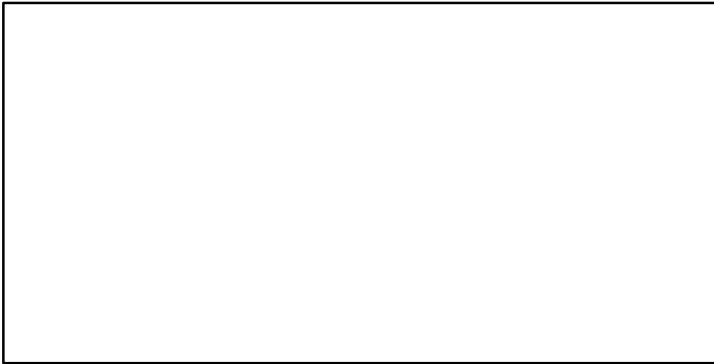
TN *



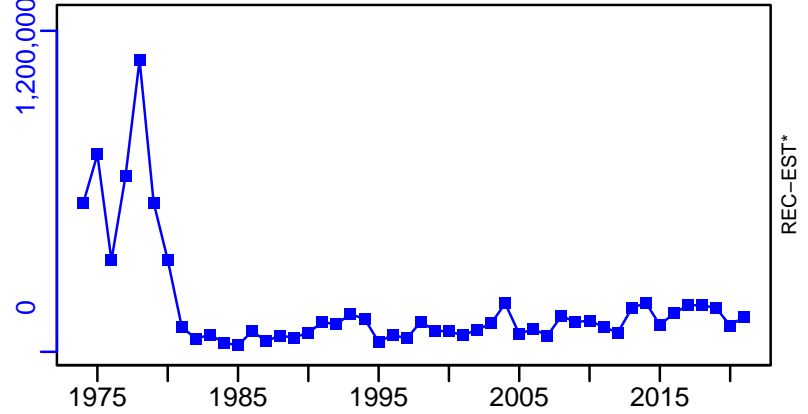
F-1/yr (1974-2021-ICESIMP2021-2)



ER*

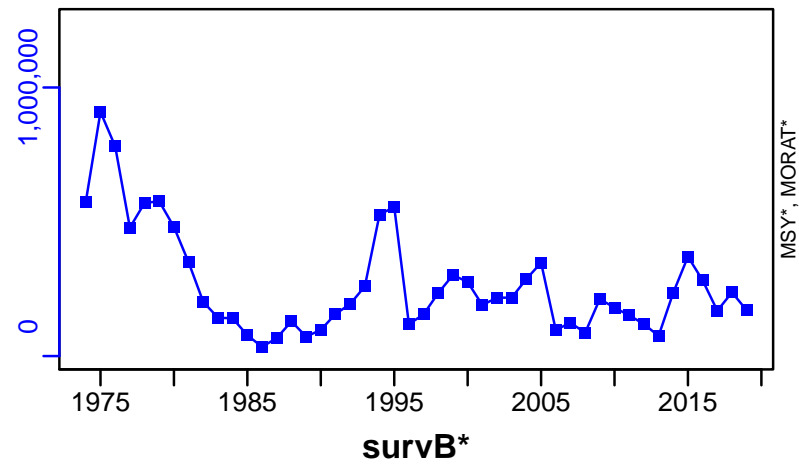


R-E00 (1974-2021-ICESIMP2021-2)

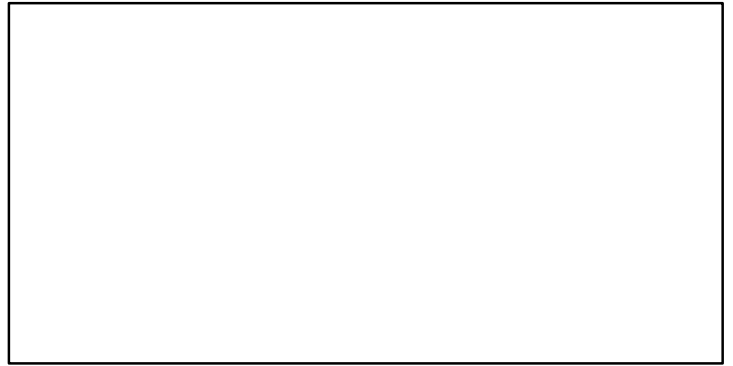


Sprat ICES 3a-4 [SPRATIIIa-IV]

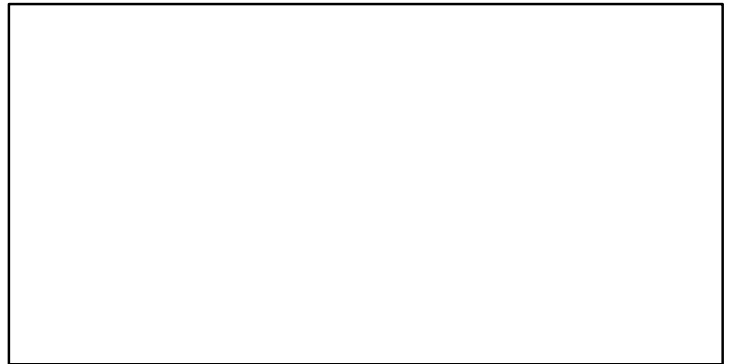
TC-MT, TL*, RecC* (1974-2020-ICESIMP2021-2)



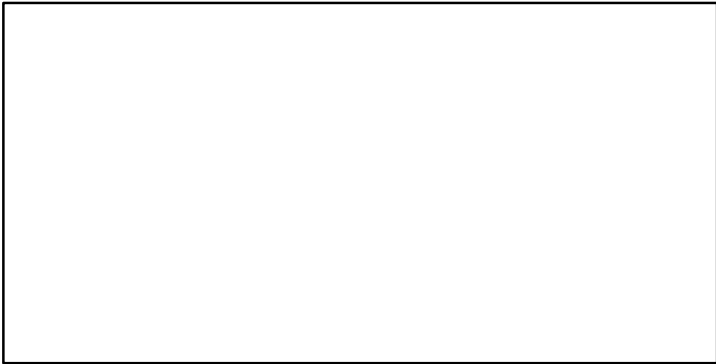
TAC*, Cpair*, Cadv*



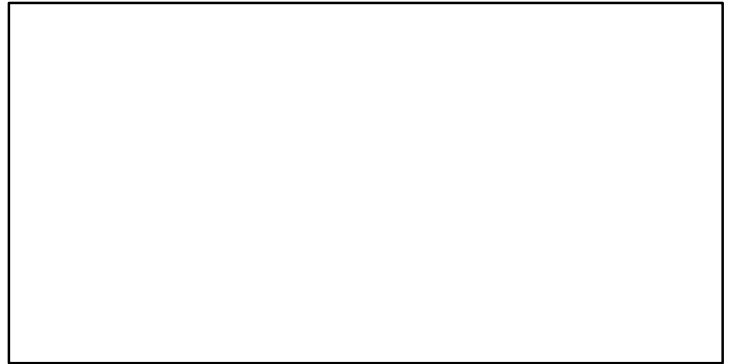
CPUE*



EFFORT*



CdivMSY*



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data

Sprat ICES 7de [SPRATVIIde]

Metadata	
Scientific Name	Sprattus sprattus
Current Assess ID	HAWG-SPRATVIIde-1977-2020-ICESIMP2021-2
Area	ICES 7de
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2018, 2019, 2020, 2016, 2016, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	SSB-MT	2018	17,091	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	F-relative	2020	0.025	-	-
ER	ER-ratio	2017	0.001	-	-
TC	TC-MT	2020	873		
TL	TL-MT	2018	2252		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

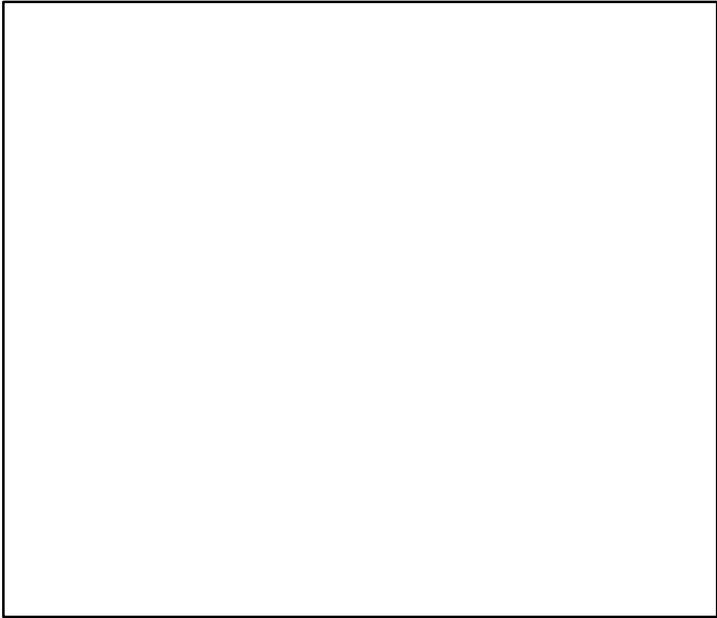
Kobe MSY*



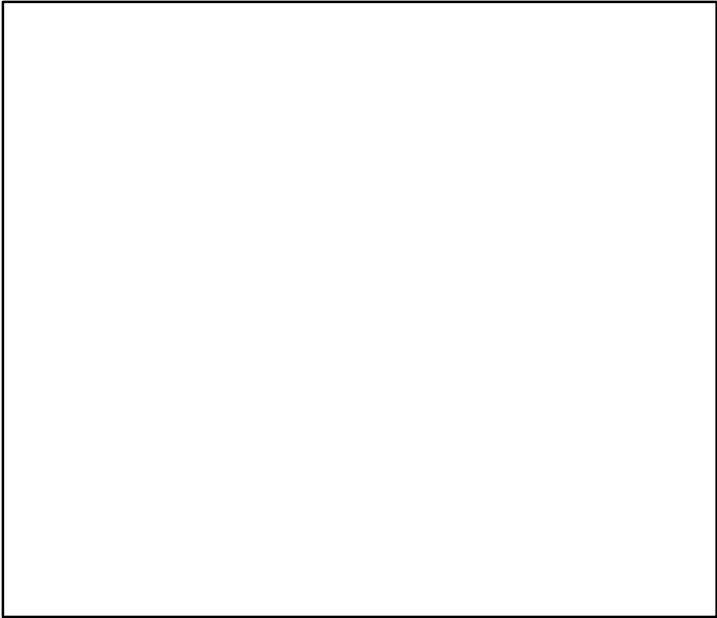
Kobe MGT*



Spawner Recruit*



Production*



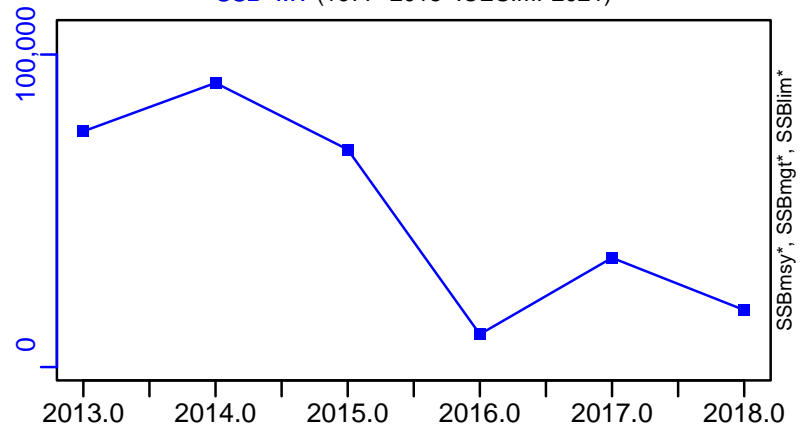
◆ Start Year ◆ End Year * No Data

Sprat ICES 7de [SPRATVIIde]

TB*



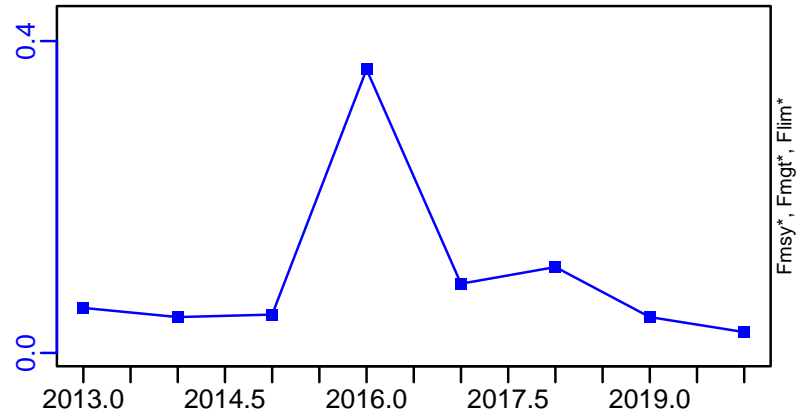
SSB-MT (1977–2018–ICESIMP2021)



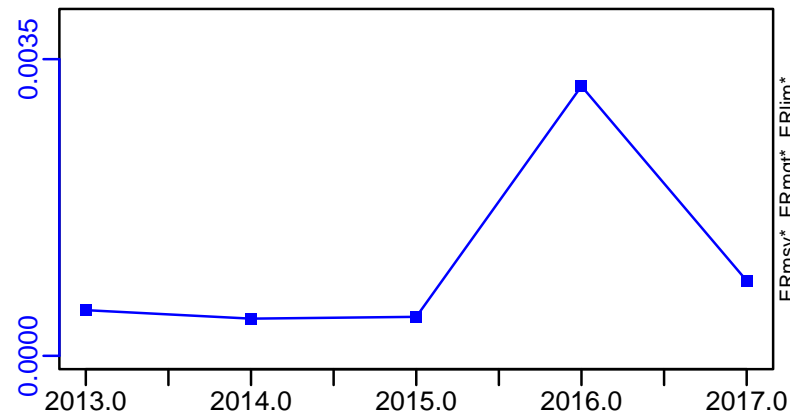
TN *



F-relative (1977–2020–ICESIMP2021–2)

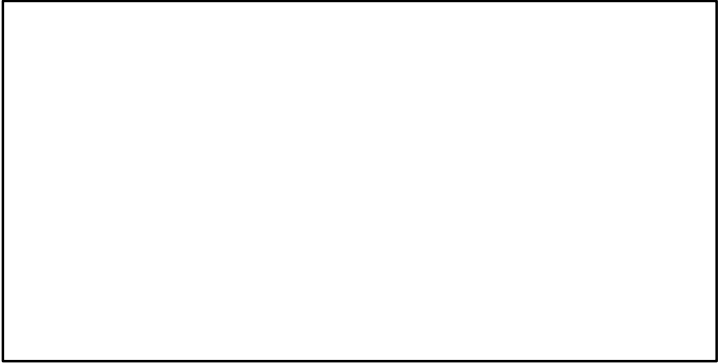
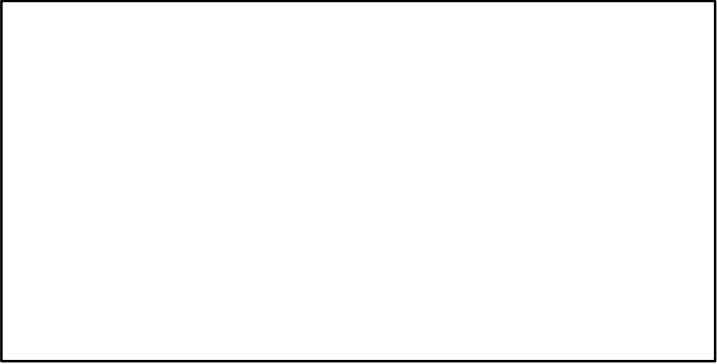
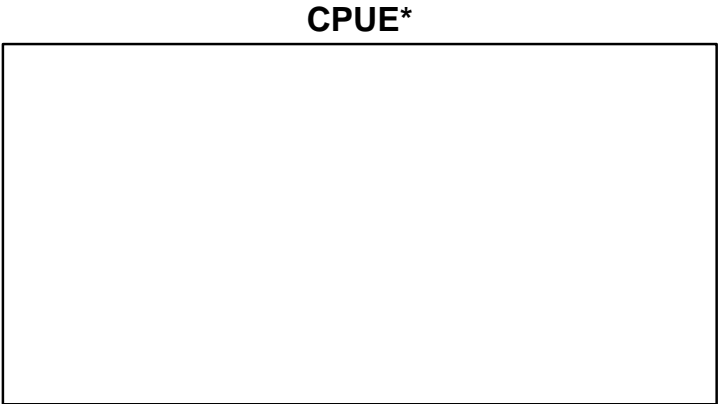
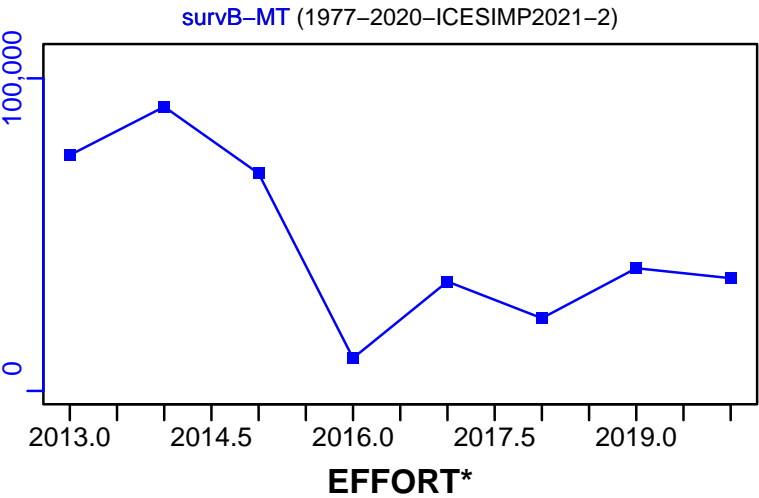
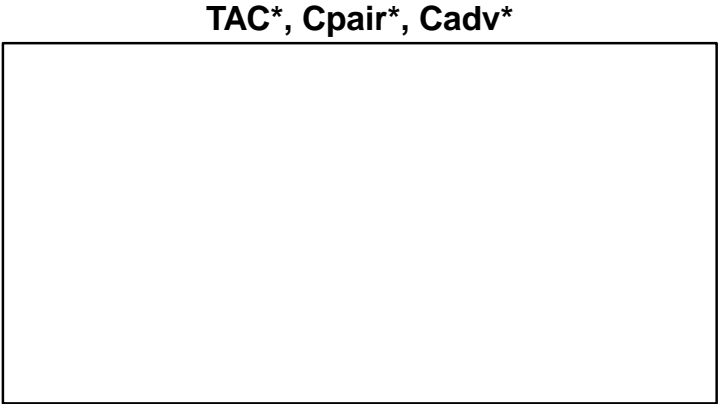
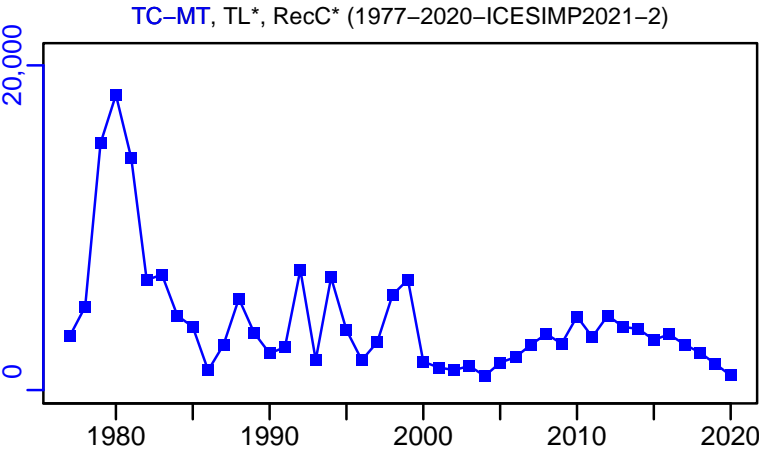


ER-ratio (1985–2017–ICESIMP2018)



Recruits*





Sprat ICES 6-7abcfghijk [SPRATVI-VIIabcfghijk]

Metadata	
Scientific Name	Sprattus sprattus
Current Assess ID	HAWG-SPRATVI-VIIabcfghijk-1986-2020-ICESIMP2021-2
Area	ICES 6-7abcfghijk
Management Authority	International Council for the Exploration of the Sea
Assessor	Herring Assessment Working Group for the Area South of 62N
Asmts in RAM	2016, 2015, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2020	15,200		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

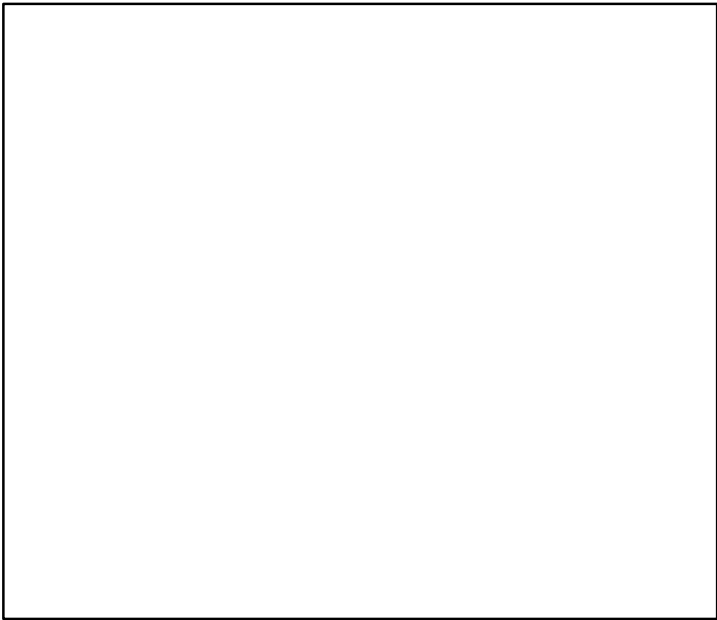
Kobe MSY*



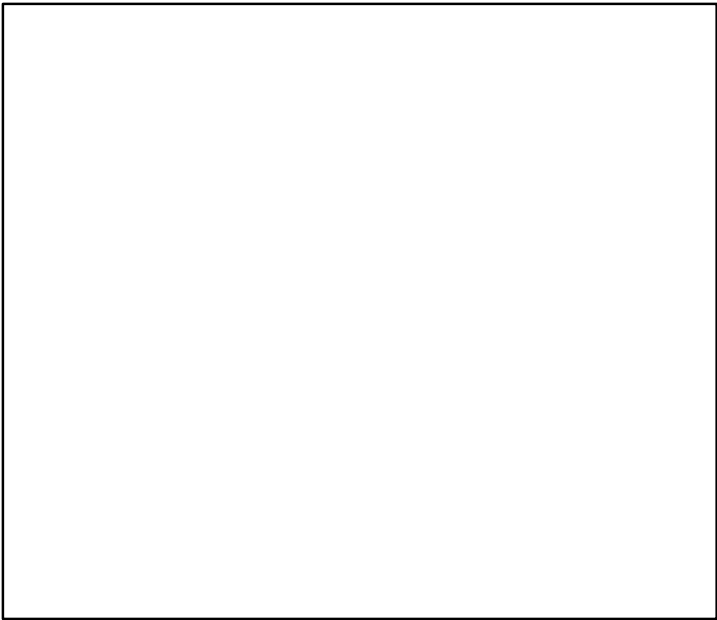
Kobe MGT*



Spawner Recruit*



Production*



◆ Start Year ◆ End Year * No Data

TB*



SSB*



TN *



F*



ER*



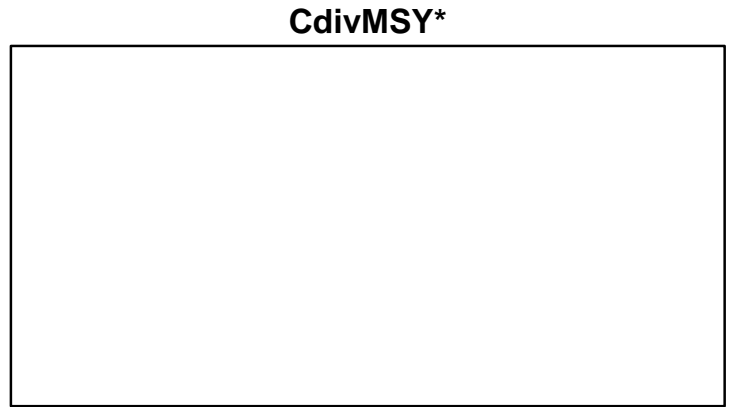
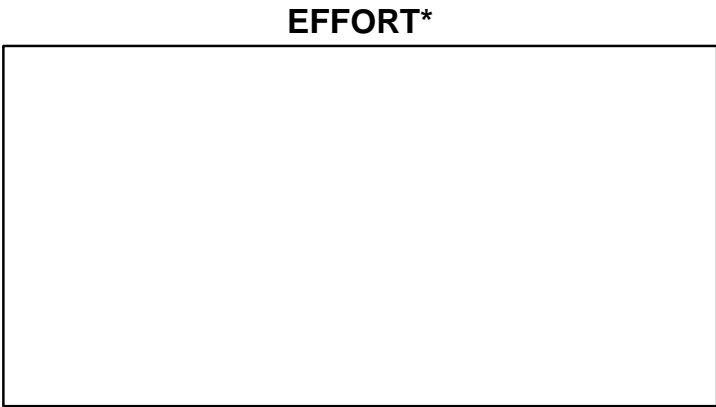
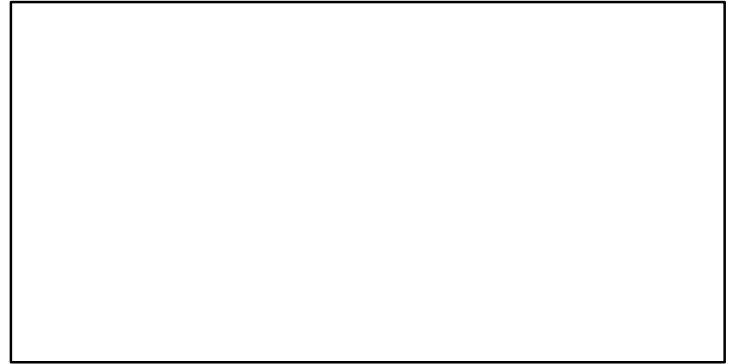
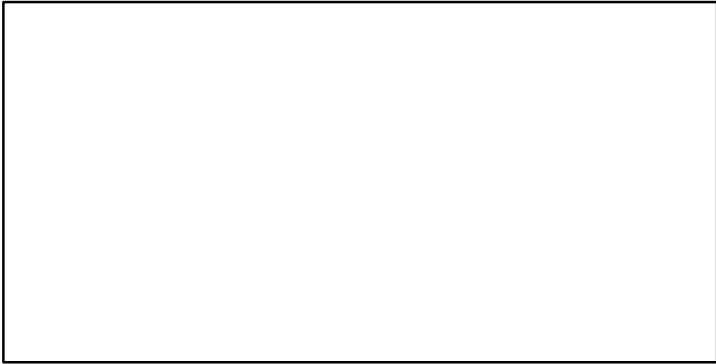
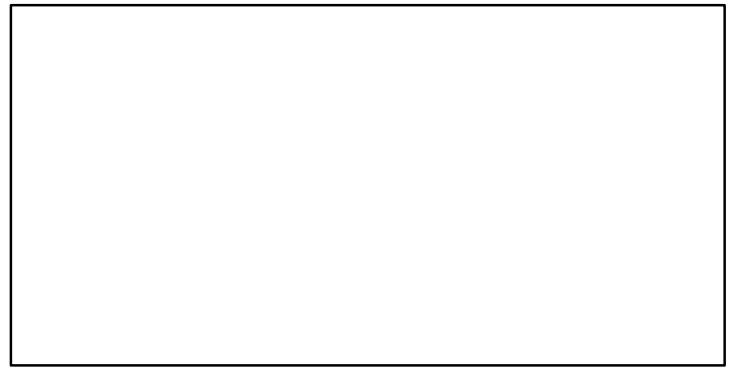
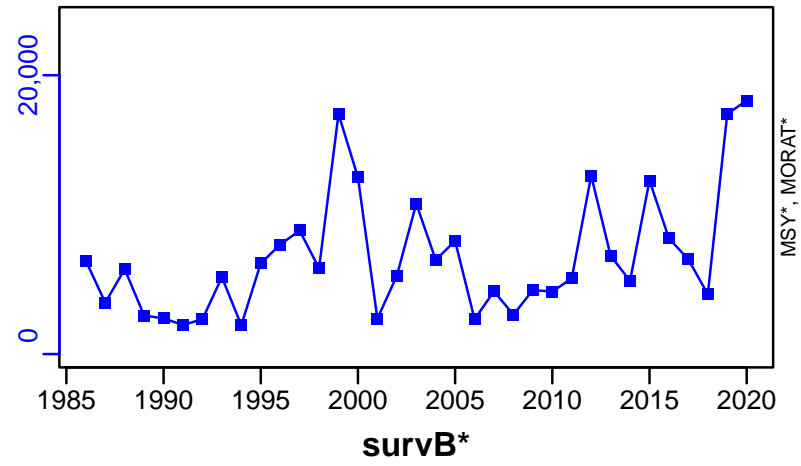
Recruits*



Sprat ICES 6–7abcfghijk [SPRATVI–VIIabcfghijk]

TL–MT, TC*, RecC* (1986–2020–ICESIMP2021–2)

TAC*, Cpair*, Cadv*



Sprat Black Sea [SPRBLKGSA29]

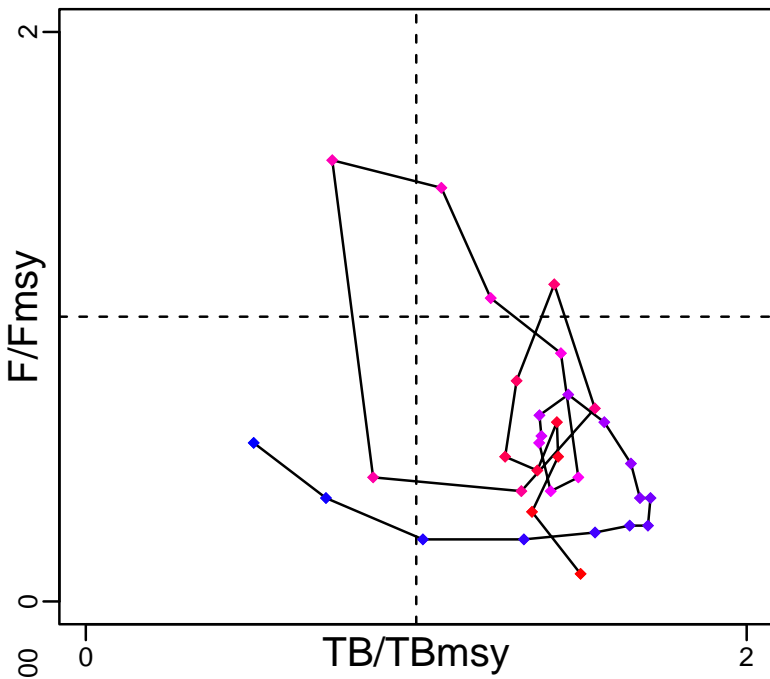
Metadata	
Scientific Name	Sprattus sprattus
Current Assess ID	SGSABS-SPRBLKGSA29-1991-2022-HIVELY
Area	Black Sea
Management Authority	General Fisheries Council for the Mediterranean, DG MARE, and national states
Assessor	Subregional Group on Stock Assessment for the Black Sea
Asmts in RAM	2022, 2020, 2010, 2014, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	TBmsy-MT	2022	166,832
SSBmsy	-	-	-
Fmsy	Fmsy-1/yr	2022	0.413
ERmsy	-	-	-
TBmgt	TBmgt-MT	2022	166,832
SSBmgt	-	-	-
Fmgt	Fmgt-1/yr	2022	0.413
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	M-1/yr	2010	0.95
TBlim	-	-	-
SSBlim	-	-	-
Flim	Flim-1/yr	2010	0.64
ERlim	-	-	-

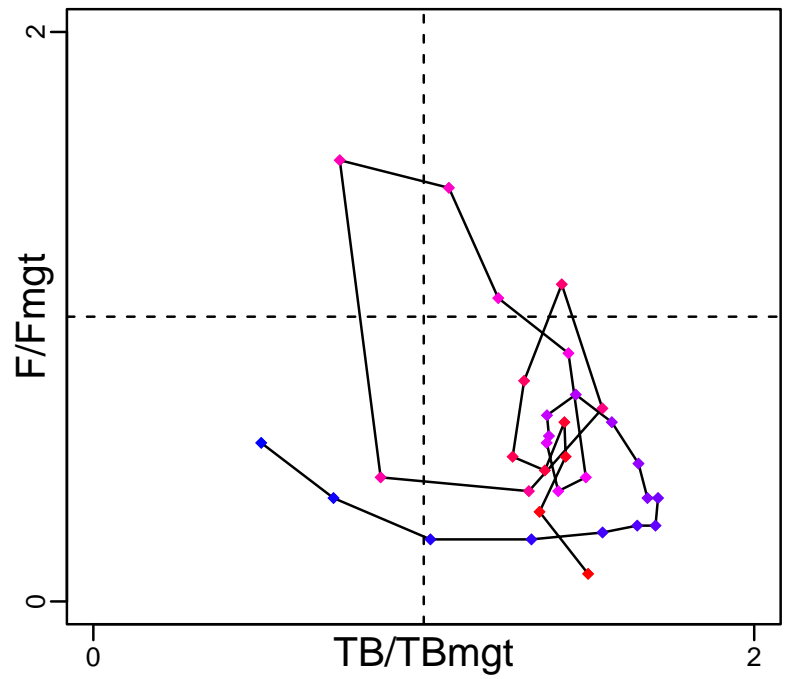
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2022	249,802	-	-
SSB	SSB-MT	2020	190,865	-	-
TN	-	-	-	-	-
R	R-E00	2020	2.02×10^{11}	-	-
F	F-1/yr	2022	0.04	-	-
ER	ER-calc-ratio	2022	0.052	-	-
TC	TC-MT	2022	12,951		
TL	TL-MT	2010	91,700		
TB/TBmsy	TB-MT/TBmsy-MT	2022	1.497		
SSB/SSBmsy	-	-	-		
F/Fmsy	F-1/yr/Fmsy-1/yr	2022	0.097		
ER/ERmsy	-	-	-		
TB/TBmgt	TB-MT/TBmgt-MT	2022	1.497		
SSB/SSBmgt	-	-	-		
F/Fmgt	F-1/yr/Fmgt-1/yr	2022	0.097		
ER/ERmgt	-	-	-		

Sprat Black Sea [SPRBLKGSA29]

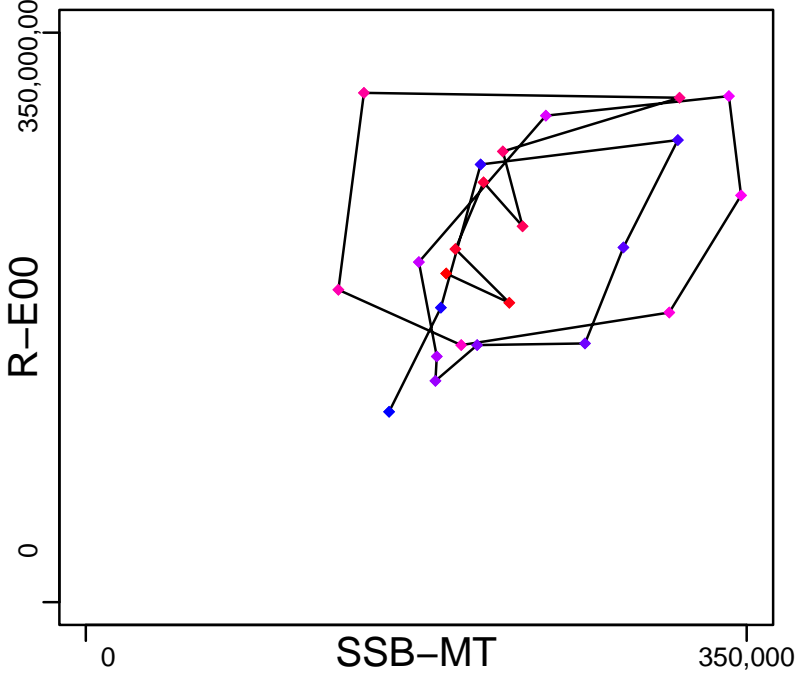
Kobe MSYpref (1991–2022–HIVELY)



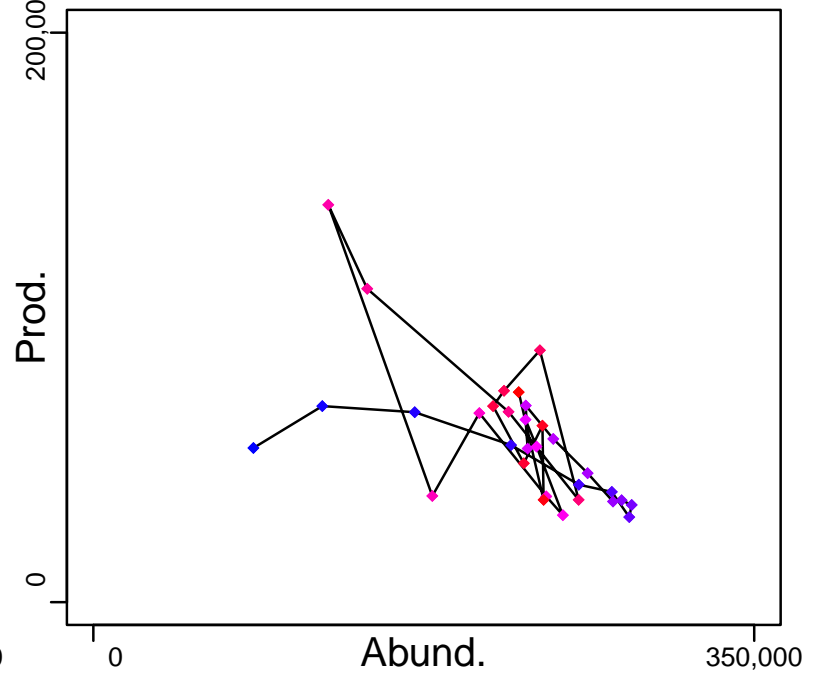
Kobe MGTpref (1991–2022–HIVELY)



Spawner Recruit (1997–2020–HIVELY)



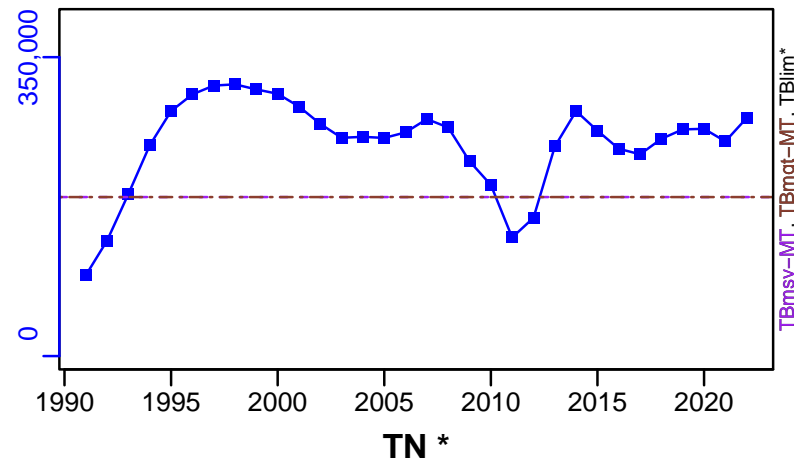
Production (1991–2022–HIVELY)



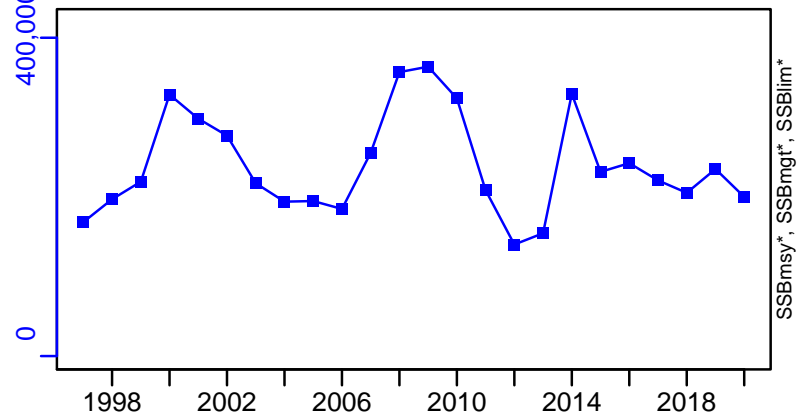
◆ Start Year ◆ End Year * No Data

Sprat Black Sea [SPRBLKGSA29]

TB-MT (1991–2022–HIVELY)



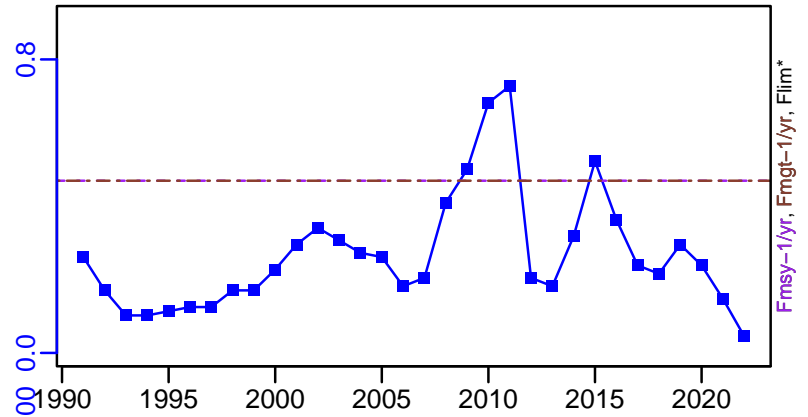
SSB-MT (1997–2020–HIVELY)



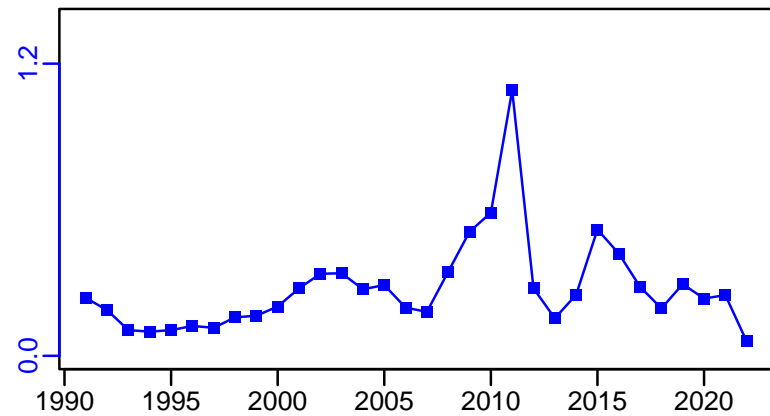
TN *



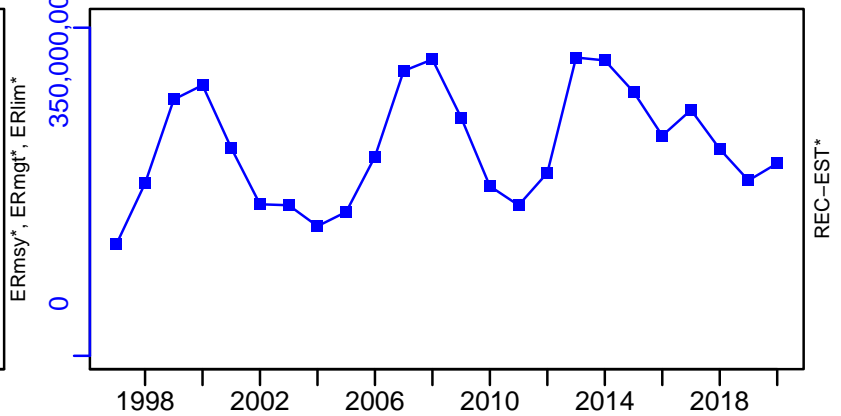
F-1/yr (1991–2022–HIVELY)



ER-calc-ratio (1991–2022–HIVELY)

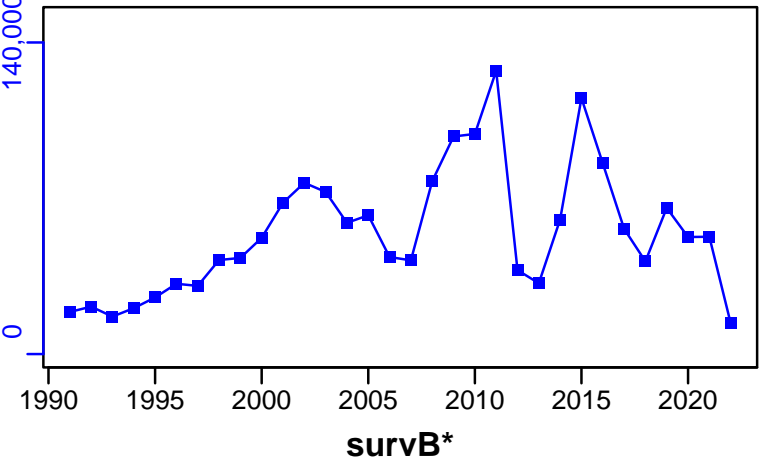


R-E00 (1997–2020–HIVELY)

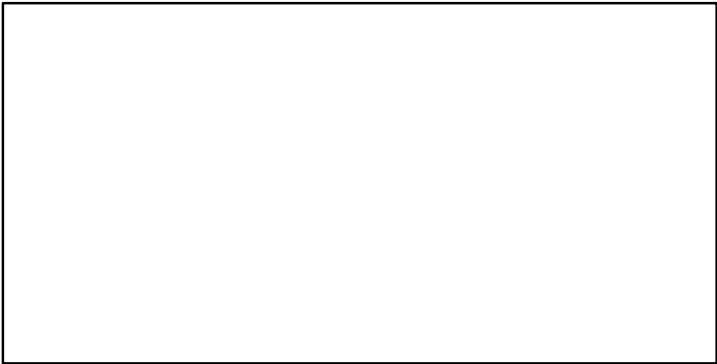


Sprat Black Sea [SPRBLKGSA29]

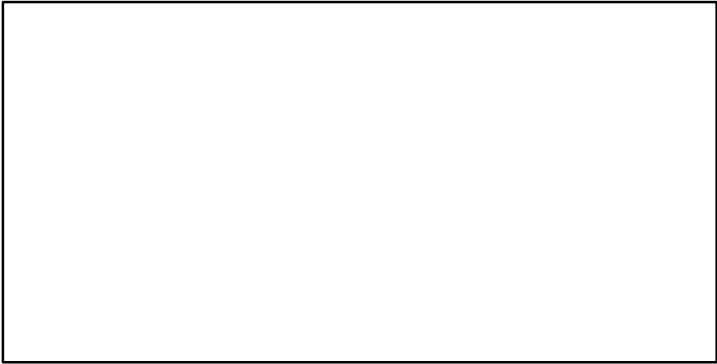
TC-MT, TL*, RecC* (1991-2022-HIVELY)



TAC*, Cpair*, Cadv*



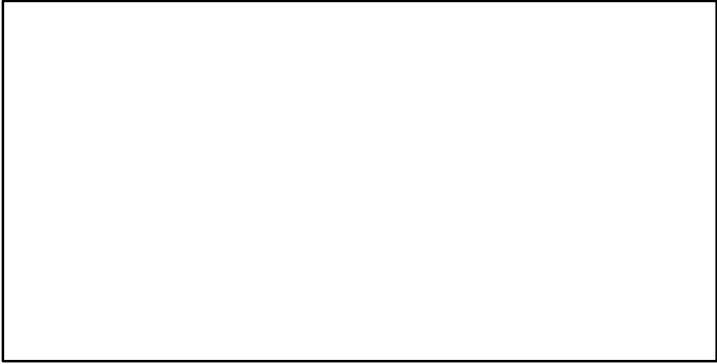
CPUE*



EFFORT*



CdivMSY*



Southern sardine Central-Southern Chile [SSARDCH]

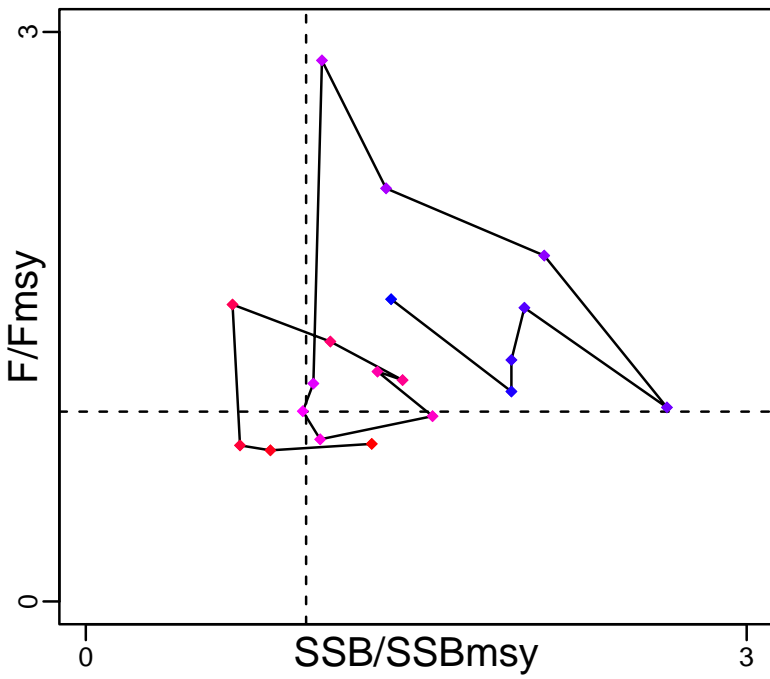
Metadata	
Scientific Name	Sprattus fuegensis
Current Assess ID	IFOPCH-SSARDCH-2002-2020-Quiroz
Area	Central-Southern Chile
Management Authority	Subsecretaria de Pesca
Assessor	Instituto de Fomento Pesquero - Chilean Fisheries Development Institute
Asmts in RAM	2020, 2012, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	SSBmsy-pr-MT	2020	29,549
Fmsy	Fmsy-pr-1/yr	2020	0.31
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	SSBmgt-MT	2016	32,400
Fmgt	Fmgt-1/yr	2016	0.34
ERmgt	-	-	-
TB0	-	-	-
SSB0	SSB0-MT	2020	53,725
MSY	MSY-MT	2020	17,982
M	M-1/yr	2020	0.83
TBlim	-	-	-
SSBlim	SSBlim-MT	2020	14,774
Flim	-	-	-
ERlim	-	-	-

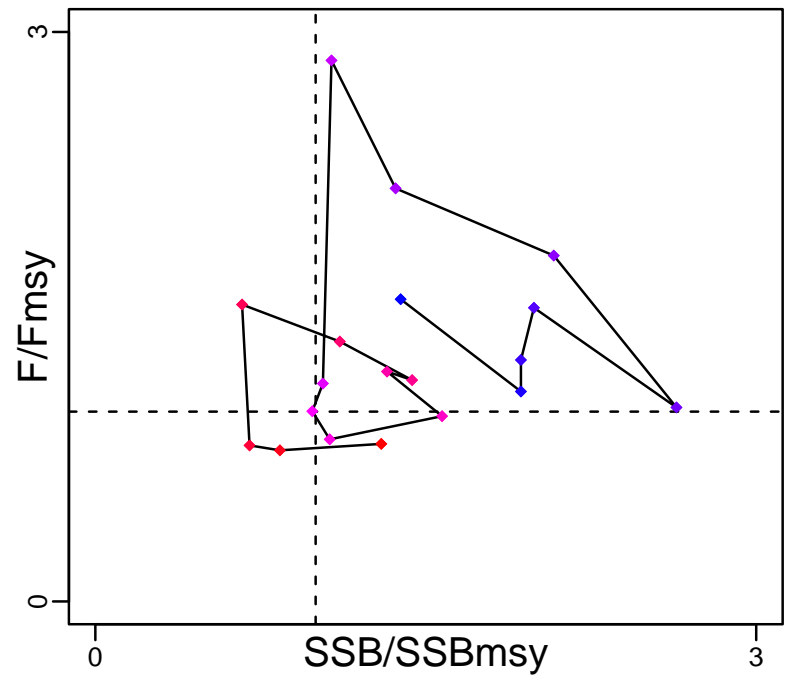
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	113,800	-	-
SSB	SSB-MT	2020	38,349	Both	-
TN	-	-	-	-	-
R	R-E00	2020	2378	Both	-
F	F-1/yr	2020	0.26	Both	-
ER	ER-ratio	2020	0.134	-	-
TC	TC-MT	2020	15,471		
TL	TL-MT	2016	20,000		
TB/TBmsy	-	-	-		
SSB/SSBmsy	SSBdivSSBmsy-dimensionless	2020	1.298		
F/Fmsy	FdivFmsy-dimensionless	2020	0.83		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	SSB-MT/SSBmgt-MT	2016	1.296		
F/Fmgt	F-1/yr/Fmgt-1/yr	2016	0.941		
ER/ERmgt	-	-	-		

Southern sardine Central–Southern Chile [SSARDCH]

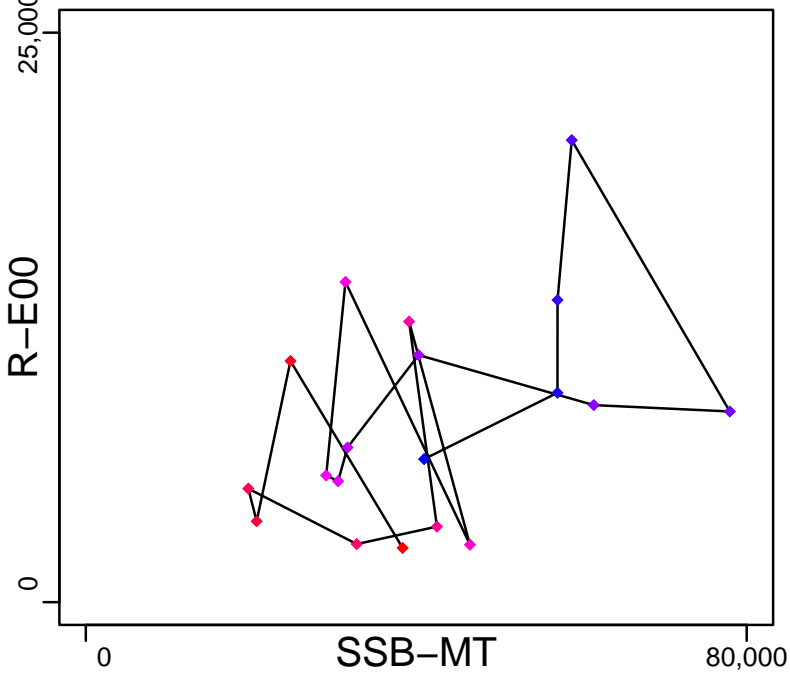
Kobe MSYpref (2002–2020–Quiroz)



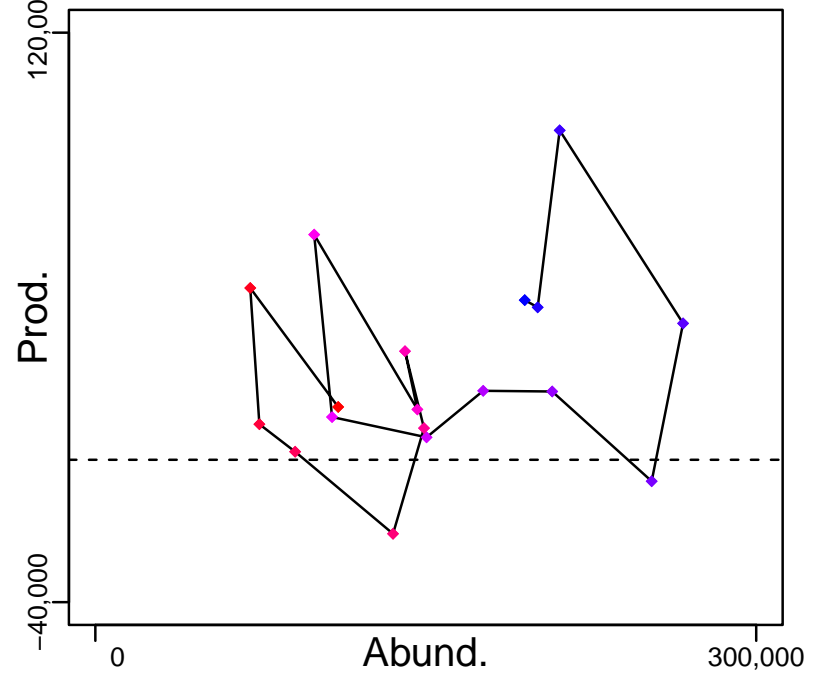
Kobe MGTpref (2002–2020–Quiroz)



Spawner Recruit (2002–2020–Quiroz)



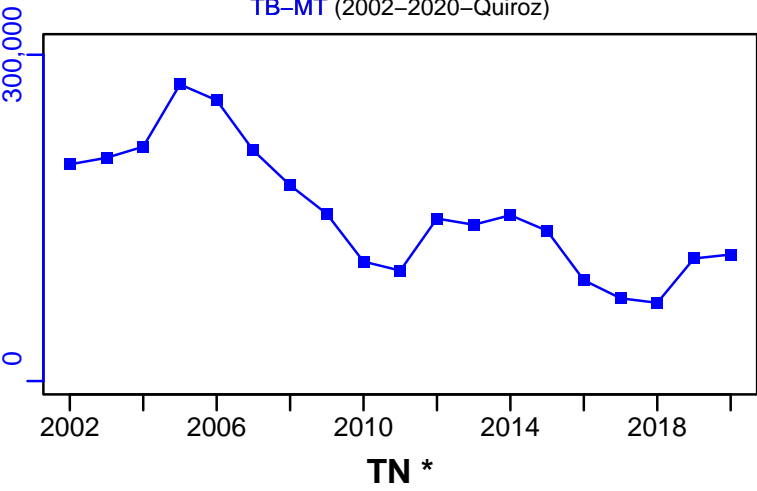
Production (2002–2020–Quiroz)



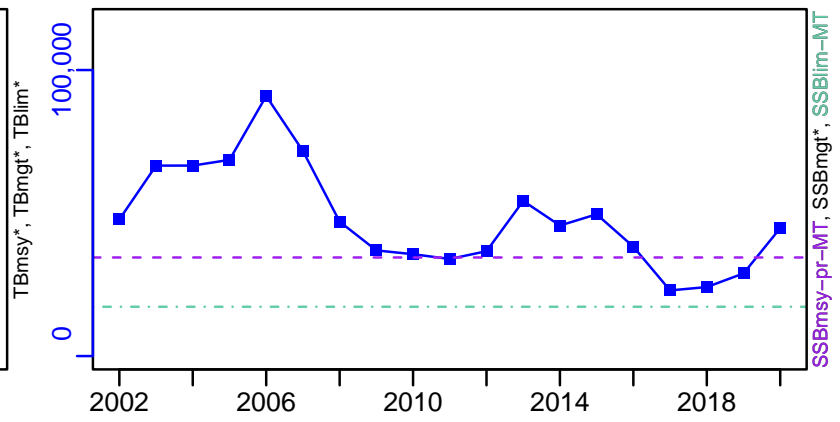
◆ Start Year ◆ End Year * No Data

Southern sardine Central–Southern Chile [SSARDCH]

TB–MT (2002–2020–Quiroz)



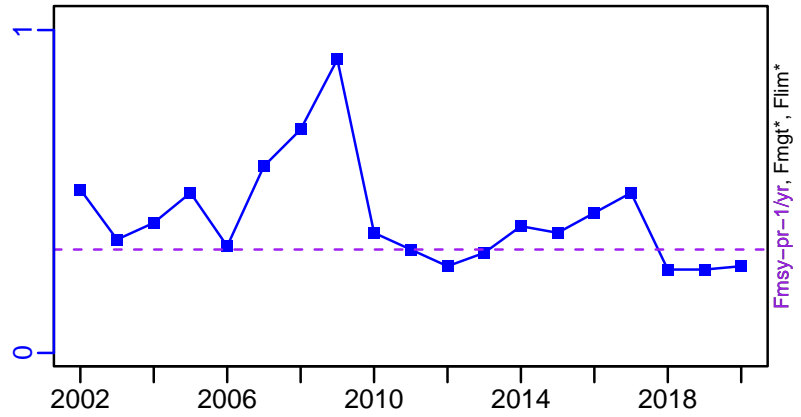
SSB–MT (2002–2020–Quiroz)



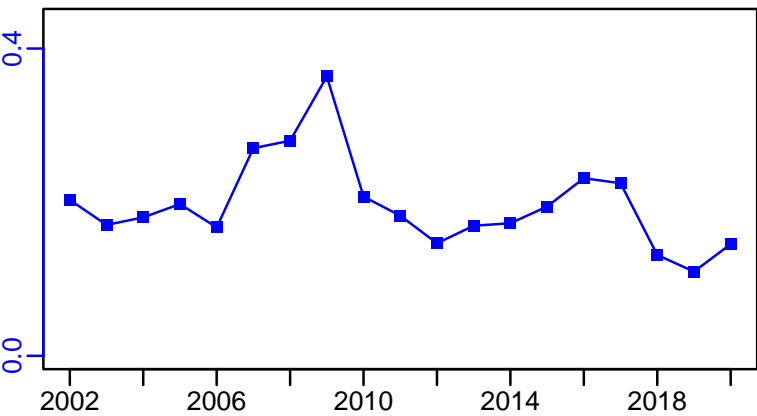
TN *



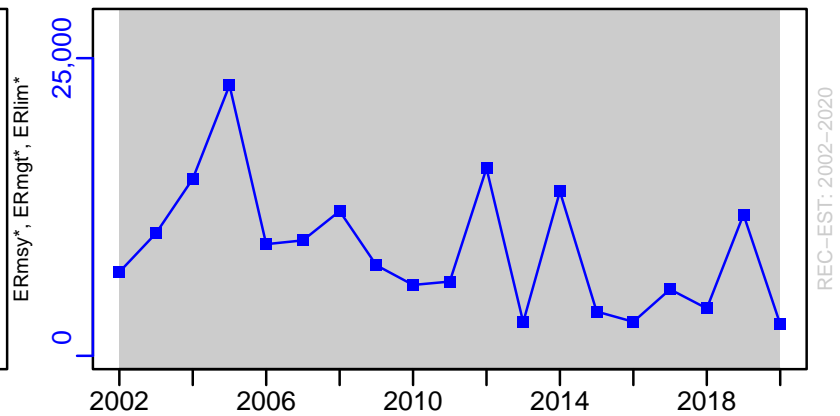
F–1/yr (2002–2020–Quiroz)



ER–ratio (2002–2020–Quiroz)

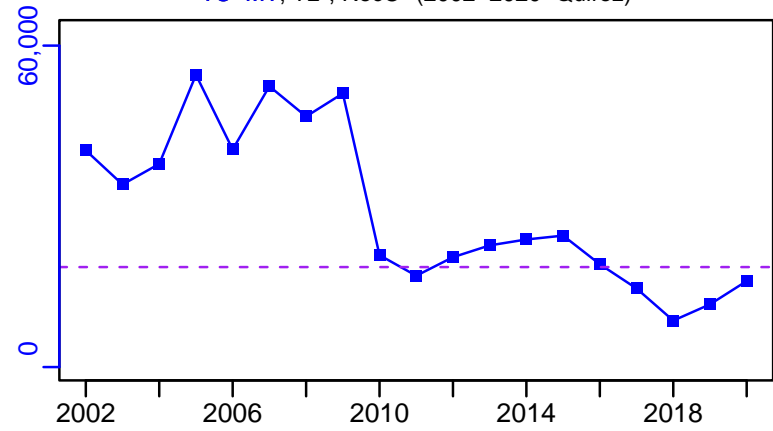


R–E00 (2002–2020–Quiroz)

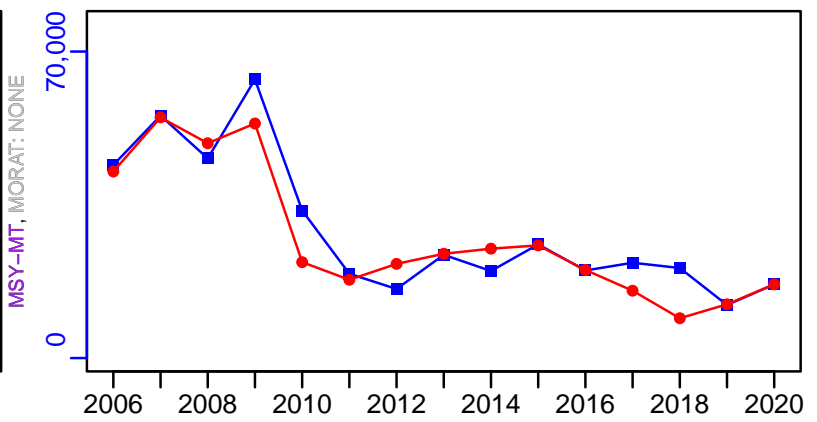


Southern sardine Central–Southern Chile [SSARDCH]

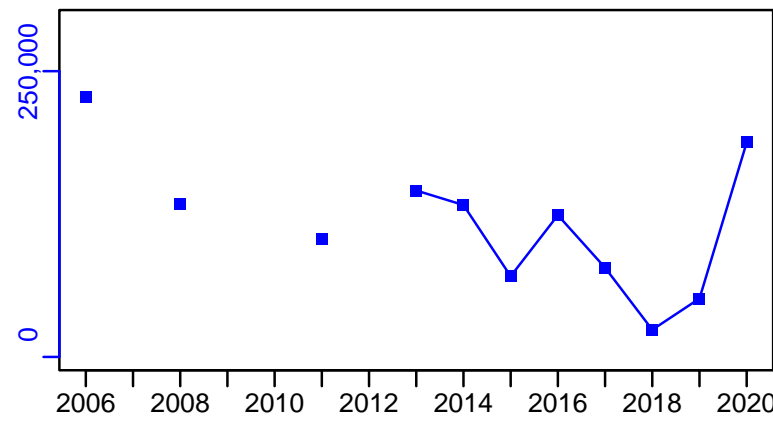
TC–MT, TL*, RecC* (2002–2020–Quiroz)



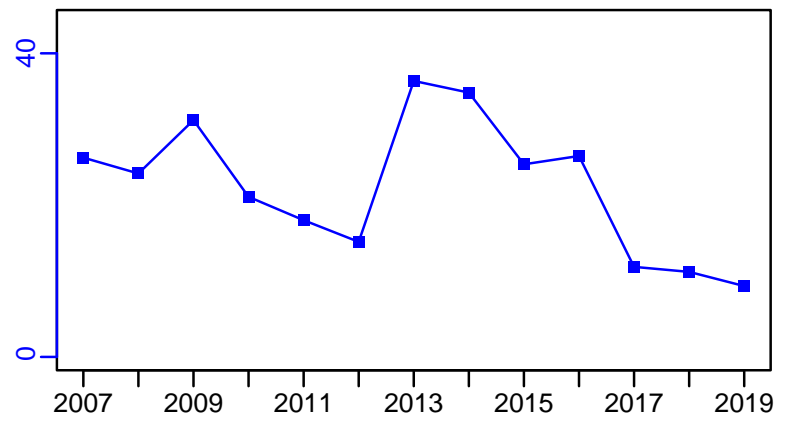
TAC–MT, Cpair–MT, Cadv* (2002–2020–Quiroz)



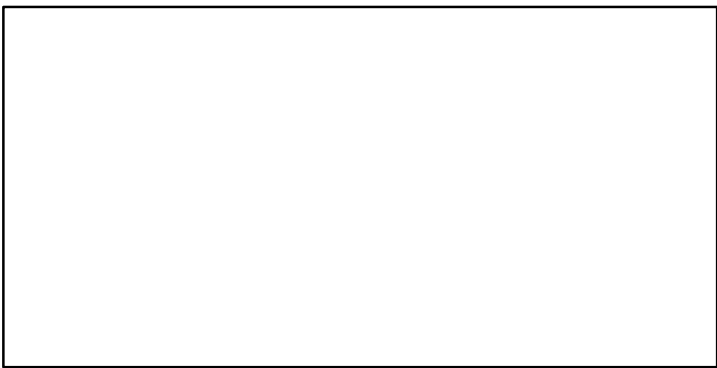
survB_absolute–MT (2002–2020–Quiroz)



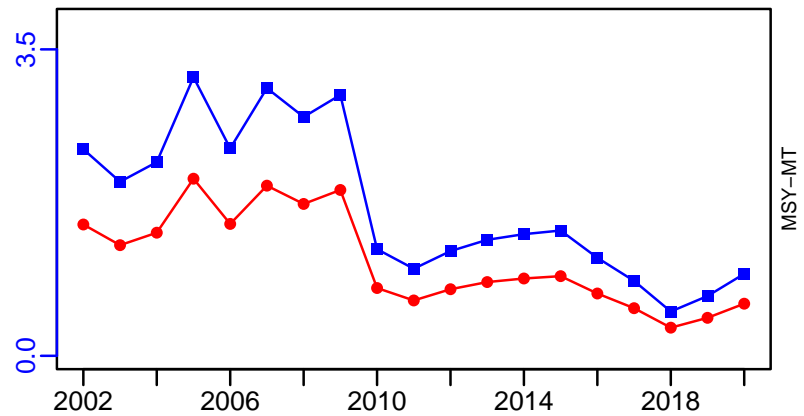
CPUE–index (2002–2020–Quiroz)



EFFORT*



TC–MT/MSY–MT, CdivMEANC–ratio, (2002–2020–Quiroz)



■ 1st listed time series ▲ 3rd listed time series — MORAT
● 2nd listed time series - - - MSY * No Data